



Yucaipa Valley Water District

12770 Second Street, Yucaipa, California 92399 Phone: (909) 797-5117

Notice and Agenda of a Regular Meeting of the Board of Directors

Wednesday, May 6, 2015 at 6:00 p.m.

- I. **CALL TO ORDER** - Pledge of Allegiance
- II. **ROLL CALL**
- III. **PUBLIC COMMENTS** - At this time, members of the public may address the Board of Directors on matters within its jurisdiction. To provide comments on specific agenda items, please complete a speaker's request form and provide the completed form to the Board Secretary prior to the board meeting.
- IV. **CONSENT CALENDAR** - All matters listed under the Consent Calendar are considered by the Board of Directors to be routine and will be enacted in one motion. There will be no discussion of these items prior to the time the board considers the motion unless members of the board, the administrative staff, or the public request specific items to be discussed and/or removed from the Consent Calendar.
 - A. Minutes of Meetings
 - 1. Regular Board Meeting - April 15, 2015
 - 2. Board Workshop - Site Tour and Inspection of the Reservoir R-12.4 - April 23, 2015 - No minutes were prepared for this workshop.
 - 3. Board Workshop - Site Tour and Inspection of the Yucaipa Valley Regional Water Filtration Facility - April 27, 2015 - No minutes were prepared for this workshop.
 - 4. Board Workshop - April 28, 2015
- V. **BOARD REPORTS**
 - A. San Gorgonio Pass Water Resource Alliance - Technical Committee and General Meeting - April 22, 2015
 - B. City of Yucaipa Economic Development Advisory Committee - April 30, 2015
 - C. Reports by Board Members
- VI. **STAFF REPORT**
- VII. **DISCUSSION ITEMS**

Any person with a disability who requires accommodation in order to participate in this meeting should telephone Tysa Baeumel at (909) 797-5117 at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

Materials related to an item on this agenda submitted to the Board of Directors after distribution of the board meeting packet are available for public inspection during normal business hours at the District office located at 12770 Second Street, Yucaipa. Meeting material is also be available on the District's website at www.yvwd.dst.ca.us

- A. Overview of State Water Resources Control Board Emergency Regulations for Urban Water Conservation to Implement Executive Order No. B-29-15 [[Director Memorandum No. 15-040 - Page 19 of 119](#)]
RECOMMENDED ACTION: Pending
- B. Award of a Construction Contract for Digester Cleaning and Cover Replacement [[Director Memorandum No. 15-041 - Page 59 of 119](#)]
RECOMMENDED ACTION: That the Board awards a construction contract to Pascal & Ludwig for the cleaning and replacement of four digester covers for a sum not to exceed \$2,175,000.
- C. Identification and Declaration of Bad Debt for Calendar Year 2013 [[Director Memorandum No. 15-042 - Page 89 of 119](#)]
RECOMMENDED ACTION: That the Board authorizes the District staff to declare bad debt for Calendar Year 2013 in the amount of \$25,761.33.
- D. Authorization to Develop and Implement the Distribution of Weather Based, Wi-Fi Irrigation Controllers for Residential Water Customers of the Yucaipa Valley Water District [[Director Memorandum No. 15-043 - Page 90 of 119](#)]
RECOMMENDED ACTION: That the Board authorizes the District staff to: (1) implement the necessary policies, procedures and priorities to distribute weather-based irrigation controllers for residential water customers pursuant to the State Water Resources Control Board Emergency Regulations and related Executive Orders by Governor Brown; (2) contract with Skydrop for the purchase of irrigation controllers and related equipment for a sum not to exceed \$250,000; (3) provide regular updates on the status of this conservation program; and (4) authorize the General Manager to amend or terminate the implementation of this program at any time.
- E. Consideration of Contract with RMC for Dewatering Equipment Pilot Testing Support Services [[Director Memorandum No. 15-044 - Page 100 of 119](#)]
RECOMMENDED ACTION: That the Board authorizes the District staff to execute a contract with RMC for Dewatering Equipment Pilot Testing Support Services for a sum not to exceed \$45,000.

VIII. DIRECTORS COMMENTS

IX. CLOSED SESSION

- A. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: IBEW Local Union 1436-YVWD Employees Association
- B. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: YVWD Supervisory Employees
- C. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: YVWD Management Employees (Exempt)
- D. Conference with Labor Negotiator (Government Code 54957.6)
Unrepresented Employee: Joseph Zoba, General Manager

X. ANNOUNCEMENTS

- A. May 12, 2015 at 4:00 p.m. - Board Workshop
- B. May 20, 2015 at 6:00 p.m. - Regular Board Meeting
- C. May 26, 2015 at 4:00 p.m. - Board Workshop
- D. May 27, 2015 at 6:00 p.m. - San Gorgonio Pass Regional Water Resource Alliance at the City of Banning

- E. June 3, 2015 at 6:00 p.m. - Regular Board Meeting
- F. June 9, 2015 at 4:00 p.m. - Board Workshop
- G. June 17, 2015 at 6:00 p.m. - Regular Board Meeting
- H. June 23, 2015 at 4:00 p.m. - Board Workshop
- I. June 24, 2015 at 6:00 p.m. - San Gorgonio Pass Regional Water Resource Alliance at the City of Banning

XI. ADJOURNMENT

Consent Calendar



Yucaipa Valley Water District

MINUTES OF A REGULAR BOARD MEETING

April 15, 2015 at 6:00 P.M.

Directors Present:

Lonni Granlund, President
Jay Bogh, Vice President
Bruce Granlund, Director
Ken Munoz, Director

Staff Present:

Joseph Zoba, General Manager
Jack Nelson, Assistant General Manager
Vicky Elisalda, Controller
Jennifer Ares, Water Resource Manager
Brent Anton, Engineering Manager
Joe DeSalliers, Public Works Supervisor

Directors Absent:

Tom Shalhoub, Director

Consulting Staff Present:

David Wysocki, Legal Counsel

Registered Guests and Others Present:

Dan Hancock, Customer
Chris Stark, Customer
David Duron, Customer
Bibiana Maldonado, Student
Karen Da Silva, News Mirror
Gil Navarro, San Bernardino Valley Municipal Water District
Leonard Stevenson, San Gorgonio Pass Water Agency

The regular meeting of the Board of Directors of the Yucaipa Valley Water District was called to order by Director Lonni Granlund at 6:00 p.m. at the Administrative Office Building, 12770 Second Street, Yucaipa, California.

CALL TO ORDER

Director Lonni Granlund led the pledge of allegiance.

FLAG SALUTE

The roll was called and Director Jay Bogh, Director Bruce Granlund, Director Lonni Granlund, and Director Ken Munoz were present. Director Tom Shalhoub was absent.

ROLL CALL

Gil Navarro thanked Jennifer Ares for her assistance with a District tour for students in the area.

PUBLIC COMMENTS

Bibiana Maldonado thanked Jennifer Ares for providing water related information to students and young adults about local water issues.

There were no other public comments.

Director Bruce Granlund moved to approve the consent calendar and Director Ken Munoz seconded the motion to approve the consent calendar.

CONSENT CALENDAR

A. Minutes of Meetings

1. Regular Board Meeting - April 1, 2015

2. Board Workshop - April 7, 2015
- B. Payment of Bills
1. Approve/Ratify Invoices for Board Awarded Contracts
 2. Ratify General Expenses for March 2015

The motion was approved by the following vote:

Director Jay Bogh - Yes
 Director Bruce Granlund - Yes
 Director Lonni Granlund - Yes
 Director Ken Munoz - Yes
 Director Tom Shalhoub - Absent

A. Reports by Board Members

- Director Bruce Granlund reported on the San Bernardino Valley Municipal Water District board meeting held on April 14, 2015.

BOARD REPORTS

General Manager Joseph Zoba provided information about the future workshop tours and the emergency water conservation regulations proposed by the State Water Resources Control Board.

STAFF REPORT

DISCUSSION ITEMS:

Following a staff presentation by Controller Vicky Elisalda, Director Bruce Granlund moved and Director Ken Munoz seconded a motion to receive and file the unaudited financial report as presented.

The motion was approved by the following vote:

Director Jay Bogh - Yes
 Director Bruce Granlund - Yes
 Director Lonni Granlund - Yes
 Director Ken Munoz - Yes
 Director Tom Shalhoub - Absent

DM 15-033
UNAUDITED
FINANCIAL REPORT
FOR THE PERIOD
ENDING ON MARCH
31, 2015

Following a staff presentation by Engineering Manager Brent Anton, Director Ken Munoz moved and Director Bruce Granlund seconded a motion to approve Development Agreement No. 2015-02.

The motion was approved by the following vote:

Director Jay Bogh - Yes
 Director Bruce Granlund - Yes
 Director Lonni Granlund - Yes
 Director Ken Munoz - Yes
 Director Tom Shalhoub - Absent

DM 15-034
CONSIDERATION OF
DEVELOPMENT
AGREEMENT NO.
2015-02 FOR
EIGHTEEN UNITS ON
3RD STREET, YUCAIPA
BY THE BILLY W.
SIMMONS FAMILY
TRUST (ASSESSOR'S
PARCEL NUMBER
0319-242-18)

Following a staff presentation by Engineering Manager Brent Anton, Director Bruce Granlund moved and Director Ken Munoz seconded a motion to approve Development Agreement No. 2015-03.

The motion was approved by the following vote:

- Director Jay Bogh - Yes
- Director Bruce Granlund - Yes
- Director Lonni Granlund - Yes
- Director Ken Munoz - Yes
- Director Tom Shalhoub - Absent

DM 15-035
CONSIDERATION OF
DEVELOPMENT
AGREEMENT NO.
2015-03 FOR
SEVENTEEN UNITS
ON 4TH STREET,
YUCAIPA BY THE
BILLY W. SIMMONS
FAMILY TRUST
(ASSESSOR'S
PARCEL NUMBER
0319-242-48)

Following a staff presentation by Engineering Manager Brent Anton, Director Ken Munoz moved and Director Bruce Granlund seconded a motion to approve Development Agreement No. 2015-04.

The motion was approved by the following vote:

- Director Jay Bogh - Yes
- Director Bruce Granlund - Yes
- Director Lonni Granlund - Yes
- Director Ken Munoz - Yes
- Director Tom Shalhoub - Absent

DM 15-036
CONSIDERATION OF
DEVELOPMENT
AGREEMENT NO.
2015-04 FOR PARCEL
MAP 19594, 6TH
STREET RETAIL
PARTNERS, LLC
COMMERCIAL
PROJECT - YUCAIPA
(ASSESSOR'S
PARCEL NUMBER
0303-131-77)

Prior to this agenda item, Director Ken Munoz excused himself from participating in the agenda item and left the board room.

Following a staff presentation by General Manager Joseph Zoba and comments from Chris Stark, Director Jay Bogh moved and Director Bruce Granlund seconded a motion to require the payment of the typical recycled water facility capacity charge for the dwelling unit under construction at 10556 Bryant Street, Yucaipa.

The motion was approved by the following vote:

- Director Jay Bogh - Yes
- Director Bruce Granlund - Yes
- Director Lonni Granlund - Yes
- Director Ken Munoz - Did Not Vote
- Director Tom Shalhoub - Absent

DM 15-037
DISCUSSION
REGARDING WATER
FACILITY CAPACITY
CHARGES FOR A NEW
DWELLING UNIT
LOCATED AT 10556
BRYANT STREET,
YUCAIPA - CHRIS
STARK

Following a staff presentation by General Manager Joseph Zoba, Director Jay Bogh moved and Director Bruce Granlund seconded a motion to approve the rental of Bear Valley Mutual Water Company stock for the 2015 Irrigation Season to Camp Morning Star, and Larry Jacinto and authorized General Manager Joseph Zoba to rent the remaining shares of stock.

The motion was approved by the following vote:

- Director Jay Bogh - Yes
- Director Bruce Granlund - Yes
- Director Lonni Granlund - Yes
- Director Ken Munoz - Yes
- Director Tom Shalhoub - Absent

Following a staff presentation by General Manager Joseph Zoba, Director Jay Bogh moved and Director Ken Munoz seconded a motion to approve Change Order No. 1 for a sum not to exceed \$39,782.19.

The motion was approved by the following vote:

- Director Jay Bogh - Yes
- Director Bruce Granlund - Yes
- Director Lonni Granlund - Yes
- Director Ken Munoz - Yes
- Director Tom Shalhoub - Absent

Director Bruce Granlund discussed the postcard mail sent by the San Gorgonio Pass Water Agency regarding the proposed development impact fees.

Director Jay Bogh, Director Bruce Granlund, Director Lonni Granlund, and Director Ken Munoz were present in closed session with Legal Counsel David Wysocki and General Manager Joseph Zoba concerning the following items:

- A. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: IBEW Local Union 1436-
YVWD Employees Association
- B. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: YVWD Supervisory
Employees
- C. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: YVWD Management
Employees (Exempt)

DM 15-038
CONSIDERATION OF
BEAR VALLEY
MUTUAL WATER
COMPANY STOCK
RENTAL
COMMITMENTS FOR
THE 2015 IRRIGATION
SEASON

DM 15-039
CONSIDERATION OF
CHANGE ORDER NO.
1 TO THE BORDEN
EXCAVATING
CONTRACT FOR THE
8TH STREET AND
WASHINGTON DRIVE
REPLACEMENT
PIPELINES PROJECT

DIRECTOR
COMMENTS

CLOSED SESSION

- D. Conference with Labor Negotiator (Government Code 54957.6)
Unrepresented Employee: Joseph Zoba, General Manager

The Board Members reconvened out of closed session into open session and Legal Counsel David Wysocki reported that direction was provided to the General Manager but no reportable action was taken in closed session.

Director Lonni Granlund called attention to the announcements listed on the agenda.

ANNOUNCEMENTS

The meeting was adjourned at 7:15 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary

(Seal)

MINUTES OF A BOARD WORKSHOP

April 28, 2015 at 4:00 P.M.

Directors Present:

Lonni Granlund, President
Bruce Granlund, Director
Tom Shalhoub, Director

Staff Present:

Joseph Zoba, General Manager
Jack Nelson, Assistant General Manager
Bob Wall, Operations Manager
Brent Anton, Engineering Manager
Vicky Elisalda, Controller
Jennifer Ares, Water Resource Manager
John Wrobel, Regulatory & Environmental Control
Manager

Directors Absent:

Jay Bogh, Vice President
Ken Munoz, Director

Consulting Staff Present:

David Wysocki, Legal Counsel
Scott Goldman, RMC

Guests and Others Present:

Vincent Chen, Student
Vanessa Register, Customer
David Duron, Customer
Richard Siegmund, Customer
Leonard Stevenson, San Gorgonio Pass Water Agency
Steven Copelan, San Bernardino Valley Municipal Water District
Bill Hemsley, City of Yucaipa

- I. Call to Order - 4:00 p.m.
- II. Public Comments - General Manager Joseph Zoba recognized the members of the Board of Directors and District staff in attendance.
 - David Duron provided comments about increasing the purchase of imported water during the next budget year.
 - Vanessa Register requested an update on the status of the District's sustainability program related to the issuance of building permits.
- III. Staff Report:
 - General Manager Joseph Zoba discussed the Community Water meeting scheduled for May 21, 2015.
- IV. Presentations
 - A. Presentation of Sweepstakes Award-Winning Science Fair Project by Vincent Chen [Workshop Memorandum No. 15-072] - Vincent Chen provided an overview of his award-winning science fair project.
 - B. Overview of the 7th Annual Inland Solar Challenge Competition [Workshop Memorandum No. 15-073] - Water Resource Manager Jennifer Ares provided an

overview of the 7th Annual Inland Solar Challenge Competition held at the Yucaipa Regional Park on April 24-26, 2015.

- C. Overview of Tiered Water Rate Structures Pursuant to the Recent Ruling by the Fourth District Court of Appeal, Division Three *Capistrano Taxpayers Association v. City of San Juan Capistrano* [Workshop Memorandum No. 15-074] - General Manager Joseph Zoba provided an overview of the recent tier rate case involving the City of San Juan Capistrano.
 - D. Overview of Turf Removal & Replacement Policies by the California Urban Water Conservation Council [Workshop Memorandum No. 15-075] - General Manager Joseph Zoba provided an overview of the turf removal document released by the California Urban Water Conservation Council.
 - E. Overview of California Drought Conditions and Related Regional Issues [Workshop Memorandum No. 15-076] - General Manager Joseph Zoba provided an overview of the current drought conditions.
 - F. Overview of Proposed State Water Resources Control Board Mandatory Restrictions to Achieve a 25% Statewide Reduction in Potable Urban Water Use [Workshop Memorandum No. 15-077] - General Manager Joseph Zoba provided an overview of the proposed emergency drinking water regulations to be enacted by the State Water Resources Control Board. During this agenda item, the Board of Directors provided District staff with a consensus to begin the implementation and distribution of Skydrop irrigation controllers.
- V. Operational Issues
- A. Update on the Potential Use of the District Building at 35192 Cedar Avenue - Yucaipa (Assessor Parcel Number 0303-232-17) [Workshop Memorandum No. 15-078] - General Manager Joseph Zoba provided an update on the status of the proposed radio station at the existing building on Cedar Avenue, Yucaipa.
 - B. Review of Alternative Sludge Dewatering Equipment at the Wochholz Regional Water Recycling Facility [Workshop Memorandum No. 15-079] - Scott Goldman from RMC provided an overview of the testing procedures and need to proceed with an analysis of sludge dewatering equipment at the Wochholz Regional Water Recycling Facility.
- VI. Capital Improvement Projects
- A. Status Report on the Construction of a 6.0 Million Gallon Drinking Water Reservoir R-12.4 - Calimesa [Workshop Memorandum No. 15-080] - Engineering Manager Brent Anton provided an overview of the R-12.4 Reservoir Project.
 - B. Status Report on the Installation of an Air Conditioning System at Lift Station No. 1 [Workshop Memorandum No. 15-081] - Regulatory & Environmental Control Manager John Wrobel provided an update on the status of the air conditioning project at Lift Station No. 1.
 - C. Status Report on the Construction of Replacement Digester Covers and Associated Piping at the Wochholz Regional Water Recycling Facility [Workshop Memorandum No. 15-082] - Scott Goldman from RMC provided an overview of the bid results for the Digester Cleaning and Cover Replacement Project.
 - D. Status Report on the Construction of the 8th Street and Washington Drive Replacement Pipelines [Workshop Memorandum No. 15-083] - Engineering Manager Brent Anton provided an overview of the Washington Drive Pipeline Project.
- VII. Administrative Items

- A. Identification and Declaration of Bad Debts for Calendar Year 2013 [Workshop Memorandum No. 15-084] - Controller Vicky Elisalda provided an overview of the 2013 bad debt.
 - B. Review of Alternative Payment Options for Customers of the Yucaipa Valley Water District [Workshop Memorandum No. 15-085] - This item was continued to the next board workshop.
 - C. Discussion Regarding Draft Surplus Recycled Water Exchange Agreement Between Yucaipa Valley Water District and Beaumont Cherry Valley Water District [Workshop Memorandum No. 15-086] - General Manager Joseph Zoba provided an overview of the proposed recycled water exchange agreement with Beaumont Cherry Valley Water District.
- VIII. Director Comments - There were no director comments.
- IX. Adjournment - The meeting was adjourned at 6:15 p.m.

Respectfully submitted,

Joseph B. Zoba, Secretary

Board Reports



Yucaipa Valley Water District

Technical Committee Meeting of the San Gorgonio Pass Regional Water Alliance Wednesday, April 22, 2015 at 4:30 p.m.

Banning City Hall Council Chambers
99 East Ramsey Street, Banning, California 92220

1. Call to Order
2. Public Comments
3. Reports from the Subcommittees of the San Gorgonio Pass Regional Water Resource Alliance
 - a. Administrative Subcommittee
 - b. Messaging Subcommittee
 - c. Recycled Water Subcommittee
 - d. Water Conservation Subcommittee
4. Discussion Regarding the Development of an Alliance Website
5. Comments by Technical Committee Members
6. Announcements
 - a. Next Meeting Date: **Wednesday, May 27, 2015 at 4:30 pm**
7. Adjournment

San Gorgonio Pass Regional Water Alliance

Wednesday, April 22, 2015 at 6:00 p.m.

Banning City Hall Council Chambers
99 East Ramsey Street, Banning, California 92220

1. Call to Order
2. Public Comments
3. Approval of Minutes
4. Reports
 - a. Technical Committee Reports
5. Presentations
 - a. Presentation of the San Gorgonio Pass Regional Water Alliance Website by Mary Ann Melleby, Director, San Gorgonio Pass Water Agency
 - b. Presentation of California Governor Brown's Statewide Mandatory Water Reductions and the State Water Resources Control Board Proposed Emergency Conservation Regulations by Perry Gerdes, Water/Wastewater Superintendent, City of Banning
 - c. Member Agency Profile: South Mesa Mutual Water Company
6. Future Meeting Topics
 - a. Alliance Member Agency Profile for May 2015 - Yucaipa Valley Water District
 - b. Other Meeting Topics
7. Comments by Alliance Members
8. Announcements
 - a. Next Meeting Date: **Wednesday, May 27, 2015 at 6:00 pm**
9. Adjournment



**Economic Development Advisory Committee
Special Meeting
Agenda**

April 30, 2015 - 5:30 PM

**Community Meeting Room - Yucaipa City Hall
34272 Yucaipa Boulevard, Yucaipa, California**

ANY PUBLIC WRITINGS DISTRIBUTED BY THE CITY TO AT LEAST A MAJORITY OF THE COMMITTEE MEMBERS REGARDING ANY ITEM ON THIS REGULAR MEETING AGENDA WILL BE MADE AVAILABLE AT THE PUBLIC SERVICE COUNTER AT CITY HALL, 34272 YUCAIPA BOULEVARD, DURING NORMAL BUSINESS HOURS.

- I. Call to Order**
- II. Public Comment**
- III. Review of Draft Economic Development General Plan Element**
- IV. Round Table**
- VIII. Adjourn**

Staff Report



Yucaipa Valley Water District

Discussion Items



Yucaipa Valley Water District



Date: May 6, 2015

Prepared By: Joseph Zoba, General Manager

Subject: Overview of State Water Resources Control Board Emergency Regulations for Urban Water Conservation to Implement Executive Order No. B-29-15


Recommendation: Pending

The State Water Resources Control Board (“SWRCB”) is in the process of implementing emergency regulations to achieve a 25% statewide reduction in potable urban water use. The proposed regulations by the SWRCB are currently under review by District staff and comments will be submitted for the SWRCB meeting on May 5, 2015.

The purpose of this agenda item is to discuss the emergency drought regulations.

Attachments:

- State Water Resources Control Board Meeting Agenda - May 5-6, 2015 (Page 2 of 40)
- State Water Resources Control Board Fact Sheet - Proposed Emergency Regulations to Achieve 25% Urban Conservation Frequently Asked Questions (Page 4 of 40)
- State Water Resources Control Board - Notice of Proposed Emergency Rulemaking (Page 13 of 40)
- State Water Resources Control Board - Emergency Regulations Digest (Page 193 of 40)

	STATE WATER RESOURCES CONTROL BOARD BOARD MEETING Tuesday, May 5, 2015 - 9:00 a.m. Wednesday, May 6, 2015 - 9:00 a.m. Byron Sher Auditorium – Second Floor Joe Serna Jr. - CalEPA Building 1001 I Street, Sacramento
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DECLARATION OF A QUORUM

Felicia Marcus, Chair; Frances Spivy-Weber, Vice Chair; Tam M. Doduc, Member; Steven Moore, Member; Dorene D'Adamo, Member

BOARD MEETING

Public comments on agenda items will be limited to 5 minutes or otherwise at the discretion of the Board Chair

PUBLIC FORUM

Any member of the public may address and ask questions of the Board relating to any matter within the State Water Resources Control Board's jurisdiction provided the matter is not on the agenda, or pending before the State Water Board or any California Regional Water Quality Control Board.

BOARD BUSINESS

1. The Board will consider adoption of the April 21, 2015 Board Meeting minutes.

UNCONTESTED ITEMS* (Items 2-4)

- *2 Consideration of a proposed Resolution [approving the final report of the Colorado River Basin salinity control forum "2014 Review-Water Quality Standards for Salinity-Colorado River System," dated October 2014.](#)
- *3. Consideration of a proposed Resolution [authorizing the Executive Director or designee to apply for, accept, and/or amend a federal Clean Water Act section 106 Water Pollution Control Program grant and authorizing execution and amendment of contracts using these funds.](#)
- *4 Consideration of a proposed Resolution [amending the Water Recycling Funding Program Competitive Project List to include Projects eligible to receive 2000 Bond Law \(Proposition 13\) funding.](#)

INFORMATIONAL ITEM

5. California's ongoing drought emergency.

OFFICE OF RESEARCH, PLANNING AND PERFORMANCE

6. Consideration of a proposed Resolution [amending and readopting drought-related emergency regulations for urban water conservation to implement Executive Order B-29-15](#). (Written comments are due on May 4, 2015 by 10:00 a.m.)
- [Fact Sheet on Proposed Emergency Regulation \(4/28/15\)](#)
 - [Proposed Emergency Regulation Text \(4/28/15\)](#)
 - [Proposed Urban Water Supplier Usage Tiers \(4/28/15\) | \(Excel spreadsheet of data\)](#)
 - [Notice of Proposed Rulemaking \(4/29/15\)](#)
 - [Emergency Regulation Digest \(4/29/15\)](#)

WEDNESDAY, MAY 6, 2015

DIVISION OF WATER QUALITY

7. Consideration of the proposed [amendment to the Statewide Water Quality Control Plan for the Ocean Waters of California addressing desalination facility intakes, brine discharges, and to incorporate other non-substantive changes](#). (Written comments were due on April 9, 2015 by 12 noon.)

INFORMATIONAL ITEM

8. Board Member Report.

IMPORTANT INFORMATION!!

Unless otherwise specified, submittal of written comments must be received by 12:00 p.m. on April 30, 2015, and will not be accepted after that time.

Submittal of **electronic Powerpoint presentations** must be received by 12:00 p.m. on April 30, 2015, and will not be accepted after that time.

Submittals are to be sent via e-mail to the Clerk to the Board at commentletters@waterboards.ca.gov. Please indicate in the subject line, "**5/5-6/15 BOARD MEETING (fill in bolded subject from appropriate item)**." If you have questions about the agenda, contact the Clerk to the Board at (916) 341-5600.

Agenda and items will be available electronically at: http://www.waterboards.ca.gov/board_info/calendar/index.shtml

* Items on the uncontested items calendar may be removed at the request of any Board member or person. If an item is removed from the uncontested items calendar, it will only be voted on at this meeting if the Board accepts the staff recommendation for the agenda item. Otherwise, the item will be continued to a subsequent board meeting to allow input by interested persons.

Video broadcast of meetings will be available at: <http://www.calepa.ca.gov/Broadcast/>.

For a map to our building, visit: <http://www.calepa.ca.gov/EPABldg/location.htm>. For security purposes, all visitors are required to sign in and receive a badge prior to entering the building. Valid picture identification may be required due to the security level so please allow up to 15 minutes for this process. Individuals who require special accommodations are requested to contact the Clerk to the Board, (916) 341-5600.



Proposed Emergency Regulations to Achieve 25% Urban Conservation

Frequently Asked Questions

On April 1, 2015, the Governor issued an Executive Order that directed the State Water Board to implement mandatory water reductions in cities and towns across California to reduce potable urban water usage by 25 percent statewide. This amounts to approximately 1.3 million acre-feet of water over the next nine months, or nearly as much water as is currently in Lake Oroville. The State Water Board is committed to expedited development of the requirements to implement the Governor’s directive.

I. Executive Order

a. What is the schedule for the State Water Board’s development and adoption of emergency regulations requiring a statewide 25% potable urban water use reduction (provisions 2, 5, 6 and 7)?

The State Water Board is expediting the development and adoption of emergency regulations to implement the new restrictions and prohibitions contained in the Governor’s April 1, 2015 Executive Order as follows:

Governor issues Drought Executive Order	April 1, 2015
Notice announcing release of draft regulatory framework and request for public comment	April 7, 2015
Notice announcing release of draft regulations for informal public comment	April 18, 2015
Emergency rulemaking formal notice	April 28, 2015
Board hearing and adoption	May 5-6, 2015
OAL approval	May 15 (estimated)

The latest Fact Sheet and Proposed Regulation, released on April 28, 2015, can be found at http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/emergency_mandatory_regulations.shtml under the “Emergency Regulation Supporting Documents (4/28/2015)” header.





b. Will Investor Owned Utilities (IOUs), regulated by the California Public Utilities Commission (CPUC), be subject to the same requirements as public water suppliers?

The State Water Board has jurisdiction to issue regulations that are binding on both public water suppliers and private water suppliers (IOUs) regulated by the CPUC. However, the CPUC has adopted special drought rules¹ for the IOUs that will need to be modified and activated for the IOUs to meet the reduction mandates set by the Board. The CPUC has a meeting scheduled for May 7 when it might adopt the Board's regulation as its rule for the IOUs.

c. Do the mandatory conservation requirements affect areas irrigated with non-potable recycled water?

The Governor's Executive Order only applies to potable water use. Areas irrigated with non-potable recycled water will not be affected.

d. If I am a homeowner with a private well, will I be required to reduce my water use by 25%?

The 25% conservation requirement will be met primarily through standards imposed on water suppliers. Private well owners that do not receive water service are, like all Californians, subject to the individual prohibitions contained in the existing emergency regulations and Executive Orders. The prohibitions that apply to everyone include:

- Using potable water to wash sidewalks and driveways;
- Allowing runoff when irrigating with potable water;
- Using hoses with no shutoff nozzles to wash cars;
- Using potable water in decorative water features that do not recirculate the water;
- Irrigating outdoors during and within 48 hours following measureable rainfall;
- Irrigation with potable water of ornamental turf on public street medians;
- Irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems; and

¹ See: http://www.cpuc.ca.gov/NR/rdonlyres/DF07FD1A-2FA6-411D-A03C-8A1DADA9B941/0/Standard_Practice_U40W_2014_wo.pdf for a description of the CPUC drought rules.



- Restaurants serving water to their customers unless the customer requests it.

Additionally, hotels and motels must offer their guests the option to not have their linens and towels laundered daily, and prominently display this option in each guest room.

e. If a commercial or industrial business is using a private well, will it be required to cut water use?

Commercial, industrial and institutional (CII) properties with an independent water supply (not served by a water supplier) are required under the proposed emergency regulation to either limit outdoor irrigation to two days per week or achieve a 25% reduction in water use. Often, these properties have large landscapes that would otherwise not be addressed by this regulation.

f. How is a “median” defined?

The Executive Order prohibits “irrigation with potable water outside of ornamental turf on public street medians.” The Executive Order does not include a specific definition of a median, but a median is commonly considered to be a strip of land between street lanes. In some cases, discretion and reasonable judgment will need to be exercised in determining whether certain areas are considered medians and subject to a regulation adopted by the Board. Urban water suppliers and municipalities are urged to stop irrigating other non-functional ornamental turf, such as strips bordering street lanes. In addition, we are focused only on ornamental turf and encourage the irrigation and preservation of trees.

g. How will the ban on new sprinklers – other than drip or microspray – be implemented?

The Executive Order prohibits irrigation with potable water “outside of newly constructed homes and buildings” unless drip or microspray irrigation is used. This prohibition does not extend to new athletic fields and parks but is instead directed at ornamental landscapes associated with newly constructed homes and buildings. The Business Standards Commission is expected to consider the adoption of emergency regulations to implement this prohibition that would take effect on or before June 1, 2015; eliminating confusion about what standards builders have to comply with regarding this prohibition. It is not the intent of this prohibition to require replacement of irrigation systems that are already in place based on issued building permits and contracts for sale.



h. How does the State Water Board plan to implement Provision 8 of the Executive Order which calls for direction to develop rate structures and other mechanisms to reduce water use?

Provision 8 directs the Board to work with water agencies and state agencies to identify mechanisms that will encourage the adoption of rate structures and other pricing mechanisms to maximize conservation. Regulations or legislation may or may not be needed to implement this provision. The Board does not have a set date for taking action on this provision, but is moving quickly to identify the most promising mechanisms and find feasible implementation pathways. Discussions are now underway with water agencies and other experts about the financial, technical, political, and legal challenges associated with changing rates, surcharges, and other fees. The Board intends to work with all parties, including the Legislature, to make rates and pricing an important element of short-term and longer-term conservation strategies.

i. How will the State determine what constitutes an underserved community for funding landscape rebates?

Contact the Department of Water Resources for questions regarding actions directed to the Department in the Executive Order.

j. Will local government jurisdictions (e.g. cities and counties) be required to report on their water use and conservation efforts?

The 25% potable urban water use reduction requirement and associated reporting applies to water suppliers, not subdivisions of local government.

II. Proposed Regulatory Framework

a. Will communities be rewarded if they are already using less water?

Yes, communities with lower per capita water use will benefit from a lower future required reduction in water use. Communities with higher water use will be required to do more.

b. Will credit be given for investments in recycled water and desalination?

No credits are given for new sources of potable water supply during the drought emergency. Given the immediate need to extend our water resources, all attention is focused on reducing the use of potable water supplies, regardless of their source. Every drop of potable water saved today improves California's ability to weather a possible fifth year of dry conditions. Recycled water that is used to recharge potable groundwater aquifers (called Indirect Potable



Reuse) and desalinated water are sources of supply that must also be protected and extended. Investments in Indirect Potable Reuse technology and desalination are a key part of diversifying local supply options and critical for a water resilient future. We will meet with water suppliers to discuss whether credits are an appropriate tool for future permanent or extended emergency conservation regulations to come.

c. If I live in a hot climate, will I have enough water to maintain my landscaping?

In this fourth year of devastating drought conditions, many Californians will have to make real lifestyle changes in order to conserve water for what could be an extended drought. We cannot predict what the next rainy season will bring. To preserve water to meet basic indoor needs such as toilet flushing, showers, clothes washing, food preparation and cleanup, outdoor water use will have to be substantially reduced. Residents in hotter climates use more water. This water use is in large part to support outdoor ornamental landscapes. Residents in warmer regions of the State are encouraged to convert to a drought tolerant landscape when cooler weather and rains arrive in the fall if they can; however, summertime watering will need to be greatly reduced in order to reduce statewide potable urban water usage by 25%. Keeping trees alive and letting ornamental turf go golden is strongly encouraged. On average 50% of residential water use in California is used for outdoor landscaping, particularly ornamental turf, in some places it is far more. For tips on how to conserve, visit www.saveourwater.com.

d. What reporting is required once the mandatory conservation requirements go into effect?

The **Proposed** Emergency Regulation includes new reporting requirements for water suppliers to assess the contributions of the CII sector towards reducing water use. This CII sector-specific reporting requirement is in addition to the monthly reporting required in the existing Emergency Conservation Regulation. Under the existing regulations, urban water suppliers must report on:

- Monthly potable water production;
- Residential gallons per capita per day (R-GPCD); and
- Compliance and enforcement efforts.

The Proposed Emergency Regulation also includes a one-time report for water suppliers serving 15-2999 water connections (currently not required to report). This report will include:

- Potable water production from June-November 2013 and June-November 2015; or
- The number of days per week outdoor irrigation is allowed and other restrictions implemented to achieve a 25% potable water use reduction.



e. What is Residential Gallons Per Capita per Day (R-GPCD) and how is it calculated?

R-GPCD is the number of gallons of water per person per day used by the residential customers a supplier serves. R-GPCD is calculated using the following equation:

$$\frac{[(\text{TMP} \times \text{PRU}) / \text{TPS}] / \text{number of days in the month}}$$

Where: TMP is the Total Monthly Potable Water Production

 PRU is the Percent Residential Use

 TPS is the Total Population Served

f. Who will enforce the required reductions in water use?

The State Water Board is primarily responsible for enforcing the required reduction in water use. The Proposed Emergency Regulation includes two additional enforcement tools that could be used alone, or in combination with other tools, to address the following compliance problems:

- Failure of water suppliers to file reports as required by the regulation;
- Failure to implement prohibitions and restrictions as described in the Governor's Executive Orders and the emergency regulation; and
- Failure of water suppliers to meet the assigned water use reduction target.

Violations of prohibited and restricted activities are considered infractions and are punishable by fines of up to \$500 for each day in which the violation occurs. Any peace officer or employee of a public agency charged with enforcing laws and authorized to do so by ordinance may issue a citation to the violator. In many areas, local water suppliers have additional compliance and enforcement authorities that will continue to be used to address water waste.

g. Over what period of time will the State consider compliance with the required reduction?

To determine if urban water suppliers (those with over 3,000 service connections or that deliver more than 3,000 acre-feet of water in a year) are meeting required use reductions, water production data, as reported by each individual water supplier for the months of June 2015 through February 2016, will be compared to the same period(s) in 2013. Given the severity of the current drought, compliance will be assessed both on a monthly and a cumulative basis under the Proposed Emergency Regulation.



h. Will businesses and industry be required to reduce the amount of water needed for manufacturing and other purposes?

There are no specific percentage reductions assigned to any sector of a water supplier's service area. Under the Proposed Emergency Regulation, each affected water supplier will be required to reduce its total potable water production by a specified percentage. Water suppliers will determine locally the actions that they will take to ensure that their commercial, industrial and institutional sectors are contributing to meeting these requirements and in what amounts. For many commercial, industrial, and institutional water users, we envision that the majority of their water savings would be achieved through a reduction in outdoor water use and improved efficiency.

i. Will hospitals and health care facilities be required to reduce their water use?

Similar to the question above, there is no specific percentage reduction assigned to any sector of a water supplier's service area. Under the Proposed Emergency Regulation, each affected water supplier will be required to reduce their total potable water production by a specified percentage. Water suppliers will determine locally the actions that they will take to ensure that they are meeting these requirements. Regardless, institutions, such as hospitals, should evaluate whether a reduction in outdoor irrigation use could produce significant water savings.

j. If a water supplier lowers its water production below the 3,000 AF urban water supplier threshold through conservation, are they then subject to the small water supplier requirements?

Urban water suppliers whose Total Potable Water Production falls below 3,000 acre feet as a result of implementation of actions to reduce water use are not re-designated as small water supplier for purposes of achieving the conservation standard at this time.

k. How should a water supplier address new connections that increase Total Potable Water Production during the timeframe of the regulation?

With the limitation on the duration of the emergency regulation to 270 days, water suppliers should account for increased water use due to future building activity in their identification and implementation of conservation actions to achieve the conservation standard for their service area. For example, some agencies have used an offset system, where new buildings retrofit older buildings to achieve water savings equal to or greater than the use they propose to add.



Fact Sheet

I. How will increases in Total Potable Water Production, in response to firefighting activities, be considered for purposes of compliance assessment?

Water suppliers that are significantly off-track in meeting their conservation standard will be directed to submit information on their conservation actions, rates and pricing and enforcement efforts to determine the actions needed to come into compliance. The State Water Board will assess this information, including factors beyond the water supplier's control, as it considers next steps.

m. How will the regulation affect urban water suppliers that provide water to agricultural areas?

Urban water suppliers delivering more than 20 percent of their total potable water production to commercial agriculture may be allowed to modify the amount of water subject to their conservation standard. These suppliers must provide written certification to the Board to be able to subtract the water supplied to commercial agriculture from their total potable water production for baseline conservation purposes. The supplier must submit to the Department of Water Resources an Agricultural Water Management Plan for that water supplied for commercial agricultural purposes.

n. Does the regulation affect private or public swimming pools?

The Proposed Emergency Regulation does not prohibit the filling of private or public swimming pools. However, water suppliers will decide how to meet their conservation standard, which could include limitations on the filling of swimming pools.

o. Are Home Owners Associations (HOAs) subject to the new regulation?

Under the Proposed Emergency Regulation, each urban water supplier will be required to reduce their total potable water production by a specified percentage. Water suppliers will determine locally the actions they will take to ensure that they are meeting these requirements. HOAs will be subject to the requirements of their local water supplier. In addition, HOAs are, like all Californians, subject to the individual prohibitions contained in the existing emergency regulations and Executive Orders.

The prohibitions that apply to everyone include:

- Using potable water to wash sidewalks and driveways;
- Allowing runoff when irrigating with potable water;



- Using hoses with no shutoff nozzles to wash cars;
- Using potable water in decorative water features that do not recirculate the water;
- Irrigating outdoors during and within 48 hours following measureable rainfall;
- Irrigation with potable water of ornamental turf on public street medians;
- Irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems; and
- Restaurants serving water to their customers unless the customer requests it.

p. Why do urban water suppliers have different conservation standards?

The Governor's April 1, 2015 Executive Order directed the Board to implement mandatory water reductions in urban areas to reduce potable urban water usage by 25 percent statewide. He also directed that this regulation take into account the different levels of conservation already achieved by communities based upon their relative per capita water usage. Many communities have been conserving for years. Some of these communities have achieved remarkable results with residential water use now hovering around the statewide target for indoor water use, while others are using many times more. Everyone must do more, but the greatest opportunities to meet the statewide 25 percent reduction in potable water use now exists in those areas with higher water use. Often, but not always, these water suppliers are located in areas where the majority of the water use is directed at outdoor irrigation due to lot size and other factors.

The Proposed Emergency Regulation assigns each of the 411 urban water suppliers to a tier of water reduction based upon three months of summer R-GPCD data (July 2014- September 2014). There are nine tiers that range from 4% to 36% conservation. Collectively, the 411 water suppliers should achieve a 25% reduction in potable water use statewide. This equates to approximately 1.3 million acre-feet of water over the next nine months, or nearly as much water as is currently in Lake Oroville.

(This Frequently Asked Questions document was updated April 28, 2015.)



State Water Resources Control Board**NOTICE OF PROPOSED EMERGENCY RULEMAKING
April 29, 2015****Prohibition of Activities and Mandatory Actions during Drought Emergency****Required Notice of Proposed Emergency Action**

Government Code section 11346.1, subdivision (a)(2) requires that, at least five working days prior to submission of a proposed emergency regulation to the Office of Administrative Law (OAL), the adopting agency must provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency. After the submission of the proposed emergency action to OAL, OAL shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code section 11349.6. This document and the accompanying information provide the required notice.

Proposed Emergency Action

On January 17, 2014, Governor Brown declared a drought state of emergency. On April 25, 2014 the Governor signed an Executive Order calling on the State to redouble state drought actions. Among other things, the Executive Order directed the State Water Board to adopt emergency regulations as it deems necessary, pursuant to Water Code section 1058.5, to ensure that Urban Water Suppliers implement drought response plans to limit outdoor irrigation and other wasteful water practices.

Water Code section 1058.5 grants the State Water Resources Control Board (State Water Board) the authority to adopt emergency regulations in certain drought years in order to: "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter's priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports."

On July 15, 2014, the State Water Board adopted [Resolution 2014-0038](#), which adopted an emergency regulation for water conservation that added new sections to title 23 of the California Code of Regulations. That emergency regulation became effective on July 28, 2014, upon approval by the Office of Administrative Law and filing with the Secretary of State. On March 17, 2015, the State Water Board amended and readopted the emergency regulation through adoption of Resolution 2015-0013, and the amended and readopted regulation took effect on March 27, 2015, upon approval by the Office of Administrative Law and filing with the Secretary of State. On April 1, 2015, Governor Brown signed Executive Order B-29-15, directing the State Water Board to, among other things, impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, as compared to the amount used in 2013. On May 5 the State Water Board will consider a resolution to amend and readopt the existing emergency regulation, with some significant updates to address the actions called

for in Executive Order B-29-15, for an additional 270 days. The proposed updated emergency regulation consists of four main types of requirements: a prohibition on certain irrigation practices; an order that all urban water suppliers, as defined, reduce their total potable water production by a defined percentage; an order that other distributors of public water supply, as defined, reduce potable water consumption; and an order for all self-supplied commercial, industrial, and institutional water users to reduce potable water usage. The proposed regulation also includes reporting requirements and new tools to ensure compliance.

Proposed Text of Emergency Regulations

See the attached proposed text of the emergency regulation.

Finding of Emergency (Gov. Code, § 11346.1, subd. (b))

The State Water Board finds that an emergency exists due to severe drought conditions and that adoption of the proposed emergency regulation is necessary to address the emergency. California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all of the demands for water in the State. On January 17, 2014, Governor Edmund G. Brown, Jr. declared a drought state of emergency. On April 25, 2014 the Governor signed an Executive Order (April 2014 Proclamation) stating, among things, "*...that severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.*" Due to these concerns, the April 2014 Proclamation directs the State Water Board to adopt emergency regulations as it deems necessary, pursuant to Water Code section 1058.5, to ensure that urban water suppliers implement drought response plans to limit outdoor irrigation and other wasteful water practices. The April 2014 Proclamation suspended the requirement for review under the California Environmental Quality Act (CEQA) for certain activities, including adoption of emergency regulations by the Board pursuant to Water Code section 1058.5. On December 22, 2014, Governor Brown issued [Executive Order B-28-14](#), which extended the suspension of the CEQA for certain activities contained in the January 2014 and April 2014 Proclamations, including Board adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016.

On April 1, 2015, Governor Brown signed Executive Order B-29-15, directing the State Water Board to, among other things, impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, as compared to the amount used in 2013. The order mandates that the Governor's January 17, 2014 Proclamation, April 25, 2014 Proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

On July 15, 2014 the State Water Board approved an emergency regulation for urban water conservation. The emergency regulation took effect on July 28, 2014 upon approval by the Office of Administrative Law. On March 17, 2015, the State Water Board amended and readopted the emergency regulation through adoption of Resolution 2015-0013, and the amended and readopted regulation took effect on March 27, 2015. The proposed action is needed to ensure urban water suppliers and all Californians are taking sufficient actions to conserve water and preserve the State's water supply and to help prevent the waste and unreasonable use of water during a period when the Governor has issued a proclamation of emergency based upon drought conditions.

The State Water Board is unable to address the situation through non-emergency regulations because the standard rulemaking process cannot timely address the current severe drought emergency that is the focus of these regulations. Furthermore, as noted above, the Governor's April 1, 2015 Executive Order directs the State Water Board to adopt emergency regulations pursuant to Water Code section 1058.5 to address the issues that are the focus of this proposed regulation.

Authority and Reference (Gov. Code, § 11346.5, subd. (a)(2))

Water Code sections 1058 and 1058.5 provide authority for the emergency regulation. The proposed updated emergency regulation implements, interprets, or makes specific California Constitution Article, X, section 2; Water Code sections 100, 102, 104, 105, 174, 186, 187, 275, 350, 1051, 1122, 1123, 1825, 1846, 10617, and 10632; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

Informative Digest (Gov. Code, § 11346.5, subd. (a)(3))

Absent the existing emergency regulation, there is no statewide prohibition on specific water uses to promote conservation. There is also no law or regulation requiring urban water suppliers to make specific potable water use reductions or report the amount of water they produce to the state. The existing emergency regulation constitutes the first statewide directive to urban water users to undertake specific actions to respond to the drought emergency and the first statewide directive setting enforceable conservation performance standards for urban water suppliers; consequently, the proposed regulation is consistent and compatible with existing regulations on this subject. The proposed regulation neither differs from nor conflicts with an existing comparable federal statute or regulation.

The proposed regulation, as updated, consists of four main types of requirements: a prohibition on certain irrigation practices; an order that all urban water suppliers, as defined, reduce their total potable water production by a defined percentage; an order that other distributors of public water supply, as defined, reduce potable water consumption; and an order for all self-supplied commercial, industrial, and institutional water users to reduce potable water usage. The proposed regulation also includes reporting requirements and new tools to ensure compliance. All of these requirements are intended to safeguard urban water supplies in the event of continued drought, minimize the potential for waste and unreasonable use of water, and achieve the 25 percent statewide potable water usage reduction ordered by Governor Brown. It is both reasonable and prudent to maintain urban water supplies to the maximum extent feasible to provide local agencies with the necessary flexibility to meet the health and safety needs of Californians during the drought emergency. April 2015 surveys revealed the lowest Sierra snow water content in California's recorded history. California has been subject to multi-year droughts in the past climate science indicates that the Southwestern United States are becoming drier, increasing the likelihood of severe and prolonged droughts. Drought conditions have already forced the State Water Board to curtail surface water diversions, and many groundwater basins around the state are already in overdraft conditions that will likely worsen due to groundwater pumping this summer. Many water supply systems face a present or threatened risk of inadequate supply. Should drought conditions persist into 2016, more water supply systems will experience shortages, presenting a great risk to the health and safety of the people supplied by those systems. Maintaining urban water supplies through enhanced conservation will reduce the risks to health and safety, and the negative impacts to the State's economy.

Each of the specific prohibitions on water uses is necessary to help prevent the waste and unreasonable use of water and to promote water conservation to maintain an adequate supply during the drought emergency. These prohibitions affect practices that use excessive amounts of water or where more efficient and less wasteful alternatives are available. These practices

are particularly unreasonable during a drought due to the need to conserve limited water supplies to meet health and safety needs.

Additional benefits will be realized should the Board adopt the proposed regulation. These benefits include the following:

- Incentives to eliminate ornamental turf will generate additional economic activity, such as investments in drought-tolerant landscaping.
- Increased water quality in receiving waters due to lower runoff volumes.
- More effective tracking of total urban water use.
- Reduced potential for severe economic disruption due to water shortages if 2016 is another dry year.
- Increased drought awareness and shared sense of responsibility among urban water users as well as out-of-state guests at California hotels, motels, restaurants and bars.

These benefits will offset some of the fiscal impacts to water suppliers when benefits and costs are viewed from a statewide perspective. Therefore, these benefits provide additional justification for adopting the proposed regulation.

Proposed section 863 sets forth the State Water Board's findings of drought emergency, noting the Governor's adoption of multiple emergency proclamations pertaining to drought conditions, the persistence of drought conditions, the dry nature of the preceding three years, and the likelihood that drought conditions will continue.

Proposed section 864 prohibits several activities, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency, to promote conservation. The section prohibits the application of water to outdoor landscapes in a manner that causes visible runoff; the use of a hose to wash an automobile except where the hose is equipped with a shut-off nozzle; the application of water to hardscapes, the use of potable water in non-recirculating ornamental fountains; the application of potable water to outdoor landscapes during or within 48-hours after measurable rainfall; the irrigation of ornamental turf on public street medians with potable water; and the irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. This section also prohibits serving water except when requested in restaurants and bars and requires the operators of hotels and motels to offer patrons the option of not having their towels and linens washed daily. Finally, under this section, commercial, industrial and institutional users not served by either type of water supplier regulated by section 865 must either limit the number of days they water outdoor turf and ornamental landscapes to no more than two days per week or reduce their total potable water production by 25 percent as compared to 2013.

Proposed section 865 directs urban water suppliers to meet specified conservation standards and to report specific information to the State Water Board. Section 865 groups the larger urban water suppliers by R-GPCD and requires the suppliers in each group to meet a specified percentage conservation standard during the months of June 2015 through February 2016, as compared to the same months in 2013. Those suppliers whose R-GPCD are lower and therefore have less ability for dramatic reductions without impacting indoor uses required for human health and safety have relatively lower conservation standards, though all suppliers are assigned some level of required reductions to meet the Governor's call for a 25 percent

statewide reduction in potable urban water use and to minimize the potential for waste and unreasonable use of water. This section also requires smaller urban water suppliers, defined as any distributor of a public water supply, whether publicly or privately owned and including a mutual water company, but not meeting the definition of urban water suppliers in water code section 10617, to either limit the number of days that outdoor watering of turf and ornamental landscapes is allowed to no more than two days per week or to reduce their total potable water production by 25 percent as compared to 2013.

Proposed section 866 provides the State Water Board with additional emergency enforcement tools to ensure that water suppliers and users are on track to achieve their required savings throughout the effective period of the regulation. A conservation order would be an enforceable order by the Board requiring the recipient to take specified actions immediately. An informational order issued by the Board would require the recipient to submit additional information relating to water production, water use or water conservation. Both conservation orders and informational orders issued by the Board would be subject to reconsideration by the Board and violations would be subject to enforcement pursuant to Water Code section 1846.

Other Matters Prescribed by Statute (Gov. Code, § 11346.5, subd. (a)(4))

The proposed emergency regulation would be adopted to help prevent the waste and unreasonable use of water and to promote water conservation in response to conditions which exist, or are threatened, in a critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years or during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions.

Local Mandate (Gov. Code, § 11346.5, subd. (a)(5))

The State Water Board has determined that adoption of proposed sections 863 and 864 does not impose a new mandate on local agencies or school districts. The sections are generally applicable law.

The State Water Board has further determined that adoption of proposed sections 865 and 866 do not impose a new mandate on local agencies or school districts, because the local agencies affected by the section have the authority to levy service charges, fees, or assessments sufficient to pay for the mandate program or increased level of service. (See Gov. Code, § 17556.)

Estimate of Cost or Savings (Gov. Code, § 11346.5, subd. (a)(6))

Increased urban water conservation will result in reduced water use, which in turn will result in reduced water sales and lost revenue for urban water suppliers or distributors of a public water supply. This loss in revenue will be a function of the amount of water conserved (and therefore not sold) and the unit price that water would have sold for. In addition to lost revenue from reduced water sales, urban water suppliers will also incur costs associated with water production reporting as required by the proposed emergency regulations. The State Water Board estimates that local agencies that are urban water suppliers or distributors of a public water supply could collectively realize as much as \$510,000,000 in lost revenue as a result of implementing the proposed regulation. Additionally, the reporting costs to local government are estimated to be \$1,656,980. The total costs to local government are therefore estimated to be \$511,656,980, which is the sum of estimated lost revenues and the estimated reporting costs. This analysis conservatively assumes that even though those costs likely can be recouped by those agencies through rates, they will not be recouped during the effective period of the

regulation and are considered costs to the supplier, but not a local mandate as the costs are ultimately recoverable.

Implementation of the proposed emergency regulation will result in additional workload for the State Water Board and possibly for the Department of Water Resources. At present this work is accomplished through redirection of resources within existing agency budgets. However, the State Water Board anticipates the need for additional resources (up to two PYs) to conduct activities related to the emergency regulation.

The above summary information is explained in greater detail in the State Water Board's Emergency Regulations Digest, which is attached.

Emergency Regulations Digest (Gov. Code , § 11346.1, subd. (b))**Prohibition of Activities and Mandatory Actions During Drought Emergency – Informative Digest (Emergency Regulation Digest (Gov. Code , § 11346.1, subd. (b))****FINDING OF EMERGENCY**

The State Water Resources Control Board (State Water Board or Board) finds that an emergency exists due to severe drought conditions and that adoption of the proposed emergency regulation is necessary to address the emergency. California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all of the demands for water in the State. On January 17, 2014, Governor Edmund G. Brown, Jr. declared a drought state of emergency. On April 25, 2014, the Governor signed an Executive Order (April 2014 Proclamation) stating, among other things, "*...that severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.*"

On December 22, 2014, Governor Brown issued [Executive Order B-28-14](#), which extended the suspension of the CEQA for certain activities contained in the January 2014 and April 2014 Proclamations, including the State Water Board adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016. On March 17, 2015, the Board adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers, i.e. those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, excluding wholesalers, to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed Executive Order B-29-15, directing the State Water Board to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, as compared to the amount used in 2013. The Governor instructed the State Water Board to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the Governor's January 17, 2014 Proclamation, April 25, 2014 Proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

Emergency Regulations Digest (Gov. Code , § 11346.1, subd. (b))

Executive Order B-29-15 also directs the State Water Board to require that commercial, industrial, and institutional properties implement water efficiency measures consistent with the reduction targets. The order instructs the State Water Board to prohibit irrigation with potable water of ornamental turf on public street medians, and to prohibit irrigation of landscapes with potable water outside newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission.

Authority for Emergency Regulations

Water Code section 1058.5 grants the State Water Board the authority to adopt emergency regulations during a period when the Governor has issued a proclamation of emergency based upon drought conditions or in response to drought conditions that exist, or are threatened, in a critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years. The State Water Board may adopt regulations under such circumstances to: "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter's priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports."

Emergency regulations adopted under Water Code section 1058.5 may remain in effect for up to 270 days. Per Water Code section 1058.5, subdivision (b), any findings of emergency the State Water Board makes in connection with the adoption of an emergency regulation under the section are not subject to review by OAL.

Government Code section 11346.1, subdivision (a)(2) requires that, at least five working days prior to submission of the proposed emergency action to OAL, the adopting agency provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency. After submission of the proposed emergency regulations to OAL, OAL shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code Section 11349.6.

The information contained within this finding of emergency provides the information necessary to support the State Water Board's emergency rulemaking under Water Code section 1058.5 and also meets the emergency regulation criteria of Government Code section 11346.1 and the applicable requirements of section 11346.5.

Evidence of Emergency

The U.S. Drought Monitor currently classifies almost the entire state of California as experiencing severe to exceptional drought conditions. In most years, California

Emergency Regulations Digest (Gov. Code , § 11346.1, subd. (b))

receives about half of its precipitation in the months of December, January and February, with much of that precipitation falling as snow in the Sierra. Only a handful of large winter storms can make the difference between a wet year and a dry one. In normal years, the snowpack stores water during the winter months and releases it through melting in the spring and summer to replenish rivers and reservoirs. However, warm and relatively dry weather conditions this year have reduced the amount of snowpack in California's mountains. As of April 27, 2015, Sacramento Region cumulative precipitation was 76 percent of average for that date (8-Station Index). However, most of that precipitation fell as rain, and Northern Sierra snow water content remained extremely low, at only 1 percent of normal for that date. Similarly, Central and Southern Sierra snowpack is at 6 and 4 percent of normal, respectively. This is California's lowest Sierra snow water content in recorded history. Due to the continuing dry conditions, on April 3, and April 17, 2015, the State Water Board issued Orders of Curtailment of Surface Water Diversions in the Antelope Creek and Deer Creek Watersheds respectively. On April 23, Notices of Curtailment of Water Right Diversions were issued in the Scott River Watershed. Again, on April 23, Notices of Curtailment of Surface Water Diversions were issued to water right holders in the San Joaquin River Watershed.

In this fourth year of record dry conditions, storage in California's reservoirs is below average levels. Current storage levels in key reservoirs reflect this trend. Shasta Lake, California's and the Central Valley Project's (CVP) largest reservoir, is at 59 percent of its 4.5 million acre-feet (MAF) capacity (69 percent of its historical average for this date). Lake Oroville, the State Water Project's (SWP) principal reservoir, is at 51 percent of its 3.5 MAF capacity (63 percent of its historical average for the date). Folsom Reservoir is at 59 percent of its 1 MAF capacity (80 percent of average for this date). New Melones Reservoir is at 21 percent of its 2.4 MAF capacity (33 percent of average for this date). New Don Pedro Reservoir is at 41 percent of its 2 MAF capacity (57 percent of average for this date).

Local, state, and federal water agencies across California have limited supplies due to the drought. In response, those agencies have taken various actions, including reducing or eliminating contract water deliveries and implementing mandatory and voluntary conservation efforts.

Need for the Regulation

To address the increasing severity of the drought emergency, Governor Brown directed the State Water Board to impose restrictions on water suppliers to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, compared to the amount used in 2013. In this fourth year of exceptional drought, immediate action is needed to meet the Governor's directive, to prevent the waste and unreasonable use of water, and to conserve remaining water supplies. Data collected by the State Water Board under the existing emergency regulation demonstrate that urban water conservation efforts should be increased to minimize the risk of severe supply

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shortages should drought conditions persist. Without adequate reserves, water suppliers will be unable to address the drought emergency. The emergency regulation quickly and effectively implements and enforces mandatory water conservation measures to help preserve the State's supplies during the ongoing drought emergency. The proposed regulation will help prevent the waste and unreasonable use of water and promote water conservation during a period when the Governor has issued a proclamation of emergency based upon drought conditions.

While the State Water Board is not, through this rulemaking, declaring any particular use or practice a waste or unreasonable use of water, it is necessary based on the severity of the current drought conditions that all reasonable efforts be taken to prevent the waste or unreasonable use of water. As the California Supreme Court has long held, "what may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time." (*Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463, 1479 (*Light*), quoting *Tulare Dist. v. Lindsay Strathmore Dist.* (1935) 3 Cal.2d 489, 567.) The Supreme Court has further clarified that "although, as we have said, what is a reasonable use of water depends on the circumstances of each case, such an inquiry cannot be resolved *in vacuo* isolated from statewide considerations of transcendent importance. Paramount among these we see the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in [Article X, Section 2.]" (*Light, supra*, 226 Cal.App.4th at 1479, quoting *Joslin v. Marin Mun. Water Dist.* (1967) 67 Cal. 2d 132, 138.)

Description and Effect of Proposed Regulation

The proposed regulation, as updated, consists of four main types of requirements: a prohibition on certain irrigation practices; an order that all urban water suppliers, as defined, reduce their total potable water production by a defined percentage; an order that other distributors of public water supply, as defined, reduce potable water consumption; and an order for all self-supplied commercial, industrial, and institutional water users to reduce potable water usage. The proposed regulation also includes reporting requirements and new tools to ensure compliance.

All of these requirements are intended to safeguard urban water supplies in the event of continued drought, minimize the potential for waste and unreasonable use of water, and achieve the 25 percent statewide potable water usage reduction ordered by Governor Brown. It is both reasonable and prudent to maintain urban water supplies to the maximum extent feasible to provide local agencies with the necessary flexibility to meet the health and safety needs of Californians during the drought emergency. April 2015 surveys revealed the lowest Sierra snow water content in California's recorded history. California has been subject to multi-year droughts in the past. Climate science indicates that the Southwestern United States is becoming drier, increasing the likelihood of

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severe and prolonged droughts. Drought conditions have already forced the State Water Board to curtail surface water diversions, and many groundwater basins around the state are already in overdraft conditions that will likely worsen due to groundwater pumping this summer. Many water supply systems face a present or threatened risk of inadequate supply. Should drought conditions persist into 2016, more water supply systems will experience shortages, presenting a great risk to the health and safety of the people supplied by those systems. Maintaining urban water supplies through enhanced conservation will reduce the risks to health and safety, and the negative impacts to the State's economy.

Each of the specific prohibitions on water uses and other end user requirements are necessary to promote water conservation to maintain adequate supplies during the drought emergency, which cannot be done if water is being used in a wasteful or unreasonable manner. These requirements affect practices that use excessive amounts of water or where more efficient and less wasteful alternatives are available. These practices are particularly unreasonable during a drought due to the need to conserve limited water supplies to meet health and safety needs. Exceptions to meet immediate health and safety concerns or to comply with state or federal permit requirements are available, however.

A prohibition on the irrigation with potable water of ornamental turf on public street medians is necessary to promote water conservation, minimize the potential for waste and unreasonable use, and address the drought emergency. Irrigating ornamental turf on street medians with potable water cannot be considered necessary or reasonable during such severe drought conditions. Ornamental turf on street medians does not provide for domestic use, sanitation, or fire protection, which are the primary needs that public water supply distributors must meet during drought periods. (Wat. Code, § 354). It is not the intent of this rule, however, to prohibit reasonable targeted water application to trees to protect their health. Healthy urban trees provide multiple health and safety benefits, such as providing shade and reducing the urban heat island effect, thereby reducing the impacts from extreme heat days.

The proposed regulation prohibits irrigation with potable water of landscapes outside of newly constructed homes and in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission (BSC), the agency responsible for building standards. Coordination with the BSC is necessary to implement Executive Order B-29-15's directive to prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. This requirement meets the definition of a building standard under section 18909 of the Health and Safety Code. This prohibition promotes water conservation, minimizes the potential for waste and unreasonable use, and addresses the drought emergency by requiring technologies that reduce runoff, overspray and evaporation. The rule encourages new construction to plan for this drought and for future droughts by installing water efficient irrigation systems. Because efficient irrigation outside new uses less potable water than many current practices, this prohibition regarding new construction provides an opportunity for reduction of potentially wasteful practices.

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Reducing potable water use supplied by urban water suppliers is necessary to promote conservation, minimize the potential for waste and unreasonable use, and address the drought emergency because mandatory restrictions have proven to be effective at reducing water use. The proposed regulation allows suppliers discretion as to how they meet their reduction targets. This gives urban water suppliers flexibility to work with their customers and identify and make reductions from the least essential and the most wasteful practices and areas, like outdoor ornamental landscape irrigation, while protecting paramount uses, like domestic water supply, sanitation, and fire protection. The proposed regulation includes alternative compliance for the handful of urban water suppliers with significant commercial agricultural operations within their service area. Each urban water supplier that provides 20 percent or more of its total potable water production for commercial agricultural use meeting the definition of Government Code section 51201, subdivision (b) may subtract the amount of water supplied for commercial agricultural use from its potable water production total, provided that the supplier complies with the Agricultural Water Management Plan requirement of paragraph 12 of the Governor's April 1, 2015 Executive Order.

Grouping urban water suppliers based on residential per capita daily water usage (R-GPCD), and setting different conservation standards for each grouping based on that relative use, promotes water conservation and equity by ensuring that those with the highest levels of residential per capita water usage make greater reductions. Tiering also promotes equity by recognizing past conservation gains, setting lower conservation standards for communities that have already reduced their R-GPCD to low levels. The regulation provides for the handful of communities not experience surface water shortage to apply for a lower conservation standard. All Californians need to do their part to bring their water use to reasonable levels that reflect the severity of this drought.

Smaller urban water suppliers and self-supplied commercial, industrial and institutional users also are being required to do their part to meet the Governor's call for a statewide 25 percent reduction in potable urban water use and reduce potentially wasteful or unreasonable uses of water during this drought emergency. It is necessary and appropriate that these suppliers and users either reduce potable water usage by 25 percent or reduce outdoor watering of ornamental landscapes to no more than two days per week. The alternative limit on outdoor water use is anticipated to promote largely equivalent levels of conservation as the 25 percent performance standard because outdoor irrigation accounts on average for 44 percent of urban water use, because outdoor irrigation is generally more discretionary than other types of use, and because studies have shown that urban landscapes are often over-watered. It is important to note that in some areas of the state, irrigation of outdoor ornamental landscapes can account for as much as 80 percent of the water use. Limiting the number of days per week of outdoor irrigation increases conservation and reduces the likelihood of over-irrigation and visible runoff. Giving these smaller suppliers and self-supplied users two different options allows them to identify and make reductions from the least essential and the most wasteful practices considering their general size and financial limitations compared to larger suppliers.

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The requirement for urban water suppliers with 3,000 or more service connections to provide the State Water Board with monthly potable water production figures, estimates of residential gallons per capita per day (R-GPCD), details of outdoor use restrictions, local compliance and enforcement actions, and information on commercial, industrial and institutional water use is necessary so that the State Water Board can track the effectiveness of the proposed regulation and urban water conservation actions. Such monitoring reports will document the effectiveness of existing conservation efforts and inform whether further actions are necessary to address the drought emergency.

Estimate of Water Savings from Proposed Regulation

The Governor's April 1, 2015 Executive Order called for a statewide 25 percent reduction in potable urban water use as compared to 2013. Based on aggregated monthly reports from California's 411 urban water suppliers, 2013 urban potable water use for the 90 percent of the population served by an urban water supplier was approximately 5.2 million acre feet statewide. While the Board does not have comparable data on the 10 percent of the population served by small water suppliers, and water use by self-supplied commercial, institutional, and industrial users, it is assumed that their use is equivalent to the population served. Accordingly, total 2013 urban water use is estimated at approximately 5.8 million acre-feet. Therefore, a 25 percent reduction in such use would equate to savings of approximately 1.45 million acre-feet of water. However, since the Board's is uncertain of the usage and savings likely to be achieved by small water suppliers and self-supplied commercial, institutional, and industrial users, the Board has been using 1.3 million acre-feet as a conservative savings estimate based solely upon reductions by urban water suppliers.

The State Water Board expects that most of this savings would come from reduction in or elimination of irrigation of ornamental landscapes with potable water, which currently is estimated to consume around 44 percent of statewide urban use. The requirement that urban water suppliers meet their specified conservation standard would, in some cases, entail restrictions on use by other customer classes, including residential indoor use or commercial, industrial and/or institutional uses. Giving suppliers the flexibility to identify where and how they can best achieve their required savings maximizes their ability to do so by targeting the least essential and most wasteful practices, as different communities have different water needs and values.

At the time that the State Water Board adopted the existing water conservation emergency regulation, many California urban water suppliers were already implementing significant water conservation measures. Based on the most recent data submitted pursuant to the existing emergency water conservation regulation, current conservation efforts have already lead to an approximately nine percent reduction in total potable urban water use as compared to 2013. This shows both that significant reductions have already been made by current conservation efforts and that the state as a whole still has much to do in attaining the 25 percent reduction. Some communities have made greater conservation gains than others and won't have as far to go to reach

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their specified conservation standard, but it is expected that all suppliers will do their part to achieve the statewide savings.

Many studies have analyzed the response of urban populations to mandatory use restrictions imposed during drought conditions. Multiple studies conclude that mandatory use restrictions are more effective than voluntary conservation measures because areas that have imposed mandatory use restrictions have achieved greater use reductions than areas that imposed only voluntary measures, controlling for other variables. The amount of conservation achievable through mandatory restrictions varies. Conservation savings of up to 29 percent have been observed. For example, a study conducted on the effects of water demand management policies of eight California water agencies during the period from 1989-1996, which included three years of drought (1989-1991), found that rationing and use restrictions were correlated with use reductions of 19 percent and 29 percent, respectively. The study's authors concluded:

In general, relatively moderate (5-15%) reductions in aggregate demand can be achieved through modest price increases and "voluntary" alternative [Demand-Side Management] policy instruments, such as public information campaigns. However, to achieve larger reductions in demand (greater than 15%), policymakers will likely need to consider either relatively large price increases, more stringent mandatory policy instruments (such as use restrictions), or a package of policy instruments.

A recent study from UCLA on use reductions in Los Angeles during the 2007-2009 drought reached similar conclusions:

Our results indicate that mandatory restrictions are most effective at reducing water consumption for [Single-Family Residential] households. The greatest impact of measures resulted from the combination of mandatory watering restrictions and the price increase, which led to a water reduction of 23% in July/August 2009, while voluntary restrictions led to only a 6% reduction in water use.

In addition, a study of Virginia's severe 2002 drought found that mandatory use restrictions, coupled with an aggressive information and enforcement campaign, led to a 22 percent reduction in use. At the time of adoption of the existing emergency regulation, the State Water Board anticipated up to a 20 percent reduction in outdoor water use, totaling 0.48 million acre-feet, as calculated below.

- Total urban water use for outdoor irrigation: 3.9 MAF
- Urban water use for outdoor irrigation affected by the proposed regulation:
3.9*0.62 = 2.4 MAF
- Estimated conservation savings from adoption of the proposed regulation:
2.4*0.2 = 0.48 MAF

Based on data collected pursuant to the existing emergency regulation, approximately 0.38 MAF of water was actually saved between August 2014 and March 2015 as compared to the same period in 2013. This savings, however, was realized by all urban

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water suppliers, including those that were not required to make changes pursuant to the regulation (i.e., those that already had the same or similar requirements in place at the time the regulation was adopted). Thus, it is reasonable to attribute only approximately 62 percent of the 0.38 MAF of water savings to actions associated with the existing emergency regulation. This equates to approximately 0.24MAF of water saved through January 2015 as a result of adoption of the existing water conservation emergency regulation. As noted above, the State Water Board expects to achieve the called-for 1.3 million acre-feet of conservation due to the proposed emergency regulation through the end of February 2016.

Additional Benefits of Proposed Regulation

The State Water Board has determined that additional benefits will be realized should it adopt the proposed updated regulation. These benefits include the following:

- Incentives to eliminate ornamental turf will generate additional economic activity, such as investments in drought-tolerant landscaping.
- Increased water quality in receiving waters due to lower runoff volumes.
- More effective tracking of total urban water use.
- Reduced potential for severe economic disruption due to water shortages if 2016 is another dry year.
- Reduced potential for waste and unreasonable use of water.
- Increased drought awareness and shared sense of responsibility among urban water users as well as out-of-state guests at California hotels, motels, restaurants and bars.

These benefits will offset some of the fiscal impacts to water suppliers when benefits and costs are viewed from a statewide perspective. Therefore, these benefits provide additional justification for adopting the proposed regulations.

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Informative Digest

Summary of Existing Laws and Regulations

Absent the existing emergency regulation, there is no statewide prohibition on specific water uses to promote conservation. There is also no law or regulation requiring urban water suppliers to make specific potable water use reductions or report the amount of water they produce to the state. The existing emergency regulation constitutes the first statewide directive to urban water users to undertake specific actions to respond to the drought emergency and the first statewide directive setting enforceable conservation performance standards for urban water suppliers; consequently, the proposed regulation is consistent and compatible with existing regulations on this subject. The proposed regulation neither differs from nor conflicts with an existing comparable federal statute or regulation.

Description and Effect of Proposed Regulation

The proposed emergency amendment and re-adoption of section 863 sets forth the State Water Resources Control Board's (State Water Board) findings of drought emergency. The proposed emergency amendment and re-adoption of section 864 directs individuals statewide to refrain from engaging in certain activities and contains other commercial sector restrictions to promote conservation to meet the drought emergency. The proposed emergency amendment and re-adoption of section 865 directs urban water suppliers to meet specified conservation standards and to report

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information to the State Water Board. The proposed emergency adoption of section 866 provides the State Water Board with additional emergency enforcement tools to ensure that water suppliers and users are on track to achieve their required savings throughout the effective period of the regulation.

Proposed Emergency Regulation Section 863

Proposed section 863 sets forth the State Water Board's findings of drought emergency, noting the Governor's adoption of multiple emergency proclamations pertaining to drought conditions, the persistence of drought conditions, the dry nature of the preceding three years, and the likelihood that drought conditions will continue.

Proposed Emergency Regulation Section 864

Proposed section 864 prohibits several activities, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency, to promote conservation. The section prohibits the application of water to outdoor landscapes in a manner that causes visible runoff; the use of a hose to wash an automobile except where the hose is equipped with a shut-off nozzle; the application of water to hardscapes, the use of potable water in non-recirculating ornamental fountains; the application of potable water to outdoor landscapes during or within 48-hours after measurable rainfall; the irrigation of ornamental turf on public street medians with potable water; and the irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. This section also prohibits serving water except when requested in restaurants and bars and requires the operators of hotels and motels to offer patrons the option of not having their towels and linens washed daily. Finally, under this section, commercial, industrial and institutional users not served by either type of water supplier regulated by section 865 must either limit the number of days they water outdoor turf and ornamental landscapes to no more than two days per week or reduce their total potable water production by 25 percent as compared to 2013.

Proposed Emergency Regulation Section 865

Proposed section 865 directs urban water suppliers to meet specified conservation standards and to report specific information to the State Water Board. Section 865 groups the larger urban water suppliers by R-GPCD and requires the suppliers in each group to meet a specified percentage conservation standard during the months of June 2015 through February 2016, as compared to the same months in 2013. Those suppliers whose R-GPCD are lower and therefore have less ability for dramatic reductions without impacting indoor uses required for human health and safety have relatively lower conservation standards, though all suppliers are assigned some level of required reductions to meet the Governor's call for a 25 percent statewide reduction in potable urban water use and to minimize the potential for waste and unreasonable use of water. This section provides alternative compliance mechanisms for the handful of urban water suppliers with significant commercial agricultural operations in their service area. This section also requires smaller urban water suppliers, defined as any distributor

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of a public water supply, whether publicly or privately owned and including a mutual water company, but not meeting the definition of urban water suppliers in water code section 10617, to either limit the number of days that outdoor watering of turf and ornamental landscapes is allowed to no more than two days per week or to reduce their total potable water production by 25 percent as compared to 2013.

Proposed Emergency Regulation Section 866

Proposed section 866 provides the State Water Board with additional emergency enforcement tools to ensure that water suppliers and users are on track to achieve their required savings throughout the effective period of the regulation. A conservation order would be an enforceable order by the Board requiring the recipient to take specified actions immediately. An informational order issued by the Board would require the recipient to submit additional information relating to water production, water use or water conservation. Both conservation orders and informational orders issued by the Board would be subject to reconsideration by the Board. Violations would be subject to enforcement pursuant to Water Code section 1846.

Authority and Reference Citations

For Section 863

Authority: Wat. Code, § 1058.5.

References: Cal. Const., Art., X § 2; Wat. Code, §§ 102, 104, 105, 275; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

For Section 864

Authority: Wat. Code, § 1058.5.

References: Cal. Const., Art., X § 2; Wat. Code, §§ 102, 104, 105, 275, 350, 10617; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

For Section 865

Authority: Wat. Code, § 1058.5.

References: Cal. Const., Art., X § 2; Wat. Code, §§ 102, 104, 105, 275, 1846, 350, 10617, 10632; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

For Section 866

Authority: Wat. Code, § 1058.5.

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References: Cal. Const., Art., X § 2; Wat. Code, §§ 102, 104, 105, 174, 186, 187, 275, 350, 1051, 1122, 1123, 1825, 1846, 10617, 10632; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

Mandate on Local Agencies or School Districts

The State Water Board has determined that adoption of sections 863 and 864 does not impose a new mandate on local agencies or school districts. The sections are generally applicable law.

The State Water Board has further determined that adoption of section 865 and 866 does not impose a new mandate on local agencies or school districts, because the local agencies affected by the section have the authority to levy service charges, fees, or assessments sufficient to pay for the mandate program or increased level of service. (See Gov. Code, § 17556.)

Suspension of California Environmental Quality Act

On April 24, 2014, the Governor issued an executive order addressing the drought emergency, which, among other things, suspended the California Environmental Quality Act (CEQA) as applied to the State Water Resources Control Board's adoption of emergency regulations to "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, to promote water recycling or water conservation, and to require curtailment of diversions when water is not available under the diverter's priority of right."

On December 22, 2014, Governor Brown issued Executive Order B-28-14, which extended the suspension of CEQA and Water Code section 13247 contained in the January 17, 2014 and April 25 Proclamation through May 31, 2016. The proposed emergency regulation falls under this suspension.

Emergency Regulations Digest (Gov. Code , § 11346.1, subd. (b))**Public Agency and Government Fiscal Impact Analysis****Summary**

Ongoing and increased urban water conservation will result in reduced water use by the customer, which in turn will result in reduced water sales and lost revenue for urban water suppliers. This loss in revenue will be a function of the amount of water conserved (and therefore not sold) and the unit price that water would have sold for. California Urban Water Supplier water rates are primarily comprised of a fixed and a variable component. The variable portion of the rate is based on the volume of water used by the customer and generally the fixed portion does not change with use. The variable portion of the rate therefore represents the unit cost of lost revenue.

Urban Water suppliers in California are comprised of governmental agencies, investor owned utilities that are regulated by the California Public Utilities Commission, and privately owned mutual water companies. Costs to investor owned utilities and mutual water companies need not be considered for the purposes of estimating the costs of the proposed regulation on local agencies. It is estimated that water suppliers that are local agencies will incur approximately 85% of the total costs to urban water suppliers.

In addition to lost revenue from reduced water sales, urban water suppliers will also incur costs associated with water production reporting as required by the proposed emergency regulation. Local governments may also see lower tax revenues from impacts the regulation may have on commercial, industrial and institutional users, but it is not anticipated that suppliers will focus on activities that would have tax revenue impacts if there are other water uses that can be reduced without such impacts.

Implementation of the proposed updated emergency regulation will result in additional workload for the State Water Board. Based on experience implementing the existing emergency regulation, the State Water Board estimates that two additional PYs (at a cost of \$254,000) will be needed to implement the updated emergency regulation.

Fiscal Impacts to Public Water Supply Agencies**Net Revenue Losses**

The proposed regulation's fiscal impact is the net revenue losses incurred by water agencies due to the effective percentage reduction in deliveries plus the reporting costs incurred by those agencies. The net revenue loss is equal to the product of the amount of required savings and the water price less variable cost, again, plus required reporting costs. The net revenue losses would be absorbed by water suppliers as fiscal deficits in the short run, but would ultimately be passed along to water customers through higher service charges and rates. Table 1 summarizes the net revenue loss estimate excluding reporting costs. For purposes of analyzing impacts on public agencies separately from investor-owned utilities and mutual companies, the impacts on those two groups are shown separately. State Water Board data on water sales shows that public agencies

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delivered about 85 percent of water sold in 2013 and revenues have been allocated proportionately on usage.

Table 1. 2015 Statewide Net Revenue Impacts

Statewide Impacts	
Total Statewide AF Savings Compared to 2013	1,300,000
Statewide AF Saved in 2014 by Local Actions	500,000
Statewide AF Saved through the Emergency Regulation	800,000
Utility Net Revenue Loss (\$) ¹	\$500 to \$600 million
Public Agencies Net Revenue Loss	\$425 to \$510 million
¹ Impacts rounded to nearest \$100 million.	

Data and Calculations

The baseline for this analysis is the effective water conservation percentage for each urban supplier in 2015 assuming continued conservation at 2014 levels. The fiscal effect is dominated by shortfalls in water agency net revenues due to the effective conservation requirements. This net revenue shortfall is conservatively assumed to be uncompensated by an increase in charges to water users during the effective period of the regulation. Price increases or service charges would be required to ensure the water agency remains revenue neutral. Given the inelastic demands for water used in this report, if water price increases were used to obtain conservation, the price increases needed to hold the agency revenue neutral might not be large enough to meet the conservation goals; some additional rationing or mandatory conservation would still be required.

Eventually, water suppliers would pass the net revenue loss onto their customers to raise money to pay fixed costs, debt service, overhead and similar expenses. At this time, consumer's discretionary income might be reduced. Both the net revenue losses and the consumer surplus losses ultimately will be borne by water users, since water utilities will have to adjust their service charges and rates over time to recover the forgone net revenue. This revenue would have gone to pay fixed enterprise costs. Municipal water service is extremely capital intensive and the majority of revenue is used to pay the fixed costs of plant, equipment, and workforce. Because most urban water suppliers in California recover a significant percentage of their fixed costs through their volumetric rates, a reduction in the sale of water will create a fiscal imbalance unless service charges and rates are adjusted to recover the forgone net revenue. The analytic approach relies on the following logic:

1. Calculate 2015 effective water conservation percentage for each water agency, defined as the mandated conservation percentage relative to 2013, less the percent conservation achieved in 2014 relative to 2013.

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2. The additional quantity of water savings required times the retail commodity rate, less variable costs of potable water production is the loss in water net revenue. This is a fiscal impact and an economic cost.¹
3. Calculate the resulting loss in consumer surplus; this is an economic cost with uncertain fiscal effects. Some of this loss represents consumer costs paid to reduce water use, but some is also the disutility or unhappiness of consumers who must sacrifice some of their enjoyment of their water.
4. For institutional water users primarily composed of government agencies, the cause-and-effect response to mandatory shortage is not the same as for households or commercial and industrial customers. For many institutional users, landscape water use might be reduced. While agencies could lay off staff or reduce spending on other operational inputs in response to temporary shortage, the need for agencies to maintain staffing and service levels set through agency budgeting processes suggests that the short-term economic effects of shortage would be limited. Additionally, public sector agencies are often unable to reduce payroll or staff levels, and may be more likely to run temporary budget deficits or to seek a temporary budget augmentation to offset cost increases.

To undertake these analytical steps, State Water Board data was used for the amount of water savings achieved by suppliers from June 2014 to February 2015, compared to 2013, for the same period.² That is, the proposed regulation's fiscal effects do not include savings achieved in 2014 relative to 2013, based on the assumption that the 2014 savings levels would continue in 2015 even without the proposed regulation. These data do not include March through May production, and it is assumed that the proposed regulation will lead to water supply reductions through February 2016.

It was assumed that without the proposed regulation, savings achieved by water suppliers in 2014 would have continued into 2015. As a result, the proposed regulation's impact would be the "Conservation Standard" less the "Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)." The analysis did not include any additional water supply cuts, beyond the "Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)" that

¹ In mandatory shortages lost revenues are equal to reduced end user water expenditures. End users do not pay the cost of water they are not allowed to use, but they also do not receive the benefit of the water they would have bought. Therefore the net welfare effect is the lost water revenue plus the lost consumer surplus of end users. However, since most water utilities are public agencies, they will be made fiscally whole at some future date to be determined by those individual agencies. Even investor-owned utilities, which in California operate under a revenue adjustment mechanism designed to maintain revenue neutrality, are likely to recover the lost revenues in future rates.

² California Water Boards, "Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction"; http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/urban_water_supplier_tiers.pdf

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would be caused by the drought in June 2015 through February 2016, even without the proposed regulation.³

Additional information on expected 2015 use, and sector-specific consumption, was extracted from the California Department of Water Resources’ Urban Water Management Plans (UWMP) database, which includes sector data for 363 agencies – for which costs by sector can be calculated – with no sector data available for 48 agencies. There are 11 agencies in the UWMP database that are not on the Board’s list; some of these are wholesale providers.

The analysis also relied on Black and Veatch (B&V) 2006 water rate data, which provided typical commodity charges and monthly service costs. If a supplier had no commodity charge it was assumed to be \$1 per hundred cubic feet (CCF).⁴ These rates were updated to 2015 dollars using the nominal rate increase factors from Table 2 below. For agencies for which no B&V rate data were available the following default water prices were used:

Table 2: Default Rate Increases and Water Prices by Region

	Nominal rate increases, 2006 to 2014	Default price, \$/AF
San Francisco Bay	2.00	\$1,500
South Coast	1.80	\$1,200
Central Coast	1.80	\$2,000
Others	1.14	\$500

Water rate data for some more-affected agencies were obtained directly from their rate structure information. The agencies with current data in the analysis are:

- Carlsbad Municipal Water District
- Coachella Valley Water District
- Contra Costa Water District
- City of Corona
- Cucamonga Valley Water District
- Desert WA
- Eastern Municipal Water District
- Elsinore Valley Municipal Water District
- City of Fullerton

The revenue loss was adjusted to remove variable cost savings assumed to be \$200 per acre-foot in most regions, and \$250 per acre-foot in the South Coast, Central Coast and Bay Area. These cost savings are reduced energy and operating expenses associated with not conveying, pumping, treating and distributing the water. The

³ It is probable that some water suppliers would have undertaken more conservation in 2015 than they did in 2014. Water supplier drought management plans typically are defined in terms of stages of use restriction. Stages of use restriction are triggered by prevailing supply and storage conditions. Given the lack of rainfall this winter it is reasonable to expect that some water suppliers (perhaps even many) would have moved into a higher use restriction stage this summer, regardless of the proposed regulation. However, it was not possible to assess this within the timeframe of this study.

⁴ A CCF is the standard “billing unit” used by most urban water agencies, equal to 748 gallons.

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resulting net revenue loss is equal to the product of the amount of required savings and the water price less variable cost. It is unaffected by the shape of the demand curve for water, i.e., how responsive water demand is to changes in rates does not affect this calculation.

Reporting Costs

The estimated cost of reporting as would be required by the proposed emergency regulation was determined by multiplying the total number of urban water suppliers that would be required to submit monthly water production reports by the estimated average time to compile and submit water production information and by an average staff cost per hour. Based on information collected by the State Water Board pursuant to the existing emergency regulation there are 411 urban water suppliers that are subject to the reporting requirements. The maximum amount of time to prepare and submit the water production data is estimated to be 4 hours per urban water supplier per month. The estimated average total hourly staff costs of urban water supplier staff required to complete the certification form is \$65 per hour or \$260 per monthly report. For smaller distributors of a public water supply the proposed regulation requires a one-time report. This report is estimated to take the same amount of time to prepare as the reports filed monthly by the urban water suppliers. i.e. \$260. Based on the best available information the Board estimates that 2674 distributors of a public water supply would be required to file the one-time report. Therefore, the additional reporting cost to those suppliers is estimated to be $\$260 * 2674 = \$695,240$.

If adopted, the term of the proposed emergency regulation would be 270 days or almost 9 months. Therefore, the total maximum reporting costs to urban water suppliers as a result of the proposed regulation is estimated at \$961,740 (411 urban water suppliers multiplied by the \$260 cost per monthly report multiplied by 9 months). Accordingly, the estimated reporting cost for both urban water suppliers and the smaller distributors of a public water supply is \$961,740 plus \$695,240, for a total of \$1,656,980.

Total Implementation Cost

The total estimated cost of implementing the proposed regulation is \$511,656,980, which is the sum of estimated lost revenues to urban water suppliers and the estimated reporting costs as described above.

Discussion of Additional Economic Impacts⁵

No one knows how the future will unfold. While the state may return to "normal," or even above average, hydrologic water conditions in 2016, such an outcome is far from certain. The proposed regulation is intended to address potentially significant economic vulnerabilities - risks - rather than statistical or probabilistic expectations. If the drought

⁵ An economic impacts analysis is not required by Government Code Section 11346.5, subdivision (a)(6). However, the State Water Board has chosen to include this section and the attached economic analysis report to demonstrate the Board's careful consideration of the full societal impacts of the emergency regulation.

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and high temperatures continue in California, water saved as a result of the order will become increasingly valuable. Under these circumstances, costs estimated to be associated with the proposed regulation this year could be more than exceeded by greater adverse impacts next year if the proposed regulation had not been issued. That is, if there is a fifth, or even sixth, year of water scarcity the proposed regulation will have safeguarded the state's future water supplies, thereby forestalling potentially dramatic economic consequences. From this perspective the proposed regulation serves to reduce the long-term risk of even more significant water curtailments, a potentially valuable insurance policy. Said differently, the proposed regulation provides an "option value" of enlarging the scope for future actions to address the possibility of an ongoing drought.⁶

An example of the potential challenge facing California comes from Australia, which experienced persistent and severe drought across most of its continent between 2002 and 2012. Lasting 10 years, the "Big Dry" had profound impacts on Australia's economy.⁷ Water curtailments imposed early in the drought in 2002-03 cut 1.6 percent from the gross domestic product (GDP) growth rate. Lower production in non-agricultural industries accounted for nearly 40 percent of the slowdown in GDP growth. Employment growth slowed by 0.8 percent, average wages fell by 0.9 percent, and exports dropped by 5 percent. Over the full course of the drought half a percentage point may have been shaved from Australia's GDP growth rate. A half-point reduction in GDP growth is significant; if this were to occur in California, cumulative state output would be reduced by close to half a trillion dollars over the same 10-year span of time. These costs would not necessarily be attributable to regulatory action in response to the drought, however, so much as to the fact that reduced water availability during a severe drought has significant economic impacts.

If wet and moderate temperature conditions return next year, the proposed regulation's water saving benefits will be relatively less valuable. However, even in this circumstance some of the proposed regulation's elements will increase water supply resiliency. For example, permanently replacing water-dependent landscaping with drought tolerant plots; retiring less water-efficient appliances and replacing them with water wise ones; and imposing new conservation-oriented water rate structures could serve to structurally reduce water demand and create new tools to address water scarcity as it emerges. As stated by the World Wildlife Fund,

*Tackling water scarcity in such a way that reduces long-term risks to a range of stakeholders can have multiple pay-offs in relation to a range of government policy priorities on poverty reduction, economic growth, food security and trade...*⁸

⁶ Quantifying the value of this option would require a deeper analytic assessment than is possible within the time frame provided for this economic analysis.

⁷ Further discussion of Australia's drought impacts are in Appendix A.

⁸ WWF, "Understanding Water Risks," http://awsassets.panda.org/downloads/understanding_water_risk_iv.pdf, March, 2009.

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In addition, imposing statewide conservation requirements will forestall the adverse consequences of allowing agencies and water users to inadequately respond to water scarcity, and “free ride” on the actions of other more prudent agencies and water users. Quantifying the economic costs imposed by free riding on more prudent planning is beyond the scope of this analysis. However, based on experience from past droughts, the potential impacts next year and in the future from failing to impose prudent planning could be quite large.

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Date: May 6, 2015

Prepared By: Kevin King, Operations Manager

Subject: Award of a Construction Contract for Digester Cleaning and Cover Replacement

Recommendation: That the Board awards a construction contract to Pascal & Ludwig for the cleaning and replacement of four digester covers for a sum not to exceed \$2,175,000.

The Yucaipa Valley Water District operates and maintains four anaerobic digesters for sludge conditioning, each with a diameter of 45 feet and a side water depth of 22 feet, yielding a working capacity of approximately 262,000 gallons per digester. The digesters treat sludge drawn from both the primary clarifiers and from the dissolved air flotation thickeners. Digested sludge flows by gravity and can be stored temporarily in a sludge holding tank before being conveyed to the belt presses for dewatering. To keep the digesters functioning properly they should be cleaned every 8-10 years in order to remove the accumulated build-up of sand, grit, and other debris.

Projects	Construction Timeline	Summary of Work
Wastewater Treatment Plant	1976-design 1984-constr	<ul style="list-style-type: none"> Construction of Digester Nos. 1 and 2 and appurtenant equipment, (e.g. heaters) Digester No. 1 equipped with a fixed cover and Digester No. 2 equipped with a floating cover
Stage I Expansion Project	1992	<ul style="list-style-type: none"> Construction of Digester Nos. 3 and 4 Both Digester No. 3 and Digester No. 4 equipped with fixed covers
Digester No. 2 Cover Modifications	1994	<ul style="list-style-type: none"> Digester No. 2 cover converted from floating to fixed configuration
Digester Cleaning	2004	<ul style="list-style-type: none"> Digester Nos. 1-4 Cleaning
Digester Coating	2005	<ul style="list-style-type: none"> Digester Nos. 1-4 Coating of Cover
Digester and Sludge Holding Tank Modifications Project	2005	<ul style="list-style-type: none"> Digester Nos. 1-4 and Digester Holding Tank Pump Mix System installation

When the digesters were last cleaned in 2005, the District staff assessed the condition of the digesters and related equipment. Based on corrosion identified at this time, the District made a decision to replace at least two covers the next time the digesters were scheduled to be cleaned.

On November 6, 2013, the Board of Directors approved a contract with RMC to assist in the cleaning and the replacement of the steel covers and piping that was previously identified as having corrosion issues.

At the board workshop on February 24, 2015, Scott Goldman outlined the proposed construction alternatives that will allow the Board of Directors to either replace either two or four digester covers.



On March 4, 2015, the Board of Directors authorized District staff to solicit proposals for the digester repairs providing three approaches:

- **Option A** - Replace covers for Digesters 1 and 2, repair and coat Digesters 3 and 4.
- **Options B** - Replace covers for Digesters 1 and 2, assess condition of Digesters 3 and 4 after Digesters 1 and 2 are returned to service. Replace covers for Digester 3 and 4 following condition assessment.
- **Option C**- Replace covers for all four digesters

Bids for the WRWRF Digester Cleaning and Cover Replacement Project were opened on Tuesday, April 14, 2015. Four bids were received, each of which was accompanied by the required bid security. The contractors bidding on the project included: Pascal and Ludwig Constructors (Pascal & Ludwig), Canyon Springs Ent. dba RSH Construction (RSH), Gateway Pacific Contractors, Inc. (Gateway Pacific), and Speiss Construction Co., Inc (Speiss). Table 1 provides a bid tabulation of the contractor's bids, listed in order of increasing amount. Contractors were requested to provide bids for three options:

Table 1: Contractor Bid Tabulation

Bidder	Bid Option A	Bid Option B	Bid Option C
Pascal & Ludwig	\$1,789,000	\$2,302,000	\$2,175,000
RSH	\$1,988,196	\$2,165,596	\$2,226,498
Gateway Pacific	\$2,115,021	\$2,609,546	\$2,421,991
Speiss	\$2,259,200	\$2,633,300 ^a	\$2,643,150
<i>Engineer's Estimate</i>	<i>\$2,104,000</i>	<i>\$3,043,000</i>	<i>\$2,787,000</i>

Footnotes:

- a. Due to a mathematical error, contractor's written bid of \$2,688,500 has been amended to accurately reflect the amounts listed in the bidding schedule submitted.

Pursuant to the Instructions to Bidders, the District can award the construction contract to the lowest responsible bidder for either Bid Option A or Bid Option C. Pascal & Ludwig was the apparent low bidder for both Options A and C; RSH was the apparent second lowest bidder for both Options A and C.

The bid submitted by Pascal & Ludwig was lowest for both Option A and Option C. The qualifications of Pascal & Ludwig have been reviewed by RMC Water and Environment and found to be satisfactory (see Bid Evaluation Report). RMC recommends that the Contract be awarded to Pascal & Ludwig for either Bid Option A or Bid Option C. Given the lower than expected bid price for Option C, the District staff recommends that the Board of Directors select Option C. It is likely that the covers for Digesters 3 and 4 will require replacement when the condition assessment is performed - and if not now, certainly within the next 10 years when the digesters are next cleaned.



Yucaipa Valley Water District

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**HENRY N. WOCHHOLZ REGIONAL WATER RECYCLING FACILITY
(WRWRF)
DIGESTER CLEANING AND COVER REPLACEMENT PROJECT
P-88-289**

BID EVALUATION REPORT

April 22, 2015

Prepared by:



RMC WATER AND ENVIRONMENT

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**YUCAIPA VALLEY WATER DISTRICT
WRWRF DIGESTER CLEANING AND COVER REPLACEMENT PROJECT**

BID REPORT

1 GENERAL

Bids for the Yucaipa Valley Water District WRWRF Digester Cleaning and Cover Replacement Project were opened and read aloud at 3:00 p.m. PST on Tuesday, April 14, 2015.

2 BIDS RECEIVED

Four bids were received, each of which was accompanied by the required bid security. The contractors bidding on the project included: Pascal and Ludwig Constructors (Pascal & Ludwig), Canyon Springs Ent. dba RSH Construction (RSH), Gateway Pacific Contractors, Inc. (Gateway Pacific), and Speiss Construction Co., Inc (Speiss). **Table 1** provides a bid tabulation of the contractor's bids, listed in order of increasing amount. Contractors were requested to provide bids for three options:

- Option A: Replace covers for digesters 1 and 2, repair and coat digesters 3 and 4.
- Options B: Replace covers for digesters 1 and 2, assess condition of digesters 3 and 4 after digesters 1 and 2 are returned to service. Replace covers for digester 3 and 4 following condition assessment.
- Option C: Replace covers for all four digesters

Per the Instructions to Bidders, the District can award the construction contract to the lowest responsible bidder for either Bid Option A or Bid Option C. Pascal & Ludwig was the apparent low bidder for both Options A and C; RSH was the apparent second lowest bidder for both Options A and C.

Table 1: Contractor Bid Tabulation

Bidder	Bid Option A	Bid Option B	Bid Option C
Pascal & Ludwig	\$1,789,000	\$2,302,000	\$2,175,000
RSH	\$1,988,196	\$2,165,596	\$2,226,498
Gateway Pacific	\$2,115,021	\$2,609,546	\$2,421,991
Speiss	\$2,259,200	\$2,633,300 ^a	\$2,643,150
<i>Engineer's Estimate</i>	<i>\$2,104,000</i>	<i>\$3,043,000</i>	<i>\$2,787,000</i>

Footnotes:

- a. Due to a mathematical error, contractor's written bid of \$2,688,500 has been amended to accurately reflect the amounts listed in the bidding schedule submitted.

The bidding schedules for each bidder and option are presented side-by-side with the engineer's estimate in **Appendix A**.

3 IRREGULARITIES

The four bids were reviewed in detail, and the following irregularities were found:

- Speiss made a mathematical error in calculating the total bid amount under Option B; this has been amended in Table 1 above.
- RSH and Speiss presented higher bid amounts under Option C than Option B. It was anticipated that Option B would be higher than Option C for all bidders.
- The Bid Bond for Pascal & Ludwig was based on 10% of Bid Option A. Addendum No. 1 clarified that the Bid Bond should be based on Option C. If the project is awarded to them, this irregularity will need to be waived.
- RSH did not provide project references under the Information Required of Bidder.
- As the apparent second low bidder, RSH did not provide project references for its subbidders (subcontractors) in accordance with the Information Required of Bidder and the Instructions to Bidders as amended in Addendum No. 2.
- RSH did not provide a signed acknowledgment of receipt of Addendum No. 3.

4 BIDDER QUALIFICATION REVIEW

The qualifications of the four bidders were reviewed based on the following information:

- General information including the firm's name, contact information, years of experience, and prior project performance.
- Identification of previous similar and relevant projects. Bidder references were checked for Pascal & Ludwig and Gateway Pacific. (Note that no references were provided for RSH.)
- Contractor licenses were checked for each bidder and found to be current and active for Class A.

A summary of the bidder's qualification information is provided in the **Appendix B**.

6 SUMMARY

The bid submitted by Pascal & Ludwig was lowest for both Option A and Option C. The qualifications of Pascal & Ludwig have been reviewed and found to be satisfactory. Therefore, RMC Water and Environment recommends that the Contract be awarded to Pascal & Ludwig for either Bid Option A or Bid Option C.

Given the lower than expected bid price for Option C, RMC is also recommending that the District select Option C. It is likely that the covers for Digesters 3 and 4 will require replacement when the condition assessment is performed—and if not now, certainly within the next 10 years when the digesters are next cleaned.

APPENDIX A: BIDDING SCHEDULES

HENRY N. WOCHHOLZ REGIONAL WATER RECYCLING FACILITY (WRWRF)
 DIGESTER CLEANING AND COVER REPLACEMENT PROJECT
 P-88-289

APPENDIX A - BIDDING SCHEDULES

Item No.	Description	Unit	Engineer's Estimate	Pascal & Ludwig	RSH	Gateway Pacific	Speiss
OPTION A							
101	Contract bonds, insurance and permits (not to exceed 3% of bid amount)	LS	\$ 113,850	\$ 50,000	\$ 60,000	\$ 60,000	\$ 54,000
102	Mobilization of equipment, materials, and labor (not to exceed 3% of bid amount)	LS	\$ 113,850	\$ 50,000	\$ 60,000	\$ 60,000	\$ 67,000
103	Furnish and install temporary gas piping	LS	\$ 56,149	\$ 25,000	\$ 24,000	\$ 85,686	\$ 37,800
104	Demolition (Digesters 1 and 2 covers, gas piping)	LS	\$ 220,386	\$ 79,000	\$ 75,000	\$ 250,000	\$ 87,200
105	Clean Digesters 1 and 2	LS	\$ 255,024	\$ 173,000	\$ 165,000	\$ 200,000	\$ 280,600
106	Structural repairs to Digesters 1 and 2 tanks	LS	\$ 32,292	\$ 6,000	\$ 2,500	\$ 15,000	\$ 16,200
107	Furnish and install new covers (including coatings) for Digesters 1 and 2	LS	\$ 724,407	\$ 708,000	\$ 806,998	\$ 609,335	\$ 662,900
108	Furnish and install new gas piping and appurtenances	LS	\$ 132,794	\$ 270,000	\$ 290,000	\$ 150,000	\$ 433,200
109	Clean Digesters 3 and 4	LS	\$ 255,024	\$ 173,000	\$ 145,000	\$ 200,000	\$ 237,600
110	Structural repairs to Digesters 3 and 4 covers	LS Allowance		\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
111	Structural repairs to Digesters 3 and 4 tanks	LS Allowance		\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
112	Digesters 3 and 4 coatings	LS	\$ 200,000	\$ 240,000	\$ 382,698	\$ 400,000	\$ 332,200
113	All other items of work not included in the above bid items required for a complete and functional project in compliance with the Contract Documents	LS	\$ -	\$ -	\$ 14,000	\$ 50,000	\$ 15,500
Total Lump Sum Bid Option A			\$ 2,103,776	\$ 1,809,000	\$ 2,060,196	\$ 2,115,021	\$ 2,259,200
Last Minute Addition or Deduction				\$ (20,000)	\$ (72,000)		
Total Bid Option A			\$ 2,104,000	\$ 1,789,000	\$ 1,988,196	\$ 2,115,021	\$ 2,259,200
Rank			-	1	2	3	4

<i>Percentage Checks</i>					
Item No. 101 (NTE 3%)		2.8%	2.9%	2.8%	2.4%
Item No. 102 (NTE 3%)		2.8%	2.9%	2.8%	2.97%
Last Minute Addition or Deduction (NTE 7%)		-1.1%	-3.5%	0.0%	0.0%

HENRY N. WOCHHOLZ REGIONAL WATER RECYCLING FACILITY (WRWRF)
 DIGESTER CLEANING AND COVER REPLACEMENT PROJECT
 P-88-289

APPENDIX A - BIDDING SCHEDULES

Item No.	Description	Unit	Engineer's Estimate	Pascal & Ludwig	RSH	Gateway Pacific	Speiss
OPTION B							
101	Contract bonds, insurance and permits (not to exceed 3% of bid amount)	LS	\$ 193,200	\$ 50,000	\$ 68,000	\$ 60,000	\$ 54,000
102	Mobilization of equipment, materials, and labor (not to exceed 3% of bid amount)	LS	\$ 193,200	\$ 50,000	\$ 68,000	\$ 60,000	\$ 67,000
103	Furnish and install temporary gas piping	LS	\$ 56,149	\$ 25,000	\$ 24,000	\$ 85,686	\$ 37,800
104	Demolition (Digesters 1 and 2 covers, gas piping)	LS	\$ 220,386	\$ 79,000	\$ 95,000	\$ 250,000	\$ 87,200
105	Clean Digesters 1 and 2	LS	\$ 255,024	\$ 173,000	\$ 165,000	\$ 200,000	\$ 280,600
106	Structural repairs to Digesters 1 and 2 tanks	LS	\$ 32,292	\$ 6,000	\$ 2,500	\$ 15,000	\$ 16,200
107	Furnish and install new covers (including coatings) for Digesters 1 and 2	LS	\$ 724,407	\$ 708,000	\$ 820,998	\$ 609,335	\$ 662,900
108	Furnish and install new gas piping and appurtenances	LS	\$ 152,204	\$ 270,000	\$ 324,002	\$ 150,000	\$ 433,200
109	Clean Digesters 3 and 4	LS	\$ 255,024	\$ 173,000	\$ 145,000	\$ 200,000	\$ 237,600
110	Structural repairs to Digesters 3 and 4 covers	Not Used					
111	Structural repairs to Digesters 3 and 4 tanks	LS Allowance	\$ 20,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
112	Digesters 3 and 4 coatings	Not Used					
113	All other items of work not included in the above bid items required for a complete and functional project in compliance with the Contract Documents	LS	\$ -	\$ -	\$ 26,000	\$ 50,000	\$ 15,500
114	Deduct Bid Items 110 and 112 from above	LS	\$ -	\$ -	\$ -	\$ -	\$ -
115	Demolition (Digesters 3 and 4 covers, gas piping)	LS	\$ 216,522	\$ 79,000	\$ 65,000	\$ 250,000	\$ 80,000
116	Furnish and install new covers (including coatings) for Digesters 3 and 4	LS	\$ 724,407	\$ 704,000	\$ 519,096	\$ 674,525	\$ 656,300
Total Lump Sum Bid Option B			\$ 3,042,815	\$ 2,322,000	\$ 2,327,596	\$ 2,609,546	\$ 2,633,300
Last Minute Addition or Deduction			\$ -	\$ (20,000)	\$ (162,000)	\$ -	\$ -
Total Bid Option B			\$ 3,043,000	\$ 2,302,000	\$ 2,165,596	\$ 2,609,546	\$ 2,633,300
Rank			Bidders Not Ranked on this Option				

Percentage Checks				
Item No. 101 (NTE 3%)	2.2%	2.9%	2.3%	2.1%
Item No. 102 (NTE 3%)	2.2%	2.9%	2.3%	2.5%
Last Minute Addition or Deduction (NTE 7%)	-0.9%	-6.96%	0.0%	0.0%

HENRY N. WOCHHOLZ REGIONAL WATER RECYCLING FACILITY (WRWRF)
 DIGESTER CLEANING AND COVER REPLACEMENT PROJECT
 P-88-289

APPENDIX A - BIDDING SCHEDULES

Item No.	Description	Unit	Engineer's Estimate	Pascal & Ludwig	RSH	Gateway Pacific	Speiss
OPTION C							
201	Contract bonds, insurance and permits (not to exceed 3% of bid amount)	LS	\$ 113,850	\$ 50,000	\$ 60,000	\$ 65,000	\$ 49,500
202	Mobilization of equipment, materials, and labor (not to exceed 3% of bid amount)	LS	\$ 113,850	\$ 50,000	\$ 60,000	\$ 65,000	\$ 61,400
203	Furnish and install temporary gas piping	LS	\$ 56,149	\$ 25,000	\$ 24,000	\$ 85,000	\$ 34,650
204	Demolition (Digesters 1 and 2 covers, gas piping)	LS	\$ 218,454	\$ 79,000	\$ 75,000	\$ 215,683	\$ 80,000
205	Clean Digesters 1 and 2	LS	\$ 254,537	\$ 173,000	\$ 165,000	\$ 200,000	\$ 257,200
206	Structural repairs to Digesters 1 and 2 tanks	LS	\$ 32,292	\$ 6,000	\$ 2,500	\$ 15,000	\$ 16,200
207	Furnish and install new covers (including coatings) for Digesters 1 and 2	LS	\$ 686,795	\$ 640,000	\$ 806,998	\$ 600,000	\$ 669,400
208	Clean Digesters 3 and 4	LS	\$ 254,537	\$ 173,000	\$ 145,000	\$ 200,000	\$ 237,600
209	Demolition (Digesters 3 and 4 covers, gas piping)	LS	\$ 218,454	\$ 79,000	\$ 75,000	\$ 200,000	\$ 87,300
210	Structural repairs to Digesters 3 and 4 tanks	Allowance		\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
211	Furnish and install new covers (including coatings) for Digesters 3 and 4	LS	\$ 686,795	\$ 640,000	\$ 665,000	\$ 600,000	\$ 669,400
212	Furnish and install new gas piping and appurtenances	LS	\$ 150,317	\$ 270,000	\$ 290,000	\$ 150,000	\$ 455,000
213	All other items of work not included in the above bid items required for a complete and functional project in compliance with the Contract Documents	LS	\$ -	\$ -	\$ 15,000	\$ 16,308	\$ 15,500
Total Lump Sum Bid Option C			\$ 2,786,030	\$ 2,195,000	\$ 2,393,498	\$ 2,421,991	\$ 2,643,150
Last Minute Addition or Deduction				\$ (20,000)	\$ (167,000)		
Total Bid Option C			\$ 2,787,000	\$ 2,175,000	\$ 2,226,498	\$ 2,421,991	\$ 2,643,150
Rank			-	1	2	3	4

Percentage Checks					
Item No. 201 (NTE 3%)		2.3%	2.5%	2.7%	1.9%
Item No. 202 (NTE 3%)		2.3%	2.5%	2.7%	2.3%
Last Minute Addition or Deduction (NTE 7%)		-0.9%	-6.98%	0.0%	0.0%

APPENDIX B: QUALIFICATION REVIEW

P-88-289_Bid Evaluation Report_2015-04-22.docx
RMC Water and Environment

04/22/2015
0350-57 | P-88-289

**YUCAIPA VALLEY WATER DISTRICT
WRWRF DIGESTER CLEANING AND COVER REPLACEMENT PROJECT**

QUALIFICATION REVIEW

The following information on the bidders has been obtained from the bid proposals and telephone interviews conducted April 17, 2015 through April 22, 2015.

HENRY N. WOCHHOZ REGIONAL WATER RECYCLING FACILITY (WRWRF)
DIGESTER CLEANING AND COVER REPLACEMENT PROJECT
P-88-289

APPENDIX B - BIDDER QUALIFICATION REVIEW

	Pascal & Ludwig	RSH	Gateway Pacific	Speiss
A. GENERAL INFORMATION				
Contractor Name	Pascal and Ludwig Constructors	Canyon Springs Ent. Dba RSH Construction	Gateway Pacific Contractors Inc	Speiss Construction Co., Inc.
Address	2049 E. Francis Street, Ontario, CA 91761	3888 Wentworth Dr. Hemet, CA 92545	8055 Freepport Blvd. Sacramento, CA 95832	PG Box 2849, Santa Maria, CA 93457
Type of Firm	Corporation	Corporation	Corporation	Corporation
Contractor License Class, Number, and Expiration	Class A, B, HAZ; No. 373525 (Exp. 4/30/17)	Class A; No. 806747 (Exp. 4/30/16)	Class A, B; No. 517988 (Exp. 9/30/15)	Class A, B, C33, C27; No. 333989 (Exp. 5/31/2016)
Contractor License Check	Current and Active as of 4/21/15; Issued 4/23/1979.	Current and Active as of 4/21/15; Issued 4/17/2002.	Current and Active as of 4/21/15; Issued 9/22/1987.	Current and Active as of 4/21/15; Issued 3/24/1977.
Years as a contractor in construction work of this type	18	24	28	38
Violations of Labor Code Div 5 Part 1 in past five years?	No	No	No	No
Injury Prevention Program?	Yes	Yes	Yes	Yes
Bidder litigation with any owner within the last 10 years?	No	No	No	No
Subbidder litigation with any owner within the last 10 years?	No	No	No	No
Inspection of proposed work site	Bill Singleton on 3/19/15	Larry Armada on 3/19/15	Jeff Wintemute on 3/19/15	Eduo Gomez on 3/19/15
Signed in to Mandatory Pre-Proposal Meeting?	Yes	Yes	Yes	Yes
Proposed PM	Rob Temple	Richard Lawrence	Jeff Wintemute	Jamie Jones
B. LIST OF SUBCONTRACTORS				
Sealants	Stone Roofing Co., Inc. References Provided: 3	-	-	-
Paintings and Coatings	Cor Ray Painting Co. References provided: 3	Simpson References Provided: None	Simpson Sandblasting and Special Coatings References Provided: None	Simpson Sandblasting References Provided: None
Digester Cleaning	Synagro WWT Inc. References provided: 5	Synagro References Provided: None	Synagro Technologies Inc. References Provided: None	Synagro References Provided: None
Dome Erection	-	PRR References Provided: None	-	-
C. STATEMENT OF EXPERIENCE				
Number of Projects Listed	24	None	3	18
Prior Experience with YVWD Included?	Yes, WRWRF (2013) for \$5.0M	No	No	No
Reference call summaries	See attached sheets.	No references provided	See attached sheets.	References were not called for apparent highest bidder.
D. BIDDER'S PRINCIPALS AND KEY PERSONNEL				
Project Manager	Rob Temple has over 30 years of construction experience as Sponsor, Project Manager, and Estimator on projects in the water, wastewater, and transportation fields.	Richard Lawrence has 32 years of construction experience with last 21 years dedicated to project management.	-	Jamie Jones has 8 years of experience.
Project Superintendent	Ray Kojac.	-	Jeff Wintemute has 26 years of experience.	Frank L. Fortun has 33 years of experience.
E. OTHER PERTINENT DATA OR INFORMATION				
	None provided.	None provided.	Statement provided on Contractor's capabilities.	None provided.
F. EQUIPMENT/MATERIAL SOURCE INFORMATION				
Digester Covers	WesTech Engineering, Inc.	Olympus Technologies Inc. (OTI)	Olympus Technologies Inc. (OTI)	WesTech Engineering, Inc.
Gas Safety Equipment	-	-	Varec	-
STATEMENTS, CERTIFICATIONS AND DECLARATIONS				
G. Statement on Bonds and Insurance	Yes	Yes	Yes	Yes
I. Certification of Bidding Documents	Signed and Notarized	Signed and Notarized	Signed and Notarized	Signed and Notarized
J. Noncollusion Declaration	Yes	Yes	Yes	Yes
K. Iran Contracting Act Certification	Yes	Yes	Yes	Yes
BID BOND				
Sum	10% of bid amount for Bid Option A	10% of bid amount (Option not specified)	10% of bid amount for Bid Option C	10% of bid amount for Bid Option C
ADDENDA				
Signed acknowledgement for Addendum Nos. 1-3	Yes	1, 2 only; 3 not included.	Yes	Yes



CONTRACTORS STATE LICENSE BOARD



Contractor's License Detail for License # 373525

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
 Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
 Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
 Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Data current as of 4/21/2015 4:10:41 PM

Business Information

PASCAL & LUDWIG CONSTRUCTORS INC
 2049 E FRANCIS STREET
 ONTARIO, CA 91761
 Business Phone Number:(909) 947-4631

Entity Corporation
Issue Date 04/23/1979
Reissue Date 04/23/1999
Expire Date 04/30/2017

License Status

This license is current and active.
All information below should be reviewed.

Classifications

A - GENERAL ENGINEERING CONTRACTOR
 B - GENERAL BUILDING CONTRACTOR

Certifications

HAZ - HAZARDOUS SUBSTANCES REMOVAL

Bonding Information

Contractor's Bond

This license filed a Contractor's Bond with SAFECO INSURANCE COMPANY OF AMERICA.
Bond Number: 5911752
Bond Amount: \$12,500
Effective Date: 01/01/2007
 Contractor's Bond History

Bond of Qualifying Individual

The Responsible Managing Officer (RMO) LUDWIG ALAN GORDON certified that he/she owns 10 percent or more of the voting stock/equity of the corporation. A bond of qualifying individual is **not** required.
Effective Date: 04/23/1999

Workers' Compensation

This license has workers compensation insurance with the TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA
Policy Number:DTJUBOF92595814
Effective Date: 10/13/2014
Expire Date: 10/13/2015
Workers' Compensation History

Miscellaneous Information

04/23/1999 - LICENSE REISSUED TO ANOTHER ENTITY

Other

Personnel listed on this license (current or disassociated) are listed on other licenses.



CONTRACTORS STATE LICENSE BOARD



Contractor's License Detail for License # 806747

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
 Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
 Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
 Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Data current as of 4/21/2015 3:20:47 PM

Business Information

CANYON SPRINGS ENTERPRISES
 DBA R S H CONSTRUCTION

3883 WENTWORTH DRIVE
 HEMET, CA 92545
 Business Phone Number:(951) 925-2288

Entity Corporation
Issue Date 04/17/2002
Expire Date **04/30/2016**

License Status

This license is current and active.
All information below should be reviewed.

Classifications

A - GENERAL ENGINEERING CONTRACTOR

Bonding Information

Contractor's Bond

This license has a Contractor's Cash Deposit on file with CSLB.
Bond Number: T1087L5
Bond Amount: \$12,500
Effective Date: 01/01/2007
 Contractor's Bond History

Bond of Qualifying Individual

This license filed Bond of Qualifying Individual number **7637985** for ERICKSON CHUCK ALLAN in the amount of **\$12,500** with FIDELITY AND DEPOSIT COMPANY OF MARYLAND.
Effective Date: 11/05/2013

Workers' Compensation

This license has workers compensation insurance with the OLD REPUBLIC GENERAL INSURANCE CORPORATION
Policy Number:A1CW95411405
Effective Date: 11/01/2014
Expire Date: 11/01/2015
Workers' Compensation History

Other

Personnel listed on this license (current or disassociated) are listed on other licenses.



CONTRACTORS STATE LICENSE BOARD



Contractor's License Detail for License # 517988

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
 Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
 Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
 Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Data current as of 4/21/2015 3:51:23 PM

Business Information

GATEWAY PACIFIC CONTRACTORS INC
 8055 FREEPORT BLVD
 SACRAMENTO, CA 95832
 Business Phone Number:(916) 665-4100

Entity Corporation
Issue Date 09/22/1987
Expire Date 09/30/2015

License Status

This license is current and active.
All information below should be reviewed.

Classifications

A - GENERAL ENGINEERING CONTRACTOR
 B - GENERAL BUILDING CONTRACTOR

Bonding Information

Contractor's Bond

This license filed a Contractor's Bond with TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA.
Bond Number: 103453633
Bond Amount: \$12,500
Effective Date: 01/01/2007
 Contractor's Bond History

Bond of Qualifying Individual

The Responsible Managing Officer (RMO) LUNDIN EVAN ROBERT certified that he/she owns 10 percent or more of the voting stock/equity of the corporation. A bond of qualifying individual is **not** required.
Effective Date: 12/17/1998

Workers' Compensation

This license has workers compensation insurance with the TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA
Policy Number:DTJUB365K759
Effective Date: 01/01/2013
Expire Date: 01/01/2016
Workers' Compensation History



CONTRACTORS STATE LICENSE BOARD



Contractor's License Detail for License # 333989

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.6) If this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.
 Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.
 Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.
 Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Data current as of 4/21/2015 4:14:09 PM

Business Information

SPIESS CONSTRUCTION CO INC
 P O BOX 2849
 SANTA MARIA, CA 93457
 Business Phone Number:(805) 937-5859

Entity Corporation
Issue Date 03/24/1977
Expire Date 05/31/2016

License Status

This license is current and active.
All information below should be reviewed.

Classifications

A - GENERAL ENGINEERING CONTRACTOR
 B - GENERAL BUILDING CONTRACTOR
 C33 - PAINTING AND DECORATING
 C27 - LANDSCAPING

Bonding Information

Contractor's Bond

This license filed a Contractor's Bond with TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA.
Bond Number: 400JS0475
Bond Amount: \$12,500
Effective Date: 03/22/2008
 Contractor's Bond History

Bond of Qualifying Individual

This license filed Bond of Qualifying Individual number **400JX5602** for MATCHETT BARRY LEE in the amount of **\$12,500** with TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA.
Effective Date: 01/01/2007
 BQI's Bond History
 The Responsible Managing Officer (RMO) COLEMAN SCOTT ALLYN certified that he/she owns 10 percent or more of the voting stock/equity of the corporation. A bond of qualifying individual is **not** required.
Effective Date: 09/21/2006

Workers' Compensation

This license has workers compensation insurance with the STARR INDEMNITY & LIABILITY COMPANY
Policy Number:1000001459
Effective Date: 10/01/2014
Expire Date: 10/01/2015
Workers' Compensation History

Other

Personnel listed on this license (current or disassociated) are listed on other licenses.



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

Subject: Pascal & Ludwig
Reference Check

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:00am to 9:07am

Project Number: 0305-57

Other Party

Contact: Brian Peck

Company/Agency: SOCWA

Phone: 949.234.5400
919.234.5400 (incorrect number)

Address: N/A

1. Purpose of Discussion

Perform reference check on Pascal & Ludwig.

2. Discussion Summary

Export Sludge Equalization Basin – April 2014

1. Brief description of the project and work performed by **Pascal & Ludwig**
Design build project. Export sludge from one treatment plant to another. Constructed eq. tank 60' dia. by 20' tall with concrete cover. Holds sludge for 3-4 days. Includes new pump station and electrical building.
2. Dollar value of the project. Confirm Contract Amount: **\$4,779,997**.
Correct.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
General Contractor – design build.
4. How was their performance on the project?
Very good.
5. Did they perform the work adequately/competently?
High quality and organized.
6. Was it completed on time and within budget?
Completed on time and on budget. Fast tracked project with Prop 50 funds.
7. Were there any claims or change orders filed on the project?
No claims or change order were small.
8. Any comments on the final product?
High quality. Pascal & Ludwig has completed nine construction project with SOCWA and is currently constructing another project.



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Pascal & Ludwig
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:40am (Out of the Office)
11:20am – 11:30am

Project Number: 0305-57

Other Party

Contact: Safa Kamangar

Company/Agency: IEUA

Phone: 949.637.3999

Address: N/A

1. Purpose of Discussion

Perform reference check on Pascal & Ludwig.

2. Discussion Summary

San Joaquin Pump Station Improvements – May 2014

1. Brief description of the project and work performed by **Pascal & Ludwig**
Retrofit of existing pump station. Replaced pumps.
2. Dollar value of the project. Confirm Contract Amount: **\$806,986**
Yes. Based on memory.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
GC.
4. How was their performance on the project?
Perfect. No complaints. Would hire again.
5. Did they perform the work adequately/competently?
Yes. Good crew.
6. Was it completed on time and within budget?
Yes.
7. Were there any claims or change orders filed on the project?
Minor change orders.
8. Any comments on the final product?
Facility is still working well.



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Pascal & Ludwig
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:35am (Out of the Office)
11:15am (Out of the Office)

Project Number: 0305-57

Other Party

Contact: Joe Polimino

Company/Agency: Yorba Linda Water District

Phone: 714.701.3000
714.701.3106 (Incorrect Number)

Address: N/A

1. Purpose of Discussion

Perform reference check on Pascal & Ludwig.

2. Discussion Summary

Equipping of Well No. 20 – October 2012

1. Brief description of the project and work performed by **Pascal & Ludwig**
2. Dollar value of the project. Confirm Contract Amount: **\$1,134,109**.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
4. How was their performance on the project?
5. Did they perform the work adequately/competently?
6. Was it completed on time and within budget?
7. Were there any claims or change orders filed on the project?
8. Any comments on the final product?



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Pascal & Ludwig
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:25am (Out of the Office)

Project Number: 0305-57

Other Party

Contact: C. Shem Hawes

Company/Agency: Garden Grove Sanitary District

Phone: 626.357.0588

Address: N/A

1. Purpose of Discussion

Perform reference check on Pascal & Ludwig.

2. Discussion Summary

Belgrave Pump Station Replacement Project – April 2014

1. Brief description of the project and work performed by **Pascal & Ludwig**.
2. Dollar value of the project. Confirm Contract Amount: **\$2,010,300**.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
4. How was their performance on the project?
5. Did they perform the work adequately/competently?
6. Was it completed on time and within budget?
7. Were there any claims or change orders filed on the project?
8. Any comments on the final product?



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Canyon Springs Enterprises dba RSH Construction
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:45am (Out of the Office)

Project Number: 0305-57

Other Party

Contact:

Company/Agency:

Phone:

Address: N/A

1. Purpose of Discussion

Perform reference check on Canyon Springs Enterprises.

2. Discussion Summary

No References provided

1. Brief description of the project and work performed by **Canyon Springs Enterprises**

2. Dollar value of the project. Confirm Contract Amount: \$ -

3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.

4. How was their performance on the project?

5. Did they perform the work adequately/competently?

6. Was it completed on time and within budget?

7. Were there any claims or change orders filed on the project?

8. Any comments on the final product?



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

Subject: Gateway Pacific Contractors, Inc.
Reference Check

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:55am-10:03am

Project Number: 0305-57

Other Party

Contact: Mark Sulik (Spoke with PE Mike)

Company/Agency: City of Chino

Phone: 530.894.4301

Address: N/A

1. Purpose of Discussion

Perform reference check on Gateway Pacific Contractors, Inc.

2. Discussion Summary

Digester Cleaning and Cover Replacement – August 2014

1. Brief description of the project and work performed by Gateway Pacific Contractors, Inc.
Remove and build a new floating cover to replace existing cover.
2. Dollar value of the project. Confirm Contract Amount: **\$1,441,961**
Sounds approximately correct.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
GC.
4. How was their performance on the project?
Good job as general contractor. Sub (coating - Mason) was not prepared. Took longer than expected.
5. Did they perform the work adequately/competently?
Yes.
6. Was it completed on time and within budget?
Sub and weather delayed the project by 6 months. Do not recalled original budget.
7. Were there any claims or change orders filed on the project?
No claims. Change orders were approximately 20% of the budget.
8. Any comments on the final product?
Satisfied.



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Gateway Pacific Contractors, Inc.
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 9:50am

Project Number: 0305-57

Other Party

Contact: Greg Deist

Company/Agency: City of San Clemente

Phone: 949.361.6154

Address: N/A

1. Purpose of Discussion

Perform reference check on Gateway Pacific Contractors, Inc.

2. Discussion Summary

Modify/Construct Reclamation Plant and Pump Station

1. Brief description of the project and work performed by **Gateway Pacific Contractors, Inc.**
Treatment plant expansion for recycled water capacity. From 2MGD to 5MGD.
2. Dollar value of the project. Confirm Contract Amount: **\$8,303,921**
Approximately \$9M.
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
GC.
4. How was their performance on the project?
Excellent – Foreman: Tim Gangle.
5. Did they perform the work adequately/competently?
Yes.
6. Was it completed on time and within budget?
On time and on budget including change orders.
7. Were there any claims or change orders filed on the project?
City made many changes. 8.9% of construction budget as change orders. No claims.
8. Any comments on the final product?
Very pleased and responsive.



Telephone Discussion Notes

P-88-289 WRWRF DIGESTER CLEANING AND COVER REPLACEMENT

**Subject: Gateway Pacific Contractors, Inc.
Reference Check**

RMC

Employee: Bert Ly

Date: April 22, 2015

Time: 10:00am (out of the office)
11:35am (out of the office)

Project Number: 0305-57

Other Party

Contact: Cindy

Thanh Vo (no longer works here)

Company/Agency: Delta Diablo Sanitation
District

Phone: 925.756.1900 x 1976
925.746.1900 (incorrect number)

Address: N/A

1. Purpose of Discussion

Perform reference check on Gateway Pacific Contractors, Inc.

2. Discussion Summary

Rehabilitation of Existing Digester – April 2012

1. Brief description of the project and work performed by **Gateway Pacific Contractors, Inc.**
2. Dollar value of the project. Confirm Contract Amount: **\$1,055,111**
3. Were they the General Contractor or were they a subcontractor? If subcontractor, who was the GC.
4. How was their performance on the project?
5. Did they perform the work adequately/competently?
6. Was it completed on time and within budget?
7. Were there any claims or change orders filed on the project?
8. Any comments on the final product?



Date: May 6, 2015

Prepared By: Peggy Little, Administrative Supervisor
Erin Anton, Administrative Clerk IV

Subject: Identification and Declaration of Bad Debt for Calendar Year 2013

Recommendation: That the Board authorizes the District staff to declare bad debt for Calendar Year 2013 in the amount of \$25,761.33.

The District actively pursues delinquent accounts, and in most cases is able to collect delinquent fees through a combination of shutting off the services provided, sending accounts to a collection agency, placing a lien on the property involved, and/or pursuing the claims through legal actions such as small claims court. In some cases, the District is unable to collect the money owed the District.

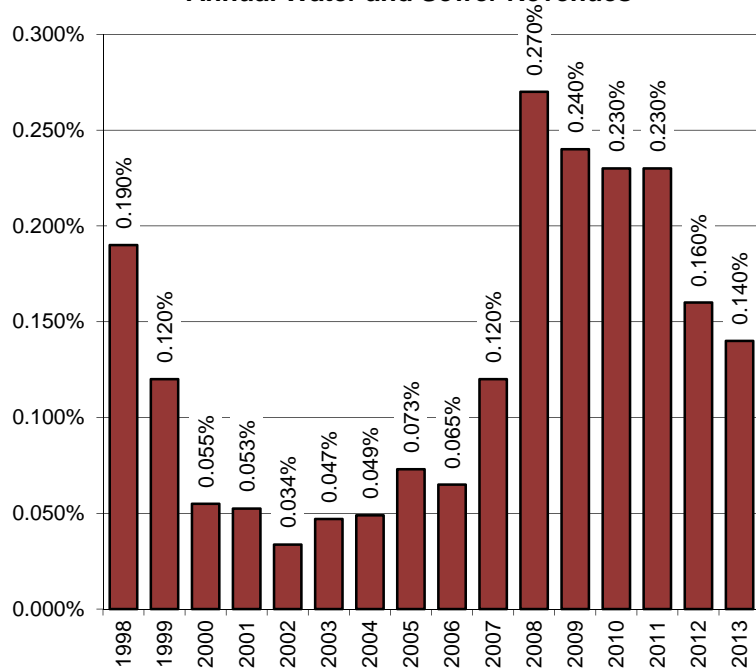
During the calendar year 2013, we did see a drop in foreclosures. The amount of bad debt due to foreclosures is \$11,434.15, which includes \$4,955.72 sewer only customers and \$6,478.43 water/sewer customers. This leaves account balances of \$14,327.18 that was not collected in the normal collection process.

As a proper accounting procedure, this bad debt must be accounted for on our financial statements; otherwise the debt remains as a liability on the District's annual audit.

District staff has compiled the list of uncollectible accounts for calendar year 2013, which amounts to \$25,761.33. Of this total, 44% of the bad debts are due to home foreclosures, and this trend will hopefully continue to decline for calendar year 2014.

Overall, the total amount of bad debt represents a loss of 0.14% for calendar year 2013 based on total water and sewer revenues.

Bad Debt as a Percentage of Annual Water and Sewer Revenues





Date: May 6, 2015

Prepared By: Joseph Zoba, General Manager

Subject: Authorization to Develop and Implement the Distribution of Weather Based, Wi-Fi Irrigation Controllers for Residential Water Customers of the Yucaipa Valley Water District

Recommendation: That the Board authorizes the District staff to: (1) implement the necessary policies, procedures and priorities to distribute weather-based irrigation controllers for residential water customers pursuant to the State Water Resources Control Board Emergency Regulations and related Executive Orders by Governor Brown; (2) contract with Skydrop for the purchase of irrigation controllers and related equipment for a sum not to exceed \$250,000; (3) provide regular updates on the status of this conservation program; and (4) authorize the General Manager to amend or terminate the implementation of this program at any time.

A new report from the California Urban Water Conservation Council, *Turf Removal and Replacement: Lessons Learned*, describes program implementation and estimated water savings from turf-based water conservation programs. The report offers qualitative and quantitative context for turf-removal programs, describes the challenges of program implementation and provides guidance to optimize program outcomes.

Turf-based landscape programs involve two steps: turf removal and turf replacement. The results of this type of water conservation program are highly variable based on customers' aesthetic desires, location, financial ability, and the availability of landscape materials. The report found that the average rebate resulted in a cost of about \$1,500 per acre foot of water saved. As public agencies continue to support, fund and implement turf removal programs during this drought, it is important to continue to review and evaluate the success of these programs to ensure policies are implemented in a manner that fully protect the funds ratepayers entrust with governmental agencies.

A stylized tree graphic with green leaves and a brown trunk, positioned behind the title text.

Turf Removal & Replacement: Lessons Learned

March, 2015
Author: Briana Seapy

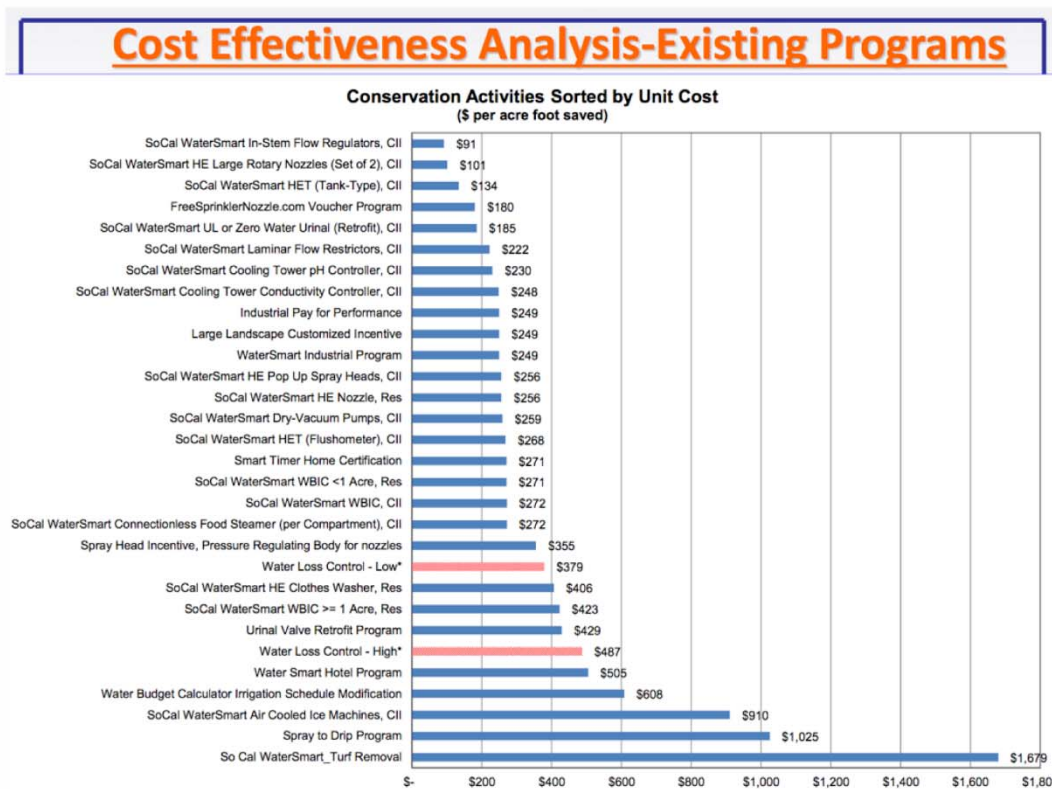


California
Urban Water
Conservation
Council

Appendix A of the report provides an overall evaluation of the cost effectiveness of various water conservation programs which range from \$91 per acre foot of water saved to about \$1,700 per acre foot of water saved. The water conservation programs at the top of the chart would be considered more effective than the water conservation programs at the bottom of the chart.

Appendix A: Conservation Program Cost Effectiveness

The following chart, presented by Joe Berg from the Municipal Water District of Orange County at the WaterSmart Innovations Conference 2014, details the relative cost per acre foot (AF) of water saved for various water conservation programs. The turf rebate program value is found at the bottom of the chart, indicating that it is the most expensive program alternative evaluated in this study with a cost of \$1,679/AF water saved. It should be noted that since 2014, cost effectiveness numbers may have changed.



The Yucaipa Valley Water District will be implementing a multi-prong approach to achieve a 36% water conservation goal set by the State Water Resources Control Board. While we continuously review all programs, we have identified that the use of Wi-Fi based irrigation controllers for residential water customers may have the ability to quickly reduce our drinking water demands this summer.

At the board workshop on April 28, 2015, the District staff demonstrated the use of a Wi-Fi based irrigation controller developed by Skydrop. The Skydrop irrigation controller uses a home Wi-Fi system to provide localized weather data to control the amount of water used for outdoor irrigation. This type of device would have been useful over the past weekend when we experienced a rainstorm with a daytime temperatures in the 50's followed four days later with unseasonably warm weather in the upper 80's. This technology will automatically adjust irrigation sprinklers to

reduce the amount of water used when it is not needed based on weather conditions, soil type, sprinkler type and even landscaped slopes.

Typically, irrigation accounts for 60% to 70% of the total residential water demands each year. If the Wi-Fi-based irrigation controllers can increase irrigation efficiency and reduce outdoor irrigation water by 50%, then we are well on our way to meet the Governor's call for a 36% water reduction in our service area.

While other communities are responding to the drought by providing rebates for turf removal and landscaping changes, the District will need to pursue an alternative that is quickly implemented and can be widely distributed throughout our service area. While turf removal programs cost about \$1,500 per acre foot of water saved, the Wi-Fi based irrigation controller will cost about \$155 per acre foot of water saved. Based on typical turf removal incentives, \$250,000 would only allow us to impact a few hundred customers, but with the installation of residential irrigation controllers we can fund systems that improve the efficiency of nearly 1,500 residential customers.

During this agenda item, the District staff will present the implementation plan to facilitate the distribution of the irrigation controllers to residential customers for a limited time. The Board is requested to authorize the General Manager to modify, adjust and terminate the program at any time.



Smart Sprinkler Controller

If you are frustrated with your current controller, tired of fighting with outdated user interfaces and confusing programming menus, the Skydrop WiFi controller will revolutionize the way you approach your home and garden irrigation.

Skydrop is more intelligent than other so-called "smart-controllers"; doing more than simply turning sprinkler zones on-and-off at programmed times the way most controllers do, built from the ground up to be an all-in-one solution for all your irrigation and conservation needs.



Not only is the Skydrop WiFi Smart controller the smartest piece of technology in your yard, it's also the most attractive! The contemporary design incorporates modern aesthetics with practical functionality. Skydrop's alloy metal wheel is actually the controller's input interface, making programming the device slick and intuitive to operate. Skydrop's ultra-smooth motion of the wheel gliding underhand feels great reflecting the solid build quality and thoughtful design.

If you already have a sprinkler controller the Skydrop is a cinch to swap out. Anyone with a screwdriver and 30-minutes can have a Skydrop up and running in their yard, saving them time and money immediately.

WHAT'S IN THE BOX?

- Skydrop smart sprinkler controller with 4.3" LCD screen
- Wall Plate featuring tool free wiring
- Installation Guide
- 24 VAC power supply
- Mounting screws for wood / drywall

FEATURES & BENEFITS

- 8 Station Smart Controller plus Master Valve / Pump
- Expandable to 16 Stations with expansion unit (Coming Soon)
- Makes adjustments to comply with regional watering restrictions
- Connects to real time hyper-local weather reports and forecasts
- Adapts the watering schedule based on variable inputs
- Can be controlled from any web-enabled device or computer

TECHNICAL SPECS

- 8 Station Smart Controller plus Master Valve / Pump
- Expandable to 16 Stations with expansion unit (Coming Soon)
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- Connects to real time hyper-local weather reports and forecasts
- Adapts the watering schedule based on variable inputs
- Can be controlled from any web-enabled device or computer

NETWORKING

- 802.11b
- 802.11g
- 802.11n (2.4 Ghz only)



skydrop™

Anywhere Access



ACCESS FROM ANY WEB-ENABLED DEVICE

You can manage your Skydrop smart controller using the controller itself, your preferred mobile device, or web browser. By connecting the Skydrop controller to your Wi-Fi network you can change settings or water at any time or any place.

WI-FI ENABLED

By connecting the Skydrop WiFi controller to your Wi-Fi network Skydrop WiFi Timer you can change settings or water your landscape or lawn at any time or from any place.



AUTOMATED WATERING

No one has time to be constantly adjusting and updating the water schedule for their lawn. Skydrops' proprietary algorithm gathers a variety of hyper-local data points creating from them a comprehensive and efficient watering schedule – dynamically adapting schedules without any intervention on your part throughout the season.

BEAUTIFULLY SIMPLE

The beautifully simple user interface makes Skydrop easy to navigate and setup. Gone are the days of struggling to understand and setup your lawn's irrigation. Skydrop can help you take back control of your yard, once and for all.



skydrop[™] is Environment Friendly

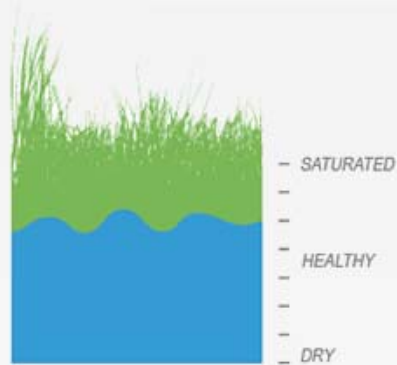
SKYDROP SAVES WATER & MONEY

Local weather changes can have drastic, daily implications on how much water is needed for any lawn or landscape. Skydrop automatically adjusts watering schedules to reduce wasteful watering, which will save you water and money.



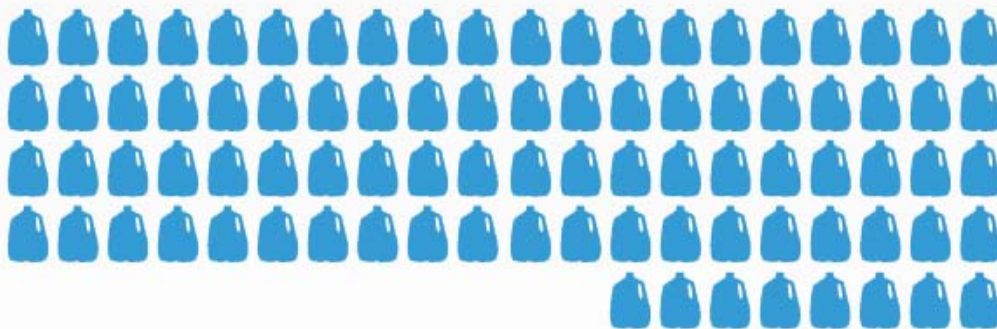
NO MORE WASTEFUL WATERING

Nothing is more wasteful than having your sprinklers on while it's raining. It's bad for the environment, and it costs you money!



WATER SMARTER

The Skydrop WiFi Smart controller helps you determine how much water your lawn needs. It actually calculates how much moisture your lawn is losing each day, and sets watering times accordingly, making sure your grass always has the optimum amount of water it needs to stay green and healthy.



IMAGINE USING 50% LESS WATER

The EPA estimates that about 30% of a household's water is used for irrigation. Over 50% of that irrigation water is wasted through over watering and evaporation. With Skydrop, those inefficiencies will be reduced by up to 50% by watering only by need, rather than watering by a set weekly schedule.



General FAQs

Below, you can find frequently asked questions about the skydrop smarter watering sprinkler controller and it's associated functionality.

How many zones can the Skydrop Controller manage?

The standard Skydrop Controller is able to manage up to 8-zones. With Skydrop Expansion module an addition of 8-zones can be managed, for a total of 16-zones.

Where does the Skydrop Controller get its weather data?

Skydrop utilizes your Wifi connection to the Skydrop cloud and our network of weather stations. The Skydrop cloud service constantly monitors real-time weather in your specific location and determines the optimal watering schedule based on what the weather conditions.



How is the Skydrop Controller installed?

Skydrop is very simple to install. It replaces your existing sprinkler timer, and the existing valve wires will plug directly into your new Skydrop Controller. Once you power up the controller for the first time, it will guide you through a WiFi connection setup process. Once connected to WiFi, it will gather weather data from the cloud, and also allows you to manage your system from a smartphone or computer.

View the [Quick Start Guide](#) for details or view the [Installation Video](#).

Can I manage settings differently for each zone?

Yes, each controller valve wire corresponds to a different zone. When you first setup your zones, Skydrop will ask questions regarding that particular condition or each zone. These conditions consist of soil, sprinkler, plant type, slope, shade, etc.

Which mobile devices are currently compatible with Skydrop?

Any Apple device running iOS 6.0 or newer & Android device running 4.0 (ice cream sandwich) or newer.

How can I download or update my Skydrop App?

The app can be downloaded through [links on our website](#). It is also available from the Apple App Store or Google Play store, by searching “Skydrop Mobile”. The app will prompt for regular updates as with any 3rd party app on your smartphone or tablet.

Do I need a mobile device, smartphone or browser to use Skydrop?

No. Skydrop can be controlled using the jog-dial & LCD screen on the device itself. Control can be accessed additionally from a computer, smartphone or tablet.

*Some advanced settings are available only via a browser or the app.

Are there any additional fees or costs associated with the Skydrop Controller?

No. There are no additional fees or costs associated with the purchase or use of the controller. The manufacturer suggested retail price of the controller is \$299.00 + tax.

Am I able to integrate my own personal weather station into the Skydrop Controller?

The controller cannot integrate with personal weather stations directly. Skydrop pulls hyper-local weather data for your controller from our vast network of weather stations near you.

However, the ability to connect to a personal weather station linked to the [Weather Underground PWS Network](#) is in development and should be available in the second quarter of 2015.

How do I set up my Skydrop Controller account?

You can create a new account or login to an existing Skydrop account by going to my.skydrop.com or accessing the Skydrop Mobile app. Creating & accessing a personal Skydrop account will give you the ability to manage your sprinkler system remotely.

What type of power supply does Skydrop use?

The controller uses a 24V AC power supply. It is a small module which plugs directly into an AC socket, commonly known as a “wall wart.”

Does the controller add to my existing system or does it replace what I have?

The Skydrop controller will replace your existing sprinkler control system, but not existing valves or wires.

What browsers does the Skydrop web interface (my.skydrop.com) support?

Chrome, Safari & Firefox (IE9 or newer)

Can the Skydrop Controller be installed outside?

The device is built for indoor installation, but can be installed outdoors with use of an outdoor



housing. Skydrop will be releasing an outdoor housing, which will be available in the later half of 2015.

Does the Skydrop Controller have lightning strike and EMI protection?

Yes. The Skydrop Controller is resistant to interference and meets all FCC standards for unintentional EMI radiation. Skydrop has built-in circuitry to protect against lightning strikes.

Is the Controller heat & cold resistant?

The Skydrop Controller is designed for indoor use (including the garage). Temperature resistance is a maximum 85C and minimum of -20C.

Can I set specific watering instructions on my Controller?

Yes. Skydrop's smart watering system allows you to set specific schedules based on day, time, duration or local watering restrictions.

How do I report a problem?

You can reach us by any of the following Support methods:

email – support@skydrop.com

chat – <http://www.skydrop.com/>

call – [1-844-SKYDROP](tel:1-844-SKYDROP) (844-759-3767)

How does Skydrop make water conservation better than other “smart” controllers?

The Skydrop controller will anticipate watering needs based on future weather predictions. These weather updates are analyzed several times per day to ensure the greatest accuracy for your lawns watering needs. In addition, after the initial setup, the Skydrop controller enters a learning period where it will send notifications requesting feedback. With this information, Skydrop fine tunes the schedule and maximizes efficiency. See the article “[How skydrop smart watering works](#)” for additional details on our smart watering methodology.

Does Skydrop help conserve water?

The EPA estimates that about 30% of a household's water is used for irrigation. Over 50% of that irrigation water is wasted through overwatering and evaporation. With Skydrop, those inefficiencies will be reduced by up to 50% by watering only based on need, rather than watering by a set weekly schedule.

Why is water conservation so important?

With water use in the United States increasing every year, many regions are starting to feel the pressure. In the last five years, nearly every region of the country has experienced a water shortage. At least 36 states are anticipating local, regional, or statewide water shortages by 2013, even under non-drought conditions. Most of these municipalities are placing restrictions on watering to combat drought conditions.

What happens if Skydrop loses its Internet connection?

If you have been connected to the Skydrop cloud service at any time, the controller will use a

backup watering schedule based on the device's history. This schedule lacks the day-to-day smart watering intelligence, but will still operate using seasonal adjustments provided by historical data. If Skydrop does not have an active Internet connection, you will not be able to access your controller using a mobile device or web browser.



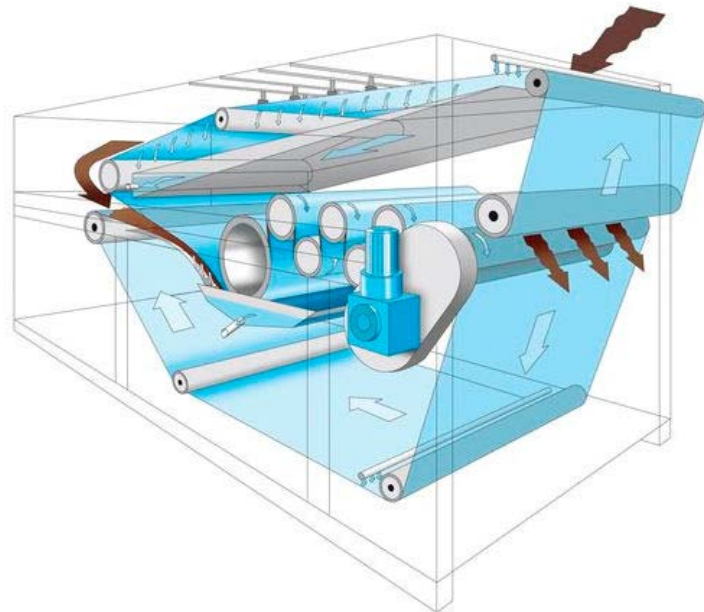
Date: May 6, 2015

Prepared By: Kevin King, Operations Manager

Subject: Consideration of Contract with RMC for Dewatering Equipment Pilot Testing Support Services

Recommendation: That the Board authorizes the District staff to execute a contract with RMC for Dewatering Equipment Pilot Testing Support Services for a sum not to exceed \$45,000.

The Wochholz Regional Water Recycling Facility uses belt filters to remove liquids from the biosolids collected throughout the sewer treatment process. The belt filter technology has been in use at the sewer treatment plant for over twenty years. The belt filters have proven to be a simple and reliable technology that has been easy to maintain with a long life. As this equipment has surpassed its useful life due to metal fatigue and stress cracks in the equipment, it is necessary to evaluate other available technology.



The District staff will be pursuing alternative dewatering equipment to further reduce maintenance, energy and hauling costs. Pilot testing of potential equipment will provide an opportunity to validate the equipment performance and provide the operations staff members with first-hand knowledge about the overall operation and maintenance of the equipment.

The District staff has requested RMC Water and Environment to assist the District with the pilot testing and to provide an estimate of the return on investment (ROI) of newer technology based on the results of the pilot testing.



April 3, 2015

Yucaipa Valley Water District
Attn: Mr. Kevin King
12770 Second Street
Yucaipa, CA 92399-0730

Subject: Proposal to assist with Dewatering Equipment Pilot Testing

Mr. King:

The performance of the existing belt presses (installed over 20 years ago) for digester solids dewatering at the Yucaipa Valley Water District (District) Henry N. Wochholz Regional Water Recycling Facility (WRWRF) has significantly deteriorated. The District is considering replacing the belt presses with a more efficient dewatering technology to reduce maintenance, energy and hauling costs. Pilot testing of potential technologies is advisable: one (1) to verify the performance, and two (2) provide the YVWD operations staff with the opportunity to understand the O&M requirements. Most vendors will provide a pilot unit for testing at no cost to the District.

RMC Water and Environment proposes to assist the District with the pilot testing and to provide an estimate of the Return on Investment (ROI) of newer technology based on the results of the pilot testing. Our proposed scope of work and fee to support the District with testing and evaluation of dewatering technologies is contained in the following.

SCOPE OF WORK

Task 1: Test Plan and Vendor Coordination

1.1 Prepare Test Plan

RMC will prepare a test plan for each technology to be tested. This will including a description of the equipment, test objectives and information to be collected. The test plan will provide a day-by-day strategy for the test (flow, chemical addition, data to be recorded, sampling frequency, etc.). The test plan may be modified based on early test results. It is assumed that the District will operate the pilot unit, collect samples, and provide sample analysis to RMC following the pilot study.

1.2 Identify design requirements and prepare layout

RMC will identify preliminary design requirements for each pilot facility to be tested. This will include a layout of the test unit and associated requirements (e.g., electrical connection, water piping, sludge pumping and piping, filtrate disposal). District shall provide information on available utilities and their location.

1.3 Coordinate with vendors

RMC will coordinate with various vendors to be tested. Based on preliminary discussions with vendors it is assumed there will be up to four (4) different vendors supplying pilot units. We anticipate that the pilot tests will be held sequentially, with only one pilot unit on site at a time. RMC will also coordinate with the vendors to prepare the Test Plan, identify design requirements, and prepare the layout plan.

15510-C Rockfield Blvd., Suite 200
Irvine, CA 92618 • 949.420.5300 • rmcwater.com



April 3, 2015

Deliverables:

- Draft and final Test Plan
- Layout Plan / Piping & Instrumentation Diagram

Task 2: Pilot Testing Assistance

2.1 Assist with pilot test start-up

RMC will provide assistance to the District during the start-up for each pilot unit. Start-up will mainly be the responsibility of the vendor. All utility connections to the pilot units (e.g., site preparation, utilities hookups, assembly, and disassembly) will be the responsibility of the District.

2.2 Support pilot test operations and monitoring

RMC will provide support to the District during the operation of the pilot unit. Plant operations and laboratory staff will manage the day-to-day operation of the pilot unit, and provide in-house laboratory analyses (e.g., jar testing for polymer dose determination, dryness testing of thickened solids).

2.3 Manage and analyze pilot test data

RMC will manage the operational and monitoring data collected by the plant staff. RMC will analyze the data at the conclusion of each vendor's pilot. It is assumed there will be up to four (4) pilot units tested.

Task 3: Technical Evaluation

3.1 Prepare draft Technical Report

RMC will prepare a technical report, presenting results of the pilot study and estimated the costs and saving of full-scale replacement of the existing belt presses. The report will include an estimated ROI to compare the newer technology piloted against each other and against the existing belt presses. The ROI will include estimated capital cost, operational cost (e.g., energy consumption, chemical/polymer use), and sludge dryness and disposal costs. RMC assumes that the District will provide data on the performance of the existing belt presses.

3.2 Prepare final Technical Report

Based on comments received from the District, RMC will incorporate changes into a final technical report.

3.3 Board Workshop

RMC will attend a Board Workshop to present the results of the technical analysis and recommendations.

Deliverables:

- Draft Screw Press Pilot Study Report
- Final Screw Press Pilot Study Report

Task 4: Project Management and Quality Control

4.1 Project Management

RMC will provide project management services, including budget and schedule control, tracking, and payment for the duration of the project.

April 3, 2015

4.2 QA/QC

RMC will provide quality assurance and quality control on work products prior to submittal to District.

SCHEDULE

RMC anticipates that each pilot unit will be tested for about a week. Depending on the availability of test units, it is anticipated that pilot testing can be completed with 10 to 12 weeks from Notice to Proceed. The Technical evaluation report will be prepared and submitted to the District approximately two weeks after completion of the final test. Total time for this effort is estimated to be around 16 weeks.

FEE ESTIMATE

Our proposed fee estimate to complete the tasks previously described is provided in the attached table.

We appreciate the opportunity to propose on this important project for Yucaipa Valley Water District.

Sincerely,



Scott Goldman, P.E., BCEE

Attached: RMC Fee Estimate



Fee Estimate

**Yucaipa Valley Water District
Dewatering Equipment Pilot Testing Assistance**

Tasks	Labor				Total Hours	Total Labor Comp. (1)	ODCs		Total
	Scott Goldman: PIC	Surbey Huling: PM	Nathan Chase: PE	Mark Tallentob: QA/QC			Assistant Project Engineer: EPS-1	Admin. AD-2	
Task 1: Task Plan, Preliminary Design, and Vendor Coordination	\$265	\$227	\$190	\$227	\$116	\$100			
1.1 Prepare test plan	1	1	1	1	1				
1.2 Identify design requirements and prepare layout	1	1	1	1	1				
1.3 Coordinate with vendors	1	1	1	1	1				
Subtotal Task 1:	0	2	28	0	12	0			
Task 2: Pilot Testing Assistance	1	2	12		12				
2.1 Assist with pilot test start-up	2	2	12		12				
2.2 Support pilot test operations and monitoring	1	2	24		8				
2.3 Manage and analyze pilot test data	2	6	48	0	8	0			
Subtotal Task 2:	1	4	20		12	2			
Task 3: Technical Evaluation	1	2	4		8	2			
3.1 Prepare draft Technical Report	4	2	4		8	2			
3.2 Prepare final Technical Report	4	6	32	0	20	4			
3.3 Board Workshop	6	16	6		6				
Subtotal Task 3:	4	16	6		48	20			
Task 4: Project Management and Quality Control	4	16	6		16	20			
4.1 Project Management	4	16	6		16	20			
4.2 QA/QC	4	16	6		16	20			
Subtotal Task 4:	4	30	11.6		41	24			
TOTAL							\$598	\$1,098	\$657,000

1. The individual hourly rates include salary, overhead and profit.
2. Subconsultants will be billed at actual cost plus 10%.
3. Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus 10%.
4. RMC reserves the right to adjust its hourly rate structure and ODC markup at the beginning of the calendar year for all ongoing contracts.



Henry N. Wochholz Regional Water Recycling Facility

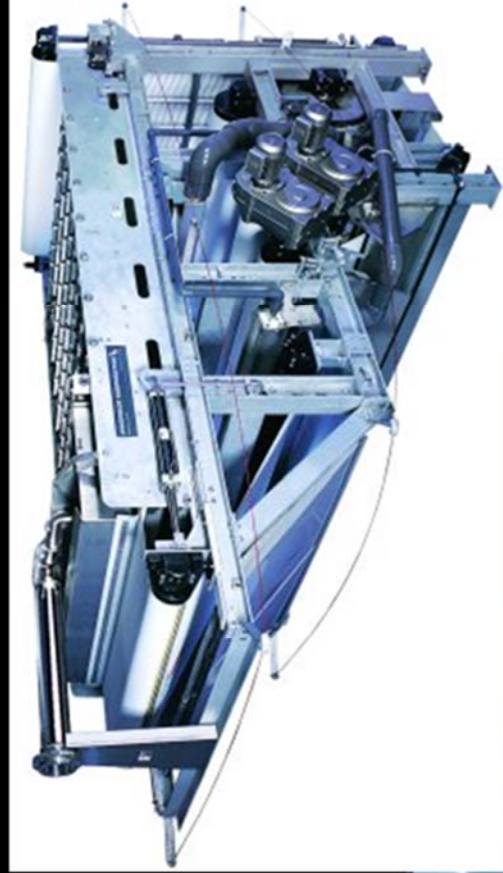
Biosolids Dewatering Pilot Test

Yucaipa Valley Water District

April 2015

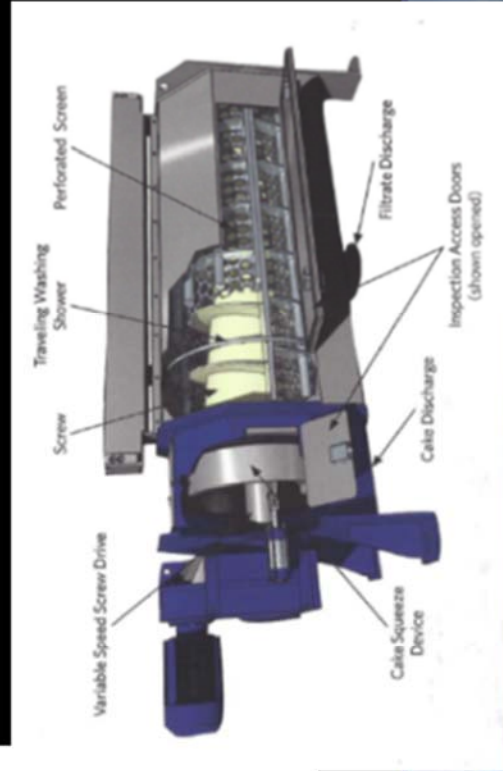
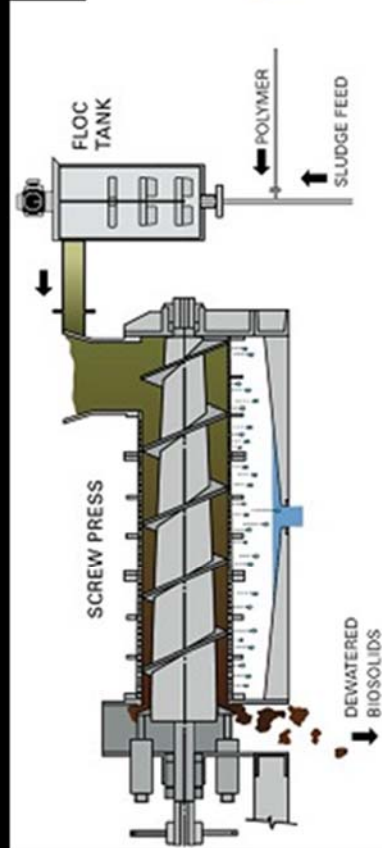
Existing Biosolids Dewatering System

- ◆ Current System: Two 2-Meter Width Belt Filter Presses
- ◆ 22 Years in Service (Installed in 1993)
 - Typical Service Life Belt = 2,000 to 3,000 hours
 - Typical Service Life for Rollers/Mechanical Components = 10 Years
- ◆ Significant Decline in Performance Due to Age
 - Expected performance new: 16% - 17% percent solids
 - Current performance: 11% - 12% percent solids



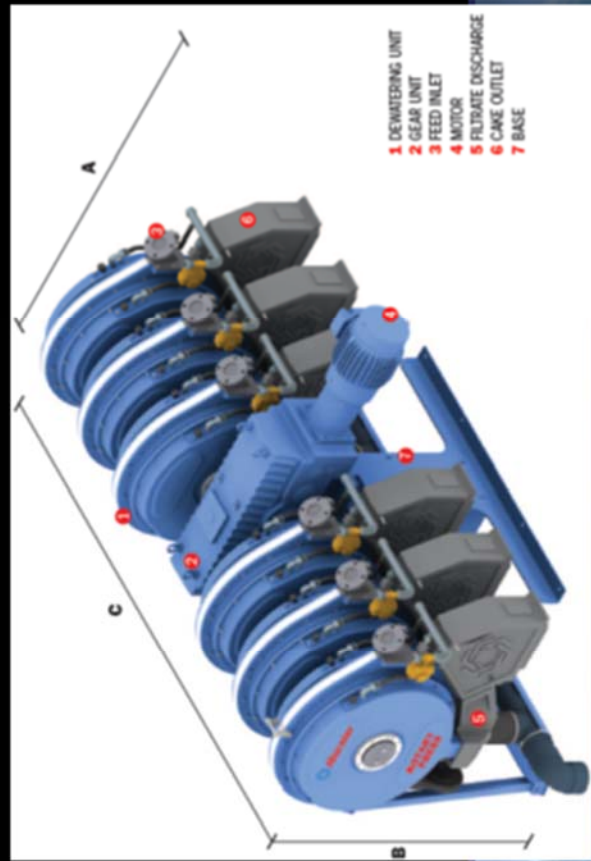
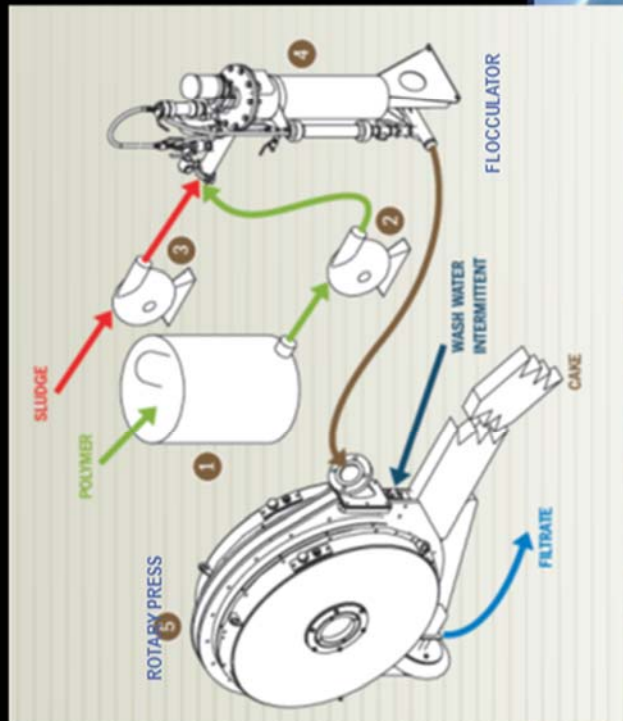
Alternative Dewatering Technologies

- ◆ Screw Press
 - Lower Power and Maintenance Costs than Belt Filter Press
 - Higher % Solids than Belt Press: 20% - 22%



Alternative Dewatering Technologies

- ◆ Rotary Press
 - Lower Power and Maintenance Costs than Belt Filter Press
 - Higher % Solids than Belt Press: 20% - 22%
 - Smaller Footprint than Belt or Screw Presses



Potential Savings?

- ◆ Energy Cost
- ◆ Chemical Cost
- ◆ Maintenance Cost
- ◆ Biosolids Disposal Cost

Preliminary Cost Savings Estimate for Sludge Disposal

Parameter	Unit	Value
2014 YVWD Annual Sludge Data		
Dewatered Sludge Production	wet ton	5,396
Sludge Wt %	%	12%
Estimated Dry Solids	ton	647
Estimated with New Equipment		
Sludge Wt %	%	20%
Annual Sludge Production	wet ton	3,237
Estimated Annual Sludge Reduction	wet ton	2,158
Unit Cost for Disposal	\$/wet ton	\$ 50
Estimated Annual Cost Savings for Disposal	-----	\$ 107,916

Why Pilot Test?

- ◆ Confirm Operating Cost Parameters for Each Technology
 - O&M Cost Parameters
 - Actual Dewatered % Solids
 - Polymer Dosing Requirements and Anticipated Usage
 - Power and Utility Requirements
- ◆ Allow Hands-On Experience for YVWD Operations Staff
- ◆ Basis to Determine Most Appropriate Dewatering Replacement Technology
 - Belt Press, Screw Press, Rotary Press
 - Cost Effectiveness Based on Lifecycle
 - Preference of YVWD Operations Staff

Pilot Test Format

- ◆ Pilot Test Four Manufacturers
- ◆ Manufacturers Preliminarily Identified for Consideration:
 - Ishigaki (Screw Press)
 - FKC (Screw Press)
 - Huber (Screw Press)
 - Fournier (Rotary Press)
- ◆ Each to Provide a Pilot Unit to Test for Up to One Week at the Henry N. Wochholz Regional WRF

Director Comments



Yucaipa Valley Water District



FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

Service Area Size: 40 square miles (sphere of influence is 68 square miles)

Elevation Change: 3,140 foot elevation change (from 2,044 to 5,184 feet)

Number of Employees: 5 elected board members
57 full time employees

Operating Budget: Water Division - \$13,072,750
Sewer Division - \$11,689,000
Recycled Water Division - \$433,500
Total Annual Budget - \$25,195,250

Number of Services: 12,206 water connections serving 16,843 units
13,492 sewer connections serving 20,312 units
62 recycled water connections

Water System: 215 miles of drinking water pipelines
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
12,000 ac-ft annual water demand (3.9 billion gallons)
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional Water Filtration Facility

Sewer System: 8.0 million gallon treatment capacity - current flow at 4.0 mgd
205 miles of sewer mainlines
5 sewer lift stations
4,500 ac-ft annual recycled water prod. (1.46 billion gallons)

Recycled Water: 22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
1,200 ac-ft annual recycled demand (0.4 billion gallons)

Brine Disposal: 2.2 million gallon desalination facility at sewer treatment plant
1.108 million gallons of Inland Empire Brine Line capacity
0.295 million gallons of treatment capacity in Orange County



THE MEASUREMENT OF WATER PURITY

One part per hundred is generally represented by the percent (%).
This is equivalent to about fifteen minutes out of one day.

One part per thousand denotes one part per 1000 parts.
This is equivalent to about one and a half minutes out of one day.

One part per million (ppm) denotes one part per 1,000,000 parts.
This is equivalent to about 32 seconds out of a year.

One part per billion (ppb) denotes one part per 1,000,000,000 parts.
This is equivalent to about three seconds out of a century.

One part per trillion (ppt) denotes one part per 1,000,000,000,000 parts.
This is equivalent to about three seconds out of every hundred thousand years.

One part per quadrillion (ppq) denotes one part per 1,000,000,000,000,000 parts.
This is equivalent to about two and a half minutes out of the age of the Earth (4.5 billion years).





GLOSSARY OF COMMONLY USED TERMS

Every profession has specialized terms which generally evolve to facilitate communication between individuals. The routine use of these terms tends to exclude those who are unfamiliar with the particular specialized language of the group. Sometimes jargon can create communication cause difficulties where professionals in related fields use different terms for the same phenomena.

Below are commonly used water terms and abbreviations with commonly used definitions. If there is any discrepancy in definitions, the District's Regulations Governing Water Service is the final and binding definition.

Acre Foot of Water - The volume of water (325,850 gallons, or 43,560 cubic feet) that would cover an area of one acre to a depth of 1 foot.

Activated Sludge Process – A secondary biological sewer treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen, and consume dissolved nutrients in the wastewater.

Annual Water Quality Report - The document is prepared annually and provides information on water quality, constituents in the water, compliance with drinking water standards and educational material on tap water. It is also referred to as a Consumer Confidence Report (CCR).

Aquifer - The natural underground area with layers of porous, water-bearing materials (sand, gravel) capable of yielding a supply of water; see Groundwater basin.

Backflow - The reversal of water's normal direction of flow. When water passes through a water meter into a home or business it should not reverse flow back into the water mainline.

Best Management Practices (BMPs) - Methods or techniques found to be the most effective and practical means in achieving an objective. Often used in the context of water conservation.

Biochemical Oxygen Demand (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

Biosolids – Biosolids are nutrient rich organic and highly treated solid materials produced by the sewer treatment process. This high-quality product can be used as a soil amendment on farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

Catch Basin – A chamber usually built at the curb line of a street, which conveys surface water for discharge into a storm sewer.

Capital Improvement Program (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

Collector Sewer – The first element of a wastewater collection system used to collect and carry wastewater from one or more building sewer laterals to a main sewer.

Coliform Bacteria – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere and is generally used as an indicator of sewage pollution.

Combined Sewer Overflow – The portion of flow from a combined sewer system, which discharges into a water body from an outfall located upstream of a wastewater treatment plant, usually during wet weather conditions.

Combined Sewer System– Generally older sewer systems designed to convey both sewage and storm water into one pipe to a wastewater treatment plant.

Conjunctive Use - The coordinated management of surface water and groundwater supplies to maximize the yield of the overall water resource. Active conjunctive use uses artificial recharge, where surface water is intentionally percolated or injected into aquifers for later use. Passive conjunctive use is to simply rely on surface water in wet years and use groundwater in dry years.

Consumer Confidence Report (CCR) - see Annual Water Quality Report.

Cross-Connection - The actual or potential connection between a potable water supply and a non-potable source, where it is possible for a contaminant to enter the drinking water supply.

Disinfection By-Products (DBPs) - The category of compounds formed when disinfectants in water systems react with natural organic matter present in the source water supplies. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established have been identified in drinking water, including trihalomethanes, haloacetic acids, bromate, and chlorite

Drought - a period of below average rainfall causing water supply shortages.

Dry Weather Flow – Flow in a sanitary sewer during periods of dry weather in which the sanitary sewer is under minimum influence of inflow and infiltration.

Fire Flow - The ability to have a sufficient quantity of water available to the distribution system to be delivered through fire hydrants or private fire sprinkler systems.

Gallons per Capita per Day (GPCD) - A measurement of the average number of gallons of water use by the number of people served each day in a water system. The calculation is made by dividing the total gallons of water used each day by the total number of people using the water system.

Groundwater Basin - An underground body of water or aquifer defined by physical boundaries.

Groundwater Recharge - The process of placing water in an aquifer. Can be a naturally occurring process or artificially enhanced.

Hard Water - Water having a high concentration of minerals, typically calcium and magnesium ions.

Hydrologic Cycle - The process of evaporation of water into the air and its return to earth in the form of precipitation (rain or snow). This process also includes transpiration from plants, percolation into the ground, groundwater movement, and runoff into rivers, streams and the ocean; see Water cycle.

Infiltration – Water other than sewage that enters a sewer system and/or building laterals from the ground through defective pipes, pipe joints, connections, or manholes. Infiltration does not include inflow. See *Inflow*.

Inflow - Water other than sewage that enters a sewer system and building sewer from sources such as roof vents, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include infiltration. See *Infiltration*.

Inflow / Infiltration (I/I) – The total quantity of water from both inflow and infiltration.

Mains, Distribution - A network of pipelines that delivers water (drinking water or recycled water) from transmission mains to residential and commercial properties, usually pipe diameters of 4" to 16".

Mains, Transmission - A system of pipelines that deliver water (drinking water or recycled water) from a source of supply the distribution mains, usually pipe diameters of greater than 16".

Meter - A device capable of measuring, in either gallons or cubic feet, a quantity of water delivered by the District to a service connection.

Overdraft - The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion of the groundwater in the basin which has a net effect of lowering the levels of water in the aquifer.

Peak Flow – The maximum flow that occurs over a specific length of time (e.g., daily, hourly, instantaneously).

Pipeline - Connected piping that carries water, oil or other liquids. See Mains, Distribution and Mains, Transmission.

Point of Responsibility, Metered Service - The connection point at the outlet side of a water meter where a landowner's responsibility for all conditions, maintenance, repairs, use and replacement of water service facilities begins, and the District's responsibility ends.

Potable Water - Water that is used for human consumption and regulated by the California Department of Public Health.

Pressure Reducing Valve - A device used to reduce the pressure in a domestic water system when the water pressure exceeds desirable levels.

Pump Station - A drinking water or recycled water facility where pumps are used to push water up to a higher elevation or different location.

Reservoir - A water storage facility where water is stored to be used at a later time for peak demands or emergencies such as fire suppression. Drinking water and recycled water systems will typically use concrete or steel reservoirs. The State Water Project system considers lakes, such as Shasta Lake and Folsom Lake to be water storage reservoirs.

Runoff - Water that travels downward over the earth's surface due to the force of gravity. It includes water running in streams as well as over land.

Sanitary Sewer System - Sewer collection system designed to carry sewage, consisting of domestic, commercial, and industrial wastewater. This type of system is not designed nor intended to carry water from rainfall, snowmelt, or groundwater sources. See *Combined Sewer System*.

Sanitary Sewer Overflow – Overflow from a sanitary sewer system caused when total wastewater flow exceeds the capacity of the system. See *Combined Sewer Overflow*.

Santa Ana River Interceptor (SARI) Line – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the sewer treatment plant operated by Orange County Sanitation District.

Secondary Treatment – Biological sewer treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

Supervisory Control and Data Acquisition (SCADA) - A computerized system which provides the ability to remotely monitor and control water system facilities such as reservoirs, pumps and other elements of water delivery.

Service Connection - The water piping system connecting a customer's system with a District water main beginning at the outlet side of the point of responsibility, including all plumbing and equipment located on a parcel required for the District's provision of water service to that parcel.

Sludge – Untreated solid material created by the treatment of sewage.

Smart Irrigation Controller - A device that automatically adjusts the time and frequency which water is applied to landscaping based on real-time weather such as rainfall, wind, temperature and humidity.

Special District - A political subdivision of a state established to provide a public services, such as water supply or sanitation, within a specific geographic area.

Surface Water - Water found in lakes, streams, rivers, oceans or reservoirs behind dams.

Total Suspended Solids (TSS) – The amount of solids floating and in suspension in water or sewage.

Transpiration - The process by which water vapor is released into the atmosphere by living plants.

Trickling Filter – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in primary treated sewage as it trickles over them.

Underground Service Alert (USA) - A free service that notifies utilities such as water, telephone, cable and sewer companies of pending excavations within the area (dial 8-1-1 at least 2 working days before you dig).

Urban Runoff - Water from city streets and domestic properties that typically carries pollutants into the storm drains, rivers, lakes, and oceans.

Valve - A device that regulates, directs or controls the flow of water by opening, closing or partially obstructing various passageways.

Wastewater – Any water that enters the sanitary sewer.

Water Banking - The practice of actively storing or exchanging in-lieu surface water supplies in available groundwater basin storage space for later extraction and use by the storing party or for sale or exchange to a third party. Water may be banked as an independent operation or as part of a conjunctive use program.

Water cycle - The continuous movement water from the earth's surface to the atmosphere and back again; see Hydrologic cycle.

Water Pressure - Pressure created by the weight and elevation of water and/or generated by pumps that deliver water to the tap.

Water Service Line - The pipeline that delivers potable water to a residence or business from the District's water system. Typically the water service line is a 1" to 1½" diameter pipe for residential properties.

Watershed - A region or land area that contributes to the drainage or catchment area above a specific point on a stream or river.

Water Table - The upper surface of the zone of saturation of groundwater in an unconfined aquifer.

Water Transfer - A transaction, in which a holder of a water right or entitlement voluntarily sells/exchanges to a willing buyer the right to use all or a portion of the water under that water right or entitlement.

Water Well - A hole drilled into the ground to tap an underground water aquifer.

Wetlands - Lands which are fully saturated or under water at least part of the year, like seasonal vernal pools or swamps.

Wet Weather Flow – Dry weather flow combined with stormwater introduced into a combined sewer system, and dry weather flow combined with infiltration/inflow into a separate sewer system.





COMMONLY USED ABBREVIATIONS

AQMD	Air Quality Management District
BOD	Biochemical Oxygen Demand
CARB	California Air Resources Board
CCTV	Closed Circuit Television
CWA	Clean Water Act
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils, and Grease
GPD	Gallons per day
MGD	Million gallons per day
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
POTW	Publicly Owned Treatment Works
PPM	Parts per million
RWQCB	Regional Water Quality Control Board
SARI	Santa Ana River Inceptor
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCADA	Supervisory Control and Data Acquisition system
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
WDR	Waste Discharge Requirements
YVWD	Yucaipa Valley Water District