

AGENDA
IRVINE RANCH WATER DISTRICT
WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE
THURSDAY, JUNE 4, 2015

CALL TO ORDER **1:00 p.m.** Committee Room, Second Floor, District Office
15600 Sand Canyon Avenue, Irvine, California

ATTENDANCE Committee Chair: Mary Aileen Matheis _____
Member: Steve LaMar _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Cheryl Clary	_____
	Beth Beeman	_____	Patrick Sheilds	_____
	Mark Tettemer	_____	Christine Compton	_____
	Fiona Sanchez	_____	Amy McNulty	_____
	Paul Weghorst	_____	Mike Hoolihan	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

COMMUNICATIONS

1. Notes: Weghorst
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
4. Determine which items may be approved without discussion.

INFORMATION

5. RESIDENTIAL RECYCLED WATER PUBLIC FILLING STATION
PROGRAM – TETTEMER/WEGHORST

Recommendation: Receive and file.

6. DROUGHT OUTREACH PROGRAM UPDATE – BEEMAN/WEGHORST

Recommendation: Receive and file.

ACTION

7. WATERSMART SOFTWARE VARIANCE NO. 2 –
STUVICK/MCNULTY/SANCHEZ./WEGHORST

Recommendation: That the Board authorize the General Manager to execute Variance No. 2 to the Professional Services Agreement between IRWD and WaterSmart Software Inc. in the amount of \$215,693.

8. WATER CONSERVATION PARTICIPATION AGREEMENT –
STUVICK/MCNULTY/SANCHEZ/WEGHORST

Recommendation: That the Board authorize the General Manager to execute the Water Conservation Participation Agreement between the Municipal Water District of Orange County and Irvine Ranch Water District, subject to non-substantive changes, for specified rebate programs with \$1,060,000 in funding for FY 2015-16.

9. 2015 LEGISLATIVE UPDATE – COMPTON/WEGHORST

Recommendation: That the Board adopt a “CONCERNED” position on AB 1390 (Alejo) and SB 225 (Pavley) and authorize staff to engage with stakeholders to protect IRWD's interests related to groundwater adjudications.

OTHER BUSINESS

10. A. Directors' Comments

B. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California (“District Office”). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District Office.

The Irvine Ranch Water District Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in an alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

June 4, 2015

Prepared by: M. Tettemer

Submitted by: P. Weghorst

Approved by: Paul Cook



WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

RESIDENTIAL RECYCLED WATER PUBLIC FILLING STATION PROGRAM

SUMMARY:

Staff has initiated a program to make a limited amount of recycled water available to all of IRWD's residential customers at a recycled water public filling station similar to the Residential Recycled Water Public Filling Station program provided by Dublin San Ramon Services District (DSRSD). This report provides a summary of DSRSD's program and an overview of the benefits, location, requirements, costs and regulatory approvals associated with implementing a Residential Recycled Water Public Filling Station program at IRWD.

BACKGROUND:

Recycled Water Public Filling Station programs have been established in a few communities throughout California, providing recycled water to the public to pick up at no charge. Using DSRSD's program as a model, staff has initiated a similar program for IRWD. Following is an overview of both recycled water filling station programs.

DSRSD's Recycled Water Public Filling Station Program

DSRSD initiated its Recycled Water Public Filling Station program to provide recycled water free of charge to residents to water trees, gardens, and lawns at their homes, or to wash outdoor furniture and hard surfaces. The recycled water is available at DSRSD's treatment plant where there are 18 recycled water filling stations, some of which are "drive-through" style and others that are "back-in" style. Before residents are permitted to obtain recycled water, they must receive training and sign an agreement which requires them to disclose the location of the use of the recycled water, the license plate number of the vehicle used to carry it and its intended uses for the recycled water. Residents are then issued a card indicating they have completed the training and signed the agreement. They are limited to taking 300 gallons of recycled water per visit and the recycled water must be placed into containers that are clearly labeled "recycled water". DSRSD reports that approximately 500 area residents have signed up for the program to date, and that approximately 120 resident visits occur daily. In 2014, 2.3 million gallons of recycled water were dispensed, which is the equivalent of nearly seven acre-feet.

DSRSD hires temporary employees as attendants at a pay rate of \$12-15 per hour to monitor access and verify that customers are trained and authorized as required. DSRSD began its program with one employee per shift but has since increased to three employees per shift due to the increased number of vehicles arriving at the recycled water filling station simultaneously. DSRSD's Recycled Water Public Filling Station is open to residents as follows:

Summer: Seven Days per Week (37 hours per week)

Monday through Friday: 2:00 p.m. – 7:00 p.m.

Thursday, Saturday, Sunday: 8:00 a.m. – Noon

Winter: Four Days per Week (19 hours per week)
Monday, Wednesday, Friday: Noon – 5:00 p.m.
Saturday: 8:00 a.m. – Noon

DSRSD promotes its recycled water filling station program on its website and Facebook page. It also provides residents with “Recycled Water Keeps This Garden Green” yard signs.

IRWD’s Proposed Recycled Water Public Filling Station Program:

After researching the possibility of establishing a recycled water filling station program, staff concluded that such a program will provide the following benefits:

- Makes recycled water available to IRWD’s residential customers;
- Promotes the acceptability of the use of recycled water within the community;
- Communicates that recycled water is a highly reliable water supply; and
- Helps the community deal with the difficult task of reducing use of potable water.

Location:

While DSRSD located its filling station at its treatment plant, neither IRWD’s Michelson Water Recycling Plant nor the Los Alisos Water Recycling Plant has sufficient space to allow for ease of access. Staff concluded that the most practical location for a residential Recycled Water Public Filling Station is in the parking lot on the undeveloped property adjacent to IRWD’s Sand Canyon offices, as shown in Exhibit “A”. Exhibit “B” shows the 0.8-acre parking lot which provides adequate space and is next to an existing four-inch diameter recycled water pipeline in Odyssey that is located adjacent to the property. Staff can modify the existing two-inch recycled water service which currently serves IRWD’s landscaping and initially construct six filling locations. Staff recommends initially establishing four “back-in” style filling locations and two “drive-through” style filling locations. These styles and associated filling station configuration are demonstrated in the photographs in Exhibits “C” and “D”. Additional filling locations can be added at the site as necessary. When the Recycled Water Public Filling Station is closed, staff can lock the existing cable gate and the recycled water supply.

Long-term plans for the proposed site include the construction of a commercial building and associated parking. The temporary Recycled Water Public Filling Station would be available for at least one year at this location while the commercial property is being planned and designed. If the public’s response warrants program expansion, an additional location for a residential recycled water filling station can be located.

This facility is being designed to provide recycled water to residential customers who use relatively small amounts of recycled water. It is not designed for commercial operations which would have trucks requiring a significant amount of time to fill. Staff is considering other ways to meet the commercial need for recycled water, e.g., recycled water for construction and street sweeping.

Customer Requirements:

Recycled water will be available to the District's customers free of charge; the additional time and effort to charge customers would increase IRWD's costs and would likely discourage customer participation. Staff will limit the amount of recycled water available to each resident to 300 gallons per visit; no limit will be placed on customer visits per day. Staff will provide training for its customers and require each to execute an agreement in which the customer agrees to use the recycled water for the intended purposes and at the locations specified by the customer.

Estimated Costs:

Staff has estimated that the cost to construct and operate this facility for one year will be \$71,800 based on two assumptions: 1) that the Recycled Water Public Filling Station will be open an average of 30 hours per week, and 2) that two attendants (temporary employees) will be present at all times when the filling station is open. Below is a summary of the estimated costs for the first year of operation:

Task	Estimated Capital Cost	Estimated Operating Cost	Notes
Construct six recycled water filling locations at the station and install signage	\$25,000		By IRWD employees
Attendants (Temporary Staff)		\$46,800	2 people x \$15/hour x 30 hours/week x 52 weeks
TOTAL	\$71,800		

The cost of this program will be paid from conservation funds generated from over allocation revenues. Staff is developing a proposed schedule of operating hours which will be presented at the Committee meeting.

Estimated Water Use:

In order to estimate the number of residents who are likely to participate in IRWD's Recycled Water Public Filling Station Program and how much recycled water would be provided, staff used DSRSD's program as an example. DSRSD serves a residential population of approximately 160,000 people, and approximately 500 area residents have signed up to participate in the program. Since DSRSD's recycled water treatment plant is located very close to residential areas, it is reasonable to assume that the approximately 120 customer visits per day are due in part to the minimal travel needed to access the recycled water filling station.

IRWD serves a residential population of approximately 370,000. A proportional comparison to DSRSD reveals that IRWD could expect approximately 1,000 area residents will sign up for the Recycled Water Station Program which equates to 200-240 customer visits per day. Since IRWD's service area is much larger than DSRSD's service area which will result in longer travel

time to the Recycled Water Public Filling Station. It is anticipated that the longer travel times will reduce the number of participants in half, from 1,000 to 500, with 100-120 customer trips per day from 200-240 customer trips. The reduced level of participation would result in about seven acre-feet of recycled water being provided by IRWD in the first year of operation.

Regulatory Approval:

Staff has held discussions with the State Water Resources Control Board, Division of Drinking Water (DDW) about IRWD's interest in establishing a Recycled Water Public Filling Station program. DDW advised staff that IRWD's program will need to include the elements of the DSRSD program described above and that it would consider modifications.

Staff is preparing the necessary documentation on the proposed Recycled Water Public Filling Station Program to submit to the DDW, the Regional Water Quality Control Board and the Orange County Health Care Agency for review and approval. Staff will also develop the residential training program, agreement and outreach methods for the program.

It will take an estimated 60 days to obtain the necessary regulatory approvals for the District's Recycled Water Filling Station Program, make the site improvements and begin outreach to the community. Staff will provide regular updates to the Committee on the development, operation and customer response.

FISCAL IMPACTS:

Approximately \$71,800 will be used from the District's conservation funds generated from over-allocation revenues to fund this project.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures and facilities.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit "A" – Aerial of IRWD's Sand Canyon Office and Adjacent Vacant Property
- Exhibit "B" – Plan View of Proposed Filling Stations and Site Traffic Pattern
- Exhibit "C" – Photos of "drive-through" and "back-in" Styles Water Filling Stations (Courtesy of DSRSD)
- Exhibit "D" – Photo of Water Filling Station Configuration (Courtesy of DSRSD)

Exhibit "A"
Aerial of IRWD's Sand Canyon Office and Adjacent Vacant Property

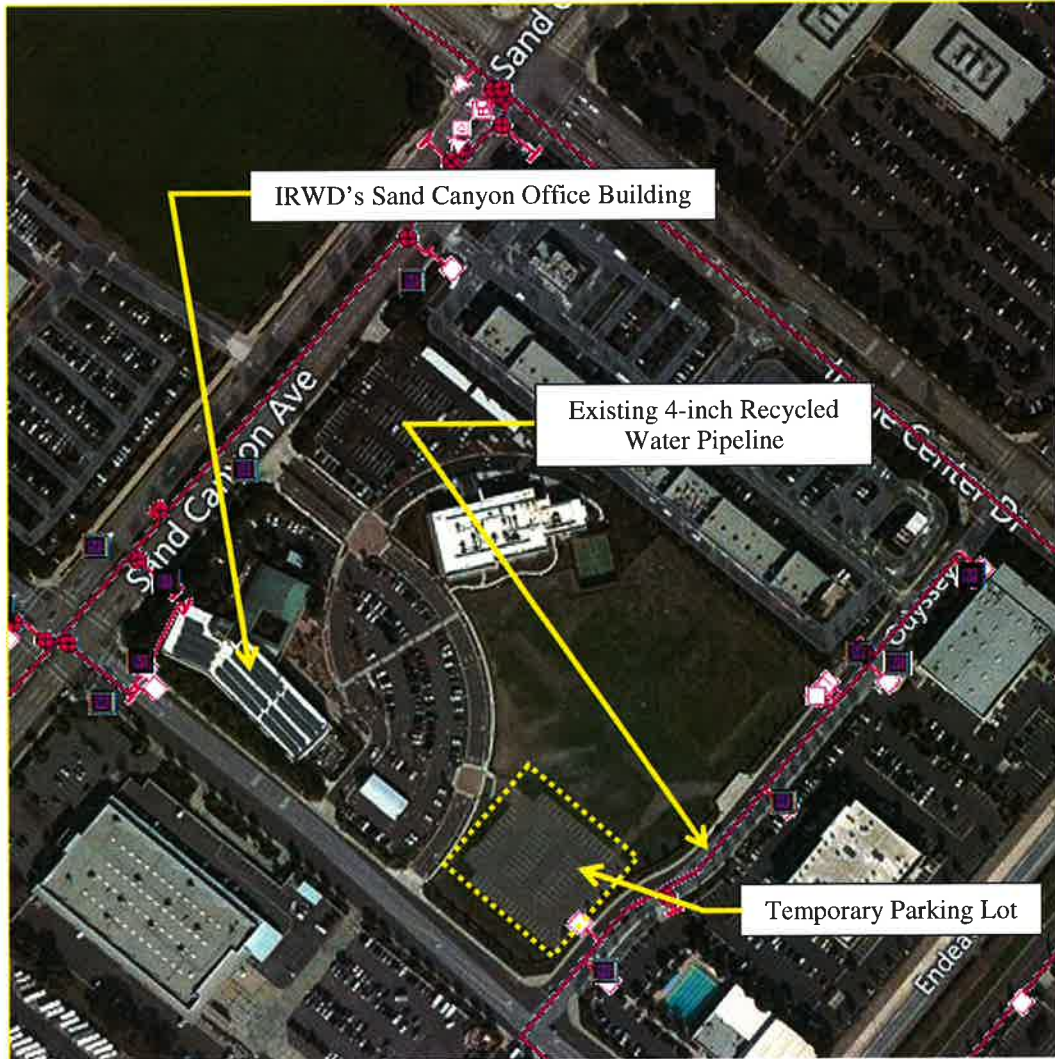


Exhibit "B"
Plan View of Proposed Fill Stations and Site Traffic Pattern



Exhibit "C"
Photos of "Back-In" and "Drive Through" Water Filling Stations
(Courtesy of DSRSD)



Exhibit "D"
Photo of Recycled Water Public Filling Station Configuration
(Courtesy of DSRSD)



June 4, 2015

Prepared by: B. Beeman

Submitted by: P. Weghorst

Approved by: Paul Cook



WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

DROUGHT OUTREACH PROGRAM UPDATE

SUMMARY:

In response to the statewide drought as well as the Governor's mandate for IRWD to reduce potable water use by 16% by February 2016, staff is developing and implementing a multi-pronged drought outreach plan. A draft of this plan was presented to the Board at its meeting on May 11, 2015. The purpose of this report is to update the Committee on these efforts and to present an initial multi-month advertising media plan and associated costs.

BACKGROUND:

Orange Park Acres Customer Outreach:

In March 2015, staff began an outreach effort to educate customers in the Orange Park Acres (OPA) area on their transition to IRWD's allocation-based conservation rate structure effective July 1, 2015. A webpage has been created on the District's website that provides the outreach schedule and copies of relevant documents. In addition, staff continues to work with high water use customers to help them find ways to save water prior to July 1. Other customer outreach efforts conducted to date include:

- In March, 2015, a postcard announcing the proposed rate changes, a formal announcement letter and a variance form was mailed to customers;
- In April, 2015, a presentation was given to the OPA Trails Committee and a rate transition flier, variance form and an announcement of two "Control Your Controller" workshops to be held in June were mailed to customers; and
- In May, 2015, the official Proposition 218 Notice on the proposed 2015-16 rates was mailed to customers.

Upcoming outreach efforts to OPA customers include:

- In June, 2015, a mailing will be sent to customers that will include instructions on how to read their new water bills;
- On June 27, two "Control Your Controller" sprinkler timer workshops will be held; and
- In July and beyond, staff will provide information on ongoing rebates, workshops and other ways to save water and money.

Customer Focus Groups and Surveys:

Staff is working with Fairbank, Maslin, Maullin, Metz & Associates (FM3), the firm that conducted IRWD's customer survey and focus groups in 2013, to conduct another series of focus groups and surveys that will help gauge customer perceptions and awareness of the drought, the statewide mandate and proposed rate changes. Two baseline focus groups were conducted on May 28, 2015 that also tested proposed outreach messages and collateral materials.

A baseline phone survey will be completed by FM3 during the first week in June. Staff will use the results of the focus groups and the first phone survey to gauge customer understanding prior to the District's outreach and media buy campaign. A post-survey will be conducted in September to measure the effectiveness of the outreach efforts and to identify, if necessary, what changes can be made to more effectively communicate with customers. At the Committee meeting, staff will provide an update with early findings of the focus groups.

Media Advertising Plan Proposal:

Staff is working with Crocker & Crocker, the District's water use efficiency outreach consultant, to finalize a multi-pronged media advertising plan. Crocker & Crocker participated in the focus groups conducted by FM3 to ensure coordinated outreach messaging and collateral materials. The advertising plan will initially focus on June, July, August and September which is the time period when the District needs to obtain the most water savings to meet the February, 2016 water use reduction goal of 16%. With the assistance of Crocker & Crocker and its media buy consultant, staff is proposing the following media advertising plan and associated costs:

- | | |
|--|------------|
| • Irvine Spectrum outdoor hanging wall advertisement (freeway visible) | } \$25,000 |
| • Irvine Spectrum outdoor two-sided sky murals (throughout venue) | |
| • Tustin Marketplace outdoor advertising (backlit panels) | |
| • Movie theater advertisements | \$23,028 |
| • District-wide bus panel advertising | \$90,000 |

Staff will present more details on the media plan at the Committee meeting. Specific costs for each advertising venue will be negotiated directly with each specific vendor to obtain the best possible value with purchase orders executed within staff and General Manager authorities. The advertising plan will be adaptive and additional venues may be added as staff gauges customer feedback and water savings. Staff is also working to develop additional advertising venues in areas such as Orange Park Acres that may need a non-traditional outreach effort.

OCTA Bus Wrap Promotion:

On May 22, 2015, staff attended the Orange County Transportation Authority (OCTA) bus wrap unveiling that announced the launch of a multi-agency water conservation campaign in Orange County with the message, "Every Drop Counts". The purpose of this campaign is to help raise awareness of California's severe drought conditions. A bus wrapped with conservation

messages was unveiled with the assistance of the OCTA Board of Directors and representatives of IRWD, the Municipal Water District of Orange County, the Transportation Corridor Agencies, Caltrans, Orange County, and the cities of Tustin and Irvine.

Presentations:

Staff made a drought presentation to the City of Irvine Green Ribbon Environmental Committee on May 14, 2015. Presentations have also been scheduled for Speak Up Newport on June 10 and the Inter-Canyon League on July 7.

Customer Communications:

The following communications are being prepared for distribution to IRWD customers:

Customer Letter:

Using feedback obtained in the customer focus groups conducted on May 28, 2016, staff has finalized a letter to IRWD customers that explains the statewide mandate to reduce IRWD potable water use by 16% by February, 2016. The letter encourages customers to help in this effort by reducing their outdoor water use by 50 percent. It also explains the potential impact of the reduction in outdoor water allocations to customer water bills that will be effective July 1, 2015. Based on customer feedback, the letter will also provide customers with an action plan on the best way to obtain water and money savings by letting their lawns go brown as well as information on opportunities to learn about drought tolerant landscaping and to obtain a rebate for the implementation of their new landscape plan in October 2015. The letter is scheduled to be mailed by June 8, 2015.

DroughtLines:

A four-page special edition of the June customer billing insert “Pipelines” was rebranded “Droughtlines” for June 2015. It promotes updated information on the statewide drought, the statewide water reduction mandate and the impact of the reduction in outside water allocations to customer bills. The publication also promoted information on how customers can reduce their water use.

Home Water Checkup Collateral Materials:

A new “Home Water Checkup” customer outreach folder containing water use efficiency collateral materials is now available for use by staff during home audits. “Home Water Audits” has been rebranded “Home Water Checkups” to convey a more positive message. An online application is also being created to facilitate customer sign-ups.

Irvine Communities Magazine:

Staff prepared an article including graphics and photos that will be published in the June, 2015 issue of *Irvine Communities* magazine published by the Irvine Company. The article is in a question-and-answer format regarding the drought, rates and what customers can do now to save water. It will reach over 90,000 households in August.

Additional Outreach:

Additional planned and ongoing community outreach include:

Outreach Community Event with the City of Irvine:

The City of Irvine will co-host a community outreach event with IRWD on September 12. It has agreed to contribute significant resources to promote the outreach and to assist during the event. Staff is in the planning stages of an article promoting the event for a publication that will reach Irvine households in August.

Hotel/Restaurant Outreach:

Staff has created table top cards for placement in all area restaurants to remind customers that water is served only on request. Staff created similar cards for local hotels asking guests to reuse towels and discouraging unnecessary linen changes. Outreach to these venues has begun.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

None.

June 4, 2015

Prepared by: L. Stuvick/A. McNulty

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook 

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

WATERSMART SOFTWARE VARIANCE NO. 2

SUMMARY:

The District's WaterSmart Program, developed and administered by WaterSmart Software Inc., provides enhanced water use information to over-allocation residential and commercial, industrial, and institutional (CII) customers separately from their water bills. The program is an effective tool that promotes water use efficiency and provides rate support outreach to customers. Staff recommends the Board authorize the General Manager to execute Variance No. 2 to IRWD's Professional Services Agreement with WaterSmart Software Inc. in the amount of \$215,693 to continue administering the WaterSmart Program through FY 2015-16.

BACKGROUND:

In 2012, the WaterSmart Program was first implemented in IRWD's service area on a pilot basis to 1,000 customers. Based on the water savings and positive customer response, the pilot program was expanded into a full-scale program targeting over-allocation, single-family customers beginning in FY 2013-14. The program provides targeted customers with monthly reports on IRWD's programs and incentives for water efficiency, as well as customized ways to save water based on each individual customer's usage. The reports compare each customer's water use with the assigned allocation, as well as with the usage of similar customers. These reports help increase customers' awareness of their water usage. The user-friendly report content is modified each billing cycle to encourage customers to participate in appropriate programs or events. A sample report is provided as Exhibit "A". Participants receive the WaterSmart Program reports for 12 consecutive monthly billing cycles.

Of the District's total recipient list of over 14,481 over-allocation customers, 11,523 single-family homes receive monthly electronic reports and an additional 2,958 receive hard copy reports through direct mail. Customers who receive hard copy reports through direct mail are encouraged to sign up for the monthly electronic water reports, as well as to schedule a home site survey with IRWD staff.

Consultant Variance:

IRWD's existing agreement with WaterSmart Software expires on June 30, 2015. Staff recommends the Board authorize the General Manager to execute Variance No. 2 with WaterSmart for FY 2015-16, which is provided as Exhibit "B". Variance No. 2 would continue and expand the program as part of the District's planned drought response plan to meet its 16 percent state-mandated potable use reduction target by February 2016. The expanded program would provide funding for up to 22,000 over-allocation accounts to receive home water reports. An open enrollment feature will be added to allow single-family residence (SFR) and condominium customers to opt in at any time. This will enable customers to sign up for the reports and for staff to enroll customers during home site surveys.

The proposed Variance No. 2 will also expand the program to include the development and implementation of custom water use portals for up to 6,000 CII customer accounts. This expansion will provide access to water usage data by CII building engineers, facility managers and sustainability managers who otherwise often experience a time delay waiting for the data from their accounts payable departments. The CII portal will provide a tool for this customer class to more closely monitor and manage water use at their facilities.

Variance No. 2 with the expanded Scope of Work will extend the WaterSmart Program through the end of FY 2015-16 at a cost of \$215,693. The FY 2015-16 program will target over-allocation SFR customers as well as CII customers through direct mail and electronic mail reports on a monthly basis for 12 months.

FISCAL IMPACTS:

Funding for the WaterSmart Program is included in the FY 2015-16 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

This program is exempt from CEQA.

RECOMMENDATION:

That the Board authorize the General Manager to execute Variance No. 2 to the Professional Services Agreement between IRWD and WaterSmart Software Inc. in the amount of \$215,693.

LIST OF EXHIBITS:

Exhibit "A" – Sample WaterSmart Report

Exhibit "B" – Variance No. 2 to IRWD's Professional Services Agreement with WaterSmart Software Inc.

EXHIBIT "A"



WaterInsight Program
15600 Sand Canyon Ave
Irvine, CA 92618

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 625 2nd Street, Suite 280
ACCOUNT NUMBER: 123-4567-89

949.453.5581 aws@irwd.com



SIGN UP TO GET THIS REPORT VIA EMAIL
irwd.waterinsight.com

A 0001 18334 V003 0000298 00000595 PDF-SEQ=29033

Peter Yolles
625 2nd Street, Suite 280
San Francisco, CA 94107-2014



Your WaterScore

JUN 18 TO JUL 18, 2014



You used **more water** than
most of your neighbors.

Gallons Per Day (GPD)
154 CCF = 3,715 GPD



Seasonal irrigation tune-up

Remember to look for:

- Appropriate sprinkler run times
- Shrubs or fences blocking your sprinkler heads
- Sprinklers that are broken or clogged, spraying sidewalks or not popping up
- Punctured hoses or leaky valves



Take action during the drought

Water conservation always has been important, but this year no Californian can afford to waste another drop.

As we near the end of summer, **reduce your outdoor water use** and check your irrigation system for broken or misdirected sprinklers.

Water-saving actions just for you

Selected assuming your home has 2 occupants and a more than 12,000 sq. ft. yard.

[Log on to correct us!](#)*

Potential annual savings if you:



Log On

Take the guesswork out of saving water. See:

- Where you're using the most
- All actions relevant to you
- Step-by-step tips and rebates

irwd.waterinsight.com

A **free** service offered by
your water utility and powered by
WaterSmart Software®

EXHIBIT "B"

EXHIBIT "C"

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Purpose. This procedure shall be used to identify, estimate, and report variances to the scope of work in professional services agreements between IRWD and a consulting engineer or other type of consultant. A variance may be initiated by either IRWD's Project Manager or by the Engineer/Consultant.

Variance. The Variance shall be used to identify all changes to the original scope of work, budget, and schedule for any study, design, or construction phases services.

Engineer/Consultant Initiates Variance. If a Variance is initiated by the Engineer/Consultant, the Engineer/Consultant shall prepare the Variance including the Description of Variance, the Engineering & Management Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Consultant shall then sign the Variance and submit it to the IRWD Project Manager for action.

IRWD Initiates Variance. If a Variance is initiated by IRWD's Project Manager, the IRWD Project Manager shall complete the Description of Variance and fill-in the Total Original Contract amount and Previous Variances amount (if any). The Variance shall then be given to the Engineer/Consultant to complete the Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Consultant shall then sign the Variance and submit it to the IRWD Project Manager for action.

Variance Processing. Once a Variance is signed and submitted by the Engineer/Consultant, the IRWD Project Manager shall:

1. Enter the Variance's details onto a Variance Register for the project,
2. Review, sign, and date the Variance, and
3. Obtain appropriate approvals.

Notice to Proceed. Work covered by a Variance may proceed upon signing by the department Director. A copy of the Variance, signed by the Director, shall be the Engineer's/Consultant's Notice to Proceed with the required work.

Contractual Authorization. Work covered by a Variance which has been signed by the Director may require final approval from the General Manager, Committee, or Board based upon the requirements of the Procurement Policy. These approvals may be obtained after the Engineer/Consultant has been given a copy of the Variance signed by the Director (the Engineer's/Consultant's Notice to Proceed). The IRWD Project Manager shall promptly thereafter prepare a memo to the General Manager, Committee and/or Board agenda items(s) for approvals as required. Once the Variance is properly approved, it modifies the existing Engineer's/Consultant's agreement.

Financial Authorization. An approved Variance may require any of the following:

1. A Capital Budget increase,
2. A new Expenditure Authorization,
3. An extension to an existing Purchase Order, and/or
4. A new Purchase Order.

It is the IRWD Project Manager's responsibility to process the necessary paperwork to grant the required financial authorization.

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Project Title: WaterSmart Home Water Use Report FY 15/16

Project No.: _____

Date: _____

Purchase Order No.: 516098

Variance No.: 2

Originator: ☒ IRWD ☐ ENGINEER/CONSULTANT ☐ Other (Explain) _____

Description of Variance (*attach any back-up material*):

This variance is to expand the scope of the current program to increase the number of reports to 22,000 with up to 11,000 as print reports, offer an "opt-in" enrollment feature for all other IRWD residential customers, add all IRWD commercial, industrial and institutional customers, and extend the contract through fiscal year 2015/16. The contract amount will increase by \$215,693 for continued administration of the expanded program.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
As per the above Scope of Work				\$215,693		\$215,693
Total \$ =						\$215,693

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
1	Program Administration	July 2012 - June 2015	1 year renewal	July 2015-June 2016

Required Approval Determination:

Total Original Contract	<u>\$90,000</u>	☐ Director: Cumulative total of Variances less than or equal to \$50,000.
Previous Variances \$	<u>98,550</u>	
This Variance	<u>\$215,693</u>	☐ Executive Director: Cumulative total of Variances less than or equal to \$75,000.
Total Sum of Variances	<u>\$314,243</u>	
New Contract Amount	<u>\$404,243</u>	☐ General Manager: Cumulative total of Variances less than or equal to \$100,000.
Percentage of Total Variances to Original Contract	<u>349</u> %	☒ Board: Cumulative total of Variances greater than \$100,000.

ENGINEER/CONSULTANT: WaterSmart Software Inc. IRVINE RANCH WATER DISTRICT
Company Name

Project Engineer/Manager

Date

Department Director

Date

Engineer's/Consultant's Management

Date

General Manager/Board

Date

IRVINE RANCH WATER DISTRICT

PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: Water Smart Home Water Use Reports

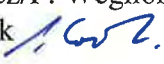
Project No.: _____ Project Manager: Amy McNulty

Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Contract extension and addition of postcard mailing	5/29/14		\$98,550
2	Contract extension, expansion of print reports and inclusion of CII customers.	5/28/15		\$215,693

June 4, 2015

Prepared by: L. Stuvick/A. McNulty

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook 

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

WATER CONSERVATION PARTICIPATION AGREEMENT

SUMMARY:

IRWD's water use efficiency program includes a "Tactical Incentives" element to encourage customers to install water conservation devices. Incentive payments are based on the water and sewage collection and treatment system avoided costs for each device and are cost-effective for IRWD. Staff has reviewed necessary funding levels and expected water savings and recommends that the Board authorize the General Manager to execute an agreement with the Municipal Water District of Orange County (MWDOC) to provide incentives at the levels specified per device, for a total funding amount of \$1,060,000 in FY 2015-16.

BACKGROUND:

Tactical Incentives are one of the key elements of IRWD's Water Use Efficiency Program. The Tactical Incentives are cost-effective financial incentives provided by IRWD to supplement existing regional rebate programs administered by either Metropolitan Water District of Southern California and/or MWDOC. The incentives are based on IRWD's calculated avoided costs resulting from the installation of the various conservation devices. A new umbrella agreement with MWDOC has been prepared to provide incentives for specified devices and programs for FY 2015-16. This agreement is attached as Exhibit "A".

Staff has reviewed the water savings and necessary funding levels for the various devices and recommends the incentive levels shown in Table 1. Based on customer participation, staff is proposing a total of \$1,060,000 in total incentive funding of which \$610,000 would be allocated to residential programs and \$450,000 to commercial programs.

Table 1: Proposed Device Funding Levels FY 2015-2016

Program	Maximum Funding	Devices	IRWD Rebate Funding Level Per Device
<u>SoCal WaterSmart</u> Residential Program	\$610,000	High Efficiency Clothes Washer (HECW)	\$165
		High Efficiency Toilet (HET)	\$50
		Residential Smart Timer	\$75

Program	Maximum Funding	Devices	IRWD Rebate Funding Level Per Device
<u>SoCal WaterSmart</u> Commercial Program	\$450,000	Commercial High Efficiency Toilet	\$50
		Multi-Family High Efficiency Toilet	\$50
		Zero Water/Ultra Low Water Urinals	\$100
		Connectionless Food Steamer	\$485 Per Compartment
		Commercial Ice Making Machine (Tier III)	\$250
		Hotel Connectionless Food Steamer	\$485 Per Compartment
		Hotel Commercial Ice Making Machine (Tier III)	\$250
		Water Savings Incentive Program	\$3 Per 1,000 gallons/ 1 year
Total Funding for All Programs	\$1,060,000		

FISCAL IMPACTS:

Funding from over-allocation revenues for tactical incentives in the amount of \$1,060,000 is included in the adopted FY 2015-16 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Board authorize the General Manager to execute the Water Conservation Participation Agreement between the Municipal Water District of Orange County and Irvine Ranch Water District, subject to non-substantive changes, for specified rebate programs with \$1,060,000 in funding for FY 2015-16.

LIST OF EXHIBITS:

Exhibit “A” –Water Conservation Participation Agreement between the Municipal Water District of Orange County and Irvine Ranch Water District

EXHIBIT "A"

Water Conservation Participation Agreement between the Municipal Water District of Orange County and _____

This Water Conservation Participation Agreement ("Agreement") is made between the Municipal Water District of Orange County ("MWDOC") and _____ ("Participant"). MWDOC and Participant may be collectively referred to as "Parties" and individually as "Party."

Recitals

- A. The Metropolitan Water District of Southern California ("Metropolitan") provides incentive funding to residential, commercial, and industrial water users in its service area for a variety of water conservation activities, including, but not limited to, rebates for the purchase and installation of water-saving devices ("Metropolitan Base Incentives").
- B. MWDOC is a member agency of Metropolitan and has agreements with Metropolitan that enable residential, commercial, and industrial water users in MWDOC's service area, and for the benefit of MWDOC's member agencies, to participate in and take advantage of Metropolitan's Base Incentives.
- C. Participant, as a MWDOC member agency or a direct Metropolitan member agency, may elect to participate in Metropolitan's program to replace non-conserving items within its service area.
- D. The Metropolitan Base Incentives amounts for each eligible device or program available to MWDOC and Metropolitan member agencies are listed in the attached Addendums 1A and 1B. It is expected that Metropolitan will establish funding for additional water conservation items and to change some or all of the existing funding rates throughout the term of this Agreement. Any such changes will be incorporated herein by amendment to Addendums 1A and 1B.
- E. Metropolitan and MWDOC each have fiscal responsibility to manage their individual budgets, and hence may have a need to limit availability of funds.
- F. MWDOC and Metropolitan member agencies may also choose to provide additional supplemental funding of their own to augment the Metropolitan Base Incentives, as set forth on Addendums 2A, 2B, and 2C. Based on the terms and conditions of this Agreement, MWDOC will facilitate supplemental funding for MWDOC member agencies through the Metropolitan rebate contractor ("Rebate Contractor") or MWDOC directly. Metropolitan member agencies will coordinate any supplemental funding directly with Metropolitan.
- G. In addition to the Metropolitan Base Incentives, MWDOC has developed and arranged additional local, state, and federal grant funding ("Grant Funding") for eligible devices in a number of water conservation programs ("MWDOC Administered Programs") that MWDOC offers to its member agencies and Metropolitan member agencies. This grant

funding may be used to enhance the Metropolitan Base Incentives. Granting agencies include, but are not limited to, the Department of Water Resources and the United States Bureau of Reclamation.

- H. MWDOC member agencies may also operate customized, local water conservation incentive programs in their respective service areas ("Participant Agency Administered Programs) and may have access to the Metropolitan Base Incentives and Grant Funding for such, subject to MWDOC and Metropolitan approval and the terms and conditions of this Agreement and any MWDOC and/or Metropolitan agreements.
- I. The purpose of this Agreement is to create a master water conservation participation agreement between MWDOC and Participant that combines all of the conservation programs and incentives into one agreement. Addendums to this Agreement will be issued for changes involving Metropolitan approved items, MWDOC Board approved items, Grant Funding, adding and subtracting MWDOC Administered Programs and Participant Agency Administered Programs as identified in Section 2, and changes to incentive programs, including funding and incentive levels.

NOW THEREFORE, in consideration of the promises and covenants hereinafter set forth, the Parties do agree as follows:

Section 1: Agreement Term and Administration

- 1.1 This Agreement will be effective on July 1, 2015 or upon execution of this Agreement by all Parties, whichever is later, and shall terminate on June 30, 2025 ("Term"). Continuance of this Agreement will be subject to annual budget approval by MWDOC's Board of Directors.
- 1.2 This Agreement may be amended at any time by written mutual agreement of the Parties, or by Addendums issued by MWDOC as set forth in Recital I.
- 1.3 This Agreement may be terminated by either Party for any reason upon thirty (30) days written notice to the other Party.
- 1.4 All Addendums are enforced for the duration of this Agreement unless the Addendums are amended or terminated by either Party.
- 1.5 In the event the Agreement is terminated early, Participant is responsible for payment of any funding contributions required by this Agreement that were initiated prior to the effective date of the termination. For purposes of this Section 1.5, an application is deemed initiated when an application has been received by Metropolitan's rebate vendor, EGIA, by MWDOC, or a reservation has been made within any of MWDOC's online application portals that is pursuant to any of the programs described within this Agreement and the attached Addendums.

- 1.6 Notwithstanding any other provision in this Agreement, funds for all of the programs described within this Agreement and the attached Addendums are conditioned upon the availability of funds and MWDOC is under no obligation to provide funding for any of the programs if MWDOC determines, in its own discretion, that such funding is exhausted, reduced, eliminated, or unavailable from any funding source, for any reason.

Section 2: Program Funding

2.1 Supplemental Funding

2.1.1 In addition to the Metropolitan Base Incentives, Participant may provide additional funding to augment the Metropolitan Base Incentives amounts for those programs and devices that Participant identifies, and in the amounts indicated, in the appropriate locations in Addendums 2A, 2B, and 2C (“Supplemental Funding”). The Supplemental Funding listed in Addendums 2A through 2C shall specify the amount of Supplemental Funding Participant will provide per device or program, as well as the total maximum Supplemental Funding amount committed to each category of device or program. If the Participant does not complete, sign, and return Addendums 2A through 2C to MWDOC within the expected timeframe, notwithstanding any other provision of this Agreement, the Participant will not be bound by this Section or the provisions in Addendums 2A through 2C.

2.1.2 If Participant elects to provide Supplemental Funding or enhanced incentives under this Agreement for any device or program, Participant is responsible for tracking the use and remaining availability of those funds. MWDOC will assist, in every way possible, but the ultimate responsibility for tracking all Participant funding is the responsibility of Participant.

2.1.3 Any requests for changes or revisions to Participant’s Supplemental Funding must be submitted by Participant to MWDOC in the form of revised Addendum 2s listing the new funding amounts/limits.

2.1.4 The Participant may elect to participate in the Supplemental Funding Program and be bound by the provisions of this Section 2.1, Sections 3, 4, 5, 6, and 7 of this Agreement, and Addendum 2A through 2C by having its authorized representative complete and sign Addendum 2a through 2c in the spaces provided.

2.2 MWDOC Administered Programs

2.2.1 With regard to the Smart Timer Rebate Program, Participant is eligible for additional Grant Funding from MWDOC (“MWDOC Smart Timer Funding”), when funding is available, only if Participant provides supplemental funding for the Smart Timer Program pursuant to this Section 2.2 and Addendum 3A.

2.2.2 Participant may elect to take advantage of the MWDOC Administered Programs by having its authorized representative complete and sign Addendums 3A through 3C in

the spaces provided. If Participant completes and signs Addendums 3A through 3C, Participant agrees to be bound by the provisions of this Section 2.2, Sections 3, 4, 5, 6, and 7 of this Agreement, and Addendums 3A through 3C. If the Participant does not complete, sign, and return Addendums 3A through 3C within the expected timeframe, notwithstanding any other provision of this Agreement, the Participant will not be bound by this Section or the provisions in Addendums 3A through 3C.

2.3 Participant Agency Administered Programs

2.3.1 From time to time, funding may be made available for Participant to operate a customized member agency administered local water conservation incentive program or programs (“Participant Agency Administered” “PA” or “MAA Program”) in its service area and access the Metropolitan Base Incentives for such, subject to MWDOC approval of the program and the terms and conditions of this Agreement and Addendum 4. The Participant Agency Administered Program(s) and requirements in connection with it are described in more detail in Addendum 4.

2.3.2 Upon receipt of approval of a Participant Agency Administered Program by MWDOC, Participant is bound by the provisions of Sections 3, 4, 5, 6, and 7 of this Agreement and Addendum 4.

2.4 Notwithstanding any other provision in this Agreement, MWDOC may terminate this Agreement as it relates to this Section 2 at any time without prior notice in the event that MWDOC determines that funding for any device or program on Addendums 2 through 4 or MWDOC Grant Funding is exhausted, reduced, eliminated, or unavailable from any funding source, for any reason.

Section 3: Responsibility and Ownership

- 3.1 Participant, at its sole discretion, may independently contract with its own agents under separate agreements for program administration and management for any Participant Agency Administered Program provided that doing so does not compromise program performance, create or present a conflict of interest, or violate the terms of this Agreement.
- 3.2 Participant and/or its agent shall provide all necessary services and materials for such Participant Agency Administered Programs including, but not limited to the following: program administration, promotion, marketing materials, data collection, and analysis, installation verification, and reporting.
- 3.3 All materials and supplies necessary to implement a Participant Agency Administered Program shall be the exclusive property of Participant. MWDOC shall have no ownership, right, title, security interest, or other interest in any Participant Agency Administered Program materials or supplies, nor any rights duties, or responsibilities, therefor.

- 3.4 Participant is responsible for assuring that any Participant Agency Administered Program complies with all federal, state, and local requirements.
- 3.5 Participant agrees to cooperate with MWDOC's data management activities related to assessing device saturation and program success.
- 3.6 As part of any Participant Agency Administered Program, Participant shall use, maintain, and submit to MWDOC within the designated timeframe an electronic database, to be approved by MWDOC prior to use, for any conservation items installed, distributed, or rebated by Participant or its agents to avoid duplicate distributions and to determine the saturation rate of items by the appropriate geographic delineation.
- 3.7 Participant is solely responsible for the performance of its staff or representatives in complying with the terms of this Agreement and for the proper allocation of funds provided by Metropolitan and/or MWDOC for the purpose of achieving water conservation savings under this Agreement.

Section 4 Marketing.

- 4.1 Participant agrees to assist in the marketing of programs it participates in under this Agreement. With regard to Participant Agency Administered Programs, Participant will be solely responsible for marketing its Participant Agency Administered Program to customers in its service area.

Section 5: Installation Verification

- 5.1 Participant shall be responsible for conducting installation verifications of items installed, distributed, and/or rebated by Participant under Participant Agency Administered Programs, and/or for paying all costs associated with this verification. Installation verification measures for program devices must be designed to ensure that materials, installation verifications of eligible program devices, and services meet requirements established by Metropolitan, which requirements will be provided to Participant by MWDOC.
- 5.2 Participant may be responsible for conducting installation verifications of items installed, distributed, and/or rebated by Participant or MWDOC under MWDOC Administered Programs, and/or for paying all costs associated with this verification. Installation verification measures for program devices must be designed to ensure that materials, installation verifications of eligible program devices, and services meet requirements established by Metropolitan, which requirements will be provided to Participant by MWDOC.
- 5.3 MWDOC reserves the right to conduct installation verification of items within MWDOC's service area.

- 5.4 Participant acknowledges that any device receiving funding from Metropolitan may be subject to an installation verification to be performed by Metropolitan, or its agent(s), at Metropolitan's discretion.
- 5.5 Participant shall promptly refund to MWDOC any amounts paid under any Participant Agency Administered Program or MWDOC Administered Program for installed or distributed devices in the event MWDOC or Metropolitan establishes via installation verification that the program devices were not installed.

Section 6: Reporting and Invoicing

- 6.1 For any and all Supplemental Funding provided by Participant and/or Participant provided funding or inspection costs under the MWDOC Administered Programs pursuant to Section 2 of this Agreement, and as more particularly described in Addendums 2 and 3, MWDOC will invoice Participant on a monthly basis for the cost of such funding, and Participant must pay the full amount of such invoice within thirty (30) days of receipt of any such invoice.
- 6.2 For any and all Participant Agency Administered Program(s), Participant will invoice MWDOC on a monthly basis, by the 10th of each month, for any approved funding and costs associated with the Participant Agency Administered Program(s) as indicated in and subject to the provisions of Addendum 4. MWDOC is under no responsibility to reimburse Participant for any costs incurred by Participant that are not approved by MWDOC consistent with the terms and conditions of this Agreement and Addendum 4. The invoice package shall include a fully completed, to the satisfaction of MWDOC, Excel customer/applicant spreadsheet showing program activity, and an Invoice, signed by the General Manager or designee of Participant, certifying the information provided as accurate. Participant shall use the Excel customer/applicant spreadsheet and Invoice forms approved by MWDOC.
- 6.3 Participant shall maintain all Participant Agency Administered Program information, including participant applications, water bills, and purchase receipts, for a period of seven years from the end date of this Agreement.
- 6.4 Payment of Participant invoices shall be in the form of either a credit on MWDOC's water bill to Participant or a check made payable to Participant. Method of payment shall be at MWDOC's discretion.

Section 7: Confidentiality

- 7.1 MWDOC agrees to maintain the confidentiality of Participant's customer names, addresses, and other information gathered in connection with this Agreement. MWDOC will not cause or permit the disclosure of such information except as necessary to carry out any of the MWDOC Administered or Participant Agency Administered programs ("Programs"), or as required by law. To the extent that MWDOC contracts with third

party contractors to carry out all or any portion of any of the Programs, MWDOC will require such contractors to maintain the confidentiality of such customer information.

- 7.2 Notwithstanding anything to the contrary in this Agreement, Participant acknowledges and agrees that MWDOC may request and use historical water consumption data for purposes of satisfying any grant water use and water quality evaluation requirements of any of the Programs. Participant also acknowledges and agrees that MWDOC may also request to use Program applicant information, such as name, mailing address, site photos, and email address to market other water use efficiency programs to past applicants. A similar provision will be required of every individual applicant.

Section 8. Indemnification.

- 8.1 The parties agree that each Party shall be responsible for its own actions, and the actions of its officers, employees, and agents, in performing services under this Agreement. Except as provided in this Agreement and its Addendums, each Party agrees to indemnify and hold the other Party and its officers and agents harmless and agrees to defend the other Party against any claim or asserted liability arising out of its actions, either willful or negligent, or the actions of its officers, employees, and agents, in performing services pursuant to this Agreement. Such indemnity will include any losses relating to any claim made, whether or not a court action is filed, and will include attorney fees and administrative and overhead costs related to or arising out of such claim or asserted liability.
- 8.2 Participant shall include the following language in its agreement with any consultant or contractor retained by Participant to work on any of the Program” “(Consultant) agrees at its sole cost and expense to protect, indemnify, defend, and hold harmless Metropolitan, MWDOC, and their associated Boards of Directors, officers, representatives, agents and employees from and against any and all claims and liability of any kind (including, but not limited to, any claims or liability for injury or death to any person, damage to property, natural resources or to the environment, or water quality problems) that arise out of or related to Participant’s approval, construction, operation, repair, or ownership of any Program. Such indemnity shall include all damages and losses related to any claim made, whether or not a court action is filed, and shall include attorneys’ fees, administrative and overhead costs, engineering and consulting fees, and all other costs related to our arising out of such claim or asserted liability.”

Section 9. Certification re Lobbying (43 CFR 18)

- 9.1 The undersigned hereby certifies on behalf of Participant that no Federal appropriated funds have been paid or will be paid, by or on behalf of the Participant, to any person for influencing or attempting to influence an officer or employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of

any Federal contract, grant, loan, or cooperative agreement. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying" in accordance with its instructions. To the extent federal funds are involved, the Participant shall require that the language of this certification be included in the awards documents for any sub-awards by the Participant at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans and cooperative agreements) and that sub-recipients, if any, shall certify accordingly.

Section 10. Other Terms

- 10.1 Any alteration or variation of the terms of this Agreement will not be valid unless made in writing and signed by both Parties.
- 10.2 This Agreement will inure to the benefit of and be binding upon the Parties and their respective successors.
- 10.3 The partial or total invalidity of one or more parts of this Agreement will not affect the intent or validity of this Agreement.
- 10.4 This agreement shall be deemed a contract made under the laws of the State of California, and for all purposes will be interpreted in accordance with such laws. The Parties hereby agree and consent to the exclusive jurisdiction of the courts of the State of California, and that the venue of any action brought hereunder will be in Orange County, California.
- 10.5 This Agreement constitutes the entire agreement between the Parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

MUNICIPAL WATER DISTRICT
OF ORANGE COUNTY

PARTICIPANT WATER AGENCY

By: _____
Robert J. Hunter
General Manager

By: _____

Addendum 1A FY 15-16

Metropolitan Base Incentive List - Residential (Pg. 1 of 1)

	Regional Residential Program	Metropolitan Incentive*
1	High Efficiency Clothes Washer (HECW)	\$85
2	High-Efficiency Toilet (HET) (Melded Rate)(single-family)	\$100
3	Rotating Nozzles ¹ (For Pop-Up Spray Head Retrofits - <i>Minimum 15 per home</i>)	\$4
	Weather Based Irrigation Controller (WBIC)	
4	- WBIC <i>Less than one irrigated acre</i>	\$80
5	- WBIC <i>One irrigated acre or larger</i>	\$35 per station
	Soil Moisture Sensor System (SMSS)	
6	- SMSS <i>Less than one irrigated acre</i>	\$80
7	- SMSS <i>One irrigated acre or larger</i>	\$35 per station
8	Rain Barrel	\$75 per barrel
9	Turf Removal	\$2 per sq ft (eff. 5/14/14)
	Other Incentives Eligible in MWD-Funded/Member Agency Administered Incentive Program	Metropolitan Incentive*
	Residential Surveys	
10	- <i>Single-Family Indoor Survey - Member agency provides on-site visit, written survey for the customer listing recommendations on improvements, and review of findings report with customer. Survey can be combined with either irrigation evaluation (w/o timer) or irrigation evaluation (with timer), but not both.</i>	\$12.50
11	- <i>Irrigation Evaluation (w/o timer) - Member agency provides the customer the findings of the evaluation, makes recommendations on improvements to the irrigation system and provides a watering schedule.</i>	\$8
12	- <i>Irrigation Evaluation (with timer) - Member agency provides the customer the findings of the evaluation and provides recommended irrigation schedule.</i>	\$18
13	Customized Residential Projects <i>Projects that result in water savings through customized site improvements. Metropolitan funding is limited to \$195 per acre-foot of estimated water savings based on project life and up to one-half of the eligible project costs.</i>	\$195 per acre-foot
14	Rotating Nozzles for Pop-up Spray Heads Retrofits <i>Minimum 15 per application. Payment will be up to the cost of the device plus appropriate administrative costs, including third party costs billed to the agency.</i>	\$4 per nozzle
	Other Incentives Grant-Funded/MWD-Matched	Metropolitan Incentives*
15	Rotating Nozzles ¹ (For Pop-Up Spray Head Retrofits)	\$4 per nozzle
	¹ Incentive incorporates \$1 per nozzle in funds from United States Department of the Interior Grant Agreement No. R12AP35351, Sprinkler Nozzle Incentive Program.	
* Incentives are subject to the following:		
• Effective July 1, 2015 (unless otherwise noted) • Paid on a first come, first served basis • Subject to available funding • Limited to the cost of the device when applicable • Must be a Metropolitan-approved device		

Addendum 1B FY 15-16

Metropolitan Base Incentive List - CII (Pg. 1 of 3)

	Regional CII Program	Metropolitan Incentive*
1	Plumbing Flow Control Valve (Minimum 10 required)	\$5 per valve ³
2	Laminar Flow Restrictors (Minimum 10 required)	\$10 per restrictor
3	Commercial High Efficiency Toilet (HET) – Tank Type <i>Rebates are for matching bowls & tanks.</i>	\$100
4	Commercial High Efficiency Toilet (HET) – Flushometer <i>Rebates are for matching bowls and complete flushometer valves (valve “kits” are ineligible)</i>	\$100
5	Multi-Family High Efficiency Toilet (HET)	\$100
6	Multi-Family High Efficiency Toilet (4-Liter)	\$145
7	Zero Water Urinals (ZWU) <i>ZWU units must replace existing urinals flushing at 1.5 gpf or greater.</i>	\$200
8	Ultra Low Water Urinal (ULWU) <i>Rebates are for matching bowls and flushometer valves (valve “kits” are ineligible) Must flush at < 0.125 gpf, and must replace existing urinals flushing at 1.5 gpf or greater.</i>	\$200
WBIC and CCIC: Upgrades to existing equipment that enable functionality as a WBIC/CCIC may qualify for incentives provided they meet program terms and conditions.		
9	Weather-Based Irrigation Controller (WBIC)	\$35 per station
10	Central Computer Irrigation Controller (CCIC)	\$35 per station
11	Soil Moisture Sensor System (SMSS)	\$35 per station
12	Large Rotary Nozzles <i>Minimum 8 sets (2 each) per site required.</i>	\$13 per set
13	Rotating Nozzles¹ for Pop-up Spray Heads Retrofits <i>Minimum 15 units per site.</i>	\$4 per nozzle
14	In-Stem Flow Regulator (Minimum 25 units per site)	\$1 per regulator
15	Turf Removal	\$2 per sq.ft. (eff. 5/14/14)
16	pH-Cooling Tower Controller (pH-CTC)	\$1,750
17	Cooling Tower Conductivity Controller (CTCC)	\$625
18	Dry Vacuum Pump <i>Maximum 2 Horsepower (HP) motor.</i>	\$125 per 0.5 HP
19	Connectionless Food Steamers	\$485 per compartment
20	Ice-Making Machines	\$1,000

Addendum 1B FY 15-16
CII Incentive List (Pg. 2 of 3)

	Other Incentives Eligible in MWD-Funded/Member Agency Administered Program	Metropolitan Incentives*
21	Large Landscape Surveys <i>Member Agency's landscape survey program shall contain the following elements for each survey site:</i> <i>1) Irrigation system evaluation; 2) Development of a water budget and irrigation schedule; and 3) Survey report provided on-site to the recipient or customer.</i> <i>Incentives are limited to the full cost of the survey; no restriction on application for additional landscape device rebates. Project information data is required.</i>	\$200 per acre
22	Water Use Accountability Incentive <i>Applies to professional landscape irrigation training and management. This incentive is available for a maximum of five years and up to one-half of project cost.</i> <i>Large residential (lot sizes one acre or more) and CII landscapes must be metered to be eligible for Water Use Accountability (WUA) funding, and new construction sites are ineligible. If a weather-based irrigation controller (WBIC) is installed on a site, that site is not eligible for WUA funding.</i> <i>Member agencies must report all direct and indirect program costs, project acreage and acre-feet usage (to the nearest one-tenth of a unit) to Metropolitan on a monthly basis, and shall certify that Metropolitan Professional California Friendly landscape training or equivalent was provided.</i>	\$3.50 per acre/month
23	Customized Projects <i>Projects that save water through customized site improvements. Metropolitan's funding is limited to \$195 per acre-foot of estimated water savings based on project life, and up to one-half of eligible project costs.</i>	\$195 per acre-foot
24	Rotating Nozzles¹ for Pop-up Spray Heads Retrofits <i>Payment will be up to the cost of the device plus appropriate administrative costs, including third party costs billed to the agency</i>	\$4 per nozzle
	Other Incentives Grant-Funded/MWD-Matched	Metropolitan Incentives*
25	Rotating Nozzles¹ For Pop-Up Spray Head Retrofits	\$4 per nozzle
	<i>1. Incentive incorporates \$1 per nozzle in funds from United States Department of the Interior Grant Agreement No. R12AP35351, Sprinkler Nozzle Incentive Program.</i>	

Addendum 1B FY 15-16
CII Incentive List (Pg. 3 of 3)

	Additional Regional Programs	Metropolitan Incentives*
Public Agency Landscape Program <i>Up-front, enhanced incentives for public agencies to install water-efficient landscape devices. This program will run through June 30, 2016.</i>		
26	Weather-Based or Central Computer Irrigation Controller, Soil Moisture Sensor System	\$55 per station
27	Large Rotary Nozzles <i>Minimum 8 sets per application.</i>	\$13 per set
28	Rotating Nozzles for pop-up spray head retrofits <i>Minimum 15 nozzles per site.</i>	\$6 per nozzle
Targeted Fitness Center Incentive Program <i>HETs, ULWUs and ZWUs: Must be WaterSense labeled devices, where available. This program will run through June 30, 2016. Incentive limited to cost of device plus installation. Rebates are for matching bowls & tanks or matching bowls and flushometer valves.</i>		
29	Commercial High Efficiency Toilet (HET) – Tank Type or Flushometer	\$300 / HET
30	Zero Water Urinals (ZU) and Ultra Low Water Urinal (ULWU)	\$500 / Urinal
*Incentives are subject to the following: - Effective July 1, 2015 (unless otherwise noted) - Paid on a first come, first served basis - Subject to available funding - Limited to the cost of the device when applicable - Must be a Metropolitan-approved device		

Addendum 2A FY 15-16

Residential Program

Participant Agency Supplemental Funding Authorization (Pg. 1 of 1)

Regional Incentive Program	Metropolitan Incentive	Participant Agency Incentive	Total Incentive
High Efficiency Clothes Washer (HECW) no Grant	\$85	\$	\$
High-Efficiency Toilets (HET). Single-family	\$50	\$	\$
Rotating Nozzles	\$4	\$	\$
Rain Barrels	\$75	\$	\$

Select one: Check here ☐ if the supplemental incentives are **flat** regardless of actual device cost

Check here ☐ if the supplemental incentives are **limited to the actual device cost**
(Actual device cost is the retail price of the device excluding tax, shipping, labor or other charges)

☐ If Participant Agency has complex or more detailed requirements or wishes to stop their funding, please check this box, sign this form and attach a spreadsheet or other documentation showing funding details.

Participant Agency Name

Total Authorized Funding¹ \$ _____

Start Date _____

End Date: _____

1. This authorization represents the Agency's total funding for the period indicated.

This funding authorization is effective only for the period designated by the Participant Agency above, or until a new authorization is approved and implemented by Metropolitan's vendor. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. **By signing, Participant Agency agrees to these terms.**

Authorizing Signature General Manager /Designee

Date

**MWDOC
Use Only:**

Date received: _____

Approved by _____

Date sent to Metropolitan: _____

Comments:

Addendum 2B FY 15-16

CII Program

Participant Agency Supplemental Funding Authorization (Pg. 1 of 2)

Regional Incentive Program	Metropolitan Incentive	Participant Agency Incentive	Total Incentive
Plumbing Flow Control Valve	\$ 5 each	\$	\$
Laminar Flow Restrictors	\$ 10 per Restrictor	\$	\$
Commercial HET – Tank Type	\$ 100	\$	\$
Commercial HET – Flushometer	\$ 100	\$	\$
Multi-Family HET	\$ 100	\$	\$
Multi-Family HET (4-Liter)	\$ 145	\$	\$
Zero Water Urinals (ZWU)	\$ 200	\$	\$
Ultra Low Water Urinal (ULWU)	\$ 200	\$	\$
Large Rotary Nozzles	\$ 13 per Set	\$	\$
Rotating Nozzles for Pop-up Spray Heads Retrofits ¹	\$ 4 per Nozzle	\$	\$
In-Stem Flow Regulator	\$ 1 per Regulator	\$	\$
pH-Cooling Tower Controller (pH-CTC)	\$1,750	\$	\$
Cooling Tower Conductivity Controller (CTCC)	\$ 625	\$	\$
Dry Vacuum Pump	\$ 125 per 0.5 HP	\$	\$
Connectionless Food Steamers	\$ 485 per compartment	\$	\$
Ice-Making Machines	\$1,000	\$	\$
Public Agency Landscape WBIC, CCIC, and SMSS	\$ 55 per Station	\$	\$
Public Agency Landscape Large Rotary Nozzles	\$ 13 Per Set	\$	\$
Public Agency Landscape Rotating Nozzles	\$ 6 per Nozzle	\$	\$
Fitness Center HET Tank Type or Flushometer	\$ 300 per HET	\$	\$
Fitness Center Urinals ZWU and ULWU	\$ 500 per Urinal	\$	\$

Addendum 2B FY 15-16

CII Program

Participant Agency Supplemental Funding Authorization (Pg. 2 of 2)

Select one:	☐ Check here if the supplemental incentives are flat regardless of actual device cost
	☐ Check here if the supplemental incentives are limited to the actual device cost (Actual device cost is the retail price of the device excluding tax, shipping, labor or other charges)
☐	If Participant Agency has complex or more detailed requirements, or wishes to stop their funding, please check this box, sign this form and attach a spreadsheet or other documentation showing funding details
Participant Agency _____	
Total Authorized Funding² \$ _____	
Start Date: _____	
End Date: _____	
1. Includes grant funding, when grant funds are available. 2. This authorization represents the Participant Agency's total funding for the period indicated.	

This funding authorization is effective only for the period designated by the Participant Agency above, or until a new authorization is approved and implemented by Metropolitan's vendor. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms. Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

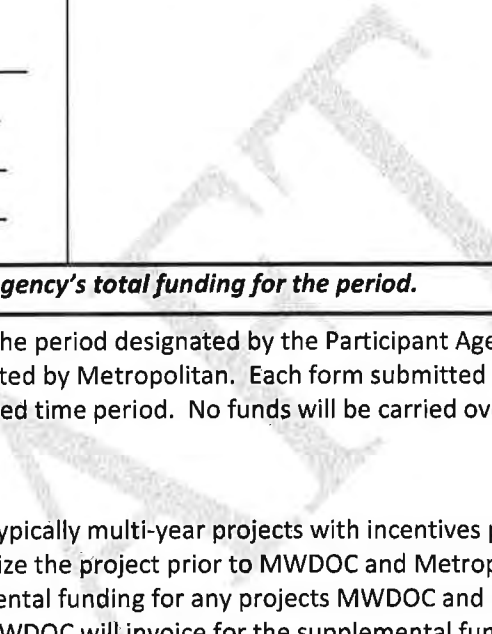
Participant Agency _____

**Authorizing Signature General Manager
/Designee**

Date _____

MWDOC Use Only: Date received: _____ Approved by _____
 Date sent to Metropolitan, if applicable: _____
Comments: _____

Addendum 2C FY 15-16
Participant Agency Supplemental Funding Authorization
for Water Savings Incentive Program

		Participant Agency Incentive (per 1,000 gal/yr)
Supplement to Metropolitan's funding for Water Savings Incentive Program		\$
Participant Agency Total Authorized Funding* \$ Start Date: End Date:		
<i>*This authorization represents the Participant Agency's total funding for the period.</i>		
This funding authorization is effective for only the period designated by the Participant Agency above or until a new authorization is approved and implemented by Metropolitan. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms. Incentives will not be applied retroactively. Water Savings Incentive Program projects are typically multi-year projects with incentives paid in subsequent years. Participant Agency is required to authorize the project prior to MWDOC and Metropolitan's approvals. Participant Agency is obligated to pay supplemental funding for any projects MWDOC and Metropolitan approve while this authorization is in effect. MWDOC will invoice for the supplemental funding portion of incentives when incentives are paid to the customer. Participating Agency shall reimburse MWDOC for any supplemental funding that the Participant Agency fails to provide as represented above and that MWDOC and/or Metropolitan provided or became obligated to provide on the Participant Agency's behalf. <i>The terms of this authorization may be modified only in writing by authorized representatives of Participant Agency and MWDOC. By signing, Participant Agency agrees to these terms.</i>		
Authorizing Signature General Manager /Designee		Date
MWDOC Use Only: Comments:	Date received: Approved by Date sent to Metropolitan, if applicable:	

Addendum 3A FY 15-16
Smart Timer Rebate Program
Participant Agency Funding Authorization

Participant Agency agrees to provide funding for the Smart Timer Rebate Program in the amount specified in Table 1 below per residential weather based irrigation controller or soil moisture sensor system (Res Smart Timer). Funding will be provided on a per device basis up to the "Not to Exceed" funding limit:

Table 1

Category	Participant Agency Funding Amount	Not to Exceed Funding Limit For Fiscal Year 2015-2016
Res Smart Timer	\$75 per Res Smart Timer	\$

If Participant Agency elects to provide additional funding for commercial weather based irrigation controllers, central computer irrigation controller, or soil moisture sensor system (CII Smart Timer), Table 2 below shall list the Participant Agency's funding amount per CII Smart Timer station. CII Smart Timer rebates are calculated on the CII Smart Timer's station capacity, and Participant Agency's funding amounts shall be in addition to the per station amount provided by Metropolitan.

Table 2

Category	Participant Agency Funding Amount	Not to Exceed Funding Limit For Fiscal Year 2015-2016
CII Smart Timer	\$ per Station	\$

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 1 of 3)

Site Inspection; Election by Participant. Participant Agency must either (1) conduct pre- and post-turf removal site inspections for all Program Applications submitted to MWDOC from within the Participant's service area, or (2) provide funding to MWDOC, as set forth below, for the cost of MWDOC's site installation inspection consultant, Mission Resource Conservation District (MRCD), to conduct both pre- and post-turf removal inspections.

If Participant Agency elects to perform the pre- and post-turf removal inspections, Participant Agency shall be responsible for the activities described below:

For pre-turf removal inspections:

- Schedule and conduct the pre- turf removal inspection,
- Complete the pre-turf removal work order, as provided by MWDOC, with the required data and site photographs
- Establish that the applicant's proposed project and site are consistent with the intent of the Program.
- Notify MWDOC if any site is being irrigated with recycled water.
- Submit the completed work order and site photographs to MWDOC.
- Recommend to approve or deny the application. If MWDOC staff agrees with the recommendation, it shall approve the application, designate the site as an eligible Program turf removal project, and issue a Notice to Proceed to the applicant, or reject the application and issue a Participation Denial Notice to the applicant. The final decision on a Notice to Proceed lies with MWDOC.

For post-turf removal inspections:

- Schedule and conduct the post-turf removal inspection
- Complete the post-turf removal work order, as provided by MWDOC, with the required data, site photographs, and receipts
- Establish that the applicant's completed project and site are consistent with the intent and guidelines of the Program, including the following.
 - The site's precise turf removal area in square feet that was removed. This shall be the basis for calculating the amount of each site's rebate, not to exceed initial pre-turf removal inspection measurements, and the total turf removal project cost.
 - The site's turf removal area does not include any live turf or turf-looking grasses.
 - The project area must include some plants.
 - The converted area's irrigation system, if any, is a low flow system (drip, bubblers, or low-precipitation high-efficiency rotating nozzles). If part of a lawn is converted, the sprinkler system must be properly modified to provide adequate coverage to the remaining lawn without spraying the converted area.
 - All exposed soil in the converted area is covered with a 2-3" layer of mulch, except in areas planted with creeping or rooting groundcovers.

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 2 of 3)

- Converted area is permeable to air and water. Weed barriers must be permeable. Pavers must have sufficient spacing to allow water to permeate project area. Concrete, plastic sheeting or other impermeable surfaces do not qualify for incentives under the Program.
- No invasive plant species are used.

At the time of this Addendum, the residential turf removal inspection cost as charged to MWDOC by MRCD is \$105 per residential inspection. The total cost for both pre and post-turf removal residential inspections is thus \$210.00. The current commercial inspection cost as charged to MWDOC by MRCD is approximately \$165.36 per inspection, based on an average of four (4) hours for a small commercial site at \$37.84 per hour, plus \$28 per hour for inspection verification administration. Again, two commercial inspections are required, for a total estimated cost of \$330.72. Should the MRCD costs decrease or increase, MWDOC will pass these changes through to Participant Agency.

By its initials below, _____ hereby elects to either:

Name of Participant Agency

(1) Conduct its own inspections:

Initials Here

or

(2) Provide funding to MWDOC to conduct inspections:

Initials Here

Not to exceed funding amount to conduct Inspections

\$ _____

Participant has the option to provide supplemental funding to customers in its service area to further incentivize turf removal program participation. By completing Table 3 below, Participant Agency elects to provide supplemental funding for turf removal rebate incentives

Table 3 –Turf Removal Supplemental Funding

Program	Not To Exceed Funding for Fiscal Year 15-16	Participant Agency Funding Amount per Square Foot	Notes/Special Considerations
Residential Turf Removal	\$	\$	
CII Turf Removal		\$	

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 3 of 3)

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 3C FY 15-16
Spray to Drip Irrigation Rebate Program
Participant Agency Funding Authorization (Page 1 of 2)

Site Inspection; Election by Participant. Participant Agency must either (1) post-drip conversion site inspections for all Program Applications submitted to MWDOC from within the Participant's service area, or (2) provide funding to MWDOC, as set forth below, for the cost of MWDOC's site installation inspection consultant, Mission Resource Conservation District (MRCD), to conduct the post-drip conversion inspections.

If Participant Agency elects to perform the post-drip conversion inspections, Participant Agency shall be responsible for the activities described below:

For post-turf removal inspections:

- Schedule and conduct the post-drip conversion inspection
- Complete the post-drip conversion work order, as provided by MWDOC, with the required data, site photographs, and receipts
- Establish that the applicant's completed project and site are consistent with the intent and guidelines of the Program, including the following.
 - Property type (residential/commercial)
 - Verified number of pressure regulation/filtration components
 - Verified project area in square footage.

At the time of this Addendum, the residential post-drip conversion inspection cost as charged to MWDOC by MRCD is \$_____ per residential post- drip conversion inspection. The current commercial inspection cost as charged to MWDOC by MRCD is approximately \$165.36 per inspection, based on an average of four (4) hours for a small commercial site at \$37.84 per hour, plus \$28 per hour for inspection verification administration. Should the MRCD costs decrease or increase, MWDOC will pass these changes through to Participant Agency.

By its initials below, _____ hereby elects to either:

Name of Participant Agency

(1) Conduct its own inspections:

Initials Here

or

(2) Provide funding to MWDOC to conduct inspections:

Initials Here

Not to exceed funding amount to conduct Inspections

\$_____

Addendum 3C FY 15-16
Spray to Drip Irrigation Rebate Program
Participant Agency Funding Authorization (Page 2 of 2)

Participant has the option to provide supplemental funding to customers in its service area to further incentivize spray to drip conversion program participation. By completing Table 4 below, Participant Agency elects to provide supplemental funding for spray to drip conversion rebate incentives

Table 4 – Spray to Drip Rebate Supplemental Funding

Program	Not To Exceed Funding for Fiscal Year 15-16	Participant Agency Funding Amount per Square Foot	Notes/Special Considerations
Residential Spray to Drip	\$	\$	
CII Spray to Drip	\$	\$	

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 4 FY 15-16
Participant Agency Administered Project Pre-Approval Request
MWD-Funded/Participant Agency Administered Incentive Program

Participant Agency must obtain Metropolitan's written pre-approval for all projects.

This form must be received by MWDOC by _____.

Program Type: ☐ Residential ☐ Commercial, Industrial, Institutional	
Project Type: ☐ Device-based ☐ Customized	
Member Agency MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	Agreement Number (Completed by MWDOC)
Participant/Retail Agency	Participant/Retail Agency Contact Name
Participant/Retail Agency Project Title/Name	Participant/Retail Agency Contact E-Mail Address
Project Start Date	Participant/Retail Agency Contact Phone Number
Project End Date (must be complete by May 31, 2016)	Participant/Retail Agency Funding Request for Project

Detailed Project Description

Project description must include the following:

1. Detailed Project narrative
2. For Device-Based Projects, include type and quantity of device
3. Implementation method (direct install, distribution, etc.)
4. Inspection/verification methodology, including percentage of installs to be inspected
5. Vendor contact information (if used)
6. Project implementation timeline (start and end dates, milestones)
7. For Customized Projects, include supporting documentation for the water savings estimate
8. An Excel Spreadsheet showing the data collection fields (MWDOC may provide standardized data collection form).

Project Description:

Please attach additional sheets, if necessary.

I certify that the information provided in this request is accurate and in accordance with guidelines provided above, and understand that both MWDOC and Metropolitan must approve this request prior to Participant/Retail Agency seeking reimbursement from MWDOC for this project. I understand that funding is not guaranteed and that a lesser amount than requested may be awarded. I further understand that signed invoices must be submitted electronically to MWDOC by the 5th of each month and that invoices must be submitted on the MWDOC-approved invoice template and include a completed data collection table/spreadsheet. By signing, Participant/Retail Agency agrees to these terms.

Authorizing Signature General Manager /Designee _____	Date _____
--	-------------------

MWDOC	Date received: _____
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Addendum 4 FY 15-16
Requirements for Incentive Reimbursement
For MWDOC Participant/Retail Agencies
MWD-Funded/Member Agency Administered Incentive Program

Projects Eligible for Metropolitan Funding

Metropolitan's funding under the MWD-Funded/Member Agency Administered Incentive Program will be provided for two types of Participant/Retail Agency administered projects.

1. Device-based and other incentive project: Eligible devices must be included in residential or commercial incentive List. Metropolitan incentives will be available for Participant/Retail Agency projects that retrofit, install or distribute devices independent of the regional rebate program. A typical example is direct installation or distribution of devices.
2. Customized project: For projects that result in water savings through customized site improvements, Metropolitan's funding is limited to \$195 per acre-foot of estimated water savings, based on project life and up to one-half of eligible project costs. Metropolitan's vendor cannot be used for customized projects. Restrictions may apply.

Restrictions

Eligible project costs include the following:

- Equipment
- Plants
- Mulch
- Pervious hardscape
- Up to one year of irrigation management fees

Ineligible project costs include the following:

- Supplemental funding for Metropolitan device incentives
- Participant/Retail Agency staffing costs

Project life is estimated at the following terms:

- Landscape irrigation system improvements: 10 years
- For other projects, life estimate determined by Metropolitan or Member agency peer reviews of supplied documentation, technical studies, etc.

Project Approval and Payment Process

The process for MWDOC\Metropolitan approval and reimbursement for MWD-Funded/Member Agency Administered projects is as follows:

1. Participant/Retail Agency submits a signed project proposal by Request deadline. The proposal shall include a project pre-approval request and any supporting documentation.
2. MWDOC/Metropolitan shall approve, reject, or convene a peer review panel to consider the request. The participants in the peer review panel shall be determined by MWDOC/Metropolitan.
3. If approved, Participant/Retail Agency may implement its project.
4. Participant/Retail Agency shall only invoice MWDOC for funding within its total allocated amount.
5. Participant/Retail Agencies must submit monthly invoices. Invoices may be submitted as a scanned invoice signed by the Participant/Retail Agency's General Manager or Designee prior to submittal, certifying the incentive amount, verification method, and work performed for the period.

6. When submitting an invoice, Participant/Retail Agencies must also submit an excel database containing supporting documentation.

Addendum 4 FY 15-16
Requirements for Incentive Reimbursement
For MWDOC Participant/Retail Agencies
MWD-Funded/Member Agency Administered Incentive Program

7. The excel database must include the data fields in the order shown below for the invoice to be processed. MWDOC/Metropolitan will provide an example excel spreadsheet for Participant/Retail Agencies upon request.

Required Database Fields for invoice payment: - *(where applicable*)*

1. Member agency
 2. Retail agency *
 3. Site, company, or organization name *
 4. Customer first name
 5. Customer last name
 6. Site or installation street address
 7. Apartment or Unit
 8. City
 9. Zip code
 10. Device
 11. Quantity
 12. Install date
 13. Number of WBIC stations *
 14. Number of Acres (large landscape) *
 15. Total square feet of turf removed *
 16. Eligible square feet of turf removed *
 17. Water factor *
 18. Site description (Business, HOA, etc) *
 19. Customer phone number
 20. Customer email address
 21. Contractor Name*
 22. Contractor phone number*
 23. Contractor email*
 24. Device make
 25. Device model
 26. Retail cost per device
 27. Program Type (residential/commercial)
8. Metropolitan shall provide payment to MWDOC by means of a credit on their monthly water bill from Metropolitan. MWDOC shall then either credit the Participant/Retail Agency's monthly water bill from MWDOC or issue Participant/Retail Agency a check. Method of payment to be determined by MWDOC at its discretion. Participant/Retail Agency shall be solely responsible for any incentive payments to customers or other applicable third parties.

DRAFT

June 4, 2015

Prepared by: C. Compton

Submitted by: P. Weghorst

Approved by: Paul Cook 

WATER RESOURCES POLICY AND COMMUNICATIONS COMMITTEE

2015 LEGISLATIVE UPDATE

SUMMARY:

This report provides an update on the 2015-2016 legislative session and IRWD priorities. As legislation develops, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board consider the following actions/position:

- AB 1390 (Alejo, D-Salinas)— *Groundwater: adjudication* and SB 226 (Pavley, D-Calabasas)— *Sustainable Groundwater Management Act: groundwater rights*— Adopt a “CONCERNED” position, and authorize staff to engage with stakeholders to protect IRWD's interests related to groundwater adjudications.

BACKGROUND:

The last day for fiscal committees to hear and report to the floor any bills introduced in its house was May 1, 2015, and the house of origin deadline is June 5. Any bill that does not meet the June 5 deadline and does not contain an urgency clause is now dead or has become a two-year bill. The next major legislative deadline is June 15, which is the constitutional deadline for passage of the budget.

A copy of the 2015 State Legislative Matrix is attached as Exhibit “A”.

State Budget Update:

April Revenue Numbers:

On May 11, 2015, State Controller Betty Yee released her monthly report on the state's finances. She announced that the state took in \$1.8 billion, or 12.2 percent, more than projections during the month of April. All three of the state's top sources of revenues exceeded the projections contained in the Governor's proposed Fiscal Year 2015-2016 budget. Personal income tax revenues alone came in 13.3 percent higher than estimates. Total General Fund revenues, as of the end of April, were \$3.4 billion, or 3.8 percent, above estimates. The State General Fund outstanding loans were \$8 billion or \$2.3 billion less than estimates at the end of April.

Governor's May Revise:

On May 14, 2015, Governor Brown released his May revision to his proposed state budget (the May Revise). The May Revise proposes \$115.3 billion in total expenditures, \$116.8 billion in total revenues and designates \$3.46 billion for the Budget Stabilization Account/Rainy Day Fund.

The increases in revenue and spending included in the May Revise reflect the continued trend of increased revenues the state has experienced this fiscal year. Overall, the May Revise includes a net increase in forecasted General Fund revenues of \$6.7 billion from the January budget. The May Revise allocates \$5.5 billion of the \$6.7 billion for K-12 schools and community colleges as required by Proposition 98, and allocates \$633 million to the Rainy Day Fund and \$633 million to pay down debts and liabilities as required by Proposition 2.

While higher-than-expected revenues have helped the state's financial situation in the current fiscal year and are projected to continue aiding the State in Fiscal Year 2015-2016, the proposed budget notes that spending commitments must remain constrained given the state's fiscal outlook over the next few years. Specifically, the May Revise states that "the budget remains precariously balanced and faces the prospect of deficits in succeeding years. The state has hundreds of billions of dollars in existing liabilities, such as deferred maintenance on its roads and other infrastructure and its unfunded liability for future retiree health care benefits for [S]tate employees and various pension benefits" (*2015-16 May Revision, Introduction, Page 1*). These three factors have led Governor Brown to propose a budget that is only 0.7 percent higher than the Fiscal Year 2014-2015 approved budget.

The May Revise, similar to the Governor's proposed budget, focuses on paying down budgetary debts from past years, adding funds to the Rainy Day Fund, and addressing needs in education and health care. Additionally, the May Revise includes the following proposals:

- Creation of a California Earned Income Tax Credit: The May Revise proposes an earned income tax credit to assist lower income workers. The credit will provide a refundable tax credit for wages of households with incomes less than \$6,580 if there are no dependents or \$13,870 if there are three or more dependents. The proposed credit would match 85 percent of the federal credit with a maximum benefit of \$2,653 providing an average estimated household benefit of \$460 annually for 825,000 families.
- UC and CSU Tuition Freeze: The May Revise proposes to hold tuition flat at University of California and California State University campuses for in-state undergraduate students for two more years by providing increased ongoing funding to the California State University and temporary assistance to the University of California to pay down its unfunded pension liability.
- Social Service Cost Increases Due to Changes in Federal Law: The May Revise includes \$62 million to provide health care and other safety net services to currently undocumented immigrants who would have gained Permanent Residence under Color of Law status under the President's executive actions. In conjunction with the President's executive actions, the May Revise proposes an additional \$5 million for direct assistance for immigrant applicants and temporary workers.

In addition to these proposals, the May Revise contains several items of interest to IRWD. Of interest to the District are the budget's proposed Cap-and-Trade Revenue expenditure plan, emergency drought response plan and water policy proposals. More detail on each of these proposals is provided below.

Proposed Fiscal Year 2014-2015 Proposed Cap-and-Trade Expenditures:

One of IRWD's legislative priorities for 2015 is the promotion of policies which encourage energy reliability in Orange County and energy efficiency in the water and wastewater sectors without an increase in cost to or mandates on local entities. As part of the District's advocacy efforts in this area, IRWD has supported allocating some of the Cap-and-Trade revenues to projects that reduce the greenhouse gas emissions and energy demands in the water and wastewater sectors, and has been monitoring the Fiscal Year 2015-2016 budget negotiations surrounding the Cap-and-Trade revenues.

As part of his proposed budget in January, Governor Brown proposed a \$1.002 billion Cap-and-Trade Expenditure Plan. Since the release of the January budget, Governor Brown issued Executive Order B 30-15 establishing a new interim statewide greenhouse gas (GHG) emission reduction target for 2030. The Executive Order sets the new 2030 target at 40 percent below 1990 levels. The May Revise supports the Governor's 2030 GHG reduction target by including a \$2.2 billion Cap-and-Trade Expenditure Plan, which is \$1.2 billion more than was included in the Governor's January budget. The increased investment reflects a revised auction proceed estimate and establishes a reserve to account for potential volatility in future auction proceeds.

Overall, the proposed expenditure plan for the \$2.2 billion allocates most of the revenue to existing programs previously funded with Cap-and-Trade revenues. The additional investment of \$1.2 billion is targeted largely for investments in clean transportation and mass transit, energy efficiency and renewable energy, waste reduction and ecosystem restoration programs. One newer program included in the expenditure plan is the Healthy Soils Program. The Healthy Soils Program will support demonstration projects that increase carbon in soil.

A comparison of the January budget expenditure plan and the May Revise expenditure plans is provided below:

*Cap-and-Trade Expenditure Plan
(Dollars in Millions)*

Investment Category	Department	Program	Amount Included in Jan 2015 Proposed Budget	Additional Funds Proposed in the May Revise	Total Proposed for inclusion in the FY 2015-16 Budget
Sustainable Communities and Clean Transportation	High-Speed Rail Authority	High-Speed Rail	\$ 250	\$ 250	\$ 500
	State Transit Assistance	Low Carbon Transit Operations Program	\$ 50	\$ 50	\$ 100
		Transit and Intercity Rail Capital Program	\$ 100	\$ 165	\$ 265
	Strategic Growth Council	Affordable Housing and Sustainable Communities Program	\$ 200	\$ 200	\$ 400
	Air Resources Board	Low Carbon Transportation	\$ 200	\$ 150	\$ 350
Energy Efficiency and Clean Energy	Department of Community Services and Development	Energy Efficiency Upgrades/Weatherization	\$ 75	\$ 65	\$ 140
	Department of General Services	Energy Efficiency for Public Buildings	\$ 20	\$ 20	\$ 40

	University of California/California State University	Renewable Energy and Energy Efficiency Projects	\$ 0	\$ 60	\$ 60
	Department of Water Resources (DWR)/Department of Food and Agriculture (DFA)	Water and Energy Efficiency *\$30 million was appropriated to this program through the emergency drought legislation enacted earlier this year.	\$ 0	\$ 60	\$ 60
	Energy Commission/ DWR	Drought Executive Order- Rebates for Appliances	\$ 0	\$ 30	\$ 30
	Energy Commission/ DWR	Drought Executive Order- Water and Energy Technology Program	\$ 0	\$ 30	\$ 30
	DFA	Agricultural and Operational Efficiency	\$ 5	\$ 20	\$ 25
Natural Resources and Waste Diversion	Department of Fish and Wildlife	Wetlands and Watershed Restoration	\$ 25	\$ 40	\$ 65
	Department of Forestry and Fire Protection	Forest Health	\$ 42	\$ 50	\$ 92
	DFA	Healthy Soils	\$ 0	\$ 20	\$ 20
	Cal Recycled	Waste Diversion	\$ 25	\$ 35	\$ 60
TOTAL			\$ 992	\$1,245	\$2,237

Emergency Drought Response:

Since the Governor first declared a state of emergency for the drought in January 2014, approximately \$1.9 billion has been appropriated toward emergency drought response. The May Revise includes an additional \$2.175 billion of one-time resources to continue the state's response to the drought. Of the \$2.175 billion proposed to be expended for drought response in Fiscal Year 2015-2016, \$1.8 billion will come from Proposition 1, which is significantly higher than the \$532.5 million proposed as part of the Governor's January budget. The \$1.8 billion in Proposition 1 funds will be available over the next three years.

A summary of the funding proposed for drought response is provided below:

*Emergency Drought Response Funding
(Dollars in Millions)*

Investment Category	Department	Program	Amount	Fund Source
Protecting and Expanding Local Water Supplies	State Water Resources Control Board	Groundwater Contamination	\$ 784.0	Proposition 1
	State Water Resources Control Board	Water Recycling	\$ 475.0	Proposition 1
	State Water Resources Control Board	Safe Drinking Water in Disadvantaged Communities	\$ 180.0	Proposition 1
	State Water Resources Control Board	Wastewater Treatment Projects	\$ 160.0	Proposition 1
	State Water Resources Control Board	Stormwater Management	\$ 100.0	Proposition 1
	Department of Water Resources	Groundwater Sustainability	\$ 60.0	Proposition 1
	Department of Water Resources	Desalination Projects	\$ 50.0	Proposition 1
Water Conservation	Department of Water Resources/Energy Commission	Urban Water Conservation	\$ 104.0	Proposition 1/Cap & Trade Revenues
	Department of Water Resources/Department of Food and Agriculture	Agricultural Water Conservation	\$ 75.0	Proposition 1/Cap & Trade Revenues
	Department of Water Resources/Energy Commission	Make Water Conservation a Way of Life	\$ 43.0	Proposition 1/Cap & Trade Revenues
	Department of General Services	Water Conservation at State Facilities	\$ 23.4	General Fund/ Special Funds

Emergency Response	Department of Forestry and Fire Protection	Enhanced Fire Protection	\$ 61.8	General Fund
	Office of Emergency Services	California Disaster Assistance	\$ 22.2	General Fund
	Department of Community Services and Development	Farmworker Assistance	\$ 7.5	General Fund
	Department of Housing and Community Development	Rental Relocation Assistance	\$ 6.0	General Fund
	State Water Resources Control Board	Executive Order Implementation	\$ 1.4	General Fund
TOTAL			\$2,175	

As part of the funding outlined above, the May Revise includes:

- \$43 million to implement consumer rebate programs for the replacement of inefficient water consuming appliances, including dishwashers and toilets, to save water and energy and to reduce greenhouse gas emissions. \$30 million of the \$43 million is from Cap-and-Trade revenues and \$13 is from Proposition 1;
- \$27 million of Proposition 1 funds to replace lawns in underserved communities throughout the state with water efficient landscaping;
- \$22 million from the General Fund to remove the emergency salinity barrier the Department of Water Resources (DWR) installed in the West False River in the Delta. The barrier slows the tidal push of saltwater from the San Francisco Bay into the Delta limiting salinity impacts on water quality. The barrier must be removed in November to avoid potential flood impacts and to prevent harm to migratory fish;
- \$20 million in Cap-and-Trade revenues for the DWR Water Energy Grant Program to reduce energy demand and greenhouse gas emissions through local projects that also support water use efficiency and conservation; and
- \$10 million in Proposition 1 funds to implement the CalConserve Program which will enable homeowners and businesses to finance water efficiency upgrades through a revolving-loan program.

Water Policy Changes Proposed with the May Revise:

Along with the May Revise, the Governor released proposed language for a number of water-related budget trailer bills. The water-related budget trailer bills deal with:

- CEQA Exemption for Drought Mitigation and Water Recycling: This budget trailer bill, as originally proposed, would provide a CEQA exemption for any project carried out to mitigate drought conditions if it:
 - Connects existing residential users facing critical water shortages to a community water system;
 - Provides interconnections between existing community water systems to improve drought resilience for existing residential users;
 - Involves construction or expansion of stormwater infiltration or recycled water treatment facilities;

- Involves construction or expansion of recycled water distribution infrastructure within existing right of way; or
 - Implements specific directives that the Governor may include in a state of emergency proclamation.
- CEQA Exemption for Groundwater Wells: As proposed, this budget trailer bill would create a CEQA exemption for the adoption of a city or county ordinance that places limitations on the drilling of new groundwater wells. It would also create a CEQA exemption for a city's or county's placement of limitations on changes in land use that would result in new demands on groundwater, including a temporary moratorium. These exemptions would remain in effect until July 1, 2017, or until the end of the drought emergency, whichever is later.
- Drought- Expanded Local Enforcement Authority: The May Revise proposed legislation to enhance local enforcement authority related to the drought. The budget trailer bill would provide all water agencies including wholesale agencies and local governments a consistent, minimum set of enforcement authorities to achieve water conservation. If approved, the proposal would grant local agencies the ability to levy a \$10,000 base and \$500 per day administrative fine upon persons who violate the emergency regulations adopted by the State Water Resources Control Board (SWRCB) or a conservation regulation adopted by the local agency. The proposal requires that any penalties obtained from this enforcement be used for local conservation efforts.
- Drought- Monitoring and Reporting: Currently the SWRCB has the ability to fine a person or entity up to \$500 per day for violating an emergency regulation or order adopted by the board. This proposal would grant the SWRCB the ability to fine a person or entity up to \$500 per day for a violation of any regulation or order adopted by the board and eliminates all references to the authority only being available to the SWRCB in critically dry years and drought emergencies. Additionally, the bill would require monitoring of and annual reporting on water diversions of 10 acre-feet or greater. It would also grant the SWRCB the ability to adopt emergency regulations to require the measurement and reporting of water diversions.
- Drought- Penalties: The current budget trailer bill language related to drought penalties would require the SWRCB to deposit any penalties it collects from violations of the recently-approved emergency urban conservation regulations or other emergency regulations into a separate fund. Those funds would then be made available for water conservation activities and programs upon appropriation by the Legislature.
- Drought- Stormwater Plans: As proposed, this budget trailer bill would allow the SWRCB to establish guidance on stormwater resource plans as directed in SB 985 (2014) more quickly. The guidance will define the types of local agencies and nongovernmental organizations that need to be consulted in the development of a stormwater resource plan; the quantitative methods for identifying and prioritizing opportunities for stormwater and dry weather runoff capture projects; the appropriate geographic scale of watersheds for stormwater resource planning; and other guidance the SWRCB deems appropriate.

- Drought – Sub-metering: As has been proposed through legislation in years past, the budget trailer bill on submetering would require the installation of submeters in any new residential or mixed-use development. Although the proposal provides that a water purveyor does not have responsibility for the submeters, it does require water purveyors to take some actions. It requires that water purveyors that “deliver water service to a newly constructed multiunit residential structure or newly constructed mixed-use residential and commercial structure, shall require a measurement of the quantity of water supplied to each individual dwelling unit as a condition of new water service.” The measurement may be individual meters or submeters.
- Drought-Water System Consolidation: As part of the May Revise, a budget trailer bill has been proposed that would provide the SWRCB with authority to require a public water system to consolidate with another public water system or a state small system where the public water system or a state small water system fails to reliably provide an adequate supply of safe drinking water. It also provides the SWRCB with authority to require a public water system to extend service to another public water system, a state small system, or domestic well users in an area that does not have access to an adequate supply of safe potable water as long as the extension of service is an interim extension of service in preparation for consolidation. The proposal would also grant the SWRCB with authority to require a public water system to provide technical, managerial or financial management assistance to another public water system.
- Public Well Logs: This budget trailer bill proposal would require that reports filed with the DWR upon the completion, alternation, abandonment or destruction of a well be made available to governmental agencies and the public, upon request.
- Safe Drinking Water Program Funding and Fees: As reported to the Board last month, the SWRCB, as part of the budget process, has asked for an increase in the fees charged under the Safe Drinking Water Program and for changes in how the fees are set. The Safe Drinking Water Program was previously operated by the Department of Public Health but is now being operated by the SWRCB’s Division of Drinking Water given the transition of the Drinking Water Program to the SWRCB last July. The program ensures that small and large public water systems meet Safe Drinking Water Act standards.

The Health and Safety Code provides authority for this program and the fees set under it. Specifically, the Health and Safety Code requires that the program’s fees be charged on a fee-for-service basis; be based on the actual cost incurred by the SWRCB; caps the total fees charged to large systems which is defined as those serving 1,000 or more connections based on a 5 percent annual escalation to Fiscal Year 2001-2002 expenditures of \$7,000,000; caps annual increases in the fees at 5 percent; and requires that changes to the fee amount and its implementing regulations be made under the Administrative Procedures Act (APA).

The SWRCB has determined that the current fee schedule is not generating sufficient revenue to fund the program and has asked that the fee structure be changed. The SWRCB, through the budget process, requested that the:

- Fees be increased to meet current program expenditures;
- Fee-for-service approach be abandoned and that the fees be based on a fee schedule;
- SWRCB be authorized to adopt the fee schedule by emergency regulation instead of the normal APA process; and
- Five percent cap on fee increases be removed.

The Association of California Water Agencies (ACWA) along with other industry associations, have proposed alternatives to the SWRCB's fee proposal, which would have retained existing provisions in state law but raised the fees to cover existing expenditure levels. The Administration rejected ACWA's proposal, but continues to discuss alternatives with ACWA and IRWD's industry partners. Staff will provide the Committee with an oral update on this budget trailer bill proposal.

Staff continues to monitor the budget negotiations and the proposed water-related budget trailer bills, and engage on the policy issues of interest to the District. As budget negotiations continue and proposals change, staff will provide the Committee with an oral update on any new developments.

IRWD 2015 State Legislative Priorities:

Legislative Clarification on Tiered Water Rates:

Since staff's April 27 presentation to the Board on the *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* and the Board's discussion regarding the need for legislative clarification on tiered water rates, staff has been working with the District's industry and association partners on seeking legislative clarification. Staff will provide the Committee with an oral update on those efforts.

Updates on 2015 State Legislation of Interest to IRWD:

Proposals on Groundwater Adjudications:

After the adoption of sustainable groundwater management legislation last year, the Administration and the Legislature indicated their interest in pursuing legislation related to groundwater adjudications this year. There are currently two proposals related to groundwater adjudications before the Legislature— AB 1390 (Alejo, D-Salinas) and SB 226 (Pavley, D-Calabasas).

AB 1390 is sponsored by the California Farm Bureau Federation and other agricultural interests. It has been developed and continues to be shaped with input from ACWA. The bill would establish special procedures for an adjudication action to determine groundwater extraction rights within the basin including the right to extract stored water.

The author states that “The goal of AB 1390 is to clarify court procedures that apply to comprehensive groundwater adjudications to reduce the time and improve the efficiency of the process.” The bill would:

- Establish special procedures that govern all groundwater adjudication actions, with exceptions;
- Allow a court to determine all rights in a groundwater basin and to declare the priority, amount, purpose of use, extraction location, and place of use of the groundwater, together with other relief or a “physical solution” to conflicts;
- Require the court to hold a preliminary hearing to determine if the adjudication should proceed; an adjudication would only be permitted if one of the following is met:
 - There is substantial evidence that declining groundwater levels may cause an undesirable result in the basin;
 - The court cannot provide adequate relief among the potential claimants to a groundwater right unless the adjudication action is completed;
 - A sufficient number of the parties have agreed to a proposed judgment in the adjudication action; or
 - The interests of groundwater rights holders will be expeditiously and effectively served by the completion of the adjudication action.
- Specify that a plaintiff shall name counties, special districts, public water systems and small water systems as defendants in an adjudication action and that the plaintiff shall have the county assessor notify other persons owning land overlying the basin of the adjudication via a mailing along with their property tax bill;
- Allow any party owning land overlying the basin to become a party to the adjudication upon application to the court;
- Specify that the initial basin boundaries for purposes of the groundwater adjudication shall be the Bulletin 118 boundary, but allows the court to adjust the boundaries;
- Require that parties initially and expeditiously disclose specifics regarding their preceding 10 years of groundwater use and other information;
- Encourage parties to use a Groundwater Sustainability Plan developed pursuant to the Sustainable Groundwater Management Act (SGMA) as the basis of a stipulated judgment setting forth a physical solution for basin management; and
- Allow a party, or group of parties, that is more than 50 percent of all named parties in the adjudication and who hold at least 75 percent of the groundwater rights, to enter into a proposed stipulated judgment and binds the court to impose any physical solution from that settlement.

AB 1390 was passed by the Assembly on a 75 to 0 vote. It is currently in the Senate Rules Committee for assignment to a policy committee. A copy of AB 1390, as amended on May 18, 2015, is attached as Exhibit "B".

SB 226 has a number of similarities to AB 1390. Both bills would establish special procedures for groundwater adjudication actions and both require broad public noticing and disclosures of the adjudication. While both bills would keep groundwater adjudication cases in the courts, SB 226 does not provide for stays to allow a collaborative process to develop a Groundwater Sustainability Plan through SGMA and does not provide for an initial hearing by the court to determine if the adjudication is necessary as provided for in AB 1390.

SB 226 would:

- Provide that a court shall use the Code of Civil Procedure for determining rights to groundwater, except as provided by the special procedures established in the bill;
- Require the boundaries of a basin to be as identified in Bulletin 118, unless other basin boundaries are established;
- Authorize DWR and the Department of Fish and Wildlife to intervene in an action or proceeding if they claim an interest relating to the action;
- Provide that all unknown defendants shall be served by publication;
- Require a party to provide specified initial disclosures to the other parties, including, among other disclosures, information relating to expert witnesses; and
- Direct a court, in making its determination of rights to groundwater, to avoid undesirable results as defined in SGMA.

SB 226 was passed by the Senate on a 23-to-14 vote. It is currently in the Assembly for assignment to a policy committee. A copy of SB 226, as amended on May 5, 2015, is attached as Exhibit "C".

Staff has reviewed both AB 1390 and SB 226, and is of the opinion that the proposals may impact IRWD's groundwater interests and ability to engage in an adjudication related to those interests. Staff recommends that the Board adopt a "CONCERNED" position on these bills and authorized staff to engage with stakeholders to protect IRWD's interests.

Other 2015 State Legislation and Actions:

Short-Lived Climate Pollutants:

Last month, the California Air Resources Board (CARB) released a concept paper and held a workshop on the board's approach and possible actions related to short-lived climate pollutants. CARB has defined short-lived climate pollutants as powerful climate forcers that remain in the

atmosphere for a period of days to up to 10 years. The board has identified the three main components of short-lived climate pollutants as black carbon, fluorinated gases and methane. To address these three components CARB has proposed to:

- Reduce black carbon emissions by at least 50 percent below 2012 levels from transportation sources by 2020, and from all sources by 2030;
- Reduce methane emissions by at least 20 percent by 2020, and 40 percent by 2030 below forecasted emission levels; and
- Reduce fluorinated gas emissions by at least 25 percent in 2020, and 50 percent by 2030 below forecasted emission levels.

Wastewater has been identified by CARB as a contributor to the state's methane emissions. CARB is considering targeting the emissions from the wastewater sector by maximizing resource recovery from wastewater treatment facilities. At this point in time, it is unclear how they will approach this maximization.

Staff will monitor CARB's actions related to short-lived climate pollutants and will work with IRWD's association and industry partners on proposals of interest to the water and wastewater sectors. Staff will provide updates to the Committee, as appropriate.

A copy of CARB's "Short-Lived Climate Pollutant Reduction Strategy Concept Paper" is attached as Exhibit "D".

2015 Federal Legislation and Actions:

"Waters of the United States" Rule: On May 26, 2015, the United States Environmental Protector Agency and the U.S. Army Corps of Engineers finalized the rule on the Definitions of "Waters of the United States" (WOTUS). The rule, which differs substantially from the proposed rule, further defines WOTUS and expands the range of waters that fall under federal jurisdiction. Staff is in the process of evaluating the rule and its impacts on IRWD. Staff will provide an oral update to the Committee on the rule and its potential impacts on the District.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

THAT THE BOARD ADOPT A “CONCERNED” POSITION ON AB 1390 (ALEJO) AND SB 225 (PAVLEY) AND AUTHORIZE STAFF TO ENGAGE WITH STAKEHOLDERS TO PROTECT IRWD’S INTERESTS RELATED TO GROUNDWATER ADJUDICATIONS.

LIST OF EXHIBITS:

Exhibit “A” – 2015 IRWD Legislative Matrix

Exhibit “B” – AB 1390 (Alejo): *Groundwater: adjudication*

Exhibit “C” – SB 226 (Pavley): *Sustainable Groundwater Management Act: groundwater rights*

Exhibit “D” – CARB’s “Short-Lived Climate Pollutant Reduction Strategy Concept Paper”

EXHIBIT “A”
IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 1</u> Brown (D)	Drought: Local Governments: Fines		Prohibits a city, county, or city and county from imposing a fine under any local maintenance ordinance or other relevant ordinance for a failure to water a lawn or having a brown lawn during a period for which the Governor has issued a proclamation of a state of emergency based on drought conditions.	05/07/2015 - To SENATE Committee on GOVERNANCE AND FINANCE.
<u>AB 2</u> Alejo (D)	Community Revitalization Authority		Authorizes certain local agencies to form a community revitalization authority with a community revitalization and investment area to carry out provisions of the Community Redevelopment Law in that area for infrastructure, affordable housing, and economic revitalization and to provide for the issuance of bonds serviced by tax increment revenues.	05/21/2015 - To SENATE Committees on GOVERNANCE AND FINANCE and TRANSPORTATION AND HOUSING.
<u>AB 10</u> Gatto (D)	Political Reform Act of 1974: Disclosures		Requires the disclosure of certain behested payments. Increases the thresholds at which a public official has a disqualifying financial interest in sources of income in investments in business entities and in interests in real property. Revises the dollar amounts associated with the value ranges for reporting the value of economic interests. Requires certain public officials to disclose information relating to governmental decisions for which the public official had a disqualifying financial interest.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 12</u> Cooley (D)	State Government: Administrative Regulations: Review		Requires each state agency after a noticed public hearing, to review the agency's regulations, identify any regulations that are duplicative, overlapping, inconsistent, or out of date, to revise those identified regulations, and report to the Legislature and Governor.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 14</u> Waldron (R)	Unmanned Aircraft Systems: Task Force		Creates the Unmanned Aircraft Systems Task Force to research, develop, and formulate a comprehensive policy for unmanned aircraft systems. Requires the task force to submit a policy draft and suggested legislation pertaining to unmanned aircraft systems.	04/13/2015 - In ASSEMBLY Committee on TRANSPORTATION: Failed passage.;04/13/2015 - In ASSEMBLY Committee on TRANSPORTATION: Reconsideration granted.
<u>AB 21</u> Perea (D)	Global Warming Solutions Act of 2006: Scoping Plan		Requires the State Air Resources Board in preparing its scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas reduction, to consult with specified State agencies regarding matters involving energy	05/18/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.

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Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			efficiency and the facilitation of the electrification of the transportation sector.	
<u>AB 23</u> Patterson (R)	Global Warming Solutions Act of 2006: Compliance		Exempts categories of persons or entities that did not have a compliance obligation under a market-based compliance mechanism from being subject to that market-based compliance mechanism.	03/23/2015 - In ASSEMBLY Committee on NATURAL RESOURCES: Failed passage.;03/23/2015 - In ASSEMBLY Committee on NATURAL RESOURCES: Reconsideration granted.
<u>AB 33</u> Quirk (D)	Global Warming Solutions Act: Climate Council		Establishes the Climate Change Advisory Council. Requires the Council to develop an analysis of various strategies to achieve the statewide greenhouse gas emissions limit. Requires the State Air Resources Board to establish consistent metrics to accurately quantify reductions in greenhouse gas emissions, quantify public health benefits, and measure the cost-effectiveness of the various strategies identified by the Council.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 45</u> Mullin (D)	Household Hazardous Waste		Requires each jurisdiction providing for the residential collection and disposal of solid waste to increase the collection and diversion of household hazardous waste in its service area over the baseline. Provides the increase is to be determined in accordance with Department of Resources Recycling and Recovery regulations. Authorizes the adoption of a model ordinance for a comprehensive program for the collection of waste. Requires an annual report to the Department on progress in achieving compliance.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 56</u> Quirk (D)	Unmanned Aircraft Systems		Prohibits the use of unmanned aircraft systems by public agencies or the contracting therefor. Exempts law enforcement agencies. Requires public notice by agencies when intending to deploy such system. Provides the time frame for destruction of images and data collected. Prohibits public dissemination of images and data. Prohibits arming. Relates to surveillance restrictions. Applies to private entities contracting with agencies. Relates to data and images subject to disclosure. Requires public comment.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 78</u> Mathis (R)	Groundwater Basins		Makes technical nonsubstantive changes to existing law that requires the Department of Water Resources to categorize each basin or	01/05/2015 - INTRODUCED.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			subbasin as high-, medium-, low-, or very low priority and to establish ground water the initial priority for each basin.	
<u>AB 88</u> Gomez (D)	Sales and Use Taxes: Exemption: Home Appliances		Exempts from the sales and use tax laws the gross receipts from the sale of, and the storage, use, or other consumption in the State of, an energy or water efficient home appliance purchased by a public utility that is provided at no cost to a low-income participant in a federal, state, or ratepayer-funded energy efficiency program for use by that low-income participant in the energy efficiency program.	05/20/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 149</u> Chavez (R)	Urban Water Management Plans	Support	Requires each urban water supplier to update and submit a urban water management plan for a specified year to the State Department of Water Resources by a specified date. Requires the Department to submit its urban water management plan report for a specified year to the Legislature by a specified date.	05/21/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 156</u> Perea (D)	Greenhouse Gas Reduction Fund: Technical Assistance		Requires the State Air Resources Board to establish a comprehensive technical assistance program, upon the appropriation of moneys from the Greenhouse Gas Reduction Fund, for eligible applicants assisting disadvantaged communities and other specified communities. Requires the Department of Finance to include in a multi-year investment plan, an allocation to the State Board for the assistance program.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 219</u> Daly (D)	Public Works: Concrete Delivery		Expands the definition of public works for purposes of requirements regarding the payment of prevailing wages for public works projects to include the delivery of ready-mixed or asphaltic concrete with respect to contracts involving any State agency or any political subdivision of the State.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 243</u> Wood (D)	Medical Marijuana Cultivation		Requires a permit to cultivate medical marijuana. Provides limitations as to where such product may be grown. Requires indoor and outdoor medical marijuana cultivation to be conducted in accordance with state and local laws and best practices related to land conversion, grading, electricity usage, water usage, agricultural discharges, and similar matters. Requires each regional water quality control board to address discharges of waste resulting from medical marijuana cultivation and associated activities.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 259</u>	Personal Information		Requires an agency, if the agency was the source of the breach and	03/25/2015 - In ASSEMBLY

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Dababneh (D)	Privacy		the breach compromised a person's social security number, driver's license number, or California identification card number, to offer to provide the person with identity theft prevention and mitigation services at no cost for not less than 12 months.	Committee on APPROPRIATIONS: To Suspense File.
<u>AB 291</u> Medina (D)	Environmental Quality Act: Local Agencies: Water		Authorizes a local agency, for certain water projects, to file the notice with the county clerk of the county in which the local agency's principal office is located in and with the Office of Planning and Research and to mail a copy of the notice to the county clerk of the counties in which the project is located. Requires the notices to be available to for public inspection.	05/14/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>AB 307</u> Mathis (R)	Graywater: Groundwater Recharge		States the intent of the Legislature to enact legislation to explicitly permit the usage of residential, commercial, and industrial graywater for the recharge of a groundwater basin or aquifer.	02/12/2015 - INTRODUCED.
<u>AB 308</u> Mathis (R)	Graywater: Agricultural Use		States the intent of the Legislature to enact legislation to explicitly permit incorporated and unincorporated communities to sell graywater for agricultural purposes and agriculture to use graywater for agricultural purposes.	02/12/2015 - INTRODUCED.
<u>AB 311</u> Gallagher (R)	Environmental Quality: Water Quality and Supply		Requires the public agency, in certifying the environmental impact report and in granting approvals for specified water storage projects funded, in whole or in part, by Proposition 1, to comply with specified procedures. Requires the Judicial Council to adopt a rule of court to establish procedures applicable to actions or proceedings seeking judicial review of an agency's action in certifying the environmental impact report and in granting project approval. Relates to court staying of the projects.	04/29/2015 - From ASSEMBLY Committee on NATURAL RESOURCES without further action pursuant to JR 62(a).
<u>AB 327</u> Gordon (D)	Public Works: Volunteers		Extends the provisions of existing law that governing public works does not apply to specified work performed by a volunteer, a volunteer coordinator, or a member of the California Conservation corps or a community conservation corps.	05/14/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 335</u> Patterson (R)	Air Quality: Minor Violations		Requires the State Air Resources Board and air pollution control and air quality management districts to adopt regulations classifying minor violations. Requires a representative of those agencies to issue a notice to comply. Requires the State Air Resources Board to report to the Legislature regarding implementation of these provisions.	05/19/2015 - From ASSEMBLY Committee on NATURAL RESOURCES without further action pursuant to JR 62(a).

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			Exempts such districts from these provisions if the districts have a similar program in effect as of a specified date.	
<u>AB 341</u> Achadjian (R)	Financial Affairs: Reports		Amends existing law requiring the officer of each local agency, who has charge of the financial records of the local agency, to furnish to the Controller a report of all such transactions of the local agency during the preceding fiscal year. Requires the report to contain underlying data from audited financial statements if this data is available. Requires such information to be submitted to the Controller by a specified date each calendar year. Provides the due date for Controller publishing the reports.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 349</u> Gonzalez (D)	Common Interest Developments: Property Use		Amends the Davis-Stirling Common Interest Development Act. Makes void and unenforceable any provision of the governing documents or architectural or landscaping guidelines or policies that prohibits the use of artificial turf or any other synthetic surface that resembles grass.	05/22/2015 - In ASSEMBLY. Read third time and amended. To third reading.
<u>AB 356</u> Williams (D)	Oil and Gas: Groundwater Monitoring		Authorizes the State Oil and Gas Supervisor to require a well operator to implement a monitoring program for below ground oil production tanks and facilities, and disposal and injection wells. Requires the annual review of underground injection or disposal projects that use Class II wells. Requires the submission of a related groundwater monitoring plan. Requires submission of certain data for inclusion in the State's geotracker database. Provides procedures for an aquifer exemption.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 401</u> Dodd (D)	Low-Income Water Rate Assistance Program		Requires the Department of Community Services and Development to develop a plan for the funding and implementation of the Low-Income Water Rate Assistance Program, which would include specified elements. Requires the Department to report to the Legislature on its findings regarding the feasibility, financial stability, and desired structure of the program.	04/15/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 402</u> Dodd (D)	Local Agency Services: Contracts		Revises the circumstances under which a local agency formation commission may authorize a city or district to provide new or extended services. Establishes a pilot program for the Napa, Sonoma, and San Bernardino commissions that would the commissions to authority a city or district to provide new or	05/19/2015 - In ASSEMBLY. Read second time. To third reading.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			extended services outside both its jurisdictional boundaries and its sphere of influence under specified circumstances.	
<u>AB 434</u> Garcia E (D)	Drinking Water: Point-of-Entry: Point-of-Use Treatment		Requires the State Water Resources Control Board to adopt regulations governing the use of point-of-entry and point-of-use treatment by a public water system in lieu of centralized treatment where it can be demonstrated that centralized treatment is not immediately economically feasible. Provides limitations. Prohibits the use of point-of-entry treatment absent a Board determination of no community opposition. Deletes the limitation on permit duration.	05/14/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>AB 452</u> Bigelow (R)	Water Rights Fund: Groundwater Regulation		Amends existing law that establishes groundwater reporting requirements for a person extracting groundwater in an area within a basin that is not within the management area of a groundwater sustainability agency or that is a probationary basin. Prohibits water rights fees from being available for expenditure by the Water Resources Control Board for the purposes of Board enforcement of the provisions of the Sustainable Groundwater Management Act and the groundwater reporting requirements.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 453</u> Bigelow (R)	Groundwater Management		Authorizes, until a groundwater sustainability plan is adopted, a local agency to amend an existing groundwater management plan in furtherance of, and consistent with, the groundwater management plan's objectives.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 454</u> Bigelow (R)	Sustainable Groundwater Management		Relates to groundwater basins. Requires a high- or medium-priority basin that is not subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plan. Provides for the designation of basins as probationary basins.	04/14/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 455</u> Bigelow (R)	Groundwater Sustainability Plans		Amends the California Environmental Quality Act. Requires the Judicial Council to adopt a rule of court to establish procedures applicable to actions or proceedings brought to attack, review, set aside, void, or annul the certification of an environmental impact report for certain projects covered by a groundwater sustainability plan. Prohibits the court from staying or enjoying the construction or operation of the project unless the court makes a certain finding.	04/14/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 472</u>	Public Works: Prevailing		Makes a nonsubstantive, technical change by deleting an obsolete	02/23/2015 - INTRODUCED.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Harper (R)	Wage: Volunteers		provision in existing law that generally requires the payment of not less than the prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed by workers employed on public works projects, except work performed by a volunteer, a volunteer coordinator, or member of the State Conservation Corps, or a community conservation corps.	
AB 478 Harper (R)	Desalination		Makes a nonsubstantive change to the Cobey-Porter Saline Water Conversion Law that states the policy of this state that desalination projects developed by or for public water entities be given the same opportunities for state assistance and funding as other water supply and reliability projects, and that desalination be consistent with all applicable environmental protection policies in the state.	02/23/2015 - INTRODUCED.
AB 501 Levine (D)	Resources: Delta Research		Relates to the Sacramento-San Joaquin Delta Reform Act of 2009. Requires a person conducting State-funded Delta Research to take specified actions with regard to the sharing of the primary data, samples, physical collections, and other supporting materials created or gathered in the course of that research. Relates to ineligibility. Authorizes the Delta Independent Science Board to adopt guidelines. Suspends State funding for improper reporting. Provides research property rights remain with the researcher.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
AB 537 Allen T (R)	Public Employees' Benefits		Prohibits a public agency, state employer, employee organization, or public employee from entering into a memorandum of understanding that provides postemployment health care benefits without a strategy for permanently prefunding members' postemployment healthcare benefits.	03/05/2015 - To ASSEMBLY Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
AB 577 Bonilla (D)	Biomethane: Grant Program		Allocates an specified amount of funds from the Greenhouse Gas Reduction Fund to the State Energy Resources Conservation and Development Commission for the implementation of a biomethane collection and purification grant program. Requires the Commission to develop and implement the grant program to award moneys for projects that build or develop collection, purification technology, infrastructure, and projects that upgrade existing biomethane facilities.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
AB 585	Outdoor Water Efficiency:	Support	Relates to the Outdoor Water Efficiency Act. Allows a credit, under	05/04/2015 - In ASSEMBLY

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Melendez (R)	Personal Income Tax Credits		the Personal Income Tax Law, for a specified percentage of the amount paid or incurred by a qualified taxpayer for water-efficiency improvements made to outdoor landscapes on real property in the State.	Committee on REVENUE AND TAXATION: To Suspend File.
AB 590 Dahle (R)	Greenhouse Gas Reduction Fund		Creates the Biomass State Cost Share Account within the Greenhouse Gas Reduction Fund. Provides that moneys in the account would be available for expenditure by the State Energy Resources Conservation and Development Commission for the purposes of maintaining the current level of biomass power generation in the State and revitalizing currently idle facilities in strategically located regions. Establishes requirements for an applicant to receive funding for a facility's eligible electrical generation.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 603 Salas (D)	Income Taxes: Every Drop Counts Tax Credit	Support	Allows a credit under the Personal Income Tax and the Corporation Tax laws to a taxpayer participating in a lawn replacement rebate program.	05/21/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 606 Levine (D)	Water Conservation	Support and Seek Amendments	Requires the Department of General Services, when the Department replaces landscaping and irrigation on public property or when new property is added to the Department's inventory, to reduce water consumption and increase water efficiencies for that property through replacement of landscaping, irrigation timers, or spray sprinkler heads, implementation of recycled water irrigation, or any combination thereof. Imposes similar water conservation requirements of the Department of Transportation.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
AB 617 Perea (D)	Groundwater		Authorizes a minimum combination of local agency and mutual water companies to enter into an agreement to form a groundwater sustainability agency. Authorizes such agency to enter into agreements and funding with private parties that assist in or facilitate the implementation of groundwater sustainability plans or elements of a plan. Requires the Water Resources Control Board to direct a State agency's cooperation with the plan. Relates to the designation of probationary basins. Relates to plan extensions.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 639	Water Quality: Membership		Makes nonsubstantive changes to provisions of existing law which	02/24/2015 - INTRODUCED.

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Dahle (R)	of Regional Boards		requires the State Water Resources Control Board and the regional water quality control boards to prescribe waste discharge requirements in accordance with the federal national pollutant discharge elimination system permit program established by the federal Clean Water Act and the Porter-Cologne Water Quality Control Act.	
<u>AB 647</u> Eggman (D)	Beneficial Use: Storing of Water Underground		Declares that the storing of water underground constitutes a beneficial use of water if the diverted water is used while it is in underground storage for specified purposes. States the intent of the Legislature that this storage of water not injure any legal user of the water involved. Provides that the period for the reversion of a water right does not include any period when the water is being used in the aquifer or storage area or is being held in storage for later application to beneficial use.	05/06/2015 - In ASSEMBLY. Read second time. To third reading.
<u>AB 723</u> Rendon (D)	Plumbing Fixtures: WaterSense Standards		Requires the State Energy Commission, when setting plumbing fixture water efficiency standards, to consider the performance requirements established by the WaterSense standards set by the federal Environmental Protection Agency.	04/30/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 725</u> Wagner (R)	Water Quality: Recycled Water: Storm-Induced Overflow	Sponsor	Requires the State Water Resources Control Board to adopt a policy to address the potential for a storm-induced overflow from an impoundment in which recycled water is stored for subsequent beneficial use or aesthetic purposes.	03/26/2015 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.;03/26/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's amendments.;03/26/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
<u>AB 852</u> Burke (D)	Public Works: Prevailing Wages		Expands the definition of public works for the purposes of provisions relating to the prevailing rate of per diem wages, to also include any construction, alteration, demolition, installation, or repair work done under private contract on a general acute care hospital, when the project is paid for, in whole or in part, with the proceeds of conduit revenue bonds.	05/07/2015 - To SENATE Committee on LABOR AND INDUSTRIAL RELATIONS.

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<u>AB 856</u> Calderon I (D)	Invasion of Privacy		Expands liability for physical invasion of privacy to additionally include a person knowingly entering into the airspace above the land of another person without permission.	05/14/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 876</u> McCarty (D)	Compostable Organics		Requires each countywide siting element to provide an estimate of the total organics processing capacity that will be needed over a specified time period to safely handle organic wastes generated with the county and to identify areas for the location of organics processing facilities, if needed or desired.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 888</u> Bloom (D)	Waste Management: Plastic Microbeads		Prohibits a person from selling or offering for promotional purposes in this state a personal care product containing plastic microbeads that are used to exfoliate or cleanse in a rinse-off product. Provides an exception. Makes a violator liable for a civil penalty to be assessed and recovered in a civil action brought in any court of competent jurisdiction by the Attorney General or local officials. Requires the civil penalties collected to be retained by the office that brought the action.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY.. *****To SENATE.
<u>AB 935</u> Salas (D)	Integrated Regional Water Management Plans: Grants		Requires the Department of Water Resources to provide grants and expenditures for the planning, design and construction of local and regional conveyance projects supporting regional and interregional connectivity and water management. Requires a regional management group awarded a grant to provide a specified a cost share of the total project costs from nonstate resources. Authorizes the Department to waiver or reduce this requirements for projects that benefit a disadvantaged community or distressed area.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 936</u> Salas (D)	Groundwater Monitoring		Amends existing law which provides that certain entities with authority to assume groundwater monitoring functions with regard to a basin or subbasin for which the Department of Water Resources has assumed those functions are not eligible for a water grant or loan awarded or administered by the state. Authorizes an exemption for the eligibility restriction if the entity submits specified documentation that provides that there are special circumstances justifying noncompliance.	04/22/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 937</u> Salas (D)	Groundwater Planning: Disadvantaged Communities		Requires the Department of Water Resources to provide technical assistance to disadvantaged communities so that they may participate	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS:

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			in groundwater planning, including planning for regional groundwater banking, with any county or other local agency.	To Suspense File.
<u>AB 938</u> Salas (D)	Groundwater: Basin Reprioritization		Imposes the requirement to establish a groundwater sustainability agency on a local agency or combination of local agencies overlying a groundwater basin.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 939</u> Salas (D)	Groundwater Sustainability Agency: Financial Authority		Requires a groundwater sustainability agency to make the data upon which a proposed fee is based available prior to a public meeting to impose or increase a fee.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 952</u> Garcia (D)	Local Government: Vacancies		Provides updated procedures for the filling of a vacancy in an elective office by a city council for a vacancy that occurs in the first half or the second half of the term of office and at least a specified number of days prior to the next general municipal election, the person appointed to fill the vacancy holds office until the next general municipal election at which a person is elected to fill that vacancy, and thereafter, until the person elected is qualified.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 954</u> Mathis (R)	Water and Wastewater Loan and Grant Pilot Program		Creates the Water and Wastewater Loan and Grant Pilot Program. Require the State Water Resources Control Board to establish a pilot program to provide low-interest loans and grants to local agencies for grants to eligible individual homeowners for purposes relating to drinking water and wastewater treatment. Creates a related fund for use under the program. Transfers a specified amount of funds from the General Fund to the fund.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 957</u> Mathis (R)	Water Quality, Supply, Infrastructure Improvement		Relates to grants under the Water Quality, Supply, and Infrastructure Improvement Act of 2014 for water supply reliability improvement to include in that improvement criterion whether the project is proposed by a community that is dependent on groundwater from a basin in overdraft, and would include in the public health benefits criterion whether the project is proposed by a community that has extended, or is in the process of extending, its water service deliveries to specified groundwater entities.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 977</u> Mayes (R)	State Water Pollution Control Revolving Fund		Amends existing law that requires loans under the State Water Pollution Control Revolving Fund to meet specified criteria, including requiring full amortization not later than a specified number of years after project completion. Requires full amortization	03/26/2015 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/26/2015

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			not later than another specified number of years after project completion.	- In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 1019</u> Garcia E (D)	Metal Theft and Related Recycling Crimes		Requires the Department of Justice to establish a Metal Theft Task Force Program designed to enhance the capacity of the department to serve as the lead law enforcement agency in the investigation and prosecution of illegal recycling operations, and metal theft and related recycling crimes. Authorizes the department to enter into partnerships with local law enforcement agencies.	04/22/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1030</u> Ridley-Thomas S (D)	Global Warming Solutions Act of 2006: Greenhouse Gas		Amends existing law that relates to the Greenhouse Gas Reduction Fund. Requires, for greenhouse gas emission reduction projects involving hiring, priority be given to projects that include partnerships with training entities that have a proven track record of placing disadvantaged workers in career-track jobs.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1068</u> Allen T (R)	California Environmental Quality Act: Priority Projects		Authorizes each Member of the Legislature to nominate one project within his or her respective district each year, and the Governor to designate those projects as priority projects if the projects meet specified requirements. Requires the Governor to provide a notice of the designation to the appropriate lead agency and to the Office of Planning and Research. Requires an environmental impact report for each project. Authorizes tiering from previously prepared reports. Relates to court stays of projects.	03/19/2015 - To ASSEMBLY Committees on NATURAL RESOURCES and JUDICIARY.
<u>AB 1095</u> Garcia E (D)	Restoration Funding: Salton Sea		Appropriates an unspecified sum from funds of the Water Quality, Supply, and Infrastructure Improvement Act of 2014, that provides funding relating to multiparty water quantification settlement agreement provisions relating to the Salton Sea, to the Natural Resources Agency to be used for restoration projects that fulfill obligations of the State in complying with those quantification settlement agreement provisions.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1128</u> Jones-Sawyer (D)	Water Conservation		Makes nonsubstantive changes to existing law that declares the intent of the Legislature to, among other things, promote urban water conservation standards that are consistent with the California Urban	02/27/2015 - INTRODUCED.

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			Water Conservation Council's adopted best management practices and specified requirements for demand management.	
<u>AB 1139</u> Campos (D)	Personal Income Tax: Credit: Turf Removal		Allows a taxpayer, under the Personal Income Tax Law, a credit for participation in a lawn replacement program.	03/26/2015 - To ASSEMBLY Committee on REVENUE AND TAXATION.;03/26/2015 - From ASSEMBLY Committee on REVENUE AND TAXATION with author's amendments.;03/26/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on REVENUE AND TAXATION.
<u>AB 1144</u> Rendon (D)	Renewables Portfolio Standard Program: Credits		Provides that unbundled renewable energy credits may be used to meet the first category of the portfolio content requirements if the credits are earned by electricity that is generated by an entity that, if it were a person or corporation, would be excluded from the definition of an electrical corporation by operation of the exclusions for a corporation or person employing landfill gas technology or digester gas technology, and the entity has specified first points of interconnection.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1201</u> Salas (D)	Delta: Predation by Nonnative Species	Support	Requires the State Department of Fish and Wildlife to develop and initiate a science-based approach that addresses predation by nonnative species upon species of fish listed pursuant to the State Endangered Species Act that reside all or a portion of their lives in the Sacramento-San Joaquin Delta.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1242</u> Gray (D)	Water Quality: Impacts on Groundwater: Instream Flows		Requires the State Water Resources Control Board to take into consideration any applicable groundwater sustainability plan or alternative in formulating state policy for water quality control and adopting or approving a water quality control plan that affects a groundwater basin. Requires the Board to identify projects for fish recovery that may be undertaken in lieu of instream flows before adopting or approving quality objectives or a program of implementation that requires such flows for beneficial uses.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1243</u> Gray (D)	Groundwater Recharge: Grants		Establishes the Groundwater Recharge Grant Fund. Provides that moneys in the fund are available to the State Water Resources	04/14/2015 - In ASSEMBLY Committee on WATER, PARKS

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			Control Board to provide grants to local governments and water districts for groundwater recharge infrastructure projects.	AND WILDLIFE: Not heard.
<u>AB 1315</u> Alejo (D)	Public Contracts Water Pollution Prevention Plans		Prohibits a public entity, charter city, or charter county from delegating to a contractor the development of a plan used to prevent or reduce water pollution or runoff on a public works contract. Provides exceptions. Prohibits those same entities from requiring a contractor on a public works contract that includes compliance with a plan to assume responsibility for the completeness and accuracy of a plan developed by that entity.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1325</u> Salas (D)	Delta Smelt		Enacts the Delta Smelt Preservation and Restoration Act of 2016. Requires the development of a deltas smelt hatchery program to preserve and restore the delta smelt. Requires entering into mitigation banking agreements with banking partners of the Department of Fish and Wildlife for the purpose of providing take authorizations to those partners and to obtain funding from banking agreements. Appropriates an unspecified amount of money from an unspecified source to implement these provisions.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.;04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Reconsideration granted.
<u>AB 1362</u> Gordon (D)	Local Government Assessments Fees and Charges		Defines stormwater for purposes of the Proposition 218 Omnibus Implementation Act to mean any system of public improvements or service intended to provide for the quality, conservation, control, or conveyance of waters that land on or drain across the natural or man-made landscape.	03/23/2015 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 1390</u> Alejo (D)	Groundwater: Adjudication		Establishes special procedures for an adjudication action to determine the rights to extract groundwater within a basin or store water from a basin. Authorizes the court to determine all rights to groundwater in a basin whether based on appropriation, overlying right, or other basis of right. Requires a complaint filed in an action to name certain defendants, including counties or cities that provide water service and overlie a basin in whole or in part, and to be served and published in a specified manner.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1454</u> Wagner (R)	Water Quality: Trash: Single-Use Carryout Bags		Suspends the operation of certain amendments to water quality control plans relating to the total maximum daily load for trash unless and until specified provisions inoperative due to a pending referendum election become effective. Requires the State Water	04/23/2015 - Re-referred to ASSEMBLY Committee on RULES.

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			Resources Control Board to revisit and revise the water quality control plans to address impaired water quality due to trash if the law pending referendum is defeated.	
<u>AB 1463</u> Gatto (D)	Onsite Recycled Water		Requires the State Water Resources Control Board to establish water quality standards and distribution, monitoring, and reporting requirements for onsite water recycling systems prior to authorizing the use of onsite recycled water in internal plumbing of residential and commercial buildings.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1532</u> Local Government Cmt	Local Government: Omnibus		Amends provisions regarding local governments to include the revision of existing law regarding local agency formation commissions. Revises provisions regarding hospital districts, conflict of interest rules for a commission appointed legal counsel, the annexation of inhabited territory, and the issuance of a certificate of completion or termination regarding the consolidation of cities or districts.	05/22/2015 - In ASSEMBLY. Read third time and amended. To third reading.
<u>AB 1534</u> Ting (D)	Assessment Analyst: Certification		Prohibits an assessor or any person employed by the Office of the County Assessor from making decisions with regard to change in ownership, or with regard to property tax exemptions, except a homeowners' exemption claim, unless he or she is the holder of a valid assessment analyst certificate issued by the State Board of Equalization. Requires prescribed annual training for certification. Provides for advanced certification. Provide failure to complete training would be grounds for revocation.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>SB 7</u> Wolk (D)	Housing: Water Meters: Multi-unit Structures		Encourages the conservation of water in multifamily residential rental buildings through means within the landlord's or the tenant's control, and to ensure that the practices involving the submetering of dwelling units for water service are just and reasonable, and including appropriate safeguards for both tenants and landlords. Authorizes building standards that require the installation of water submeters in multiunit residential buildings. Defines the term submeter for the Water Measurement Law.	05/22/2015 - To ASSEMBLY Committees on HOUSING AND COMMUNITY DEVELOPMENT and WATER, PARKS AND WILDLIFE.
<u>SB 13</u> Pavley (D)	Groundwater		Authorizes the State Water Resource Control Board to designate a basin as a probationary basin and to develop an interim plan. Relates deficiency remedies by a local agency or groundwater sustainability	05/21/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's

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			agency. Relates to the designation of a basin as probationary. Relates to establishing a groundwater sustainability plan. Authorizes a mutual water company to participate in such agency. Provides a water corporation or mutual water company may participate. Extends the deadline for basins to be under a plan.	amendments.;05/21/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
<u>SB 20</u> Pavley (D)	Wells: Reports: Public Availability		Amends an existing law which requires a person who digs, bores, or drills a water well, cathodic protection well, or a monitoring well to file a report of completion with the Department of Water Resources. Requires the Department to make reports available to the public. Requires the Department to redact from the report specified information pertaining to the well owner.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 32</u> Pavley (D)	Global Warning Solutions Act of 2006: Emissions Limit		Requires the State Air Resources Board to approve a specified statewide greenhouse gas emission limit that is equivalent to a specified percentage below the 1990 level to be achieved by 2050. Authorizes the Board to adopt interim emissions level targets to be achieve by specified years. Makes conforming changes.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 47</u> Hill (D)	Environmental Health: Synthetic Turf		Requires the Office of Environmental Health Hazard Assessment, in consultation with the Department of Resources Recycling and Recovery, the State Department of Public Health, and the Department of Toxic Substances Control, to prepare and provide to the Legislature and post on the office's Internet Web site a study analyzing synthetic turf, for potential adverse health impacts. Provides the information to be included in the study. Authorizes grant to crumb rubber businesses to find alternative markets.	04/13/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 113</u> Galgiani (D)	Disaster Preparedness and Flood Prevention Bond Act		Specifies that the Disaster Preparedness and Flood Prevention Bond Act of 2006 funds provided by the act are only available for appropriation until a specified date and at that time the amount of indebtedness authorized by the act is reduced by the amount of funds that have not been appropriated. Removes the restriction that the funds are available for appropriation only until that specified date.	03/24/2015 - In SENATE Committee on NATURAL RESOURCES AND WATER: Not heard.
<u>SB 119</u> Hill (D)	Protection of Subsurface Installations		Relates to excavation. Provides for certain training requirements, fines, and license suspension. Makes changes relating to a regional notification center and subsurface installations. Provides for delineation of areas to be excavated, preservation of certain plans,	05/26/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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			damages, pipeline safety, an exemption for certain residential property owners, occupational safety and health standards for excavators, and the use of moneys collected as a result of the issuance of citations. Creates a complaint authority.	
<u>SB 122</u> Jackson (D)	Environmental Quality Act: Record of Proceedings		Amends the Environmental Quality Act. Relates to a database for the collection, storage, retrieval, and dissemination of environmental documents, notices of exemption, notices of preparation, notices of determination, and notices of completion provided to the office that shall be available online to the public through the internet. Provides for the phase-in of electronic documents. Requires the lead agency to submit to the State Clearinghouse a sufficient number of environmental documents for review.	05/04/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 127</u> Vidak (R)	Water Quality, Supply, and Infrastructure Improvement		Relates to the Water Quality, Supply, and Infrastructure Improvement Act of 2014. Requires the public agency, in certifying the environmental impact report and in granting approvals for projects funded, in whole or in part, by Proposition 1, including the concurrent preparation of the record of proceedings and the certification of the record of proceeding within 5 days of the filing of a specified notice, to comply with specified procedures.	02/05/2015 - To SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
<u>SB 142</u> Jackson (D)	Civil law: Unmanned Aerial Vehicles		Defines knowing entry upon the land of another to include the operation of an unmanned aerial vehicle below the navigable airspace overlaying the real property. Extends liability for wrongful occupation of real property and damages to a person who without permission operates an unmanned aerial vehicle below the navigable airspace overlaying the real property or operation of an unmanned aerial vehicle less than a specified number of feet above ground level with the airspace overlaying the real property.	05/22/2015 - To ASSEMBLY Committees on PRIVACY AND CONSUMER PROTECTION and JUDICIARY.
<u>SB 143</u> Stone (R)	Diamond Valley Reservoir: Recreational Use	Oppose	Amends existing law that prohibits recreational use in which there is bodily contact with water, in a reservoir in which water is stored for domestic use.	02/05/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>SB 173</u> Nielsen (R)	Groundwater: De Minimis Extractors		Amends existing law that generally excepts a de minimis extractor from the requirement that a person who extracts groundwater from a probational basin or extracts groundwater on or after July 1, 2017, in an area within a basin that is not within the management area of a	03/24/2015 - In SENATE Committee on NATURAL RESOURCES AND WATER: Failed passage.;03/24/2015 - In SENATE Committee on

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			groundwater sustainability agency and where the county does not assume responsibility to be the groundwater sustainability agency has to file a report of groundwater extraction. Defines a de minimis extractor.	NATURAL RESOURCES AND WATER: Reconsideration granted.
<u>SB 179</u> Berryhill (R)	Secondhand Goods: Junk Dealers		Makes nonsubstantive changes to existing law that prohibits a junk dealer or recycler from possessing a reasonably recognizable, disassembled, or inoperative fire hydrant or fire department connection, a manhole cover or lid, or a backflow device, that was owned by an agency, without a written certification on the agency's letterhead that the agency either has sold the material described or is offering the material for sale.	02/19/2015 - To SENATE Committee on RULES.
<u>SB 184</u> Hertzberg (D)	Local Government: Omnibus Bill		Clarifies that provisions in existing law relating to the authority of the duties of the auditor apply only to the county auditor. Authorizes marginal notations on recorded records. Repeals keeping an index of separate property of married women. Authorizes general grantor-grantee index in computerized or electronic format. Deletes certain endorsement requirements. Deletes certain name and address posting on records requirement. Updates government contract cost accounting. Relates to local contract bidding.	05/18/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 185</u> De Leon (D)	Public Retirement Systems: Divestiture of Thermal Coal		Prohibits the boards of the Public Employees' Retirement System and the State Teachers' Retirement System from making new investments or renewing existing investments of funds in a thermal coal company. Requires the boards to liquidate investments and to engage with such companies to ascertain if they are transitioning to clean energy generation business models. Requires the boards to make a comprehensive assessment on divesting in natural gas and petroleum investments.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 208</u> Lara (D)	Integrated Regional Water Management Plans: Grants		Requires a regional water management group to provide the state entity administering the regional water management grant with a list of projects to be funded by the grant funds where the project proponent is a nonprofit organization or a disadvantaged community, or the project benefits a disadvantaged community.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 216</u> Pan (D)	Public Employees Retirement System		Amends the Public Employees Retirement System. Repeals the provisions regarding investing in residential realty on the system's	05/14/2015 - To ASSEMBLY Committee on PUBLIC

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			investment portfolio. Changes the frequency of a specified report to eliminate the requirement to report on the investments on a cost basis. Makes other changes to the content of the report. Specifies that the option to purchase service credit shall be elected prior to retirement, that the member be returning to State service.	EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
<u>SB 223</u> Galgiani (D)	Division of Boating and Waterways: Oversight Committee		Requires the Division of Boating and Waterways to establish an advisory and oversight committee to evaluate and monitor the activities of the Division relating to the management and control or eradication of invasive aquatic plants. Provides the expertise of members of the committee. Requires the committee to meet a specified amount of times per year and to communicate any findings or recommendations to the Division.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 226</u> Pavley (D)	Sustainable Groundwater Management Act		Provides for a comprehensive method for determining groundwater rights. Provides that a court shall use the Code of Civil Procedure for determining rights to groundwater. Requires the rights determination process to be available to specified courts. Provides for applicability to Indian tribes and the federal government. Requires the boundaries of a basin to be identified in Bulletin 118. Authorizes certain departments to intervene in specified actions. Provides for expert witness disclosures.	05/26/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 228</u> Cannella (R)	Groundwater Storage: Beneficial Use		Declares that the recharging of a groundwater basin by a local groundwater management agency or a local groundwater sustainability agency for the purposes of repelling saline intrusion and recovering basin groundwater levels constitutes a beneficial use of water if the recharge is consistent with the local agency's groundwater management plan or groundwater sustainability plan.	02/26/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>SB 248</u> Pavley (D)	Oil and Gas		Provides for an inspection protocol and schedule of activities regulated pursuant to provisions concerning drilling, operation, maintenance, and abandonment of oil and gas wells and certain tanks and facilities. Requires information on inspections to be reported. Requires the recording of information in a well history, including fluid injection, chemical composition, and waste disposal injection. Provides conditions for shutdown. Relates to Class II wells regulated under the Safe Drinking Water Act.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 258</u> Bates (R)	Local Government		States the intent of the Legislature to enact legislation that would protect the right of the public to participate in open deliberations of the legislative bodies of local agencies by clarifying the appropriate use of special meetings.	02/26/2015 - To SENATE Committee on RULES.
<u>SB 272</u> Hertzberg (D)	State Public Records Act: Local Agencies: Inventory		Requires each local agency, in implementing the State Public Records Act, to create a catalog of enterprise systems, to make the catalog publicly available upon request in the office of the clerk of the agency's legislative body, and to post the catalog on the local agency's Internet Web site. Requires the catalog to disclose a list of the systems utilized by the agency and, among other things, the current system vendor and product.	05/22/2015 - To ASSEMBLY Committees on JUDICIARY and LOCAL GOVERNMENT.
<u>SB 317</u> De Leon (D)	Safe Neighborhood Parks, Rivers, and Coastal Protection		Enacts the Safe Neighborhood Parks, Rivers, and Coastal Protection Bond Act of 2016, which, if adopted by the voters, would authorize the issuance of bonds in a specified amount pursuant to the State General Obligation Bond Law to finance a safe neighborhood parks, rivers, and coastal protection program.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 350</u> De Leon (D)	Clean Energy and Pollution Reduction Act of 2015		Establishes the quantity of electricity products from eligible renewable energy resources be procured by each retail seller for specified periods. Requires the boards of local publicly owned electric utilities to ensure that specified quantities of such products be procured to achieve a specified percentage by a specified date. Excludes combustion from municipal waste as eligible renewable energy sources. Requires submission of renewable energy procurement plans. Relates to reducing motor vehicle emissions.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 360</u> Cannella (R)	Biomethane		Authorizes the Public Utilities Commission to consider providing the option to all corporations to engage in competitive bidding and direct investment in ratepayer financed biomethane collection equipment.	03/05/2015 - To SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
<u>SB 385</u> Hueso (D)	Primary Drinking Water Standards: Hexavalent Chromium		Authorizes the State Water Resources Control Board to grant a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium by approving the compliance plan. Requires a public water system to provide specified notice regarding the plan to its customers and to send status reports to the Board. Authorizes the Board to direct revisions to the plan and to implement, interpret, or make specific provisions by	05/26/2015 - From SENATE Committee on APPROPRIATIONS: To second reading without further hearing pursuant to Senate Rule 28.8.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			means of criteria, published on its Internet Web site.	
<u>SB 454</u> Allen (D)	Water Quality: Oil and Gas: Exempt Aquifer		Relates to water quality, oil and gas wells and exempt aquifers. Prohibits the Division of Oil, Gas, and Geothermal Resources from submitting a proposal for an aquifer exemption to the United States Environmental Protection Agency unless the division and the State Water Resources Control Board concur in writing that the aquifer meets specified conditions. Relates to the Clean Water Act. Relates to an aquifer that is hydrocarbon bearing. Provides for injection zones separated from beneficial waters.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 471</u> Pavley (D)	Water, Energy, Reduction of Greenhouse Gas		Requires the development of an emissions inventory of greenhouse gas emissions from the water system in the State. Includes reduction of greenhouse gas emissions associated with water treatment among the investments that are eligible for funding from the Greenhouse Gas Reduction Fund.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 485</u> Hernandez (D)	County of Los Angeles: Sanitation Districts		Authorizes specified sanitation districts in the County of Los Angeles, to acquire, construct, operate, maintain, and furnish facilities for the diversion, management, and treatment of stormwater and dry weather runoff, the discharge of the water to the stormwater drainage system, and the beneficial use of the water. Makes legislative findings and declarations as to the necessity of a special statute for the County of Los Angeles.	05/18/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 487</u> Nielsen (R)	Sustainable Groundwater Management Act: Exemptions		Relates to the California Environmental Act (CEQA). Exempts from the requirements of CEQA the formation of a groundwater sustainability agency, the amendment of a groundwater sustainability plan or coordinated groundwater sustainability plan, and the implementation of those plans, except to the extent that the implementation requires the construction or installation of a new facility.	03/12/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>SB 551</u> Wolk (D)	State Water Policy: Water and Energy Efficiency	Seek Amendments	Declares the policy of the state that water use and water treatment shall be as energy efficient as is feasible and energy use and generation shall be as water efficient as is feasible. Requires all relevant state agencies to consider this state policy when revising, or establishing policies, regulations, and grant criteria when pertinent to these uses of water and energy.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 552</u> Wolk (D)	Disadvantaged Communities Drinking Water Standards		Requires the State Water Resources Control to develop a report identifying specific funding and enforcement mechanisms necessary ensure that disadvantaged communities have water systems that are in compliance with state and federal drinking water standards. Requires the report to identify specific legislative and administrative actions necessary to bring disadvantaged communities into compliance with safe drinking water standards.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 553</u> Wolk (D)	Water Conservation		Requires the Department of General Services to identify each public property in the department's state property inventory where it is feasible for water consumption to be reduces and water efficiencies to be achieved through implementation of the relevant recommendations made in the model water efficient landscape ordinance and would require the department to implement the relevant recommendation where feasible.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 554</u> Wolk (D)	Water Commission Disqualifying Financial Interest		Removes a member of the California Water Commission from office if after trial a court finds that the commission member has knowingly participated in any commission decision in which the member has a disqualifying financial interest in the decision.	04/21/2015 - In SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS: Not heard.
<u>SB 555</u> Wolk (D)	Urban Retail Water Suppliers: Water Loss Management		Require each urban retail water supplier to submit a completed and validated water loss audit report for the previous calendar year. Requires the Department of Water Resources of post a reports on its Internet Web site and to develop metrics for reporting year-over-year progress on water loss reduction. Requires rules requiring urban retail water suppliers to meet performance standards for the volume of water losses.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 556</u> De Leon (D)	Victims of Crime: Indemnification: Applications		Relates to indemnification of victims of crime. Defines the time of processing applications. Requires the Victim Compensation and Government Claims Board to post on its Internet Web site its progress and current average time of processing applications, the number of applications approved and denied, and incomplete applications received. Relates to the period of time, including all calendar days, that begins when the board first receives an application and ends when a check is mailed to an eligible victim.	05/26/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 568</u>	Groundwater Management		Relates to the Sustainable Groundwater Management Act.	03/12/2015 - To SENATE Committee

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Fuller (R)			Authorizes the State Water Resources Control Board to designate a basin as a probationary basin if the state board makes a certain determination and authorizes the state board to develop an interim plan for the probationary basin.	on RULES.
<u>SB 615</u> Berryhill (R)	Waste Discharge: Waivers: Managed Wetlands		Relates to waste discharge requirements, waivers and managed wetlands. Requires each regional board to prescribe waste discharge requirements that implement relevant water quality control plans. Provides for waivers. Amends monitoring of wetlands unless results of downstream monitoring demonstrate a violation of water quality discharge standards.	04/29/2015 - In SENATE Committee on ENVIRONMENTAL QUALITY: Not heard.
<u>SB 625</u> Galgiani (D)	Water Management: Synthetic Plastic Microbeads		Prohibits the selling, or offering for promotional purposes a person care product containing synthetic plastic microbeads. Exempts from this prohibition the sale or promotional offer of a product containing a specified amount of such microbeads. Makes a violator liable for a civil penalty for each violation. Authorizes the penalty to be recovered in a civil action brought by the Attorney General. Prohibits any local ordinance, resolution, or rule relating to the sale of such microbeads.	04/22/2015 - Re-referred to SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
<u>SB 687</u> Allen (D)	Renewable Gas Standard		Requires the State Air Resources Board to adopt a carbon-based renewable gas standard that requires all gas sellers to provide specified percentages of renewable gas meeting certain deliverability requirements, to retail end-use customers for use in the state that increases over specified compliance periods, and to issue an analysis of the lifecycle emissions of greenhouse gases and reductions for different biogas types and end uses. Requires a renewable gas assessment.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 704</u> Gaines T (R)	Public Officers and Employees: Conflicts of Interest		Relates to conflicts of interest of public officers and employees. Provides for an updated definition of remote interest when dealing with seeking and awarding public entity contracts.	05/22/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 758</u> Block (D)	Atmospheric Rivers Research and Mitigation Program		Establishes the Atmospheric Rivers Research and Mitigation Program in the State Department of Water Resources to research the causes and effects of such rivers, and to take actions to capture water generated by such rivers to increase the water supply and reliability of water resources in the State and to operate reservoirs in a manner	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			that improves flood protection in the State. Establishes a related fund for funding the program.	
<u>SB 768</u> Wieckowski (D)	Water-Conserving Plumbing Fixtures		Makes technical, nonsubstantive changes to existing law that requires the replacement of plumbing fixtures that are not water conserving in residential and commercial real property built and available for use on or before a specified date.	03/19/2015 - To SENATE Committee on RULES.
<u>SB 772</u> Stone (R)	Bay Delta Conservation Plan: Judicial Review		States the intent of the Legislature to enact legislation establishing judicial review procedures for the Bay Delta Conservation Plan.	03/19/2015 - To SENATE Committee on RULES.
<u>SB 798</u> Pavley (D)	Natural Resources		Provides provisions regarding natural resources to include sport fishing regulations, the automated fishing and hunting license data system, the retrocession of jurisdiction by the United States over land within the State, the conveyance of certain State lands to the United States for a lighthouse, membership of the Range Management Advisory Committee, membership on the Coastal Commission, violations of water use and diversion provisions, temporary water diversion permits, and small irrigation water usage.	05/22/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SJR 1</u> Beall (D)	Social Security: Retirement Benefits: Public Employees		Requests the President and the Congress of the United States to pass legislation repealing the Government Pension Offset and the Windfall Elimination Provisions from the Social Security Act.	04/16/2015 - In SENATE. Read third time. Adopted by SENATE. *****To ASSEMBLY.

EXHIBIT "B"

AMENDED IN ASSEMBLY MAY 18, 2015

AMENDED IN ASSEMBLY APRIL 30, 2015

AMENDED IN ASSEMBLY MARCH 26, 2015

CALIFORNIA LEGISLATURE—2015–16 REGULAR SESSION

ASSEMBLY BILL

No. 1390

Introduced by Assembly Members Alejo, Gomez, and Perea
(Principal coauthors: Assembly Members Bigelow, Gray, Olsen,
and Salas)

(Principal coauthors: Senators Cannella, *Hueso*, and Vidak)
(Coauthors: Assembly Members Cooley, Cooper, Eggman, Frazier,
Gallagher, Ridley-Thomas, and Wilk, and Wood)
(Coauthors: Senators Fuller, Galgiani, and Nielsen)

February 27, 2015

An act to add Chapter 7 (commencing with Section 830) to Title 10 of Part 2 of the Code of Civil Procedure, relating to groundwater.

LEGISLATIVE COUNSEL'S DIGEST

AB 1390, as amended, Alejo. Groundwater: adjudication.

The California Constitution requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable. Under the Sustainable Groundwater Management Act, which applies to all groundwater basins in the state, all basins designated as high- or medium-priority basins by the Department of Water Resources as basins that are subject to critical conditions of overdraft, as specified, are required to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020.

This bill would establish special procedures for an adjudication action, which is defined as an action filed in superior court to determine the

rights to extract groundwater within a basin or store water from a basin, as specified. The bill would authorize the court to determine all rights to groundwater in a basin whether based on appropriation, overlying right, or other basis of right. The bill would require these special procedures to govern all adjudication actions except in specified cases not involving allocation of a basin's groundwater supply.

This bill would require a complaint filed in an adjudication action to name certain defendants, including all counties or cities that provide water service and overlie the basin in whole or in part, and to be served and published in a specified manner. The bill would require the complaint to be accompanied by a draft notice and draft form answer, as specified, and would require the court to hold a preliminary hearing within 180 days of the filing of the complaint to determine if the action should proceed to comprehensively determine groundwater rights in the basin in accordance with the special procedures for adjudication actions. If the court makes that determination, based on a finding that at least one of 4 specified conditions is met, the bill would require the court to issue an order declaring the case an adjudication action and authorizing the service of the landowners of the basin. After the court order authorizing service of the landowners of the basin, the bill would require the plaintiff to file an ex parte application seeking court approval of the draft notice and draft form answer filed with the complaint. If the court approves the draft notice and draft form answer, the bill would require the assessor or assessors of the county or counties in which the basin to be adjudicated lies to include the court-approved notice and form answer with the next property tax bill sent to each landowner in the basin. The bill would require the plaintiff to reimburse the assessor or assessors for the costs of including the court-approved notice and form answer with the property tax bills and, after those materials have been included with the property tax bills, would require the plaintiff to file a declaration under penalty of perjury with the court attesting to the completion of the mailing. By expanding the scope of an existing crime, the bill would impose a state-mandated local program. The bill would deem fulfillment of the service and publication provisions as effective service of process of the complaint and notice on all interested parties of the adjudication action for purposes of establishing in rem jurisdiction and the comprehensive effect of the adjudication action.

This bill would authorize the court to convene an initial case management conference within 60 days of completion of service of the complaint and notice, as described above, after which the court could

divide the adjudication action into phases. The bill would require the court to define the scope of any phase of the adjudication action by written order and would provide that the court's discretion is not limited in ordering as many phases as the court deems appropriate for the expeditious and appropriate resolution of competing claims to the groundwater basin. In a phase of an adjudication action, the bill would require discovery to be strictly limited to the scope of the phase and would authorize the court to issue a written statement of decision at the completion of each phase. In addition, the bill would require each party to make, under penalty of perjury, specified initial disclosures within 60 days after the initial case management conference, except a plaintiff would be required to make the initial disclosures at the time it files the complaint. By expanding the scope of an existing crime, the bill would impose a state-mandated local program. The bill would authorize the court to appoint a special master in an adjudication action, and would provide that the special master's duties could include, among other things, initiating a technical committee to conduct joint factfinding regarding the basin and would require the special master to compile a technical report of the findings, as specified. On or before January 1, 2017, the bill would require the Department of Water Resources to establish and maintain a list of individuals who may serve as special masters in adjudication actions and would prescribe the experience needed for an individual to be placed on the list.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: yes.

The people of the State of California do enact as follows:

- 1 SECTION 1. Chapter 7 (commencing with Section 830) is
- 2 added to Title 10 of Part 2 of the Code of Civil Procedure, to read:

CHAPTER 7. ACTIONS RELATING TO GROUNDWATER RIGHTS

Article 1. General Provisions

830. (a) The Legislature finds and declares all of the following:

(1) Diverse economic, environmental, and social interests are implicated by sustainable groundwater management.

(2) Efficient resolution of conflicts concerning the right to use and manage groundwater will promote beneficial use of the waters of the state consistent with Section 2 of Article X of the California Constitution, the state water policies mandated in Chapter 1 (commencing with Section 100) of Division 1 of the Water Code, and as intended by the Sustainable Groundwater Management Act (Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code).

(3) Previous groundwater adjudication actions have taken more than a decade before issuance of a final judgment by the court in an adjudication action.

(4) In light of the scope and complexities of groundwater adjudication actions, the state's welfare will be promoted by the development of specially tailored legal procedures to efficiently process groundwater adjudication actions.

(b) It is the intent of the Legislature to do all of the following:

(1) Develop procedures to provide a more streamlined and expeditious groundwater adjudication process, while at the same time fully respecting established principles of water rights law and providing participants appropriate due process.

(2) Establish procedures by which courts may conduct comprehensive determinations of all rights to groundwater in a basin.

(3) Encourage early resolution of groundwater rights disputes.

(4) Substantially reduce the time and expense of groundwater adjudications, while ensuring fair procedures to protect all parties' rights to groundwater.

(5) Ensure the judicial process is not used to unnecessarily delay or thwart the goal of managing groundwater in a sustainable manner.

(6) Reduce the burdens placed on the judiciary under the current adjudication process.

1 830.5. For purposes of this chapter, the following definitions
2 apply:

3 (a) “Adjudication action” means an action filed in superior court
4 to determine the rights to extract groundwater within a basin or
5 store water from a basin, including, but not limited to, ~~actions an~~
6 *action* to quiet title respecting rights to extract or store groundwater
7 or an action brought to impose a physical solution on a basin.

8 (b) “Basin” means a groundwater basin or subbasin identified
9 pursuant to Section 839.

10 (c) “Bulletin 118” means the department’s report entitled
11 “California’s Groundwater: Bulletin 118” updated in 2003, as it
12 may be subsequently updated or revised.

13 (d) “Complaint” means a complaint filed in superior court to
14 determine rights to extract groundwater and includes any
15 cross-complaint that initiates an adjudication action in response
16 to a plaintiff’s complaint or other cross-complaint.

17 (e) “Department” means the Department of Water Resources.

18 (f) “Groundwater” means water beneath the surface of the earth
19 within the zone below the water table in which the soil is
20 completely saturated with water, but does not include water that
21 flows in known and definite channels.

22 (g) “Groundwater extraction facility” means a device or method
23 for extracting groundwater from within a basin.

24 (h) “Groundwater recharge” means the augmentation of
25 groundwater, by natural or artificial means.

26 (i) “Person” includes, but is not limited to, counties, local
27 agencies, state agencies, federal agencies, tribes, business entities,
28 and individuals.

29 (j) “Plaintiff” means the person filing the complaint initiating
30 an adjudication action and includes a cross-complainant who
31 initiates an adjudication action by cross-complaint.

32 (k) “Sustainable Groundwater Management Act” means the
33 provisions of Part 2.74 (commencing with Section 10720) of
34 Division 6 of the Water Code.

35 831. (a) This chapter establishes special procedures for an
36 adjudication action. This chapter shall not alter groundwater rights
37 or the law concerning groundwater rights. The other provisions of
38 this code apply to procedures in an adjudication action to the extent
39 they do not conflict with the provisions of this chapter.

1 (b) In an adjudication action subject to this chapter, the court
2 may determine, in the proceedings provided for in this chapter, all
3 rights to groundwater in a basin whether based on appropriation,
4 overlying right, or other basis of right.

5 (c) The court's final judgment in an adjudication action, as to
6 the right to groundwater of each party, may declare the priority,
7 amount, purposes of use, extraction location, and place of use of
8 the water, together with appropriate injunctive relief, subject to
9 terms adopted by the court to implement a physical solution in the
10 adjudication action.

11 (d) The procedures of this chapter shall govern all adjudication
12 actions, unless the court finds either of the following, in which
13 case the action shall proceed in accordance with other provisions
14 of law:

15 (1) The action concerns only claims that the operation of a
16 party's groundwater extraction facility is interfering with the
17 physical availability of groundwater to one or more other parties'
18 groundwater extraction facility or facilities and does not involve
19 an allocation of the basin's groundwater supply.

20 (2) The action concerns only claims to extract, or to prevent
21 interference with extractions of, a specific source of groundwater
22 recharge and does not involve an allocation of the basin's
23 groundwater supply.

24 (e) In implementing this chapter and applying the other
25 provisions of this code in an adjudication action, the court should
26 expedite resolution of the adjudication action and, where a
27 groundwater sustainability plan is required pursuant to the
28 Sustainable Groundwater Management Act, the court should
29 encourage the parties to cooperatively develop a groundwater
30 sustainability plan that may serve as the basis of a stipulated
31 judgment setting forth a physical solution for management of the
32 basin.

33 Article 2. Commencement of Action

34
35
36 832. (a) Unless a court orders otherwise for good cause, the
37 complaint in an adjudication action shall name all of the following
38 persons as defendants:

39 (1) All counties or cities that provide water service and overlie
40 the basin in whole or in part.

1 (2) All general or special districts empowered to manage or
2 replenish groundwater resources of the basin in whole or in part.

3 (3) The operator of a public water system that uses groundwater
4 from the basin to supply water service.

5 (4) The operator of a state small water system that uses
6 groundwater from the basin to supply water service.

7 (b) Within 30 days of the filing of the complaint, all of the
8 following shall occur:

9 (1) The plaintiff shall serve the complaint on all persons named
10 as defendants pursuant to subdivision (a) in the manner prescribed
11 by Article 3 (commencing with Section 415.10) of Chapter 4 of
12 Title 5.

13 (2) The plaintiff shall publish notice of the complaint pursuant
14 to Section 6066 of the Government Code.

15 (3) The plaintiff, or its representative, shall personally appear
16 at a meeting of the board of supervisors of each county overlying
17 the basin at least in part, and announce that the plaintiff has filed
18 the adjudication action and where copies of the complaint may be
19 obtained.

20 (4) The court shall allow any person to intervene in the
21 adjudication action upon an ex parte application that demonstrates
22 that the person holds fee simple ownership in a parcel in the basin.
23 A person filing the ex parte application shall give notice to the
24 plaintiff consistent with the California Rules of Court.

25 832.5. (a) Within 180 days of the filing of a complaint to
26 adjudicate groundwater rights, the court shall conduct a preliminary
27 hearing to determine if the action should proceed to
28 comprehensively determine groundwater rights in the basin in
29 accordance with this chapter. At the preliminary hearing the court
30 may hear expert or lay testimony and the plaintiff shall demonstrate
31 one of the following:

32 (1) There is substantial evidence that declining groundwater
33 levels may cause an undesirable result in the basin.

34 (2) The court cannot provide adequate relief among the potential
35 claimants to a groundwater right in the basin subject to the
36 adjudication action unless the adjudication action is completed.

37 (3) The parties sufficient to comply with Section 847 have
38 agreed to a proposed judgment in the adjudication action.

39 (4) Consistent with Section 2 of Article X of the California
40 Constitution, the interests of groundwater rights holders will be

1 expeditiously and effectively served by the completion of the
2 adjudication action.

3 (b) If, after the preliminary hearing, the court finds that any
4 condition described in paragraphs (1) to (4), inclusive, of
5 subdivision (a) is met, the court shall issue an order declaring that
6 the case is an adjudication action subject to this chapter and
7 authorizing service of landowners in accordance with Section 833.

8 (c) If, after the preliminary hearing, the court finds that no
9 condition described in paragraph (1) to (4), inclusive, of
10 subdivision (a) is met, the court shall either dismiss the adjudication
11 action without prejudice, or find that the action is not subject to
12 this chapter under Section 831 and permit the action to proceed
13 pursuant to the other provisions of this code.

14 (d) Before the preliminary hearing the court may allow expedited
15 discovery consistent with this chapter. The court shall actively
16 manage the expedited discovery to prevent delays in order to
17 enable, to the greatest extent possible and pursuant to Section 833,
18 service of landowners through the next mailing of property tax
19 bills within the basin.

20 833. (a) Together with the filing of the complaint, the plaintiff
21 shall file both of the following:

22 (1) A draft notice titled "NOTICE OF COMMENCEMENT OF
23 GROUNDWATER BASIN ADJUDICATION" in no less than
24 20-point font and the following text printed immediately below
25 the draft notice title in no less than 14-point font:

26 "THIS NOTICE IS IMPORTANT. ANY RIGHTS YOU CLAIM
27 TO PUMP OR STORE GROUNDWATER FROM THE BASIN
28 IDENTIFIED IN THIS NOTICE MAY BE AFFECTED BY A
29 LAWSUIT INITIATED BY THE COMPLAINT SUMMARIZED
30 BELOW.

31 A copy of the complaint may be obtained by contacting the
32 plaintiff or the plaintiff's attorney identified in this notice. If you
33 claim rights to pump or store groundwater within the basin, either
34 now or in the future, you may become a party to this lawsuit by
35 filing an answer to the lawsuit on or before the deadline specified
36 in this notice by completing the attached form answer and filing
37 it with the court indicated in this notice and by sending a copy of
38 the form answer to the plaintiff or the plaintiff's attorney.

39 Failing to participate in this lawsuit could have a significant
40 adverse effect on any right to pump or store groundwater that you

1 may have. You may seek the advice of an attorney in relation to
2 this lawsuit. Such attorney should be consulted promptly. A case
3 management conference in this groundwater basin adjudication
4 proceeding shall occur on the date specified in this notice. If you
5 intend to participate in the groundwater adjudication proceeding
6 to which this notice applies, you are advised to attend the initial
7 case management conference in person or have an attorney
8 represent you at the initial case management conference.

9 Participation requires the production of all information regarding
10 your groundwater use. You must provide this information by the
11 date identified in this notice.

12 A form answer is provided for your convenience. You may fill
13 out the form answer and file it with the court. Should you choose
14 to file the form answer, it will serve as an answer to all complaints
15 and cross-complaints filed in this case.”

16 (2) (A) A draft form answer titled “ANSWER TO
17 ADJUDICATION COMPLAINT” in no less than 20-point font
18 and the following text printed immediately below the draft form
19 answer title in no less than 14-point font:

20 “The undersigned denies all material allegations in the complaint
21 or cross-complaint in this action that seeks to adjudicate rights in
22 the groundwater basin and asserts all applicable affirmative
23 defenses to that complaint.”

24 (B) Notwithstanding any other law, the filing of an answer in
25 the form described in subparagraph (A) in an adjudication action
26 is sufficient to put at issue all material allegations and applicable
27 affirmative defenses to the complaint in the adjudication action.
28 If a party intends to seek adjustment of the basin’s boundaries, it
29 shall disclose that intention in the form answer described in
30 subparagraph (A).

31 (b) The draft notice described in paragraph (1) of subdivision
32 (a) shall include the following information immediately following
33 the text described in paragraph (1) of subdivision (a):

34 (1) The name of the basin that is the subject of the adjudication
35 action.

36 (2) A space to be completed with the case number assigned to
37 the adjudication action, and the name and address of the court and
38 department to which the action is assigned.

1 (3) The name, address, telephone number, and email address of
2 the plaintiff, or plaintiff's attorney, from which the complaint may
3 be obtained.

4 (4) A space to be completed with a date upon which the court
5 will hold a case management conference. The court shall determine
6 the date for the case management conference.

7 (5) The date an answer must be filed with the court.

8 (6) A summary of the causes of action alleged in the complaint
9 and the relief sought. The summary shall not exceed 25 lines.

10 (c) Within 15 days of a court order authorizing service of
11 landowners pursuant to this section, the plaintiff shall file an ex
12 parte application that seeks the court's approval of plaintiff's draft
13 notice and draft form answer filed pursuant to subdivision (a). The
14 plaintiff shall give at least 24 hours' notice of the hearing on the
15 ex parte application to all parties identified in subdivision (a) of
16 Section 832 and any other party the plaintiff has served. The
17 plaintiff's notice of the ex parte application shall include a copy
18 of the draft notice and draft form answer filed pursuant to
19 subdivision (a).

20 (d) Once the court approves the draft notice, the draft notice
21 shall substitute for the summons otherwise provided for in civil
22 actions pursuant to Section 412.20.

23 (e) Following a court order authorizing service of landowners
24 pursuant to this section, the plaintiff shall identify, as expeditiously
25 as possible and using the records of the assessor or assessors of
26 the county or counties in which the basin to be adjudicated lies,
27 the names and addresses of all holders of fee title to real property
28 within the basin. The plaintiff shall provide the court and all parties
29 notice of its acquisition of, or sufficient access to, this information.
30 Upon receipt of the court order authorizing service of landowners
31 pursuant to this section and the plaintiff's draft notice and draft
32 form answer, as approved by an order of the court, the assessor or
33 assessors shall include the court-approved notice and form answer
34 with the next property tax bill sent to each landowner in the basin.
35 The plaintiff shall reimburse the assessor or assessors for the costs
36 of including the court-approved notice and form answer, unless
37 otherwise ordered by the court. The assessor or assessors may
38 appear at any court proceeding concerning the costs associated
39 with including the court-approved notice and form answer with
40 the property tax bills.

1 (f) After the assessor or assessors include the court-approved
2 notice and form answer with the property tax bills pursuant to
3 subdivision (e), the plaintiff shall file with the court a declaration
4 under penalty or perjury attesting to the completion of the mailing.

5 (g) Notwithstanding any other law, the fulfillment of the service
6 provisions of this section, the publication provisions of paragraph
7 (2) of subdivision (b) of Section 832, and the remaining service
8 and notice provisions of this chapter shall be deemed effective
9 service of process of the complaint and notice on all interested
10 parties of the adjudication action for purposes of establishing in
11 rem jurisdiction and the comprehensive effect of the adjudication
12 action.

13 834. Within 15 days of the service of a complaint against or
14 by a local agency in an adjudication action, and upon the motion
15 of any party, the court shall either transfer the adjudication action
16 for all purposes to a neutral county or request the chairperson of
17 the Judicial Council to assign a disinterested judge from a neutral
18 county to hear the adjudication action for all purposes. For purposes
19 of this section, “local agency” has the same definition as that term
20 is defined in subdivision (m) of Section 10721 of the Water Code.

21 835. In an adjudication action there may only be two
22 disqualifications of judges pursuant to Section 170.6,
23 notwithstanding the provisions of Section 170.6 concerning sides
24 in an action. A request or motion to disqualify a judge under
25 Section 170.6 shall be filed within 30 days of completion of service
26 pursuant to Section 833, or within 30 days of a transfer or
27 assignment pursuant to Section 834.

28 836. An adjudication action is presumed to be a complex case
29 within the meaning of Rule 3.400 of the California Rules of Court
30 unless a party demonstrates that the adjudication action is not
31 complex.

32 837. Service of pleadings in an adjudication action, other than
33 the complaint initiating an adjudication action, shall occur
34 electronically to the greatest extent possible. If available, service
35 shall occur through a court-provided electronic service system. If
36 a court-provided electronic service system is unavailable, the
37 parties shall serve documents by email or other equivalent
38 electronic means to the greatest extent possible. To enable
39 electronic service of pleadings, the attorneys of record or parties

1 representing themselves shall include their email address in the
2 captions of pleadings they file in the adjudication action.

3
4 Article 3. Conduct of Action
5

6 838. (a) In managing an adjudication action, the court may,
7 notwithstanding any other law, convene a case management
8 conference within 60 days after service is completed pursuant to
9 Section 833.

10 (b) After the initial case management conference the court may
11 divide the adjudication action into phases. This section shall not
12 limit the court's discretion to order as many phases as the court
13 deems appropriate for the expeditious and appropriate resolution
14 of competing claims to the groundwater basin. The court shall
15 define the scope of any phase of the adjudication action by written
16 order and shall revisit that definition only upon a demonstration
17 that continuing with the phase as previously defined would
18 substantially impede the expeditious resolution of the adjudication
19 action.

20 (c) In a phase of an adjudication action, discovery shall be
21 strictly limited to the scope of the phase, as defined in the court's
22 written order. The court may make any appropriate orders to ensure
23 that discovery during a phase remains within the scope of the phase
24 and, unless an injustice would otherwise result, shall impose
25 monetary sanctions on parties, attorneys, or both parties and
26 attorneys, who, during the phase, propound discovery outside the
27 scope of the phase.

28 (d) Pursuant to Section 632, a court may issue a written
29 statement of decision at the completion of each phase of the
30 adjudication action. If the court issues a written statement of
31 decision, that written statement of decision shall be considered a
32 resolution of the phase and shall be binding for the remainder of
33 the adjudication action unless reversed or modified by an appellate
34 court. Appellate review of a court's written statement of decision
35 that concludes a phase of the adjudication action may be by writ
36 only and a party may only appeal the court's final judgment.

37 (e) A court may facilitate the formation of a class or classes of
38 overlying groundwater rights holders pursuant to the criteria
39 specified in Section 382.

1 839. (a) Subject to subdivision (b), the initial basin boundaries
2 for an adjudication action shall be the basin boundaries identified
3 in Bulletin 118 as of the date the complaint initiating the
4 adjudication action is filed. Based on these boundaries, the court
5 and the parties shall initiate the procedures to serve the complaint
6 in an adjudication action in accordance with Section 833.

7 (b) The court may consider adjusting a basin's boundaries at
8 the initial phase of an adjudication action. The court may refer
9 consideration of adjustment of a basin's boundaries to the
10 department for recommendations in accordance with the procedures
11 described in Section 10722.2 of the Water Code. The court may
12 stay any proceedings in the adjudication action pending the
13 department's resolution of any boundary adjustments, except the
14 court shall not stay the parties' initial disclosures made pursuant
15 to Section 840.

16 (c) If a court, based on department recommendations, adjusts
17 the basin's boundaries after completion of the initial phase of an
18 adjudication action, the basin's boundaries, as determined by the
19 court, shall be the basin's boundaries for all purposes in all
20 subsequent phases of the adjudication action. Appellate review of
21 a court's determination of the basin's boundaries after completion
22 of the initial phase of the adjudication action may be by writ only
23 and shall not be subject to any later writ or appeal.

24 840. (a) Except as otherwise stipulated by the parties or ordered
25 by the court, and without waiting for a discovery request, a party
26 shall provide the court or special master initial disclosures that
27 include all of the following information:

28 (1) The name, address, telephone number, and email address of
29 the party completing the form developed pursuant to subdivision
30 (b).

31 (2) The quantity of any groundwater extraction from the basin
32 by the party, or the party's representative or agent, during each of
33 the 10 calendar years immediately preceding the filing of the
34 complaint.

35 (3) The beneficial purpose of any use of groundwater from the
36 basin or the beneficial use of any alternative water use that the
37 party claims as its use of groundwater.

38 (4) The location of any extraction of groundwater from the basin
39 by the party, or the party's representative or agent.

- 1 (5) The location of any beneficial use of groundwater from the
2 basin or beneficial use of any alternative water use that the party
3 claims as its use of groundwater.
- 4 (6) The quantity of any beneficial use of any alternative water
5 use that the party claims as its use of groundwater under any
6 applicable law, including, but not limited to, Section 1005.1,
7 1005.2, or 1005.4 of the Water Code.
- 8 (7) Identification of all surface water rights and contracts that
9 the party claims provides the basis for its water right claims in the
10 adjudication action.
- 11 (8) The quantity of any replenishment of water to the basin that
12 augmented the basin's native water supply, resulting from the
13 intentional storage of imported or non-native water in the basin,
14 managed recharge of surface water, or return flows resulting from
15 the use of imported water or non-native water on lands overlying
16 the basin by the party, or the party's representative or agent, during
17 each of the 10 calendar years immediately preceding the filing of
18 the complaint.
- 19 (9) The names, addresses, telephone numbers, and email
20 addresses of all persons possessing information that supports the
21 party's disclosures.
- 22 (10) Any other information deemed appropriate by the court
23 for initial disclosure in an adjudication action.
- 24 (b) The Judicial Council shall develop a form for initial
25 disclosures made pursuant to subdivision (a) to facilitate the
26 consistent, independent, impartial, and accessible administration
27 of adjudication actions.
- 28 (c) (1) Unless otherwise stipulated by the parties or ordered by
29 the court, and not including the plaintiff that initiates the
30 adjudication action, a party shall make the initial disclosures
31 described in subdivision (a) within 60 days after the initial case
32 management conference in the adjudication action.
- 33 (2) A plaintiff that initiates the adjudication action shall make
34 the initial disclosures described in subdivision (a) at the time it
35 files the complaint by lodging the required information with the
36 court in an electronic format. The plaintiff shall serve the required
37 information on the defendants or cross-defendants that it names
38 when it serves the complaint.
- 39 (3) The court may order, after the initial case management
40 conference, any supplemental disclosures, other than those

1 described in subdivision (a), that may expedite resolution of the
2 adjudication action.

3 (d) Unless otherwise ordered by the court, a party that is first
4 served, or otherwise joined to the adjudication action, after the
5 initial case management conference shall make the disclosures
6 described in subdivision (a) within 30 days after being served or
7 joined, unless a different time is set by stipulation of the parties
8 or an order of the court. The court shall liberally consider any
9 motions or applications to extend the time for a newly-served or
10 -joined party to make the disclosures described in subdivision (a).

11 (e) A party shall make its initial disclosures based on the
12 information then reasonably available to it. A party is not excused
13 from making its initial disclosures because it has not fully
14 investigated the case, because it challenges the sufficiency of
15 another party's disclosures, or because another party has not made
16 its disclosures.

17 (f) A party that has made its initial disclosures, as described in
18 subdivision (a), or that has responded to another party's discovery
19 request, shall supplement or correct a disclosure or response in
20 either of the following situations:

21 (1) In a timely manner if the party learns that in some material
22 respect the disclosure or response is incomplete or incorrect and
23 the additional or corrective information has not otherwise been
24 made known to the other parties during the disclosure or discovery
25 process.

26 (2) As ordered by the court.

27 (g) To the greatest extent possible, a party shall serve his or her
28 initial disclosures electronically through a court-provided electronic
29 service system, email, or another method of electronic transmission.
30 If it is not possible for the party to serve his or her disclosures
31 electronically, he or she shall serve the disclosures in an electronic
32 format saved on a portable storage media device such as a compact
33 disc or flash drive.

34 (h) A party's obligations under this section may be enforced by
35 a court on its own motion or the motion of a party pursuant to
36 Section 2030.300.

37 (i) A party's disclosures under this section shall be verified
38 under penalty of perjury as being true and correct to the best of
39 the party's knowledge.

1 841. (a) In addition to all other disclosures required by this
2 chapter, a party shall disclose to the other parties the identity of
3 any expert witness it may use at trial to present evidence. For
4 purposes of this chapter, "expert witness" means a witness qualified
5 pursuant to Section 720 of the Evidence Code.

6 (b) Unless otherwise stipulated by the parties or ordered by the
7 court, the disclosure made pursuant to subdivision (a) shall be
8 accompanied by a written report prepared and signed by the expert
9 witness if the witness is retained or specially employed by the
10 party offering the expert witness to testify as an expert in the action,
11 or if the expert witness's duties as the party's employee regularly
12 involves giving expert testimony. The report shall include all of
13 the following:

14 (1) A complete statement of all opinions the witness will express
15 and the basis and reasons for those opinions.

16 (2) The facts or data considered by the witness in forming his
17 or her opinions.

18 (3) Any exhibits the witness will use to summarize or support
19 his or her opinions.

20 (4) The witness's qualifications, including a list of all
21 publications authored by the witness in the previous 10 years.

22 (5) A list of all other cases in which the witness testified as an
23 expert at trial or by deposition in the last five years.

24 (6) A statement of the compensation to be paid for the witness's
25 work and testimony in the adjudication action.

26 (c) If subdivision (b) does not apply to an expert witness because
27 of a stipulation by the parties or an order of the court, the witness's
28 disclosure shall include both of the following:

29 (1) The subject matter on which the witness is expected to
30 present evidence.

31 (2) A summary of the witness's opinions, and the facts or data
32 considered by the witness in forming his or her opinions.

33 (d) Unless otherwise stipulated by the parties, a party shall make
34 the disclosures of any expert witness it intends to present at trial,
35 except for an expert witness presented solely for purposes of
36 impeachment or rebuttal, at the times and in the sequence ordered
37 by the court. If there is no stipulation or court order, the disclosures
38 of an expert witness shall be made as follows:

1 (1) At least 30 days after the court's entry of an order
2 establishing the scope of the relevant phase of the adjudication
3 action.

4 (2) Except for a supplemental expert witness described in
5 paragraph (3), at least 60 days before the date set for trial of the
6 relevant phase of the adjudication action.

7 (3) For a supplemental expert witness who will express an
8 opinion on a subject to be covered by another expert witness
9 designated by an adverse party that was not among the subjects
10 covered by an expert witness initially disclosed by the party
11 offering the supplemental expert witness, no more than 20 days
12 after the initial expert witness disclosure date.

13 (e) The court may modify the disclosure requirements of
14 subdivisions (b) to (d), inclusive, for expert witnesses presented
15 solely for purposes of impeachment or rebuttal. In modifying the
16 disclosure requirements, the court shall adopt disclosure
17 requirements that expedite the court's consideration of the issues
18 presented and shall ensure that expert testimony presented solely
19 for purposes of impeachment or rebuttal is strictly limited to the
20 scope of the testimony that it intends to impeach or rebut.

21 (f) (1) A party whose expert witness has made a disclosure
22 pursuant to this section shall promptly supplement or correct the
23 expert witness's disclosure in either of the following instances:

24 (A) In a timely manner if the party learns that in some material
25 respect the disclosure is incomplete or incorrect, if the additional
26 or corrective information has not otherwise been made known to
27 the other parties during the disclosure or discovery process.

28 (B) As ordered by the court.

29 (2) A party's duty to supplement or correct its expert witness's
30 disclosure includes the information included in the report and the
31 information given during the expert witness's deposition. Unless
32 otherwise stipulated by the parties or ordered by the court, any
33 supplementation or correction shall occur at least 14 days before
34 trial of the applicable phase of the adjudication action.

35 (3) The court may authorize a supplemental deposition of an
36 expert witness based on a supplemental disclosure made pursuant
37 to this subdivision. The court shall appropriately condition the
38 authorization of a supplemental deposition of an expert witness to
39 ensure the expeditious completion of the applicable phase of the
40 adjudication action. The court may require the party whose expert

1 makes the supplemental disclosure to pay some or all of the costs
2 associated with the supplemental deposition.

3 (g) To the greatest extent possible, the parties shall serve expert
4 witness disclosures electronically through a court-provided
5 electronic service system, email, or another method of electronic
6 transmission. If it is not possible for the party to serve his or her
7 expert witness disclosures electronically, he or she shall serve the
8 expert witness disclosures in an electronic format saved on a
9 portable storage media device such as a compact disc or flash
10 drive.

11 (h) If a party or its expert witness fails to comply with this
12 section, the court may exclude the expert witness's testimony from
13 trial, authorize additional depositions of the expert witness at the
14 party's expense, or take other appropriate action upon the noticed
15 motion, or ex parte application, of a party.

16 842. (a) A court in an adjudication action may require the
17 parties to submit written testimony of relevant witnesses in the
18 forms of affidavits or declarations under penalty or perjury in lieu
19 of presenting live testimony. The required written testimony may
20 include, but is not limited to, expert witness opinions and testimony
21 that authenticates documentary evidence. The court may order that
22 the written testimony constitutes the entirety of the witness's direct
23 testimony, require the written testimony to include any exhibits
24 offered in support of the written testimony, and, in the case of
25 written testimony of an expert witness, require a statement of the
26 witness's qualifications.

27 (b) If the court requires the submission of written testimony
28 pursuant to subdivision (a), a complete copy of the direct testimony
29 shall be served at least 21 days before trial of the applicable phase
30 of the adjudication action. A complete copy of any rebuttal
31 testimony shall be served no later than the first day of trial of the
32 applicable phase of the adjudication action. The court shall ensure
33 the rebuttal testimony is strictly limited to the scope of the direct
34 testimony to which it responds.

35 (c) If the contents of the written testimony would have been
36 admissible if the witness testified orally, the written testimony
37 shall be received by the court as a documentary exhibit if, at the
38 trial of the applicable phase of the adjudication action, the witness
39 whose written testimony is being offered is made available for
40 cross-examination by all parties.

1 843. (a) In an adjudication action, the court may appoint a
2 special master whose duties may include the following:

3 (1) Initiating a technical committee consisting of the parties,
4 the parties' designated representatives, or both, to conduct joint
5 factfinding as to the basin's safe yield of groundwater, water
6 demand, and any other technical issues, as directed by the court.
7 The special master shall compile a technical report of the findings
8 in accordance with Section 844.

9 (2) Conducting or facilitating mediation or settlement
10 discussions.

11 (3) Performing other tasks the court may deem appropriate.

12 (b) The special master may be employed by the court as a
13 full-time or part-time employee, or retained as an independent
14 contractor. A special master's compensation and other expenses
15 related to the conduct of an adjudication action shall be fixed by
16 the court, apportioned pro rata to the extent reasonably feasible to
17 do so, and paid by all parties unless the parties agree to another
18 allocation or the court determines that, in the interests of justice,
19 another allocation is necessary. The court may provide for the
20 collection and disbursement of special master fees as it deems
21 appropriate.

22 (c) (1) To assist trial courts in selecting special masters the
23 department shall, on or before January 1, 2017, establish and
24 maintain a list of individuals who may serve as special masters in
25 adjudication actions. To be placed on the list an individual shall
26 have at least 10 years experience as either of the following:

27 (A) A licensed professional engineer, professional hydrologist,
28 or professional geologist.

29 (B) An attorney licensed to practice law in the state.

30 (2) The department shall establish any other qualifications that
31 may be appropriate to ensure that individuals placed on the list are
32 qualified to assist a court in an adjudication action.

33 844. (a) If a technical committee is established pursuant to
34 Section 843, the special master shall provide all parties with a copy
35 of a draft technical report he or she prepares and a notice setting
36 a day at least 60 days after the draft technical report has been
37 provided to all parties before which the parties may submit to the
38 special master written objections to the draft technical report.

39 (b) An objection to the draft technical report shall identify the
40 specific grounds and evidence on which the objection is based.

1 Within 10 days after the close of the period for filing objections,
2 the special master shall provide copies of the objections to all
3 parties.

4 (c) The special master may notice and hold hearings, as he or
5 she deems appropriate, to gather information or address issues
6 raised in the objections to the draft technical report.

7 (d) The special master shall consider the objections to the draft
8 technical report and develop a final certified copy of the technical
9 report that shall be filed with the court, together with a certified
10 copy of all evidence considered by the special master in preparing
11 the draft technical report, all evidence identified in the objections
12 to the draft technical report, and all evidence considered by the
13 special master in preparing the final technical report.

14 845. Chapter 2 (commencing with Section 1115) of Division
15 9 of the Evidence Code shall apply to all mediations, settlement
16 conferences, and other similar out-of-court negotiations in
17 adjudications actions subject to this chapter.

18 846. (a) It is the policy of the state to encourage the
19 compromise and settlement of adjudication actions.

20 (b) Upon the motion of any party to an adjudication action, a
21 court may do any of the following:

22 (1) Stay an adjudication action for a period of up to one year,
23 subject to renewal in the court's discretion upon a showing of good
24 cause, in order to facilitate any of the following:

25 (A) (i) Timely development of a groundwater sustainability
26 plan under the Sustainable Groundwater Management Act that
27 may serve as the basis of a stipulated judgment setting forth a
28 physical solution for management of the basin.

29 (ii) If the court stays an adjudication action for purposes of
30 facilitating timely progress on a groundwater sustainability plan,
31 the court may direct the parties to provide the court with regular
32 updates on the progress in developing the groundwater
33 sustainability plan.

34 (B) Technical studies that may be useful to the parties in
35 developing a stipulated judgment or physical solution.

36 (C) Voluntary mediation on all, or a portion of, the subject
37 matters or legal questions identified in the adjudication action or
38 any phase of the adjudication action.

1 (D) Compromise and settlement of the adjudication action, a
2 phase of the adjudication action, or any subject matter of the
3 adjudication action or a phase of the adjudication action.

4 (2) Schedule mandatory mediation and appointment of a neutral
5 mediator concerning the adjudication action, a phase of the
6 adjudication action, or any subject matter of the adjudication action
7 or a phase of the adjudication action.

8 (3) Schedule phases of trial in combination with mandatory
9 mediation for purposes of fostering compromise concerning the
10 adjudication action, a phase of the adjudication action, or any
11 subject matter of the adjudication action or a phase of the
12 adjudication action.

13 (c) A stay may be extended for up to one year at a time. If a
14 party opposes an extension of a stay, a stay may only be granted
15 after a showing that there is good progress being made on the
16 issues that were identified as the reasons for the stay. The total
17 time period an adjudication action may be stayed shall not exceed
18 3 years.

19 (d) A stay pursuant to this section shall not stay, or otherwise
20 delay, the parties' obligations to provide initial disclosures pursuant
21 to Section 840 unless the court determines the initial disclosures
22 will not benefit resolution of the adjudication action.

23 847. (a) If a party, or a group of parties, submits a proposed
24 stipulated judgment that is supported by (1) more than 50 percent
25 of all named parties in the adjudication action and (2) groundwater
26 rights holders holding title to at least 75 percent of the groundwater
27 production during the past 10 years in the basin, the court shall
28 impose any physical solution that is part of the stipulated judgment
29 as a component of the final judgment in the adjudication action if
30 the physical solution satisfies all of the following criteria:

31 (1) It furthers the interests of the state in ensuring that the water
32 resources of the state are put to beneficial use to the fullest extent
33 that they are capable, as required by Section 2 of Article X of the
34 California Constitution.

35 (2) It is consistent with all water right priorities in the basin.

36 (3) It treats all objecting parties equitably as compared to the
37 stipulating parties.

38 (b) A party objecting to a proposed stipulated judgment shall
39 demonstrate, by a preponderance of the evidence, that the proposed
40 stipulated judgment does not satisfy the criteria described in

1 paragraphs (1) to (3), inclusive, of subdivision (a). If the objecting
2 party is unable to make this showing, the court may impose the
3 proposed stipulated judgment on all parties.

4 SEC. 2. No reimbursement is required by this act pursuant to
5 Section 6 of Article XIII B of the California Constitution because
6 the only costs that may be incurred by a local agency or school
7 district will be incurred because this act creates a new crime or
8 infraction, eliminates a crime or infraction, or changes the penalty
9 for a crime or infraction, within the meaning of Section 17556 of
10 the Government Code, or changes the definition of a crime within
11 the meaning of Section 6 of Article XIII B of the California
12 Constitution.

O

EXHIBIT "C"

AMENDED IN SENATE MAY 5, 2015

AMENDED IN SENATE APRIL 6, 2015

SENATE BILL

No. 226

Introduced by Senator Pavley

February 13, 2015

An act to amend Sections 10721 and ~~10735.8~~, *10735.8 of*, and to add Chapter 12 (commencing with Section 10737) to Part 2.74 of Division 6, ~~of 6 of~~, the Water Code, relating to groundwater.

LEGISLATIVE COUNSEL'S DIGEST

SB 226, as amended, Pavley. Sustainable Groundwater Management Act: groundwater rights.

Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources that are designated as basins subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority basins to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2022, except as specified.

Existing law specifies the jurisdiction of the courts. Under existing law, courts may adjudicate rights to produce groundwater and exercise other powers relating to the supervision of a groundwater basin.

This bill would find and declare that it establishes a timely and comprehensive method for determining rights to groundwater. The bill would provide that a court shall use the Code of Civil Procedure for determining rights to groundwater, except as provided by the special

procedures established in the bill. This bill would require the process for determining rights to groundwater to be available to any court of competent jurisdiction. The bill would provide that it applies to Indian tribes and the federal government. The bill would require the boundaries of a basin to be as identified in Bulletin 118, unless other basin boundaries are established, as specified. The bill would authorize the Department of Water Resources and the Department of Fish and Wildlife to intervene in an action or proceeding if they claim an interest relating to the action or proceeding, as provided. The bill would specify service and notice procedures. The bill would require a party to provide specified initial disclosures to the other parties, including, among other disclosures, information relating to expert witnesses.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Section 10721 of the Water Code is amended to
2 read:

3 10721. Unless the context otherwise requires, the following
4 definitions govern the construction of this part:

5 (a) "Adjudication action" means an action filed in the superior
6 or federal district court to determine the rights to extract
7 groundwater from a basin or store water within a basin, including,
8 but not limited to, actions to quiet title respecting rights to extract
9 or store groundwater or an action brought to impose a physical
10 solution on a basin.

11 (b) "Basin" means a groundwater basin or subbasin identified
12 and defined in Bulletin 118 or as modified pursuant to Chapter 3
13 (commencing with Section 10722).

14 (c) "Bulletin 118" means the department's report entitled
15 "California's Groundwater: Bulletin 118" updated in 2003, as it
16 may be subsequently updated or revised in accordance with Section
17 12924.

18 (d) "Coordination agreement" means a legal agreement adopted
19 between two or more groundwater sustainability agencies that
20 provides the basis for coordinating multiple agencies or
21 groundwater sustainability plans within a basin pursuant to this
22 part.

1 (e) “De minimis extractor” means a person who extracts, for
2 domestic purposes, two acre-feet or less per year.

3 (f) “Expert witness” means a witness qualified pursuant to
4 Section 720 of the Evidence Code.

5 (g) “Governing body” means the legislative body of a
6 groundwater sustainability agency.

7 (h) “Groundwater” means water beneath the surface of the earth
8 within the zone below the water table in which the soil is
9 completely saturated with water, but does not include water that
10 flows in known and definite channels.

11 (i) “Groundwater extraction facility” means a device or method
12 for extracting groundwater from within a basin.

13 (j) “Groundwater recharge” means the augmentation of
14 groundwater, by natural or artificial means.

15 (k) “Groundwater sustainability agency” means one or more
16 local agencies that implement the provisions of this part. For
17 purposes of imposing fees pursuant to Chapter 8 (commencing
18 with Section 10730) or taking action to enforce a groundwater
19 sustainability plan, “groundwater sustainability agency” also means
20 each local agency comprising the groundwater sustainability
21 agency if the plan authorizes separate agency action.

22 (l) “Groundwater sustainability plan” or “plan” means a plan
23 of a groundwater sustainability agency proposed or adopted
24 pursuant to this part.

25 (m) “Groundwater sustainability program” means a coordinated
26 and ongoing activity undertaken to benefit a basin, pursuant to a
27 groundwater sustainability plan.

28 (n) “Local agency” means a local public agency that has water
29 supply, water management, or land use responsibilities within a
30 groundwater basin.

31 (o) “Operator” means a person operating a groundwater
32 extraction facility. The owner of a groundwater extraction facility
33 shall be conclusively presumed to be the operator unless a
34 satisfactory showing is made to the governing body of the
35 groundwater sustainability agency that the groundwater extraction
36 facility actually is operated by some other person.

37 (p) “Owner” means a person owning a groundwater extraction
38 facility or an interest in a groundwater extraction facility other
39 than a lien to secure the payment of a debt or other obligation.

1 (q) “Personal information” has the same meaning as defined in
2 Section 1798.3 of the Civil Code.

3 (r) “Planning and implementation horizon” means a 50-year
4 time period over which a groundwater sustainability agency
5 determines that plans and measures will be implemented in a basin
6 to ensure that the basin is operated within its sustainable yield.

7 (s) “Public water system” has the same meaning as defined in
8 Section 116275 of the Health and Safety Code.

9 (t) “Recharge area” means the area that supplies water to an
10 aquifer in a groundwater basin.

11 (u) “Sustainability goal” means the existence and
12 implementation of one or more groundwater sustainability plans
13 that achieve sustainable groundwater management by identifying
14 and causing the implementation of measures targeted to ensure
15 that the applicable basin is operated within its sustainable yield.

16 (v) “Sustainable groundwater management” means the
17 management and use of groundwater in a manner that can be
18 maintained during the planning and implementation horizon
19 without causing undesirable results.

20 (w) “Sustainable yield” means the maximum quantity of water,
21 calculated over a base period representative of long-term conditions
22 in the basin and including any temporary surplus, that can be
23 withdrawn annually from a groundwater supply without causing
24 an undesirable result.

25 (x) “Undesirable result” means one or more of the following
26 effects caused by groundwater conditions occurring throughout
27 the basin:

28 (1) Chronic lowering of groundwater levels indicating a
29 significant and unreasonable depletion of supply if continued over
30 the planning and implementation horizon. Overdraft during a period
31 of drought is not sufficient to establish a chronic lowering of
32 groundwater levels if extractions and recharge are managed as
33 necessary to ensure that reductions in groundwater levels or storage
34 during a period of drought are offset by increases in groundwater
35 levels or storage during other periods.

36 (2) Significant and unreasonable reduction of groundwater
37 storage.

38 (3) Significant and unreasonable seawater intrusion.

1 (4) Significant and unreasonable degraded water quality,
2 including the migration of contaminant plumes that impair water
3 supplies.

4 (5) Significant and unreasonable land subsidence that
5 substantially interferes with surface land uses.

6 (6) Depletions of interconnected surface water that have
7 significant and unreasonable adverse impacts on beneficial uses
8 of the surface water.

9 (y) “Water budget” means an accounting of the total
10 groundwater and surface water entering and leaving a basin
11 including the changes in the amount of water stored.

12 (z) “Watermaster” means a watermaster appointed by a court
13 or pursuant to other law.

14 (aa) “Water year” means the period from October 1 through the
15 following September 30, inclusive.

16 ~~(bb)~~

17 (ab) “Wellhead protection area” means the surface and
18 subsurface area surrounding a water well or well field that supplies
19 a public water system through which contaminants are reasonably
20 likely to migrate toward the water well or well field.

21 SEC. 2. Section 10735.8 of the Water Code is amended to read:

22 10735.8. (a) The board, after notice and a public hearing, may
23 adopt an interim plan for a probationary basin.

24 (b) The interim plan shall include all of the following:

25 (1) Identification of the actions that are necessary to correct a
26 condition of long-term overdraft or a condition where groundwater
27 extractions result in significant depletions of interconnected surface
28 waters, including recommendations for appropriate action by any
29 person.

30 (2) A time schedule for the actions to be taken.

31 (3) A description of the monitoring to be undertaken to
32 determine effectiveness of the plan.

33 (c) The interim plan may include the following:

34 (1) Restrictions on groundwater extraction.

35 (2) A physical solution.

36 (3) Principles and guidelines for the administration of rights to
37 surface waters that are connected to the basin.

38 (d) Except as provided in subdivision (e), the interim plan shall
39 be consistent with water right priorities, subject to Section 2 of
40 Article X of the California Constitution.

1 (e) The board shall include in its interim plan a groundwater
2 sustainability plan, or any element of a plan, that the board finds
3 complies with the sustainability goal for that portion of the basin
4 or would help meet the sustainability goal for the basin. Where,
5 in the judgment of the board, an adjudication action can be relied
6 on as part of the interim plan, either throughout the basin or in an
7 area within the basin, the board may rely on, or incorporate
8 elements of, that adjudication into the interim plan adopted by the
9 board.

10 (f) In carrying out activities that may affect the probationary
11 basin, state entities shall comply with an interim plan adopted by
12 the board pursuant to this section unless otherwise directed or
13 authorized by statute and the state entity shall indicate to the board
14 in writing the authority for not complying with the interim plan.

15 (g) (1) After the board adopts an interim plan under this section,
16 the board shall determine if a groundwater sustainability plan or
17 an adjudication action is adequate to eliminate the condition of
18 long-term overdraft or condition where groundwater extractions
19 result in significant depletions of interconnected surface waters,
20 upon petition of either of the following:

21 (A) A groundwater sustainability agency that has adopted a
22 groundwater sustainability plan for the probationary basin or a
23 portion thereof.

24 (B) A person authorized to file the petition by a judicial order
25 or decree entered in an adjudication action in the probationary
26 basin.

27 (2) The board shall act on a petition filed pursuant to paragraph
28 (1) within 90 days after the petition is complete. If the board, in
29 consultation with the department, determines that the groundwater
30 sustainability plan or adjudication action is adequate, the board
31 shall rescind the interim plan adopted by the board for the
32 probationary basin, except as provided in paragraphs (3) and (4).

33 (3) Upon request of the petitioner, the board may amend an
34 interim plan adopted under this section to eliminate portions of
35 the interim plan, while allowing other portions of the interim plan
36 to continue in effect.

37 (4) The board may decline to rescind an interim plan adopted
38 pursuant to this section if the board determines that the petitioner
39 has not provided adequate assurances that the groundwater
40 sustainability plan or judicial order or decree will be implemented.

1 (5) This subdivision is not a limitation on the authority of the
2 board to stay its proceedings under this section or to rescind or
3 amend an interim plan adopted pursuant to this section based on
4 the progress made by a groundwater sustainability agency or in
5 an adjudication action pursuant to Chapter 12 (commencing with
6 Section 10737), even if the board cannot make a determination of
7 adequacy in accordance with paragraph (1).

8 (h) Before January 1, 2025, the state board shall not establish
9 an interim plan under this section to remedy a condition where the
10 groundwater extractions result in significant depletions of
11 interconnected surface waters.

12 (i) The board's authority to adopt an interim plan under this
13 section does not alter the law establishing water rights priorities
14 or any other authority of the board.

15 SEC. 3. Chapter 12 (commencing with Section 10737) is added
16 to Part 2.74 of Division 6 of the Water Code, to read:

17
18 CHAPTER 12. DETERMINATION OF RIGHTS TO GROUNDWATER

19
20 Article 1. General Provisions

21
22 10737. (a) The Legislature finds and declares that this chapter
23 establishes a timely and comprehensive method for determining
24 rights to groundwater in furtherance of the objectives of this part.

25 (b) This chapter establishes special procedures for court use in
26 determining rights to groundwater. Unless otherwise provided in
27 this chapter, a court shall determine rights to groundwater using
28 the procedures codified in the Code of Civil Procedure.

29 (c) *Nothing contained in this chapter shall be deemed to repeal*
30 *or preclude an action to determine rights to groundwater in*
31 *accordance with the common law.*

32 10737.2. In making its determination of rights to groundwater,
33 a court shall avoid an undesirable—~~results~~ *result* as defined in
34 Section 10721.

35
36 Article 2. Application

37
38 10738. The process defined in this chapter shall be available
39 to any court of competent jurisdiction.

1 10738.2. (a) Consistent with subdivision (b) of Section
2 10720.3, this chapter applies to an Indian tribe and to the federal
3 government, to the extent authorized under federal law.

4 (b) Section 389 of the Code of Civil Procedure shall not apply
5 to any failure to join an Indian tribe or the United States to an
6 action or proceeding brought under this chapter.

7 10738.4. An action requesting a court to determine water rights
8 under this chapter shall be deemed provisionally complex within
9 the meaning provided in Rule 3.400 of Title 3 of the California
10 Rules of Court.

11 12 Article 3. Basin Boundaries

13
14 10739. Unless other basin boundaries are established pursuant
15 to Section 10722.2 or subdivision (b) of Section 12924, the
16 boundaries of a basin shall be as identified in Bulletin 118.

17 18 Article 4. Parties

19
20 10740. Upon timely motion, the court shall permit the
21 department or the Department of Fish and Wildlife, or both, to
22 intervene in an action or proceeding brought under this chapter if
23 the movant claims an interest relating to the action or proceeding
24 and is so situated that disposing of the action or proceeding may,
25 as a practical matter, impair or impede the movant's ability to
26 protect its interest.

27 28 Article 5. Service and Notice

29
30 10741. (a) All known defendants shall be served in the manner
31 provided in Chapter 4 (commencing with Section 413.10) of Title
32 5 of Part 2 of the Code of Civil Procedure.

33 (b) (1) All unknown defendants shall be served by publication
34 as provided in Section 415.50 of the Code of Civil Procedure.

35 (2) In addition to other requirements of Section 415.50 of the
36 Code of Civil Procedure, the publication shall describe the
37 groundwater basin that is the subject of the action. The publication
38 shall describe the groundwater basin as identified pursuant to
39 Section 10739, the Internet address for a map depicting the basin,

1 and any other identifying information that the court deems
2 appropriate.

3
4 Article 6. Discovery

5
6 10742. (a) Except as otherwise stipulated or ordered by the
7 court, a party shall, without awaiting a discovery request, provide
8 to the other parties all of the following:

9 (1) The name and, if known, the address and telephone number
10 of each individual likely to have discoverable information, along
11 with the subjects of that information, who the disclosing party may
12 use to support its claims or defenses, unless the use would be solely
13 for impeachment.

14 (2) A copy or a description by category and location, of all
15 documents, electronically stored information, and tangible things
16 that the disclosing party has in its possession, custody, or control
17 that it may use to support its claims or defenses, unless the use
18 would be solely for impeachment.

19 (3) A quantification of claims to water in the basin by the
20 disclosing party. The disclosing party shall also make available
21 for inspection and copying any documents or other evidentiary
22 material, unless privileged or protected from disclosure, on which
23 each claim is based, including materials bearing on the nature and
24 extent of those claims.

25 (b) A party shall make all disclosures required by this article at
26 or within 14 days after the parties' initial case management
27 conference unless a different time is set by stipulation or court
28 order, or unless a party objects during the conference that initial
29 disclosures are not appropriate in this action and states the objection
30 in a proposed discovery plan. In ruling on the objection, the court
31 shall determine what disclosures, if any, are to be made and shall
32 set the time for disclosure.

33 (c) A party that is first served or otherwise joined after the initial
34 case management conference shall make its initial disclosures
35 within 30 days after being served or joined, unless a different time
36 is set by stipulation or court order.

37 (d) A party shall make its initial disclosures based on the
38 information then reasonably available to it. A party is not excused
39 from making its disclosures because it has not fully investigated

1 the case or because it challenges the sufficiency of another party's
2 disclosures or because another party has not made its disclosures.

3
4 Article 7. Expert Witnesses
5

6 10743. (a) In addition to the other disclosures required by this
7 chapter, a party shall disclose to the other parties the identity of
8 any expert witness it may use at trial to present evidence.

9 (b) Unless otherwise stipulated or ordered by the court, this
10 disclosure shall be accompanied by a written report, prepared and
11 signed by the expert witness, if the expert witness is retained or
12 specially employed to provide expert testimony in the case or
13 whose duties as the party's employee regularly involve giving
14 expert testimony. The report shall contain all of the following:

15 (1) A complete statement of all opinions the expert witness will
16 express and the basis and reasons for them.

17 (2) The facts or data considered by the expert witness in forming
18 his or her opinions.

19 (3) Any exhibits that will be used to summarize or support the
20 opinions of the expert witness.

21 (4) The expert witness' qualifications, including a list of all
22 publications authored in the previous 10 years.

23 (5) A list of all other cases in which, during the previous four
24 years, the expert witness testified as an expert at trial or by
25 deposition.

26 (6) A statement of the compensation to be paid to the expert
27 witness for the study and testimony in the case.

28 (c) Unless otherwise stipulated or ordered by the court, if the
29 expert witness is not required to provide a written report, the
30 disclosure shall state both of the following:

31 (1) The subject matter on which the expert witness is expected
32 to present evidence.

33 (2) A summary of the facts and opinions to which the expert
34 witness is expected to testify.

35 (d) A party shall make the required disclosures at the times and
36 in the sequence that the court orders. Absent a stipulation or a court
37 order, the disclosures shall be made at either of the following times:

38 (1) At least 90 days before the date set for trial or for the case
39 to be ready for trial.

- 1 (2) If the evidence is intended solely to contradict or rebut
- 2 evidence on the same subject matter identified by another party,
- 3 within 30 days after the other party's disclosure.

O



Short-Lived Climate Pollutant Reduction Strategy

CONCEPT PAPER

California Environmental Protection Agency
 **Air Resources Board**

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Preface

California must achieve deep reductions in short-lived climate pollutant (SLCP) emissions by 2030 to meet future greenhouse gas emission targets and air quality goals. In addition, intensified, global action to reduce these emissions is the only way to immediately slow global warming and is necessary to keep warming below 2°C through at least 2050, which is a critical threshold to manage the damaging effects of climate change. Short-lived climate pollutants, which include methane, fluorinated gases (F-gases), black carbon, and tropospheric ozone, are among the most harmful to both human health and global climate.

Significant reductions in SLCP emissions can be achieved globally using cost-effective technologies and strategies, some of which have already been demonstrated effectively in California. Over the past several decades, the State's efforts in controlling harmful emissions have prevented thousands of premature deaths in California, saved the State many tens of billions of dollars in energy and health costs, and have occurred alongside strong economic growth throughout our diverse economy. Applying California's experiences to reduce SLCPs globally would help prevent millions of premature deaths; boost agricultural productivity; limit disruption of historic rainfall patterns; slow the melting of glaciers, snowpack, and sea ice; reduce sea level rise; and provide trillions of dollars in economic benefit each year.

California has taken significant steps in reducing SLCP emissions, especially black carbon from transportation, methane from oil and gas operations and landfill emissions, and F-gas emissions from refrigerants, insulating foams, and aerosol propellants. Still, more remains to be done to reduce emissions from these and other sources in the State, including methane from waste management and dairies, black carbon from fossil-fuel combustion and biomass burning, and F-gas emissions from refrigeration and air conditioning systems. The State is committed to further reducing SLCP emissions.

The Legislature recognized the critical role that SLCPs must play in the State's climate efforts with the passage of Senate Bill 605 (Lara, Chapter 523, Statutes of 2014), which requires the Air Resources Board (ARB) to develop a strategy by the end of 2015 to further reduce SLCP emissions. In his 2015 Inaugural Address, Governor Brown reinforced this commitment and called on California to show the world the path to limiting global warming below 2°C through 2050, while highlighting the role that action to cut SLCPs must play in this effort. In April, the Governor set a target for reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030, which the actions identified in the Strategy will support.

This Concept Paper presents initial ideas that will be considered and evaluated in the coming months by ARB, in coordination with other agencies, as it develops a SLCP Strategy pursuant to SB 605. The Concept Paper will be discussed at a May 27, 2015, public workshop. Comments received on the Concept Paper will inform the development of a draft Strategy that ARB expects to release later this summer for public review. ARB welcomes broad participation among stakeholders, experts and interested

parties throughout this process, which will be important to the development of an effective Strategy. The workshop notice, along with any other additional material related to the development of the Strategy, will be posted on ARB's SLCP website at: <http://www.arb.ca.gov/cc/shortlived/shortlived.htm>.

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Significant Benefits from Accelerated Action on Short-Lived Climate Pollution

Short-lived climate pollutants (SLCPs) include methane (CH₄), tropospheric ozone (O₃), black carbon (soot), and fluorinated gases (F-gases, including hydrofluorocarbons, or HFCs). They are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants, including carbon dioxide (CO₂), which is the primary pollutant regulated under AB 32. Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂. SLCPs may be responsible for about 40 percent or more of global warming experienced to date.^{1,2,3,4}

Cutting emissions of these pollutants is the *only* way to immediately slow global warming and reduce the impacts of climate change. While CO₂ is the most abundant well-mixed greenhouse gas (GHG) and primarily responsible for global warming, it has an average lifetime of 100 years or more, and CO₂ emissions today will continue to warm the planet for decades to come. On the other hand, about 90 percent of the decrease in the global mean temperature that would accrue from cutting emissions of SLCPs would occur within about a decade.⁵ Ultimately, immediate and significant cuts in emissions of both short-lived and long-lived climate pollutants, especially CO₂, are needed to keep average warming below 2°C this century.

Cutting emissions of SLCPs can also often be accomplished quickly and effectively, by putting emission control devices on existing equipment and infrastructure. Therefore, it is within our grasp to significantly cut emissions of SLCPs from worldwide sources by 2030.

While some sources will remain difficult to control over the next 15 years – especially natural sources – existing strategies can cost-effectively reduce global methane emissions an estimated 40 percent and black carbon an estimated 80 percent below reference levels in 2030.⁶ Additionally, a new global phase-down of HFCs under the Montreal Protocol and other efforts could cut the expected use of F-gases by more than 50 percent in 2030.^{7,8}

Achieving these levels of global reductions would deliver significant climate benefits. It would cut the expected rate of global warming in half by 2050, or by about 0.6°C,^{9,10} which is about four times more than the reductions in warming that may come by 2050 from action on CO₂ alone.¹¹ It would also increase the probability of staying below the 2°C threshold to more than 90 percent through 2050.^{12,13}

The benefits could be even greater in the Arctic, which is especially vulnerable to black carbon emissions and is warming twice as fast as the rest of the world.¹⁴ The current rate of warming there could be slowed by two-thirds by 2040, or 0.7°C, due to these levels of emission reductions.¹⁵ This could be critically important for stabilizing climate change and its impacts, as the Arctic is an important driver of sea level rise and weather patterns throughout the Northern Hemisphere, with changes there potentially affecting drought in California and extreme snow and cold in the upper Midwest and New England, although such links have not been definitively proven.^{16,17} Accelerated

warming in the Arctic could also lead to irreversible climate “tipping points,” such as release of vast quantities of CO₂ and methane from melting permafrost.¹⁸

Global mean sea level will continue to rise during the twenty-first century, and the rate of sea level rise will exceed that observed during 1971 to 2010 due to increased ocean warming and increased loss of mass from glaciers and ice sheets. Sea level rise is an important impact of climate change on California due to the long coastline and large population that lives near coastal waters. A recent study shows that SLCP mitigation can have significant benefits for limiting sea level rise. It can slow down the rate of sea level rise by roughly 25-50 percent this century.¹⁹

Black carbon is a component of fine particulate matter (PM_{2.5}) resulting from combustion sources such as biomass burning and diesel emissions; diesel emissions are also carcinogenic. Recent studies suggest that deploying existing, cost-effective technologies to reduce SLCP emissions can also cut global emissions of PM_{2.5} by 50 percent, oxides of nitrogen (NO_x) emissions by 35 percent, and carbon monoxide (CO) emissions by 60 percent.²⁰ If these measures were fully in place by 2030, an estimated 2.4 million premature deaths and 53 million metric tons of crop losses could be avoided globally, per year. The economic value of these climate, crop, and health benefits is estimated to be about \$5.9 trillion annually.²¹

In addition to its climate and health impacts, black carbon (as a component of PM) disrupts cloud formation, precipitation patterns, water storage in snowpack and glaciers, and agricultural productivity.²² In California, State and international action to reduce emissions of SLCPs can improve air quality and reduce related health risks, hospitalizations and medical expenses, especially in disadvantaged communities. Other benefits to California include reducing damage to forests and crops, reducing background ozone and particulate levels to help meet federal air quality standards, and reducing disruption of historic rainfall patterns. California is working with a set of national and subnational partners throughout the world to fight air pollution and climate change, which will help deliver these benefits to our State while providing significant benefits where emission reductions occur.

Strengthening California Climate Leadership

Prompt global action to reduce emissions of SLCPs offers tremendous global climate, economic, food security, and health benefits, and will help us achieve our international goal of stabilizing global warming at or below 2°C this century. Modeling results suggest that delaying global efforts to cut methane emissions until 2030 or black carbon emissions until 2040 would lead to crossing the 2°C threshold by 2050.^{23,24}

California is already a leader on reducing emissions of SLCPs:

- *Black carbon:* California has cut anthropogenic sources of black carbon emissions by more than 90 percent since the 1960s, and will cut them in half again by 2020. These efforts prevent an estimated 5,000 premature deaths in the State each year, and deliver important climate benefits. If the world

replicated this success, it would slow global warming by an estimated 15 percent,²⁵ essentially offsetting one to two decades' worth of CO₂ emissions.²⁶

- *Methane*: California has the nation's strongest standards for limiting methane emissions from landfills, has existing or proposed offset protocols under our Cap-and-Trade program to reduce methane emissions from dairies, coal mines, and rice cultivation, and has rules under development and being implemented that should create a comprehensive approach to limit methane leaks from the oil and gas sectors.
- *F-gases*: California is the only subnational jurisdiction in the world with an inventory for F-gas emissions, a Cap-and-Trade offset protocol incentivizing the capture and destruction of ozone depleting substances (which are also F-gases), and regulations in place that will cut emissions of F-gases by 25 percent below projected levels in 2020.

Still, more remains to be done. California is home to some of the highest levels of air pollution in the country, and although the State has substantially reduced particulate matter and black carbon emissions from on-road transportation, vehicles still pollute the air in our communities and harm the lungs of some of our most vulnerable populations. Methane is responsible for about 25 percent of current global warming, and its emissions continue to increase in California and globally. F-gases, specifically HFCs, are the fastest growing source of GHG emissions in California and globally. California is committed to expanding upon its leading climate and air quality policies with a targeted effort to significantly cut emissions of SLCPs.

The Legislature and Governor Brown further solidified the State's commitment to addressing short-lived climate pollution by passing and signing Senate Bill 605 (Lara, Chapter 523, Statutes of 2014). Accordingly, ARB will develop a plan in 2015, in coordination with other state and local agencies, to integrate planning, ongoing efforts, and identify new measures to help overcome obstacles and significantly cut SLCP emissions through 2030.

Many of the benefits of cutting SLCP emissions in California will accrue in the most disadvantaged parts of the State, where pollution levels and their health impacts are often highest, and where further economic development may be most needed. For example:

- Further cutting black carbon emissions from the transportation sector and building a sustainable freight system would have health and economic benefits for communities in Southern California and the Inland Empire along freight corridors and near ports and railyards where diesel particulate matter concentrations are high;
- Investments to cut methane and black carbon emissions as part of an integrated strategy to reduce emissions from agriculture and waste and support healthy soils and a resilient and competitive agricultural sector, can support jobs and economic growth, and improved public health throughout the Central Valley;

- Improving management and health of forests and rural landscapes to mitigate black carbon emissions from wildfires and biomass burning can help bring investment, economic, and climate resiliency benefits throughout the Sierra and other rural parts of California; and
- Switching to low-global warming potential (GWP) refrigerants in air conditioning systems can also improve their energy efficiency, which can help to cut transportation fuel consumption and electricity bills throughout the State, especially in the hottest climate zones, including the Central Valley and San Bernardino, Imperial, Inyo, and Riverside counties.

By highlighting the critical role that SLCPs play in addressing climate change, the significant benefits associated with strong action to reduce them, and committing to strong action to reduce emissions of both SLCPs and CO₂ in 2020, 2030, and beyond, California can strengthen its climate leadership and accelerate global progress to limit global warming and the impacts of climate change.

Foster International Action to Significantly Reduce SLCP Emissions and Impacts

California is already fostering broad action to reduce SLCP emissions. California is actively engaged with national and subnational governments in China, India, Mexico, U.S. states, Canadian provinces, and elsewhere in efforts to reduce GHG emissions and air pollution. Many of these efforts will help reduce emissions of black carbon from the transportation sector and emissions of other SLCPs, including activities with Mexico pursuant to a Memorandum of Understanding signed in 2014. Additionally, last September at the United Nations (UN) Climate Summit, ARB became the first state-level entity to sign onto action statements of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants. At the UN climate negotiations in Lima, California co-sponsored an event with Mexico on SLCPs and their role in an international framework to contribute to national commitments to reduce emissions. We continue to be committed to acting both bilaterally and multilaterally to cooperate with other jurisdictions to cut SLCP emissions.

Building on leadership around SLCPs can provide an important example for action in other countries and jurisdictions, and is one of the most significant opportunities to accelerate international progress to fight climate change. California is in a unique position to serve as a model for action for other countries and jurisdictions to accelerate their progress to reduce emissions of both SLCPs and CO₂, based on our demonstrated leadership on air quality and climate change, commitments to set stringent, science-based targets to reduce emissions of both CO₂ and SLCPs, and integrated planning efforts like this one to develop comprehensive policy frameworks to achieve those goals. As we have done for decades already, California's actions on SLCPs can demonstrate win-win opportunities for both the most developed countries, where reducing SLCP emissions is an important element of broad efforts to cut GHG emissions, as well as for the least developed countries, where SLCP reductions have tremendous benefits for air quality and human health.

“At national and sub-national scales many of the identified [SLCP] measures could be implemented under existing policies designed to address air quality and development concerns. Improved cooperation within and between regions would enhance widespread implementation and address transboundary climate and air quality issues.”
– UNEP (2011) *Integrated Assessment of Black Carbon and Tropospheric Ozone*

In developing the Strategy, California will look to build on its international leadership position on climate change and air quality. The Strategy will identify and prioritize opportunities to expand action on SLCPs beyond our borders, and look to learn from others who are implementing programs new to us, including landfill diversion and anaerobic digestion. The State will also explore additional opportunities to further reduce air pollution, greenhouse gas, and SLCP emissions through its existing partnerships, perhaps including collaborative pilot programs or other efforts to collectively reduce emissions.

Ultimately, each state, region, or country has its own mix of SLCP sources, needs, and opportunities to reduce emissions. While we are developing a Strategy to address our own, we will also look to highlight the critical role that this type of planning and goal setting plays in helping to successfully reduce emissions and maximize local and global benefits. We will share this planning effort with others, and encourage them to adopt specific SLCP reduction targets and plans to achieve them. A few already have – President Obama has set specific targets to cut methane emissions from the oil and gas sector, Mexico has included targets to cut black carbon emissions in its Intended Nationally Determined Contribution to the United Nations Framework Convention on Climate Change, and Norway has developed an SLCP action plan of its own.²⁷ But these types of commitments and planning efforts need to be adopted much more broadly, and by developing a comprehensive plan to achieve necessary SLCP reductions in an effective and beneficial way, California will continue to foster broader action beyond its borders, and demonstrate effective processes and strategies to address climate change.

Process for Developing a Short-Lived Climate Pollutant Strategy

The 2014 Scoping Plan Update identified SLCPs as an important aspect of a comprehensive approach to addressing climate change. It committed ARB to develop a short-lived climate pollutant strategy in 2015 as part of a broad effort to reduce emissions of all GHGs from all sources – including CO₂ from energy-related activities, as well as emissions from natural and working lands, and N₂O.

Senate Bill 605 reaffirmed and codified that commitment. The bill requires ARB to “develop a comprehensive strategy to reduce emissions of SLCPs in the state” by January 1, 2016, and in developing the strategy to:

- Complete an inventory of sources and emissions of SLCPs in the State based on available data;
- Identify research needs to address any data gaps;

- Identify existing and potential new control measures to reduce emissions;
- Prioritize the development of new measures for SLCPs that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities, as identified pursuant to Section 39711;
- Coordinate with other state agencies and districts to develop and implement measures identified as part of the comprehensive strategy;
- Consult with experts in academia, industry, and the community on SLCPs. The topics shall include, but not be limited to, all of the following:
 - Assessment of the current status of controls that directly or indirectly reduce emissions of SLCPs in the State.
 - Identification of opportunities and challenges for controlling emissions.
 - Recommendations to further reduce emissions.
- Hold at least one public workshop during the development of the strategy.

Pursuant to these requirements, ARB will develop a Short-Lived Climate Pollutant Strategy (Strategy), in coordination with other state agencies and local air districts, which will be presented to the Board in the fall of 2015. An estimated timeline for development of the Strategy and public engagement is provided in Table 1. Public engagement will include public workshops and Board meetings, as well as input and review by climate science, industry experts, and other interested stakeholders.

Table 1: Estimated Timeline and Process for Developing a Short-Lived Climate Pollutant Strategy.

May	Release SLCP Concept Paper / Public workshop
Summer	Release initial draft of Strategy / Public workshop
Fall	Release draft proposed Strategy
Fall	Present draft proposed Strategy to Board
Spring 2016	Present final Strategy to Board for approval

This Concept Paper describes initial ideas that will be explored over the next several months as the Strategy is developed. The concepts included in this discussion draft do not represent commitments at this time, nor do they comprise an exhaustive list of elements or considerations that may be included in the Strategy or shape its development.

Indeed, the intention of this paper – and the public process that follows – is to elicit new ideas and refine strategies to reduce emissions of SLCPs throughout the State. ARB welcomes broad participation among stakeholders, experts, and interested parties throughout this process.

Strategy Scope

The Strategy will explore opportunities to reduce emissions from all major sources of methane, black carbon, and F-gases. Regarding F-gases, the Strategy will primarily focus on reducing emission of HFCs, but may explore opportunities and research needs to reduce emissions of some other F-gases. Tropospheric ozone will not be considered independently, as it is not directly emitted.

The Strategy will aim to identify and develop systems-level solutions that move beyond individual projects and enable deep, sector-wide emission reductions. For example, developing a comprehensive approach for utilizing organic waste from a number of sources for energy, soil amendment, or other purposes will require coordinating a broad array of tools – including regulatory measures, incentives, and public investment – that work across sectors to address various economic, institutional, or technological issues.

For some sectors, further research efforts are critical to understanding costs and benefits associated with reducing SLCP emissions. The Strategy will identify ongoing research and additional research needs to further advance the science regarding inventory methods and reduction measures, determine expected reductions from mitigation strategies, and account for the climate impacts of SLCPs in California.

In accounting for the climate impacts of SLCP emissions, ARB will evaluate inventories based on 20-year and 100-year GWP values (see Table 2). Global warming potentials account for the lifetime of different greenhouse gases in the atmosphere, and the amount of energy they absorb on a per-kilogram basis, relative to CO₂, to represent the relative climate forcing of a kilogram of emissions when averaged over a time period of interest (for example, 20 years or 100 years). Current practice in most of the world for developing GHG emission inventories, including California's inventory, is to use 100-year GWP values from the 4th Assessment Report of the Intergovernmental Panel on Climate Change, which was released in 2007. The 4th Assessment did not include GWP values for black carbon, however, so values from the 2013 5th Assessment Report are used here.

The latest scientific consensus, as reflected by GWPs included in the 5th Assessment Report, suggests that methane emissions have an even greater impact on climate change than previously understood. While developing the Strategy, including in consultations with experts and stakeholders, ARB will consider the best methods to account for the costs and benefits associated with proposed measures to reduce emissions of SLCPs.

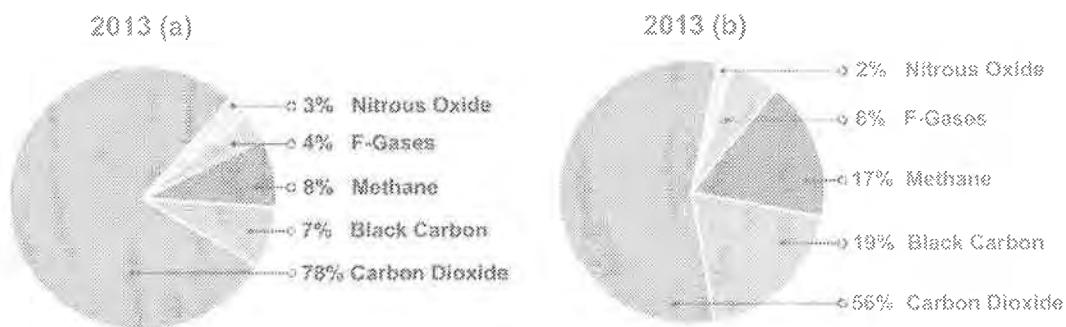
Table 2: Global Warming Potential for SLCPs to be used in the Strategy

Pollutant	Lifetime (years)	GWP time horizon	
		20 years	100 years
Carbon dioxide	100	1	1
Methane	12	72	25
F-Gases (Hydrofluorocarbons)*	1.4 – 52	437 – 6350	124 – 4470
Black carbon	Days to weeks	3,200	900

* Does not include two long-lived HFCs with negligible emissions.

Figure 1 presents California's greenhouse gas inventory, using 100-year and 20-year GWPs. The impact of SLCPs on global warming more than doubles, to just over 40 percent of California's inventory, when GWPs are computed over 20 years, rather than 100 years.

Figure 1: California's 2013 Greenhouse Gas Inventory Using (a) 100-year and (b) 20-Year Global Warming Potential Values



In addition to minimizing climate risks, immediate action to reduce emissions of SLCPs can deliver a broad array of benefits throughout California. A wide range of benefits will be accounted for when considering potential measures related to short-lived climate pollution, and as called for in Senate Bill 605, the Strategy will identify and prioritize measures that complement and accelerate progress to meet other economic, health, social equity, and environmental objectives.

The Strategy fits within a wide range of ongoing planning efforts throughout the State to advance economic and environmental priorities. Integrated planning to achieve multiple objectives requires coordination among planning agencies and across sectors, systems, and government jurisdictions. Development of the Strategy will be closely coordinated with other relevant planning efforts. For example, new SLCP emission reduction concepts for California's freight system will align with strategies identified in the Sustainable Freight Strategy. That plan is currently being developed by ARB and other state agencies, and will identify strategies that will further reduce black carbon emissions throughout the freight sector. Other concurrent planning efforts in the State

could also identify additional activities that may serve to reduce SLCP emissions. For example, CEC's Integrated Energy Policy Report, the State Implementation Plan, the Healthy Soils Initiative, and the Forest Carbon Plan are all ongoing efforts that intersect with many of the concepts described in this paper. ARB will collaborate with other agencies developing those plans to identify and prioritize activities to reduce SLCP emissions that would also support other State priorities and integrated planning efforts. Climate action planning efforts by city, county, and other local government entities will also play a role in reducing SLCP emissions.

State Plans that Will Assist the State in Meeting the SLCP Emission Reduction Goals	
✓ Sustainable Freight Strategy ✓ 2014 Scoping Plan Update ✓ Additional Scoping Plan Updates ✓ Three Year Auction Proceeds Investment Plan ✓ Funding Plan for the Air Quality Improvement Program (AQIP) and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments	✓ 2016 State Implementation Plan ✓ ARB's Annual Research Plan ✓ CAT Climate Change Research Plan for California ✓ Water Action Plan ✓ DWR's Climate Action Plan ✓ Caltrans Strategic Management Plan for 2015-2020 ✓ Forest Carbon Plan ✓ Healthy Soils Initiative

Framing the Strategy

A number of overarching concepts will frame the development of the Strategy, which are described below.

Achieve Scientific-Based Targets

The Strategy will identify and recommend measures to achieve SLCP emission reductions that scientific studies suggest are necessary – globally, and in conjunction with immediate and significant reductions in CO₂ emissions – to limit global warming to less than 2°C, as well as to support Governor Brown's new climate goal of reducing California's GHG emissions to 40 percent below 1990 levels by 2030.* Specifically, the Strategy will:

- Describe ongoing and developing efforts (e.g., Sustainable Freight Strategy, Diesel Risk Reduction Plan, State Implementation Plan, Forest Carbon Plan) that have achieved significant black carbon reductions already or seek to reduce black carbon emissions further; these efforts and others that will be identified, are

* Executive Order B-30-15

expected to reduce black carbon emissions by at least 50 percent below 2012 levels from transportation sources by 2020, and from all sources by 2030;

- Identify existing and potential new measures to reduce methane emissions by at least 20 percent by 2020 and 40 percent by 2030, below forecasted emission levels; and
- Identify existing and potential new measures to reduce F-gas emissions by at least 25 percent in 2020 and 50 percent in 2030, below forecasted emission levels.

Prioritize Actions with Diverse Benefits

The direct benefits of cutting SLCP emissions will be immediately tangible, and can be substantial. As part of an integrated strategy to not only reduce emissions of SLCPs, but also to develop renewable sources of energy and strengthen the competitiveness and resiliency of our agricultural, forestry, freight and other sectors, they can deliver even greater benefits, including:

- Reduced asthma risk, hospitalization, premature death, and associated medical costs from air pollution;
- Reduced global and localized climate change impacts, including sea level rise and disrupted precipitation patterns, and associated costs;
- Reduced crop losses from air pollution;
- Healthier forests, wildlife habitats, and watersheds;
- Healthier soils that are more sustainable and resilient to climate change, sequester GHGs, require less synthetic amendments, and improve water retention;
- Increased availability of renewable fuels and energy, to stabilize energy costs and reduce emissions from buildings, industry, power plants, and transportation; and
- Stronger agricultural and freight sectors that are well positioned to continue competing globally and growing as a source of jobs and economic development in California.

Clearly, there are a number of drivers and benefits to reducing SLCP emissions that extend beyond mitigating the impacts of climate change. The Strategy will frame these broad benefits and identify priority measures to provide a wide array of climate, health, and economic benefits throughout the State.

Put Organic Waste to Its Most Beneficial Use

In most cases, organic material can be a potential resource, not a waste stream. By treating and utilizing organic waste streams in better ways, we can significantly cut methane emissions from existing or new landfill, dairy, wastewater treatment, or other waste management operations, as well as black carbon emissions from agricultural burning or prescribed burns and wildfires. We can also create new sources of jobs and economic activity, renewable power or natural gas, clean transportation fuels, and

expand the production and use of compost and other beneficial soil amendments in the State. Many renewable fuels from organic waste streams have the lowest carbon intensity in the Low Carbon Fuel Standard, which provides an economic incentive for utilizing those resources for expanded fuel production. Soil amendments may improve soil health and water retention and reduce the use of synthetic amendments in agriculture. Indeed, strategies to improve management and utilization of organic waste throughout the State may have the ability to help reduce emissions throughout the agricultural sector, from avoided methane emissions from manure, CO₂ emissions from fuel use, and N₂O emissions (a very potent, but *long-lived*, GHG) from fertilizer use and soils.

Wherever possible, and as soon as possible, we should be utilizing organic waste in order to both reduce SLCP emissions and produce maximum value from the energy and nutrients that remain in these sources. Toward those ends, in developing the Strategy, the State will work with researchers and stakeholders to identify the cost, feasibility, and potential funding mechanisms, incentives, regulations and other strategies – on the supply and demand side – to maximize the beneficial use of organic waste.

Identify Practical Solutions to Overcome Barriers

Achieving the SLCP emission reduction targets identified above will require overcoming stubborn barriers, and in some cases, modifying operations and updating best practices, to significantly reduce SLCP emissions from sources that may have been difficult to control in the past. For example, cheap and abundant landfill capacity makes organics diversion and utilization difficult. Developing projects that not only generate renewable energy, but also improve air quality and protect water quality may require additional investments in the cleanest technology and management practices, while navigating through various permitting processes. Collection and utilization of dispersed woody biomass resources, such as agricultural wastes or forest thinnings, may suffer from poor economies of scale, which limit the feasibility of extracting energy from these resources. Utility engagement and interconnection – getting electricity onto the grid or renewable gas into the pipeline – remains an unnecessarily long and costly process in many parts of the State. Technology or market barriers also remain in some sectors, such as developing cleaner engine and fuel options for off-road equipment and other vehicles and operations throughout the goods movement supply chain. In other sectors, such as those using refrigerants, cleaner, low-GWP options are just beginning to emerge, and markets for these options need to be supported and scaled.

These barriers are not insurmountable. Through coordinated planning to align priorities and streamline permitting, targeted investment and incentives to overcome cost barriers to clean technologies and practices, and direct engagement with farmers and ranchers, landfill operators, waste haulers, and other stakeholders, we can overcome these barriers and significantly cut SLCP emissions and improve the health and vibrancy of communities throughout California.

For example, the Strategy will identify strategies and funding mechanisms to encourage and streamline the use of the cleanest technologies to advance the State's air quality,

water quality, climate change, and other environmental objectives. Such technologies or strategies may include fuel conditioning of biogas to remove contaminants before vehicle use, injection into the natural gas pipeline, or fuel cells for electric generation. Several existing programs already provide potentially significant incentives to convert waste streams to various forms of energy, but others will be considered to further encourage the use of energy from organic waste, including potential mechanisms that could increase the share of renewable natural gas used in California buildings, industry, and transportation.

Efforts to increase composting and anaerobic digestion should be accompanied by efforts to promote and account for the benefits of utilizing compost, manure, and other soil amendments that come from these processes. Increasing demand for compost and other soil amendments may be key to financing projects to utilize organic waste and cut emissions of SLCPs. ARB will coordinate with the California Department of Food and Agriculture (CDFA) and other agencies working on the Healthy Soils Initiative to identify additional research needs to inform the science and accounting methods necessary to quantify the various benefits of using compost and other soil amendments and address any potential problems such as buildup of salts or heavy metals in soil. Collaboration among state agencies, water districts, and local governments will help improve quantification of benefits and impacts that could enable greater use of compost in urban storm water management, remediation of fire-degraded lands, water conservation measures, and other beneficial uses. Agencies will also consider potential mechanisms to encourage the use of compost and other soil amendments in agriculture and various other applications in California, in ways that protect air quality, water supplies, and provide other benefits.

Finally, the State already has a number of research projects and multi-agency working group efforts underway to overcome barriers to accelerating deployment of compost and anaerobic digestion facilities, scrape systems and digesters at dairies, renewable natural gas generation at wastewater treatment facilities, and other technologies and strategies to reduce SLCP emissions. The Strategy will pull from all of these efforts and suggest measures to overcome barriers that may exist throughout the supply chain – including feedstock, technology, market/economics, permitting, technical feasibility, infrastructure/logistics, and user behavior.

Advance the Science of SLCP Sources and Emissions

Data related to SLCPs and their sources is often less available or of lower quality than it is for CO₂. One reason is that energy-related emissions of CO₂ are often easier to quantify than emissions of other GHGs, which may form through complex biological or other processes where existing reporting guidelines and procedures may not apply. But there has also been less of a focus on collecting additional data that could help to quantify GHG emissions from some non-CO₂ sources. While improving data access and quality is not prerequisite for many actions to reduce emissions of SLCPs, it is important for informing ongoing efforts to reduce emissions to necessary levels from these sources.

In addition to identifying current research efforts underway to advance the understanding of sources and emissions of SLCPs in California, the Strategy will explore potential reporting methods and requirements that could improve understanding of SLCP emissions and impacts in California. This may include activities to improve understanding of methane emissions from natural gas and oil supplied to California, dairy operations, landfills, as well as various sources of F-gas and black carbon emissions. Additionally, research needs to further understanding around the climate forcing impact of light-absorbing particles known as “brown carbon” (which mostly come from biomass burning), its sources in California, and potential mitigation options will be explored.

Invest in SLCP Emission Reductions

Achieving significant reductions in SLCPs will require substantial investments to provide incentives and direct funding for priority sectors, sources, and technologies. Significant investments of private capital, supported by targeted, priority investments of public funding, are necessary to scale deployment of technologies and strategies to significantly cut emissions of SLCPs throughout California and to maximize the benefits of doing so. Public investments should be smart and strategic, to leverage private investment and accelerate market transitions to cleaner technologies that foster significant, system-wide solutions to cut emissions of SLCPs, maximize resource recovery from organic waste streams, and provide economic and health benefits in agricultural, disadvantaged, and rural parts of the State. Examples may include targeted support to reduce emissions of SLCPs and CO₂ through integrated strategies at dairies, landfills and in organic waste management; throughout the freight system; in commercial refrigeration applications; and from the management of woody waste materials in the agricultural and forestry sectors.

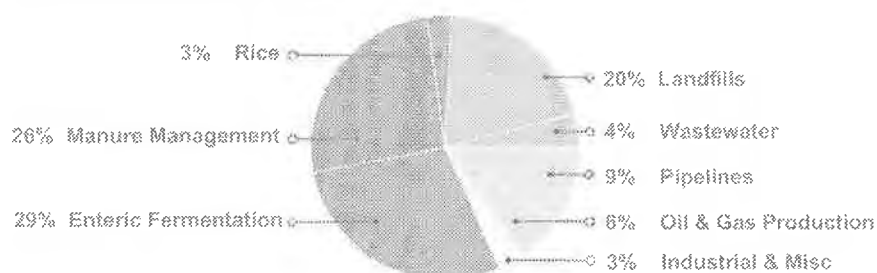
The State will need to continue coordinating and utilizing funding sources such as the Greenhouse Gas Reduction Fund (Cap-and-Trade auction proceeds),²⁸ the Alternative and Renewable Fuel and Vehicle Technology Program (AB 118), Electric Program Investment Charge (EPIC) Program, Carl Moyer program, Air Quality Improvement Program, and the Proposition 39: Clean Energy Job Creation Fund to expand investments in California’s clean economy and further reductions in SLCPs and other GHG emissions. Strategies identified during the development of the SLCP Strategy will help inform the recommendations in the Cap and Trade Auction Proceeds three-year Investment Plan that is currently being updated.

Potential new funding mechanisms and incentive structures will also be considered during the course of developing the Strategy. These could include adjusting the tipping fee structure to account for the true cost of managing organic materials and landfills, state procurement contracts for renewable natural gas and other fuels in buildings or vehicles, or labeling programs to recognize leading companies in the market place, including those producing milk with low levels of dairy methane emissions.

Methane Emission Reduction Concepts

Methane is the second largest, and a growing, component of GHG emissions in California (see Figure 2 for California's methane emission sources). The State has taken important steps to reduce methane emissions from all of its major sources, but more needs to be done to more fully control methane emissions, especially from organic waste streams going to landfills and at dairies.

Figure 2: California 2013 Methane Emission Sources



Methane is the principal component of natural gas and is also produced biologically under anaerobic conditions in ruminant animals, landfills and waste handling. Since methane emissions come from many sources, including complex biological processes, it can be difficult to measure emissions from major sources. Coordinated research efforts between ARB and the California Energy Commission to refine emission estimates have led to the development of the only subnational methane monitoring network in the world. In addition, researchers at ARB and at NASA's Jet Propulsion Laboratory are currently collaborating to identify large "hot spot" methane sources in the San Joaquin Valley. This research will aid in future control and regulatory plans to reduce GHG emissions in California. The Strategy will catalog ongoing research efforts related to methane emission detection and highlight remaining research gaps.

Methane also contributes to global background levels of ozone in the lower atmosphere (troposphere). Ozone itself is a powerful SLCP as well as a regional ground level air pollutant. Ozone negatively impacts human health, and can lead to asthma attacks, hospitalizations, and even premature death. It impairs the ability of plants to absorb CO₂, thereby suppressing crop yields and harming ecosystems. Ozone also affects evaporation rates, cloud formation, and precipitation levels. In addition to the direct climate benefits of cutting methane emissions, it can also reduce global background levels of ozone pollution and provide additional climate, health, and other benefits. ^{29,30,31}

Regional ozone concentrations reflect contributions from ozone formed from emissions (oxides of nitrogen (NO_x), and volatile organic compounds (VOCs)) on a regional scale, as well as ozone transported on hemispheric scales (global background levels of ozone). Due to its low reactivity, methane emissions do not affect regional scale ozone production that occurs over hours to days. However, regional methane emissions which are fairly well-mixed in the atmosphere contribute to the global abundance of methane,

which in turn contributes to global background levels of ozone. About two-thirds of the rise in global levels of tropospheric background ozone can be attributed to methane emissions. Studies have also shown that the global background ozone concentrations can approach 40 ppb and have been increasing in recent years. Increases in background ozone raise the baseline upon which local-to-regional ozone builds.

Over the past 50 years, ARB and local air districts have implemented a comprehensive regulatory control strategy to continually reduce regional ozone formation in order to comply with health-based ambient air quality standards set under the federal Clean Air Act. Many rules and amendments have been adopted, which have more than cut in half the emissions of VOCs and NO_x, and significantly reduced ozone concentrations throughout California. Because the regulatory definition of VOCs does not include methane due to its relatively low reactivity and lack of impact on regional ozone production, methane emissions have not fallen at similar rates as VOCs over the past decades.

In California, agriculture and landfills are the primary sources of methane emissions. Including manure from agricultural operations, organic waste is responsible for more than half of the State's methane emissions. The Strategy will explore potential methane emission reductions from all sources, but will specifically look to significantly reduce emissions from the waste and agricultural sectors in the State, through integrated strategies that fully utilize organic waste streams to recover their maximum value.

Minimize Fugitive Methane Emissions from all Infrastructure and Equipment

Natural gas is currently California's largest source of electricity generation, energy for industrial operations, and GHG emissions from residential and commercial buildings. Its use in the transportation sector is also increasing, and it could potentially play an important role in helping many parts of the State comply with federal air quality standards over the next 20 years, especially if "ultra-low NO_x" natural gas engines become commercially available for heavy-duty trucks within the next few years.

As California continues to rely on natural gas for a large fraction of its energy supply, it is critical to increase supplies of renewable natural gas and minimize fugitive emissions of methane from natural gas infrastructure. Renewable natural gas can be captured at landfills, wastewater treatment plants, commercial food waste facilities, agricultural operations, or other sources, treated, and used as a renewable energy source to displace fossil fuel consumption. Due to its high global warming potential, relatively small levels of methane emissions throughout the supply chain can overwhelm any reduction in CO₂ emissions from the use of fossil or renewable natural gas, compared to oil or coal. In California, which uses little coal, the important comparison is to diesel fuel used in transportation. As we increase the number of facilities producing and using renewable supplies of natural gas, hydrogen, or any other potential source of methane emissions in a cleaner energy economy, we must also take steps to minimize potential methane leaks from those facilities.

Based on existing models and accounting frameworks, the use of conventional natural gas in the transportation and other sectors is reducing emissions in California, compared to the use of oil or coal. California also has ongoing efforts to further reduce fugitive methane emissions from oil and gas production. ARB is developing a regulation to reduce methane emissions from oil and gas production, processing, and storage operations, and the California Public Utilities Commission is developing rules, per SB 1371 (Leno, Chapter 525, Statutes of 2014), to reduce emissions from gas transmission and distribution pipeline leaks throughout the State. Together, these rules should create a comprehensive approach to limit methane leaks from oil and gas operations. However, about 90 percent of our natural gas comes from out-of-state suppliers, so the State will continue to advocate for strong national methane standards to ensure potential climate benefits from our use of gas in the State.

In developing the Strategy, ARB and other state agencies will consider additional data, measurement, and reporting needs and tools in order to improve the characterization of fugitive methane emissions from natural gas supplies to California. The Strategy will also consider potential measures to ensure climate benefits associated with the use of natural gas in all sectors of California's economy. To the extent that ultra-low NO_x natural gas trucks enter the market in the next few years and play an important role in the State's approach to meet future air quality and climate goals, it will be important to already have these potential reporting requirements and measures in place.

Ultimately, a key driver of fugitive emissions is our demand for oil and natural gas, which will likely have to decline significantly to meet our climate and air quality targets. As state policies continue pushing our evolution away from conventional oil and natural gas, they will also help to reduce emissions of methane from the production and distribution of fossil fuels. In particular, efforts to improve efficiency or electrify appliances, buildings, and vehicles will not only reduce energy use and CO₂ emissions, but also serve to reduce or avoid fugitive methane emissions from the production, and potentially transmission and distribution, of natural gas. In developing the Strategy, ARB and other agencies will consider whether fugitive methane emissions should be accounted for in cost/benefit calculations for various state energy and efficiency programs, and appropriate methods for potentially doing so.

Effectively Eliminate Disposal of Organic Materials at Landfills

Organic waste constitutes more than one-third of California's waste stream. Food waste alone accounts for about five million tons of landfilled organics each year. Efforts to divert organics from landfills, and to develop an organics infrastructure that makes best use of the material, are a key element of integrated strategies to increase production and access to renewable energy, reduce air pollution, improve agricultural soil health, and reduce GHG emissions from a broad array of sources throughout California.

California has clear goals to reduce waste, and to divert organic material from landfills and put it to beneficial use. The State has a target to reduce landfilling of solid waste by 75 percent in 2020 through the use of recycling, composting, and source reduction.

Additionally, the 2014 Scoping Plan Update called for eliminating disposal of organic materials at landfills, which has the potential to virtually eliminate methane emissions from landfills over time, once existing organic “waste-in-place” has decomposed. The Legislature has taken steps to increase organics diversion from landfills, through AB 1826 (Chesbro, Chapter 727, Statutes of 2014) and AB 1594 (Williams, Chapter 719, Statutes of 2014). This legislation represents important steps forward.

Building on this foundation, the Strategy will explore additional measures to accelerate organics diversion and GHG emission reductions to meet an initial goal of diverting 75 percent of organics from landfills through source reduction and organics recycling by 2020. This amounts to a 50 percent additional reduction from current levels, and is in line with existing goals set forth in AB 341 (Chesbro, Chapter 476, Statutes of 2011). Further, the Strategy will consider measures to meet a goal of diverting 90 percent of organics from landfills through source reduction and organics recycling by 2025 (80 percent reduction from current levels). Achieving these levels of diversion would effectively eliminate the disposal of organic materials in landfills in California, as called for in the Scoping Plan Update, by the middle of the next decade.

An important step, and an effective way to meet these targets, is to avoid wasting food or other organic material in the first place. The Strategy will explore research opportunities and potential approaches to reduce food waste. In addition to reducing GHG emissions, avoiding food waste saves money, effectively conserves the amount of energy and water that would have been used to produce the food, and conserves fuel in delivery and removal of waste.

The next step is to support the development of infrastructure for utilizing the additional organic waste. Achieving these targets will likely require at least 100 new or expanded facilities for utilizing diverted organic waste from landfills – through composting, anaerobic digestion, or other methods that advanced the State goals related to air quality, climate, energy, and soil sustainability. The Strategy will explore funding mechanisms, incentives, and other measures to expedite these facilities and phasing out organic disposal at landfills. One mechanism that will be considered is reforming CalRecycle’s solid waste tipping fee to incentivize the diversion of organic material away from landfills and support the development of compost and anaerobic digestion facilities.

Finally, additional regulatory measures may be necessary to achieve these levels or complement potential state incentives or funding for organic waste infrastructure. In developing the Strategy, agencies will consider potential regulatory measures as an element of a comprehensive approach to effectively eliminate organics from landfills.

Even if we eliminate new organics in landfills, existing organic waste in landfills will remain a source of methane emissions for years to come. In developing the Strategy, ARB will work with CalRecycle, stakeholders, and experts to identify research needs and other efforts to develop potential measures to expand the use of best management practices and further reduce methane emissions from landfills by 2020 and through

2030. These measures could include upgrading landfill gas collection systems, improved post-closure maintenance, improved monitoring, and phased closure.

Significantly Cut Methane Emissions from Dairies

Agriculture, primarily dairies, is responsible for about 60 percent of California's methane emissions.[†] About equal levels of emissions come from manure management (primarily in flushwater lagoon systems at dairies) and the digestive processes of cows and other ruminant animals (enteric fermentation). Any potential strategies to reduce agricultural methane emissions should be based on a whole-system perspective in the California context, taking into account the lifecycle of emissions, energy and water use, economics, animal health/welfare, soil health, and water quality.

Methane emissions from manure management can be significantly reduced by capturing and destroying or utilizing methane from lagoons, switching from lagoon systems to solid manure management "scrape" systems (to avoid generating methane in the first place), and/or converting manure into renewable energy in anaerobic digesters. Anaerobic digesters can be used with manure from lagoons or scrape systems and may provide renewable electricity or natural gas that can be used to power farm equipment and vehicles, including milk trucks, which would further reduce air pollution and GHG emissions. Dairy manure can also be mixed with other organic materials – diverted from landfills or at wastewater treatment facilities, for example – and "co-digested," which may improve the performance or economics of anaerobic digestion projects in certain cases. Switching to scrape systems could potentially deliver significant water savings, along with improvements in water quality and soil health.

In developing the Strategy, ARB will work with CDFA, stakeholders, and experts to better understand the potential costs or environmental tradeoffs and broad array of benefits associated with various options to reduce methane emissions at dairies. The Strategy will identify necessary investments and other strategies to control manure methane emissions from the largest sources as quickly as possible – and no later than 2025. Those measures will likely include developing a methane capture or abatement standard, as called for in the Scoping Plan Update, as well as incentives and state funding to bring as many projects as possible online ahead of any potential regulation on existing sources.

Methane is also produced by the microorganisms involved in the digestive processes in the stomachs of ruminants, such as sheep, goats, buffalo and cattle – which is referred to as "enteric fermentation." Achieving the methane targets identified in this Concept Paper may be difficult or infeasible if emissions from enteric fermentation increase. Research on strategies to reduce methane emissions from enteric fermentation has

[†] The Animal Legal Defense Fund has petitioned ARB to measure and control animal agriculture methane emissions via ARB's Mandatory Reporting Rule and Cap-and-Trade Regulation. ARB continues to investigate this option and welcomes feedback on it as the planning process moves forward.

increased significantly in the past few years. Potential strategies may include breeding for lower methane-producing animals, microbial interventions, and nutrition and animal management.³² The Strategy will describe existing research in this area and remaining gaps.

Maximize Resource Recovery from Wastewater Treatment Facilities

Wastewater treatment plants are used to treat or reclaim sewage or liquid waste streams from residential, commercial and industrial sources. These plants represent a relatively small amount of California's methane inventory (four percent). Most wastewater treatment plants already use anaerobic digestion in their processing, and many have large amounts of spare capacity to potentially take in new sources of waste. As such, wastewater treatment presents a tremendous opportunity to divert organics from landfills and utilize them for producing energy and soil amendments. Many of the treatment plants are located fairly close to population centers and could utilize potentially significant amounts of food and other organic waste streams that come from cities and towns.

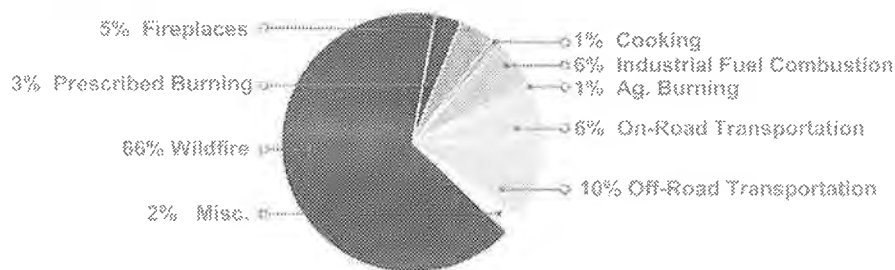
Existing barriers limit or discourage wastewater treatment facilities from more fully recovering the energy and nutrient value that remains in organic waste. The Strategy will build on existing efforts to overcome these barriers and identify opportunities to expand the role that wastewater treatment plants can play in diverting organic waste from landfills and putting it to beneficial use while minimizing methane emissions.

Additionally, much of California's wastewater infrastructure is aging and vulnerable to climate change impacts, and due for renewal, retooling, and/or replacement before 2030. Many tens of billions of dollars will be invested in new infrastructure over that time frame, which could transform the wastewater sector and its business model into one that focuses not only on water quality, but also on maximum resource recovery from a wide array of waste streams and potential end products. ARB will work with the Water Resources Control Board to identify potential options to increase the role that wastewater treatment can play in reducing emissions of SLCPs.

Black Carbon Emission Reduction Concepts

Black carbon emissions are the State's third largest component of GHG emissions (see Figure 3 for California's black carbon emission sources), and as a component of diesel particulate matter, is among the most toxic and harmful air pollutants affecting health in our communities. Globally, black carbon emissions are responsible for millions of premature deaths each year. In California, health impacts are valued at tens of billions of dollars from smog-forming emissions such as NOx, black carbon and diesel particulate matter, every year.

Figure 3: California 2013 Black Carbon Emission Sources



California has done more than any other jurisdiction to reduce the emissions of particulate matter (PM) and black carbon. ARB and local air districts have developed programs to comply with federal air quality standards for PM. These include mandatory and voluntary rules to restrict residential wood-burning in fireplaces and wood stoves, as well as incentive programs to switch to cleaner burning devices. Additionally, district rules regulating commercial cooking and smoke management programs addressing agricultural, forest, and rangeland burning operations have reduced PM emissions. California has achieved significant emission reductions from diesel-fueled engines and vehicles through the implementation of the Diesel Risk Reduction Plan. California's clean fuel and in-use vehicle requirements for on- and off-road sources and complementary incentive programs have accelerated the switch to cleaner diesel equipment and cleaner vehicles, directly contributed to diesel PM emission reductions. As a result, ambient levels of black carbon in California are now 90 percent lower than in the early 1960s, despite the use of diesel fuel more than tripling over the same time period. Existing rules will cut them in half again by 2020.

If the rest of the world achieved similar levels of reductions, it would prevent millions of premature deaths each year and slow global warming by 15 percent. But the State still suffers from the nation's worst air quality, and many regions remain out of compliance with federal health-based ambient air quality standards. Complying with federal air quality standards and protecting public health in our State will require virtually eliminating smog-forming and particulate matter emissions from mobile sources in Southern California and the Central Valley by 2031.

Non-anthropogenic black carbon emissions (wildfires) account for more than half of the State's total black carbon emissions. While this source is difficult to control, it is critical to address as part of integrated climate and forest planning.

The impacts of black carbon on climate change vary by location and source, which complicates climate modeling and understanding of the climate forcing role that black carbon plays. Particulate matter emissions that include black carbon also inevitably include "brown carbon" (the light absorbing component of organic carbon, which is abundant in biomass burning), sulfur, and other particles that have varying impacts on regional climate. ARB is sponsoring research to advance the science on black carbon, as well as brown carbon. Results from this research will improve our understanding of

its impact on the climate, and inform ongoing efforts to further reduce emissions, address climate change, and improve public health.

In developing the Strategy, ARB will provide information on current research efforts, and lay out a research agenda that will identify additional actions to advance the science on black and brown carbon and incorporate this into our efforts to address SLCPs, as appropriate.

Continue to Lead on Reducing Diesel Black Carbon Emissions

California has done more than any jurisdiction in the world to reduce diesel emissions, but many areas in the State still suffer from poor air quality. According to the American Lung Association, California cities still rank as the top five in the country for ozone and particle pollution.³³

State and local efforts will continue reducing diesel particulate matter emissions to comply with federal air quality standards and further protect public health, which will further reduce black carbon emissions, as well. ARB is working with the State's transportation and energy agencies, as well as its economic development office, local partners, and stakeholders to develop a comprehensive, integrated plan – the California Sustainable Freight Strategy – that will enhance system efficiency; deploy zero and near-zero emission freight equipment powered by renewable energy sources; provide reliable velocity while increasing safety, mobility and capacity; and improve the competitiveness of our logistics system. Additionally, ARB continues to update the State Implementation Plan, including a plan in 2016 that will outline actions to achieve federal air quality standards by 2032. Emission reduction measures identified in these ongoing processes will be incorporated in the SLCP Strategy.

In developing the Strategy, ARB will work with other agencies to align efforts to improve air quality and reduce black carbon emissions, and identify any additional diesel black carbon-specific measures that may not otherwise be captured through existing efforts. While existing policies and processes effectively target particulate matter and black carbon emissions from on-road sources, additional efforts are needed to drive reductions from off-road sources, including farm and construction equipment, trains and railroad operations, cargo handling equipment, and shipping.

Reduce Black Carbon Emissions from Biomass Burning

The State and local air districts have a number of measures in place to reduce particulate matter emissions from biomass burning, which have also resulted in significant reductions of black carbon. State law restricts agriculture burning in specific parts of California. All large air districts in the State have adopted mandatory and voluntary rules restricting wood-burning in residential fireplaces and heaters. In fact, the Bay Area Air Quality Management District is considering a new rule to ban all wood burning devices in new construction and restrict the sale of buildings with old fireplaces, stoves or other wood-burning devices that fail to meet United States Environmental

Protection Agency (U.S. EPA) emission standards. Air districts also administer incentive programs for residents to replace their old wood burning devices with new, cleaner options. ARB will coordinate with local agencies and identify potential options to further reduce particulate matter and black carbon emissions from biomass burning from major sources, including wildfire, agricultural burning, open pile burning, and commercial and residential cooking and fireplaces, among others. ARB will explore research related to how we can most effectively prioritize areas where the use of prescribed fire will have the greatest reduction in wildfire risk, and associated net black carbon impacts, at the lowest cost, and with the least impact to residents at the urban-wildland interface.

Wildfires account for the majority of black carbon emissions in California. No single wildfire may be preventable, but improved management can reduce the incidence and severity of wildfires in California, which can offer climate benefits by both strengthening our forests as carbon stocks and sinks, and reducing black carbon (and brown carbon) emissions from wildfires. Additionally, the impacts of climate change are expected to make wildfires more frequent and severe, and our forests need to increasingly be managed with climate change impacts in mind.

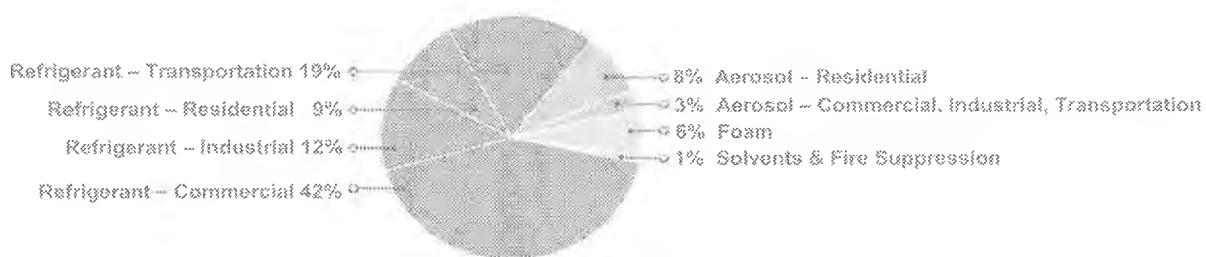
The Scoping Plan Update called for developing a “Forest Carbon Plan” in 2016 to set quantitative greenhouse gas planning targets for the State’s forests and identify actions to meet them. ARB is part of an inter-agency working group of Federal and State agencies that is currently developing the Plan. The working group is reviewing forest practice regulations and recommendations for best management practices and potential additional regulatory actions to minimize GHG emissions and enhance carbon storage associated with silvicultural treatments. Potential management practices to minimize GHG emissions could include measures that would enhance wild land fire prevention and suppression, resulting in avoidance of direct black carbon emissions.

Improved management of woody biomass in general – from forest residues, agricultural waste, or other sources – can reduce black carbon emissions and provides an opportunity to generate renewable energy and economic development in rural parts of the State. As for other organic waste streams, the Strategy will explore options to put woody biomass to beneficial use and avoid black carbon emissions that would otherwise result from burning. One option may be pyrolysis of woody biomass, which generates energy and biochar, and which can be used to sequester carbon in soils and improve soil fertility.^{34,35,36,37} Current analyses suggest that biochar could be used to sequester significant volumes of CO₂ globally,³⁸ but the benefits of large-scale projects have not been demonstrated or quantified, and several research gaps remain. Despite the uncertainty, several carbon trading entities have developed or are developing protocols for biochar projects.^{39,40} The potential benefits from these projects will be investigated, and additional research or demonstration projects will be identified to improve our understanding of the potential role biochar may play in addressing an integrated set of air pollution, climate, energy, soil and resource issues.

F-Gas Emission Reduction Concepts

Fluorinated gases are the fastest growing source of GHG emissions both globally and in California (see Figure 4 for California's F-gas emission sources). They include ozone-depleting substances that are being phased out under the Montreal Protocol, and their primary substitute, hydrofluorocarbons (HFCs). Most F-gas emissions come from leaks of these gases in refrigeration and air-conditioning systems. F-gases are also emitted when used in aerosol propellants and fire suppressants at the time of application, and slowly emitted from polyurethane foam insulation when used as foam-expanding agents.

Figure 4: California 2013 F-gas (Hydrofluorocarbons)* Emission Sources



* Does not include two long-lived HFCs with negligible emissions.

Many F-gases are hundreds, or thousands, of times more potent than CO₂. For an increasing number of them, low-GWP alternatives are entering the market and becoming more cost-effective. Many of them can be easily captured or destroyed at the end-of-life, and are even required to be, but due to the lack of incentive and difficulty of enforcement, they often are not. Reducing F-gas emissions from many sources are among the most cost-effective opportunities to reduce GHG emissions.

California is among the leaders in reducing F-gas emissions. It is the only subnational entity with an inventory of F-gas emissions, and early action measures adopted under AB 32, including the Refrigerant Management Program for stationary sources, will reduce F-gas emissions by an estimated six million metric tonnes of CO₂-equivalent (MMTCO₂-e) by 2020.

California's efforts to reduce emissions of F-gases are part of a broader set of national and international commitments to phase down the production and use of HFCs. President Obama, China President Xi Jinping, and leaders of the G-20 countries have agreed to work together and through the Montreal Protocol to phase down the production and consumption of HFCs. The U.S. EPA can impose federal bans on F-gases under the Significant New Alternatives Policy (SNAP) Program. The agency has proposed, but not yet adopted, bans on specific HFCs with very high GWPs used in new commercial refrigeration systems, the manufacture of polyurethane foam, and in new light-duty motor vehicle AC systems. The European Union has adopted leading F-gas regulations that will phase down the production and import of HFCs by almost 80 percent from 2015 levels in 2030.^{41,42}

Given this national and international context, California can accelerate broader action on F-gas emissions by continuing to build on its leading efforts. New measures developed in California can grow markets for low-GWP alternatives, and can provide an important national and international signal to build the case for action. The Strategy will consider several additional efforts to reduce the use and emissions of high-GWP F-gases from several sources.

Reduce the Use of HFCs in New Refrigeration and Air-Conditioning Equipment by At Least 80 Percent by 2030

The Scoping Plan Update called for California to work with the U.S. Environmental Protection Agency and other partners to develop programs to phase-down HFC production and import by about 80 percent by 2030. This aligns with commitments by the U.S., Mexico, Canada, China, European Union, India, and others to phase-down the production of HFCs under the Montreal Protocol. Proposed amendments to the Montreal Protocol are currently under negotiation.^{43,44}

A global phase-down under the Montreal Protocol is necessary to alleviate much of the burden that the use of these gases imposes on our climate, and California will support international efforts to address the issue. Still, California can lead by taking its own steps to reduce the use of HFCs in the State as quickly as possible. Existing measures adopted under AB 32 are projected to reduce HFC emissions in California by 30 percent below “business as usual” levels in 2030. Proposed federal rules would reduce HFC emissions by another 10 percent in California in 2030.

The Strategy will explore additional steps that California can take to reduce the use of HFCs in the State by at least 80 percent by 2030. HFC emission reductions could be achieved through sector specific prohibitions, where feasible and cost effective alternatives are available, by imposing a mitigation fee on sales of high-GWP HFCs, or other potential options. (Note that F-gas emission reductions partially lag reductions in their use, due to the long life of the existing stock of equipment that still contain high-GWP F-gases. Therefore, an 80 percent reduction in the use of F-gases by 2030 would not reduce their emissions by as much as 80 percent in that same year.)

Remove High Global Warming Potential Gases from Foams, Aerosols, and Transportation

In particular, the use of HFCs in foams, aerosols, and transportation could be quickly addressed. The majority of insulating foam and aerosol propellants that have historically used high-GWP F-gases has already transitioned to low-GWP substitutes. ARB regulations currently ban consumer product aerosol propellants with a GWP greater than 150 in most products, and the U.S. EPA has proposed federal prohibitions on the use of high-GWP HFCs in certain insulating foam applications and aerosol propellants.

In developing the Strategy, ARB will consider measures, including bans, to transition the remaining insulating foams and aerosol propellant consumer products using HFCs to low-GWP alternatives as soon as possible. Additionally, ARB will consider developing regulations to prohibit the use of high-GWP refrigerants in air conditioning and refrigeration systems for heavy-duty motor vehicles, if such prohibitions are not enacted at the federal level.

Reduce Leaks from Existing Equipment and at End-of-Life

Phasing out the use of these highly potent gases is necessary to reduce their emissions, but even then, strong measures are needed to ensure best practices are employed during the use and end-of-life of appliances, in order to prevent the release of F-gases for decades to come. Leakier systems may have lower upfront capital costs, but higher operating costs – due to the greater need for repairs and to replenish leaking refrigerant. At the end of life, while requirements exist for scrappers to capture F-gases, it is often easier to just “cut-the-line,” and vent the gas. These are problems that may not be easily solved through regulation.

ARB will consider stronger regulations and enforcement as part of the Strategy to reduce F-gas emissions, and will also consider additional incentives, funding, and collaborative efforts that can be taken with the private sector to significantly reduce emissions from F-gases during their use and end-of-life. This will include reviewing utility-based incentive programs, and considering the costs and benefits of measures that could be taken to strengthen them, expand them, link them with energy efficiency programs in cases where the use of low-GWP refrigerants can also reduce energy use, or otherwise adjust them to ensure that appliances with low-GWP gases are incentivized, and gases from old and leaking appliances are increasingly captured, recycled, or destroyed.

Target Early Action to Significantly Reduce F-gas Emissions from Commercial Refrigeration

Commercial refrigeration, which is the source of about 40 percent of California's F-gas emissions, may provide a ready test case for a productive, collaborative approach to significantly reduce F-gas emissions. President Obama recently announced a coordinated set of public and private sector commitments to reduce HFC emissions,⁴⁵ mainly from the commercial sector, and cost-effective alternatives (including CO₂) are available for many applications in many locations.⁴⁶ Emission reductions in California on the order of several MMTCO₂-e per year may be available at a cost of a few dollars per tonne.

But the requirements, incentives and funding mechanisms need to align with the commitment of the private sector, in order to capture this opportunity. In developing the Strategy, ARB will work with other agencies, stakeholders, experts, and others to identify potential mechanisms to accelerate the transition to the use of recycled refrigerant or low-GWP alternatives as quickly as possible. While commercial

refrigeration operations cover a wide array of businesses and applications, ARB will look to identify collaborative approaches to overcome barriers and transition large commercial refrigeration systems to low-GWP alternatives as soon as possible, and no later than 2025.

ARB will consider developing regulatory requirements to use low-GWP refrigerants in new commercial refrigeration systems by feasible effective dates, as well as potential future bans or other regulatory requirements or programs for existing systems. Additionally, the Strategy will explore the potential scope and cost-effectiveness of potential incentives to:

- Remove high-GWP refrigerants from existing equipment and replace (retrofit) with low-GWP refrigerants in the same equipment.
- Offset some or all of the higher cost that might be associated with replacing older high-GWP refrigeration equipment with new, low-GWP refrigeration systems.
- Install low-GWP refrigeration systems at new facilities.
- Link with energy efficiency programs in cases where low-GWP refrigerants can reduce energy use. For example, low-GWP refrigerants such as ammonia, carbon dioxide, and hydrocarbons have been shown to reduce energy consumption between 5 and 35 percent compared to HFC refrigerants, with a corresponding decrease in electricity use and GHG emissions.⁴⁷
- Encourage the greater use of recycled refrigerants for air conditioning and refrigeration buildings.
- Recover and destroy F-gas refrigerants no longer produced.

Showing the Way to 2°C

California is committed to building on its ongoing leadership to cut air pollution and greenhouse gas emissions by developing a comprehensive, effective plan to significantly reduce SLCP emissions in the State through 2030. Doing so, in conjunction with strong action to immediately cut emissions of CO₂, is the only way to stabilize global warming below 2°C and provide near-term climate benefits that can help reduce the disproportionate climate impacts that are likely to be felt in the developing world. Accordingly, in his 2015 Inaugural Address, Governor Brown called for California to “reduce the relentless release of methane, black carbon and other potent pollutants across industries,” as a key part of his plan to show the world the path to limiting global warming to no more than 2°C.⁴⁸

The concepts described in this paper represent an initial set of ideas that deserve conversation and exploration, but it is not meant to be exhaustive. We welcome comments that will advance California's goal of demonstrating that emission reductions can be achieved in ways that are not only affordable, but also beneficial to the State economy and the well-being of its residents.

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