



April 7, 2017

Board Policy: EL-7 Communication and Support to the Board

The BAOs shall inform and support the Board in its work.

Page # A. NEWSLETTERS & BRIEFINGS

4 **ACWA e-news:** 04/05/17

B. CEO BULLETIN

12 **Week of:** 03/31/17 – 04/06/17

C. BOARD MEMBER REQUESTS & INFORMATIONAL ITEMS

15 **BMR/IBMR Weekly Reports:** 04/06/17

17 Memo from Jim Fiedler, COO - Water Utility Enterprise, to the Board, dated 03/22/17, regarding correspondence from a congressional delegation to President Trump and correspondence between State and Federal agencies regarding the Oroville Dam emergency.

24 Memo from Jim Fiedler, COO - Water Utility Enterprise, to the Board, dated 03/22/17, regarding correspondence between State and Federal agencies regarding the Oroville Dam emergency including Independent Board of Consultants Memorandum No. 1.

41 Memo from Ngoc Nguyen, Interim DOO – Watersheds Design and Construction, to Melanie Richardson, Interim COO – Watersheds, dated 03/29/17, regarding how flood protection projects performed during recent storms to protect properties, and what impact incomplete projects had on the community (R-17-0004).

44 Memo from Jim Fiedler, COO – Water Utility Enterprise, to the Board, dated 03/29/17, regarding thank you letters to the District's retailers for meeting water conservation targets (R-17-0001).

48 Memo from Jim Fiedler, COO – Water Utility Enterprise, to the Board, dated 03/30/17, regarding backup generators at District facilities.

49 Memo from Jim Fiedler, COO – Water Utility Enterprise, to the Board, dated 04/03/17, regarding public comments on the District's Alternative to a Groundwater Sustainability Plan.

143 Memo from Chris Elias, DOO – Office of CEO Support, to the Board, dated 04/04/17, regarding Safe Clean Water and Natural Flood Protection Grant Project Priorities B7 and D3.

145 Memo from Jim Fiedler, COO – Water Utility Enterprise, to the Board, dated 04/07/17, regarding California WaterFix presentations to the Metropolitan Water District of Southern California Special Committee on the Bay-Delta.

208 Memo from Jim Fiedler, COO – Water Utility Enterprise, to the Board, dated 04/07/17, regarding the Contra Costa Water District and Grassland Water District representatives' visit to Washington DC for Los Vaqueros Expansion Project.

D. INCOMING BOARD CORRESPONDENCE

- 215 **Board Correspondence Weekly Report:** 04/06/17
- 217 Letter from Tom Zigterman, Stanford University, to Chair Varela, received 04/03/17, regarding the District's Sustainable Groundwater Management Act alternative plan submission (C-17-0151).
- 219 Email from Sam Liccardo, Mayor, City of San Jose, to the Board, dated 04/03/17, regarding working collaboratively to improve flood response protocol (C-17-0152).
- 220 Email and letter from Stan Williams, Vice President - Poseidon Water, to Chair Varela, dated 04/05/17, regarding P3 partnership (C-17-0153).
- 223 Letter from Tim Guster, VP and General Counsel - Great Oaks Water Company, to Trevor Joseph, CA DWR, received 04/04/17, regarding GOWC's comments to the District on the SGMA Alternative Plan Submission (C-17-0154).
- 244 Letter from Michael Jackson, Area Manager - Bureau of Reclamation, to the Board, dated 03/31/17, regarding the declaration of water made available for 2017, San Felipe Division - Central Valley Project (C-17-0155).
- 247 Email from Sue McElwaine to Chair Varela, dated 04/06/17, regarding additional questions for their meeting on 04/14/17 (C-17-0156).
- 248 Memo from Michele King to the Board, dated 04/07/17, regarding multiple emails received in opposition to the delta tunnels project (C-17-0157).
- 257 Email from Vicki Moore, Living Classroom, to the Board, dated 04/06/17, regarding support for SB 424 (Allen) (C-17-0158).
- 264 Email from Elizabeth Lamont, West Coast Drilling, to Chair Varela, dated 04/06/17, regarding his response to her request to release retention (C-17-0159).

E. OUTGOING BOARD CORRESPONDENCE

- 266 Memo from Rick Callender, DAO – Office of Government Relations & Communications, to Norma Camacho, Interim CEO, dated 04/03/17, regarding thank you letters from Chair Varela and Vice Chair Santos, to the attendees of the Coyote Creek flood impacted areas briefing and tours for Federal representatives.
- 272 Reply email from Chair Varela to Sue McElwaine, dated 04/04/17, regarding the list of questions she would like answered at their 4/14/17 meeting (C-17-0143).
- 273 Reply email from Chair Varela to Elizabeth Lamont, President - West Coast Drilling, dated 04/06/17, regarding release of retention (C-17-0142).
- 274 Interim reply email from Director Kremen to Paul Jensen, dated 04/06/17, regarding the difference in well fees between agricultural and non-agricultural owners (C-17-0146).
- 275 Reply letter from Chair Varela to Ken Colson, dated 04/06/17, regarding why the Cross Valley Pipeline wasn't used to divert excess water flow from Anderson to Calero during the February storms (C-17-0144).

Board correspondence has been removed from the online posting of the Non-Agenda to protect personal contact information. Lengthy reports/attachments may also be removed due to file size limitations. Copies of board correspondence and/or reports/attachments are available by submitting a public records request to publicrecords@valleywater.org.

NEWSLETTERS & BRIEFINGS



Published on Association of California Water Agencies (<http://www.acwa.com>)

[Home](#) > [News](#) > [ACWA eNews](#) > Printer-friendly

ACWA eNews for April 5, 2017

in [ACWA eNews](#)

ACWA's eNews is a weekly roundup of California water news and events. Manage your subscription [here](#).

Online Registration Deadline Approaches for ACWA Spring Conference

Submitted by Pamela Martineau on Wed, 04/05/2017 - 5:13pm



The online registration deadline for ACWA's 2017 Spring Conference & Exhibition in Monterey is fast approaching, with just 7 days left until the April 14 close. Several key leaders in the water industry will speak at the conference providing perspectives on everything from energy storage to emergency management.

The conference, themed "One Water, One Future," runs May 9-12 and will explore California's shared vision – and challenges – regarding the state's water future.

[Read more](#)

April ACWA Priority Issues Update Available to Members

Submitted by Pamela Martineau on Wed, 04/05/2017 - 4:43pm



The April ACWA Priority Issues Update is now available online to ACWA members. The monthly bulletin-style update provides an overview of the issues ACWA is actively engaged on.

The April Priority Issues Update is [here](#). ACWA membership is required for access.

[Read more](#)

Californians' Water Savings Exceed 25% in February

Submitted by Pamela Martineau on Tue, 04/04/2017 - 2:54pm



The State Water Resources Control Board today announced that urban Californians statewide saved 25.1% more water in February than they used during the same month in 2013, and that figure is more than double the 11.9% savings in February 2016 when state-mandated conservation targets were in place.

[Read more](#)

Yun is New Executive Officer of CWC

Submitted by Pamela Martineau on Mon, 04/03/2017 - 3:03pm



The California Water Commission today announced that Joe Yun is now the new executive officer of the CWC, replacing former Executive Officer Paula Landis who retired in June. Yun assumed the position today.

Yun most recently served as interim program manager for the Water Storage Investment Program where he was instrumental in drafting the program's regulations. Yun has over 28 years of experience working in water resource planning and management for the California Department of Water Resources and in private consulting.

[Read more](#)

Water Agencies Pledge Cooperation on Temperance Flat Reservoir

Submitted by Pamela Martineau on Fri, 03/31/2017 - 1:15pm



Four agencies representing water users in the San Joaquin Valley today signed a joint letter to the California Water Commission pledging collaboration in developing the Temperance Flat Reservoir project with the goal of submitting an application for Proposition 1 storage funding for the project by Aug. 14.

[Read more](#)

ACWA/CESA Energy Storage Summit Explores Industry's Successes and Challenges

Submitted by Pamela Martineau on Thu, 03/30/2017 - 4:53pm



Water and energy utility managers from throughout California attended an energy storage summit in Sacramento today that explored new technologies and management techniques in the emerging energy storage field.

[Read more](#)

Eight Groundwater Contamination Cleanup Projects to Receive \$20 Million in Prop. 1 Funding

Submitted by Emily Allshouse on Thu, 03/30/2017 - 3:31pm



The State Water Resources Control Board Thursday announced the selection of eight projects that have been awarded a combined total of more than \$20 million in Proposition 1 funds to cleanup or prevent groundwater contamination of aquifers that serve as a source of drinking water.

According to the State Water Board, projects in this initial round of grants under its Proposition 1 Groundwater Grant Program (GWGP) represent a total investment of more than \$40 million with matching funds. The next project solicitation for the GWGP is expected in October.

[Read more](#)

March 30 Snow Survey Shows Statewide Snowpack at 164% of Average

Submitted by Emily Allshouse on Thu, 03/30/2017 - 2:29pm



Although portions of the state continue to struggle with drought, snowpack measurements recorded Thursday show that California's snowpack remains well above average for March 30 and is helping the state "rebound from the previous five years," according to the California Department of Water Resources.

[Read more](#)

CWC Hosts Water Storage Investment Program Application Assistance Workshop

Submitted by Emily Allshouse on Thu, 03/30/2017 - 12:58pm



The California Water Commission Thursday hosted a workshop to provide information on how to apply for funding under its Water Storage Investment Program (WSIP), the process being used to distribute \$2.7 billion from Proposition 1 for eligible water storage projects.

[Read more](#)

California Water Policy Conference 26

Thu, 04/06/2017 - Fri, 04/07/2017

Location: Courtyard by Marriott at Liberty Station, San Diego

From the California Water Policy website at <http://www.cawaterpolicy.org/> :

INFORMATION

[Read more](#)

Building Capacity for Regional Sustainability in California: A Water Summit

Wed, 04/12/2017 - 1:00pm - 4:30pm

Location: Sacramento Convention Center, 1400 J St., Sacramento

Cosponsored by the Water Education Foundation and the California Department of Water Resources, the half-day summit will explore:

- Establishing governance for groundwater management
- Developing groundwater management and other water management plans
- Improving regulatory processes and securing sustainable funding – all necessary ingredients for achieving sustainable water balance.

[Registration and further information](#)

STORMS Seminar Series: Municipal Finance of Stormwater Projects

Thu, 04/20/2017 - 10:00am - 11:30am

Location: CalEPA, Byron Sher Auditorium, 1001 I Street, Sacramento

Sponsored by the State Water Resources Control Board, this free seminar will explore some of the legal cases and ongoing efforts to address the municipal finance of stormwater projects. Michael G. Colantuono, a leading expert on the law of local government revenues, is slated to speak at the event.

[EventBrite RSVP](#)

[Read more](#)

HEADWATERS TOUR 2017

Thu, 04/27/2017 - Fri, 04/28/2017

Location: The tour begins and ends at Sacramento International Airport.

Presented by the Water Education Foundation.

[Registration](#)

[Read more](#)

ACWA 2017 Spring Conference & Exhibition

Tue, 05/09/2017 - Fri, 05/12/2017

Location: Monterey, CA



ACWA's 2017 Spring Conference & Exhibition is set for May 9-12, 2017, at the Monterey Marriott and Portola Hotel & Spa in Monterey.

Online Registration & cancellation deadline is April 14, 2017 - 4:30 p.m. (PST)

IMPORTANT LINKS:

[REGISTRATION](#)

[Read more](#)

2017 SANTA ANA RIVER WATERSHED CONFERENCE

Thu, 05/25/2017

Location: Ontario Convention Center

This daylong event – convened by the Santa Ana Watershed Project Authority and coordinated by the Water Education Foundation – will

INFORMATION

[Read more](#)

BAY-DELTA TOUR 2017

Wed, 06/14/2017 - Fri, 06/16/2017

Location: This tour starts and ends at the Sacramento International Airport

Presented by the Water Education Foundation.

Go deep into California's water hub and traverse the Sacramento-San Joaquin Delta, a 720,000-acre network of islands and canals that support the state's water system and is California's most crucial water and ecological resource. The tour makes it way to San Francisco Bay, and includes a ferry ride.

INFORMATION

[Read more](#)

©2007-2017 Association of California Water Agencies.

Source URL: <http://www.acwa.com/newsletter/acwa-enews/acwa-enews-april-5-2017>

CEO BULLETIN

To: Board of Directors
From: Norma J. Camacho, Interim CEO

Chief Executive Officer Bulletin Week of March 31- April 6, 2017

Board Executive Limitation Policy EL-7:

The Board Appointed Officers shall inform and support the Board in its work. Further, a BAO shall 1) inform the Board of relevant trends, anticipated adverse media coverage, or material external and internal changes, particularly changes in the assumptions upon which any Board policy has previously been established and 2) report in a timely manner an actual or anticipated noncompliance with any policy of the Board.

Page	IN THIS ISSUE
1	The Water District Education Outreach Team Visits Boys and Girls Clubs of Silicon Valley
2	<u>Director Hsueh</u> Look at how our Flood Protection projects performed during recent storms to protect properties. If a project hasn't been completed, investigate what impact the storms had on the community. R-17-0004

The Water District Education Outreach Team Visits Boys and Girls Clubs of Silicon Valley

On March 29, 2017, the education outreach team visited the Boys and Girls Clubs of Silicon Valley (BGCSV) at the Levin Clubhouse location in San Jose.

During the hour-long visit, 15 students learned about where our water comes from and the importance of water supply stewardship. They participated in hands-on activities, including the "Incredible Journey" where they were transformed into water molecules as they went through the water cycle. In "Salmon Survival" they role-played being salmon on their return migration from ocean to stream and learned about the many obstacles they must overcome to survive and spawn.

This was the first visit in a series of nine visits that have been scheduled over the next three months, with an expected participation of over 200 students. The water district is working closely with BGCSV to build an ongoing relationship with its nine clubhouse locations in San Jose and Morgan Hill and provide hands-on learning and an understanding of local water resources to a new audience.

The BGCSV is a non-profit youth development organization that provides innovative and effective afterschool and summer enrichment programs primarily for low income, at-risk Santa Clara County youth ages 6-18 years. Its mission is "to inspire and empower all young people, especially those who need us most, to realize their full potential as productive, responsible and caring adults."

For further information, please contact Chris Elias at (408) 630-2379.

Director Hsueh

Look at how our Flood Protection projects performed during recent storms to protect properties. If a project hasn't been completed, investigate what impact the storms had on the community.

R-17-0004

Response to BMR R-17-0004 is included in the board's April 7, 2017, Non-Agenda package.

For further information, please contact Ngoc Nguyen at (408) 630-2632.

BOARD MEMBER REQUESTS & INFORMATIONAL ITEMS

Request	Completed Date	Meeting Date	Director	GM / AGM	Description	20 Days Due Date	Expected Completion Date	Disposition
R-17-0005	Pending	02/14/17	Estremera	Fiedler	Staff to prepare a response to Ms. Geotze's handout and questions on Fluoride presented during public comments. (See X Drive\ Conformed Board Agenda Items\ 2017 Board Meetings\ 021417 Regular Meeting\ Handout 2.6-A))	03/06/17		
R-17-0001	Pending	01/24/17	Hsueh	Fiedler	Staff is to prepare for Chair Signature, thank you letters to water retailers, commending efforts that enabled county meeting 20% conservation measures.	02/15/17		
R-17-0004	Pending	02/14/17	Hsueh	Camacho	Look at how our Flood Protection projects performed during recent storms to protect properties. If a project hasn't been completed, investigate what impact the storms had on the community.	03/06/17		
R-16-0021	Pending	04/12/16	Keegan	Stanton	Staff to take a preliminary look at the use of PLAs on Non-federal District projects.	03/22/17		03/02/17 Continued. 07/28/16 CEO Bulletin.
R-17-0003	Pending	02/14/17	Keegan	Fiedler	After storm season is over, staff to review our rule curve in terms of discharge to see if they still serve us well.	03/06/17		
R-17-0009	Pending	03/01/17	Varela	Camacho	Staff to investigate how to access and utilize the County Reverse 911 Notification System and report back to the Board.	03/22/17		
R-17-0011	Pending	03/28/17	Varela	Camacho	Staff is to provide Mr. Kuersten with status of action and follow up flip chart items resulting from a Homeless Encampment Ad Hoc Committee meeting in Mountain View.	04/19/17		

Request	Completed Date	Request Date	Director	GM / AGM	Description	20 Days Due Date	Expected Completion Date	Disposition
I-17-0002	Pending	02/27/17	Varela	Camacho	Chair Varela met with Assembly Member Anna Caballero and wants to send a follow up letter for another meeting in a month or so to discuss San Benito and Pajaro River.	03/19/17		
I-17-0003	Pending	03/01/17	Varela	Camacho	Schedule a tour of the District's EOC for the Directors.	03/22/17		



MEMORANDUM

FC 14 (01-02-07)

TO: Board of Directors

FROM: James M. Fiedler

SUBJECT: Correspondence from a Congressional delegation to President Trump and correspondence between State and federal agencies regarding Oroville Dam emergency

DATE: March 22, 2017

On March 10, 2017, a Congressional delegation sent a letter to President Trump regarding activities being taken to repair damage to the spillways and other facilities at Oroville Dam.

On March 15, 2017, Ted Craddock, the California Department of Water Resources (DWR) Project Manager for Oroville Emergency Recovery – Spillways, sent a letter to Federal Energy Regulatory Commission (FERC) Director David Capka regarding an independent forensic review of the Oroville Dam Spillway. In a February 21, 2017 letter from FERC, DWR was asked to identify a forensic team to evaluate the failure of the spillway. That February 21 letter was provided in the non-agenda of February 24, 2017.

The March 10 and March 15 letters are attached. The enclosures with the DWR letter containing biographical information on DWR's proposed forensic team are voluminous and not attached. Should you wish to review these enclosures, please contact Jennifer Schmidt at (408) 630-2957.

James M. Fiedler, P.E., D.WRE
Chief Operating Officer, Water Utility Enterprise

Attachment 1: March 10, 2017 Congressional delegation letter to President Trump

Attachment 2: March 15, 2017 DWR letter to Director Capka

Congress of the United States
Washington, DC 20515

March 10, 2017

The Honorable Donald J. Trump
President of the United States
1600 Pennsylvania Avenue, NW
Washington, DC 20500

President Trump,

We are writing to request that you take immediate action to facilitate work required to address an emergency situation impacting Oroville Dam, one of the most important components of California's water supply infrastructure. As you are aware, as a result of unprecedented precipitation and runoff in the Feather River watershed, the emergency spillway at the Oroville Dam was used on February 11, 2017, for the first time since the Dam's construction in 1968. An uncontrolled spill occurred directly onto the earthen hillside below the crest of the emergency spillway, resulting in significant erosion that threatened to undermine and collapse the spillway structure itself. Had this failure occurred, a 30-foot wall of water would have inundated the Feather River below the Dam, flooding communities downstream. Fearing this exact scenario, on February 12, 2017, emergency response officials ordered the mandatory evacuation of more than 180,000 people from low-lying areas along the Feather River in Butte, Yuba and Sutter Counties. Your emergency declaration in response to this situation ensured that federal resources were available to aid in the evacuation and shelter those forced to flee their homes, and you have our sincere gratitude and appreciation for this swift response.

As of February 12, California suspended the application of the California Environmental Quality Act (CEQA) in order to expedite emergency response work and recovery at the Dam. Ensuring that the dam is operational and safe by next winter is essential to protecting residents and the state's drinking water supply in the coming year.

Emergency work has been ongoing at the Dam and while the mandatory evacuation order was rescinded, residents are still under an evacuation warning. Families were able to return to their homes and businesses were reopened. However, the emergency is not over. The threat looms with every pending storm and the eventual runoff of record levels of snow in the watershed above the Dam. Those who were evacuated have been told to remain prepared for another evacuation.

Despite the ongoing emergency, on February 24, the National Marine Fisheries Service (NMFS), an agency within the Department of Commerce, sent to the Federal Energy Regulatory Commission a letter recommending emergency consultation under the Endangered Species Act, as well as numerous recommended restrictions on repair work already underway. Those


restrictions would threaten and impede efforts to repair the Oroville Dam emergency spillway and related infrastructure. For example, NMFS urged that spillway closures to conduct inspections and repairs be conducted only at night, a proposal which would delay repairs immeasurably and place workers at risk, and recommended that debris removal work necessary to restore hydroelectric generation be done with an emphasis on fishery health, not alacrity.


This letter is a striking display of how the Endangered Species Act and its implementation by unelected bureaucrats places listed species ahead of human life, property, businesses, schools, and churches, which remain at significant risk of catastrophic loss. Should NMFS be allowed to dictate the repair process, critical work needed to protect hundreds of thousands of people will be delayed significantly, perhaps for years, and experience major cost increases. Furthermore, such delays would negatively impact operations of the largest state-owned reservoir in California, which supplies 20 million people with drinking water.


It is our hope that you will continue your work to aid the region by exempting from the Endangered Species Act and the National Environmental Policy Act for all repair work at the Dam, the spillways, and other facilities damaged during the February 2017 storm events, for the duration of this work. In this emergency situation, these exemptions are absolutely vital to prevent the recurrence of the disaster and to reduce the potential harm to the populations of those counties affected by the disaster. We thank you for your continued personal attention to this situation.


Respectfully,

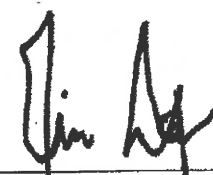

Doug LaMalfa
Member of Congress

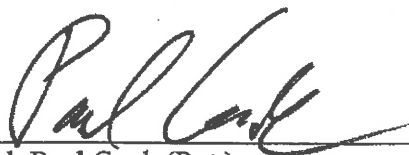

Kevin McCarthy
Member of Congress


Devin Nunes
Member of Congress


John Garamendi
Member of Congress


Jeff Denham
Member of Congress

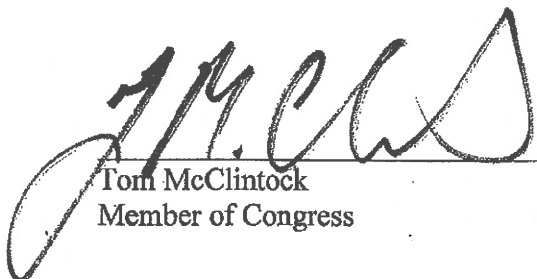

Jim Costa
Member of Congress



Col. Paul Cook (Ret.)
Member of Congress



Ken Calvert
Member of Congress



Tom McClintock
Member of Congress



David G. Valadao
Member of Congress

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



March 15, 2017

Mr. David E. Capka, P.E.
Director, Division of Dam Safety and Inspections
Federal Energy Regulatory Commission
888 First Street, N.E., Routing Code: PJ-123
Washington, D.C. 20426

FERC Project No. 2100
Independent Forensic Review of the Oroville Dam Spillway

Dear Mr. Capka:

This letter is in response to the Federal Energy Regulatory Commission's (FERC) February 21, 2017 letter to the California Department of Water Resources (DWR) regarding the situation at Oroville Dam. DWR's Acting Director, Mr. William Croyle, has asked me to respond on his behalf.

DWR appreciates your continued attention to the situation at Oroville Dam. DWR has engaged the State's Division of Safety of Dams (DSOD) and FERC during weekly Board of Consultant meetings. As you know, our immediate focus is ensuring the flood control spillway can be operated safely through the spring runoff season. At the same time, we are developing a plan and schedule to ensure safe operation of the flood control and emergency spillways during the next flood season. Finally, we will establish and engage an independent forensic review team to investigate the causes of the spillway failures.

As requested in the February 21, 2017 letter from FERC, the forensic team must be identified by March 15, 2017. DWR contacted the United States Society of Dams (USSD) and the Association of State Dam Safety Officials (ASDSO) to select an independent team to conduct a forensic evaluation of the failure of the spillways.

These are the premier dam safety associations in the United States, and USSD is affiliated with the International Commission on Large Dams. USSD and ASDSO also have a long history of creating various technical committees including an ASDSO committee to study dam failures and incidents.

As a result of ongoing efforts between DWR and these organizations, an independent forensic team has been selected. It will consist of a core group with expertise in various engineering disciplines. The core team will rely on a larger team, including worldwide expertise, to provide support in specialized areas. The core group includes:

<u>Area of Expertise</u>	<u>Name</u>
Geotechnical	John France, team leader
Hydraulics	Hank Falvey
Hydraulic Structures	John Trojanowski
Operations/Human Factors	Irfan Alvi
Operations	Steven Rigby
Engineering Geology	David K. Rogers

Resumes are enclosed for each candidate.

Additional technical support will be added as required based on the ongoing investigation by the core team. The core team also will rely on the following technical expertise for specialized considerations:

<u>Area of Expertise</u>	<u>Name</u>
General Civil/Dam Construction	Dan Hertel
Scour and Erosion	Erik Bollaert
Hydraulics	Anton Schleiss
Hydraulics	Sultan Alam

Dan Wade and Lori Spragens also will be available representing USSD and ASDSO respectively.

Upon your approval of the candidates, DWR will immediately engage these experts and develop a detailed process to guide the evaluation. DWR understands the urgency of finding preliminary results to ensure the design and construction of any modifications take the results into consideration.

Mr. David Capka, P.E.
March 15, 2017
Page 3

If you have any questions or would like to discuss this further, please contact me at (916) 502-2067.

Sincerely,



Ted Craddock, Project Manager
Oroville Emergency Recovery – Spillways
Executive Division

Enclosure(s)

Letter from USSD to Mr. William A. Croyle dated March 13, 2017
Independent forensic review team candidate resumes

cc: Sharon Tapia, Chief
Division of Safety of Dams
2200 X Street, Room 200
Sacramento, California 95818

Mr. Frank L. Blackett, P.E.
Regional Engineer
Federal Energy Regulatory Commission
100 First Street, Suite 2300
San Francisco, California 94105-3084

William A. Croyle, Director



MEMORANDUM

FC 14 (01-02-07)

TO: Board of Directors

FROM: James M. Fiedler

SUBJECT: Correspondence between State and federal agencies regarding Oroville Dam emergency including Independent Board of Consultants Memorandum No. 1

DATE: March 27, 2017

On March 17, 2017, Ted Craddock, the California Department of Water Resources (DWR) Project Manager for Oroville Emergency Recovery – Spillways, sent a letter to Federal Energy Regulatory Commission (FERC) Director David Capke transmitting the Independent Board of Consultants (BOC) Memorandum No. 1 concerning the initial meetings between DWR and the BOC. In a February 13, 2017 letter from FERC, DWR was asked to identify a forensic team to evaluate the failure of the spillway and DWR's plan for remedial options. That February 13 letter was provided in the non-agenda of February 24, 2017.

The March 17 letter and BOC Memorandum No. 1 are attached.

James M. Fiedler, P.E., D.WRE
Chief Operating Officer, Water Utility Enterprise

Attachment 1: March 17, 2017 DWR letter to Director Capke

Attachment 2: March 10, 2017 BOC letter to Project Manager Craddock

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



March 17, 2017

Mr. David E. Capka, P.E.
Director, Division of Dam Safety and Inspections
Federal Energy Regulatory Commission
888 First Street, N.E., Routing Code: PJ-123
Washington, D.C. 20426

FERC Project No. 2100 – Oroville Emergency Recovery – Spillways,
Independent Board of Consultants, Memorandum No. 1

Dear Mr. Capka:

The Department of Water Resources (DWR) submits for your review the Independent Board of Consultants (Board) Memorandum No. 1 for the Oroville Emergency Recovery – Spillways (Project), dated March 10, 2017. The Board's memorandum covers activities regarding the March 1 and 3, 2017, introduction and orientation meetings, the March 2, 2017, Oroville spillway site visit, and the March 10, 2017, design concept meeting.

The memorandum was prepared by the Board with assistance from the DWR Project Team for formatting and transmittal only. DWR will include the Board's comments and recommendations, as well as those from the Federal Energy Regulatory Commission and California Division of Safety of Dams in the Project Comment Status Report.

If you have any questions or would like to discuss this further please contact me at (916) 502-2067.

Sincerely,

A handwritten signature in blue ink that reads "Ted Craddock".

Ted Craddock, Project Manager
Oroville Emergency Recovery - Spillways
Executive Division

Mr. David Capka, P.E.
March 17, 2017
Page 2

Enclosures

cc: Sharon Tapia, Chief
Division of Safety of Dams
2200 X Street, Room 200
Sacramento, California 95818

Mr. Frank L. Blackett
Regional Engineer
Federal Energy Regulatory Commission
100 First Street, Suite 2300
San Francisco, California 94105-3084

Memorandum

DATE: Friday, 3/10/2017

TO: Mr. Ted Craddock, Project Manager
Oroville Emergency Recovery – Spillways
California Department of Water Resources

FROM: Independent Board of Consultants for
Oroville Emergency Recovery – Spillways

SUBJECT: Memorandum No. 1 - Orientation Meeting March 1 & 3, Site Visit
March 2, and Design Concepts Meeting, March 10, 2017

INTRODUCTION

This initial Board of Consultants (BOC) Memorandum covers activities for the first orientation and introductions meetings which took place March 1 and 3, the site visit to view the spillway damage on March 2nd, and the first design concepts meeting on March 10, 2017.

INITIAL INTRODUCTORY MEETING AND ORIENTATION

The first meeting of the BOC was held at the California State Department of Water Resources (DWR) on March 1st, 2017. Only BOC members Cassidy and Kollgaard were able to attend on the afternoon of March 1st. The purpose was to introduce the staff of DWR who will be working on the restoration design and representatives from the Army Corps of Engineers and Stantec, who were present.

The meeting started at about 1:00 pm and DWR team members were introduced and their positions described. Some of the drone video of the damage to the Oroville Dam facilities was then shown. A summary of the events during the spillway failure was given and the timeline for repair and restoration was discussed. The BOC members were given time to briefly review some of the documents and plans related to the spillway [Gated Spillway] design and performance. Individual contracts for BOC services were provided to Dr. Cassidy and Mr. Kollgaard and the meeting closed shortly after 5:00 pm after arrangements were made for the field trip to Oroville the following day.

Drs. Makdisi and Cato had the opportunity on Friday, March 3rd, to review the same information regarding the history of the design and operation of the spillway [Gated Spillway] at the DWR offices.

FIELD TRIP TO INSPECT SPILLWAY DAMAGE

On Thursday, March 2nd, the BOC were taken to Oroville Dam for their first view of the extent of the damage. BOC members Dr. Makdisi and Dr. Cato were also in attendance for the field trip to inspect the spillway [Gated Spillway] damage. On the morning of March 2nd, the BOC members joined a large party of participants, including staff from the Federal Energy Regulatory Commission (FERC) and the California Division of Safety of Dams (DSOD), to view the Oroville spillway [Gated Spillway] condition during the short period that the service spillway discharge has been shut off. The group was escorted to four viewpoints where the extensive damage could be seen. Intensive efforts are underway to get the powerhouse back in operation and to inspect and map the service spillway [Gated Spillway] damage during the gates closure so that the restoration could be started as soon as possible. The stabilization of the Emergency Spillway damaged area appears to be nearly completed such that this facility would be able to discharge if this should be needed. The BOC members returned to Sacramento at around 5:00 pm.

ISSUES NOTED BY THE BOC FOR CONSIDERATION, DURING RESTORATION DESIGN

Based on their review of project documents, the BOC noted the number of repair instances that have been done to the concrete spillway chute slabs. Of particular concern is the necessity to cut the concrete in order to fill voids discovered beneath the concrete. It is also noted that the slab is only 12-inches in thickness, and at the herringbone drains, the thickness is further reduced. In some areas of the foundation of the chute slab, compacted clay was used to fill depressions in the rock foundation. This calls into question whether the portions of the slab that appear undamaged by the failure should be replaced during the restoration.

The amount of drain water flowing from the pipe discharge openings along the spillway training walls seems extraordinarily large. This drainage system picks up any seepage from the herringbone system of drains under the chute slab and surface water from the backside of the training walls. It appears also that the drains are collecting leakage through cracks in the chute slab and/or defects in the construction joints between slabs. The drains appear to flow for some appreciable time after the gates are closed and no precipitation is occurring. It was noted that no flow was coming from the drains

downstream from the row of sandbags on the spillway chute that diverted flow to one side of the chute. Clearly flow coming from the drains is at least partially coming through cracks and spalls in the slab. The BOC believes this situation should be investigated. It seems likely that piping of foundation material beneath the chute slab may be responsible for the voids that have been found and repaired in the past.

The BOC concurs that restoration of the service spillway to operational service is a first priority, it is anticipated that some portions of the work will involve interim solutions and final completion of all restoration efforts may require more than one season.

RESTORATION DESIGN MEETING MARCH 10, 2017

On March 10, 2017, the BOC met at offices of DWR for presentations of restoration design concepts by DWR. An agenda for the meeting is attached. All BOC members were present. The attendees at the meeting are shown on the attached Attendance List.

QUESTIONS FOR THE BOC

- 1. Does the BOC have any comments or recommendations regarding the emergency site repairs?**

Response

The BOC believes that the DWR plan presented during BOC Meeting 1 is a reasonable approach. Our comments address the short-term plan and the, as yet to be formalized, long-term mitigation. One aspect of the short-term Emergency Spillway plan is to manage operations so that flow over the Emergency Spillway does not occur during the spring 2017 wet season; this is absolutely critical.

Additional aspects of the short-term mitigation consist of the cyclopean backfill placed downstream of the approximately 1,000-ft-long monolithic ogee weir section. The weakest point in this plan occurs at the downstream end of the armoring where all flows are directed and become channelized. To this end, DWR has placed small, 3-ft-high cyclopean check dams to slow the flow in these areas and control the gradient. The knickpoints in these channels downstream of the check dams could be problematic should future flows occur.

The BOC believes that additional flows over the Emergency Spillway will result in further erosion in two general areas (channelized section downstream of the armoring that was discussed above, and the area immediately downstream of the 800-ft-long overflow weir). Thus, we will state what appeared clear to everyone

during the presentation, that it is imperative that the Emergency Spillway not receive additional flows and that a long-term mitigation and re-design plan begin now.

We believe the planned geologic exploration that will commence this coming week should provide important information. This includes 8 seismic geophysical lines and 5 exploratory borings on the slope that leads down to the Feather River. Near the Emergency Spillway structure about 14 borings will be drilled on the downstream toe of the spillway (some will be drilled through the armoring that has recently been placed) and about 5 borings are planned on the upstream side of the structure. All of these will provide details for the conceptual design of the ultimate fix for this element of the project.

2. Does the BOC have any comments on the process or preliminary design recovery concepts developed for restoration of the gated and Emergency Spillway structures?

Response

The DWR staff has narrowed the concepts for restoration of the service spillway to a small number of variations. These are specific to the phase of restoration that must be accomplished to operate the spillway during the period until May 2017 and to the interim period when the spillway must pass the 2017/2018 flood flows and to the final solution to completely restore the spillway to modern design standards. Basically, the plan calls for rebuilding the spillway in the same configuration as the original design: rebuilding the entire length of the chute, retaining walls and energy dissipation structure at the exit.

For the initial period to be able to operate until the spring runoff is over in the beginning of May, strengthening of the chute slabs at the end of the upper chute section is underway by installation of anchors and armoring of the slope below the spillway. Extensive efforts are underway to locate and repair any voids beneath the upper chute slab and patch any spalls and seal cracks or joints that permit water to enter the under-drain system. The BOC concurs that this work needs to be completed on a priority basis.

Restoring the original spillway will require that the entire lower section of the chute training walls and flip bucket be rebuilt. Whether this can be completed in the short time period until November is questionable. It would require rebuilding the foundation for the chute slab and walls in the deeply eroded holes with concrete. This seems likely to be done using conventional concrete in the bottom

of the depressions to obtain a level surface to place Roller Compacted Concrete (RCC) up to the foundation level. The reinforced concrete chute slab and training walls would then be placed starting at a connection to the existing upper chute. The BOC questions if this can all be completed before November. The BOC is of the opinion that a temporary end of chute paving could be configured with a small flip angle to throw the discharge a distance downstream where it might impact on the remaining paved chute near the existing flip bucket. This would be used only for one flood season. Some additional downstream erosion should be expected and would be considered acceptable. During the next construction season, this portion of the chute would be completed.

The upper chute section and its training walls will also need to be completely replaced or restored to a condition acceptable for long term service. During the construction period between May and November of 2017, there is not sufficient time for a complete replacement. Interim measures to address any voids beneath the slab, repair spalls and deteriorated concrete, and caulking of all open cracks and joints are planned. The existing training walls will be anchored to improve their stability and strength. The BOC agrees that these measures should be accomplished as an interim solution. The complete replacement of this section of the chute should be scheduled as part of the work during the second season.

Another alternative for repair of this upper chute section is to anchor a reinforced concrete overlay on top of the existing slab as a permanent fix. In the BOC's opinion, this solution leaves too many unknowns unanswered as to the foundation conditions beneath the existing slab. However, the BOC emphasizes the need for all spalls and any areas of deteriorated concrete in the chute surface of this upper spillway portion to be properly patched and repaired to avoid the possibility of cavitation or uplift causing damage during its remaining service. If an overlay is considered as a temporary measure, it would need to be removed together with the existing concrete slab when the final fix of the upper section of chute is done.

3. Does the BOC have any comments or recommendations on the Design Team's intended approach for developing the project design criteria?

Response

The BOC was presented with a draft of the Design Team's approach to developing the project's design criteria. It is the BOC's understanding that design criteria will be developed for both the short-term repair measures, and the long-

term mitigation. The BOC recommends that a clear distinction be made between criteria developed for the two remediation goals.

It was also noted that design criteria will be selected in tandem with flood control operation of the reservoir.

The presented design criteria for spillway flows are as follows:

Restore both spillways to pass the Probable Maximum Flood (PMF) flows without failing, and with damage below the Emergency Spillway to be expected. These include the following estimated flows:

- Gated Spillway peak design outflow of 277,000 cfs
- Emergency Spillway peak design outflow of 369,000 cfs

Operational maximum release goals are as follows:

- Operate the reservoir to limit the Gated Spillway maximum design release to 100,000 cfs
- Operate the reservoir to prevent spill over the Emergency Spillway.

It is the BOC's understanding that peak outflows through the Gated Spillway will be limited to about 150,000 cfs, which is consistent with historic peak releases, and are designed to prevent overtopping of levees and flooding of communities downstream of the dam.

The current inflow to the reservoir is about 13,000 cfs. Using the current snow pack, and based on forecasts from historical snowmelt seasons, a conservative estimate of inflows during the April and May months indicate inflows of the order of 25,000 cfs. With the gates closed, current outflows through powerhouse are about 13,000 cfs, resulting in a net inflow of about 12,000 cfs. Thus, the reservoir should be operated to address the net inflow during the snowmelt season.

Design criteria for the components of the repair were not presented in enough detail to allow the BOC to provide specific recommendations. It is understood that such details would be presented in subsequent BOC meetings.

It is understood that flood and seismic design criteria for long-term remediation will follow deterministic approaches. Risk approaches will be used for design of interim measures. Details of these approaches were not presented during this meeting.

The BOC concurs with the Design Team's approach of incorporating both the operational and flood control constraints in its development of design criteria for the project.

4. Does the BOC have any comments or recommendations on the preliminary project schedule?

Response

The schedule is controlled by the time available between now and the beginning of November (the potential beginning of the rainy season). The schedule given to us calls for completion of required geotechnical studies by mid-May and award of grading contracts by March 31. The final-design alternative will be selected by April 7. That leaves only two weeks for 95% completion of plans by mid-May. This in turn leaves only about 3 weeks to prepare final drawings. Bid packages would need to be sent out and bidders would need to be briefed in the last two weeks of May. To accomplish this it would be wise to begin evaluation of qualifications of potential contractors immediately if this has not been done already. Construction contracts would be awarded by June 1. This is a very demanding schedule, as everyone recognizes. There seems to be no room anywhere to expand any part of the schedule. A very significant risk would be incurred if the Gated Spillway is not operational by November 1.

5. Does the BOC have any other comments, advice, recommendations, or questions for the Design Team?

Response

General Comments. At this early meeting, the BOC does not have much specific information to go on in offering advice and recommendations.

The BOC cautions that any interim concept that has a discharging flow impacting an RCC placement risks losing some of the concrete.

Chute Spillway [Gated Spillway]. The chute spillway [Gated Spillway] has operated many times since its completion in 1968. Although the floor of the spillway chute [Gated Spillway] in this section has experienced a good deal of spalling and cracking, there has been no significant damage. The cracks and spalls have been repaired several times. The velocity of flow in the upper chute is lower than that experienced in the vicinity of the February failure.

Planned Geologic Investigation. The BOC believes the planned geologic investigation is warranted and we encourage this effort. For the immediate

emergency response effort, the information obtained about the Gated Spillway Chute rock foundation conditions and the interface between concrete slabs and the condition of underlying materials (such as whether it is clay, weathered rock, or possibly voids) will be timely and influence the immediate design response. The seismic lines and borings outside the spillway will be useful for the permanent design for the Gated Spillway.

BOC RECOMMENDATIONS SUMMARY *(COMPILED BY STEPHEN W. VERIGIN)*

Issues noted by the BOC for consideration during restoration design (from March 2, 2017 site visit):

- MO – 1.1 In some areas of the foundation of the chute slab, compacted clay was used to fill depressions in the rock foundation. This calls into question whether the portions of the slab that appear undamaged by the failure should be replaced during the restoration.
- MO – 1.2 The drains appear to flow for some appreciable time after the gates are closed and no precipitation is occurring. The BOC believes this situation should be investigated.
- MO – 1.3 The BOC concurs that restoration of the service spillway to operational service is a first priority, it is anticipated that some portions of the work will involve interim solutions and final completion of all restoration efforts may require more than one season.

Emergency Site Repairs, Question 1:

- M1 – 1.1 One aspect of the short-term Emergency Spillway plan is to manage operations so that flow over the Emergency Spillway does not occur during the spring 2017 wet season; this is absolutely critical.
- M1 – 1.2 DWR has placed small, 3-ft-high cyclopean check dams to slow the flow in these channelized flow areas and control the gradient. The knickpoints in these channels downstream of the check dams could be problematic should future flows occur.
- M1 – 1.3 It is imperative that the Emergency Spillway not receive additional flows and that a long-term mitigation and re-design plan begin now.

Preliminary Design Concepts for Gated and Emergency Spillway, Question 2:

- M1 – 2.1 Extensive efforts are underway to locate and repair any voids beneath the upper chute slab and patch any spalls and seal cracks or joints that permit water to enter the under-drain system. The BOC concurs that this work needs to be completed on a priority basis.
- M1 – 2.2 The BOC is of the opinion that a temporary end of chute paving could be configured with a small flip angle to throw the discharge a distance downstream where it might impact on the remaining paved chute near the existing flip bucket.
- M1 – 2.3 Interim measures to address any voids beneath the slab, repair spalls and deteriorated concrete and to caulk all open cracks and joints are planned. The existing training walls will be anchored to improve their stability and strength. The BOC agrees that these measures should be accomplished as an interim solution. The complete replacement of this section of the chute should be scheduled as part of the work during the second season.
- M1 – 2.4 Another alternative for repair of this upper chute section is to anchor a reinforced concrete overlay on top of the existing slab as a permanent fix. In the BOC's opinion this solution leaves too many unknowns unanswered as to the foundation conditions beneath the existing slab.

Design Team's Intended Approach for Developing Design Criteria, Question 3:

- M1 – 3.1 It is the BOC's understanding that design criteria will be developed for both the short-term repair measures, and the long-term mitigation. The BOC recommends that a clear distinction be made between criteria developed for the two remediation goals.
- M1 – 3.2 It is the BOC's understanding that peak outflows through the Gated Spillway will be limited to about 150,000 cfs, which is consistent with historic peak releases, and are designed to prevent overtopping of levees and flooding of communities downstream of the dam.

- M1 – 3.3 The reservoir should be operated to address the net inflow during the snowmelt season.
- M1 – 3.4 The BOC concurs with the Design team's approach of incorporating both the operational and flood control constraints in its development of design criteria for the project.


Preliminary Schedule, Question 4:

- M1 – 1.4 Bid packages would need to be sent out and bidders would need to be briefed in the last two weeks of May. To accomplish this it would be wise to begin evaluation of qualifications of potential contractors immediately if this has not been done already.

Advice, Recommendations, Questions for Design Team, Question 5:

- M1 – 5.1 The BOC cautions that any interim concept that has a discharging flow impacting an RCC placement risks losing some of the concrete.
- M1 – 5.2 The BOC believes the planned geologic investigation is warranted and we encourage this effort.

Respectfully submitted,



John J. Cassidy
2884 Saklan Indian Drive
Walnut Creek, CA 94595
Tel (925) 933-5994
jjcassidyhydro@comcast.net



Eric B. Kollgaard
4820 Eagle Way
Concord, CA 94521
Tel (925) 798-9475
ebkollgaard@astound.net



Faiz Makdisi
1 Kaiser Plaza, Ste. 1125
Oakland, CA 94612
Tel (510) 529-8110
fmakdisi@sageengineers.com



Kerry Cato
P.O. Box 891930
Temecula, CA 92589
Tel (951) 834-2619
kerry@catogeoscience.com



STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
OROVILLE'S EMERGENCY RECOVERY – SPILLWAYS
Board of Consultants Meeting No. 1

Date: Friday, 3/10/2017
Handouts: Board Report Template
Location: Room 1603

AGENDA

Questions for the Board

1. Does the Board have any comments or recommendations regarding the emergency site repairs?
2. Does the Board have any comments on the process or preliminary design recovery concepts developed for restoration of the gated and emergency spillway structures?
3. Does the Board have any comments or recommendations on the design team's intended approach for developing the project design criteria?
4. Does the Board have any comments or recommendations on the preliminary project schedule?
5. Does the Board have any other comments, advice, recommendations, or questions for the design team?

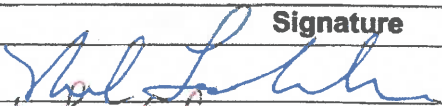

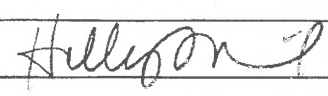
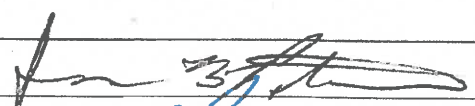
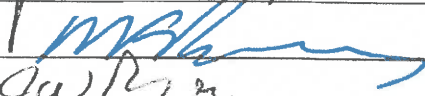
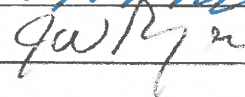


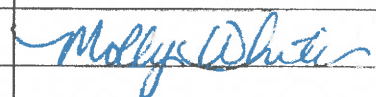

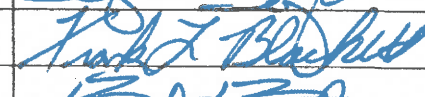

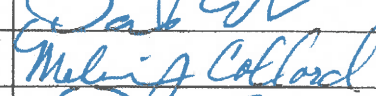
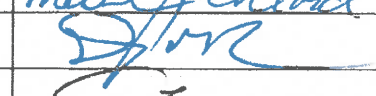
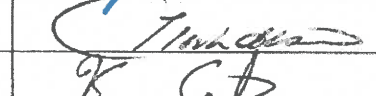

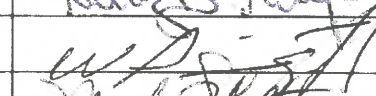
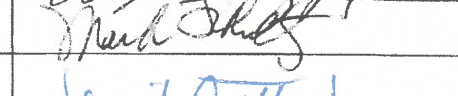



9:00 – 9:15	Welcome, introductions	Ted Craddock
9:15 – 9:30	Questions for the Board and review of agenda	Steve Verigin
9:30 – 10:00	Briefing on emergency response repairs	Ghassan Alqaser
Break		
10:15 – 11:15	Briefing and discussion of preliminary spillway restoration design concepts	Dale Brown/Jesse Dillon
11:15 – noon	Briefing and discussion of project definition and design criteria	Steve Verigin
Lunch		
12:30 – 12:45	Briefing on preliminary project schedule	Ted Craddock
12:45 – 1:15	Geologic and geotechnical exploration	Holly Nichols/Craig Hall
1:15 – 4:15	Board closed session	Board
4:15 – 5:00	Board report	Board

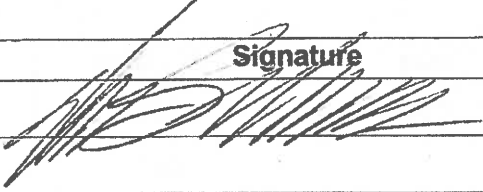


State of California
Department of Water Resources
Oroville's Emergency Recovery -- Spillways
Independent Consultant Meeting No. 1

March 10, 2017

Name	Affiliation	Signature
Cassidy, John	IC	Present, did not sign in; arrived at 10:00 am
Cato, Kerry	IC	Present, did not sign in
Kollgaard, Eric	IC	<i>Eric B. Kollgaard</i>
Makdisi, Faiz	IC	Present, did not sign in
Alqaser, Ghassan	DWR	<i>Ghassan</i>
Benham, Banafsheh	DWR	
Brown, Dale	DWR	<i>Dale</i>
Craddock, Ted	DWR	<i>Ted Craddock</i>
Crampton, Todd	GEI	
Dillon, Jesse	DWR	
Dossey, Kevin	DWR	<i>Kevin Dossey</i>
Driller, Mike	DWR	
Ford, David	DFCE	<i>David Ford</i>
Fortner, Mark	GEI	<i>Mark</i>
Glick, Frank	DWR	
Gottfried, Jennifer	DWR	<i>Jennifer Gottfried</i>
Grey, Mike		
Gutierrez, David	GEI	
Hall, Craig	GEI	<i>Craig Hall</i>
Harder, Les	HDR	<i>Les Harder</i>
Jabbour, Daniel	HDR	
Kuttel, Jeanne	DWR	<i>Jeanne M. Kuttel</i>

Name	Affiliation	Signature
Laughlin, Noel	HDR	
Lewis, Liz	GEI	
Lindell, James	MWH Stantec	
MacArthur, Robert	MWH Stantec	
Nichols, Holly	DWR	
Pandey, Ganesh	DWR	
Putnam, Jim	GEI	
Rogers, Mike	MWH Stantec	
Royer, Joe	DWR	
Sturm, Joel		
Todarro, Sal	USACE	
Torres, Ralph	DWR	
Verigin, Steve	GEI	
Wagner, Annie	DWR	
White, Molly	DWR	
Zumot, Jamal	DWR	
DAUG BOYER	FERC	
Frank Blackett	FERC	
BRUCE BRAND	FERC	
Dave Cooke	Ferc	
Melissa Colford	DWR/DSOD	
Dave Eury	DSOD	
Fair Mardisi	SAGE	
KERRY CATE	Calo Gen - BOC	
Mutaz Mihyar	DSOD	
Bill Pennington	DSOD	
MARK SCHULTZ	DSOD	
Jennifer Gottfried	DWR	

Name	Affiliation	Signature
<i>David Morken</i>	<i>USACE</i>	

TO: Melanie Richardson

FROM: Ngoc Nguyen

SUBJECT: Information for Board Member Request
R-17-0004

DATE: March 29, 2017

This memo provides information for Board Member Request R-17-0004. At the Board Meeting on February 14, 2017, Director Hsueh asked staff to: (1) look at how our flood protection projects performed during recent storms to protect properties; and (2) if a project hasn't been completed, investigate what impact the storms had on the community.

During the past few months of historical wet weather, our completed flood protection projects performed well in conveying flood flows and protecting adjacent properties. The summary of completed flood protection projects since the 1980s is in Attachment 1.

During this past winter, flooding that would have occurred if the following projects were not in place:

1. Downtown and Lower Guadalupe River Projects (from Hwy 280 to Alviso)

On February 20, 2017, spills from Lexington Reservoir flowing down Los Gatos Creek coupled with sizable flows in Guadalupe River resulted in an estimated flow of 7,500 cubic feet per second (cfs) near downtown San Jose. In 1995, a recorded flow of 8,400 cfs flooded downtown San Jose and CA-87.

2. Lower Coyote Creek Project (from the Bay to Montague Expressway)

On February 21, 2017, historical spillway flows from Anderson Reservoir resulted in an estimated 8,000 to 8,300 cfs flowing downstream into San Jose. After flooding many neighborhoods, such as Rock Springs, East William and South Bay Mobile Home Park, approximately 7,500 cfs passed through Montague Expressway into the Lower Coyote Creek Project reach.

In 1983, a flow 5,000 to 6,000 cfs flooded an area of approximately 4,000 acres affecting businesses and homes downstream of I-280. Water covered much of the area between Lower Penitencia Creek and Guadalupe River and from Montague Expressway north to the Salt Pond levees. The project also provided flood protection for the areas downstream of Montague Expressway for the 1990's flood events.

3. Uvas Creek Project (from Santa Teresa Blvd to W. Luchessa Avenue)

On January 8, 2017, an estimated flow of 9,000 to 10,000 cfs made its way down Uvas Creek, flooding the City of Gilroy downstream of the flood protection reach and US-101. In 1986, the creek overtopped upstream of Luchessa Avenue and inundated many residents in southwest Gilroy at an estimated peak flow of 14,000 cfs, which may have been inundated at 10,000 cfs as well. Since 1986, a 6-foot-high levee has been built to protect this area.

SUBJECT: Information for Board Member Request R-17-0004

Several projects that are in design and construction stages may have prevented much of the risk of flooding experienced this past winter:

1. San Francisquito Creek – Reach 1 (from the Bay to US-101)

Construction of this reach broke ground last year and the project is currently in construction. However, on February 7, 2017, a flow of approximately 4,800 cfs under US-101 caused flooding of some local businesses on the downstream side. In addition, a section of existing levee experienced initial signs of failure that was repaired. Once the project is completed, the downstream reach will have 9,000 cfs capacity.

2. West Little Llagas Creek

This creek experiences incidental flooding in Morgan Hill at many points, including inundating roadways and intersections. Damages are not severe, but flooding occurs very frequently along arterial roads due to creek overtopping this winter.

If you have questions or require additional information, please let me (extension 2632) or Liang Xu (extension 2780) know.



Ngoc Nguyen, P.E.
Interim Deputy Operating Officer
Watersheds Design & Construction Division

Attachment 1: Summary of Santa Clara Valley Water District Flood Protection Projects Completed
Since the 1980s as of March 28, 2017

aj:tdb
0329a-mm.docx

Attachment 1
Summary of Santa Clara Valley Water District
Flood Protection Projects Completed
Since the 1980s as of March 28, 2017

Lower Peninsula Watershed

- Stevens Creek, Crittendon Lane to Highway 101: 1% protection per FEMA 2009 (constructed 1983)
- Barron/Matadero Creek, SF Bay to Foothill Expressway, constructed 1997, modified 2005: 1% protection per FEMA (2006)
- San Francisquito Creek, San Francisco Bay to Highway 101: Levees raised to As-Built conditions, not 1% (2002)
- Adobe Creek, Reaches 1-4 and Reach 5, El Camino Real to Edith Avenue (2009)

West Valley Watershed

- San Tomas Aquino Creek, Highway 237 to Highway 101: 1% protection per FEMA (~1995)
- Calabazas Creek, SF Bay to Miller Avenue: 1% protection per FEMA (2007)
- Calabazas Creek at Bollinger Road Bridge, Miller Avenue to Wardell Avenue: 1% protection (2009)
- Calabazas Creek, Miller Avenue to Wardell Road: 1% protection (2011)

Guadalupe Watershed

- Alamos Creek, Lake Almaden to McKean Road: 1% protection, not to current FEMA standards (completed prior to promulgation of current FEMA standards, ~1983)
- Los Gatos Creek, near Lark Road: 1% protection per FEMA (2002)
- Lower Guadalupe River, SF Bay to Highway 101: 1% protection per FEMA (~2005)
- Downtown Guadalupe River, Highway 101 to Highway 280: 1% protection per FEMA (2005)
- Upper Guadalupe River, Reach 6, Highway 280 to Union Pacific Railroad: 1% protection (2012)
- Upper Guadalupe River, Reach 12, Branham Lane to Blossom Hill Road: 1% protection (2015)

Coyote Watershed

- Lower Penitencia Creek, Coyote Creek Confluence to Milmont Drive: 1% protection (~1986)
- Lower Coyote Creek, SF Bay to Montague Expressway: 1% protection per FEMA (1995)
- Thompson Creek, Quimby Road to Aborn Road: 1% protection per FEMA (2001)
- Lower Berryessa Creek Phase 1, Lower Penitencia Creek Confluence to Abel Street: 1% protection completed (2016)
- Lower Silver Creek, Coyote Creek Confluence to Highway 680: 1% protection (2015)
- Lower Silver Creek, Highway 680 to Lake Cunningham: 1% protection (2017)

Pajaro Watershed

- West Branch Llagas, from Llagas Creek Confluence to Highway 101: 1% protection per FEMA (1995)
- Uvas Creek, City of Gilroy: 1% protection (constructed 1991, re-certified 2007)



MEMORANDUM

FC 14 (01-02-07)

TO: Board Chair Varela
Board Members

FROM: Jim Fiedler

SUBJECT: BMR -17-0001

DATE: March 29, 2017

BMR-17-0001 requested that staff prepare, for our Board Chair, thank-you letters to the District retailers, commending them on their efforts that enabled the County to meet the water conservation target in 2016. Attached is one such letter and the distribution list for the set of letters.

A handwritten signature in black ink, appearing to read "Jim Fiedler", written over a horizontal line.

Jim Fiedler, P.E., D. WRE
Chief Operating Officer
Water Utility Enterprise



BOARD OF DIRECTORS

John L. Varela / Chair (District 1)
Barbara F. Keegan (District 2)
Richard P. Santos / Vice Chair (District 3)
Linda J. LeZotte (District 4)
Nai Hsueh (District 5)
Tony Estremera (District 6)
Gary Kremen (District 7)

INTERIM CHIEF EXECUTIVE OFFICER

Norma Camacho

CLERK OF THE BOARD

Michele L. King, CMC

March 9, 2017

The Honorable Roland Velasco
Mayor, City of Gilroy
7351 Rosanna Street
Gilroy, CA 95020

Dear Mayor Velasco:

On Tuesday, January 24, the Santa Clara Valley Water District Board of Directors (Board) voted to continue its call for water use reductions of 20 percent compared to 2013 water use. While statewide and local conditions have improved significantly, the Board emphasized that dry conditions could return, and the community's water savings achievements should be continued.

On behalf of the Board, I commend your agency's efforts to conserve water during the severe drought that has impacted our county, as well as most of the State, over the past few years. Because of your efforts, and those of your customers, the county used 28 percent less water in 2016 than was used in 2013, exceeding the 20 percent water-use reduction target.

I also acknowledge that a large part of this success is due to the hard work and close coordination between elected officials and staff of each of our organizations, working together to achieve this goal for the good of the community. It is my hope that all water retailers, cities and the county continue this excellent relationship in the years ahead.

Sincerely,

John L. Varela
Chair/Board of Directors

do:mf
0307c-l.docx

DISTRIBUTION LIST
FOR
LETTER OF APPRECIATION FOR 2016 WATER USE REDUCTION

Company Name & Address	Contact Name	Phone Number	Email address
City Address (Mayors)			
City of Gilroy 7351 Rosanna Street Gilroy, CA 95020	Roland Velasco Mayor	(408) 846-0400	Roland.velasco@cityofgilroy.org
City of Milpitas 455 East Calaveras Blvd. Milpitas, CA 95035	Rich Tran - Mayor	(408)-586-3000	rtran@ci.milpitas.ca.gov
City of Morgan Hill 17575 Peak Ave Morgan Hill, CA 95037	Steve Tate Mayor	408-779-7271	Steve.tate@morganhill.ca.gov
City of Mountain View City Hall 500 Castro St. 3 rd Floor Mountain View, CA 94041	Ken Rosenberg Mayor	(650) 903.6304	Ken.rosenberg@mountainview.gov
City of Palo Alto 250 Hamilton Avenue Palo Alto, CA 94301	Greg Scharff - Mayor	(650) 329-2571	Greg.scharff@cityofpaloalto.gov
City of Santa Clara 1500 Warburton Ave. Santa Clara, CA 95050	Lisa Gillman - Mayor	(408) 615-2200	Lgillman@santaclaraca.gov
City of Sunnyvale P. O. Box 3707 Sunnyvale, CA 94088	Glen Hendricks - Mayor	(408) 730-7473	ghendricks@sunnyvale.ca.gov
San Jose Municipal Water System 3025 Tuers Rd. San Jose, CA 95121	Sam Liccardo-Mayor 200 E. Santa Clara St. 18 th Floor San Jose, CA 95113 <i>USE THIS ADDRESS</i>	(408) 535-4800	Sam.liccardo@sanjoseca.gov

DISTRIBUTION LIST
FOR
LETTER OF APPRECIATION FOR 2016 WATER USE REDUCTION

AGENCIES			
California Water Service Company 1720 North First St. San Jose, CA 95112	Martin Kropelnicki President & Chief Executive Officer	(408) 367-8200	mkropelnicki@calwater.com
Great Oaks Water Co. P. O. Box 23490 San Jose, CA 95153	Tim Guster – General Counsel	408) 227-9540	tguster@greatoakswater.com
Purissima Hills Water District 26375 W. Fremont Rd. Los Altos Hills, CA 94022	Brian Holtz Board Chair	(650) 948-1217	Rcollins@purissimawater.org
San Jose Water Company 1221 S. Bascom Ave. San Jose, CA 95128	Rich Roth President, CEO	(408) 279-7900	Rich.Roth@sjwater.com
Stanford University 327 Bonair Siding 2 nd Floor Stanford, CA 94305	Tom Zigterman Director of Water Resources & Civil Infrastructure	(650) 725-3400	twz@stanford.edu



MEMORANDUM

FC 14 (01-02-07)

TO: Board of Directors

FROM: Jim Fiedler, P.E. D.WRE

SUBJECT: Backup (Standby) Generators at District Facilities

DATE: March 30, 2017

At the February 28, 2017 Board meeting, Director Kremen asked about backup power at the Silicon Valley Advanced Water Purification Center (SVAWPC) related to a staff report on a hit-and-run driver knocking down power poles on Zanker Road and taking out power to the SVAWPC for a couple of hours before power was restored to the facility.

SVAWPC was not constructed with standby power due to high power requirements to run the facility, i.e., it takes roughly 40% more power to run SVAWPC than the Rinconada Water Treatment Plant, and because the facility's current purpose is to improve the quality of non-potable recycled water and serve as a demonstration facility for potable reuse, which can tolerate production interruptions.

The District's Penitencia, Rinconada, and Santa Teresa water treatment plants, joint intertie pump station with San Francisco Public Utilities Commission, and Campbell Well Field are equipped with standby generators with sufficient power to continue the production of safe drinking water through PG&E power outages.

The Pacheco and Coyote pumping plants were not constructed with standby power. These pumping plants receive higher reliability power at the transmission level and require much higher standby power for their operation, on the order of 10 to 20 megawatts compared to 1.5 megawatts for Rinconada. The Vasona Pumping Plant was not constructed with standby power because it was not deemed as a critical operating facility. All three pumping plants, however, have emergency generators for life safety systems which power critical valve actuators, lights and ventilation systems.

Jim Fiedler, P.E., D.WRE
Chief Operating Officer
Water Utility Enterprise

TO: Board of Directors

FROM: James Fiedler
Chief Operating Officer
Water Utility Enterprise

SUBJECT: Public Comments on the District's Alternative
to a Groundwater Sustainability Plan

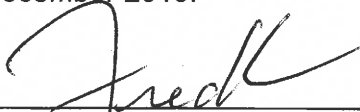
DATE: April 3, 2017

To meet Sustainable Groundwater Management Act (SGMA) requirements and California Department of Water Resources (DWR) Emergency Groundwater Sustainability Plan (GSP) Regulations, the District prepared the 2016 Groundwater Management Plan (GWMP) as an Alternative to a GSP. On November 22, 2016, the Board held a public hearing on the Draft GWMP and considered oral and written input from stakeholders. Following the public hearing, the Board adopted the GWMP and concurred with the staff recommendation to submit the GWMP as an Alternative Plan by the January 1, 2017 statutory deadline. The Board emphasized an ongoing commitment to working closely with water retailers and other stakeholders on SGMA policy issues, and referred consideration of related issues to the Board's Water Conservation and Demand Management Committee.

The six comment letters received during the GWMP public hearing and related responses were included as an appendix to the GWMP, which was submitted to DWR on December 21, 2016. Per SGMA requirements, DWR provided a public comment period during which any interested person could submit comments on Alternative Plans via the DWR online Alternative Reporting System at <http://sgma.water.ca.gov/portal/alternative/all>. The DWR public comment period for Alternative submittals closed April 1, 2017. Public comment letters on the District's Alternative submittal that were posted to the DWR website are included as Attachment 1. Commenters included the San Jose Water Company, National Marine Fisheries Service, Stanford University (2 letters), Great Oaks Water Company, and The Nature Conservancy.

The District responses to comments submitted prior to March 29, 2017 are posted to the DWR website and included as Attachment 2. Staff is preparing a response to comments submitted by Stanford University, Great Oaks Water Company, and The Nature Conservancy that were submitted just prior to the close of the DWR public comment period. The DWR website is now closed for public comments or responses. However, the District is preparing responses to submit directly to the commenters and DWR. Staff will also provide the responses to the Board when available via non-agenda memo.

The District continues to engage stakeholders on SGMA policy issues through the Board's Water Conservation and Demand Management Committee, which has included monthly SGMA updates since December 2016.



James Fiedler, P.E., D. WRE
Chief Operating Officer
Water Utility Enterprise

Attachments: 1. Public Comments Submitted to DWR on the District Alternative:

- San Jose Water Company February 16, 2017 Comments (pages 1 to 41 of 81)
- Stanford University February 17, 2017 Comments (pages 42 to 47 of 81)
- National Marine Fisheries Service February 17, 2017 Comments (pages 48 to 51 of 81)
- Stanford University March 29, 2017 Comments (pages 52 to 53 of 81)

- Great Oaks Water Company March 30, 2017 Comments (pages 54 to 74 of 81)
 - The Nature Conservancy April 1, 2017 Comments (pages 75 to 81 of 81)
2. District Response to Comments Posted Prior to March 29, 2017:
- Response to San Jose Water Company February 16, 2017 Comments (pages 1 to 6 of 11)
 - Response to Stanford University February 17, 2017 Comments (pages 7 to 9 of 11)
 - Response to National Marine Fisheries Service February 17, 2017 Comments (pages 10 to 11 of 11)

cc: G. Hall, V. De La Piedra



110 W. Taylor Street
San Jose, CA 95110-2131

February 16, 2017

Trevor Joseph
Sup. Engineering Geologist
Sustainable Groundwater Management Chief
California Department of Water Resources
901 P. Street, Room 213
P.O. Box 942836
Trevor.Joseph@water.ca.gov
Sacramento, California 94236

Uploaded through SGMA's Alternative Portal and submitted via email to:
Trevor.Joseph@water.ca.gov

RE: San Jose Water Company's Comments on Santa Clara Valley Water District's Submitted Alternative Groundwater Sustainability Plan

Dear Mr. Joseph:

San Jose Water Company ("SJWC") presents these comments regarding Santa Clara Valley Water District's ("District") submission of its recently amended groundwater management plan ("GWMP") to the Department of Water Resources' ("DWR") as an alternative groundwater sustainability plan ("Alternative Plan") under the Sustainable Groundwater Management Act ("SGMA"). The District submitted this Alternative Plan on December 21, 2016 ("Submitted Alternative") for the Santa Clara Valley Groundwater Basin (DWR Basin No. 2-9.02) ("Basin") under SGMA and subsequent emergency regulations (23 CCR § 350 *et seq.*) ("GSP Regulations"), which allow a local agency governing a medium- or high-priority groundwater basin to forego developing a groundwater sustainability plan ("Plan") by submitting a "functionally equivalent" Alternative Plan that has been in existence since January 1, 2015 and demonstrates the ability to meet SGMA's goals and objectives.

SJWC is a public water system, regulated by the California Public Utilities Commission. SGMA requires Groundwater Sustainability Agencies ("GSA") to consider the interests of beneficial uses and users of groundwater. Those "interests" specifically include public water systems. (Wat. Code § 10723.2; see also CCR § 354.10(a).) SJWC was formed in 1866, and now provides a reliable water supply to more than 1 million people for largely domestic and municipal and industrial uses. (Wat. Code §106 (domestic use is the highest and best use).)

Through over a century of continuous beneficial use, SJWC has developed appropriate and prescriptive rights to groundwater in the Basin that it conjunctively uses in coordination with District programs. In reliance on these water rights, SJWC has made

substantial investments and developed groundwater infrastructure and well capacity sufficient to withdraw approximately 290,000 acre-feet per year from the Basin. These proprietary rights are statutorily protected against loss or diminishment through the actions of third parties. (Civ. Code § 1007.) Groundwater is a critical resource for SJWC and the broader community it serves. Accordingly, SJWC has a substantial interest in the shared governance and sustainability of this Basin and standing to contest DWR's approval of the Submitted Alternative.

As described more fully below, the Submitted Alternative does not meet the requirements of SGMA, nor of the GSP Regulations, and should not be accepted as an Alternative Plan by DWR.

I. General Comments on the District's Submitted Alternative

A. The Submitted Alternative is Not an Acceptable Alternative Under SGMA

SGMA sets forth three potential Alternative Plans that a local agency may submit in place of a Plan, including an existing GWMP developed pursuant to Part 2.75 of the Water Code or other law authorizing groundwater management. (Wat. Code § 10733.6.) The Water Code specifically prohibits, however, a new GWMP from being adopted, or an existing GWMP from being "renewed" or amended after January 1, 2015. (Wat. Code § 10750.1(a).) The Water Code further states that "this [prohibition] does not apply to a [GWMP] submitted as an [Alternative Plan] pursuant to Section 10733.6, unless the department has not determined that the alternative satisfies the objectives of [SGMA] on or before January 31, 2020, or [DWR] later determines that the [Alternative Plan] does not satisfy the objectives of that part." (Wat. Code § 10750.1(c).) Therefore, the Water Code prohibits a local agency from adopting or amending a GWMP until after DWR accepts the GWMP as functionally equivalent to a Plan. The rationale behind this rule is to avoid allowing GSAs to fast-track an existing groundwater management plan simply by updating it without allowing for sufficient coordination and collaboration with interested stakeholders, as mandated by SGMA.

In violation of this prohibition, the District amended its GWMP, originally adopted in 2012, on November 22, 2016, two days before Thanksgiving, and less than three weeks after it provided a draft for public review and comment on its website. It then submitted its amended GWMP to DWR as an Alternative Plan. As set forth above, however, the Water Code explicitly prohibits an amended GWMP from being submitted as an Alternative Plan under SGMA and only authorizes DWR to review and accept GWMPs adopted prior to January 1, 2015. Further, the District's hasty release and approval of the plan avoided any meaningful collaboration and coordination in violation of SGMA. For this reason, SJWC strongly urges DWR to reject the District's Submitted Alternative because its action undermines the SGMA objectives of coordination and collaboration.

B. The Submitted Alternative Undermines Collaboration Among Basin Stakeholders

In addition to being invalid for circumventing the prescribed process, the Submitted Alternative also disregards repeated efforts by the Basin's various water retailers to

directly collaborate with the District on the preparation and submittal of a Plan, or an Alternative Plan. Since July 2016, SJWC has repeatedly corresponded and met with the District to share its concerns over the adequacy of the District's GWMP, both prior to its amendment and as amended, and to suggest development and inclusion of a shared governance model in any Plan or Alternative Plan submitted to DWR. This proposal would not have required an amendment to the Submitted Alternative; rather, it would have constituted a further contemplated action. (*See* Wat. Code § 10723.6.) To this end, SJWC developed and presented to the District a draft memorandum of agreement and provided comments on the District's amended GWMP (attached hereto as Attachment A), which the District did not take into account prior to submitting its Submitted Alternative. These efforts at collaboration have been met with resistance from the District.

Instead, District representatives have pointed to past voluntary cooperation and coordination among the District and the Basin's other water retailers ("Water Retailers") as an example of how decisions *might* be made under SGMA. The District has also stated that it will start engaging stakeholders in 2017, but if DWR accepts the District's Submitted Alternative, any engagement will be too late. Because the District's process for making SGMA-related decisions is not set forth in the Submitted Alternative, SJWC is concerned that the District may elect to pursue actions independently and without regard to interests of the Water Retailers. In so doing, the District's actions may diminish the value and reliability of the Water Retailers' water rights and undermine their ability to meet the needs of their constituents.

II. Comments on Specific Deficiencies in the Submitted Alternative

If DWR decides to review the Submitted Alternative despite the late amendments to the plan, we have provided specific comments detailing how and why the Submitted Alternative with the included amendments is *not* the functional equivalent of a Plan. A summary of these key deficiencies is provided below. We have also added more detailed comments to the District's "Demonstration of Functional Equivalency," chart which it submitted to DWR to demonstrate the Submitted Alternative's functional equivalence to a Plan (see Attachment B).

A. The Submitted Alternative Fails to Comply with SGMA's Notice and Communication Requirements.

In order to be functionally equivalent to a Plan, the Submitted Alternative must include (1) an explanation of the District's decision-making process and (2) identification of opportunities for public engagement and a discussion of how public input and responses will be used. (23 CCR § 354.10(d)(1), (2).) The Submitted Alternative does not satisfy either of these requirements.

Although the Submitted Alternative includes a section titled "Groundwater Management Partners and Stakeholders," this section does not satisfy the requirement to provide an explanation of how the District will make decisions pertaining to groundwater management affecting the Basin's stakeholders, specifically the Water Retailers who hold water rights to the Basin's groundwater. The closest the Submitted Alternatives comes to describing the District's decision-making process is a statement that "[o]ngoing strong

partnership and collaboration will be essential to meet future water supply challenges.” (Submitted Alternative, pp. 1-14, 1-15.) This hoped-for collaboration between the District and the Water Retailers, however, is contradicted by the Submitted Alternative’s description of the role of Water Retailers in groundwater management, which makes no reference to any decision-making responsibility. (Submitted Alternative, p. 1-16.) No process is explained and no explanation is provided for how input and comments from Water Retailers will be used, if at all, when decisions are made that impact, or potentially impact, groundwater rights and Water Retailer operations. The District’s failure to satisfy its notice and communication requirements undermines one of SGMA’s key objectives—to ensure that groundwater management remains a collaborative, stakeholder driven process.

B. The Submitted Alternative Does Not Include a Current or Projected Water Budget for the Basin.

The GSP Regulations require Plans (and Alternative Plans) to provide a historical, current, and projected water budget for their basin(s). (23 CCR § 354.18.) Although the District’s Submitted Alternative includes a historical groundwater budget identifying the average inflows and outflows from 2003 through 2012, it does not quantify this information for current inflows and outflows nor provides a projected water budget going forward. Inclusion of this information in any SGMA-authorized plan is necessary to provide the foundation for understanding the state of a basin and informing management activities and programs. The District’s failure to provide a current or projected water budget for the Basin calls into question the remainder of the Submitted Alternative, including the District’s assessment of the Basin’s conditions and its proposed management actions.

C. The Submitted Alternative Fails to Define Undesirable Results.

One of SGMA’s key objectives is the avoidance of undesirable results. To prevent undesirable results, they must first be expressly identified. It is actually hard to imagine a valid Plan under SGMA that does not identify the undesirable results that the management strategy aspires to avoid or minimize. Indeed, this is the entire objective of SGMA: manage basins for sustainability to avoid harm.

The GSP Regulations outline the requirements governing how undesirable results should be defined; including requiring a local agency to describe the process and criteria relied upon to define and quantify undesirable results for its specific basin. (23 CCR § 354.26.) Although the District’s “Demonstration of Functional Equivalency” chart references multiple chapters in the Submitted Alternative complying with this requirement, the Submitted Alternative never actually uses the term “undesirable results,” or sets forth the groundwater conditions from which they would occur. While the Submitted Alternative discusses storage levels, water quality indicators, and subsidence, the District does not describe: (1) the “processes and criteria relied upon to define undesirable results;” (2) the “cause of groundwater conditions...that would lead to...undesirable results;” (3) the “criteria used to define when and where the effects of groundwater conditions cause undesirable results;” (4) and whether some undesirable results “are not present and are not likely to occur....” (23 CCR § 354.26.) The failure to satisfy this cornerstone requirement

of SGMA means DWR should summarily reject the Submitted Alternative as functionally equivalent.

D. The Submitted Alternative Does Not Satisfy the GSP Regulation's Requirements for the Establishment of Minimum Thresholds.

In order to be functionally equivalent, the GSP Regulations require that an Alternative Plan establish quantitative minimum thresholds for each sustainability indicator present in a basin. (23 CCR § 354.28.) Although the Submitted Alternative establishes basin-wide "key performance measures" that the District refers to as "outcome measures" for four of the six SGMA-defined undesirable results, it fails to demonstrate why the other two undesirable results—depletions of interconnected surface water and chronic lowering of groundwater levels—are not present in the basin and thus do not need to be addressed.

The GSP Regulations also require an Alternative Plan to include additional information regarding how and why the minimum thresholds were established. This must include how the minimum thresholds in each sub-basin have been selected to avoid causing undesirable results in the adjacent sub-basin and how the minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests overlying the Basin. The Submitted Alternative fails to address any of these requirements. For these reasons, DWR should find that the Submitted Alternative is not functionally equivalent.

E. The Submitted Alternative Fails to Establish Measurable Objectives.

In addition to undesirable results and minimum thresholds, the GSP Regulations also require an Alternative Plan to establish and describe quantitative measurable objectives for the Basin. The Submitted Alternative does not even attempt to address this requirement. Based on the District's "Demonstration of Functional Equivalency" chart (submitted with its Submitted Alternative), the District appears to believe that this requirement is not applicable, or "N/A," to the Basin. The District does not provide any justification for why the Basin, or itself, may be exempt from complying with this requirement. Based on this lack of compliance, DWR must find the Submitted Alternative is not functionally equivalent.

F. Monitoring Network Described in Submitted Alternative Does Not Meet Requirements of GSP Regulations.

Another important requirement set forth in the GSP Regulations is the inclusion of a robust monitoring system in order to keep abreast of changing conditions in the basin and react accordingly to ensure that the basin is sustainably managed. Although the Submitted Alternative includes a chapter devoted to describing the District's monitoring network, the monitoring network still falls short of the requirements in the GSP Regulations. For example, although the monitoring network monitors groundwater levels throughout the basin, it does not appear to be designed to monitor all of the additional elements required by the GSP Regulations, including: groundwater flow directions, hydraulic gradients, depletions of interconnected surface waters, and changes in annual groundwater storage. Instead, the Submitted Alternative attempts to skirt these monitoring requirements without explaining why they are unnecessary or inapplicable to the Basin. The Submitted

Mr. Trevor Joseph
February 16, 2016
Page 6

Alternative also fails to satisfy the requirement in the GSP Regulations to provide information about the District's monitoring protocols, technical standards, and data collection methods.

The Submitted Alternative also fails to identify data gaps in the District's monitoring network. As noted in our comments above, however, there are many deficiencies in the District's current monitoring network. The District's failure to describe a functionally equivalent monitoring system, or to identify any data gaps within its monitoring network, weighs against the Submitted Alternative satisfying the functionally equivalent standard.

III. Conclusion

Based on a fair review of the District's Submitted Alternative—and as described above—the Submitted Alternative does not qualify as an eligible Alternative Plan under SGMA and it is not functionally equivalent to a Plan developed under the GSP Regulations. For these reasons, DWR must reject the Submitted Alternative as an ineligible submission, or alternatively, find that the Submitted Alternative fails to meet the substantive standards of SGMA. While SJWC remains committed to the long-term sustainable management of groundwater, SGMA requires better definitions and firmer commitments than those set forth in the District's Submitted Alternative. In the end, a Plan that fosters collaboration and coordination among Water Retailers and the District is far more likely to achieve SGMA's statutory objectives.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew R. Gere".

Andrew R. Gere, P.E.
President and Chief Operating Officer

cc: Timothy Guster, Great Oaks Water Company
Jim Simunovich, California Water Service Company
Gary Kremen, District Board Member
John Varela, District Board Chair
Linda LeZotte, District Board Member
Nai Hsueh, District Board Member
Richard Santos, District Board Member
Tony Estremera, District Board Member
Barbara Keegan, District Board Member
Norma Camacho, District CEO
Jim Fiedler, District COO



110 W. Taylor Street
San Jose, CA 95110-2131

November 18, 2016

Santa Clara Valley Water District
Attention: Barbara Keegan, Board Chair
5750 Almaden Expressway
San Jose, CA 95118-3686

Re: Submittal of an Alternative Plan Pursuant to the Sustainable Groundwater Management Act

Dear Ms. Keegan:

After more than a century without comprehensive groundwater regulation in California, the Legislature adopted the Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, and established criteria for the adoption of Groundwater Sustainability Plans (GSPs). As the designated Groundwater Sustainability Agency (GSA) under SGMA, the Santa Clara Valley Water District (District) was empowered to either prepare a GSP in compliance with SGMA¹ or submit an existing Alternative Plan that meets all the requirements of SGMA as the functional equivalent required by Articles 5 and 7 of the Department of Water Resources' (DWR) SGMA Regulations.² The Alternative Plan must fully "demonstrate the ability of the Alternative to achieve the objectives of the Act."³

San Jose Water Company (SJWC) writes to express our support for sustainable groundwater management and the District moving forward with an Alternative Groundwater Sustainability Plan (Alternative Plan). However, we must also make you aware of our opposition to the District's submitting its 2012 Ground Water Management Plan (GWMP), with amendments,⁴ as an Alternative Plan without your having first concurrently embraced the important role of the region's Public Water Systems (Water Systems)⁵ in the shared oversight of

¹ SGMA and related regulations (jointly referred to as "SGMA Requirements").

² Cal. Code Regs. (CCR) Tit. 23, Div. 2, Ch. 1.5, Sub Ch. 2, approved by the California Water Commission on May 18, 2016.

³ 23 CCR 358.2(d).

⁴ According to SGMA, however, "[b]eginning January 1, 2015, a new [GWMP] shall not be adopted and an existing [GWMP] shall not be renewed pursuant to [the Water Code]." (Wat. Code § 10750.1.)

⁵ "Public water system" has the same meaning as defined in Section 116275 of the Health and Safety Code (Wat. Code § 10721(s)), which defines "Public water system" as "a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year." Health & Safety Code, § 116275.

1866

150 Years of Service to the Community

2016

certain provisions that ensure sustainability.⁶ We believe this shared responsibility among the Water Systems will enable the District to adopt effective sustainability goals, while also allowing those assuming the greatest burden and interest in a successful outcome the opportunity to develop the strategy for achieving compliance.

Incorporated in 1866, SJWC is a public water system, regulated by the California Public Utilities Commission (CPUC), and has an approved Urban Water Management Plan. It has faithfully discharged its duty to provide a high quality and reliable water supply to more than 1 million people. In furtherance of this duty, it has developed a portfolio of water supplies and efficiently managed the distribution of its water for over 150 years. No water supply is more important to SJWC and the broader community it serves than its groundwater.

Toward that end, SJWC has developed appropriate and prescriptive rights to groundwater that it conjunctively uses in coordination with the District's programs as a private steward of an important public resource. In reliance on these vested proprietary water rights, SJWC has made substantial investments and developed groundwater infrastructure and well capacity sufficient to withdraw approximately 290,000 acre-feet in a single year.

Since July 2016, we have repeatedly corresponded and met with District management and staff⁷ in a good faith effort to share our concerns over the adequacy of the GWMP and to suggest a shared governance model among Water Systems that may facilitate the approval of the GWMP by DWR and will improve its efficacy. Specifically, the GWMP fails to acknowledge the proprietary groundwater rights held by the Water Systems within the management area (including SJWC) and the need to directly involve such systems in defining responsive actions consistent with their vested rights.⁸ SGMA requires GSAs to consider the interests of beneficial uses and users of groundwater. Those interests specifically include Water Systems.⁹ Consequently, the GWMP is not yet a functional equivalent of a GSP as required under applicable law. Even if it were, it holds open the question of future enforcement and will serve to undermine future planning and water supply development.

The Legislature has clearly declared that sustainable groundwater management must respect proprietary rights to groundwater.¹⁰ In fact, it was the expressed intent of the Legislature to "preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater."¹¹

SGMA requires management of groundwater within the sustainable yield of the basin.¹² GSPs and functionally equivalent Alternative Plans must have mechanisms to ensure

⁶ Wat. Code § 10735.2(a)(3)-(5)

⁷ July 7, 2016 correspondence; 2016 Meetings: September 9, October 7, 12 and 20.

⁸ While the Amended Plan acknowledges that pursuant to SGMA, local agencies may not determine water rights in regulating pumping, it does not define the proprietary water rights in the Basin, explain how these rights will be protected, or what the process will be to respect those rights.

⁹ Water Code § 10723.2.

¹⁰ Wat. Code § 113(b)(4); Wat. Code § 10720(b)(4).

¹¹ Wat. Code § 10720.1(b).

¹² Wat. Code § 10721(v).

sustainability,¹³ and the District's GWMP is lacking. If the District adopts a sustainable yield and ultimately corresponding methods to limit groundwater production within the plan area, then the burden of implementing strategies will be borne almost entirely by the sovereign Water Systems. These Water Systems have already dedicated this groundwater to a public use and have accrued proprietary groundwater rights.¹⁴ Either a future amendment to the GWMP will address the subject of plan enforcement and its consistency with these vested rights, or a court is likely to do so. We believe the Water Systems, pursuant to a memorandum of agreement with the District, can collaboratively develop water budgets and curtailment strategies that will provide certainty and enhance efficient use.

Under the District's GWMP, Water Systems within the planning area are forced to guess as to how and when the District will move to adopt provisions to ensure sustainability that may dramatically impact their ability to plan and provide water service to their customers in the future. This uncertainty adds to the lack of regional water supply reliability, and will result in increased costs and waste, and is otherwise contrary to the public interest.

Despite requests from SJWC and other Water Systems, the District has not stated what actions it will take to ensure that sustainability objectives are achieved, or provided assurance that its actions will be consistent with vested water rights and, thus far it has been unwilling to acknowledge that measures that curtail the quantity of available groundwater are best left to the entities with the primary responsibility for distribution of groundwater. We ask that the District agree now to a shared governance among Water Systems on the question of how any allocation of groundwater or curtailing use be borne and implemented.¹⁵ Only this way can the District ensure that its achievement of a sustainability goal will be consistent with the vested rights cumulatively held by these entities and not resisted by them at a later date.

Specifically, in reviewing the District's GWMP and comparing it to the standards of a GSP,¹⁶ we wish to point out the following deficiencies:

- o **Failure to Describe Basin Conditions in Required Detail.** The District's GWMP fails to describe the current status and conditions of the Santa Clara Sub-basin (Basin) with the level of detail mandated by the SGMA Requirements. The GWMP's multiple maps and other graphics depicting the Basin also fall short of providing the required information and details. These basic deficiencies suggest that the GWMP lacks sufficient baseline data to successfully, and sustainably, manage the Basin pursuant to the SGMA Requirements.

¹³ 23 CCR 354.24 requires that "[t]he [GSP] shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, [and] a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield."

¹⁴ These rights are statutorily protected against loss or diminishment by third-party conduct. Civ. Code § 1007; see *Wright v. Goleta Water District* (1985) 174 Cal.App.3d 71.

¹⁵ A proposal for shared public water system governance by a Memorandum of Agreement is attached hereto.

¹⁶ 23 CCR 358.2(d).

- **No Express Identification of Basin's Beneficial Users.** The District's GWMP fails to specifically identify individual beneficial users of the Basin's groundwater resources, which is required under the SGMA Requirements. Failure to identify specific Basin users also indicates that the District's GWMP lacks important, and required, data about the status of the Basin's groundwater supplies. It also may result in incomplete and an unfair distribution of enforcement burdens and one that fails to honor and protect vested rights.
- **Failure to Include Basin's Projected Water Budget.** To be functionally equivalent, a GWMP must include a basin's water budget under historical, current and future conditions. Although the District's GWMP includes a graphic illustrating the Basin's historical average annual water budget, this graphic does not include the information nor level of detail required under the SGMA Requirements. The GWMP does not include any discussion regarding the quantification of the Basin's current or future groundwater budget nor provide whether there are limitations on expanded or even existing production.
- **GWMP Fails to Identify All Required Undesirable Results or Establish Sufficient Minimum Thresholds.** Although the District's GWMP briefly identifies multiple undesirable results present in the Basin, discussion of these conditions is insufficient to meet the SGMA Requirements. In addition to this deficiency, the District's GWMP also fails to quantify current groundwater conditions and establish adequate minimum thresholds to determine when conditions in the Basin necessitate action. The four "Outcome Measures" in the Amended Plan do not meet the extensive requirements for minimum thresholds and measurable objectives for each applicable sustainability indicator. Failure to satisfy this cornerstone requirement of SGMA means that the District's GWMP is not functionally equivalent.
- **No Identification of GWMP's Data Gaps.** To be deemed functionally equivalent, a GWMP is required to identify both uncertainty and existing gaps in the data that informs the hydrogeological model within the SGMA Requirements. The District's GWMP fails to expressly identify any data gaps within either its monitoring network or the data provided about the Basin, which is a key requirement under the SGMA Requirements.

Although the District's recent draft amendment to its GWMP attempts to address these deficiencies in its 2012 GWMP, it does not fully satisfy SGMA's requirements. Moreover, SGMA prohibits local agencies in medium- and high-priority basins from adopting a new GWMP or

amending an existing GWMP as of January 1, 2015.¹⁷ A fair reading of the plain meaning of Water Code § 10750.1(a) suggests that an amended GWMP is not eligible for consideration as an Alternative Plan.

As stated above and in all of our prior communications, SJWC supports sustainable groundwater management. We agree the District is best situated to develop sustainability goals. However, allocating groundwater among interests and requiring curtailment to achieve sustainability goals is a matter that is best left to the vested right holders in the planning area.

Based upon our review of the District's GWMP—and as described above—we do not believe the GWMP qualifies as an Alternative Plan. It does not provide sufficient clarity as to how the GWMP will result in sustainable management or how water budget/allocation will be addressed and any curtailment enforced.

Should the District move forward with submitting its GWMP as an Alternative Plan without first acknowledging the need for shared governance on the key areas of water budget/allocation and curtailment, we are prepared to submit a comprehensive comment letter to DWR detailing the GWMP's lack of functional equivalency as summarized above and stating our opposition to its adoption at this time.

SJWC urges the District Board of Directors to defer adoption of an amended GWMP until its deficiencies are corrected and the shared governance issues identified in this letter are appropriately addressed and incorporated into the plan. SJWC looks forward to the cooperation of the District to resolve these concerns and stands ready to help develop workable solutions that balance the needs and rights of Water Systems with achieving the important basin sustainability goals required by SGMA.

Respectfully,

Andrew R. Gere, P.E.
President and Chief Operating Officer

Cc: Gary Kremen, District Board Member
John Varela, District Board Member
Linda LeZotte, District Board Member
Nai Hsueh, District Board Member
Richard Santos, District Board Member
Tony Estremera, District Board Member
Norma Camacho, District CEO
Jim Fiedler, District COO

¹⁷ Wat. Code § 10750.1(a)

**MEMORANDUM OF AGREEMENT ("MOA")
BETWEEN PUBLIC WATER RETAILERS AND THE SANTA CLARA VALLEY WATER
DISTRICT ("DISTRICT") REGARDING THE IMPLEMENTATION OF THE 2012**

Public Water Retailers are "public water systems" that produce groundwater within Santa Clara County and are required to prepare and file Urban Water Management Plans ("UWMP") with the California Department of Water Resources;

WHEREAS, the District is a multi-purpose water management district with the powers set forth in its authorizing act and is the agency designated as the Groundwater Sustainability Agency ("GSA") for purposes of preparing a Groundwater Sustainability Plan ("GSP") and implementing the California Sustainable Groundwater Management Act ("SGMA") within Santa Clara County for the Santa Clara and Llagas subbasins ("subbasins");

WHEREAS, since the 1930's, the District's water supply strategy has been to maximize conjunctive use, the coordinated management of surface and groundwater;¹

WHEREAS, Tables ES-1 and ES-2 of the District 2012 Groundwater Management Plan ("2012 GMP") acknowledge the shared responsibility and cooperation with others that is required to effectively manage groundwater within these areas;³

WHEREAS, Section 2.2 of the 2012 GMP states that "[n]early half of the water used in Santa Clara County is pumped from groundwater, one of the county's greatest natural resources," and that UWMP of the public water systems demonstrate that these water retailers show a continued reliance upon groundwater to meet the needs of their customers;⁴

WHEREAS, Section 1.3 of the 2012 GMP reflects the District's intention to be a regional partner in groundwater management;

WHEREAS, Section 4.1.4 of the 2012 GMP acknowledges that the subbasins in Santa Clara County are not adjudicated and the District does not legally control the operation of groundwater wells or the amount of groundwater that wells can produce;

¹ 2012 Groundwater Management Plan, ES-1.

³ 2012 Groundwater Management Plan, Tables ES-1 and ES-2.

⁴ 2012 Groundwater Management Plan, Section 4.1.5 and 1.3.

WHEREAS, a key component of the water supply reliability performance under the 2012 GMP and approved UWMP depends on the cooperation between the District and its water retailers, which is "critical during times of shortage;"⁵

WHEREAS, the District resolved to continue and enhance further groundwater management partnerships;⁶

WHEREAS, the District has announced its intention to submit its 2012 GMP as an Alternative Plan in lieu of a GSP in compliance with SGMA, and to qualify Alternative Plans must fulfill the objectives of a GSP;

WHEREAS, groundwater management pursuant to SGMA must be consistent with Section 2 of Article X of the California Constitution and nothing within SGMA may modify the priorities of common law water rights⁷ and the statutory protection of those rights;⁸

WHEREAS, SGMA requires GSAs to consider the interests of beneficial uses and users of groundwater within the plan area and those "interests" specifically include public water systems⁹; and

WHEREAS, SGMA provides that a GSA may implement a plan pursuant to legal agreement in a manner consistent with Recommendation 7-5 of the District 2012 GMP, pursuant to an MOA.

NOW THEREFORE, the Parties hereby agree that a Water Rights Committee with the foregoing powers and authority shall be formed to guide implementation of the 2012 GMP as an Alternative Plan or a GSP as either the 2012 GMP or GSP may be amended and approved by DWR from time to time.

1. Water Rights Committee.

A "Water Rights Committee" ("WRC") is hereby established by written agreement among the signatory Water Retailers and the District. This WRC will wield the responsibility for coordinating and facilitating implementation of the 2012 GMP or a GSP (collectively hereinafter the "SGMA Plan") with regard to the following subjects in the manner described:

⁵ 2012 Groundwater Management Plan, Section 4-1-4 at p. 4-5.

⁶ 2012 Groundwater Management Plan, Recommendation: 7-3(5) at pp. 7.4-7.5

⁷ Water Code § 10720.5.

⁸ See. e.g. Civil Code § 1007, Water Code §§ 106, 106.5; Public Utilities Code § 851.

⁹ Water Code § 10723.2; Section 354.10 of the GSP Regulations ("Notice and Communication").

(a) Curtailment/Appportionment. In the event that either the District determines that curtailment of groundwater production or an apportionment of groundwater (allocation) within the subbasins is required to avoid causing undesirable results under a SGMA Plan, then:

- (i) The District will notify the WRC in writing of the need for a curtailment/apportionment plan to avoid causing undesirable results;
- (ii) At any time on its own initiative, the WRC may, or within twelve (12) months of its receipt of written notice from the District, the WRC will prepare a curtailment/apportionment plan;
- (iii) The methodology to curtail existing extractions or apportionment of groundwater shall be developed by the WRC in its complete discretion;
- (iv) Any WRC curtailment/apportionment plan shall be presented to the District for its consideration and inclusion in any SGMA Plan;
- (v) The District will accept and include the WRC curtailment/apportionment plan developed by the WRC in the SGMA Plan unless, after a good faith evaluation, the District finds that the WRC allocation/curtailment plan, including proposed mitigation measures, do not provide reasonable assurance that "undesirable results" will be avoided;
- (vi) In the event the District disagrees with the WRC curtailment/apportionment plan pursuant to (v) above, the District may seek to set aside the adoption of the WRC plan pursuant to Code of Civil Procedure (CCP) § 1085;
- (vii) The Parties will exercise good faith and reasonable efforts to coordinate the implementation of any interim measures required to protect against "undesirable results" during the WRC's development of a curtailment/apportionment plan;
- (viii) If after twelve (12) months from the date of the District's notice required in paragraph (a)(i) above, the WRC fails to complete a curtailment/apportionment plan and present the plan to the District for approval, then the District may prepare its own curtailment/apportionment plan. If the WRC disagrees with the District's plan, then the WRC may seek to set aside the adoption of the District's curtailment/apportionment plan pursuant to CCP § 1085.

(b) Transfer and Carry-Over. If water allocations are created pursuant to section 1(a) of this MOA, the WRC may, in its complete discretion, develop a transfer and carry-over plan further implementing a SGMA Plan that will establish rules and conditions for the transfer, conservation, and carry-over of any unused allocation between and among the public water systems.

- (i) The WRC will notify the District in writing of its intent to prepare a transfer and carry-over plan, and thereafter the WRC will exercise good faith and reasonable diligence in preparing a transfer and carry-over plan;
- (ii) The methodology for transfer and carry-over of any allocations shall be developed by the WRC in its complete discretion, subject to the express requirement that the transfer and carry-over plan will not cause or threaten to cause unmitigated "undesirable results;"
- (iii) The District will accept and include a WRC transfer and carry-over plan in the SGMA Plan unless, after a good faith evaluation, the District finds that the WRC transfer and carry-over plan, including proposed mitigation measures, do not provide reasonable assurances against causing or threatening to cause "undesirable results;"
- (iv) In the event the District disagrees with the WRC transfer and carry-over plan pursuant to (b)(iii) above, the District may seek to set aside the adoption of the WRC plan pursuant to CCP § 1085.

(c) Storage and recovery of imported water. The District will submit any plan that will limit or condition the ability of public water systems to import foreign (out of County, out of watershed) supplemental water into the subbasins for storage and recovery by the public water systems to the WRC for its review and consideration.

- (i) The District will provide written notice to the WRC of its intent to prepare a storage and recovery plan;
- (ii) The storage and recovery plan shall not impair the operating ability of a public water system or cause or threaten to cause "undesirable results;"
- (iii) The District will seek the WRC's approval of any storage and recovery plan prior to inclusion in any SGMA Plan;
- (iv) If the WRC disagrees with the District's plan, then the WRC may seek to set aside the District's adoption of its storage and recovery plan pursuant to CCP § 1085;
- (v) Alternatively, if the District has not issued a notice of its intention to prepare a storage plan pursuant to (c)(i) above, the WRC may independently develop a plan for the storage and recovery of imported water to enhance local water supply reliability. The WRC will present any WRC plan for the storage and recovery of water to the District for inclusion in a SGMA Plan. The District will accept and include the WRC storage and recovery plan unless, after a good faith

evaluation, it finds that storage and recovery of imported water will cause or threatens to cause "undesirable results" or will directly interfere with existing District operations or replenishment programs;

- (vi) The WRC may challenge the District's decision not to include the storage and recovery plan in a SGMA Plan pursuant to CCP § 1085.

(d) Well Permits / Well Location. The District will not restrict or seek to regulate a public water system's ability to produce groundwater for public consumption by an existing, replacement or new well unless there is a direct and immediate threat to the health, safety and welfare that is separate, discrete and distinguishable from groundwater production in the subbasin as a whole. If the District determines in its discretion that such an immediate and direct threat to the health, safety, and welfare of the community exists, it may act by an urgency ordinance to reasonably condition the new wells but only for so long as the actual emergency condition exists. The District will exercise good faith and reasonable efforts to coordinate with the WRC to develop a consensus on reasonable conditions to protect public health and safety and to avoid undesirable results. The WRC may challenge the District's plan to limit or condition well permits and well location pursuant to CCP §1085.

2. Water Rights Committee Representation.

The WRC shall be comprised of representatives appointed by each of the Public Water Retailers and drawn from its membership.

Voting: Except as specifically otherwise provided herein, the vote of a majority of the members of the WRC present at any regular, adjourned or special meeting shall be sufficient to pass or act upon any matter properly before the WRC, and each member of the WRC shall have one vote.

Groundwater Weighted Voting: Upon the call and request of any WRC member, present and able to vote, and a quorum being present, a weighted voting formula shall apply for any vote to be taken by the WRC, with each member having one or more votes based upon the groundwater pumping set forth in Exhibit A. In order for the WRC to take action under the provisions of this section two requirements must be fulfilled:

- a) A majority of the votes weighted by groundwater pumping must be cast in favor of the action, provided that not less than two member agencies vote in favor of the action; and
- b) A majority of the members vote in favor of the action. In the event a simple majority vote on a question has previously been taken, and a weighted vote is subsequently called; a roll call vote will be taken that tabulates both the weighted vote and the members voting. The vote weighted by a majority of

those voting representing a majority of the groundwater pumping shall supersede the previous simple majority vote, provided that the vote of a single member may not defeat an action.

Groundwater Pumping: For the purposes of determining the weighted vote of water retailers or the At-Large representative, the weighted vote by groundwater use shall be based on the historical groundwater pumping range set forth in Exhibit A, which may be updated annually by the WRC to reflect the actual increase in a WRC member's groundwater use.

The Public Water Retailers agree to form the WRC by January 15, 2017.

(a) **Quorum.** A majority of the voting power of the WRC shall constitute a quorum for the transaction of affairs and the approval or disapproval of plans and actions set forth in paragraph 1(a)-1(d) above. Any action or recommendation of the WRC shall be transmitted to the District in writing.

(b) **Organizational Meeting.** At its first meeting each year, the WRC shall elect a chairperson and vice-chairperson from its membership. It shall also elect a secretary and treasurer as may be appropriate, and the positions need not be from its membership.

(c) The WRC shall conduct its business in accordance with Robert's Rules of Order and the California Open Meetings Law, and shall establish further governing rules and procedures as may be necessary and convenient for the WRC.

4. Binding on All Plans.

The commitments set forth in this MOA shall apply to any SGMA Plan.

5. Effective Date.

The MOA is effective upon execution of the Parties.

EXHIBIT A

Method: All Retailers Represented with Weighting except that use <400 AFY¹.
One At-Large representative to be appointed from among parties that use <400 AFY.

Retailer	# of Votes	Range in AF		# of Votes	
San Jose Water Company	10	55,800	62,000	10	
Santa Clara	3	49,600	55,800	9	
Great Oaks ²	3	43,400	49,600	8	= Total GW/#votes
Gilroy	2	37,200	43,400	7	Total GW = 155,000
Morgan Hill	2	31,000	37,200	6	otes = 25
Cal Water	1	24,800	31,000	5	
Sunnyvale	1	18,600	24,000	4	
San Jose	1	12,400	18,600	3	
Mountain View	1	6,200	12,400	2	
		0	6,200	1	
<i>Total</i>					

GROUNDWATER USE IN AF

	2010 UWMP	% Total
San Jose Water Company	60,500	39.0%
Santa Clara	14,800	9.5%
Great Oaks	12,300	7.9%
Gilroy	8,500	5.5%
Morgan Hill	7,800	5.0%
Cal Water	5,200	3.4%
Sunnyvale	1,200	0.8%
San Jose	400	0.3%
Mountain View	400	0.3%
Stanford	200	0.1%
Independent Santa Clara	9,800	6.3%
Independent Coyote Valley	5,000	3.2%
Independent Llagas	28,900	18.6%
<i>Total</i>	155,000	100.0%

¹ SCVWD 2010 UWMP

² Great Oaks rounded up to 12,400

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
Article 5. Subarticle 1: Administrative Information			
Introduction to Administrative Information (§ 354.2)			
§ 354.2	This Subarticle describes information in the Plan relating to administrative and other general information about the Agency that has adopted the Plan and the area covered by the Plan.	§§ 1.2, 1.3	
General Information (§ 354.4)			
§ 354.4(a)	Each Plan shall include the following general information: (a) An executive summary written in plain language that provides an overview of the Plan and description of groundwater conditions in the basin.	Executive Summary	
§ 354.4(b)	(b) A list of references and technical studies relied upon by the Agency in developing the Plan. Each Agency shall provide to the Department electronic copies of reports and other documents and materials cited as references that are not generally available to the public.	References	
§ 354.6(a)	When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information: The name and mailing address of the Agency.	§ 1.1	
§ 354.6(b)	The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.	§§ 1.1, 1.3	
§ 354.6(c)	The name and contact information, including the phone number, mailing address and electronic mail address, of the plan manager.	§ 1.1	
§ 354.6(d)	The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.	§ 1.3	Although the Submitted Alternative identifies various legal authorities authorizing the District to undertake groundwater management generally, it fails to acknowledge that its Submitted Alternative—a recently amended GWMP—does not fall within one of the three potential types of Alternative Plans identified in SGMA. Under SGMA, local agencies in medium- or high-priority basins (such as the Basin) are explicitly prohibited from adopting a new GWMP or amending an existing GWMP after January 1, 2015. (Wat. Code § 10750.1.) The District's Submitted Alternative, therefore is not eligible for

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
			acceptance by DWR as an Alternative Plan because it was amended in 2016.
§ 354.6(e)	An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.	§ 1.3	Although the Submitted Alternative identifies an annual budget for one of the District's numerous divisions, it does not provide any information as to an estimate of the cost of implementing the Submitted Alternative, or a general description of how the District plans to meet those costs.
Description of Plan Area (§ 354.8)			
§ 354.8(a)	<p>Each Plan shall include a description of the geographic areas covered, including the following information:</p> <p>(a) One or more maps of the basin that depict the following, as applicable:</p> <p>(1) The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.</p> <p>(2) Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.</p> <p>(3) Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.</p> <p>(4) Existing land use designations and the identification of water use sector and water source type.</p> <p>(5) The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.</p>	Figures 1-1, 2-1, 3-1, 4-8, 4-10	The Submitted Alternative does not provide maps depicting all of the details required by 23 CCR 354.8(a), including (1) existing land use designations and (2) the identification of water use sector and water source type and the density of wells per square mile.
§ 354.8(b)	(b) A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.	§§ 1.2, 2.1, 3.1	Although the Submitted Alternative includes a written description of the covered area, it does not include a description of all of the features required to be depicted on the maps pursuant to 23 CCR 354.8(a).
§ 354.8(c)	(c) Identification of existing water resource monitoring and management programs, and description of any such programs	Chapters 6, 7	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	the Agency plans to incorporate in its monitoring network or in development of its Plan.		
§ 354.8(d)	(d) A description of how existing water resource monitoring or management programs may limit operational flexibility in the basin, and how the Plan has been developed to adapt to those limits.	Chapter 6	
§ 354.8(e)	(e) A description of conjunctive use programs in the basin.	§§ 4.3, 6.1	
§ 354.8(f)	<p>(f) A plain language description of the land use elements or topic categories of applicable general plans that includes the following:</p> <p>(1) A summary of general plans and other land use plans governing the basin.</p> <p>(2) A general description of how implementation of existing land use plans may change water demands within the basin or affect the ability of the Agency to achieve sustainable groundwater management over the planning and implementation horizon, and how the Plan addresses those potential effects.</p> <p>(3) A general description of how implementation of the Plan may affect the water supply assumptions of relevant land use plans over the planning and implementation horizon.</p> <p>(4) A summary of the process for permitting new or replacement wells in the basin, including adopted standards in local well ordinances, zoning codes, and policies contained in adopted land use plans.</p> <p>(5) To the extent known, the Agency may include information regarding the implementation of land use plans outside the basin that could affect the ability of the Agency to achieve sustainable groundwater management.</p>	§§ 1.4, 5.3, 6.1, 6.2	The Submitted Alternative does not provide a description of all of the items required by 23 CCR354.8(f), including a summary of general plans and other land use plans overlying the Basin, how implementation of existing land use plans may change water demands within the Basin or affect the District's ability to achieve sustainable groundwater management over the planning and implementation horizon, and a general description of how its implementation may affect water supply assumptions of relevant land use plans over the planning and implementation horizon.
§ 354.8(g)	(g) A description of any of the additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.	§§ 1.4, 5.3, Chapter 6	
Notice and Communication (§ 354.10)			
§ 354.10(a)	<p>Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:</p> <p>(a) A description of the beneficial uses and users of</p>	Appendix A	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.		
§ 354.10(b)	(b) A list of public meetings at which the Plan was discussed or considered by the Agency.	Appendix A	
§ 354.10(c)	(c) Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.	Appendix A	
§ 354.10(d)	(d) A communication section of the Plan that includes the following: (1) An explanation of the Agency's decision-making process. (2) Identification of opportunities for public engagement and a discussion of how public input and response will be used. (3) A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin. (4) The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.	§§ 1.4, 1.5, Appendix A	Although the Submitted Alternative includes a section titled "Groundwater Management Partners and Stakeholders," this section does satisfy the requirement to provide an explanation of how the District will make decisions pertaining to groundwater management that affect Water Retailers, especially the largest water-producing retailers.
Article 5. Subarticle 2: Basin Setting			
Introduction to Basin Setting (§ 354.12)			
§ 354.12	This Subarticle describes the information about the physical setting and characteristics of the basin and current conditions of the basin that shall be part of each Plan, including the identification of data gaps and levels of uncertainty, which comprise the basin setting that serves as the basis for defining and assessing reasonable sustainable management criteria and projects and management actions. Information provided pursuant to this Subarticle shall be prepared by or under the direction of a professional geologist or professional engineer.	Chapters 2, 3	
Hydrogeologic Conceptual Model (§ 354.14)			
§ 354.14(a)	(a) Each Plan shall include a descriptive hydrogeologic conceptual model of the basin based on technical studies and qualified maps that characterizes the physical components and interaction of the surface water and groundwater systems in the basin.	Chapters 2, 3	
§ 354.14(b)	(b) The hydrogeologic conceptual model shall be summarized	Chapters 2, 3	Although the Submitted Alternative provides a general

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>in a written description that includes the following:</p> <p>(1) The regional geologic and structural setting of the basin including the immediate surrounding area, as necessary for geologic consistency.</p> <p>(2) Lateral basin boundaries, including major geologic features that significantly affect groundwater flow.</p> <p>(3) The definable bottom of the basin.</p> <p>(4) Principal aquifers and aquitards, including the following information:</p> <p>(A) Formation names, if defined.</p> <p>(B) Physical properties of aquifers and aquitards, including the vertical and lateral extent, hydraulic conductivity, and storativity, which may be based on existing technical studies or other best available information.</p> <p>(C) Structural properties of the basin that restrict groundwater flow within the principal aquifers, including information regarding stratigraphic changes, truncation of units, or other features.</p> <p>(D) General water quality of the principal aquifers, which may be based on information derived from existing technical studies or regulatory programs.</p> <p>(E) Identification of the primary use or uses of each aquifer, such as domestic, irrigation, or municipal water supply.</p> <p>(5) Identification of data gaps and uncertainty within the hydrogeologic conceptual Model.</p>		<p>description of the physical properties of the aquifer and aquitards found in the Basin, it does not include all of the required details, including a description of the aquifer's , hydraulic conductivity, and storativity. The Submitted Alternative also fails to identify the primary use or uses of each aquifer, such as domestic, irrigation, or municipal water supply or any potential data gaps and uncertainty within the hydrogeologic conceptual model.</p>
§ 354.14(c)	<p>(c) The hydrogeologic conceptual model shall be represented graphically by at least two scaled cross-sections that display the information required by this section and are sufficient to depict major stratigraphic and structural features in the basin.</p>	<p>Figures 2-4, 2-5, 3-4, 3-5, 3-6</p>	
§ 354.14(d)	<p>(d) Physical characteristics of the basin shall be represented on one or more maps that depict the following:</p> <p>(1) Topographic information derived from the U.S. Geological Survey or another reliable source.</p> <p>(2) Surficial geology derived from a qualified map including the locations of cross sections required by this Section.</p> <p>(3) Soil characteristics as described by the appropriate Natural Resources Conservation Service soil survey or other applicable studies.</p>	<p>Figures 1-3, 2-1, 2-2, 2-4, 2-5, 2-6, 2-14, 3-1, 3-2, 3-4, 3-5, 3-6</p>	<p>Although the Submitted Alternative includes various maps, it does not include a map depicting the Basin's topography, the Basin's soil characteristics, or the source and point of delivery for imported water supplies.</p>

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>(4) Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas, including significant active springs, seeps, and wetlands within or adjacent to the basin.</p> <p>(5) Surface water bodies that are significant to the management of the basin.</p> <p>(6) The source and point of delivery for imported water supplies.</p>		
Groundwater Conditions (§ 354.16)			
§ 354.16(a)	<p>Each Plan shall provide a description of current and historical groundwater conditions in the basin, including data from January 1, 2015, to current conditions, based on the best available information that includes the following:</p> <p>(a) Groundwater elevation data demonstrating flow directions, lateral and vertical gradients, and regional pumping patterns, including:</p> <p>(1) Groundwater elevation contour maps depicting the groundwater table or potentiometric surface associated with the current seasonal high and seasonal low for each principal aquifer within the basin.</p> <p>(2) Hydrographs depicting long-term groundwater elevations, historical highs and lows, and hydraulic gradients between principal aquifers.</p>	<p>§§ 2.2, 3.2, Appendix C</p> <p>Figures 2-8, 2-9, 2-10, 2-11, 3-8, 3-9, 3-10</p>	
§ 354.16(b)	<p>(b) A graph depicting estimates of the change in groundwater in storage, based on data, demonstrating the annual and cumulative change in the volume of groundwater in storage between seasonal high groundwater conditions, including the annual groundwater use and water year type.</p>	<p>§§ 4.4</p> <p>Figures 4-9, 4-10, 4-13</p>	
§ 354.16(c)	<p>(c) Seawater intrusion conditions in the basin, including maps and cross- sections of the seawater intrusion front for each principal aquifer.</p>	<p>§ 2.2</p> <p>Figure 2-21</p>	<p>Although the Submitted Alternative provides a map depicting the extent of sea water intrusion in the principal aquifer, it does not include a cross section, as is also required.</p>
§ 354.16(d)	<p>(d) Groundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and map of the location of known groundwater contamination sites and plumes.</p>	<p>§§ 2.2, 3.2, 6.2</p> <p>Figures 6-1, 6-2</p>	
§ 354.16(e)	<p>(e) The extent, cumulative total, and annual rate of land subsidence, including maps depicting total subsidence,</p>	<p>§ 2.2</p>	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	utilizing data available from the Department, as specified in Section 353.2, or the best available information.	Figure 2-13	
§ 354.16(f)	(f) Identification of interconnected surface water systems within the basin and an estimate of the quantity and timing of depletions of those systems, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	§§ 2.2, 3.2	Although the Submitted Alternative identifies interconnected surface water systems within the Basin, it does not provide an estimate of the quantity and timing of those systems as required.
§ 354.16(g)	(g) Identification of groundwater dependent ecosystems within the basin, utilizing data available from the Department as specified in Section 353.2, or the best available information.	§§ 2.2, 3.2	
Water Budget (§ 354.18)			
§ 354.18(a)	(a) Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored. Water budget information shall be reported in tabular and graphical form.	§§ 4.4, 4.5	
§ 354.18(b)	(b) The water budget shall quantify the following, either through direct measurements or estimates based on data: (1) Total surface water entering and leaving a basin by water source type. (2) Inflow to the groundwater system by water source type, including subsurface groundwater inflow and infiltration of precipitation, applied water, and surface water systems, such as lakes, streams, rivers, canals, springs and conveyance systems. (3) Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow. (4) The change in the annual volume of groundwater in storage between seasonal high conditions. (5) If overdraft conditions occur, as defined in Bulletin 118, the water budget shall include a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions. (6) The water year type associated with the annual supply,	§ 4.4	The Submitted Alternative does not identify the water year type associated with the annual supply, demand, and change in groundwater stored.

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>demand, and change in groundwater stored.</p> <p>(7) An estimate of sustainable yield for the basin.</p>		
§ 354.18(c) (1) and (2)	<p>(c) Each Plan shall quantify the current, historical, and projected water budget for the basin as follows:</p> <p>(1) Current water budget information shall quantify current inflows and outflows for the basin using the most recent hydrology, water supply, water demand, and land use information.</p> <p>(2) Historical water budget information shall be used to evaluate availability or reliability of past surface water supply deliveries and aquifer response to water supply and demand trends relative to water year type. The historical water budget shall include the following:</p> <p>(A) A quantitative evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical planned versus actual annual surface water deliveries, by surface water source and water year type, and based on the most recent ten years of surface water supply information.</p> <p>(B) A quantitative assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10 years, or as is sufficient to calibrate and reduce the uncertainty of the tools and methods used to estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.</p> <p>(C) A description of how historical conditions concerning hydrology, water demand, and surface water supply availability or reliability have impacted the ability of the Agency to operate the basin within sustainable yield. Basin hydrology may be characterized and evaluated using water year type.</p>	§§ 4.4, 4.5	<p>Although the Submitted Alternative includes a historical groundwater budget identifying quantifies the average inflows and outflows from 2003 through 2012, it does not quantify this information for current inflows and outflows. The Submitted Alternative's historical water budget also does not include an evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical versus actual annual surface water deliveries.</p>
§ 354.18(c) (3)	<p>(3) Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget components. The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning</p>	§ 4.5	<p>The Submitted Alternative does not include a projected water budget.</p>

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon:</p> <p>(A) Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.</p> <p>(B) Projected water demand shall utilize the most recent land use, evapotranspiration, and crop coefficient information as the baseline condition for estimating future water demand. The projected water demand information shall also be applied as the baseline condition used to evaluate future scenarios of water demand uncertainty associated with projected changes in local land use planning, population growth, and climate.</p> <p>(C) Projected surface water supply shall utilize the most recent water supply information as the baseline condition for estimating future surface water supply. The projected surface water supply shall also be applied as the baseline condition used to evaluate future scenarios of surface water supply availability and reliability as a function of the historical surface water supply identified in Section 354.18(c)(2)(A), and the projected changes in local land use planning, population growth, and climate.</p>		
§ 354.18(d)	<p>(d) The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget:</p> <p>(1) Historical water budget information for mean annual temperature, mean annual precipitation, water year type, and land use.</p> <p>(2) Current water budget information for temperature, water year type, evapotranspiration, and land use.</p> <p>(3) Projected water budget information for population, population growth, climate change, and sea level rise.</p>	§§ 4.4, 4.5, 6.1	The Submitted Alternative does not identify what information it relies on to develop the water budget.
§ 354.18(e)	(e) Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin	§§ 4.4, 4.5, 7.6	Although the Submitted Alternative provides a historical water budget, the Submitted Alternative does not identify what

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions.		information it relies on to develop the water budget. The water budget included in the Submitted Alternative also does not provide any insight into—or mention—the Basin’s historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow.
§ 354.18(f)	(f) The Department shall provide the California Central Valley Groundwater- Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different groundwater and surface water model, pursuant to Section 352.4.	§7.6	
Management Areas (§ 354.20)			
§ 354.20(a)	(a) Each Agency may define one or more management areas within a basin if the Agency has determined that creation of management areas will facilitate implementation of the Plan. Management areas may define different minimum thresholds and be operated to different measurable objectives than the basin at large, provided that undesirable results are defined consistently throughout the basin.	Executive Summary, § 2.1	
§ 354.20(b)	(b) A basin that includes one or more management areas shall describe the following in the Plan: (1) The reason for the creation of each management area. (2) The minimum thresholds and measurable objectives established for each management area, and an explanation of the rationale for selecting those values, if different from the basin at large. (3) The level of monitoring and analysis appropriate for each management area. (4) An explanation of how the management area can operate under different minimum thresholds and measurable objectives without causing undesirable results outside the management area, if applicable.	Executive Summary, § 5.4	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
§ 354.20(c)	(c) If a Plan includes one or more management areas, the Plan shall include descriptions, maps, and other information required by this Subarticle sufficient to describe conditions in those areas.	Chapter 2	
Article 5. Subarticle 3: Sustainable Management Criteria			
Introduction to Sustainable Management Criteria (§ 354.22)			
§ 354.22	This Subarticle describes criteria by which an Agency defines conditions in its Plan that constitute sustainable groundwater management for the basin, including the process by which the Agency shall characterize undesirable results, and establish minimum thresholds and measurable objectives for each applicable sustainability indicator.	Chapter 5	
Sustainability Goal (§ 354.24)			
§ 354.24	Each Agency shall establish in its Plan a sustainability goal for the basin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline. The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon.	Chapters 5, 6, 8	Although the Submitted Alternative establishes two sustainability goals for the basin and discusses the measures that will be implemented to meet to ensure that the Basin will be operated within its sustainable yield, it does not provide a timeline for meeting the sustainability goals or explain how the sustainability goals are likely to be achieved within 20 years and maintained through the planning and implementation horizon.
Undesirable Results (§ 354.26)			
§ 354.26(a)	(a) Each Agency shall describe in its Plan the processes and criteria relied upon to define undesirable results applicable to the basin. Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.	Chapters 2, 3, 5	Although the Submitted Alternative contains—and discusses—outcome measures (e.g., performance measures), <i>it does not define undesirable results or the process and/or criteria relied upon to define them.</i>
§ 354.26(b)	(b) The description of undesirable results shall include the following: (1) The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting, and other data or models as appropriate.	Chapters 2, 3, 5	<i>The Submitted Alternative does not define undesirable results, discuss groundwater conditions from which they would occur, or discuss the potential effects of undesirable results on the Basin's beneficial users and uses.</i>

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>(2) The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.</p> <p>(3) Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results.</p>		
§ 354.26(c)	(c) The Agency may need to evaluate multiple minimum thresholds to determine whether an undesirable result is occurring in the basin. The determination that undesirable results are occurring may depend upon measurements from multiple monitoring sites, rather than a single monitoring site.	§ 5.4	The Submitted Alternative does not define undesirable results.
§ 354.26(d)	(d) An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.	Chapters 2, 3 § 5.4	The Submitted Alternative fails to demonstrate that one or more sustainability indicators are not present and are not likely to occur in a basin and therefore is required to establish criteria for undesirable results.
Minimum Thresholds (§ 354.28)			
§ 354.28(a)	(a) Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.	§§ 2.2, 3.2, 5.4	The Submitted Alternative establishes Basin-wide quantitative thresholds (which it refers to as outcome measures) for 4 of the 6 SGMA-defined undesirable results and does not demonstrate why the other two undesirables results are not present in the Basin and thus do not need to be addressed.
§ 354.28(b)	<p>(b) The description of minimum thresholds shall include the following:</p> <p>(1) The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the basin setting.</p> <p>(2) The relationship between the minimum thresholds for each</p>	§§ 2.2, 3.2, 5.4, 7.2	The Submitted Alternative does not describe how the minimum thresholds in each sub-basin have been selected to avoid causing undesirable results in the adjacent sub-basin. The Submitted Alternative also only describes how the minimum thresholds may affect the District, not how they may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.</p> <p>(3) How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.</p> <p>(4) How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.</p> <p>(5) How state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.</p> <p>(6) How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.</p>		
§ 354.28(c)(1)	<p>(c) Minimum thresholds for each sustainability indicator shall be defined as follows:</p> <p>(1) Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results. Minimum thresholds for chronic lowering of groundwater levels shall be supported by the following:</p> <p>(A) The rate of groundwater elevation decline based on historical trends, water year type, and projected water use in the basin.</p> <p>(B) Potential effects on other sustainability indicators.</p>	§§ 2.2, 3.2, 5.4	The Submitted Alternative does not define a minimum threshold for the chronic lowering of groundwater levels, nor demonstrate why a minimum threshold is unnecessary or inapplicable for this sustainability indicator.
§ 354.28(c)(2)	<p>(2) Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.</p>	§§ 2.2, 3.2, 5.4	Although the Submitted Alternative defines a minimum threshold for the reduction in groundwater storage, it is unclear on what information this threshold is based. Specifically, the Submitted Alternative does not explain the relationship between the minimum threshold for the reduction in groundwater storage and the Basin's sustainable yield, calculated based on historical trends, water year type, and projected water use.
§ 354.28(c)(3)	(3) Seawater Intrusion. The minimum threshold for seawater	§ 2.2, 5.4	The minimum threshold for seawater intrusion set forth in the

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>intrusion shall be defined by a chloride concentration isocontour for each principal aquifer where seawater intrusion may lead to undesirable results. Minimum thresholds for seawater intrusion shall be supported by the following:</p> <p>(A) Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold and measurable objective for each principal aquifer.</p> <p>(B) A description of how the seawater intrusion minimum threshold considers the effects of current and projected sea levels.</p>		Submitted Alternative (1) is not defined by a chloride concentration isocontour, (2) does not include maps and cross-sections of the chloride concentration isocontour to support the minimum threshold for seawater intrusion, and (3) does not consider the effects of current and projected sea levels.
§ 354.28(c)(4)	<p>(4) Degraded Water Quality. The minimum threshold for degraded water quality shall be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results. The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin. In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.</p>	§§ 2.2, 3.2, 5.4	
§ 354.28(c)(5)	<p>(5) Land Subsidence. The minimum threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results. Minimum thresholds for land subsidence shall be supported by the following:</p> <p>(A) Identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how the Agency has determined and considered those uses and interests, and the Agency's rationale for establishing minimum thresholds in light of those effects.</p> <p>(B) Maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum threshold and measurable objectives.</p>	§ 2.2, 5.4	Although the Submitted Alternative contains maps and graphs depicting the historical extent and rate of land subsidence in the Basin, it does not include a visual depiction of the minimum threshold for land subsidence, as required.
§ 354.28(c)(6)	<p>(6) Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall</p>	§§ 2.2, 2.3	The Submitted Alternative does define a minimum threshold for depletions of interconnected surface water, nor demonstrate

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:</p> <p>(A) The location, quantity, and timing of depletions of interconnected surface water.</p> <p>(B) A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph.</p>		why a minimum threshold is unnecessary or inapplicable for this sustainability indicator.
§ 354.28(d)	(d) An Agency may establish a representative minimum threshold for groundwater elevation to serve as the value for multiple sustainability indicators, where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual minimum thresholds as supported by adequate evidence.	N/A	
§ 354.28(e)	(e) An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish minimum thresholds related to those sustainability indicators.	Chapters 2, 3, 5	The Submitted Alternative fails to demonstrate that one or more sustainability indicators are not present and/or are not likely to occur in the Basin and therefore is required to establish minimum thresholds for each of the 6 SGMA-identified sustainability indicators.
Measurable Objectives (§ 354.30)			
§ 354.30(a)	(a) Each Agency shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon.	Executive Summary, Chapter 8	Although the Submitted Alternative contains "Groundwater Management Plan Recommendations," which will be evaluated during pursuant to the evaluation schedule set forth in SGMA, the Submitted Alternative does not discuss "measurable objectives" or describe how the basin's sustainability goal will be met within 20 years.
§ 354.30(b)	(b) Measurable objectives shall be established for each sustainability indicator, based on quantitative values using the same metrics and monitoring sites as are used to define the minimum thresholds.	N/A	The Submitted Alternative does not establish quantitative measurable objectives for each sustainability indicator.
§ 354.30(c)	(c) Measurable objectives shall provide a reasonable margin of	N/A	The Submitted Alternative does not establish quantitative

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.		measurable objectives.
§ 354.30(d)	(d) An Agency may establish a representative measurable objective for groundwater elevation to serve as the value for multiple sustainability indicators where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual measurable objectives as supported by adequate evidence.	N/A	
§ 354.30(e)	(e) Each Plan shall describe a reasonable path to achieve the sustainability goal for the basin within 20 years of Plan implementation, including a description of interim milestones for each relevant sustainability indicator, using the same metric as the measurable objective, in increments of five years. The description shall explain how the Plan is likely to maintain sustainable groundwater management over the planning and implementation horizon.	Executive Summary, Chapter 8	Although the Submitted Alternative contains “Groundwater Management Plan Recommendations,” to maintain the basin’s groundwater resources, there is no description of interim milestones or explanation of how the Submitted Alternative is likely to maintain sustainable groundwater management over the planning and implementation horizon.
§ 354.30(f)	(f) Each Plan may include measurable objectives and interim milestones for additional Plan elements described in Water Code Section 10727.4 where the Agency determines such measures are appropriate for sustainable groundwater management in the basin.	N/A	
§ 354.30(g)	(g) An Agency may establish measurable objectives that exceed the reasonable margin of operational flexibility for the purpose of improving overall conditions in the basin, but failure to achieve those objectives shall not be grounds for a finding of inadequacy of the Plan.	N/A	
Article 5. Subarticle 4: Monitoring Networks			
Introduction to Monitoring Networks (§ 354.32)			
§ 354.32	This Subarticle describes the monitoring network that shall be developed for each basin, including monitoring objectives, monitoring protocols, and data reporting requirements. The monitoring network shall promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through	Chapter 7	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
implementation of the Plan.			
Monitoring Network (§ 354.34)			
§ 354.34(a)	(a) Each Agency shall develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation.	§§ 7.1, 7.2, 7.3, 7.4	
§ 354.34(b)	(b) Each Plan shall include a description of the monitoring network objectives for the basin, including an explanation of how the network will be developed and implemented to monitor groundwater and related surface conditions, and the interconnection of surface water and groundwater, with sufficient temporal frequency and spatial density to evaluate the affects and effectiveness of Plan implementation. The monitoring network objectives shall be implemented to accomplish the following: (1) Demonstrate progress toward achieving measurable objectives described in the Plan. (2) Monitor impacts to the beneficial uses or users of groundwater. (3) Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds. (4) Quantify annual changes in water budget components.	§§ 7.1, 7.2, 7.3, 7.4	
§ 354.34(c)(1)	(c) Each monitoring network shall be designed to accomplish the following for each sustainability indicator: (1) Chronic Lowering of Groundwater Levels. Demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features by the following methods: (A) A sufficient density of monitoring wells to collect representative measurements through depth-discrete perforated intervals to characterize the groundwater table or potentiometric surface for each principal aquifer. (B) Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions.	§ 7.1	Although the monitoring network described in the Submitted Alternative monitors groundwater levels throughout the Basin, it does not appear to be designed to monitor all of the required elements, including groundwater flow directions and the hydraulic gradients and depletions of interconnected surface waters.

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
§ 354.34(c)(2)	(2) Reduction of Groundwater Storage. Provide an estimate of the change in annual groundwater in storage.	§ 7.1	The Submitted Alternative provides an estimate of the change in annual groundwater storage through modeling, not through information gained from the monitoring network.
§ 354.34(c)(3)	(3) Seawater Intrusion. Monitor seawater intrusion using chloride concentrations, or other measurements convertible to chloride concentrations, so that the current and projected rate and extent of seawater intrusion for each applicable principal aquifer may be calculated.	§ 7.3	
§ 354.34(c)(4)	(4) Degraded Water Quality. Collect sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators, as determined by the Agency, to address known water quality issues.	§ 7.3	
§ 354.34(c)(5)	(5) Land Subsidence. Identify the rate and extent of land subsidence, which may be measured by extensometers, surveying, remote sensing technology, or other appropriate method.	§ 7.2	
§ 354.34(c)(6)	(6) Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following: (A) Flow conditions including surface water discharge, surface water head, and baseflow contribution. (B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable. (C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction. (D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.	§ 7.4	Although the monitoring network described in the Submitted Alternative includes monitoring protocols for surface water generally, there is not discussion regarding its ability to monitor for potential depletions of interconnected surface water as required.
§ 354.34(d)	(d) The monitoring network shall be designed to ensure adequate coverage of sustainability indicators. If management areas are established, the quantity and density of monitoring	Chapter 7	The monitoring network described in the Submitted Alternative covers 5 of the 6 SGMA-defined sustainability indicators; it does not provide data on changes to groundwater storage within

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	sites in those areas shall be sufficient to evaluate conditions of the basin setting and sustainable management criteria specific to that area.		the Basin.
§ 354.34(f)	<p>(f) The Agency shall determine the density of monitoring sites and frequency of measurements required to demonstrate short-term, seasonal, and long-term trends based upon the following factors:</p> <p>(1) Amount of current and projected groundwater use.</p> <p>(2) Aquifer characteristics, including confined or unconfined aquifer conditions, or other physical characteristics that affect groundwater flow.</p> <p>(3) Impacts to beneficial uses and users of groundwater and land uses and property interests affected by groundwater production, and adjacent basins that could affect the ability of that basin to meet the sustainability goal.</p> <p>(4) Whether the Agency has adequate long-term existing monitoring results or other technical information to demonstrate an understanding of aquifer response.</p>	Chapter 7	
§ 354.34(g)	<p>(g) Each Plan shall describe the following information about the monitoring network:</p> <p>(1) Scientific rationale for the monitoring site selection process.</p> <p>(2) Consistency with data and reporting standards described in Section 352.4. If a site is not consistent with those standards, the Plan shall explain the necessity of the site to the monitoring network, and how any variation from the standards will not affect the usefulness of the results obtained.</p> <p>(3) For each sustainability indicator, the quantitative values for the minimum threshold, measurable objective, and interim milestones that will be measured at each monitoring site or representative monitoring sites established pursuant to Section 354.36.</p>	Chapter 7	Although the Submitted Alternative provides a general description of the District's monitoring network, the description is silent as to numerous required details, including the scientific rationale for the monitoring site selection, consistency with data and reporting standards, the quantitative values to be measured at each monitoring site, and the District's monitoring protocols, technical standards, and data collection methods.
§ 354.34(h)	(h) The location and type of each monitoring site within the basin displayed on a map, and reported in tabular format, including information regarding the monitoring site type, frequency of measurement, and the purposes for which the monitoring site is being used.	Chapter 7, Appendix E	The Submitted Alternative does not identify the location and type of monitoring site in tabular format, as required.
§ 354.34(i)	(i) The monitoring protocols developed by each Agency shall	Chapter 7	The Submitted Alternative does not include a description of the

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	include a description of technical standards, data collection methods, and other procedures or protocols pursuant to Water Code Section 10727.2(f) for monitoring sites or other data collection facilities to ensure that the monitoring network utilizes comparable data and methodologies.		District's monitoring protocols, technical standards, and data collection methods.
§ 354.34(j)	(j) An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish a monitoring network related to those sustainability indicators.	Chapters 2, 3, 5	The Submitted Alternative fails to demonstrate that one or more undesirable results are not present and/or are not likely to occur in the Basin and therefore is required to establish a monitoring network related to each of the 6 sustainability indicators.
Representative Monitoring (§ 354.36)			
§ 354.36(a)	Each Agency may designate a subset of monitoring sites as representative of conditions in the basin or an area of the basin, as follows: (a) Representative monitoring sites may be designated by the Agency as the point at which sustainability indicators are monitored, and for which quantitative values for minimum thresholds, measurable objectives, and interim milestones are defined.	Chapters 5, 7	The Submitted Alternative does not describe or designate representative monitoring sites.
§ 354.36(b)	(b) Groundwater elevations may be used as a proxy for monitoring other sustainability indicators if the Agency demonstrates the following: (1) Significant correlation exists between groundwater elevations and the sustainability indicators for which groundwater elevation measurements serve as a proxy. (2) Measurable objectives established for groundwater elevation shall include a reasonable margin of operational flexibility taking into consideration the basin setting to avoid undesirable results for the sustainability indicators for which groundwater elevation measurements serve as a proxy.	Chapters 5, 7	The Submitted Alternative does not address using groundwater elevations as a proxy for monitoring other sustainability indicators.
§ 354.36(c)	(c) The designation of a representative monitoring site shall be supported by adequate evidence demonstrating that the site reflects general conditions in the area.	Chapters 5, 7	The Submitted Alternative does not describe or designate representative monitoring sites.
Assessment and Improvement of Monitoring Network (§ 354.38)			
§ 354.38(a)	(a) Each Agency shall review the monitoring network and include an evaluation in the Plan and each five-year assessment, including a determination of uncertainty and	Chapter 7	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal for the basin.		
§ 354.38(b)	(b) Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites at a sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy minimum standards of the monitoring network adopted by the Agency.	N/A	The Submitted Alternative fails to identify data gaps in the District's monitoring program. As noted in our comments above, however, there are many deficiencies in the District's current monitoring program, not the least of which are its current inability to monitor for required groundwater level elements, changes in groundwater storage and depletions of interconnected surface water.
§ 354.38(c)	(c) If the monitoring network contains data gaps, the Plan shall include a description of the following: (1) The location and reason for data gaps in the monitoring network. (2) Local issues and circumstances that limit or prevent monitoring.	N/A	The Submitted Alternative fails to identify obvious data gaps in the District's monitoring network.
§ 354.38(d)	(d) Each Agency shall describe steps that will be taken to fill data gaps before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.	N/A	The Submitted Alternative fails to identify obvious data gaps in the District's monitoring network.
Introduction to Projects and Management Actions (§ 354.42)			
§ 354.42	This Subarticle describes the criteria for projects and management actions to be included in a Plan to meet the sustainability goal for the basin in a manner that can be maintained over the planning and implementation horizon.	Chapter 6	
Projects and Management Actions (§ 354.44)			
§ 354.44(a)	(a) Each Plan shall include a description of the projects and management actions the Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.	Chapters 6, 8	
§ 354.44(b) (1) and (2)	(b) Each Plan shall include a description of the projects and management actions that include the following: (1) A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of	Chapters 6, 8	Although the Submitted Alternative identifies programs and/or management actions to maintain a reliable water supply in the Basin, the programs and/or management actions are described very generally. The Submitted Alternative does not include the following required descriptions: the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	<p>minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:</p> <p>(A) A description of the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.</p> <p>(B) The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.</p> <p>(2) If overdraft conditions are identified through the analysis required by Section 354.18, the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.</p>		<p>projects or management actions, the process by which the District shall determine that conditions requiring the implementation of particular projects or management actions have occurred, and how the District will provide notice to the public and other agencies and stakeholders that such programs and/or management actions will be taken.</p>
§ 354.44(b) (3) to (8)	<p>(3) A summary of the permitting and regulatory process required for each project and management action.</p> <p>(4) The status of each project and management action, including a time-table for expected initiation and completion, and the accrual of expected benefits.</p> <p>(5) An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.</p> <p>(6) An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.</p> <p>(7) A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.</p> <p>(8) A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.</p>	Chapter 6	<p>The Submitted Alternative does not include the following required descriptions: the status of each program and/or management action (including a time-table for expected initiation and completion, and the accrual of expected benefits), and description of the estimated cost for each project and management action and a description of how the District plans to meet those costs.</p>
§ 354.44(b) (9)	<p>(9) A description of the management of groundwater extractions and recharge to ensure that chronic lowering of</p>	Chapters 1, 4, 6	

DWR Emergency Regulations Section	Requirement	GWMP Location	SJWC Comments
	groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.		
§ 354.44(c)	(c) Projects and management actions shall be supported by best available information and best available science.	Chapters 1, 4, 6	
Article 7 Annual Reports and Periodic Evaluations by the Agency			
§ 356.2	Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan.	Chapter 7, Appendix C	
§ 356.4	Each agency shall evaluate its Plan at least every five years and whenever the Plan is amended, and provide a written assessment to the Department. The assessment shall describe whether the Plan implementation, including implementation of projects and management actions, are meeting the sustainability goal in the basin, and shall include components (a) through (k) as documented in the Emergency GSP Regulations.	Executive Summary, Chapter 8	

Via DWR SGMA Portal and Email (Trevor.Joseph@water.ca.gov)

Trevor Joseph
SGM Section Chief
Department of Water Resources
901 P Street, Room 213
P.O. Box 942836
Sacramento, CA 94236

February 17, 2017

Re: Santa Clara Valley Water District's SGMA Alternative Submission

Dear Mr. Joseph,

Stanford University ("University"), an overlying groundwater rights holder in the Santa Clara Subbasin ("Subbasin"), appreciates the opportunity to provide comments on Santa Clara Valley Water District's ("District") alternative submission under the Sustainable Groundwater Management Act ("SGMA") for management of the Subbasin. As a stakeholder within the District's jurisdictional boundaries that has for many years been actively involved in groundwater management efforts in the Subbasin, the University has concerns with the District's alternative submission and related efforts to comply with and implement SGMA in the Subbasin. For the reasons set forth below, the University requests that the Department of Water Resources ("DWR") reject the District's alternative submission as being non-compliant with SGMA. The District must develop a groundwater sustainability plan ("GSP") with input from the numerous stakeholders in the Subbasin and ensure that the GSP includes the necessary elements and information required by SGMA.

Water Code section 10733.6 allows a local agency to submit an alternative to comply with SGMA in place of submitting a GSP. (Wat. Code § 10733.6 (a).) Alternatives may be any of the following: (1) a groundwater management plan developed under Water Code sections 10750 *et seq.* or other law authorizing groundwater management; (2) groundwater management pursuant to an adjudication action; and (3) an analysis demonstrating that the basin has been operated within its sustainable yield over a period of at least 10-years. (*Id.* at § 10733.6(b).) To be adequate under SGMA, an alternative must satisfy the objectives of SGMA and address various topics set forth in DWR's Groundwater Sustainability Plan Emergency Regulations ("Regulations," 23 Cal. Code Regs. §§ 350 *et seq.*). (See, Wat. Code § 10733.6(a), 23 Cal. Code Regs. §§ 350, 350.2, 358.2, 358.6.)

The District submitted its 2016 Groundwater Management Plan ("Plan") as an alternative under SGMA. The Plan relies on the District's existing asserted authority under the Santa Clara Valley Water District Act but fails to meet the requirements of SGMA in numerous ways. Specifically, the Plan fails to: (1) identify and recognize water right holders in the Subbasin and provide for measures to ensure sustainable groundwater management in a way that protects water right holders; and (2) address SGMA authorities and explain the process for how the District will exercise those authorities in a lawful manner to sustainably manage groundwater in the Subbasin.

1. The Plan fails to identify and recognize water right holders in the Subbasin and provide for measures to ensure sustainable groundwater management in a way that protects water right holders.

A primary objective of SGMA is to sustainably manage groundwater basins *in a manner that protects water rights, including groundwater rights*. This objective is evident in the provisions of SGMA that require local agencies to identify and recognize groundwater right holders, as well as those that describe the protected nature of water rights. (See, Water Code §§ 10720.1(b) [“It is the intent of the Legislature to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater”], 10720.5 (a), (b) [stating that “[n]othing in [SGMA] modifies rights or priorities to use or store groundwater consistent with Section 2 of Article X of the California Constitution” and that “[n]othing in SGMA, or in any groundwater management plan adopted pursuant to [SGMA], determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights”], 10723.2 [“The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater . . .”], 10726.8 (b) [“Nothing in [SGMA] shall be construed as authorizing a local agency to make a binding determination of the water rights of any person or entity”].) DWR’s Regulations acknowledge SGMA’s requirement that local agencies must recognize existing groundwater rights holders. (See, 23 Cal. Code Regs. §§ 354.10(a) [A GSP or alternative must include “[a] description of the beneficial uses and users of groundwater in the basin”], 355.4(b)(4) [noting that DWR, in evaluating whether a GSP or alternative is likely to achieve the sustainability goal for a basin, must consider “[w]hether the interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests potentially affected by the use of groundwater in the basin, have been considered”].) Thus, the District’s Plan must identify and recognize groundwater right holders in the Subbasin and describe how groundwater management will occur in a manner that respects their rights.

Here, the Plan does not identify and recognize groundwater right holders in the Subbasin, nor does it describe how the District will implement management actions in a manner that respects water rights. The District cites generally to Appendix A of the Plan as the location that includes a description of the beneficial uses and users of groundwater in the Subbasin. (Plan, Appendix B [titled “Demonstration of Functional Equivalency”], p. B-5 [specifying the location of the Plan that includes the information required by Section 354.10 of the Regulations].) However, Appendix A does not include any identification or description of the beneficial groundwater users and right holders in the Subbasin, and no such identification and description is set forth elsewhere in the Plan. The Plan accordingly also does not include any description of how groundwater management actions will be implemented in a manner that respects water rights. Therefore, the Plan is substantially deficient and fails to satisfy the objectives of SGMA.

2. The Plan fails to address SGMA authorities and explain how the District will exercise those authorities in a lawful manner to sustainably manage groundwater in the Subbasin.

While the Plan generally discusses the authorities provided to local agencies under SGMA, it does not address how the District will implement those authorities to sustainably manage groundwater in the Subbasin in a manner that respects water rights. (See, Plan, § 1.4.2.2 at pp. 1-11→1-13.) Instead, the Plan acknowledges that critical SGMA elements are left entirely unaddressed and explains that the District will evaluate SGMA authorities at a later date to determine how they will be exercised, including triggers for

exercise and implementation mechanisms. (See, *Id.*, § 8.3 at p. 8-5.) This approach violates SGMA for a number of reasons.

Initially, certain SGMA authorities are expressly required to be implemented and exercised through a local agency's SGMA governance document (i.e., GSP or alternative).

(a) A groundwater sustainability agency may require through its groundwater sustainability plan that the use of every groundwater extraction facility within the management area of the groundwater sustainability agency be measured by a water-measuring device satisfactory to the groundwater sustainability agency.

...

(c) A groundwater sustainability agency may require, through its groundwater sustainability plan, that the owner or operator of a groundwater extraction facility within the groundwater sustainability agency file an annual statement with the groundwater sustainability agency setting forth the total extraction in acre-feet of groundwater from the facility during the previous water year.

(Wat. Code § 10725.8 [emphasis added].) Thus, these authorities must be exercised through the Plan and not developed at a later time through a separate process that does not include DWR's review and approval.

Similarly, to the extent that a local agency intends to exercise SGMA authorities as part of management actions to manage a basin and/or address future conditions in a basin, DWR's Regulations require that a GSP or alternative include a description of the authorities and the management actions to be implemented pursuant thereto.

(a) Each Plan shall include a description of the projects and management actions the Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.

(b) Each Plan shall include a description of the projects and management actions that include the following:

(1) A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:

(A) A description of the circumstances under which projects or

management actions shall be implemented, the criteria that would trigger implementation and termination of projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.

(B) The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.

(2) If overdraft conditions are identified through the analysis required by Section 354.18, the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.

(3) A summary of the permitting and regulatory process required for each project and management action.

(4) The status of each project and management action, including a timetable for expected initiation and completion, and the accrual of expected benefits.

(5) An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.

(6) An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.

(7) A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.

(8) A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.

(9) A description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.

(c) Projects and management actions shall be supported by best available information and best available science.

(d) An Agency shall take into account the level of uncertainty associated with the basin setting when developing projects or management actions.

(23 Cal. Code Regs. § 354.44 [emphasis added].) Thus, an alternative must not only describe the authority supporting a management action, but the management action itself. This important substantive and procedural information cannot be left for a later date to be developed outside of DWR's review process. If the District intends to exercise authorities under SGMA as part of its groundwater management in the Subbasin, it must include the required information in the alternative for DWR to evaluate. Because the District failed to take such action, the Plan is substantially deficient and any effort by the District to later exercise SGMA authorities would be unlawful and invalid.

Finally, SGMA authorities and the manner in which they will be exercised must be addressed in a GSP or alternative because their exercise directly relates to the SGMA objective of protecting water rights (e.g., they may unlawfully infringe on groundwater rights). For example, a local agency that exercises SGMA authorities to restrict groundwater extraction (see, Water Code § 10726.4) or impose fees on groundwater extraction (see, *id.* at §§ 10730, 10730.2) could exercise those authorities in a manner that unlawfully infringes upon groundwater rights. As such, the exercise of those authorities must be detailed in the agency's groundwater management governance document (i.e., GSP or alternative) that DWR is required to review and approve in order to ensure that the local agency will sustainably manage groundwater basins in a manner that protects water rights - a primary objective of SGMA. This process is critically important with respect to the District and the Plan for three primary reasons. First, unlike other basins where groundwater sustainability agencies are being formed through collaborative processes that involve multiple agencies and stakeholders, the District was statutorily designated as the exclusive agency for the Subbasin (see, Wat. Code § 10723(m)) and will largely manage the Subbasin through unilaterally imposed management actions. Thus, groundwater right holders in the Subbasin will be left with little ability to provide meaningful input into the SGMA implementation actions in the Subbasin following approval of the District's alternative. Second, unlike most other basins where local agencies are pursuing the longer and more involved process of developing a GSP (due either by January 31, 2020 or January 31, 2022), the District developed and submitted an alternative in a truncated time period to meet SGMA's January 1, 2017 deadline. This rushed submission left the Plan deficient in many ways, as described herein. Third, the District's exercise of groundwater management authority (under the Santa Clara Valley Water District Act) is the subject of active litigation and legal disputes. Approval of a SGMA alternative that entirely fails to address the various and significant SGMA authorities and related management actions sets the Subbasin up for continued and additional disputes. Such disputes would be reduced or entirely avoided if the District develops a SGMA compliant GSP with input from stakeholders.

For the reasons discussed above, the University respectfully requests that DWR reject the District's Plan as an alternative under SGMA. The District must develop and submit a SGMA compliant GSP.

Thank you for your attention to this matter.

Sincerely,



Tom W. Zigterman
Director – Water Resources & Civil Infrastructure

c: Robert E. Donlan – Ellison, Schneider, Harris & Donlan
John L. Varela – SCVWD Board of Directors (jvarela@valleywater.org)
Barbara Keegan – SCVWD Board of Directors (bkeegan@valleywater.org)
Richard P. Santos – SCVWD Board of Directors (rsantos@valleywater.org)
Linda J. LeZotte – SCVWD Board of Directors (llezotte@valleywater.org)
Nai Hsueh – SCVWD Board of Directors (nhsueh@valleywater.org)
Tony Estremera – SCVWD Board of Directors (testremera@valleywater.org)
Gary Kremen – SCVWD Board of Directors (gkremen@valleywater.org)
Norma Camacho – SCVWD Interim CEO (ncamacho@valleywater.org)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

February 17, 2017

William Croyle, Acting Director
California Department of Water Resources
1416 9th Street
Sacramento, California 95814

Dear Mr. Croyle:

The following transmits comments from NOAA's National Marine Fisheries Service (NMFS) regarding Santa Clara Valley Water District's (SCVWD) December 21, 2016, submission of the 2016 Groundwater Management Plan (2016 GWMP) for the Santa Clara and Llagas groundwater subbasins to the California Department of Water Resources (DWR) pursuant to the Sustainable Groundwater Management Act (SGMA) of 2014 (Part 2.74 of Division 6 of the California Water Code) and subsequent Emergency Regulations (CA Water Code 10733.2 and 10733.4). SGMA established a process which allows a local Groundwater Sustainability Agency (GSA) governing a medium or high priority groundwater basin to forgo creating a Groundwater Sustainability Plan (GSP) by submitting an Alternative Plan. By submitting the 2016 GWMP, SCVWD seeks to demonstrate the plan's sufficiency in meeting statutory requirements as outlined under SGMA. The Santa Clara Subbasin is currently classified as a "medium" priority per DWR's Bulletin 118, whereas the Llagas Subbasin is classified as a "high" priority.

California Code of Regulations (23 CCR § 358.2) states "the entity submitting an Alternative shall explain how the elements of the Alternative are functionally equivalent to the elements of a Plan required by Articles 5 and 7 of this Subchapter and are sufficient to demonstrate the ability of the Alternative to achieve the objectives of the Act". One of the objectives of SGMA is for GSAs to establish criteria that will maintain or achieve sustainable groundwater management, which is defined as "the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results".

NMFS is responsible for protecting and conserving anadromous fish species listed under the Endangered Species Act (ESA), including threatened Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*) residing within the Stevens Creek, Guadalupe River, and Coyote Creek watersheds that overlie the Santa Clara Subbasin, and threatened South-Central California Coast (SCCC) steelhead residing within Uvas Creek and Llagas Creek overlying the Llagas Subbasin. Ongoing efforts related to the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE)¹ suggest that current management of surface flows in streams within the Santa Clara Subbasin adversely affect CCC steelhead. A major purpose of flow releases from reservoirs on Coyote

¹ The FAHCE settlement agreement was negotiated to resolve disputes regarding SCVWD's use of its water rights on Coyote, Guadalupe, and Stevens Creeks in Santa Clara County.



Creek, Guadalupe Creek, Stevens Creek, Uvas Creek, and Llagas Creek is to recharge groundwater aquifers downstream. The interaction of groundwater and surface water in these systems, in turn, influences flow-dependent habitats for CCC steelhead, SCCC steelhead, and therefore their survival and recovery.

To ensure that the SCVWD's Alternative properly analyzes and addresses this important issue, we offer the following comments and observations pertaining to the 2016 GWMP and its ability to protect and conserve instream aquatic habitat condition that support ESA-listed steelhead.

Integration with the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE)

Specific to the Santa Clara Subbasin, there are several locations in the document (e.g., sections 6.1.1.2 and 6.3.1) that reference modifying water management practices to reflect environmental regulations or concerns. However, flow release strategies agreed to pursuant to the FAHCE settlement agreement have not been implemented by SCVWD, which suggests managing flows for fisheries has not been fully implemented. We, therefore, suggest the 2016 GWMP clarify these statements or omit them. In either case, this highlights the need to develop an integrated approach to managing surface flow and groundwater resources for the protection and recovery of ESA-listed salmonids.

Ample opportunity exists for such an integrated approach in part because SCVWD has already invested heavily in monitoring and modeling of both groundwater resources and surface water resources, through the 2016 GWMP and FAHCE process, respectively. The FAHCE effort is developing a comprehensive hydrologic model, called the Water Evaluation and Planning System (WEAP), and biological evaluation criteria to determine how well surface water flow meets specific life-stage flow needs of steelhead and Chinook salmon (*O. tshawytscha*) in Coyote Creek, Guadalupe Creek, and Stevens Creek. We recommend these tools be leveraged by those working on SCVWD's 2016 GWMP to provide a meaningful evaluation of the effects of groundwater management on fishery resources.

Sustainability Goals, Strategies, and Outcome Measures

Chapter 5 of the 2016 GWMP frames the SCVWD approach to managing groundwater using Sustainability Goals. The goals are followed by Strategies and Outcome Measures. Stated goals include optimizing water supply reliability, minimizing land subsidence, and protection from contamination. Because the California Water Code definition of sustained yield includes avoiding depletion of surface water flows, a critical component of salmonid habitat, we suggest adding the stated goal of protecting and restoring fisheries resources. The inclusion of this goal in the definition of sustainability should then influence subsequent Strategies and Outcome Measures in a manner that seeks to avoid "undesirable results" per SGMA. This would also support FAHCE efforts to reconcile SCVWD operations with water rights and the ESA.

The first strategy listed in the 2016 GWMP is to manage groundwater in conjunction with surface water. We understand this is a reference primarily to managed recharge; however, NMFS recommends SCVWD include in that definition, the management of groundwater and

surface water interactions. This would be an important strategy to support the goal of protecting steelhead and Chinook salmon habitat.

SGMA Emergency Regulations require GSAs to identify numeric minimum thresholds for each sustainability indicator, including depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of surface water. SCVWD's 2016 GWMP includes Outcome Measures, which are defined as "specific, quantifiable goals", but it does not include numeric thresholds for each sustainability indicator, and thus appears to be deficient with respect to this requirement.

Lack of a Groundwater/Surface Water Analytical Model

With regard to specific analysis required under SGMA, the Emergency Regulations § 354.18(e) states the following:

Each Alternative Plan "shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, **groundwater and surface water interaction**, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to **quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses** and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions." (emphasis added)

SCVWD presents analysis from three separate analytical groundwater models. However, the models in question are operational, groundwater flow, and water supply system models that do not adequately analyze or inform groundwater-surface flow dynamics within the basins. To ensure compliance with SGMA, SCVWD should develop a numeric groundwater/surface water model to quantify and evaluate projected water budget conditions and potential impacts to beneficial uses (*i.e.*, aquatic habitat) and users of groundwater. This is relevant to avoiding undesirable results, such as impacts to steelhead and salmon. For example, some recharge zones may result in streamflows and water temperatures that are unlikely to support juvenile steelhead rearing.

NMFS appreciates the opportunity to provide comments regarding SCVWD's 2016 GWMP under SGMA. Groundwater management that protects surface flows is essential to ensuring that aquatic habitat and anadromous salmonids persist in streams overlying the Santa Clara Valley and Llagas subbasins. NMFS stands ready to engage with SCVWD, DWR, regulatory agencies and interested stakeholders to craft solutions to groundwater and streamflow issues in both basins.

If you have any questions, please contact Mr. Rick Rogers at the NMFS North-Central Coast Office in Santa Rosa, California (707-578-8552 or rick.rogers@noaa.gov).

Sincerely,



for

Alecia Van Atta
Assistant Regional Administrator
California Coastal Office

cc. Trevor Joseph, DWR, Sacramento
Roy Hull, DWR, Red Bluff
Kristal Davis-Fadtke, CDFW, Water Branch, Sacramento
Erik Ekdahl, SWRCB, Sacramento
Vanessa De La Piedra, SCVWD

Literature Cited

National Marine Fisheries Service. 2013. South-central California Coast Steelhead Recovery Plan. National Marine Fisheries Service, West Coast Region, Long Beach, California.

National Marine Fisheries Service. 2016. Coastal Multispecies Recovery Plan. National Marine Fisheries Service, West Coast Region, Santa Rosa, California.

Via Regular Mail and Email (jvarela@valleywater.org)

Mr. John L. Varela
Board Chair
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

March 29, 2017

Subject: Santa Clara Valley Water District's SGMA Alternative Submission

Dear Mr. Varela,

On Friday, March 24, 2017, I attended a meeting of the Santa Clara Valley Water District's ("SCVWD") Water Conservation and Demand Management Committee ("Committee") on behalf of Stanford University ("University"). The University is particularly interested in SCVWD's implementation of the Sustainable Groundwater Management Act ("SGMA") in the Santa Clara Subbasin, and an update on SGMA implementation was provided at the Committee meeting. I appreciated the information shared at the meeting and staff's statements that the Santa Clara Subbasin appears to be in good condition, and their acknowledgment that SGMA implementation within SCVWD's boundaries involves a number of complex issues that require a significant amount of work yet to be undertaken. I stated at the meeting that the University is interested in sustainable management of the groundwater basin, and in working with SCVWD on collaborative development of a comprehensive groundwater management plan.

The University's February 17, 2017 comment letter on SCVWD's SGMA alternative submission addressed a number of the issues and related deficiencies in SCVWD's alternative plan submission that need to be addressed. Given this context, and based on information provided by SCVWD and the discussion at the Committee meeting, the University respectfully requests that SCVWD withdraw its SGMA alternative plan submission and proceed forward with collaborative development of a groundwater sustainability plan through a process that provides for adequate input of genuinely interested stakeholders such as the University, and time to ensure the development of a SGMA compliant groundwater management plan and document.

Thank you for your attention to this matter.

Sincerely,



Tom W. Zigterman, P.E., D.WRE
Director – Water Resources & Civil Infrastructure

Mr. John L. Varela
March 29, 2017

Page 2

Cc:

Robert E. Donlan – Ellison, Schneider, Harris & Donlan
Trevor Joseph – SGM Section Chief, DWR (SGMA Portal and Trevor.Joseph@water.ca.gov)
Barbara Keegan – SCVWD Board of Directors (bkeegan@valleywater.org)
Richard P. Santos – SCVWD Board of Directors (rsantos@valleywater.org)
Linda J. LeZotte – SCVWD Board of Directors (llezotte@valleywater.org)
Nai Hsueh – SCVWD Board of Directors (nhsueh@valleywater.org)
Tony Estremera – SCVWD Board of Directors (testremera@valleywater.org)
Gary Kremen – SCVWD Board of Directors (gkremen@valleywater.org)
Norma Camacho – SCVWD Interim CEO (ncamacho@valleywater.org)



GREAT OAKS WATER COMPANY

P.O. Box 23490
San Jose, California 95153
(408) 227-9540

March 30, 2017

Trevor Joseph
Sup. Engineering Geologist
Sustainable Groundwater Management Chief
California Department of Water Resources 901 P. Street, Room 213
P.O. Box 942836
Sacramento, California 94236

Submitted Online through SGMA Alternative Plan Portal
and by Email to *Trevor.Joseph@water.ca.gov*

RE: Great Oaks Water Company's
Comments to Santa Clara Valley Water District
SGMA Alternative Plan Submission

Dear Mr. Joseph:

On December 21, 2016, the Santa Clara Valley Water District (SCVWD) submitted an Alternative Plan to the California Department of Water Resources (DWR) under Water Code §10733.6, the general authority of the Sustainable Groundwater Management Act (SGMA), and the regulations pertaining thereto. As discussed below, SCVWD's Alternative Plan is materially incomplete and should be rejected. In the alternative, approval of SCVWD's Alternative Plan should be withheld until the Alternative Plan has been completed in all material respects and resubmitted.

Background

Great Oaks Water Company (Great Oaks) is a water utility serving a population of approximately 100,000 in Santa Clara County, California. Great Oaks is regulated by the California Public Utilities Commission (CPUC). Groundwater produced from wells owned by Great Oaks and located on property owned by Great Oaks provides one hundred percent (100%) of the water served by Great Oaks to its customers.

All of Great Oaks' wells produce groundwater from the Santa Clara Subbasin which is covered by SCVWD's Alternative Plan submission. The Santa Clara Subbasin, like the Santa Clara Valley Basin (Basin 2-9.02) of which it is a part, is not adjudicated. SCVWD

Great Oaks Water Company
Comments to Santa Clara Valley Water District
SGMA Alternative Plan Submission

1

acknowledges that the Santa Clara Valley Basin has been declared a “medium” priority basin by DWR.¹

Because of its reliance upon groundwater, Great Oaks has been and continues to be concerned that actions of SCVWD under SGMA may not adequately respect rights to groundwater, especially those of Great Oaks. Driven by these concerns, Great Oaks has been proactive in its communications with SCVWD pertaining to SGMA and, most recently, SCVWD’s SGMA Alternative Plan submission.

Beginning in November 2014, less than two months after Governor Brown signed the package of legislation that is now known as SGMA into law, Great Oaks initiated a meeting with SCVWD and other interested parties² to discuss its concerns. At the meeting, Great Oaks and others requested full disclosure and open communications with SCVWD about SCVWD’s utilization of the new legal authorities available under SGMA that may impact groundwater sources and rights. As a result of this meeting, SCVWD committed to Great Oaks and others to fully engage with and include them in any intended actions under SGMA that may have an adverse effect on groundwater production and groundwater rights, including those of Great Oaks. This commitment was verbal.

In June of 2016, during a meeting of SCVWD’s Groundwater Subcommittee, SCVWD staff advised Great Oaks and other water utilities in Santa Clara County that it was the District’s intention to update its 2012 Groundwater Management Plan (GMP) and submit the updated GMP as an Alternative Plan under SGMA. During that same meeting, the undersigned requested information on the status of the GMP update and was advised that the process had only just begun and was not very far along. The GMP update, which ultimately was submitted as a SGMA Alternative Plan, was performed on an accelerated schedule. Only minimal input from interested parties was permitted.

Great Oaks also participated in efforts initiated by San Jose Water Company in July of 2016 to establish a documented procedure within SCVWD’s proposed Alternative Plan for SGMA compliance and control of groundwater extractions under SGMA authorities. These efforts to establish the necessary procedures, including notice and communication, were thwarted by SCVWD. Every proposal made by Great Oaks and other interested parties were rejected. Details of these efforts were provided in Great Oaks’ original comment letter to SCVWD’s then-proposed Alternative Plan.³

The point of Great Oaks’ November 22, 2016 “comment letter” was (and still is) that SCVWD’s Alternative Plan does not comply with the requirements for an Alternative Plan because it fails to include the required “Notice and Communication” section with the necessary elements of (1) an explanation of SCVWD’s decision-making process, and (2)

¹ See Alternative Plan, at 1-1.

² Among the interested parties were other Santa Clara County water utilities, including San Jose Water Company and California Water Service Company, both of which are also regulated by the CPUC.

³ See Alternative Plan, at A55 – A60.

identification of opportunities for public engagement and a discussion of how public input and response will be used.⁴

The Alternative Plan is also incomplete because it admittedly contains no information at all about how, or if, SCVWD would utilize legal authorities available under SGMA and how, if at all, SCVWD would address the concerns of Great Oaks and others pertaining to groundwater production and groundwater rights. Throughout its Alternative Plan, SCVWD acknowledges that it has not completed (or perhaps not even begun) its own analysis of SGMA legal authorities and how or if use of those legal authorities may impact water producers like GOWC.⁵

In response to GOWC's "comment letter," all SCVWD could muster was a general, very non-specific claim that its Alternative Plan is the functional equivalent of a Groundwater Sustainability Plan (GSP), even if it does not contain all of the elements of a GSP, including the required information on "Communications and Notice" and use of SGMA legal authorities.⁶

Specific Deficiencies in SCVWD Alternative Plan

Great Oaks incorporates by reference herein those deficiencies noted in its November 22, 2016 "comment letter," which was included in Appendix A to SCVWD's Alternative Plan Submission, at pages A55 – A60.

In addition to the deficiencies noted in Great Oaks' "comment letter," the SCVWD Alternative Plan is deficient, and therefore incomplete, in the following ways:

- DWR Emergency Regulations Section 354.44(a) requires that each plan, including SCVWD's Alternative Plan, include a description of the projects and management actions the Agency (SCVWD) has determined will achieve the sustainability goals for the basin, including projects and management actions to respond to changing conditions in the basin. Section 354.44(b) of the same regulations requires specific descriptions of those projects and management actions and the circumstances under which those actions would be implemented. Among the specific requirements of the regulations is the following, found in Section 354.44(b)(7):

A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.

SCVWD represents that these required elements are contained in Chapter 6 of its Alternative Plan.⁷ However, a review of Chapter 6 of SCVWD's Alternative Plan reveals none of the required information on SGMA legal authorities. This is because, of course,

⁴ California Code of Regulations, Title 23, Division 2, Chapter 1.5, Subchapter 2. Groundwater Sustainability Plans, §§354.10(d)(1) and (2).

⁵ See, e.g., Alternative Plan at ES-5, ES-6, 1-11, 1-12 – 1-13, 8-2, and 8-3.

⁶ SCVWD's Response to Great Oaks' "comment letter" was also provided with its Alternative Plan submission at A97 – A99.

⁷ See Appendix B to SCVWD's Alternative Plan – Demonstration of Functional Equivalency – at pages B-21 to B-22.

SCVWD has not completed its analysis of those authorities. Chapter 6 only references the Santa Clara Valley Water District Act as the legal authority for the various projects and management actions listed and described therein. Without the required disclosures of how, when, and if SCVWD would take action under SGMA legal authorities, SCVWD's Alternative Plan is incomplete and may not be accepted.

Additional Information – SCVWD Actions After Its Alternative Plan Submission

Recognizing that its response to GOWC and others about the Alternative Plan deficiencies did not satisfy ongoing legitimate concerns, the SCVWD Board delegated further action to address these concerns to its Water Conservation and Demand Management Committee.⁸

At a meeting on January 25, 2017, the Water Conservation and Demand Management Committee of the SCVWD Board considered a plan to evaluate the SGMA legal authorities as part of a proposed Stakeholder Engagement Plan. A copy of that draft plan is attached hereto as Exhibit A. The draft plan references SCVWD's Alternative Plan and acknowledged that "[n]ew SGMA authorities may have significant implications for water retailers and are of interest to other basin stakeholders."⁹

As you will see in Exhibit A, SCVWD plans to first conduct an "Evaluation of SGMA Fees" that would result in a "preliminary analysis of these fee types by August 2017."¹⁰ At the same time, and on the same schedule, SCVWD will conduct a "preliminary analysis of SGMA pumping regulation authorities by August 2017."¹¹

Notably, it will not be until *after* SCVWD completes its "preliminary" analyses of these SGMA authorities that stakeholders will be permitted to review SCVWD's conclusions and provide input. The entire process is projected to conclude in December 2017, with a Committee meeting that may *or may not* lead to action by the full SCVWD Board.¹²

In other words, SCVWD plans to take another full year to review its authority under SGMA and then still may not take any action to satisfy the legitimate concerns of water utilities and others about their groundwater production rights.

Great Oaks fully supports SCVWD's intentions to analyze and better understand the legal authorities and the implications of utilizing those authorities, and Great Oaks expressed its support for the proposal at the January 25, 2017 Board Committee meeting. At the same time, Great Oaks expressed concern about building in another year of delay while SCVWD tries to come to a basic understanding of the SGMA legal authorities that have already been in place for more than two years. Great Oaks requested the schedule under the proposal be accelerated. No action has been taken on that request.

⁸ This action by the SCVWD Board is an admission that the Alternative Plan is incomplete.

⁹ See Exhibit A, page 1 of 3. Note that the legal authorities in SGMA are not "new," but have instead been in place for more than two years.

¹⁰ Exhibit A, page 2 of 3.

¹¹ Exhibit A, page 3 of 3.

¹² Exhibit A, page 3 of 3.

On February 17, 2017, just prior to the original deadline for submitting comments to SCVWD's Alternative Plan, Great Oaks received by email the agenda for the meeting of the Water Conservation and Demand Management Committee of the SCVWD Board scheduled for February 23, 2017. In that agenda was the document attached here as Exhibit B, providing an update on progress made up to that date on SCVWD's analysis of the new SGMA legal authorities. The Committee Agenda Memo provides this update:

There are no substantive updates at this time, as the related analysis is just beginning. Staff proposes to present general information on groundwater rights and related SGMA issues at the Committee's next meeting.

The agenda for the "Committee's next meeting," held March 24, 2017, included a presentation with very general information on the topic of groundwater rights that were taken from publicly-available sources. It was a basic, if not entirely superficial, presentation. The SCVWD Water Conservation and Demand Management Committee agenda memo for the March 24, 2017 meeting on this topic is attached as Exhibit C.

An email, sent March 21, 2017 about the SCVWD's purported analysis of new legal authorities under SGMA, a copy of which is attached as Exhibit E, says it all:

On Friday March 24, 2017, the District's Water Conservation and Demand Management Committee will receive an update on the evaluation of new Sustainable Groundwater Management Act (SGMA) authorities.

As noted in the agenda memo for Item 4.2 linked below, there are no substantive updates on the evaluation at this time. Staff will present general information on groundwater rights. (emphasis added)

So, now more than two years after SGMA became law and Great Oaks initiated efforts to determine what, if anything, SCVWD would do with the new legal authorities potentially available to it under SGMA, all interested and affected parties still have no information on this important and essential element of the Alternative Plan. SCVWD openly and repeatedly admits that it has not completed its analysis of SGMA legal authorities. Questions exist as to whether that analysis will ever be completed, and, if completed, whether any action will be taken by the SCVWD Board should it be presented with its legal options under SGMA.

The SGMA Alternative Plan submitted by SCVWD was required to provide specific information about how or if SCVWD would utilize new SGMA legal authorities. The required information was not provided, rendering SCVWD's Alternative Plan incomplete and non-compliant with the controlling regulations.

Requested Action on SCVWD's SGMA Alternative Plan

The simple fact that SCVWD admits it does not yet fully understand what it can or even should do under SGMA legal authorities should be sufficient to convince DWR that SCVWD's SGMA Alternative Plan is incomplete and must be rejected.

That SCVWD believes it will take at least all of 2017 to fully understand current law begs many questions, not the least of which is: How can SCVWD claim its Alternative Plan is complete when its own understanding of what actions SGMA does or does not authorize is admittedly incomplete?

Rejecting SCVWD's Alternative Plan will in no way hinder SCVWD in fulfilling its responsibilities and will not endanger the public in any way, but it will provide interested stakeholders with the opportunity to finally participate in this essential aspect of SGMA and provide the information on SGMA legal authorities that is missing from the Alternative Plan.

Great Oaks requests that DWR reject SCVWD's Alternative Plan for non-compliance with the controlling regulations. In the alternative, Great Oaks respectfully requests that DWR withhold acceptance and approval of SCVWD's Alternative Plan until SCVWD completes its legal analysis and incorporates the appropriate information into the Alternative Plan, all with appropriate input from interested stakeholders who have, so far, been denied that opportunity.

Respectfully submitted,



Timothy S. Guster
Vice President and General Counsel
Legal and Regulatory Affairs

cc: Santa Clara Valley Water District Board of Directors
James Fiedler
Garth Hall
Vanessa De La Piedra

Attachments: Exhibits A through E

Exhibit A

**Excerpts from January 25, 2017 Agenda
Santa Clara Valley Water District
Water Conservation and Demand Management Committee**



Committee: Water Conservation and Demand Management
Meeting Date: 01/25/17
Agenda Item No.: 4.2
Unclassified Manager: Garth Hall
Email: GHall@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Stakeholder Engagement in Evaluating New Authorities under the Sustainable Groundwater Management Act (SGMA).

RECOMMENDED ACTION:

Discuss the proposed plan to engage stakeholders in the evaluation of new SGMA authorities and provide direction to staff.

SUMMARY:

The Sustainable Groundwater Management Act (SGMA) provides Groundwater Sustainability Agencies (GSAs), like the District, with various authorities to ensure groundwater sustainability. In November 2016, the District Board of Directors (Board) adopted the 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins (GWMP) following a public hearing. The GWMP acknowledges new SGMA authorities, including the regulation of pumping and collection of different fee types, as potential tools that may be needed to ensure continued sustainability. Per the GWMP, the District will begin to evaluate these authorities in 2017 in coordination with water retailers and other interested stakeholders. Prior to adopting the GWMP, the Board affirmed a continued commitment to working with stakeholders, and referred consideration of stakeholder engagement on SGMA authorities to the Water Conservation and Demand Management Committee (Committee).

Staff is seeking the Committee's input on the proposed approach to engage stakeholders in the evaluation of new SGMA authorities, which is described in Attachment 1. Staff is also seeking preliminary input from the Committee, water retailers, and other interested stakeholders in terms of specific SGMA authorities and the District's evaluation of those potential tools.

BACKGROUND:

To meet SGMA planning requirements and DWR Emergency Groundwater Sustainability Plan (GSP) Regulations, the District prepared the GWMP as an alternative to a GSP. The Board adopted the 2016 GWMP on November 22, 2016 after a public hearing, and directed staff to work with the Committee on stakeholder engagement options with regard to evaluating new SGMA authorities. On December 9, 2016, the Committee discussed the GWMP public comment letters and the draft District responses. Comment letters from several water retailers focused on concerns related to water rights and the potential regulation of pumping. Several retailers present at the December 9, 2016 meeting indicated a need to clearly define the process by which the District will evaluate SGMA authorities and involve stakeholders in a meaningful way as these authorities have potentially significant impacts on water retailer operations.

The comment letters and related responses were included as an appendix to the GWMP, which was submitted to DWR on December 21, 2016. Any interested person may submit comments on the District's GWMP to DWR

at <http://sgma.water.ca.gov/portal/alternative/all> during a 60-day public comment period, which ends on February 20, 2017.

Several comment letters were submitted for the GWMP public hearing related to concerns over new SGMA authorities, and the Board noted the need to involve water retailers and other interested stakeholders as the District considers these potential tools. Staff is seeking Committee and stakeholder input on the proposed stakeholder engagement plan related to the evaluation of new SGMA authorities (Attachment 1). Staff is also seeking preliminary input on specific SGMA authorities and the related District evaluation of those authorities.

ATTACHMENT(S):

Attachment 1 – Proposed Stakeholder Engagement Plan

Evaluation of New Sustainable Groundwater Management Act (SGMA) Authorities Proposed Stakeholder Engagement Plan

The District will be evaluating new SGMA authorities to determine how they may support long-term groundwater sustainability and to develop a related framework for implementation should they be needed. This stakeholder engagement plan describes how the District plans to involve water retailers and other interested stakeholders in the evaluation of new SGMA authorities.

Background

The Sustainable Groundwater Management Act (SGMA) provides Groundwater Sustainability Agencies (GSAs), like the District, with various authorities to ensure groundwater sustainability. In November 2016, the District Board of Directors (Board) adopted the 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins (GWMP) following a public hearing. The GWMP acknowledges the need to involve stakeholders in the evaluation of new SGMA authorities in GWMP Section 1.4.2:

“Potential new authorities under SGMA include the ability to regulate groundwater pumping and assess different types of groundwater charges. The District plans to evaluate these new authorities in cooperation with water retailers and other interested stakeholders and consider what conditions might necessitate their implementation to sustainably manage groundwater into the future.”

Several water retailers submitted comment letters related to the GWMP public hearing expressing concern with the potential regulation of pumping and interference with water rights and retailer operations. Letters from both San Jose Water Company and Great Oaks Water Company included a proposed Memorandum of Agreement (MOA) between the District and public water retailers based on a shared governance approach. This draft MOA proposed the development of a Water Rights Committee composed of public water retailers and an at-large representative for other pumpers. The draft MOA proposed that this Water Rights Committee develop and implement plans to curtail or allocate pumping, if needed.

Pursuant to groundwater management authority granted by the Santa Clara Valley Water District (District Act), the District has sustainably managed groundwater for the benefit of the community for many decades. While the District maintains sole authority with regard to groundwater management, continued coordination and collaboration with water retailers and stakeholders will help ensure effective management of groundwater resources. New SGMA authorities may have significant implications for water retailers and are of interest to other basin stakeholders. In addition to considering potential groundwater management benefits from these tools, stakeholder input should be carefully considered.

Proposed Forum for Stakeholder Engagement

Prior to adopting the GWMP, the Board affirmed a continued commitment to working with stakeholders, and referred consideration of stakeholder engagement on SGMA authorities to the Board's Water Conservation and Demand Management Committee (Committee). Committee meetings are publicly-noticed and open to any interested person. This forum also allows for interested stakeholders to provide input directly to Board Committee members. Promoting dialog and exchange through this Committee ensures an open and transparent process as the District evaluates new SGMA authorities.

The District maintains a list of stakeholders interested in the development and implementation of the GWMP, and will notify these stakeholders in advance of Committee agenda items related to the evaluation of SGMA authorities. District staff will also provide related updates to water retailers through meetings of the Water Retailers Committee and/or Groundwater Subcommittee.

Preliminary Evaluation of New SGMA Authorities

Potential authorities to regulate pumping or collect different types of fees are complex and have limitations related to water rights, land use authorities, and regulatory requirements. District staff will conduct a preliminary analysis of new SGMA authorities and bring related information to the Committee to facilitate Committee and stakeholder discussion and input. Questions to be considered during the preliminary District analysis of these authorities include:

- What basin conditions might trigger the use of SGMA authorities?
- Which specific SGMA tools are best suited to help ensure sustainability or further the District's ability to manage groundwater?
- What process or steps would be followed prior to implementing these tools?
- How might these authorities be implemented – who would be affected, what actions would be required, etc.?

Evaluation of new SGMA authorities will rely on a phased approach, with Committee and stakeholder input at various milestones as outlined below.

Phase 1 – Evaluation of SGMA Fees

SGMA allows GSAs to impose fixed fees and fees charged on a volumetric basis, including, but not limited to, fees that increase based on the quantity of groundwater produced annually, the year in which the production of groundwater commenced from a groundwater extraction facility, and impacts to the basin. As noted in the GWMP, fees imposed pursuant to SGMA must comply with applicable provisions of Proposition 218.

Currently, the District collects volumetric fees based on the quantity of groundwater produced in accordance with the District Act. The District will conduct a preliminary analysis of the various fees that can be collected pursuant to SGMA to determine if they further sustainable groundwater management or reduce volatility in revenue and rates.

Staff will further define fee types consistent with SGMA and conduct a preliminary analysis of these fee types by August 2017. This analysis will be included on a Committee agenda in late summer 2017 for review and input by the Committee and stakeholders.

Phase 2 – Evaluation of Groundwater Extraction Regulation

SGMA provides GSAs with various authorities related to the regulation of groundwater extraction, including the ability to:

- Impose spacing requirements on new well construction to minimize interference;
- Impose reasonable operating regulations on existing wells to minimize interference, including requiring extractors to operate on a rotation basis;

DRAFT

- Regulate, limit, or suspend groundwater extraction, construction of new wells, enlargement of existing wells, or reactivation of abandoned wells;
- Establish groundwater extraction allocations;
- Authorize temporary and permanent transfers of groundwater extraction allocations; or
- Establish rules to allow unused groundwater extraction allocations to be carried over from one year to another and voluntarily transferred.

SGMA acknowledges limitations related to controlling pumping. Local agencies are not authorized to make a binding determination of the water rights of any person or entity, and must also consider the land-use authority of cities and counties, which is not superseded by SGMA. The potential regulation of pumping is a complex and controversial topic that will require thoughtful analysis and meaningful exchange with those potentially affected.

The preliminary District staff analysis will evaluate specific pumping regulation authorities listed in SGMA to consider when they might be needed (e.g., basin condition triggers) and what would be required for implementation.

Staff will complete the preliminary analysis of SGMA pumping regulation authorities by August 2017. This analysis will be included on a Committee agenda in late summer 2017 for review and input by the Committee and stakeholders.

Phase 3 – Draft Implementation Framework

Based on the preliminary technical analysis and stakeholder input, staff will prepare a draft implementation framework for the new SGMA authorities. This framework will identify the triggers and process for the implementation of these authorities, should they be needed. The proposed process is expected to range from voluntary, collaborative measures to more stringent, mandatory measures based on an increasing threat of harm to the groundwater subbasins. In developing the draft framework, staff will consider Committee and stakeholder input from previous phases, as well as concepts identified in the MOA proposed by San Jose Water Company and Great Oaks Water Company.

The draft implementation framework will be included on a Committee agenda item in December 2017 for review and input by the Committee and stakeholders. The Committee will provide direction to staff in terms of next steps with regard to new SGMA authorities. This could include additional technical analysis, stakeholder engagement, or discussion with the full Board of Directors.

Exhibit B

**Excerpts from February 23, 2017 Agenda
Santa Clara Valley Water District
Water Conservation and Demand Management Committee**



Committee:	Water Conservation and Demand Management
Meeting Date:	02/23/17
Agenda Item No.:	4.3
Unclassified Manager:	Garth Hall
Email:	ghall@valleywater.org
Est. Staff Time:	15 minutes

COMMITTEE AGENDA MEMO

SUBJECT: Update on the Evaluation of New Sustainable Groundwater Management Act (SGMA) Authorities

RECOMMENDED ACTION:

This is an information only item and no action is required.

SUMMARY:

The Sustainable Groundwater Management Act (SGMA) provides the District with various authorities to ensure groundwater sustainability. Per the District's 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins (GWMP), the District will evaluate the regulation of pumping and collection of different fee types as potential tools that may be needed to ensure continued sustainability. The Board referred related stakeholder engagement to the Water Conservation and Demand Management Committee (Committee).

On January 25, 2017, the Committee concurred with staff's proposed approach to engage stakeholders in the evaluation of new SGMA authorities. There are no substantive updates at this time, as the related analysis is just beginning. Staff proposes to present general information on groundwater rights and related SGMA issues at the Committee's next meeting.

BACKGROUND:

On December 9, 2016, the Committee discussed the GWMP public comment letters. Several retailers present indicated a need to clearly define the process to evaluate SGMA authorities and involve stakeholders, as these authorities have potentially significant impacts on water retailer operations.

On January 25, 2017, the Committee discussed staff's proposed stakeholder engagement plan (plan) and received stakeholder input. The Committee directed staff to implement the plan as proposed, to provide regular updates to the Committee, and to expedite the analysis if feasible. Under the plan, staff will present preliminary findings on new SGMA authorities to the Committee in late summer 2017 and the draft implementation framework in December 2017. Stakeholders present were generally supportive of the plan.

Staff maintains a list of stakeholders interested in GWMP implementation, and will continue to provide notification of upcoming Committee items related to SGMA authorities.

ATTACHMENT(S):

None.

Exhibit C

Agenda Memo on Groundwater Rights

March 24, 2017

Santa Clara Valley Water District

Water Conservation and Demand Management Committee



Committee:	Water Conservation and Demand Management
Meeting Date:	03/24/17
Agenda Item No.:	4.2
Unclassified Manager:	Garth Hall
Email:	ghall@valleywater.org
Est. Staff Time:	20 minutes

COMMITTEE AGENDA MEMO

SUBJECT: Update on the Sustainable Groundwater Management Act (SGMA)

RECOMMENDED ACTION:

This is an information only item and no action is required.

SUMMARY:

The Sustainable Groundwater Management Act (SGMA) provides the District with various authorities to ensure groundwater sustainability. Per the District's 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins (GWMP), the District will evaluate the regulation of pumping and collection of different fee types as potential tools that may be needed to ensure continued sustainability. The Board referred related stakeholder engagement to the Water Conservation and Demand Management Committee (Committee).

The potential regulation of pumping is a complex and controversial topic, and SGMA acknowledges related limitations. Local agencies are not authorized to make a binding determination of the water rights of any person or entity, and must also consider the land-use authority of cities and counties. Staff will present general information on groundwater rights as summarized below.

Staff will also provide an update on public comments received by the California Department of Water Resources (DWR) related to the District's GWMP, which was submitted as an Alternative to a Groundwater Sustainability Plan (GSP).

BACKGROUND:

In 2014, SGMA was enacted as California's first comprehensive, statewide regulatory program for groundwater. SGMA provides Groundwater Sustainability Agencies (GSAs), like the District, with various authorities to ensure groundwater is managed in a sustainable manner. Important for this agenda item, SGMA provides GSAs with various authorities related to the regulation of groundwater extraction by restricting or suspending well production, prohibiting new well construction, imposing well-spacing requirements, and requiring measurement and reporting of groundwater production by well owners. (Water Code §§ 10725.8, 10726.4(a).)

Implementation of the above authorities could impact existing water rights. Water Code § 10726.8(b) provides that, "Nothing in this part shall be construed as authorizing a local agency to make a binding determination of the water rights of any person or entity." While SGMA states that implementation of the statute does not alter water rights, allocating cutbacks on groundwater extractions, for example, will impact a particular user's ability to exercise its groundwater right. As such, significant conflicts could arise in the exercise of a GSA's powers, where water rights priorities are at issue or the equities of a proposed management action are disputed.

Given the intersection between groundwater rights and a GSA's authorities related to the regulation of groundwater extraction, understanding the framework and types of California's groundwater rights law will be important as the District considers whether and how to control pumping under certain circumstances. The following discussion provides a brief overview of California's law on groundwater rights, and is intended to support the Committee's understanding and discussions as District staff moves forward with evaluating SGMA's new authorities.

At the February 23, 2017 Committee meeting, staff reported there were no substantive updates regarding the analysis of new authorities. The preliminary analysis is underway, and staff plans to present related information to the Committee in late summer 2017. Staff provided handouts of three public comment letters submitted to DWR on the District's GWMP by February 20, 2017, the original DWR deadline. On February 21, 2017, DWR announced that the public comment period for Alternatives submitted throughout the state would be extended to April 1, 2017. Staff has since notified the list of interested stakeholders of the revised public comment deadline.

More detailed information on groundwater rights and public comments on the District's GWMP is provided below.

Summary of California Law of Groundwater Rights*

Below is a brief discussion of the California law of groundwater rights. These are general provisions and are not intended to discuss specific water rights issues.

1. Reasonable and Beneficial Use Doctrine

Article 10, section 2 of the California Constitution prohibits the waste of water, and requires reasonable use, method of use and method of diversion for all surface and groundwater rights. The doctrine of reasonable and beneficial use is the basic principle defining California water rights: that holders of water rights must use water reasonably and beneficially.

2. Groundwater Rights

California groundwater law is based almost entirely in case law. Unlike the law governing rights to surface water and true underground streams, there is no comprehensive, statewide permitting scheme governing the extraction or use of groundwater.

Groundwater rights attach to percolating groundwater, which includes all groundwater that does not comprise a subsurface stream or the underflow of a surface stream. The courts have established three categories of groundwater rights with respect to native percolating groundwaters.

Overlying Rights

Overlying groundwater rights are analogous to riparian rights to surface water. Each owner of land that overlies a common groundwater supply has a right to reasonable, beneficial use of that water supply on or in connection with the overlying land. The courts have restricted that right to an amount which is reasonable in light of the competing demands of other overlying users; this is often referred to as a correlative right. The quantification of each overlying user's correlative right depends entirely on the facts and circumstances as they exist in the basin. However, the overlying user's correlative right is generally to a reasonable share of the common groundwater supply.

* Much of the language provided in this summary was derived from *A primer on California Water Rights*, Gary W. Sawyers, Esq., http://aic.ucdavis.edu/events/outlook05/Sawyer_primer.pdf, and *A Summary of the California Law of Surface Water and Groundwater Rights*, Bartkiewicz, Kronick & Shanahan (2006), http://www.norcalwater.org/wp-content/uploads/bks_water_rights.pdf.

There is no priority in time among overlying users. The correlative right belongs to all overlying landowners in common, and each may use only a reasonable share when the water is insufficient to meet the needs of all.

The overlying right may be used for any reasonable, beneficial use. However, water devoted to public uses (for example, water acquired by municipalities and public utilities for distribution to the public) is not an overlying use.

Appropriative Rights

Water users that do not use groundwater on their overlying land are not barred from using groundwater. Such water users include public agencies and owners of non-overlying land. They may extract groundwater, but their rights are analogous to appropriative rights to surface water. Appropriators generally have the right to take the available surplus from a groundwater basin and apply it to beneficial use inside or outside the basin. "Surplus" means available water not needed to provide for the reasonable, beneficial use by the overlying owners and of which the use of will not create an overdraft condition. There is no restriction as to where the water may be used, and no requirement that the appropriator be a landowner. The water may generally be used for private or public uses without restriction, subject to the requirement that the use of the water must be reasonable and beneficial.

Among appropriators, the priority of each appropriator's right is determined by the relative timing of the commencement of use, i.e., first in time is first in right.

Prescriptive Rights

Prescriptive groundwater rights are not acquired by taking surplus or excess water. An appropriative taking of groundwater that is not surplus is wrongful, and may ripen into a prescriptive right when the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years, and under the claim of right. Prescriptive rights do not begin to accrue until a condition of overdraft begins. Therefore, it is first necessary to determine when a condition of surplus ends and overdraft begins.

Once a groundwater basin reaches a condition of overdraft, no new appropriative uses may be lawfully made. Typically, however, appropriators continue extraction activities unless and until demand is made and/or suit is brought. If an appropriator continues pumping from an overdrafted basin for the prescriptive period after the other users from the basin have notice of the overdraft condition, then that appropriator may obtain a prescriptive right good as against any other private user.

Prescription generally may not occur as against public entities and public utilities.

An adjudication or court proceeding is necessary to confirm the existence and scope of prescriptive rights.

Adjudicated Water Rights

Many groundwater rights in California are not quantified, but are simply claimed and/or exercised without objection by other parties. However, when competing demands for a groundwater basin's water supply become too great, formal adjudications are sometimes commenced by one or more of the competing groundwater users. The authority to adjudicate a groundwater basin exists in State courts, and in limited circumstances, with the State Water Resources Control Board. Adjudications typically take years or even decades to complete because of the complex legal and factual issues involved. Courts often retain continuing jurisdiction over the implementation of the adjudication order.

Public Comments on the District's GWMP

To meet SGMA planning requirements and DWR Emergency GSP Regulations, the District prepared the GWMP as an Alternative to a GSP. The Board adopted the 2016 GWMP on November 22, 2016 after a public hearing. The District received several comment letters related to the public hearing, which were included with related District responses as an appendix to the GWMP. The District submitted the GWMP to DWR on December 21, 2016, beginning a public comment period during which any interested person could submit comments to DWR at <http://sgma.water.ca.gov/portal/alternative/all>. The DWR comment period for all Alternatives was originally 60 days, with the District's public comment period scheduled to end on February 20, 2017. Three comment letters were posted to the DWR web page by that date. However, on February 21, 2017, DWR extended the comment period for all Alternatives, including the District's GWMP, to April 1, 2017.

Comments from San Jose Water Company (SJWC), Stanford University, and the National Marine Fisheries Service (NMFS) submitted to DWR were handed out at the February 23, 2017 Committee meeting. The comments received from SJWC and Stanford University were similar to comments provided by those agencies during the District's GWMP public hearing. These include assertions that the GWMP is not an acceptable Alternative under SGMA, that the GWMP is deficient in demonstrating functional equivalence to a GSP, and that water rights and SGMA authorities are not adequately addressed. The District respectfully disagrees with these comments and believes that the GWMP adequately demonstrates functional equivalence to a GSP and the intent of SGMA. Comments received from NMFS relate to surface water flows in the Santa Clara Subbasin and the protection of instream aquatic habitat. Several comments relate to the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE). The District Board has recently emphasized its commitment to resolving FAHCE issues and implementing related operational changes as quickly as possible.

Although no formal deadline has been announced, DWR staff prefers that agencies that submitted Alternatives post any related response to public comments on the DWR website by April 1, 2017. Staff is preparing related District responses, and will provide those as handouts to the Committee on March 24, 2017 if available.

ATTACHMENT(S):

None

Exhibit D

March 21, 2017 Email from Santa Clara Valley Water District
Regarding March 24, 2017 Water Conservation and Demand Management
Committee Meeting

Subject: Water Conservation and Demand Management Committee

Date: Tuesday, March 21, 2017 at 10:54 AM

From: GWMP <GWMP@valleywater.org>

To: GWMP <GWMP@valleywater.org>

Interested Parties

On Friday March 24, 2017, the District Board's Water Conservation and Demand Management Committee will receive an update on the evaluation of new Sustainable Groundwater Management Act (SGMA) authorities.

As noted in the agenda memo for Item 4.2 linked below, there are no substantive updates on the evaluation at this time. Staff will present general information on groundwater rights. The meeting will begin at 10:00 am in the District Board Room and the complete agenda is available at:

<http://www.valleywater.org/WorkArea/DownloadAsset.aspx?id=15101>

Background:

SGMA provides Groundwater Sustainability Agencies, like the District, with various authorities to ensure groundwater sustainability. In November 2016, the District Board of Directors adopted the 2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins (GWMP) following a public hearing. The GWMP acknowledges new authorities conferred by SGMA to the District, including the potential regulation of pumping and collection of different fee types, as available tools that may be needed to ensure continued sustainability. Per the GWMP, the District will begin to evaluate these authorities in 2017 in coordination with water retailers and other interested stakeholders. Prior to adopting the GWMP, the Board affirmed a continued commitment to working with stakeholders, and referred related stakeholder engagement to the Board's Water Conservation and Demand Management Committee.

You are receiving this email because you are on the District's list of interested parties with regard to local groundwater management and compliance with the Sustainable Groundwater Management Act. If you would like to be removed from this list or would like additional information, please contact us at

GWMP@valleywater.org

1 April 2017

Acting Director William Croyle
California Department of Water Resources
P.O. Box 942836
Sacramento, California 94236

Submitted online via DWR's SGMA portal:
<http://sgma.water.ca.gov/portal/alternative/all>

Re: Alternative Submittal from Santa Clara Valley Water District (basins 2-009.02, 3-003.01)

Dear Director Croyle:

The Nature Conservancy (TNC) appreciates the opportunity to comment on the alternative submittal from Santa Clara Valley Water District (SCVWD) (basins 2-009.02, 3-003.01) under the Sustainable Groundwater Management Act (SGMA).

Background on Our Interest

TNC is a global, nonprofit organization dedicated to conserving the lands and waters on which all life depends. We have over 100,000 California members and seek to achieve our mission through science-based research, planning and implementation of conservation strategies. TNC participated in multiple stakeholder dialogues in framing SGMA policy objectives and worked actively in the legislative process to pass SGMA in 2015.

Our reason for engaging is simple: California's freshwater biodiversity is highly imperiled. We have lost more than 90 percent of our native wetland and river habitats, leading to precipitous declines in native plants and the populations of wildlife that call these places home. These natural resources are intricately connected to California's economy providing direct benefits through industries such as fisheries, timber and hunting, as well as widely shared benefits such as clean water supplies and diverse landscapes that make California America's most biodiverse State. Given the inextricable connection between groundwater and surface water, SGMA must be successful for a sustainable future in California.

California continues to use more water than nature provides. While surface water rights and access to surface water may be curtailed, the balance of water consumed is coming from groundwater – an estimated 60% of California's water during the drought was supplied by groundwater. SGMA provides a path for California to

sustainably manage groundwater so that the critical groundwater reserves are available when surface water is not.

SGMA is now law, but implementation is just beginning. The success of SGMA depends on bringing the best available science to the table, engaging all stakeholders in robust dialog, providing strong incentives for beneficial outcomes and rigorous enforcement by the State of California.

The recently submitted alternatives marks the first opportunity for the Department of Water Resources (Department) to hold local agencies accountable for sustainability. We ask the Department to fully exercise its authorities granted under SGMA to ensure the adequacy of plans. Given our mission "to preserve the plants and animals on which all life depends," we are particularly concerned about the inclusion of nature, as required, in groundwater sustainability plans (GSPs).

"Functionally Equivalent" Requires Fully Addressing Nature's Water Needs

Santa Clara Valley Water District submitted an alternative submittal based on an existing plan for two basins. To meet the requirements provided under SGMA, the alternative submittal must:

1. Provide "(a) plan developed pursuant to Part 2.75 (commencing with Section 10750) or other law authorizing groundwater management." (23 CCR §358.2(b)(1)); and
2. "(E)xplain how the elements of the Alternative are functionally equivalent to the elements of a Plan required by Articles 5 and 7 of this Subchapter and are sufficient to demonstrate the ability of the Alternative to achieve the objectives of the Act." (23 CCR §358.2(d))

To be "functionally equivalent," the alternative submittal must fully incorporate the numerous requirements to address nature's water needs under SGMA. While there are certainly additional provisions regarding nature's water needs, for the purposes of our review, we focused on the following:

1. Are groundwater dependent ecosystem (GDEs) identified? (23 CCR §354.16(g)) Are GDEs and surface water dependent species included as beneficial uses? (23 CCR §354.10(a))
2. Are interconnected surface waters identified and are estimates of the quantity and timing of any depletions specified? (23 CCR 354.16(f), §354.28(c)(6)(A))
3. Do water budgets include water needs for managed wetlands and native vegetation, as defined water use sectors, as well as total surface water inflows and outflows? (23 CCR §354.18(b))
4. Do undesirable results and minimum thresholds describe potential effects on beneficial uses (especially GDEs), land uses (including recreational uses) and

property interests (including open space and conservation lands), particularly for the chronic lowering of groundwater, degraded water quality and depletions of interconnected surface waters? (23 CCR §354.26, §354.28, §355.4(b)(4)) Are these undesirable results being avoided? (Water Code §10733.6(b)(3)) Has the basin operated sustainably for at least the past 10 years? (23 CCR §358.2(c)(3))

5. Does the sustainability goal include the environment, and if so, does the plan include measurable objectives and interim milestones to achieve the environmental portion of the sustainability goal within 20 years? (23 CCR §354.30)
6. Does the monitoring network monitor impacts to beneficial uses? (23 CCR §354.34(b)(2))

Our comments related to the above questions are provided in Attachment A: TNC Evaluation of SCVWD's Alternative Submittal. Based on our review, SCVWD's alternative submittal does not meet the requirements to be deemed "functionally equivalent" to a GSP under SGMA. SCVWD has demonstrated a strong commitment to integrated natural resource management across its service area, however important information, such as identifying GDEs, seems to be at least somewhat known to SCVWD but omitted from the plan.

Thank you for fully considering our comments as you evaluate the adequacy of this alternative submittal.

Best Regards,



Sandi Matsumoto
Associate Director, Water Program
The Nature Conservancy of California

Attachment A: TNC Evaluation of SCVWD Alternative Submittal

- 1. Are groundwater dependent ecosystem (GDEs) identified? No. Are GDEs and surface water dependent species included as a beneficial uses? Yes, but beneficial uses are not substantively considered as required throughout the plan.**

The only reference to the term "groundwater dependent ecosystem" in the plan appears in the Appendix B "Functional Equivalency" chart showing the text of the regulations requiring identification of GDEs.

The term "ecosystem" only appears in Appendix A7 as text on the District's webpage, in a sidebar entitled "healthy creeks and ecosystems." Upon visiting that website and following the link, the following text can be found:

"The more than 800 miles of creeks and rivers in our valley need protection and care. Unique among water districts, state legislation authorizes the district "to enhance, protect, and restore streams, riparian corridors, and natural resources..."

Santa Clara Valley encompasses five major watersheds. A watershed is the land area from which surface runoff drains into a stream channel, lake, reservoir or the ocean. For example, all the creeks and rivers in the Guadalupe Watershed, including water from storm drains, flow into the Guadalupe River then downstream into San Francisco Bay.

The health of a creek reflects the conditions throughout the watershed, not just those along its banks. The water district's environmental work protects and restores habitats and encourages the return of endangered species such as the red-legged frog, steelhead trout and salt marsh harvest mouse.

In addition, the district also partners with cities and the county to provide open space and recreational opportunities at many of its 10 reservoirs and along creeks throughout the county. Since 2000, public access to more than 70 miles of new creekside trails has been made available in the county."

Source: visited 2/16/17

<http://www.valleywater.org/Services/HealthyCreeksandEcoSystems.aspx>

This District website indicates the presence of GDEs in the basin. The GDEs are required to be identified in the plan.

The District's glossary definition of beneficial use is, "One of many ways that water can be used either directly by people or for their overall benefit. The State Water Resources Control Board recognizes 23 types of beneficial use with water quality criteria for those uses established by the Regional Water Quality Control Boards".

Beneficial uses in the basin therefore include groundwater dependent ecosystems. However habitat and species are not explicitly included in the plan as a beneficial use in the many provisions requiring consideration of beneficial uses.

2. Are interconnected surface waters identified and are estimates of the quantity and timing of any depletions specified? No.

The District provides historical ecology maps intended to indicate where interconnected surface waters historically existed and have the potential to exist today. Current, verified interconnected surface waters were not identified, nor were estimates of the quantity or timing of depletions specified. The alternative submittal suggests that the District may have data that could inform whether water bodies are interconnected and whether and where depletions are occurring, but the District did not provide an analysis of that data, as required by SGMA.

The second paragraphs of Section 2.2.3 and 3.2.3 of the alternative submittal read:

"The District has a comprehensive surface water monitoring network to measure creek flows, comply with water rights reporting and reservoir restrictions, and meet environmental requirements. Stream gauging by the District is discussed in Chapter 7. Surface water flow data can be used to evaluate which reaches of streams are gaining or losing streams with regard to groundwater. However, the District has not performed a comprehensive evaluation of the data for this purpose."

Without an understanding of whether, where and to what extent depletions are occurring, it is impossible to know whether depletions are causing an undesirable result on interconnected surface waters.

3. Do water budgets include water needs for managed wetlands and native vegetation, as defined water use sectors? No.

The water budgets only include domestic, municipal and industrial and agriculture as components of groundwater demands. It is unclear whether managed wetlands exist in the basins, but if they do, the water demand for this use is not included in the water budget. It seems likely that the basins include native vegetation, however water use by this water sector is not included in the water budget.

4. Do undesirable results and minimum thresholds describe potential effects on beneficial uses, land uses and property interests, particularly for the chronic lowering of groundwater, degraded water quality and depletions of

interconnected surface waters? No. Are these undesirable results being avoided? Unclear.

The alternative submittal does not describe undesirable results for depletions of interconnected surface waters, nor does it provide a quantitative minimum threshold. Because the alternative submittal does not contain a minimum threshold for interconnected surface waters, it is unclear whether undesirable results are occurring.

Potential effects on GDEs, a beneficial use, from minimum thresholds for the sustainability indicators are not described.

5. Does the sustainability goal include the environment, and if so, does the plan include measurable objectives and interim milestones to achieve the environmental portion of the sustainability goal within 20 years? No.

The sustainability goal does not include the environment.

6. Does the monitoring network monitor impacts to beneficial uses? No.

The monitoring network includes surface flow gages, in part to “meet environmental requirements.” (Section 7.4.2) The environmental requirements are not specified and it is therefore unclear whether these gages are sufficient to monitor impacts to environmental beneficial uses.

It is unclear whether water quality monitoring of groundwater and recharge supplies that contribute to interconnected surface waters adequately captures impacts to environmental beneficial uses, included listed fish species.

Monitoring of groundwater levels in an around GDEs is not included.

The District’s website seems to indicate that the District at least contemplated ecological monitoring that could help assess impacts to environmental beneficial uses related to groundwater conditions. The website contains a link

(<http://www.valleywater.org/Services/HealthyCreeksandEcoSystems.aspx>, visited 3/20/17) to a report entitled *Ecological Monitoring and Assessment Framework*, dated April 15, 2011. The purpose of the report reads,

“This Ecological Monitoring and Assessment Framework Technical Plan (Technical Plan) describes the recommended strategic approach to implementing an ecological monitoring and assessment framework (Framework), to improve the efficiency and effectiveness of the Santa Clara Valley Water District’s (District) ecological monitoring activities, as called for in the District Monitoring Activities Evaluation Report (Ali-Adeeb et al. 2002) and the District’s Strategic Plan for 2009 – 2014 (SCVWD 2009b). The Framework is one of four key elements included in the

District's Ecological Monitoring and Assessment Program (EMAP) (Table ES-1). The intent of EMAP is to ensure that cost-effective and timely ecological information, of known quality, is available to inform, evaluate, and improve watershed management decisions."

The monitoring network would greatly benefit from integration of any monitoring under the Technical Plan because ecological monitoring provides critical information on the interaction of groundwater conditions and GDEs.

March 30, 2017

Mr. Trevor Joseph
Sustainable Groundwater Management Chief
California Department of Water Resources
Submitted via DWR's SGMA Alternative Portal

Subject: Response to San Jose Water Company's Comments on the Santa Clara Valley Water District's Submitted Alternative to a Groundwater Sustainability Plan

Dear Mr. Joseph:

This letter provides the Santa Clara Valley Water District (District) response to the February 16, 2017 San Jose Water Company (SJWC) comment letter on the District's submitted Alternative to a Groundwater Sustainability Plan (GSP).

As background, the District was formed as a special act district in 1929 to manage groundwater. At that time and through the late 1960s, excessive groundwater pumping caused undesirable results including chronic overdraft, permanent subsidence, and salt water intrusion. District investments in managed recharge, imported water, and infrastructure effectively halted these major problems. Ongoing District programs and investments in diverse water supplies and conjunctive management have maintained sustainable groundwater conditions over many decades despite a growing population.

To ensure a reliable water supply, the District closely coordinates with water retailers, including SJWC, the District's largest customer. However, the District must consider the interests of all beneficial users in fulfilling our mission to protect and augment groundwater. Due to the diverse interests of basin stakeholders, we recognize that not all decisions or investments will be universally supported. We also recognize that in some cases there is significant apprehension over how basins will be managed under SGMA. Groundwater in Santa Clara County has been carefully managed for nearly 90 years, and the District will continue to do so for the benefit of, and in coordination with local beneficial users.


With regard to the SJWC comments, the District respectfully disagrees with the assertion that the 2016 Groundwater Management Plan (GWMP) is not an acceptable Alternative or that it is deficient. Alternatives do not need to conform to GSP requirements but must demonstrate functional equivalence to certain GSP Regulation articles and that they meet the intent of SGMA. The District believes that the GWMP is an acceptable Alternative under SGMA, and that it meets the intent of SGMA, which is to achieve sustainable groundwater conditions. Specifically, the GWMP provides clear evidence of the District's understanding of basin setting and conditions, monitoring to assess related changes, as well as comprehensive programs and numeric thresholds to avoid undesirable results and ensure continued sustainability.

Our mission is to provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

Mr. Trevor Joseph
Page 2
March 30, 2017

The comprehensive groundwater management framework described in the GWMP is effective, and ensures groundwater conditions remain sustainable. Despite several years of drought, local groundwater levels and storage have generally rebounded due to the GWMP framework. This requires strong coordination with water retailers, and the District looks forward to continued collaboration with SJWC and other stakeholders. The District's detailed response to the SJWC comment letter is attached. The District is also preparing responses to the extensive SJWC comments on the functional equivalence table in GWMP Appendix B (SJWC Attachment B), which will be submitted to DWR and SJWC in April 2017.

Sincerely,


for
Jim Fiedler, P.E., D. WRE
Chief Operating Officer
Water Utility Enterprise

cc: Timothy Guster, Great Oaks Water Company
Jim Simunovich, California Water Service Company
District Board of Directors
N. Camacho, G. Hall, V. De La Piedra

Attachment 1: Detailed Response to SJWC Comment Letter

Attachment 1 - Santa Clara Valley Water District Detailed Response to the San Jose Water Company (SJWC) Comment Letter Dated February 16, 2017

SJWC Comment 1A: The Submitted Alternative is Not an Acceptable Alternative Under SGMA

SJWC asserts that Water Code Section 10750.1(a) prohibits a new GWMP from being adopted, or an existing GWMP from being amended after January 2015 and that Water Code Section 10750.1(c) only authorizes DWR to review and accept GWMPs adopted prior to January 1, 2015.

Section 10750.1(a) does not apply to the District's 2016 GWMP, which was adopted pursuant to the authorities provided by the District Act. Water Code Section 10733.6(b)(1) allows local agencies to submit Alternative Plans that are developed pursuant to Part 2.75 or other law authorizing groundwater management. Here, the District Act is the authorizing law and, as such, any prescription against adopting or amending plans prepared pursuant to Part 2.75 does not apply to the 2016 GWMP. Even if the 2016 GWMP was developed pursuant to Part 2.75, however, the prescription against adopting or amending a groundwater management plan still does not apply to a plan submitted as an Alternative to a GSP. Section 10750.1(c) states:

"This section does not apply to a plan submitted as an alternative pursuant to Section 10733.6, unless the department has not determined that the alternative satisfies the objectives of Part 2.74 (commencing with Section 10720) on or before January 31, 2020, or the department later determines that the plan does not satisfy the objectives of that part."

Section 10750.1(c) suggests that a groundwater management plan can be amended or adopted after January 1, 2015, as long as it is submitted as an Alternative to a GSP pursuant to Section 10733.6, and DWR determines by January 31, 2020 that the plan satisfies SGMA's objectives.

SJWC Comment 1B: The Submitted Alternative Undermines Collaboration Among Basin Stakeholders

The SJWC comments state that the Submitted Alternative "disregards repeated efforts by the Basin's various water retailers to directly collaborate with the District on the preparation and submittal of a plan, or an Alternative Plan." The letter also states that "because the District's process for making SGMA-related decisions is not set forth in the Submitted Alternative, SJWC is concerned that the District may elect to pursue actions independently and without regard to the interests of the Water Retailers."

The state's emergency regulations for GSPs and Alternatives were adopted in May 2016 leaving agencies developing Alternatives little time to prepare, adopt, and submit by the January 1, 2017 statutory deadline. In recognition of the short timeframe, the District made clear our intent to prepare and submit an updated GWMP as an Alternative, with a focus on updating technical information and acknowledging new SGMA authorities. This strategy was discussed at multiple meetings with the water retailers and in publicly-noticed Board meetings dating back to March/April of 2016. In June 2016, the District encouraged the water retailers Groundwater Subcommittee to review the District's 2012 GWMP, noting "We are not planning to update basin management goals, strategies, or numeric targets as we believe the current ones have been effective." The District did not receive related comments. These goals, strategies, targets, and programs are the backbone of the District's groundwater management strategy and are essentially unchanged in the 2016 GWMP.

Several water retailers expressed concern with new SGMA authorities to regulate pumping and potential interference with water rights, and the District met with these retailers on several

occasions to discuss related issues. Following these meetings, SJWC and another investor-owned water retailer formally recommended a shared governance model as reflected in comments received during the District's public hearing on the 2016 GWMP. These comments, as well as input received from several other stakeholders, were considered by the District Board of Directors prior to adopting the GWMP.

The GWMP does not propose implementing SGMA authorities to regulate pumping. It acknowledges these as potential tools that may be needed in the future to avoid undesirable results but clearly indicates continued collaboration with pumpers is the preferred approach. The GWMP states the District's intent to work with interested stakeholders in 2017 to identify basin conditions that might trigger the need to regulate pumping and mechanisms to ensure effective implementation should use of the tools become necessary. The District recognizes there are complex issues and limitations associated with these authorities related to water rights and land use authority. As such, the District welcomes and encourages input and participation by the water retailers and other interested stakeholders as we assess these authorities, including when and how they might ever need to be used.

With regard to SGMA-related decisions, the District will continue to conduct its business openly and transparently through publicly-noticed meetings, considering the interests of all beneficial users and with opportunities for stakeholder input. At the November 22, 2016 public hearing for the GWMP, the District Board affirmed its commitment to continue working closely with water retailers, and referred related SGMA stakeholder engagement to the Board's Water Conservation and Demand Management Committee. This Board committee has met monthly since December 2016 and stakeholders present at the meetings, including SJWC, have been supportive of the District's approach to evaluate new SGMA authorities in 2017. The District list of interested stakeholders includes water retailers, local land use agencies, regulatory agencies, adjacent water agencies, businesses, non-government organizations and private individuals. Any person or entity can request to be included in this list. The District notifies interested stakeholders of any SGMA-related District Board and Board committee items, as well as relevant news such as the DWR time extension for public comments on Alternatives.

Like SJWC, the District is focused on meeting the water supply reliability needs of our constituents, including SJWC. We believe we have demonstrated an ongoing commitment to managing the basins for the benefit of all groundwater pumpers, including water retailers who are by far the largest pumpers in the Santa Clara Subbasin. The District works closely with SJWC and other water retailers on current operations as well as future water supply needs and investments, and will continue to do so. On major policy issues, the District has not and will not act without input from water retailers and other beneficial users or without regard for their particular interests.

SJWC Comment 2A: The Submitted Alternative Fails to Comply with SGMA's Notice and Communication Requirements

Alternatives do not need to conform to GSP requirements but must demonstrate functional equivalence to certain GSP Regulation articles and that they meet the intent of SGMA. As documented in Appendix A, the District communicated information on planned SGMA compliance on numerous occasions and provided opportunities for stakeholder input. This included publicly-noticed Board meetings and public hearings, multiple meetings with water retailers, and two community meetings.

Chapter 1 of the GWMP describes the structure and charge of the District's elected Board of Directors and describes how the District interacts with stakeholders. As documented throughout the GWMP, the District will continue to engage water retailers and other stakeholders in our work to protect local groundwater resources.

SJWC Comment 2B: The Submitted Alternative Does Not Include a Current or Projected Water Budget for the Basin

The GWMP provides detailed water budget information. Chapter 4 of the GWMP presents the countywide water budget, the long-term average groundwater budget for 2003-2012, and the annual change in groundwater storage. Appendix C provides detailed information on the current (2015) groundwater budget. Chapter 4 also includes future groundwater demand projections through 2040 derived from the District's Urban Water Management Plan.

As noted in the GWMP, the Urban Water Management Plan includes comprehensive information on future water supply and demand projections, water supply challenges and constraints, and water supply reliability. The GWMP also discusses District planning efforts to evaluate and recommend actions for future water supply reliability through the Water Supply Master Plan. The District ensures future water supply reliability through regular, forward-looking planning and appropriate investments, in coordination with water retailers and other interested parties.

SJWC Comment 2C: The Submitted Alternative Fails to Identify Undesirable Results

The GWMP describes the cause and effect of historical undesirable results that have been successfully addressed through District planning and investments, including long-term declines in groundwater levels and storage, land subsidence, and salt water intrusion. Despite the SJWC assertion, the GWMP uses the term "undesirable results" in numerous places in describing basin groundwater management goals, strategies, and programs. The GWMP also states that the groundwater subbasins are sustainable, indicating no undesirable results are occurring, and presents supporting data and information in Chapters 2, 3, and 4.

SJWC Comment 2D: The Submitted Alternative Does Not Satisfy the GSP Regulation's Requirements for the Establishment of Minimum Thresholds

The intent of minimum thresholds is to identify when problems may be occurring so appropriate action can be taken. The outcome measures in the GWMP have proven to be effective in prompting action when needed to maintain sustainable conditions. In 2014, increased pumping and decreased recharge due to drought conditions caused groundwater levels in the Santa Clara Subbasin to approach the subsidence thresholds in the GWMP outcome measure. The District and SJWC took swift and collaborative action to understand the issue and reduce pumping in key areas, resulting in a direct, positive effect on groundwater levels and minimizing the risk of resumed subsidence.

The groundwater storage outcome measure, derived from the District's Water Shortage Contingency Plan, has also proven effective. Based on projected end of year groundwater storage, the Board set related water use reduction targets. The water retailers' response was impressive, reducing overall water use by nearly 30% in 2015 and 2016 compared to 2013 and shifting their sources to more treated water in lieu of groundwater pumping. Coupled with District efforts to secure supplemental surface water, this response caused groundwater levels to improve even with continued drought conditions. Countywide groundwater storage is

estimated to be in the Normal Stage (Stage 1) of the Water Shortage Contingency Plan at the end of 2016 despite five years of drought. This is a significant accomplishment and a testament to effective metrics and collaborative response.

SJWC Comment 2E: The Submitted Alternative Fails to Establish Measurable Objectives

Measurable objectives serve as targets to achieve the basin sustainability goal within 20 years of implementation. Since groundwater conditions are sustainable in Santa Clara County as stated in the GWMP, this concept is not applicable.

SJWC Comment 2F: Monitoring Network Described in Submitted Alternative Does Not Meet Requirements of GSP Regulations

Unlike many basins that have little or no groundwater data, the District has conducted robust groundwater monitoring and analysis for many decades, and the Santa Clara and Llagas subbasins have been extensively studied. As described in the GWMP, the District monitors groundwater levels, quality, and subsidence at hundreds of sites, and analyzes related data to assess changing conditions so that appropriate action can be taken. The District also measures surface water and uses tools like calibrated groundwater flow models to assess groundwater conditions. Groundwater monitoring and modeling efforts are described in detail in Chapter 7 of the GWMP, including monitoring sites, data collection protocols, and reporting. As noted on GWMP page 7-1:

“For all monitoring, the District works to ensure the monitoring locations and data collected provide adequate information to facilitate a comprehensive understanding of groundwater conditions and support informed decision-making. This includes ongoing assessment of data gaps or redundancy, monitoring protocols, and data management, evaluation, and reporting. Specific wells or locations monitored may vary and evolve over time due to issues with well construction or access, but the overall programs provide strong and comprehensive data to assess conditions and trends within the Santa Clara and Llagas subbasins.”

The District’s monitoring network is extensive, and there are no significant data gaps in the monitoring programs or hydrogeologic conceptual model. Ongoing assessment and adaptation of the program to meet changing needs ensures the District will continue to collect data that supports thorough assessment of groundwater conditions and related decision making.

March 30, 2017

Mr. Trevor Joseph
Sustainable Groundwater Management Chief
California Department of Water Resources
Submitted via DWR's SGMA Alternative Portal

Subject: Response to Stanford Comments on the Santa Clara Valley Water District's Submitted Alternative to a Groundwater Sustainability Plan

Dear Mr. Joseph:

This letter provides the Santa Clara Valley Water District (District) response to the February 17, 2017 Stanford University comment letter on the District's 2016 Groundwater Management Plan (GWMP), which was submitted to DWR as an Alternative to a Groundwater Sustainability Plan (GSP).

As background, the District was formed as a special act district in 1929 to manage groundwater. At that time and through the late 1960s, excessive groundwater pumping caused undesirable results including chronic overdraft, permanent subsidence, and salt water intrusion. District investments in managed recharge, imported water, and infrastructure effectively halted these major problems. Ongoing District programs and investments in diverse water supplies and conjunctive management have maintained sustainable groundwater conditions over many decades despite a growing population.

To ensure a reliable water supply, the District closely coordinates with water retailers, including Stanford. However, the District must consider the interests of all beneficial users in fulfilling our mission to protect and augment groundwater. Due to the diverse interests of basin stakeholders, we recognize that not all decisions or investments will be universally supported. We also recognize that, in some cases, there is significant apprehension over how basins will be managed under SGMA. Groundwater in Santa Clara County has been carefully managed for nearly 90 years, and the District will continue to do so for the benefit of, and in coordination with, local beneficial users.

Responding to Stanford's comments, we respectfully disagree that the District's GWMP is deficient. The District believes that the GWMP meets the intent of SGMA, which is to achieve sustainable groundwater conditions. Specifically, the GWMP provides clear evidence of the District's understanding of basin setting and conditions, monitoring to assess related changes, as well as comprehensive programs and numeric thresholds to avoid undesirable results and ensure continued sustainability. Further detailed responses are provided as follows:

Our mission is to provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

Stanford Comment 1: The Plan fails to identify and recognize water right holders in the Subbasin and provide for measures to ensure sustainable groundwater management in a way that protects water right holders.

Alternatives are not required to conform with GSP Regulations, and the District believes that functional equivalence with Section 354.10 of the GSP Regulations (referenced by Stanford) has been demonstrated. Section 354.10 requires a description of the beneficial uses and users of groundwater in the basin, but does not require a list of individual water right holders. The GWMP recognizes water retailers as the primary groundwater users in Section 1.5 (Groundwater Management Partners and Stakeholders) and Chapter 4 (Water Supplies, Demand, and Budget). The GWMP contains detailed information on pumping by municipal and industrial (M&I), domestic, and agricultural users in Chapter 4 and Appendix C.

The groundwater management framework described in the GWMP is essentially unchanged from ongoing District goals, strategies, programs, and outcome measures, which have ensured sustainable groundwater supplies and protected beneficial uses and users. The GWMP does not place, or propose, any restrictions on groundwater extraction or use, and as such, does not impact the underlying water rights.

Stanford Comment 2: The Plan fails to address SGMA authorities and explain how the District will exercise those authorities in a lawful manner to sustainably manage groundwater in the Subbasin.

The comments state that the GWMP does not address how the District will implement SGMA authorities in a manner that respects water rights. Furthermore, Stanford maintains that to the extent that a local agency intends to exercise SGMA authorities, Section 354.44 of the GSP Regulations require a description of the authorities and the management actions to be implemented pursuant thereto.

The GWMP does not propose to implement new SGMA authorities and clearly states that the District will work collaboratively with stakeholders to evaluate the authorities and develop related triggers and implementation mechanisms. As noted in the GWMP, the District recognizes there are complex issues and limitations associated with these authorities related to water rights and land use authority that must be thoughtfully analyzed.

The comprehensive groundwater management framework described in the GWMP is effective and ensures groundwater conditions remain sustainable. Despite several years of drought, local groundwater levels and storage have generally rebounded due to the GWMP framework, which includes strong coordination with water retailers.

At the November 22, 2016 public hearing for the GWMP, the District Board of Directors affirmed its commitment to continue working closely with water retailers, and referred related stakeholder engagement to the Board's Water Conservation and Demand Management Committee. This Board committee has met monthly since December 2016, and we appreciate continued input and participation by Stanford and other stakeholders in these meetings.

Per SGMA and the GSP Regulations, the intent of the DWR review of a GSP or Alternative is to ensure certain administrative requirements are met and to determine if the plan complies with SGMA and substantially complies with relevant GSP Regulations. With regard to the latter, the goal is to assess whether the plan is likely to achieve the sustainability goal for the basin. The

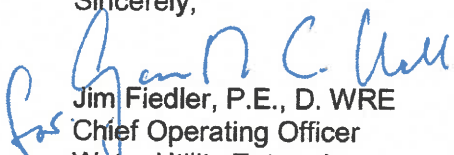
Mr. Trevor Joseph
Page 3
March 30, 2017

District believes that the GWMP is an acceptable Alternative under SGMA, and that it meets the intent of SGMA, which is to achieve sustainable groundwater conditions. Specifically, the GWMP provides clear evidence of the District's understanding of basin setting and conditions, monitoring to assess related changes, as well as comprehensive programs and numeric thresholds to avoid undesirable results and ensure continued sustainability.

Lastly, the District wishes to clarify that the only subject of active litigation with regard to District groundwater management relates to groundwater production charges.

The District looks forward to continued collaboration with Stanford and other stakeholders.

Sincerely,


for Jim Fiedler, P.E., D. WRE
Chief Operating Officer
Water Utility Enterprise

cc: Tom Zigterman, Stanford University
District Board of Directors
N. Camacho, G. Hall, V. De La Piedra, E. Soderlund, B. Kassab, G. Cook

March 30, 2017

Mr. Trevor Joseph
Sustainable Groundwater Management Chief
California Department of Water Resources
Submitted via DWR's SGMA Alternative Portal

Subject: Response to National Marine Fisheries Service Comments on the Santa Clara Valley Water District's 2016 Groundwater Management Plan

This letter provides the Santa Clara Valley Water District (District) response to the February 17, 2017 National Marine Fisheries Service (NMFS) comment letter on the District's 2016 Groundwater Management Plan (GWMP), which was submitted to the Department of Water Resources as an Alternative to a Groundwater Sustainability Plan. Like NMFS, the District supports an integrated approach to groundwater and surface water management.

Through the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE), the District, NMFS, California Department Fish and Wildlife (CDFW) and other parties are working to support fish and aquatic habitat restoration. The GWMP notes that "although the District is not yet required to implement FAHCE measures, it has moved forward with restoration measures for the protection of fish and wildlife resources consistent with Board policies. In conjunction with flood protection efforts, the District has removed 22 fish passage barriers, laddered and screened water diversions, and collected data to provide a foundation to support fish and aquatic habitat restoration to fulfill elements of the FAHCE Settlement Agreement." Our Board of Directors has expressed a strong commitment to protecting fisheries and aquatic habitat through FAHCE, and we look forward to continued collaboration with NMFS and CDFW in implementing the requirements of the FAHCE Settlement Agreement.

The District's support of an integrated water management approach is also demonstrated through our One Water Plan. The vision of this plan is to manage Santa Clara County water resources holistically and sustainably to benefit people and the environment in a way that is informed by community values. Objectives of this plan include the following:

- Sustainable Groundwater (Objective B): Groundwater subbasins provide critical storage to meet demands during water shortages. The coordinated use of multiple supply sources maintains and augments groundwater. Conservation and the use of surface water supplies and recycled water provides in-lieu recharge by offsetting demands on groundwater. Sustainable groundwater management supports urban, rural, agricultural, and environmental water supply needs.
- Supportive Stream Flows (Objective F): A regionally-, climate- and location-appropriate variety of surface flow patterns – in magnitude, timing, and duration – to support native

Our mission is to provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

Mr. Trevor Joseph
Page 2
March 30, 2017


habitat complexity and diversity, transport sediment and maintain natural life-cycle cues for fish and other aquatic and riparian organisms.

NMFS recommends that the GWMP include specific goals, strategies, and outcome measures related to the protection and restoration of fisheries resources. The focus of SGMA with regard to surface water/groundwater interaction is to avoid undesirable results related to the depletion of interconnected surface water. As noted in the GWMP, District reservoir and recharge operations extend the duration of flow in intermittent creeks. The District is not aware of any areas where groundwater pumping has a significant or unreasonable effect on interconnected surface water. The GWMP notes the District's strong commitment to protecting aquatic habitat and acknowledges that additional work is necessary to better understand groundwater/surface water interactions in the subbasins. The District plans to conduct additional analysis prior to updating the GWMP by 2022.

NMFS also recommends that the District develop a numeric groundwater/surface water model to quantify and evaluate projected water budget conditions and potential impacts to beneficial uses (i.e., aquatic habitat) and users of groundwater. The District believes that it has relied upon best available information and science in developing its Alternative Plan, but will consider the need for and benefits of such a model as additional assessment of groundwater/surface water interaction proceeds.

The District thanks NMFS for its comments and looks forward to continued collaboration to protect fisheries and aquatic habitat.

Sincerely,


for Jim Fiedler, P.E., D. WRE
Chief Operating Officer
Water Utility Enterprise

cc: Alecia Van Atta, National Marine Fisheries Service
N. Camacho, G. Hall, E. Soderlund, V. De La Piedra, B. Kassab, G. Cook



MEMORANDUM

FC 14 (01-02-07)

TO: The Board of Directors

FROM: Chris Elias

SUBJECT: Safe, Clean Water and Natural Flood Protection Grant Project Priorities B7 and D3

DATE: April 4, 2017

This is to notify the Board that staff has released information announcing availability of the 2017 Safe, Clean Water and Natural Flood Protection Program (SCW) grants and inviting eligible applicants to submit their proposals. Funding for 2017 competitive grants will be issued through: SCW Priority B Grants (for support of volunteer cleanup efforts and education) and SCW Priority D Grants (for access to trails and open space). Details are summarized below.

Funding

\$200,000 is available for support of volunteer cleanup efforts and education. The minimum award amount is \$25,000 and the maximum award is up to \$50,000.

\$571,000 is available for access to trails and open space. The minimum award amount is \$75,000 and the maximum award is up to \$150,000.

Funding for Priorities B & D is not intended to cover the entire project's costs, but rather subsidize eligible projects that meet the objectives of those priorities.

Deadline for Submitting Proposals

All applications for Priority B funding must be received by 5:00 p.m. on May 5, 2017.

All applications for Priority D funding must be received by 5:00 p.m. on June 30, 2017.

Benefits and Types of Projects Requested

Both SCW Priorities B & D provide opportunities for applicants to collaborate with the District in achieving the objectives that result in the following benefits:

Priority B (support of volunteer cleanup efforts and education)	Priority D (access to trails and open space)
Reduces contaminants entering our waterways and groundwater	Enhances creek and bay ecosystems
Engages community and supports watershed stewardship	Expands trail and open space access
Leverages volunteer community resources for efficient use of funds	Leverages community funding through grants. Increases collaborations and partnerships for stewardship activities with cities, the county, nonprofit organizations, schools, and other stakeholders

Eligibility and Application Process

Eligible applicants include municipalities (county, cities, towns or special districts), educational institutions, neighborhood associations and not-for-profit corporations with a 501(c)(3) designation. If the organization does not fall under these categories, the applicant will need to include a fiscal sponsor, which is a tax-exempt 501(c)(3) organization that agrees to accept and be responsible for grant funds on behalf of another organization. The fiscal sponsor is responsible for the general management of

grant funds, which can include keeping financial records, disbursing funds in accordance with the grant, fulfilling reporting requirements, and ultimately ensuring compliance with grant project terms and conditions. Projects eligible for funding under the SCW Program must provide a direct, measurable benefit within Santa Clara County.

There will also be a non-mandatory grants workshop for interested grant applicants to get more information about the 2017, SCW grant program, and pertinent grant application requirements. Clarification questions will be addressed at the workshop event, and on an on-going basis.

The SCW Grant Program Workshop details are as follows:

Date: April 17, 2017

Time: 9:30 a.m. - 12:00 p.m.

Location: SCVWD, Conference Room B-108

Address: 5750 Almaden Expressway

San Jose, CA 95118

Meanwhile, questions about the grants may be directed to Grants@valleywater.org

Additional Communication and Public Outreach

Additional public outreach efforts include the following media and outlets:

- Local Municipalities, Schools & Nonprofits including neighborhood organizations
- District Committees
- District E-newsletter
- Social Media
- NextDoor
- CEO Bulletin
- Board Agenda Items
- District webpage

Details of the application process are on District website and distributed through eCivis, an electronic grant management system.

If you have any questions, please contact me at 408-630-2379



Chris Elias
Deputy Administrative Officer
Office of CEO Support & Board Support

Cc: SCW Grants file, N. Camacho, C. Elias, K. DuQuite

TO: Board of Directors

FROM: James M. Fiedler

SUBJECT: California WaterFix presentations to
Metropolitan Water District of Southern
California Special Committee on the Bay-
Delta

DATE: April 7, 2017

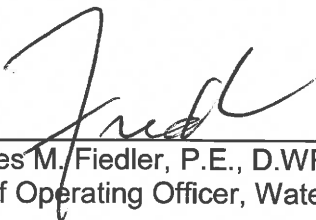
The following are links to recent presentations on the California WaterFix that include discussion on several issues which have also been raised by the Santa Clara Valley Water District Board, including a review and lessons learned from other large tunnel projects, and the cost estimation and cost risk analyses performed for the California WaterFix.

Staff at the Metropolitan Water District of Southern California (Met) recently made presentations on the California WaterFix project to their Special Committee on Bay-Delta. In January, Met staff member, John Bednarski, provided an overview of the project, including its physical components, cost, proposed organizational structure, and construction schedule. He also described a review of other several large tunnel projects from around the world including their cost, schedule, and lessons learned. His slides are provided as Attachment 1 and his presentation can be heard by clicking on item 3b at the following link:

http://mwdh2o.granicus.com/MediaPlayer.php?view_id=12&clip_id=5839

In February, the program manager for the California WaterFix project, Chuck Gardner, introduced two consultants who have been engaged to prepare the cost estimate and risk management process for the project. Patrick Pettiette with 5RMK, a project management and planning organization that provides cost estimates for mega-projects around the globe, described the scope and basis for the cost estimate. Robert Goodfellow with Aldea Services LLC, a tunnel and underground construction engineering firm that specializes in risk management, described a cost risk analysis for the design and construction of the California WaterFix. Their slides are provided as Attachment 2 and their presentation can be heard by clicking on item 3b at the following link:

http://mwdh2o.granicus.com/MediaPlayer.php?view_id=12&clip_id=5921



James M. Fiedler, P.E., D.WRE
Chief Operating Officer, Water Utility Enterprise

Attachment 1: Project Implementation Considerations
Attachment 2: Construction Cost and Risk Management



Project Implementation Considerations for California WaterFix

Special Committee on Bay-Delta
Item 3b
January 24, 2017

Agenda

● January

- California WaterFix Overview
- Review Other Mega-Projects
 - Cost
 - Schedule
 - Lessons Learned

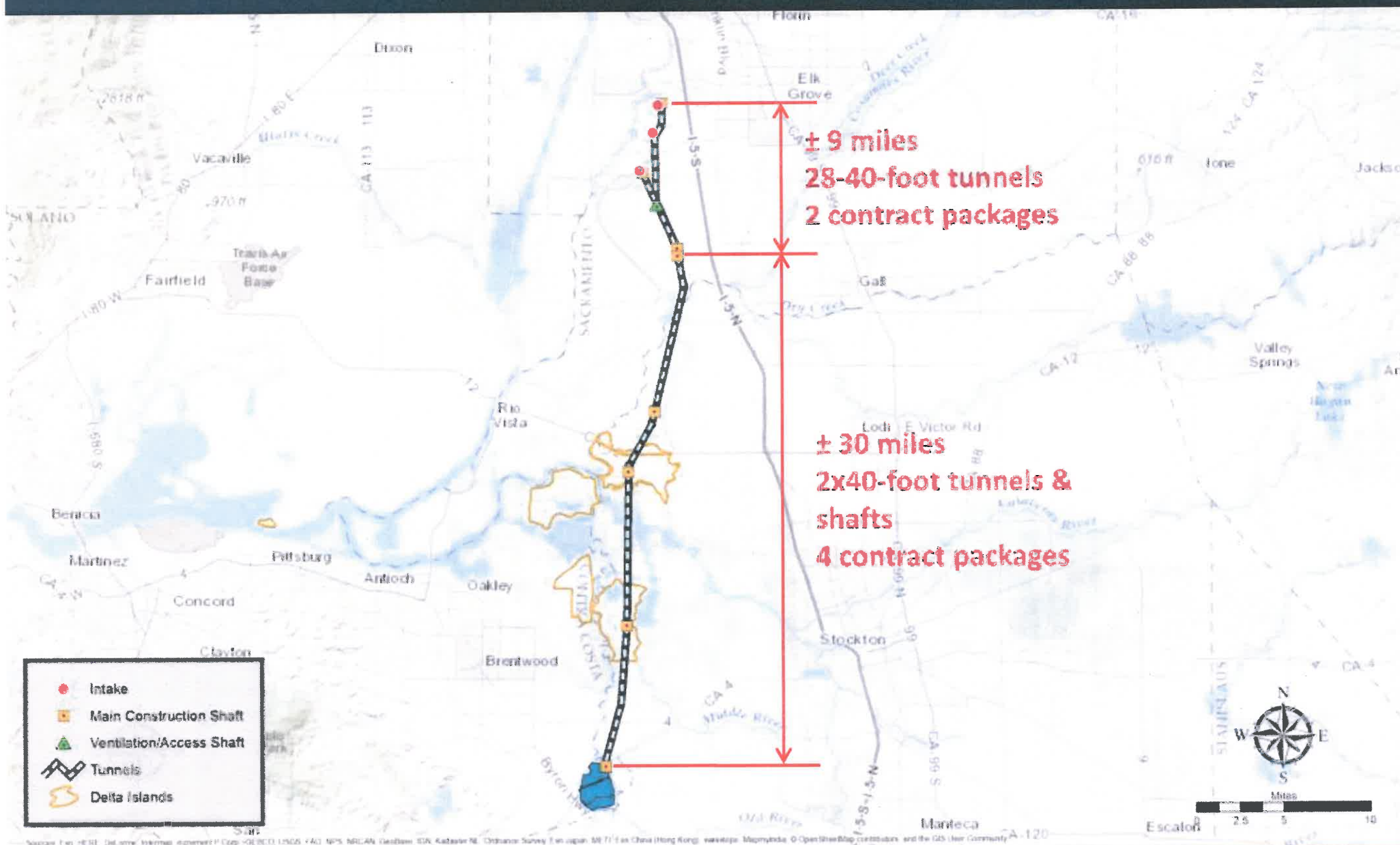
● February

- Construction Risk Management

DRAFT

Tunnel Portions of Program

DRAFT



Main Tunnels

- 100 year life
- Twin bore main tunnels
- 150 ft below grade
- Concrete segmental liner
- Pressurized face Tunnel Boring Machine construction
- 45 ft excavated diameter
- 40 ft finished internal diameter

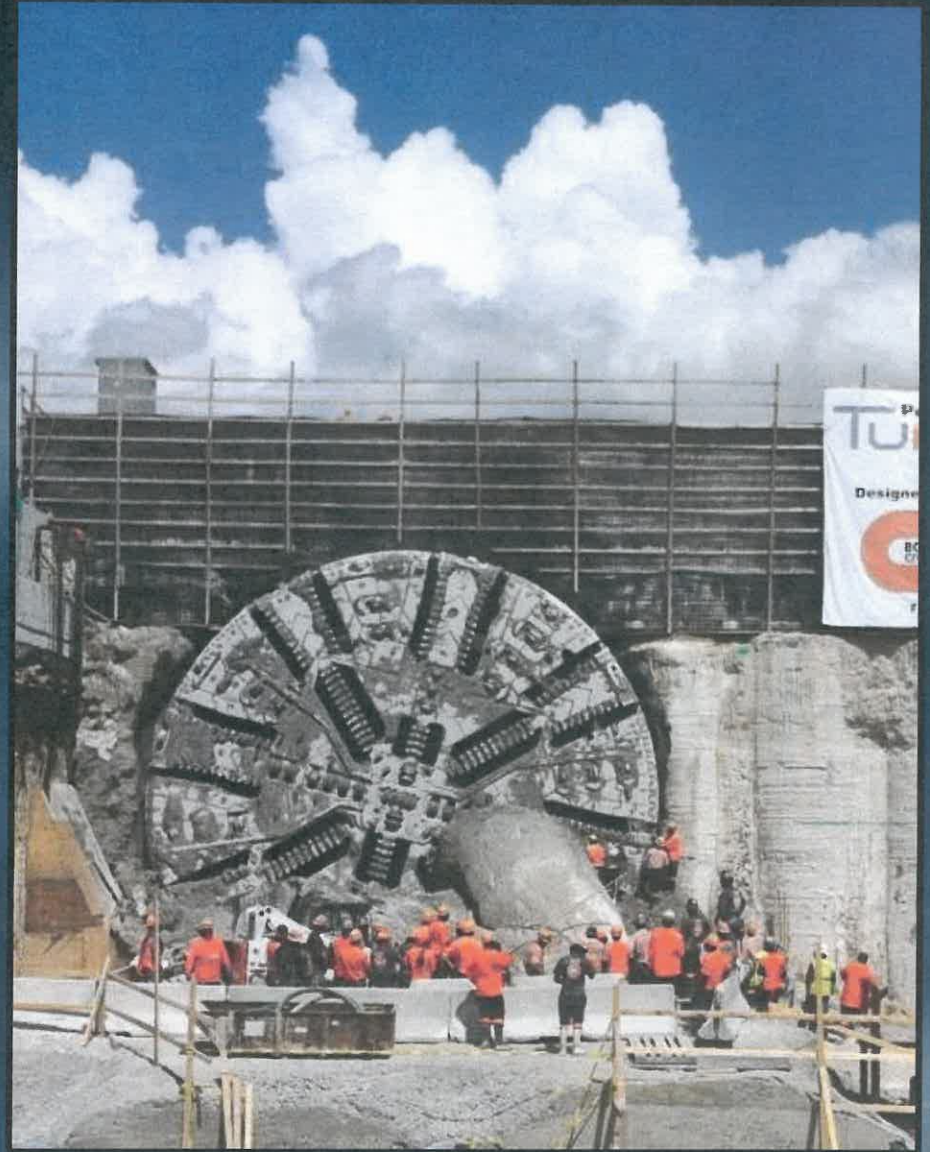
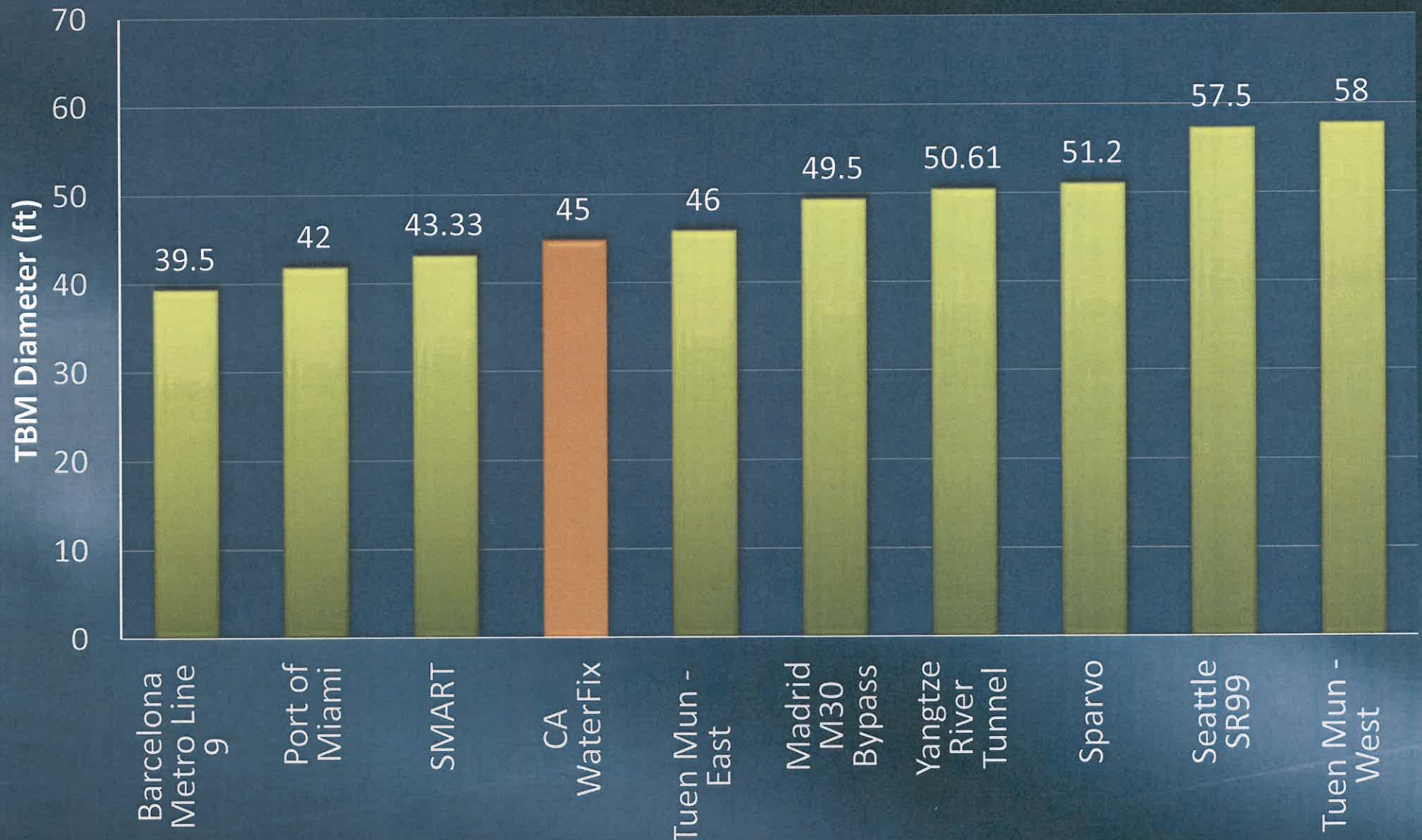


Photo Courtesy: Port of Miami Tunnel

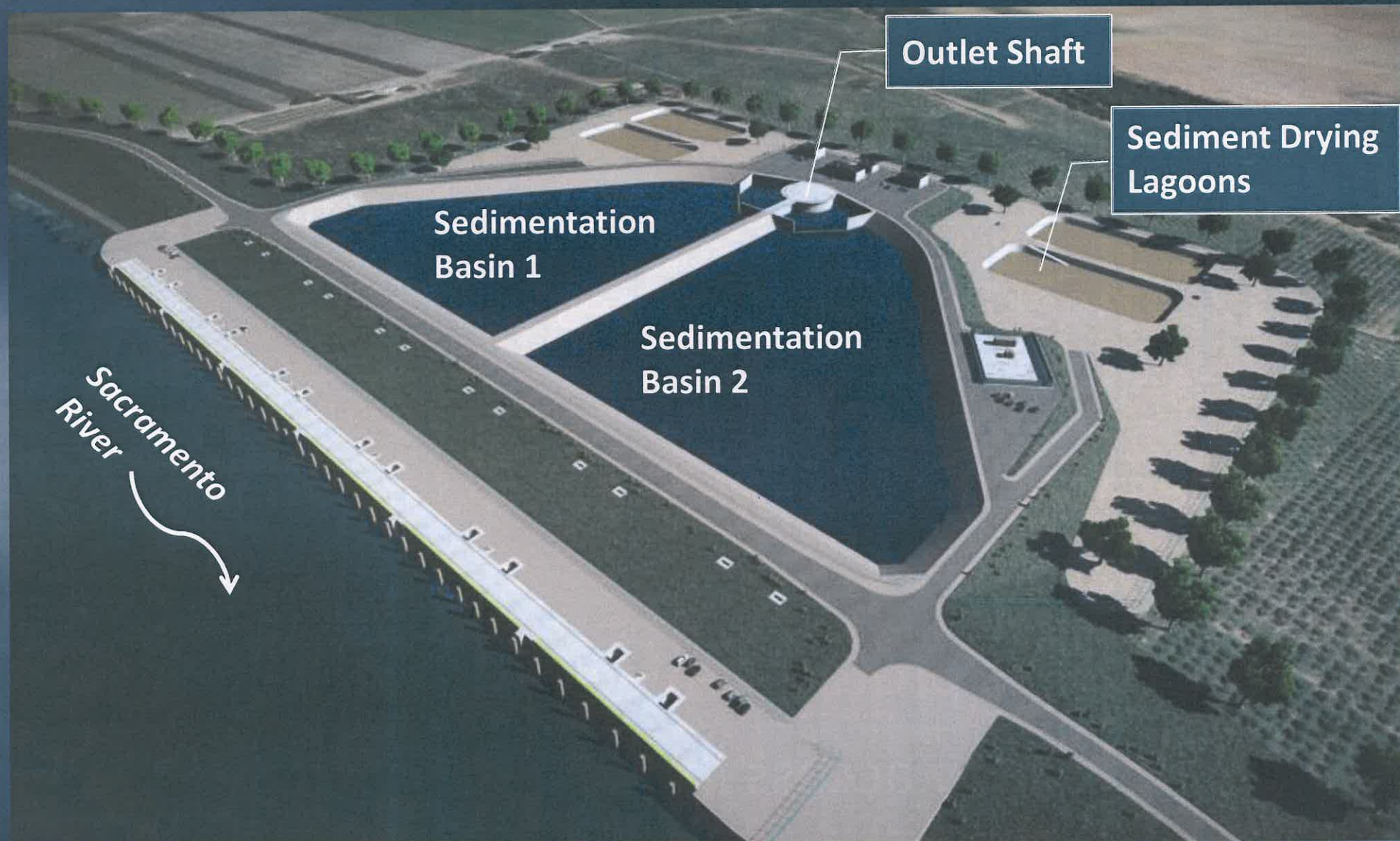
Large Diameter Tunnel Boring Machine Projects



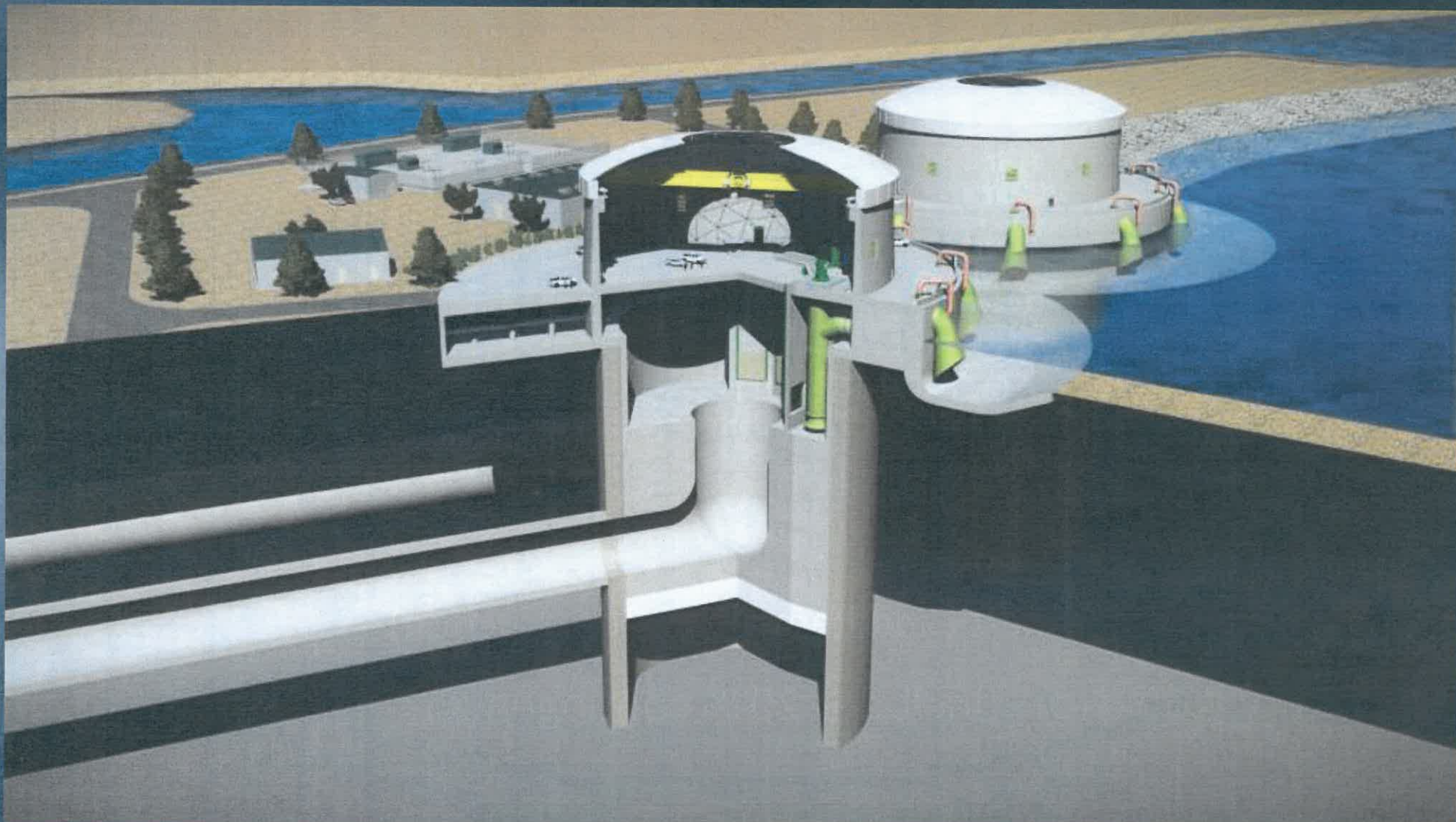
Program Facts

- 700,000 tunnel segments
- 23 million cubic yards of excavated tunnel material
- 10-12 Tunnel Boring Machines operating simultaneously
- 195 Mega Watts of power required for Tunnel Boring Machines
- Existing levees protect project sites
- Limited highway access in Delta

River Intakes



Clifton Court Pump Plants



Program Estimate

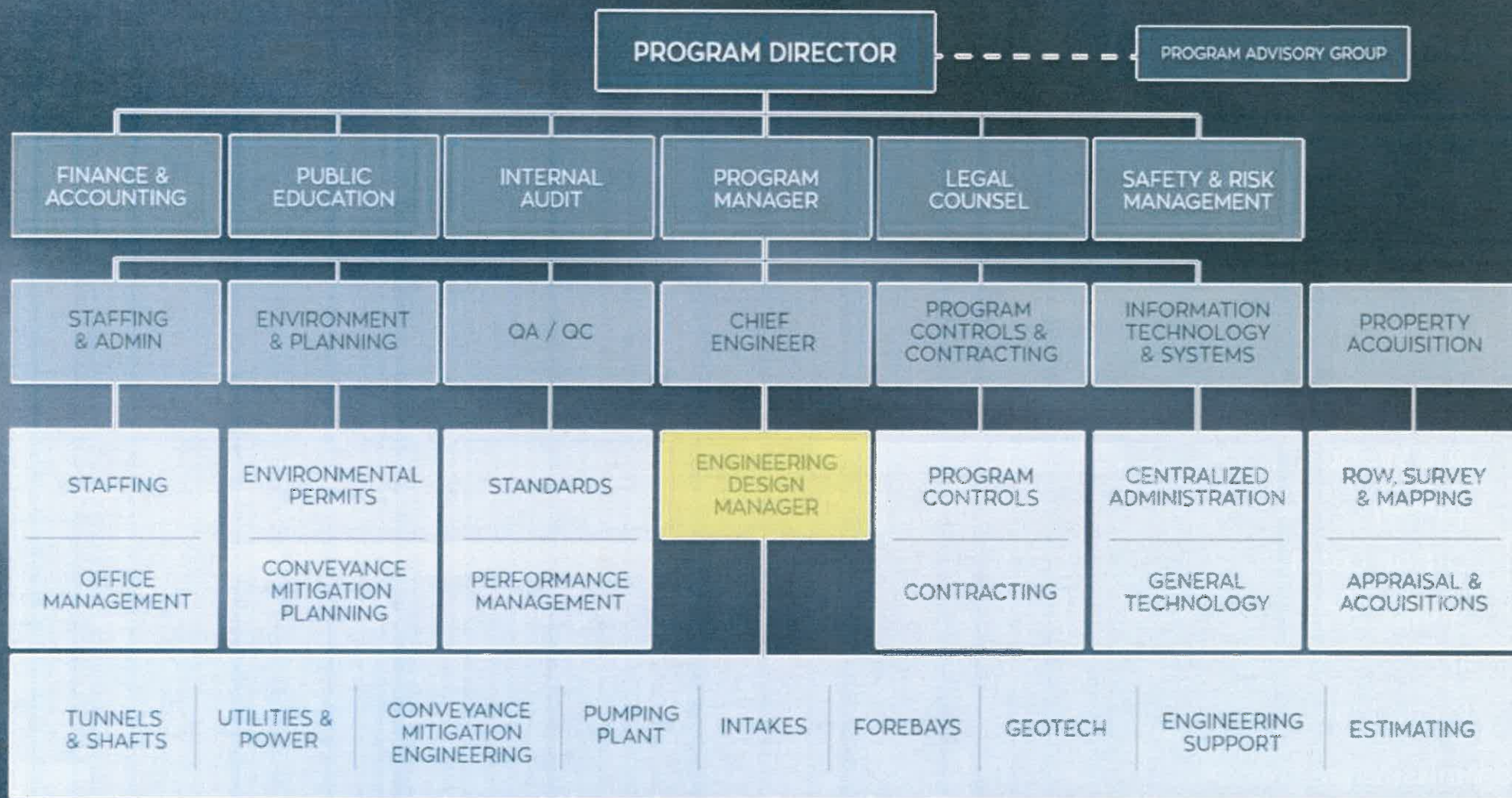
Item	Amount (\$ Billions)
Total	\$ 14.94
PM/CM/Engineering	\$ 1.91
Tunnels/Shafts construction	\$ 6.82
Remaining construction	\$ 2.68
Contingency (~36% for Tunnel/Shafts and Remaining Construction)	\$ 3.38
Land acquisition (includes 20 % contingency)	\$ 0.15

Program Estimate developed in September 2015

Program Estimate in 2014 Dollars

Design and Construct Enterprise

Organizational Structure



DCE Program Schedule

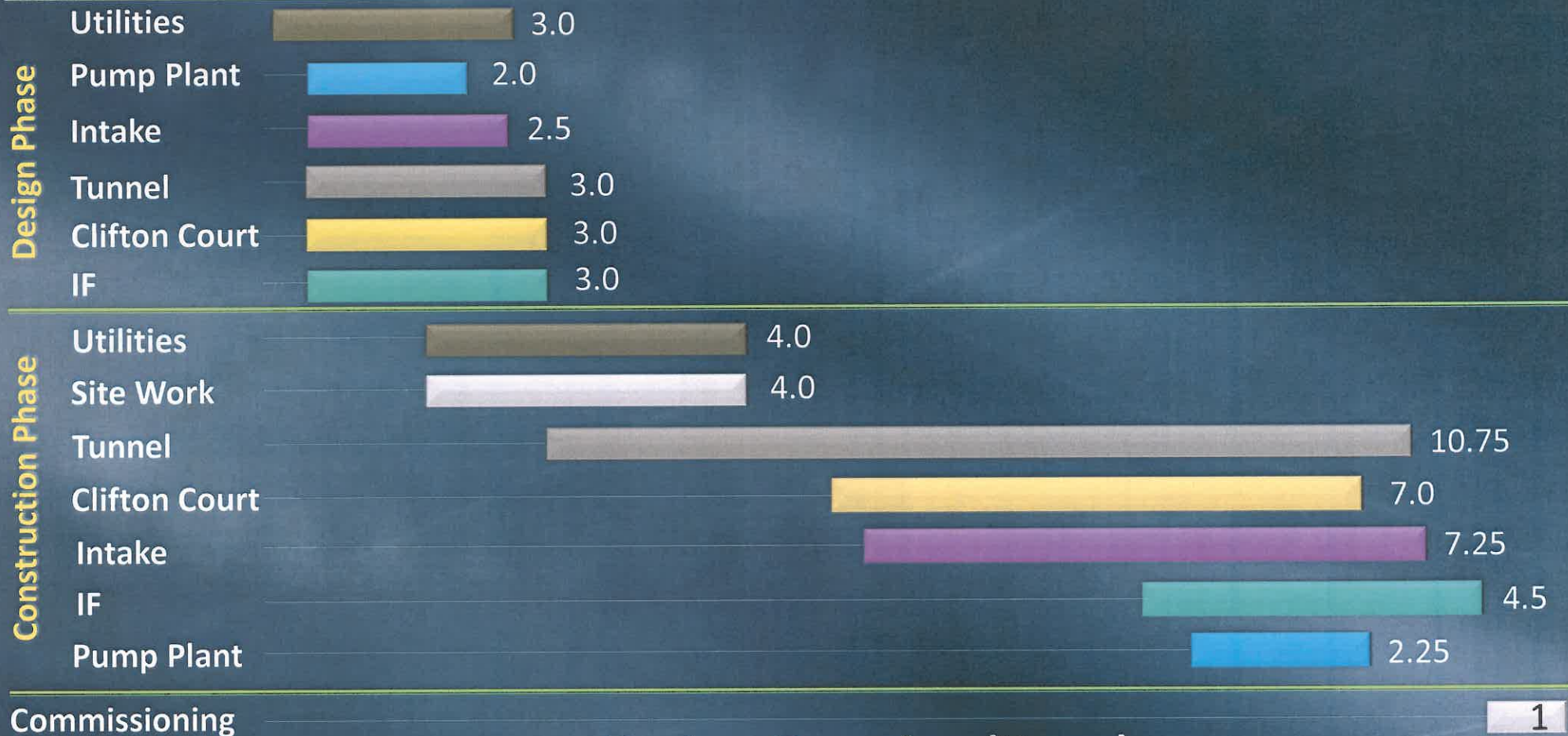
Lead staffing 0.75

RFQ process 1.0

Land Acquisition 4.0

Note:

Numbers indicate task duration in years

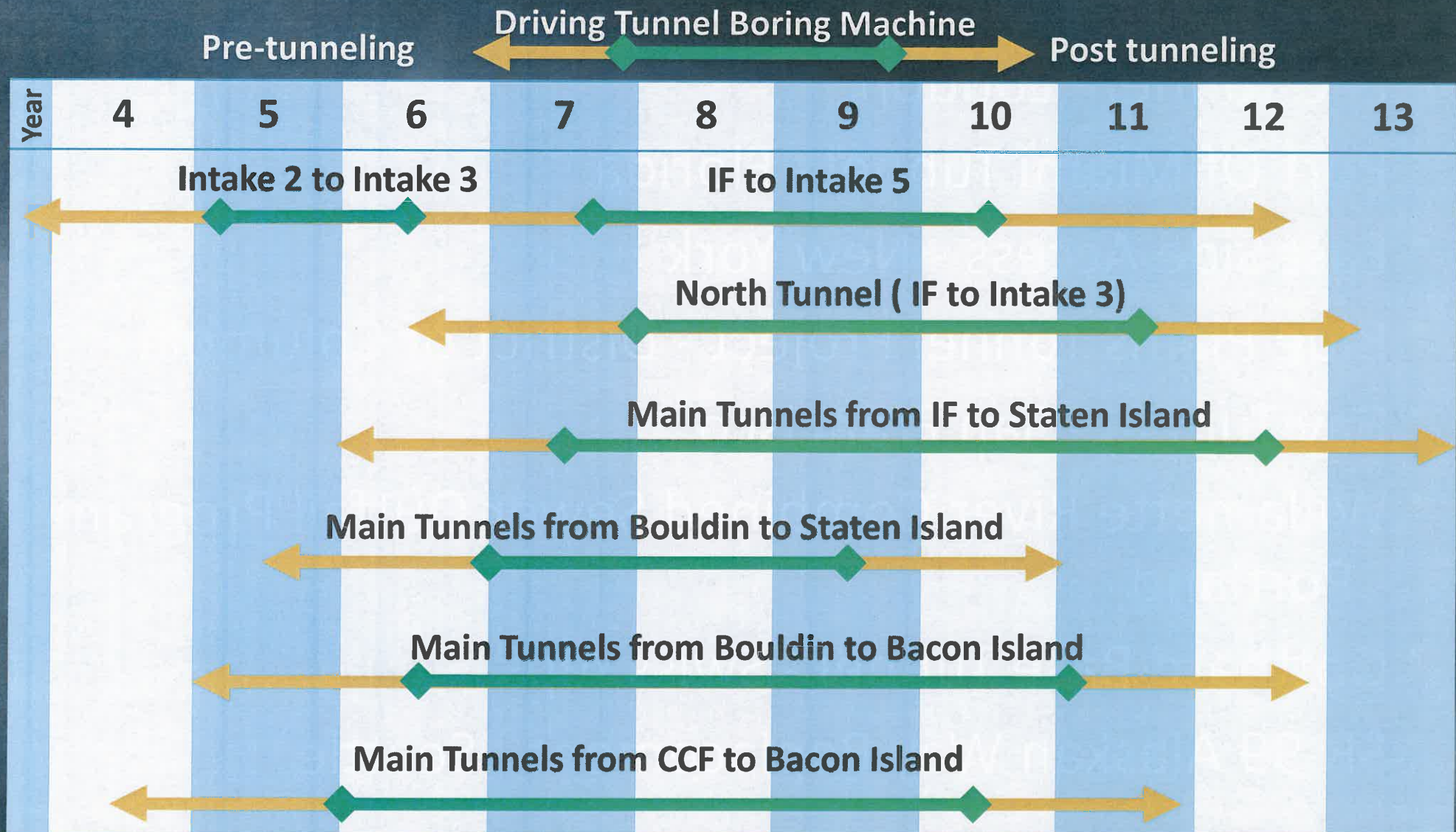


Project Duration (Years)

Start 4 8 12 16

Tunnel Construction Schedule

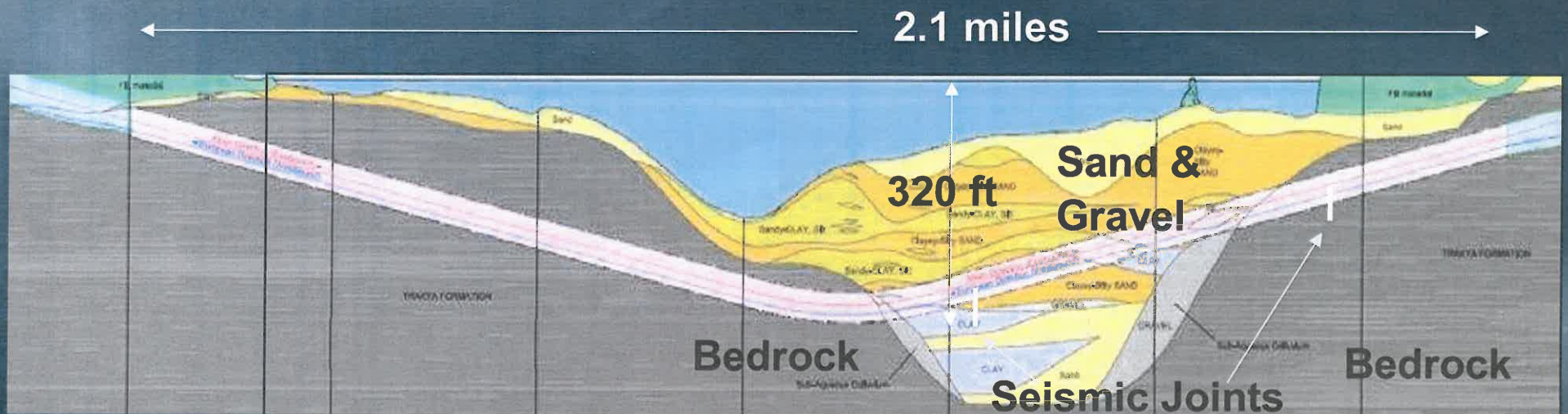
(AWARD THROUGH CONTRACT CLOSEOUT – PRELIMINARY)



Review of Other Mega-Projects

- The Eurasia Tunnel - Turkey
- Lee Tunnel - London
- Port Of Miami Tunnel - Florida
- East Side Access - New York
- Blue Plains Tunnel Project - District of Columbia
- Bay Tunnel - San Francisco
- Willamette River Combined Sewer Outfall Program - Portland
- Gotthard Base Tunnel - Swiss Alps
- SR-99 Alaskan Way Replacement - Seattle

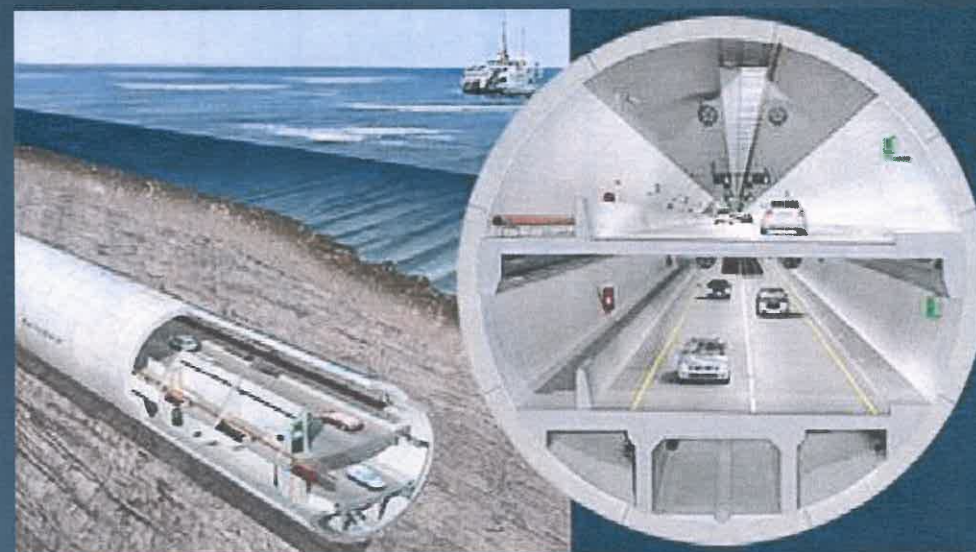
The Eurasia Tunnel – Turkey



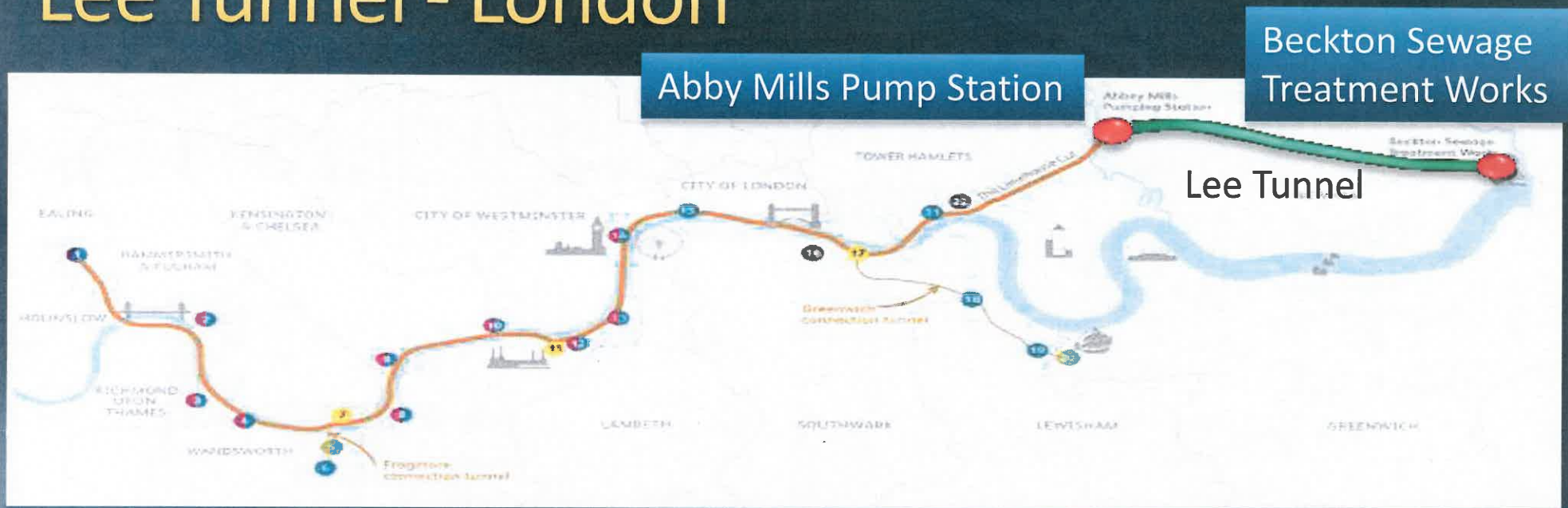
The Eurasia Tunnel – Turkey

Project Information

- Transportation Tunnel
45 ft Internal Diameter (ID) x
2.1 mile
- 320 ft deep
- Design-Build-Operate-Transfer
- Completed Dec 2016,
3 months ahead of schedule
- Construction value US \$1.3 B
within budget
- Challenges
 - Complex geology, seismic
deformations, and high
groundwater pressure



Lee Tunnel - London



Lee Tunnel – London

Project Information

- 23.6 ft ID x 4.3 mile Combined Sewer Outfall (CSO) Tunnel
- 160 ft deep
- Design-Build
- Completed December 2015, on schedule
- Construction value US \$1.01 B
\$27 M under budget
- Challenges
 - Groundwater contamination, complexity of Tunnel Boring Machine launch, and spoil removal



Port of Miami Tunnel - Florida



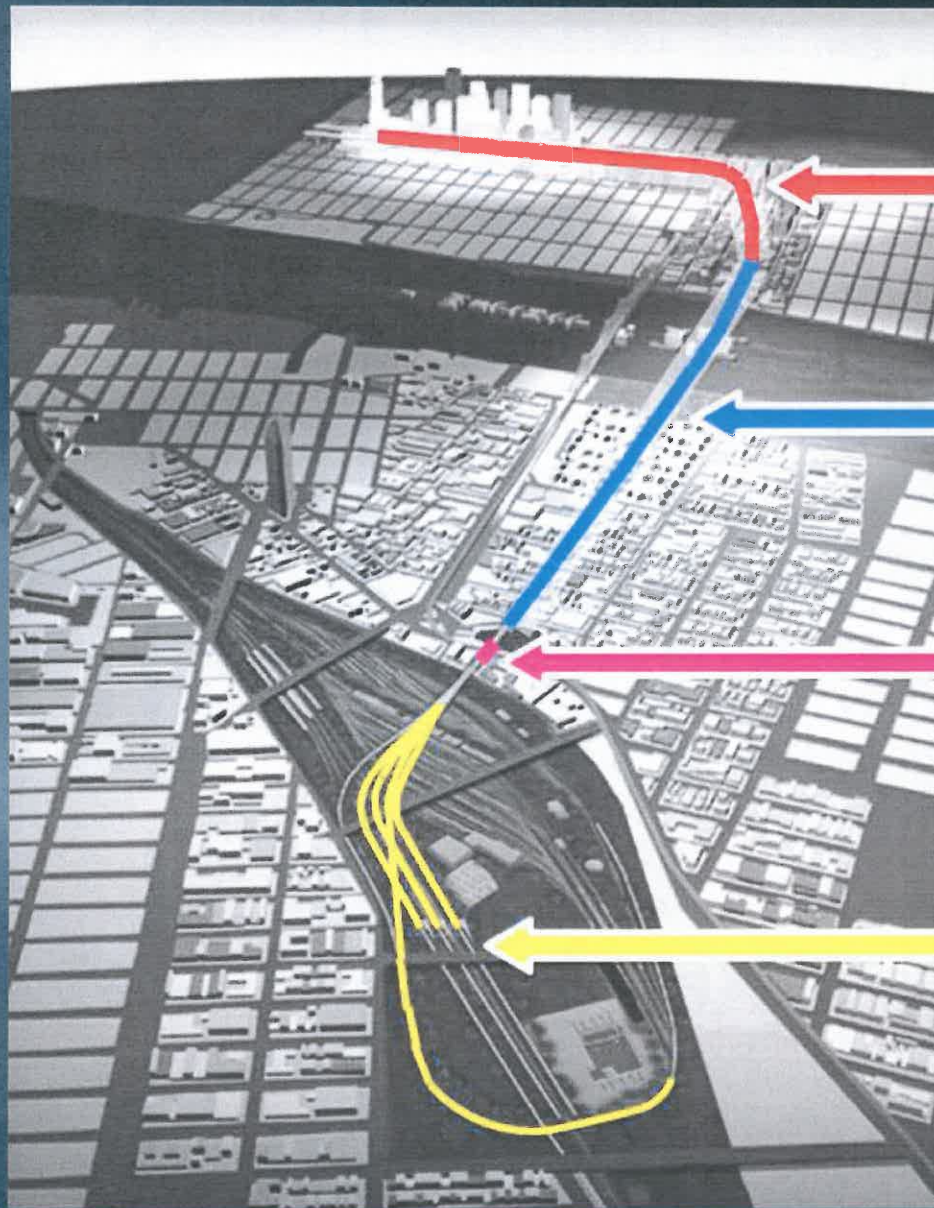
Port of Miami Tunnel

Project Information

- (2) 39 ft ID x 4,200 ft Long Transportation Tunnels
- 120 ft deep
- Private Public Partnership (Design-Build)
- Completion May 2014, on time
- Opened to traffic August 2014
- Construction US \$668.5 million, on budget
- Challenges
 - Additional geotechnical investigations were critical to confirm the ground model



East Side Access – New York



MANHATTAN TUNNELS & CAVERNS

63RD STREET TUNNELS

NORTHERN BOULEVARD CROSSING

QUEENS BORED TUNNELS

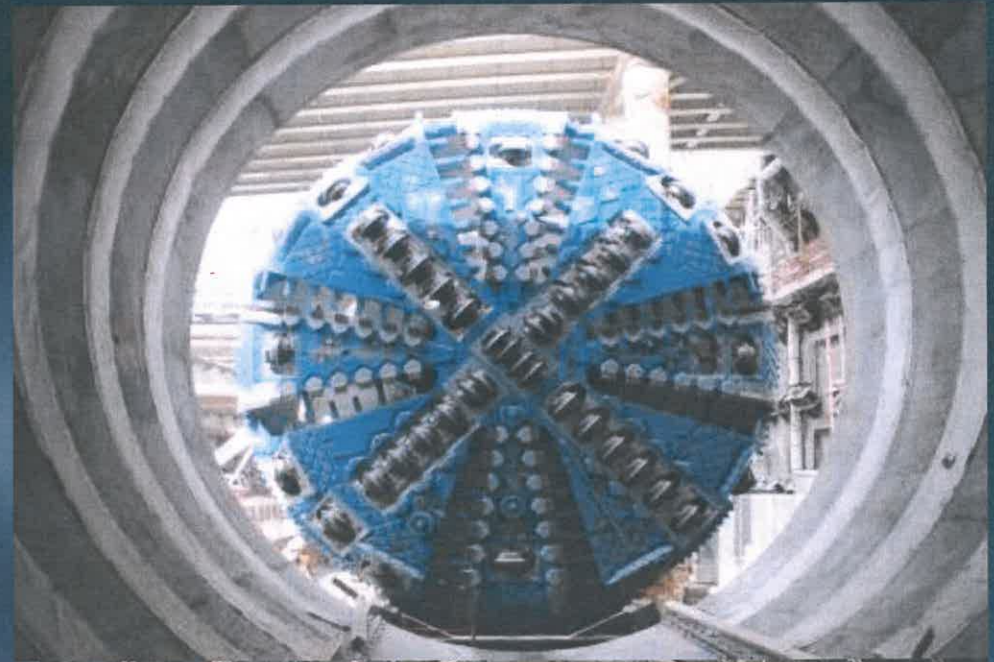


**Long Island Rail Road
East Side Access**

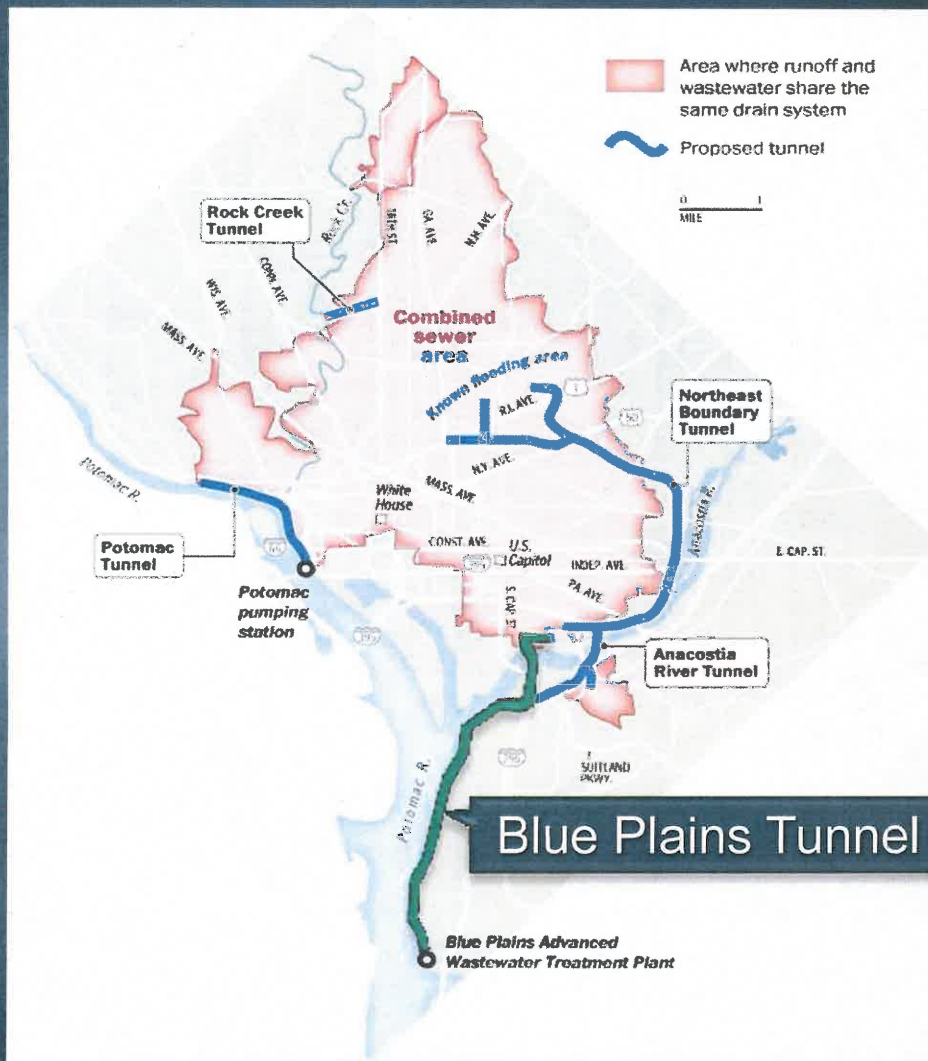
East Side Access – New York

Project Information

- (4) 19 ft Railroad Tunnels
- 60 ft deep
- Design-Bid-Build
- Completion June 2013
- Construction value US \$777M, on budget
- Challenges
 - Small work area, abrasive ground conditions, labor shortages, low ground cover, and minimal safe havens



Blue Plains Tunnel Project- District of Columbia



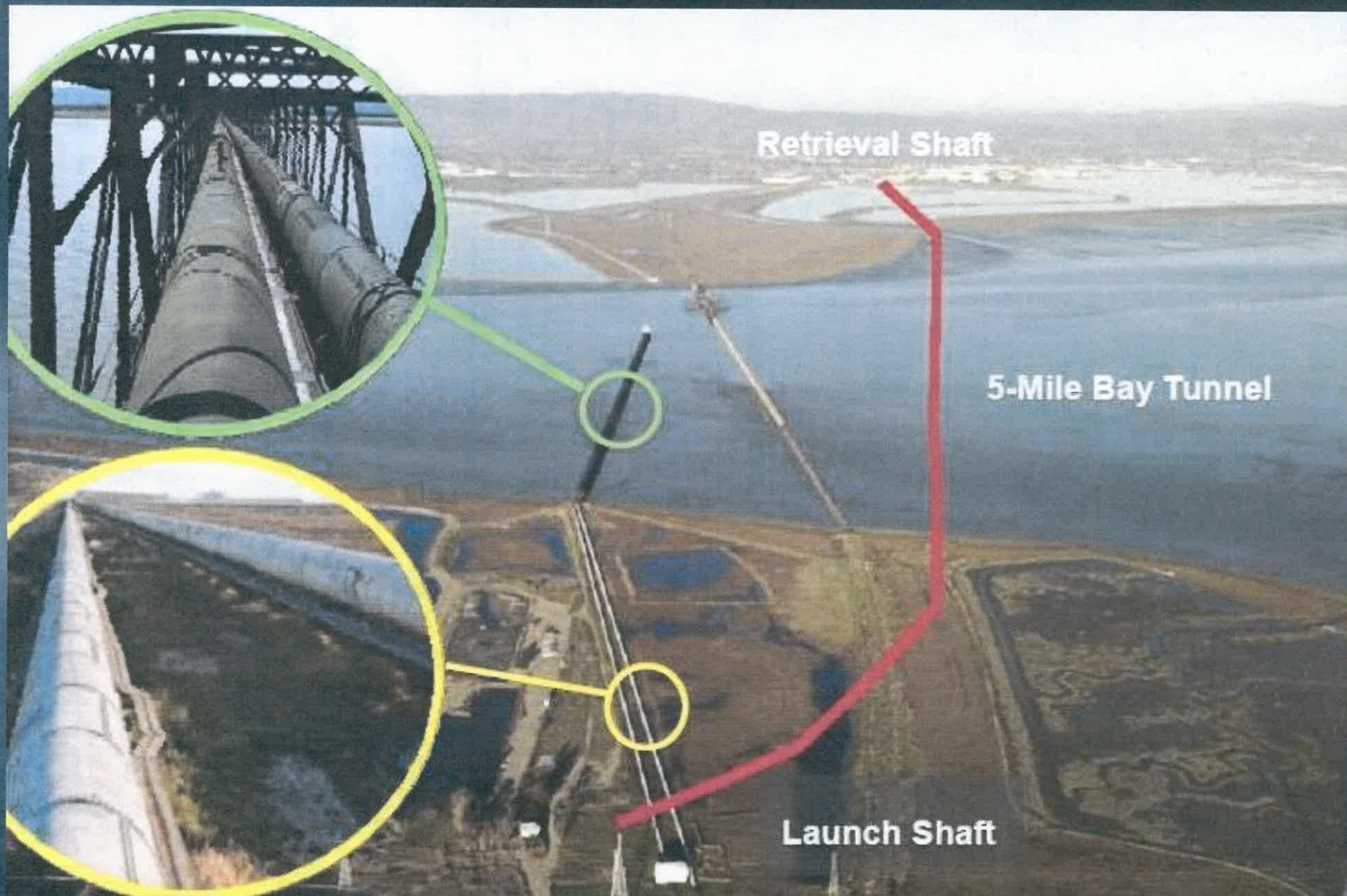
Blue Plains Tunnel Project

Project Information

- 23 ft ID x 24,200 ft CSO Tunnel
- 160 ft deep
- Design-Build
- Completed Dec 2015, 3 months ahead of schedule
- Construction value US \$330.5M, \$4 M under budget
- Challenges
 - Institutional resistance to change, and environmental permitting



Bay Tunnel – San Francisco



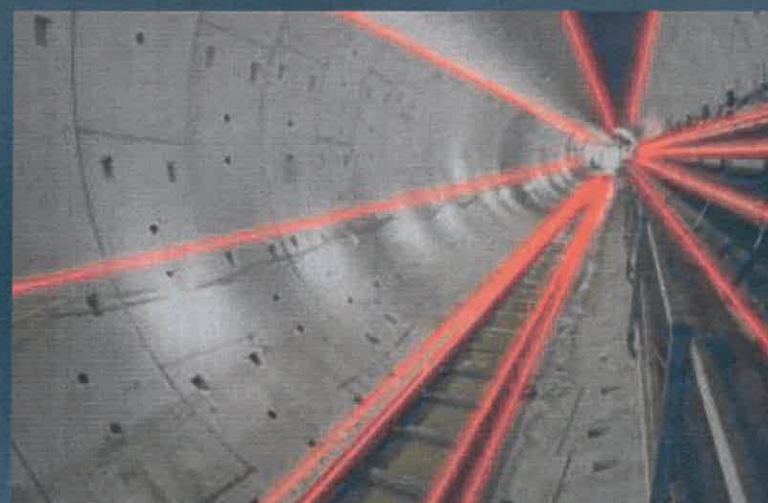
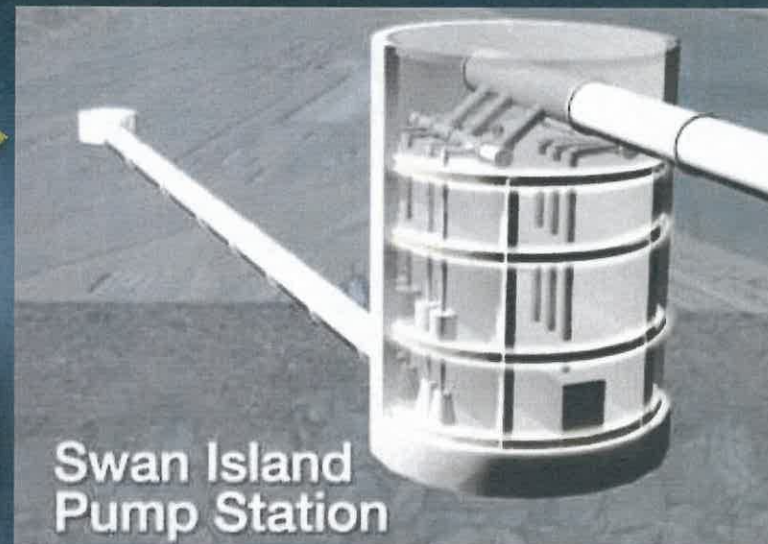
Bay Tunnel – San Francisco

Project Information

- 15 ft ID x 5 mile water tunnel
- 110 ft deep
- Design-Bid-Build
- Completed Oct, 2014 on time
- Construction value US \$288M, within budget
- Challenges
 - Variable ground, contaminated soil, disposal of tunnel material, and high ground water pressure 3.5 bar



Willamette River Combined Sewer Outfall Program – Portland



Willamette River Combined Sewer Outfall Program – Portland

Project Information

- (1) 14 ft ID x 3.5 mile 120 ft deep and (1) 22 ft ID x 6 mile
- 150 ft deep CSO tunnels
- Cost Reimbursable Fixed Fee
- Construction Complete Feb 2012
8 months ahead of schedule
- Construction value US \$719 M, \$65M under budget
- Challenges
 - Schedule, existing infrastructure, groundwater, Tunnel Boring Machine breakout, soil modification, and subcontract changes



Gotthard Base Tunnel – Swiss Alps



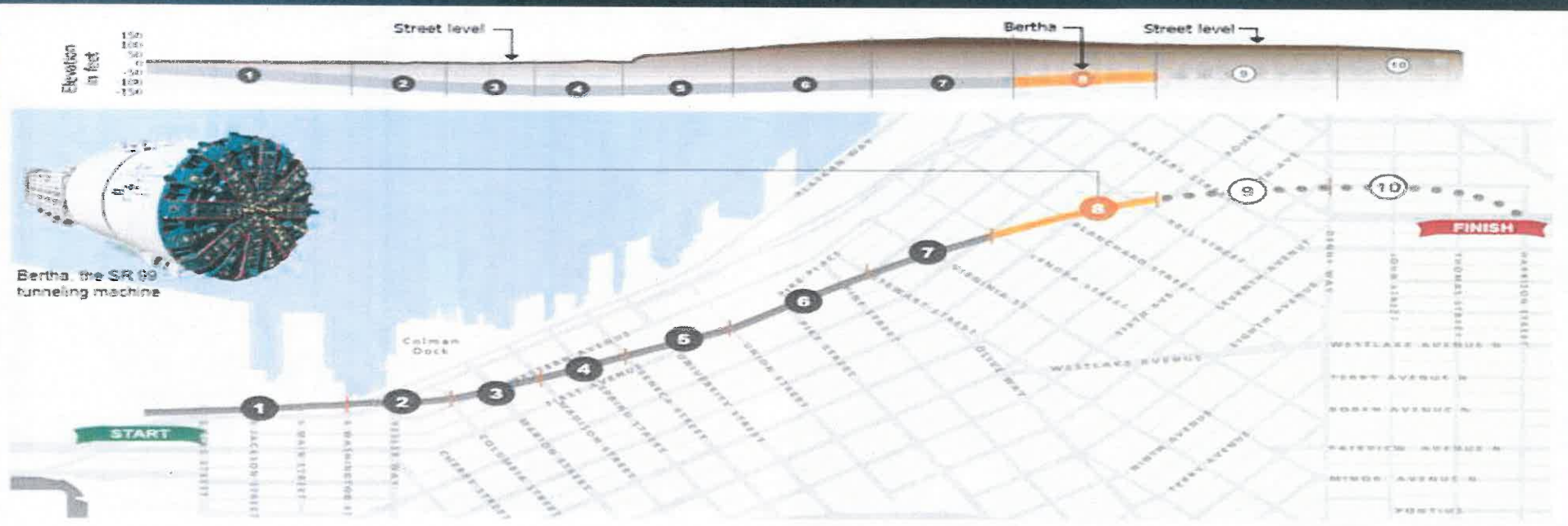
Gotthard Base Tunnel-Swiss Alps

Project Information

- (2) 30 ft ID x 35 mile rail tunnel
- Up to 6,560 ft deep
- Completed June 2016 within schedule (17 years)
- Final construction cost \$12.5B over budget by \$0.8B
- Challenge: Safety, geology
- For the 2 main tunnels and the safety, ventilation and cross cuts, a total of 95 miles tunnel has been bored



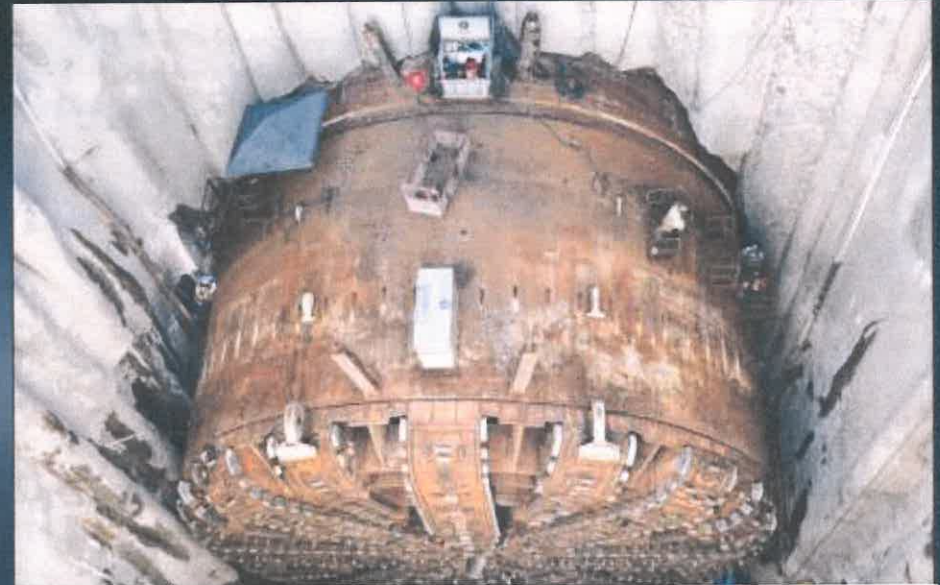
SR-99 Alaskan Way Replacement-Seattle



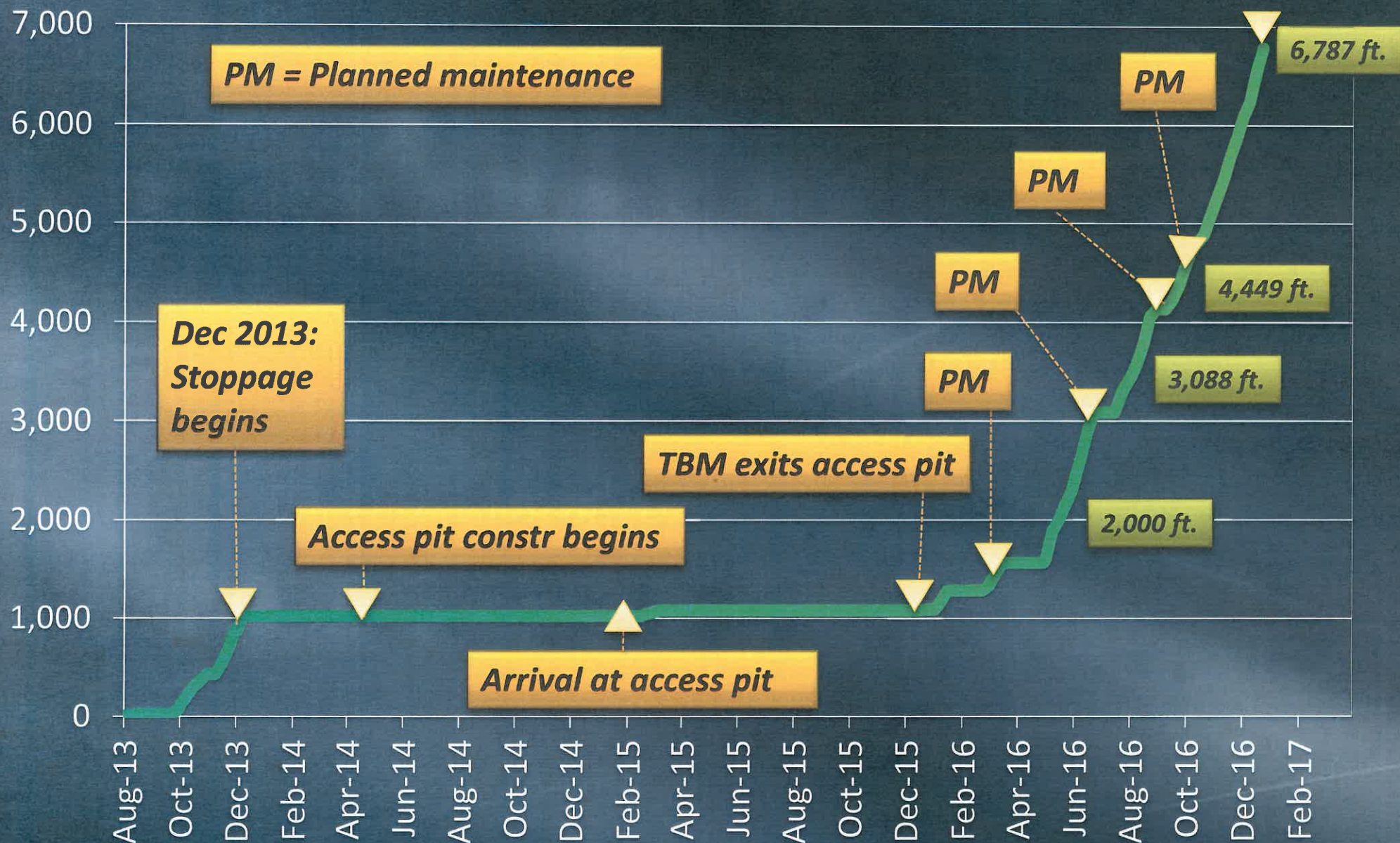
SR-99 Alaskan Way Replacement-Seattle

Project Information

- 53 ft ID x 2 mile transportation tunnel
- Design-Build
- Construction schedule approximately 2 year delay
- Tunnel budget \$2.05B with final cost being negotiated
- Challenges
 - Equipment malfunction, labor work stoppage, and unknown pile



SR 99 Tunneling Progress



Lessons Learned

- Proactive risk management strategy at all stages
- Assign risk to appropriate party
- Get construction input early
- Select project delivery method to maximize project benefits
- Invest in good geotechnical program and GBR
- Must have strong owner involvement
- Co-locate project team
- Resolve Right-of-Way and property acquisition early
- Resolve utility issues early
- Identify long lead items early
- Proactively manage logistical issues
- Develop effective program communication strategy

Next Steps

- February Special Committee on Bay-Delta
 - Construction Risk Management



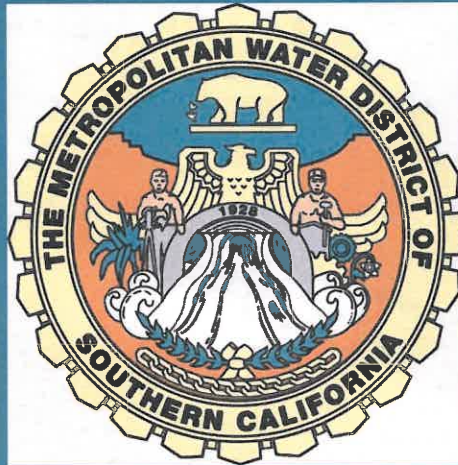
The California Water Fix



The California Water Fix

April 2015 Construction Cost Estimate

Presented To:



Revised March 8, 2017

Attachment 2, Page 2 of 26

Today's Presentation

1. 5RMK Qualifications/experience
2. Scope of program
3. Cost summary
4. Basis of estimate
5. Intakes
6. Clifton Court pump plants
7. Tunnel reaches

1. 5RMK Qualifications

5RMK Is a project management and planning organization providing the following services to the infrastructure and resource development industries:

- ❖ Estimating, scheduling, project planning
- ❖ Permitting, siting assessments, environmental compliance
- ❖ Program & construction management
- ❖ Claims support, defense & dispute resolution

1. 5RMK Qualifications



2. Scope of 2015 Estimate

- ❖ New class 3 estimate as defined by the Association for The Advancement of Cost Engineering International
- ❖ New scope definition based on new quantity take-offs, crew definitions, equipment selections and productivities
- ❖ Scope of the Project:
 - 3 - 3000 CFS Intakes
 - 2 - 4500 CFS Clifton Court Pump Plants
 - 1 - Intermediate Forebay
 - 1 - Clifton Court modifications, include embankments, siphons, canals and control structures
 - Tunnels with shafts and safe havens
 - 1- 28 ft inside diameter x 2 mile long (reach 1)
 - 1 - 28 ft inside diameter x 4.8 mile long (reach 3)
 - 1 - 40 ft inside diameter x 6.8 mile long (reach 2)
 - 2 - 40 ft inside diameter x 30.1 mile long (reaches 4-7)

2. Scope of 2015 Estimate

Total constructed value includes:

- ❖ All craft labor costs
- ❖ Construction equipment operating and ownership cost
- ❖ All permanent material and supply cost
- ❖ Field offices, laydown and staging area development
- ❖ Personnel, material, equipment and other transport cost
- ❖ Construction supervision, administration and management

Cost does not include:

- ❖ Land Acquisition, Program Management, Construction Management, Engineering, or Contingency

3. Construction Cost

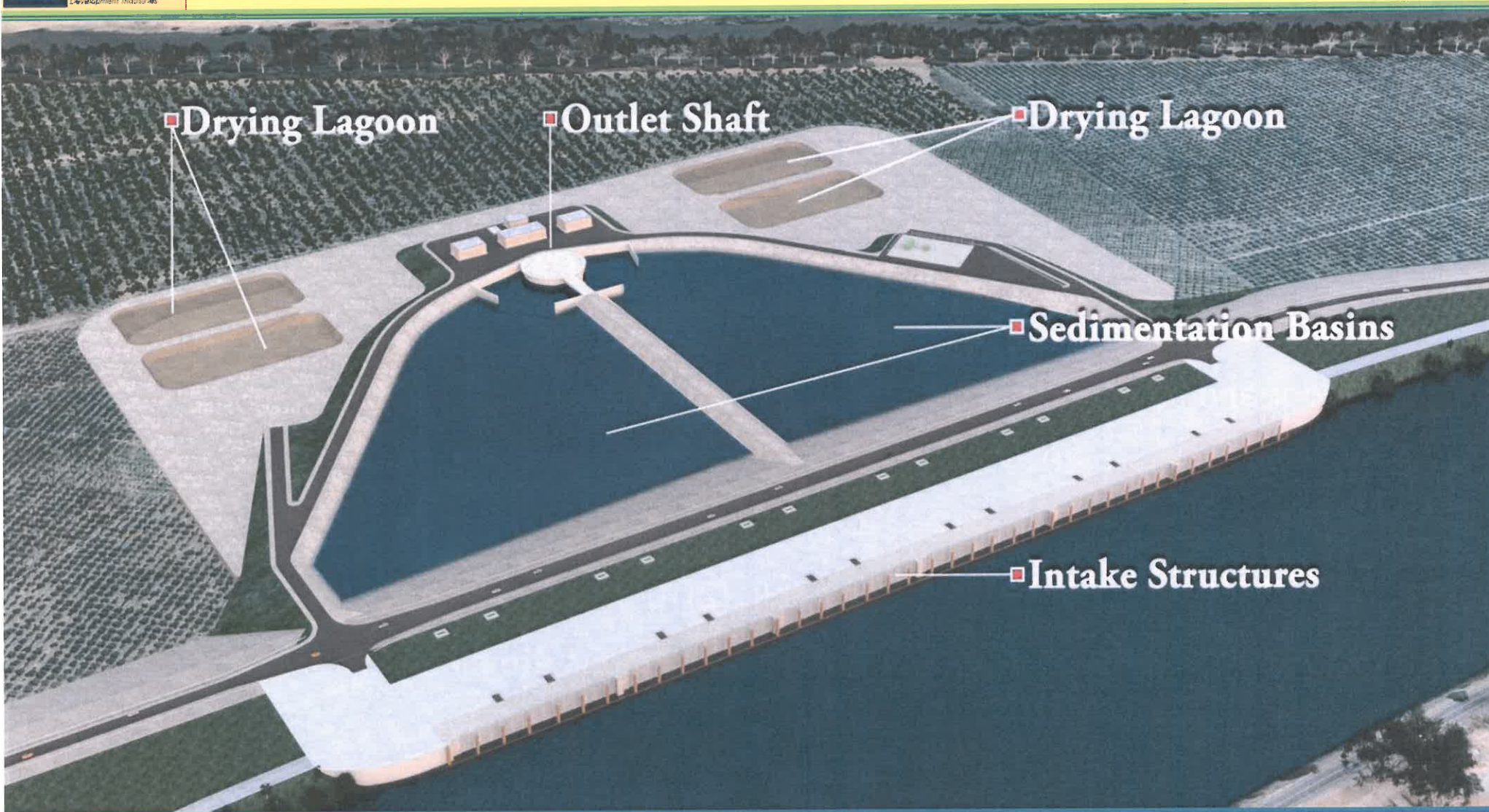
CWF April 2015 Estimate Summary

Contract	Estimate
Intakes 2,3, 5	\$ 1,082,880,306
Intermediate Forebay	\$ 159,579,782
Clifton Court Forebay	\$ 593,720,041
Clifton Court Pump Plant	\$ 446,577,237
Reach 7 Tunnels	\$ 1,538,449,966
Reach 6 Tunnels	\$ 1,559,673,985
Reach 5 Tunnels	\$ 899,619,545
Reach 4 Tunnels	\$ 1,603,383,401
Reach 1, 2, & 3 Tunnels	\$ 1,218,681,541
Communication Network, Scada	\$ 25,065,734
Access, Power Delivery & Utility Relocations	\$ 371,300,000
Construction Total	\$ 9,498,931,538

4. Basis of Estimate

- ❖ Based on April 1, 2015 Conceptual Engineering Report (CER)
- ❖ Detailed quantity takeoffs prepared from CER
- ❖ Wage & workmen's comp rates based on "prevailing rates" listed by California Department of Industrial Relations
- ❖ Equipment ownership and operating costs based on US Army Corps Engineers
- ❖ Vendor and subcontract costs based on independent supplier solicitations
- ❖ All costs data is in 2014 dollars
- ❖ Work shifts – surface facilities: 4 days per week, 10 hours per day
- ❖ Work shifts – tunnels: 5 days per week, (2)10 hours shifts per day
- ❖ Geotechnical data is limited – further investigations are planned
- ❖ Advance rate for 40' diameter tunnels – 31.1 to 34.1 ft/day
- ❖ Advance rate for 28' diameter tunnels - 34.5 ft/day (reach 3); 40.4 ft/day (reach 1)

5. Intakes Overview



6. Clifton Court Pump Plants

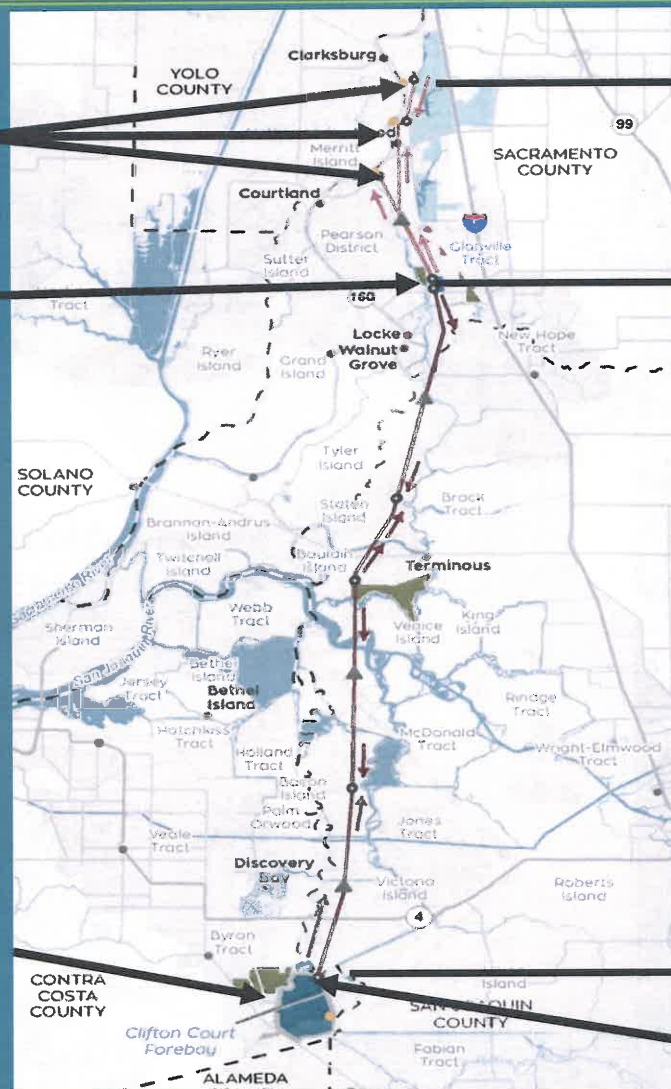
Combined Surge Shaft and Pump Plants



7. Tunnel Reaches

Intakes
Intermediate
Forebay

Clifton Court



North Tunnel
Reaches 1,2,3

Main Tunnel
Reaches 4-7

Pump Plants

California Water Fix



ALDEA SERVICES

CALIFORNIA WATER FIX

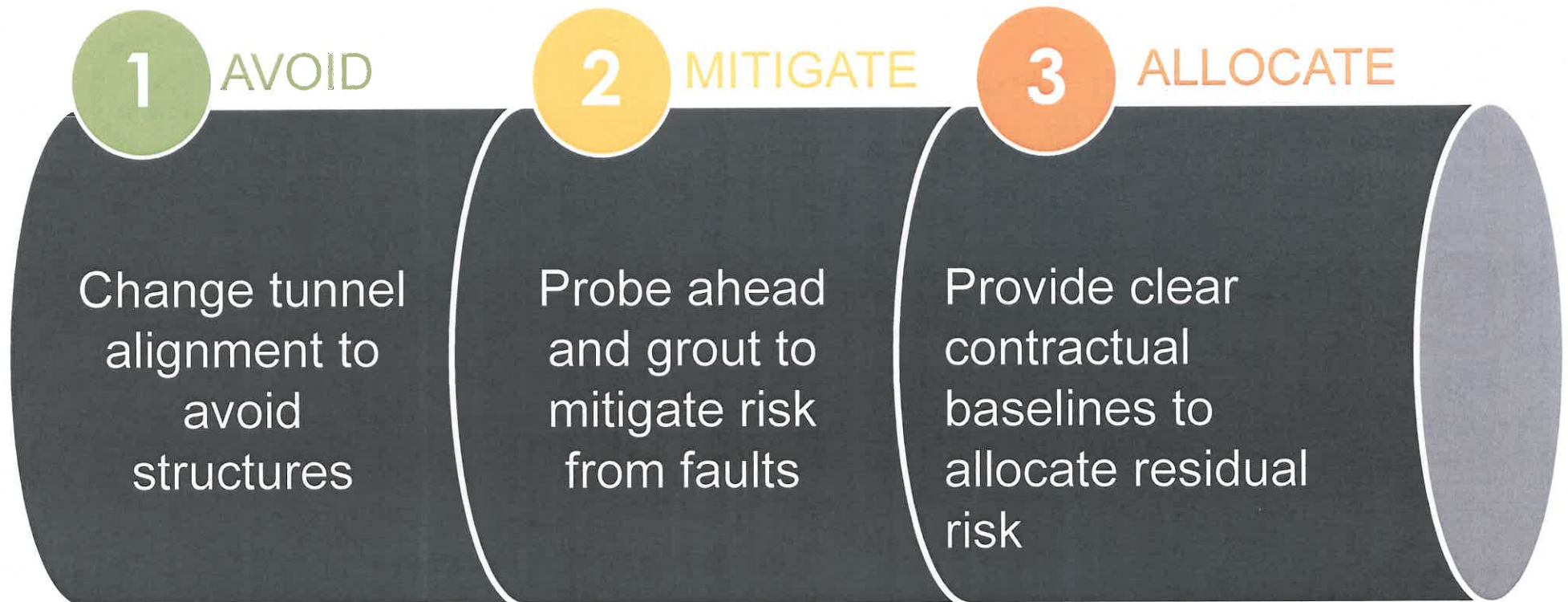
**RISK MANAGEMENT –
DESIGN AND CONSTRUCTION**



Process of Risk Management

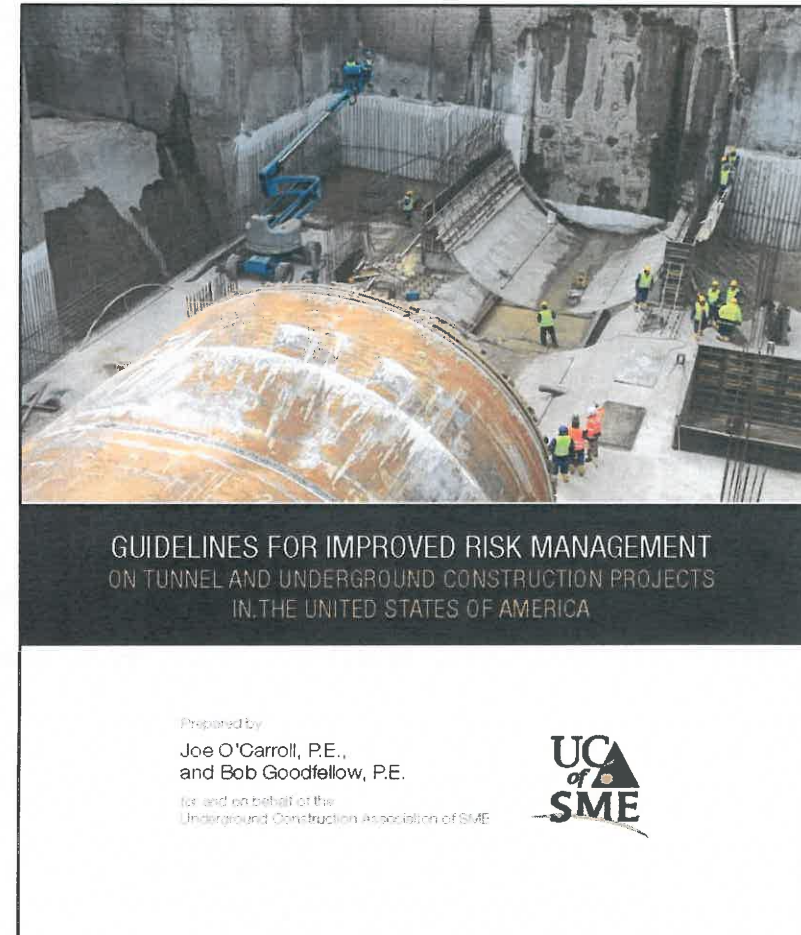


Three-Step Risk Management Process



US Guidelines Exist for Risk Management on Tunnel Projects

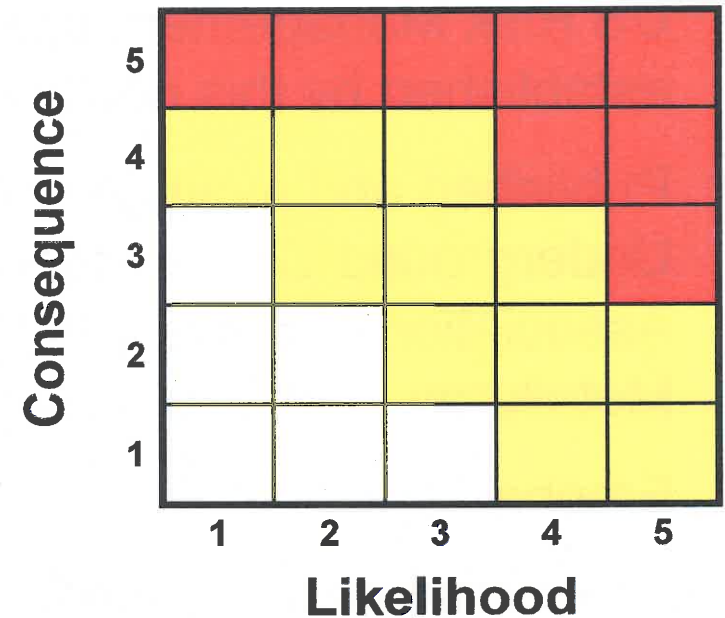
- US Risk Management practice established by this document
- Published and available online by Underground Construction Association of Society for Mining, Metallurgy, and Exploration
- Emphasizes:
 - The importance of experience in project team
 - The use of Risk Registers as a risk management tool
 - Consistent risk management approach from early planning throughout life of project



Design and Construction Risks

Risk Examples

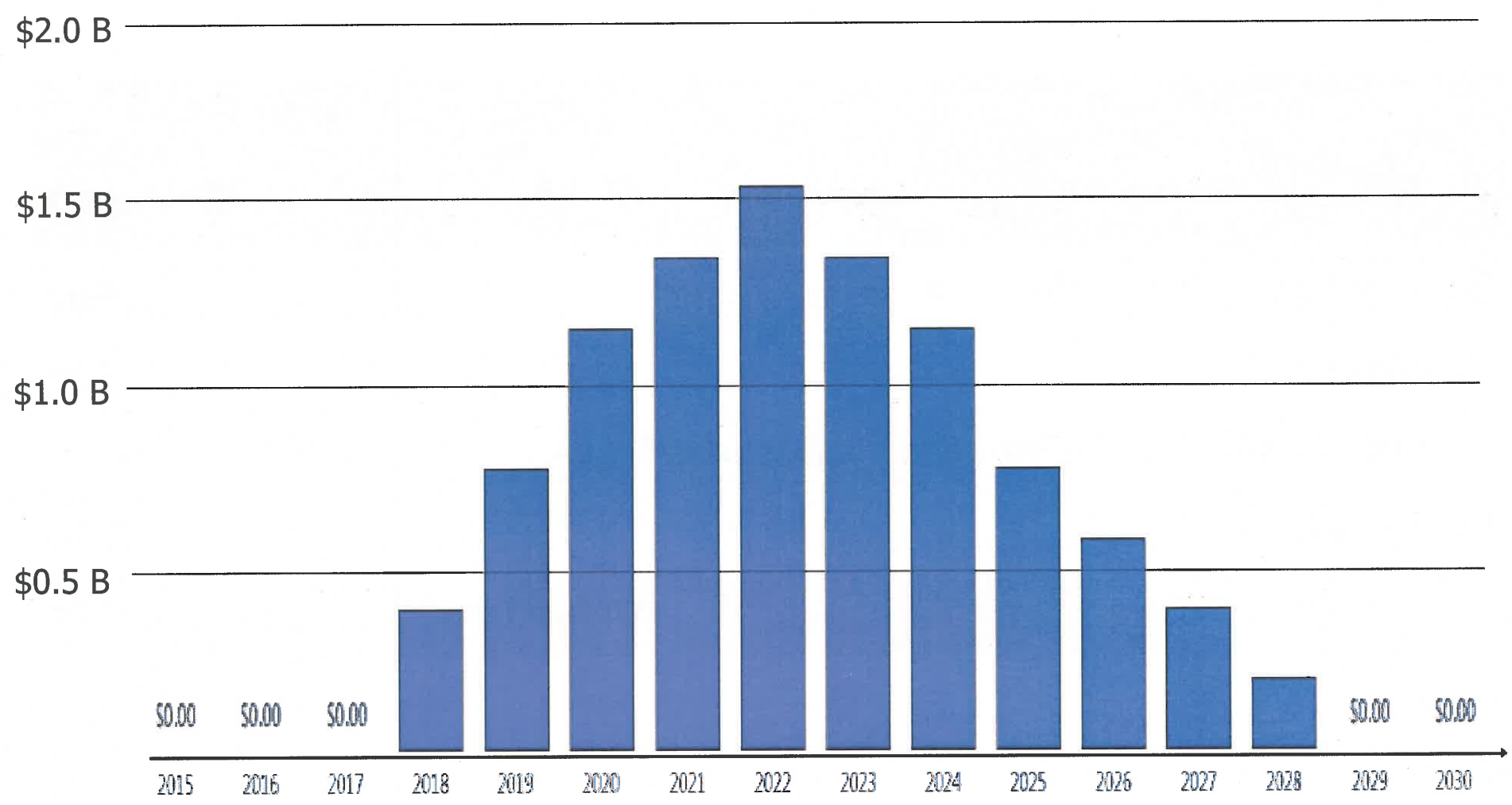
- ☐ Initial facility development works delayed leading to consequent delays to main construction
- ☐ Geotechnical investigation delayed leading to delay in design completion and start of construction
- ☐ Transmission power to work site delayed leading to delay to start of tunneling
- ☐ Geotechnical conditions different to those expected leading to slower progress, increased cost and delay to completion of tunneling
- ☐ Substantial design change to surface works required during construction leading to delay in commissioning



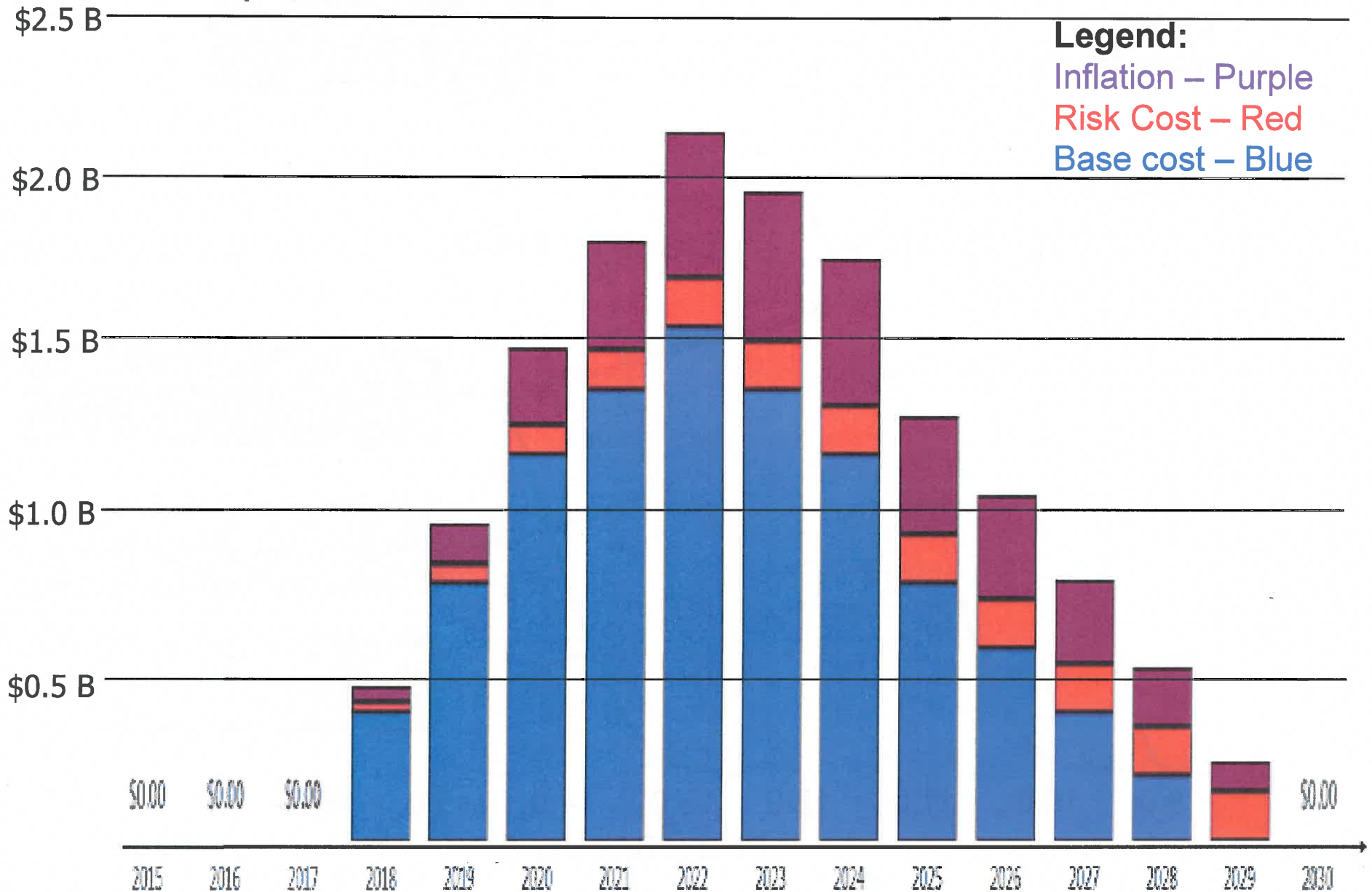
Program Estimate

Item	5RMK Estimate (Billions)
Estimated Base Construction Cost	\$9.50
Contingency	\$3.38
Program Management/Construction Management/Engineering	\$1.91
Land Acquisition	\$0.15
Grand Total	\$14.94

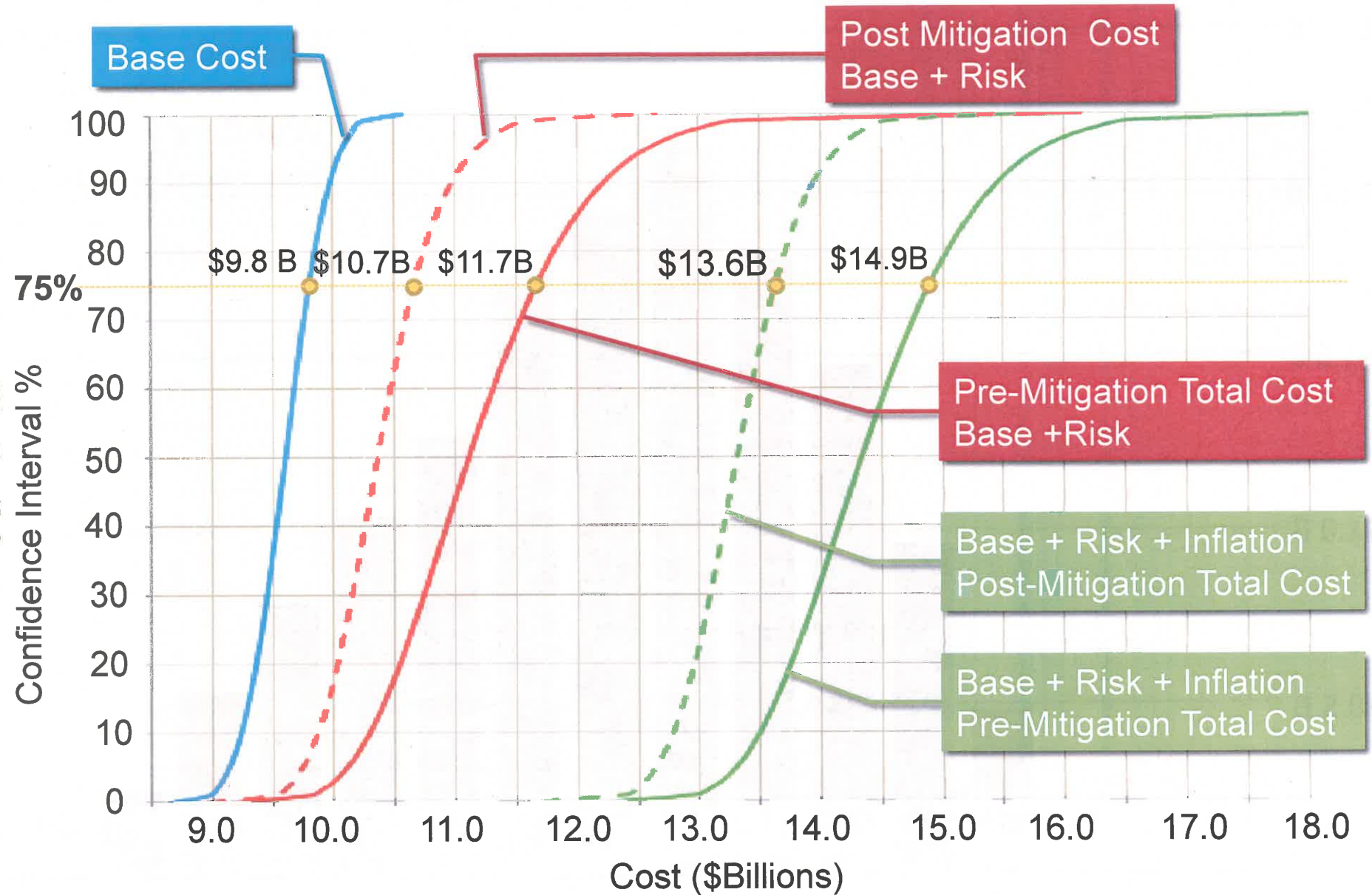
Annual Expenditures – 2014 Dollars



Annual Expenditures – with Risk and Inflation Cost



Construction Cost Distribution Profile



Estimate Summary

Item	Risk with Mitigation at 75% Confidence Interval ⁽¹⁾⁽³⁾ (Billions)	5RMK Estimate ^{(1),(2)} (Billions)	Jacobs Eng Estimate ^{(1),(2)} (Billions)
Construction	\$10.66	\$9.50	\$8.86
Contingency	—	\$3.38	\$3.15
Construction Subtotal	\$10.66	\$12.88	\$12.01
PM/CM/Eng	\$1.91	\$1.91	\$1.91
Land acquisition	\$0.15	\$0.15	\$0.15
Grand Total	\$12.72	\$14.94	\$14.07

(1) Program estimates in 2014 dollars

(2) ~36% Contingency on construction for 5RMK and Jacob Engineering estimates

(3) Based on risks known at time of assessment

Questions ?

Jacobs Engineering Construction Estimate

CWF October 2015 Estimate Summary		
Contract		Estimate
Intakes 2,3, 5	\$	954,650,094
Intermediate Forebay	\$	266,334,692
Clifton Court Forebay ⁽¹⁾	\$	593,720,041
Clifton Court Pump Plant	\$	268,772,589
Reach 7 Tunnels	\$	1,468,022,562
Reach 6 Tunnels	\$	1,426,602,944
Reach 5 Tunnels	\$	782,700,255
Reach 4 Tunnels	\$	1,511,693,724
Reach 1, 2, & 3 Tunnels	\$	1,140,518,403
Communication Network, Scada ⁽²⁾	\$	25,065,734
Access, Power Delivery & Utility Relocations	\$	420,789,943
Construction Total	\$	8,858,870,981

(1) 5RMK value used

(2) Conservative DWR estimate used due to limited design information

Attachment 2, Page 25 of 26

3. Construction Cost

CWF April 2015 Estimate Summary

Contract	Estimate
Intakes 2,3, 5	\$ 1,082,880,306
Intermediate Forebay	\$ 159,579,782
Clifton Court Forebay	\$ 593,720,041
Clifton Court Pump Plant	\$ 446,577,237
Reach 7 Tunnels	\$ 1,538,449,966
Reach 6 Tunnels	\$ 1,559,673,985
Reach 5 Tunnels	\$ 899,619,545
Reach 4 Tunnels	\$ 1,603,383,401
Reach 1, 2, & 3 Tunnels	\$ 1,218,681,541
Communication Network, Scada ⁽¹⁾	\$ 25,065,734
Access, Power Delivery & Utility Relocations	\$ 371,300,000
Construction Total	\$ 9,498,931,539

(1) Conservative DWR estimate used due to limited design information



MEMORANDUM

FC 14 (01-02-07)

TO: Board of Directors

FROM: James M. Fiedler

SUBJECT: Representatives from Contra Costa Water District and Grassland Water District Visit Washington DC for Los Vaqueros Expansion Project

DATE: April 7, 2017

During the week of March 27, 2017, Contra Costa Water District (CCWD) General Manager, Jerry Brown, and Grassland Water District (GWD) General Manager, Ric Ortega, visited Washington DC to garner support for the Los Vaqueros Expansion (LVE) project's funding application to the Proposition 1 Water Storage Investment Program. Jerry Brown and Ric Ortega also explored the potential for federal funding to support the Final Federal Feasibility Report, planned for release in November 2018. The scheduled meetings are listed below. Attached is a briefing packet provided by CCWD for the meetings that lists the District as a potential local partner considering participation.

Currently, the District is participating in the initial stages of the Los Vaqueros Reservoir Expansion project and has contributed \$100,000 to CCWD to support the development of a Draft Supplemental Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and application for Proposition 1 Water Storage Investment Program funding. Participation in the Los Vaqueros Reservoir Expansion project (LVE Project) may provide an opportunity for the District to: 1) increase water supply by capture of surplus Delta water; 2) bank Central Valley Project (CVP) and State Water Project (SWP) water during wet years for future dry year use; and 3) use an alternate route for transmitting North of Delta water supplies to the District during periods when CVP and SWP exports are restricted by regulatory requirements. The expansion of Los Vaqueros Reservoir is one of several storage options being investigated by the District and will be included in the analysis for the District's 2017 Water Master Plan update.

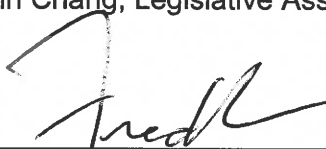
CCWD/GWD—Washington DC Scheduled Meetings:

Tuesday, March 28th

Congressmen Denham, Garamendi, Valadao, and Costa

Wednesday, March 29th

Congressman McNerney
John Watts, Legislative Director, Office of Senator Feinstein
Mark Copeland and Sarah Jackson, Legislative Directors, Office of Congressman DeSaulnier
Congressman Huffman and Logan Ferree, Legislative Director
Kevin Chang, Legislative Assistant, Office of Senator Harris


James M. Fiedler, P.E., D.WRE
Chief Operating Officer, Water Utility Enterprise

Attachment 1: Los Vaqueros Reservoir Expansion Project Briefing Packet

LOS VAQUEROS RESERVOIR EXPANSION PROJECT RELIABLE WATER SUPPLY FOR WILDLIFE REFUGES

ISSUE

A further expansion of Los Vaqueros Reservoir is feasible in a reasonably short timeframe under the State's Prop 1 storage funding. The Environmental Impact Study/Environmental Impact Report (EIS/EIR) is complete and a Supplement to the Final EIS/EIR document is being prepared jointly by Contra Costa Water District (CCWD) and the Bureau of Reclamation (Reclamation) to account for changes since 2010. A substantial portion of the environmental mitigation land is already owned by the Contra Costa Water District (CCWD). The reservoir could be expanded to a capacity of up to 275,000 acre-feet with a pipeline connection from the CCWD Transfer Facility to the California Aqueduct at Bethany Reservoir (the Transfer-Bethany Pipeline).

BACKGROUND

Expansion of Los Vaqueros Reservoir develops water supplies for environmental water management and increases water supply reliability while improving water quality. Reclamation is the lead federal agency and the CCWD is the lead state agency for the EIS/EIR. CCWD is the local owner of Los Vaqueros.

Los Vaqueros is the first and only of the CALFED surface storage projects to move forward with construction. The reservoir expansion was planned to be implemented in phases. Construction of the initial phase of expansion from 100,000 to 160,000 acre-feet was 100% funded by CCWD and completed in 2012. CCWD has completed several pilot water transfer projects through Los Vaqueros to provide immediate water supply benefits to local agencies. Grassland Water District (GWD) and CCWD recently collaborated on a grant proposal to the California Natural Resources Agency to secure funding for a multi-year water transfer project to provide up to 10,000 acre-feet of water per year from the existing Los Vaqueros Reservoir to the South of Delta wildlife refuges.

BENEFITS TO WILDLIFE REFUGES

CCWD is coordinating with Reclamation and the south-of-Delta wildlife refuge managers (GWD, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service) to develop project operations that provide significant and secure water supply benefits to wildlife refuges. Preliminary results show that the project can increase supplies to refuges in all years by utilizing new and expanded conveyance and storage facilities and directly delivering refuge supplies through the Transfer-Bethany Pipeline. Increasing supplies to wildlife refuges has been identified by the state as a high priority ecosystem improvement that is eligible for Prop 1 storage funding.

REQUEST

- Support CCWD and partners' application for Prop 1 – due August 14, 2017.
- Support completion of Final Federal Feasibility Report – due November 30, 2018.
- Support annual federal appropriations for CVPIA restoration fund to provide water for wildlife refuges.



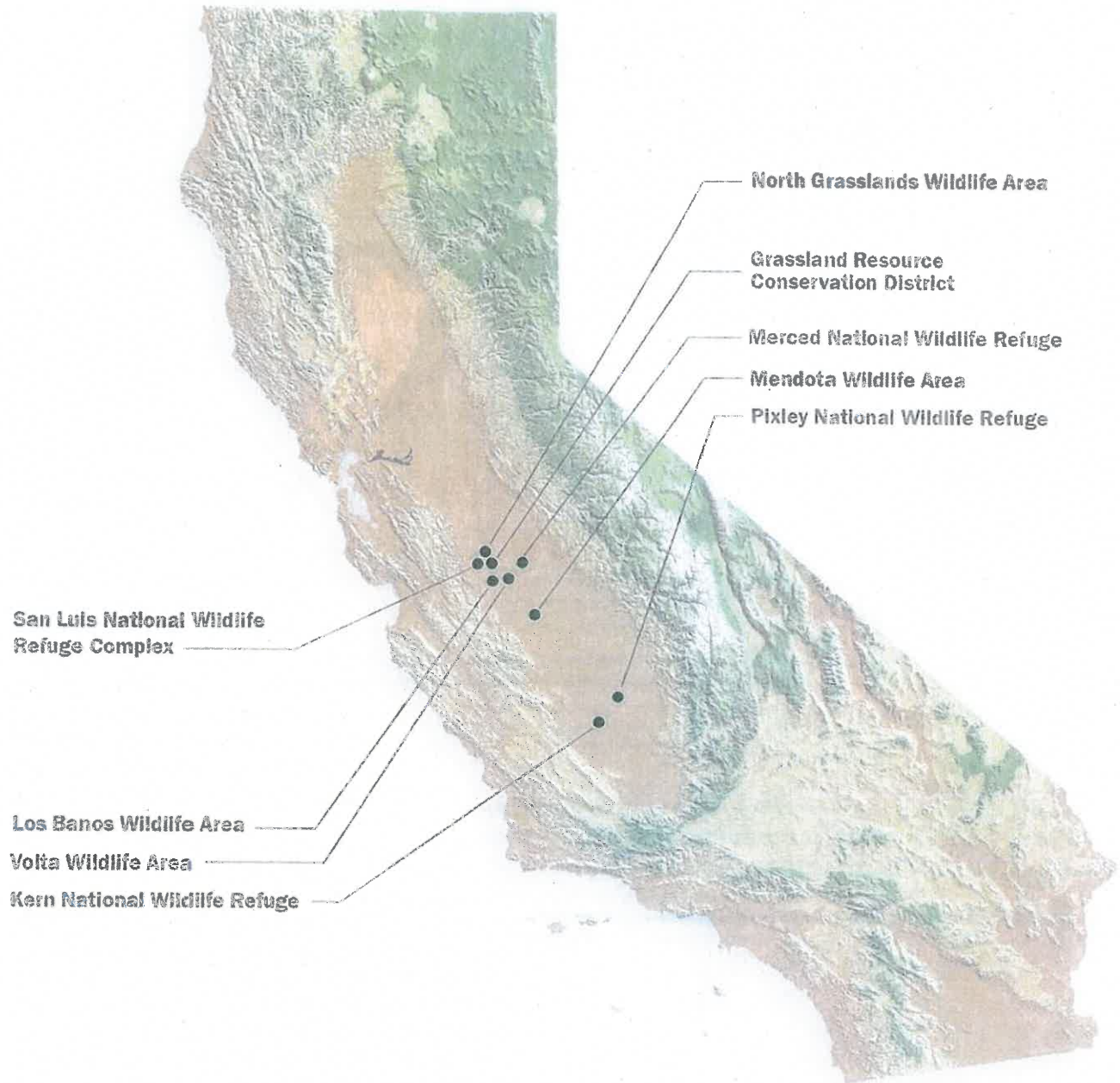
LOCAL AGENCY FUNDING PARTNERS

CCWD is also working closely with a diverse group of local potential partners to optimize project operations that provide benefits to local agencies in addition to the benefits provided for wildlife refuges. The local agencies are evaluating potential participation in the project to help strengthen their water supply portfolios to better manage droughts, emergencies, climate change, and regulatory challenges that limit their supplies. All of the local agencies, including CCWD and GWD, are providing funding and in-kind services to support completion of the Draft Supplement to the Final EIS/EIR for public review and the California Water Commission application for Prop 1 funding. Potential local partners include:

- Contra Costa Water District
- Alameda County Water District
- Bay Area Water Supply and Conservation Agency
- Byron Bethany Irrigation District
- City of Brentwood
- East Bay Municipal Utility District
- East Contra Costa Irrigation District
- Santa Clara Valley Water District
- San Francisco Public Utilities Commission
- San Luis & Delta-Mendota Water Authority
- Zone 7 Water Agency



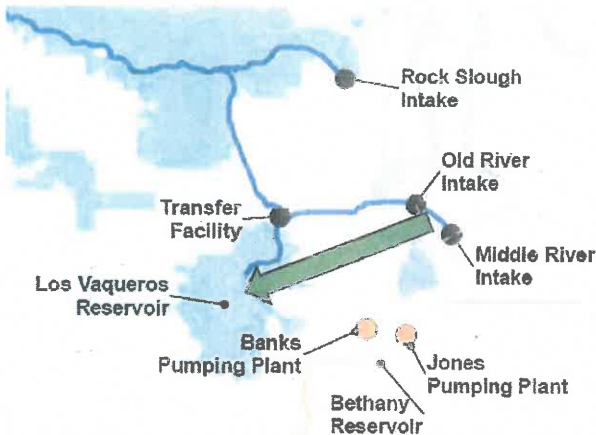
Central Valley Project Improvement Act South of Delta Wildlife Refuges



Operations WITHOUT CCWD-GWD Refuge Transfer

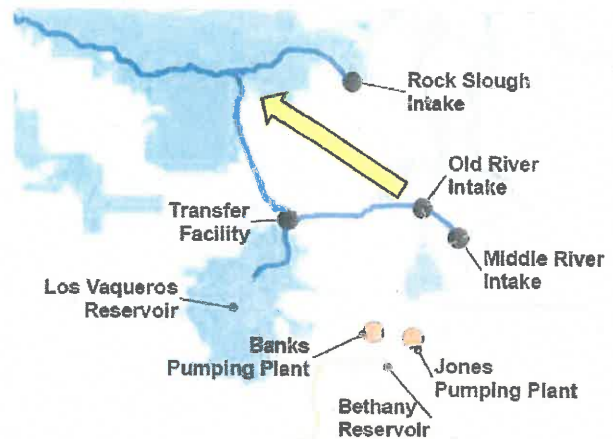
Winter-Spring 2017-2018

- CCWD diverts water to LV storage



July-September 2018 (or later)

- CCWD diverts CVP water to meet CCWD customer demand

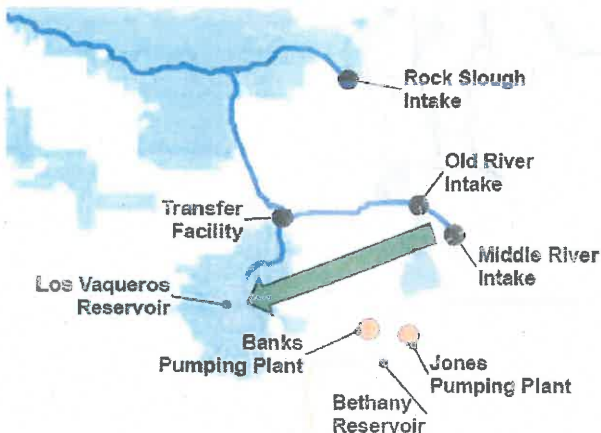


Example of Operations with CCWD-GWD Refuge Transfer

Step 1: Storage of water

Winter-Spring 2017-2018

- CCWD diverts water to LV storage for GWD



Step 2: Delivery of water

Summer 2018 Transfer Window

- CCWD uses GWD's water from LV storage to meet CCWD customer demand in lieu of diverting CVP water
- Jones (or Banks) diverts CCWD's CVP water to the California Aqueduct for GWD

