

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY  
BOARD OF DIRECTORS MEETING**

**Foster City Community Building – 1000 E. Hillsdale Blvd., Foster City  
Wind Room  
(Directions on Page 2)**

*(Members of the Board may participate in this meeting by Teleconference. Locale shall be: 1028 Eden Bower Lane, Redwood City, CA 94061. If any member of the board participates by teleconference, all votes taken at this meeting will be by roll call vote.)*

**Thursday, July 21, 2016  
7:00 P.M.**

**AGENDA**

<b><u>Agenda Item</u></b>	<b><u>Presenter</u></b>	<b><u>Page</u></b>
<b>1. Call to Order/Roll Call/Salute to Flag</b>	<b>(Breault)</b>	
<b>2. Comments by the Chair</b>	<b>(Breault)</b>	
<b>3. Board Policy Committee Report (Attachment)</b>	<b>(Quigg)</b>	<i>Pg 3</i>
<b>4. Public Comments</b> <i>Members of the public may address the Board on any issues not listed on the agenda that are within the purview of the Agency. Comments on matters that are listed on the agenda may be made at the time the Board is considering each item. Each speaker is allowed a maximum of three (3) minutes.</i>	<b>(Breault)</b>	
<b>5. Consent Calendar (Attachments)</b>	<b>(Breault)</b>	
A. Approve Minutes of the May 19, 2016 Meeting		<i>Pg 13</i>
B. Receive and File Budget Status Report – As of May 31, 2016		<i>Pg 17</i>
C. Receive and File Investment Report – As of June 30, 2016		<i>Pg 19</i>
D. Receive and File Directors' Reimbursement Report – As of June 30, 2016		<i>Pg 21</i>
E. Professional Services Contract with ReNUWI to Complete a Demand Reduction Study as Part of BAWSCA's Drought Response Analysis (Attachment) <i>The Committee voted unanimously to recommend approval of the proposed Board action.</i>		<i>Pg 23</i>
F. Professional Services Contract with ReNUWI to Develop Independent Regional Water System and Supply Modeling Tool (Attachment) <i>The Committee voted unanimously to recommend approval of the proposed Board action.</i>		<i>Pg 27</i>
<b>6. Break for San Francisco Bay Area Regional Water System Financing Authority Board of Directors Meeting</b>	<b>(Breault)</b>	
<b>7. Reconvene following San Francisco Bay Area Regional Water System Financing Authority Board of Directors Meeting</b>	<b>(Breault)</b>	

- 8. SFPUC Report** (Kelly)
- 9. Report and Discussion** (Breault)
- A. Process and Schedule for CEO/General Manager's Annual Performance Evaluation
- 10. Reports** (Hurley)
- A. Water Supply and Drought Update
- B. WSIP Update
- C. SFPUC Water Management Action Plan (WaterMAP)
- D. CEO/General Manager's Letter (*Attachment*) Pg 33
- E. Board of Directors Policy Calendar (*Attachment*) Pg 37
- F. Correspondence Packet ([\*Under Separate Cover\*](#))
- 11. Reconvene and Report from Closed Session** (Breault)
- 12. Directors' Discussion: Comments, Questions and Agenda Requests** (Breault)
- 13. Date, Time and Location of Future Meetings** (Breault) Pg 39  
(See attached schedule of meetings)
- 14. Adjourn to next meeting scheduled for September 15, 2016 at 7pm** (Breault)

*Upon request, the Bay Area Water Supply and Conservation Agency will provide for written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please send a written request, including your name, mailing address, phone number and brief description of the requested materials and the preferred alternative format or auxiliary aid or service at least two (2) days before the meeting. Requests should be sent to: **Bay Area Water Supply & Conservation Agency, 155 Bovet Road, Suite 650, San Mateo, CA 94402** or by e-mail at [bawasca@bawasca.org](mailto:bawasca@bawasca.org)*

*All public records that relate to an open session item of a meeting of the BAWSCA Board that are distributed to a majority of the Board less than 72 hours before the meeting, excluding records that are exempt from disclosure pursuant to the California Public Records Act, will be available for inspection at **BAWSCA, 155 Bovet Road, Suite 650, San Mateo, CA 94402** at the same time that those records are distributed or made available to a majority of the Committee.*

**Directions to Foster City Community Bldg. – 1000 E. Hillsdale Blvd., Foster City**

**From Hwy. 101**, take the Hillsdale Ave. exit East. Turn Right into the parking lot just after the intersection with Shell Blvd. The Community Bldg. entrance is separate from the Library entrance and is marked by signage. The Wind Room will be at the top of the stairs on the right, across from the reception station (there is also an elevator).

**From the East Bay**, take Hwy. 92 West, exiting at Foster City Blvd., and going South on Foster City Blvd. to Hillsdale. Turn Right (West) onto Hillsdale and proceed to Shell Blvd., making a U-turn to be able to pull into parking lot on SE corner of Hillsdale and Shell. See underlined sentence of first paragraph above for remainder of directions.

# **BAWSCA**

**Bay Area Water Supply & Conservation Agency**

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## **MEMORANDUM**

TO: BAWSCA Board Members  
FROM: Nicole Sandkulla, Chief Executive Officer/General Manager  
DATE: July 15, 2016  
SUBJECT: Summary of Board Policy Committee meeting held June 8, 2016

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1. **Call to Order:** Committee Chair Dan Quigg called the meeting to order at 1:32 pm. A list of Committee members who were present (9), absent (1) and other attendees is attached.

The Committee took the following action and discussed the following topics:

2. **Comments by Chair:** Committee Chair Dan Quigg announced the resignation of Kirsten Keith from the Board Policy Committee due to conflicts with her work. She will continue to serve on the BAWSCA Board.

Chair Quigg noted that there are two action items which the committee is asked to recommend to the Board for approval in July. The first is a demand reduction study that will analyze the significant water use reduction during the past several years. The second is a development of a water system modeling tool. Both are important to BAWSCA's critical work on future water supply planning.

3. **Public Comments:** There were no comments from members of the public.
4. **Consent Calendar:** Approval of Minutes from the April 13, 2016 meeting.

**Director O'Connell made a motion, seconded by Director Vella, that the minutes of the April 13, 2016 Board Policy Committee meeting be approved.**

**The motion passed. Director Guzzetta abstained because he was not at the April 13<sup>th</sup> meeting.**

5. **Action Item:**

- A. **Professional Services Contract with ReNUWI to Complete a Demand Reduction Study as Part of BAWSCA's Drought Response Analysis:** Michael Hurley reported that BAWSCA's work plan in FY 2016-17 includes the initiation of a Demand Reduction Study as part of the Drought Response Analysis. The objective of the study is to better understand long-term implications on water use within the BAWSCA service area. Other elements of the Drought

Response Analysis are the evaluation of drought preparedness and review of SFPUC and member agencies' shortage provisions. Collectively, these efforts will support the planning for future droughts and long-term water supply planning.

The Demand Reduction Study will investigate the impacts of various factors on demands such as media coverage, State Board regulations, climate, cost of water, and active conservation programs to name a few. The study will utilize existing records of "data rich" agencies such as Redwood City and Mountain View who have technology such as Advanced Metering Infrastructure (AMI).

Total estimated cost for this initial effort is \$20K.

BAWSCA will be working with Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt) on this effort. ReNUWIt is an applied research center at Stanford with researchers from UC Berkeley, Colorado School of Mines, and New Mexico State University.

In 2014, Dr. Newsha Ajami, Director of Urban Water Policy with Stanford's ReNUWIt initiative, reached out to BAWSCA to collaborate on regional water management strategies. BAWSCA has been successfully working with ReNUWIt since.

The partnership has proven to be successful as there is significant overlap between ReNUWIt's ongoing efforts and the analysis that BAWSCA seeks to develop in the demand reduction study. In particular, a media coverage analysis has been initiated, and a turf replacement effectiveness analysis has been completed by a group of Stanford undergraduate students. The results, however, can be improved with substantial data BAWSCA can readily provide.

In April 2016, BAWSCA became an Associate Member of ReNUWIt, which enables BAWSCA to collaborate with ReNUWIt and have access to educational and research expertise. Given the mutually beneficial relationship, staff recommends a sole source agreement with ReNUWIt to leverage ReNUWIt's ongoing work and expand it to achieve BAWSCA's desired results. This approach increases the overall cost-effectiveness of the work.

Director Larsson expressed his support for the contract with ReNUWIt, but inquired about BAWSCA's procurement process.

Legal Counsel, Allison Schutte, explained that BAWSCA's procurement policy does not require the same state mandated rules that cities have. For services, the CEO/General Manager can enter into a contract of \$25K or less without a defined process. Service contracts that exceed \$25K require approval of the board. The proposed contract amount of not to exceed \$20K with ReNUWIt does not require Board approval, however, staff is choosing to present it to the Board. Contracts for supplies do have a required process.

In response to Director Schmid's question about who will do the work, Mr. Hurley explained that ReNUWIt is a consortium of researchers and the work will be performed by PhD students under the direction of Dr. Newsha Ajami.

Ms. Sandkulla added that BAWSCA's working relationship with ReNUWIt started because of Dr. Ajami's interest in collaborating with BAWSCA. It developed into a mutually beneficial relationship today because of how closely each other's efforts are aligned.

Director Guzzetta suggested that the Board be provided with estimated hourly rate against the scope of work. Additionally, demand hardening should be carefully looked at given the multiple droughts the region has experienced. Indoor water use has changed significantly and outdoor use has been significantly reduced. Having a measure of where demand hardening currently is, would be helpful to water managers because the harder demand gets, the more critical increased reliability becomes.

Director Vella stated that he would like to see the final product put to use, and commented that the not-to-exceed cost should include legal review.

Ms. Sandkulla explained that legal counsel's budget anticipates their review of contracts according to BAWSCA's adopted work plan and operating budget.

**Director Mendall expressed his support and made a motion, seconded by Director O'Connell, that the Committee recommend that the Board authorize the CEO/General Manager to negotiate and execute an agreement with ReNUWI, subject to legal counsel review, to complete the Demand Reduction Study of the Drought Response Analysis.**

**The motion passed unanimously.**

- B. Professional Services contract with ReNUWI to Develop Independent Regional Water System and Supply Modeling Tool: As part of the Long-Term Reliable Water Supply Strategy (Strategy) BAWSCA has a cooperative agreement with the SFPUC to utilize its modeling tool to identify potential future hydrologic conditions for the service area. Under this agreement, the SFPUC analyze the probability of supply shortages on the San Francisco Regional Water System that is published in the Strategy report.

Mr. Hurley reported that BAWSCA's reliance on the SFPUC's supply reliability modeling has reached its limits, and is no longer efficient in meeting BAWSCA's needs for the implementation of the Strategy. The development of an independent modeling tool would allow the analysis of different scenarios based on BAWSCA's needs, and the ability to expand the analysis to other regional supplies, therefore understanding their potential impacts to the service area's supply reliability. Having these features in an independent modeling tool is a critical element in the implementation of the Strategy.

The SFPUC's current model is reflective of their WSA obligations and has limited capabilities. The goal of BAWSCA's independent modeling tool is to replicate SFPUC's model and expand upon it to include incorporation of all supplies relied upon by BAWSCA member agencies.

Ms. Sandkulla added that the SFPUC will continue to have its modeling tool. BAWSCA will take SFPUC's tool as a component of a combined regional modeling tool that will include input from the State Water Project, Santa Clara Valley Water District (SCVWD) imported supplies, and other supplies relied upon in the BAWSCA service area.

Lessons learned from the region's experiences with the ongoing drought will be applied. For example, as part of BAWSCA's Strategy, member agencies wanted BAWSCA to keep focus on the water supply reliability of the SF RWS, and not look at the reliability of other supplies utilized by the agencies. This proved to be a failed assumption because the other systems significantly impacted the SF RWS during this current drought.

Additionally, BAWSCA's pilot water transfer plan demonstrated that while partnering agencies may be willing, and facilities may exist to execute a transfer, water supply or system capacity may not be available.

BAWSCA's regional representation of 26 water providers in three counties puts BAWSCA in a unique position to lead this kind of effort. The member agencies, SFPUC, and Santa Clara Valley Water District (SCVWD) recognize the benefit of understanding the interrelationships of the regional supplies, and all agencies are supportive of BAWSCA.

BAWSCA's opportunity to develop such independent modeling tool is to build on the ongoing efforts of ReNUWIt. Stanford's ReNUWIt researchers have started developing a water supply reliability modeling tool for their own research efforts using data from the BAWSCA service area. Because of the significant overlap in BAWSCA's and ReNUWIt's efforts to examine regional water management strategies, a sole source contract is recommended to leverage ReNUWIt's ongoing work and increase cost-effectiveness for BAWSCA.

BAWSCA anticipates this to be a multi-year effort with an estimated total cost of \$60-\$100K. The estimated cost for FY 2016-17 is \$40K.

The initial work in FY 2016-17 will 1) formulate the modeling approach and develop an outline of the potential scenarios to be analyzed, and 2) examine existing models and their underlying assumptions, identify additional data needs and uncertainties, as well as methodologies to evaluate reliability of the other supplies.

The deliverables for the work to be completed in FY 2016-17 will be two technical memos summarizing the findings.

The development of the approach to simulate the reliability of the SF RWS will begin in FY 2016-17, but will continue through FY 2017-18. This work will determine whether a new or revised model should be created. Status reports on this portion of the work will be provided throughout FY 2016-17.

In response to Director Larsson's question about the output of the model, Mr. Hurley explained that the model would serve as a mass-balancing model that would look at the available water against the service area demands, the excess water and available storage, as well as water deficiency and where supply can be pulled from. The operational functions are the different scenarios to be analyzed. The output would be whether the operational functions make sense, are possible, cost-effective, or involve risks.

Ms. Sandkulla stated that this tool will be instrumental in evaluating future investments and in determining whether those investments work with the system that the service area relies upon, which is not limited to the SF RWS. What became very clear with the ongoing drought and with the Pilot Water Transfer plan is that while BAWSCA may have a plan to implement a water transfer, it may not have access to the water supply due to the state of the other systems. With the modeling tool, both the transfer and the storage capabilities can be reviewed together.

Director Mendall commented that the service area's response to the emergency regulations proved that the assumption about demand hardening was inaccurate three years ago. While

it is a difficult equation, it would be ideal to obtain a better sense of what can be expected in the next drought so the service area can be better prepared.

Mr. Hurley stated that both the drought analysis and development of a modeling tool will better inform BAWSCA so that future droughts and water supply shortages are addressed as realistically as possible.

Director Schmid believes that the development of an independent modeling capability is very valuable. However, he expressed his concern with ReNUWIT's commitment to the success of the project against the SFPUC's ability to make a bigger investment and develop a better modeling tool. He requested that regular progress reports be provided to the Board.

Ms. Sandkulla agreed to provide regular progress reports on a regular basis during the project timeline. She added that the SFPUC supports this effort because they recognize the value of the information it can provide. The expectation is to continue the partnership between BAWSCA and the SFPUC in developing the modeling tool as a regional tool with the input from the SFPUC and other water suppliers in the region.

Mr. Hurley added that BAWSCA takes the institutional commitment and continuity seriously. BAWSCA's key contact at ReNUWIt for this project along with Dr. Ajami is a graduate level student who is just starting her doctoral program and is committed to the effort for the next 3-5 years. There will be researchers and a core group of students who will be working on this project and will be interacting with BAWSCA as well.

Director Guzzetta commented that the power of this kind of institutional relationship comes when the university engages students so that there is an educational process for students to learn about the practical world and obtain hands-on training in finding solutions to the problems. This eventually leads to developing educated staff who become the leaders of the effort.

He added that it is important to have a solid context with the professors who are the main drivers of ReNUWIt's success with this effort, and who will want to seek out graduate level students who have an interest in this area.

Mr. Hurley agreed and stated that Dr. Ajami is committed to this effort and was the one who cultivated the mutually beneficial relationship with BAWSCA and ReNUWIt.

In response to Director Benton's inquiry, Ms. Sandkulla explained that BAWSCA's investment of \$40K with ReNUWIt will initiate the process to develop the framework of the model. The work plan and budget for FY 2017-18 will include the cost and efforts needed to complete the model and identify what kind of analysis should be done to obtain information BAWSCA and member agencies want.

**Director Mendall made a motion, seconded by Director Vella, that the Committee recommend the Board authorize the CEO/General Manager to negotiate and execute a contract with ReNUWIt, subject to legal counsel review, to perform initial development of an Independent Regional Water System & Supply Modeling Tool, and entail regular progress reports from the CEO/General Manager to the Board.**

**The motion passed unanimously.**

**6. Reports:**

- A. Water Supply and Drought Update: Mr. Hurley reported that the storage level at Hetch Hetchy reservoir is slightly below normal due to the ongoing efforts of San Francisco to fill the Water Bank. The total system storage is at 84.5%, which is a significant improvement from previous months.

Precipitation is above median. Snowpack approached median in early February but remains slightly below since mid-February. Conditions, however, are better than previous years when runoff started earlier.

Tuolumne River water available to the City is currently at 523 TAF compared to 50 TAF in 2015. SFPUC projects a high forecast of 780 TAF, which remains below the 810 TAF needed to achieve full storage capacity. This is reflective of SFPUC's continued call for a voluntary 10% water use reduction.

Total deliveries continue to remain below the State's mandatory reduction target, which will be lifted in June. Mr. Hurley was pleased to report that all 26 BAWSCA member agencies are meeting or exceeding their mandatory reduction targets. Overall, the agencies achieved a savings of 20 billion gallons over a period of 11 months.

Committee members expressed interest in knowing how usage has gone down to 40 gpcd, which is way below the EPA's floor of 50 gpcd.

Director Breault stated his concern that the numbers indicate future inelasticity. He emphasized the importance of understanding demands and how much more elastic demand can be when the next drought comes.

As part of the demand reduction study, BAWSCA will aim at understanding what factors contributed to the demand reductions for each agency.

Mr. Hurley reported the changes the State Water Resource Control Board (SWRCB) made on the emergency drought regulations. The SWRCB added back the requirements for restaurants to offer water upon request and for hotels to provide the option of not having their towels replaced daily. The deadline for wholesalers to provide urban water suppliers with data to complete self-certification and to produce conservation standards was extended to June 15<sup>th</sup>.

The SWRCB also added the option for wholesalers and their retailers to submit an aggregated conservation standard. Member agencies can collectively submit a conservation standard which, BAWSCA discussed with the Water Management Representatives at its June meeting.

The new regulations went in effect as of June 1<sup>st</sup>. The SFPUC has indicated that it has sufficient supply to meet the region's demands with a 0% cutback per the SWRCB formulas, but will continue to call for a voluntary 10% water use reduction.

The SCVWD is expected to go to its Board with a recommendation of a continued water usage cutback at 20%, collectively.

BAWSCA will continue to provide assistance to its member agencies. The deadline for water retailers to complete the self-certification process is June 22<sup>nd</sup>.

BAWSCA will be participating in the “listening sessions” that state agencies will conduct regarding the implementation of the Executive Order, which will focus on the long-term implementation.

- B. Water System Improvement Program (WSIP) Update: Ms. Sandkulla reported that BAWSCA continues its involvement with the WSIP.

BAWSCA provided comments on SFPUC’s proposed changes to the WSIP scope, schedule and budget. The comments focused on SFPUC’s ability to meet demands and the drought level of service goals, the potential impacts to the system should Mountain Tunnel fails, and SFPUC’s commitment to complete the WSIP cost-effectively by shifting resources as the program comes to a close.

SFPUC staff was responsive to BAWSCA’s comments and committed to providing the Commission regular reports on its implemented cost-saving practices and procedures, as well as a plan that ensures best management practices of its finances. Ms. Sandkulla reported that at the beginning of the WSIP, an assumed number was allocated for bond financing based upon and assumed costs at the time. At BAWSCA’s request, the SFPUC agreed to compare the actual financing costs to date, recognize any cost savings achieved, and apply those cost savings to future changes needed for the program.

The Calaveras Dam Replacement Project continues to make progress. Ms. Sandkulla reported that the SFPUC requested BAWSCA’s assistance in obtaining a permit renewal from Alameda County to close Calaveras Dam Road. On June 2, 2016, BAWSCA wrote a letter to the Alameda County Board of Supervisors urging them to act on a permit renewal. The item is on the Transportation and Planning Committee agenda for June 23<sup>rd</sup>, and is expected to be presented to the Board of Supervisors on June 28<sup>th</sup>.

The initial permit provided periods for road closures for hauling materials on Calaveras Road. The delays experienced is causing the project to go outside of the dates of the original permit which expires July 1<sup>st</sup>. Without the permit renewal for the road closure, SFPUC would be limited to hauling materials for the Calaveras Dam project at night, therefore impacting the project schedule and costs due to time constraints and additional resources and safety precautions needed for night time operations. The estimated additional costs would be between \$5 to \$10 million.

- C. SFPUC’s Water Management Action Plan (Water MAP): Ms. Sandkulla reported that she spoke at the May 24<sup>th</sup> Commission meeting providing BAWSCA’s preliminary comments on SFPUC’s WaterMAP. While the Commission will not be presented with the WaterMAP until its meeting on June 14<sup>th</sup>, it was important to establish BAWSCA’s position on this effort by the SFPUC.

Ms. Sandkulla’s May 24<sup>th</sup> statement to the Commission emphasized 1) BAWSCA’s expectations for SFPUC to continue meeting its LOS goals adopted as part of the WSIP Program EIR, 2) BAWSCA’s support of East Palo Alto, Santa Clara, and San Jose’s efforts to secure additional permanent supplies from the Regional Water System, and 3) BAWSCA Board, staff and member agencies’ commitment to, and engagement with, the process.

The presentation to the Commission on June 14<sup>th</sup> will be for information only. The Commission will not be asked to act, but will be asked for input and feedback. Commission support would prompt development of an addendum to the WSIP Program EIR and likely project level EIR's. SFPUC's preliminary schedule indicates completion of necessary CEQA document in FY 2017-18, and action by the Commission in 2018.

Ms. Sandkulla stated that the questions being addressed in the WaterMAP have different timelines, therefore, BAWSCA's review of the document will look at how to break down the different issues to manageably address each of them.

BAWSCA's review of the document and the Commission's response will be reported to the Board at its July 21<sup>st</sup> meeting.

- D. Partnership on a Potable Reuse Study: Mr. Hurley reported that as part of BAWSCA's ongoing efforts to identify water resource opportunities for the Strategy, BAWSCA is partnering with Silicon Valley Clean Water (SVCW) along with Cal Water and SFPUC to develop a potable reuse exploratory plan.

SVCW operates waste water treatment facilities that serve communities in Belmont, San Carlos and Redwood City. In 2015, SVCW approached BAWSCA to explore partnership opportunities for the development of both direct potable reuse (DPR) and indirect potable reuse (IPR) supply. SVCW currently estimates 8-10 mgd of available capacity for an IPR/DPR project.

The parties are currently working to finalize a memorandum of understanding (MOU) to begin Phase 1 of the study in FY 2016-17.

Phase 1 would provide sufficient information to determine whether to proceed with further exploration of IPR potential. The study will focus on three elements which include 1) treatment requirements, 2) integration into and development of new transmission facilities, and 3) introduction of IPR supplies into existing storage. Each task will examine the potential with the SF RWS facilities including consideration of BDPL 1 or 2 for the isolated transmission required for IPR, and Crystal Springs Reservoir and San Mateo Plain groundwater basin as potential points of introduction for storage. The total cost for Phase 1 is \$56K. SVCW is committed to \$25K. The agencies are working on finalizing cost allocations.

Mr. Hurley explained that the study will extrapolate from other efforts to minimize the development of data specific to the service area, and obtain information that can be shared among, and used by, the member agencies.

Director Schmid expressed that the additional 8-10 mgd from SVCW would be a good addition given the requests for additional supply by East Palo Alto, San Jose and Santa Clara.

In response to Director O'Connell, Mr. Hurley stated that SVCW is aware of inflow reductions and will include that factor as part of the analysis.

Ms. Sandkulla added that the study is going to determine the cost-effectiveness of IPR and DPR in all aspects of what is required for treatment, transmission, and especially storage. Finding storage is key, as 8-10 mgd will require space that SVCW currently cannot accommodate.

- E. CEO's Letter: Committee members had no questions or comments on the items reported in the CEO letter.
- F. Board Policy Committee Calendar: Action items for the September Board meeting require no prior action by the Board Policy Committee. There will be no meeting in August 2016.
- 7. **Comments by Committee Members**: There were no further comments from Committee members.
- 8. **Adjournment**: The meeting was adjourned at 2:54pm. The next meeting is October 12, 2016.

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY**

**BOARD POLICY COMMITTEE – June 8, 2016**

**Roster of Attendees:**

**Committee Members Present**

Dan Quigg, City of Millbrae (Chair)  
Gustav Larsson, City of Sunnyvale (Vice Chair)  
Jay Benton, Town of Hillsborough  
Randy Breault, City of Brisbane/GVMID (BAWSCA Chair)  
Rob Guzzetta, California Water Service Company  
Al Mendall, City of Hayward (BAWSCA Vice Chair)  
Irene O’Connell, City of San Bruno  
Gregg Schmid, City of Palo Alto  
Louis Vella, Mid-Peninsula Water District

**Committee Members Absent**

Jerry Marsalli, City of Santa Clara

**BAWSCA Staff:**

Nicole Sandkulla	CEO/General Manager
Michael Hurley	Water Resources Manager
Adrienne Carr	Sr. Water Resources Specialist
Andree Johnson	Sr. Water Resources Specialist
Christina Tang	Sr. Administrative Analyst
Lourdes Enriquez	Assistant to the Chief Executive Officer
Deborah Grimes	Office Manager
Allison Schutte	Legal Counsel, Hanson Bridgett, LLP
Bud Wendell	Strategic Counsel, Management Communications

**Public Attendees:**

Karla Dailey	City of Palo Alto
Michelle Novotny	San Francisco Public Utilities Commission

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY  
BOARD OF DIRECTORS MEETING**

**May 19, 2016 – 7 p.m.**  
**Foster City Community Building, Foster City CA**

<b>MINUTES</b>
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**1. Call to Order/Pledge of Allegiance/Roll Call – 7:00 pm**

BAWSCA Chair, Randy Breault, called the meeting to order and led the salute to the flag. Nicole Sandkulla called the roll. Seventeen (17) members of the Board were present at roll call, constituting a quorum. Two arrived shortly after roll-call. A list of Directors present (19) and absent (7) is attached.

- 2. Board Policy Committee (BPC) Report:** Committee Chair, Dan Quigg, reported the Committee's discussions at its meeting on April 13, 2016, which were focused on the proposed Work Plan and Operating Budget for FY 2016-17, and the results of the survey regarding a potential Board meeting time and location change. The proposed Work Plan and Operating Budget for FY 2016-17 was supported by the Committee with a unanimous vote for recommendation to the Board. The Committee deliberated the results of the survey on the Board meeting time and location change, and decided to bring the matter to the Board for discussion.

- 3. Public Comments:** There were none.

- 4. Consent Calendar:** There were no discussions on items in the Consent Calendar.

**Director Kasperzak made a motion, seconded by Director Richardson, to approve the Minutes of the March 17, 2016 meeting, and receive and file the Budget Status Report, Investment Report, Bond Surcharge Collection Report, and Directors' Reimbursement Report as of March 31, 2016.**

**The motion passed unanimously.**

- 5. Comments by Chair:** BAWSCA Chair Breault encouraged the Board to support the proposed Work Plan and Operating Budget, and Professional Services contracts for FY 2016-17 to achieve the agency's goals, which remain in line with BAWSCA's founding legislation.

One important effort that will require considerable focus and review by the CEO and staff is SFPUC's WaterMAP. It is a planning effort by the SFPUC that is related to water supply decisions it must make by December 31, 2018. It is illustrative of why BAWSCA was formed 13 years ago to represent and protect the member agencies and their water customers. It is critical that BAWSCA pays close attention to how SFPUC makes its decisions and how the needs of individual member agencies are met in subsequent decades. East Palo Alto, San Jose and Santa Clara have requested action by the Commission regarding their future water needs.

Lastly, Chair Breault reported that he has asked the CEO to reach out to the member agencies and water purveyors in the region to encourage more active participation of the Bay Area agencies in ACWA conferences and meetings, particularly on issues associated with water conservation and efficient water use in the region.

**6. Action Calendar:****A. Proposed FY 2016-17 Work Plan and Operating Budget:**

**Director Pierce made a motion, seconded by Director Kasperzak, that the Board approve:**

- 1. Proposed FY 2016-17 Work Plan and Results to be Achieved;**
- 2. Proposed Operating Budget of \$3,468,008**
- 3. Recommended funding plan which includes FY 2016-17 assessments of \$3,440,734 and a transfer of \$27,274 from the General Reserve.**

**The motion passed unanimously.**

**B. Approval of Professional Services Contracts for FY 2016-17:**

**Director Zigterman made a motion, seconded by Director Keith that the Board approve the twenty-one contracts, subject to legal counsel's review, for legal, engineering, financial, strategic and water conservation services needing to be in place by July 1, 2016.**

**The motion passed unanimously.**

**7. Report and Discussion:**

**A. Results of Survey on Board Meeting Time and Locations Change:** Ms. Sandkulla presented the results of the two surveys conducted to evaluate the benefits of changing the Board meeting time and location as a potential solution to the worsening traffic conditions Board members face in their commute to BAWSCA Board meetings. Based on Board consensus, the CEO will look into alternative venues accessible from I-280.

**8. SFPUC Report:** David Briggs, SFPUC Division Manager for Water Supply and Treatment, addressed the Board on behalf of SFPUC General Manager, Harlan Kelly, and Assistant General Manager, Steve Ritchie.

Michelle Novotny, SFPUC Senior Water Analyst, reported on the Regional Water System's water supply conditions.

**9. Reports:** BAWSCA Water Resources Manager, Michael Hurley, reported on the State Water Resources Control Board's changes to the emergency regulations, and the SFPUC's WaterMAP.

**10. Closed Session:** The Board adjourned to Closed Session at 8:28 pm.

- 11. Reconvene and Report from Closed Session:** The meeting reconvened from Closed Session at 9:00 pm. Legal Counsel, Ms. Schutte, reported that no action was taken during Closed Session.
- 12. Directors' Discussion: Comments, Questions and Agenda Requests:** There were no further discussions.
- 13. Date, Time and Location of Next Meeting:** The next meeting is scheduled on July 21, 2016 in the Wind Room, Foster City Community Center.
- 14. Adjournment:** The meeting adjourned at 9:02 pm.

Respectfully submitted,

Nicole M. Sandkulla  
Chief Executive Officer/General Manager

NMS/le  
Attachments: 1) Attendance Roster

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY**  
**Board of Directors Meeting**  
**May 19, 2016**

**Attendance Roster**

Present:

Robert Anderson	Purissima Hills Water District
Randy Breault	Guadalupe Valley Water District
Tom Chambers	Westborough Water District
Jose Esteves	City of Milpitas
Rob Guzzetta	California Water Service Company
Mike Kasperzak	City of Mountain View
Kirsten Keith	City of Menlo Park
Gustav Larsson	City of Sunnyvale
Al Mendall	City of Hayward
Larry Moody	City of East Palo Alto
Irene O'Connell	City of San Bruno
Rosalie O'Mahony	City of Burlingame
Tom Piccolotti	North Coast County Water District
Barbara Pierce	City of Redwood City
Dan Quigg	City of Millbrae
Sepi Richardson	City of Brisbane
Gregg Schmid	City of Palo Alto
John Weed	Alameda County Water District
Tom Zigterman	Stanford

Absent:

Jay Benton	Town of Hillsborough
Charlie Bronitsky	City of Foster City
Michael Guingona	City of Daly City
Sam Liccardo	City of San Jose
Jerry Marsalli	City of Santa Clara
Chris Mickelsen	Coastside County Water District
Louis Vella	Mid-Peninsula Water District

# BAWSCA

## Bay Area Water Supply & Conservation Agency

155 Bovet Road, Suite 650  
 San Mateo, California 94402  
 (650) 349-3000 tel. (650) 349-8395 fax

**TO: Nicole Sandkulla, CEO/General Manager**

**FROM: Deborah Grimes, Office Manager**

**DATE: July 5, 2016**

**SUBJECT: Budget Status Report as of May 31, 2016**

This memorandum shows fiscal year budget status for FY 2015-16. It includes major areas of spending, provides an assessment of the overall budget, and summarizes reserve fund balances. This report covers the budget and expenses for BAWSCA. The BAWSCA operating budget includes necessary resources for the RFA and BAWUA.

**Operating Budget Summary:**

For the eleven-month period ending May 31, 2016, 92 percent into the fiscal year, total expenditures were \$2,588,108 or 82 percent of the total budget of \$3,201,679.

**Table 1. Operating Budget Summary as of May 31, 2016**

Cost Category	Year-To-Date		
	Budget	Expenses	Percent
<b>Consultants /Direct Expenditures</b>			
Reliability	807,450	578,059	72%
Fair Pricing	415,000	284,633	69%
Administration	85,000	106,852	126%
<b>Subtotal</b>	<b>1,307,450</b>	<b>969,544</b>	<b>74%</b>
<b>Administration and General</b>			
Salary & Benefits	1,518,529	1,396,379	92%
<b>Other Expenses</b>			
BAWSCA	313,200	222,185	71%
BAWUA	1,100	0	0%
<b>Subtotal</b>	<b>3,140,279</b>	<b>2,588,108</b>	<b>82%</b>
<b>Capital Expenses</b>	2,500	0	0%
<b>Budgeted Contingency</b>	57,500	0	0%
<b>Regional Financing Authority</b>	1,400	0	0%
<b>Grand Total</b>	<b>3,201,679</b>	<b>2,588,108</b>	<b>82%</b>

**Overview:**

Overall expenditures for FY 2015-16 are tracking within budget.

**Consultants**

The \$125,000 budget for technical review and tracking of the SFPUC's Water System Improvement Program was 68 percent expended. The Operating Budget allocation of \$150,000 for strategic counsel was 93 percent expended. The Operating Budget allocation of \$586,500 budget for legal counsel was 87 percent expended. The \$257,450 budget for water management and conservation-related activities was 61 percent expended.

**Administration and Other Expenses**

Budgets for salaries and other expenses were 92 percent and 71 percent expended respectively.

**Use of CEO's Discretionary Spending Authority:**

There was no CEO discretionary spending during this period.

**Use of Reserve and Reserve Fund Balance:**

Unspent funds at the end of FY 2014-15 were \$198,781. The BAWSCA General Reserve balance as of May 31, 2016, shown below, reflects this November 30, 2015 deposit.

**Table 2. General Reserve Fund Balance**

<b>Fund</b>	<b>Account Balance (As of 03/31/16)</b>	<b>Account Balance (As of 05/31/16)</b>
General Reserve	\$776,620	\$776,620

**Long-Term Reliable Water Supply Strategy and Use of Water Management Charge:**

At the May 21, 2015 meeting, the board authorized the reimbursement to BAWSCA's General Reserve the unspent Water Management Charge funds associated with the development of the Strategy. This reimbursement of \$352,378 occurred November 30, 2015. The BAWSCA General Reserve balance as of May 31, 2016, shown above, reflects this deposit.

# BAWSCA

## Bay Area Water Supply & Conservation Agency

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155 Bovet Road, Suite 650  
San Mateo, California 94402  
(650) 349-3000 tel. (650) 349-8395 fax

### MEMORANDUM

**TO:** Nicole Sandkulla, CEO/General Manager  
**FROM:** Deborah Grimes, Office Manager  
**DATE:** July 5, 2016  
**SUBJECT:** Investment Report – As of June 30, 2016

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In February 2004, the Board originally adopted an investment policy consistent with the Government Code that requires a report on the Agency's investments be provided to the Board. This report presents fund management in compliance with the current investment policy. The Board most recently reviewed the investment policy at its September 17, 2015 meeting. No changes were recommended or adopted as part of that review

Funds in excess of \$250,000 are deposited in the BAWSCA Local Agency Investment Fund (LAIF) account throughout the year to ensure compliance with BAWSCA's investment policy.

BAWSCA's prior and current period LAIF account balances are shown below:

<u>03/31/16</u>	<u>06/30/16</u>
\$1,755,269	\$1,857,300

Of the total in the BAWSCA LAIF account as of June 30, 2016, \$776,620 represents BAWSCA's General Reserve Fund, equivalent to approximately 24 percent of FY 2015-16 Operating Budget. The remaining amount consists of Subscription Conservation Program funds and unrestricted funds. At the May 21, 2015 meeting, the Board authorized the reimbursement to BAWSCA's General Reserve of the unspent Water Management Charge funds associated with the development of the Strategy. This reimbursement of \$352,378 was transferred on November 30, 2015.

Recent historical quarterly interest rates for LAIF deposits are shown below:

<u>12/31/15</u>	<u>03/31/16</u>
0.37%	0.46%

The actual earned interest rate for the past quarter ending June 30, 2016 is not yet available and has not been applied to the LAIF account balance. This will be reported as part of the next quarterly Investment Report.

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# **BAWSCA**

## **Bay Area Water Supply & Conservation Agency**

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155 Bovet Road, Suite 650  
San Mateo, California 94402  
(650) 349-3000 tel. (650) 349-8395 fax

### MEMORANDUM

**TO:** Nicole Sandkulla, CEO/General Manager

**FROM:** Deborah Grimes, Office Manager

**DATE:** July 5, 2016

**SUBJECT:** Directors' Reimbursement Quarterly Report for the Period Ending June 30, 2016

---

In March 2006, the board adopted a directors' expense reimbursement policy consistent with the Government Code that requires a quarterly report on the Agency's reimbursement of directors' expenses. This report shall show the amount of expenses reimbursed to each director during the preceding three months.

Table 1 presents the reimbursed expenses for BAWSCA Directors during the quarter ending June 30, 2016.

**Table 1. Director Reimbursement Expenses**

<b>BAWSCA Director</b>	<b>Expense Amount</b>	<b>Purpose</b>
Randy Breault, Chair	\$126	Mileage May 2016 - ACWA Conference Monterey, CA

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**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY**

**BOARD OF DIRECTORS MEETING**

**Agenda Title:**       **Professional Services Contract with ReNUWIt to Complete a Demand Reduction Study as part of BAWSCA’s Drought Response Analysis**

**Summary:**

One of the key efforts included in BAWSCA’s adopted FY 2016-17 Work Plan and Operating Budget is the development of a Drought Response Analysis. A critical element of the Drought Response Analysis is the investigation of factors impacting water demand reduction in the BAWSCA service area (Demand Reduction Study).

The Demand Reduction Study will investigate the extent to which various factors, including media coverage of the drought, new regulations, climate, and active conservation programs, influenced water use patterns within the service area during the current drought. Other elements of the Drought Response Analysis, to be completed in tandem with the Demand Reduction Study, include the review of regional wholesalers and member agencies’ shortage provisions and drought preparedness. Together, the results from these efforts will better prepare the service area from a technical and policy perspective for the transition out of the current drought, planning for the next drought, and informing BAWSCA’s long-term planning.

Since FY 2014-15, BAWSCA staff have been collaborating with Stanford researchers affiliated with the Re-inventing the Nation’s Urban Water Infrastructure (ReNUWIt) research center. The Stanford researchers have been using BAWSCA member agency data to examine regional water management strategies, while BAWSCA has benefited from these new analyses done by Stanford faculty and students. There is significant overlap between ReNUWIt’s ongoing research efforts and the analysis that BAWSCA seeks to complete in the Demand Reduction Study of the Drought Response Analysis. In particular, the Stanford researchers have already begun an evaluation of the impacts of media coverage of the drought on customer water use. Given the potential to leverage ReNUWIt’s ongoing work to complete scope of work in a cost effective manner on an accelerated timeframe, a non-competitively procured contract with ReNUWIt to complete the Demand Reduction Study is recommended.

**Board Policy Committee Action:**

The Committee voted unanimously to recommend approval of the proposed Board action.

**Recommendation:**

**That the Board authorize the CEO/General Manager to negotiate and execute an agreement with ReNUWIt, subject to legal counsel review, to complete the Demand Reduction Study of the Drought Response Analysis.**

**Fiscal Impact:**

A contract for a not-to-exceed amount of \$20,000 is recommended to complete the Demand Reduction Study. This amount represents a portion of the FY 2016-17 Operating Budget

allocated for the Drought Response Analysis. The remainder of the FY 2016-17 Operating Budget allocated for the Drought Response Analysis will be reserved for additional activities to assess the longer term implications associated with the significant water use reductions observed during the drought and future drought preparedness.

**Discussion:**

The adopted BAWSCA FY 2016-17 Work Plan and Operating Budget includes a Drought Response Analysis as one of the key activities. The purpose of the Drought Response Analysis is to assess the impacts to water use resulting from the recent drought conditions and associated actions to reduce water use in order to inform BAWSCA's long-term planning. Understanding the drivers for these water use reductions, the demand hardening associated with the actions taken during the drought, and the long-term impacts on water use within the region, is necessary to ensure that water management efforts implemented as part of the Long Term Reliable Water Supply Strategy (Strategy) are in line with the region's long term water supply needs.

The Demand Reduction Study of the overall Drought Response Analysis is an evaluation of factors impacting recent water demand reductions experienced in the BAWSCA service area. The Demand Reduction Study will investigate the extent to which various factors, including media coverage of the drought, new regulations, climate, and active conservation programs, influenced water use patterns within the service area. The results will better prepare the service area from a technical and policy perspective for the transition out of the current drought as well as preparation for the next drought, which may include modifications to the regional water demands and conservation savings projections.

**The Demand Reduction Study - Scope of Work**

The proposed Scope of Work for this study includes:

1. Collecting and updating data on climate, population, socioeconomics (e.g., unemployment), water use, conservation programs, water use restrictions, and water pricing.
2. Mapping the historical and current urban water use patterns across the BAWSCA service area.
3. Evaluating the impact of:
  - a. climate variability and economic factors on water use;
  - b. technological advancements, such as smart meter and demand management software, in changing customer behaviors;
  - c. earned media coverage of the drought on water use; and
  - d. various water conservation programs, policies, pricing strategies, and regulations on reducing customer water use.

Deliverables for the Demand Reduction Study include a technical memorandum describing the results of the work performed and documenting the quantitative impacts on water use associated with each of the factors evaluated.

**The Demand Reduction Study - Schedule**

Work on the Demand Reduction Study would begin after the contract is finalized at the start of FY 2016-17. The Demand Reduction Study work would be completed by January 2017.

**The Demand Reduction Study – Cost**

The Stanford researchers are not paid hourly, but BAWSCA staff have estimated an effective hourly wage for this effort, based upon the estimated total number of person-hours needed to complete this work and the total contract amount. Three Stanford researchers are anticipated to be contributors to this effort, providing approximately 300 person hours. Using the total cost of \$20,000 for this effort and an assumption that 300 hours would be spent on completing the work, the effective average rate for this effort is approximately \$67 per hour.

**Background on ReNUWIt and BAWSCA's Relationship with ReNUWIt**

ReNUWIt is an interdisciplinary, multi-institution research center whose goal is to change the ways in which we manage urban water. Their vision is of safe, sustainable urban water infrastructures enabled by technological advances in natural and engineered systems, and informed by a deeper understanding of institutional frameworks. ReNUWIt is a collaboration of researchers at Stanford University, the University of California-Berkeley, Colorado School of Mines, and New Mexico State University, funded by the National Science Foundation. With over 40 water resources experts, the ReNUWIt Program contains an extensive breadth and depth of knowledge in water resources management and hydrologic modeling.

BAWSCA staff has been successfully collaborating with Dr. Newsha Ajami, Director of Urban Water Policy with Stanford University's ReNUWIt initiative, for over a year and a half to cultivate a mutually beneficial relationship in which ReNUWIt researchers work with BAWSCA to develop capabilities to investigate regional water management strategies for the BAWSCA service area. In conjunction with the research activities under the ReNUWIt Program, Stanford has created an Industrial Membership Program as a mechanism to enable water agencies and private entities to collaborate with university researchers. In April 2016, BAWSCA became an Associate Member of ReNUWIt which enabled collaboration and access to educational and research expertise to improve water management.

**Justification for the Non-Competitive Procurement Approach**

As a threshold matter, BAWSCA's procurement policy does not require a competitive procurement process for service contracts; however, service contracts exceeding \$25,000 must be approved by the Board of Directors. While this contract is below the \$25,000 threshold for which Board approval is required, it is being brought to the Board to provide additional transparency.

For this study, engaging ReNUWIt pursuant to a non-competitive procurement process is recommended for the following reasons. First, as determined by Staff and discussed in detail above, this contract is cost-effective compared to the rates offered by other consultants to do the same work. Second, since ReNUWIt research center has been working with BAWSCA on these issues for more than a year, ReNUWIt is already mobilized and will be able to complete the scope of work in an accelerated timeframe and at less cost, as compared to other likely proposers.

Lastly, the existing work ReNUWIt performed significantly overlaps with the analysis that BAWSCA seeks to develop but the results can be further improved with additional data provided by BAWSCA. In particular, ReNUWIt researchers have already begun an

evaluation of the impacts of media coverage of the drought on customer water use. Given the ability to leverage ReNUWIt's ongoing work to complete the Demand Reduction Study scope of work in a cost effective manner on an accelerated timeframe, a non-competitively procured contract with ReNUWIt to develop the Demand Reduction Study is recommended.

**Alternatives to the Recommended Action:**

Alternatives to the recommended action included herein are to: (1) not move forward with the Demand Reduction Study, or (2) select a potentially different consultant through a competitive bid process.

BAWSCA does not recommend the above alternatives. As part of the Drought Response Analysis, the Demand Reduction Study is a key item in the FY 2016-17 Work Plan and is critically important to informing long-term water supply planning in the region. ReNUWIt is uniquely qualified to complete the Demand Reduction Study of the Drought Response Analysis within the proposed budget and timeframe given the work its researchers are already performing and the shared resources that ReNUWIt is providing as part of this work to decrease cost and increase overall cost-effectiveness. Given ReNUWIt's qualifications, it is appropriate to contract with the research center for this project.

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY**

**BOARD OF DIRECTORS MEETING**

**Agenda Title: Professional Services Contract with ReNUWIt to Develop Independent Regional Water System & Supply Modeling Tool**

**Summary:**

A key effort included in BAWSCA's adopted FY 2016-17 Work Plan and Operating Budget is the initial development of an Independent Regional Water System & Supply Modeling Tool. To date, as part of the Long-Term Reliable Water Supply Strategy (Strategy), BAWSCA has relied on the SFPUC's modeling resources to inform long-term planning decisions including BAWSCA's modeling of potential future hydrologic conditions. However, as BAWSCA's and the member agencies' needs have grown, it is not effective to rely on the SFPUC for modeling work to meet BAWSCA's analytical and schedule needs. Developing an independent modeling tool would allow BAWSCA to run independent alternative scenarios to meet BAWSCA's planning needs and understand the impacts of the reliability of other regional water supplies (e.g., surface water from Santa Clara Valley Water District, State Water Project supplies).

Since FY 2014-15, BAWSCA staff have been collaborating with Stanford University (Stanford) researchers affiliated with the Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt) research center on water supply reliability and conservation planning efforts. The Stanford researchers have started building a water supply modelling tool for their own research efforts using data from the BAWSCA service area as a test case. The effort proposed here would leverage the reliability modeling work that is already being done to provide BAWSCA with critical analyses. Given the potential to leverage ReNUWIt's ongoing work to complete the scope of work in a cost effective manner on an accelerated timeframe, a non-competitively procured contract with ReNUWIt to perform initial development of the Independent Regional Water System & Supply Modeling Tool is recommended.

**Board Policy Committee Action:**

The Committee requested that the commitment to regular progress reports from staff be included in the recommended action. The Committee voted unanimously to recommend approval of the proposed Board action.

**Recommendation:**

**That the Board authorize the CEO/General Manager to negotiate and execute an agreement with ReNUWIt, subject to legal counsel review, to perform initial development of an Independent Regional Water System & Supply Modeling Tool, and entail regular progress reports from the CEO/General Manager to the Board on overall project progress.**

**Fiscal Impact:**

A contract for a not-to-exceed amount of \$40,000 is recommended for the work to be completed during FY 2016-17 for the initial development of the Independent Regional Water

System & Supply Modeling Tool. This amount is included in the adopted FY 2016-17 Operating Budget for this effort.

Development of this modeling tool is a multi-year effort. As presented in the FY 2016-17 Work Plan and Operating Budget memo, additional funds will need to be budgeted in FY 2017-18 to complete the development of the Independent Regional Water System & Supply Modeling Tool and perform scenario analysis with an estimated total multi-year development cost of \$60-\$100k.

**Discussion:**

As part of the Strategy, BAWSCA's modeling of potential future hydrologic conditions were performed by SFPUC staff through a cooperative agreement with SFPUC to analyze the probability of supply shortages on the San Francisco Regional Water System (SF RWS). The reliance on SFPUC's modeling capabilities have become restrictive for BAWSCA's analytical and schedule needs. In addition, the reliability analyses done as a part of the Strategy did not account for potential shortages in other supplies utilized by BAWSCA member agencies (e.g., State Water Project supplies or local groundwater). Circumstances seen during the current drought have provided insight on the potential impacts that shortages on other regional supplies can have on BAWSCA member agency reliability and potential SF RWS purchases.

BAWSCA has an opportunity to establish independent modeling capabilities by supporting and building on efforts already under way at Stanford. Stanford ReNUWIt researchers have started developing a water supply reliability modelling tool for their own research efforts using data from the BAWSCA service area as a test case. Leveraging this research to develop independent modeling capabilities would allow an analysis of the SFPUC's reliability based on BAWSCA's scenarios, and provide an additional benefit of being able to integrate other regional and local supplies into the analysis to further understand their implications to regional water supply reliability. The need for integration of other regional and local supplies as part of regional reliability analyses was highlighted during the current drought.

In addition, continued collaboration between BAWSCA and ReNUWIt is ideal for BAWSCA's long term water supply planning needs. After the initial development of the model, continued collaboration with ReNUWIt would enable BAWSCA to complete development of the model and to perform additional analyses with the model, as needed, which would avoid the need to add additional staff to satisfy planning needs. In addition, working with ReNUWIt is anticipated to be more cost effective than hiring an engineering consulting firm to provide these ongoing services as BAWSCA is able to leverage and build upon work that is being independently developed by Stanford researchers for their own purposes.

On May 19, 2016 the Board approved the FY 2016-17 Work Plan that contained the initial development of an Independent Regional Water System & Supply Modeling Tool, which when completed, would provide the following capabilities to BAWSCA and its member agencies:

- Evaluating the benefits of new water resources
- Evaluating the effects of changed water demands
- Assessing potential water shortage frequency considering all supplies utilized by BAWSCA member agencies,
- Assessing impact shortage on supplies other than SFRWS supplies has on SFPUC

- purchases
- Evaluating the overall effectiveness of water supply projects in enhancing regional reliability

BAWSCA's intention is to perform initial development of the tool during FY 2016-17. Deliverables during FY 2016-17 would be two technical memorandums. The first memo would summarize the proposed modeling approach and outline the potential scenarios to be analyzed. The second memo would summarize the existing models and their underlying assumptions, identify additional data needs or uncertainties in evaluating reliability of other supplies, and identify methodologies to evaluate reliability of the other supplies.

Completion of project is anticipated to be a multi-year effort with further work, including model completion and scenario analyses, anticipated during FY 2017-18.

### Scope of Work

Development of the Independent Regional Water System & Supply Modeling Tool would be a multi-year effort. The first year of work would consist of planning the approach to building the model and identifying potential scenarios to be evaluated. Regular updates would be provided to the BAWSCA Board on the progress of this effort.

The proposed Scope of Work for this effort in FY16-17 includes:

1. **Formulate the appropriate modeling approach to evaluate regional-scale reliability considering all of the available supplies to the BAWSCA service area.** This task will also include scenario planning, in which BAWSCA and ReNUWIt staff will coordinate to list potential modeling scenarios to be performed after the model is completed.

**Deliverable** - a technical memorandum summarizing the proposed modeling approach and outlining the potential scenarios to be analyzed.

2. **Develop the approach and capabilities to evaluate reliability of other water supplies.** ReNUWIt team will identify and become familiar with tools used to evaluate reliability of regional water supplies other than SFPUC supplies (e.g., State Water Project, local groundwater), as well as potential new supply projects (e.g. expanding recycled water use) that directly or indirectly impact the reliability of BAWSCA's member agencies.

**Deliverable** - a technical memorandum summarizing existing models and their underlying assumptions, identifying additional data needs or uncertainties in evaluating reliability of other supplies, and identifying methodologies to evaluate reliability of the other supplies.

3. **Develop capabilities to evaluate the supply reliability of the SF RWS.** This task develops the approach to simulating reliability of the SF RWS. If a new or revised model is used, ReNUWIt would verify the accuracy through a comparison to existing model results.

**Deliverable** - regular status reports on progress throughout FY 2016-17. The work would be completed by the end of FY 2016-17 and a memorandum would be anticipated early in FY 2017-18. If a new or revised model is created, BAWSCA would obtain the new model.

If BAWSCA chose to continue this work, funds will be needed in FY 2017-18 for completing the development of the Independent Regional Water System & Supply Modeling Tool and perform scenario analysis. Potential tasks for FY 2017-18 include:

4. **Construct and calibrate a regional reliability modeling tool.** Using at least one scenario agreed to by BAWSCA and ReNUWIt. Using the approach formulated in tasks 1-3, described above, ReNUWIt will construct a numerical model that incorporates reliability of both SF RWS and other supplies that is capable of investigating regional reliability questions posed above.

**Deliverable** – Results of one or more planning-level scenarios, as defined during work completed for Task 1, will be presented in a memorandum. In addition, BAWSCA will receive a copy of the model.

5. **Use the modeling tool to evaluate additional scenarios.** ReNUWIt will use the calibrated Regional Reliability Model to investigate additional regional reliability questions formulated in Task 1.

**Deliverable** – Results of the additional scenarios would be presented in a memorandum.

Schedule

Work on development of BAWSCA’s Independent Regional Water System & Supply Modeling Tool would begin after the contract is finalized at the start of FY 2016-17. Two memorandums would be produced in FY 2016-17 and additional work would be done in the following fiscal year on the following schedule:

<b>TASK</b>	<b>SCHEDULE</b>
Memorandum on formulating the modeling approach for regional-scale reliability	Jan. 2017
Memorandum on evaluating the reliability of other water supplies	April 2017
Memorandum on evaluating the reliability of the SF RWS	Oct. 2017
Memorandum on constructing and calibrating the regional reliability model	Feb. 2018
Submit copy of regional reliability model	March 2018
Memorandum presenting evaluation results for additional scenarios	June 2018

Cost

The Stanford researchers are not paid hourly, but BAWSCA staff have estimated an effective hourly wage for this effort, based upon the estimated total number of person-hours needed to complete this work and the total contract amount. Three Stanford researchers are anticipated to be contributors to this effort and approximately 500 person hours would be

spent on this effort in FY 2016-17. Using the total cost of \$40,000 for this effort and an assumption that 500 hours would be spent on completing the work, the effective average rate for this effort is approximately \$80 per hour.

**Background on ReNUWIt and BAWSCA's Relationship with ReNUWIt**

ReNUWIt is an interdisciplinary, multi-institution research center whose goal is to change the ways in which we manage urban water. Their vision is of safe, sustainable urban water infrastructures enabled by technological advances in natural and engineered systems, and informed by a deeper understanding of institutional frameworks. ReNUWIt is a collaboration of researchers at Stanford University, the University of California-Berkeley, Colorado School of Mines, and New Mexico State University, funded by the National Science Foundation. With over 40 water resources experts, the ReNUWIt Program contains an extensive breadth and depth of knowledge in water resources management and hydrologic modeling.

BAWSCA staff has been successfully collaborating with Dr. Newsha Ajami, Director of Urban Water Policy with Stanford University's ReNUWIt initiative, for over a year and a half to cultivate a mutually beneficial relationship in which ReNUWIt researchers work with BAWSCA to develop capabilities to investigate regional water management strategies for the BAWSCA service area. In conjunction with the research activities under the ReNUWIt Program, Stanford has created an Industrial Membership Program as a mechanism to enable water agencies and private entities to collaborate with university researchers. In April 2016, BAWSCA became an Associate Member of ReNUWIt which enabled collaboration and access to educational and research expertise to improve water management.

**Justification for the Non-Competitive Procurement Approach**

As a threshold matter, BAWSCA's procurement policy does not require a competitive procurement process for service contracts; however, service contracts exceeding \$25,000 must be approved by the Board of Directors. In this case, engaging ReNUWIt pursuant to a non-competitive procurement process is recommended for the following reasons. First, as determined by Staff and discussed in detail above, this contract is cost-effective compared to the rates offered by other consultants to do the same work. Second, since ReNUWIt research center has been working with BAWSCA on these issues for more than a year, ReNUWIt is already mobilized and will be able to complete the scope of work in an accelerated timeframe and at less cost, as compared to other likely proposers. Lastly, the existing work ReNUWIt performed significantly overlaps with the analysis that BAWSCA seeks to develop but the results can be further improved with additional data provided by BAWSCA.

Providing the desired work products requires professional services with expertise in hydrological and water resources numerical modeling, and also familiarity with the SF RWS and BAWSCA member agencies' other water supplies. ReNUWIt researchers have already begun to construct a regional reliability model for their own research using BAWSCA member agency data as a case study. Since the ReNUWIt research center has already developed the expertise for this work, particularly related to BAWSCA's member agencies, it is more efficient to contract ReNUWIt rather than with another organization to obtain the same level expertise in the BAWSCA data.

This effort is being funded in part by the National Science Foundation (the sponsor of ReNUWIt as mentioned above), which will reduce the overall cost to BAWSCA. Given the potential to leverage ReNUWIt's ongoing work to complete the scope of work in a cost effective manner on an accelerated timeframe, a non-competitively procured contract with ReNUWIt to perform the initial development of the Independent Regional Water System & Supply Modeling Tool is recommended.

**Alternatives to the Recommended Action:**

Alternatives to the recommended action included herein are to: (1) not move forward with the development of an Independent Regional Water System & Supply Modeling Tool, or (2) select a potentially different consultant through a competitive bid process.

BAWSCA does not recommend the above alternatives. The development of an Independent Regional Water System & Supply Modeling Tool is a key item in the FY 2016-17 Work Plan and is important to informing long-term water supply planning in the region.

ReNUWIt is uniquely qualified to develop an Independent Regional Water System & Supply Modeling Tool within the proposed budget and timeframe given the work its researchers are already performing. ReNUWIt researchers have already begun to construct a regional reliability model for their own research using BAWSCA member agency data as a case study. This effort is being funded in part by the National Science Foundation, which will reduce the overall cost to BAWSCA. No other entity is thought to have all of the necessary expertise and resources to pursue this work at the proposed cost. A private consulting firm would charge significantly more for the same work product, and the work could take significantly longer, as the staff at the firm could require significant effort to come up to speed. Given ReNUWIt's qualifications, it is appropriate to contract with the research center for this project.

# **BAWSCA**

**Bay Area Water Supply & Conservation Agency**

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155 Bovet Road, Suite 650  
San Mateo, California 94402  
(650) 349-3000 tel. (650) 349-8395 fax

## MEMORANDUM

**TO:** BAWSCA Board of Directors  
**FROM:** Nicole Sandkulla, CEO/General Manager  
**DATE:** July 15, 2016  
**SUBJECT:** Chief Executive Officer/General Manager's Letter

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### Emergency Response Table Top Exercise

On June 15, 2016, the SFPUC held a “tabletop exercise” with the BAWSCA member agencies following its quarterly Wholesale Customers meeting. A tabletop exercise is a training session where a simulated emergency situation and the actions the parties would take in such an emergency are reviewed and discussed. These exercises allow for the testing of an emergency plan in an informal, low-stress environment.

The three objectives for this exercise were to:

1. Understand the effects of a failure of Mountain Tunnel on the SFPUC Regional Water System (RWS) and its customers.
2. Review SFPUC customers' alternative water supply and demand management strategies in the event that the SFPUC is unable to fully meet demands.
3. Explore information communication strategies.

The scenario discussed assumed that there was evidence of collapse of a portion of Mountain Tunnel, resulting in a need for immediate shutdown and assessments.

The exercise was well attended by BAWSCA member agencies and was successful based on the identified lessons learned. One specific result of the exercise is the identification that the Wholesale Customers (through BAWSCA or some other means), should have a representative in the SFPUC Department Operation Center during a future emergency for increased coordination and information sharing.

### Mountain Tunnel

BAWSCA continues to meet regularly with the SFPUC to discuss efforts to address the preparation for and implementation of necessary improvements to structural defects in the Mountain Tunnel lining. The SFPUC is focused on three key efforts: 1) the Mountain Tunnel Improvement Project, which consists of a series of capital projects to improve access to the facility and ultimately, the inspection and repair of the tunnel, 2) an Emergency Restoration Plan to return the facility to service within 3 months of a tunnel failure, and 3) an Emergency Response Plan to provide for alternative water supplies under both planned and unplanned outage scenarios.

On June 28th, the SFPUC approved plans and specifications and awarded \$4.9M contract for services related to Mountain Tunnel Improvement Project. The services include the repair of 7,200 linear feet of concrete lining in the tunnel, road and adit improvements to improve access to the facilities, and tunnel inspection assistance during the 2017 shutdown.

Additionally, the Chief Executive Officers of Santa Clara Valley Water District and the SFPUC executed an expanded intertie agreement for the Milpitas Intertie as part of the development and implementation of the Emergency Response Plan. This agreement expands the minimum level of mutual preparedness and support for the intertie in preparation for both planned and unplanned outages. The SFPUC expects to execute a similar agreement with East Bay Municipal Water District regarding the Hayward Intertie within a month.

**ConserveTrack Online Rebate System Launch:**

The ConserveTrack Water Conservation Management System (ConserveTrack) Online Rebate System is complete and ready for BAWSCA and member agency use. ConserveTrack will improve the rebate process for customers and enhance the administration of conservation programs for both BAWSCA and the member agencies.

ConserveTrack includes two distinct but related components: 1) an online rebate application system (Online Rebate System) and 2) a Data Management System, which enables BAWSCA member agencies to track and manage each individual agency's conservation programs. The Online Rebate System will be used by all BAWSCA member agencies participating in BAWSCA's subscription rebate programs. The Data Management System is offered to all BAWSCA member agencies as a subscription program. For FY 2016-17, four BAWSCA member agencies are participating in the Data Management System.

BAWSCA staff is currently working with the consultant on user training for member agency staff. Training sessions are scheduled for early July, and the system is scheduled to go live for access by member agency customers by the end of July, once all users are trained. The public launch was delayed from July 1 to address some system errors and to enable additional user training beyond what was conducted in June.

**FY 2016-17 Conservation Programs Launch:**

BAWSCA's Regional Water Conservation Program was launched for FY 2016-17. The Regional Water Conservation Program includes both Core Programs, implemented regionally throughout the BAWSCA service area, and Subscription Programs, funded by individual member agencies that elect to participate and implemented within their respective service areas.

The three Core Programs to be provided for the BAWSCA service area in FY 2016-17 include landscape education classes, the BayAreaGardening.org Water Wise Gardening website, and public outreach. These programs are offered regionally for the benefit of all BAWSCA member agencies and their customers.

The Subscription Programs include: rebate programs for high-efficiency toilets, high-efficiency clothes washers, water-efficient landscape, and rain barrels; a voucher program

for water-efficiency sprinkler nozzles; a home water use reports program; three school education programs; a large landscape water budget program; a conservation program management system; and consultant support for services to assist in demand and conservation savings forecasting. Twenty-four of the BAWSCA member agencies are participating in at least one of the aforementioned Subscription Programs for FY 2016-17.

**Association of California Water Agencies (ACWA) Advocacy - Update:**

At the May Board meeting, Chair Breault reported that he had asked the CEO to reach out to the member agencies and other water purveyors in the region to encourage more active participation with the Association of California Water Agencies (ACWA) in conferences and meetings. Of particular concern was involvement in the areas of water conservation and efficient water use.

CEO/General Manager Sandkulla raised this issue at the June meeting of the Bay Area Water Agencies Coalition (BAWAC), which is comprised of water agencies in Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara counties. At this meeting, BAWAC agreed that increased connection between ACWA and water agencies would be beneficial at this critical time and outlined several actions that would be taken including inviting the regional representative for ACWA to attend specific upcoming BAWAC meetings.

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# Board of Directors Policy Calendar through January 2017

Board Meeting	Purpose	Issue or Topic
July 2016	D&A D R&D	Consideration of New Water Management Consultant Contracts Discussion on CEO Performance Evaluation Procedure Review of SFPUC's Water Management Action Plan (MAP)
Sept. 2016	D&A D&A	Resolution Approving Temporary Appointment of A. Jensen as Special Counsel to the CEO/GM CEO/GM Evaluation
November 2016	D&A R&D	Annual Review and Consideration of Statement of Investment Policy Extend contract with PG&E for Regional Washing Machine Rebate Program
January 2017	D&A R&D	BAWSCA Mid-Year Review for FY 2016-17 Work Plan and Budget Work Plan and Budget Planning for FY 2017-18

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**Bay Area Water Supply and Conservation Agency  
and Regional Financing Authority**

**Meeting Schedule through July 2017**

<b>Schedule for BAWSCA Board Meetings (Meetings are held from approx. 7:00 – 9:00 p.m.)</b>	
<b><u>Date</u></b>	<b><u>Location</u></b>
Thursday – July 21, 2016	Wind Room, Foster City Community Center
Thursday – September 15, 2016	Wind Room, Foster City Community Center
Thursday – November 17, 2016	Wind Room, Foster City Community Center
Thursday – January 19, 2017	Wind Room, Foster City Community Center
Thursday – March 16, 2017	Wind Room, Foster City Community Center
Thursday – May 18, 2017	Wind Room, Foster City Community Center

<b>Schedule for RFA Board Meetings (Meeting time will be announced)</b>	
<b><u>Date</u></b>	<b><u>Location</u></b>
Thursday – July 21, 2016	Wind Room, Foster City Community Center
Thursday – January 19, 2017	Wind Room, Foster City Community Center
Thursday – July 20, 2017	Wind Room, Foster City Community Center

<b>Schedule for BAWSCA Board Policy Committee Meetings (Meetings held from 1:30-4:00 p.m.)</b>	
<b><u>Date</u></b>	<b><u>Location</u></b>
Wednesday – August 10, 2016 - <b>CANCELLED</b>	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.
Wednesday – October 12, 2016	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.
Wednesday – December 14, 2016	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.
Wednesday – February 8, 2017	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.
Wednesday – April 12, 2017	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.
Wednesday – June 14, 2017	155 Bovet Rd., San Mateo – 1 <sup>st</sup> Floor Conf. Rm.

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