

BAWSCA

Bay Area Water Supply & Conservation Agency

BOARD POLICY COMMITTEE

October 10, 2012

1:30 p.m.

BAWSCA Offices, 155 Bovet Road, San Mateo, 1st Floor Conference Room

(Directions on page 2)

AGENDA

<u>Agenda Item</u>	<u>Presenter</u>	<u>Page#</u>
1. <u>Call To Order, and Roll Call</u>	(Klein)	
Roster of Committee members (<i>Attachment</i>)		Pg 3
2. <u>Comments by Chair</u>	(Klein)	
3. <u>Public Comment</u>	(Klein)	
<i>Members of the public may address the committee on any issues not listed on the agenda that are within the purview of the committee. Comments on matters that are listed on the agenda may be made at the time the committee is considering each item. Each speaker is allowed a maximum of three (3) minutes.</i>		
4. <u>Consent Calendar</u>	(Klein)	
A. Approval of Minutes from the August 8, 2012 meeting (<i>Attachment</i>)		Pg 5
5. <u>Action Item</u>		
A. Potential Bond Issuance to Prepay Capital Debt Owed to SFPUC (<i>Attachment</i>)	(Jensen)	Pg 19
<u>Issue:</u> The Committee is asked to recommend Board approval of four actions in November:		
1. Authorize the CEO/General Manager to amend the contract with KNN for their financial advisory services until the completion of the financing.		
2. Authorize the CEO/General Manager to appoint a bank to be selected through a RFP process as the Trustee for the bonds.		
3. Adopt a Resolution approving in substantially final form the various financing documents, including the Revenue Bond Indenture, First Supplemental Indenture, the Continuing Disclosure Certificate, the Preliminary Official Statement, a Prepayment and Collection Agreement with the SFPUC and the Bond Purchase Agreement.		
4. Authorize the CEO/General Manager to execute these financing documents at the appropriate time conditioned upon satisfaction of specified criteria.		
<u>Information to Committee:</u> Attached staff memo and oral presentation. The oral presentation will include a description of alternatives for allocating debt service and a recommendation. (<i>Attachments under separate cover - electronically</i>)		
<u>Committee Action Requested:</u> Questions, advice and a Committee recommendation to the Board of Directors		

B. Amendments to BAWSCA Investment Policy (Attachment) (Jensen) Pg 23

Issue: The Committee is asked to recommend Board adoption of the proposed revised BAWSCA Investment Policy subject to satisfying specified objectives.

Information to Committee: Attached staff memo and oral presentation.

Committee Action Requested: Questions, advice and a Committee recommendation to the Board of Directors

C. Authorization to Negotiate and Execute a Contract Amendment with PG&E for the Washing Machine Rebate Program. (Attachment) (Sandkulla) Pg 25

Issue: What is required to continue BAWSCA's joint Water Utility and Energy Utility Residential WMRP through calendar year 2013?

Information to Committee: Memorandum and oral report.

Committee Action Requested: That the Committee recommend that the Board authorize the Chief Executive Officer to:

- 1) Negotiate and execute a contract amendment with PG&E, subject to legal counsel's final review, for administrative and rebate processing services through June 30, 2014 associated with implementation of the Washing Machine Rebate Program from January 1 through December 31, 2013, and
- 2) Offer participation in the program to BAWSCA member agencies through December 31, 2013.

6. Brief Reports (Jensen)

- A. Proposal to Drain Hetch Hetchy – Status Report (Attachment)
- B. Mid-Year Budget Review

Pg 27

7. Comments by Committee Members (Klein)

8. Adjournment to the next meeting on December 12, 2012 at 1:30pm in the 1st floor conference room of the BAWSCA office building, at 155 Bovet Road, San Mateo. (Klein)

Upon request, the Board Policy Committee of the Bay Area Water Supply and Conservation Agency (BAWSCA) 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

All public records that relate to an open session item of a meeting of the Board Policy Committee that are distributed to a majority of the Committee 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 BAWSCA

From 101: Take Hwy.92 Westbound towards Half Moon Bay. Exit at El Camino Northbound (move into the far left Lane) Left at the 1st stop light which is Bovet Road (Washington Mutual Building will be at the corner of Bovet and El Camino). Proceed West on Bovet Road past Albertson's to two tall buildings to your left. Turn left into the driveway between the two buildings and left again at the end of the driveway to the "Visitor" parking spaces in front of the parking structure.

From 92: Exit at El Camino Northbound and follow the same directions shown above



BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE

Committee Roster:

Larry Klein, City of Palo Alto (Chair)

Rob Guzzetta, California Water Service Company (Vice-Chair)

Ruben Abrica, City of East Palo Alto

Robert Anderson, Purissima Hills Water District

Randy Breault, City of Brisbane/GVMID

Jamie McLeod, City of Santa Clara

Irene O'Connell, City of San Bruno (BAWSCA Vice Chair)

Tom Piccolotti, North Coast County Water District

Barbara Pierce, Redwood City (BAWSCA Chair)

John Weed, Alameda County Water District

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BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE

August 8, 2012 – 1:30 p.m.

BAWSCA Offices, 155 Bovet Road, San Mateo, 1st Floor Conference Room

MINUTES

1. Call to Order: 1:30 p.m.

Committee Chair Larry Klein called the meeting to order at 1:30 pm. A list of Committee members present (9) and absent (1), and of other attendees is attached.

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

2. Comments by Chair: There were no comments by the Chair.

3. Public Comments: There were no public comments.

4. Consent Calendar: Director Anderson made a motion, seconded by Director Pierce, that the minutes from the meeting of June 13, 2012, be approved. The motion carried unanimously.

5. Action Items:

A. Potential Bond Issuance to Prepay Capital Debt Owed to SFPUC: Mr. Jensen presented the results of the feasibility study performed to determine whether issuing bonds would save member agencies money, and to identify what Board actions were needed to proceed.

The feasibility report, included in the agenda packet, was prepared by BAWSCA and its team of consultants. The primary author was David Brodsky of KNN Public Finance. The report concludes that it is feasible for BAWSCA to issue bonds and save member agencies money. The financing team recommends that BAWSCA continue to pursue the bond issuance and aim for a bond closing in January 2013.

Mr. Jensen reported that at current rates, a bond issuance could save no less than \$20 million in present value, assuming participation by all agencies. This level of savings equates to 6% of the \$367 million of outstanding debt owed to San Francisco.

Mr. Jensen stated the \$20 million savings over 21 years translates to approximately \$38,000 for Brisbane and Guadalupe Valley Improvement District, and for Cal Water it translates to \$4.5 million, based on their current percentage of water purchases from San Francisco.

An initial savings estimate of \$35 million was provided in the Fall prior to completion of the feasibility study. That earlier estimate represented what might be an average estimate of savings and was based on preliminary information. The value of \$20 million represents an estimate of the lower end of potential savings, and is based on more refined information. The range will be discussed with the Board in September along with information about the inherent sources of uncertainty.

Mr. Jensen went over the actions taken since January, when the consideration of a potential bond issuance was first presented to the Committee. He reported that AB 2167 was introduced in the State Legislature to establish a legal structure for issuing bonds, and explained that the bill explicitly expands BAWSCA's authority to issue bonds for the purpose of prepaying members' obligation to San Francisco. AB 2167 passed the Assembly and is awaiting Senate approval.

Key questions and considerations addressed in the feasibility study include the establishment of a revenue collection mechanism, tax-exempt interest rates, impact on BAWSCA members, and accommodating partial participation.

Mr. Jensen stated that establishing a revenue collection mechanism is important to ensure that the credit structure is acceptable to the bond market. Another objective is to create a fair mechanism for allocating costs. Currently, the capital costs that would be prepaid are a component of the annual Wholesale Revenue Requirement (WRR). The SFPUC currently allocates the WRR in proportion to each wholesale customer's water purchases. This form of cost allocation is based on how San Francisco currently sets rates. BAWSCA will use this current cost allocation as a basis of comparison for how repayment of BAWSCA's bonds might be allocated among the agencies.

Consideration of a revenue collection mechanism for BAWSCA is also being examined by BAWSCA's bond underwriters. AB 2167 would allow BAWSCA to have SFPUC add a surcharge to the wholesale water bill of each agency, collect the payments and forward them to BAWSCA or a trustee. Whether to establish the surcharge at volumetric pricing or fixed charge is currently being explored.

Mr. Jensen reported that the feasibility study looked at maximizing the amount of bonds that can be issued on a tax-exempt basis in order to lower the interest expense and maximize savings. For the portion of the prepayment that would correspond to CalWater's share, taxable bonds must be issued. The study concludes that with full participation, approximately 20% of the bonds must be taxable.

Bond counsel determined that federal law requires San Francisco to use tax-exempt bond proceeds for capital facilities owned and used by San Francisco. San Francisco would have greater latitude in the use of taxable bond proceeds. The financial team is continuing to examine how taxable and tax-exempt bonds might be issued and what agreements would be needed with San Francisco for the use of funds.

In reviewing potential impacts of the bond issuance to BAWSCA member agencies, Bond Counsel determined that the surcharges can and should be characterized as operating expenses as part of the cost of water, just as the current expenses are characterized today.

To implement the bond issuance, no amendments are needed for the 2009 Water Supply Agreement. Agencies would be requested to adopt a resolution electing to participate in the prepayment, and directing staff to assist in completing the financing. The resolution would serve as an advantage to the adopting governing bodies by providing transparency and to the bond buyers and investors as it can increase confidence, and therefore, lower interest rates.

To ensure that BAWSCA coordinates with the most appropriate individuals in each agency, a letter will be sent to agency managers asking them to appoint an appropriate staff member to receive future correspondence and represent the needs of their agency.

Mr. Jensen reported that there are no economic or risk management reasons for a member agency not to participate. However, partial participation will be accommodated in the event that an agency, for whatever reason, is unwilling to participate or unable to act on the resolution by the end of the calendar year. Non-participation by an agency should not prevent other agencies from realizing the savings generated by the bond issuance. Bonds can be issued for a partial prepayment so that non-participating agencies would continue to pay their current obligation at the current interest rate of 5.13%.

In response to Chair Klein, Mr. Jensen reported that there are no current indications from any member agencies that they don't want to participate in the bond issuance.

Director Weed reported that ACWD engaged in an independent Bond Counsel to review the bond issuance from his district's perspective.

Director Abrica suggested that BAWSCA consider passing a resolution of encouragement for agencies to adopt the resolution to participate in the bond issuance. Art suggested the Board resolution say the Board recommends agencies consider the matter seriously and schedule the bond participation resolution for consideration and action prior to the deadline. The Committee agreed. Chair Klein noted that some city councils only meet once in December, and that there may be a lack of time between November and December to process the adoption of the resolution.

The draft resolution for participation will be circulated to agencies immediately following the September Board meeting. The Committee asked that a draft of that resolution be provided to the Board in September. The Committee suggested that the transmittal of that resolution should note that the bond issuance would proceed based upon further findings and after an action by the Board in November.

Mr. Jensen noted that further refinements to the bond structure are anticipated and will be presented to the Board in September and November. Additional activities by the financial team through September include negotiations with San Francisco on a collection mechanism and other matters, preparation of initial bond legal and disclosure documents, and meeting with rating agencies on preliminary ratings.

The October Board Policy Committee will be a critical meeting. The Committee will be presented with final recommendations for Board action, including approval of bond documents, and delegation of authority to execute the documents. The Committee will receive drafts of all materials that will be considered by the Board for adoption in November.

Mr. Jensen presented the three Board action items required to move forward. They include authorizing the CEO/General Manager to amend the contract with Orrick to implement Phase III of the Bond Counsel services, authorize the CEO/General Manager to seek preliminary credit ratings from rating agencies, Moody's and S&P, and authorize the transfer of funds from the General Reserve for payments to rating agencies, if bonds are not issued. The payments to rating agencies would be made from the bond proceeds if they are successfully issued.

Mr. Jensen reported the status and potential impact of the bond issuance on the General Reserve balance. The funding of activities for the bond issuance is consistent with the Board adoption of the Budget and work plan for FY 2012-13. All of Orrick's future costs can be paid using bond proceeds, contingent upon the sale of bonds.

Receiving preliminary ratings from the rating agencies will cost \$120,000 whether or not bonds are issued. The adopted budget for this fiscal year noted that payment of costs not covered by the bond proceeds could be funded by the General Reserve. If the bonds are not issued, the payment of \$120,000 for the rating agencies would need to be taken out of the General Reserve. The current estimated General Reserve balance is \$1,262,000. There is more than enough available in the General Reserve to pay for the preliminary rating expense if bonds are not issued. The General Reserve balance would remain above the Board's guidelines, and subject to further action as discussed with the Board in May.

In May, the alternatives considered by the Board for managing the General Reserve included refunding a portion of the balance to agencies, and to reduce assessments going into FY2013-14. At that time, Mr. Jensen predicted the need to lower assessments going into FY 2013-14 regardless of whether a portion of the General Reserve balance were spent or refunded. Mr. Jensen stated that his recommendations remain the same.

With no further discussion, Director Anderson made a motion, seconded by Director Pierce, to recommend the Board to:

- a. Authorize the CEO/General Manager to amend the contract with Orrick, Harrington & Sutcliffe LLP, subject to legal counsel's review, to begin Phase 3 of the Bond Counsel services, to appoint Orrick as Disclosure Counsel and to increase the not-to-exceed amount by \$220,000. Payment would be made from bond proceeds.**
- b. Engage Moody's and S&P to secure credit ratings for the BAWSCA bonds at a cost of \$200,000. Payment would be paid from bond proceeds upon a successful bond issuance, although a payment of \$120,000 for preliminary ratings would be necessary even if bonds are not issued.**
- c. Authorize the CEO/General Manager to transfer \$120,000 from the General Reserve for payments to rating agencies, if bonds are not issued.**
- d. Adopt a resolution encouraging member agencies to seriously consider saving money by participating in BAWSCA's issuance of bonds to prepay the debt owed to San Francisco and for them to schedule the bond participation resolution for consideration and action prior to the deadline.**

The motion carried unanimously.

- B. Long-Term Reliable Water Supply Strategy (Strategy) Phase II A Report and Recommendations:** Water Resources Planner, Ms. Anona Dutton, presented the findings and recommendations of the Strategy's Phase II A Report. She stated that the Strategy was designed to determine the water supply needs of the region, and to develop and implement solutions to meet the identified needs. The phases of the Strategy are on schedule and within budget, and are being managed to use resources efficiently and to achieve the desired results. The date for completing development of the Strategy is December 2014.

Key findings of Phase II A show that limited additional supply is needed in normal years until 2035. The impacts of drought, however, continue to have significant economic and other impacts to the region. Therefore, future efforts of the Strategy will focus on meeting supply needs during drought.

Seventeen projects were evaluated that could potentially be developed to meet the identified need. Project evaluation criteria were developed according to the BAWSCA Board's objectives. In addition to the technical findings, Phase IIA identified a series of specific work items that BAWSCA needs to complete by December 2014 to finalize the Strategy.

Ms. Dutton reported that BAWSCA worked closely with member agencies and referenced the 2010 Urban Water Management Plans (UWMP) to project future water demands for the service area out to 2035. The projected total demand in 2035 is 315

mgd. This projection reflects population and employment growth, as well as anticipated impacts of passive conservation.

Ms. Dutton reported that the current projected 2035 demand is less than the previously reported estimate of 343 mgd in both the 2005 UWMP's and the Phase I Report. She stated that the decrease is a function of the current decline in water use, among other things. She emphasized the uncertainty of how and when the precipitous decline in recent water use will recover, and noted that demand hardening will be a future issue.

The Phase II A report also documents BAWSCA agencies' ongoing conservation efforts that projects water savings of up to 48 mgd through 2035 with both passive and active conservation. Ms. Dutton noted that conservation remains a priority for BAWSCA agencies for several reasons, including eligibility for State grants, achieving local and State mandates, and realizing a cost effective means of developing new supply compared to SFPUC water or other sources. Greater efficiency, however, raises the issue of demand hardening, or the ability to accommodate drought water shortages.

Ms. Dutton presented a chart of the member agencies' anticipated water supply use portfolio in 2015 and 2035. It shows the member agencies' projected increase use of supplies beyond the supplies purchased from the SFPUC. Ms. Dutton explained that although member agencies have reduced demands, they continue to invest in additional supply through active conservation, groundwater and recycled water. Despite the agencies' investments in additional supply, there remains an unmet need in the future.

Ms. Dutton explained that there are seven agencies with an unmet need during normal years in 2035. The need ranges between 4 and 13 mgd. The 9 mgd range accounts for the uncertainty in future SFPUC supply provided to San Jose and Santa Clara. Ms. Dutton stated that the SFPUC will need to decide soon whether they will continue to serve San Jose and Santa Clara beyond 2018.

The impact of drought to the SFPUC supplies is significant. The unmet water supply need from the SFPUC during drought ranges between 58 and 62 mgd. Ms. Dutton reported that in running the SFPUC's hydrological model, which spans an 82 year period (1920-2002), against the projected demands, it shows that on average, SFPUC supply experiences a drought once every 10 years. This results in an 18 to 29% cutback in the SFPUC service area. If the hydrology of the last decade is also considered, between 2002 and 2011, the frequency of drought appears to increase to once every 8 years.

Ms. Dutton stated that based on best estimates, drought cutbacks of 18 to 29% can potentially occur once every 8 to 10 years. For some BAWSCA agencies that depend on the SFPUC supplies, the cutback translates to a cutback to their SFPUC supplies of up to 40%. With demand hardening as an impending issue, meeting the cutbacks will be difficult even for agencies with alternative sources. Additionally, current studies show that there is an estimated economic impact to the BAWSCA region of greater than \$1 billion for each drought year.

Ms. Dutton reported that BAWSCA met with each of the seven agencies that has a supply need during normal years, and each agency is investigating alternatives to meet their need, independent of the Strategy. The drought year need is a regional issue, and therefore, future efforts of the Strategy will focus on this issue to achieve regional benefit.

In identifying the solution to the problem, Ms. Dutton reported that the 65 projects identified in Phase I were refined to seventeen projects during Phase II A. Based on Board input in May and July of 2010, criteria were developed to evaluate and rank the water supply projects for consideration. Ultimately, the goal is to increase supply reliability, provide high quality water, minimize cost of new water supplies, reduce potable water demand, minimize environmental impacts of new water supplies, and increase implementation potential of new water supplies.

For the purposes of Phase II A, BAWSCA focused on a subset of these criteria for which most information was available. Desalination, non-potable capture and reuse, recycled water, and water transfers were the four types of projects Phase II A closely evaluated for further consideration.

There are nine potential desalination projects that range from coastal desalination, brackish ground water, Bay water, and participation in the Bay Area Regional Desalination Project. Ms. Dutton noted that the yield of these projects has a potential range of 1 – 20 mgd per year, but the actual yield will depend upon the location and source of water. In addition to the yield, issues that remain outstanding and will require further evaluation for desalination include the cost, public acceptance and permitting, and brine disposal.

Local capture and reuse projects include rainwater harvesting, greywater reuse, and stormwater capture. Preliminary analysis of the benefits of these projects were focused on residential implementation to offset irrigation. Further evaluation of the project potential would need to be done to address issues associated with yield. Supplies generated will depend on the residents' successful implementation, and, with the exception of greywater harvesting, supplies will depend on precipitation. Local implementation of these projects are happening in the service area, and BAWSCA is working closely with agencies to track success of existing projects to examine the viability of a wide scale implementation.

Three agency-led recycled water projects were retained in Phase II A. They are expansions of existing projects that include, Daly City's recycled water project to serve cemeteries in the Peninsula, Palo Alto's recycled water project to serve Stanford Research Park, and Redwood City's Recycled Water Project, which is currently assessing what area the project can serve if it were expanded. Each project expansion has an estimated yield of approximately 1 mgd per year. The projects are still in development and further evaluation is needed to address issues associated with actual yield, public acceptance and water quality. Agencies are taking the lead in developing additional pro-

ject information that will be included in the next phase of the Strategy. BAWSCA is working closely with these three agencies.

In examining the potential of water transfers, BAWSCA looked at Sacramento Valley and the Delta/San Joaquin Valley as two primary source areas. Ms. Dutton noted that there are limited ways to convey water into the service area, and that water transfers into the BAWSCA service area would require the use of other water agency facilities and existing interties. BAWSCA looked at the Santa Clara Valley Water District (SCVWD) and East Bay Municipal Utility District (EBMUD) as potential conduits to bringing the transfer water into the service area. A range of yield potential is between 1 – and more than 5 mgd, depending on what different sellers are able to provide, as well as the capacity to wheel the water into the system. BAWSCA took the lead in developing information for this potential project, but additional work needs to be done to determine the abilities, cost of using other agency facilities, and project management.

In summary, Phase II A analyzed a diverse suite of projects and developed a list of 17 projects for further evaluation. The projects provide the benefit of additional supply to the region that is independent of SFPUC, and that provide drought protection. However, critical project information still needs to be confirmed, and additional work needs to be developed to complete the project ranking and analysis.

Ms. Dutton reported that specific tasks need to be completed to finalize the Strategy by December 2014. Staff recommendation for committee action for the completion of the Strategy include 1) completion of the reprogrammed Phase II A work, 2) development of a plan for a pilot water transfer, and 3) updating the water demand and conservation projections for the region, using a common methodology.

Ms. Dutton explained that the reprogrammed Phase II A work include efforts that were critical to the Strategy, but were deferred because they were not critical to the completion of Phase II A. During the course of Phase II A, BAWSCA needed to recalibrate its efforts in response to some changed conditions resulting from the decrease in current and projected water demands, and availability of information that could be incorporated in the analysis. The budgets associated with the deferred tasks were retained.

The development of a plan for a pilot water transfer is being recommended for a number of beneficial reasons. Ms. Dutton reported that both EBMUD and SCVWD have expressed interest in partnering with BAWSCA on a water transfer effort. Specifically, EBMUD has approached BAWSCA about doing a pilot water transfer as early as Fall 2013. Water transfers are an option to address dry-year needs and a pilot program would identify cost, institutional, legal, and environmental issues associated with such an effort. It would provide key information on the feasibility of a long-term water transfer agreement at an aggressive schedule so that if conditions are right, BAWSCA can pull the trigger to implement such a pilot transfer.

By developing a pilot water transfer project with EBMUD, BAWSCA can position itself to secure available conveyance capacity, and be able to decide whether water transfer is something BAWSCA would want to execute in the long-term. Additionally, there are limited means of bringing water into the Bay Area, and EBMUD is a system that can. Because EBMUD is looking for a partner now, it would be in BAWSCA and its member agencies' best interest to take this timely opportunity that presents itself. By showing success in working with EBMUD, the more likely BAWSCA would be in a position to work with EBMUD to purchase the capacity, execute the program should the conditions presents itself, and enter into a long-term agreement.

Director Klein asked how much excess conveyance capacity EBMUD has between now and 2035. Ms. Dutton reported that EBMUD is currently doing a conveyance capacity study that will be finished in 2013. The intertie between EBMUD and the San Francisco system has a capacity of 20 mgd, but availability of all or a portion of that capacity will depend on competition for its use. Ms. Dutton noted that the Bay Area Regional Desalination Project is also looking at that conduit. Additional information will be available in 6 months.

Mr. Jensen commented that the various water supply projects can affect member agencies differently. The intertie between EBMUD and San Francisco, for example, can affect the City of Hayward. Mr. Jensen noted that any affected agencies will be included in the assessment of projects being considered.

Ms. Dutton reported that BAWSCA has been meeting with individual agencies to discuss the findings of Phase II A. It has met with eighteen agencies to date, and all have expressed their unanimous support for the recommendations. The results of the meetings with the remaining eight agencies will be reported at the September Board meeting.

Mr. Jensen presented the details and funding for the two recommended Board actions.

He noted that Recommendation #1, completing reprogrammed under Phase II A, is a reconfirmation of what the Board has already authorized. Over a year ago, Phase II A was re-programmed due to changing conditions in water demand and demand projections. The work requires no additional funding for the technical consultant and no extension of time. Although authority has already been granted to complete the Strategy, it seemed appropriate to ask for Board approval because the Strategy is a multi-year project and involves BAWSCA's largest single consulting contract.

Recommendation #2, developing a plan for a pilot water transfer with EBMUD, could be funded by the General Reserve. Mr. Jensen emphasized that the result would be a comprehensive plan that would enable a water transfer to be implemented if the need arose and the agencies acted to proceed. The work to develop the plan is evenly split between legal work by Hanson Bridgett and technical support from CDM-Smith. EB-

MUD is a ready and willing participant, and the opportunity could potentially go away if not explored at this time.

Director Breault asked for an overview of the scopes of work for Hanson Bridgett and Bud Wendell for the re-programmed work. Mr. Jensen explained that Strategic Counsel would have a minor role in this effort, and that their participation would ensure that BAWSCA clearly states the key issues the Board would need to address. Hanson Bridgett's scope of work involves additional time and management of the contracts.

In response to Director Weed's question, Mr. Jensen explained that the Phase II A did not look at inter-agency transfers of Individual Supply Guarantees for two reasons: 1) BAWSCA cannot assume that inter-agency transfers will be implemented as part of a long-term plan, and 2) it is not within BAWSCA's authority to require such transfer take place. If inter-agency transfers of Individual Supply Guarantees were to be implemented, it could change the amount of additional water agencies might need in the future.

Director Guzzetta noted that SCVWD seems to be interested in being able to participate in the discussions of water transfers. SCVWD has a huge groundwater reservoir that can be used to bank wet-year water, and perhaps this is where both customers of San Francisco and SCVWD can participate. Director Guzzetta asked if BAWSCA should be looking at the potentials of moving water for further discussion, as this could be a possible solution at a low cost.

Mr. Jensen stated that the report presents information on projects that member agencies have asked BAWSCA to assess. None of BAWSCA's member agencies in Santa Clara County have asked BAWSCA to examine transfers through their systems. BAWSCA has met with the SCVWD and will continue to cooperate on projects of mutual interest.

Director Abrica suggested that perhaps a sub-group outside of the BAWSCA structure can look at possibilities of inter-agency water transfers, particularly for the normal-year need of seven agencies. Mr. Jensen stated that if there is value to the member agencies and BAWSCA's involvement is desired, BAWSCA's potential role in interagency transfers of Individual Supply Guarantees could be examined.

Director Weed stated that ACWD has invested over \$100 million in dry-year water supply and does not have any requirement for additional normal or dry year supplies from San Francisco. He questions whether the supply need is really a regional issue, and suggested BAWSCA look at what agencies require during dry years.

Director Klein asked to hear more about the role, including the financial role, of Santa Clara and San Jose on the proposed 2 mgd water transfer between SFPUC and MID, and their future plans about their interruptible water supply from San Francisco. He wanted the Board to have a better understanding of the 2 agencies' equity on the proposed water transfer compared the rest of the member agencies.

Mr. Jensen will provide further clarification to the Board. For the committee's understanding, Mr. Jensen explained that Santa Clara and San Jose both want to continue to be served by San Francisco, however there is no current plan in place on how that would happen after 2018. He noted that the range of amounts in the normal and dry year presented in the staff report pertain to whether or not Santa Clara and San Jose will be served by San Francisco. There are no projects being proposed by BAWSCA that would serve the needs of those two agencies.

Director Weed noted that brackish water desalination is ACWD's least expensive water source, and makes recycled water a poor consideration for ACWD. Mr. Jensen agreed that brackish water desalination can be more cost-effective than some other alternatives, and that is the reason why brackish ground water was retained as one of the potential projects. He noted that brackish water desalination projects can provide water directly to a local agency's distribution system, without passing through San Francisco's pipes and without paying San Francisco for transporting that amount of water.

Director Pierce expressed her support for Director Abrica's comments about inter-agency transfers, and suggested BAWSCA consider being a source of information about water and contractual limitations. She said that in discussions of regional housing, for example, BAWSCA's knowledge could provide information to cities and planning departments that they would otherwise not have. She added this suggestion was not to add to the existing fiscal year work plan, but simply to recognize the opportunity when the need comes along.

Director Weed asked to look into the water quality for the transfer water, and noted that there may be a cost to the receiving agency based on the difference in water quality. Ms. Dutton stated that those elements are included in the development of the pilot water transfer plan with EBMUD.

Director Breault asked if the pilot water transfer plan will identify the environmental impact reviews that will need to be done, and whether there is an accounting benefit to transfer funds from the General Reserve versus reallocating funds that have been previously approved for the Strategy. Mr. Jensen stated that the need for CEQA reviews will be identified. Mr. Jensen stated the remaining balance of the Water Management Charge is needed to complete the Strategy, and would be insufficient to fund the development of a pilot transfer plan.

Director Weed suggested looking into the role the Dumbarton Quarry might have in being a reservoir site located between the San Francisco and EBMUD systems.

Director Anderson made a motion, seconded by Director Breault, that the committee recommend Board approval to:

- 1. Complete the Reprogrammed Phase II A Work by December 2014**

- a. **Authorize the CEO to issue Notice to Proceeds to CDM Smith and Bud Wendell to complete the reprogrammed work within the original contract not-to-exceed amounts; and**
 - b. **Authorize the CEO to amend the existing contract with Hanson Bridgett to complete the reprogrammed work and to increase the contract by \$65,000 for a revised not-to-exceed amount of \$141,000. Funds are available from the unspent balance of the WMC.**
2. **Develop a Plan for a Pilot Water Transfer with EBMUD by June 2013**
- a. **Authorize the CEO to negotiate and execute a contract with CDM Smith for \$72,000 to provide technical support for the development of the Plan;**
 - b. **Authorize the CEO to negotiate and execute a contract with Hanson Bridgett for \$58,000 to provide legal support for the development of the Plan; and**
 - c. **Authorize a transfer of \$130,000 from the BAWSCA General Reserve.**

The motion carried unanimously.

Brief Reports:

- A. SFPUC 2mgd Water Transfer with MID: Mr. Jensen reported that the proposed water transfer between MID and the SFPUC remains under consideration as MID attempts to resolve concerns in the City of Modesto.

BAWSCA's statement about the proposed transfer is being refined to consider the comments received at the July Board meeting from members of the public and members of the Board. Additional information is expected from San Francisco in response to several questions: how a 2 mgd transfer can reduce drought shortages by as much as 10 percent, how to reconcile the disparate costs in dollars per acre-foot, and whether the water would be available in a dry year.

Mr. Jensen reported that given the relatively higher costs of drought protection alternatives, the avoided cost of economic impacts of drought shortage, and the immediate need for drought protection, BAWSCA supports San Francisco's pursuit for the water transfer unless an alternative is presented that has less environmental impact, has comparable costs, and can be implemented in the same timeframe.

Director Guzzetta commented that the magnitude of 2 mgd could be illustrated to show that it is a very small percentage of the river flow. This could clarify the size of the proposed transfer to those who might envision a significant amount of water is being taken away.

Director Weed stated that an extraordinary precedence that would be established by the water transfer is the change in perception of water as a right versus water as a commodity.

Mr. Jensen will provide the refined BAWSCA statement to members of the Board and Water Supply Management representatives as reference for the agencies' governing bodies.

- B. Proposal to Drain Hetch Hetchy – Status Report:** Mr. Jensen reported that he declined an invitation to be in a panel to discuss the initiative to drain Hetch Hetchy. He stated that he declined because BAWSCA 's interest is not in the current initiative but in pursuing the ability for people outside of San Francisco, or their representatives, to vote before any plan to replace the Hetch Hetchy reservoir could be implemented.

Mr. Jensen also reported that the initiative going before San Francisco voters would create a five-member task force to oversee development of the plans required by the initiative. The initiative states that one member of the task force would be the General Manager and CEO of BAWSCA. Mr. Jensen said he would not sit on the task force because: 1) the customers outside San Francisco pay two-thirds of the costs and deserve two-thirds of any vote, not one-fifth as a participant of the task force; and 2) he could be of more value representing the interests of the member agencies as BAWSCA's CEO than as a member of the task force.

- C. SFPUC General Manager Replacement - Update:** Mr. Jensen reported that the Mayor is currently meeting with candidates.
- D. Annual Review of Investment Policy:** Mr. Jensen reported that the annual review of the investment policy was delayed so that a revised policy could include any changes needed to accommodate the possible issuance of bonds. The investment policy , and any recommended changes, will be brought back to the committee in October, for Board consideration in November.

- 6. Comments by Committee Members:** Director Pierce noted that she will discuss with Mr. Jensen preparations for CEO's annual evaluation by the Board.
- 7. Adjournment:** The meeting was adjourned at 3:15pm. The next meeting is October 10, 2012.

Respectfully submitted,

Arthur R. Jensen, Chief Executive Officer and Secretary

ARJ/le

Attachments: 1) Attendance Roster

BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE – August 8, 2012

Roster of Attendees:

Committee Members Present

Larry Klein, City of Palo Alto (Chair)

Rob Guzzetta, California Water Service Company (Vice-Chair)

Ruben Abrica, City of East Palo Alto

Robert Anderson, Purissima Hills Water District

Randy Breault, City of Brisbane/GVMID

Barbara Pierce, Redwood City (BAWSCA Chair), by teleconference

John Weed, Alameda County Water District

Committee Members Absent

Jamie McLeod, City of Santa Clara

Irene O’Connell, City of San Bruno (BAWSCA Vice-Chair)

Tom Piccolotti, North Coast County Water District

BAWSCA Staff:

Anona Dutton

Water Resources Planner

Christina Tang

Sr. Administrative Analyst

Lourdes Enriquez

Assistant to the Chief Executive Officer

Steve Miller

Legal Counsel, Hanson Bridgett, LLP

David Brodsky

KNN Public Finance (by teleconference)

Public Attendees:

Alex Ameri

City of Hayward

Michelle Sargent

San Francisco Public Utilities Commission

Craig Von Bargen

Camp Dresser McKee

BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE MEETING

Agenda Title: Potential Bond Issuance to Prepay Capital Debt Owed to SFPUC

Summary:

The objective of a potential bond issuance to prepay a capital debt the agencies owe San Francisco is to save BAWSCA's member agencies money. In August 2012, the BAWSCA's Financing Team (experienced financial managers and staff from KNN, Orrick, Hanson Bridgett and BAWSCA) concluded that it is feasible to issue bonds and save BAWSCA's member agencies money.

The Financing Team is drafting the necessary documents and obtaining a preliminary credit assessment from Standard & Poor's. In November, the documents will be in substantially final form and will be submitted to the Board for approval.

This item asks the Committee to recommend Board approval of four actions in November.

Fiscal Impact:

Payment to KNN for financial advisory services during the financing would be a fixed fee of \$155,000. The cost will be contingent upon the sale of bonds and paid from the bond proceeds. If the Board authorizes the CEO to contract with a bank selected through a Request for Proposal (RFP) process to serve as bond Trustee, an upfront cost will not exceed \$5,000. Both the financial advisory cost and the trustee's initial cost will be contingent upon the successful sale of bonds.

The estimated cost of issuance is less than \$2 million, all payable from bond proceeds. Non-contingent costs of issuance were estimated to be less than \$400,000. Funds to cover the non-contingent costs have already been approved by the Board.

Recommendation:

That the Committee recommend the Board to:

- 1. Authorize the CEO/General Manager to amend the contract with KNN for their financial advisory services until the completion of the financing.**
- 2. Authorize the CEO/General Manager to appoint a bank to be selected through a RFP process as the Trustee for the bonds.**
- 3. Adopt a Resolution approving in substantially final form the various financing documents, including the Revenue Bond Indenture, First Supplemental Indenture, the Continuing Disclosure Certificate, the Preliminary Official Statement, a Prepayment and Collection Agreement with the SFPUC and the Bond Purchase Agreement.**
- 4. Authorize the CEO/General Manager to execute these financing documents at the appropriate time conditioned upon satisfaction of specified criteria.**

Discussion:

Background. Since Fall 2011, BAWSCA and its advisors have been exploring the possibility of a potential bond issuance to prepay capital debt the agencies owe San Francisco in order to save BAWSCA's member agencies money.

BAWSCA's Financing Team consists of experienced financial managers and staff from KNN, Orrick, Hanson Bridgett, Goldman Sachs, De La Rosa & Co. and BAWSCA. Based on the information available to date, the Financing Team believes that issuing such bonds is feasible. At current rates, the bond transaction could generate in excess of \$20 million in present value savings, or approximately 6% of the outstanding capital recovery amount of \$367 million, as of December 30, 2012, assuming full participation.

Actions needed to proceed with bond issuance. If after receiving comments and advice from the Board Policy Committee, the CEO decides to recommend moving forward with issuance of bonds, the Board will be asked to consider the following four actions in November:

1. Authorize the CEO/General Manager to amend the contract with KNN Public Finance for financial advisory services to be provided until the completion of the financing. Similar to Orrick and the Underwriters, payment for KNN's work on this phase of the financing will be contingent on issuing bonds and will be paid using bond proceeds. The fee for KNN's services will be \$155,000, which will include services provided since August 1.
2. Authorize the CEO/General Manager to appoint a bank to serve as the Trustee for the bonds. The Trustee will be selected through a RFP process. The Trustee will receive payments from San Francisco, pay debt service and deposit money in a reserve fund. Initial fees will be paid out of bond proceeds, with subsequent fees included in the BAWSCA surcharge to be collected by the SFPUC for debt service.
3. Adopt a Resolution approving in substantially final form the various financing documents, including the Revenue Bond Indenture, First Supplemental Indenture, the Continuing Disclosure Certificate, the Preliminary Official Statement, a Prepayment and Collection Agreement with the SFPUC and the Bond Purchase Agreement. The draft forms of the first three documents are attached to this memorandum. These documents were prepared by BAWSCA's bond counsel, Orrick. The additional three documents will be included in the November Board packet. All financing documents going to the Board in November will have been reviewed by BAWSCA's legal counsel. Each of these financing documents is described briefly below.
 - Revenue Bond Indenture: Provides for the issuance of and security for bonds to finance the Capital Cost Recovery Prepayment Program and any future refunding bonds.
 - First Supplemental Revenue Bond Indenture: Sets forth the specific terms of the initial series of bonds issued under the Revenue Bond Indenture.
 - Continuing Disclosure Certificate: Sets forth procedures for post-issuance disclosure as required by securities laws.

- Preliminary Official Statement: Disclosure document used to market the bonds in compliance with securities law.
 - Prepayment and Collection Agreement with the SFPUC: Will provide for San Francisco's collection of the surcharge as part of its water billing and set forth other obligations of San Francisco in connection with the expenditure of bond proceeds and the administration of the surcharge. This agreement is the subject of negotiations with the SFPUC.
 - Bond Purchase Agreement: Provides for the sale of the bonds to the underwriters.
4. Authorize the CEO/General Manager to execute these financing documents at the appropriate time conditioned upon satisfaction of specified criteria. The sale of bonds is expected to occur after January 1, 2013, when AB 2167 has become effective and conditioned upon satisfaction of specified criteria.

By authorizing the CEO/General Manager to execute these financing documents, the Board would be authorizing the sale of bonds. The action to be brought before the Board in November will include specified criteria that must be met for this authorization to be effective. These criteria include the following:

- a. The bond interest rates and final financing structure will need to result in a net present value savings of not less than \$20 million over the term of the bonds.
- b. San Francisco must provide, in advance of receiving any funds, a written pledge to use bond proceeds in a manner consistent with federal laws and regulations.

Preliminary Plan of Finance

The Financing Team is currently preparing the various legal and disclosure documents described above, and has begun conversations with one of the rating agencies to obtain a preliminary assessment of a draft financing structure, including the amount of reserves to be funded.

A key consideration is how to best balance the advantages of preserving a volumetric allocation of debt service with the need of investors to be protected from any revenue risk inherent to volumetric pricing and the variability of water purchases.

Currently BAWSCA members assume the risk of under-payment of the Wholesale Revenue Requirement, either from lower than expected water purchases or the (very) remote risk of an agency defaulting on payments to San Francisco. Under provisions of the 2009 Water Supply Agreement, San Francisco would recover any unpaid amounts through wholesale water rates set for the following fiscal year. To minimize risk to investors, BAWSCA must establish sufficient reserves or employ other mechanisms to ensure it makes debt service payments.

The amount of reserves BAWSCA needs to create could be reduced if the bond surcharge were allocated to wholesale agencies as a fixed number based on prior year purchases, thereby eliminating the inherent revenue uncertainty associated with volumetric rates. If necessary to ensure fairness, a subsequent reconciliation could be made based on actual

water purchases. Whether or not this modified approach to volumetric pricing is recommended will be based in part on the feedback we receive from the credit rating agencies over the next few weeks.

The following is what is currently anticipated for a bond structure, although the final structure will be a function of market conditions (which will affect the amount of bonds that need to be sold) and rating considerations (which will affect the size of the reserve fund):

		In Millions
Bond Proceeds	Total Par Amount	\$348.2
	Premium	\$34.8
	Total Proceeds	\$383.0
Prepayment Funds	Tax-Exempt Proceeds	\$284.0
	Taxable Proceeds	\$83.7
	Total Proceeds	\$367.8
Reserves	Stabilization Fund (From Bond Proceeds)	\$13.1
Savings	PV Savings for Members	\$20.0 - \$34.0
	Avg Annual Savings for Members	\$1.0 - 2.1

Note: Rates as of September 25, 2012. Assumes stabilization fund equal to 50% of maximum annual debt service and a 1.00% earnings rate on that fund.

Amendment of the BAWSCA's Investment Policy

Based on the financial advisor's and the legal counsel's review of the current Investment Policy, the amendment of the Investment Policy has been determined to be necessary and is presented as a separate agenda item.

Attachments: Under Separate Cover – Electronically at www.bawasca.org/agendas-documents/agendas/

1. Draft Revenue Bond Indenture
2. Draft First Supplemental Revenue Bond Indenture
3. Draft Continuing Disclosure Certificate

BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE MEETING

Agenda Title: **Amendments to BAWSCA Investment Policy**

Summary:

The potential bond issuance to prepay a capital debt the agencies owe San Francisco results in a need to amend BAWSCA's current investment policy. The revised policy would set parameters for investing bond-related moneys held by a Trustee or fiscal agent. BAWSCA's staff, legal counsel and financial advisors are developing proposed revisions to the Investment Policy. A revised Investment Policy will be presented to the Board in November for consideration and approval.

Fiscal Impact: **None**

Recommendation:

That the Committee recommend that the Board to adopt the proposed revised BAWSCA Investment Policy subject to satisfying specified objectives.

Discussion:

The issuance of bonds by BAWSCA would require changes to the current Investment Policy to ensure consistency with bond indentures and prudent financial policy.

Revisions to the current policy are being developed and cannot be finalized until the Revenue Bond Indenture is substantially complete. The objectives that the revised investment policy should satisfy are the same as the ones considered when the policy was first prepared. Those objectives remain relevant today and include the following in priority order:

1. Safety. Safety of principal is the foremost objective of the investment program. The Agency's funds shall be invested in a manner that seeks to ensure preservation of capital.
2. Liquidity. The Agency's investments will remain sufficiently liquid to enable the Agency to meet its cash flow requirements.
3. Return on Investment. The Agency's investments shall be designed with the objective of attaining a market rate of return consistent with the constraints imposed by its safety and liquidity objectives.

The types of permitted investments may be revised to be consistent with the Revenue Bond Indenture, but could include the following:

- a. Federal Securities;
- b. FDIC insured deposits;
- c. Bonds, debentures, notes or other evidence of indebtedness issued or guaranteed by federal agencies; and
- d. Money market mutual funds rated AAA by Standard & Poor's or Moody's.

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The investment policy requires the CEO/General Manager to provide the Board regular reports on fund balances and interest earnings.

The investment policy can be revised at any time by the Board of Directors and, by policy, is subjected to an annual review.

Staff and the advisors are working on the proposed revised Investment Policy. A proposed revised investment policy with the parameters above will be presented to the Board in November for considerations and approval.

BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

BOARD POLICY COMMITTEE MEETING

Agenda Title: **Authorization to Negotiate and Execute a Contract Amendment with PG&E for the Washing Machine Rebate Program**

Summary:

Since January 2008, PG&E has administered a joint Water Utility and Energy Utility Residential Washing Machine Rebate Program (WMRP) in partnership with BAWSCA and the other major water utilities in the Bay Area. The current WMRP will end December 31, 2012. BAWSCA's current administrative contract with PG&E expires June 30, 2013 as it anticipates a 6 month close out period for the current program. However, in order to continue the WMRP through all of calendar year 2013, a new contract with PG&E needs to be executed.

Participating BAWSCA member agencies have expressed an interest to continue the joint WMRP with PG&E. A new contract between BAWSCA and PG&E would allow continuation of the current WMRP to at least June 30, 2013 at which time BAWSCA would have the opportunity to modify its participation in the WMRP through December 31, 2013 consistent with the desires of the participating member agencies.

Fiscal Impact:

None. As a subscription program, all costs are paid by participating BAWSCA agencies with all expenses, payments, and bank transactions associated with subscription programs accounted for separately from BAWSCA's operating budget.

Recommendation:

That the Committee recommend that the Board authorize the Chief Executive Officer to:

- 1) Negotiate and execute a contract amendment with PG&E, subject to legal counsel's final review, for administrative and rebate processing services through June 30, 2014 associated with implementation of the Washing Machine Rebate Program from January 1 through December 31, 2013, and**
- 2) Offer participation in the program to BAWSCA member agencies through December 31, 2013.**

Discussion:

Since 2001, BAWSCA has partnered with other major Bay Area water utilities to offer the Bay Area Water Utility Clothes Washer Rebate Program (WMRP). In January 2008, PG&E began administration of the WMRP on behalf of the Bay Area water utilities to offer a new combined Water Utility and Energy Utility rebate program to Bay Area residents.

The change to PG&E as the administrator of the program has increased visibility of the program, increasing rebate activity up to 30% in some areas. Customers have indicated a high rate of satisfaction with the current format of the WMRP because they are able to complete a single rebate application form and get rebates from both PG&E and the Bay Area water utilities.

PG&E is proposing no increases in costs or new costs for administering the program in calendar year 2013.

BAWSCA agency participation in BAWSCA's conservation programs, including the WMRP, typically operates on a fiscal year basis, as this is consistent with the budget cycles of most of the BAWSCA agencies. In contrast, PG&E operates on a calendar year basis, which is why the current WMRP ends December 31, 2012. BAWSCA's current contract with PG&E expires on June 30, 2013 which allows for a 6-month close-out period. In the event that PG&E or BAWSCA were to elect not to continue the WMRP beyond December 31, 2012, the six-month close-out period accommodates the three months that customers have to submit a rebate request, plus processing time for the rebates and resolution of all accounting.

A contract amendment with PG&E extending the existing contract through June 30, 2014 would allow for the current WMRP to continue through December 31, 2013 with a 6-month close-out period allowance.

Alternatives to the Recommended Action:

Two primary alternatives exist to the recommended action.

1. **Offer Program Using Different/New Rebate Administrator:** Prior to using PG&E as the rebate administrator for this program, the Bay Area water utilities contracted with Electric Gas Industry Associates (EGIA) to administer the program. Other entities also exist that would potentially be willing to administer a regional WMRP. The EGIA administrative fees for the WMRP were greater than PG&E's current administrative fees. Furthermore, customers have indicated a high rate of satisfaction with the current format of the WMRP because they are able to complete a single rebate application form and get rebates from both PG&E and the Bay Area water utilities. At this time no other Bay Area water utilities have indicated a desire to change WMRP administrators. In addition, customer satisfaction rates might decrease if BAWSCA did not continue to utilize PG&E as the program administrator because they would no longer be able to fill out a single rebate application. Lastly, if BAWSCA decided to go with a different WMRP administrator, a full request for proposal process would be required, which would delay the continuation of the WMRP until a new contract was in place.
2. **Not Offer Program:** The WMRP has been the most successful conservation program offered within the BAWSCA service area to date. Since 2001, the number of agencies, total budgets, and total number of rebates issued has increased each year. Continued implementation of the WMRP with expanded customer participation is one of the five key conservation measures included in BAWSCA's 2009 Water Conservation Implementation Plan. Full implementation of these five measures will be critical to achieving sufficient conservation savings to continue to provide reliable supplies to all BAWSCA member agencies through 2018.

Background:

The Bay Area Water Utility Clothes Washer Rebate Program began on October 1, 2001. In 2002, the regional program expanded with eight other Bay Area water agencies joining to offer a single Bay Area Water Utility Clothes Washer Rebate Program covering a region of 2.7 million residential customers. In addition to BAWSCA, other participants in this regional program include Contra Costa Water District, Zone 7 Water Agency, East Bay Municipal Utility District, Alameda County Water District, Santa Clara Valley Water District, Marin Municipal Utility District, Sonoma County Water Agency, and City of Davis. SFPUC joined in July 1, 2006.

San Jose Mercury News

Hetch Hetchy controversy: Could Yosemite's 'second valley' be restored?

By Paul Rogers

September 30, 2012

For nearly 100 years, environmentalists have dreamed about draining Hetch Hetchy Reservoir and turning the 300-foot-deep man-made lake in Yosemite National Park back into a glorious Sierra landscape -- a second Yosemite Valley with green meadows, rich forests and waterfalls cascading down granite walls.

San Francisco voters head to the polls in five weeks to consider Measure F, which would require the city to conduct an \$8 million study to determine whether it makes sense to empty the reservoir and replace the electricity it generates and the water it supplies to 2.5 million Bay Area residents. A vote on whether to drain Hetch Hetchy could come as soon as 2016.

From reservoir to another Yosemite valley
If Hetch Hetchy Reservoir is drained, biologists say the valley could return to its former glory in roughly a century. Here's how the restoration would look over the years:

"Bathtub ring"

Within 0-5 years	10-20 years	50 years	100-150 years
<ul style="list-style-type: none">Valley floor is covered with grasses and old tree stumpsSmall conifers and oaks would sprout or be plantedCrews would need to remove invasive plant speciesDeer, black bears, coyotes and other wildlife would begin wandering through the valleyRainbow trout and other fish would begin to return	<ul style="list-style-type: none">Conifer trees would grow up to 20 feet highBirds and rain would disperse seedsOld tree stumps would still be very visibleSizable alders and willows would grow along the riverSmall mammals, amphibians and reptiles would return	<ul style="list-style-type: none">Well-established oak trees and conifer forests up to 90 feet tall would existOld stumps would be largely decayed and hidden by dense forest coverBears, deer and other animals would live year-round in the valley as forests grew upPrescribed burns could be used to balance meadows and forests	<ul style="list-style-type: none">Hetch Hetchy would look like Yosemite Valley todayThe "bathtub ring" around the granite walls may have fadedThick conifer forests 125 feet tall would existSome large oak trees would be establishedAll native wildlife would have returned

Source: National Park Service, University of Wisconsin and staff reporting

PAI/BAY AREA NEWS GROUP

View from the South Side of Hetch Hetchy Near the Lake.
(Herbert W. Gleason/Sierra Club)



The politics and economics are daunting: The project could cost billions of dollars, and many of the state's top political leaders oppose the idea. But as voters become aware of the measure, the questions are growing: Is it even possible to restore Hetch

Hetchy to the way it was? Would any of us live to see it? Can you put the ecological toothpaste back in the tube?

Yes, say scientists who have studied the issue over the past 25 years.

"It would require a lot of dedicated work for many years. You'd have to stick with it, and it would cost a lot of money to maintain it and monitor it. But it's not an immense area. It's feasible," said Steve Botti, a botanist and former acting chief of Yosemite's resource management division.

The reservoir was created after crews finished building O'Shaughnessy Dam on the Tuolumne River in 1923. The project was fought bitterly by Sierra Club founder John Muir, who lost his battle when San Francisco leaders made the case to Congress that the city needed a more reliable water supply after it burned in the 1906 earthquake.

After the 312-foot concrete dam was completed and the 7-mile-long valley submerged, the landscape was essentially frozen in time. But during severe droughts since then, the water level sometimes fell so low that clues of what lies underneath have been exposed.

One such year was 1977. Botti, a Yosemite employee at the time, wandered in.

"The valley looked pretty much like it did in 1923," said Botti, now retired in Idaho. "I saw axes lying there where people had chopped the trees down. The river was still in its old banks. There was no vegetation. It wasn't pretty. But I thought, 'This is possible.' I could envision it the way it was."

Although no exhaustive research projects have been done, botanists, biologists, hydrologists and other scientists who have studied the valley say that if the reservoir is ever drained, an ugly landscape left from the dam's construction -- with thousands of huge tree stumps, two abandoned quarries, a railroad track and miles of gray silt -- would come into view.

But within five years, according to a 1988 National Park Service study written by Botti and other scientists, grasses and shrubs would create new meadows, and rainbow trout would come back. Deer, black bears, coyotes and other wildlife would begin wandering through the valley.

Within 10 to 20 years, thousands of small ponderosa pines, sugar pines, Douglas firs and other trees -- planted by large crews of restoration biologists -- would be 20 feet tall. Within 50 years, oak woodlands would emerge. Conifer trees would grow to 90 feet. The old stumps would be largely decayed or hidden by the new forest cover.

"Most people could go there in 40 or 50 years and not even realize that there was ever a dam there," said Sarah Null, an assistant professor of watershed sciences at Utah State University who has studied the area.

From Yosemite to the Bay Area

The Hetch Hetchy water system is a key water source that serves 2.5 million people in the Bay Area. Percentage of selected cities' water supplies from Hetch Hetchy:

San Francisco	100%
Menlo Park	100
East Palo Alto	100
Burlingame	100
Redwood City	99
Hayward	98
Palo Alto	94
Mtn. View	88
Milpitas	60
Sunnyvale	45
Fremont	20
Union City	20
Santa Clara	19
San Jose	3



Sources: Water districts, Department of Water Resources, San Francisco Public Utilities Commission Capital Improvement Program

BAY AREA NEWS GROUP

"There would be some clues for astute people, like no 300-year-old trees, or the bathtub ring, but it would be a nice place."

The "bathtub ring" is a huge discolored area along the granite walls, formed when the reservoir's waters killed the moss and lichens growing on the rocks. Nobody knows for sure how long it would take to go away. The 1988 National Park Service study, still considered the most exhaustive look at restoring Hetch Hetchy, estimated it would take up to 120 years for the lichens to fully grow back.

Perhaps the best news for people who hope to one day restore the valley is that the reservoir is not full of mud. Other dam removal projects have been hampered by billions of pounds of sand and silt that pile up behind many dams and must be removed if the structures come down. But because the Tuolumne River drains Yosemite's high country, which is mostly granite with thin soils, the silt levels are no more than a few inches deep.

Even so, enormous challenges would loom.

The group Restore Hetch Hetchy, the Sierra Club and other supporters of draining the reservoir say most of its 360,000 acre-feet of water storage can be replaced through more water conservation, recycling and storing water in other reservoirs, such as the massive Don Pedro Reservoir nearby. But critics, such as U.S. Sen. Dianne Feinstein and San Francisco Mayor Ed Lee, who calls the idea "insane," say water is a precious commodity in California and that no city should take the risk of giving up a reliable water supply. Silicon Valley business leaders also say that because two-thirds of Hetch Hetchy water customers live outside San Francisco, in places like Palo Alto and north San Jose, they should get to vote, too.

A 2006 study by the state Department of Water Resources estimated that restoring Hetch Hetchy would cost \$3 billion to \$10 billion, although some environmentalists say it could be done for as little as \$1 billion.

A key question is what to do with the dam. Removing it would involve constant blasting and thousands of truck trips. A rail line might have to be built to carry away the debris.

One 2004 study by the University of Wisconsin said the reservoir should be drained in steps, over years, so scientists could experiment by restoring small patches of dry ground and then use the most successful techniques for bigger areas.

There would also be major biological hurdles. Without enough human intervention, the valley could become overgrown quickly with invasive plants such as star thistle, knapweed and cheat grass, which wouldn't provide adequate food or shelter for wildlife.

"It would have to be constantly maintained and attacked. The park is not a super big fan of using herbicides," said Tim Ramirez, natural resources division manager for the San Francisco Public Utilities Commission, which operates the reservoir. "You are talking about hand crews and a lot of valley. It gets pretty overwhelming."

Also, there would almost certainly be battles over American Indian archeological sites, public access fights and erosion problems because the original dam base was built 118 feet below the ground. Excavating it would change the river gradient and cause massive erosion.

Huge political and economic debates remain. But so far no biologists have come forward to say Hetch Hetchy Valley would not return to life after about 100 years.

"You get major cleansings of the landscape all the time. Fires and other kinds of things like 100-year droughts happen," said Peter Moyle, a professor of fish biology at UC Davis.

"There's not a lot of uncertainty in the science. You'd get a pretty good ecosystem in 50 years after the reservoir had been drained. In the end, it's a political question."