EBMUD **Water Supply Management Program 2040**

Agenda

WSMP 2040
Community Liaison Committee Meeting No.7
Monday, May 19, 2008
6:00-9:00 PM

1. Project Update	**15 min**
- Workplan & WSMP 2040 Progress	
- Next Meeting Dates	
2. WSMP 2040 Portfolios	**60 min**
- Building WSMP 2040 Portfolios	
- Modeling Results: Key Observations & Findings	
- Portfolio Screening & Evaluation	
- Five Primary Portfolio Alternatives	
3. CLC Portfolio Feedback and Comments	**45 min**
4. Public Comment	**20 min**

Community Liaison Committee Meeting #7

May 19, 2008 6:00 – 9:00 pm
EBMUD Administration Building
375 Eleventh Street, Oakland
Large Training Room

Attendees
Charles Brydon, Merlin Edwards, Stuart Flashman, Henry Gardner, Charles Gilcrest, Walt Gill, Laura Harnish, Howard Kerr, David Nesmith

Not Present
Barbara Becnel, John Gioia, Bob Glover, Michael Hanemann, Bruce Kern, Tomi Van de Brooke, Eleanor Loynd, Kris Hunt, Julia Liou, Betty Graham

Public Attendees
Ingrid Severson, Bay Localize
Juliet Lamont, Environmental Consultant with the Sierra Club
Sonia Diermayer, Sierra Club
Mark McLeod, Sustainable Business Alliance (SBA)

EBMUD Attendees

An Bartlett, Greg Chan, Tom Francis, Cherie Sakurai, Mike Tognolini

Project Team Attendees
David Blau, Kara Demsey, Lois Humphreys, Yanna McLaughlin, Dave Richardson, Marcia Tobin

Welcome and Introductions

Lois Humphreys, TRG & Associates public outreach consultant and lead facilitator, welcomed the CLC members.

1. Project Update

- Workplan & WSMP 2040 Progress

Consultant Team Project Leader, David Blau of EDAW, provided an overview of the meeting's agenda and an update on the WSMP 2040 progress and schedule. Mr. Blau stated that the Preferred Alternative is likely to be a hybrid of the 5 Primary Portfolios and that a hybrid approach will create a robust portfolio, resulting in a smart and prudent water supply strategy.

- Next Meeting Dates

- Scoping Meetings for the EIR:
  - May 22, 2008 in Oakland
  - May 29, 2008 in Stockton
- Public Board Workshops
  - June 16, 2008 in Walnut Creek
  - June 17, 2008 in Oakland

- Next meetings for CLC members:
  - Tuesday, June 24, 2008 from 8:30-11AM Board Workshop #9. CLC members are encouraged to attend this meeting to provide input when the Board chooses a preferred portfolio.
  - Following the June 24, 2008 Board Workshop, CLC members will decide when they would like the next CLC meeting to occur. It may be held in September or in November around the time of the release of the public Draft EIR.

2. WSMP 2040 Portfolios

a. Building WSMP 2040 Portfolios

David Blau reviewed the portfolio building matrix and summarized the different component categories that were considered. Most portfolios have primary component themes: flexibility; groundwater storage; maximizing regional partnerships; and low carbon footprint. There are also 3 portfolios that were proposed by the Board Members (Portfolios 12-14).

b. Modeling Results: Key Observations & Findings

Dave Richardson, Principal of RMC Water and Environment (RMC), described the preliminary portfolio modeling results matrix. The maximum amount of rationing for each portfolio was presented. The matrix also lists the rationing frequency (number of years of rationing in a 10-year-period), with ranges from between 0 to 2 years in 10 (3 years of rationing in 10 is the current District policy),, and captures portfolio cost & economic information. Portfolios 1 and 2 do not meet the Need-for-Water in drought years due to capacity limitations of the aqueducts and water treatment plants. All portfolios except for Portfolio 6 require upcountry pretreatment before the water enters the aqueducts and mixes with high-quality Mokelumne River watershed water. In the 3rd year of a drought, sources other than Mokelumne water are required to meet the Need- for- Water and therefore, upcountry pretreatment is needed.

It was noted that for costing and evaluation purposes, the Regional Desalination component included in WSMP 2040 assumes that it would be sited in Pittsburg. With such a configuration, desalinated water would need to be treated two times – once prior to entering the aqueducts and a second time where it enters an EBMUD treatment plant. In addition, an alternate location for the desalination plant could also be considered to alleviate the transmission and distribution limitations of the Pittsburg location. Neither a District-only solution nor alternative plant locations are being considered as part of WSMP 2040 at this time.

Portfolios 11 and 14 have the highest rationing at 25% and consequently, they have the highest cost of water shortage.

c. Portfolio Screening & Evaluation

David Blau described the component screening methodology including the four criteria categories established: Operations, Engineering, Legal & Institutional; Economic; Public Health, Safety & Community; and Environmental. The criteria that helped distinguish between the portfolios were used as screening mechanisms.

The same scoring system that was used for scoring the components was also used to evaluate the portfolios. A criteria score of “High” represented a good (favorable) response, addressing the intent of the particular criterion. A “Low” score meant that the portfolio had an unfavorable response to meeting a particular criterion.

The portfolio screening matrix showed that Portfolios 1 and 2 failed the modeling analysis. The Need- for- water could not be met with the combination of "0% rationing" and "Enlarge Pardee Reservoir". Due to limited treatment and conveyance possibilities, it was recommended that Portfolios 1 and 2 be held from further consideration and the Board agreed. Portfolio 3, with an emphasis on upcountry surface storage, is very similar to Portfolio 10. It was combined with Portfolio 10, which was moved forward into additional analysis as Portfolio "D".

Portfolio 4, which has a focus on groundwater storage and exchange, is potentially more difficult to implement. Yet it scores well on most criteria and thus was recommended for further consideration. The Board agreed. Portfolio 4 became the basis for "Portfolio A-Groundwater".

Portfolio 5, with a focus on maximizing regional partnerships, was considered the most robust portfolio due to its diversification. It has the highest number of components including Regional Desalination, IRCUP/San Joaquin Groundwater Banking/Exchange, Sacramento Groundwater Banking/Exchange, Enlarge Lower Bear Reservoir, and Northern California Water Transfers. It was recommended for further analysis as "Portfolio B-Diversified".

Portfolio 6 was themed around reliability and is centered on storage west of the Delta at Buckhorn Canyon. Portfolio 6 scored high for meeting the operational and engineering criteria, but scored low in terms of meeting biological and community criteria, since the project would inundate a new area. This portfolio was recommended as "Portfolio C-Reliability".

Portfolio 7, which also focused on emergency reliability, was not recommended, since its desalination component is also included in Portfolio 5 which was carried forward. The same logic was applied to Portfolio 8.

Portfolio 9 has an emphasis on conservation and recycling. This portfolio was not recommended for further analysis based on cost effectiveness.

Portfolio 10 is a low carbon footprint portfolio with a component to "Enlarge Pardee Reservoir", which could be a renewable energy resource. This portfolio was recommended for further consideration and testing as "Portfolio D-Lower Carbon Footprint".

Portfolio 11 includes rationing at 25% and a major water transfer. 25% rationing has a high cost to customers in drought years and as such, the Board thought Portfolios 11 and 14 should be held from further consideration.

Portfolio 12 is centered on a large water transfer. This portfolio was recommended for further analysis as "Portfolio E-Recycling & Transfer".

Portfolio 13 was designed to test the 20% rationing case. 20% rationing has been proposed to be tested in multiple portfolios, so there was no longer a need for a separate portfolio to test 20% rationing. Thus, Portfolio 13 was held from further consideration.

In summary, Portfolios 4, 5, 6, 10, and 12 were identified as the Primary Portfolios which will be tested further.

The following summarizes additional Board decisions from the April 22, 2008 workshop:

- 0% and 25% rationing were eliminated from further consideration, with 10%, 15%, and 20% rationing levels remaining.
- The majority of Board members agreed to keep Portfolio 6 (Buckhorn) for additional analysis to have a robust set of portfolios to examine. The cost effectiveness and operational benefits of this portfolio warrant further investigation.

d. Five Primary Portfolio Alternatives

The five primary portfolios have been renamed with letters and themed:

- Portfolio A (formerly Portfolio 4) - Groundwater Theme (10% Rationing, Conservation Level D, Recycling Level 2, Water Transfers, IRCUP/San Joaquin Groundwater Banking/Exchange, Sacramento Basin Groundwater Banking/Exchange, Bayside Phase 2).
    - This portfolio will also be tested at 20% rationing.
- Portfolio B (formerly Portfolio 5) – Diversified Theme (10% Rationing, Conservation Level C, Recycling Level 2, Water Transfers, Regional Desalination, IRCUP/San Joaquin Groundwater Banking/Exchange, Sacramento Basin Groundwater Banking/Exchange, Enlarge Lower Bear Reservoir).
    - This portfolio will also be tested at 15% and 20% rationing.
- Portfolio C (formerly Portfolio 6) – Reliability Theme (15% Rationing, Conservation Level C, Recycling Level 2, Buckhorn Canyon Reservoir).
- Portfolio D (formerly Portfolio 10) – Lower Carbon Footprint Theme (15% Rationing, Conservation Level C, Recycling Level 2, Bayside Phase 2, Enlarge Pardee Reservoir).
- Portfolio E (formerly Portfolio 12) – Recycling & Transfer Theme (10% Rationing, Conservation Level C, Recycling Level 3, Water Transfers, Bayside Phase 2, Sacramento Basin Groundwater Banking/Exchange).
    - This portfolio will also be tested at 15% and 20% rationing.

These 5 Primary Portfolios will be tested in round 3 of the modeling and the results will be presented at the next Board Workshop on June 24, 2008.

Following this presentation, the CLC members were asked to comment on the five primary portfolios and to provide their preferences on specific portfolios and components. Mr. Blau described that the WSMP 2040 Preferred Portfolio would likely be built from a hybrid of these portfolios, as the success and implementability of some of the components was still too uncertain and thus several options may need to be explored further.

3. CLC Portfolio Feedback and Comments [Q = Question, A = Answer, C = Comment]

The comments and feedback of the attending CLC members regarding the presentation and portfolios are summarized below. CLC members used the scorecards to identify their top three portfolio preferences. All attending members handed in their scorecards.

Subject:

Building WSMP 2040 Portfolios

Q: (David Nesmith): I am surprised to see the low cost to the District of Portfolio 11.
A: Portfolio 11 has no recycling, 25% rationing, and it includes water transfers which have the lowest capital cost.

Q: (Laura Harnish): What are the supplemental supplies in Portfolios 1 and 2?
A: Portfolio 1 includes enlargement of Pardee and Lower Bear Reservoirs, and a water transfer. Portfolio 2 includes enlargement of Pardee and Lower Bear Reservoirs, and Regional Desalination.

Modeling Results: Key Observations & Findings

Q: (Stuart Flashman): In a worst case scenario, what is the cost of the existing system to the customer? What is the drought cost to the District of doing nothing?
A: The water shortage cost to the customer would be similar to the costs shown for Portfolios 11 and 14 which have 25% rationing, which is the District's current rationing goal. The customer cost of doing nothing would be higher than the costs shown for Portfolios 11 and 14, because no new projects would have been built, so rationing could likely be at 40+% by 2040. The cost of doing nothing will be considered in the Program EIR. In terms of the cost to the District of doing nothing, this year the District is going to 15% mandatory rationing which includes a $5 million revised budget and requires $29 million to be taken out of the drought fund.

Q: (Stuart Flashman): How much is in the drought fund right now?
A: About $48 million.

Q: (Laura Harnish): Does raising Pardee and Lower Bear Reservoirs result in no rationing ever?
A: No. Portfolios 1 and 2, by design, were set up to have zero rationing and the modeling showed that zero rationing and raising Pardee does not work to meet the Need- for- Water in drought years. As the modeling results illustrate, the Need- for- Water in Portfolios 1 and 2 could not be met without any rationing.

Q: (Stuart Flashman): Why is pretreatment not needed now for Freeport?
A: Water from Freeport can be moved to the terminal reservoirs and then treated at the conventional treatment plants.

Q: (Howard Kerr): Is desalination economically feasible?
A: We have not seen it ruled out for economic reasons. Its costs are similar to other components per acre-foot, such as groundwater banking and exchange. We also found that most of the recycled water projects are comparable in cost to desalination at around $2,000 per acre-foot dry year unit cost.

Q: (Dave Nesmith): What is the cost of desalination per acre-foot?
A: About $2,000 per acre-foot, depending on different attributes, (e.g. Pittsburg location and associated salinity content).

Q: (Laura Harnish): Why was desalination assumed to be at the Pittsburg location? Is the location set?
A: No, the location is not set yet, but it is where the study has led to at this point. The Pittsburg location is a lower cost option compared to the other locations that have higher salinity-content water and would need more treatment. No agreement or decisions have been made yet.

Q: (Dave Nesmith): Who are the partners in the Regional Desalination project?
A: East Bay Municipal Utility District, Contra Costa Water District, Santa Clara Valley Water District, San Francisco Public Utilities Commission.

Q: (Laura Harnish): Couldn't you build a bypass so that you don't have to treat the desalinated water twice?
A: The hardware costs would likely be much more than treating the water twice.

C: (Charles Brydon): This all assumes that the aqueducts are still working.

Portfolio Screening & Evaluation

Q: (Henry Gardner): Why are there blanks in the scoring matrix?
A: We tried to capture just the very high and very low scores for each criterion. A blank score means that the portfolio had an average score for that criterion.

Q: (Merlin Edwards): In the scoring matrix, does that mean the costs override the benefits if a "Low" is listed as a score for one of the criteria? (As visible for Portfolios 4, 5 and 6)
A: It is not that simple. The lows may still be overcome.

C: (Stuart Flashman): In terms of water quality (Criteria: Maximize use of water from the best available sources), it is more of a policy issue to have the highest quality source.

Five Primary Portfolio Alternatives

Q: (Stuart Flashman): Regional Desalination looks like an unattractive component, but it also may be the most likely to change with new technology in the future. Is the assumption that we will start implementing all components simultaneously or that some that are more long-term? If desalination is one of these, technology may change and make it more attractive in the future.
A: The various components would have different timelines for implementation. It will depend on how many components we keep in the Preferred Portfolio and how much we stage them. We will need to make some big assumptions on timelines to meet the Need- for- Water over time as it increases, but what we are working on will show a picture for implementation. This will be fine-tuned as the Preferred Portfolio is built.

Q: (Stuart Flashman): Do we have to make all of our choices now? Can a portfolio have choices to be made later on? We should keep more components in the mix now (more than are needed to meet the Need- for- Water) and choose which are best as time goes on. If a component cannot be pushed through, you may want to move onto a new component.

C: (Laura Harnish): Desalination may look more attractive over time.

A: The notion that we pursue on multiple fronts is being considered and is very sound. We have done enough testing to know that all 5 remaining portfolios could meet the Need –for- Water if they come online at the optimal dates.

C: (Charles Brydon): We are up against 2040 to implement the portfolio. "Fusion" is probably the answer.

Q: (David Nesmith): How much do we get out of 20% rationing? I do not see the numbers listed on the matrix of the portfolios.
A: It is close to 40 MGD. It's a linear relationship. The higher rationing we choose, the harder it is to be flexible in the future.

Q: (David Nesmith): If you are at 20%, you only have to ration 1.8 years out of 10. Does that yield any additional water?
A: Yes. At 20%, 40 MGD is gained in the worst drought year (the third year of the drought usually uses the full 20% rationing).

C: (Charles Brydon): Our population is increasing. We went from 3 million to about 50 million in California in a few generations. The demand includes population increases and that is going to continue to happen. It's not just the same people using more water. Population rise has changed the whole nature of how we do everything. When you ration, it has a different impact on different customers on both sides of the hills. This is a function of geography and climate. In hot areas, it is harder to ration water. Lots East of the Hills are set as a policy to minimize

growth (large lots). People are now stuck with all this land. People who live there did not set those policies.

Q: (Charles Gilcrest): The goal is not to over-ration – yet the lower carbon portfolio (Portfolio D) has high rationing of 15%. This is the only portfolio where you are over what you need to hit the Need- for- Water. You could decrease the rationing to 10% and take out Bayside. Why is it 15% instead of 10%?
A: Any portfolio that has the Enlarge Pardee Reservoir component as part of the solution has to deal with the total system storage requirements. The District's drought management program follows a specific sequence. An enlarged Pardee Reservoir increases the total amount of District storage, and thus the District does not need to start rationing or taking water from Freeport as early. The District has to wait longer to hit the trigger. As a result, there is less overall yield from portfolios, so we had to add additional supplies and rationing to make it work.

Q: (Laura Harnish): Why does Pardee not work in Portfolio 1 and Portfolio 2, but in Portfolio 9 it works?
A: The key difference is the rationing. 0% rationing was used in Portfolio 1 and Portfolio 2 versus 15% used in Portfolio 9. If rationing is 0%, not enough water can be pushed through the aqueducts to meet the Need- for- Water.

Q: (Laura Harnish): Does the trigger for when EBMUD rations get larger if you enlarge Pardee?
A: EBMUD is considering that possibility. It is not a given that EBMUD can raise the trigger to 650 thousand acre-feet (TAF). It would be odd to ration but not use EBMUD's drought rationing supply at Freeport, but EBMUD cannot say for certain that we can raise the trigger.

C: (Charles Brydon): Please remember that we gave away the American River allotment for Freeport. A higher Pardee would trigger Freeport differently and that was the whole point of Freeport. We spent a lot on Freeport. It's like we bought a beautiful new parachute and can't even use it.

Q: (Laura Harnish): What happened with Buckhorn in the last round? Can you summarize the past concerns and controversy?

A: Prior to the WSMP 2020, Buckhorn Reservoir was pursued in a project EIR as the only solution to EBMUD's water supply need, since it appeared to have a lot of benefits: at a high elevation, gravity-fed, west of the Delta. The EIR was sued immediately by the State and the District backed off the project. The environmental majority on the subsequent Board moved away from Buckhorn as well and instead, comprehensively looked at all potential demand and supply-side solutions. In the WSMP 2020, under a different Board, Buckhorn Reservoir came up again as an attractive component, but issues relating to inundation of wetlands, inundation of habitat for species of concern, difficult access for construction, and other environmental challenges proved to be consistent environmental problems. The WSMP 2020 plan instead focused on groundwater storage and recovery in San Joaquin County. An enlarged Pardee was also looked at as a potential back up.

C: (Stuart Flashman, Howard Kerr): Castro Valley objected to the truck traffic that would be generated to construct Buckhorn. There was strong opposition west of hills, and strong support east of hills.

Q: (Howard Kerr): Would any people be displaced by constructing Buckhorn? If not, I would like to see it pursued. It has many advantages.
A: No. It is EBMUD-owned land.

Q: (Charles Brydon): What is the population east versus west of hills?
A: Approximately 3:1 west to east.

C: (Charles Brydon): I don't quite understand how it [Buckhorn] passed, if west of hills was against it?

C: (Henry Gardner): Looking at the 5 remaining portfolios. Voting on one Portfolio may be voting against yourself. If you want reliability, you may have to vote against public health and safety.

Q: (Henry Gardner): What do the portfolios cost the average household? We were given the gross cost, but we need to know what the costs means to the ratepayer.
A: We are working on this for the June Board Workshop.

Q: (Laura Harnish): Groundwater banking/exchange projects are more expensive than other supplemental supplies? Why?
A: Pumping and capital costs. The water often has to be injected in as well as pumped out.

Q: (Stuart Flashman): Are we assuming active groundwater storage and recovery at Bayside?
A: Yes, all are active recovery projects. IRCUP has some in-lieu recharge.

Q: (Stuart Flashman): In the 1994 WSMP [WSMP 2020], in-lieu groundwater banking was proposed. Agricultural users would use EBMUD's banked groundwater and EBMUD would use Mokelumne water. This would decrease the pumping costs.
A: There is only one irrigation district that has Mokelumne Water rights (Woodbridge Irrigation District).

Q: (Stuart Flashman): Couldn't we do in-lieu groundwater banking for American River or Sacramento River water now that we have Freeport?
A: The water still may need to be pumped from Freeport and through the aqueducts.

Q: (Howard Kerr): Are any groundwater banking/exchange projects being used right now by EBMUD? Are any of these projects in operation yet?
A: Bayside (1 MGD) is going into construction. No other projects are approved at the current time.

Q: (Charles Brydon): How big is the San Joaquin groundwater banking and exchange component? Why did it fall off? This project would help the San Joaquin aquifer.

A: About 17 MGD.
A: (Stuart Flashman) The basic reason was politics and lack of trust.

Q: (Henry Gardner): Does the Board have goals for the WSMP 2040? Based on the model, which of the 5 portfolios best achieves the goals? - Then that's the one I'm going to vote for.
A: Yes, the Board established goals, however these goals were never weighted by the Board, so it depends which goal you want to put front and center.

Q: (Henry Gardner): I would rather debate which of the goals are more important than which of the portfolios I like best. Otherwise, I cannot make a decision. I do not see how I can decide based on what we have.
A: We turned the goals statements into the criteria that we used to score both the individual components as well as the portfolios. The performance criteria represent the project goals and have been used for scoring. The highs and lows have different weights.

A: (David Blau): We would like to give the Board the CLC's view. You are not locked into the 5 Primary Portfolios. You can give the Board insight into other preferences as well.

A: (Greg Chan): All of you bring a varying perspective. We would like to bring these to the Board.

A: (Mike Tognolini): Even more valuable than the portfolio ranking is the reasoning for what you want to see (e.g., reliability, fish, low customer rates, etc). That is very valuable too. Where do you land on the spectrum of what criteria you find more important?

C: (David Nesmith): Another thing that should be mentioned in the portfolio evaluation is that the environment from which the water supply is being taken is changing. It is mostly changing for the worse. Fish are showing a dramatic decline and that will result in restrictions on water agencies to reliably provide water in the same ways as they did in the past. Populations of Delta Smelt and Salmon did not used to be a problem. One of the criteria I am looking at is to see if we can do more with the water we already have. Should we invest more in using the water we have more wisely (e.g., making changes East of Hills towards less water-consumptive landscaping)? I don't know how it's going to change in the future, but it will change.

C: (David Nesmith): The foothill counties are growing like crazy and they have area of origin [water] rights to the Mokelumne River. We will have big fights over that in the future. One of my major criteria is trying to maintain an environment that makes sense for my grandkids, including having fish. With some extra money and foresight, can we use the water we have right now more wisely and make it more reliable for us?

C: (Charles Brydon): A solution can be to take water during large rain events and store it for when you need it. Then you do not need to take water out of the river during moderate and low flow times. But you need a place to store the water so that you can then use it when you have to. That relieves a lot of pressure off of the Delta. Having water storage makes your water supply more predictable and controllable. I believe in savings accounts.

C: (David Nesmith): Species within Delta ecosystems have evolved to adapt to varying conditions. What we've done over the years is stabilize the conditions. We still need flood flows to the Delta.

C: (David Nesmith): Do heroic levels of conservation make more sense though than a huge facility that you only use in 1 year out of 10?

Q: (Stuart Flashman): David (Nesmith) raised an interesting point. What is not considered specifically in the criteria is the fish environment. Are there things we could be doing in our program to improve the fish environment instead of just minimizing impacts to it? The Enlarge Pardee component may have some advantages for fish in terms of being able to make releases during dry years for fish. From that standpoint, upcountry storage may be more beneficial for fisheries releases.

A: (Tom Francis) The cold water pool in Pardee may change over time due to global climate change, so an enlarged Pardee may improve/maintain that cold water pool for fish releases.

Q: (Stuart Flashman): There should be a contingency for if a Bay-Delta process cuts water through the Delta during a drought. How does that affect these different programs? Water transfers would be most affected and conservation would be least affected.

A: Pursuing multiple components at one time as a strategy may also be used as a way to deal with unknown future climate change or other changes in the system's water availability.

Q: (David Nesmith): It is hard to figure out how to read these portfolio matrices. Portfolio theme names are not that useful for me. We do not have cost per unit of water attached to these portfolios. We do not know how these portfolios would impact rates.

A: From the preliminary modeling results matrix, the following are the yearly costs for the portfolios: Portfolio A = $26.9 million, Portfolio B = $23.9 million, Portfolio C = $15.9 million, Portfolio = D $19.3 million, Portfolio = E $24.2 million.

Q: (Merlin Edwards): If you want to factor rate impacts into the analysis, how do you do that?
A: That is represented under the cost of water shortage to the customer (rationing).

Q: (Laura Harnish): Where do the other portfolios fall in the spectrum of lowest carbon footprint?
A: The next lowest after Portfolio D would be the west of Delta storage (Portfolio C), then groundwater storage (Portfolio A) and conservation & transfers (Portfolio E). The diversified portfolio (Portfolio B) has the highest carbon footprint.

C: (Stuart Flashman): All these could change in the next 10 years based on technological changes.

Q: (Walt Gill): What is the likelihood of success for transfers and other regional/cooperative projects with other agencies?
A: All of the proposed supplemental supply components are challenging. EBMUD would have likely implemented them by now if they were easy. All of the remaining components are difficult to implement. To get a significant quantity of water in the future (except for Buckhorn) will involve collaboration with others. From a State perspective, transfers are encouraged.

Q: (Stuart Flashman): How will these portfolio scorecards be used? Will they be averaged? Will each be individually presented to the Board?
A: We will make a summary chart, but we will provide the full feedback to the Board.

Q: (Charles Brydon): I would like to hear from the group first, before filling out my scorecard, on what is most important to them.
A: Lets take 10 minutes to collect our thoughts first and then go around and hear from the group. Scoring or thoughts can be revised after we go around.

Scorecard results

Charles Brydon: "Optimum control will allow EBMUD to deal with water shortage in the future (drought or loss of the aqueducts in a seismic event). Reliability and control are the most important." His ranking:

- #1 - Portfolio C, Reliability;
- #2 - Portfolio A, Groundwater;
- #3 - Portfolio D, Lower Carbon Footprint.

Howard Kerr's ranking:

- #1 - Portfolio C, (Reliability) because Buckhorn has many advantages. This project would be on the cold side of the hill, it would have a short hookup to the system, it is large storage, EBMUD owns the land, and it is the least costly.
- #2 - Portfolio B, Diversified, as #2 for the diversification in case of failure of any part of the system. This portfolio needs a lot of cooperation.
- #3 - Portfolio A, Groundwater, because it provides safety, but EBMUD must overcome public objections of treatment plant exhaust and subsidence for it to be implemented (Bayside Phase 2).

Charles Gilcrest's ranking:

- #1 - Portfolio B, Diversified, because it speaks to reliability as well. Portfolio B limits risk with the lower level of mandatory rationing, and it has a lower price on the consumers. Lower rationing is needed to respond to unanticipated needs.

- #2 - Portfolio C, Reliability, Reliability needs to be a top issue. EBMUD needs a portfolio that will be there. It is also the lowest cost to implement but may face a lot of community opposition.
- #3 - Portfolio D, Lowest Carbon Footprint, without Bayside Phase 2, since it may have significant legal hurdles, and this should not be underestimated.

Laura Harnish: "There are tradeoffs between reliability and construction impacts. The Board should not choose a preferred alternative, but instead should do an equal level of detail analysis in the CEQA document on all 5 portfolios. I would like to see full disclosure on all 5 portfolios to make a preferred portfolio decision. Needing to make a choice, I would leave storage projects out, as they usually have the most impacts." Her ranking:

- #1 - Portfolio A, Groundwater, because groundwater storage generally has the least environmental impacts.
- #2 - Portfolio E, Recycling & Transfer. Transfers also encourage efficiency in the agricultural world. The higher level of recycling has higher energy costs, but maybe EBMUD can use renewable energy sources. EBMUD should use the water that they have in more efficient ways.
- #3 - Portfolio B, Diversified; however, desalination is still a really high energy user.

David Nesmith: "In keeping with what I said before, I am looking for options within the District's existing water system that are as environmentally benign as possible. Surface storage destroys wetlands and habitat and groundwater storage requires energy. I cherry-picked specific components because I could not rationalize picking one of the portfolios in its entirety. I would choose: Bayside Phase 2 (9 MGD), 20% rationing, Conservation Level D, and Recycling at Level 3. This is 99 MGD. That is the "river runners' portfolio". It assumes in the next 30 years, water will be scarcer and more expensive. We should plan for this. [Comment: This is close to Portfolio 9 in the previous list.] However, if needing to make a choice among the options, my ranking would be":

- #1 - Portfolio A, Groundwater;
- #2 - Portfolio B, Diversified;
- #3 - Portfolio E, Recycling & Transfer.

Walt Gill's ranking:

- #1 - Portfolio C, Reliability, because it has a lot of certainty for supply and it's in the District's control (Buckhorn). (I am curious if the environmental concerns can be addressed for Buckhorn.)
- #2 - Portfolio B, Diversified, because it increases the likelihood of success.
- #3 - Portfolio A, Groundwater, because it is less dependent on transfers. It sounds like transfers and cooperation is a challenge.

Merlin Edwards' ranking "from a customer perspective":

- #1 - Portfolio B, Diversity, because it gives the opportunity to partner with others. Between now and 2040, technology will be such that desalination will not be as expensive as if we did it now.

- #2 - Portfolio C, Reliability, because as a customer and small business, I have to depend on the reliability of the water, so that with population growth, we are going to have to have more reliability of water for this influx of people.
- #3 - Portfolio A, Groundwater, for the same reasons as others mentioned.

Henry Gardner: "I recommend the Board make a wise decision. I do not want to vote against my own interests. Portfolio A, Groundwater, seems like where I would want to place my emphasis and support. I like that it scores high in the environment. However, I feel like I am not informed enough to make a decision".

Stuart Flashman: "My top priority is to benefit the environment. The District has a long history of not doing this in the Mokelumne Basin. The environment should be a top priority, as the District says it is. Benefiting the environment may not be the cheapest thing". His ranking:

- # 1 - Portfolio A, Groundwater, because conjunctive use is a good idea. I am surprised that it is as expensive as it is, but nevertheless, it is worth doing. I recognize that there are potential difficulties in implementing conjunctive use, but it is worth pushing through those. Transfers, although with questionable certainty, are good for partnerships.
- #2 - Portfolio B, Diversified, partly because it promotes regional participation. We need to "hang together or we will certainly hang separately," but I am concerned about the costs, particularly the desalination costs (high). This one may be too high and does not benefit the environment very much.
- #3 - Portfolios D&E (in a tie). Portfolio E, Recycling & Transfer has the same problems as Portfolio B; it is expensive. Portfolio E does not do a lot of damage to the environment. Portfolio D, Lower Carbon Footprint, if managed and operated properly, could benefit the environment [enlarge Pardee]. As for reducing the District's carbon footprint, this can also be good.
- I didn't choose Portfolio C, Reliability, because it is a "go-it-alone" strategy. To address the earthquake issue, we should address the aqueducts and not try to put storage on this side of the Delta.

The following page contains a matrix summarizing all rankings.

The following table summarizes the rankings provided by the CLC-members:

Ranking/ Portfolio	First Choice	Second Choice	Third Choice	Why?
A	✓✓✓	✓	✓✓✓	• Safety net • Groundwater has least environmental impacts • Good for Ag sector • Transfers are a challenge, but maybe the State can help • Conjunctive use is a good idea even though now more expensive • Regional Cooperation is good
B	✓✓	✓✓✓✓	✓	• Diversification • Cooperation (but concerned about cost & environmental effects) • Variety – means lower risk, less mandatory rationing & cost • Customer perspective
C	✓✓✓	✓✓		• Provides Control • Has Advantages • Most feasible to implement • Small business perspective
D			✓✓	• Like concept of Pardee, but you're underestimating Bayside: it's not worth the legal challenge for 9 MGD. • If managed properly, it could benefit the environment. It takes a certain amount of faith & may not be cooperative enough.
E		✓	✓ ✓*	• Too energy intensive, but with energy from renewables this could work.

* Stuart Flashman's tie between Portfolio D & E.

Alternative suggestions:

- Board should do equal analysis of all 5 primary portfolios instead of selecting a preferred alternative.
- Alternative Portfolio ("River Runner" Portfolio from David Nesmith, who suggested it may not be politically feasible):
    - Bayside Phase 2
    - 20% rationing
    - Conservation Level D
    - Recycling Level D (11MGD)

How should this information be conveyed back to the Board?

C: (Henry Gardner): Indicate that there was a diversity of opinions.

Consensus: CLC members all said that David Blau should summarize the opinions.

C: (Charles Brydon): There are 10 CLC members that are not here tonight. They are not going to have the benefit of this discussion. They did not hear the arguments at all.

C: (Charles Brydon): I would like to have the people present make the call as they have heard all of the discussion.
A: We will keep the scores from tonight and any coming in later separate.

C: (Stuart Flashman): Are we [the CLC] really representing the District?

C: (Charles Gilcrest): Scan all the comments and let the Board read it all.

C: (Laura Harnish): We are not considering the difficulties of permitting, controversy of some of these projects (e.g., Buckhorn). Buckhorn is not the only way to get reliability west of the delta. Portfolio C, Reliability, may be a deceptive title because it implies that Buckhorn is the only way to have west of delta storage and system reliability (we could also do Bayside Phase 2, desalination, conservation, etc).

A: (David Blau): We will look at the most promising aspects of many of these portfolios and pursue them on multiple paths. We just need to determine the order of how to pursue the components.

C: (Stuart Flashman): We should look at the portfolios like options on a storyboard and not just choose one. The Board should not get to the Preferred Portfolio until the Final EIR.

4. Public Comment

- No public comments were made
- Ingrid Severson from Bay Localize submitted written comment: "Within the water conservation theme, rainwater catchment is a simple technology that can offer significant alternatives for supplies. (Proposition 84), the Statewide Bond geared towards strengthening water systems in CA can provide funding for the implementation of this system for commercial, residential and public sectors. Rainwater catchment is a robust alternative – especially when utilized as larger volume of storage facilities, like the 1,000 gallon tanks."

Note: Charles Gilcrest requested his ranking of Buckhorn to be changed after receiving "considerable input from community members" which "convinced him that Buckhorn still faces significant community opposition to the point that it probably cannot reliably withstand a ballot box challenge". He requested that his first choice be recorded as "Diversified" and his second choice be recorded as "Reliability".