

**DUBLIN SAN RAMON SERVICES DISTRICT
MINUTES OF A SPECIAL MEETING OF THE BOARD OF DIRECTORS**

April 21, 2015

A special meeting of the Board of Directors was called to order at 5:10 p.m. by President Edward R. Duarte. Boardmembers present: President Edward R. Duarte, Director Richard M. Halket, Director Dawn L. Benson (Director Benson entered the meeting at 5:12 p.m.), and Director Georgan M. Vonheeder-Leopold. Vice President D.L. (Pat) Howard was absent. District staff present: Bert Michalczyk, General Manager; Dan McIntyre, Engineering Services Manager; John Archer, Administrative Services Manager/Treasurer; Dan Gallagher, Operations Manager; Robert B. Maddow, Assistant General Counsel; and Nicole Genzale, Administrative Analyst I.

1. CALL TO ORDER
2. PLEDGE TO THE FLAG
3. ROLL CALL - Members: Benson, Duarte, Halket, Howard, Vonheeder-Leopold
4. PUBLIC COMMENT (MEETING OPEN TO THE PUBLIC) – 5:11 p.m. - No members of the public addressed the Board.
5. BOARD BUSINESS

A. Long Term Alternative Water Supply Study Workshop

Engineering Services Manager McIntyre introduced the item to the Board stating that the purpose of the study is to provide information to enable the Board to develop water policies which will have impact on the 2015 Urban Water Management Plan (UWMP), the District's position regarding Delta issues and the water supply agreement with Zone 7. This study will also provide insight on more aggressive conservation issues within the District's service area. It is the first planning step in developing and encouraging a diversified water supply portfolio for the District. The study will focus on the policies and programs critical to the District, though it is likely that concepts recommended in the study will necessitate collaboration within the Tri-Valley and beyond. The first workshop was held on February 17, 2015. Initial water supply and water conservation concepts were presented and a tentative policy framework was agreed upon at that time. The following areas were covered by District staff and the consulting team and discussed by the Board.

Policy Framework for Project

The approach is diversification:

- Reduce Demand;
- Increase Reuse;
- Increase Reliability;
- Decrease Variability;
- Reduce Dependence on Imported Supplies; and
- Reduce "Concentration Risk."

Water Demand Projections

For the purpose of this study, 2010 UWMP projections were used for current potable water supplies and will be updated with the next Urban Water Management Plan.

Water Supply Options Overview

Eight options were initially identified and those denoted with an asterik (*) were selected for further analysis:

- 1 - Demand Management* (certain elements have been selected for further analysis);
- 2 - Non-Potable Recycled Water*;
- 3 - Indirect Potable Reuse*;
- 4 - Direct Potable Reuse*;
- 5 - Regional Desalination*;
- 6 - Transfer & Exchanges*;
- Fringe Basin Groundwater; and
- District-wide Stormwater.

Option 1 – Demand Management

Strategies include:

- Enhanced conservation;
- Recycled Water direct to residential customers;
- Rainwater capture; and
- Greywater.

Combined, these strategies can reduce demand by 660 AFY (2.5% reduction), but these strategies alone will not meet supply needs. Pairing these strategies with various supply options will help reduce demands and meet supply needs in the future.

Option 1a – Enhanced Conservation

From May - December 2014, DSRSD processed 477 rebates at a total cost of \$16,000. If DSRSD processes four times the rebates it currently processes, it could save up to 70 AF in 2025, at a total cost of \$48,500 or \$700/acre-foot.

Option 1b – Recycled Water Direct to Residential Customers

- Retrofits - 50 homes irrigating front lawns with recycled water will offset potable use by 5 AFY at a cost of \$300,000/AFY. The cost would be approximately \$5000 per house.
- New Developments - If 25% of new connections between 2015 and 2025 included recycled water, 200 AFY of potable water could be offset. If put in at time of development, cost to DSRSD would be close to \$0.

Option 1c – Rainwater Capture and Greywater

- Retrofits - If 3% of residential connections in 2025 had a rain barrel or installed a greywater system, 55 AFY of potable water could be offset. At

\$500 per barrel and assuming DSRSD offers a 50% rebate, total program costs would be \$191,000 or \$3,400/acre-foot.

- New Developments - If 75% of new connections between 2015 and 2025 installed rain barrels or greywater systems, 390 AFY of potable water could be offset. If put in at time of development, cost to DSRSD would be \$0.

Conclusions:

- 660 AFY reduction in demand is possible.
- Reliability is up to 100% and cost is \$700/AFY for enhanced rebates and \$0 for new development strategies.

The Board endorsed the need to consider possibilities for greywater and rainwater capture and the future connection of recycled water to homes.

Option 2a – Indirect Potable Reuse (IPR) with Groundwater Recharge

- Use of DSRSD flows typically sent to LAVWMA for discharge (approx. 3,500 AFY);
- Advanced water treatment at DSRSD RWTF;
- Separate injection and recovery wells;
- 90% recovery from the GW basin;
- Yield: 2,825 AFY;
- Capital Cost*: \$54M - \$67M;
- Cost per Acre-Foot: \$2,000 - \$2,200/AF; and
- Cost assumes no outside funding or cost sharing.

Option 2b – IPR with Reservoir Augmentation

- Use of DSRSD flows typically sent to LAVWMA for discharge (approx. 3,500 AFY);
- Advanced water treatment at DSRSD RWTF;
- Construct pipeline to Lake Del Valle or San Antonio Reservoir;
- Water becomes part of Zone 7/SFPUC supply, which is distributed to Zone 7/SFPUC contract agencies (DSRSD and others);
- Yield: 2,825 AFY;
- Capital Cost*: \$94M - \$117M;
- Cost per Acre-Foot: \$2,700 - \$3,100/AF; and
- Cost assumes no outside funding or cost sharing.

Option 2c – Direct Potable Reuse

- Use of DSRSD flows typically sent to LAVWMA for discharge (approx. 3,500 AFY);
- Advanced water treatment at DSRSD RWTF;
- Construct storage to provide health and safety buffer;
- Distribute water through existing DSRSD system;
- Yield: 2,825 AFY;
- Capital Cost: \$61M - \$76M;
- Cost per Acre-Foot: \$1,700 - \$2,000/AF;
- Cost assumes no outside funding or cost sharing; and

- Regulations predicted to be in place, about 2018, with costs lessening due to less infrastructure needed.

Conclusions:

- 2,825 AF available and could be used as:
 - Indirect potable reuse to groundwater basin
 - Indirect potable reuse to local reservoir
 - Direct potable reuse to distribution system
- Reliability is 100% and cost is \$1,700 - \$3,100/AFY

The Board endorsed the continued evaluation of indirect potable reuse noting that the District needs to consider the use of outside funding, cost sharing and partnership on future projects once analysis of just the District is completed.

Option 3 – Bay Desalination

- Desalination Facility located in Hayward adjacent to Hayward Treatment Plant;
- Brine discharged through EBDA with constructed pipeline from the plant to DSRSD service area;
- Yield: 4,265 AFY;
- Capital Cost: \$212M - \$264M;
- Cost per Acre-Foot: \$4,700 - \$5,300/AF; and
- Cost assumes no outside funding or cost sharing.

Conclusions:

- 4,265 AFY is possible
- Reliability is 100%

The Board endorsed the continued evaluation of desalination as a component of the District's future water supply portfolio.

Option 4 – North of Delta Transfers

- Purchase water from north of Delta water suppliers and wheel through EBMUD system;
 - Assumes EBMUD will upgrade Walnut Creek Plant to treat Freeport water;
 - Delivery alternatives:
 - Construct pipeline from Walnut Creek Treatment Plant to DSRSD service area
 - Connect pipeline to connect to current DSRSD distribution system
 - Could use Los Vaqueros for storage;
 - Yield: variable;
 - Costs: \$1,800/AF + new conveyance pipeline from EBMUD to DSRSD;
 - Cost assumes no outside funding or cost sharing; and
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- Reliability is dependent on the contract secured, but likely better reliability than through Delta water supplies.

The Board endorsed the continued evaluation of north of Delta transfers as a component of the District's future water supply portfolio.

The Board also discussed the available options, including the favorable aspects of indirect and direct potable reuse, previous efforts around indirect potable reuse, and the long timeline for delivery of water per desalination.

Board expressed tentative endorsement of the following policy goals for the long term water supply portfolio, recognizing that tentative estimates place the cost of doing so between \$1,600 and \$2,000 per AF.

Potable Demand	75-80 residential gallons per person per day
Increase Reuse	No discharge to Bay 365 days (100%) per year
Increase Supply Portfolio Reliability & Variability	85%
Increase Local Control	At least 63% of demand satisfied by local and regional supplies
Reduce Concentration Risk	No more than 40% of supply originates from one source

Mr. Michalczyk stated that as next steps the Board will:

- Receive a final draft report on the study and be given an opportunity for further input; and
- Be asked to adopt a policy developed in alignment with the Study's conclusions which will establish a roadmap to pursue an attainable physical water solution.

No members of the public addressed the Board.

No formal action was taken.

6. ADJOURNMENT

President Duarte adjourned the meeting at 6:13 p.m.

Submitted by,
Nicole Genzale
Administrative Analyst I

For: Nancy G. Hatfield
District Secretary