The meeting teleconference will begin shortly

Listen to the meeting by using your computer or tablet speakers or by calling (877) 853-5247 using meeting ID 831-7559-3663

View the live meeting presentation at https://us04web.zoom.us/j/684456030
PASSCODE: 3802020

Public comments, suggestions or questions regarding technical issues may be emailed to comments@sbvmwd.com

Please use the chat feature in the Zoom toolbar to let the moderator know that you would like to make a comment during the meeting or use the digital "raise hand" function in Zoom.

Please mute your microphone during the meeting to reduce background noise. Click on the microphone icon to unmute your microphone if needed.

Call to Order

Board of Directors Workshop - Policy
Thursday, December 10, 2020

Chairperson – Director Longville
Vice-Chair – Director Kielhold

NOTICE REGARDING (COVID-19)

Before public comments are considered, the record will reflect that pursuant to the provisions of Executive Order N-29-20 issued by Governor Gavin Newsom on March 19, 2020, this meeting will be conducted by teleconference only.

Introductions

Following the introduction of Directors and District staff, participants may use this time to state their name and agency/affiliation in order to be included in the formal record of attendees.

Public Comment

Any person may address the Board on matters within its jurisdiction.

- *Please use the chat feature on the Zoom toolbar or digitally raise your hand to let the moderator know you would like to make a comment.*

Summary of Previous Meeting (Pg. 3)

Board of Directors Workshop – Policy – November 12, 2020

Presentations 4.1 (Pg. 8)

Bob Tincher, PE, MS – Chief Water Resources Officer/Deputy General Manager

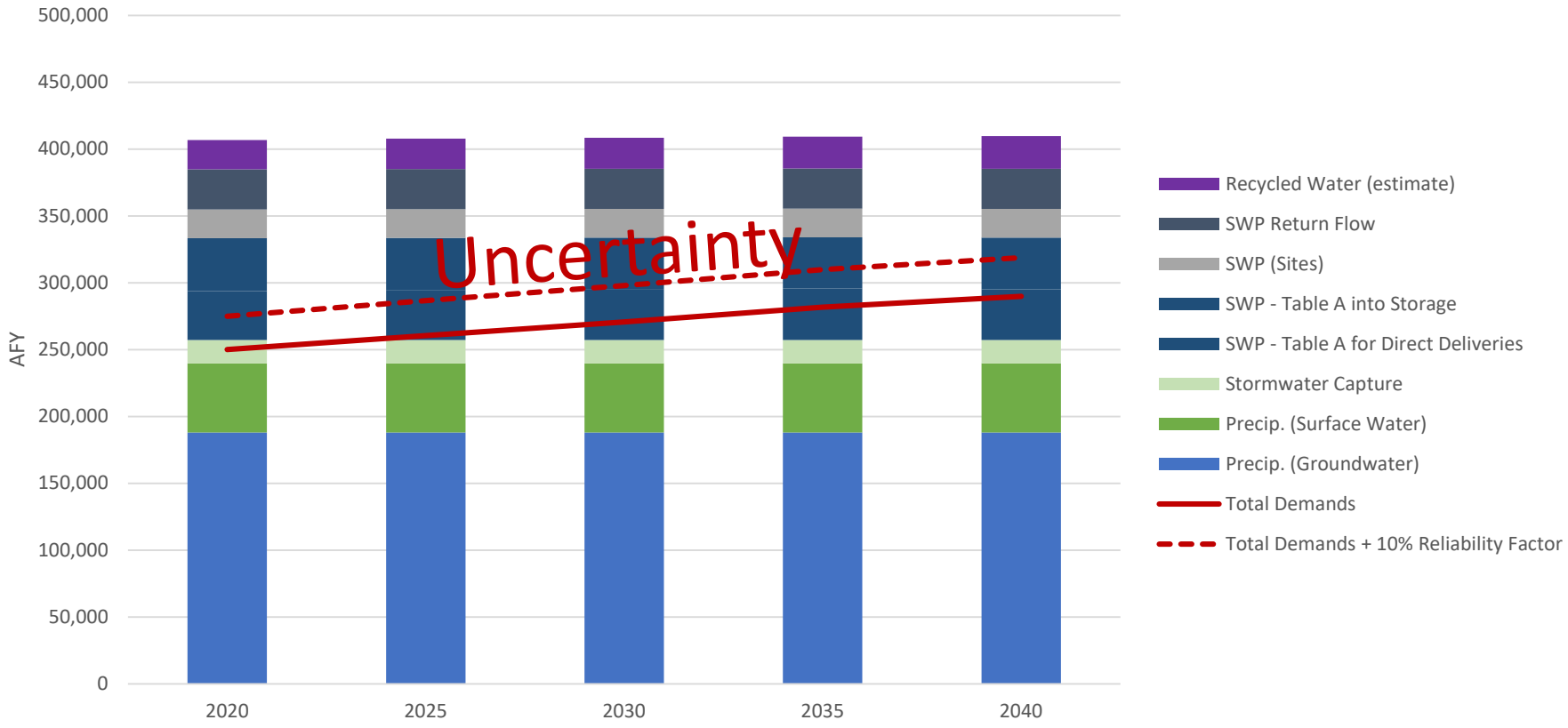
Presentation of the Draft Results of the RAND Review of Water Supplies and Demands

Staff Recommendation
Receive and file.

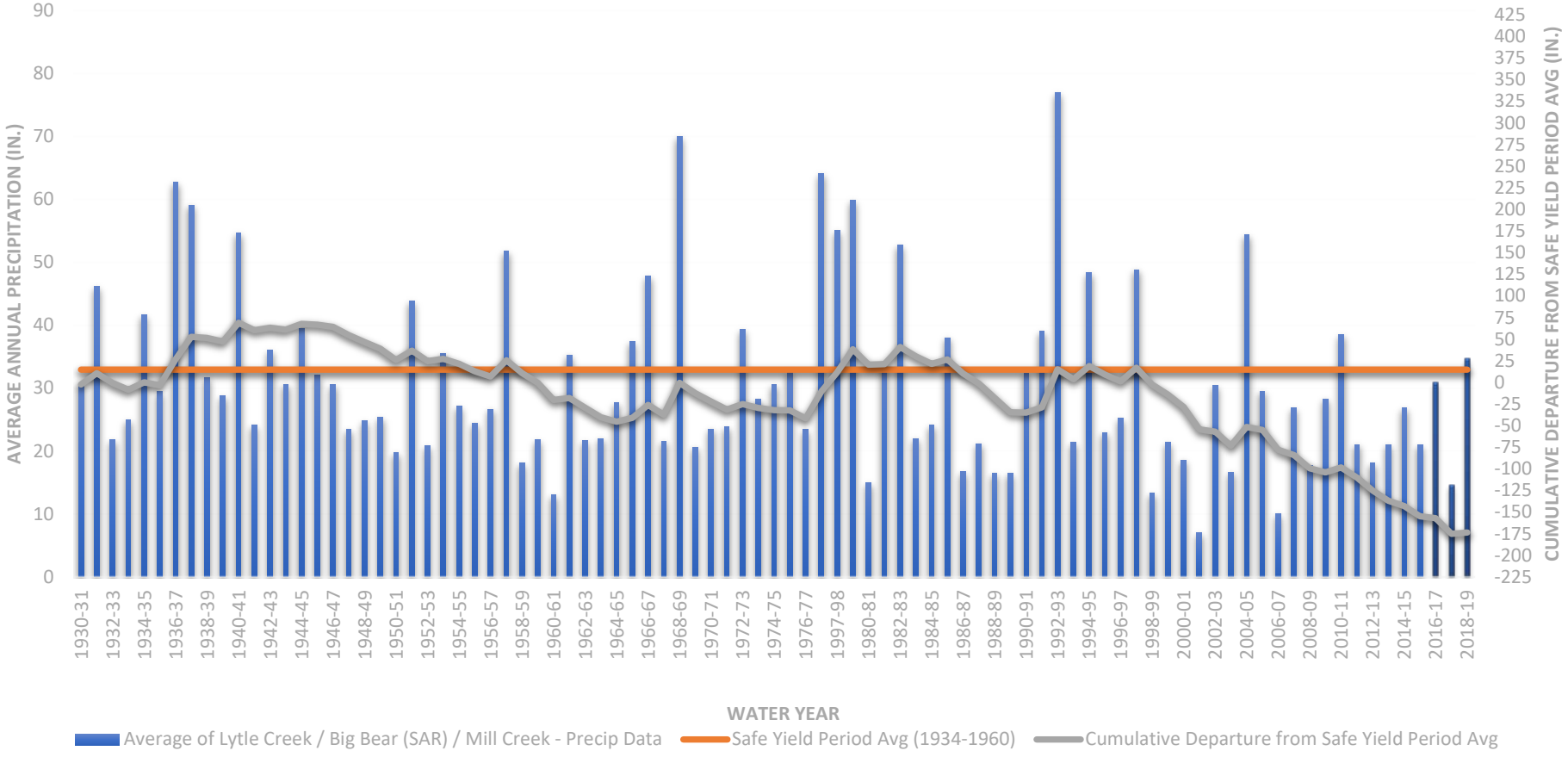
SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

Background

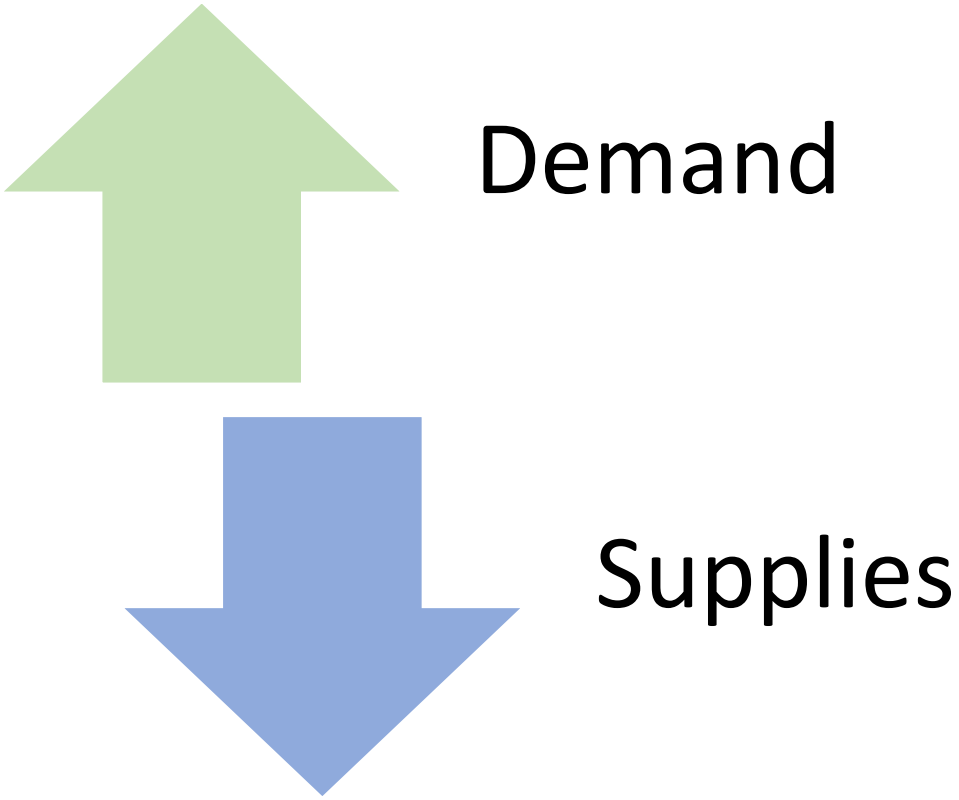
What if we are wrong?



A History of Droughts Longer than 3 Years



Evaluating Uncertainty



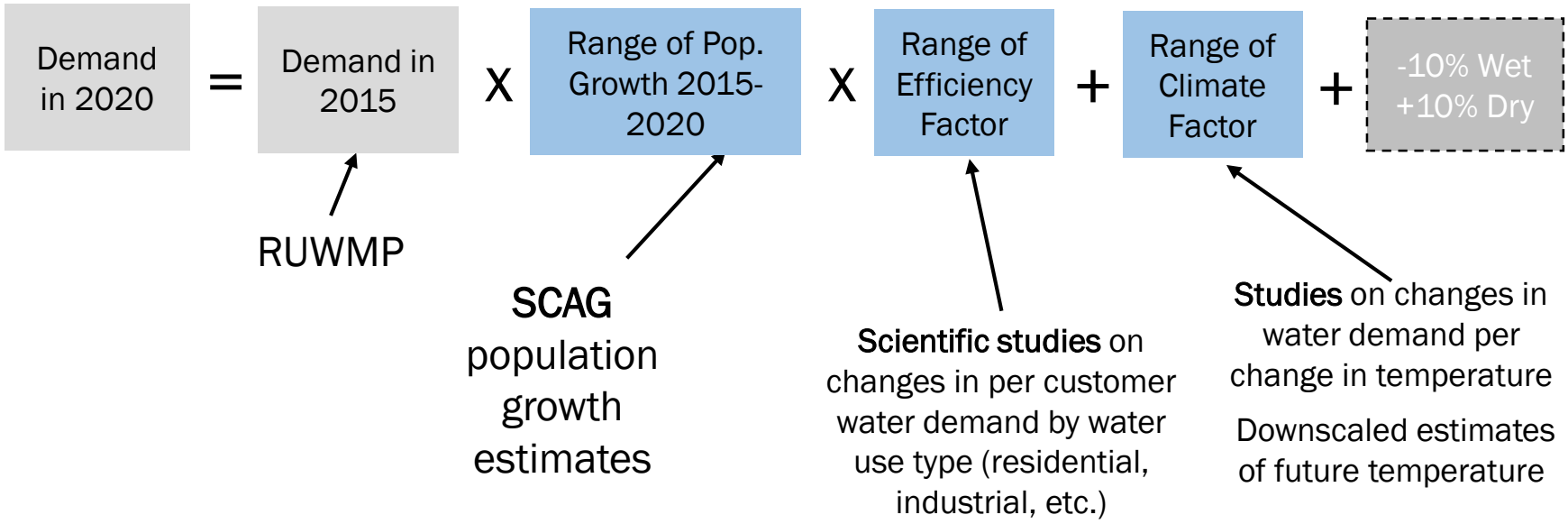
Identifying Vulnerabilities in San Bernardino Valley Municipal Water District's Demand and Water Supply Plans

Michelle E. Miro, David Groves,
David Catt, James Syme,
Stephanie Tanverakul

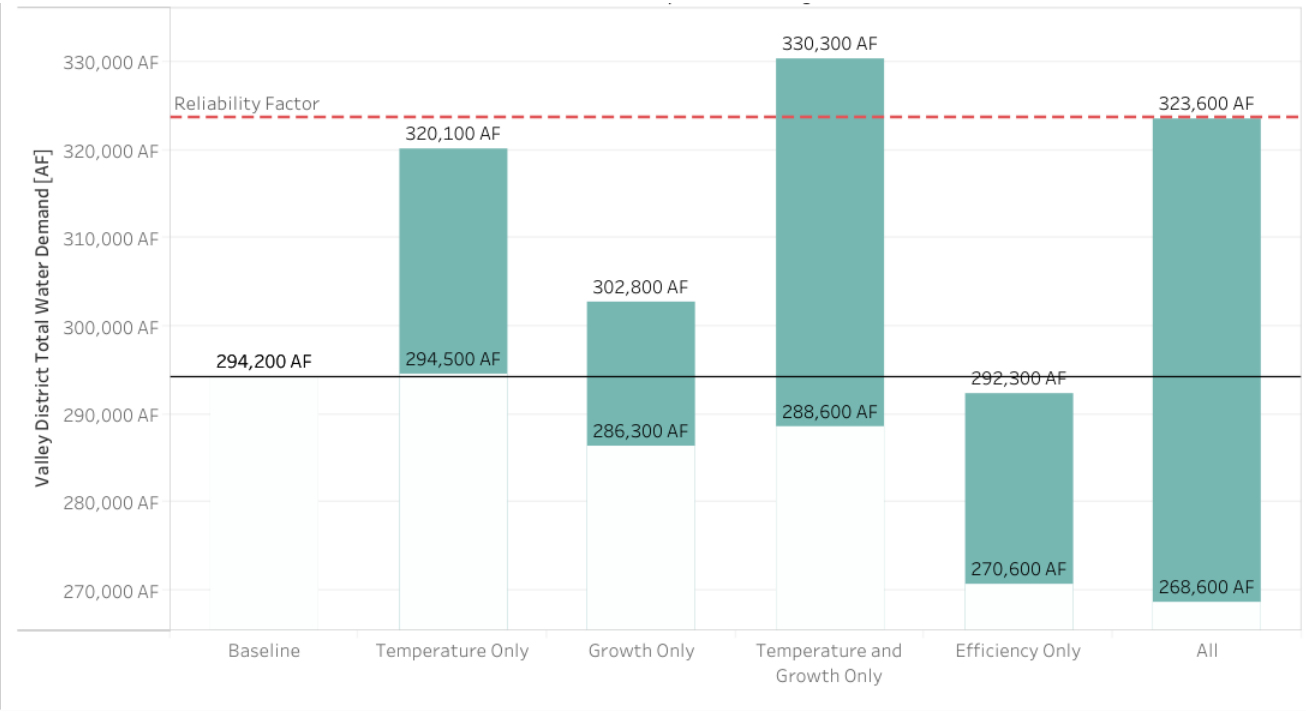
Agenda for today's meeting

- Review of demand study conclusions
- Water supply study objectives and outcomes
  - Modeling framework
  - Future uncertain factors
  - Key system vulnerabilities
  - Performance of planned strategies
  - Reliability factor
  - Future factors to monitor
- Final study steps

In the demand study, we developed a new method for projecting future demand with three additional factors



The demand study found that considering all uncertainties together leads to a range of 2040 demand that is approximately +/- 10% of the baseline



The demand study found that the new range of demand scenarios fell within the existing RUWMP Reliability Factor

- RAND analysis suggests:
  - Demand could exceed the Reliability Factor if temperature and population growth increases are not offset by efficiency.
  - The Reliability Factor (fixed 10%) does not change as conditions change in the future.
  - The Reliability Factor **does not consider uncertainties with supplies**.

This study focused on both supply and demand and carried out the following objectives:

1. Build on the results from the demand study
2. Evaluate the water supplies across a wide range of plausible futures
3. Define the key future supply vulnerabilities
4. Characterize whether key water supply investments will provide enough buffer in the future or if additional measures are needed
5. Quantify uncertainty in current water supply system and compare to reliability factor
6. Provide any temperature, precipitation or other signposts that signal when demands may exceed supplies

This study focused on both supply and demand and carried out the following objectives:

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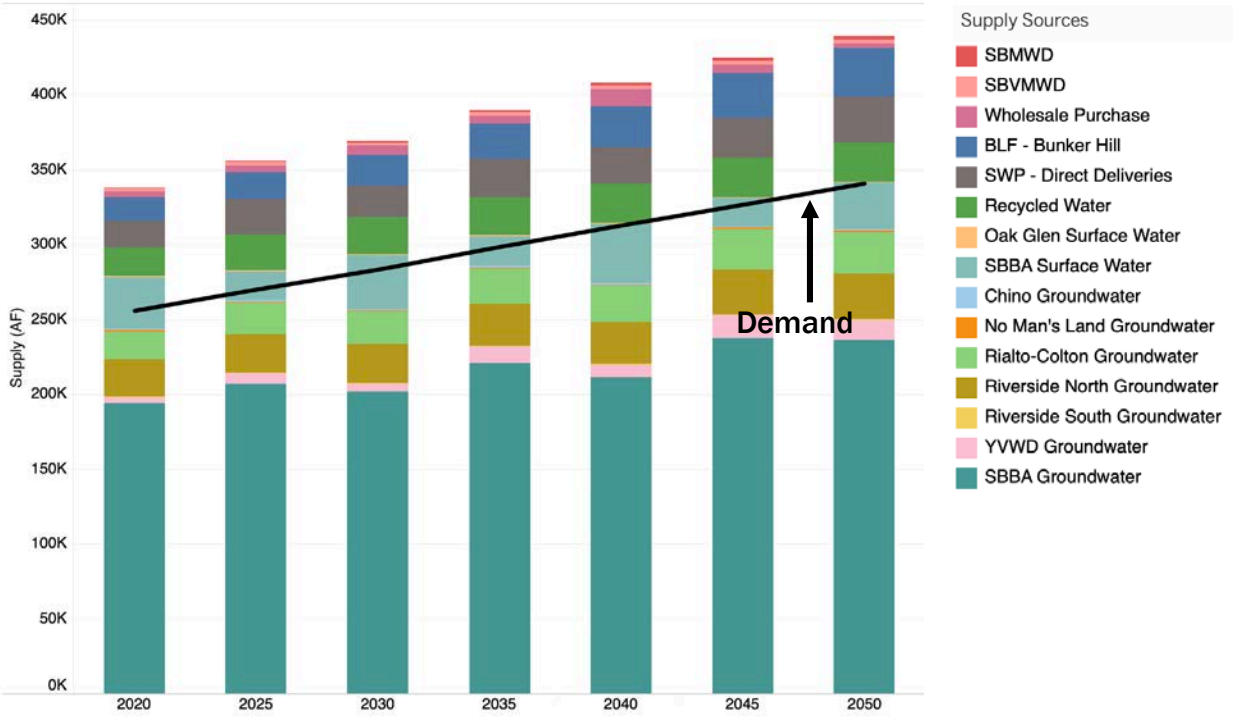
Under baseline assumptions, demand is met through a range of sources

Supply and Demand under baseline assumptions (AF)



We developed a three-part modeling framework to stress test Valley District's system

	Demand Model	Supply Model	Empirical Groundwater Model
Functions	*Calculates annual demands for 16 retail agencies*	*Determines supply needed to meet demand for 16 retail agencies and 16 different supply sources*	*Estimates annual change in groundwater storage for three groundwater basins*
		Includes sub-models for: - Imported water (California's State Water Project) - Local surface water	Our empirical model draws from a calibrated MODFLOW model of the regional groundwater system.
Outputs	**Annual demand (acre-feet) by retailer**	**Annual supply used (acre-feet) by retailer by source**	**Annual available groundwater storage (acre-feet) by basin**

We stress tested Valley District's UWMP Demands and Supplies against a wide range of future uncertainties

Category	Uncertainty Factors	Demand Model	Supply Model
Demographics	Population growth Per capita water use Temperature sensitivity of demand	X X X	
Climate	Future change in precipitation Future variability in precipitation Future change in temperature	 X	X X X
State Water Project imports	Infrastructure configurations Environmental regulations		X X
Local water supplies	Surface water availability		X

Resulting in 1,872 future scenarios

Modeling framework estimates changes in groundwater levels to 2050 under 1,872 future scenarios

Model process includes the following steps:

1. Select future scenario
2. Calculate annual demand by retailer (previous work)
3. Estimate SWP deliveries
4. Calculate annual supplies used by each retailer, including:
    1. Recycled Water
    2. Surface Water
    3. State Water Project Water, including Sites & Delta Conveyance
    4. Groundwater (annual pumping)
5. Estimate surplus supplies
6. Calculate annual change in groundwater level

We evaluate system "failure" using two metrics: loss in groundwater availability and excess groundwater demand

Groundwater availability thresholds:

- SBBA Threshold: 4,465,000 AF
  - *The threshold can be changed*

Excess groundwater demand:

- Demand above safe yield needs to be met with alternative supply(s)

Threshold from Geoscience work on usable storage

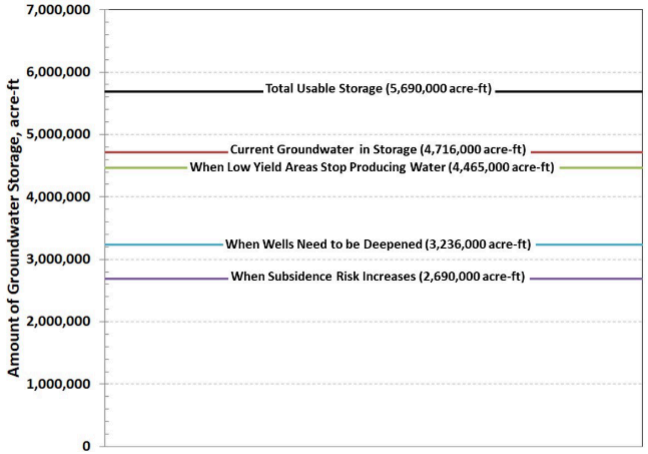


Figure 2-1. Total Usable Storage and Usable Groundwater in Storage – San Bernardino Basin Area

We evaluate system "failure" using two metrics: loss in groundwater availability and excess groundwater demand

Groundwater availability thresholds:

- Rialto-Colton Threshold: 127,8000 AF
  - *The threshold can be changed*

Excess groundwater demand:

- Demand above safe yield needs to be met with alternative supply(s)

Threshold from Geoscience work on usable storage

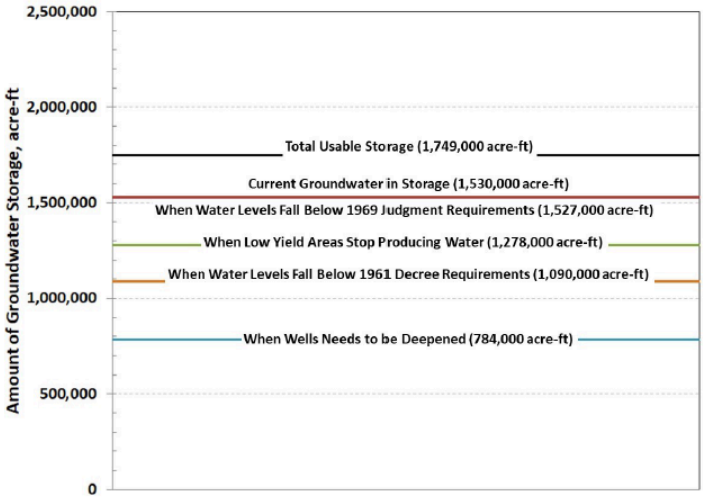
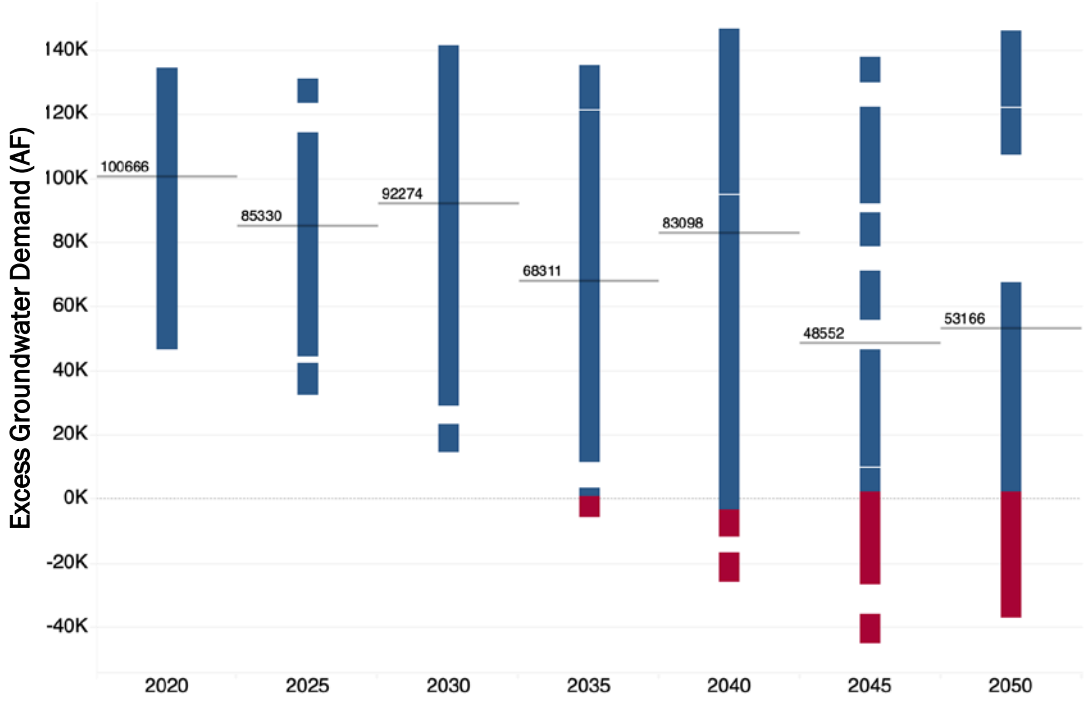


Figure 2-2. Total Usable Storage and Usable Groundwater in Storage – Rialto-Colton Basin

In the majority of future scenarios, Valley District has sufficient supply to meet demands

Interpreting the figure
Each square represents the gap between supply and demand under one of the 1,872 future scenarios. Positive values (blue squares) mean there is additional supply above demand. Negative values (red squares) mean there is more demand than available supply.



These scenarios include Sites Reservoir and Delta Conveyance

Futures with sufficient supply

Futures where groundwater demand exceeds available supply

- *Demand that would need to be met with alternative supply(s)*

This study focused on both supply and demand and carried out the following objectives:

1. Evaluate the water supplies across a wide range of plausible futures
2. Define the key future vulnerabilities
3. Characterize whether key water supply investments will provide enough buffer in the future or if additional measures are needed
4. Quantify uncertainty in current water supply system and compare to reliability factor
5. Provide any temperature, precipitation or other signposts that signal when demands may exceed supplies

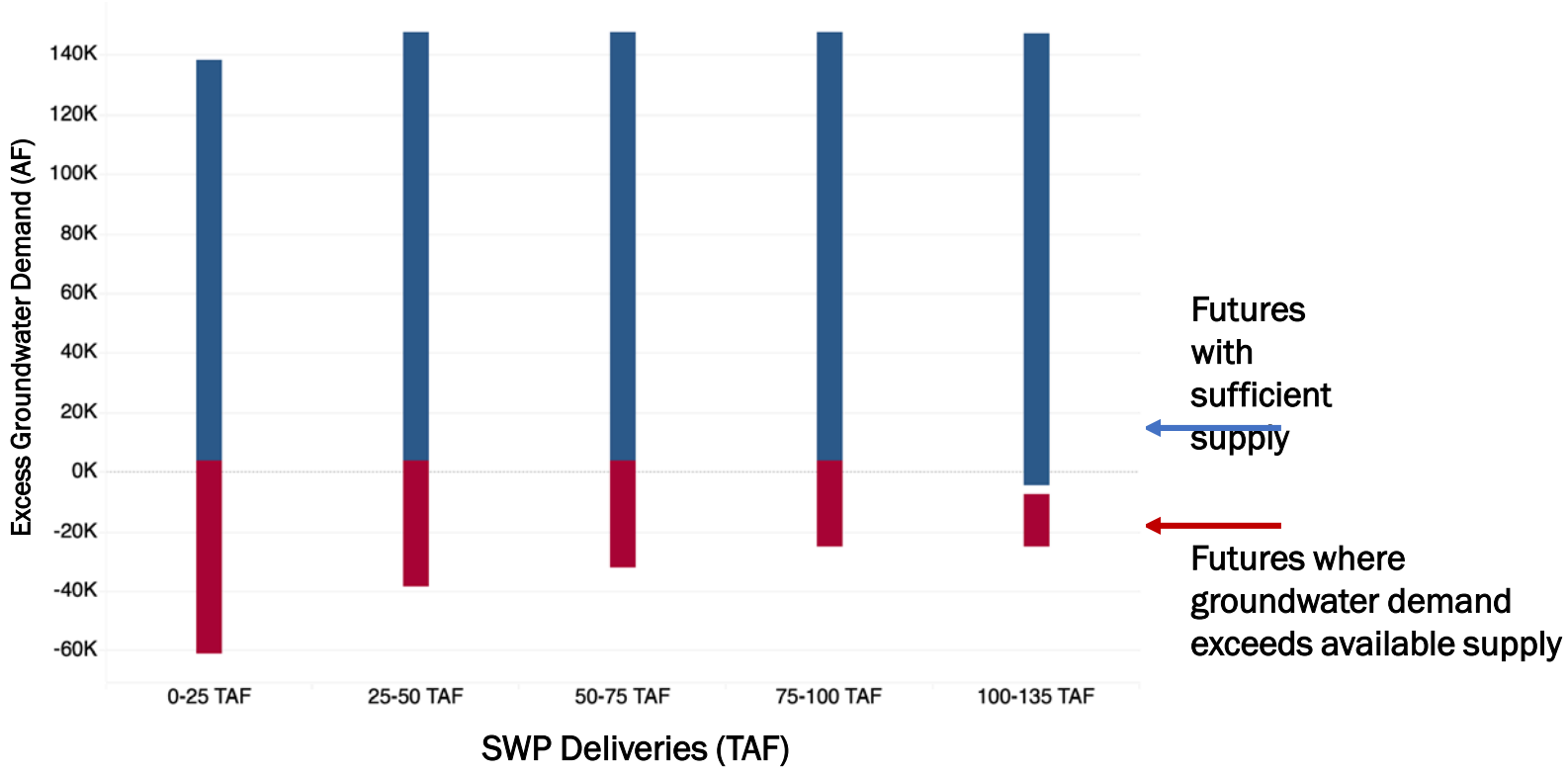
What future conditions would lead demand to exceed available supplies?

Key future vulnerabilities:

- High average annual population growth
- Long duration drought (20-30 years)
- Low SWP deliveries

Largest future gap between supply and demand is 56,374 AF

Futures in which demand exceeds available supply occur when SWP deliveries are low



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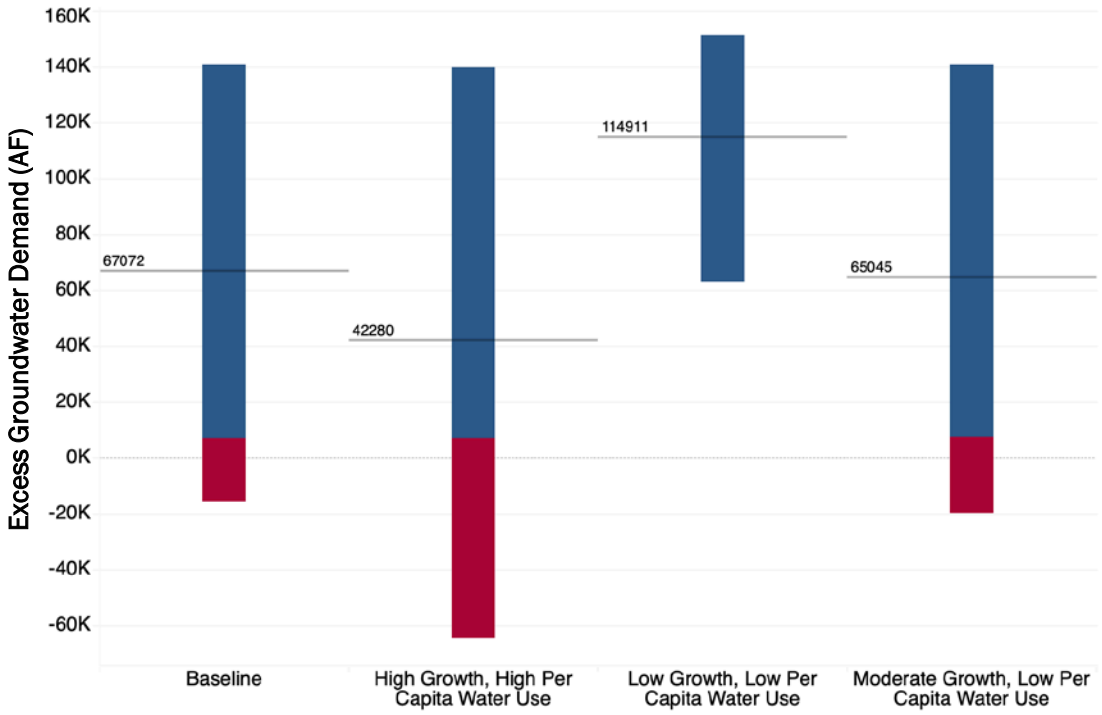
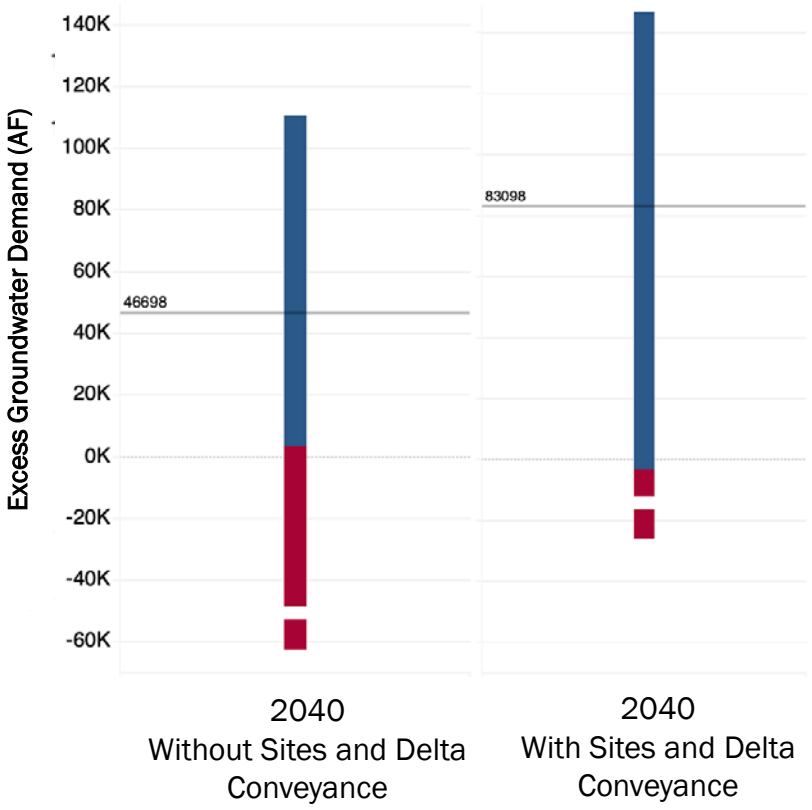
Demand management can reduce need for new water supply projects



Futures with sufficient supply

Futures where groundwater demand exceeds available supply

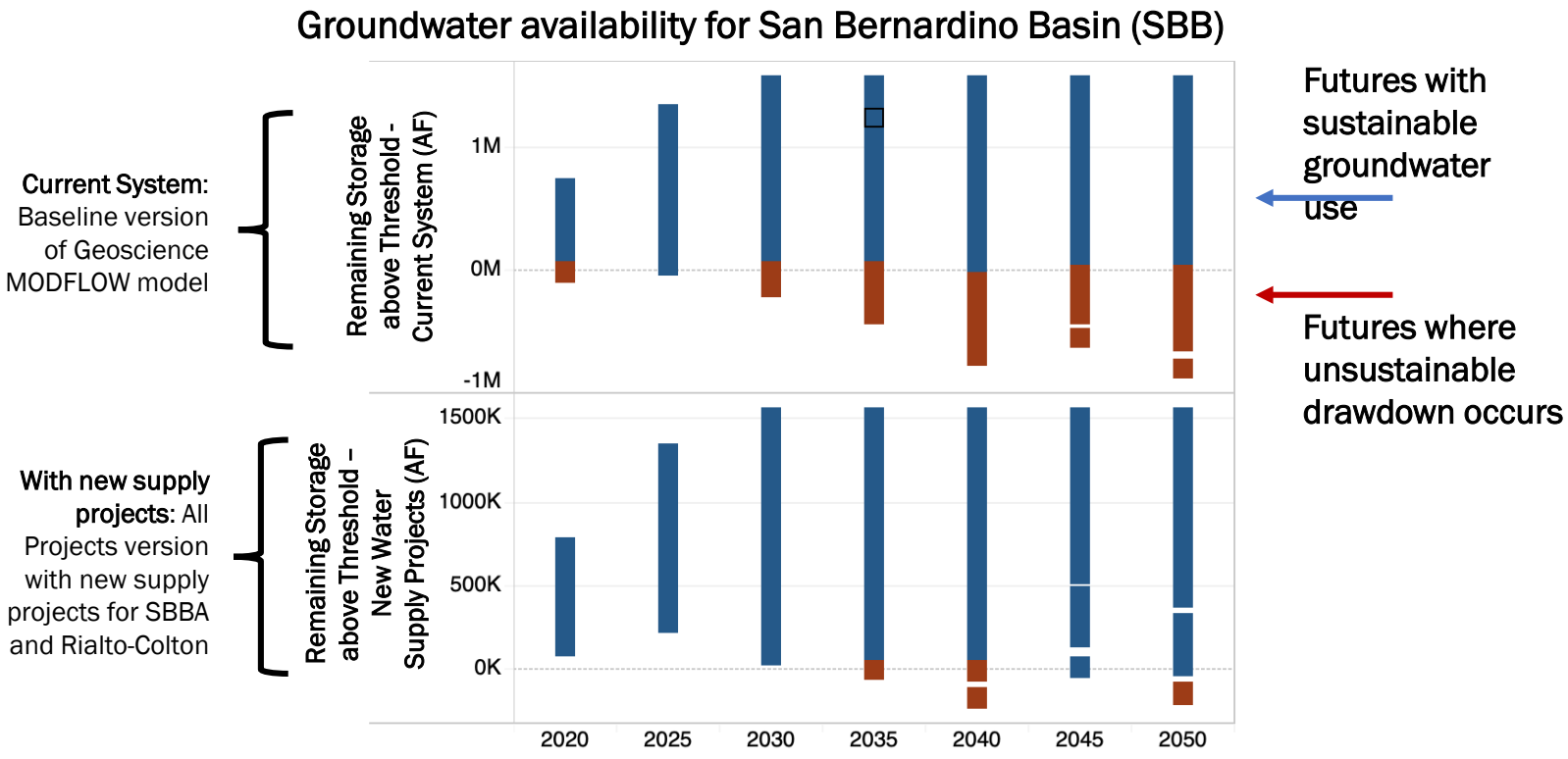
Investments in Sites and Delta Conveyance reduce future vulnerabilities



Futures with sufficient supply

Futures where groundwater demand exceeds available supply

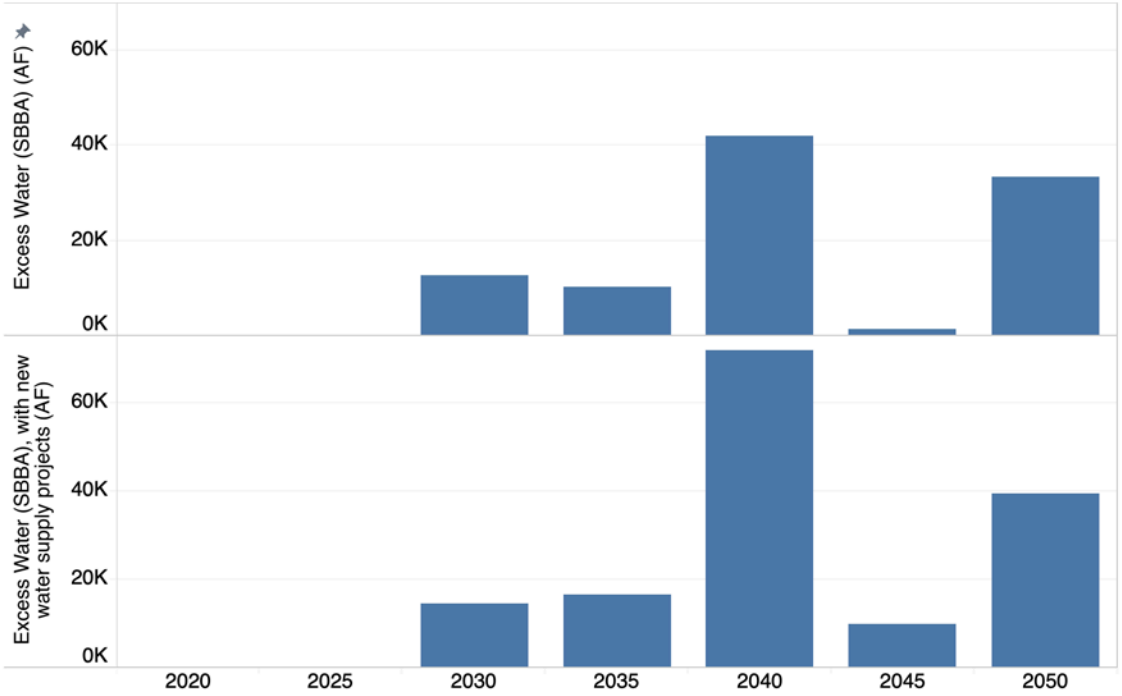
Results show that new supply projects may help Valley District overcome effects of future climate



Results also show that new supply projects may lead to surplus water supply when groundwater basins are full

The Valley District could explore options that would provide more freeboard and lower the amount of excess water

Average excess water above volume needed for groundwater replenishment (SBBA)



New water supply projects lead to additional excess supply

This study focused on both supply and demand and carried out the following objectives:

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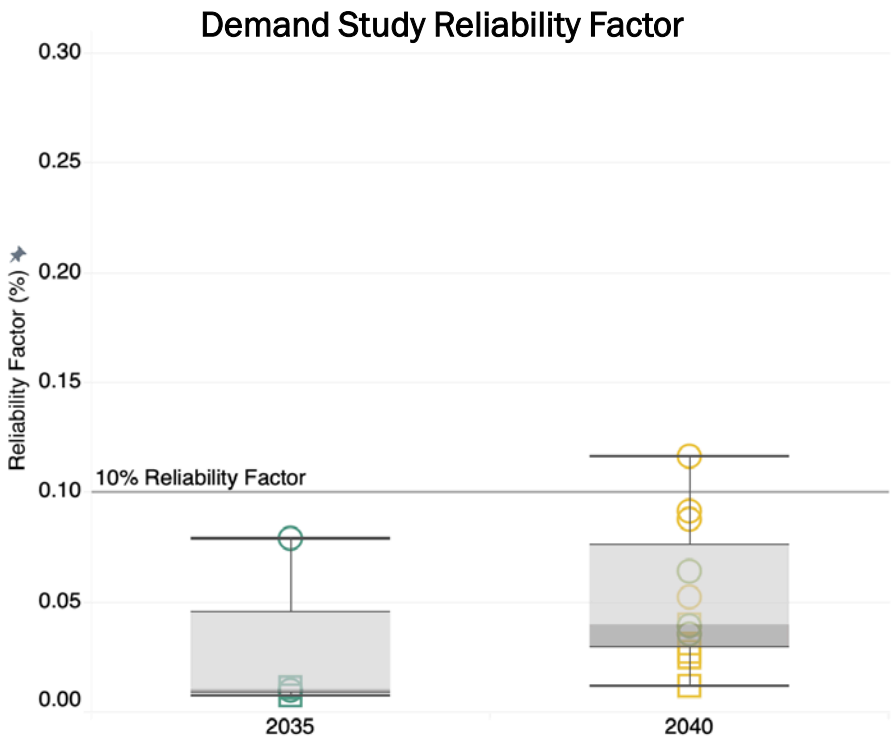
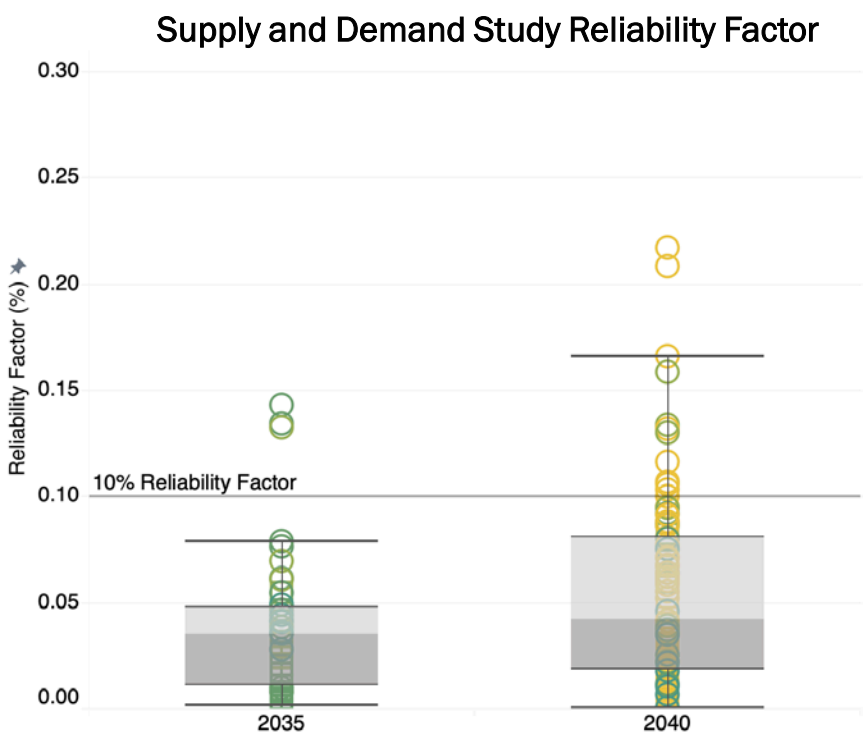
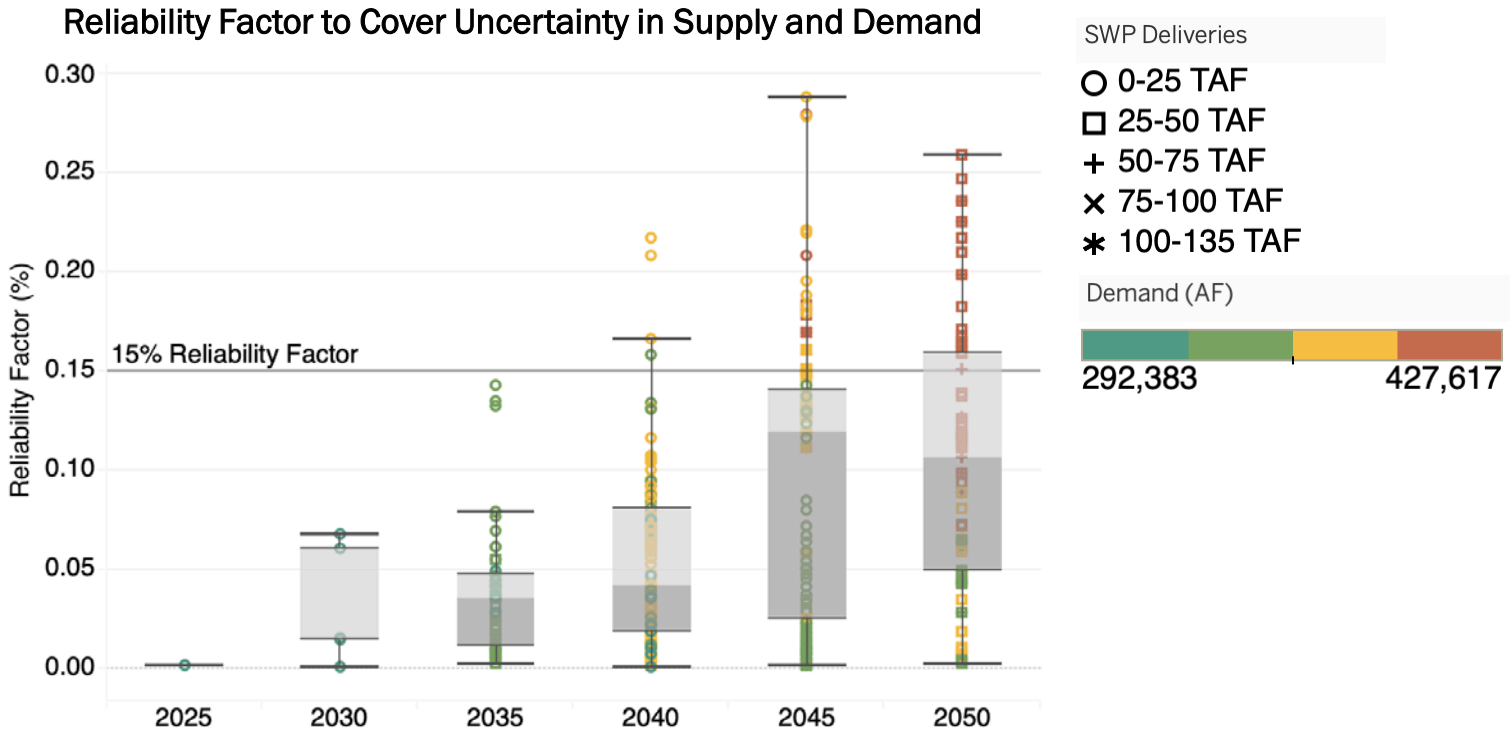
We found that when considering the additional uncertainties in supply a larger Reliability Factor may be needed





Each circle in these figures represent the reliability factor needed to cover gaps in future supply and demand

An adaptable Reliability Factor of 15% relative to baseline demands would cover uncertainty in supply and demand



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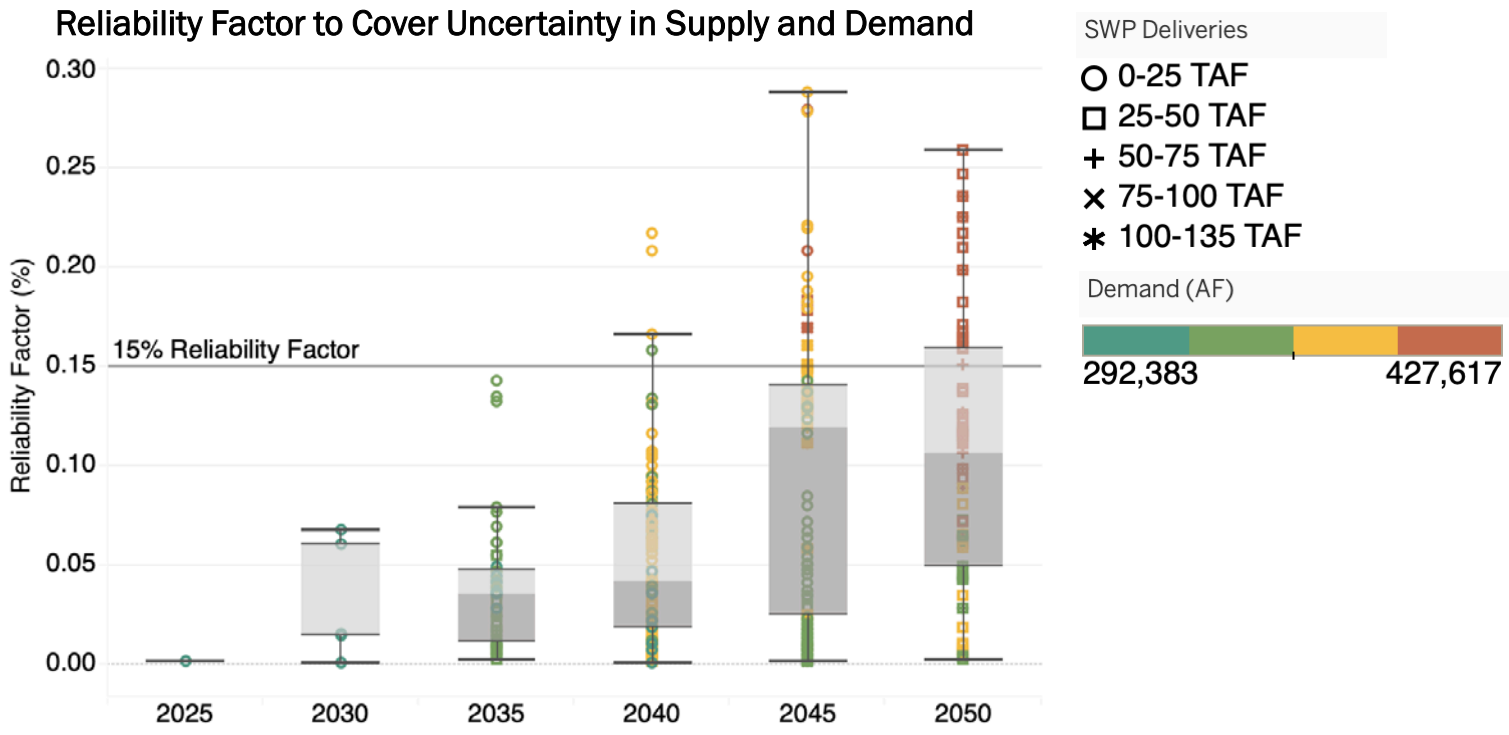
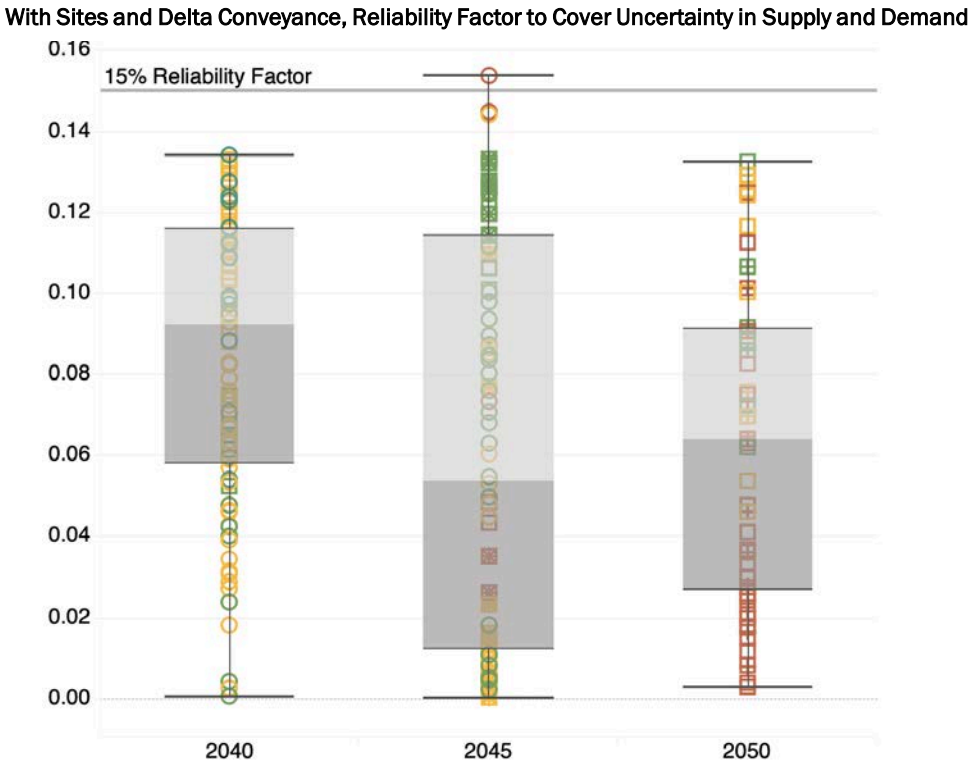
If SWP deliveries consistently dip below 50 TAF and demand exceeds 360,000 AF, the Valley District could consider adjusting the Reliability Factor above 15%



Once Sites and Delta Conveyance come online and deliver estimated supplies, a 15% Reliability Factor, or lower, may be sufficient



SWP Deliveries

- ○ 0-25 TAF
- □ 25-50 TAF
- \+ 50-75 TAF
- × 75-100 TAF
- ✱ 100-135 TAF

Demand (AF)

292,383 — 427,617

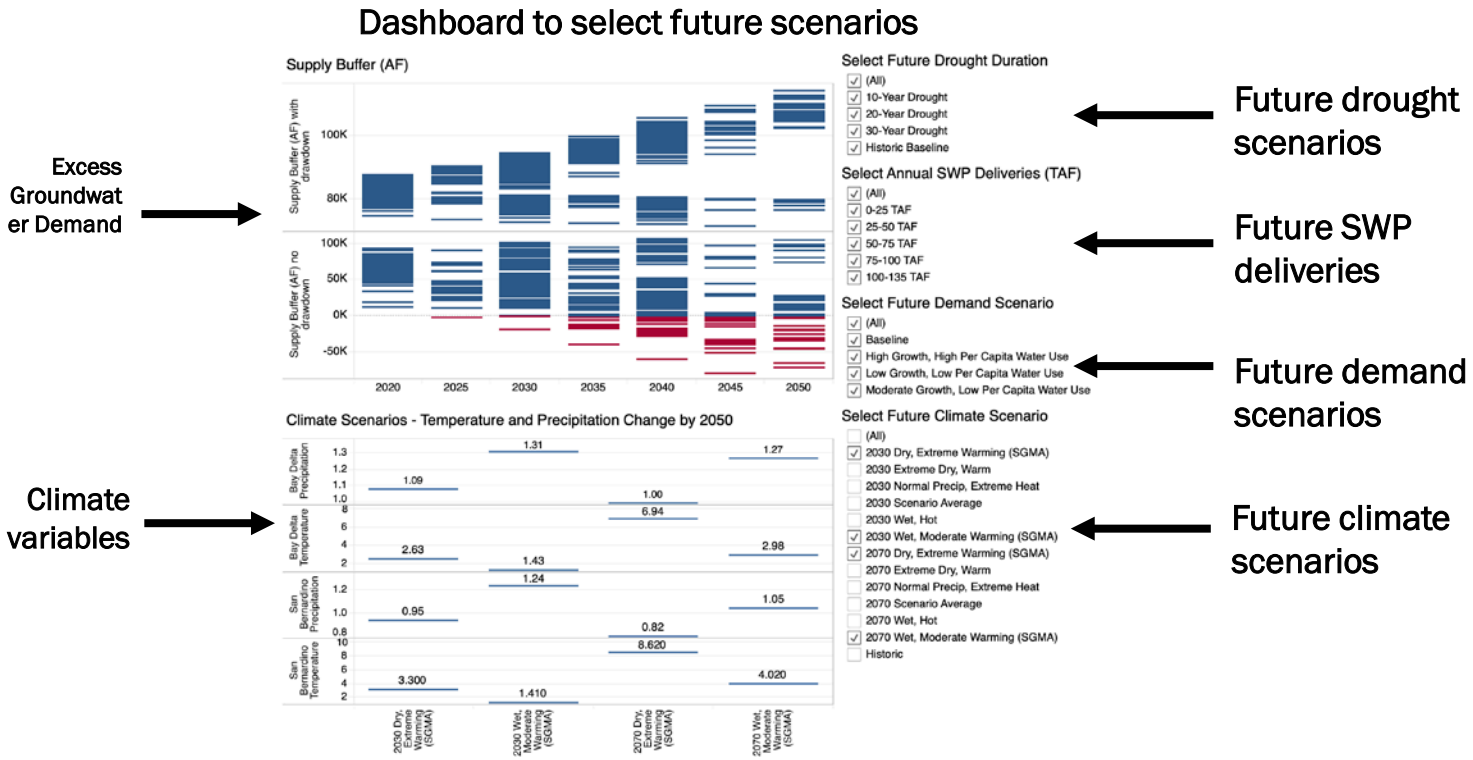
Predicted annual deliveries:

- Delta Conveyance: 15,000 AF
- Sites: 21,400 AF

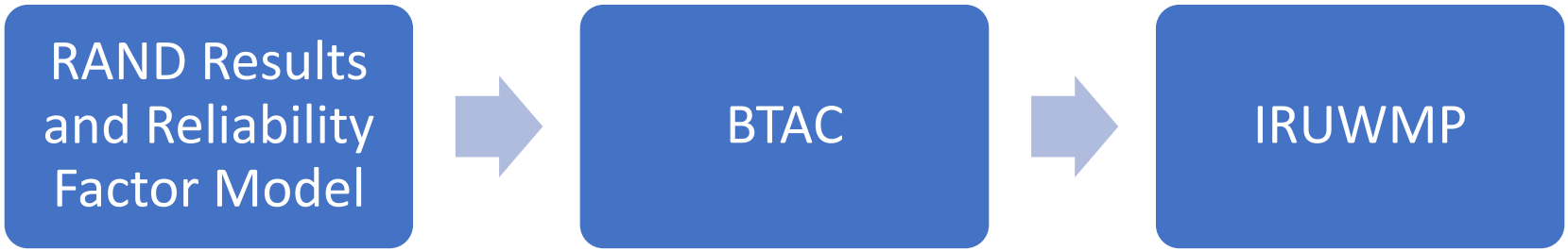
Agenda for today's meeting

- Review of demand study conclusions
- Water supply study objectives and outcomes
  - Modeling framework
  - Future uncertain factors
  - Key system vulnerabilities
  - Performance of planned strategies
  - Reliability factor
  - Future factors to monitor
- Final study steps

We are finalizing an interactive tool to support future planning and adjust the reliability factor

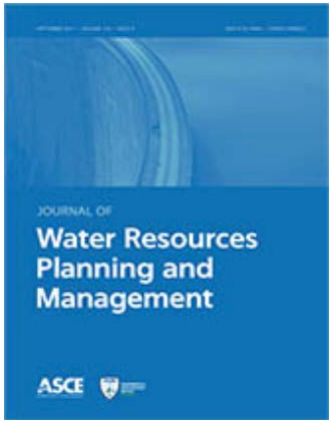


Use of the RAND Study Results



We will produce a final report as an academic journal article

- Manuscript will be available to the Board in January 2021
- Published per reviewer and journal timeline in 2021



Thank you

Director Comments and Discussion

T. Milford Harrison
President

Paul Kielhold
Vice President

Susan Longville
Treasurer

June Hayes
Director

Gil J. Botello
Director

Staff Recommendation

Receive and file.

Discussion Item 5.1 (Pg. 59)

Melissa Zoba, MBA, MPA – Chief Information Officer

Consider an Agreement with Western Audio Visual & Security for the Design, Installation and Service of Board Room Audio-Visual Equipment

Staff Recommendation

Staff recommends that the Board forward the agreement and service contract with Western Audio Visual & Security in the amount of $155,374.08 to the next regular meeting of the Board of Directors for consideration.

BACKGROUND

- Administration office was built in 2008
- Majority of existing AV equipment was installed at the time the District took occupancy
- Equipment has reached “end of life”
- Increased frequency of technical issues and reduced reliability
- 2019 ADA Compliance Inspection
  - Relocation of projector screen
  - Assistive listening device

REQUEST FOR PROPOSAL

- Design, Installation, & Service of all AV Equipment
- Pre–Proposal Site Walk at Admin Building
- Base Design Requirements
  - Replacement of speakers, wall displays, projection screen, microphones, ADA compliance
  - Ability to broadcast meetings via video teleconference or livestream
- 3-year Service Contract
- Provide Optional Recommendations

SUMMARY OF PROPOSALS

- Five (5) proposals received
- Evaluation Criteria
  - Vendor's Approach to the Project
  - Experience
  - Ability to Meet the Project Schedule
  - Cost and Price
  - References

Table 1 – Vendor Proposal Summary

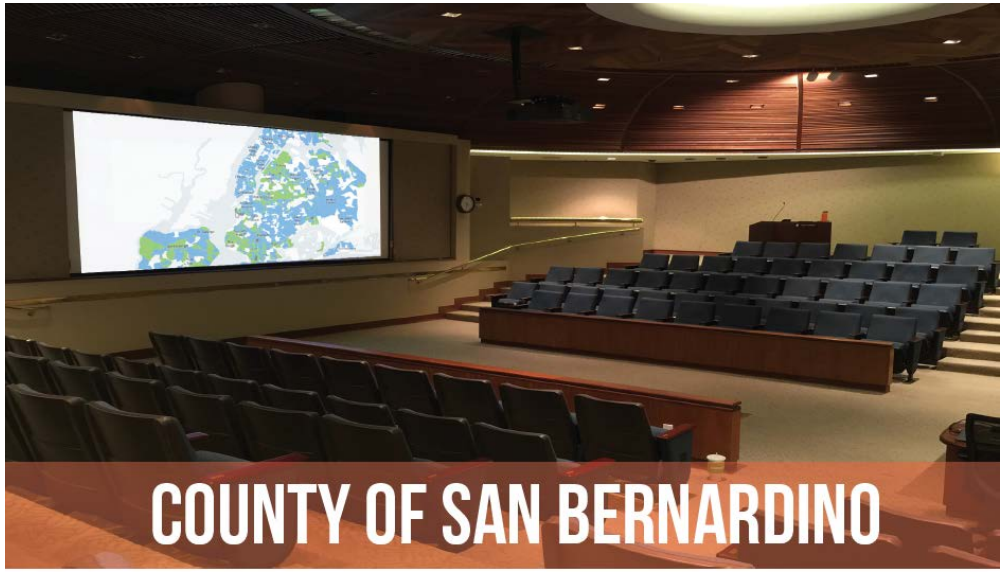
	Western Audio Visual	Vendor 2	Vendor 3	Vendor 4	Vendor 5
Equipment	$141,269.08	$97,118.23	$151,479.54	$162,397.29	$170,964.52
Service Contract	$14,105.00	$15,441.52	$6,400.00	$18,388.32	$12,933.11
TOTAL	**$155,374.08**	**$112,559.75**	**$157,879.54**	**$180,785.61**	**$183,897.63**

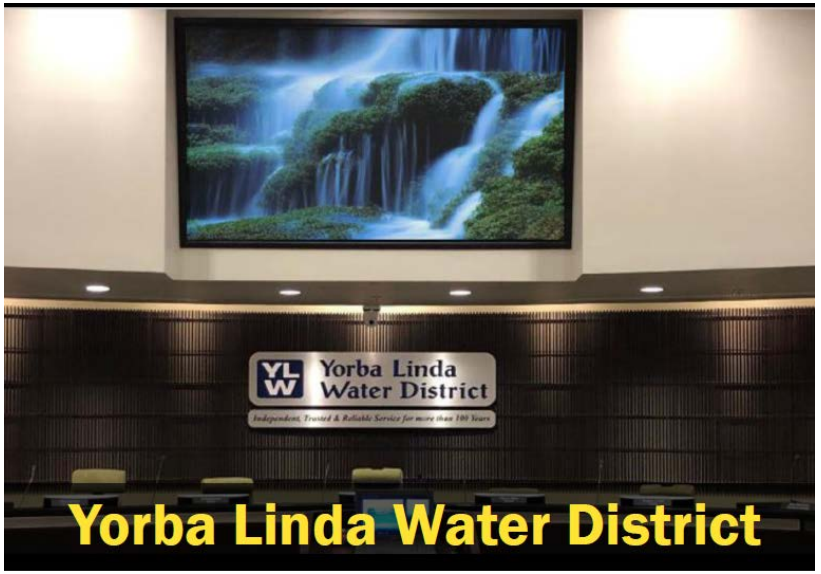
WESTERN AUDIO VISUAL & SECURITY

- 30+ years providing audio visual systems in the corporate, government, and education markets
- References and Recent Related Projects
- Project Approach
  - Wall displays to replace projection screen
  - 4 Pan, Tilt, Zoom (PTZ) cameras
  - Ability to broadcast meetings via video teleconference or livestream
- Optional Recommendations
  - Engineer's Console
  - Voting System


City of Chino
Council Chamber


City of Ventura
Council Chamber


COUNTY OF SAN BERNARDINO


YLW
Yorba Linda
Water District
Yorba Linda Water District

Proposed Design/Build Schedule

- Kick-off Meeting – Dec 2020/Jan 2021
- Develop Scope of Work
- Approval from Board for Any Optional Features
- Installation/Implementation
- Testing/Quality Control
- Training
- Tentative Project Completion – February 2021

Director Comments and Discussion

T. Milford Harrison
President

Paul Kielhold
Vice President

Susan Longville
Treasurer

June Hayes
Director

Gil J. Botello
Director

Staff Recommendation

Staff recommends that the Board forward the agreement and service contract with Western Audio Visual & Security in the amount of $155,374.08 to the next regular meeting of the Board of Directors for consideration.

Discussion Item 5.2 (Pg. 132)

Wen Huang, PE, MS – Chief Engineer/Deputy General Manager
Heather Dyer, MS, MBA – Chief Executive Officer/General Manager

Consider Amendment to Collaborative Agreement for Enhanced Recharge with San Bernardino Valley Water Conservation District and Western Municipal Water District

Staff Recommendation
Forward the amendment to the Collaborative Agreement to the next Board of Directors' meeting for consideration.

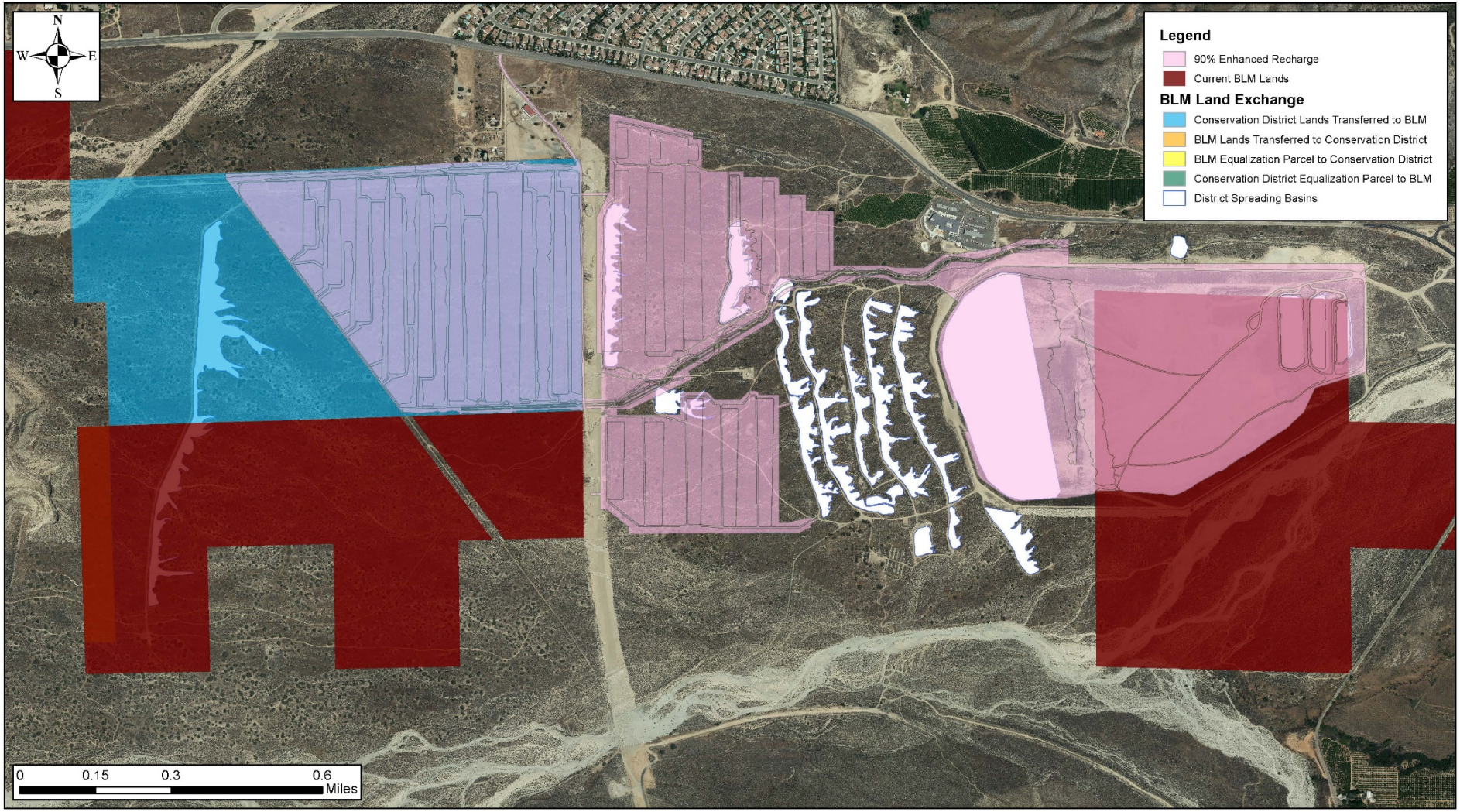
Background

- October 2012, the Board approved the Collaborative Agreement to Develop and Operate Enhanced Recharge Facilities with Conservation District and Western:
  - Initial term of 25 years
  - Lands owned by Conservation District and exchanged to be owned by the Bureau of Land Management (BLM) available to Valley/Western for construction of the Enhanced Recharge facilities for water conservation
  - Parties work collaboratively to best uses of their respective assets and skills to improve water supply reliability and for mutual benefit

90% Design Enhanced Recharge Phase 1B and BLM Current and Transfer Lands

Coordinate System:
NAD 1983 StatePlane California V FIPS 0405 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Source: SBVWCD, CASIL, SBVMWD
GIS Contact: Katelyn Scholte
M:\Enhanced Recharge\Phase 1B
November 17, 2020

San Bernardino Valley Water Conservation District
Helping Nature Store Our Water



Consideration

- BLM is concerned that the broad grant of rights under the provisions of the Collaborative Agreement could be read as expanding the rights of other parties, perhaps beyond Conservation District's historic activities.
- Ways suggested to resolve the concerns:
  - Require BLM's additional grants of right of way: may take years
  - ***Amendment*** to the Collaborative Agreement:
    - Clarify the leased rights to be limited to Conservation District's historic rights
    - Supported by BLM and Solicitor

Director Comments and Discussion

T. Milford Harrison
President

Paul Kielhold
Vice President

Susan Longville
Treasurer

June Hayes
Director

Gil J. Botello
Director

Staff Recommendation

Forward the amendment to the Collaborative Agreement to the next Board of Directors' meeting for consideration.

Discussion Item 5.3 (Pg. 224)

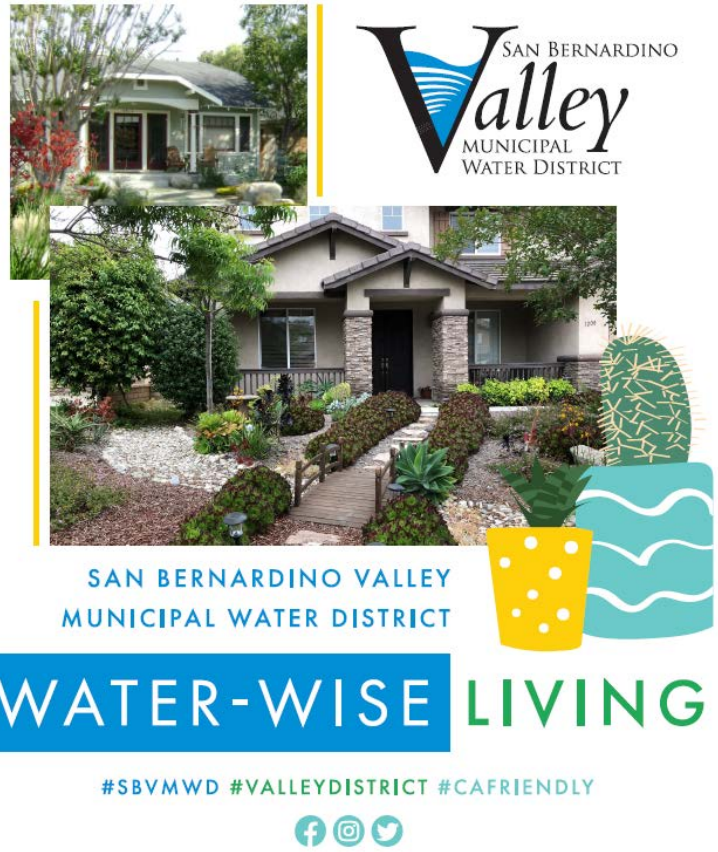
Kristeen Farlow, MPA – External Affairs Manager

Discuss the Purchase and Distribution of Reusable Grocery Bags

Staff Recommendation

Discuss the proposed graphics, purchase, and distribution of reusable grocery bags and provide direction to Staff.


WATER-WISE LIVING
#SBVMWD
#VALLEYDISTRICT
#CAFRIENDLY
San Bernardino
Valley
Municipal
Water District


San Bernardino
Valley
Municipal
Water District
SAN BERNARDINO VALLEY
MUNICIPAL WATER DISTRICT
WATER-WISE LIVING
#SBVMWD #VALLEYDISTRICT #CAFRIENDLY

Cost and Distribution

- Opportunities to distribute via the school lunch programs
  - Interest from SB City Schools, Rialto, Redlands, and Colton
  - Talking to Yucaipa-Calimesa and Fontana

- Cost is approximately $15,000 to purchase 5,000 bags

Director Comments and Discussion

T. Milford Harrison
President

Paul Kielhold
Vice President

Susan Longville
Treasurer

June Hayes
Director

Gil J. Botello
Director

Staff Recommendation

Discuss the proposed graphics, purchase, and distribution of reusable grocery bags and provide direction to Staff.

Future Business

Adjournment