



**SPECIAL NOTICE REGARDING
CORONAVIRUS DISEASE 2019 (COVID-19)
AND PARTICIPATION IN PUBLIC MEETINGS**

On March 4, 2020, Governor Newsom declared a State of Emergency resulting from the threat of COVID-19. Governor Newsom issued Executive Order N-25-20 (3-12-20) and Executive Order N-29-20 (3-17-20) which temporarily suspend portions of the Brown Act relative to conducting public meetings. Subsequent thereto, Governor Newsom issued Executive Order N-33-20 (3-19-20) ordering all individuals to stay at home or at their place of residence. Accordingly, it has been determined that all Board and Workshop meetings of the San Bernardino Valley Municipal Water District will be held pursuant to the Brown Act and will be conducted via teleconference. There will be no public access to the meeting venue.

**BOARD OF DIRECTORS WORKSHOP - RESOURCES
THURSDAY, FEBRUARY 4, 2021 – 2:00 P.M.**

PUBLIC PARTICIPATION

Public participation is welcome and encouraged. You may participate in the February 4, 2021, meeting of the San Bernardino Valley Municipal Water District online and by telephone as follows:

**Dial-in Info: (877) 853 5247 US Toll-free
Meeting ID: 979 215 700
PASSCODE: 3802020**

<https://sbvmwd.zoom.us/j/979215700>

If you are unable to participate online or by telephone, you may also submit your comments and questions in writing for the District's consideration by sending them to comments@sbvmwd.com with the subject line "Public Comment Item #" (insert the agenda item number relevant to your comment) or "Public Comment Non-Agenda Item". Submit your written comments by 6:00 p.m. on Wednesday, February 3, 2021. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record.

IMPORTANT PRIVACY NOTE: Participation in the meeting via the Zoom app is strongly encouraged. Online participants MUST log in with a Zoom account. The Zoom app is a free download. Please keep in mind: (1) This is a public meeting; as such, the virtual meeting information is published on the World Wide Web and available to everyone. (2) Should you participate remotely via telephone, your telephone number will be your "identifier" during the meeting and available to all meeting participants; there is no way to protect your privacy if you elect to call in to the meeting.



SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
380 E. Vanderbilt Way, San Bernardino, CA 92408

BOARD OF DIRECTORS WORKSHOP - RESOURCES

AGENDA

2:00 PM Thursday, February 4, 2021

CALL TO ORDER

Chairperson: Director Hayes

Vice-Chair: Director Harrison

1) INTRODUCTIONS

2) PUBLIC COMMENT

3) SUMMARY OF PREVIOUS MEETING

3.1 January 7, 2021, Meeting (Page 3)

[Summary Notes BOD Workshop - Resources 010721](#)

4) DISCUSSION ITEMS

4.1 Consider Geoscience Proposal to Calculate the Total Volume in Storage for the Yucaipa Basin and Subbasins (Page 7)

[Staff Memo - Consider Proposal to Calculate the Total Volume of Groundwater Storage for the Yucaipa Basin and Subbasins](#)

[Geoscience Proposal to Calculate the Volume in Groundwater Storage for Yucaipa Basin and Subbasins](#)

4.2 Presentation on Water Supply Conditions (Page14)

[Staff Memo - Presentation on Water Supply Conditions](#)

5) FUTURE BUSINESS

6) ADJOURNMENT

PLEASE NOTE:

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection in the District's office located at 380 E. Vanderbilt Way, San Bernardino, during normal business hours. Also, such documents are available on the District's website at www.sbvmd.com subject to staff's ability to post the documents before the meeting. The District recognizes its obligation to provide equal access to those individuals with disabilities. Please contact Melissa Zoba at (909) 387-9228 two working days prior to the meeting with any special requests for reasonable accommodation.



DATE: February 4, 2021
TO: Board of Directors Workshop- Resources
FROM: Staff
SUBJECT: Summary of January 7, 2021 Board of Directors Workshop – Resources

The Resources Workshop convened on January 7, 2021. Director Hayes chaired the meeting via video conference.

Directors Present: President Kielhold, Vice President Hayes, Director Harrison, Director Longville, and Director Botello

Staff Present:

Heather Dyer, MS, MBA – Chief Executive Officer/General Manager
Wen B. Huang, PE, MS – Chief Engineer/Deputy General Manager
Cindy Saks, CPA – Chief Financial Officer/Deputy General Manager
Bob Tincher, PE, MS – Chief Water Resources Officer/Deputy General Manager
Melissa Zoba, MBA, MPA – Chief Information Officer
Kristeen Farlow, MPA – External Affairs Manager
Matthew E. Howard, MS – Water Resources Senior Project Manager
Adekunle Ojo, MPA – Manager of Water Resources
Shavonne Turner, MPA – Water Conservation Program Manager

Members of the Public Present:

Jasmine Clark, Inland Empire Resources Conservation District
David Raley, San Bernardino Valley Water Conservation District
Melody McDonald, San Bernardino Valley Water Conservation District
Joyce McIntire, Yucaipa Valley Water District

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.

In recognition of historic events at the United States Capitol on January 6, 2021, Chair Hayes spoke about democracy and expressed thankfulness to the members of the Board, staff, and partners for working together for the good of the District and its mission.

3. Summary of Previous Meeting

The meeting notes from the December 3, 2020 meeting were reviewed with no comments.

4.1 Consider Amendments to the Geoscience Contract for the Upper Santa Ana River Integrated Model and the Related Balleau Groundwater Contract for Peer Review

Water Resources Manager Adekunle Ojo provided background on the development of the Upper Santa Ana River Integrated Model. This amendment will form the water quality component of the model, he explained. He requested the Board authorize contract amendments with Geoscience to complete the water quality model and with Balleau to provide a peer review.

If approved by the Board, the fiscal impact would be \$65,421, Ojo advised. He noted this will support a lot of water quality modeling, monitoring and compliance efforts in the future. Director Longville asked about other partners in the project such as other agencies along the river. Mr. Ojo confirmed that the report would include examination of factors that may be contributing to the decline in flows in the Santa Ana River as pointed out by Director Longville such as dryer, hotter conditions, longer droughts, and more extreme precipitation events. He assured that the results would be presented to the Board in the future and noted this component deals with water quality.

Director Longville asked whether the report would feed into the Salt and Nutrient Management Plan (SNMP); Mr. Ojo said it would, as this is the tool that will be used to do much of the computation and is the foundation of the SNMP work. CEO / General Manager Dyer noted that Geoscience has provided seven volumes of results, and this is an add on to incorporate nitrates, salt and nutrients into the model already built. The goal is to obtain a max benefit analysis and approval from the Regional Water Quality Control Board that the salt and nutrients in the basin can be managed.

Mr. Tincher added that the results of the modeling effort will be summarized for the Board at a future workshop.

Action Item(s): This item will be forwarded to a future Board Meeting for consideration.

4.2 Presentation of Water Conservation Education Biannual Report

External Affairs Manager Kristeen Farlow explained she had worked with Jasmine Clark of the Inland Empire Resources Conservation District (IERCD). She noted that 2020 was a challenging year, and programs transitioned to virtual offerings which were developed to accomplish the goal of conservation education.

Ms. Farlow detailed the student and adult programs which are all distance-learning materials for 2020-2021. She noted that 30 to 50 participants have attended landscape workshops and survey responses have been positive. Director Longville noted that the program titles seem vague; Ms. Clark explained that the titles are linked to an acronym (WISE-UP) and taglines are in development. She detailed the program content. Director Longville suggested including education on fixtures and promotion of rain barrels.

CEO / General Manager Dyer suggested using the more detailed descriptions which had been included in the proposal from IERCD. Director Hayes recommended use of catchier terms for marketing and Director Longville pointed out the Save Our Water tagline.

Ms. Farlow reported on marketing and outreach including social media, websites, and virtual flyers. She indicated that options such as Careers in Water and other events may need to wait until the next school year. Ms. Clark detailed the procedures for socially distanced drive through events. Director Longville suggested that additional water saving devices can be provided at drive through events, such as a toilet exchange or rain barrels.

Ms. Farlow reviewed the metrics for measuring the success of the programs.

Director Botello asked about plans to partner with workforce or community colleges in an effort to talk to young people about careers in water. He pointed to collaboration with the workforce regarding funding for specialized classes, industry-recognized certifications, and paid or non-paid internships. Ms. Farlow said she had spoken informally with others over the last year about this regional need, but this has not yet been formally embraced. She acknowledged workforce pending retirements and said she is open to ideas. Director Botello offered his assistance and noted there is funding from the Department of Labor through the County Workforce. In response to Director Hayes, Ms. Dyer noted that East Valley Water District offers a training program that could be built upon.

In response to President Kielhold, Ms. Clark listed other partners of IERCD in the program.

Action Item(s): Receive and File

4.3 Review List of Current Board Committees and Other Appointments

The list of District committee assignments was reviewed in detail. All directors informed the Board President of their particular interest in various committee assignments. Based on the discussion and input from all board members, the Board President will make committee assignments and will announce the completed list at a future board meeting.

Action Item(s): The Board President will make committee assignments and will announce the completed list at a future board meeting

5. Future Business

Director Botello requested a report from Water Conservation Manager Shavonne Turner. CEO / General Manager Dyer noted that a presentation is planned.

6. Adjournment

Staff Recommendation

Receive and file.



DATE: February 4, 2021

TO: Board of Directors Workshop - Resources

FROM: Matt Howard, Water Resources Senior Project Manager

SUBJECT: Consider Proposal to Calculate the Total Volume of Groundwater Storage for the Yucaipa Basin and Subbasins

Staff is recommending that the Board authorize a modeling study with Geoscience Support Services, Inc. (Geoscience) to calculate the total volume of groundwater storage for the nine (9) Subbasins that make up the Yucaipa Basin. The total cost of the study is \$14,158.

Background

Valley District calculates the change in groundwater storage each year for the San Bernardino, Rialto-Colton and Yucaipa Basins. The approach for this calculation was recently changed from a relative change in storage, as compared with a base year, to a total change in storage that takes into consideration the total usable storage down to bedrock.

The Sustainable Groundwater Management Act (SGMA) went into effect on January 1, 2015 and required the establishment of a Groundwater Sustainability Agency and the preparation of a Groundwater Sustainability Plan (GSP) for each unmanaged or un-adjudicated basins in California. The only principal basin or subbasin that falls in this category within the Valley District service area is the Yucaipa Basin. The Yucaipa Sustainable Groundwater Management Agency (SGMA) is currently working on a Groundwater Sustainability Plan for which Valley District staff is providing project and contract management services. The Yucaipa SGMA plans to divide the Yucaipa Basin into multiple management areas and would like to track the total storage for each of these management areas.

This proposed study would calculate the total volume in groundwater storage from bedrock to 50 feet below ground surface for the nine (9) Subbasins: Triple Falls Creek, Oak Glen, Gateway,

Crafton, Wilson Creek, Western Heights, Calimesa, Singleton, and Live Oak. These results can then be used by the Yucaipa SGMA to calculate the total usable storage for each management area in the Yucaipa Basin.

Staff is recommending that the Board consider funding this study which is consistent with the Total Usable Storage Project, funded by the Board, that included the San Bernardino, Rialto-Colton, Riverside and Arlington Basins.

Fiscal Impact

The amount of \$14,158 to cover this work is not included in the approved 2020-2021 General Fund Budget. However, funds are available in the same budget line item 6360-Consultants to cover this expense.

Staff Recommendation

Staff recommends the Board direct staff to place this item on a future Board of Directors regular meeting agenda for consideration.

Attachment

Geoscience Proposal to Calculate the Volume in Groundwater Storage for Yucaipa Basin and Subbasins

GEOSCIENCE

The First Name in Groundwater

January 26, 2021

Mr. Matthew Howard
Water Resources Senior Project Manager
San Bernardino Valley Municipal Water District
300 East Vanderbilt Way
San Bernardino, CA 92408-3593

Re: Scope of Work and Cost Estimate to Calculate the Volume of Groundwater Storage for Yucaipa Basin and Subbasins

Dear Matt:

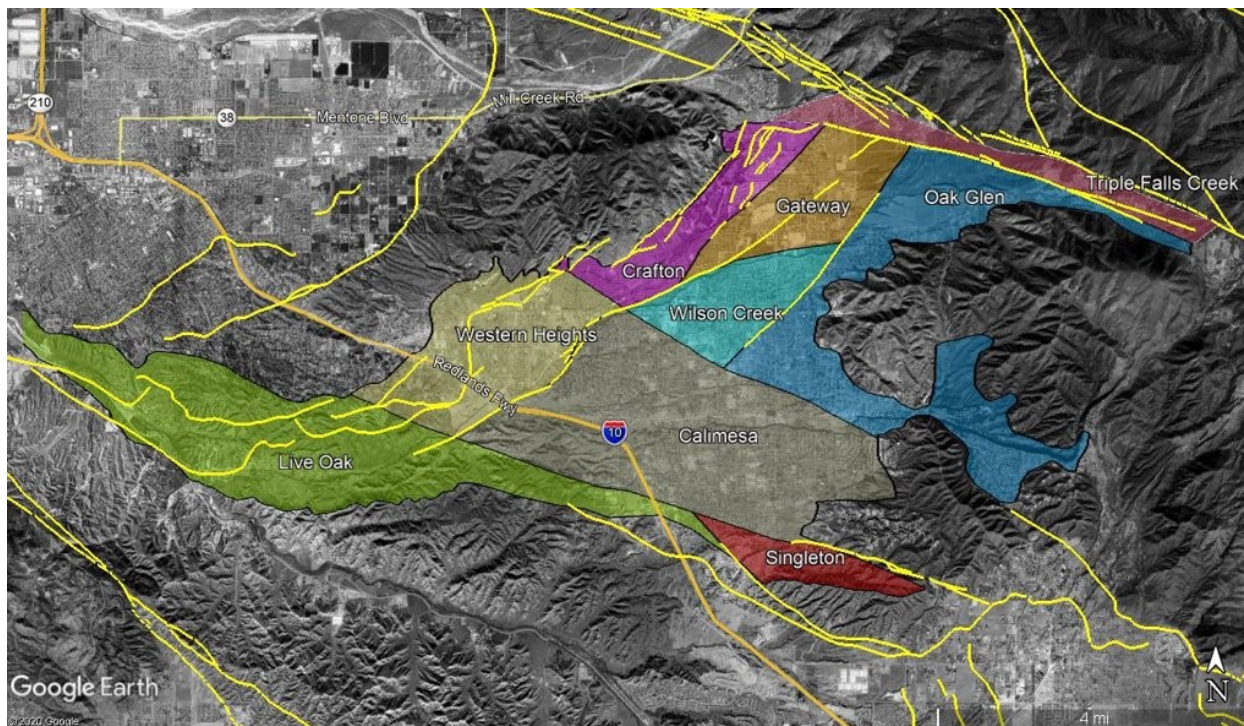
Per your request, Geoscience Support Services, Inc. (Geoscience) has prepared this scope of work and cost proposal to develop a technical memorandum that outlines methodology for calculating the total volume of groundwater storage in Yucaipa Basin and to perform that analysis on each of the nine existing Yucaipa Subbasins, shown on the figure below.

The scope of work includes:

- Task 1.0 – Calculate Total Volume of Groundwater Storage for each Yucaipa Subbasin
- Task 2.0 – Prepare Draft and Final Technical Memorandum including Methodology and Results from Task 1.0
- Task 3.0 – Prepare for and Attend Meeting

The following sections discuss the proposed scope of work, schedule, and cost estimate.

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Yucaipa Basin and Subbasins

Scope of Work

Task 1.0: Calculate Total Volume of Groundwater Storage for each Yucaipa Subbasin

The amount of groundwater storage is the volume of groundwater which can be stored between given water level and base elevation, and can be calculated using the equation below:

$$V = A * (WL - B) * SY$$

Where:

- V: Storage Volume
- A: Basin Area
- WL: Water Level Elevation
- B: Base Elevation
- SY: Specific Yield

2016 water level elevations will be used to calculate the total amount of groundwater storage in each Yucaipa Subbasin and total groundwater storage for the Yucaipa Basin.

Different base elevations can be used to calculate groundwater storage, depending on the goal of the analysis. Traditionally, usable groundwater storage calculations typically use the top of bedrock for the

base elevation. However, sediments in the Yucaipa Basin are very deep (estimated to be approximately 4,000 ft thick in the deepest area of the basin). The deepest well in the basin (WHWC Well 11) is drilled to 1,720 ft bgs and is screened from 1,210 to 1,690 ft bgs. For the purpose of this study, we propose to calculate two values groundwater storage using two base elevations: 1,700 ft bgs (representing the depth at which existing wells would go dry) and the top of bedrock (representing total groundwater storage).

To account for spatial variation of the parameters used to calculate the amount of groundwater storage, the existing model grids for the Upper Santa Ana River Integrated Model (Integrated SAR Model) will be used. The grid size of this model is approximately 100 ft by 100 ft. Therefore, the storage can be calculated using the following equations:

$$V_i = A_i * (WL_i - B_i) * SY_i$$

$$V_{MA} = \sum V_i$$

Where:

- V_i : Storage Volume in the i th Model Grid
- A_i : Area of Model Grid (100 ft x 100 ft)
- WL_i : Water Level Elevation in the i th Model Grid (2016 water levels)
- B_i : Base Elevation in the i th Model Grid (1,700 ft bgs or top of bedrock – see discussion above)
- SY_i : Specific Yield in the i th Model Grid
- V_{MA} : Total Amount of Groundwater Storage for a Given Yucaipa Subbasin

The 3-D lithologic model developed for the Yucaipa Groundwater Basin will be used to determine the specific yield for each model grid. Lithologic types in the lithologic model will be assigned a specific yield value based on those listed in the U.S. Geological Survey Water Supply Paper 1662-D¹.

Task 2.0 – Prepare Draft and Final Technical Memorandum including Methodology and Results from Task 1.0

A Draft Technical Memorandum (Draft TM) will be prepared to summarize project methodology and estimated groundwater storage for Yucaipa Basin and each Yucaipa Subbasin. The Draft TM will be submitted to Valley District for review and comment. A Final Technical Memorandum (Final TM) will then be prepared that incorporates all comments received on the Draft TM.

¹ Johnson, A.I. 1967. Specific Yield – Compilation of Specific Yields for Various Materials. United States Geological Survey Water-Supply Paper 1662-D. U.S. Department of the Interior, U.S. Geological Survey, in cooperation with the California Department of Water Resources, United States Government Printing Office: Washington.

Task 3.0 - Prepare for and Attend Meeting (Assumes One Meeting)

Geoscience will prepare for and attend one (1) meeting to explain the methodology used and present the results of the analysis to Valley District.

Schedule

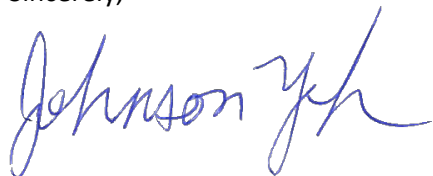
The proposed analysis is anticipated to take approximately 4 weeks from Notice to Proceed, including 2 weeks for the groundwater storage calculations and development of the Draft TM, 1 week for review, and 1 week to finalize the TM.

Cost Estimate

A breakdown of cost by subtask and anticipated staff participation is provided in attached Table 1. As shown, the total proposed cost is \$14,158.

If you have any questions, please contact us at (909) 451-6650

Sincerely,



Johnson Yeh, PhD, PG, CHG
Principal Geohydrologist
Encl.

**Cost Proposal for Professional Services to
Calculate the Volume of Groundwater Storage for Yucaipa Basin and Subbasins**

Task Description								
		Principal Modeler	Project Geohydrologist	Modeler III	Technical Illustrator	Labor	Reimbursable Expenses ¹	Total Cost
<i>Hourly Rate:</i>		\$270	\$195	\$189	\$119			
1.0	Calculate Total Volume of Groundwater Storage for each Yucaipa Subbasin (9 existing Subbasins)	2	2	32		\$ 6,978	\$ -	\$ 6,978
2.0	Prepare Draft and Final Technical Memorandum including Methodology and Results from Task 1.0	4	8	8	8	\$ 5,104	\$ -	\$ 5,104
3.0	Prepare for and Attend Meeting (Assumes 1 Meeting)	2	4	4		\$ 2,076	\$ -	\$ 2,076
TOTAL HOURS AND COST:		8	14	44	8	\$ 14,158	\$ -	\$ 14,158

Notes:

¹ Reimbursable Expenses include mileage and report reproduction costs.

GEOSCIENCE is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain “public works” and “maintenance” projects. The work GEOSCIENCE performs does not fall under prevailing wage rate categories.



DATE: February 4, 2021

TO: Board of Directors' Workshop - Resources

FROM: Bob Tincher, Chief Water Resources Officer/Deputy General Manager
Adekunle Ojo, Water Resources Manager

SUBJECT: Presentation on Water Supply Conditions

Water Resources staff will make a presentation on local and statewide water supply conditions to keep the Board and stakeholders informed about developing conditions. As always, Valley District encourages all customers to use water efficiently.

Background:

Precipitation in California is “feast or famine”, being highly variable from year to year with rapid shifts from very wet to very dry conditions. The water year starts in October and the state gets most of its rainfall from December through March. Valley District has developed a robust water supply portfolio consisting of demand reduction, imported surface water, local runoff/stormwater capture and recycled water. The region also has almost 9 million acre-feet of groundwater in storage. This diverse water supply portfolio supports a sustainable and reliable water supply for the San Bernardino Valley in drought conditions such as the 22-year drought the region is currently experiencing.

The purpose of this presentation is to review the water supplies for the current water year, the imported water orders for 2021 and some of the dry year purchase programs the Board may want to consider should the dry conditions continue.

Fiscal Impact:

There is no fiscal impact related to this item

Staff Recommendation:

Receive and File

Attachments:

None