



## **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. On September 16, 2021, Governor Newsom signed Assembly Bill No. 361 into law. Assembly Bill No. 361 amends Government Code section 54953(e) by adding provisions for remote teleconferencing participation in meetings by members of a legislative body, without the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions. The San Bernardino Valley Municipal Water District adopted a resolution determining, by majority vote, that, as a result of the declared State of Emergency, a meeting in person would present imminent risks to the health or safety of attendees. 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 - POLICY** **THURSDAY, AUGUST 11, 2022 – 2:00 P.M.**

#### **PUBLIC PARTICIPATION**

Public participation is welcome and encouraged. You may participate in the August 11, 2022, 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: 831 7559 3663**

**PASSCODE: 3802020**

**<https://sbvmwd.zoom.us/j/83175593663>**

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](mailto: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, August 10, 2022. 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 - POLICY**

**AGENDA**

**2:00 PM Thursday, August 11, 2022**

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**CALL TO ORDER**

Chairperson: Director Botello

Vice-Chair: Director Kielhold

**1) INTRODUCTIONS**

**2) PUBLIC COMMENT**

Members of the public may address the Board regarding any item within the subject matter jurisdiction of the Board; however, no action may be taken on off-agenda items except as authorized by law. Each speaker is limited to a maximum of three (3) minutes.

**3) SUMMARY OF PREVIOUS MEETING**

3.1 Board of Directors Workshop - Policy - July 14, 2022(Page 3)  
[Summary Notes BOD Workshop - Policy 071422](#)

**4) DISCUSSION ITEMS**

- 4.1 Quarterly Investment Portfolio Update from PFM Asset Management(Page 8)  
[Staff Memo - Quarterly Investment Portfolio Update with PFM Asset Management](#)  
[PFM Asset Management presentation on the District's investments through June 2022](#)
- 4.2 Consider the Fiscal Year 2022-2023 Cooperative Study Program with United States Geological Survey (Page 28)  
[Staff Memo - Consider the Fiscal Year 2022-2023 Cooperative Study Program with United States Geological Survey](#)  
[Draft Cooperative Study Program for Fiscal Year 2022-2023](#)
- 4.3 Discuss Strategic Communications and Engagement Plan: Branding & Logo(Page 41)  
[Staff Memo - Strategic Communications and Engagement Plan - Branding & Logo](#)

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](http://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.



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**DATE:** August 11, 2022  
**TO:** Board of Directors Workshop – Policy  
**FROM:** Staff  
**SUBJECT:** Summary of July 14, 2022, Board of Directors Workshop – Policy

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The Resources Workshop convened on July 14, 2022. Director Botello chaired the meeting via video conference.

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

Directors Absent: Director Harrison

Staff Present:

Heather Dyer, MS, MBA – Chief Executive Officer / General Manager  
Jose Macedo, ML, CPT-P (USA Retired) – Chief of Staff / Clerk of the Board  
Cindy Saks, CPA – Deputy General Manager / Chief Financial Officer  
Bob Tincher, PE, MS – Deputy General Manager/Chief Water Resources Officer  
Melissa Zoba, MBA, MPA – Chief Information Officer

Kristeen Farlow, MPA – Strategic Communications Manager  
Anthony Flordelis – Business Systems Analyst  
Adekunle Ojo, MPA – Water Resources Manager  
Karen Resendez, MA – Human Resources / Risk Manager  
Shavonne Turner, MPA – Water Conservation Program Manager

Olivia Ramirez – SBVMWD Intern

Members of the Public Present:

Chris Mann, Yucaipa Valley Water District  
Melody McDonald, San Bernardino Valley Water Conservation District  
Robert Stewart, San Bernardino Valley Water Conservation District  
Jackson R. Gualco, Gualco Group

## **1. Introductions**

Chief Executive Officer / General Manager Heather Dyer introduced staff members present. President Kielhold introduced San Bernardino Valley Water Conservation District Directors Robert Stewart and Melody McDonald.

## **2. Public Comment**

Chair Botello invited public comment. There was none.

## **3. Summary of Previous Meeting**

The meeting notes from the June 9, 2022, Board of Directors Workshop - Policy were accepted with no corrections.

### **4.1 State and Federal Legislative Update**

Strategic Communications Manager Kristeen Farlow introduced Jack Gualco of the Gualco Group.

Mr. Gualco advised that the State legislature is on break for the month of July. The budget is large, and refunds will be returned to drivers to offset the high price of gas, he noted.

Watershed Connect will depend on how the drought and wildfire portions of the budget are worked out in August, Mr. Gualco said, so there is not much information expected before the Labor Day weekend.

The Legislature returns on August 1, and fiscal committees must wrap up by August 12, Mr. Gualco stated. They will be dealing with items on the floor between August 15 and 31. The Governor then has 30 days to decide on signing or vetoing bills, or allowing them to become law without signature.

About 24 members of the legislature have decided to retire or leave, Mr. Gualco noted.

Mr. Gualco updated the Board on the following bills:

- AB 2142 Turf replacement: The bill is in the Appropriations Committee and will be addressed upon the return of the legislature.
- AB 2449 Open Meetings (Three Valleys): The scheduled hearing has been delayed but there is no problem with the bill. It allows for continued use of remote

participation by both the public and directors and would allow locations to be private provided a quorum of the Board is otherwise present.

- SB 230: Metropolitan Water District sponsored bill on constituents of emerging concern: In the Assembly Appropriations Committee
- SB 1020 Requirement for renewable energy purchases by State agencies: Primarily falls on the Department of Water Resources. Mr. Gualco said he has been involved on the District's behalf as part of the State Water Contractors group of lobbyists to assure that issues which could drive increased costs are ameliorated as much as possible.
- SB 833 Community Energy Resilience Act of 2022: Sets up a process for local governments to receive grants through a non-competitive process. It is limited to cities and counties and is intended to be a gap filler. It will be heard by the Assembly Appropriations Committee upon the return of the Legislature.
- SB 852: Would allow set up of climate resilience districts to allow redevelopment authority to be established by a city or county. Special districts can participate if the effort is initiated by a city or county. It provides additional tax increment financing for steps needed to deal with climate change on a local level. Opposition comes mainly from the Chamber of Commerce and the California Taxpayers Association.

Director Longville pointed out that SB 852 is the enhanced infrastructure financing districts which has been a large part of the work of the infrastructure funding alliance.

Ms. Farlow reported that the House Appropriations Committee has released all 12 bills and the Senate is expected to release theirs in July. They will be considered in August when the Legislature returns, and it should be a quick turnaround.

The lobbyist for the Habitat Planning Coalition, Innovative Federal Strategies, has been working with the U.S. Fish and Wildlife Service on changes to the Notice of Funding opportunity for Section 6 grants, Ms. Farlow reported. The changes would be helpful to practitioners in easing some of the requirements when seeking those grants.

Thanks to the District's efforts in working closely with Representative Pete Aguilar, through the House Appropriations Committee the language for Seven Oaks Dam regarding the non-federal entities working with the U.S. Army Corps of Engineers to capture and release water into groundwater basins was included, Ms. Farlow advised.

**Action Item(s):** Receive and file.

#### **4.2 Discuss Additional Sponsorships for FY 22-23**

Chief Executive Officer / General Manager Heather Dyer pointed to the list of approved sponsorships as identified at the Budget Workshop on June 14, 2022, including a \$6,000 budget line for Miscellaneous Potential Sponsorships to be determined that would allow consideration of other opportunities that come up throughout the year.

Director Botello had requested information on The Climate Center and Water Education for Latino Leaders (WELL), Ms. Dyer continued. She briefed the Board on both organizations and sponsorship levels.

Chair Botello reiterated his support for both organizations. He said The Climate Center has been educational and is a worthwhile effort and recommended a sponsorship of \$3,000. He said he had attended a conference of the WELL group, which is not only for Latino leaders but also elected officials who represent Latinos. He recommended a sponsorship of \$2,500.

President Kielhold asked about The Climate Center purpose to “rapidly reduce climate pollution.” Director Botello mentioned that Director Longville is on the Board of Directors. He pointed to the webinars presented and emphasized the tie of climate change to negative impacts to life on earth, many times connected to water.

Director Longville stated that rapidly reducing climate pollution is connected with reaching carbon neutrality in 2045. It includes energy resilience, fossil fuel industry changes, support for renewables, and a variety of other things. In response to President Kielhold, Director Longville confirmed the focus is on education and advocacy. She emphasized that she is a director on The Climate Center Board but has never done any work for or been paid by the organization, and has no family members who work for them. She indicated intention to abstain from the vote.

Vice President Hayes reminded about her previously voiced concern about Maven’s Notebook. Ms. Dyer said that Ms. Farlow had reached out to Ms. Austin but that no substantial progress had been made.

**Action Item(s):** The Board of Directors approved support for The Climate Center at the \$3,000 level was approved by the following roll call vote:

MOTION: Kielhold	SECOND: Hayes	APPROVED: 3-0-1
AYES:	Botello, Hayes, Kielhold	
NOES:	None	
ABSTAIN:	Longville	
ABSENT:	Harrison	

**Action Item(s):** The Board of Directors approved support for the Water Education for Latino Leaders (WELL) organization at the \$2,500 level by the following roll call vote:

MOTION: Longville	SECOND: Kielhold	APPROVED: 4-0
AYES:	Botello, Hayes, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	Harrison	

**5. Future Business**

None added.

**6. Adjournment.**

Chair Botello adjourned the meeting at 2:49 p.m.

**Staff Recommendation**

Receive and file.





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**DATE:** August 11, 2022  
**TO:** Board of Directors' Workshop - Policy  
**FROM:** Cindy Saks, Chief Financial Officer / Deputy General Manager  
**SUBJECT:** Quarterly Investment Portfolio Update with PFM Asset Management

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**Staff Recommendation**

Receive and file the quarterly portfolio update report from PFM Asset Management.

**Summary**

Richard Babbe, Senior Managing Consultant of PFM Asset Management will be available via the Zoom meeting to make a presentation on the status of the District's investments based on the current investment strategy.

**Background**

One of the specific tasks outlined by the Board is to meet quarterly with the investment advisor. The Board approved Investment Advisory services from PFM Asset Management and to continue with the investment strategy developed and adopted by the Board. Periodically over the years the Board has reviewed the investment strategy. On February 10, 2022, the board reviewed and directed staff to continue with the same investment strategy which provides greater portfolio diversity with a slightly longer average maturity while not increasing risk, all of which is in accordance with the District's investment policy.

**Fiscal Impact**

There is no fiscal impact to receive and file the quarterly investment report and reviewing the District's investment policy.

**Attachment**

- PFM Asset Management presentation on the District's investments through June 2022

# San Bernardino Valley Municipal Water District

## Investment Performance Review For the Quarter Ended June 30, 2022

### Client Management Team

Sarah Meacham, Managing Director  
James Sims, CFA, Managing Director  
Ellen Clark, Director  
Richard Babbe, CCM, Senior Managing Consultant

### PFM Asset Management LLC

633 W 5th St., 25th Floor  
Los Angeles, CA 90071  
213-415-1699

213 Market Street  
Harrisburg, PA 17101-2141  
717-232-2723

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# Market Update

## Current Market Themes



- ▶ The U.S. economy is characterized by:
  - ▶ High inflation
  - ▶ A strong labor market
  - ▶ Depressed consumer confidence
  - ▶ Growing potential for economic recession



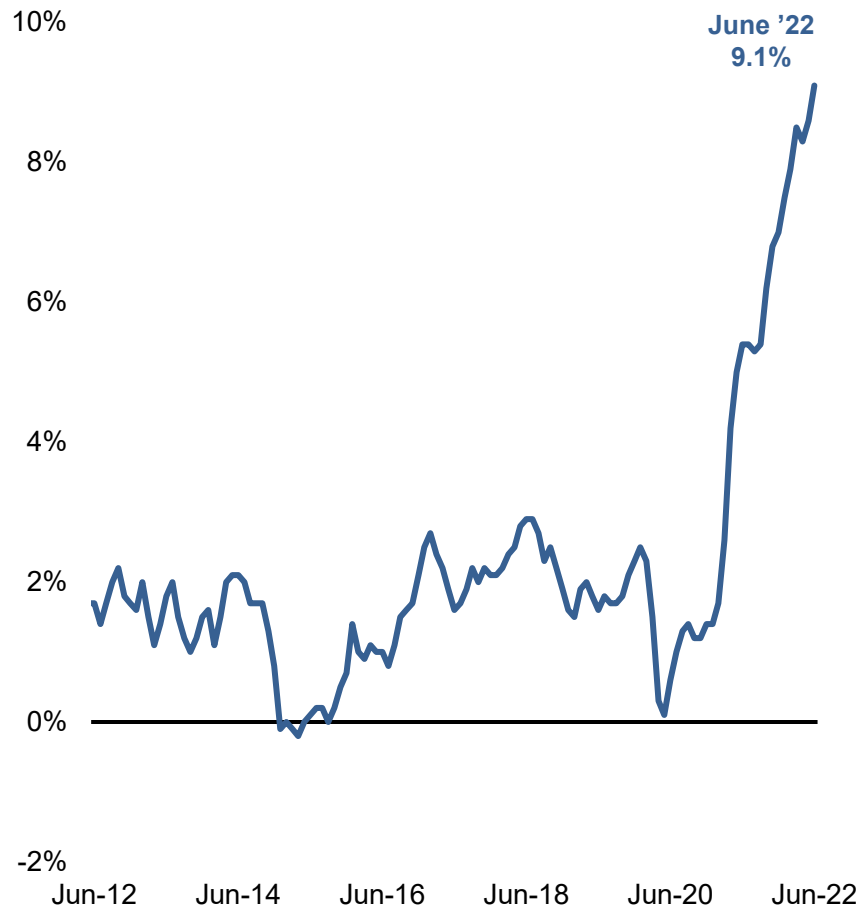
- ▶ The Federal Reserve is tightening monetary policy
  - ▶ More aggressive rate hikes to battle persistent inflation
  - ▶ Short-term fed funds rate projected to reach 3.25% to 3.75% by year-end
  - ▶ Start of balance sheet reduction; pace to double beginning in September



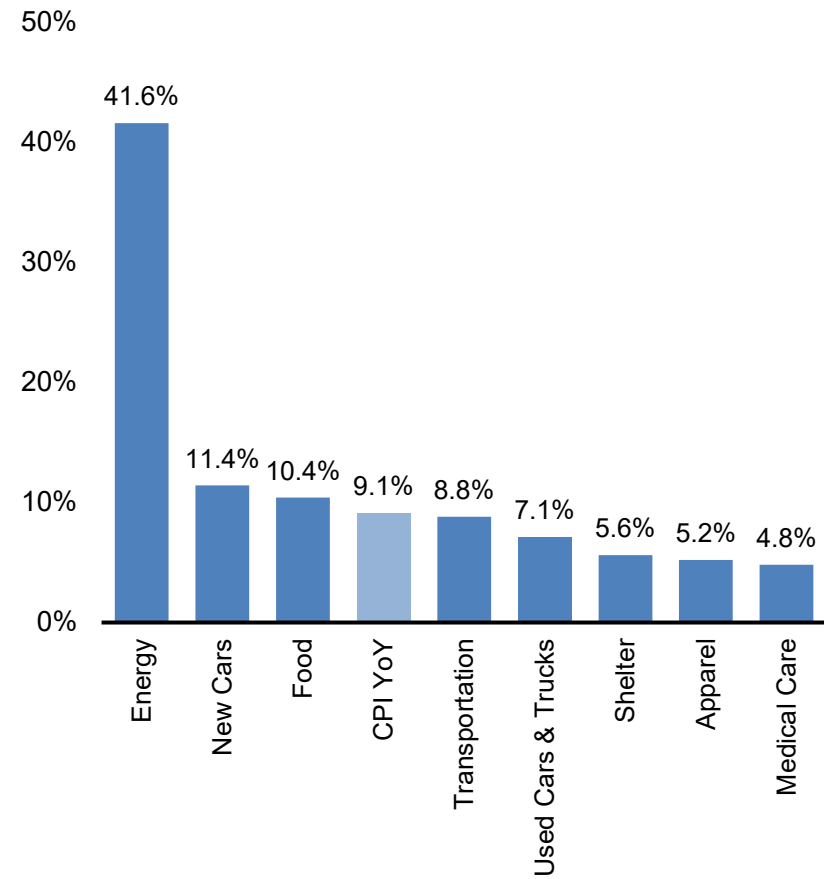
- ▶ Asset prices have fallen sharply in 2022 as a result of:
  - ▶ The impact of higher rates on bond prices and equity valuations
  - ▶ Wider credit spreads
  - ▶ High commodity prices, rising labor costs, and the continuing conflict in Ukraine
  - ▶ High levels of volatility and uncertainty

## U.S. Inflation Hit a New Four-Decade High in June

**Consumer Price Index**  
% Change YoY



**Key Consumer Price Index Components**  
% Change YoY

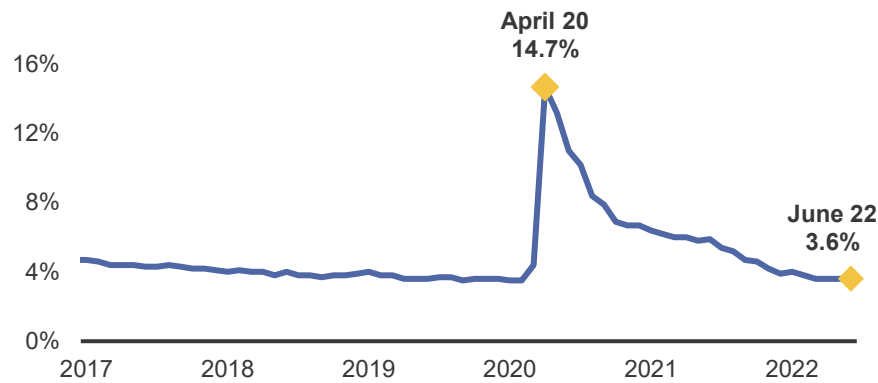


Source: Bloomberg, as of June 2022.

## Strong Labor Market and Spending Provide Momentum Against Signs of Economic Slowing

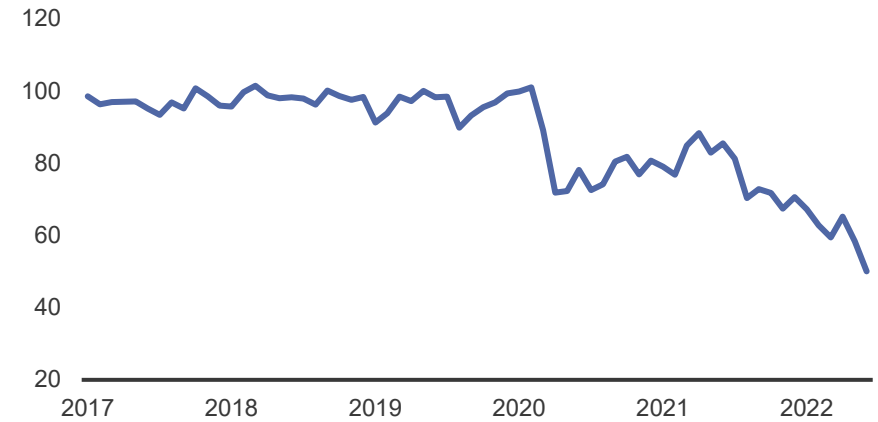
### Tailwinds

U.S. Unemployment Rate

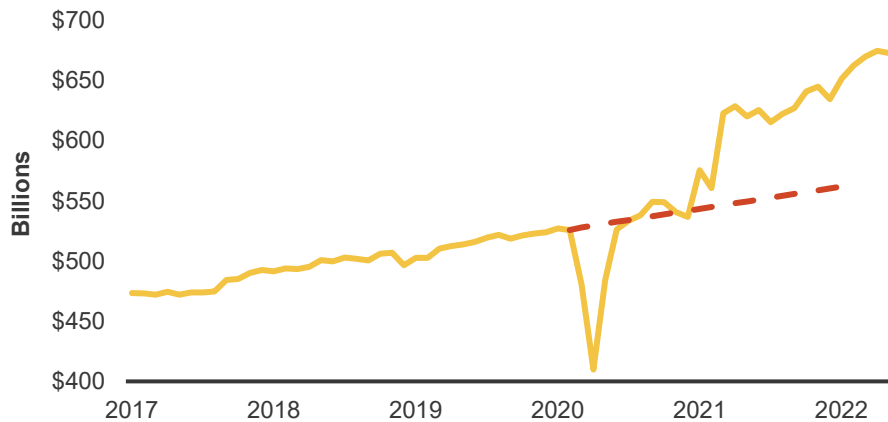


### Headwinds

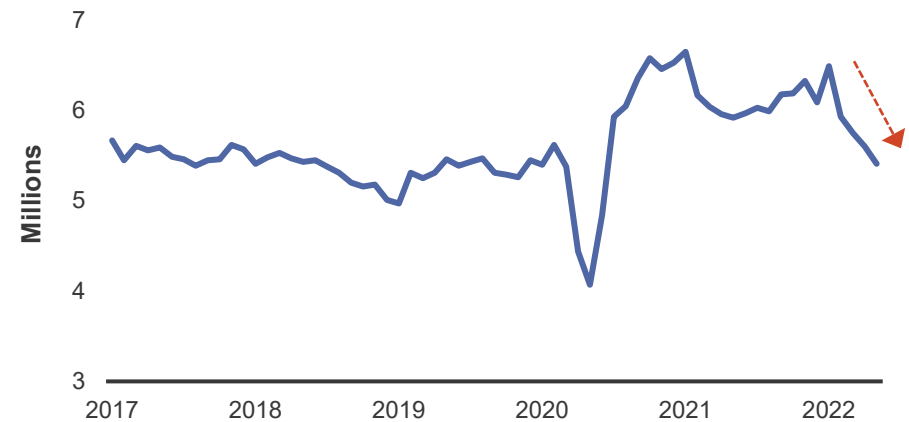
Index of Consumer Sentiment



Retail Sales (Monthly)



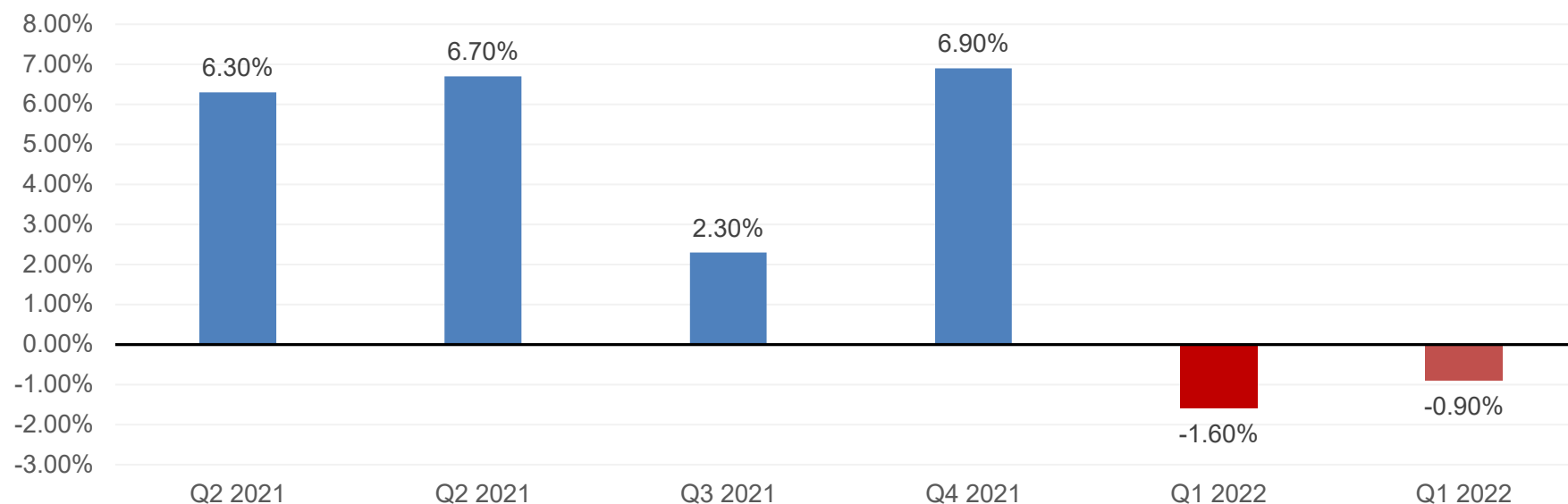
Existing Home Sales



Source: Bloomberg, as of June 2022.

## Uncertainty Grows Around Economic Outlook

### U.S. Real GDP



### GDP Contributors

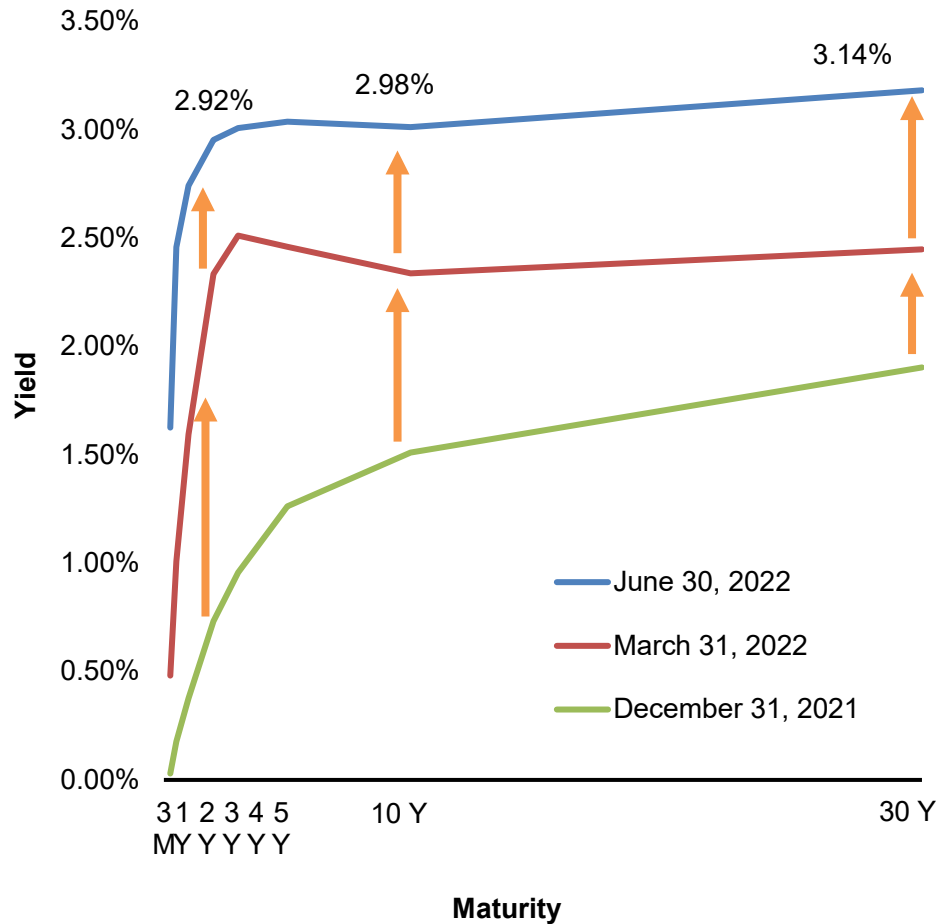
	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022*
<b>U.S. Real GDP</b>	<b>6.30%</b>	<b>6.70%</b>	<b>2.30%</b>	<b>6.90%</b>	<b>-1.60%</b>	<b>-0.90%</b>
<i>Personal Consumption</i>	7.40%	7.90%	1.40%	1.80%	1.20%	0.70%
<i>Fixed Investment</i>	2.30%	0.60%	-0.20%	0.50%	1.30%	-0.70%
<i>Private Inventories</i>	-2.60%	-1.30%	2.20%	5.30%	-0.40%	-2.00%
<i>Net Exports</i>	-1.60%	-0.20%	-1.30%	-0.20%	-3.20%	1.40%
<i>Gov't Expenditures</i>	0.80%	-0.40%	0.20%	-0.50%	-0.50%	-0.30%

Source: Bloomberg, as of July 28, 2022.

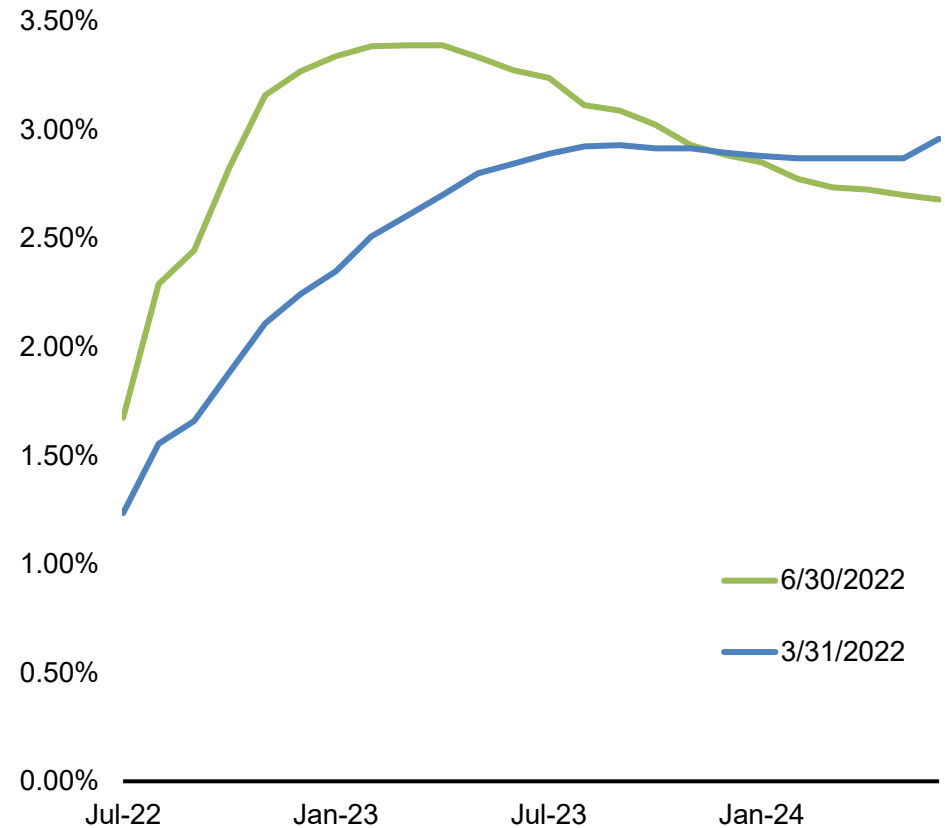
\*Advance number subject to substantial revision.

## Treasury Yields Move Higher Across the Curve; Future Expectations Changed Over the Quarter

### U.S. Treasury Yield Curve



### Fed Funds Futures Curve (Rate)



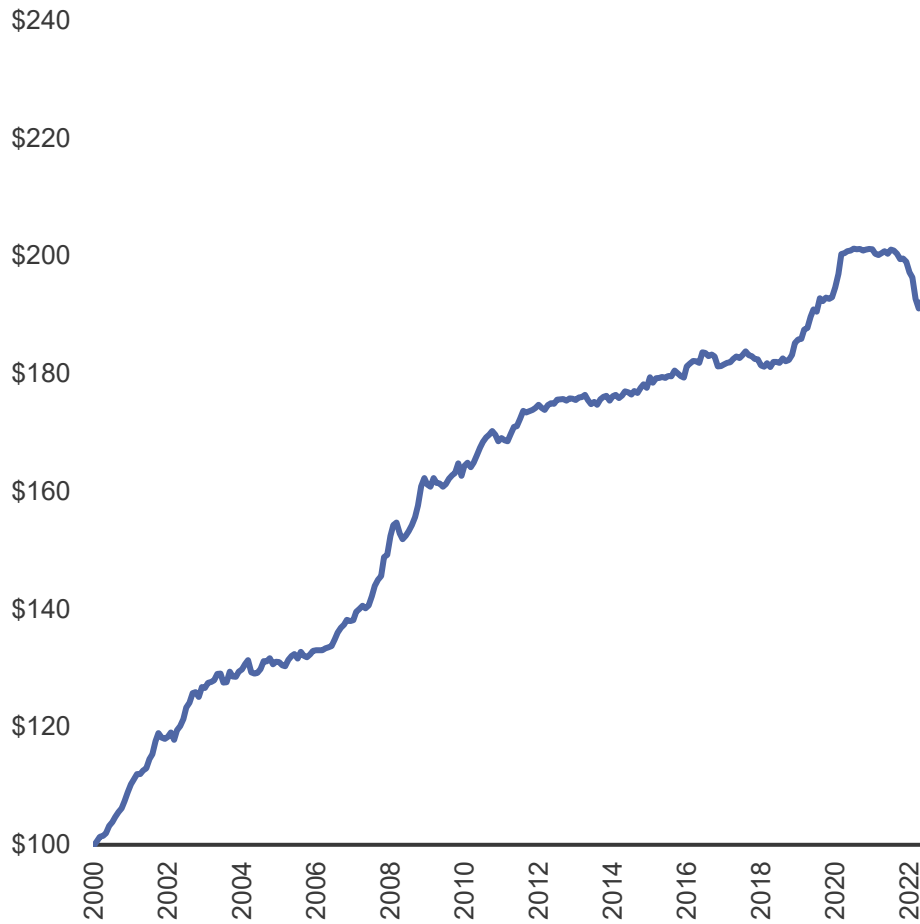
Source: Federal Reserve and Bloomberg. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the federal funds rate at each year-end.



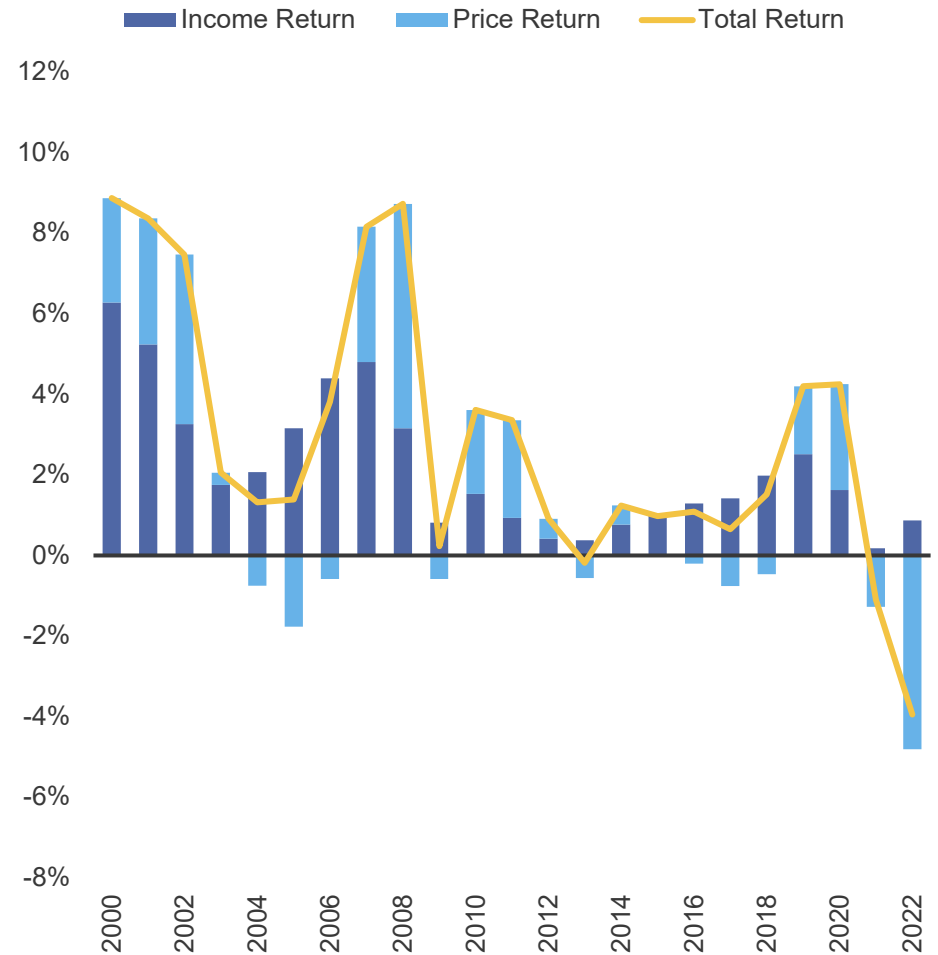
## Surging Yields Give Back Pandemic Gains

### ICE BofAML 1-5 Year Treasury Index

**Growth of \$100**  
(1/1/2000 - 6/30/2022)



**Annual Price & Income Returns**



Source: ICE BofAML Indices via Bloomberg, as of 6/30/2022; PFMAM calculations. 2022 Price, income, and total return is YTD as of 6/30/2022.

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# Portfolio Review

**Combined Portfolio – Composition: By Fund**

<b>Fund</b>	<b>March 31, 2022</b>	<b>June 30, 2022</b>
General Fund	\$85,034,145	\$78,205,403
State Water Contract Fund	\$423,014,371	\$456,495,239
Devils Canyon/Castaic Fund	\$4,596,612	\$4,600,234
<b>Total</b>	<b>\$512,645,128</b>	<b>\$539,300,876</b>

### Combined Portfolio - Sector Allocations

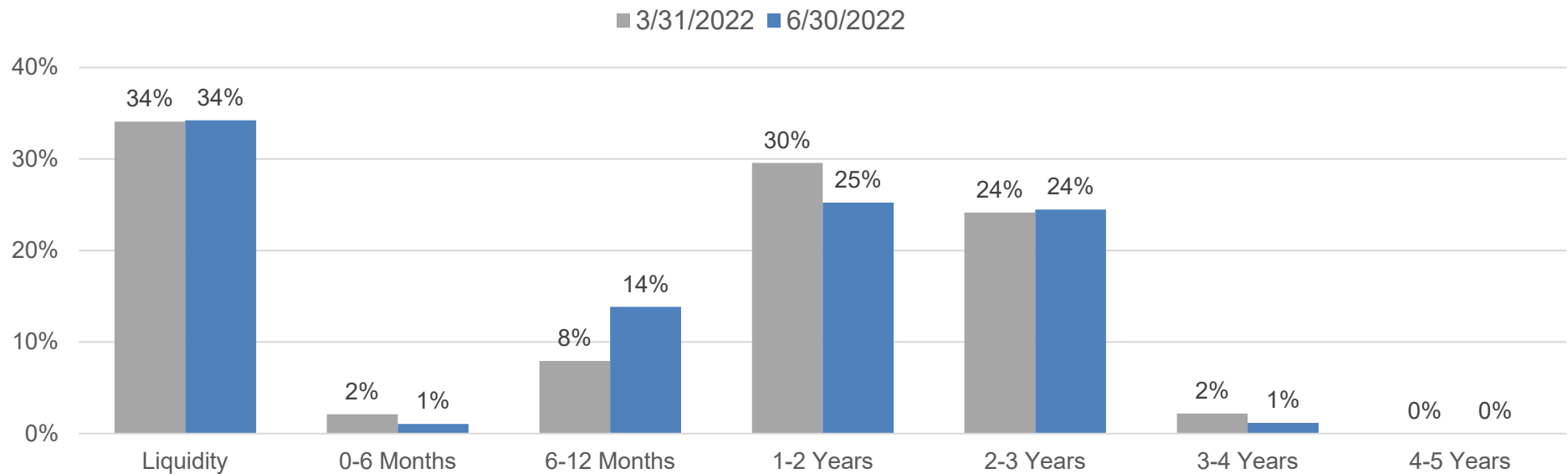
Security Type	Market Value as of December 31, 2021	% of Portfolio	Market Value as of June 30, 2022	% of Portfolio	Change vs. 3/31/22	Sector Limits*
U.S. Treasury	\$196,200,179	38.3%	\$194,486,189	36.1%	-2.2%	100%
Federal Agency	\$67,692,077	13.2%	\$66,621,855	12.4%	-0.9%	100%
Municipal	\$10,944,605	2.1%	\$10,878,542	2.0%	-0.1%	30%
Negotiable CDs	\$6,363,707	1.2%	\$3,886,973	0.7%	-0.5%	30%
Corporate Notes	\$75,654,033	14.8%	\$78,344,748	14.5%	-0.2%	30%
<b>Securities Sub-Total</b>	<b>\$356,854,600</b>	<b>69.7%</b>	<b>\$354,218,308</b>	<b>65.8%</b>		
Accrued Interest	\$674,244		\$716,044			
<b>Securities Total</b>	<b>\$357,528,845</b>		<b>\$354,934,353</b>			
LAIF	\$74,575,729	14.6%	\$74,634,496	13.9%	-0.7%	\$75 Million
Money Market Fund	\$171,281	0.0%	\$683,735	0.1%	0.1%	20%
CAMP	\$80,369,273	15.7%	\$109,048,292	20.2%	4.5%	50%
<b>Total Liquidity</b>	<b>\$155,116,283</b>	<b>30.3%</b>	<b>\$184,366,524</b>	<b>34.2%</b>		
<b>Total Investments</b>	<b>\$512,645,128</b>	<b>100.0%</b>	<b>\$539,300,876</b>	<b>100.0%</b>		

Market values as of period end.

\*Sector Limits as derived from our interpretation of your most recent Investment Policy as provided.

### Combined Portfolio - Maturity Distribution

- ◆ The District maintains ample liquidity in the LAIF/CAMP.
- ◆ For the managed portfolio, we continue to emphasize maturities in the 1-3 year maturity range, consistent with the portfolio’s benchmark.



Weighted Average Maturity (Years)	March 31, 2022	June 30, 2022
Overall	1.2	1.1
Managed Portfolio	1.8	1.7

## Managed Portfolios Total Return Performance

- Total return expresses annualized rate of return over a specified period and incorporates all changes in value in the portfolio, including market value changes, cash flows, and interest earned plus realized gains/losses.
- Interest rates ended the quarter sharply higher, as a result market values fell resulting in negative total returns. Interest rates increased at a faster pace in the past six months than they have anytime in the past forty years.

Periods Ending June 30, 2022					
			Annualized		
BofAML Indices	Duration (years)	Quarter	Past 12 Months	Past 4 Years	Since Inception
State Water Contract Fund	1.71	-0.52%	-3.18%	1.36%	1.08%
General Fund	1.41	-0.53%	-3.07%	1.40%	1.11%
ICE BofAML 1 Year UST Index (GC03)	0.90	-0.48%	-1.44%	1.14%	0.73%
ICE BofAML 1-3 Year UST Index (G1O2)	1.78	-0.50%	-3.30%	1.15%	0.78%
ICE BofAML 1-5 Year UST Index (GVQ0)	2.52	-0.81%	-3.95%	1.23%	0.89%

ICE BofAML Indices provided by Bloomberg Financial Markets.

The District's portfolios are not managed on a total return basis, so the indices are shown for information only. Performance on trade-date basis, gross (i.e., before fees), in accordance with the CFA Institute's Global Investment Performance Standards (GIPS).

Periods less than one year are on an unannualized basis. Periods greater than one year are on an annualized basis.

Portfolio inception date as of June 30, 2012

### Combined Portfolio - Market Value and Accrual Basis Earnings

Market Value Earnings	3 Months	1 Year	3 Years	5 Years	Since Inception
Interest Earned <sup>2</sup>	\$775,247	\$3,292,155	\$16,320,473	\$28,753,286	\$41,945,555
Change in Market Value	(\$2,637,756)	(\$15,184,479)	(\$11,693,407)	(\$9,439,526)	(\$11,534,284)
<b>Total Dollar Return</b>	<b>(\$1,862,509)</b>	<b>(\$11,892,324)</b>	<b>\$4,627,066</b>	<b>\$19,313,760</b>	<b>\$30,411,271</b>

Accrual Basis Earnings	3 Months	1 Year	3 Years	5 Years	Since Inception
Interest Earned <sup>2</sup>	\$775,247	\$3,292,155	\$16,320,473	\$28,753,286	\$41,945,555
Realized Gains / (Losses) <sup>3</sup>	(\$161,149)	\$677,809	\$4,953,891	\$3,856,430	\$3,940,015
Change in Amortized Cost	(\$93,323)	(\$448,280)	(\$429,041)	(\$430,891)	(\$2,533,345)
<b>Total Earnings</b>	<b>\$520,775</b>	<b>\$3,521,684</b>	<b>\$20,845,323</b>	<b>\$32,178,825</b>	<b>\$43,352,225</b>

1. Performance inception date is June 30, 2012.
2. Interest earned calculated as the ending accrued interest less beginning accrued interest, plus net interest
3. Realized gains / (losses) are shown on an amortized cost basis

## Certificate of Compliance

During the reporting period for the quarter ended June 30, 2022, the account(s) managed by PFM Asset Management ("PFMAM") were in compliance with the applicable investment policy and guidelines as furnished to PFMAM.

Acknowledged : *PFM Asset Management LLC*

*Note: Pre- and post-trade compliance for the account(s) managed by PFM Asset Management is provided via Bloomberg Asset and Investment Management ("AIM").*



## Important Disclosures

This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation, as it was prepared without regard to any specific objectives or financial circumstances.

Investment advisory services are provided by PFM Asset Management LLC ("PFMAM"), an investment adviser registered with the U.S. Securities and Exchange Commission and a subsidiary of U.S. Bancorp Asset Management, Inc. ("USBAM"). USBAM is a subsidiary of U.S. Bank National Association ("U.S. Bank"). U.S. Bank is a separate entity and subsidiary of U.S. Bancorp. U.S. Bank is not responsible for and does not guarantee the products, services or performance of PFMAM. The information contained is not an offer to purchase or sell any securities. Additional applicable regulatory information is available upon request.

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It is not possible to invest directly in an index. The index returns shown throughout this material do not represent the results of actual trading of investor assets. Third-party providers maintain the indices shown and calculate the index levels and performance shown or discussed. Index returns do not reflect payment of any sales charges or fees an investor would pay to purchase the securities they represent. The imposition of these fees and charges would cause investment performance to be lower than the performance shown.

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- Market values that include accrued interest are derived from closing bid prices as of the last business day of the month as supplied by Refinitiv, Bloomberg, or Telerate. Where prices are not available from generally recognized sources, the securities are priced using a yield-based matrix system to arrive at an estimated market value.
- In accordance with generally accepted accounting principles, information is presented on a trade date basis; forward settling purchases are included in the monthly balances, and forward settling sales are excluded.
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- Bank of America/Merrill Lynch Indices provided by Bloomberg Financial Markets.
- Money market fund/cash balances are included in performance and duration computations.
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- Callable securities in the portfolio are included in the maturity distribution analysis to their stated maturity date, although, they may be called prior to maturity.
- MBS maturities are represented by expected average life.

## Glossary

- **Accrued Interest:** Interest that is due on a bond or other fixed income security since the last interest payment was made.
- **Agencies:** Federal agency securities and/or Government-sponsored enterprises.
- **Amortized Cost:** The original cost of the principal of the security is adjusted for the amount of the periodic reduction of any discount or premium from the purchase date until the date of the report. Discount or premium with respect to short-term securities (those with less than one year to maturity at time of issuance) is amortized on a straight line basis. Such discount or premium with respect to longer-term securities is amortized using the constant yield basis.
- **Asset-Backed Security:** A financial instrument collateralized by an underlying pool of assets – usually ones that generate a cash flow from debt, such as loans, leases, credit card balances, and receivables.
- **Bankers' Acceptance:** A draft or bill of exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill as well as the insurer.
- **Commercial Paper:** An unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory.
- **Contribution to Total Return:** The weight of each individual security multiplied by its return, then summed for each sector to determine how much each sector added or subtracted from the overall portfolio performance.
- **Effective Duration:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years.
- **Effective Yield:** The total yield an investor receives in relation to the nominal yield or coupon of a bond. Effective yield takes into account the power of compounding on investment returns, while nominal yield does not.
- **FDIC:** Federal Deposit Insurance Corporation. A federal agency that insures bank deposits to a specified amount.
- **Interest Rate:** Interest per year divided by principal amount and expressed as a percentage.
- **Market Value:** The value that would be received or paid for an investment in an orderly transaction between market participants at the measurement date.
- **Maturity:** The date upon which the principal or stated value of an investment becomes due and payable.
- **Negotiable Certificates of Deposit:** A CD with a very large denomination, usually \$1 million or more, that can be traded in secondary markets.
- **Par Value:** The nominal dollar face amount of a security.
- **Pass-through Security:** A security representing pooled debt obligations that passes income from debtors to its shareholders. The most common type is the mortgage-backed security.

## Glossary

- Repurchase Agreements: A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.
- Settle Date: The date on which the transaction is settled and monies/securities are exchanged. If the settle date of the transaction (i.e., coupon payments and maturity proceeds) occurs on a non-business day, the funds are exchanged on the next business day.
- Supranational: A multinational union or association in which member countries cede authority and sovereignty on at least some internal matters to the group, whose decisions are binding on its members.
- Trade Date: The date on which the transaction occurred; however, the final consummation of the security transaction and payment has not yet taken place.
- Unsettled Trade: A trade which has been executed; however, the final consummation of the security transaction and payment has not yet taken place.
- U.S. Treasury: The department of the U.S. government that issues Treasury securities.
- Yield: The rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.
- YTM at Cost: The yield to maturity at cost is the expected rate of return based on the original cost, the annual interest receipts, maturity value, and the time period from purchase date to maturity, stated as a percentage on an annualized basis.
- YTM at Market: The yield to maturity at market is the rate of return based on the current market value, the annual interest receipts, maturity value, and the time period remaining until maturity, stated as a percentage on an annualized basis.



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**DATE:** August 11, 2022

**TO:** Board of Directors' - Policy Workshop

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

**SUBJECT:** Consider the Fiscal Year 2022-2023 Cooperative Study Program with the United States Geological Survey

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### **Staff Recommendation**

Staff recommends the Board forward the Fiscal Year 2022-2023 Cooperative Study Program with the United States Geological Survey in the amount of \$543,449 to the next regular meeting of the Board of Directors for consideration.

### **Summary**

For decades, Valley District has been a “cooperator” with the United States Geological Survey (USGS). As a cooperator, Valley District has benefited from having the USGS perform various independent scientific studies, or investigations, within the Valley District service area and has provided, or cooperated, in the USGS’ cost for this work.

Staff is recommending the attached scope of work for Fiscal Year 2022-2023 at a total cost \$543,449. Valley District’s maximum portion of the cost is \$450,882, a decrease of \$110,119 or 20% resulting from the completion of several multiyear tasks. A unique aspect of the proposed program is that some of the costs associated with Valley District may not be incurred if staff decides not to proceed with some of the Yucaipa Basin tasks. USGS cooperative funding match, subject to availability, is \$92,567; this share of the total cost, approximately 17%, is consistent with last year.

### **Background**

The USGS scientific investigations have resulted in the development of groundwater flow models for the San Bernardino Basin Area, Yucaipa Basin and the Rialto-Colton Basin and have provided valuable scientific data in support of the Upper Santa Ana River Habitat Conservation Plan. The cost sharing arrangement between Valley District and USGS has fluctuated over the years based upon the amount Congress allocates to the USGS and the needs of Valley District for USGS

support. The USGS works cooperatively with Valley District staff on the scope of work to be completed during each Fiscal Year.

The scope of work for Fiscal Year 2022-2023 is attached and includes the following items:

1. **San Bernardino Basin:** Rehabilitation of the USGS monitoring well sites in Bunker Hill and Lytle Creek Basins and evaluate of wells for future rehabilitation
2. **Yucaipa Basin:** Completion of the climate station, and additional groundwater modeling and water quality if requested by the Yucaipa Sustainable Groundwater Management Agency (Valley District is a member)
3. **Rialto-Colton Basin:** Evaluation of USGS monitoring well sites for future rehabilitation
4. **Santa Ana River:** Continuation of Native Fish Study and peer review of the water quality components of the expanded Upper Santa Ana River Integrated Model

Any refinements to the scope of the work will be reflected in the final Joint Financing Agreement at a future Board of Directors regular meeting.

### **District Strategic Plan Application**

The cooperative study program is consistent with Valley District's Mission Statement to *work collaboratively to provide a reliable and sustainable water supply to support the changing needs of our region's people and environment* and with the following strategies:

- Proactively manage a diverse, adaptable water supply portfolio to maximize the value of the region's water assets
- Drive science-based decision making and proactive risk management
- Build trust by being a collaborative and resourceful partner through effective communication and engagement

### **Fiscal Impact**

The total cost of the project proposal is \$543,449; Valley District's share is \$450,882 and USGS's share is \$92,567. Adequate funding for this project is included in the General Fund Budget for Fiscal Year 2022-2023 under line item 6350 United States Geological Survey.

### **Attachment**

Draft Cooperative Study Program for Fiscal Year 2022-2023



# United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
California Water Science Center  
6000 J Street, Placer Hall  
California State University  
Sacramento, California 95819-6129  
Phone: (916) 278-3000 Fax: (916) 278-3070  
<https://www.usgs.gov/centers/ca-water/>

August 3, 2022

Ms. Heather Dyer, CEO/General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, California 92408

Subject: Proposed USGS program for August 1, 2022 – June 30, 2023

Dear Ms. Dyer,

This letter confirms discussions between our respective staffs describing proposed work for the August 1, 2022, through June 30, 2023 agreement period, as part of our cooperative water-resources program between the San Bernardino Valley Municipal Water District (SBVMWD) and the United States Geological Survey (USGS). This 11-month agreement period spans parts of Federal Fiscal Years 2022 and 2023 and is aligned with SBVMWD fiscal years ending June 30.

Six topical tasks are included: one for each of the study areas: Bunker Hill/Lytle Creek Basins (Task 1), Yucaipa Basin (Task 2), and Rialto-Colton Basin (Task 3); tasks related to the Santa Ana River hydraulic and sedimentation study (Task 4) and native fish study (Task 5); and technical review of the Upper Santa Ana River Integrated Model (Task 6).

This letter provides details of the work that are proposed for each of the 6 tasks during the 12-month agreement period. Proposed funding for each task and subtask is summarized in the attached table. Program accomplishments for the previous agreement are documented in a separate letter. This letter, however, does provide brief descriptions of how the proposed work fits within the long-term study plan for each component of the program.

## **1. Optimal Water Management in the Bunker Hill and Lytle Creek Basins**

In the 2022–23 program year, work in the Bunker Hill and Lytle Creek Basins will include validation of the USGS multiple-depth, monitoring-well sites. These sites provide valuable data that are used to better understand and to manage the Bunker Hill and Lytle Creek Basins, including changes in water levels and water quality; calculations of changes in basin storage; estimates of runoff and recharge; and interaction of surface water and groundwater. These data also are used to calibrate the various groundwater-flow and solute-transport models and are used in multiple studies and by multiple water agencies. Specific subtasks include:

### ***1a. Rehabilitate USGS monitoring-well sites***

Rehabilitation of the USGS multiple-depth, monitoring-well sites includes replacement of damaged vaults and well casings; video logging wells; evacuation of silt and debris in wells; and re-development of wells. Re-sampling wells for selected water-quality constituents to evaluate performance of the wells, if needed, could be performed under a future contract. A total of 6 well sites in the Bunker Hill Basin

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(SBSH, SBEP, SBMP, SBCC, SBRV, and SBCM; <https://ca.water.usgs.gov/sanbern>) will be rehabilitated in the 2022–23 program year. Prior to rehabilitation, SBVMWD will be provided an assessment of the 6 well sites and the needed repairs, some of which could be performed under a future contract.

**Deliverables:** Written assessment and description of rehabilitation done at the following 6 well sites: SBSH, SBEP, SBMP, SBCC, SBRV, and SBCM.

***1b. Evaluate rehabilitation of USGS monitoring-well sites***

After rehabilitation of a USGS multiple-depth, monitoring-well site, subsequent water-level and water-quality data will be evaluated and compared to prior data to ensure that (1) the site was rehabilitated sufficiently, and (2) any offset in the data was not induced by the rehabilitation. The following 6 well sites in the Bunker Hill Basin will be evaluated: SBSH, SBEP, SBMP, SBCC, SBRV, and SBCM.

**Deliverables:** Written evaluation of the following 6 well sites: SBSH, SBEP, SBMP, SBCC, SBRV, and SBCM.

**2. Hydrogeology of the Yucaipa Basin**

In the 2022–23 program year, work in the Yucaipa Basin will include finalizing and archiving work completed during the 2021–22 program year, publishing scientific reports, and collecting new climate and water chemistry data. Five reports have been published to better understand the hydrogeology of the Yucaipa Basin, including surface-water and groundwater quality (Mendez and others, 2001); geologic structure (Mendez and others, 2016); geologic, hydrologic, and water-quality data from USGS multiple-depth, monitoring-well sites (Mendez and others, 2018); a three-dimensional hydrogeologic framework model (Cromwell and Matti, 2022); and hydrologic characterization and simulation of the Yucaipa Integrated Hydrologic Model (YIHM; Cromwell and Alzraiee, 2022). During the 2022–23 program year, work in the Yucaipa Basin will continue to build upon the published reports. This work includes four subtasks, as described below.

***2a. Evaluate integrated hydrologic model scenarios, uncertainty analysis, and managed aquifer recharge***

The original work for this subtask was to characterize the hydrogeology and to develop an integrated hydrologic model of the Yucaipa Basin (the YIHM). Two reports were published in January 2022. The first report describes the hydrogeologic framework and characterizes the hydrologic setting of the Yucaipa Basin; the second report describes the YIHM.

Subsequent work for this subtask was divided into two parts. Part 1 included evaluation of the limitations of the YIHM with respect to input data and calibrated model parameters and recommendations for additional data collection. Also included were evaluation and documentation of groundwater management scenarios in the Yucaipa Basin using the YIHM. Part 2 included evaluation of the fate and extent of imported water that was used as managed aquifer recharge. This subsequent work was developed and proposed by the USGS in consultation with SBVMWD staff.

Last year, work for part 1 included: an analysis of locations where new stream gages could be placed or reactivated to improve estimates of surface-water flow and water availability in the YIHM; a statistical analysis of the sensitivity of the YIHM to changes in selected parameters, which provide a greater understanding of how changes to input parameters will affect model results; use of the YIHM to track the source of groundwater flowing to the Yucaipa Regional Park, and flowing from the Wilson Creek and the Oak Glen Creek spreading basins, which can be used to evaluate the sources and paths of groundwater flow through different parts of the groundwater system; and an evaluation of the effects of future climate scenarios on evapotranspiration, groundwater recharge, and storage in the Yucaipa Basin using the YIHM, which will support optimal water management by providing estimates of future



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groundwater recharge and storage. A presentation summarizing the work in part 1 was provided to SBVMWD on June 6, 2022.

In the 2022–23 program year, results from part 1 will be archived so that SBVMWD and their consultants can use the information; location of new stream gages and results from the particle-tracking analysis will be provided to SBVMWD as a USGS-approved powerpoint presentation; results from the parameter sensitivity analysis will be added to the publicly available YIHM model archive; and climate scenarios will be documented in a scientific journal article. Additional funds are requested for the 2022–23 program year to archive the materials described above and publish the scientific journal article.

Last year, work for part 2 included an analysis of water-chemistry data to evaluate the presence of imported water from northern California in selected wells in the Yucaipa Basin over time. The results from this work can be used to evaluate how quickly, and at what depths, the imported water has traveled through the groundwater system. A preliminary report has been prepared and is in initial review.

In the 2022–23 program year, the report from part 2 will be revised following colleague review and cooperative review from SBVMWD, and will be published as a USGS report. Additional funds are requested to finalize and publish this report.

**Deliverables:** (1) A USGS-approved presentation that includes the optimal locations of new stream gages, results from the particle-tracking analysis, and the effect of future climate scenarios on groundwater availability in the Yucaipa Valley. (2) Updates to the YIHM model archive with the YIHM parameter sensitivity results. (3) A scientific journal article describing effects of future climate scenarios in the YIHM on groundwater recharge. (4) A report describing the presence and rate of flow of imported water in the groundwater system. (5) Written summary of work performed each quarter to support this subtask.

***2b. Analyze groundwater age, stable isotopes, and nitrate concentrations in the Yucaipa and San Bernardino Basins – tentative upon approval***

The purpose of this subtask is to better understand the groundwater chemistry and the hydrogeology of the Yucaipa and San Bernardino Basins, including flow between the basins, by investigating groundwater chemical signatures from selected wells. For the 2022–23 program year, this subtask contains elements of groundwater chemical analyses that previously were part of different subtasks, which were developed by the USGS in consultation with SBVMWD. The scope of this subtask was modified to combine the evaluation of nitrate concentrations in the Yucaipa Basin (previously subtask 2c) and the evaluation of stable isotopes and groundwater age in the Yucaipa and Bunker Hill Basins (previously subtask 2d). The modified scope provides a more comprehensive analysis of groundwater flow in the groundwater system over different timescales and allows for the findings to be published in a single report.

The work in this subtask will help to better understand the sources of groundwater recharge in the Yucaipa and Bunker Hill Basins, to provide better estimates of groundwater flow paths and travel time of groundwater recharge in different parts of the basins, and to better understand historical changes in groundwater chemistry with respect to nitrate contamination. This investigation includes a correlation of groundwater age and stable-isotope chemistry to refine sources of groundwater recharge, a comparison of groundwater chemistry between the two basins relative to geography and hydrogeology, and an analysis of the fate and transport of nitrate in the groundwater system. The results from this subtask will improve the conceptual and quantitative understanding of groundwater flow in the Yucaipa and Bunker Hill Basins and can be used to improve numerical simulations of groundwater flow in the YIHM and in the Upper Santa Ana River Integrated Model (USARIM).

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A draft of the scientific journal article will be provided to SBVMWD for review by January 31, 2023; final publication of this journal article is expected to occur during the 2022–23 program year. Additional funds are requested to accommodate the change in scope and to complete the journal article.

**Deliverables:** Written summary of work performed each quarter to support this subtask. Draft and published journal article.

***2c. Install and monitor climate stations***

The purpose of this subtask is to install and monitor two climate stations in the Yucaipa Basin. The climate stations will monitor temperature and precipitation at selected intervals. The data collected from these stations can be used to make water-management decisions and can be used to refine climate input data for the YIHM. The locations of these two climate stations were selected during program year 2021–22 in cooperation with SBVMWD and were chosen to provide a range of climatic information within the Yucaipa Basin. One station was installed during program year 2021–2022 near the central part of the Yucaipa Basin near South Mesa Water Company well number 9. The second station, located in the northern part of the Yucaipa Basin near the San Bernardino Mountains, was not installed during program year 2021–22 due to unanticipated logistical and permitting issues with the City of Yucaipa, which owns the land on which the second site is to be installed. The logistical and permitting issues yet to be resolved include construction of a cement retaining wall around the climate station. The second station is planned to be installed during program year 2022–23.

In the 2022–23 program year, the second climate station will be installed, both stations will be monitored, and the data will be archived according to USGS Fundamental Science Practices. Funding is requested to complete installation of the second climate station, including construction of the retaining wall, and to monitor data collection at both stations. In this agreement, funds for monitoring both stations are requested only for July 1 through September 30, 2022. Beginning October 1, 2022, the USGS Redlands Field Office will be responsible for monitoring the two stations and will be funded through a separate agreement between SBVMWD and the USGS Redlands Field Office.

**Deliverables:** Two operating climate stations and established monitoring program. Written summary of work performed each quarter to support this subtask.

***2d. Sample for water quality at USGS monitoring-well sites – tentative upon approval***

The purpose of this subtask is to collect new groundwater-quality data from the 4 USGS multiple-depth, monitoring-well sites in the Yucaipa Basin (YVWC, YVDA, YVEP, and YV6E). The 4 sites have a combined total of 18 individual wells, each perforated at a different depth. Wells at the four sites were last sampled between 2014 and 2016, except for the three most shallow wells at site YV6E which were sampled in 2019. New groundwater-quality data are necessary to evaluate present conditions of the groundwater system in order to evaluate the effects of anthropogenic changes on the groundwater system, such as an increase or decrease in pumping and changes to the rate and location of managed aquifer recharge, with specific relevance to the Wilson Creek and the Oak Glen Creek spreading basins; and to better constrain estimates of groundwater flow paths through the aquifer and the length of travel time within, and between, groundwater subareas within the Yucaipa Basin. The collection of new groundwater quality data also will contribute to a long-term record of chemical data in the Yucaipa Basin that are necessary to evaluate long-term changes in groundwater quality in the basin.

In the 2022–23 program year, groundwater samples will be collected from wells at each of the 4 USGS multiple-depth, monitoring-well sites in the Yucaipa Basin. Laboratory analyses will be performed to measure major and minor ions, trace elements, nutrients, stable isotopes of oxygen and hydrogen, tritium, and carbon-14. The analytical results will be archived in the USGS National Water

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Information Systems (NWIS) database, which is a publicly available, permanent archive; and a summary of the results will be presented to SBVMWD at the end of the program year.

**Deliverables:** Analytical results for all samples will be archived in the NWIS database. A presentation will be given to SBVMWD by June 30, 2023 summarizing the analytical results. Written summary of work performed each quarter to support this subtask.

***2e. Provide technical outreach – tentative upon approval***

If requested by SBVMWD, the USGS will provide technical outreach to the Yucaipa groundwater sustainability agency, the several water agencies, and the general public in the Yucaipa Basin. The USGS will provide the necessary technical guidance and support to help ensure success as these parties continue to work together and develop hydrogeologic understanding and water management plans. This technical outreach may include attendance at meetings, giving presentations, individual briefings of agencies, completing publication of information products, maintenance and updating the project web page, technical review of proposed plans, and technical support for the USGS integrated hydrologic model YIHM.

**Deliverable:** Written summary of technical outreach provided each quarter to support this subtask.

**3. Rialto–Colton Basin**

In the 2022–23 program year, work in the Rialto-Colton Basin will include an inventory of 18 USGS multiple-depth, monitoring-well sites. These sites provide valuable data that are used to better understand and to manage the Rialto-Colton Basin, including changes in water levels and water quality; calculations of changes in basin storage; estimates of runoff and recharge; and interaction of surface water and groundwater. These data also are used to calibrate the various groundwater-flow and solute-transport models and are used in multiple studies and by multiple water agencies. Specific subtasks include:

***3a. Inventory USGS monitoring-well sites***

Inventory of the 18 USGS multiple-depth, monitoring-well sites in the Rialto-Colton Basin will include written descriptions and photographs of each site documenting the physical condition of the site infrastructure. Documentation of the physical condition of each site will be used to evaluate whether any of the sites should be rehabilitated in future program years. The 18 sites inventoried in the 2022–23 program year are El Verde Reservoir, Linden Ponds, Apple St, Cedar Ave, Vineyard Ave, Fontana Landfill, Airport, Easton Reservoir, RCNE, RCSW, Rialto Ave, Cesar Chavez Park, Fogg 1, Fogg 2, CRCR, Lilac Park, RHSW, and RCZ6. SBVMWD will be provided written descriptions, photographs, and an assessment of the 18 sites and any needed repairs or rehabilitation, which could be performed under a future contract.

**Deliverables:** Written assessment and description of any suggested repair or rehabilitation for the 18 USGS monitoring-well sites: El Verde Reservoir, Linden Ponds, Apple St, Cedar Ave, Vineyard Ave, Fontana Landfill, Airport, Easton Reservoir, RCNE, RCSW, Rialto Ave, Cesar Chavez Park, Fogg 1, Fogg 2, CRCR, Lilac Park, RHSW, and RCZ6.

**4. Santa Ana River**

In the 2022–23 program year, no work will be performed on this task. Previous work on this task was related to sediment transport along the Santa Ana River. All previous work has been completed.

**Deliverables:** None.

**5. Santa Ana Native Fish Study**

In the 2022–23 program year, work on the Santa Ana native fish study will include continued estimation of population and habitat features for native fish species in the study area. This effort will include sampling

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

areas where the Santa Ana Sucker was observed during the 2021 surveying period, which spanned from the Van Buren Bridge to the Rialto Channel. The Santa Ana Sucker (*Catostomus santaanae*) is listed as a threatened species under federal legislation and is considered a species of special concern in California by the California Department of Fish and Wildlife (Moyle, 2002). The Arroyo Chub (*Gila orcutti*) is considered a species of special concern in California by the California Department of Fish and Wildlife (Moyle, 2002). Both species are present in the Santa Ana River watershed in the area being evaluated for establishment of the upper Santa Ana River Habitat Conservation Plan (HCP).

Developing an HCP requires sufficient knowledge of the populations of interest to develop plans for their protection and management. The ability to monitor population abundance and habitat availability with some level of confidence is important when developing such plans. Initial assessment of the available data within the HCP suggested to the concerned parties that additional data that extends spatially and temporally are needed on population density and availability of suitable habitat to support development of the HCP. The overall objective of this proposed work in Task 5 is to address those needs. Specific subtasks include:

***5a. Develop a population estimate for native and non-native fish species***

In the 2022–23 program year, a full population survey for native fishes of the Santa Ana River will be conducted in order to continue documenting the baseline condition of the Santa Ana Sucker and the Arroyo Chub within the mainstem. The survey will be completed in September 2022 and plans are to sample between the Rialto Channel and the Van Buren Bridge, where the presence of native fishes was confirmed during 2021 surveys. The survey will use the sampling methods developed in 2015 and 2016, which have been refined and updated based on river conditions. Results of the survey will be used to estimate the total population of the Santa Ana Sucker and the Arroyo Chub within the study area along with estimates of non-native predator fish. The data also will be used to refine understanding of habitat suitability for native fishes and proposed habitat improvement projects. Lastly, this data will be incorporated into the continued development of a population viability analysis (refer subtask 5b).

***5b. Continue development of a population viability analysis (PVA) for native fishes in the Santa Ana River***

Population viability analysis (PVA) is a powerful tool used by conservation biologists to evaluate extirpation risk for species. The development of a PVA has been highlighted as a priority action needed by the Santa Ana Sucker Recovery Plan (USFWS, 2017). To help achieve this goal, multiple data sets collected within the Santa Ana River specific to fish surveys were compiled, and a rough draft of a PVA for the Santa Ana Sucker was developed.

In the 2022–23 program year, work will include additional compilation of data sets from interested parties (USFWS, US Army Corps of Engineers, Orange County Water District) and refinement of the PVA as new data sets become available. Use of the PVA will be expanded to assess different management scenarios planned to assess risks to native fish persistence in the Santa Ana River. Results from this subtask will be valuable for decision making and prioritizing threats to target for remediation. If requested by SBVMWD, the USGS will participate in workshops and symposia to support monitoring and management of the Santa Ana River fishes.

**Deliverables:** Written summary of work performed each quarter to support this subtask. Results of the population estimate survey, population dynamics modeling, and the PVA analysis will be presented annually, or more frequently by request, to the SBVMWD as well as to other interested parties. The USGS will continue to refine and develop draft manuscripts describing the results of the population abundance, bioenergetics, and habitat use results collected to date with the goal of having one or more draft manuscripts submitted to a journal by the winter/spring of 2022–23.

**6. Upper Santa Ana River Integrated Model**

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

In the 2022–23 program year, work will continue to provide technical support and peer review for development and use of the Upper Santa Ana River Integrated Model (USARIM). In the past program years (2018–2022), the USGS provided technical support and peer review to SBVMWD and their consultants, and attended meetings and workshops related to the USARIM. This next year, USGS support will include review of the final version of the USARIM and expansion of that model to track groundwater movement of dissolved solids and nitrate. Specific subtasks include:

***6a. Review the expanded Upper Santa Ana River Integrated Model***

In the 2022–23 program year, the USGS will review expansion of the Upper Santa Ana River Integrated Model (USARIM), which is now designed to track groundwater movement of dissolved solids and nitrate. This review will include attendance at Technical Advisory Committee (TAC) meetings where the modeling plans, procedures, and results are presented and discussed; review of Technical Memoranda provided by the consultant that describe development, calibration, and use of the USARIM; review of the USARIM computer code and model files; discussions with the consultant and other peer reviewers about the USARIM, model files, and related Technical Memoranda; and preparation of written review comments.

**Deliverables:** Written review comments and summary of work performed.

***6b. Report on the geology of the Upper Santa Ana River groundwater basin***

USGS involvement in subtask 6a resulted in an evaluation of the geology of the Upper Santa Ana River groundwater basin, and a description of basin development over geologic time. These findings have been summarized in a journal article, which has been submitted for USGS review. Final publication is expected to occur during 2023. No additional funds are requested for this subtask.

**Deliverables:** USGS-approved scientific journal article.

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

The proposed program for the August 1, 2022 – June 30, 2023 agreement period, including the six major tasks and associated subtasks and costs, are as follows:

Basin and Task	Funding		
	SBVMWD	USGS	Total
<b>1. Bunker Hill and Lytle Creek Basins</b>			
a. Rehabilitate USGS monitoring-well sites	\$23,950	\$4,533	\$28,483
b. Evaluate rehabilitation of USGS monitoring-well sites	\$18,896	\$4,724	\$23,620
<i>Subtotal</i>	<b>\$42,846</b>	<b>\$9,257</b>	<b>\$52,103</b>
<b>2. Yucaipa Basin</b>			
a. Evaluate integrated hydrologic model scenarios, uncertainty analysis, and managed aquifer recharge	\$30,019	\$7,505	\$37,524
b. Analyze groundwater age, stable isotopes, and nitrate concentrations in the Yucaipa and San Bernardino Basins – tentative upon approval	\$27,360	\$6,840	\$34,200
c. Install and monitor climate stations	\$39,447	\$3,646	\$43,093
d. Sample for water-quality at USGS monitoring-well sites – tentative upon approval	\$83,879	\$13,019	\$96,898
e. Provide technical outreach – tentative upon approval	\$12,469	\$3,118	\$15,587
<i>Subtotal</i>	<b>\$193,174</b>	<b>\$34,128</b>	<b>\$227,302</b>
<b>3. Rialto–Colton Basin</b>			
a. Inventory USGS monitoring-well sites	\$14,079	\$3,156	\$17,235
<i>Subtotal</i>	<b>\$14,079</b>	<b>\$3,156</b>	<b>\$17,235</b>
<b>4. Santa Ana River</b>			
All work has been completed	—	—	—
<i>Subtotal</i>	—	—	—
<b>5. Santa Ana Native Fish Study</b>			
a. Develop a population estimate for native and non-native fish species	\$166,570	\$37,474	\$204,044
b. Continue Development of a Population Viability Analysis for native fishes in the Santa Ana River			
<i>Subtotal</i>	<b>\$166,570</b>	<b>\$37,474</b>	<b>\$204,044</b>
<b>6. Upper Santa Ana River Integrated Model</b>			
a. Review the expanded Upper Santa Ana River Integrated Model, designed to track movement of dissolved solids and nitrate	\$34,213	\$8,552	\$42,765
b. Report on geology of Upper Santa River groundwater basin	\$0	\$0	\$0
<i>Subtotal</i>	<b>\$34,213</b>	<b>\$8,552</b>	<b>\$42,765</b>
<b>TOTAL (Tasks 1-6)</b>	<b>\$450,882</b>	<b>\$92,567</b>	<b>\$543,449</b>
<b>TOTAL (Tasks 1-6) without tentative upon approval (2b,2d&amp;2e) tasks</b>	<b>\$327,174</b>	<b>\$69,590</b>	<b>\$396,764</b>

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

Total cost for the proposed investigations program is **\$543,449**. Cost to SBVMWD is **\$450,882**. Subject to the availability of cooperative matching funds, the USGS will provide **\$92,567**. Total cost is for the agreement period August 1, 2022 through June 30, 2023.

Enclosed is a digital version of Joint Funding Agreement's (JFA) 22ZGJFA21000008 for your approval. If you are in agreement with this proposed program, please return a fully executed JFA to our office via email address [iarios@usgs.gov](mailto:iarios@usgs.gov). Work performed with funds from this JFA will be conducted on a fixed-price basis. Billing for the agreement will be rendered on a quarterly basis..

Thank you for your long-standing support of our collective efforts to better understand the water resources of the San Bernardino Valley.

Sincerely,

**ALISSA COES**  
Digitally signed by ALISSA  
COES  
Date: 2022.08.03 13:43:01  
-07'00'

Alissa Coes  
Acting Director, USGS California WSC

cc: Claudia C. Faunt, Supervisory Hydrologist, Groundwater Availability and Use Program  
Wesley Danskin, Research Hydrologist, Project Chief, Bunker Hill/Lytle Basin (Task 1, 6a)  
Gregory O. Mendez, Hydrologist, Project Chief, Yucaipa Basin (Task 2c,d)  
Geoff Cromwell, Geologist, Project Chief, Yucaipa Basin (Task 2a,b,e, 6b)  
Linda R. Woolfenden, Research Hydrologist, Project Chief, Rialto-Colton Basin (Task 3)  
Brock Huntsman, Fish Biologist, Project Chief Santa Ana River Fish Study (Task 5)

Form 9-1366  
(May 2018)

**U.S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

**JOINT FUNDING AGREEMENT**

Customer #: 600000809  
 Agreement #: 22ZGJFA21000008  
 Project #: ZG00A4X  
 TIN #: 95-6005196  
 Fixed Cost Agreement YES

FOR

WATER RESOURCES INVESTIGATIONS

**THIS AGREEMENT is entered into as of the, 3rd day of AUGUST, 2022 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the San Bernardino Valley Municipal Water District, party of the second part.**

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation for cooperative water resources investigations in the San Bernardino Valley Water District as outlined in the USGS program letter dated August 3, 2022 (Scope of Work) herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.
  
2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of \$0.00 .
  - (a) by the party of the first part during the period
 

Amount	Date	to	Date
\$92,567.00	August 1, 2022		June 30, 2023
  
  - (b) by the party of the second part during the period
 

Amount	Date	to	Date
\$450,882.00	August 1, 2022		June 30, 2023

USGS DUNS is 1761-38857.

  - (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00
 

Description of the USGS regional/national program:  
not applicable
  
  - (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
  
  - (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.
  
3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.
  
4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.
  
5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.
  
6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.




**9-1366 (Continuation)**      Customer #: 600000809      Agreement #: 22ZGJFA21000008

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties.  
The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).
9. Billing for this agreement will be rendered.

Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

<p><b>U.S. Geological Survey</b> <b>United States</b> <b>Department of the Interior</b> <b><u>USGS Point of Contact</u></b></p>	<p>San Bernardino Valley Municipal Water District</p> <p><b><u>Customer Point of Contact</u></b></p>
Name: Irene Rios, Budget Analyst	Name: Heather Dyer, CEO/General Manager
Address: 4165 Spruance Rd., Suite 200 San Diego, CA 92101	Address: 380 East Vanderbilt Way San Bernardino, California 92408
Telephone: 619-225-6156	Telephone: 909-387-9256
Email: iaros@usgs.gov	Email: heatherd@sbvmwd.com

**Signatures and Date**

Signature: <b>ALISSA COES</b>	 <p>Digitally signed by ALISSA COES Date: 2022.08.03 13:43:31 -07'00'</p>	Date: _____	Signature: _____	Date: _____
Name: Alissa Coes	Name: Heather Dyer			
Title: Acting Director, USGS CA WSC	Title: CEO/General Manager			



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**DATE:** August 11, 2022

**TO:** Board of Directors Workshop – Policy

**FROM:** Heather Dyer, Chief Executive Officer/General Manager  
Kristeen Farlow, Strategic Communications Manager

**SUBJECT:** Discuss Strategic Communications and Engagement Plan: Branding & Logo

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### **Staff Recommendation**

The Board of Directors is asked to participate in this workshop and provide input on the branding and logo elements in order to finalize the District brand.

### **Summary**

Staff has worked with WSC on the Brand Revive efforts, as approved by the Board on January 9, 2022. At today's Workshop, the Board will be presented with "mood boards" and logo ideas in consideration of identifying the District's *revived brand*. There are a number of elements that go into developing a brand – including colors, fonts, layout, and photos. This process will be explained to the Board, and the Board will have the opportunity to explore how the proposed mood boards were developed and discuss and consider which brand best represents the District.

### **Background**

On June 1, 2021, the Board of Directors approved a proposal from Water Systems Consulting, Inc. (WSC), for \$120,545 to complete the Strategic Communications and Engagement Plan. On September 21, 2021, the Board of Directors approved Amendment 1 to the Agreement for \$9,655 to include a brand refresh as a component of the Strategic Communications and Engagement Plan.

On October 18, 2021, WSC led the Directors through a process to evaluate how the District's existing brand aligns with the District's communication goals, role in the watershed, and recently developed Strategic Plan. At this workshop, the Directors requested a follow-up to further discuss expanding the branding scope.

At the Policy Workshop on December 9, 2021, Staff presented three options for District branding: Refresh, Revive, and Rebrand. Each option offers a different level of updating and amending the District's brand and branding elements. After discussion, the Directors recommended Staff bring the Brand Revive option to a future Board Meeting for consideration.

At the January 4, 2022, Board Meeting, the Board of Directors recommended the District proceed with a Brand Revive, a midrange rebranding effort. The Board of Directors approved Amendment 2 to the Agreement in the amount of \$60,440 bringing the total Branding/Strategic Communications and Engagement Plan contract price to \$190,640.

At the Policy Workshop on June 9, 2022, Staff led the Board through a Name Change Discussion in consideration of identifying a "common name" that could be used that accurately reflects the District's function and who it serves. At that time, the Board agreed that the District keep the legal name and through the branding exercise, identify a common name.

### **District Strategic Plan Application**

The District Strategic Communications and Engagement Plan, and the Branding and Logo, align with the Strategic Plan value of being *trustworthy*, and strategy of "building trust by being a collaborative and resourceful partner through effective communication and engagement." Establishing a consistent and clear brand enables the District to achieve our mission more effectively as we communicate what we do and the value we bring to the communities we serve.

### **Fiscal Impact**

The total contract amount for the project, (Strategic Communications and Engagement Plan, including the Branding Revive effort) is \$190,640. The remaining funds on the contract for these services have been budgeted in the FY 2022-2023 General Fund Budget under Account 6360 Consultants.