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# Call to Order

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Board of Directors Workshop - Policy  
Thursday, November 18, 2021

*Chairperson – Director Botello*  
*Vice-Chair – Director Kielhold*

# Introductions

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

# Public Comment

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

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



# Summary of Previous Meeting (Pg. 3)

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Board of Directors Workshop – Policy – October 14, 2021

# Discussion Item 4.1 (Pg. 15)

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**Cindy Saks, CPA** – Deputy General Manager/Chief Financial Officer

Quarterly Investment Portfolio Update with PFM Asset Management

## **Staff Recommendation**

Receive and file the portfolio update report from PFM.



# San Bernardino Valley Municipal Water District

## Investment Performance Review For the Quarter Ended September 30, 2021

### Client Management Team

Richard Babbe, CCM, Senior Managing Consultant  
Ellen Clark, Director

### PFM Asset Management LLC

555 W. 5th Street, Suite 3500  
Los Angeles, CA 90013  
949-230-6896

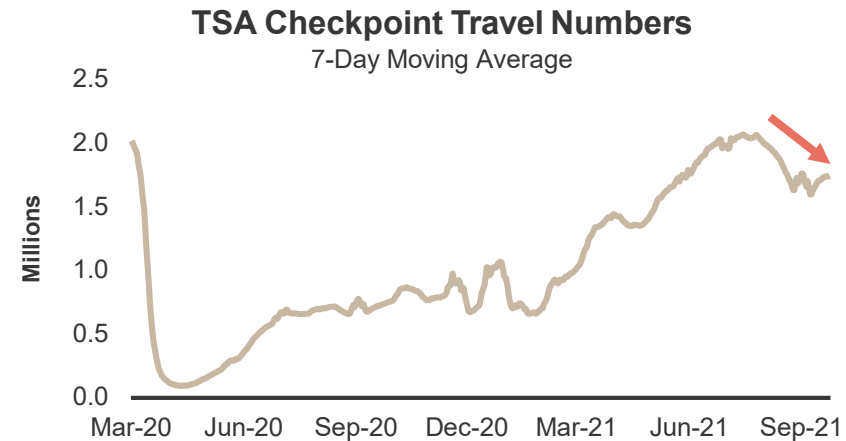
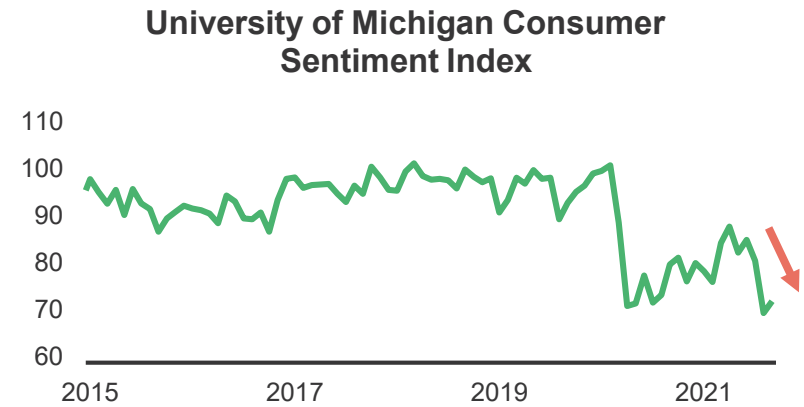
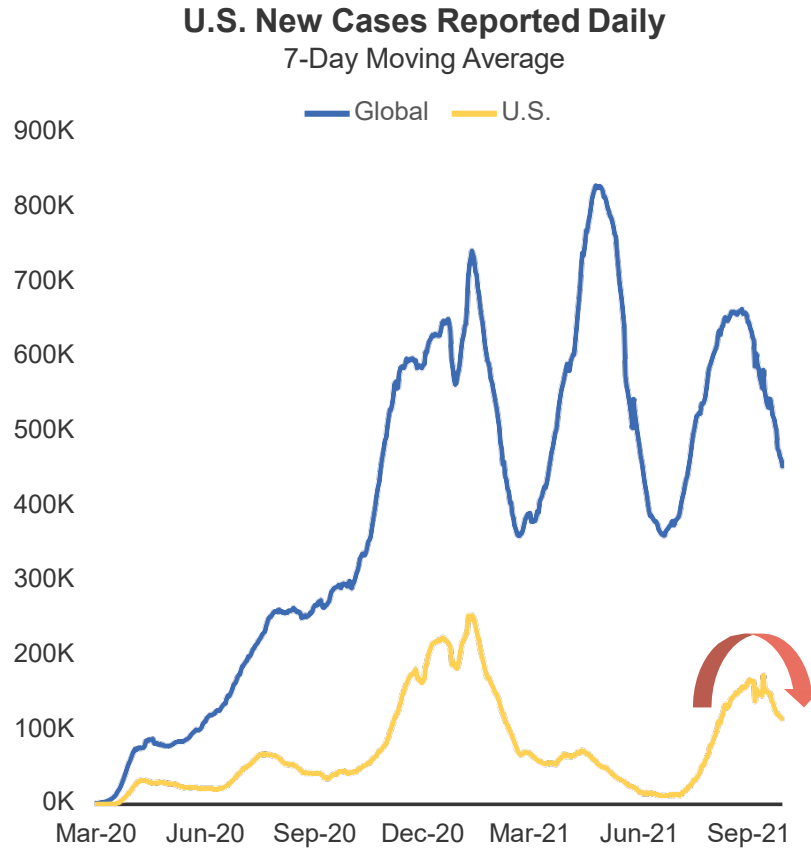
213 Market Street  
Harrisburg, PA 17101-2141  
717-232-2723

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## Market Summary

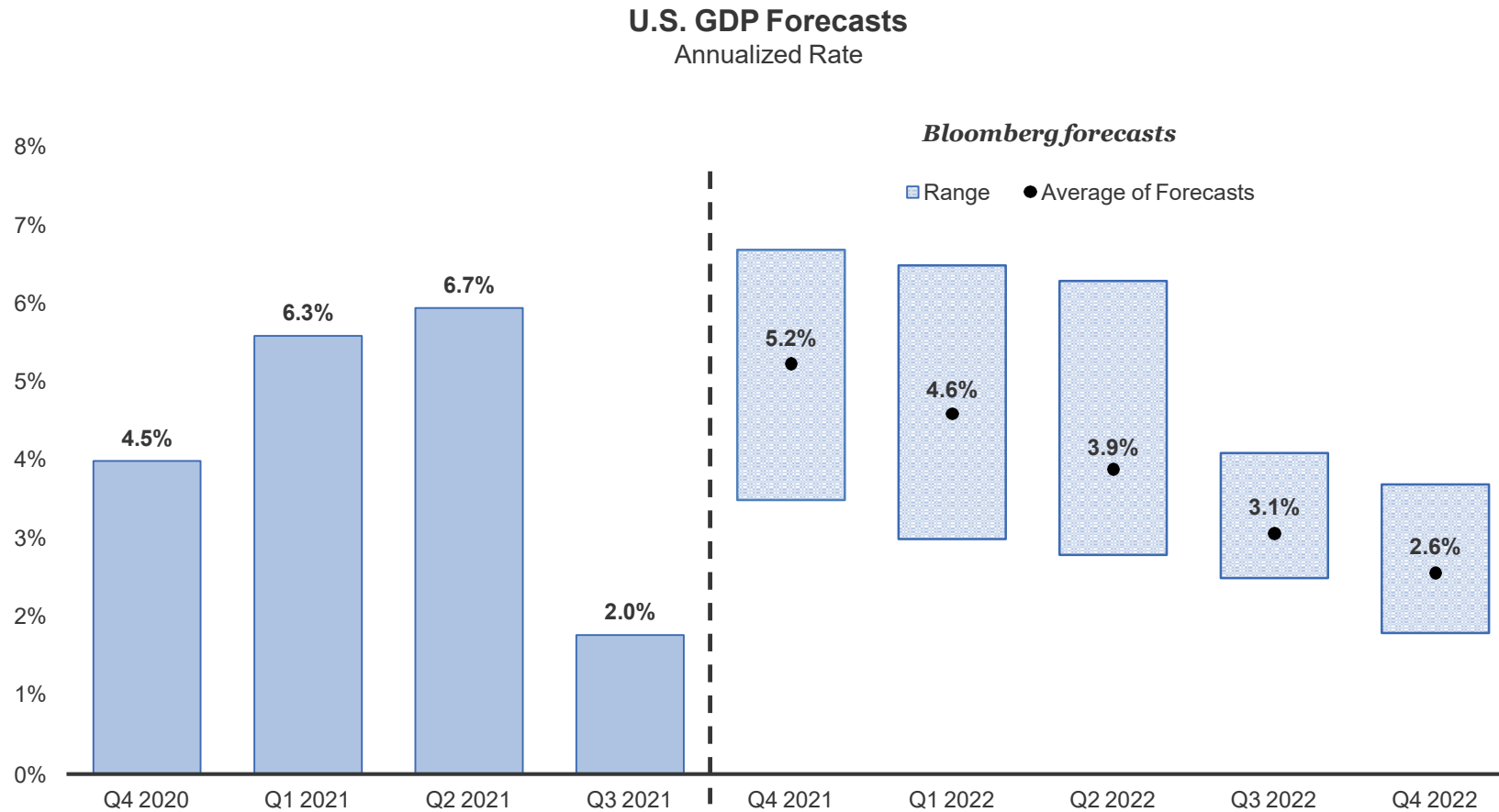


### As COVID Goes, So Goes the Economy



Source: John Hopkins University Coronavirus Resource Center, PFM calculations (left); Bloomberg (top right, bottom right) as of 9/30/2021.

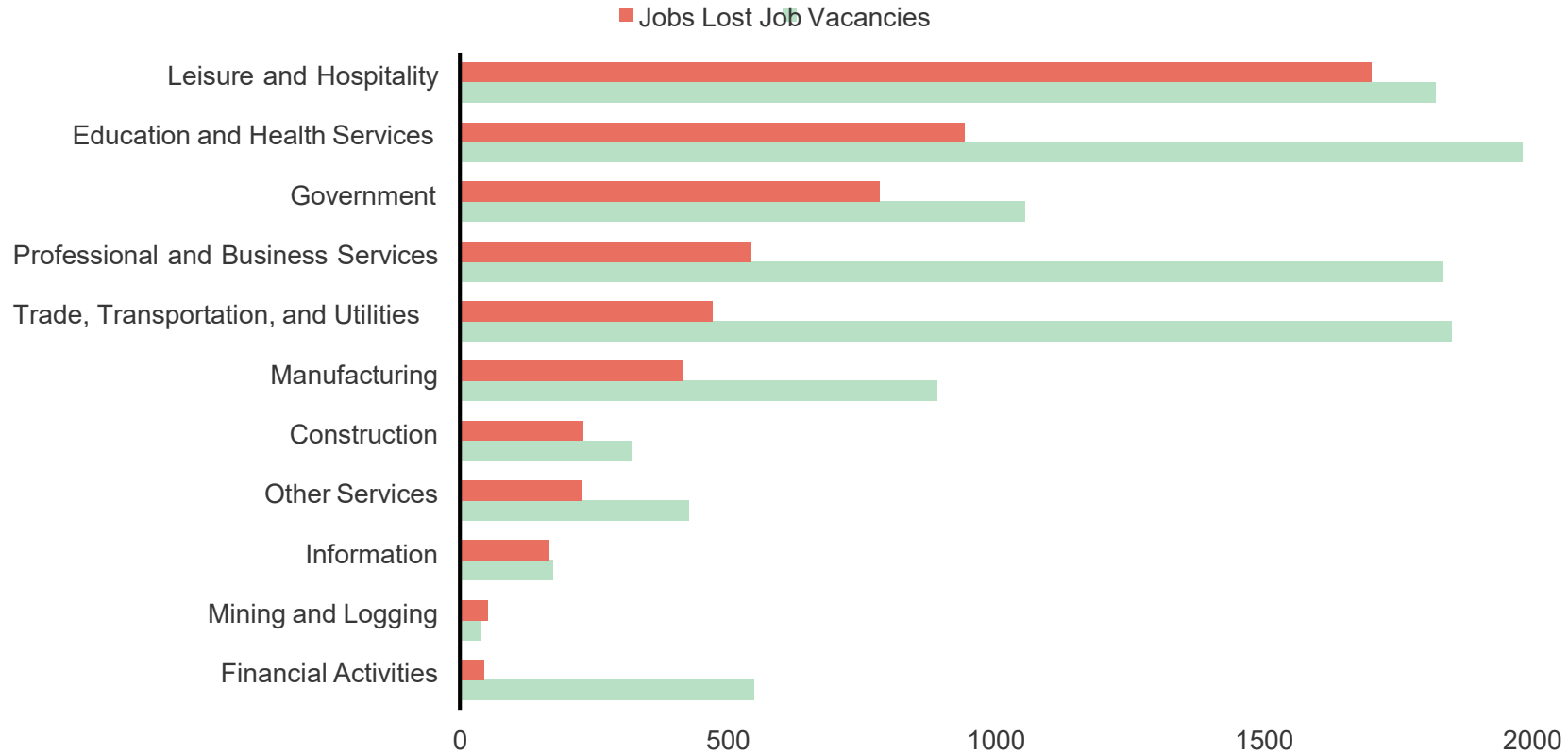
### U.S. Economic Growth Slowed on Delta Surge and Supply Chain Issues



Source: Bloomberg, as of October 2021. Forecasts by Goldman Sachs Group, Deutsche Bank, ING Group, JPMorgan Chase, BMO Capital, Barclays, UBS, Morgan Stanley, and Wells Fargo.

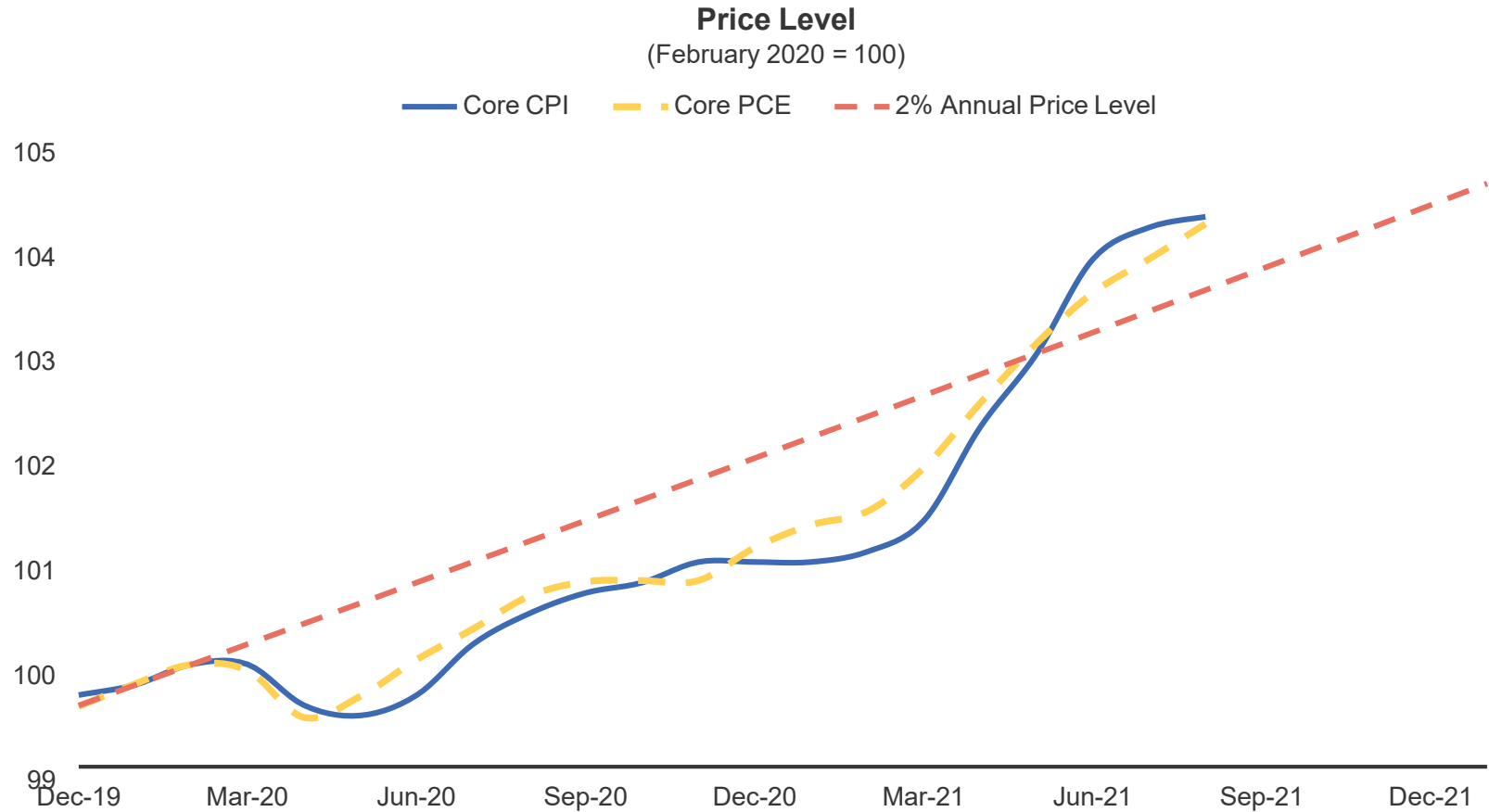
### Labor Shortages Are More Dramatic in Select Industries

Jobs Lost to the Pandemic vs. Current Job Openings (in '000s)



Source: Bureau of Labor Statistics, PFM calculations; as of 9/30/2021. Jobs Lost represents a change in payroll employment numbers from February 2020 to July 2021.

### Inflation Indicators Surpass Pre-Covid Trend

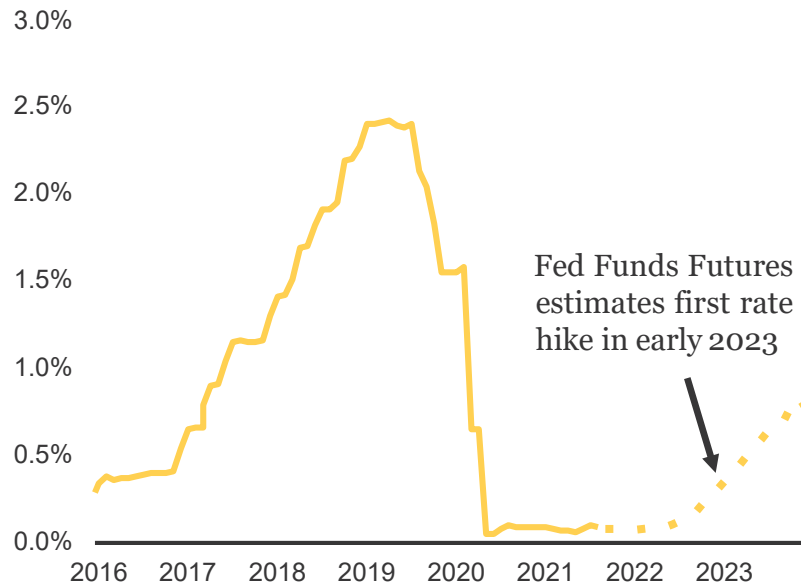


Source: Bloomberg, as of 9/30/2021.

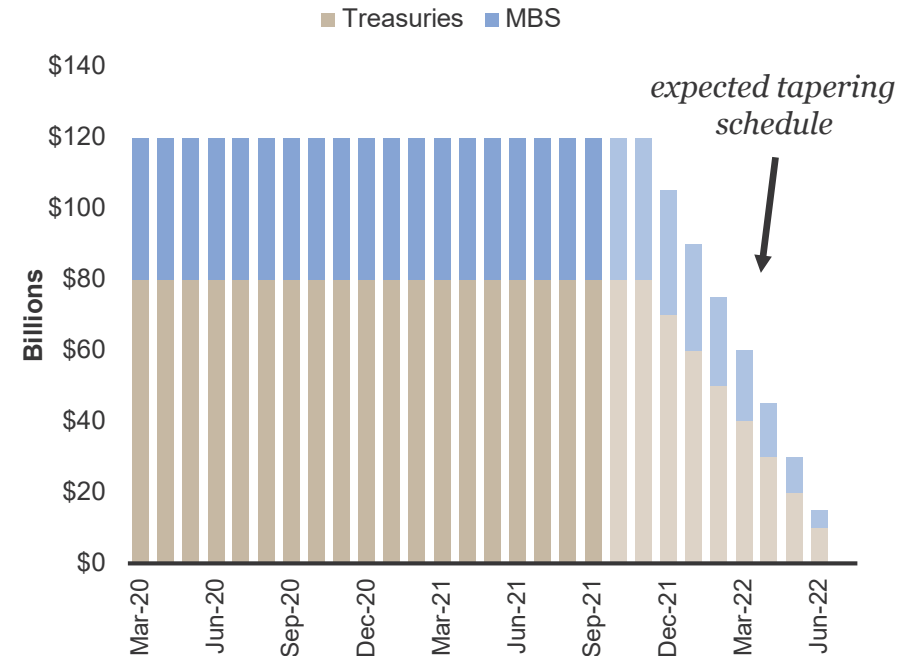
### Tapering Likely to Begin in Late 2021; De-couples Rate Decision

*“If progress continues broadly as expected, the Committee judges that a moderation in the pace of asset purchases may soon be warranted... a gradual tapering process that concludes around the middle of next year is likely to be appropriate...The timing and pace of the coming reduction in asset purchases will not be intended to carry a direct signal regarding the timing of interest rate liftoff, for which we have articulated a different and substantially more stringent test.”*

**Federal Funds Rate**

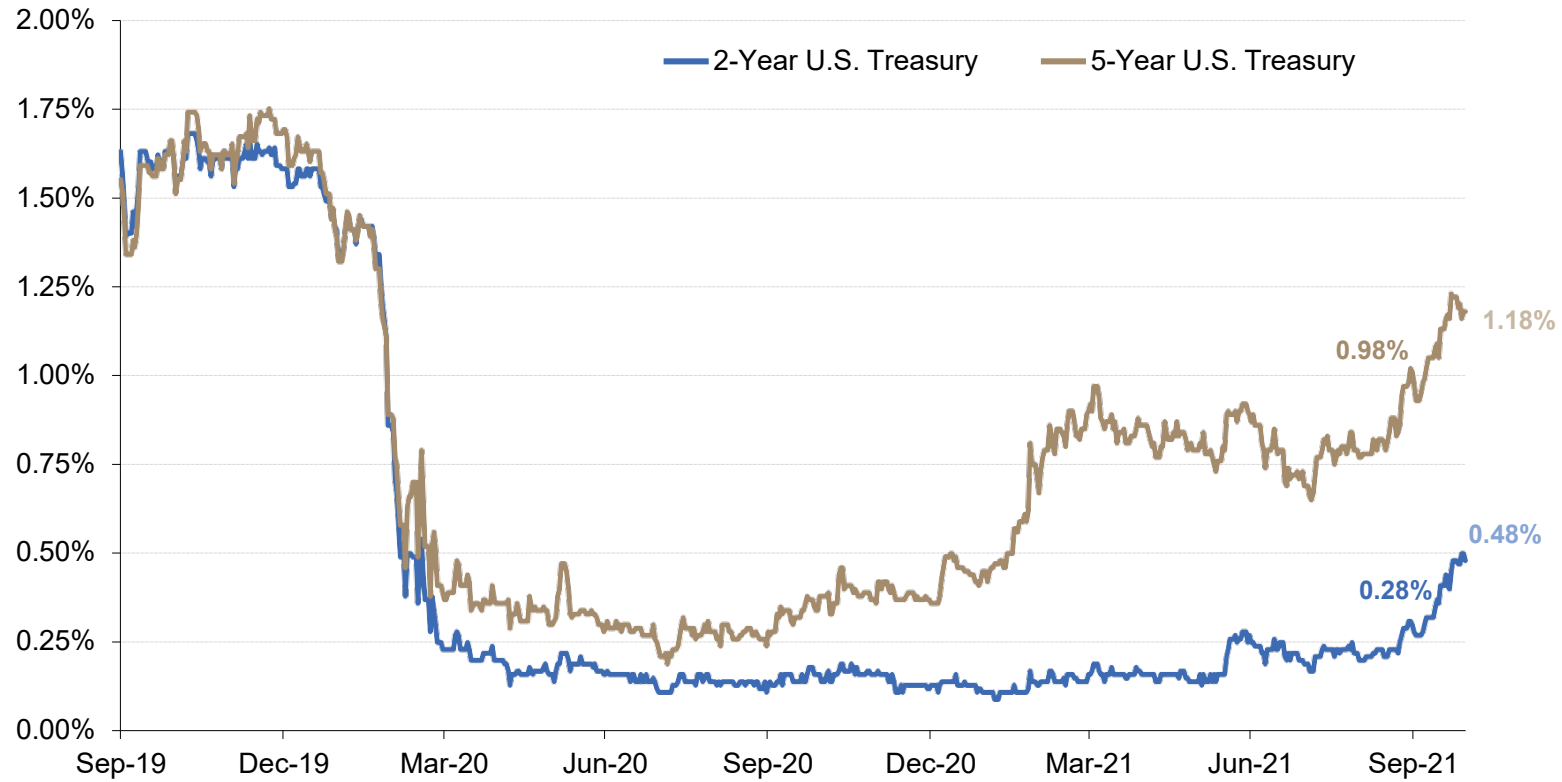


**Fed Asset Purchases**



Source: Bloomberg, as of 9/30/2021 (chart). Fed Funds Futures projections as of 9/30/2021.

### Despite Volatility, Yields Ended Little Changed in Q3, Up Sharply to Start Q4



Source: Bloomberg, as of 10/29/21.

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## Account Summary

**Combined Portfolio Composition – By Fund**

| <b>Fund</b>                | <b>June 30, 2021</b> | <b>September 30, 2021</b> |
|----------------------------|----------------------|---------------------------|
| General Fund               | \$147,528,238        | \$143,128,727             |
| State Water Contract Fund  | \$417,688,350        | \$397,223,608             |
| Devils Canyon/Castaic Fund | \$5,297,111          | \$4,790,874               |
| <b>Total</b>               | <b>\$570,518,699</b> | <b>\$545,138,209</b>      |



## Sector Allocations

| Security Type               | Market Value as of<br>June 30, 2021 | % of<br>Portfolio | Market Value as of<br>September 30, 2021 | % of<br>Portfolio | Change vs.<br>6/30/21 | Sector<br>Limits |
|-----------------------------|-------------------------------------|-------------------|--|-------------------|-----------------------|------------------|
| U.S. Treasury               | \$221,790,836                       | 38.9%             | \$241,420,684                            | 44.4%             | 5.4%                  | 100%             |
| Federal Agency              | \$86,557,487                        | 15.2%             | \$76,015,442                             | 14.0%             | -1.2%                 | 100%             |
| Municipal                   | \$13,331,311                        | 2.3%              | \$11,292,903                             | 2.1%              | -0.3%                 | 30%              |
| Negotiable CDs              | \$23,795,360                        | 4.2%              | \$16,545,797                             | 3.0%              | -1.1%                 | 30%              |
| Corporate Notes             | \$70,864,141                        | 12.4%             | \$71,441,630                             | 13.1%             | 0.7%                  | 30%              |
| <b>Securities Sub-Total</b> | <b>\$416,339,134</b>                | <b>73.1%</b>      | <b>\$416,716,456</b>                     | <b>76.6%</b>      | <b>3.4%</b>           |                  |
| Accrued Interest            | \$1,088,696                         |                   | \$845,130                                |                   |                       |                  |
| <b>Securities Total</b>     | <b>\$417,427,830</b>                |                   | <b>\$417,561,586</b>                     |                   |                       |                  |
| LAIF                        | \$74,426,696                        | 13.1%             | \$74,487,463                             | 13.7%             | 0.6%                  | \$75 Million     |
| Money Market Fund           | \$87,581                            | 0.0%              | \$252,952                                | 0.0%              | 0.0%                  | 20.0%            |
| CAMP                        | \$78,576,593                        | 13.8%             | \$52,836,208                             | 9.7%              | -4.1%                 | 50.0%            |
| <b>Total Liquidity</b>      | <b>\$153,090,869</b>                | <b>26.9%</b>      | <b>\$127,576,623</b>                     | <b>23.4%</b>      | <b>-3.4%</b>          |                  |
| <b>Total Investments</b>    | <b>\$570,518,699</b>                | <b>100.0%</b>     | <b>\$545,138,209</b>                     | <b>100.0%</b>     |                       |                  |

## Issuer Diversification

| Security Type / Issuer                   | Market Value (%) | S&P / Moody's / Fitch | Security Type / Issuer                   | Market Value (%) | S&P / Moody's / Fitch |
|--|------------------|-----------------------|--|------------------|-----------------------|
| <b>U.S. Treasury</b>                     | <b>57.9%</b>     |                       | <b>Corporate</b>                         | <b>17.1%</b>     |                       |
| UNITED STATES TREASURY                   | 57.9%            | AA / Aaa / AAA        | AMAZON.COM INC                           | 1.1%             | AA / A / AA           |
| <b>Federal Agency</b>                    | <b>18.2%</b>     |                       | AMERICAN EXPRESS CO                      | 0.4%             | BBB / A / A           |
| FANNIE MAE                               | 4.0%             | AA / Aaa / AAA        | AMERICAN HONDA FINANCE                   | 0.3%             | A / A / NR            |
| FREDDIE MAC                              | 14.2%            | AA / Aaa / AAA        | APPLE INC                                | 0.4%             | AA / Aa / NR          |
| <b>Municipal</b>                         | <b>2.7%</b>      |                       | ASTRAZENECA PLC                          | 0.4%             | A / A / NR            |
| CALIFORNIA DEPARTMENT OF WATER RESOURCES | 0.2%             | AAA / Aa / NR         | BANK OF AMERICA CO                       | 0.8%             | A / A / AA            |
| CALIFORNIA EARTHQUAKE AUTHORITY          | 0.2%             | NR / NR / A           | BLACKROCK INC                            | 0.4%             | AA / Aa / NR          |
| CALIFORNIA STATE UNIVERSITY              | 0.1%             | AA / Aa / NR          | BMW FINANCIAL SERVICES NA LLC            | 0.2%             | A / A / NR            |
| FLORIDA STATE BOARD OF ADMIN FIN CORP    | 0.2%             | AA / Aa / AA          | BRISTOL-MYERS SQUIBB CO                  | 0.4%             | A / A / NR            |
| LOS ANGELES COMMUNITY COLLEGE DISTRICT   | 0.2%             | AA / Aaa / NR         | CATERPILLAR INC                          | 0.7%             | A / A / A             |
| NEW JERSEY TURNPIKE AUTHORITY            | 0.2%             | A / A / A             | CHARLES SCHWAB                           | 0.3%             | A / A / A             |
| NEW YORK ST URBAN DEVELOPMENT CORP       | 0.8%             | AA / NR / AA          | CHEVRON CORPORATION                      | 0.2%             | AA / Aa / NR          |
| SAN JUAN UNIFIED SCHOOL DISTRICT         | 0.1%             | NR / Aa / NR          | CITIGROUP INC                            | 1.1%             | BBB / A / A           |
| STATE OF CONNECTICUT                     | 0.0%             | A / Aa / AA           | COMCAST CORP                             | 0.2%             | A / A / A             |
| STATE OF MARYLAND                        | 0.5%             | AAA / Aaa / AAA       | DEERE & COMPANY                          | 0.6%             | A / A / A             |
| STATE OF MISSISSIPPI                     | 0.2%             | AA / Aa / AA          | GOLDMAN SACHS GROUP INC                  | 0.6%             | BBB / A / A           |
| <b>Negotiable CD</b>                     | <b>4.0%</b>      |                       | HOME DEPOT INC                           | 0.1%             | A / A / A             |
| CREDIT SUISSE GROUP RK                   | 0.7%             | A / A / A             | HONEYWELL INTERNATIONAL                  | 0.1%             | A / A / A             |
| DNB ASA                                  | 0.9%             | AA / Aa / NR          | JP MORGAN CHASE & CO                     | 1.3%             | A / A / AA            |
| NORDEA BANK ABP                          | 0.9%             | AA / Aa / AA          | MERCK & CO INC                           | 0.5%             | A / A / A             |
| SKANDINAVISKA ENSKILDA BANKEN AB         | 0.9%             | A / Aa / AA           | MORGAN STANLEY                           | 0.7%             | BBB / A / A           |
| SUMITOMO MITSUI FINANCIAL GROUP INC      | 0.7%             | A / Aa / A            | NATIONAL RURAL UTILITIES CO FINANCE CORP | 0.4%             | A / A / A             |
| <b>Corporate</b>                         | <b>17.1%</b>     |                       | NESTLE SA                                | 0.7%             | AA / Aa / NR          |
| 3M COMPANY                               | 0.2%             | A / A / NR            | PACCAR FINANCIAL CORP                    | 0.2%             | A / A / NR            |
| ADOBE INC                                | 0.2%             | A / A / NR            | PEPSICO INC                              | 0.1%             | A / A / A             |
|  |                  |                       | PFIZER INC                               |                  |                       |

Ratings shown are calculated by assigning a numeral value to each security rating, then calculating a weighted average rating for each security type / issuer category using all available security ratings, excluding Not-Rated (NR) ratings. For security type / issuer categories where a rating from the applicable NRSRO is not available, a rating of NR is assigned. Excludes balances invested in money market funds.

## Issuer Diversification

| Security Type / Issuer                  | Market Value (%) | S&P / Moody's / Fitch |
|---|------------------|-----------------------|
| <b>Corporate</b>                        | <b>17.1%</b>     |                       |
| PNC FINANCIAL SERVICES GROUP            | 0.2%             | A / A / A             |
| THE BANK OF NEW YORK MELLON CORPORATION | 0.6%             | A / A / AA            |
| TOYOTA MOTOR CORP                       | 1.4%             | A / A / A             |
| TRUIST FIN CORP                         | 0.5%             | A / A / A             |
| UNILEVER PLC                            | 0.3%             | A / A / A             |
| UNITEDHEALTH GROUP INC                  | 0.3%             | A / A / A             |
| US BANCORP                              | 0.2%             | A / A / A             |
| VISA INC                                | 0.2%             | AA / Aa / NR          |
| WAL-MART STORES INC                     | 0.3%             | AA / Aa / AA          |
| <b>Total</b>                            | <b>100.0%</b>    |                       |

Ratings shown are calculated by assigning a numeral value to each security rating, then calculating a weighted average rating for each security type / issuer category using all available security ratings, excluding Not-Rated (NR) ratings. For security type / issuer categories where a rating from the applicable NRSRO is not available, a rating of NR is assigned. Excludes balances invested in money market funds.

## Certificate of Compliance

During the reporting period for the quarter ended September 30, 2021, the account(s) managed by PFM Asset Management ("PFMAM") were in compliance with the applicable investment policy and guidelines as furnished to PFMAM.

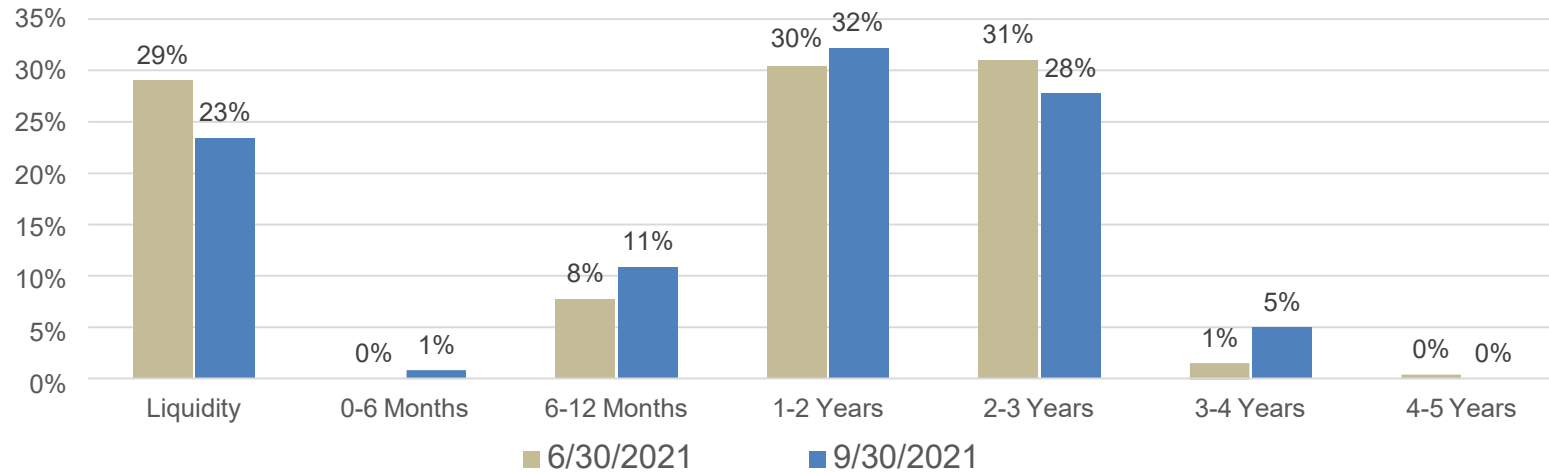
Acknowledged : *PFM Asset Management LLC*

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

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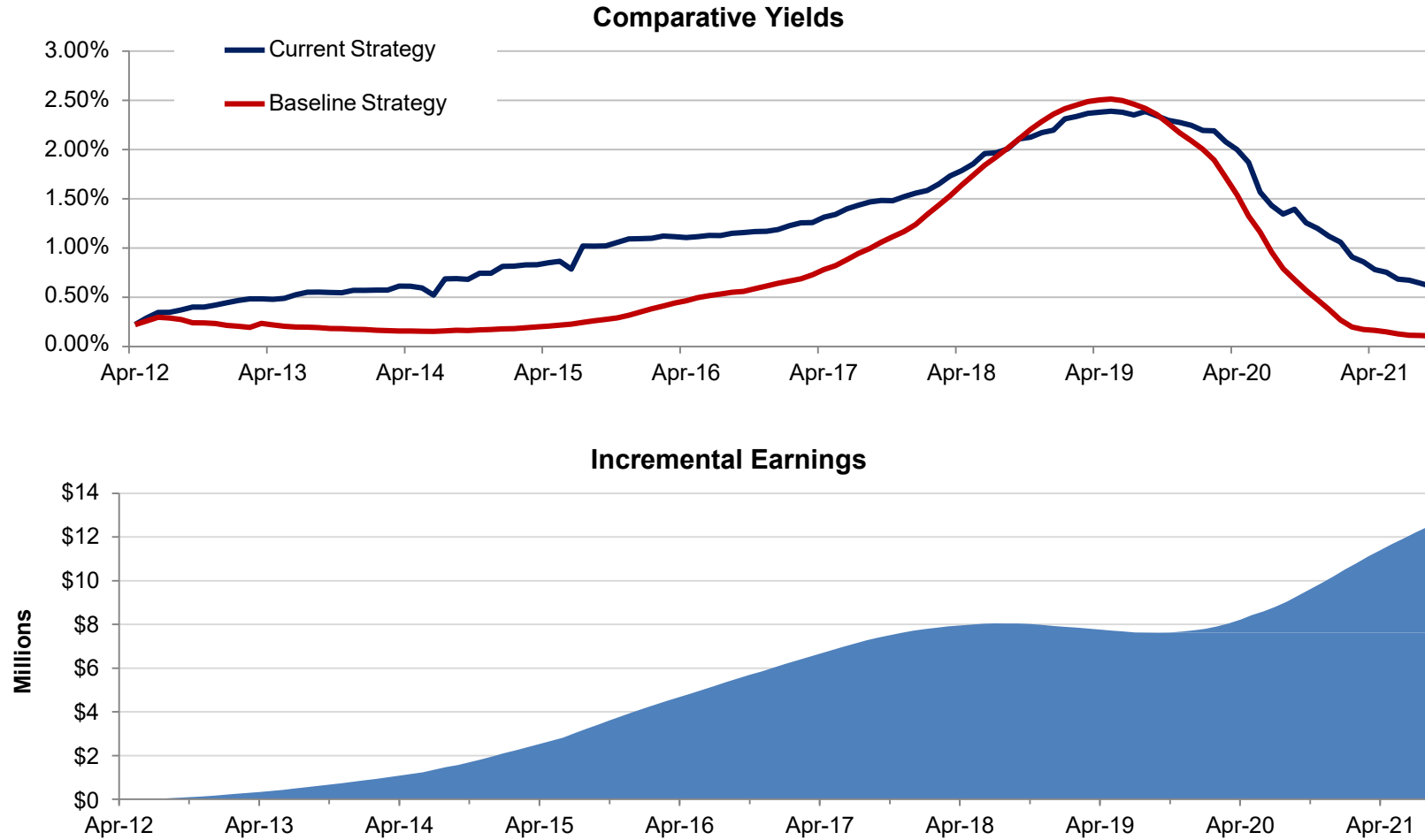
### Maturity Distribution

- 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) | June 30, 2021 | September 30, 2021 |
|-----------------------------------|---------------|--------------------|
| Overall                           | 1.4           | 1.5                |
| Managed Portfolio                 | 1.9           | 1.9                |

### Combined Portfolio Yield and Earnings Comparison April 2012 – September 2021



## Managed Portfolio Total Return Performance

- Total return expresses annualized rate of return over a specified period and takes into account all changes in the portfolio, including market value changes, reinvestment rates, cash flows, and interest earned plus realized gains/losses.

| Periods Ending September 30, 2021    |                  |         |                |              |                 |
|--------------------------------------|------------------|---------|----------------|--------------|-----------------|
|                                      |                  |         | Annualized     |              |                 |
| BofAML Indices                       | Duration (years) | Quarter | Past 12 Months | Past 3 Years | Since Inception |
| State Water Contract Fund            | 1.83             | 0.07%   | 0.25%          | 2.79%        | 1.52%           |
| General Fund                         | 1.84             | 0.07%   | 0.26%          | 2.81%        | 1.55%           |
| ICE BofAML 1 Year UST Index (GC03)   | 0.91             | 0.02%   | 0.16%          | 1.88%        | 0.95%           |
| ICE BofAML 1-3 Year UST Index (G1O2) | 1.83             | 0.06%   | 0.03%          | 2.63%        | 1.22%           |
| ICE BofAML 1-5 Year UST Index (GVQ0) | 2.59             | 0.00%   | -0.40%         | 3.24%        | 1.48%           |

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

## Market Value and Accrual Basis Earnings

| Market Value Earnings        | 3 Months         | 1 Year           | 3 Years             | 5 Years             | Since Inception     |
|------------------------------|------------------|------------------|---------------------|---------------------|---------------------|
| Interest Earned <sup>2</sup> | \$992,336        | \$4,514,525      | \$19,494,454        | \$29,859,016        | \$39,645,735        |
| Change in Market Value       | (\$688,208)      | (\$3,571,143)    | \$9,317,644         | \$2,721,752         | \$2,961,986         |
| <b>Total Dollar Return</b>   | <b>\$304,128</b> | <b>\$943,382</b> | <b>\$28,812,098</b> | <b>\$32,580,768</b> | <b>\$42,607,721</b> |

| Accrual Basis Earnings                 | 3 Months           | 1 Year             | 3 Years             | 5 Years             | Since Inception     |
|--|--------------------|--------------------|---------------------|---------------------|---------------------|
| Interest Earned <sup>2</sup>           | \$992,336          | \$4,514,525        | \$19,494,454        | \$29,859,016        | \$39,645,735        |
| Change in Market Value                 | \$479,070          | \$2,367,696        | \$4,222,827         | \$3,630,974         | \$3,741,277         |
| Realized Gains / (Losses) <sup>3</sup> | (\$126,273)        | (\$229,278)        | \$35,869            | (\$382,726)         | (\$2,211,339)       |
| <b>Total Earnings</b>                  | <b>\$1,345,133</b> | <b>\$6,652,943</b> | <b>\$23,753,150</b> | <b>\$33,107,264</b> | <b>\$41,175,673</b> |

1. Performance inception date 1. 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



## Important Disclosures

This material is based on information obtained from sources generally believed to be reliable and available to the public; however, PFM Asset Management LLC cannot guarantee the accuracy, completeness, or suitability of information provided by third party sources. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some, but not all of which, are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.

- 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 or Bloomberg. 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.
- Performance is presented in accordance with the CFA Institute's Global Investment Performance Standards (GIPS). Unless otherwise noted, performance is shown gross of fees. Quarterly returns are presented on an unannualized basis. Returns for periods greater than one year are presented on an annualized basis. Past performance is not indicative of future returns.
- Bank of America/Merrill Lynch Indices provided by Bloomberg Financial Markets.
- Money market fund/cash balances are included in performance and duration computations.
- Standard & Poor's is the source of the credit ratings. Distribution of credit rating is exclusive of money market fund/LGIP holdings.
- 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.

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## 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.

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## 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.

# Director Comments and Discussion

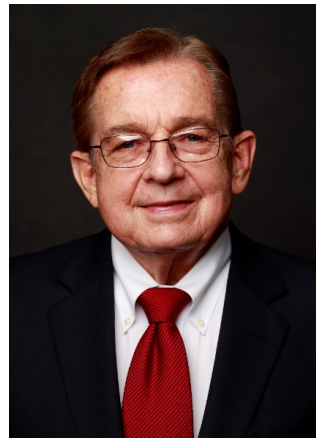
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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Receive and file the portfolio update report from PFM.

# Discussion Item 4.2 (Pg. 37)

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**Kristeen Farlow, MPA** – Strategic Communications Manager

Discuss State and Federal Legislative Update

**Staff Recommendation**

Receive and file.

# State Legislative Update

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- Jan. 3: Legislature returns
- Jan. 10: Governor's budget due
- Feb. 18: last day to introduce bills
- May 27: last day for bills to pass out of their house of origin



- 
- Proposed Initiative: Water Infrastructure Funding Act of 2022
  - Redistricting



# Bills of Interest

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## TWO-YEAR BILLS

- AB 284 (Rivas): California Global Warming Solutions Act of 2006: climate goal: natural and working lands.
- AB 377 (Rivas): Water quality: impaired waters.
- AB 564 (Gonzalez): Biodiversity Protection and Restoration Act.
- AB 1500 (E. Garcia): Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022.
- SB 45 (Portantino): Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2022.
- SB 559 (Hurtado): Department of Water Resources: water conveyance systems: Water Conveyance Restoration Fund.



# Federal Legislative Update

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## THE INFRASTRUCTURE INVESTMENT & JOBS ACT

- Passed by the House of Representatives- Nov. 7
- Signed by the President on Nov. 15
- \$1.2 trillion package, including
  - \$8.3 billion for Reclamation
  - \$9.5 billion for the Army Corps
  - \$55 billion for clean drinking water
  - \$3.3 billion for wildfire reduction



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## APPROPRIATIONS

- Conversations have not been productive
- On-hold until March 2022
- Anticipate Continuing Resolution to fund the government after December 3
- Legislators face a “December cliff:”
  - Government funding deadline
  - Debt ceiling crisis
  - Expiration of highway funding

## EPA STRATEGY TO ADDRESS PFAS

Research – Restrict – Broaden

- Research PFAS
- Restrict its release into the air, land and water
- Broaden cleanup efforts

# Director Comments and Discussion

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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Receive and file.

# Discussion Item 4.3 (Pg. 71)

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**Adekunle Ojo** – Manager of Water Resources

**Shavonne Turner** – Water Conservation Program Manager

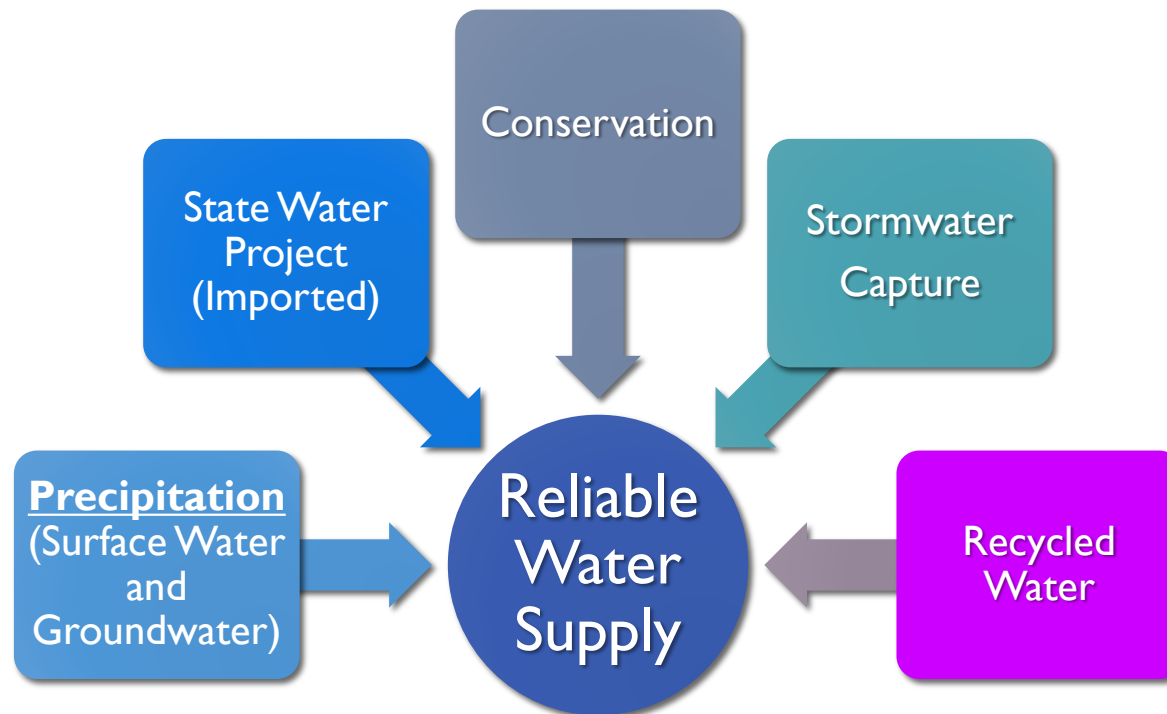
Consider Expanding the Local Resources Investment Program (LRIP) to Water Conservation and Other Demand Management Programs

## **Staff Recommendation**

Consider the proposed new approach and provide feedback to staff

# Water Supply Reliability through Planning and Investment

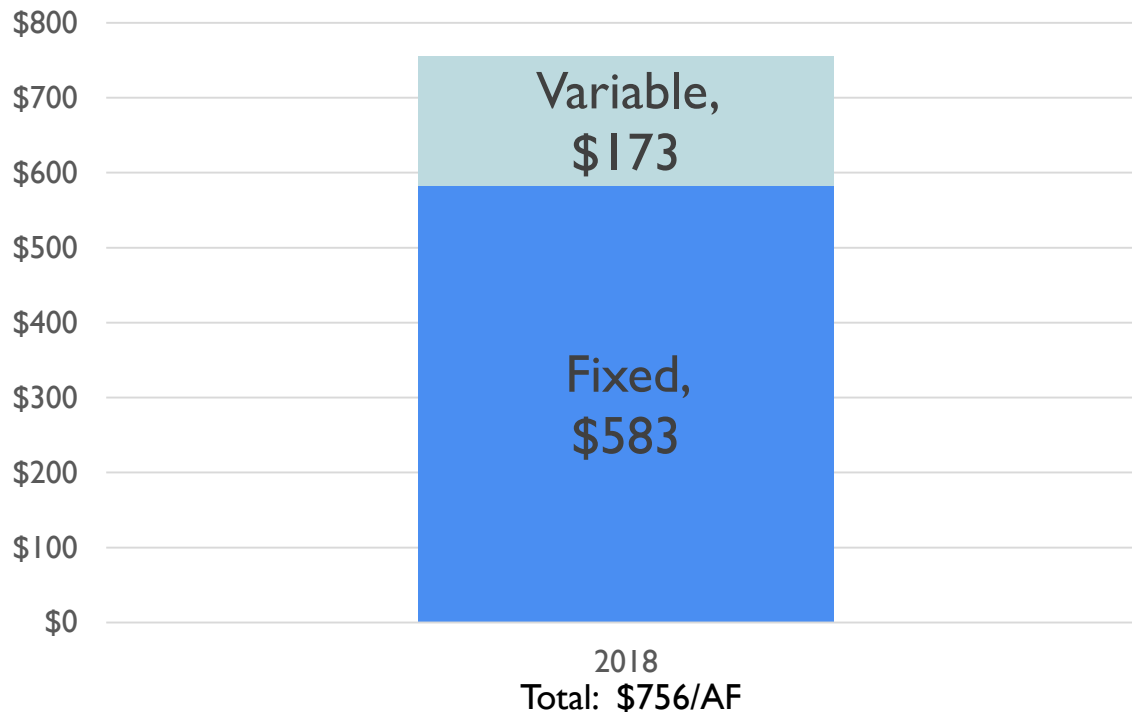
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# Local Resources Investment Program (LRIP)



Valley District Cost for SWP, per Acre-foot



## Recycled Water: 16,600 AFY

1. Sterling Natural Resources Center: 11,000 AFY
2. Clean Water Factory: 5,600 AFY

## Stormwater Capture: 10,300 AF Total

1. Wilson Basin III

## Conservation/Demand Reduction: Currently not covered by LRIP; potential to generate 15,000-40,000 AFY of conserved water

1. Allocation Based-Pricing
2. Smart Metering
3. Customer Engagement
4. Demand Management using SCADA, MIS, and CIS
5. Non-Revenue Water Reduction
6. Rebates for Water Savings, etc.

# Challenges and Opportunities

- Variable hydrology – more drought years and flood years per average year than any other state (UC Davis)
- Making Conservation a California Way of Life
- 15% Reduction Challenge by the Governor
- Prolonged and More Intense Drought
- Warmer Temperatures
- Lower Runoff from Snowpack
- Ecosystem Water Needs
- **Need for new water supply infrastructure**
- **Better management of existing water supply**
- **Multiple approaches – some smaller, some larger**

## Strategic Priorities

OUR *priorities*  
ARE TO DELIVER  
SOLUTIONS  
THAT ARE...



**RESILIENT.**

Resilient to seismic conditions, drought, population growth and climate change.



**RESTORATIVE.**

Reduce carbon footprint and recover environmental health.



**SCIENCE BASED.**

Built from reliable regional data shared among all partners.



**COST-EFFECTIVE.**

Optimize operational efficiency and maximize benefits from ratepayer investments.



**INTEGRATED.**

Holistically optimize value to the region.

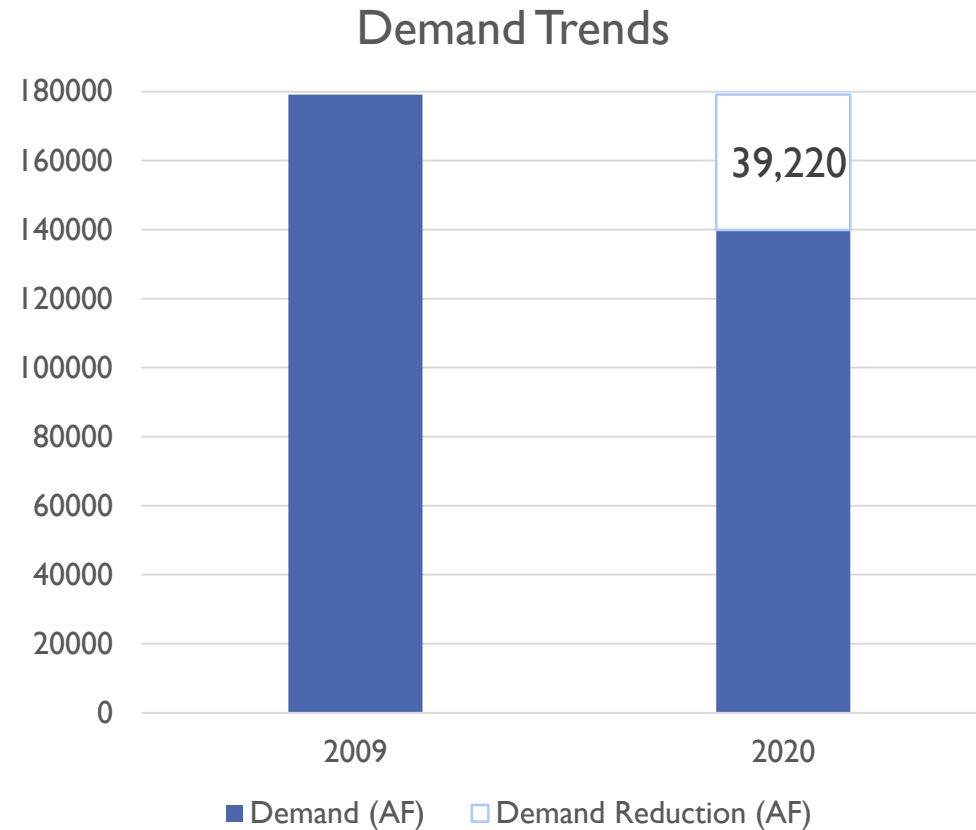
Securing  
Our  
Imported  
Supplies

**Building  
Local  
Supplies**

**Building  
Climate  
Resilience**

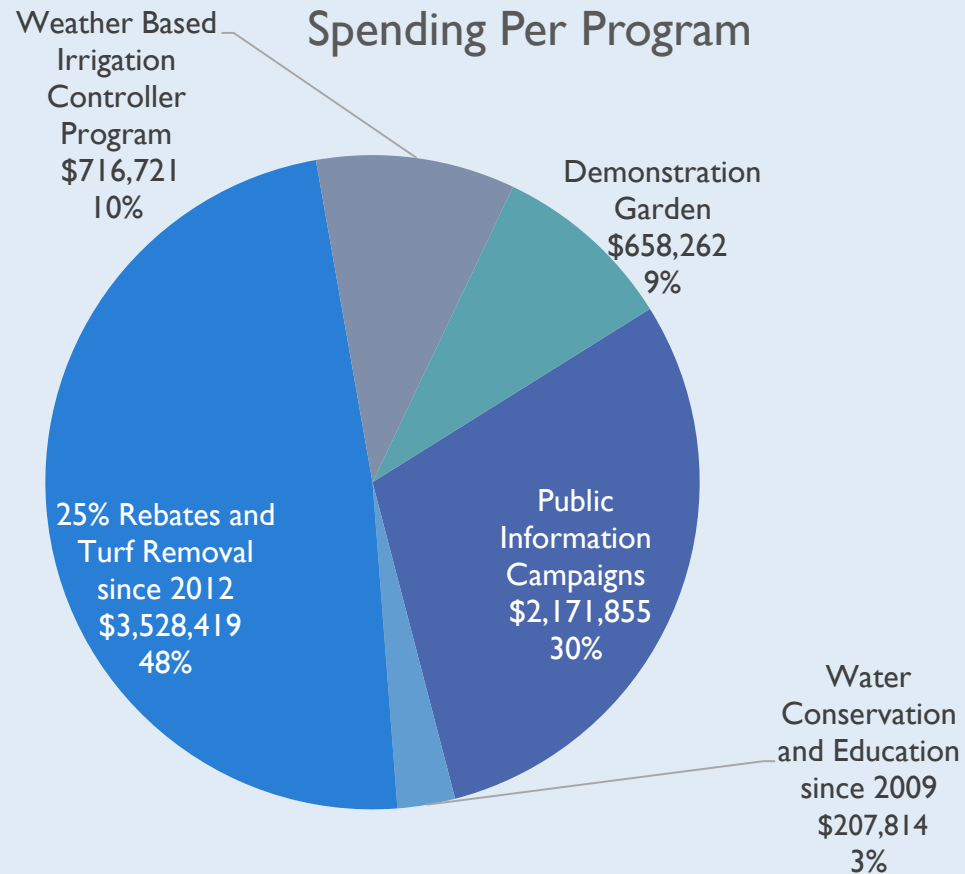
**Cost  
Effective  
Reliability**

# Demand Reduction/Conservation

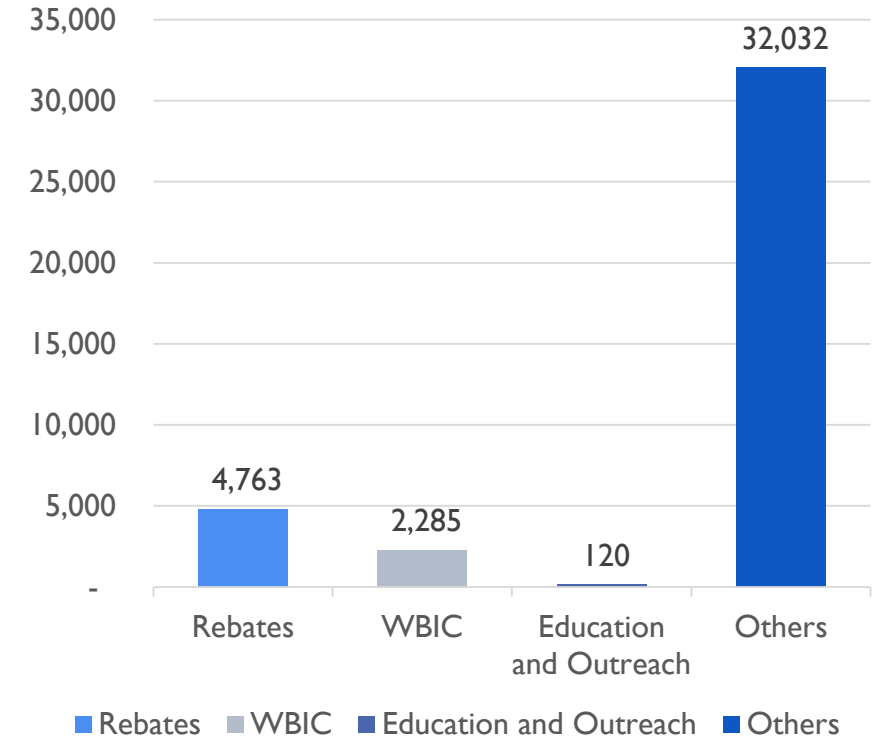




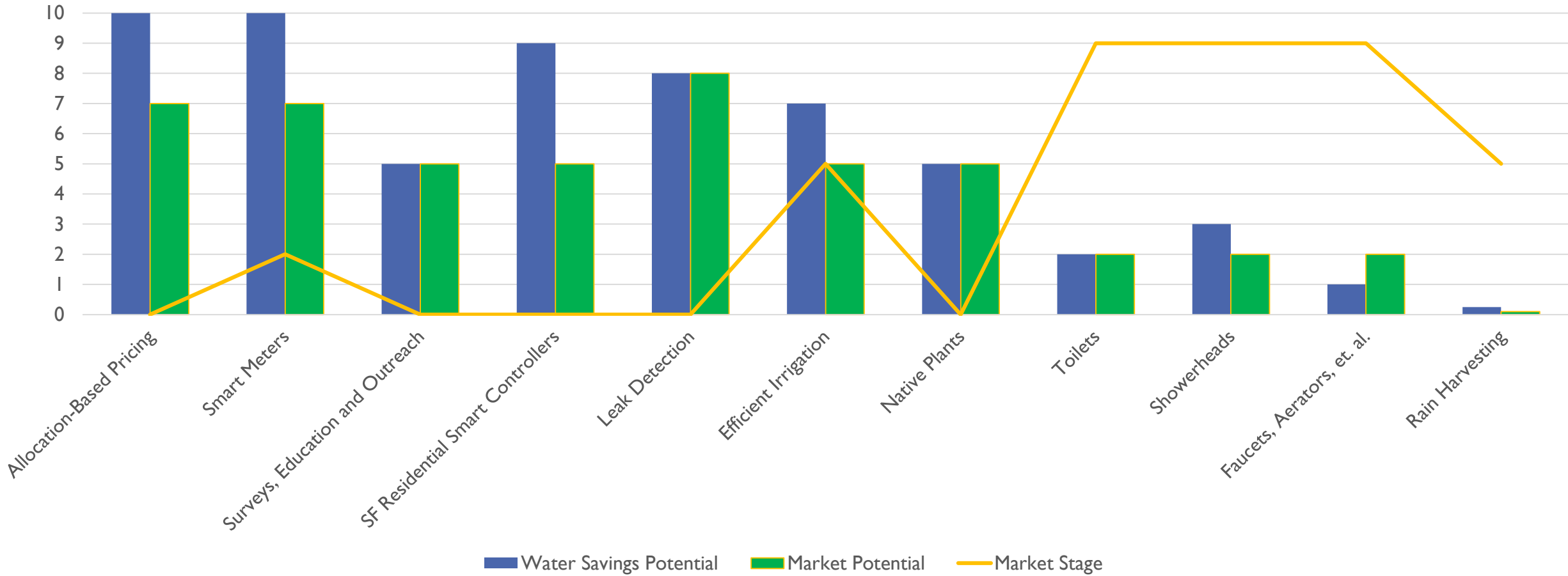
# Measurable Savings



## Maximum Estimated Savings AFY

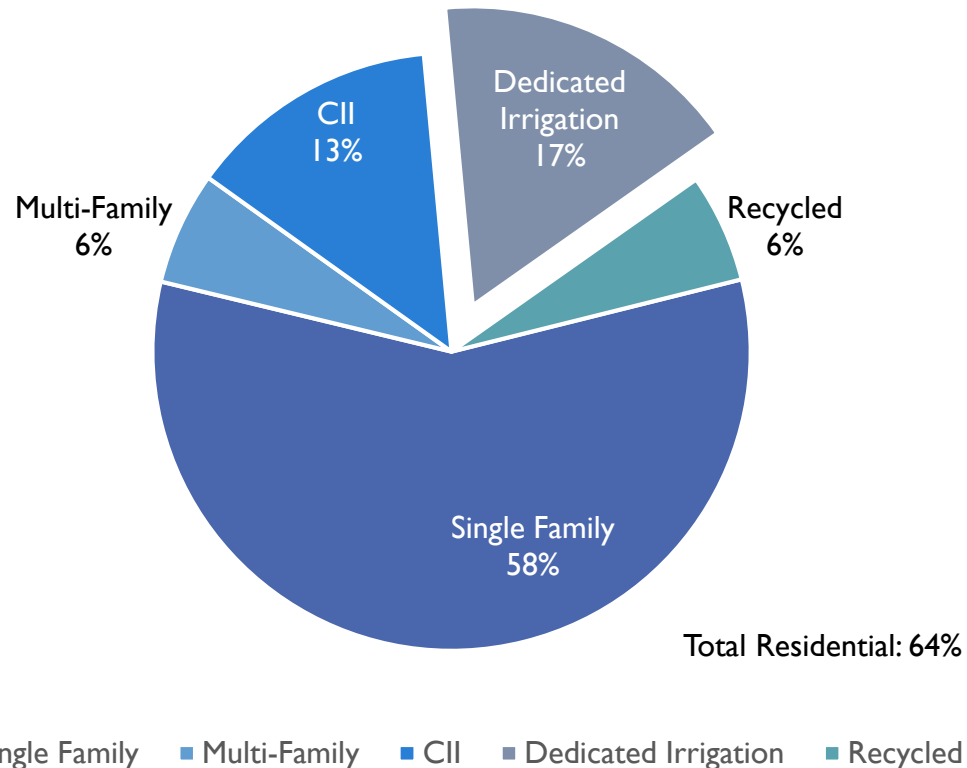


# From 1 (Low) to 10 (High)



# Outdoor Water Use, Prime Opportunity for Savings

Outdoor Use (AF) ~73,000 AFY



Estimated Amount of Water that can be saved if irrigation is turned off 48 hours after measurable rain:

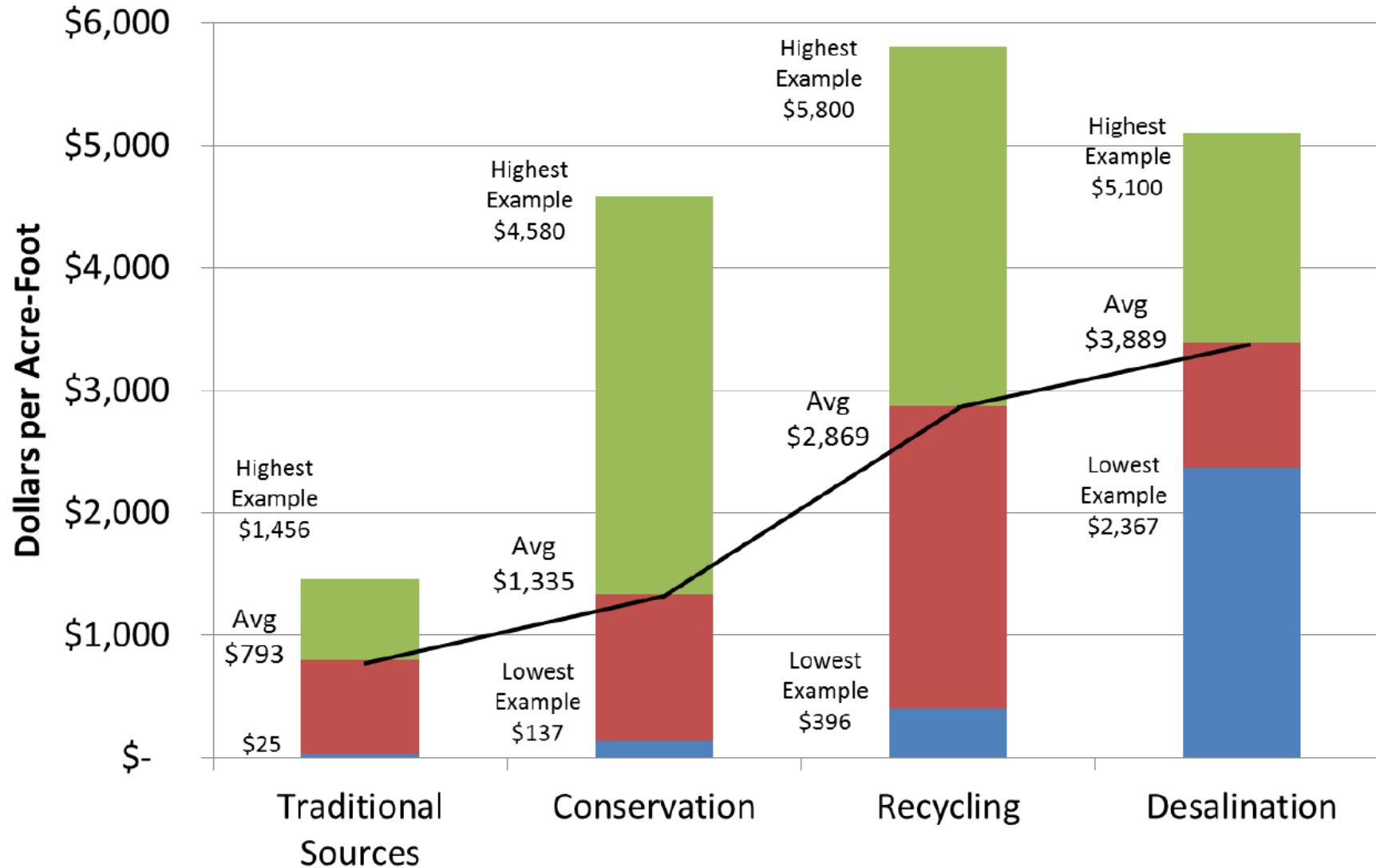
Avg. Daily Irrigation Demand (200 AF) x 30 Rainy Days x 50% of Customers

**3,000 AFY**

*Established plants can wait for a whole week or more without water after a rain*

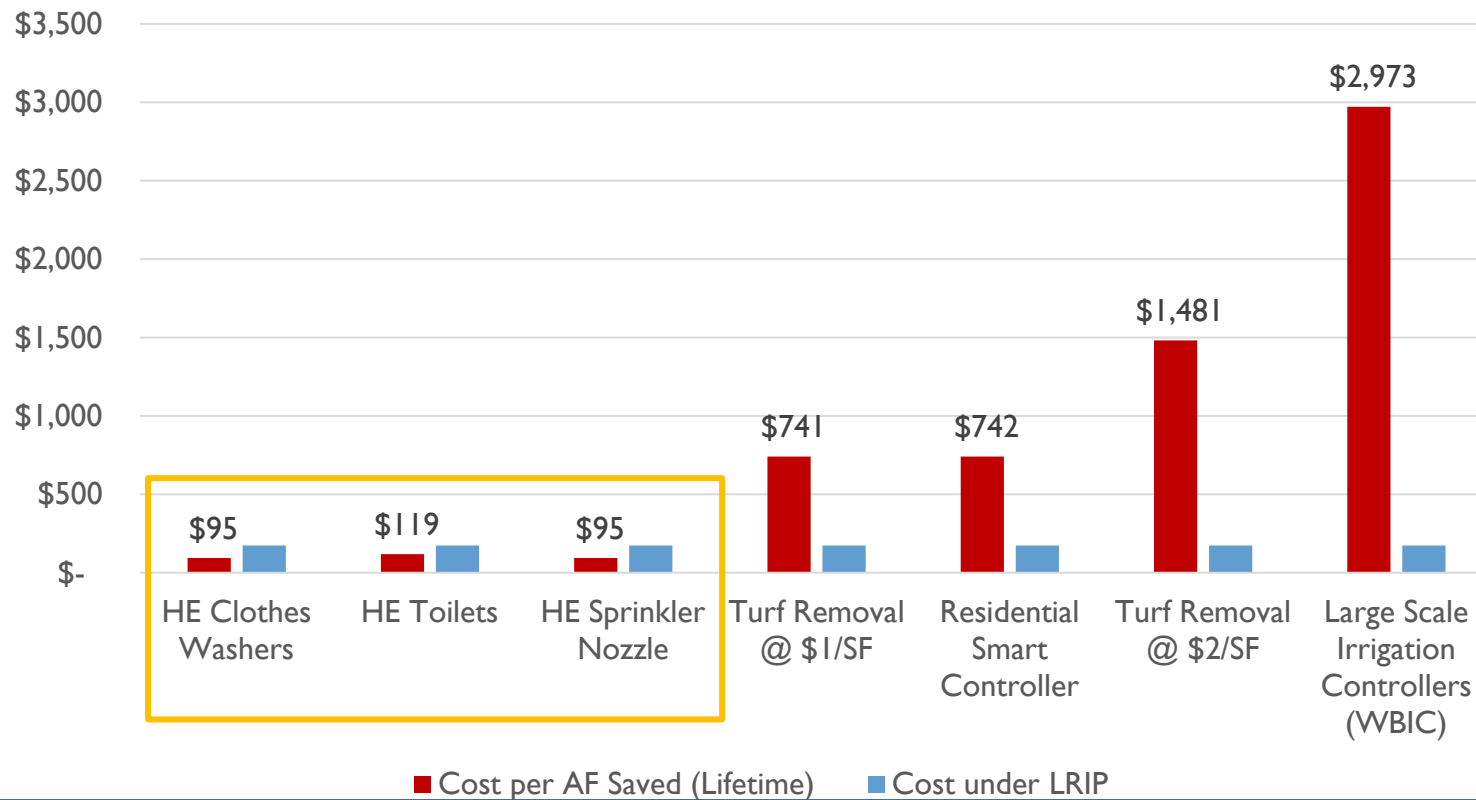
# New Sources Are More Costly

## Summary of Costs of Traditional and New sources of Water



# Costs per AF under Current Programs v. LRIP (\$179/AF)

Comparative Costs



## Consider Investing in Water Conservation and Other Demand Management Programs through Local Resources Investment Program (LRIP)

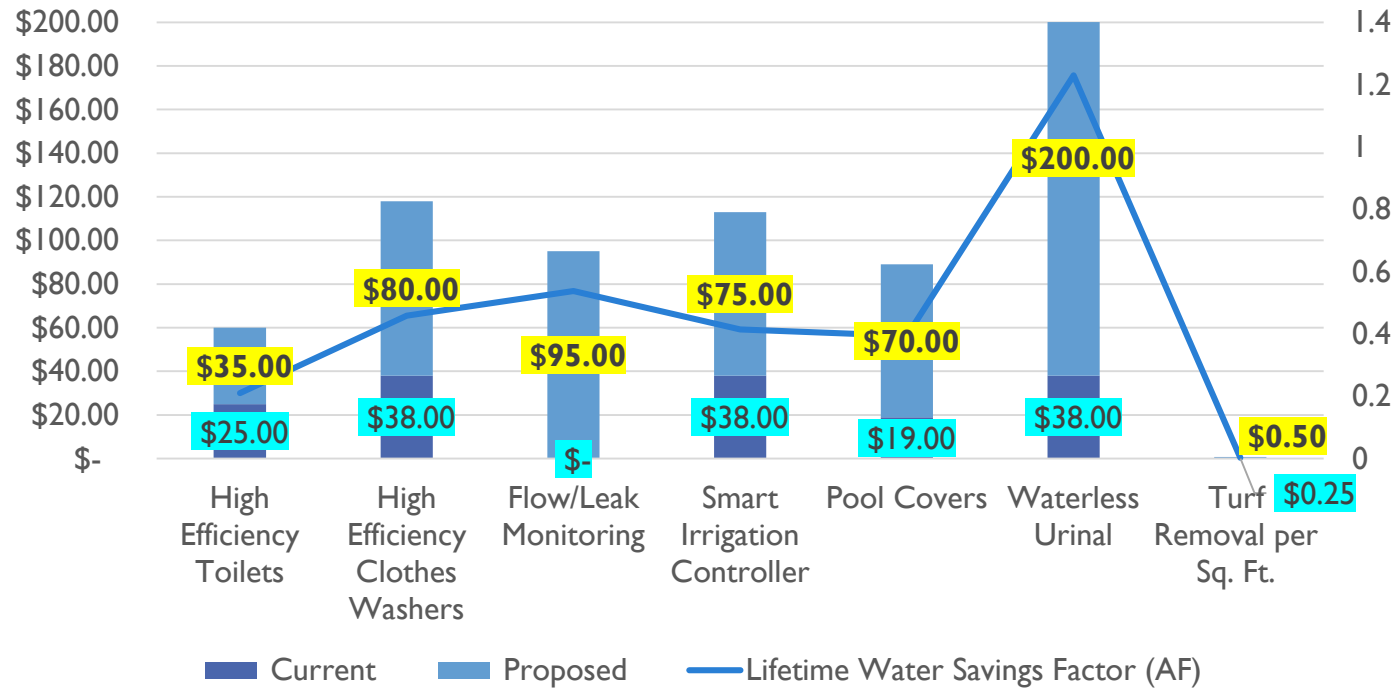
- 
- REGION HAS ACHIEVED PREVIOUS CONSERVATION OBJECTIVES AND IS RAMPING UP EFFORTS TO HELP RETAIL AGENCIES MEET NEW STATE WATER USE EFFICIENCY STANDARDS
  - ADDITIONAL EFFORTS NEEDED TO ACHIEVE POSITIVE RESULTS IN A COST-EFFECTIVE MANNER
  - FUND PROGRAMS WITH MEASURABLE SAVINGS THROUGH LRIP AND DECOUPLE THEM FROM HARD-TO-MEASURE PROGRAMS

CHANGE TO EXISTING SPENDING



# Investing in End Users through LRIP 2022-2027

Examples of LRIP Converted to Rebates



**Retail Agency Administered Multi-Benefit Program (RAAMP):** Rebates for water-efficient devices like toilets, smart irrigation controllers, and turf replacement for customers directly or indirectly through retailers; will replace the 25% reimbursement

- Retail agencies do not have to add to the Valley District incentive or can add selectively
- Staff is exploring a regional rebate website that can allow end-use customers in our service area to directly apply for these rebates in case a retail agency still choose not to offer rebates
- A combination of a regional website and increased incentive will increase participation and water savings



# Investing in Retailers through LRIP 2022-2025

**Demand Management Incentive:** Provide a fixed, annual allowance available to each retail agency within Valley District to spend on demand management improvement projects; Valley District approval still required for approval of 50% of actual expenditures

Funding can be used for the following:

- Non-revenue water reduction
- Allocation-based pricing and budget-based programs
- Tools and technologies including smart meters, GIS, customer information system, California Data Collaborative, etc.
- **Education**, outreach, and special events
- **Pilot Projects**
- Funding match for conservation-related federal and state grants
- **Stacked incentives and programs** targeted at low-income/disadvantaged communities, property and facilities managers, homeowner associations, and parcels with excessive water use, AND MORE

Sample of how \$500,000 allowance can be allocated; Valley District will pay 50% of an agency’s eligible cost up to the agency’s allowance

**Performance Measure:** Conserved Water

| Agency                                    | Avg. of SBVMWD Population, Connections, and Water Use | Proposed Annual Allowance |
|---|---|---------------------------|
| San Bernardino Municipal Water Department | 29%   | \$ 145,000                |
| West Valley Water District                | 14%   | \$ 70,000                 |
| East Valley Water District                | 14%   | \$ 70,000                 |
| City of Redlands Municipal Utilities      | 12%   | \$ 60,000                 |
| Yucaipa Valley Water District             | 8%  | \$ 40,000                 |
| City of Rialto Water Utility              | 8%  | \$ 40,000                 |
| City of Colton Water Utility              | 7%  | \$ 35,000                 |
| City of Loma Linda Water Utility          | 3%  | \$ 15,000                 |
| Riverside Highland Water Company          | 3%  | \$ 15,000                 |
| Others                                    | 2%  | \$ 10,000                 |
| <b>TOTAL</b>                              | <b>100%</b>   | <b>\$ 500,000</b>         |



NEW

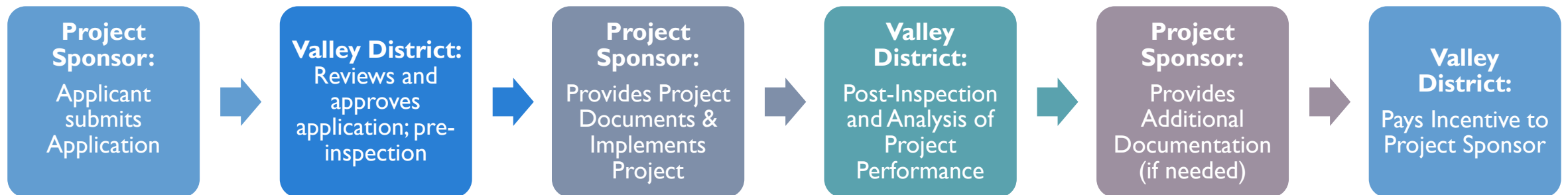


# Watershed-Scale Investment (2022-2030)

## Watershed Investment for Sustainability, Equity and Resilience (WISER)

**Pay for Performance Incentive for up to 10 Years; replace the Weather Based Irrigation Controller (WBIC) Program**

- Pay project applicants for custom projects that can save water
- Improve water efficiency through upgraded equipment and services
- Eligible projects must save at least 10 acre-feet over total project useful life (up to 10 years)
- Eligible applicants will include retail agencies, colleges and school districts, cities, large landscapes, HOA's, apartment operators, etc.
- Eligible projects will include equipment-type solutions and water service management-type projects
- Similar to MWDSC's Water Savings Incentive Program
- Phased Payment



# Summary and Potential Fiscal Impact

| Program           | Beneficiary   | Existing Annual Budget | Proposed Annual Budget | Water Savings (AFY) from Proposed Budget |
|-------------------|---|------------------------|------------------------|--|
| RAAMP (2022-27)   | End-use customers   | \$300,000              | \$500,000              | 2,793                                    |
| DMI (2022-25)     | Retail Agencies   | \$300,000              | \$500,000              | 3,000                                    |
| WISER (2022-2030) | Large Water Users, Retail Agencies, Cities, Schools, HOAs, etc. | \$300,000              | \$300,000              | 1,675                                    |
| <b>TOTAL</b>      |   | <b>\$900,000</b>       | <b>\$1,300,000</b>     | <b>~7,500</b>                            |

## Estimated Annual LRIP Spending at \$179/AF



# Director Comments and Discussion

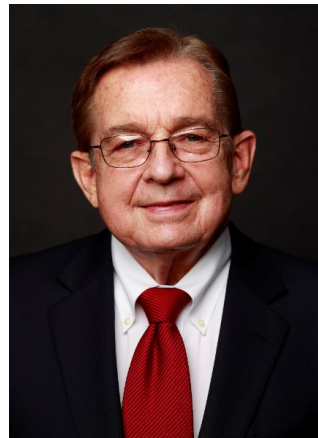
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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Consider the proposed new approach and provide feedback to staff.

# Discussion Item 4.4 (Pg. 90)

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**Wen B. Huang, PE, MS** – Deputy General Manager/Chief Engineer

Consider Third Amendment to the Reimbursement Agreement with East Valley Water District for Construction of the Regional Recycled Water Facilities

## **Staff Recommendation**

Forward the Third Amendment to the Reimbursement Agreement with EVWD for construction of the Regional Recycled Water Facilities to the next regular Board of Directors meeting for consideration.

# History of Development of Recycled Water

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## 2016: Regional Recycled Water Concept Study

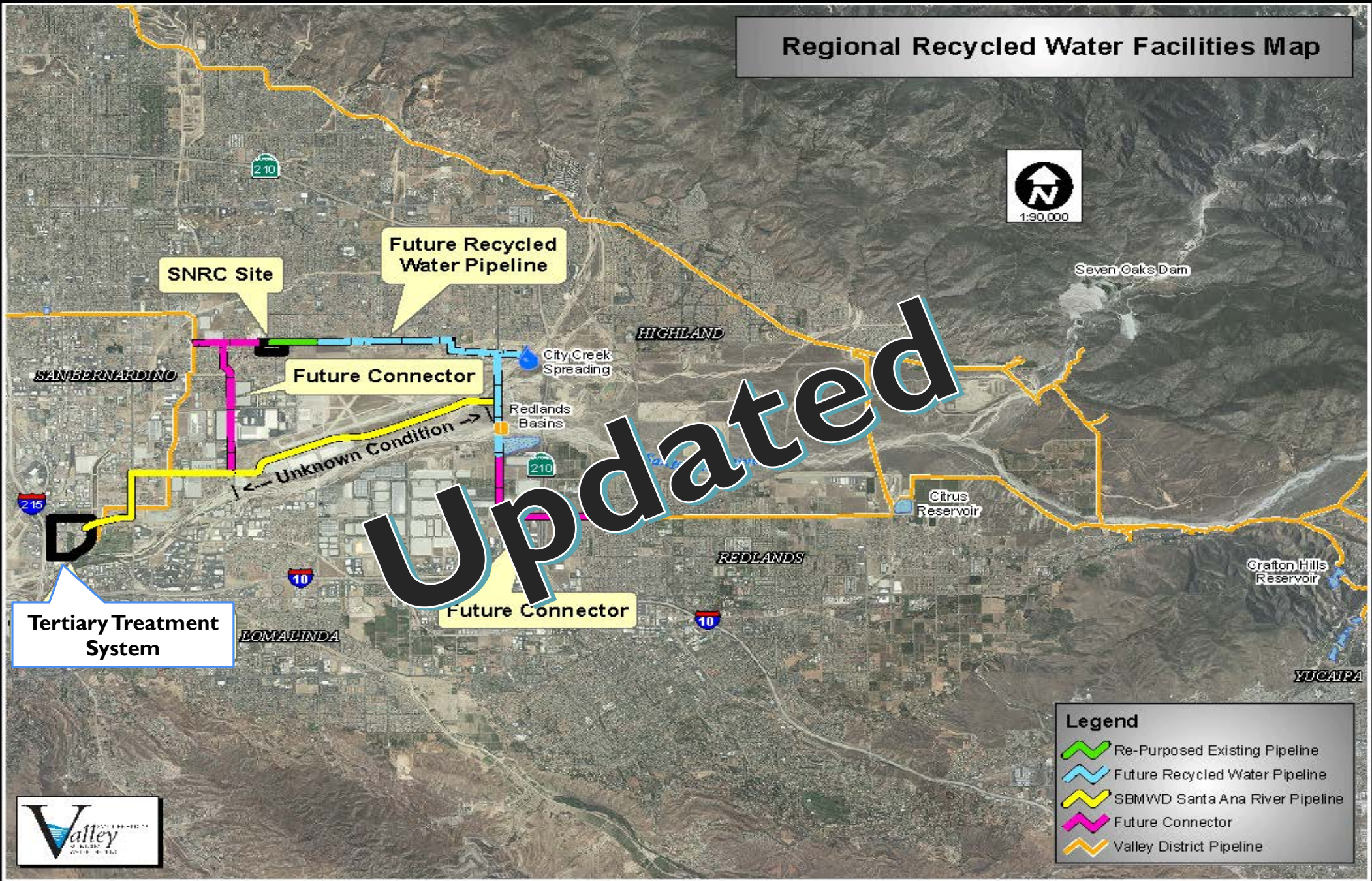
- Projects Identified to be further developed:
  - EVWD's Sterling Natural Resource Center (SNRC)
  - SBMWD's Tertiary Treatment System (TTS), formerly Clean Water Factory
- Development of Regional Recycled Water Infrastructure
  - Continue Valley District's leadership role as a regional water agency
  - Led by Valley District

## 2018: Local Resources Investment Program (LRIP)

- Incentives provided for development of new water supplies
  - Recycled water and stormwater



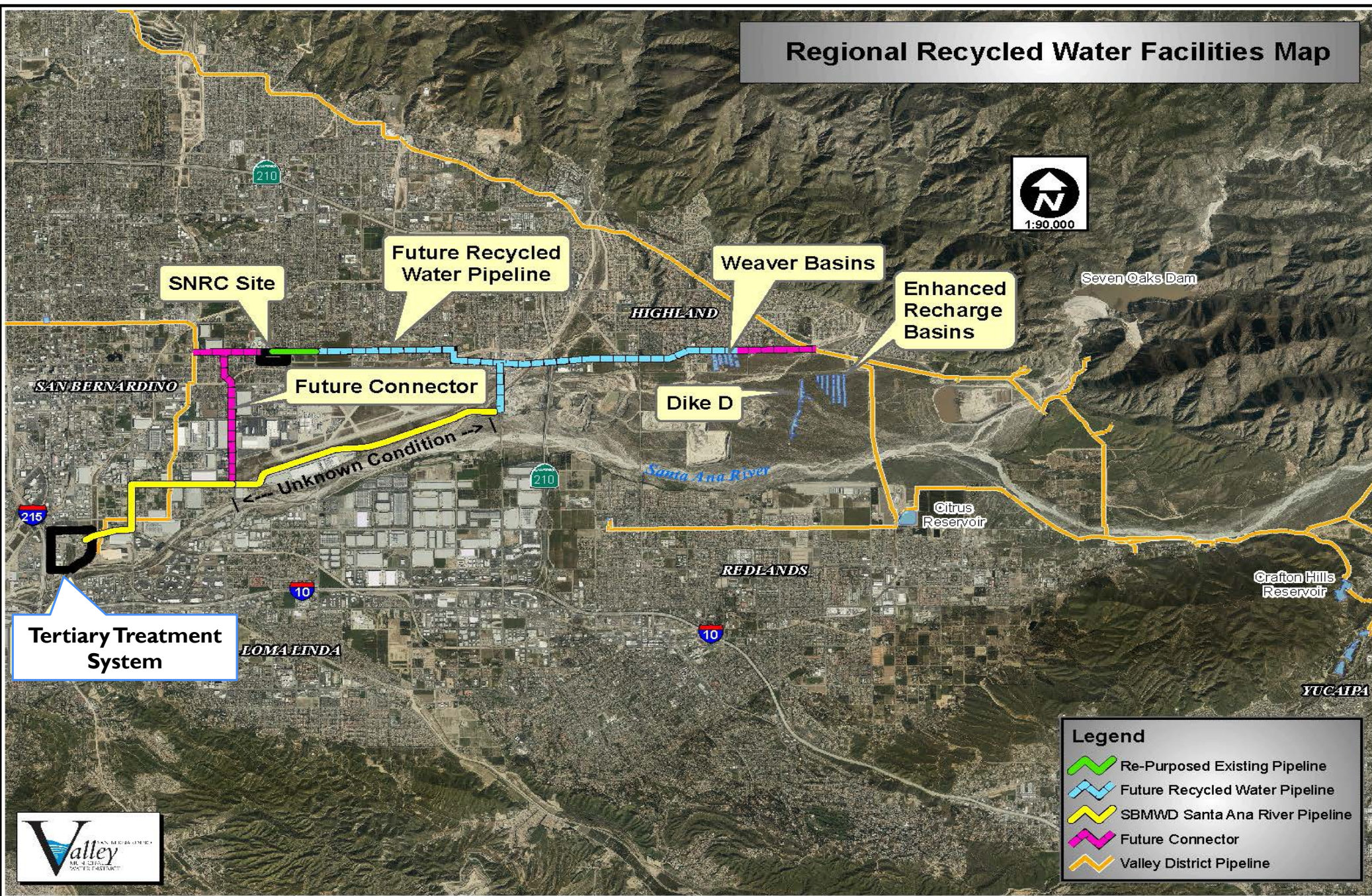
# Regional Recycled Water Facilities Map



- Legend**
- Re-Purposed Existing Pipeline
  - Future Recycled Water Pipeline
  - SBMWD Santa Ana River Pipeline
  - Future Connector
  - Valley District Pipeline



# Regional Recycled Water Facilities Map



- Legend**
- Re-Purposed Existing Pipeline
  - Future Recycled Water Pipeline
  - SBMWD Santa Ana River Pipeline
  - Future Connector
  - Valley District Pipeline



# Development and Implementation of RRWS

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## Phase I (being implemented)

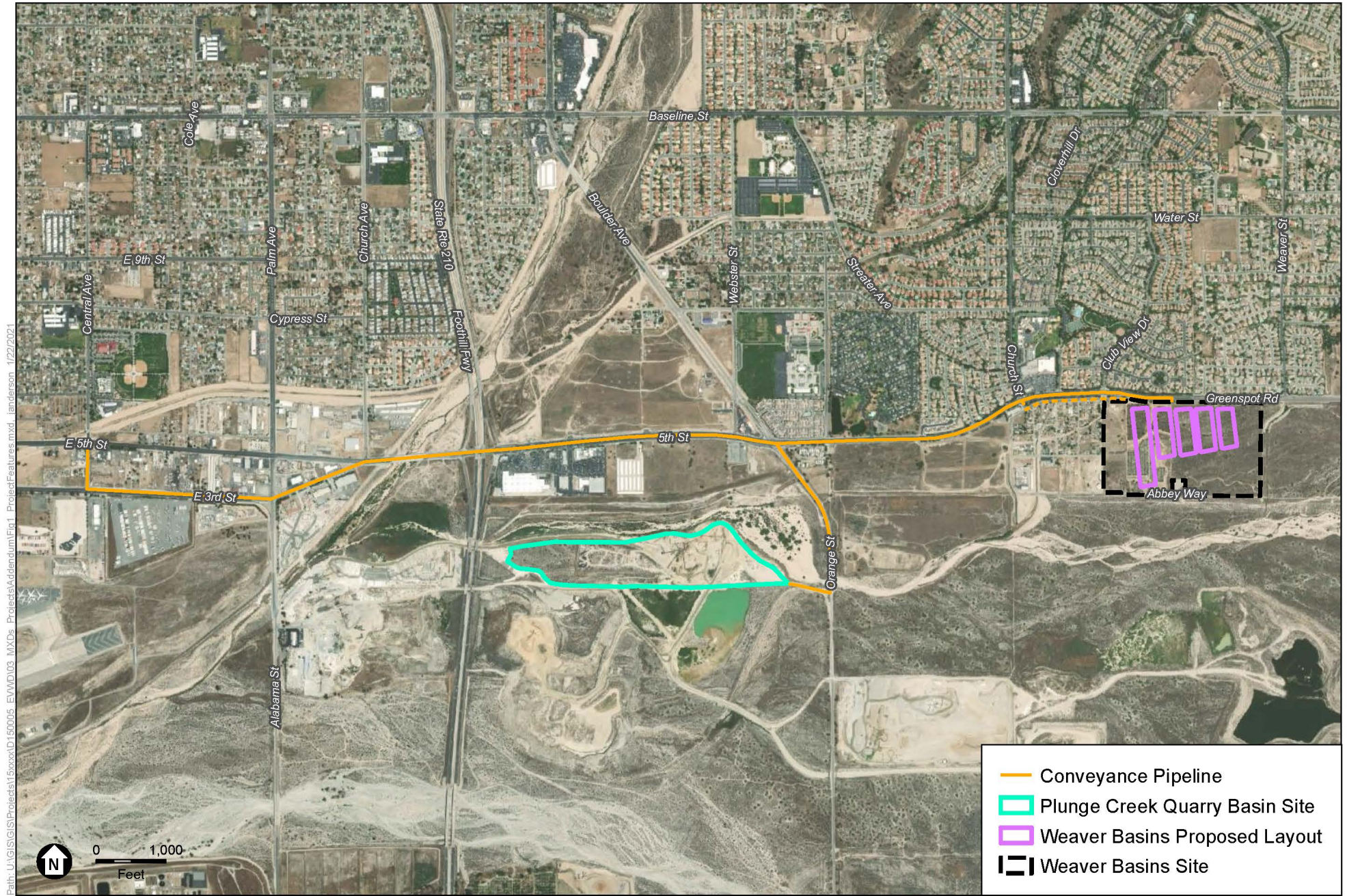
- Regional Recycled Water Pipeline (RRWP)
  - West of Alabama St - Construction substantially completed (Reimbursement Agreement, Amendment No. 1)
  - East of Alabama St - Design Complete pending review by Caltrans and City (Amend. No. 2)
- Weaver Basins
  - Design Complete (Amend. No. 2)
  - Construction pending approvals from State (SHPO) and USFWS
- Alabama Street Pipeline
  - Table-top research of PCCP complete (Amend. No. 2)
  - Condition Assessment in progress (Amend. No. 2)

## Phase II (Concept)

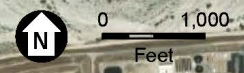
- Extension of RRWP easterly
- Dike D and Enhanced Recharge Basins







Path: U:\GIS\GIS\Projects\15xxxx\15xxxx.D\150005\_EVWD\03\_MXD\Projects\Addendum\Fig1\_ProposedFeatures.mxd | anderson | 1/27/2021







| Activity ID   | Activity Name  | OD  | RD  | PCT | Start       | Finish    | TF   | Calendar                  | 2022 |     |     |     |     |     |     |     |     |     |     |     | 2023 |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
|---|--|-----|-----|-----|-------------|-----------|------|---------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|
|   |  |     |     |     |             |           |      |                           | p    | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep  | Oct | Nov | Dec | Jan | Feb | Mar |  |  |  |  |  |  |  |  |  |  |  |
| <b>Balfour Beatty - SNRC Water Recycling Facility Schedule - September 2021</b> |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Construction</b>   |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Offsite Structures &amp; Piping</b>  |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Effluent Piping</b>  |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Construction Phase</b>   |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Pipe Line &amp; Construction of Weaver Basin</b>                             |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7000  | Weaver Basin Procurement   | 45  | 11  | 75% | 01-Jun-21 A | 18-Oct-21 | -181 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7040  | RRWP Extension - Package 3 Freeway Crossing                                | 102 | 102 | 0%  | 22-Oct-21*  | 23-Mar-22 | -104 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7020  | RRWP Extension - Package 1 West of 210                                     | 122 | 122 | 0%  | 22-Oct-21   | 20-Apr-22 | -141 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7030  | RRWP Extension - Package 2 East of 210                                     | 183 | 183 | 0%  | 22-Oct-21*  | 18-Jul-22 | -202 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| <b>Weaver Basin Fragnet</b>   |  |     |     |     |             |           |      |                           |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7050  | Mobilization   | 5   | 5   | 0%  | 01-Dec-21*  | 06-Dec-21 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7060  | Develop Water to Site  | 3   | 3   | 0%  | 03-Dec-21   | 06-Dec-21 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7070  | Clearing / Demo (Work From West to East)                                   | 14  | 14  | 0%  | 07-Dec-21   | 23-Dec-21 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7080  | Pre-Water  | 8   | 8   | 0%  | 16-Dec-21   | 27-Dec-21 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7090  | OX & Cut / Fill Soil (Work From Basin 1 to 5)                              | 27  | 27  | 0%  | 28-Dec-21   | 02-Feb-22 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7100  | Stockpile Oversized  | 27  | 27  | 0%  | 28-Dec-21   | 02-Feb-22 | -136 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7125  | Import   | 10  | 10  | 0%  | 26-Jan-22   | 07-Feb-22 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7120  | Excavate Emer Basin  | 8   | 8   | 0%  | 03-Feb-22   | 12-Feb-22 | -208 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7130  | Excavate Pump Struct   | 3   | 3   | 0%  | 14-Feb-22   | 16-Feb-22 | -208 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7110  | Process / Crush Oversized  | 27  | 27  | 0%  | 15-Jan-22   | 18-Feb-22 | -136 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7140  | Place Crushed Material   | 20  | 20  | 0%  | 08-Feb-22   | 04-Mar-22 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7150  | Rough Grades Basins  | 17  | 17  | 0%  | 18-Feb-22   | 12-Mar-22 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7160  | RG Pump / Forbay Pad   | 2   | 2   | 0%  | 14-Mar-22   | 15-Mar-22 | -152 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7190  | FG Emer Basin for PCC (Precise Grading Work)                               | 10  | 10  | 0%  | 14-Mar-22   | 25-Mar-22 | -209 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7170  | Finish Grade Basins / Ramps (Precise Grading Work)                         | 24  | 24  | 0%  | 16-Mar-22   | 14-Apr-22 | -152 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7180  | Finish Grade Roadways (Predse Grading Work)                                | 8   | 8   | 0%  | 09-Apr-22   | 19-Apr-22 | -152 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7195  | Install Rip Rap  | 8   | 8   | 0%  | 09-Apr-22   | 19-Apr-22 | -152 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7200  | Backfill Pump Perimeter (Backfill Perimeter of Pump Bldg Estimated at 12') | 3   | 3   | 0%  | 20-Apr-22   | 22-Apr-22 | -152 | WEAVER BASIN CAL          |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7240  | Weaver Basin Mechanical  | 60  | 60  | 0%  | 18-Feb-22   | 13-May-22 | -177 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7245  | Weaver Basin Structural  | 61  | 61  | 0%  | 28-Mar-22   | 21-Jun-22 | -202 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |
| RWP-C-7250  | Weaver Basin Electrical  | 90  | 90  | 0%  | 28-Mar-22   | 02-Aug-22 | -202 | 5 DAY WORKWEEK + holidays |      |     |     |     |     |     |     |     |     |     |     |     |      |     |     |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |

█ Remaining Level of Effort    █ Critical Remaining Work  
█ Actual Work    ◆ Milestone  
█ Remaining Work

# Constr. Cost - RRWP and Weaver Basins

| SUMMARY OF COSTS                    |  |      |           | Direct Costs      |
|-------------------------------------|--|------|-----------|-------------------|
| New Discharge Basin, Weaver Site    |  |      | \$        | 15,782,788        |
| Extend Pipeline to New Weaver Basin |  |      | \$        | 13,172,239        |
| <b>Subtotal Direct Costs</b>        |  |      | <b>\$</b> | <b>28,955,027</b> |
|                                     | Bond                                   | 1%   | \$        | 330,869           |
|                                     | Markup                                 | 10%  | \$        | 3,040,989         |
|                                     | Insurances                             | LSUM | \$        | 1,123,995         |
|                                     | Owner Control Contingency              | 10%  | \$        | 3,345,088         |
|                                     | Subtotal Indirect Costs & Contingency  |      | \$        | 7,840,941         |
|                                     | Geotechnical Costs during Construction |      | \$        | 474,730           |
| <b>Total Project Cost</b>           |  |      | <b>\$</b> | <b>37,638,658</b> |

Based on 10 MGD a day recharge for 50 years (expected service life) with the cost of all Phase I facilities and land acquisition at \$62M, the average facility cost of recharge of the recycled water per ac-ft is approx. \$110/AF.

# Director Comments and Discussion

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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Forward the Third Amendment to the Reimbursement Agreement with EVWD for construction of the Regional Recycled Water Facilities to the next regular Board of Directors meeting for consideration.

# Future Business

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# Adjournment

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