



WATER FORUM AGREEMENT 2050

Final Agreement

*The Next Generation of Water Management in
the Sacramento Region*

Signed April 2026

Water Forum Agreement 2050

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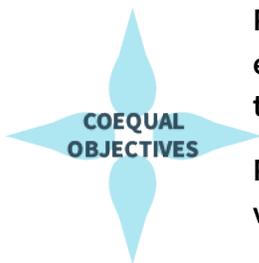


Introduction

The Water Forum: Protecting the River and Regional Water Supply

The lower American River (LAR) is one of the Sacramento region's greatest treasures. Generations of Sacramento-area residents have grown up on the river and along the parkway, enjoying its rich ecosystem of plants and wildlife, as well as numerous recreational activities. Throughout history, the river has sustained the lives and livelihoods of local residents by providing them with drinking water. But the river doesn't just *provide* for the region; it also needs active stewardship.

In 2000, 40 different agencies, organizations, citizen groups, and businesses came together to sign the landmark Water Forum Agreement, a visionary long-term plan created to balance two coequal objectives:



Provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030; and

Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

The Water Forum Agreement (WFA) was a bold experiment. People with vastly different views on the best uses of water agreed to work together toward mutual goals. Water agencies, environmental

The lower American River is an essential part of life in the Sacramento region. It provides drinking water to nearly 2 million people and is home to 43 species of fish, including the endangered Central Valley steelhead and fall-run Chinook salmon. The river also offers invaluable recreational and aesthetic values for the region and attracts nearly eight million visitors per year.

The river corridor also helps protect Sacramento-area communities from floods and plays an important role in supplying water to the Sacramento-San Joaquin Delta, which ultimately serves drinking water for many Californians and provides water for the state's agriculture.

organizations, business groups, and other interested parties negotiated a 30-year plan for how the American River basin's water would be managed and protected. The aim was to reduce the persistent conflicts over water resources that had historically plagued the region.

Before the Water Forum, the Sacramento area had seen its share of lawsuits, demonstrations, and political battles over planned water projects. Water providers and business interests were concerned that opposition to water development would hinder their ability to serve customers with a reliable water supply. At the same time, environmental advocates were alarmed by the ongoing decline of water-based ecosystems.

The agreement, reached after seven years of intense negotiations, included financial and operational commitments from water providers, as well as a promise from environmental organizations to support water providers based on the terms of the agreement. The first WFA included seven key **elements** that represented the strategies members¹ used to meet the coequal objectives of water supply reliability and environmental stewardship. Over the past 25 years, these strategies have shaped water management in the Sacramento region, addressing both immediate needs and long-term sustainability.

The original Water Forum **elements** were:

1. Detailed plans for **increased surface water supplies** from rivers during average to wet years to support Sacramento's anticipated population and economic growth through 2030.
2. Water providers' commitment to **actions during dry years** to reduce surface water diversions to protect fish, wildlife, aesthetic, and recreational value of the river.
3. Plans to establish a **new flow standard** for the LAR that would improve water releases to better support fish.
4. A **Habitat Management Element (HME)** dedicating purveyor and federal resources toward preserving the fishery, wildlife, recreational, and aesthetic values of the LAR.
5. Comprehensive **water conservation** plans to meet regional water needs while reducing reliance on both groundwater and surface water.
6. Establishment of local agencies for **groundwater management**, to monitor groundwater use and implement a conjunctive use program.
7. Ongoing implementation and adaptation of the WFA through 2030 via the **Water Forum Successor Effort (WFSE)**.



The Water Forum brings together a diverse group of businesses, citizen groups, environmentalists, water managers, and local governments in Sacramento, Placer, and El Dorado counties.

¹ The term member in this document is intended to refer to an organization that is a signatory to the Water Forum. Member and signatory can be used interchangeably.

These original Water Forum elements and the members' progress in each are detailed in **Appendix 1: Advancing the Seven Elements of the First Water Forum Agreement.**

Now, after more than two decades, the Water Forum is widely regarded as a success and is often recognized as a model for similar initiatives. It has not only led to tangible accomplishments in water management and river health enhancement but has also built strong, collaborative relationships that have helped the region navigate severe droughts. These collaborations have enabled the region to invest in river restoration projects and major infrastructure projects without opposition or lawsuits, a testament to the trust and transparency that have been cultivated over the years.

The success of this partnership has earned the Sacramento area a statewide reputation as an innovative steward of regional water resources, providing a solid foundation for negotiating a new agreement necessary to tackle the challenges ahead. The challenges ahead are significant for maintaining a reliable water supply, and especially for a healthy ecosystem that relies on cold water.

HONORS AND AWARDS

1999 – Achievement Award from California Water Policy Conference

2000 – Association of California Water Agencies Clair A. Hill Water Agency Award

2000 – U.S. Environmental Protection Agency Region 9 Outstanding Environmental Achievement Award

2001 – League of California Cities Helen Putnam Award for Excellence

2001 – Governor's Environmental and Economic Leadership Award for outstanding contributions in Environmental-Economic Partnerships

2004 – Harvard University Kennedy School of Government "Top 50" Programs in the Innovations in American Government competition

2015 – American Water Resources Association, Csallany Institutional Award for Exemplary contributions to Water Resources Management

2015 – Governor's Environmental and Economic Leadership Award

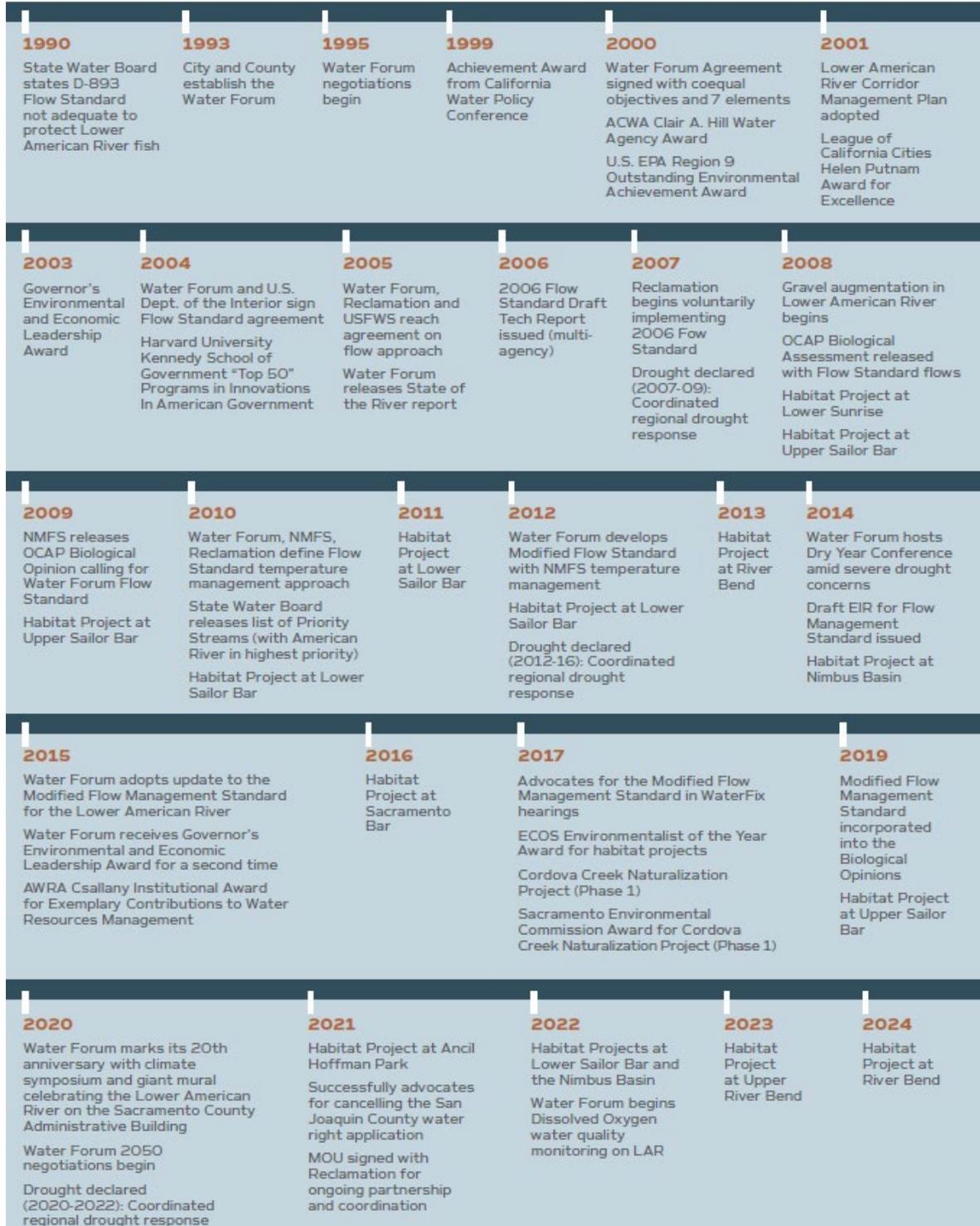
2017 – Environmental Council of Sacramento Environmentalist of the Year Award

The Water Forum was honored in both 2001 and 2015 with the **Governor's Environmental and Economic Leadership Award** — the state's top award for environmental stewardship — in recognition of its work to improve the lower American River riparian habitat and parkway, and to protect the Sacramento region's water supply.

KEY MILESTONES IN THE WATER FORUM’S HISTORY

Figure 1. Water Forum Timeline, 1990–2024

WATER FORUM Timeline 1990 - 2024



COMMITMENT TO THE WATER FORUM WAY

The **Water Forum Way** is an explicit set of mutual obligations that has guided Water Forum members' engagement with one another since its inception. Members demonstrate adherence to the Water Forum Way through the following practices:

- Mutual gains approach and collaborative effort to seek consensus and build trust
- Participating with an open-minded, respectful, and interest-based approach to all discussions
- Working through challenges, search for and find balance across the Water Forum's coequal objectives
- Understanding Water Forum processes and interested parties
- Emphasize transparency through a group disclosure process
- Surfacing and seeking to understand and accommodate differences and interests among Water Forum members
- Working with diverse groups to enable voices to be heard and to have an opportunity to have a seat at the table

All members of the Water Forum, including staff and consultants, commit to adhering to the Water Forum Way and hold one another accountable for reinforcing this practice.

Water Forum 2050: The Next Generation

As the Water Forum looks to the next twenty-five years, it faces a different set of challenges and a new regulatory landscape, including the impacts of climate change, increasingly challenged environmental conditions, increased regulations, and economic pressures. Given the magnitude and timing of the expected challenges, the negotiations for the new Water Forum Agreement were initiated in 2020 to prepare the region to better respond to changes as they materialize.

- **Shifting hydrology:** Climate change presents the single most significant threat to achieving the Water Forum’s coequal objectives of water supply reliability and environmental stewardship of the LAR. While the first WFA focused primarily on mitigating the effects of dry years, the region is now experiencing a complex mix of hotter and drier periods, coupled with more intense bursts of rainfall and a diminishing snowpack. This pattern will challenge water storage infrastructure, particularly Folsom Reservoir, which must balance flood control needs with storing water for drought periods—challenges that were not anticipated in the first WFA.
- **Environmental Challenges and Fisheries:** Salmon and steelhead populations in the LAR face significant threats due to suboptimal flow and temperature conditions. Additionally, climate change impacts and other factors, including ocean and Delta conditions, have contributed to reduced fish populations. Continuing habitat enhancements and fostering continued collaboration with agencies, including the U.S. Bureau of Reclamation (Reclamation), for suitable flows and temperatures will be crucial for mitigating these challenges.
- **Operational Challenges:** Folsom Reservoir is owned and operated by the Bureau of Reclamation (Reclamation) as part of the broader Central Valley Project (CVP), a statewide water delivery system. As such, Reclamation must consider and balance the needs for water beyond the American River watershed within its operations. There are times when out-of-basin demands of the CVP may seem at odds with the needs of the LAR and the American River region. As the impacts of climate change further constrain water supplies, those times of competing demands are likely to increase and intensify. Ongoing coordination and engagement with Reclamation will be crucial for the continued success of the coequal objectives and ensuring that American River interests are fully considered within the broader context of CVP operations.
- **Water Supply Reliability:** The threat of a reduced snowpack and critically low storage conditions at Folsom Reservoir (i.e., "dead pool"), when water levels are too low to meet supply needs, represents a severe risk to both water supply and river health. Multi-year droughts have previously brought the reservoir to critical levels, impacting water reliability for over a million residents.

The Water Forum’s Flow Management Standard, which includes minimum flows, temperature management protocols, and storage target provisions, offers one strategy for mitigating this risk. However, further actions will be needed to adapt to climate-driven extremes in hydrology, including support for more diversified supply portfolios, such as enhanced conjunctive use, alternative or expanded diversion points, and the capture and underground storage of unstorable surface water, to enable regional water providers to reduce their reliance on American River supplies during drought conditions.

- **Groundwater Management:** The Sustainable Groundwater Management Act (SGMA) of 2014 expanded groundwater regulatory requirements, requiring local agencies to form Groundwater Sustainability Agencies (GSAs) and create long-term Groundwater Sustainability Plans (GSPs). SGMA and the GSAs now guide groundwater management across California, superseding many features of the first WFA’s groundwater element.
- **Rising Regulatory Pressures:** Since 2000, state regulations related to water have undergone significant expansion, introducing mandates that have raised compliance costs and created new challenges for water purveyors. Increased regulation now affects every aspect of water management, from groundwater sustainability and surface water flows to conservation requirements and long-term planning. For example, the State’s role in water conservation has expanded, gradually surpassing the framework set by the first WFA. The most recent example is the Making Conservation a California Way of Life regulation, adopted by the State Water Board in August 2024, which solidified conservation as a permanent state mandate.
- **Water Affordability:** The costs of providing water are increasing, driven by rising expenses for regulatory compliance, infrastructure maintenance, and essential supplies, including energy and chemicals. At the same time, revenues are impacted as conservation measures reduce demand and customers resist rate increases. This financial strain on local water providers highlights the need for cost-effective, transparent management strategies that align with public expectations.

CHALLENGE OF CLIMATE CHANGE

Water Forum members have identified climate change as *the most significant challenge* to the Water Forum’s coequal objectives of balancing reliable water supplies while protecting the health of the LAR environment. To assess the impacts of climate change and population growth on water supply reliability and river health through 2050, the Water Forum conducted a technical analysis that compared projected conditions to historical data.

This analysis, Water Forum 2.0 – Ad Hoc Technical Team (AHTT) Study Plan Analysis Report, was led by a team of experts from the water, business, public agency, and environmental sectors. It built upon Reclamation’s 2022 American River Basin Study, applying its data to a focused examination of the LAR.

Key findings included:

- **Hydrology:** Runoff is projected to peak earlier due to declining snowpack conditions, while the frequency and severity of multi-year droughts are expected to increase. Multi-year droughts similar to the 2014-16 event are likely to shift from occurring once every 100 years to once every 10 years under moderate climate change assumptions. As a result, the region is expected to find itself in drought-response mode more frequently, with extreme drought events becoming increasingly common. Current regional operations may also prove less effective due to shifts in the timing and volume of runoff.
- **Water Supply Reliability:** Future conditions indicate a decline in surface water reliability, which will result in an increased reliance on groundwater. This reduced availability of surface water will necessitate greater flexibility in water management strategies. Additionally, the frequency of critically low storage levels at Folsom Reservoir is expected to rise, presenting challenges for existing operations. As a result, proactive groundwater management in wet years will become essential for the region's water supply reliability.
- **River Health and Fisheries:** Temperatures will continue to be a limiting factor for resident salmonids on the LAR. Climate change is likely to significantly increase the number of days when river temperatures reach levels that are unsuitable for the survival of salmonids. This rise in unsuitable conditions will pose challenges for fish survival², highlighting the need for actions that effectively balance the beneficial uses of available surface water to support both fisheries and water supply needs.

Overall, the study provided a technical foundation for collaborative solutions and informed the Water Forum by identifying gaps in water supply and river corridor health under future conditions. It also set the foundation for a regional dialogue on potential adaptation tools, projects, and measures to address these critical issues.

A POSITIVE VISION FOR THE FUTURE

The challenges facing water management today present an opportunity to **strengthen and modernize** the WFA for its continued relevance in the evolving landscape.

As with the first WFA, the **Water Forum 2050 Agreement (WF2050)** is a commitment to working together towards coequal objectives, this time to overcome a different set of challenges. The intent is that cooperation leads to increased support and drives investments in resiliency programs, enhancing the region's reputation and improving competitiveness for water management and ecosystem enhancement grants. Growing support from interested parties will

² Studies have shown that summer river temperatures above species-specific tolerances can cause direct adult mortality and reduce egg and juvenile survival. In addition, barrier-limited or low-elevation populations can't access cold-water refugia, increasing their climate vulnerability.

stretch local investments further, leading to more efficient and effective water management programs.

While the challenges are significant, interested parties at the Water Forum share a positive vision for the future. This vision is built on the principles of mutual benefit, with a renewed WFA serving as the foundation. In this future, regional ecosystems and the economy remain resilient and sustainable, and citizens enjoy reliable, sufficient, and safe water supplies. Communities can weather multi-year droughts without compromising the health of their landscapes or water-based ecosystems.

As conditions continue to evolve, WF2050 provides a framework to address current and emerging water management challenges while safeguarding the environmental health of the region for future generations.

Structure of the Water Forum 2050 Agreement

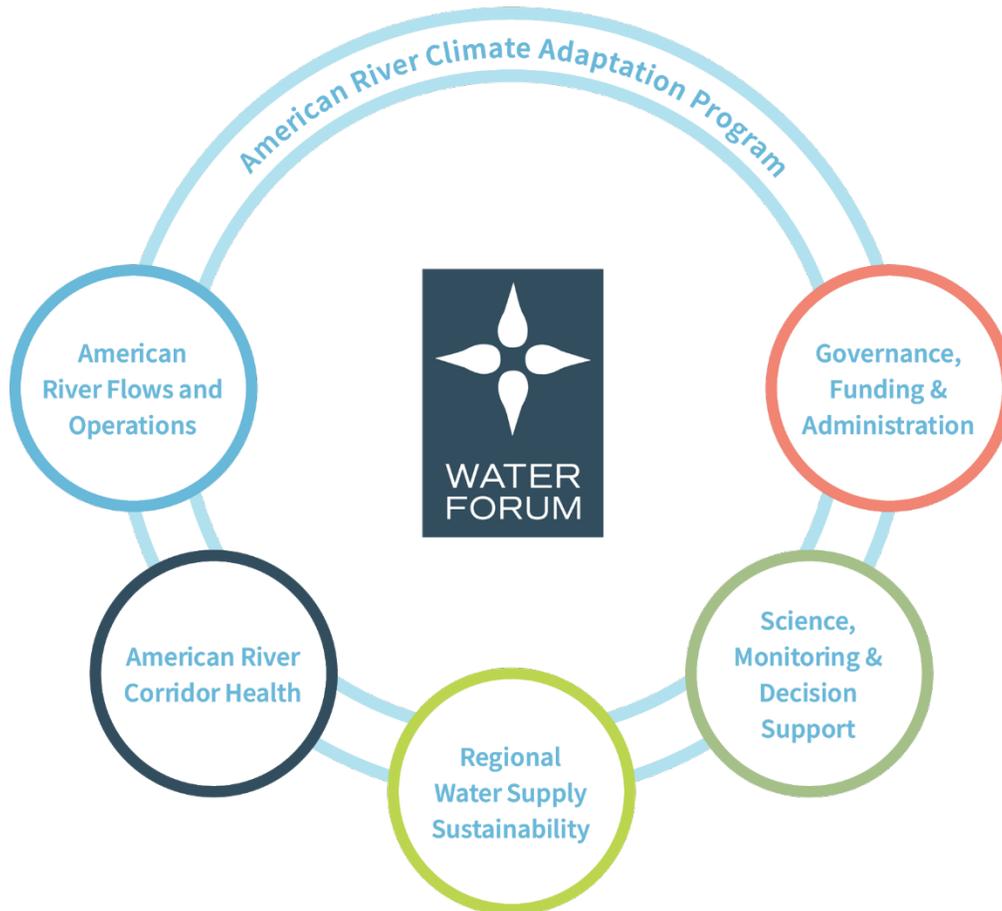
The WF2050 restructures the seven elements from the first WFA into five **Program Areas**:

1. American River Flows and Operations
2. American River Corridor Health
3. Regional Water Supply Sustainability
4. Science, Monitoring, and Decision Support
5. Governance, Funding, and Administration

Each Program Area is designed to support the coequal objectives by outlining specific principles, actions, and activities directed to the relevant area of focus. Recognizing that climate change presents the most significant threat to achieving the coequal objectives, the **American River Climate Adaptation Program (ARCAP)** is a cross-cutting program designed to accelerate progress in all five Program Areas by developing and targeting additional volumes of water to directly support the coequal objectives. ARCAP aims to better manage water in the face of climate change by voluntarily linking agencies, infrastructure, and policies—creating a truly regional water system where water is managed by agencies to be available when and where it's needed, and cold water is preserved in the American River for fish and future supply is protected.

The WF2050 agreement is a voluntary agreement between signatories that functions through mutual commitments made to support the coequal objectives, implement the guiding principles, and uphold specific commitments relevant thereto.

Figure 2. Structure of WF2050



The WF2050 Program Areas (Figure 2) incorporate many of the elements from the first WFA, adapted to meet the region's evolving needs over the next 25 years. For example, the **American River Corridor Health** Program Area includes the Habitat Management element, and **American River Flows and Operations** integrates the Water Forum's Flow Management Standard. Additionally, **Governance, Funding, and Administration** introduces a new pathway for the Water Forum while maintaining the major components of the Water Forum governance structure (Figure 3).

Figure 3. Water Forum Governance Structure



The WF2050 includes:

Coequal Objectives: Reaffirmation of the long-standing mission and vision of the Water Forum, emphasizing a dual commitment to water supply reliability and environmental stewardship.

Guiding Principles: Foundational guidelines to drive the actions of the Water Forum and its members, helping to ensure that Water Forum efforts remain aligned with the core values and objectives.

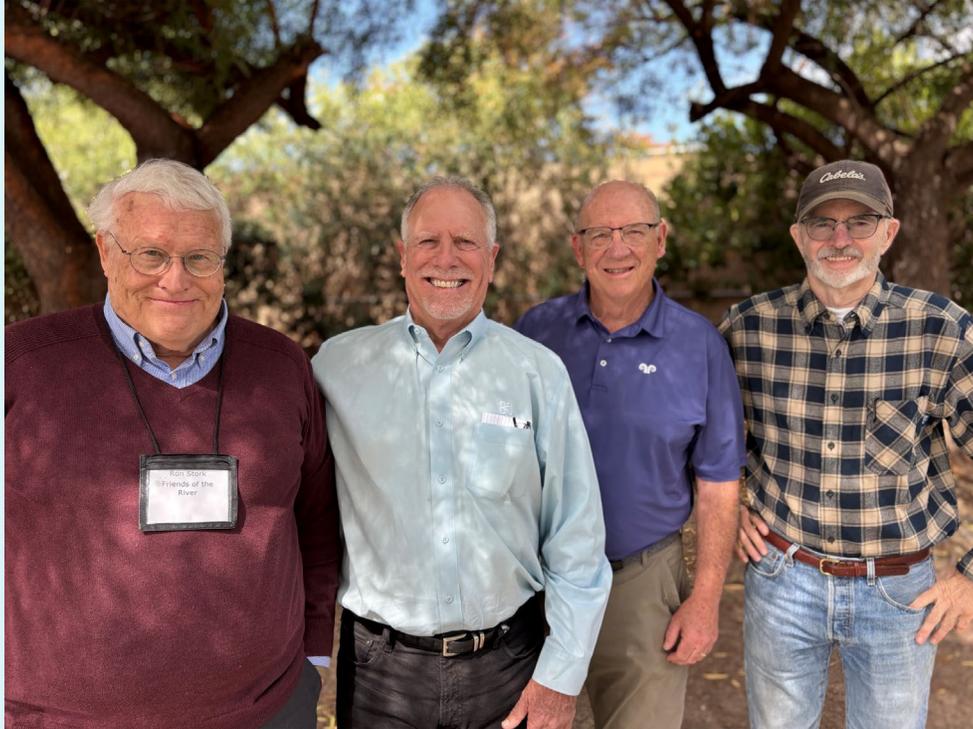
Program Elements: Core elements of the Water Forum’s work, defining roles and responsibilities in the areas of American River Corridor Health; American River Flows and Operations; Regional Water Supply Sustainability; Science, Monitoring, and Decision Support; and Governance, Funding, and Administration – supported and accelerated by the American River Climate Adaptation Program.

Metrics: Data and information for monitoring and assessment to provide a framework for evaluation, helping to ensure that initiatives are effective and impactful.

Supported Projects: A list of regional initiatives and projects broadly supported by the Water Forum, highlighting collective efforts to enhance water supply and environmental health.

Acknowledgments

The success of WF2050 builds on the foundation established by those who brought the first WFA to life. Many individuals and organizations have contributed their time, expertise, and resources throughout the negotiation and development process. Their commitment to addressing the region's water supply and environmental challenges has been essential in shaping a comprehensive framework for the next 25 years.



The foundation of the WF2050 reflects the vision and commitment of those who shaped the Water Forum. Special recognition goes to original Water Forum members who have continued to participate: Ron Stork of Friends of the River, Clyde Macdonald of Save the American River Association, Jim Ray of the North State Building Industry Association/MacKay & Soms, and Brian Holloway of Sacramento Association of Realtors, whose leadership was essential to the success of both negotiations.

WF2050 PARTICIPATING ORGANIZATIONS

Thank you to the organizations and their representatives who devoted countless hours to participating in “Water Forum 2.0” (WF2050) negotiations. The Water Forum would not be possible without the dedication of its members.

Business Caucus

AKT Development*
Associated General Contractors*
North State Building Industry Association*
Sacramento Association of Realtors*
Sacramento Metropolitan Chamber of Commerce*
Sacramento Regional Builders Exchange
Green Acres Nursery & Supply

Environmental Caucus

Environmental Council of Sacramento*
Friends of the River*
Save the American River Association*
Sierra Club Mother Lode Chapter*

Public Caucus

American River Flood Control District
American River Parkway Foundation
City of Rancho Cordova
City of Sacramento Planning Department*
League of Women Voters, Sacramento County *
Placer County
Sacramento Area Council of Governments
Sacramento Area Flood Control Agency
Sacramento County*
Sacramento Regional Parks
Sacramento Valley Conservancy
Sacramento Municipal Utility District *

Water Caucus

California American Water*
Carmichael Water District*
Citrus Heights Water District*
City of Folsom*
City of Roseville*
City of Sacramento*
East Bay Municipal Utility District
El Dorado Irrigation District*
El Dorado Water Agency*
Fair Oaks Water District*
Golden State Water Company/Arden-Cordova Water District*
Orange Vale Water Company*
Placer County Water Agency*
Regional Water Authority*
Sacramento Suburban Water District*
Sacramento County Water Agency*
San Juan Water District*

* Denotes an organization that was a Signatory to the 2000 agreement.

Memorandum of Understanding for Water Forum 2050

The stakeholder representatives have concluded that the best mechanism to implement Water Forum 2050 is a Memorandum of Understanding (MOU) among all signatories to the WF2050 Agreement. By memorializing the substance of the WF2050 Agreement, this MOU creates the overall commitment to Water Forum 2050.

All signatories agree that by signing the MOU, they agree to carry out all the actions specified for them in the WF2050 Agreement.

Preamble

A diverse group of business leaders, environmentalists, citizen groups, water managers, and local government representatives has carefully reviewed the region's water future and the anticipated impacts of climate change. They found that unless we act now, our region risks a future marked by water shortages, environmental degradation, contamination, threats to groundwater reliability, and limitations to economic prosperity.

Joining together as the Water Forum, these community leaders from El Dorado, Sacramento, and Placer counties have spent thousands of hours analyzing the environmental and water supply needs of the region, focusing on the Lower American River, agreeing on principles to guide development of regional solutions, and negotiating the Water Forum 2050 Agreement.

This diverse group agrees that the optimal approach is a comprehensive package of interconnected actions that will achieve two coequal objectives:

Provide a reliable and safe water supply for the region's economic health and planned development through to the year 2050;

and

Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

Recitals

1. *Whereas*, a reliable water supply is needed by current and future residents, businesses, and agriculture; and
2. *Whereas*, the lower American River is recognized as an important natural resource which should be protected and preserved for future generations by all Water Forum interested parties; and

3. *Whereas*, the Sacramento region’s groundwater resources are being successfully managed through Groundwater Sustainability Plans that have been approved by the State Department of Water Resources, and the Water Forum serves as a place to exchange information, concerns, and ideas regarding the management of this resource; and
4. *Whereas*, water purveyors and others have for years sought to develop additional safe, reliable water supplies; and
5. *Whereas*, the environmental community and others in the region have for years sought to restore the fishery, wildlife, recreational, and aesthetic values of the lower American River, protect and preserve the American River Watershed, and the region's groundwater supplies, including the environmental resources they support; and
6. *Whereas*, all signatories continue to recognize the potential benefits of mutually supporting each other’s goals and working together, as well as the collective risk of pursuing independent objectives in isolation; and
7. *Whereas*, the framework of an interest-based negotiation process cannot provide exactly equivalent benefits for all, but in most cases does make it possible for stakeholders to obtain what they need in a *Water Forum 2050 Agreement*.

Now, Therefore Be It Resolved That:

1. All signatories to this Memorandum of Understanding (MOU) agree that participation in *Water Forum 2050* is in the best interest of water consumers and the region as a whole.

All signatories will endorse and, where indicated, participate in implementing the attached *Water Forum 2050 Agreement*, in accordance with the five Program Areas, and subject to relevant caveats and assurances:

- American River Flows and Operations
 - American River Corridor Health
 - Regional Water Supply Sustainability
 - Governance, Funding, and Administration
 - Science, Monitoring, and Decision Support
2. Individual Purveyor Specific Agreements (PSAs) were negotiated as part of the Water Forum 2050 Agreement and are incorporated therein.
 3. All signatories will have equal standing in the Water Forum, regardless of whether they belong to the Public, Water, Business, or Environmental caucus.

Term of the Memorandum of Understanding

This MOU shall remain in force and effect until December 31, 2050.

Legal Authority

Nothing in this MOU or the attached *Water Forum 2050 Agreement* is intended to give any signatory, agency, entity, or organization expansion of any existing authority.

Non-Contractual Agreement

This MOU and the attached *Water Forum 2050 Agreement* are intended to embody general principles agreed upon between and among the signatories. Still, they are not intended to, and do not, create contractual relationships, rights, obligations, duties, or remedies enforceable in a court of law by, between, or among the signatories or any third parties.

In witness thereof, the undersigned parties have executed this MOU this XX day of April, 2026.

Business Caucus

AKT Development _____

Associated General Contractors _____

North State Building Industry Association _____

Sacramento Association of Realtors _____

Sacramento Metropolitan Chamber of Commerce _____

Sacramento Regional Builders Exchange _____

Green Acres Nursery & Supply _____

Environmental Caucus

Environmental Council of Sacramento _____

Friends of the River _____

Save the American River Association _____

Sierra Club Mother Lode Chapter _____

Public Caucus

American River Parkway Foundation

City of Rancho Cordova

City of Sacramento

League of Women Voters, Sacramento County

Sacramento Area Council of Governments

Sacramento Area Flood Control Agency

Sacramento County

Sacramento Regional Parks

Sacramento Valley Conservancy

Sacramento Municipal Utility District

Water Caucus

California American Water

Carmichael Water District

Citrus Heights Water District

City of Folsom

City of Roseville

City of Sacramento

East Bay Municipal Utility District

El Dorado Irrigation District

Fair Oaks Water District

Golden State Water Company

Orange Vale Water Company

Placer County Water Agency

Regional Water Authority

Sacramento Suburban Water District

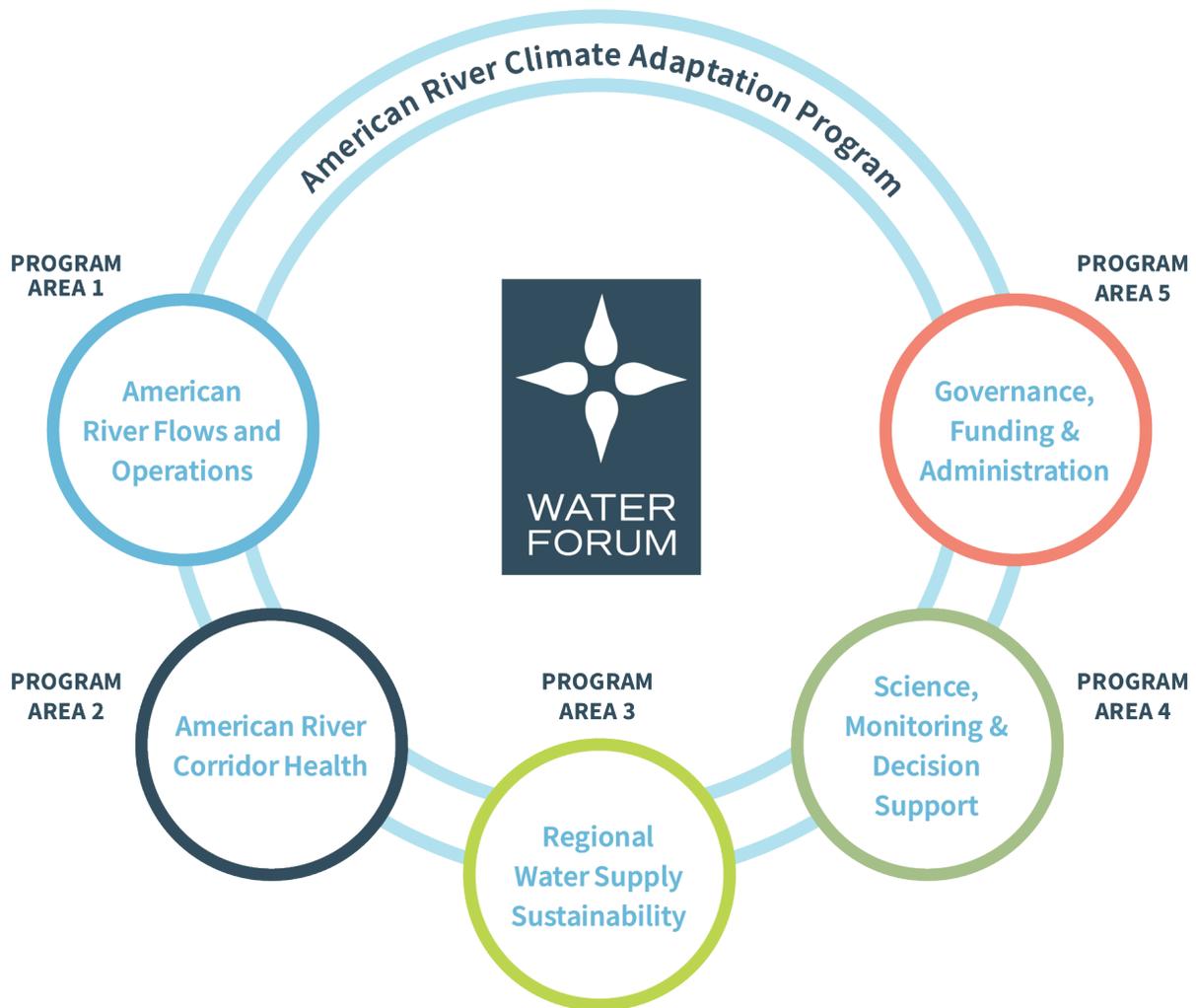
Sacramento County Water Agency

San Juan Water District

Water Forum 2050 Program Areas

Water Forum 2050 (WF2050) comprises five key **Program Areas** (Figure 4), crafted to support the coequal objectives and shape and focus the work of the Water Forum over the next 25 years. The five Program Areas are supplemented by the American River Climate Adaptation Program (ARCAP), a cross-cutting program designed to focus and accelerate progress in all areas by seeking to develop and target additional volumes of water to support the coequal objectives.

Figure 4. WF2050 Program Areas



Common Themes Among Water Forum 2050 Program Areas

Spanning all WF2050 Program Areas are common themes that are foundational to the Water Forum 2050 Agreement. Collaboration and partnership, adaptive management, and advocacy will be central to the work of the Water Forum over the next 25 years, supporting the coequal objectives in the unique context of the challenges the region will face due to climate change.

COLLABORATION AND PARTNERSHIP

At its core, the Water Forum is a venue for effective collaboration and partnership. In addition to the Water Forum's diverse group of member organizations, external partners also inform and influence the work of the Water Forum and/or support the coequal objectives through shared goals. The diversity of member organizations and partners offers valuable opportunities for the sharing of information and resources in support of the coequal objectives, in a manner that is focused and includes a regional perspective that can otherwise be lost when operating in isolation. Within all the Water Forum 2050 Program Areas, opportunities for collaboration and partnership are identified as they relate to the activities and principles of the specific program.

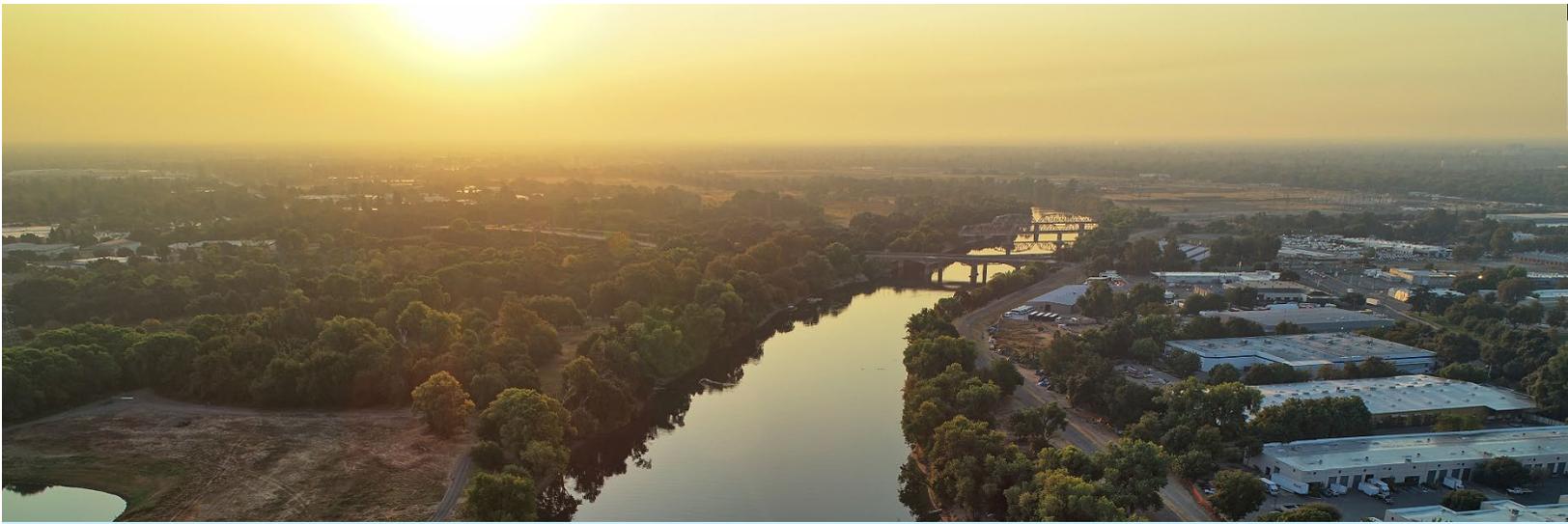
ADAPTIVE MANAGEMENT

Continuously evaluating regional conditions relative to the coequal objectives and the effectiveness of the Water Forum's work is a cornerstone of the 2050 agreement. There is a shared understanding that climate change poses the greatest challenge to the coequal objectives over the next 25 years. However, there is uncertainty regarding the potential severity and timing of realized impacts on the region. Low storage at Folsom Reservoir, increased river temperatures, and more intense wet and dry cycles are expected; however, it is not possible to predict with precision what these will mean for the region or what the most effective responses will be. Each of the Water Forum 2050 Program Areas acknowledges this uncertainty and includes elements to evaluate and adjust priorities and activities as an understanding of regional conditions and needs evolve over the life of the agreement. The Water Forum 2050 agreement also includes a robust *Metrics and Reporting* section that specifies metrics to track the implementation of the agreement and the viability of the coequal objectives, and outlines when and how those metrics will be reviewed and considered.

EXTERNAL ENGAGEMENT

One of the greatest strengths of the Water Forum is the ability to garner and leverage regional support for projects, programs, and activities focused on the coequal objectives. Ultimately, the challenges the region will face over the next 25 years will require action on a scale that exceeds the members' ability to implement. Solutions will require investments from state and federal

partners. Water Forum support and external engagement significantly enhance the likelihood that funding will be allocated to the region. The Water Forum 2050 Program Areas identify where external engagement is expected to be key to the success of the work.



American River Climate Adaptation Program (ARCAP)

Water Forum members recognize that climate change presents the most significant threat to achieving the coequal objectives of water supply reliability and environmental stewardship of the LAR. Climate change has the potential to adversely impact the region in many ways, including those listed below:

- Accelerated decline of salmonids, recreation, and water quality due to decreased flows and increased river temperatures in the LAR.³
- Decreased reliability of the region's urban water supply due to changes in hydrology, and increased strain on statewide water project operations.³
- Increased threat of external claims for American River water due to water-shortage pressure elsewhere in the state.
- Increased drying of soils and plants due to higher temperatures.
- Increased need for overall regional water resilience due to evolving regulatory requirements.

These extreme threats demand the timely and substantial watershed resilience measures contemplated as part of the American River Climate Adaptation Program (ARCAP), **a multi-caucus problem-solving program seeking to develop and target additional volumes of water toward Water Forum coequal objectives**. ARCAP offers a better way for the region to manage water as

³ The Water Forum Ad Hoc Technical Team report of 2022 highlighted significant challenges that will result from climate change, including:

- The region will experience more frequent and more severe droughts and flood events. This pattern will challenge the capability of water storage infrastructure, particularly Folsom Reservoir's ability to provide flood protection and reliable water supplies.
- Salmon and steelhead populations in the lower American River will face significant threats due to suboptimal flows and temperature conditions and poor genetic diversity.
- Folsom storage is projected to be at critically low levels more often due to climate change, creating a substantial risk to regional water supply reliability.

climate conditions become more extreme. It enhances the five Program Areas by voluntarily linking agencies, infrastructure, and policies—creating a truly regional water system where water is managed by agencies to be available when and where it's needed, and cold water is preserved in the American River for fish and future supply is protected.

The ARCAP intends to make measurable quantities of water available to provide demonstrable benefits to both of the Water Forum's coequal objectives. Collectively, these water quantities will be referred to as *ARCAP Water* and can be thought of as an insurance policy against the challenges described above. *ARCAP Water* may include contractual or set-aside supply, or stored water that is managed by one or more entities. *ARCAP Water* could be provided from multiple sources, including:

- **Regional conjunctive use operations** – water stored in the groundwater basin through in-lieu or other recharge and recovery methods. The Water Forum, in collaboration with key partners, will examine the nexus between these activities and the planned Sacramento Regional Water Bank.
- **RiverArc** – relocating the source of water supply from an American River diversion to a Sacramento River diversion for some agencies.
- **Reservoir reoperation** – potential operational changes to provide *ARCAP Water* and enhance coldwater pool conditions in Folsom Reservoir and seek benefits from Forecast Informed Reservoir Operations (FIRO), or potentially through other CVP operational changes.
- **Capture, storage, and use of un-storable water** – may include recharge of excess water during flood operations when releases are well above optimal riverine ecological levels.
- **Vineyard Treatment Plant expansion** – potential additional capacity in the Freeport diversion on the Sacramento River if the Vineyard Treatment Plant were expanded.
- **Sacramento Water Treatment Plant expansion** – The City of Sacramento may increase the capacity of this plant, making additional Sacramento River water available.
- **Water conservation actions** – actions expected to reduce water demand and diversions, potentially making water available for ARCAP.
- **Other sources** may be identified.

ARCAP Water could offer the following benefits for the American River region:

- Additional supplies for water agencies serving communities in the Sacramento Region that are facing significant water shortages during droughts or other conditions.
- Augmented storage in Folsom Reservoir to enhance the coldwater pool and reduce river temperatures to benefit fish.

- Augmented flows in the LAR to benefit fish.
- Increased operational flexibility to benefit CVP operations.
- Increased capture, use, and storage of un-storable and excess flood waters.
- Increased groundwater storage regionally to enhance conjunctive use and support Groundwater Dependent Ecosystems.
- Demonstration of our region’s commitment to proactively addressing climate issues and maintaining a sustainable American River watershed.
- Demonstration to Reclamation of our region’s commitment towards Folsom Reservoir storage during dry and critical times.

The ARCAP is ambitious, and several important issues must be addressed before this program becomes operational. Because many outstanding questions will be unanswered during the WF2050 negotiations, the ARCAP includes elements focused on technical analysis and resolution of important issues. These technical and interested-party processes will rely on the technical coordination and cooperation of the Regional Water Authority (RWA) (see Program Elements) and consultation with Groundwater Sustainability Agencies (GSAs).

There is a precedent for such an ambitious initiative by the Water Forum. The Flow Management Standard (FMS), for example, has become a major focus of the Water Forum’s activities and deliberations over the last two decades, ultimately leading to changes in CVP operations on the LAR. Like the ARCAP, the process for developing and implementing the FMS was not fully defined until after the original WFA was signed.

Guiding Principles

The ARCAP activities will support the Water Forum’s coequal objectives by aligning with the guiding principles below:

1. ARCAP Water will provide water supply and ecosystem benefits, and will strive to provide multiple benefits whenever possible.
2. ARCAP Water will be created by using existing or planned regional water sources.
3. Program design and implementation will be conducted openly with all caucuses.
4. Developing and implementing the ARCAP will be a long-term endeavor, but it will progress incrementally to build confidence and support with early implementation, resulting in collective successes.
5. The role of the Water Forum staff in ARCAP development and implementation will focus on coordination with Water Forum members, conducting analyses, advocating for programs and funding, and tracking progress.
6. ARCAP analyses and coordination will be covered in partnership with RWA and the Water Forum.

7. ARCAP questions and issues related to conjunctive use (and possibly the Sacramento Regional Water Bank) will be addressed through a partnership between the Water Forum and RWA, involving water purveyor members and regional GSAs.
8. The ARCAP will work in concert with the FMS and other Water Forum elements to support the coequal objectives.
9. ARCAP Water will not be used to meet the minimum regulatory requirements as defined by the FMS or SGMA (as those are expected to be met per existing regulations and legislation).
10. The use of the Water Forum members' facilities and water supplies for the ARCAP should provide a benefit to those organizations.

Program Elements

To implement the ARCAP Guiding Principles listed above, the Water Forum will commit to the programs, actions, and activities below. These actions are designed to support the Water Forum's coequal objectives through the implementation of the ARCAP and are subject to the relevant caveats and assurances.

1. Technical, Operational, Regulatory, and Legal Issues

Several issues must be resolved before the ARCAP can come to fruition. These issues include:

1. What will be the target volume (if any) of ARCAP Water?
2. What are the sources of water for the ARCAP?
3. Who will own and manage ARCAP Water?
4. How, where, and when will ARCAP Water be stored?
5. Where and when will ARCAP Water be used?
6. How will the Water Forum and members track the sources and destinations of ARCAP water?
7. How will the ARCAP perform under various climate scenarios, including multi-year droughts, critically low storage (aka deadpool), and water supply curtailments?
8. What additional infrastructure will be needed to implement the ARCAP?
9. What will be the technical and physical limitations of the ARCAP?
10. What is the potential maximum volume of water that could be developed through the ARCAP?
11. How much groundwater recharge and recovery is possible in the region?
12. How much groundwater recharge and recovery is needed in the region?
13. Could the modified timing of released ARCAP Water enhance LAR temperature conditions?
14. How can changes in the point of diversion (e.g., from Folsom Reservoir or the LAR to Freeport) provide additional water storage or flow for the LAR?
15. What is the expected increase in un-storable water in the American River system, and what would be necessary to capture and store that water under the ARCAP?

16. Could FIRO increase ARCAP Water supplies, and if so, how much?
17. What opportunities exist to create and track *ARCAP Water* within regional demand management and conservation actions (including climate-ready landscapes and other emerging areas of research)?
18. How will inter-agency commitments to ARCAP be recognized, and how will their operations be counted?

ARCAP will consider the integrated interactions of demand (including demand management actions), supply, source waters, and conjunctive use that may impact the potential benefits of *ARCAP Water*, among other considerations. **Appendix 2** outlines the first two years of technical, operational, regulatory, and legal analyses necessary to begin answering these questions and indicates the roles and responsibilities of the Water Forum and key partners (RWA, GSAs, etc.) in completing the various analyses.

2. External Engagement Strategy

The ARCAP will require partners beyond the signatories to WF2050 to be successful. Sustained efforts to communicate with potential partners will maximize the probability of success. Some of the entities identified for outreach include:

Reclamation – Changes in CVP operations may be sought to help establish or store ARCAP Water. This will require a strategy for ongoing engagement with Reclamation that is consistent among members and flexible in approach. The Water Forum will strive to communicate to Reclamation that ARCAP actions help support their goals of delivering water with minimal shortages and maintaining operational flexibility.

Regional GSAs – Active coordination with the GSAs will be implemented as part of ARCAP and will include the sharing of relevant analyses and data, as well as general information sharing to raise awareness and explore opportunities for collaboration.

California Department of Water Resources (DWR) – The DWR has a regional watershed planning initiative (which RWA is piloting for this region) and is likely to continue serving as a source of funding for water infrastructure and climate resiliency actions. As such, DWR should be kept informed of the ARCAP effort and successes.

State Water Resources Control Board (SWRCB) – The SWRCB would be involved in any transfers of water supplies that utilize water rights established after 1914 or modifications of existing water rights to add new points of diversion.

Fisheries agencies, including the National Marine Fisheries Service, California Department of Fish and Wildlife, and the Federal Fish and Wildlife Service, are likely to have valuable information on employing ARCAP Water to benefit the aquatic ecosystem.

Other entities, such as the California Legislature and Congress, will likely have a keen interest in the ARCAP efforts, and the Water Forum should strive to provide them with regular progress updates.

3. Coordination, Management, and Implementation of *ARCAP Water*

The implementation and management of *ARCAP Water* will be coordinated with regional and external partners. It is expected that the Water Forum will partner with RWA and others on technical analyses to inform the development and deployment of *ARCAP Water*, will coordinate among members as ARCAP is implemented, and will track development. Additionally, the Water Forum will advocate for programs and funding as needed.

4. Program Review and Refinement

It will be necessary to periodically evaluate and refine the ARCAP, given its scope and complexity. A work group composed of Water Forum and RWA members/staff will be established to oversee and guide the ongoing work for ARCAP. A work plan for the ARCAP, including a budget and scope of work, is included in **Appendix 2**. The ARCAP workplan will be reviewed and updated annually.

The annual ARCAP review will analyze the program's successes, challenges, and barriers. A summary of the ARCAP review will be included in the Water Forum's Five-year Status Report (or other periodic Water Forum publication) and will include specific, agreed-upon reporting metrics.

The ARCAP review will, as appropriate, guide changes to the program to ensure long-term success.

Caveats and Assurances

The following list of assurances is intended to ensure that the Water Forum develops and implements the ARCAP through a concerted and good-faith effort that supports the coequal objectives and embodies the Water Forum's Values.

- 1. The ARCAP will be developed and implemented, with opportunities for open cross-caucus discussions and guidance, utilizing the Water Forum's decision-making processes. This applies to both technical processes and member deliberations.*
- 2. The Water Forum will work jointly with RWA and the GSAs to resolve technical issues during ARCAP development and implementation. Staff from RWA and the Water Forum will work together in a collaborative relationship to support this program and will engage with the regional GSAs.*
- 3. The ARCAP approach will strive to add value and avoid creating added costs, duplicative processes, and bureaucracy.*
- 4. The ability of Water Forum members to identify and employ ARCAP Water does not imply that the American River is in excess conditions.*
- 5. ARCAP implementation will complement and support other Water Forum programs (e.g., FMS).*

6. *The Water Forum will review the successes and challenges of the ARCAP and refine the program as needed, with adjustments agreed upon by all caucuses.*
7. *ARCAP assets (e.g., water rights and contracts, wells, diversion works) will remain under the control of the owning agencies.*
8. *The role of the Water Forum (including its staff and members) will be to coordinate ARCAP actions, complete agreed-upon technical analyses and studies, advocate for programs and funding, and track and review the status of these programs.*
9. *The Water Forum and RWA will respect the operational authority and third-party agreements of their members, which are necessary for their contributions to ARCAP Water.*
10. *No part of the ARCAP will abridge the authorities, entitlements, or agreements of Water Forum members without the express consent of the relevant parties.*



Program Area 1: American River Flows and Operations

The American River Flows and Operations (ARFO) Program Area includes three areas of focus for Water Forum activities and commitments:

- Flow Management Standard
- Flood Operations
- Temperature Management and other Water Management Infrastructure

FLOW MANAGEMENT STANDARD

The Flow Management Standard (FMS) for the LAR was envisioned and prescribed under the original WFA, and the first iteration was completed in 2006. As new data, tools, and technology have become available, the FMS has been updated and refined to support the Water Forum’s coequal objectives⁴. The features of the FMS (i.e., minimum reservoir releases, storage targets, and temperature management protocols) provide guidelines for the operation of Folsom Dam and the LAR to help protect river health and preserve water supply reliability, particularly during droughts when water supplies are reduced and competing demands arise.

The degree to which the FMS features are included in the operations and planning of Folsom Reservoir depends greatly on engagement with Reclamation and advocacy for regional interests within CVP operations. The flows and river temperatures on the LAR are directly related to the operations of Folsom Dam, which Reclamation owns and operates as part of the broader CVP. The CVP is an extensive, multi-purpose network of dams, reservoirs, canals, hydroelectric power plants, and other facilities that span 400 miles of inland California, providing water supplies to municipal (including Sacramento area purveyors), industrial, refuge, and agricultural water users. Additional authorized purposes of the CVP include flood protection, recreation, navigation, flow

⁴ In late 2024 the most recent iteration of the FMS was referred to as the Modified Flow Management Standard (MFMS) and was referenced as such in the 2019 Biological Opinion.

augmentation, fish and wildlife enhancement, fish and wildlife mitigation, power generation, and water quality enhancement (particularly in the Delta). Proportionally, both the demand on CVP water within the American River region and the storage capacity of Folsom Reservoir are relatively small parts of the broader CVP demands and storage capacities, respectively. However, the proximity of Folsom Reservoir to the Sacramento-San Joaquin Delta (Delta) in comparison to other CVP storage facilities makes it one of the first facilities called upon when Delta water quality improvements are needed. This action is further fueled by Folsom Reservoir's small storage capacity relative to historical runoff volumes⁵ and an underlying perspective by Reclamation and other CVP contractors that Folsom Reservoir is more likely to refill each year as compared to other CVP reservoirs.

Historically, Water Forum members have engaged with Reclamation and other federal and state agencies to advocate for changes in operations and infrastructure that could support the coequal objectives⁶. In seeking implementation of the FMS and to reduce potential resistance, the Water Forum strived to balance the features of the FMS such that the impacts to out-of-basin uses were minimized. However, LAR conditions, particularly river temperatures, have been severely challenged over the last several decades, and CVP operations for broader system-wide objectives, including the magnitude of deliveries and the contractual priority of out-of-basin water users, can be at odds with the needs of the LAR. For example, Folsom Reservoir releases are frequently at their peak during the summer months to support CVP deliveries outside of the basin and to maintain water quality in the Delta. However, these increased releases in the summer months can challenge temperature management on the river, particularly for the fall spawning season.

River temperatures on the LAR have long been understood to be the primary limiting factor for salmonid species in the river. Current temperature targets for salmonid species, as stated in various regulatory requirements, are frequently exceeded, and detrimental temperature conditions are particularly prevalent and extreme in drought years due to lower storage (and therefore less cold water) within Folsom Reservoir and lower flows below Nimbus Dam. Additionally, the releases from Folsom Reservoir into Lake Natoma create further challenges for temperature management due to the warming that can occur before the water is released into the LAR. Over the last 15 years, the temperatures known to be optimal for the resident salmonids' key life stages have rarely been met on LAR and have trended towards upper tolerable in the best of years. Droughts have become increasingly frequent over the last 20 years and are projected to become more severe and frequent in the future. Temperature models indicate that under climate change, river temperatures are expected to routinely be markedly above the suitable ranges for

⁵ Folsom Reservoir storage capacity is just under 1 million-acre-feet (MAF) and the historical annual Folsom Reservoir inflow between 1976 and 2024 was just over 2.7 MAF. In approximately two-thirds of the years between 1988 and 2024, a portion of inflow could not be stored due to Folsom Reservoir's flood management responsibilities.

⁶ Water Forum and Reclamation signed a Memorandum of Understanding (MOU) in 2021 to formalize information sharing and communication on LAR conditions, operations, and forecasts.

resident salmonids for nearly half of the year, creating unhealthy or even lethal conditions for the fish. Extreme climate change scenarios indicate that the survival of the salmonids in the LAR could be severely threatened.

Temperature management improvements, including both operational and physical enhancements, will be crucial under future conditions to enhance the health of the river and support the Water Forum's coequal objectives. Therefore, FMS Program Elements include opportunities for strategic partnerships and engagement related to the Water Forum's operational temperature management activities through the maintenance and updating of the FMS. Improvements to temperature management *infrastructure* are discussed in other sections of this program area, along with specific challenges and opportunities related to managing the cold-water resources on the LAR system.

As the region enters a new era of water management and shifting hydrology due to climate change, the Water Forum aims to maintain the integrity of the FMS through appropriate adjustments, ensuring it remains effective and relevant.

Guiding Principles

The FMS will:

1. Be designed to help protect the health and productivity of the LAR resident salmonids (steelhead and chinook) while balancing regional water supply needs and the recreational and esthetic values of the LAR.
2. Provide the following *functions* for the LAR⁷:

Primary Functions

- a. Support physical habitat availability and favorable water temperatures for the spawning life-cycle stage of chinook and steelhead.
- b. Support favorable water temperatures for the rearing life cycle stage of chinook and steelhead.
- c. Provide storage protections to minimize the frequency of low storage at Folsom Reservoir, for both water supply and cold-water resources.

Secondary Functions

- d. Support physical habitat availability for the rearing life cycle stage of chinook and steelhead.
3. Avoid causing unreasonable impacts to water uses outside of the American River Basin.

⁷ Updates to the stated FMS functions can be made with confirmation from the Plenary.

4. Will not be inconsistent with the applicable flood control objectives and operational guidelines for protecting the Sacramento region downstream of the Folsom and Nimbus dams.
5. Include mechanisms to update and refine FMS features and functions based on changing conditions and the availability of new data and tools.
6. Align with other Water Forum commitments in the driest conditions to ensure that both in-stream and consumptive users share the burden of reduced supplies.

Program Elements

1. Ongoing Monitoring, Tracking, and Reporting

Metrics and indicators for the effectiveness of the FMS will be monitored and tracked for the duration of the agreement (as described in the *Science, Monitoring, Decision Support, and Reporting Program Area*). Thresholds, or triggers, for actions related to the FMS will be established based on the metrics identified in the Metrics and Reporting section. Performance towards the identified metrics will be reported consistently.

2. Cross-Caucus and Internal Coordination

The Water Forum will schedule regular internal meetings with an inter-caucus group of representatives with knowledge and interest in the real-time flows and operations on the LAR (Cross-Caucus). The frequency of the Cross-Caucus meetings will depend on the needs of the given water year and could range from monthly to weekly (drought years will likely require heightened levels of coordination as compared to wetter years). The purpose of the Cross-Caucus meetings will be for caucus members to coordinate with Water Forum staff to develop a recommended approach to current and forecasted reservoir operations and strategize for regional advocacy. The approach will be informed by the best available and current data, including forecasts, reservoir operations, and flows on the LAR. In their meetings with Reclamation and other regulatory agencies, Water Forum staff will advocate for the position developed by the caucus representatives. An emphasis of the Cross-Caucus will be on guiding implementation of the FMS within the relevant regulatory framework. Regular updates from the Cross-Caucus meetings will be provided at the caucuses, highlighting key issues and strategies identified as relevant to the success of the FMS.

3. External Engagement for Implementation

Reclamation is the principal implementing agency for key features of the FMS (reservoir releases, Folsom storage, temperature management); state and federal resource agencies also have critical roles in the oversight and regulation of Folsom operations. Active relationships with external partners will be necessary for the FMS to be implemented over time. Key partnerships and relationships are outlined below.

Reclamation. The Water Forum will continue to work with managers and operators on seasonal and real-time implementation of the FMS, including participation in regular

meetings regarding current conditions and forecasts, and engagement in the American River Group (ARG) monthly meetings (see below for more information). Water Forum discussions with Reclamation related to seasonal and real-time planning and operations may consider implications of broader CVP operations on LAR targets and conditions. In addition, when regulatory processes regarding operations on the LAR relevant to the FMS are initiated, the Water Forum will engage to support the inclusion of FMS features and to ensure that American River interests are fully considered by Reclamation within the broader context of regulatory processes governing CVP operations. For example, the current FMS is referenced (in part) in the 2019 Biological Opinion on Long-term Operation of the CVP and the State Water Project (BiOp) issued by National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and governs Reclamation's operations, affecting implementation of FMS flows, storage, and temperature management protocols. Future efforts will be made to ensure that references to the FMS are continued in regulatory frameworks and that the information referenced reflects current understanding. In other words, as relevant regulatory processes and documents are updated, the Water Forum will work to facilitate the inclusion of references to the most recent FMS documentation and ensure shared understanding.

In 2021, the Water Forum and Reclamation signed an MOU to identify and implement communication and information sharing activities related to Reclamation's operations on the LAR. Specifically, the MOU focuses on the implementation of key elements of the FMS (end-of-December storage, minimum reservoir releases, temperature management, etc.). Since the signing of the MOU, Water Forum staff and members have been meeting with Reclamation at regular intervals to share and discuss information related to the latest forecasts, conditions, and operations decisions.⁸

Additional details related to the Water Forum's expected engagement with Reclamation are provided in **Appendix 3**.

NOAA Fisheries: NOAA Fisheries is the primary federal regulatory agency responsible for protecting federally listed threatened and endangered anadromous species on the LAR. The Water Forum will actively maintain working relationships with NOAA Fisheries representatives working on the American River operations to facilitate their understanding of FMS features and functions.

U.S. Fish and Wildlife Service (USFWS): The USFWS's work on the LAR focuses on protecting federally listed species, including guiding research, developing conservation

⁸ As of January 2024, aspects of that MOU have expired, and updates will need to be explored and pursued. Specifically, the 300 TAF end-of-December planning minimum for Folsom Reservoir storage was established for a pilot period for calendar years 2020-2022. Current efforts are underway to include a similar planning minimum in a forthcoming updated BiOp, but pending the outcome of those efforts, continued engagement with Reclamation will focus on the implementation of FMS features as needed.

actions, and partnering to restore habitats and recover species. The Water Forum will actively maintain working relationships with USFWS representatives working on the American River operations to facilitate their understanding of FMS features and functions.

California Department of Fish and Wildlife (CDFW): CDFW operates the Nimbus Fish Hatchery on the LAR and leads many of the surveys and data collection efforts focused on the health and status of fish in the LAR. The Water Forum will continue to coordinate and partner with CDFW on activities related to implementing the FMS.

State Water Resources Control Board (SWRCB): The SWRCB is responsible for administering water rights in California and thus oversees the water rights permits and licenses held by Reclamation and other diverters on the American River. In addition, the SWRCB regulates water quality in the Delta. Some SWRCB actions impacting conditions on the LAR can include (but are not limited to) issuing temporary urgent change petitions (TUCPs) for Delta water quality (impacting CVP operations) and water right curtailment during drought emergencies, adopting flow standards for river systems, updates to the Bay Delta Water Quality Control Plan⁹, and otherwise regulating flows on the LAR.

It is the intent of the signatories to the WF2050 that the FMS will be permanently implemented, recognizing that over time the FMS will be refined to reflect updated understanding of the needs of the river. One way this can be implemented will be an updated SWRCB flow standard for the LAR. It is also the intent that there be flexibility (adaptive management) in the implementation of the FMS to reflect real-time ecological considerations.

The Water Forum will continue to be an active member of the American River Group (ARG), which offers a monthly opportunity for LAR interested parties to convene and share the latest information related to reservoir inflows, reservoir and hatchery operations, river conditions, and fisheries status. Reclamation established the ARG as a working group to coordinate fishery and operational requirements for the LAR in 1996. Reclamation is the lead coordinator, bringing together those who have either a legislated or resources-specific interest in the operation of Folsom Dam and Reservoir and the LAR. The formal members include Reclamation, the Water Forum, and agencies with public trust responsibilities for fisheries resources in the LAR, which include USFWS, NOAA Fisheries, and CDFW. Members of the public and other agencies are welcome to attend ARG meetings and provide comments on matters under consideration by the ARG. Reclamation considers the information provided at ARG when making operational and management decisions regarding temperatures and flows necessary to sustain fish resources in the LAR.

4. Periodic Updates and Refinements to the FMS

The status of the FMS (effectiveness and level of implementation) will be reviewed on a regular basis within the broader Metrics and Reporting efforts of the Water Forum and the FMS will be

⁹ Also known as the Health Rivers and Landscapes Program.

updated and refined when new data or tools, or new approaches that may have merit, indicate that revisions would improve contributions of the FMS to supporting the coequal objectives, and/or when processes to update relevant regulatory requirements are pursued.

Caveats and Assurances

1. *Signatories acknowledge that, while minimum reservoir releases are a key feature of the FMS, flows above the specified minimum releases can provide important benefits for wildlife, recreational, and aesthetic values of the LAR.*
2. *Signatories acknowledge that low Dissolved Oxygen (DO) levels have a significant impact on the health of salmonids, thereby negatively affecting the benefits of the FMS. Consequently, Folsom Reservoir complex management actions must take this factor into account to avoid unhealthy DO levels.*
3. *Signatories acknowledge that Folsom Reservoir storage levels in the spring are critical to the volume of cold-water pool available for the effective implementation of the FMS during the rest of the year, and that management actions should be taken to preserve as much reservoir storage as feasible during this timeframe.*
4. *All signatories agree to recommend to the SWRCB an updated American River Flow Management Standard, developed by the Water Forum, that protects the fishery, wildlife, recreational, and aesthetic values of the lower American River. The recommendation will include requirements for Reclamation releases to the LAR.*
5. *The Water Forum will develop recommendations to inform transfer activity in the region, subject to agencies' determinations of operational, regulatory, and contractual feasibility, to be as consistent with the FMS as possible and maximize the value of the transfer water for the health of the LAR.*
 - a. *Note: Current regulations include a commitment to implement certain aspects of the FMS, and water moved through a transfer agreement has the potential to offer additional flows and/or temperature benefits to the LAR, pending operational constraints such as, but not limited to, timing of deliveries, infrastructure capacity, regulatory or discretionary actions by Reclamation.*
 - b. *Note: When transfers are arranged with Reclamation, purveyors can make requests or suggestions regarding how and when water is moved through the system; however, operational decisions are ultimately at the discretion of Reclamation and are subject to regulatory requirements.*

FLOOD OPERATIONS

As the American River watershed experiences climate change, the characteristics of flood events are expected to change from those historically observed. In response to the changing hydrology, modifications to flood operations may be necessary not only to continue to provide the Sacramento region with needed flood protection but also to avoid compromising the Water

Forum’s coequal objectives. Specifically, changes in precipitation patterns, shifting increasingly from snow to rain under climate change, are expected to result in a reduced snowpack and shifts in the timing and magnitude of flows into Folsom Reservoir. Consequently, if Folsom flood operations are not changed accordingly, lower reservoir storage at key times in the year could lead to reduced regional water supply reliability and increased river temperatures.

Current climate models consistently indicate that global temperatures are increasing and will continue to increase for years and decades to come (the summer months of 2023 and 2024 were both record-breaking years for heat). Regionally, warmer temperatures in the upper watershed will result in more precipitation occurring as rain instead of snow, leading to more intense and extreme conditions for both storms and droughts. These changes in precipitation patterns and temperatures are likely to result in inflows to Folsom Reservoir arriving earlier in the season than observed historically, and potentially at higher flow rates—particularly during severe storm events—stressing the existing flood operations and infrastructure at Folsom Dam and on the LAR. High volumes of water arriving quickly at Folsom Reservoir with the rainstorm events, rather than slowly over the spring and summer as snowmelt, will make it harder to capture and store the runoff for use in the drier months due to the relatively small size of Folsom Reservoir.

Enhanced operational flexibility for flood operations at Folsom Reservoir could help to mitigate the impacts of climate change on regional water supply and river temperatures by creating opportunities to store and capture increased amounts of reservoir inflows during flood seasons. Operational flexibility refers to the ability to adapt and adjust the management of a reservoir to changing conditions and forecasts. It often involves real-time monitoring, forecasting, and communication with relevant authorities to make timely and informed decisions to protect downstream communities and infrastructure from flooding.

The goal of operational flexibility is to retain water in the reservoir for various purposes, such as water supply, hydropower generation, and ecosystem benefits, while maintaining the ability to manage the reservoir to regulate the anticipated inflow in a controlled and safe manner, thereby reducing the risk of flood-related damage. Operational flexibility involves making decisions about when to release water from the reservoir, how much water to release, and at what rate to make the releases, while considering factors such as weather forecasts, upstream inflows, downstream conditions, and the potential for flood-related damage. Future considerations for operational flexibility may need to include innovative approaches to reservoir management in order to address the challenges posed by climate change¹⁰.

¹⁰ For example, a study at the time of signing the WF2050 agreement indicated benefits to reservoir storage by managing reservoirs based on hydrologic cycles rather than years (i.e., a new cycle starts when all the reservoirs in a system are full, not when a new water year begins).

Guiding Principle

1. Support and advocate for enhanced operational flexibility within the American River watershed through improvements in infrastructure and procedures to increase flood protection for the Sacramento region and contribute to the coequal objectives.

Program Elements

Reclamation operations of Folsom Reservoir for flood control are subject to the conditions of the Water Control Manual issued by the U.S. Army Corps of Engineers (USACE), which is the primary regulatory agency for flood operations at Folsom Dam¹¹. These two agencies are the primary implementation agencies, as the flood operation at Folsom Dam is the dominant element for flood management in the Sacramento region. In addition, current Water Forum members, specifically the Sacramento Area Flood Control Agency (SAFCA) and the American River Flood Control District (ARFCD), both have active roles in flood management for corresponding facilities (infrastructure downstream of Folsom Dam) and their associated operation and thus are also implementing agencies related to flood operations.

The Water Forum will support implementing agencies' programs, projects, and activities that are aligned with the WF2050 flood operations guiding principle of increased operational flexibility in the American River watershed, as described below.

1. Support for Projects, Programs, and Activities

The Water Forum will engage and support implementing agencies' projects, programs, and activities as appropriate and feasible in pursuit of the flood operations guiding principle. Support can include (but is not limited to):

- Funding for technical analysis
- Staff and/or consultant participation in project planning
- Providing regional education and awareness

Staff will monitor and track regional efforts that align with the flood operations guiding principle, and, when there is an opportunity to add value through support, staff will develop recommendation(s) for Water Forum contributions for consideration by the Coordinating Committee, the caucuses, and the Plenary. Relevant projects and programs may include enhanced hydrologic forecasting capabilities, new monitoring stations in the upper watershed, flood-managed aquifer recharge projects, enhanced FIRO at Folsom Dam, changes to structures and operations at selected upstream reservoirs, and nature-based solutions, among others.

Signatories support pursuing a [Preliminary Viability Assessment of American River Watershed Forecast-Informed Reservoir Operations](#) (Watershed FIRO) in partnership with Reclamation, USACE, National Oceanic and Atmospheric Administration (NOAA), and others, where

¹¹ Water Control Manual will be updated as project to raise the dam to add 3 ft for freeboard is completed.

appropriate and possible. Watershed FIRO offers the potential for improved water supply reliability and temperature management through increased operational flexibility, resulting in increased water storage volumes at Folsom Reservoir by the end of the flood season. In addition, where feasible and with willing partners, Watershed FIRO may include elements of nature-based solutions and upstream reservoir modifications in the upper watershed to enhance the benefits and durability.

Signatories support the **identification and implementation of excess flood water recharge** when: 1) carried out within the region; 2) designed, constructed, and operated in accordance with appropriate environmental and engineering standards/requirements, and the FMS; and 3) consistent with and supporting the Water Forum's coequal objectives. These concepts and opportunities will be explored and analyzed within the ARCAP.

2. External Advocacy for Improvements

Some opportunities for improving operational flexibility at Folsom Dam will involve addressing layers of jurisdiction and governance at the local, regional, state, and federal levels. The role of advocacy by the Water Forum (as a representative of broad local interests) can play an important part in the success of a given effort. Opportunities for advocacy may include (but are not limited to):

- Communications with federal partners (i.e., Reclamation, USACE)
- Advocacy at the federal level with specific messaging¹²

Staff will maintain awareness of opportunities for improvements to operational flexibility within the American River watershed, and as identified (with support from members and consultants), staff will develop recommendations for Water Forum advocacy for consideration by the Coordinating Committee and the Caucuses, as relevant.

Caveats and Assurances

1. *The Water Forum Signatories support pursuing a Preliminary Viability Assessment of American River Watershed Forecast-Informed Reservoir Operations¹³ (Watershed FIRO) in partnership with Reclamation, USACE, NOAA, and others, where appropriate and possible.*
2. *The Water Forum signatories support the identification and implementation of excess flood water recharge when: 1) carried out within the region; 2) designed, constructed, and operated in accordance with appropriate environmental and engineering*

¹² The Coordinating Committee reviews talking points and briefing materials with the Executive Director to ensure proposed messaging adequately supports the coequal objectives and is representative of the caucuses' interests.

¹³ Definitions of FIRO can vary, but generally includes expanding meteorological, watershed, channel condition, and environmental monitoring; advancing technology to enhance meteorological, watershed, channel condition, and environmental forecasting; and integrating data collection, management, display, and analysis capabilities into decision support systems related to reservoir operations.

standards/requirements, and the FMS; and 3) consistent with and supporting the Water Forum's coequal objectives.

TEMPERATURE AND OTHER WATER MANAGEMENT INFRASTRUCTURE

Temperature management improvements, including both operational and infrastructure improvements, will be critical under future conditions to help protect the health of the river and to support the coequal objectives. Key opportunities for Water Forum engagement related to operational temperature management activities primarily involve maintaining and updating the FMS, which includes setting storage targets at key times of the year, developing strategies for utilizing available tools for river temperature management, and exploring strategic partnerships and opportunities for engagement. Temperature management infrastructure improvements can be a crucial tool for further optimizing and protecting cold-water resources for the LAR.

Currently, the existing infrastructure for temperature management on the LAR includes temperature shutters on the power intakes at Folsom Dam (note that although the lower-level dam outlets are sometimes used to improve temperature conditions as a last resort, temperature management is not the primary purpose of those facilities). The temperature shutters at Folsom Dam enable water to be drawn from varying levels within the water column, offering some flexibility in managing the cold-water resources. However, the existing shutters are decades old, require manual placement within the water column, and without undertaking the cumbersome task of separating (or “de-ganging”) individual panels within the shutters, the flexibility for selective withdrawal is limited. In addition, the shutters are known to leak cold water at lower elevations than intended due to design and structural limitations, which further limits their effectiveness.

Improvements to the existing temperature shutters, as well as other temperature infrastructure projects, were proposed and/or studied in the LAR system over the last couple of decades, including a method to access cold water below Folsom Dam's penstocks. The Water Forum has contributed to studies and discussions of some of these projects in the past and has been integral to advocating for improvements¹⁴. Current plans for updated temperature shutters on the Folsom Penstocks have been authorized by Congress.

The last 20 years of operations on the LAR have illustrated the challenges of maintaining suitable temperatures for resident salmonids even when Reclamation's operation of Folsom Dam is consistent with applicable regulatory mandates. There are established thresholds for optimal fish health, which are specified as targets in various regulatory documents. Within these regulatory frameworks, optimal temperature targets are often coupled with options for exceeding them by varying degrees, based on their relative feasibility within a given year due to hydrologic

¹⁴ Areas of study have also included examination of opportunities to reduce heat gain across Lake Natoma, which presents additional challenges to temperature management on the LAR.

conditions and CVP operations. In recent decades, temperatures have frequently trended towards or exceeded the upper ends of suitable habitat conditions. These challenges are expected to continue and will be exacerbated by increased ambient air temperatures and shifting hydrology predicted by climate change.

In addition to known challenges related to temperatures on the LAR, over the last several years, there has been a growing awareness and concern regarding low dissolved oxygen (DO) levels in Folsom and Nimbus Dam releases, as well as associated DO levels at the Nimbus Fish Hatchery and on the LAR. In the fall of 2023, at a time when Reclamation was releasing water from lower elevations in the water column to access colder water, DO levels were recorded in both Lake Natoma and the LAR below suitable thresholds for salmonid survival. The fish were essentially at risk of suffocating in the water. Over the course of several days, with access to Water Forum DO data collected at key locations on the LAR, Reclamation was able to implement careful and effective infrastructure management actions to raise the DO levels to more suitable levels; namely, implementing the power bypass at Folsom Dam (i.e., releasing water from the lower outlets) and spilling water over the gates at Nimbus Dam (rather than through the penstocks). At this time, it remains unclear whether DO will continue to be a concern on the LAR and what actions will be most appropriate in response. However, infrastructure improvements to manage DO may need to be considered in the future, and options for aeration without bypassing power generation explored.

Given the current and projected temperature and DO challenges on the LAR, as well as the aging existing infrastructure, Water Forum support and advocacy for the continued enhancement of temperature and other water management infrastructure, along with considerations for future improvements, are imperative for contributing to healthier fisheries in the LAR.

Guiding Principle

1. Support and advocate for operational and infrastructure improvements within the American River watershed that contribute to more effective water temperature management and other important water quality attributes on the LAR for anadromous salmonids.

Program Elements

Reclamation and USACE are the principal parties responsible for infrastructure installation and management on both Folsom and Nimbus Dams. In addition, SAFCA has an active role in current efforts to improve the temperature shutters at Folsom Dam¹⁵. Known key areas for future improvement include:

¹⁵ There are efforts underway to design and implement updated, remotely controlled temperature control shutters at Folsom Dam.

- Infrastructure at Folsom Dam to improve access to coldwater resources in Folsom Reservoir (i.e., temperature shutters, penstocks, and powerhouse)
- Options to reduce heat gain across Lake Natoma

The Water Forum will support implementing agencies' programs, projects, and activities that align with the WF2050 temperature management infrastructure guiding principle, as described below.

1. Support Projects, Programs, and Activities

The Water Forum will support implementing agencies' projects, programs, and activities (as appropriate and feasible) in pursuit of the temperature and other water management infrastructure guiding principles. Support can include (but is not limited to):

- Funding for technical analysis
- Staff and/or consultant participation in project planning
- Providing regional education and awareness

Staff will monitor and track regional efforts that align with the temperature management infrastructure guiding principle. When there is an opportunity for Water Forum engagement, they will develop a recommendation for Water Forum contributions for consideration by the Coordinating Committee, the caucuses, and the Plenary. A current list of temperature management projects and programs is included in **Appendix 4**.

Signatories support the current efforts to redesign and improve the temperature control shutters at Folsom Dam and will consider opportunities for Water Forum support and advocacy. Until improvements are made, signatories support the implementation of a power bypass at Folsom Dam in all years as necessary to provide suitable fall spawning temperatures for LAR resident salmonids, unless September temperature modeling indicates that 56°F or lower can be achieved at Watt Avenue on or before November 1st without the bypass.

2. External Advocacy for Improvements

Opportunities for improvements to temperature and other water management infrastructure will involve layers of jurisdiction and governance at the regional, state, and federal levels. The role of advocacy by the Water Forum (as a representative of broad local interests) can play a valuable and important part in the success of a given effort. Opportunities for advocacy may include (but are not limited to):

- Communications with federal partners (i.e., Reclamation, USACE)
- Advocacy at the federal level with specific messaging

Staff will maintain awareness of opportunities for improvements to water management infrastructure at Folsom and Nimbus Dams, and as identified (with support from members and

consultants), staff will develop recommendations for Water Forum advocacy for consideration by the Coordinating Committee¹⁶ and the Caucuses, as relevant.

Caveats and Assurances

- 1. Signatories support the current efforts to redesign and improve the temperature control shutters at Folsom Dam and will consider opportunities for Water Forum support and advocacy. Until improvements are made, signatories support the implementation of a power bypass at Folsom Dam in all years as necessary to provide suitable fall spawning temperatures for LAR resident salmonids, unless September temperature modeling indicates that 56°F or lower can be achieved at Watt Avenue on or before November 1st without the bypass.*

¹⁶ The Coordinating Committee reviews talking points and briefing materials with the Executive Director to ensure proposed messaging adequately supports the coequal objectives and is representative of the caucuses' interests (see Program Area 5: Governance, Funding, and Administration).



Program Area 2: American River Corridor Health

The American River Corridor Health (ARCH) Program Area includes one area of focus for Water Forum activities and commitments:

- American River Corridor Health Program

AMERICAN RIVER CORRIDOR HEALTH PROGRAM

The Water Forum commits to sustaining the American River Corridor Health (ARCH) Program to further improve, recover, enhance, and maintain the resources of the LAR corridor in service of the coequal objectives.

The ARCH Program builds on the success of the existing Water Forum Habitat Management Element (HME) program, as described in the first WFA. The ARCH Program is designed to take a multifaceted approach to support the coequal objectives by leading habitat and science efforts for the LAR, as well as collaborating with partners to achieve a thriving river corridor and region. Although many projects directly implemented under the ARCH Program focus on habitat, education, science, and decision-support activities, actions that support a robust and healthy river corridor also contribute to water supply reliability and economic vitality for our region.

Guiding Principles

1. Maintain a focus on the health of the LAR consistent with the coequal objectives.

All activities covered under the ARCH Core Program are in direct support of the Water Forum’s coequal objectives.

These Core Program activities comprise most actions and projects under ARCH and meet specific criteria to:

- Continue improvement, recovery, enhancement, and maintenance of LAR corridor natural resources¹⁷ by leveraging Water Forum funding to maximize available local, state, and federal grant funding.
- Lead implementation of native salmonid habitat and multi-benefit¹⁸ natural resource projects within the LAR corridor.
- Support study and implementation of actions that improve flow and temperature conditions, and habitat quantity and quality for native species along the LAR corridor and broader region.
- Support public outreach and education associated with Water Forum efforts on the LAR.
- Advocate at the local, state, and federal level to support Water Forum efforts on the LAR, including efforts of Water Forum signatories and partners to support achieving the coequal objectives.

2. Leverage advocacy and partnerships in pursuit of shared goals.

Advocacy and partnerships contribute to the Water Forum's ability to improve resource conditions in support of its coequal objectives. As opportunities arise and resources permit, the Water Forum participates in regional and potentially broader initiatives and efforts in support of the coequal objectives. Actions and projects supported as part of the non-Core Program would meet specific criteria associated with effectiveness, costs, and benefits, and nexus with the coequal objectives, including:

- Maintaining an awareness of relevant projects and programs (e.g., Regional Parks Natural Resource Management Plan advancement, Central Valley Project Improvement Act Science Integration Team (CVPIA SIT) strategy development, etc.)
- Strengthening collaboration with American River Parkway and watershed partners (e.g., CDFW, Reclamation, NMFS, Regional Parks, Soil Born Farms, etc.)
- Leveraging Water Forum funding where appropriate (e.g., cost-sharing grant-funded activities, such as temperature modeling, for mutual gains and decision support)
- Identifying areas of advocacy and support for mutual gains to benefit the region (e.g., participating in advisory groups for partner projects, data sharing, outreach, etc.)

¹⁷ Consistent with applicable policies, goals, plans, guidance, and laws governing the resources, lands, and funding sources associated with ARCH Program work (including but not limited to the American River Parkway Plan and Natural Resource Management Plan (NRMP), CVPIA Anadromous Fish Restoration Program guidelines, etc.).

¹⁸ Multi-benefit projects are defined as those that do not focus on a single corridor resource, and intentionally include elements to serve multiple needs, including recreation, education, multiple species, etc.

3. Continue a commitment to adaptive management of Program activities.

Consistent with current practice, the ARCH Program will continue to incorporate “adaptive management” actions into its Program and project planning, not only to maintain the status quo but also to continually improve outcomes associated with the work of the ARCH Program.

Adaptive management and assessments of “lessons learned” will continue to occur at different intervals appropriate to the action being evaluated (i.e., salmonid project design assumptions are revisited on an annual basis based on fishery, hydraulic, and geomorphic data collection and analyses, whereas adaptive management associated with hydrologic changes influenced by climate change would be evaluated on a longer timescale).

Current best practices of adaptive management for the ARCH Program include, but are not limited to, the following:

- Monitoring and evaluation of the corridor health project effectiveness
- Review of existing assumptions and new data and analysis of hydrologic conditions in the watershed and region, and hydraulic conditions in the river corridor
- Synthesis of information gleaned from Water Forum-led and collaborative partnerships regarding fishery and other resource conditions
- Continuous coordination with state and federal agencies to ensure programs and planned activities are responsive to changing resource conditions associated with growth and climate change, updated agency guidance, and maximizing funding opportunities, etc.

Adaptive management activities support flexibility in addressing emerging issues and responding nimbly to changing conditions as additional scientific information and funding become available, as well as accommodating climate change and resource needs within the region. A continued robust program of coordination, advocacy, and funding for science, monitoring, and decision support activities is needed to support the coequal objectives through adaptive management.

Adaptive management is currently associated with ongoing WF2050 program areas, specific projects, and responses to emerging needs (i.e., implementation of the DO pilot study or review of the FMS during the ongoing BiOp Reconsultation process). However, the scale of adaptive management is expected to expand or contract over the term of WF2050 and can be easily scaled to accommodate potential new program areas or activities necessary to support improved outcomes, improved understanding associated with changing resource conditions over time, and adaptations needed to align with principles of the broader WF2050.

4. Ensure resource protection in compliance with applicable regulations.

Consistent with the original WFA and standard practice since its signing, individual projects undertaken by Water Forum members or the Water Forum itself will conduct all necessary

project- or program-specific environmental compliance documentation and consultation, as well as any required project-specific mitigation, in compliance with applicable laws and regulations.

5. Work in a manner that acknowledges changes in the nature and magnitude of human and societal effects on the natural resources of the LAR.

The Water Forum does not work in a vacuum. While our work can be highly technical and often focused on implementation, there are practical realities of working on an urban river corridor that is also designated as a federal and state Wild and Scenic River. Acknowledging the tension that exists between the river's ecological importance as a habitat for corridor species and human use of the Parkway as a recreational amenity and for other purposes is important.

The Water Forum is aware of and will continue to work to understand what challenges our members and partners face in addressing broader issues related to illegal camping¹⁹, fire risk, waste management, safety, pollution, and other human dimensions of resource management on the Parkway, within the policy guidance and framework of the County of Sacramento, as landowner and manager of the Parkway.

Program Elements

The ARCH Program has grown in scope and size since the signing of the first WFA, new entities are involved in WF2050, and resource discussions and planning are more complex due to continued growth, changes in the nature and magnitude of human usage of the Parkway, and pressure exerted by the accelerated effects of climate change on resources addressed by our coequal objectives. Thus, additional implementation considerations and processes will be considered for the term of WF2050, as described below.

1. Water Forum ARCH Program Planning Matrix (Appendix 5)

The Water Forum's work in support of a healthy river corridor is ongoing and can be easily scaled to accommodate available funding sources, the capacity for work on the Parkway and within the region, and to meet existing and emerging decision-support needs for river operations.

Maintaining a list of ongoing and potential projects and broader potential program areas that may address emerging issues, that are at varying levels of feasibility (ranging from concepts/ideas for the future to shovel-ready designs), allows the organization to seize funding and coordination opportunities as they arise and respond to changing resource conditions and guidance.

Building on past experience and success, a robust program of developing and conveying information to inform river operations decision support and planning, analysis, design, implementation, and monitoring of projects will support continued improvements, maintenance, scientific understanding, and coproduction of data associated with the health of the river

¹⁹Lack of affordable housing and legal shelter space both contribute to illegal camping on the parkway, along with other factors.

corridor and its resources. Outreach and education associated with habitat, decision support, and science and monitoring activities will also continue to be an important element of the ARCH Program.

See **Appendix 5: ARCH Program Planning Matrix** for a “living” list of habitat, science/monitoring, decision support, outreach, and ongoing educational activities, or under consideration, in support of the coequal objectives during the WF2050 term. The Matrix is utilized for annual and long-term work planning and is current at the time of WF2050 signing; however, it is expected to be a living document.

2. Engagement, External Communications, and Advocacy

To support continued advocacy and member engagement after WF2050 is signed, a framework or process will be developed to provide members with the necessary information regarding the ARCH Program (i.e., upcoming projects, priority partnerships) for use in external communications and advocacy. This could include program- or project-level talking points or briefings planned on a seasonal or annual basis for Water Forum-led initiatives. There are a range of venues available for Water Forum collaboration with local, state, and federal partners.



Program Area 3: Regional Water Supply Sustainability

The Regional Water Supply Sustainability (WSS) Program Area includes five areas of focus for Water Forum activities and commitments:

- Surface Water Management
- Groundwater Management
- Demand Management
- Dry-Time Actions
- Land Use Decisions

Additionally, the WSS Program Area includes a description of regional projects designed to support the coequal objectives and advance the principles of the Program Area.

SURFACE WATER MANAGEMENT

Regional demands for surface water are expected to increase under future conditions due to projected regional growth and the availability of ample regional surface water entitlements. However, the uncertainty in surface water availability due to climate change and the associated changes in hydrology must be carefully weighed when planning to support the Water Forum’s coequal objectives under future conditions.

Folsom Reservoir is projected to be at critically low levels more frequently due to the loss of snowpack and earlier inflows to the reservoir, as well as the challenges these conditions will present for current operational practices. These changes will threaten the regional municipal and industrial (M&I) intakes and produce lower flows on the lower American River. Analyses of climate change impacts on river temperatures relative to the needs of fish show that, without action, the survival of salmonid populations will be severely threatened. The region will need to examine new approaches related to surface water management on the American River to protect regional water supply reliability and to maintain a salmonid population under climate change.

Conditions on the LAR are largely governed by the operations of Folsom Reservoir, managed by Reclamation, as it responds to demands within the broader CVP. Over the past 10 years (2014-2023), regional M&I diversions from the American River have accounted for an average of approximately 11% of the annual unimpaired inflow to Folsom Reservoir. This ratio can vary significantly depending on the hydrology of the given year; in wet years, regional demands are relatively less significant compared to the total runoff, and in dry years, they account for a greater proportion.

There is considerable diversity among the regional water purveyors in terms of supply portfolios, locations of diversions, types of entitlements, and amount of growth projected, as summarized in **Table 1**. This diversity presents a variety of opportunities to support the coequal objectives through surface water management. Additionally, each purveyor has unique constraints that may limit their flexibility regarding surface water diversions.

Table 1. Water Forum Purveyor Water Production (2014-23)

Purveyor	Water Production ¹ 2014-23 Average (AFY)		
	SW	GW	Total
El Dorado Irrigation District	31,930	0	31,930
Placer County Water Agency	26,680	80	26,760
City of Folsom	18,200 ²	0	18,200
City of Roseville	28,000	220	28,220
San Juan Water District — Consotrium ³	32,960	4,240	37,200
<i>San Juan Water District - Retail</i>	<i>11,460</i>	<i>0</i>	<i>11,460</i>
<i>Citrus Heights Water District</i>	<i>9,720</i>	<i>1,720</i>	<i>11,440</i>
<i>Fair Oaks Water District</i>	<i>6,900</i>	<i>2,520</i>	<i>9,420</i>
<i>Folsom (Ashland)</i>	<i>1,100</i>	<i>0</i>	<i>1,100</i>
<i>Orange Vale Water Company</i>	<i>3,780</i>	<i>0</i>	<i>3,780</i>
Golden State Water Company	5,470	5,050	10,520
Carmichael Water District	4,780	3,470	8,250
City of Sacramento	68,460	21,200	89,660
Sacramento Suburban Water District	8,020	22,530	30,550
California-American Water Company	2,610	24,580	27,190
Sacramento County Water Agency	15,080	22,470	37,550
Totals	242,190	103,840	346,030
<ol style="list-style-type: none"> 1. Production data as collected and distributed by the Regional Water Authority includes treated retail water used within each respective service area. 2. Includes non-potable water deliveries to Willow Hill Reservoir. 3. Includes areas served by the San Juan Water District, which provides retail and wholesale supplies. Values shown reflect the sum volumes for San Juan retail, Citrus Heights, Fair Oaks, Ashland (Folsom), and Orange Vale. 			

WF2050 establishes principles for surface water management implemented through the elements of the agreement, including commitments contained in Purveyor Specific Agreements (PSAs).

Guiding Principles

Water Forum activities related to surface water management will support Water Forum’s coequal objectives by aligning with the guiding principles below. Notably, there are other principles specific to certain agreement topics (e.g., demand management) that are relevant to surface water diversions but are stated within their respective areas of focus. In addition, it is acknowledged that there is an inherent tension between the coequal objectives, and when considered in isolation, they can be interpreted as being in conflict. The Water Forum aims to prioritize its objectives equally, recognizing the need to manage our water resources holistically.

1. Prioritize alternative supplies to supplement surface water from the American River system during dry conditions, providing flow and water quality²⁰ benefits for the LAR.
 - a. Pursue opportunities for increased groundwater pumping to allow surface water to remain in the LAR.
 - b. Pursue opportunities for increased diversions from the Sacramento River as an alternative to surface water from the American River system.
2. Ensure that surface water commitments are balanced with regional efforts to achieve groundwater sustainability.
 - a. Prioritize surface water diversions in wet conditions to allow groundwater recharge.

Program Elements

1. Purveyor Specific Agreements

Within water Purveyor Specific Agreements (PSAs), individual commitments are articulated based on the Unimpaired Inflow to Folsom Reservoir (UIFR) as an annual metric of hydrologic conditions within the American River watershed. A UIFR of 400 thousand acre feet (TAF) or lower will define the driest conditions. A UIFR between 950 and 400 TAF will define the drier conditions. A UIFR between 950 TAF and 1,600 TAF will be considered normal conditions. And, a UIFR of 1,600 TAF or greater will be considered to reflect wet conditions. While 1,600 TAF is not considered a formal definition of what constitutes a “wet year” or “wet conditions” on the American River, it was utilized in the original Water Forum agreement as a basis for surface water commitments. It is expected that additional analysis and discussions will be conducted as part of ARCAP to explore and define other potential criteria that could guide regional operations in wet conditions.

Purveyor commitments were developed based on the surface water guiding principles and the unique opportunities for each purveyor. An important feature of the commitments, particularly for diverters of American River water, includes the establishment of the projected future level of diversions that would be expected to occur in normal conditions. This projected future level of diversion forms the basis for commitments in drier-than-normal hydrologic conditions.

2. Engagement with Reclamation

The influences of Reclamation's operations on the coequal objectives are much greater than the influences of regional surface water diversions, particularly related to the health of the river. The Water Forum will continue to engage with Reclamation to support the coequal objectives. Details related to the Water Forum's strategy for engagement with Reclamation are included in **Appendix 3**.

3. Regional Projects and Programs

Regional projects and programs described below have been identified as aligning with the coequal objectives and supporting the WF2050 surface water principles and elements. These projects have conceptual endorsement from the Water Forum (see Governance, Funding, and Administration, page 114), and are at varying levels of development and analysis. It is expected that these projects will continue to be discussed and assessed within the Water Forum to better understand the potential benefits and impacts.

RiverArc

The RiverArc project emerged from the 2000 Water Forum Agreement negotiations and was envisioned as a means to protect the river, its flows, and habitat from growing threats while also supporting water supply needs for planned regional development. Planning for the RiverArc Project has continued to evolve over the last 25-years but the concept has remained the same: to strategically shift existing water supply diversions from the American River to the much larger Sacramento River without adversely affecting other water users. RiverArc is seen as an adaptive management strategy that provides a foundational, regional approach to addressing the growing impacts of climate change in the American River watershed and supports the coequal objectives.

RiverArc design includes construction of water treatment and transmission facilities to deliver Sacramento River water supplies to the region upon implementation. The facilities are planned to include the utilization of an existing raw water intake on the Sacramento River that is fitted with state-of-the-art screens to protect fish, a raw water booster pump station, a pipeline to deliver raw water for treatment, a water treatment plant, and two treated water delivery pipelines, one to western Placer County and one to northern Sacramento County.

The RiverArc Partners, which currently include Placer County Water Agency, the City of Sacramento, the City of Roseville, and Sacramento County Water Agency, are currently working through the environmental analysis and technical studies required for the preparation of an Environmental Impact Report and Environmental Impact Statement. The RiverArc Partners anticipate presenting a public draft Environmental Impact Report in 2026. This planning work has been funded by a \$5.1 million California Wildlife Conservation Board Streamflow Enhancement grant, demonstrating the importance of RiverArc's anticipated benefits to California.

Sacramento Regional Water Bank:

The Sacramento Regional Water Bank (Water Bank) is a project being developed by approximately 20 local water purveyors through the Regional Water Authority (RWA). The goal of the Water Bank is to expand conjunctive use, thereby increasing water banking operations throughout the region to: (1) Improve long-term regional reliability and provide statewide water supply opportunities when possible; and (2) Support healthy ecosystem function on the lower American River.

The Water Bank objectives are to:

- Increase groundwater recharge during wet conditions using available surface and recycled water supplies.
- Reduce reliance on surface water during dry conditions by using previously banked groundwater.
- Contribute to healthy ecosystem function, including on the lower American River
- Contribute to water reliability of water agencies in the region with no or limited access to groundwater.
- Maintain the quality of surface water and groundwater.
- Contribute to CVP operational flexibility by reducing reliance on Folsom Reservoir during dry conditions.
- Consider and advance mutually beneficial opportunities to partner with entities outside the region on operational collaboration and/or investment in the Water Bank.
- Generate revenue for investment in infrastructure and other projects/programs to improve regional water supply reliability, resiliency, and affordability for participating agencies.
- Generate revenue (through water transfers and exchanges) to reduce financial barriers to conjunctive use for participating agencies.

The Water Bank consists of a system of groundwater wells, pumps and pipelines that allow local water agencies to fill and then pump out water reserves stored underground to primarily serve local water needs. It is anticipated that up to 65,000 acre-feet per year of water can be recharged (or stored) by local water agencies during wet periods of and up to 55,000 acre-feet per year of water can be extracted by the same agencies during dry periods. Environmental documentation for the Water Bank is anticipated to be completed by the end of 2026, and the project will be implemented at that time.

Ongoing conversations within the Water Forum are expected to include details related to groundwater recharge during wet conditions and reduced reliance on surface water during dry conditions. These conversations are likely to occur within the ARCAP working group.

Caveats and Assurances

1. *The ability for any individual purveyor to implement the surface water diversions principles will depend on their respective opportunities and constraints.*
2. *On a five-year cycle, purveyor signatories will coordinate with the Water Forum staff to provide data and assumptions to be reported in their Urban Water Management Plans (UWMPs), including demand projections, current and planned supplies, and drought planning scenarios. Water Forum staff will compile regional data and assumptions for presentation to the Water Forum membership for review and discussion.*
3. *Nothing in the agreement is intended to call for the reduction or forfeiture of existing surface water entitlements. Signatories to the agreement will honor this principle in state and federal entitlement proceedings directly related to WF2050. It is recognized that there may be broader state and federal entitlement proceedings where signatories may have different interests, such as the SWRCB water rights proceeding for the Bay-Delta. Signatories agree to work in good faith through the Water Forum with the objective of developing a consensus recommendation for how state and federal entitlement proceedings should affect those agencies that store and divert American River water. All signatories will make good faith efforts to ensure that recommendations are consistent with both coequal objectives.
 - a. *The LAR is considered to be fully appropriated by way of the existing declarations of full appropriations, the responsibilities of the California Wild & Scenic Rivers Act, and the realities of the National Wild & Scenic Rivers Act. For more detailed information, see Appendix 6. The Water Forum will not be pursuing amendments to the existing declaration of full appropriation.**
4. *Recognizing that the majority of LAR surface water supply originates in the Upper American River Watershed, signatories support efforts above Folsom Reservoir to enhance and restore watershed health, creating a resilient headwater for water supply and ecosystem benefits on the American River.*
5. *The Water Forum did not evaluate new reservoirs in the analyses used to inform the WF2050 negotiations. Notwithstanding any provision of this agreement, any proposal for the Water Forum to support or oppose a new reservoir shall be approved by the Plenary, with at least 30-day notice to each Water Forum representative.*
6. *Signatories acknowledge that the parties to the Healthy Rivers and Landscape (HR&L) Proposal will be obligated to meet tributary program requirements for the American River, if approved by State Water Resources Control Board along with associated agreements. In addition, there are Water Forum members who have also made flow commitments*

pursuant the American River Terms for Ecosystem Support and Infrastructure Assistance Needs (ARTESIAN) Agreement²¹.

- 7. Signatories are encouraged when invited to support (where possible) purveyors' rates and fees necessary to implement projects and programs insofar as they are consistent with the WF2050 guiding principles and in support of the coequal objectives. The Water Forum will provide learning and engagement opportunities on water affordability and related best practices, and signatories will work to better understand associated challenges and opportunities (see Governance Program Element- Community Outreach and Engagement for more information).*

GROUNDWATER MANAGEMENT

The region's water providers are expected to continue expanding their reliance on groundwater due to climate change, the potential for groundwater to serve as a backup supply during increasingly dry conditions, and projected regional growth and economic considerations. Water providers and groundwater management agencies have made significant investments in protecting the quality and quantity of groundwater to protect the viability of this local water supply and to comply with State regulations. Local water providers have expended intense effort to demonstrate that local groundwater subbasins will comply with SGMA. SGMA will continue to require local management actions and reporting.

Historically, most local water systems were either supplied by surface or groundwater, but not both. Over time, some of the previously surface-water-fed systems have added groundwater to their supply mixes to increase resilience. Many of the traditionally groundwater-supplied systems have added surface water supplies to either replace contaminated groundwater or to replenish their groundwater aquifer through in-lieu recharge. The use of direct groundwater recharge (also known as injection) is a relatively recent addition to local management actions and is relatively rare in the region. "Conjunctive use," "groundwater banking," and "aquifer storage and recovery" are terms used to describe efforts to manage both surface and groundwater supplies in a manner that complements each other. **Table 1** (presented above in the Surface Water Management Section) lists local water providers and their recent mix of surface and groundwater supplies.

WF2050 intends to establish agreed-upon principles to leverage and enhance the collective resources of its signatories to support the coequal objectives and groundwater sustainability while avoiding duplication of effort.

²¹ The ARTESIAN Agreement contains commitments for certain RWA members to obtain funding to complete groundwater infrastructure projects and provide contributions to environmental outflow with or without adoption of the HR&L. The ARTESIAN Agreement governs the rights and obligations with respect to the administration of state funding provided for in the Funding Agreement Between the State of California (Department of Water Resources) and the Regional Water Authority - Voluntary Agreement Early Implementation for the American River, executed on July 21, 2023.

Guiding Principles

Water Forum activities related to groundwater management will support the coequal objectives by aligning with the guiding principles below.

1. Recognizing that the regional GSAs have primary responsibility for managing regional subbasins, the Water Forum will facilitate coordination and collaboration while avoiding duplicative efforts.
 - a. Facilitate dialogue and the exchange of information between Water Forum signatories and groundwater managers to increase the understanding of groundwater conditions and trends, support inter-basin coordination, and promote effective regional groundwater management.
 - b. Promote and facilitate the application of the latest scientific and data-driven insights in groundwater evaluations and planning.
2. Support conjunctive management of regional groundwater basins with surface water supplies to enhance water supply reliability and provide flow and water quality²² benefits to the LAR.
 - a. Prioritize groundwater use in dry conditions to allow surface water to remain in the LAR.
 - b. Facilitate increased surface water diversions during wet periods to support groundwater recharge, in a manner that protects the river system.

Program Elements

1. Regional Coordination and Information Sharing

The Water Forum will work cooperatively with regional groundwater management organizations²³ to inform Water Forum members about groundwater conditions and trends, including GSP implementation and Sacramento Regional Water Bank operations. Activities and products to include:

1. An annual meeting on groundwater conditions and GSP implementation status.
2. Key groundwater indicators and data are synthesized and displayed on the Water Forum webpage for quick access to current conditions and project status. This feature will provide a comprehensive overview of regional groundwater conditions, incorporating information from the regional groundwater subbasins and the Sacramento Regional Water Bank. This information has value not only to Water Forum members but also to the public, including regional decision makers, land-use agencies, and policy analysts.
Information to include:

²² Including temperature, DO, and other characteristics.

²³ GSA, water banking participants, and other organizations who use groundwater.

- a. Subbasin groundwater condition mapping with water quality and water level monitoring information.
- b. A list of groundwater management actions planned by GSAs and their respective status.
- c. Annual volumes of water stored, extracted, and transferred as reported by the Sacramento Regional Water Bank.

The Water Forum will coordinate with regional groundwater organizations to facilitate collaboration on efforts when there is alignment in planning and implementation activities.

Water Forum activities will include:

1. Sharing data and information (climate change, water demand, or otherwise) with regional groundwater management organizations when there is alignment in planning and implementation needs.
2. Maintaining open dialogues between Water Forum staff and consultants and groundwater management organizations to seek opportunities to provide ecosystem benefits through groundwater management actions.

2. Support Actions: Technical, Facilitation, and Public Engagement

The Water Forum has a long history of successfully helping local groundwater managers²⁴. Upon request from groundwater management organizations and with the approval of the Water Forum Plenary, the Water Forum will assist local groundwater management organizations. Examples of possible Water Forum support actions are listed and described below.

Technical: Gathering or interpreting data or conducting analyses (e.g., performing CALSIM runs to validate GSP modeling).

Facilitation: Structuring and holding conversations within and between GSAs and other interested parties. For example, in 2020, the Water Forum convened negotiations with the Sacramento Central Groundwater Authority and other local entities to determine the structure and funding of the South American Subbasin GSP.

Public Engagement: Sharing the status of our region's groundwater management efforts with key audiences (e.g., tailored communications for Water Forum signatories who desire a region-wide perspective; public support to groundwater managers for grant requests).

3. Purveyor Specific Agreements

Within the PSAs and the conditions outlined within the surface water management program element, each of the purveyors has outlined opportunities to implement the groundwater

²⁴ One of the most recent examples was Water Forum staff and consultant technical and facilitation support for the Cosumnes Subbasin during the preparation of their GSP in 2018.

management guiding principles. These opportunities include descriptions of in-lieu recharge activities and direct recharge, among other opportunities.

Caveats and Assurance

- 1. The Water Forum will work to understand better and communicate the opportunities for, and impacts of, increased surface water diversions in wet conditions.*
- 2. Signatories acknowledge the importance of continued data collection and analysis to improve understanding of Groundwater Dependent Ecosystems (GDEs) and surface water–groundwater interactions and commit to ongoing dialogue within the Water Forum as these topics are explored in the context of SGMA requirements and ARCAP analyses (as relevant).*

DEMAND MANAGEMENT

Demand management refers to a range of actions aimed at managing the consumptive use of water, including improvements in water use efficiency and efforts to ensure that demand does not exceed available supplies. These actions can be deployed at the regional, purveyor, and household levels. As the region prepares for continued growth and the impacts of climate change, demand management is a valuable tool in our regional toolbox to reduce surface water diversions from the American River (which has the potential to improve reservoir storage, cold water pool, and river flows) and to reduce demands (which improves regional water supply reliability, including groundwater sustainability and climate resilience).

Climate change in the American River watershed is expected to cause greater volatility in surface water availability between hydrologic year types. To partially address this increasing uncertainty in the availability of surface water supplies, particularly in dry and critical conditions, reduced surface water reliability will be offset (in part) by increased groundwater production and demand management. Demand management can contribute to improved water supply reliability while leaving more water to support the health of the river. Moreover, reuse, grey water, and water recycling can reduce the need for surface water diversions. Such measures have already been implemented at varying scales within the region, with expected expansion in the future.

Continued engagement and coordination with Reclamation (as the owner and operator of Folsom Dam) will be critical to increase the likelihood that regional demand management and other related actions will result in targeted improvements to the health of the LAR.

It is important to note that water providers in California have more stringent state requirements for water conservation than existed 20 years ago, which bring greater operational and financial obligations. The new regulatory framework adopted by the SWRCB in 2024 (Making Conservation a California Way of Life) establishes agency-specific water use objectives for urban water purveyors in California, which will have varying impacts on regional purveyors. WF2050 incorporates these new requirements.

Guiding Principles

Water Forum activities related to demand management will support the Water Forum’s coequal objectives by aligning with the guiding principles below:

1. Support appropriate and reasonable demand management actions that help purveyors meet their regulated water use objectives, including actions that can improve water supply reliability and provide ecosystem benefits in the LAR, while also supporting regional groundwater sustainability.
2. Facilitate dialogue and the exchange of information between Water Forum signatories to promote awareness and understanding of regional water use trends and standards.
3. Seek ongoing opportunities for engagement, coordination, and agreements to promote the use of conserved water to support the coequal objectives.
4. Support actions that contribute to tree canopy health and avoid actions that exacerbate urban heat island effects.
5. Promote access to water necessary to support living landscapes across all socio-economic conditions and encourage low-water use and the use of native vegetation.

Program Elements

To implement the Demand Management principles listed above in support of the coequal objectives, the Water Forum will commit to the programs, actions, and activities below.

1. Regional Coordination and Information Sharing

Water Forum members commit to ongoing communication and collaboration on the implementation of demand management. The various mechanisms and venues where this communication and collaboration will occur are provided below.

Water Forum staff will obtain information regarding regional demand management that Water Caucus members have annually reported to the State and will synthesize the data to provide a regional overview of the status of implementation and water use trends. This information will be shared with Water Forum members in various venues and formats, as described below. Water use information shared with the Water Forum members will be built on existing reporting requirements.

- Water Forum will convene an annual meeting for Water Forum members focused on demand management and regional water use trends. Topics include regional water use trends (based on purveyor production data), the status of implementing demand management actions identified in agency PSAs and reported to the SWRCB, and the hydrologic outlook for the current year, with implications for regional water supplies and river needs. Optionally convene an additional meeting, as needed.
- Post progress towards meeting state-mandated water use objectives on the Water Forum webpage for quick access. Provide a “one-stop shop” for regional demand management progress, incorporating information from purveyors, DWR, and SWRCB.

- Provide updates on purveyors' approaches to meeting state-mandated objectives²⁵, including information on the relative effectiveness of various actions and programs (as available).
 - Purveyors and Water Forum staff will collaborate to consider opportunities for quantifying and tracking water conserved through ARCAP or other mechanisms.
- Purveyors intend to provide Water Forum members with a 30-day review period for their respective Draft UWMPs before the plans are adopted. This 30-day review period is expected to be built into the other required public review cycles and is not intended to be additive.
- Maintain open dialogues between Water Forum staff, members, and RWA to seek opportunities to support LAR health through demand management actions.²⁶
- Host a semi-annual meeting with interested Water Forum members, RWA staff, and agency water conservation staff to review and discuss current and planned regional efforts related to demand management. Water Forum members will have the opportunity to provide input on regional strategies and messaging for consideration by the agency's water conservation staff.

2. Implementation of Priority Demand Management Actions

Each Water Forum purveyor has developed and will continue to refine its portfolio of demand management actions to meet regulatory requirements. In choosing the timing and level of effort for potential actions, purveyors consider their opportunities and constraints to weigh potential effectiveness.

The Water Forum has compiled a non-exhaustive list of demand management actions that have the potential to benefit LAR health and support water supply reliability, and these actions are summarized in **Appendix 8**. Implementation of the actions will help support the coequal objectives.

- Water purveyors will consider implementing the demand management actions listed in **Appendix 8**.²⁷

²⁵ State mandated objectives (including outdoor water use) broadly become more restrictive over time and relevant updates and information will be presented across the urban water use categories.

²⁶ RWA implements their Water Efficiency Program (WEP) as a regional program which was created to help water providers in the greater Sacramento region work together to help their customers use water efficiently and meet relevant water use efficiency regulations and requirements. WEP activities have included public outreach campaigns, rebate programs, school education and research studies. In addition, RWA's WEP has been highly effective in attracting grant funding to increase water efficiency in the region and has secured \$15 million in funding since the start of the program in 2003.

²⁷ As noted in Element 1 (Regional Coordination and Information Sharing), Water Forum's annual reporting on demand management information will include a summary of actions and measures implemented within the region, along with progress towards meeting mandated water use objectives.

- The Water Forum, through its decision process, may modify the list of demand management actions as information on their effectiveness becomes available.

3. Purveyor Specific Agreements

All purveyors are committed to adhering to the relevant conservation and water use efficiency regulations. At the time of signing, key requirements are associated with the 2024 “Making Conservation a California Way of Life” regulations, Assembly Bill (AB) 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELO) which encourages low-water use and native landscaping for new development.

Within each PSA, purveyors will outline their anticipated approach to comply with water conservation regulations, including opportunities to improve landscape irrigation, install native and low-water-use vegetation, or take other actions that are identified as meeting agencies’ specific needs. The descriptions include current programs as well as the approach to future conservation. These projections will be understood by signatories to be preliminary in nature and subject to change and are included to provide a reference point as water use trends and practices evolve over the life of WF2050.

4. Engagement with Reclamation

Water Forum strategies and mechanisms for coordination with Reclamation are expected to shift over time as circumstances and opportunities evolve and climate change alters our regional hydrology, presenting new and potentially unforeseen challenges.

Demand management actions have the potential to increase the flexibility of the CVP system if they result in reduced diversions, particularly during drier periods. Reclamation has acknowledged this potential connection and the value of demand reduction during these times. As part of its ongoing work with Reclamation²⁸, the Water Forum will promote the benefits of regional demand management actions to influence operations and agreements that are favorable to the coequal objectives.

Over time, this coordination could seek potential agreements with Reclamation that acknowledge the quantities of conserved water and provide stronger dry-year protections than currently exist with the end-of-year planning minimum. Future agreements should also include provisions to protect purveyor water rights and to emphasize the role the Water Forum has played in decisions concerning Folsom Reservoir storage and releases.

²⁸ The Water Forum’s ongoing work with Reclamation is expected to include implementing and improving the Flow Management Standard; developing various agreements with Reclamation; and providing real-time operational guidance.

Caveats and Assurances

- 1. All signatories acknowledge that the requirements related to water purveyors' water use efficiency and demand management have become increasingly stringent since the signing of the original WFA and are continuing to evolve.*
- 2. All signatories acknowledge that the purveyors must consider the costs and benefits of demand management actions (monetary, ecosystem, quality of life, etc.).*
- 3. All signatories acknowledge that water rates have impacts on affordability and equity.*
- 4. All signatories recognize that conserving water provides multiple benefits (if properly targeted, implemented, and managed) and commit to implementing demand management actions in a manner that strives to support both coequal objectives, with considerations for improvements to landscape irrigation efficiency and installation of native and low-water-use vegetation.*

DRY-TIME ACTIONS

Balancing the coequal objectives has proven challenging in all years on the LAR, particularly in relation to river temperatures, for which seasonal targets are exceeded in nearly all years. During dry conditions, these challenges become exacerbated, as providing a reliable regional water supply and protecting the health of the LAR may come into conflict, particularly when water supplies become more constrained. The frequency and severity of dry conditions are expected to increase in the future, multi-year droughts are expected to occur more frequently, and dry years are expected to be drier. Careful planning in anticipation of, and diligent coordination and strategy during, dry conditions will be required to ensure that both coequal objectives are supported. “Dry-Time Actions” are the actions provided below that are designed to be taken during dry conditions. Planning and preparation for dry conditions, as well as opportunities to build resilience in wetter times, are also important and are discussed in other sections of this document.

It is essential to acknowledge that Reclamation, as the owner of Folsom Dam and Reservoir, which it operates as part of the statewide CVP, plays a crucial role in the ability of any regional actions to reliably support the Water Forum’s coequal objectives. As such, the Water Forum’s ongoing engagement with Reclamation is always important, but crucial in dry times.

Other topics related to dry times discussed by the working groups have included specific principles and elements related to regional commitments in dry conditions (surface water, groundwater, and demand management). The guiding principles and elements below include additional language that is helpful for commitments specific to dry times.

Guiding Principles

1. Prioritize alternative supplies²⁹ to surface water from the American River system in dry conditions to support LAR health.
2. Work collaboratively to develop consistent messages and strategies for engagement with Reclamation and the State in dry conditions.
3. Strive for consistent regional messaging to the public on water conservation and best practices during dry conditions.
4. Convene interested parties to conference about balancing coequal objectives during defined dry times.

Program Elements

1. Purveyor Commitments for Managing Surface Water Diversions

The PSAs include an important program element for implementing Dry Time Actions, which is shared with the Surface Water Management area of focus. As stated in the Surface Water Management program element, the PSAs include specific commitments based on the UIFR (summarized in Table 2).

²⁹ Alternative supplies to the American River surface water could include groundwater, Sacramento River water, as well as reservoir reoperation transfers that would release water from storage upstream of Folsom Reservoir, and other supplies that would make additional water available to support conditions on the LAR.

Table 2. WF2050 Description of Operations

Agency	Normal Conditions (UIFR > 950 TAF)	Drier Conditions (950 >UIFR >400 TAF)	Driest Conditions (UIFR < 400 TAF)
El Dorado Irrigation District	<ul style="list-style-type: none"> • Use American River supplies to meet up to 50% of its forecasted 5-year total potable demand • Potentially provide transfer water for conjunctive use to improve groundwater conditions 	<ul style="list-style-type: none"> • Implement the conservation measures required by its adopted Drought Action Plan • Limit use of American River supplies to meet up to 70% of forecasted 5-year total potable demand • Potentially provide transfer water for conjunctive use to improve groundwater conditions 	<ul style="list-style-type: none"> • Implement the conservation measures required by its adopted Drought Action Plan • Limit use of American River supplies to meet up to 75% of forecasted 5-year total potable demand • Potentially provide transfer water for conjunctive use to improve groundwater conditions
Placer County Water Agency	<ul style="list-style-type: none"> • 155,000 AFY (total of water rights permits and CVP contract) 	<ul style="list-style-type: none"> • 155,000 AFY from the American River • Replace up to 47,000 AFY (27,000 AFY for PCWA and 20,000 AFY for City of Roseville) of water through reoperation of Middle Fork Project reservoirs 	<ul style="list-style-type: none"> • Conference with stakeholders on how available water should be managed • Likely reduction in deliveries (50% reduction in irrigation water, 20% reduction in treated water)
City of Folsom	<ul style="list-style-type: none"> • Current 5-year UWMP projections will serve as the basis of diversions 	<ul style="list-style-type: none"> • Reduce surface water diversions up to 10 percent or as required by the City’s Water Shortage Contingency Plan, whichever is greatest 	<ul style="list-style-type: none"> • Reduce surface water diversions up to 20 percent, as required by the City’s Water Shortage Contingency Plan, or as required by any mandates issued by the State of California, whichever is greatest
City of Roseville	<ul style="list-style-type: none"> • Diversions would be defined by the most recent UWMP’s 5-year projected demand 	<ul style="list-style-type: none"> • Diversions would decrease linearly from normal levels to the driest conditions 	<ul style="list-style-type: none"> • Reduce surface water diversions from normal diversions by 20%

Agency	Normal Conditions (UIFR > 950 TAF)	Drier Conditions (950 >UIFR >400 TAF)	Driest Conditions (UIFR < 400 TAF)
SJWD Consortium	<ul style="list-style-type: none"> SJWD will divert and the SJWD Consortium will use 38,603 AF within the current SJWD wholesale service area 	<ul style="list-style-type: none"> SJWD will divert and the SJWD Consortium will use a decreasing amount of surface water from 38,603 AF to 30,882 AF within the current SJWD wholesale service area SJWD Consortium will reduce its surface water demand by additional conservation (up to 20% or as required by the Districts' Water Shortage Contingency Plans) and use of groundwater 	<ul style="list-style-type: none"> SJWD will reduce its diversion to 30,882 AF for use within the current SJWD wholesale service area SJWD Consortium will reduce its surface water demand by additional conservation (up to 20% or as required by the Districts' Water Shortage Contingency Plans) and use of groundwater
Sacramento Municipal Utility District	<ul style="list-style-type: none"> Entitlements total 30,000 AFY, though the maximum diverted in the last 10-years is around 6,100 AFY (2013) 	<ul style="list-style-type: none"> Cosumnes Power Plant (CPP) will need to operate during drier years to meet critical local and regional electrical demands. Need to operate the CPP could increase in drier years due to dry year reductions in hydroelectric supply or potentially higher temperatures leading to increased use of air conditioning 	<ul style="list-style-type: none"> CPP will need to operate during driest years to meet critical local and regional electrical demands Need to operate the CPP could increase in driest years due to dry year reductions in hydroelectric supply or potentially higher temperatures leading to increased use of air conditioning
Golden State Water Company	<ul style="list-style-type: none"> Continue to use its pre-1914 appropriative right from the South Fork of the American River 	<ul style="list-style-type: none"> Coordinate with City of Folsom and Reclamation for pre-1914 appropriative surface water rights 	<ul style="list-style-type: none"> Coordinate with City of Folsom and Reclamation for pre-1914 appropriative surface water rights

Agency	Normal Conditions (UIFR > 950 TAF)	Drier Conditions (950 >UIFR >400 TAF)	Driest Conditions (UIFR < 400 TAF)
Carmichael Water District	<ul style="list-style-type: none"> Future diversions from the American River may increase during normal and wet years by 1,500 to 3,000 AFY for storage into the groundwater basin 	<ul style="list-style-type: none"> Implement water conservation measures to reduce demand by 10% or as required by the District’s Water Shortage Contingency Plan Where possible, prioritize groundwater use to ensure sufficient flows in the lower American River 	<ul style="list-style-type: none"> Implement water conservation measures to reduce demand by 10 – 20% or as required by the District’s Water Shortage Contingency Plan Comply with State Water Resources Control Board’s water rights orders for diversion limitations or curtailments Where possible, prioritize groundwater use to ensure sufficient flows in the lower American River
City of Sacramento	<ul style="list-style-type: none"> Diversion up to 200 MGD so long as the flow bypassing the diversion at the Fairbairn Water Treatment Plant (FWTP) is greater than the Hodge Flow Criteria, otherwise diversions will conform with Hodge Flow Criteria and corresponding diversion rates City water diverted at FWTP in drier conditions in accordance with the foregoing limitations could be used anywhere within the City’s authorized POU as it exists now and in the future 	<ul style="list-style-type: none"> Diversion up to 200 MGD so long as the flow bypassing the diversion at the FWTP is greater than the Hodge Flow Criteria, otherwise diversions will conform with Hodge Flow Criteria and corresponding diversion rates City water diverted at FWTP in drier conditions in accordance with the foregoing limitations could be used anywhere within the City’s authorized POU as it exists now and in the future 	<ul style="list-style-type: none"> Diversions at FWTP to be no greater than 155 cfs and not greater than 50,000 AFY

Agency	Normal Conditions (UIFR > 950 TAF)	Drier Conditions (950 >UIFR >400 TAF)	Driest Conditions (UIFR < 400 TAF)
Sacramento Suburban Water District	<ul style="list-style-type: none"> Utilize contracts with neighboring agencies (currently City of Sacramento, and PCWA) to access surface water and allow groundwater to replenish 	<ul style="list-style-type: none"> Use groundwater to meet customer demands in a discretionary fashion to support regional conjunctive use goals, operational levels of service, and the Water Forum coequal objectives 	<ul style="list-style-type: none"> Use groundwater to meet customer demands in a discretionary fashion to support regional conjunctive use goals, operational levels of service, and the Water Forum coequal objectives
California American Water	<ul style="list-style-type: none"> Use surface water as it is available through purchase water agreements with the City of Sacramento, PCWA, SCWA, and SSWD 	<ul style="list-style-type: none"> Use groundwater to meet customer demands in a discretionary fashion to support regional conjunctive use goals, operational levels of service, and the WF coequal objectives 	<ul style="list-style-type: none"> Use groundwater to meet customer demands in a discretionary fashion to support regional conjunctive use goals, operational levels of service, and the WF coequal objectives
East Bay Municipal Utility District Sacramento County Water Agency	<ul style="list-style-type: none"> Diversions are from the Sacramento River Proposals do not include specific diversions based on defined hydrologic conditions Proposals articulate contributions to the coequal objectives beyond American River diversions 		

2. Cross-Caucus and Internal Coordination

Cross-Caucus and Internal Coordination is a key program element within the American River Flows and Operations (ARFO) Program Area. The description of the topics and activities focuses on the implementation of the FMS. To ensure common understanding and general awareness of the hydrologic outlook, as well as the implications for related WF2050 commitments, updates on the current UIFR projections will be included in the Cross-Caucus meetings.

3. Engagement with Reclamation

Engagement with Reclamation is understood to be critical to the success of the WF2050 agreement and is described in several areas of focus (as it relates to the specific activities). A broader description is provided in **Appendix 3**.

In dry conditions, Water Forum members will enhance internal coordination to develop specific and consistent messages for engagement with Reclamation to: ensure implementation of the FMS, promote the benefits of the Water Forum dry-time actions, and the value of leveraging Water Forum commitments to support the coequal objectives.

4. Regional Conferences in Dry Times

Water Forum signatories acknowledge that during certain dry times, there may be insufficient water to support Water Forum's coequal objectives, and special provisions will be necessary for water management.

During dry time Regional Conferences, all signatories agree to:

- Meet regularly to confer on managing available water supplies to best serve the coequal objectives.
- Consider actions and strategies (beyond managing water supplies) to address the specific challenges posed by these conditions.
- Develop consistent messaging related to the need for water conservation, encompassing both the coequal objectives (not just individual available supplies). Agreed-upon messaging will be utilized region-wide to promote consistent understanding and awareness of the current situation³⁰.

Regional Conferences can be triggered under the following conditions and circumstances:

- The March-November UIFR is less than 750 TAF in any given month, based on the most recent Bulletin-120 (released February-May).
- Folsom Reservoir storage is projected to drop below 200 TAF at any time in the future, according to the 50% forecast.
 - The projection could be either:

³⁰ Agencies will still develop individual messaging for their specific situations and requirements, as necessary.

- Provided by Reclamation
- Made by Water Forum staff or consultants over any future time frame (note: the ability to forecast will dictate the time frame; in other words, with a valid forecast that shows future storage <200 TAF, then Regional Conferences would be triggered)

Other circumstances may also warrant Regional Conferences and are described below. Either of the circumstances described below requires confirmation from the Plenary³¹ before a Regional Conference may be called.

- The Water Forum Cross-Caucus identifies that current dry conditions warrant a Regional Conference.
 - Cross-Caucus discussions on the potential for Regional Conferences will consider real-time conditions, including reservoir storage, river flows, river temperatures, forecasted operations, regional water supplies and infrastructure, state or federal declarations, etc.
- The Water Forum Executive Director, in consultation with the Coordinating Committee, identifies that current dry conditions warrant a Regional Conference.

Caveats and Assurances

1. *Water is essential for public health and sanitation, as well as for economic stability and quality of life. Water agencies have a fundamental responsibility to provide all customers with reliable access to safe, clean drinking water. This fundamental responsibility may constrain the breadth of Water Forum related actions purveyors are able to take during extreme drought.*
2. *Water agencies in California manage water shortages in accordance with their individual Water Shortage Contingency Plans (WSCPs), which are developed and updated every five years as part of their UWMPs, in compliance with California Water Code requirements.*
3. *Signatories acknowledge that dry times present exceptional challenges for the health of the LAR, and actions should be pursued to protect the fish that rely on river flows and temperature.*

LAND USE DECISIONS

Water Forum signatories include several entities with land use planning responsibilities and water purveyors with water planning responsibilities. Water Forum signatories recognize the benefit of coordination between water resources planning and land use decision-making.

³¹ Plenary confirmation for Conferencing can be conducted via a special session, to be scheduled outside the regularly schedule meetings, as needed.

While coordination between water planning agencies and land use decisions is required by State law and regulation, and land use decisions rest solely within the purview of the local authorities, the Water Forum can organize and disseminate regional data that informs the nexus between water supply and land use. To that end, WF2050 aims to outline the Water Forum’s role in promoting awareness of the coequal objectives as they relate to land use.

Guiding Principles

The core principles below shape the Water Forum’s approach to fostering a regional understanding of water supply-land use considerations, particularly as it relates to supporting the Water Forum’s coequal objectives.

1. The Water Forum has a regional vantage point on water use and supply and a connection to the coequal objectives that is not highlighted through existing mechanisms or requirements.
2. Land use authority rests solely within the purview of the appropriate government jurisdiction, and the Water Forum can play an important role by keeping members and others informed of water supply trends by synthesizing data on regional water use and supply. This data is not intended to suggest Water Forum advocacy (for or against) any land-use decisions.
3. The Water Forum recognizes the challenges in any projections given the uncertain and shifting nature of future land use, water supply, and water use trends, and is committed to clearly articulating such limitations.

Approach

Existing California state laws and local procedures are in place to link land-use decisions and water supply. These include:

- Senate Bills (SB) 221 and 610, adopted in 2001 and in place as of January 1, 2002 (e.g., water supply assessments)
- Water supply information requirements are outlined in Chapter 881 of the California Water Code
- California Environmental Quality Act (CEQA) process
- UWMPs (the source for water supply projections)
- GSPs
- “Can and will serve” letters from water purveyors and related requirements that include analyses of impacts of single-year and multiple-year droughts, intended to foster a rigorous and comprehensive analysis of water supply and reliability
- MWELo

The Water Forum recognizes that collating and synthesizing existing data at a regional scale (drawn from the above sources) can contribute to the understanding of the region's cumulative water supply and demand picture among members and others. The WF will rely on UWMPs, Annual Water Supply and Demand Assessments, and GSPs in the region, as well as dry-time actions included in member PSAs and other relevant water supply planning documents, to shape its synthesis of water supply and demand trends. These data sources will include demand and supply projections for the proceeding 20- to 25-year period, to be updated on a five-year cycle.

Additionally, the Water Forum will track longer-term water supply trends to account for changing climate change projections and trends; significant shifts in water or land use; changes in water supply opportunities, etc. This will be done through the ARCAP Framework and work plan (see Appendix 2).

As noted above, the approach is not intended to suggest that the Water Forum will take positions on, or imply support or opposition to, any land use developments. Instead, it is intended to provide members and others with an ongoing understanding of regional trends in both water supply and demand, consistent with the coequal objectives.

Program Elements

1. Region-Wide Supply and Demand Forecast

- The Water Forum will draw on existing data (UWMPs, GSPs, dry-time actions from PSAs, etc.) to compile an ongoing region-wide synthesis of actual and projected water demands and sources (initially through 2050). This timeframe is intended to be consistent with the UWMP planning horizon and not project so far into the future as to be overly speculative. Opportunities for Water Forum review and discussion of draft UWMPs prior to adoption are described in the Demand Management program elements.
- This region-wide synthesis of projected supplies and demands is to be updated on a five-year basis (with a rolling 25-year time horizon) and will highlight differences between actual versus previously projected water demand forecasts. Annual updates would occur when data is available and relevant.
- This region-wide examination will make explicit the underlying assumptions shaping the different data sources, highlighting both common and divergent assumptions, as well as any noteworthy information gaps.
- This region-wide overview is to be shared in an accessible manner (i.e., on the Water Forum website) and included in the 5-year Status Report to inform Water Forum members and others about regional trends in water demand and supply.
- As needed, the Water Forum will provide analyses regarding longer-term (beyond 25 years) water supply trends to inform its understanding of possible longer-term trends and

consequences for the coequal objectives. This work will be done within ARCAP as the program endeavors to understand and prepare for the impacts of climate change.

- The work will be coordinated with and built on efforts and information from other Water Forum processes as relevant (e.g., ARCAP, demand management, etc.) to avoid duplication of effort.
- Following the adoption of WF2050, the Water Forum will convene a working group³² comprising members of all four caucuses to develop an agreed-upon approach (e.g., data sources, format) for reflecting and updating actual and projected water demands and sources throughout the life of WF2050.
 - The working group will identify information needs and sources, as well as the timeframe for projections (e.g., a rolling 25-year time horizon). Additionally, it will determine a method for displaying the information (format, dashboard, etc.) and integrate, as appropriate, the data with Water Forum metrics and other Water Forum processes.
 - The working group will meet periodically to review and confirm its process for developing a regional perspective on water demands and supply, and recommend any necessary changes in approach.

Water Forum staff are expected to collate and synthesize data. Any additional research or analytical needs identified by the working group would need to be discussed and confirmed with both the applicable water and planning agency staff, as well as Water Forum members, to ensure that staff burden and overall costs are considered and consistent with the Water Forum's budget development and review process.

2. Education and Information-sharing

The Water Forum plays a valuable role in educating its members and others in the region about the coequal objectives. There are aspects in ARCH, for example, that speak to public outreach and education, and other areas within Section 5 that underscore the importance of learning and community engagement. This information-sharing is expected to be centered at plenaries, in the Water Forum's 5-year Status Report, through an online dashboard, and via other outreach mechanisms described elsewhere in this document.

While the Water Forum as an entity does not have a role (formal or informal) in education related to specific land use projects, it can provide a useful venue for dialogue among its members. To that end, and consistent with the Water Forum Way, signatories are encouraged to use Water Forum processes to apprise other members of major land use projects, lawsuits, and other

³² This working group could be combined with the ARCAP working group or a separate group could be formed. After the Water Forum 2050 Agreement is adopted, the caucuses will decide if two groups would be more focused or if one will be more efficient.

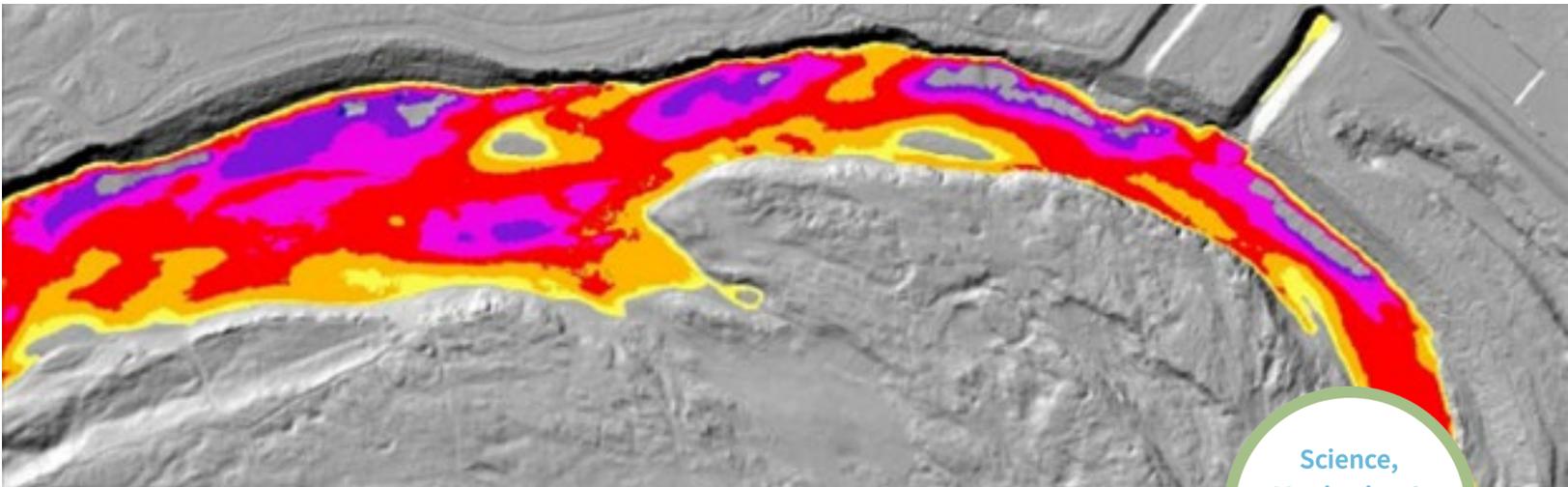
activities relevant to the coequal objectives and the work of the Water Forum. These disclosures create an opportunity for Water Forum members to engage in further discussions.

Additionally, individual Water Forum members are encouraged to keep their respective partners, decision-makers, and the public apprised of Water Forum priorities, coequal objectives, activities, and interests by utilizing fact sheets and other materials developed by Water Forum staff.

3. Water Forum Members' Right to Take Individual Positions on Proposed Land-Use Projects

All parties retain the right to support or oppose proposed land-use projects occurring within Sacramento, Placer, and El Dorado counties, and nothing in this agreement is intended to limit that right.

However, consistent with the Water Forum Way, members are encouraged to use the Water Forum process early on to disclose, discuss, clarify, and, as possible, resolve issues related to land use that may be seen as having the potential to impact the Water Forum's coequal objectives.



Science,
Monitoring &
Decision
Support

Program Area 4: Science, Monitoring, and Decision Support

The Water Forum commits to continuing to develop and sustain a robust science, monitoring, and decision support program to further study, monitor, adaptively manage, co-produce, report and share relevant data, advocate for scientific rigor, and inform and provide effective decision support for the ARFO, ARCH, WSS, and ARCAP program areas in service of the coequal objectives.

Guiding Principles

1. Continue the production and coproduction of scientific information to support effective river corridor and watershed adaptive management.

The Water Forum has a reputation for producing reliable, credible, and rigorous technical information. The Water Forum will continue to co-produce and contribute information regarding corridor health and watershed conditions (through project-related data collection and analysis, as well as other ad hoc or emerging needs) to inform flow and operational discussions with ARG and Reclamation, and support decision-making on the LAR (through the analysis and implementation of the FMS).

The Water Forum will continue to review and advocate for the most appropriate data collection, metric tracking, analyses, and tools to inform adaptive management, thereby improving conditions in the river and supporting the coequal objectives. Building relationships and acquiring data that meets Best Available Science criteria from other entities to assist with science, monitoring, and decision support activities (such as Folsom temperature profiles or CDFW carcass surveys) allows the Water Forum to leverage operating and grant funding to produce actionable information, act as a liaison between interested party and state and federal managing agencies, and support decision-making and understanding of corridor resources and conditions at public venues such as the ARG and Lower American River Task Force (LARTF), and inform regional planning efforts and regulatory processes such as the Reconsultation on the Long Term Operations of the CVP, and the Healthy Rivers and Landscapes Program (HR&LP).

2. Monitor program and project activities according to appropriate scientific standards and intervals to continue informing adaptive management.

The Water Forum’s various programs and associated project work will continue to meet the highest standards for scientific data collection, tracking, analysis, and reporting. Standardized, peer-reviewed information and protocols will be utilized and incorporated where applicable. ARFO and ARCH work on the river and within the watershed will continue to be monitored and documented, with the aim of collecting actionable data to inform adaptive management, metrics reporting, and decision support. The Water Forum frequently develops specific information for ongoing work on the LAR, particularly when other information is not available or supplied by other entities, and this will continue for project-specific actions. A description of the Water Forum’s current integration into broader regional and statewide adaptive management strategies, which include peer review, is provided below.

3. Communicate effectively regarding project outcomes, public data, and information access associated with Water Forum programs.

The Water Forum conducts a substantial amount of project monitoring and special studies, developing information that supports planning and decision-making in the region, from technical memoranda to peer-reviewed publications. Sharing well-organized information through open data initiatives and clearinghouses, as well as the Water Forum website, conferences, and special events, will support the Water Forum’s reputation for producing reliable, credible, and rigorous technical information that can be shared publicly.

Providing easily accessible and interactive information related to the Water Forum’s work for its members, the public, and educational programs is a key focus of this guiding principle. A detailed description of the role of website updates, data visualization, and a timeline for information sharing and updates associated with this principle can be found in the Metrics and Reporting section.

Program Elements

1. External Processes and Constraints That Directly Inform WF2050 Program Areas

External entities and processes influence the work of the Water Forum, particularly for the activities of the ARCH and ARFO Program Areas. The Water Forum’s nexus with the oversight, reporting, guidance, and restrictions associated with various ARFO and ARCH-related regulatory processes and groups is detailed below.

Additionally, grant-funded efforts for any Water Forum Program would include actions and schedules that are informed and constrained by funding agency priorities and cost-benefit criteria, approved grant scopes, and outside science and review processes that prohibit flexibility for changes in scope or priorities prior to or during the grant term.

EXTERNAL SCIENTIFIC AND PLANNING OVERSIGHT FOR ARFO and ARCH PROGRAMS

ARCH - Central Valley Program Improvement Act, Science Integration Team (CVPIA SIT): Structured Decision-making and Near-Term Restoration Strategy Guidance and

Requirements: Reclamation and USFWS established the Science Integration Team (SIT) to use the Structured Decision Making (SDM) process as a science-based framework to identify priorities for Chinook salmon, steelhead, and green and white sturgeon. Water Forum staff and technical consultants participate in the SIT and provide information that supports an understanding of LAR habitat and science efforts and operations, to inform decision-support through continued evolution of the SIT SDM based on best available science and lessons learned. Water Forum staff oversees planning and monitoring of habitat measures and special studies associated with CVPIA grant funds.

ARFO and ARCH - HR&LP: Planning, Design Review, Monitoring, Science Plan Oversight, and Habitat and Flow Accounting Processes:

The HR&LP process includes several required venues and processes that are being put in place to ensure best available science is used to plan, implement, evaluate function, and monitor effectiveness of habitat constructed to fulfill Voluntary Agreement (VA) commitments, and test VA Science plan hypotheses. Flow and habitat measures must meet strict criteria regarding timing, suitability, and effectiveness for entities to receive “credit” for the actions. All habitat actions must also go through a third-party design review process prior to implementation and a review of As-Built Conditions. These processes represent a “feedback loop” to strive for best outcomes where best available scientific information is vetted and informed by the HR&LP process, and information developed by tributaries in the process of this work feeds back into the process. Water Forum staff sit on the HR&LP Science Committee and are heavily involved in Science Committee efforts associated with multi-tributary coordination, design review, habitat accounting, tributary monitoring, and reporting/tracking, as well as overseeing planning, implementation, and monitoring of habitat measures associated with HR&LP commitments, and ARFO activities associated with HR&LP flow commitments and accounting are occurring in close coordination with RWA staff as the American River regional representative organization under the HR&LP process.

2. Support, Evaluate, and Integrate with Appropriate Scientific Partnerships and Efforts

The need to build and maintain data-sharing channels and supportive relationships on the American River Parkway and within the watershed requires the Water Forum to carefully consider data collection and analysis activities in relation to the mandated roles and needs of other agencies. The extent to which the Water Forum relies on other entities to conduct science activities effectively supports or constrains progress towards its coequal objectives.

The Water Forum will assess the level of commitment to and investment in science-related activities that support decision-making, including an evaluation of how the Water Forum's efforts and roles compare to those of other entities conducting data collection or science activities on the LAR (e.g., Regional Parks NRMP, ARPF, CDFW, etc.). Additionally, it will be important to consider how current Water Forum efforts compare to other regional and partner efforts, the

usability and value of existing monitoring and data analyses, including its application to State and Federal agency decision-making, future use of peer-review or science advisory panels, level of certainty of future funding, nexus with upcoming programs and efforts, and consider the need for a long-term, robust monitoring framework/program, decision support, and data management within the context of climate change on the LAR.

Due to various agency mandates such as those related to operations, river and fishery management, water supply, and groundwater planning, etc., for certain information, the Water Forum is often dependent on the actions of other agencies to collect the scientifically defensible data needed for decision-making. Data collected and used to monitor progress toward coequal objectives and guiding principles are described in the next section.

3. Metrics and Reporting

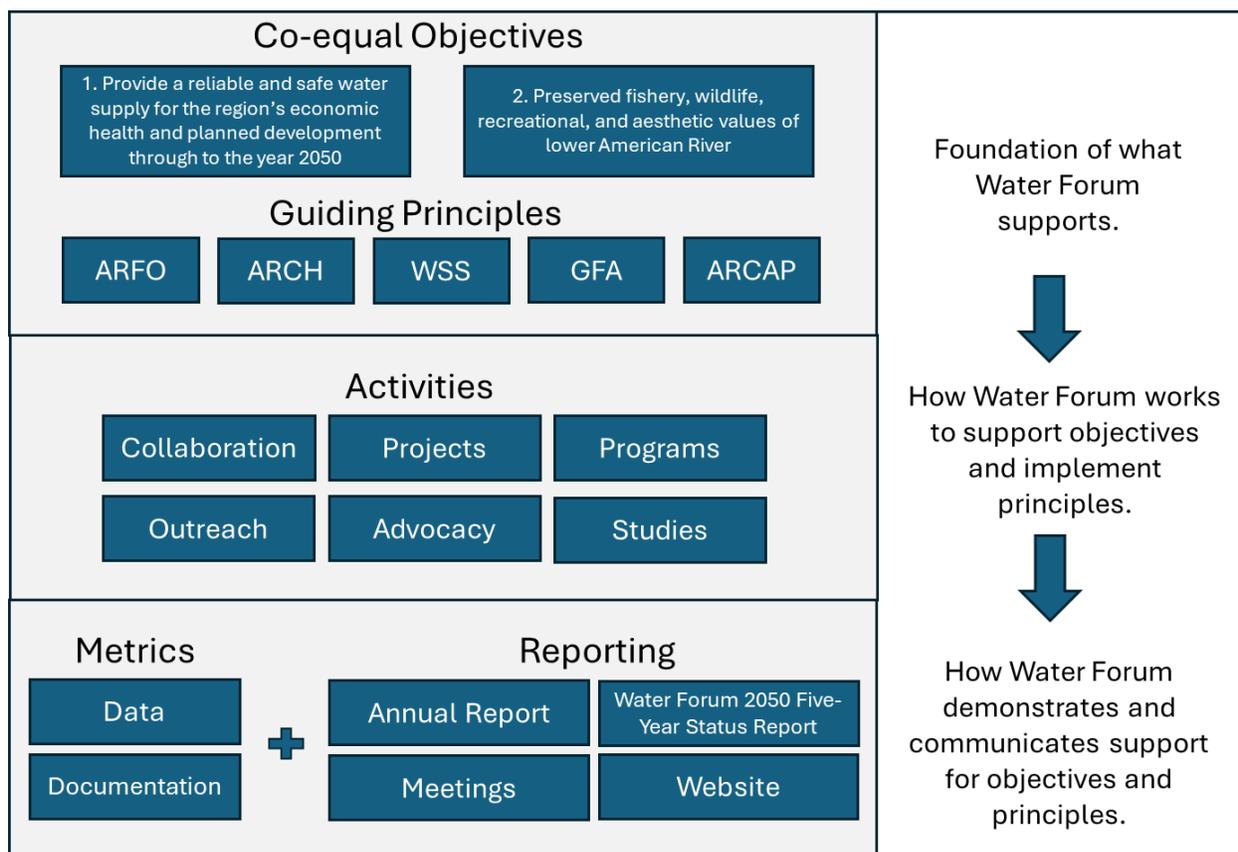
The metrics and reporting program element identifies appropriate information, data and metrics related to the work of the Water Forum, and details how the Water Forum will track and communicate progress on efforts that support the coequal objectives and encompasses a range of activities covered under the ARCH, ARFO, WSS, GFA, and ARCAP guiding principles. This section provides the foundation and framework for ongoing analysis and synthesis to support monitoring and reporting for Water Forum's activities and the success of WF2050.

Metrics will be utilized to track and provide transparency in reporting progress toward both coequal objectives and the agreement's guiding principles. Metrics will leverage existing publicly available data, as well as information collected from programs, projects, studies, and outreach initiatives led and supported by the Water Forum.

Regular tracking and reporting by the Water Forum will provide an opportunity to share information about the value of the Water Forum's presence and the organization's role in the region. Monitoring informs adaptive management and decision-making, while reporting enhances the general understanding of water supply sustainability and river health, and helps build trust with interested parties.

Figure 5 provides an overview of the relationship between the coequal objectives, guiding principles, metrics, and reporting. The coequal objectives and the guiding principles of the agreement establish the foundation of what the Water Forum supports and pursues. Activities that span from collaboration to specific projects, as well as outreach and engagement, support how the Water Forum works to achieve its objectives and implement these principles.

Figure 5. Coequal Objectives and Guiding Principles Relationships with Activities, Metrics, and Reporting



Types of Metrics

There are two types of metrics that are intended to be used in tracking the implementation of the agreement’s guiding principles: data-driven metrics and documentation metrics. In addition to these types of metrics, there is contextual data that is informative regarding the status of the coequal objectives but is not necessarily indicative of the success of the Water Forum. A description of the metrics is provided below, and a summary table of the metrics used in the Water Forum metrics and reporting program element, along with their respective categories and relevant program areas, is included in **Appendix 9**.

Data-Driven Metrics: Data-driven metrics encompass quantitative information derived from analyses of habitat availability (e.g., percentage of exceedance flows), river temperatures, changes in groundwater sustainable yield, and trends in hydrologic conditions. Data-driven metrics can also include quantifiable values related to funding, the number of individuals reached or engaged, and the number of participating organizations. Several categories help differentiate the focus of data-driven metrics. These categories include:

- Water Quality (temperature, dissolved oxygen, etc.)

- Habitat
- Storage
- Funding
- Water Supply
- Other

The Other category is used to capture data-driven metrics that do not cleanly fit into a defined category, supporting flexibility in updates made to metrics over time as new information becomes available. A summary of these data-driven metrics is provided in **Appendix 9**.

Documentation Metrics: Documentation metrics are typically more qualitative and descriptive in nature. Several categories help differentiate the focus of documentation-driven metrics. These categories include:

- Accountability
- Benefits
- Partnership
- Process & Structure

Metrics that provide documentation of accountability are typically related to commitments to specific actions, documenting outcomes from meetings and briefings, and efforts to provide clear communication and consistent messaging. Efforts to enhance transparency and clearly communicate roles and responsibilities are also grouped under the category of accountability. The benefits category is related to metrics that document opportunities, improvements, and evaluations of impacts or beneficial results. Partnership metrics document and describe collaborative meetings and engagement sessions as well as partnership opportunities. Process and structure metrics document specific processes and organizational or procedural structures. A summary of these documentation metrics is provided in **Appendix 9**.

Contextual Data and Information: It is important to note that there are other data and information that represent contextual information related to the status or viability of the coequal objectives that are important for tracking and monitoring changes in conditions, understanding long-term trends, or normalizing Water Forum-collected data and analyses, such as: ambient air temperature, snow accumulation, salmon carcass surveys, Delta conditions, salmonid population and growth studies, upstream reservoir storage, and others. However, while these metrics are informative as to the viability of the coequal objectives, they are not necessarily indicative of the effectiveness of the Water Forum's efforts. Relevant contextual data and information will be tracked within the Metrics and Reporting program element as is viable and informative for guiding Water Forum priorities. Data synthesized and communicated in this category will evolve over time based on the direction of the Plenary with the goal of providing a consistent basis of understanding on the conditions and trends related to the coequal objectives.

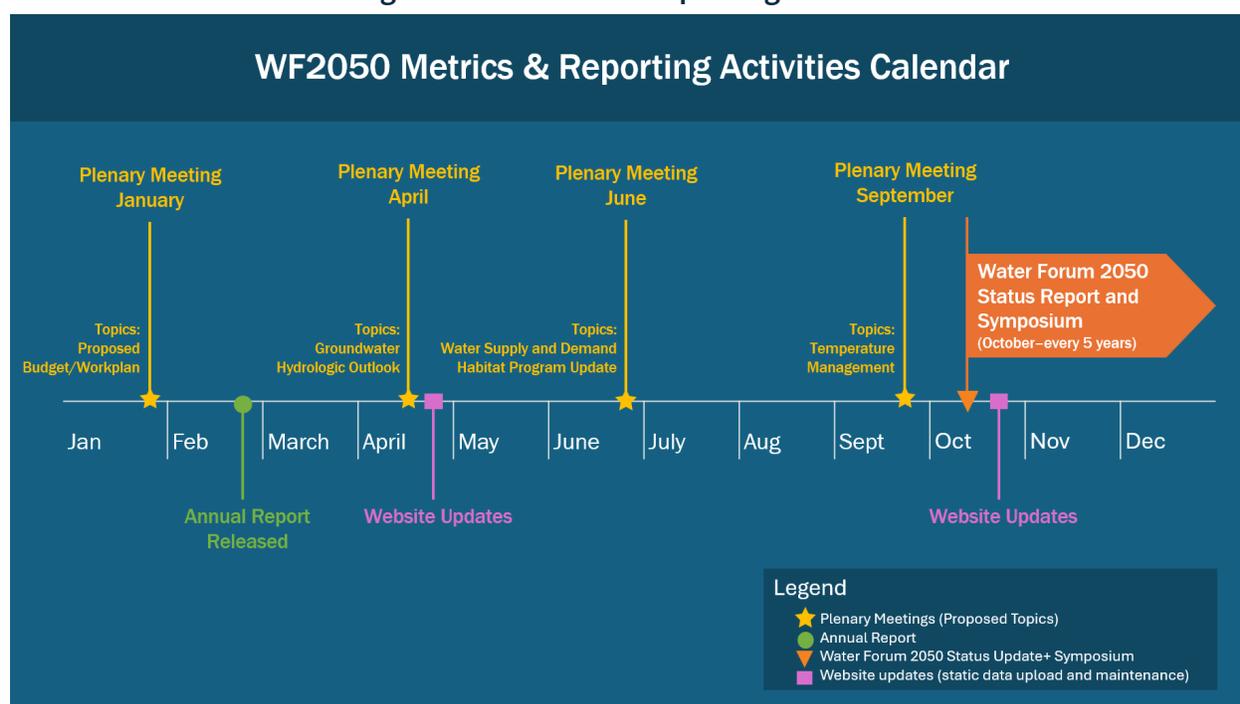
Metrics Reporting and Timeline

Several reporting mechanisms will be used to document and communicate progress on supporting the coequal objectives and WF2050 guiding principles. The reporting mechanisms are listed and described below. Additionally, the metrics identified for inclusion in each respective reporting mechanism are detailed in **Appendix 9**.

- Annual Report
- Water Forum 2050 Five-Year Status Report and Quinquennial Symposium
- Plenary and Caucus meetings (regularly recurring meetings)
- Water Forum website and Conditions/Data Dashboard
- Project-specific reporting (as needed)

The reporting mechanisms listed above will be relied upon throughout the year and follow a general timeline (**Figure 6**). To enhance member engagement and more effectively communicate relevant information, an annual sequence is proposed that is closely tied to the availability of pertinent data and/or information, as well as relevant partner processes, key decision points, and actions throughout the year. Please note that project reporting will occur according to the individual project schedule.

Figure 6. Metrics and Reporting Timeline



Annual Report

Each year, the Water Forum will update and provide an Annual Report that describes the Water Forum’s priorities, updates, and progress on Water Forum internal operations and

implementation of the WF2050's guiding principles. Content will include updates and a reflection on the past year based on data-driven metrics, including funding, habitat, river temperature, storage, water supply, etc., as well as documentation metrics for communicating accountability efforts and realized benefits. This report will be released annually in the first quarter and will reflect the activities and progress made by the Water Forum during the previous year. This report may include specific, agreed-upon reporting metrics to document a summary of progress made on ARCAP.

Five-Year Status Report

The Water Forum commits to developing a Water Forum 2050 Five-Year Status Report that will synthesize information related to the status of efforts supporting the coequal objectives and implementation of the guiding principles. The report will describe the progress made regarding the impact of program activities on a sustainable and reliable water supply, as well as their contribution to corridor health. The report will also describe the progress made through metrics that support accountability and document updates to processes and structures. Reporting may also consider and include information solicited from other agencies and entities, where applicable, appropriate, and where best available science considerations can be met³³. This report will provide a valuable opportunity to reflect on trends that are more easily interpreted at a time step greater than one year. This report may include specific, agreed-upon reporting metrics to document a summary of progress made on the ARCAP Guiding Principles.

The Water Forum 2050 Five-Year Status Report will be utilized internally to evaluate progress of the Water Forum's work, but will also be compiled in a format that is easily shareable with and relevant to other interested parties and a wider public audience. The Five-Year Status Report will: (1) comprehensively review progress towards meeting the coequal objectives and guiding principles; (2) highlight climate change impacts or other factors that may be impacting the work of the Water Forum, and (3) suggest any needed revisions or changes to WF2050 priorities and activities, or the annual work plan to address changing conditions. The Five-Year Status Report will be developed in coordination with the members and reviewed and confirmed by the Coordinating Committee. Upon completion, this report will be presented at a Plenary meeting for final approval before being shared publicly.

When developing the report, Water Forum staff will strive to use language, graphics, and learning and engagement sessions that make both the data and any associated ramifications accessible

³³ Although leveraging information from other agencies is advantageous, consideration should be given to using best available science and understanding the limitations associated with reliance on data collected by entities outside the Water Forum, that may have funding/staff limitations and differing management mandates that can affect data quality, format, useability, timeliness, availability, and scientific defensibility.

to an intended audience (Water Forum members and others) with varying degrees of expertise in the different topic areas.

Quinquennial Symposium

Every five years, and following shortly after the release of the Water Forum 2050 Five-Year Status Report, a Water Forum 2050 Quinquennial Symposium will be held to highlight how the work of the Water Forum supports improved water supply reliability, habitat and science, and operational decision-support needs for the LAR, and tracks metrics and adaptively manages activities in service of the coequal objectives. This symposium is meant to foster resource understanding among members and the public and offers an opportunity for strengthening partnerships within the region.

Having the symposium occur on an interval that matches the Water Forum 2050 Five-Year Status Report provides an opportunity to offer an interactive and collaborative opportunity to discuss broader trends identified in the Five-Year Status Report and participate in visioning and development of ideas for adaptive management and next steps to address issues that are directly actionable by the Water Forum (programs/projects/funding) or indirectly actionable through advocacy and new or continued partnerships. Water Forum members will be actively engaged in the development and implementation of the Symposium.

Plenary Meetings

Plenary meetings are conducted on a quarterly basis and are focused on key areas of the Water Forum's activities. Under the proposed schedule, during the first quarter, Plenary meetings will focus on the proposed Annual Budget and Work Plan, as well as the previous year's Annual Report. In the second quarter, these meetings will focus on groundwater and the hydrologic outlook. In the third quarter, the focus shifts to water supply and demand, along with an update on the ARCH Program. The fourth quarter will discuss annual temperature management on the LAR. It is intended that the Plenary meetings will also provide an opportunity to highlight the efforts of Water Forum member organizations and/or invite partners to share relevant information on projects or programs that provide mutual benefits toward the coequal objectives and guiding principles, as well as other topic areas as needed.

Caucus Meetings

Caucus meetings are held monthly, or as beneficial for the respective caucus. These meetings provide a venue to discuss areas of interest related to the Water Forum's work for the respective caucuses: Business, Environmental, Public, and Water. The metrics topics discussed in these meetings will align with and be prepared for in advance of the quarterly Plenary meetings.

Water Forum Website

The Water Forum website will be updated biannually and as needed to provide information synthesized by the Water Forum and illustrating its relevance to the coequal objectives (e.g., regional demand data, information from regional GSPs, REDD and snorkel surveys, peer-reviewed publications, and project-specific reports). Website information will be presented in a manner that is useful, timely, and accessible to those with and without in-depth knowledge of the system and the Water Forum's coequal objectives.

Real-Time Conditions and Data Visualization Dashboard

As funding becomes available, a robust data and information visualization dashboard will be developed and maintained, focused on Water Forum program areas, results, and synthesis of information, in line with Principle 3 of the Science, Monitoring, and Decision-support Program Area.

Leveraging new technologies and emerging platforms for sharing data (such as an interactive conditions and data visualization dashboard, Shiny apps, etc.) where the Water Forum's work may be showcased and where members, the public, and partner agencies may access data, visualize status and trends, and interactively synthesize and interpret information is a focus area for future reporting efforts. As part of this reporting mechanism, there is a commitment to improve, expand, and maintain an online dashboard that provides real-time updates on key indicators and benchmarks of water supply and river health to help inform flow and operation decisions and share the results of the work of the Water Forum in an easily accessible, interactive way for all users.

The dashboard will, as much as practicable, draw on existing data and ongoing data collection mechanisms associated with Water Forum programs, and will include linkages that are updated continuously to reflect real-time conditions from partner entities (such as CDEC), as possible, and other indicators like river flows, Folsom Reservoir storage, and water temperature; as well as habitat conditions or likelihood of presence/absence of salmonids based on lifecycle. Additionally, the data dashboard will also synthesize physical, biological, hydrologic, and spatial data gleaned from past Water Forum project and program efforts and will allow the user to interact with and visualize river science information, hydrologic data, regional water supplies and demands, and other program data and trends, and will act as an online repository for Water Forum's relevant technical studies, monitoring reports, peer-reviewed publications, and data that has undergone quality assurance/quality control. The dashboard would also link to existing and emerging open data platforms where LAR fisheries and physical data are housed and available for the broader scientific community to utilize. The data dashboard will incorporate information for metrics as described earlier in this section and summarized in **Appendix 9**.

Project-specific Reporting

Reporting of project progress and outcomes will be conducted according to the project-specific schedule. Metrics included in this reporting are anticipated to include funding data-driven metrics, as well as documentation of accountability efforts, project benefits, and processes and structures.

Revisiting Metrics and Adaptive Management Needs

Metrics inform our understanding of the status of the coequal objectives and where future resources may be best directed as conditions change over time. Reporting focuses on the status and trends associated with metrics specific to the coequal objectives and Guiding Principles. This information can be used to identify changed conditions and decision points at which the Water Forum may need to shift its focus or adaptively manage its activities to anticipate and respond more effectively to these changes. Updates to Water Forum activities will be documented in the form of Adaptive Management Actions that will be recommended in the Water Forum 2050 Five-Year Status Report and discussed at the Water Forum 2050 Quinquennial Symposium.

Anticipated changes can also be influenced by concurrent planning efforts and partner projects and programs, which support the need for continued collaboration as Water Forum metrics are revisited and updated over time. Current (at the time of signing) planning processes relevant to the Water Forum's work that should be considered in tandem with updates to the Water Forum metrics and reporting process include (but are not limited to):

- GSP updates
- UWMP updates
- Reconsultation/LTO
- HR&LP implementation
- CVPIA SIT Near-Term Restoration Strategy updates
- Regional Parks Natural Resource Management Plan and Monitoring Plan efforts

Caveats and Assurances

1. *The level of effort and the scope of Science, Monitoring and Decision Support Program activities will be informed by emerging data needs, and science activities mandated by regional and/or statewide programs that may arise during the WF2050 term (i.e., the Statewide HR&LP Science Plan habitat accounting process, changing hydrology, new water supply regulations, etc.), and other emerging funding sources and requirements, as applicable.*



Program Area 5: Governance, Funding, and Administration

The Water Forum commits to sustaining robust Governance, Funding, and Administration (GFA) for the organization, in service of its coequal objectives.

The structure of the organization builds on the success of the existing Water Forum and is designed to support the programs throughout the 25-year term of WF2050.

Guiding Principles

Guiding Principles are grouped into the following categories:

- General
- Governance
- Funding
- Administration

These guiding principles are crucial to maintaining the long-term integrity and efficacy of the Water Forum as an interest-based organization. These principles serve as both a touchstone to guide our work and a scorecard to measure the extent to which an evolving governance approach is consistent with and likely to further these principles. Collectively, these principles work to instill confidence, both internally and externally, in Water Forum direction, decisions, and actions. Water Forum members (also referred to as signatories or member organizations) support and actively practice the principles outlined below.

General Guiding Principles

1. Commitment to The Water Forum Way

The Water Forum Way is an explicit set of mutual obligations that has guided Water Forum members' engagement with one another since its inception. Members demonstrate adherence to the Water Forum Way through the following practices:

- Mutual gains approach and collaborative effort to seek consensus and build trust;

- Participating with an open-minded, respectful, and interest-based approach to all discussions;
- Working through challenges, search for and find balance across the Water Forum’s coequal objectives;
- Understanding Water Forum processes and interested parties;
- Surfacing and seeking to understand and accommodate differences and interests among Water Forum members; and
- Working with diverse groups to enable voices to be heard and to have an opportunity to have a seat at the table.
- Demonstrating a commitment to becoming informed on the topics fundamental to engaging in effective Water Forum discussions.

All members of the Water Forum, as well as staff and consultants, commit to adhering to the Water Forum Way and hold one another accountable for reinforcing this practice.

2. Commitment to Bridging Differences in Perspectives, Experiences, and Resources

Natural resource management and policy can be a place of conflicting and competing interests and resources, both within and across regions. An effective Water Forum governance creates a platform for diverse Sacramento-region participants to have the hard conversations necessary to build consensus for the needed actions within the region and to advocate for its interests with others elsewhere. Water Forum members recognize that effective governance is grounded in a process that holds at its core the following:

- Inclusive and active participation
- Governing processes that address potential inequities to achieve a more level playing field and hear all members’ perspectives
- Encourage novel thinking to address the coequal objectives
- Mechanisms that foster timely decision-making (e.g., avoid gridlock or handing any one-party veto power, etc.)
- A “no surprises” policy that puts a premium on member candor and full disclosure on Water Forum-related issues
- Builds and tests for broad buy-in for any agreed-upon actions and decisions

3. Commitment to Open, Transparent Public Processes

The Water Forum is committed to acting in a manner that improves and strengthens public trust. Water Forum members believe that as public agencies and representatives of diverse interests, it is imperative that our actions are open and transparent, and that we work diligently to maintain accountability and build trust in our work.

4. Commitment to Understanding How the Work of the Water Forum Impacts Our Region's Diverse Communities

Consistent with these principles, Water Forum members are committed to a governance approach that incorporates effective and credible mechanisms to understand and consider how the diversity of perspectives and communities in our region intersects with the Water Forum's work and priorities. We recognize that we "don't know what we don't know," and strive to create a structure that fosters shared learning. To that end, the Water Forum embraces a governance structure and culture that fosters the following:

- Each caucus strives to bring diverse and traditionally underrepresented voices into its caucus and discussions.
- Discussions and learning sessions that help Water Forum members understand how their pursuit of the coequal objectives may have the potential to impact positively or negatively, the full range of individuals and communities within our region, and especially those who may have a nexus with historic and current inequities
- Identify and, as practicable, address barriers to full participation by communities and parties that Water Forum activities may impact. Consider forming partnerships with community groups to increase engagement among underrepresented groups and ensure their interests are represented in Water Forum deliberations.
- Learn from one another and share effective techniques to strengthen outreach and inclusion of communities and people traditionally on the periphery of Water Forum-related discussions. Look to state resources to support these efforts and consult with diverse constituencies to advise on best practices.

The final Governance Program Element, Community Outreach and Engagement, addresses more specific strategies for considering how aspects of the Water Forum may intersect and impact diverse communities and constituencies.

5. Principles Require Practice

The Water Forum regularly applies the principles of our work through tools such as establishing meeting ground rules, addressing gaps in representation, and promoting transparency through disclosures. Consistent with these principles, Water Forum members are committed to a governance approach that builds on effective and credible mechanisms to understand and consider how our region's diversity of perspectives and communities intersect with the Water Forum's work and priorities.

GOVERNANCE

Governance Guiding Principles

1. Governance Scaled to Meet the Mission

The Water Forum's governance structures (including budget, staffing, programs and representation) are appropriately scaled to the Water Forum's mission and related tasks (as defined by the coequal objectives); while balancing the need for robust and inclusive learning, discussion, and decision-making with the reality of member resource and capacity constraints.

2. Governance Avoids Duplication of Efforts

Water Forum governance is structured to complement, not replicate, efforts undertaken elsewhere (within and outside the region) that have the potential to further (or impact) its coequal objectives.

3. Governance Supports Learning and Community Engagement

Given its commitment to building a broad coalition for advancing its coequal objectives, the Water Forum will ensure that its governance structure includes ongoing and effective mechanisms and opportunities to learn from one another and to educate and learn from external community groups that may be potentially impacted by Water Forum actions.

4. Clear Roles and Responsibilities for All Facets of the Water Forum

An effective governance structure clearly articulates roles and responsibilities for all facets of the Water Forum, including members, staff, and consultants, as well as written charters for any established committees that describe their purpose, scope, participation, leadership roles, and decision-making protocols. It also incorporates a clear process to identify and learn about recruitment, which improves representation and onboarding and mentoring of new members, as well as ensures that current members understand the updated governance structure.

5. Effective Leadership Fosters Productive Dialogue and Consensus Building

The Water Forum is an organization that relies on the participation of individual member organizations in the Plenary and in interest-based caucuses. This governance structure relies on the active participation of its members and leadership to foster trust within and across caucuses, as well as between and among Water Forum members, staff, and consultants. Any leadership for caucuses or committees is intended to facilitate representative, effective, and efficient communication, not replace the Water Forum's consensus-based decision-making structure.

Governance Program Elements

Governance Program Elements are grouped into the following categories:

- Governance Structure
- Roles and Responsibilities

- Water Forum Standing Committees and Working Groups
- Decision-Making
- Representing the Water Forum Externally
- Implementation Partners
- Community Outreach and Engagement

Program Elements–Governance Structure

1. Governance Structure

The Water Forum is a collaborative organization that strives to bring together diverse interests in the Sacramento region and American River watershed to create innovative solutions and, when needed, resolve conflicts to help achieve the coequal objectives. **Figure 7** is an illustration of the Water Forum’s governance structure, outlining the organization’s members, various bodies, and the roles and responsibilities of participants.

Figure 7. Water Forum Governance Structure



2. Water Forum Signatories

WF2050 is a voluntary agreement that organizations signed to carry out actions in support of the coequal objectives. The signatories to WF2050 acknowledge that by signing, they commit to support, advocate for, and carry out all actions specified for them in WF2050, and any related Purveyor Specific Agreements (PSAs), the Interagency Agreement for the Administration and Management of the Water Forum, or any other implementing agreements, subject to the relevant caveats and assurances. All signatories to WF2050 have equal standing in the Water Forum.

3. Membership

All signatory organizations are considered members of the Water Forum. Participation as a member is expected of entities that sign WF2050, including business, agricultural, and environmental organizations, community groups, water purveyors, and local governments. The Water Forum will continue the interest-based Water Forum Way process used successfully in developing and implementing the previous WFA.

Therefore, all Water Forum participants, acting as representatives of their signatory organizations, have the following general responsibilities:

- Commitment to the discipline of interest-based problem solving
- Willingness to invest time and resources to carry out WF2050 responsibilities
- Willingness to work collaboratively with others
- Commitment to an inclusive, fair, and transparent decision-making process
- Commitment to integrating diversity, equity, inclusion, justice, and accessibility considerations as part of Water Forum activities and deliberations

Because the effectiveness of the Water Forum will depend upon cooperation and collaboration among all participants, members will observe the following ground rules:

- Listen carefully and openly discuss issues with others who hold different opinions
- View a disagreement as a problem to be solved, not a battle to be won
- Avoid stereotyping and personal attacks on any other representative
- Avoid questioning or impugning the motivations or intentions of any other representative
- Respect the integrity and values of other representatives
- Honor commitments once made

Each Water Forum signatory organization may have multiple representatives participating in the Water Forum, but may designate only one signatory representative (and an alternate) to participate in formal decision-making actions (see Program Element – Decision Making, below). Signatory organizations are also encouraged to name an alternate to fill in when the designated signatory representative is unavailable. Each signatory will inform the Executive Director in writing of their signatory representative and alternate.

4. Process for Adding New Members

The Water Forum will utilize the steps below to consider requests from organizations seeking to become new members of the Water Forum once WF2050 is adopted and being implemented. New members can be considered at any time.

- Any potential new member contacts the Water Forum Executive Director, an existing member organization, or caucus to express their interest in becoming a signatory.
- Based on this interest, the Water Forum member or caucus can nominate the new potential member for consideration. This sponsoring member or caucus is responsible for describing the new member organization. The description outlines how and why the proposed member is aligned with and supports the Water Forum's coequal objectives, member participation commitments, and responsibilities. The description is distributed to other signatories for their review and consideration.
- If any existing member(s) raises concerns about the proposed new member, the Executive Director – consistent with the Water Forum Way – will bring those members together with the new proposed member to discuss and attempt to resolve any existing conflict prior to their becoming a new member or identify a pathway to address the concerns constructively through future discussions.
- The new-member sponsor collaborates with the Executive Director to add the item to the agenda of a subsequent Plenary meeting, where the prospective member is present. After a discussion, the Plenary votes to accept the new member organization. If the decision to accept the new member organization is not unanimous, the decision-making process (outlined in Program Area 5: Governance, Funding, and Administration) is used to arrive at a final determination.
- Once approved, the new member organization signs WF2050, and their designee joins the appropriate caucus.

If the Water Forum is updating WF2050, prospective member organizations can join the appropriate caucus to participate in discussions related to the update. The prospective member organization would only formally join the Water Forum once the new WF2050 is put forward for adoption, and they opt to sign on as a signatory.

5. Process for Onboarding New Members

When a new organization joins the Water Forum or a new representative of an existing member organization joins the Plenary, the Executive Director shall implement the Water Forum Mentoring Program. This Program immediately pairs up the new representative(s) with one or more caucus representatives (Caucus Mentors). When possible, Caucus Mentors will have at least four years of experience with the Water Forum. The Executive Director will provide briefings regarding WF2050 and the full range of Water Forum programs, expected time commitments for members, and related issues to ensure new members are prepared to engage effectively. The Caucus Mentors will provide additional information and insight regarding caucus operations and interests. Caucus Mentors will also assist the Executive Director in introducing the new member to other Water Forum members outside of their caucus and join the new members at Plenary

sessions. Caucus Mentors will actively mentor new members for the first year of their involvement as a Water Forum member.

6. Process for Handling Consolidations Among Existing Members

In the event that two or more distinct signatory organizations already in the Water Forum merge into a single entity, the new entity will inform the Water Forum Executive Director of this change, and it will be considered a single signatory entity within the Water Forum. The new entity will identify its designated representative and alternate.

7. Process for Exiting Current Members

When a signatory organization voluntarily leaves the Water Forum, the Executive Director will request an exit interview with the exiting member to understand their reasons for leaving and share those insights, as appropriate, with the Coordinating Committee, caucuses, and the Plenary.

If a member organization is not meeting its stated commitments or its representative(s) are consistently failing to abide by Water Forum participation principles, the issue will first be discussed within the respective caucus. If the issue is not successfully resolved through caucus discussions, a caucus may refer the issue to the Executive Director, who will work with the member and the Coordinating Committee to successfully resolve any concerns to the satisfaction of each caucus. If necessary, the issue will be referred to the Plenary for further action, up to and including removal, in accordance with the decision-making process outlined in the Process for Renegotiation or Amendment Requests (see Administration Program Elements).

Program Elements–Roles and Responsibilities

8. Water Forum Plenary

Purpose: The Water Forum Plenary (Plenary) is the main decision-making and information-sharing body for the Water Forum and sets policy direction for staff. The Plenary approves the annual Water Forum budget, business plan, and Water Forum program directions consistent with the Water Forum Agreement. The Plenary approves the charters of all formed Standing Committees and Technical Advisory Groups. Changes to WF2050 are within the purview of the Plenary unless the Plenary decides they need to be referred to signatory members' boards for formal confirmation (see section on Changed Conditions and Amendments in Administration Program Elements).

Composition: The Plenary consists of representatives from the signatory organizations, and each signatory has equal standing in the decision-making process.

The Water Forum recognizes the benefits of the Plenary as a venue for facilitating information-sharing, coordination, and collaboration across a wide range of audiences. To that end, Plenary meetings are considered open forums for both members and non-members. There may be times, based on issues under discussion or particular situations (e.g., litigation or ongoing

negotiations), where it is appropriate to limit Plenary meeting participation to signatories only. Such a decision will be made by the Executive Director, in consultation with the Coordinating Committee.

Roles and Responsibilities: Roles and Responsibilities of signatory representatives include engaging in Plenary meetings consistent with the principles stated above.

Disclosures: The Water Forum has a long-standing practice of setting aside time in each meeting (e.g., Plenary, caucus, other) for disclosures. Representatives are encouraged to disclose information about their organization's activities related to the coequal objectives that may be of interest to other participating organizations. These disclosures, typically made verbally at the start of Water Forum Plenary or committee meetings, are intended to keep one another apprised of upcoming communications, actions, testimony at hearings, etc. that may be related to or impact Water Forum activities and/or coequal objectives. For time-sensitive issues, members are encouraged to share disclosures in a timely fashion (e.g., by email or phone to the Executive Director and/or members, as appropriate) rather than waiting for the next available Water Forum meeting. The intent of disclosures is to support a "no surprises" policy among signatories, thereby enhancing collaboration, coordination, and trust among Water Forum members.

Schedule: Plenary meetings are expected to be held quarterly throughout the year; exact meeting times will be scheduled sufficiently in advance to facilitate participation by Water Forum members. The Executive Director, the Coordinating Committee, or a Plenary member may propose changes to the Plenary meeting schedule. The decision to change the meeting schedule shall be made by the Executive Director in consultation with the Coordinating Committee. Plenary meetings are open and inclusive, with updates provided by Water Forum staff on projects and programs being implemented to meet the coequal objectives.

Plenary decision-making processes are discussed in the Decision-Making Program Elements. The process for Renegotiation or Amendment Requests can be found in the Administration Program Elements.

9. Water Forum Caucuses

Purpose: The Water Forum has four caucuses – Business, Environmental, Public, and Water – each of which coalesces diverse interests in the region with a common interest and drive to work collaboratively to further the coequal objectives. The purpose of each caucus is to provide a venue that primarily facilitates information sharing and discussion of issues of interest to the caucus, in an open and collegial framework that seeks to find alignment among the participating entities and enhance consensus opinion.

The Public, Business, Environmental, and Water Caucus members have each documented a specific Caucus Interest Statement that serves as a foundation for each caucus's discussions and work in the WF2050 negotiation, in service of the co-equal objectives. The Caucus Interest Statement is used to explain the Caucus's values and goals for recruiting or orienting new

members, as well as working with the other caucuses. The four Caucus Interest Statements are posted on the Water Forum website and are available for review by Water Forum members and the public. The Caucus Interest Statements can be updated or amended with agreement from caucus members. While caucuses make decisions related to their internal functions (e.g., naming representatives to committees, designating any internal caucus leadership, etc.), caucuses are not decision-making bodies related to Water Forum decisions unless the Plenary is unable to reach consensus (as described in the Decision-Making Section).

Composition: The Water Forum is structured into four caucuses, each centered around one of four main interest groups with a stake in the coequal objectives. These caucuses, described below, are tasked with representing the breadth of interests within their caucus, either through direct participation of entities within the caucus or through effective outreach to affected parties affiliated with their caucus. Each caucus is committed to the Water Forum’s coequal objectives, while also contributing a distinct and broader focus through their participation.

- **Business Caucus** – The Business Caucus includes representatives from organizations that have a strong interest in maintaining the Sacramento region’s economic health, growth, and urban competitiveness through the constant supply of reliable and cost-effective water resources. Participants are motivated to support viable solutions for water conservation, a healthy American River Parkway, and conjunctive use of groundwater to / augment supplies and prevent unnecessary constraints on growth.
- **Environmental Caucus** – The Environmental Caucus comprises organizations with a strong interest in protecting regional surface and groundwater Public Trust resources for all beneficial uses and users. The Environmental Caucus advocates for public access to pristine park and recreation spaces, programs that lead to the efficient use of water resources, water-related climate adaptation actions, SMART growth within the Urban Services Boundary, and thriving conditions in and along the LAR and its tributaries for all aquatic and terrestrial species that utilize and live near the river, including water temperature, flows, and dissolved Oxygen levels necessary for the healthy lifecycle of Chinook Salmon, Steelhead Trout, and other sensitive aquatic species in the LAR.
- **Public Caucus** – The Public Caucus comprises organizations that represent current and long-term public interests in water availability and affordability, as well as public access to the LAR and Parkway, and communities that are underserved or underrepresented in current civic engagement. The Public Caucus comprises nonprofits, community organizations, land-use authorities, and general government entities. Within the context of the coequal objectives, the Public Caucus promotes the following:
 - Redress inequities that result in uneven representation and participation in civic processes; the Public Caucus endeavors to fully represent the communities of the Sacramento region and therefore makes special efforts to ensure robust public participation processes in Water Forum work efforts.

- Balance land planning efforts with the sustained availability of water, given the impact of climate change on water supply.
- Implementation of water conservation, demand management, and nature-based solutions to ensure affordable water rates, preservation of the environment, and adequate water supply.
- **Water Caucus** – The Water Caucus comprises water purveyors serving communities in the American River watershed and region, as well as non-purveyors, including RWA, El Dorado County Water Agency, and others. The Water Caucus members’ mission is to provide a reliable, safe, and long-term water supply for its customers and support for the Water Forum’s coequal objectives.

New Water Forum members will work with the Executive Director and caucus leaders/points of contact to identify the relevant caucus to join based on their entity’s focus and interests. (See Elements 4 and 5 under Governance above for language regarding the process for approving and onboarding new members.)

Roles and Responsibilities: Caucus meetings are designed to facilitate communication within the caucus regarding issues pertinent to the Water Forum.

Each caucus may choose to elect leaders or points of contact to assist with communication and information-gathering within and between caucuses and/or Water Forum staff. Additionally, having an individual (or individuals) selected to help the caucus clarify and sharpen its shared interests is extremely helpful and encouraged. Conversations in the caucus meetings are intended to foster brainstorming among members and generate ideas that can be shared in discussions across caucuses. Each caucus will decide how to handle confidentiality regarding caucus discussions.

Water Forum staff and consultants typically participate in caucuses to stay abreast of and contribute to caucus deliberations. Staff and consultants draw on these insights to help guide Water Forum discussions and activities, building collaboration across caucuses. In doing so, staff and consultants are asked to use their discretion in sharing information across caucuses (e.g., not assigning comments to individual members nor with enough specificity to identify the commenter), and caucuses are encouraged to indicate to staff and consultants sensitive issues that should be treated confidentially (i.e., not appropriate for sharing outside of the caucus).

Conversations among signatory representatives are encouraged, and nothing in this description is intended to limit individual Water Forum members from engaging in dialogue directly with other members.

Schedule: Caucus meetings are held monthly, or as needed (may be more or less frequent). Caucuses may request Water Forum staff/consultant support related to facilitation, technical presentations, etc.

10. Water Forum Staff

Purpose: Water Forum staff are the “glue” that hold the Water Forum together and facilitate implementation of the five Program Areas and ARCAP. To that end, they act as key points of contact with members and non-members. The Water Forum is staffed by a range of professionals with expertise in water, biology, environmental, engineering, construction, communications, and other related disciplines. More details on Water Forum staff roles in external communications can be found in the Representing the Water Forum Externally Program Element.

Composition: Water Forum Staff includes the Executive Director, and technical leads/program manager(s) for the Water Forum Program Areas, and fiscal and administrative support staff. At the time of signing, the Executive Director reports directly to the Director of the City of Sacramento Department of Utilities, while other staff report directly to the Water Forum Executive Director. These positions and roles are subject to change based on the Water Forum's focus, available funding, and ongoing discussions with the Plenary and the City of Sacramento.

- The Executive Director plays a vital role in working with member organizations, caucuses, and the Plenary to identify opportunities for collaboration and agreement-building across the various entities, as well as surfacing and resolving disagreements that may impede the pursuit of the coequal objectives. The Executive Director (in conjunction with other Water Forum staff and consultants) carries out this role through a mix of one-on-one conversations with members, arranging for small within and across-caucus discussions, and conducting ongoing outreach to other implementation partners. The Executive Director provides regular updates on issues of interest to all facets of the Water Forum (Plenary, caucuses, relevant members, Coordinating Committee, etc.).
- The River Corridor Health Program Manager is the lead in implementing a comprehensive habitat enhancement and science program for the Water Forum. These responsibilities include a range of activities, including technical oversight of design, permitting, construction/implementation, and monitoring of habitat projects; oversight of science and monitoring programs; development and execution of grant applications and funding; engagement with local, state, and federal agencies on external activities; and implementation of public outreach related to habitat projects. Additionally, the position serves as the lead on special internal and external projects to ensure consistency with the Water Forum's efforts.
- The Water Resources Senior Engineer is the lead for several core areas of the Water Forum's programs including Flows and Operations, the FMS, engagement with state and federal agencies on regulatory processes (e.g., re-consultation of the Long-Term BiOp and the SWRCB Water Quality Control Plan update/Voluntary Agreement process), Surface Water, Groundwater, and ARCAP, other elements of WF2050. The role requires a high level of technical fluency to direct analysis (e.g., temperature modeling, climate change

modeling) as well as excellent communication skills to translate findings and facilitate discussions with a diverse group of interested parties.

Program Elements—Water Forum Standing Committees and Working Groups

The Water Forum utilizes standing committees and working groups to facilitate the achievement of WF2050's program elements and annual priorities. Standing committees have a specific focus and work plan aligned with a major program area. For example, the Flows and Operations Cross-Caucus Committee, described below, focuses on critical technical and operational issues that affect the American River during the water year. Water Forum signatory member representatives who serve on committees and working groups serve as effective conduits to their respective caucuses. They provide perspectives from their respective caucuses and serve to gather input and share information back to their caucuses. Committee and working group members serve as either representatives of their respective caucuses and/or their organizations, as specified.

11. Coordinating Committee

Purpose: The Coordinating Committee provides fiscal oversight and guidance for the Water Forum staff. This includes working closely with the Executive Director on the annual budget process and recommending a proposed budget to the Water Forum Plenary for approval. In doing so, the Coordinating Committee provides input on annual priorities and work plans, consistent with the priorities of the Plenary. The Coordinating Committee also considers recommendations and suggestions from the caucuses, standing committees, and working groups for inclusion in the proposed budget and when developing recommendations for Plenary consideration. Coordinating Committee members are expected to provide guidance informed by and consistent with their respective Caucus's input.

The Coordinating Committee provides oversight and input into Water Forum strategic communications, on behalf of the Plenary. At the request of the Executive Director and any affected signatory (if relevant), the Coordinating Committee will review public information releases, Water Forum comment letters, and endorsements prior to their release. The Coordinating Committee will include in its deliberations any affected Water Forum members to get their input on any relevant communication. The Coordinating Committee, at the request of the Executive Director, will review Plenary meeting agendas, draft standing committee and working group charters, and other staff-generated documents to be provided to Plenary members or directly to the general public.

The Coordinating Committee is responsible for discussing (e.g., identifying additional information needs, etc.) and forwarding to the Plenary for its consideration any formal requests to amend WF2050. This process is further described in the Administration Program Elements.

The Coordinating Committee, in conjunction with the City of Sacramento and with input from their respective caucuses, will contribute to the hiring and evaluation of the Executive Director, similar to the role of an executive committee or board. For example, the Coordinating

Committee will contribute to an annual review. The exact format for providing input is to be determined in discussion with the City of Sacramento to ensure consistency with Human Resources policies and procedures. The Executive Director reports to the Director of the City of Sacramento Department of Utilities or their designee.

The Coordinating Committee is responsible for accepting feedback from signatories of the Water Forum. This input will help inform priorities in the Water Forum's annual work plan.

Composition: The Coordinating Committee comprises two representatives from each of the four caucuses and the Executive Director. These representatives are chosen by their respective caucuses. The format for Coordinating Committee meetings – whether open or closed to observers - will be determined by the committee members, with a preference for openness. This discretion allows representatives to discuss and consider sensitive topics as needed (e.g., legal or personnel matters), and to seek input from funders or other stakeholders on topics when appropriate.

Roles and Responsibilities: Coordinating Committee members will be responsible for sharing items that are ready for discussion beyond the Coordinating Committee with their respective caucus and for bringing the perspective of their caucus to the Coordinating Committee. Coordinating Committee agendas will be shared with all caucuses in advance to identify relevant caucus interests and if others should participate in pending/upcoming discussions, and a standing agenda item will be added to each caucus's monthly agenda to debrief the most recent Coordinating Committee meeting.

Meeting Schedule: The Coordinating Committee will meet monthly or as needed.

The Plenary will assess the effectiveness of measures to address the Coordinating Committee's transparency and accountability following the first year of implementation of this agreement.

12. Flows and Operations Cross-Caucus Committee

Purpose: The Flows and Operations Cross-Caucus Committee (Flows & Ops) enables Water Forum members to coordinate with Water Forum staff on issues related to the operations of Folsom Reservoir and implementation of the Modified FMS. Activities include dialogue to develop a recommended approach to current and forecasted reservoir operations and strategize for regional watershed and dam management advocacy. The approach will be informed by the best available and current data, including forecasts, reservoir operations, and flows on the LAR. In their meetings with Reclamation and other regulatory agencies, Water Forum staff will advocate for the position developed by the Flows & Ops Cross-Caucus representatives. Representatives are often attending primarily on behalf of their organizations, but will indicate when they are taking a caucus-based interest in a topic.

Flows and Ops meetings will also include reporting on the UIFR, as well as pertinent Water Forum and/or member actions.

Composition: Flows & Ops is open to any interested Water Forum member who has knowledge and interest in the real-time flows and operations of the LAR. Each caucus will inform the Executive Director of members who wish to be kept informed about Flows & Ops meetings and work.

Roles and Responsibilities: The focus of Flows & Ops will be on implementing the FMS within the relevant regulatory framework.

Meeting Schedule: The frequency of the Flows & Ops meetings will depend on the needs of the given water year and could range from monthly to weekly (drought years will likely require heightened levels of coordination as compared to wetter years).

13. American River Corridor Health Cross-Caucus Committee

Purpose: A standing group to inform the Water Forum members regarding prioritization of proposed projects, performance of implemented projects, and overall River Corridor Health programs. Water Forum members will have an opportunity to seek clarity on the approach and to provide input and guidance on program direction. Key information shared and discussed with the ARCH Cross-Caucus will also be reported out to the Plenary on an annual basis.

Composition: Representatives from each Water Forum caucus, Water Forum staff, and technical consultants who are subject matter experts, temporarily, depending upon the subject and need. The ARCH Cross-Caucus will be chaired by the Executive Director, in coordination with the Water Forum's technical staff and consultants.

Roles and Responsibilities: The ARCH Cross-Caucus will provide input and guidance for the ARCH program area.

Meeting Schedule: The ARCH Cross Caucus will meet at least semi-annually, including to inform ARCH-related elements to be included in the annual work plan. The ARCH Cross-Caucus may schedule meetings as needed. All meetings will be open to observation by Water Forum members and will be hybrid meetings, allowing participants to observe remotely.

14. American River Climate Adaptation Program Working Group

Purpose: This working group will inform and guide the activities of the ARCAP.

Composition: The working group will be co-convened with the Water Forum and RWA, will include two members from each caucus as primary representatives, and will be open to all Water Forum members

Roles and Responsibilities: Working group primaries will commit to making reasonable efforts to attend all working group meetings and to review related materials prior to the meetings. The primaries will also be expected to act as representatives of their caucuses by reporting ARCAP progress to the caucus and providing feedback to the Working Group on matters affecting the caucus. The ARCAP working group will be tasked with:

- Reviewing and commenting on work products
- Providing input on program direction, scope, and pace
- Deliberating, refining, and providing answers to ARCAP Questions

The Working Group decisions and recommendations will be developed by consensus and will be presented to the Plenary for approval.

Meeting Schedule: Meetings will be held monthly and supported by facilitation staff, with the option of additional meetings as necessary.

15. Process for Establishing New Standing or Ad-Hoc Committees

The action to initiate the formation of a new standing committee, ad-hoc committee, or working group can be initiated by the Executive Director, a caucus or caucuses, a member representative or organization, or the Plenary. The need for a new committee or working group can stem from a significant change in circumstances, resource or programmatic constraints, a need for the application of adaptive management, or other significant changes that are not being addressed by the Water Forum's current structure.

The first step in establishing a new committee or working group is to develop a Charter. The Charter identifies the problem or issue to be addressed, why the problem or issue cannot be effectively addressed within the Water Forum's current structure, and how the needed resources and expertise will be applied from within the Water Forum's existing resources. The individual or Caucus initiating the Charter will work with the Executive Director to prepare the draft document.

The draft Charter is circulated among the caucuses and the Coordinating Committee for review and discussion. Comments are reviewed and consolidated into a final draft, which the Coordinating Committee then reviews for any budgetary or programmatic considerations before being sent to the Plenary for discussion and action.

Program Elements–Decision-Making

Members of the Water Forum will continue to use the same collaborative form of decision-making used in the Water Forum since its inception. This collaborative process respects both the diversity and the legitimacy of the interests of all participants and is grounded in the Guiding Principles outlined above. The steps below will guide the Water Forum's ongoing decision-making process, any disputes that arise among members, and any efforts to change or amend WF2050.

16. Decision-Making Process

- The Water Forum is a consensus-based organization.
- The caucuses are encouraged to seek consensus to facilitate effective decision-making at the Plenary.

- The Plenary is the main decision-making body of the Water Forum and always strives for consensus, meaning all signatories are able to support a particular policy or decision under discussion. (Since its inception, the Plenary has reached a consensus on all decisions.) However, if, after full exploration and discussion of an issue or set of issues, the Plenary cannot come to a consensus agreement, the following process will be used:
 - If one or more Signatory Representative(s) disagree with the majority of Signatory Representatives in the Plenary, this member may choose to “stand aside” and let the Plenary reach consensus without them. Within the Water Forum, this is still considered a consensus.
 - If the Signatory Representative(s) who disagree with the rest of the Plenary cannot “stand aside,” then the “75% rule” will prevail. The 75% rule requires that 75% of the signatory organizations from each Caucus support a proposal for it to be considered a formal action of the Water Forum. The 75% consists of those signatory organizations present and voting within each caucus (primary or alternate Representative) or, in the event that neither the primary nor alternate is present, represented by a proxy (another member organization within the same caucus is granted permission by the absent organization to vote on its behalf).

Consideration of suggested revisions to WF2050 is subject to the above decision-making process, but WF2050 itself cannot be changed or modified without the expressed approval and consent of the signatories whose interests would be affected by the change (see section below on Changed Conditions and Amendments to the Agreement for more detail).

- Designated Signatory Representatives may identify alternates to participate on their behalf in Water Forum meetings or Plenary sessions in instances of unavoidable absences. However, it remains the responsibility of each Designated Signatory Representative to make the necessary time available to attend all Water Forum meetings and Plenary sessions as well as the various group and committee meetings, as appropriate.
- Plenary Meetings of all Signatory Representatives will be held periodically throughout the year and are open to all Water Forum participants. Specifics on meeting frequency are included in the Water Forum Plenary Program Element.
- The Plenary shall, as necessary, appoint teams of Signatory Representatives to meet on a routine and/or ad hoc basis to: foster implementation of WF2050; finalize procedural agreements (if drafted); develop “trial balloons” regarding changed conditions; and propose options—for subsequent Plenary consideration—to resolve disagreements related to differing interpretations of WF2050. These teams shall use the interest-based collaborative decision-making process described above.

17. Dispute Resolution

A major function of a collaborative process, and a tenet of the Water Forum Way, is to prevent disagreements from escalating into full-fledged disputes. With proper facilitation and communication, most potential disputes can be resolved. However, no matter how sophisticated a collaborative process may be, disputes will inevitably arise. Some may arise out of the interpretation of specific provisions of WF2050. Others may result from concerns about non-compliance or differing interpretations of the terms of WF2050.

It is essential that interested parties refrain from resorting to litigation as a first response to every perceived problem or transgression that falls within the purview of WF2050. Lawsuits can quickly destabilize the collaborative process, potentially returning all Water Forum participants to gridlock. Therefore, while not waiving any of their legal rights, all organizations represented in WF2050 agree to initiate alternative dispute resolution procedures, including mediation, before pursuing litigation.

Program Elements—Representing the Water Forum Externally

While the heart of the Water Forum's work is centered on communication and collaboration among its members and four caucuses, the nature of the Water Forum's work requires frequent interaction with a range of external parties, including state and federal agencies, the media, and others.

The Water Forum, in the course of its regular work, implements a robust communications strategy that calls for a range of methods to reach a diverse audience. Typical Water Forum communication products include publications such as the annual plan and the Five-Year Status Report, which communicate the Water Forum's progress, priorities, and upcoming actions to external audiences. In addition, the Water Forum maintains a presence on social media platforms. The annual communication strategy as well as periodic reports will be developed in close collaboration with the Coordinating Committee and approved by the Plenary before public release.

Additionally, the Water Forum undertakes a robust outreach and engagement effort to support the habitat enhancement work, as outlined in the American River Corridor Health program area. This work, which provides critical habitat for salmonids, must also consider the other uses and values of the American River Parkway. For example, the Water Forum habitat team is conscientious as to how its work impacts neighborhoods, river access, and perceptions of enhancement projects. The Water Forum accomplishes this through project-specific outreach, as well as general outreach at venues such as the Lower American River Task Force (LARTF) meetings and engagement with organizations working along the river. (See River Corridor Health for additional information)

The Program Elements below are intended to set expectations and procedures for ensuring the Water Forum is represented externally in a transparent way, informed by its membership, and

consistent with key aspects of the Water Forum Way, most notably the importance of clear communication and “no surprises.” They also address the mechanisms the Water Forum will use to ensure its deliberations are informed by external parties affected by the Water Forum.

18. Role of Water Forum Members

Water Forum members have the responsibility of coordinating with the Executive Director on external communications that mention or attribute work to the Water Forum, including educational material, media releases, or public presentations, to ensure consistent and accurate representation. This responsibility is carried out by members during interactions with one another and the Water Forum staff, and is practiced through Water Forum meetings (see Member Responsibilities on Page 74).

19. Role of Executive Director

The Executive Director serves as the primary external representative of the Water Forum. The Executive Director uses their discretion in representing Water Forum activities, policies, and perspectives with external groups and in public settings, as well as building and strengthening relationships with external partners to the benefit of the organization.

Working with Water Forum members and caucuses, the Executive Director will also seek to identify and foster outreach to and connections with a diverse set of potentially affected parties to ensure (1) they are aware of Water Forum activities, and (2) that their perspectives inform relevant Water Forum discussions. These efforts could range from conversations within established venues, such as conferences, to one-on-one engagements and focus groups.

Note: The role of the Executive Director relative to internal communications within and across staff and Water Forum members is discussed on Page 80.

20. Role of the Coordinating Committee

The Coordinating Committee serves an important role in reviewing external communication materials (e.g., media statements, press releases, letters, etc.) to ensure consistent messaging that balances the interests of all four caucuses. The level of review and involvement depends on the product, topic, and level of controversy, but as a part of the regular work of the Water Forum, the Executive Director will engage with the Coordinating Committee and any potentially affected members on the following:

- Consult in the development of proposed external messages that represent the Water Forum to the public, including news and print media, social media, video, signage, brochures, educational materials, and website content prior to release.
- Confirm proposed external messages that represent the Water Forum in special settings, such as conferences, meetings with elected officials, or state or local agencies, prior to representing the organization’s interest or position on sensitive issues.

- Review and refine comment letters on behalf of the organization, or to form cross-caucus working groups as needed to engage in complex or sensitive topics (e.g., re-consultation of the BiOp) that require a public statement (see additional detail in the section below).
- Coordinate with individual Water Forum members and caucuses regarding external discussions on issues that may be relevant or important to those entities.

Recognizing the unique relationship the Water Forum has with the City of Sacramento, the Executive Director (in collaboration with the Coordinating Committee) will maintain close contact with the City of Sacramento on sensitive legal and administrative issues.

21. Requests for Engagement or Support

There may be times when the Water Forum is asked to engage in formal or informal discussions directly with various external partners or asked to endorse or provide input on a specific issue. These requests may come with different timeframes (e.g., a request requiring immediate response versus those that come with weeks or months of lead time) or in different formats (e.g., a written statement, letter, or oral testimony). Requests may be generated by a member or non-member, as well as from Water Forum staff.

The sensitivity of the requests will also likely vary, generally falling under one of two categories:

1. Requests with strong member concurrence

This type of request includes subjects that fall under the purview of the Water Forum or are consistent with WF2050 and are non-controversial. For example, a request by a Water Forum member to send a letter to the editor of a newspaper extending support for an action or project that is consistent with WF2050 (e.g., Folsom storage levels), and the statement can be issued with support from all interests.

The Executive Director, in discussion with the Coordinating Committee and affected Water Forum members, determines a path for addressing the request based on timing/urgency and level of concurrence or divergence, as follows:

- The requestor meets with the Executive Director to provide details on the requested action, including the timeframe, format, and duration of engagement. The Executive Director meets with Water Forum member(s) most affected or involved in the issue to discuss the Water Forum's response in light of WF2050.
- The Executive Director responds and proposes an approach to the Coordinating Committee and any affected members, and then implements the action.
- The Coordinating Committee members inform the caucuses at the next regularly scheduled meeting, and action is then reported on at the next regularly scheduled Plenary meeting.

2. Requests with low member concurrence or that are controversial

This type of request includes subjects that may or may not be consistent with WF2050 or have the potential to be highly controversial due to the level of interest outside of the Water Forum. For example, being asked to submit testimony to, or negotiate with, state or federal regulatory agencies on issues that may affect the coequal objectives but are not in WF2050 (e.g., litigation). These requests often have a longer time frame for response and engagement.

The Executive Director, in discussion with the Coordinating Committee and affected Water Forum members, determines a path for addressing the request based on timing/urgency and level of concurrence or divergence, as follows:

- The Executive Director meets with the Coordinating Committee and the member(s) most affected or involved in the issue to coordinate and discuss the Water Forum's concerns and position in light of WF2050 and the coequal objectives.
- The Executive Director develops an issue memo that lays out:
 - purpose of the request and the interested parties
 - recommended engagement to respond to the request
 - ground rules and guideposts for the response
 - outcome being sought
 - areas that are not to be engaged in/negotiated
- The Executive Director will consult with the Coordinating Committee (and any affected members) on the issue memo, who will then coordinate its review by and feedback from the caucuses. All feedback will be shared with the Executive Director, who will coordinate the completion of the issue memo with the author(s).
- Once completed, the Coordinating Committee will redistribute the memo to the caucuses and schedule the issue memo for discussion at a Plenary meeting, where the appropriate individuals will present the issue to the Plenary for discussion and resolution.
- Once the engagement begins, the Executive Director and/or the individual(s) leading the Water Forum engagement will provide updates as warranted to the Coordinating Committee, affected members, and the Plenary.
- As engagement progresses, changes in circumstances may arise that warrant adjustments to the Water Forum response. Changes will be brought back to the Coordinating Committee, caucuses, and, when appropriate and consistent with the commitment to disclosures as described elsewhere in this document, to the Plenary for agreement and authorization to adopt them into the Water Forum's response.
- The Water Forum may also ultimately not respond to or decline the request for engagement.

22. Cross-Learning Among Water Forum Members

Water Forum members routinely engage in outreach activities with their various constituencies. As a result, they have each developed practices and approaches that can inform engagement strategies aimed at furthering the Water Forum's coequal objectives. These can include mechanisms for effectively sharing technically dense information, communicating complex or controversial funding and budgetary needs, and reaching out to traditionally underrepresented or hard-to-reach communities and interested parties, among others.

Given this expertise, Water Forum members are encouraged to share these approaches with one another and create spaces for mutual learning. Water Forum members are also encouraged to partner with one another and Water Forum staff to deepen the effectiveness of outreach and engagement strategies.

Program Elements–Implementation Partners

The Water Forum's work towards achieving the coequal objectives demands consistent cooperation and collaboration among its members. While much of this work is accomplished through the informal or ongoing efforts of staff and members, it is anticipated that, due to the integrated nature of many governmental and non-governmental organizations, there are opportunities for more formal partnerships or agreements.

To that end, the Water Forum's governance structure acknowledges the need for “implementing agreements” with other entities that work on and have influence over LAR conditions and activities related to, and/or furthering, the coequal objectives. Implementing agreements are intended to be consistent with WF2050 and provide more detail regarding the roles and responsibilities of the Water Forum in relation to our partners. Implementing agreements can be crafted between the Water Forum and its members, or between the Water Forum and non-members, such as state and federal partners like DWR, Reclamation, and USACE.

Implementing agreements can be developed, reviewed, and updated on a case-by-case basis. Due to the wide range of activities covered by Water Forum members or partners, the structure of any implementing agreement is unique to the issues or topic and can change over time. For example, the Water Forum has an implementing agreement with Reclamation (2021) to inform operations at Folsom Dam. At the time of execution of this Agreement, the Water Forum also has an MOU with the City of Sacramento Department of Utilities that outlines roles and responsibilities for fiscal and administrative services.

The Water Forum will use the process below to introduce, consider, and enter into any formal agreements with other entities:

- Any Water Forum member, Water Forum staff, or third-party entity may suggest the need for an implementing agreement with another Water Forum member or external entity. This expression of need should include a brief description of the need for and structure of the

intended partnership, highlighting the benefit to the Water Forum’s coequal objectives and any resource obligations (staffing, funding, etc.). This description should be submitted to the Water Forum Executive Director.

- Once received, the Executive Director first refers the proposal to the caucuses and any relevant committees for discussion. Caucuses and committees are encouraged to consider both benefits and concerns, identify any additional information needs, and indicate, as warranted, whether the proposed partner agreement is necessary.
- Once the caucuses and committees have had an opportunity to consider the proposal, the request is forwarded to the Coordinating Committee for its discussion. The Coordinating Committee will draw on input from the caucuses and committees to develop a recommendation for consideration by the Plenary.
- The Coordinating Committee is to forward all requests on to the Plenary for its consideration. The Coordinating Committee may, at its discretion, offer an accompanying recommendation to adopt, modify, or reject the agreement. It may also forward it on to the Plenary without any recommendation.
- The Plenary will consider the request and make a final determination in accordance with its decision-making protocols, as described elsewhere in this agreement.

Any agreements developed will be included in the administrative record of the Water Forum (or appended to WF2050) and will be available upon request. The City of Sacramento is the legal entity that enters into agreements on behalf of the Water Forum.

Program Elements–Community Outreach and Engagement

The Guiding Principles in this section emphasize the importance of implementing WF2050 in a manner that encompasses the breadth of perspectives in the region, engages with communities and individuals not typically involved, and fully considers how WF2050 and its work to further the coequal objectives may impact all communities and constituencies. The best way to accomplish this is to have representation from underserved and historically underrepresented community members on the Water Forum. This emphasis on outreach, engagement, and transparency is important not just in the context of the governance and administration of the Water Forum but should be viewed as an integral part of the Water Forum Way.

Water Forum will work to better understand and will provide learning and engagement opportunities related to:

- Human dimensions of resource management on the American River
- Water affordability and related best practices
- Underrepresented communities’ ability to engage with and relate to the work of the Water Forum

To that end, the Water Forum will apply methodologies to help inform its full range of implementation activities, guiding our work to meaningfully reflect the Water Forum's commitment to the Sacramento region. While specific approaches will vary from program to program, implementation activities should consider the following issues:

- How outreach is being carried out to ensure people from historically underrepresented groups are made aware of Water Forum activities (e.g., tribes and economically disadvantaged communities, among others)
- How and when input is being gathered to help overcome barriers to meaningful participation (e.g., time of day, location, unseen costs, etc.)
- How the Water Forum can evaluate, (1) how its actions are perceived and/or impact groups across the region, and (2) how the legacy of non-participation by historically underrepresented groups may be improved through Water Forum implementation when appropriate

In addition to these important yet more general practices, the Water Forum and its members participate in various initiatives that can help foster broad participation within all communities affected by the coequal objectives. These efforts can include access to our region's natural resources, education about the LAR, and support for the affordability of our drinking water. These efforts can be continued and strengthened under the WF2050 framework.

- **American River Corridor Health and Access** – The Water Forum recognizes that its habitat enhancement work along the American River corridor, in furtherance of the coequal objectives, has the potential to affect historically underrepresented communities. The Water Forum is aware of and will continue to work to understand these conditions, from fire risk and waste management, to safety, pollution, river access and use, and other human dimensions of resource management. Recognizing these complexities and with the leadership of the Public Caucus, the Water Forum will work to draw in speakers and members able to bring this vantage point to Water Forum discussions.
- **Water Affordability** – The Water Forum recognizes there is a potential nexus between its members' commitments and water affordability. Considering this, Water Forum members commit to fostering an ongoing series of dialogues and joint learning sessions as part of the implementation of WF2050 to better understand this connection, and, as appropriate, identify relevant best practices that have the potential to contribute to achieving the Water Forum's coequal objectives while accounting for affordability concerns. Signatories are committed to exploring this topic while acknowledging that rate-setting rests within the purview of each water purveyor's governing body and applicable laws.
- **Education** – Under the leadership of the Public Caucus, the Water Forum will engage with underrepresented communities to, (1) understand how the coequal objectives resonate with, address and/or impact these communities' needs and priorities, (2) improve public

participation processes, and (3) identify opportunities to implement WF2050 in a way that accounts for people having different access to resources due to systemic inequities. This will focus primarily on Water Forum-led activities, but can also include members sharing guidance with one another on strategies they can undertake to deepen their public participation processes.

The Water Forum recognizes that its work to meet the interests of the broader community is an ongoing effort and welcomes feedback on how it can engage more effectively with communities across the region as it pursues its coequal objectives.

FUNDING

The Water Forum's governance, finance, and administration will be transparent and collaborative in nature. The operation and funding of the Water Forum require a significant commitment of time and money by interested parties to promote and carry out stewardship of our watershed's resources. The administration of the Water Forum's various initiatives, along with its large group of signatories and interested parties, requires a dedicated and consistent effort to make progress toward achieving the coequal objectives.

Guiding Principles

The principles outlined below shape the Water Forum's approach to budgeting and funding its activities, and are intended to create a foundation for equitable and sustainable funding and budgeting throughout the life of this agreement.

1. Finance Mechanisms

Effective Water Forum governance must provide a clear and reliable financial mechanism to generate the necessary funding, as well as a transparent and inclusive process for identifying and confirming funding sources.

2. Diverse Funding Sources

Water Forum activities are to be funded through a mix of water purveyor contributions, state and/or federal grants, and in-kind contributions of non-monetary support for Water Forum initiatives, including advocacy, public outreach, in-kind contributions of time, etc. The Water Forum will continue to pursue diverse forms of funding and is open to funding contributions from all caucuses.

3. Commitment to Affordability and Cost-Effectiveness of Actions

When considering program areas and priorities, the Water Forum is committed to understanding the cost-effectiveness and affordability of its actions. The Water Forum further acknowledges that while programs and activities are funded through a range of sources, they are primarily funded through local ratepayers, and we have a responsibility to provide clear benefits to those ratepayers and the broader public.

4. Financially Viable and Effective

The Water Forum strives to establish a budget and funding mechanism that balances the meaningful and ongoing pursuit of its coequal objectives with the limited financial capacity of its funding members. To that end, the Plenary sets annual priorities that are consistent with both the Water Forum's objectives and available budget resources.

5. Differential Abilities to Pay

The Water Forum recognizes that its members, both within and across caucuses, have varying abilities to contribute to Water Forum funding. The Water Forum budget and funding allocation approach is structured to account for these differences. All members are expected to contribute,

at a minimum, substantial in-kind effort through participation in a range of committees, Plenary meetings, and activities.

6. Ongoing Budgetary Review

Each year, the Water Forum shall undertake a thorough review of progress to date and update its annual work plan based on funding needs and the expected contributions of funders. Any increase or decrease to the annual budget requires a consensus among all caucuses and agreement by those agencies providing Water Forum funding.

7. Long-term Budgetary Planning

The Water Forum recognizes that pursuing its coequal objectives requires longer-term budgeting and financing commitments. To that end, while Water Forum budgets must be approved annually by both its funders and the Plenary, the Water Forum will undertake longer-term budgetary planning to provide greater clarity and certainty to both funders and the Water Forum's programmatic long-range planning. It will also consider base funding from sources other than ratepayers.

8. Augmenting Water Forum Member Funding

The Water Forum strives to augment annual contributions from its funders with grant funding from federal, state, and other sources that will further contribute toward its mission to advance the coequal objectives. Such grant applications, prepared by the Water Forum, must be approved by resolution of the Sacramento City Council. The City of Sacramento would be the formal grant applicant.

9. Importance of Maintaining a Reserve Fund

The Water Forum recognizes that costs and funding may fluctuate from year to year. To maintain a consistent program across uneven funding years, the Water Forum is committed to building and maintaining a reserve fund equal to 120 days of working capital. The Water Forum reserve fund will be managed in accordance with relevant policies and best practices per the City of Sacramento.

10. Program Fund Accounts

The Water Forum's program funds include the WFSE, HME, and grants, keeping outside funding separate from Water Forum member contributions. The WFSE and HME fund expenses are tracked separately to maintain budgetary transparency for these two distinct functions. Similarly, outside grant funds or potential Healthy Rivers and Landscape Program funds will also be separately accounted for and budgeted. Additional funds accounting approaches may be applied as funding sources / other requirements dictate. The HME fund shall have a cap; if and when that cap is reached, funders will not be assessed additional HME funds until the balance drops below the cap level.

Program Elements

1. Water Forum Budget

As an entity within the City of Sacramento's administration with a July through June fiscal year, the Water Forum budget also operates on a July through June fiscal year. The Water Forum budget will be approved by the Plenary as described below, and the associated funding contributions are expected to be approved by the funding agency governing boards and councils no later than May.

Below is a description of the process for developing and approving annual budgets as part of the WF2050 Agreement.

Budget Description

The annual budget, prepared by the Executive Director, will include, but not be limited to, the following elements:

- Clear linkages to annual and multi-year work plans
- Delineation of costs associated with staff, consultants, direct expenses, contingencies, etc.
- Status of the Water Forum reserve fund
- A report on prior year expenditures (actuals)
- A report on the status of local, state, and federal grants
- Highlight budget items tied to Interagency agreements or contracts between the Water Forum and signatories

The budget is to be developed with the assistance of the City of Sacramento Department of Utilities' finance staff, consistent with the Water Forum-Department of Utilities MOU (**refer to Appendix 10: Water Forum and Department of Utilities MOU**).

Water Forum Budget Process and Schedule

The Executive Director will annually develop a proposed budget, which the Coordinating Committee will review and approve. As part of its review, the Coordinating Committee will engage with Water Forum funders (water purveyors with PSAs, implementing agencies, and flat fee agencies) to ensure the proposed budget and work plan are consistent with funders' anticipated contributions. A final proposed budget will be shared with and must ultimately be approved by the Plenary.

The Water Forum annual budget will be developed each year using the following fiscal year (July 1 to June 30) schedule:

- **September – November:** Internal budget development for future fiscal year by Water Forum staff based on review of operating budget and actual expenditures, Water Forum

priorities (set by the Plenary), annual work plan including upcoming project costs and staffing needs, reserve fund status, and anticipated revenue (funder contributions and grants). Executive Director reviews first and subsequent drafts of the future fiscal year budget with the Coordinating Committee.

- **November – December:** Executive Director meets with the Water Caucus (with expanded participation, as needed, to bring in any non-Water Caucus funders) to review and confirm consistency with funders' funding abilities and commitments. The Executive Director collaborates with the Coordinating Committee (in consultation with interested funders) to resolve any outstanding funding and budgetary issues before submitting the budget to the Plenary for consideration and approval.
- **January – February:** Executive Director presents proposed draft for future fiscal year budget to the Plenary for its review and approval. This budget is accompanied by a memo that details the proposed budget, expenses, and the status of the reserve fund. Member agency contributions are calculated in January to allow for inclusion in annual member agency budgeting processes. Plenary identifies if there is any opposition to proceeding with the budget. As needed, the Executive Director, in consultation with the Coordinating Committee and interested funding members, revises the budget based on Plenary discussions and direction.
- **February – May:** Interagency funding agreements are signed, with final approval from the City of Sacramento Council for the upcoming fiscal year.

Budget Oversight Process

The Water Forum will establish a transparent budget oversight process, including the following reports, to foster effective use and tracking of Water Forum spending:

- **August:** Publish an annual implementation report card. Review the prior year's accomplishments and identify any uncompleted priorities with the Plenary.
- **August-September:** Provide a standard budget report (spreadsheet) to the Coordinating Committee detailing prior fiscal year actual expenditures and remaining balance in reserve funds.
- **October:** Provide a standard budget report (spreadsheet) to the Coordinating Committee on the first quarter (July-September) actuals.
- **January:** Provide a standard budget report (spreadsheet) to the Coordinating Committee on second quarter (October-December) actuals.
- **April:** Provide a standard budget report (spreadsheet) to the Coordinating Committee on the third quarter (January-March) actuals.

Prior to completion of the first year following the signing of WF2050, the Water Forum shall undertake a careful review of progress to date and shall revise the work plan considering existing circumstances. The annual budget and contributions may be revised at that time. Any increase or decrease to the first-year budget would require a consensus among all interest groups and agreement by funding agencies.

Use of Consultants

Consultants shall be used only as needed. Identification and approval of actual expenditures for specific consultant contracts shall be part of the Water Forum budget process. If consultant contract funds or funds allocated for consultant contracts in a given fiscal year are not spent prior to the end of that year or encumbered for future expenditure, the Water Forum shall modify the following year's budget appropriately. To the extent that there is a need for consultant services not anticipated in the annual budget, such services can be allowed, provided there is an adequate budget (e.g., savings from another line item) and with the concurrence of the Coordinating Committee.

Reserve Fund

To ensure the Water Forum's ongoing fiscally sound financial management and to adequately provide for unforeseen circumstances such as economic uncertainties, loss of significant revenue sources, grant match requirements, and grant monitoring as required, a Reserve Fund will be established with a target level equivalent to 120 days of working capital.

Budgets: Year 1 Budget and 5-year Look Ahead

To estimate the actual cost of the Water Forum's work and foster long-term planning by its staff, members, and funders, the Water Forum is committed to producing a five-year look-ahead as part of its Five-Year Status Report. While the look-ahead is non-binding, members and funders will use these projections to identify and secure the necessary resources and shape the work of the Water Forum. The initial five-year look-ahead (2025-2030) is provided in **Appendix 11**. Fiscal Year 2025-2026 budget components include proposed expenditures, a summary of projected funding sources, the HME Cost Share Projection, and the WFSE Cost Share. The Fiscal Year 2025-2026 budget totaled \$1,973,140 and is included in **Appendix 11**. All signatories have reviewed and agreed to this five-year look-ahead and associated budget.

2. Water Forum Funding

As part of their commitment to investing in a reliable water supply and a healthy LAR ecosystem, Water Forum member water purveyors and other funders voluntarily enter into an annual funding agreement that stipulates funding levels for the Water Forum, based on the negotiated Cost Allocation Method. This Cost Allocation Method is included as **Appendix 12** and describes the funding allocation methodology in detail.

Description of Funding Methodology and Other Sources

The Water Forum will draw on a range of sources to fund its annual budget. These sources include both member funding and resources provided by outside entities. It also includes both direct funding and in-kind support.

The funding allocation methodology intends to equitably share the costs of the Water Forum programs in furtherance of the coequal objectives. The current (2025) version of the cost allocation model is included as **Appendix 12**. This model will be updated at five-year intervals and will be subject to approval solely by the funding agencies listed in the model. It should be noted that this cost allocation assumes that all the purveyors identified in **Table 2** in **Appendix 12** will sign WF2050. If fewer funders sign WF2050, the percentages of the costs allocated to the other funders that do sign will increase.

Below is an overview of the agreed-upon funding sources and cost-allocation methodologies.

- **Purveyor Specific Agreements:** Purveyors with PSAs provide funding based on the formula described in the cost allocation model (see Appendix 12), which was developed and unanimously agreed to by the purveyors, and as reflected in the annual funding agreement.
- **Implementing agencies:** Implementing agencies provide funding based on a set-fee model. These fees are set by mutual agreement between the implementing agency and the Water Forum and will be included in the Water Forum's budgets as agreements are made. Sacramento County, SMUD, EDWA, and SAFCA have contributed in this manner historically and are expected to continue doing so.
- **Grants:** The Water Forum receives extensive grant funding from federal, state, and other sources to support its work on the ARCH Program Area and may include other Program Areas in the future. The total grant funding varies from year to year and is outlined in the annual budget.
- **In-Kind Donations:** Significant resources are donated on behalf of Water Forum member organizations through the participation of their staff and members in various Water Forum activities and committees. In-kind donations are not reflected in the budget or funding allocation.

Except for grant funding that is earmarked for specific projects and purposes, all other funding provided to the Water Forum is collected as a general contribution. Funding is pooled across all these sources and then allocated to either the WFSE or the HME program based on the annual budget need, or to the Reserve Fund.

The process to amend the funding structure described above will follow the “Changed Conditions and Amendments to the Agreement” section outlined elsewhere in this document.

3. Five-Year Review

As described elsewhere in this agreement, the Water Forum will comprehensively review progress made toward achieving the coequal objectives every five years. The results of this review will assist in the development of the next five-year plan, revising the annual work plan, and adjusting the current budget and activities to reflect successes and failures revealed by the review.

ADMINISTRATION

Guiding Principles

1. Authority and Accountability

Water Forum governance should clearly articulate lines of authority and accountability among all parties to the Agreement. This accountability is intended to cover all aspects of the Water Forum work, including but not limited to: members to members; members and staff to one another; members and staff to the Water Forum mission and agreed-upon actions and priorities; and the Water Forum to the affected public.

2. Tracking Progress

Understanding, tracking, and reporting on the Water Forum's progress are essential to supporting the coequal objectives, as well as fostering thoughtful consideration of any necessary changes in its work and approach throughout the life of the Agreement. To that end, Water Forum governance should include clear metrics, benchmarks, and an agreed-upon process to ensure that Water Forum members and staff can track and, as needed, adapt its work related to the following:

- Water Forum-led projects and actions are intended to support Water Forum's coequal objectives.
- Water Forum member-led projects are intended to support the Water Forum's coequal objectives.
- A comprehensive understanding of both river health and water supply reliability

Program Elements

1. Administrative Structure

The Water Forum will continue to be administered under the auspices of the City of Sacramento. Staff will be either employees or contractors of the City of Sacramento, and all administrative responsibilities related to such employees or contractors will continue to be handled by the City. This arrangement will:

- Ensure continuity between WF2050 and the priorities of the Water Forum
- Preserve existing technical expertise
- Avoid creating another redundant government entity

WF2050 is made binding and enforceable through the execution of three agreements: the MOU for the Water Forum 2050 Agreement (this document, signed by all entities choosing to be Water Forum members); the annual Funding Agreements (which, consistent with the funding principles set forth above, are executed by the entities making payments to support the work of the Water Forum); and the Interagency Agreement for the Administration and Management of the Water

Forum (also signed by funding members, **see Appendix 13**). Together, these agreements will contain provisions to continue the Water Forum organization. All parties that sign the MOU will become full participants in the Water Forum. It is important to note that:

- All signatories to WF2050 will have equal standing in the Water Forum, regardless of whether they are a public agency, an investor-owned utility, or a community interest or advocacy organization.
- Although Water Forum staff will be employees or contractors of the City of Sacramento, the WF2050 signatories will provide overall policy direction for the work of staff.

2. Changed Conditions and Amendments to the Agreement

No individual Water Forum member or staff has independent authority to alter WF2050. At the same time, the Water Forum must be able to respond to the changing conditions or other unforeseen circumstances that will arise over the next several decades. WF2050 may be amended only by all signatories employing the same interest-based collaborative process used to negotiate the original WF2050. The Water Forum staff will facilitate and coordinate such negotiations should they prove necessary. Changes to WF2050 are the purview of the Plenary unless the Plenary decides they need to be referred to signatory members' boards for formal confirmation.

Term of the Agreement

The original WFA, adopted in 2000, was set to expire after a 30-year term. In 2020, then Water Forum Executive Director Tom Gohring initiated a renegotiation of the WFA well in advance of the expiration date, recognizing that the original agreement had taken seven years to negotiate and that regulatory, policy, and physical conditions had substantially changed over the past 20 years. While the renegotiation of the WFA is expected to be completed prior to the original expiration date and in less time than the original negotiations, it is recognized that, due to the nature of the agreement and the complexity of the issues, members should anticipate and plan for future renegotiations.

Therefore, given the complexity of issues and anticipated climate change, WF2050 is to be reviewed through an assessment of key indicators in the Five-Year Status Report, including data from UWMPs and GSPs, on a 5-year basis, with a renegotiation term of 25 years.

The anticipated timeline of review and renegotiation is as follows for the period of 2025-2050:

- **2025:** Signing of the New Agreement, WF2050. Publish updated Annual Work Plan that lays out programmatic and budgetary priorities for the coming year, as well as a look-ahead for the FY 25/26-30/31 period.
- **2030:** Publish Five-Year Status Report. Review progress on implementation of program elements; develop updated Annual Work Plan that lays out programmatic and budgetary

priorities for the coming year, as well as a look-ahead to cover the next 5-year period (FY 30/31-35/36) for Plenary approval.

- **2035:** Publish Five-Year Status Report. Review progress on implementation of program elements; develop revised Annual Work Plan that lays out programmatic and budgetary priorities for the coming year, as well as a look-ahead for the next 5-year period (FY 35/36-40/41) for Plenary approval.
- **2040:** Publish Five-Year Status Report. Review progress on implementation of program elements; develop revised Annual Work Plan that lays out programmatic and budgetary priorities for the coming year, as well as a look-ahead for the next 5-year period (FY 40/41-45/46) for Plenary approval.
- **2045-2050:** Publish Five-Year Status Report. Initiate review and renegotiation of WF2050 to coincide with a 25-year renewal period. Provide a 5-year window to complete, with the anticipated new agreement to be approved no later than 2050. This 5-year window can be automatically extended with the concurrence of the Plenary, provided that negotiations are deemed productive and are on a path towards a successful conclusion.

Request for Renegotiation

Renegotiation can be requested outside of the scheduled timeframe. Any proposal to renegotiate WF2050 would be considered in the context of the Water Forum's coequal objectives. Specific engagement processes for renegotiating WF2050 should be developed through a transparent and collaborative process.

Request for Amendment

Amendments to WF2050 can be requested outside of the scheduled timeframe. Any proposal to amend WF2050 would be considered in the context of the Water Forum's coequal objectives. Specific engagement processes for amending WF2050 should be consistent with the collaborative decision-making process that was used in the development of WF2050.

Process for Renegotiation or Amendment Requests

The mechanism to request consideration of amendments is as follows:

- Any signatory, caucus, or Executive Director can make a formal request for renegotiation of some terms. The request must include a rationale stating the changed conditions warranting consideration and should include proposed amendment concepts or language.
- The request for renegotiation by a signatory or caucus must be submitted to the Water Forum Executive Director, who will bring it (or any request they may have) first to the Coordinating Committee for discussion. Coordinating Committee discussions will be

informed by input from their respective caucuses and, as appropriate, any guidance from relevant committees.

- The Coordinating Committee is to forward all requests on to the Plenary for its consideration. The Coordinating Committee may, at its discretion, offer an accompanying recommendation to adopt, modify, or reject. It may also forward it on to the Plenary without any recommendation.

A request for an amendment or renegotiation does not necessarily mean WF2050 will be revised. WF2050, including specific agreements (e.g., PSAs), can be changed or modified only with the express approval and consent of the Plenary. Changes to WF2050 are the purview of the Plenary, with the caveat that changes that require additional funding will be subject to agreement by the funders. The Plenary may recommend that the proposed changes be referred to the signatory members' boards/decision-making bodies for formal confirmation.

Specific implementing agreements (e.g., PSAs) cannot be changed or modified without the express approval and consent of the entity whose interests would be affected by the change. These changes also must be approved by the Plenary.

3. Process for Project Endorsement from the Water Forum

This program element is designed to provide a framework for projects proposed by Water Forum members to receive endorsement from the Water Forum, consistent with the decision-making processes described above.

Water Forum signatories may receive support (i.e., endorsement) for a proposed project from fellow signatories when agreed-upon conditions are met, including good faith sharing of project information and the project proponent's commitment to WF2050 implementation. A "project" could refer to infrastructure, water entitlement, an application for funding, a policy, or a procedure. Endorsement can range from conceptual to full endorsement (as described below) and is dependent on the level of project development and information shared with the Water Forum.

Conceptual Endorsement

Definition: The project idea is acknowledged by signatories as relevant and aligned with the coequal objectives.

Purpose: Signals openness to explore the concept further.

Full Endorsement (Ready to Implement)

Definition: Water Forum signatories have confirmed support for the project's final implementation.

Purpose: Signals that the project is supported by all caucuses and implementation will not be opposed by Water Forum signatories.

When a project receives Water Forum endorsement, signatories (when called upon) will make reasonable efforts to provide endorsement in any (or all) of the following ways:

- Speak before stakeholder boards and regulatory bodies
- Provide letters of endorsement
- Provide supportive comments to the media
- Advocate the WF2050 Agreement to other organizations, including environmental organizations that are not signatories to the Water Forum Agreement.
- Otherwise, respond to requests from other signatories to make public their endorsement of WF2050 and associated projects (as relevant).

At a minimum, Water Forum endorsement of a project will mean refraining from making negative statements or opposing the project. However, *conceptual endorsement* does not preclude Water Forum signatories from asking questions and seeking clarity within various environmental review processes as projects are advanced.

If requested, an endorsement could come from individual signatories, the Plenary, or the Executive Director on behalf of the Plenary.

Framework for Information Exchange to Build Trust

Projects that receive Water Forum endorsement are those that have been shared and discussed widely with other Water Forum signatories. This could occur in caucus meetings, Plenary, Water Forum committees, or other Water Forum meetings that have been made available to all signatories. Discussions with signatories may be completed sequentially if access to information is made to all signatories in a timely manner. For instance, a project proponent could share their project details with all caucuses separately.

Inherent in this approach is the intent to build trust among signatories through full and early disclosure of project details. Sharing project information early in its development process will allow Water Forum signatories to evaluate, provide feedback, and engage in dialogue about the project. Project proponents should share project details in good faith before final decisions are made. The history of the Water Forum has shown that this type of information tends to garner support from other signatories.

In addition to the information sharing and disclosure process, projects may also receive Water Forum endorsement through the ARCAP, which will include analysis and assessment of regional actions to support the coequal objectives including through the potential development of

additional volumes of water. Projects considered within ARCAP are expected to undergo review and discussion through all levels of the Water Forum governance structure.

Project Endorsement Caveats and Assurances

- 1) *The nature of a project endorsement will be commensurate with the level of detail shared with the WF and the level of development of the specific project. For example, if conceptual project information is available and shared with the WF, then WF signatories can only provide endorsement of the project's concept. If project proponents seek full endorsement of a ready-to-build project, then it is expected that they will have shared and discussed details, including concept, design, funding, permitting, and construction, as relevant.*
- 2) *WF endorsement will be contingent on:*
 - a. *Proponent is adhering to all applicable planning, environmental, and regulatory requirements.*
 - b. *The proponent has conducted a public participation process, such as engaging with established citizen advisory committees or employing other appropriate mechanisms, to inform project design and implementation as needed.*
 - c. *Project aligns with the coequal objectives and the WF 2050 guiding principles.*
 - d. *The project proponent has demonstrated a clear commitment to WF2050 implementation.*
- 3) *If a consensus cannot be reached within the Water Forum for endorsing a project, no action will be taken by the Water Forum.*
- 4) *If a project is determined by consensus within the Water Forum to be in direct and clear conflict with the Water Forum's coequal objectives, it is possible that the Water Forum would take a position of opposition to the project.*
- 5) *All signatories retain their existing ability to comment or provide input on specific details of facility design, financing, and construction of projects.*

4. Legal Considerations

Administrative Structure

The Water Forum is not a legal entity, but rather a forum for a group of business and agricultural leaders, community groups, environmentalists, public and private water agencies, and local governments. Staffing and administrative support for the Water Forum are funded by water purveyors and other willing donors, with personnel management provided by the City of Sacramento. The Water Forum is not a separate legal entity. The current authority for the Water Forum is outlined in the 2025 Interagency Agreement for the Administration and Management of the Water Forum.

The key points of the 2025 Interagency Agreement for the Administration and Management of the Water Forum (**attached as Appendix 13**) are as follows:

- The objective of the Water Forum office and staff is to promote the implementation and continued vitality of the Water Forum Agreement.
- The Executive Director of the Water Forum reports directly to the Director of the City of Sacramento Department of Utilities.
- The City is responsible for providing facilities, budget, and administrative support to the Water Forum.
- All employees of the Water Forum, including the Executive Director, are City employees.
- The Water Forum contracting follows City procedures.
- The Water Forum will carry its own insurance policy to cover claims up to an agreed-upon threshold.
- If a signatory decides to terminate membership in the Water Forum, that signatory is responsible for covering their funding share for the current and subsequent fiscal year.
- The City's signature delegation policy identifies the Executive Director's position as equivalent to a Department Director and authorizes contract authority of up to \$100,000.

The City Attorney's office represents the Water Forum on matters related to City procedures and general governmental issues. The Water Forum currently shares the City's outside water counsel for advice on substantive water-related issues but has agreed to terminate the representation if a potential conflict with the City's interests arises.

Water Forum Meetings – Relationship to Brown Act

The Water Forum is neither a local governing body nor was it created by federal or state law. Accordingly, it is not subject to the Brown Act.

Nevertheless, the Water Forum strives to be as transparent and inclusive as possible, both with its members and with cooperating entities, affected parties, and the broader public. To that end, Plenary meetings are open unless a specific topic warrants member-only discussions. The Water Forum also strives to hold informational sessions that deepen understanding among its members and others. In the case of open Plenary meetings, the Water Forum will provide advance notice of meeting times and materials to inform the public. The general intent for Plenary meetings is to be open to the public so that the formulated plans and positions are made known.

The Water Forum strives to provide meeting materials to its members in a manner consistent with good public participation practices (e.g., meetings are noticed in advance, discussion topics are described in the agenda, meetings take place locally and are open to the public, etc.).

Water Forum members are responsible for ensuring their engagements with the Water Forum are consistent with their agency's Brown Act obligations.

California Environmental Quality Act

The City of Sacramento is considered the lead for any Water Forum actions requiring CEQA (California Environmental Quality Act) review.

Development and adoption of WF2050 is not a “Project” subject to CEQA.

Caveats and Assurances

AMERICAN RIVER CLIMATE ADAPTATION PROGRAM (ARCAP)

ARCAP Caveats and Assurances include the following:

1. *The ARCAP will be developed and implemented, with opportunities for open cross-caucus discussions and guidance, utilizing the Water Forum's decision-making processes. This applies to both technical processes and member deliberations.*
2. *The Water Forum will work jointly with RWA and the GSAs to resolve technical issues during ARCAP development and implementation. Staff from RWA and the Water Forum will work together in a collaborative relationship to support this program and will engage with the regional GSAs.*
3. *The ARCAP approach will strive to add value and avoid creating added costs, duplicative processes, and bureaucracy.*
4. *The ability of Water Forum members to identify and employ ARCAP Water does not imply that the American River is in excess conditions.*
5. *ARCAP implementation will complement and support other Water Forum programs (e.g., FMS).*
6. *The Water Forum will review the successes and challenges of the ARCAP and refine the program as needed, with adjustments agreed upon by all caucuses.*
7. *ARCAP assets (e.g., water rights and contracts, wells, diversion works) will remain under the control of the owning agencies.*
8. *The role of the Water Forum (including its staff and members) will be to coordinate ARCAP actions, complete agreed-upon technical analyses and studies, advocate for programs and funding, and track and review the status of these programs.*
9. *The Water Forum and RWA will respect the operational authority and third-party agreements of their members, which are necessary for their contributions to ARCAP Water.*
10. *No part of the ARCAP will abridge the authorities, entitlements, or agreements of Water Forum members without the express consent of the relevant parties.*

AMERICAN RIVER FLOWS AND OPERATIONS (ARFO)

ARFO Caveats and Assurances are grouped in the following categories:

- Flow Management Standard (FMS)
- Flood Operations
- Temperature and Other Water Management Infrastructure

Flow Management Standard

1. *Signatories acknowledge that, while minimum reservoir releases are a key feature of the FMS, flows above the specified minimum releases can provide important benefits for wildlife, recreational, and aesthetic values of the LAR.*
2. *Signatories acknowledge that low Dissolved Oxygen (DO) levels have a significant impact on the health of salmonids, thereby negatively affecting the benefits of the FMS. Consequently, Folsom Reservoir complex management actions must take this factor into account to avoid unhealthy DO levels.*
3. *Signatories acknowledge that Folsom Reservoir storage levels in the spring are critical to the volume of cold-water pool available for the effective implementation of the FMS during the rest of the year, and that management actions should be taken to preserve as much reservoir storage as feasible during this timeframe.*
4. *All signatories agree to recommend to the SWRCB an updated American River Flow Management Standard that protects the fishery, wildlife, recreational, and aesthetic values of the lower American River. The recommendation will include requirements for Reclamation releases to the LAR.*
5. *The Water Forum will develop recommendations to inform transfer activity in the region, subject to agencies' determinations of operational, regulatory, and contractual feasibility, to be as consistent with the FMS as possible and maximize the value of the transfer water for the health of the LAR.*
 - a. *Note: Current regulations include a commitment to implement certain aspects of the FMS, and water moved through a transfer agreement has the potential to offer additional flows and/or temperature benefits to the LAR, pending operational constraints such as, but not limited to, timing of deliveries, infrastructure capacity, regulatory or discretionary actions by Reclamation.*
 - b. *Note: When transfers are arranged with Reclamation, purveyors can make requests or suggestions regarding how and when water is moved through the system; however, operational decisions are ultimately at the discretion of Reclamation and are subject to regulatory requirements.*

Flood Operations

- 6. The Water Forum Signatories support pursuing a Preliminary Viability Assessment of American River Watershed Forecast-Informed Reservoir Operations³⁴ (Watershed FIRO) in partnership with Reclamation, USACE, NOAA, and others, where appropriate and possible.*
- 7. The Water Forum signatories support the identification and implementation of excess flood water recharge when: 1) carried out within the region; 2) designed, constructed, and operated in accordance with appropriate environmental and engineering standards/requirements, and the FMS; and 3) consistent with and supporting the Water Forum's coequal objectives.*

Temperature and Other Water Management Infrastructure

- 8. Signatories support the current efforts to redesign and improve the temperature control shutters at Folsom Dam and will consider opportunities for Water Forum support and advocacy. Until improvements are made, signatories support the implementation of a power bypass at Folsom Dam in all years as necessary to provide suitable fall spawning temperatures for LAR resident salmonids, unless September temperature modeling indicates that 56°F or lower can be achieved at Watt Avenue on or before November 1st without the bypass.*

REGIONAL WATER SUPPLY SUSTAINABILITY (WSS)

WSS Caveats and Assurances are grouped in the following categories:

- Surface Water Management
- Groundwater Management
- Demand Management
- Dry-Time Actions

Surface Water Management

- 1. The ability for any individual purveyor to implement the surface water diversions principles will depend on their respective opportunities and constraints.*
- 2. On a five-year cycle, purveyor signatories will coordinate with the Water Forum staff to provide data and assumptions to be reported in their Urban Water Management Plans (UWMPs), including demand projections, current and planned supplies, status of demand management and water use efficiency programs, and drought planning scenarios. Water*

³⁴ Definitions of FIRO can vary, but generally includes expanding meteorological, watershed, channel condition, and environmental monitoring; advancing technology to enhance meteorological, watershed, channel condition, and environmental forecasting; and integrating data collection, management, display, and analysis capabilities into decision support systems related to reservoir operations.

Forum staff will compile regional data and assumptions for presentation to the Water Forum membership for review and discussion.

3. *Nothing in the agreement is intended to call for the reduction or forfeiture of existing surface water entitlements. Signatories to the agreement will honor this principle in state and federal entitlement proceedings directly related to WF2050. It is recognized that there may be broader state and federal entitlement proceedings where signatories may have different interests, such as the SWRCB water rights proceeding for the Bay-Delta. Signatories agree to work in good faith through the Water Forum with the objective of developing a consensus recommendation for how state and federal entitlement proceedings should affect those agencies that store and divert American River water. All signatories will make good faith efforts to ensure that recommendations are consistent with both coequal objectives.
 - a. *The LAR is considered to be fully appropriated by way of the existing declarations of full appropriations, the responsibilities of the California Wild & Scenic Rivers Act, and the realities of the National Wild & Scenic Rivers Act. For more detailed information, see Appendix 6. The Water Forum will not be pursuing amendments to the existing declaration of full appropriation.**
4. *Recognizing that the majority of LAR surface water supply originates in the Upper American River Watershed, signatories support efforts above Folsom Reservoir to enhance and restore watershed health, creating a resilient headwater for water supply and ecosystem benefits on the American River.*
5. *The Water Forum did not evaluate new reservoirs in the analyses used to inform the WF2050 negotiations. Notwithstanding any provision of this agreement, any proposal for the Water Forum to support or oppose a new reservoir shall be approved by the Plenary, with at least 30-day notice to each Water Forum representative.*
6. *Signatories acknowledge that the parties to the Healthy Rivers and Landscape (HR&L) Proposal will be obligated to meet tributary program requirements for the American River, if approved by State Water Resources Control Board along with associated agreements. In addition, there are Water Forum members who have also made flow commitments pursuant the American River Terms for Ecosystem Support and Infrastructure Assistance Needs (ARTESIAN) Agreement³⁵.*
7. *Signatories are encouraged when invited to support (where possible) purveyors' rates and fees necessary to implement projects and programs insofar as they are consistent with the WF2050 guiding principles and in support of the coequal objectives. The Water Forum will provide learning and engagement opportunities on water affordability and related best*

³⁵ The ARTESIAN Agreement contains commitments for certain RWA members to obtain funding to complete groundwater infrastructure projects and provide contributions to environmental outflow with or without adoption of the HR&L. The ARTESIAN Agreement governs the rights and obligations with respect to the administration of state funding provided for in the Funding Agreement Between the State of California (Department of Water Resources) and the Regional Water Authority - Voluntary Agreement Early Implementation for the American River, executed on July 21, 2023.

practices, and signatories will work to better understand associated challenges and opportunities (see Governance Program Element– Community Outreach and Engagement for more information).

Groundwater Management

8. *The Water Forum will work to understand better and communicate the opportunities for, and impacts of, increased surface water diversions in wet conditions.*
9. *Signatories acknowledge the importance of continued data collection and analysis to improve understanding of Groundwater Dependent Ecosystems (GDEs) and surface water–groundwater interactions and commit to ongoing dialogue within the Water Forum as these topics are explored in the context of SGMA requirements and ARCAP analyses (as relevant).*

Demand Management

10. *All signatories acknowledge that the requirements related to water purveyors' water use efficiency and demand management have become increasingly stringent since the signing of the original WFA and are continuing to evolve.*
11. *All signatories acknowledge that the purveyors must consider the costs and benefits of demand management actions (monetary, ecosystem, quality of life, etc.).*
12. *All signatories acknowledge that water rates have impacts on affordability and equity.*
13. *All signatories recognize that conserving water provides multiple benefits (if properly targeted, implemented, and managed) and commit to implementing demand management actions in a manner that strives to support both coequal objectives, with considerations for improvements to landscape irrigation efficiency and installation of native and low-water-use vegetation.*

Dry-Time Actions

14. *Water is essential for public health and sanitation, as well as for economic stability and quality of life. Water agencies have a fundamental responsibility to provide all customers with reliable access to safe, clean drinking water. This fundamental responsibility may constrain the breadth of Water Forum related actions purveyors are able to take during extreme drought.*
15. *Water agencies in California manage water shortages in accordance with their individual Water Shortage Contingency Plans (WSCPs), which are developed and updated every five years as part of their UWMs, in compliance with California Water Code requirements.*
16. *Signatories acknowledge that dry times present exceptional challenges for the health of the LAR, and actions should be pursued to protect the fish that rely on river flows and temperature.*

SCIENCE, MONITORING, AND DECISION SUPPORT

Science, Monitoring, and Decision Support Caveats and Assurances include the following:

1. *The level of effort and the scope of Science, Monitoring and Decision Support Program activities will be informed by emerging data needs, and science activities mandated by regional and/or statewide programs that may arise during the WF2050 term (i.e., the Statewide HR&LP Science Plan habitat accounting process, changing hydrology, new water supply regulations, etc.), and other emerging funding sources and requirements, as applicable.*

GOVERNANCE, FUNDING, AND ADMINISTRATION

Governance, Funding, and Administration Caveats and Assurances include the following:

1. *The nature of a project endorsement will be commensurate with the level of detail shared with the WF and the level of development of the specific project. For example, if conceptual project information is available and shared with the WF, then WF signatories can only provide endorsement of the project's concept. If project proponents seek full endorsement of a ready-to-build project, then it is expected that they will have shared and discussed details, including concept, design, funding, permitting, and construction, as relevant.*
2. *WF endorsement will be contingent on:*
 - a. *Proponent is adhering to all applicable planning, environmental, and regulatory requirements.*
 - b. *The proponent has conducted a public participation process, such as engaging with established citizen advisory committees or employing other appropriate mechanisms, to inform project design and implementation as needed.*
 - c. *Project aligns with the coequal objectives and the WF 2050 guiding principles.*
 - d. *The project proponent has demonstrated a clear commitment to WF2050 implementation.*
3. *If a consensus cannot be reached within the Water Forum for endorsing a project, no action will be taken by the Water Forum.*
4. *If a project is determined by consensus within the Water Forum to be in direct and clear conflict with the Water Forum's coequal objectives, it is possible that the Water Forum would take a position of opposition to the project.*
5. *All signatories retain their existing ability to comment or provide input on specific details of facility design, financing, and construction of projects.*

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WATER FORUM AGREEMENT 2050

California American Water Purveyor Specific Agreement

Updated: January 8, 2026

California American Water is submitting this document as a commitment to the Water Forum for surface water management of the American River. This agreement follows the Purveyor Specific Agreement (PSA) Template and Guidelines and addresses surface water management, current and future diversions from the American River, dry conditions management, critically low storage conditions in the Folsom Reservoir, and a project list to support coequal objectives. We recognize that climate variability is impacting water resources in the region. The continuing implementation of the historic Sustainable Groundwater Management Act (SGMA) in the Sacramento region provides opportunities to ensure alignment for the sustainable management of our shared water resources.

Purveyor Background

California American Water is an investor-owned utility operating under the rules and regulations of the California Public Utilities Commission (CPUC). California American Water has seven service areas within the metropolitan area of Sacramento County; (1) Antelope, which serves the communities of Antelope and Elverta; (2) Lincoln Oaks, which serves portions of Citrus Heights and North Highlands; (3) Parkway located in the Florin area, (4) Fruitridge Vista located in the Lemon Hill area, (5) Suburban/Rosemont, which serves Rosemont and the western portion of Rancho Cordova; (6) Arden in the Arden Arcade area, and (7) Security Park in the Sunrise Douglas area. Additionally, California American Water provides water to the West Placer service area, located just north of the Antelope service area in Placer County. As of January 2024, California American Water had 65,467 active connections within these eight service areas. California American Water serves water to two additional areas within Sacramento County, the City of Isleton and the community of Walnut Grove; both areas rely solely on groundwater. California American Water's service areas may be extended from time to time as approved by the CPUC.

Groundwater

Groundwater is the primary source of supply for California American Water's systems in Sacramento County. All the Sacramento County water systems are within the boundaries of the Sacramento Valley Groundwater Basin of the Sacramento River Hydrologic Region as identified by California Department of Water Resources (DWR) in its Bulletin 118 updated in 2018.

- Antelope, Arden, and Lincoln Oaks are located within the North American Subbasin.

- Fruitridge, Parkway, Security Park, and Suburban-Rosemont are located within the South American Subbasin.

There are currently 101 active groundwater wells in these seven service areas. The total production capacity is approximately 70,720 gallons per minute (gpm). **Table 1** summarizes the wells by service area.

California American Water does not use groundwater to supply its West Placer service area. Under a franchise agreement with Placer County, the provision of domestic water service by California American Water shall be consistent with the water source requirements and conditions adopted by the county as applicable to the specific county general plan policy, community plan, or zoning for, or directly affecting, the property to be so served.

Table 1. Groundwater Wells by Service Area

Service Area	Number of Wells	Total Well Capacity (gpm)
Antelope	17	13,580
Arden	5	2,350
Fruitridge Vista	13	7,410
Lincoln Oaks	22	14,750
Parkway	19	14,450
Security Park	1	200
Suburban-Rosemont	24	17,980
Total	101	70,720

Purchased Water

California American Water's Arden, Parkway, and Suburban-Rosemont service areas lie within the Place of Use (POU) for the City of Sacramento's American River Water Rights. In 2010, California American Water revised an existing wholesale supply agreement with the City to receive a maximum of 3.46 million gallons per day (MGD) of non-firm supply (defined as surplus capacity in the City of Sacramento's treatment and transmission facilities that is available to divert, treat and deliver potable water to California American Water after all the demands of the City's prior wholesale and wheeling service customers and present and future retail water service customers are met) during off-peak periods (October 15th through May 14th), plus an additional 2.3 MGD of firm capacity, for a total of 5.76 MGD, that can be delivered to the Arden, Parkway, or Suburban-Rosemont service areas. The agreement stipulates that the City would supply surface water unless the Lower American River is below the Hodge Flow Criteria, in which case the City would produce groundwater instead of surface water when demands exceed 1.13 MGD. This mixed supply is available to California American Water up to 2.3 MGD.

California American Water also has an agreement with the City of Sacramento for the Fruitridge service area, which was carried over from the agreement between the Fruitridge Vista Water Company and the City. Through this agreement, California American Water can purchase up to 3.24 MGD of water from the City to serve its Fruitridge service area.

Sacramento County Water Agency (SCWA) supplies water to the Security Park service area. The current agreement between California American Water and SCWA allows California American Water to take up to 50 gpm of potable water.

Sacramento Suburban Water District (SSWD) and California American Water have an agreement from 2005 that allows California American Water to purchase up to 2,000 AFY of water from SSWD to serve its Antelope and Lincoln Oaks service areas.

California American Water has an agreement with Placer County Water Agency (PCWA) to purchase water for its West Placer service area. The agreement allows for purchase of 3 MGD and a maximum delivery rate of 2,362 gpm. Additional capacity can be purchased if needed.

Table 2 summarizes the wholesale supply interties in each service area. Note that it does not include approximately 30 emergency interties.

Table 2. Wholesale Interties

Service Area	Wholesale Provider	Number of Interties*
Antelope	SSWD	2
Arden	City of Sacramento	1
Fruitridge	City of Sacramento	2
Lincoln Oaks	SSWD	1
Parkway	City of Sacramento	1
Security Park	SCWA	1
Suburban-Rosemont	City of Sacramento	1
West Placer	PCWA	3

* does not include emergency interties

Current and Projected Water Demand

Table 3 summarizes the current and projected water demand by service area in million gallons (MG). The projected water demand is from the 2020 Urban Water Management Plan (UWMP).

Table 3. Current and Projected Demand (MG)

Service Area	2023	2040
Antelope	1,190	1,536
Arden	442	461
Fruitridge	928	932
Lincoln Oaks	1,591	1,960
Parkway	2,277	2,812
Security Park	6	1,020
Suburban-Rosemont	2,543	3,162
West Placer	358	1,095

Surface Water Management

The coequal objectives of the Water Forum are (1) to provide a reliable and safe water supply for the region's economic health and planned development and (2) to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. With the exception of the West Placer service area, California American Water relies primarily on groundwater to serve its customers. However, as a member of three groundwater sustainability agencies (West Placer Groundwater Sustainability Agency, Sacramento Groundwater Authority, and Sacramento Central Groundwater Authority), California American Water must use groundwater responsibly and therefore prioritizes the use of purchased water within the limits of the purchase water agreements when it's available, plentiful, and economically feasible.

Current Diversions

California American Water's current diversions from the American River are through the four agencies from which California American Water purchases water. The supply sources from these agencies are described briefly below:

- **City of Sacramento's** wholesale supply sources include American River and groundwater, the majority of this being from the American River.
- **PCWA** supplies water from Pacific Gas and Electric and the Middle Fork American River project and plans to deliver water from the Central Valley Project, supplied by the American River.
- **SCWA's** supply sources include surface water, groundwater, and non-potable (recycled) water. Surface water is mainly supplied from the Sacramento River, with some diversions from the American River.
- **SSWD** relies primarily on groundwater, but imports water from Folsom Reservoir and the Lower American River through water purchases from PCWA and the City of Sacramento.

Table 4 summarizes the amount of water California American Water purchased from these four agencies for the past five years.

Table 4. Purchased Water (MG)

Wholesale Water Agency	2023	2022	2021	2020	2019
City of Sacramento	680.5	339.7	863.0	1481.7	460.9
PCWA	357.8	365.3	392.6	359.6	298.6
SCWA	0.3	0.4	0.3	0.4	0.1
SSWD	290.4	0.0	2.0	48.8	482.9

Future Projected Diversions

Projected diversions consider conditions when the Unimpaired Inflow to Folsom Reservoir (UIFR) is above 950 thousand acre-feet (TAF). Under normal conditions, California American Water intends to use surface water as it is available through purchase water agreements with the City of Sacramento, PCWA, SCWA, and SSWD.

Drier Conditions Management

“Drier conditions” is defined as the condition where the UIFR is between 950 TAF and 400 TAF. Supply management includes the following expectations:

- No change is anticipated in the availability of the City of Sacramento’s supply, as indicated in their 2020 UWMP. Regardless, California American Water commits to reducing the amount of purchased water from the City in drier years.
- SSWD has agreed not to use any water from the Lower American River in years other than wet years (when UIFR is greater than or equal to 1,600 TAF), although SSWD still would have groundwater available. Regardless, California American Water’s agreement with SSWD does not guarantee that supply will be available and it is assumed that in drier years, California American Water will plan for this supply source to be unavailable.
- While the demand in Security Park can currently be met using groundwater, the service area is expected to grow significantly in the near future due to the Rio Del Oro development. California American Water intends to serve this area primarily with purchased water from SCWA, with groundwater as a back-up source for use during dry conditions.
- PCWA does not expect to see a reduction in Middle Fork Project (MFP) supply in a dry year, although Pacific Gas and Electric Company (PG&E) and Central Valley Project (CVP) supplies would be reduced to 50%. Shortfalls in supply would be addressed by PCWA through groundwater production.

Driest Conditions Management

“Driest conditions” refers to the condition in which the UIFR is less than 400 TAF. In these conditions, supply will be managed under the following expectations:

- California American Water’s wholesale supply agreement with the City of Sacramento is subject to Hodge Flow Criteria on the Lower American River and inflow to the Folsom Reservoir (i.e., UIFR less than 400 TAF). The firm capacity component specifies a minimum of 2.3 MGD available throughout the year and the non-firm capacity of 3.46 MGD is available during non-peak periods. Although the City’s 2020 UWMP indicates that the City has adequate water supply to meet demands during multiple dry years through the year 2040, it is assumed that only the firm capacity will be available.
- As with the “drier” condition scenario, SSWD water is assumed to be unavailable for purchase during driest conditions.
- Similar to the “drier” year conditions, any reductions in supply from SCWA to serve Security Park will be met using groundwater, to the extent it is available.
- PCWA does not expect to see a reduction in MFP supply during the driest conditions, but PG&E water will be assumed unavailable and CVP supplies would be reduced to 25%. Shortfalls in supply would be addressed by PCWA through groundwater production.

Critically Low Storage Conditions

In the event of catastrophically low storage at Folsom Reservoir, two conditions must be addressed:

1. Potential operations in spring and summer when Folsom Reservoir storage is forecasted to reach 110 TAF at some point in the next 12 months.
2. Potential operations in summer and fall when Folsom Reservoir storage is below 110 TAF.

In both cases, California American Water will prioritize the use of groundwater wells and greatly reduce or eliminate the use of purchased water to the extent reasonably possible. In the case that purchased water includes groundwater, California American Water will prioritize use of its own groundwater wells to the extent reasonably possible, to allow other users access to wholesale agency groundwater water supplies.

While there are currently restrictions on California American Water's use of groundwater to supply its service area in West Placer, California American Water's agreement with PCWA does allow for California American Water to construct and use groundwater facilities, with the requirement that the use of PCWA water be prioritized, when available. The agreement further states that PCWA may instruct California American Water to reduce demand for surface water by up to 25 percent during periods of drought in areas where groundwater is available to ensure supply is available to other areas that do not have access to groundwater. Therefore, it may be feasible to negotiate with Placer County to obtain the ability to develop emergency groundwater sources.

Demand Management

California American Water has been offering conservation and water efficiency programs to its customers since the early 2000s. Conservation and efficiency programs help secure long-term water supply reliability, help with effective water demand management and peak water demand reduction, provide customer education on conservation and efficiency practices, and provide affordability by lowering customers' water bills.

California American Water's conservation and efficiency programs are also playing a critical role in the Company's response to California state regulations and policies pertaining to water efficiency, water loss management, and groundwater management including California's Senate Bill 555 and the Sustainable Groundwater Management Act. Senate Bill No. 606 (2017-2018 Reg. Sess.) ("SB 606") and Assembly Bill No. 1668 (2017-2018 Reg. Sess.) ("AB 1668") created a new framework for long-term improvements in water conservation and drought planning commonly referred to as "Making Conservation a California Way of Life" regulation. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include establishing water use objectives ("WUO") and long-term standards for efficient water use that apply to urban retail water suppliers.

Two additional pieces of legislation, Senate Bill No. 555 (2015-2016 Reg Sess.) ("SB 555") and Senate Bill No. 1157 (2022) together establish the comprehensive legislative framework for the WUO that water purveyors must comply with starting in 2027. The WUO is the sum of a water system's use of indoor and outdoor residential water uses, commercial landscape irrigation, and distribution system water loss. The regulations also require water agencies to implement extensive non-residential water use performance measures and add substantial reporting requirements for water utilities to the state.

The challenge for utilities will be to make customers adapt to these new WUOs through an increase in conservation and efficiency measures primarily on outdoor water usage.

Meeting the WUOs will require landscape transformation shifting from turf grass to more climate-adapted plant palettes according to the Model Water Efficient Landscape Ordinance (MWELO) Principles, a shift that will be very costly for homeowners and for utilities to incentivize this change.

Many water utility customers still seem mostly unaware of the Making Conservation a California Way of Life regulation and its implications for both residential and non-residential customers.

California American Water has invested greatly in educating its customers on conservation and efficiency matters and will continue to do so and its parent corporation, American Water, received the U.S. Environmental Protection Agency's WaterSense Excellence award in 2022 and 2023 for its various water efficiency customer education programs, foremost its webinar series launched for California American Water customers and for its collaboration with other organizations to continuously innovate its conservation programs.

California American Water is committed to its ongoing strong investments in conservation and efficiency programs and initiatives to meet and exceed water conservation regulations, to meet and exceed WUO and Water Loss targets and to assure reliable and safe future water supplies to our customers in the region.

As such, California American Water proposed conservation programs that will put the Company's various service areas in the best position to comply with state regulations and policies pertaining to water conservation and water loss management as prescribed in the Making Conservation a California Way of Life framework. Additionally, California American Water has sought approval to maintain the Company's ability to implement successful conservation programs through flexibility and innovation allowing cost-effective and efficient program execution and participation in partnerships, such as the Water Forum, with other agencies' conservation programs.

As directed by Water Code Section 10632 (a)(3)(A), California American Water maintains a water shortage contingency plan (Rule 14.1) and associated enforcement tariffs (Schedule 14.1 SAC , FRT) that can be implemented upon approval by the CPUC based on operational service conditions and water supply availability.

Project List and Future Water Supply Reliability Efforts

It is understood that to support the coequal objectives and mitigate challenges facing the region under future conditions, structural and non-structural projects will be needed. The following projects are anticipated to aid in California American Water's efforts to implement the proposed commitments outlined in the PSA.

Structural

1. **Well Rehabilitation and Replacement Program** – California American Water implemented this program to ensure adequate water supply and to maintain or increase the performance of groundwater wells. Because California American Water's service areas rely heavily on groundwater, this program helps to ensure that customer demands can be met through groundwater, and the purchase of surface water is minimized.

2. **Pipeline Replacement Program** – This program was implemented to replace aging water mains, thereby reducing the risk of pipe leaks and breaks. Leaks and breaks contribute to water loss, increasing overall system demand. By decreasing water loss, California American Water decreases overall demand, including the need to purchase surface water.
3. **Advanced Metering Infrastructure (AMI)** – California American Water is upgrading meters to AMI. Information collected through this metering system can assist in identifying and reducing system losses.

Non-Structural

1. **Water Conservation Program** – California American Water encourages water conservation through efforts such as customer education and information, contributions to research on innovative conservation programs and products, and participation in committees that promote conservation measures. These actions help reduce overall demands and especially peak demands, which reduces reliance on surface water.
2. California American Water helped sponsor the River Arc project in the past, and although no longer a project partner, California American Water continues to support the project and believes it is an important project for the future of reliable water supply in the Sacramento area.

Caveats and Assurances

1. The ability for any individual purveyor to implement the surface water diversions principles will depend on their respective opportunities and constraints.
2. In circumstances where excess water is made available by the U.S. Bureau of Reclamation (Reclamation) by Article 3(f) of a purveyor's Water Repayment Contract or by a Section 215 Contract between the purveyor and Reclamation due to flood control operations at Folsom Reservoir, for the purposes of groundwater recharge, that water would not be counted as diversion water within their PSA, regardless of year type.
3. California American Water is governed by the CPUC. California American Water's agreed endorsements in, or continued implementation of, this PSA are subject to review by the CPUC. California American Water may modify or terminate its endorsements agreed to in, or implementation of, this PSA upon receiving an adverse decision relating to said endorsements or implementation by the CPUC.
4. California American Water's operations, facilities, and contracts as described in this PSA may be modified, revised or amended from time to time, and this PSA is not intended to restrict California American Water's ability to execute and implement such modifications, revisions, and amendments. California American Water shall not be required to update or otherwise amend this PSA in the event of any such modifications, revisions, and amendments to its operations, facilities, and contracts.
5. As part of the development of their quinquennial UWMPs, purveyor signatories will provide information to Water Forum staff and signatories related to the data and assumptions to be reported in their UWMPs, including; demand projections, current and planned supplies, and

drought planning scenarios. Water Forum staff will compile regional data and assumptions for presentation to Water Forum membership for review and discussion.

- a. This assurance is intended to facilitate improved transparency and understanding related to the data and assumptions within the UWMPs, and to better elucidate any differences in assumptions by purveyors.



WATER FORUM AGREEMENT 2050

Carmichael Water District Purveyor Specific Agreement

Updated: November 26, 2025

Purveyor Background

Carmichael Water District (CWD or District), formerly Carmichael Irrigation District, was formed in 1916 to serve water for irrigation and a small but growing township called “Carmichael Colonies”. The District was formed under the California Irrigation District laws but changed its name to Carmichael Water District in the 1980s to reflect its transformation from a primarily irrigation water supplier to an urban water supplier. Today, CWD serves about 11,900 connections with a population of about 40,000 people. With a history of over 100 years, the District is built out with 90% residential service and a steady decrease in water demand from effective water efficiency campaigns and education.

The District’s water supply portfolio has provided over 100 years of water supply reliability to its customers. The District’s transition from exclusive use of surface water diverted from the American River to groundwater use and then to a sophisticated conjunctive use program, including a state-of-the-art water treatment facility, epitomizes the flexibility and adaptability that the District has displayed throughout its history. Renewed flexibility and adaptability will allow the District to handle climate change, regulatory change, and legislated conservation and water quality protection.

CWD has three main water supplies in its portfolio: surface water rights to divert the natural flows of the American River, groundwater supplies derived from its well system including banked water supplies from its long-term conjunctive use activities, and remediated groundwater supplies from its contract with Aerojet-Rocketdyne Corporation. All these water supplies are collectively managed to meet the District’s demands.

Surface Water Supplies

CWD’s surface water supplies consist of three appropriative water rights derived from the natural flow of the American River where water is normally available under natural conditions, subject to more senior appropriators. The supply is based upon water availability that is tied to the priority dates of these water rights. The State Water Resources Control Board (State Board) determines when there is insufficient water supply in the American River watershed to satisfy CWD’s diversion rate under each water right.

The three appropriate water rights consist of two licensed and one permitted water right providing up to 32,600 acre-feet per year (AFY) with a maximum diversion rate of 50 cubic feet per second, depending

on the season of use. CWD's water rights have priority dates after 1914 and are subject to curtailment by the State Board.

Water Right	Priority Date	Diversion Rate	Volume (AFY)	Diversion Period
License 1387	1915	15 cfs	10,859	Jan – Dec
License 8731	1925	10 cfs	3,669	May – Oct
Permit 7356	1948	25 cfs	18,099	Jan – Dec

The District diverts surface water through three Ranney collector wells in the American River and treats water at the Bajamont Water Treatment Plant (BWTP). The Ranney collectors use a series of laterals extending to the riverbed to gather water and utilize the natural sands and gravel for riverbank filtration. Water flows from the collectors by gravity to a central collector and then the District conveys it to BWTP through a 48-inch pipeline.

Groundwater Supplies

Groundwater supplies constitute a major component of the District's water supply portfolio. The District conjunctively manages its surface water and groundwater supplies to optimize the uses of these water assets.

The District currently operates 4 groundwater wells and is in the process of replacing 2 old wells and constructing a new well. These projects are in various stages of construction and are projected to be completed in 2026. The projected capacity for the wells will be about 8,000 to 10,000 gallons per minute (11.5 million gallons per day (MGD) to 14.4 MGD).

The District plans to further its conjunctive use program by utilizing Aquifer Storage and Recovery (ASR) technology to inject treated water from the BWTP when surface water is plentiful to maintain groundwater levels in the basin. The estimated annual capacity for storage is about 1,500 AFY to 3,000 AFY during normal and wet years. The District plans to invest additional resources in conjunctive use and water banking and will continue to implement additional ASR wells when replacing old wells that have reached the end of their useful life.

Alternative Supplies

The District may access remediated groundwater supplies from the Aerojet Groundwater Extraction and Treatment (GET) LA and LB facilities located within the District's service area. Aerojet makes these water supplies available through the extraction, treatment, and discharge of groundwater into the American River. The District has exercised its option to divert this remediated groundwater when its surface water rights have been curtailed.

Distribution System of Note

The District's water delivery system consists of both a distributed supply from groundwater wells and a centralized supply from the BWTP. The supply capacity is aided by two ground level water storage tanks, the La Vista Tank and the Dewey Tank, with a combined available storage capacity of 4 million gallons. The network of distribution pipelines consists of water supply mains ranging in size from 4-inch to 18-inch pipes to larger water mains of 24-inch and 30-inch pipes.

The District also maintains an intertie with Fair Oaks Water District and Citrus Heights Water District and four interties with Sacramento Suburban Water District.

Surface Water and Groundwater Management

The table below summarizes District water demand (by source) from 2006 through 2024. The Purchased Water column indicates additional water acquired and used during surface water right curtailment periods via short-term temporary contracts with Aerojet for additional remediated groundwater, when available, and with San Juan Water District. These contracts were single-year contracts, and the supplies are no longer available. The District’s total demand has decreased significantly since 2006.

Year	Surface Water (AFY)	Groundwater (AFY)	Purchased Water (AFY)	Total
2006	8,971	3,519	0	12,490
2007	9,509	2,867	0	12,376
2008	10,422	1,581	0	12,003
2009	8,965	1,609	0	10,574
2010	8,217	1,518	0	9,735
2011	7,849	1,469	0	9,318
2012	8,315	1,570	0	9,894
2013	8,369	2,030	0	10,399
2014	2,441	3,417	2,501	8,359
2015	2,429	2,543	2,169	7,142
2016	6,254	1,189	0	7,443
2017	5,897	2,384	0	8,280
2018	5,633	2,718	0	8,352
2019	6,051	2,165	0	8,216
2020	4,342	4,172	0	8,514
2021	4,023	3,779	865	8,667
2022	3,264	5,176	159	8,599
2023	5,656	2,481	0	8,138
2024	6,479	2,151	0	8,630

Current Diversions

CWD’s recent diversions from the American River are listed in the table below.

Year	Total (AFY)	Note
2014	2,441	Curtailment year
2015	2,430	Curtailment year
2016	6,254	
2017	5,897	
2018	5,633	
2019	6,051	
2020	4,342	Groundwater substitution transfer year
2021	4,023	Curtailment year

Year	Total (AFY)	Note
2022	3,264	Curtailment year and groundwater substitution transfer year
2023	5,656	
2024	6,479	

Future Projected Diversions

As the District is built out, the future projected diversions are expected to be similar to current conditions. Future in-fill projects will most likely reduce current irrigated areas and comply with regulatory water conservation standards. Future water efficiency measures will also limit additional diversions from the American River.

Future diversions from the American River may increase during normal and wet years by 1,500 to 3,000 AFY for storage of surface water in the groundwater basin via ASR operations.

Wet Conditions Management

Wet conditions occur when the Unimpaired Inflow Folsom Reservoir (UIFR) is **greater than 1.6 Million Acre Feet**. This threshold is not considered a formal definition of what constitutes a “wet year” or “wet conditions” on the American River but was utilized in the original Water Forum agreement as a basis for surface water commitments. It is expected that additional analysis and discussions will be conducted as part of the American River Climate Adaptation Program (ARCAP) to explore and define what other potential criteria could be used to guide regional operations in wet times. Where possible, the District will expand its conjunctive use operations and increase its diversions to groundwater storage by 1,500 to 3,000 AFY through its ASR wells.

Drier Conditions Management

In drier conditions, when the UIFR is **between 950 Thousand Acre Feet (TAF) and 400 TAF**, the District will implement water conservation measures to reduce demand by 10% from normal, or as required by the District’s Water Shortage Contingency Plan. Where possible, the District will prioritize groundwater use to leave water in the LAR.

Driest Conditions Management

In the driest conditions, when the UIFR is **less than 400 TAF**, the District will implement water conservation measures to reduce demand by 10 – 20% from normal or as required by the District’s Water Shortage Contingency Plan. Where possible, the District will prioritize groundwater use to leave water in the LAR.

Critically Low Storage Conditions

In critically low Folsom Reservoir storage conditions, the District would most likely be required to cease water diversions from the LAR per curtailment orders issued by the State Board or terms and conditions in the Healthy Rivers and Landscapes Agreements. If curtailed, the District would use its groundwater resources to meet demands and, if necessary, acquire additional water to supply demands as available. The District would also implement its Water Shortage Contingency Plan that aligns with a potential water supply shortage and comply with any applicable mandates issued by the State Board.

Demand Management

CWD is committed to abide by relevant water conservation and water use efficiency regulations. At the time of signing, key requirements are associated with the 2024 “Making Conservation a California Way of Life” regulations, Assembly Bill (AB) 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELO), which encourages low water use and native landscaping for new development.

CWD has participated and will continue to participate in the Regional Water Authority’s Water Efficiency Program, especially for regional compliance with the Commercial, Industrial, and Institutional (CII) best management practices and regional non-functional turf outreach, along with regional messaging. CWD also offers water efficiency surveys and rebates for turf replacement, smart sprinkler controllers, and Flume Water’s Smart Home Water Monitor and Leak Detector. Continuation of the rebate program is subject to CWD Board of Directors approval.

Potential demand management actions include:

- Developing programs to assist in the conversion of publicly owned, commercial, and institutional landscaping to low-water-use native landscaping.
- Expand and strengthen regional conservation messaging about plant watering needs.
- Provide additional water use efficiency rebates to customers.
- Track customer water use and develop targeted outreach opportunities for high-water-use customers.
- Maintain and implement water waste prevention programs.
- Maintain customer outreach and communication programs to educate and inform customers of state water use efficiency requirements.
- Maintain customer programs to support the implementation of Best Management Practices for the CII sectors.

Project List

Structural

Rehabilitation, modernization, or replacement of existing infrastructure as outlined below:

- Rehabilitation and replacement of Ranney collector laterals to maintain capacity and infrastructure integrity.
- Replacement of existing wells at the end of their useful life and modernize with ASR capabilities.
- Replacement of existing pipelines in poor condition to improve water transmission reliability.
- Distribution pressure zone modifications for efficient water use and energy management.
- New groundwater facilities consistent with the adopted Groundwater Sustainability Plan.
- Projects and programs to ensure success of the Healthy Rivers and Landscapes Program or a similar tributary-specific program that improves the ecosystem, protects local water entitlements, and maintains better cold water pool conditions in Folsom Reservoir and the LAR.

Non-Structural

- Water transfers when available consistent with the Groundwater Sustainability Plan and the Water Code.
- Additional groundwater storage opportunities in the Sacramento Regional Water Bank.
- Support and participate in regional partnership opportunities with other water purveyors that provide reliability to regional water supply systems and benefits to the LAR.
- Agreements with neighboring purveyors for conjunctive use opportunities.
- Extension and/or license of water entitlements.
- Regional water efficiency and conservation campaigns.

Caveats and Assurances

1. CWD was established over 100 years ago and is mostly built out. Structural projects listed above for rehabilitation, modernization, or replacement of existing infrastructure are key for water supply reliability to its customers. CWD seeks support in implementation of rehabilitation, modernization, and replacement of old infrastructure for supply reliability, operational efficiency, and water conservation objectives.
2. The District uses surface water supplies, when possible, to protect its groundwater supplies and prevent migration of contaminant plumes associated with the Aerojet facilities in Sacramento County. The District will continue to practice conjunctive use to meet existing and future needs and manage dry and critically dry conditions as they arise in the future.
3. Acknowledge that the duty of a water purveyor is to simultaneously provide an affordable, reliable, and high-quality water supply to its customers. Proposals that favor one of these goals over another could threaten a water purveyor's ability to achieve all goals simultaneously.



WATER FORUM AGREEMENT 2050

City of Folsom Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

The City of Folsom (City) is a public agency that provides potable water directly to its residential and business customers. The City's boundaries are not coterminous with the City's water service area. The City's water system is divided into five (5) distinct water service areas. The water service areas are listed below and shown in **Figure 1**.

- Folsom West Service Area
- Folsom East Service Area
- Nimbus Service Area
- Folsom Plan Area Service Area
- Ashland Service Area

The City obtains its surface water supply directly from a diversion point in Folsom Reservoir. The City's water service contracts allow it to develop an intake facility at the Folsom South Canal, but the City has not yet done so. For areas south of the American River, the City takes deliveries from the Natoma Pipeline, a 42-inch steel pressure pipe that originates at Folsom Dam. The Natoma Pipeline splits into two separate lines: one line to the Folsom Prison water treatment plant (WTP), and one line to the Folsom WTP. At the inlet to the Folsom WTP, the raw water line splits. A portion of the raw water is delivered to the Willow Hill Reservoir. This portion of the water has served non-potable industrial uses on the Aerojet Industrial Property (Aerojet). The balance of the water is delivered to the Folsom WTP. After treatment at the Folsom WTP, water is stored and pumped through a system of reservoirs and pumping stations to seven pressure zones. Groundwater Extraction and Treatment (GET) A and B facilities are now being used to serve most of Aerojet's non-potable water needs, which has allowed the City to reduce surface water diversions from Folsom Reservoir since 2015.

For the Ashland Service Area, water is diverted from the Folsom Reservoir and piped to the Sydney N. Peterson WTP, which is owned and operated by San Juan Water District (SJWD). After treatment, water is stored in Hinkle Reservoir until SJWD releases and pumps it to the Ashland Service Area. While SJWD provides wholesale water supplies to the Ashland Service Area, it is conveyed to customers through City infrastructure, including service connections with meters. The water delivered to Ashland Service Area derives from SJWD's water entitlements and contracts.

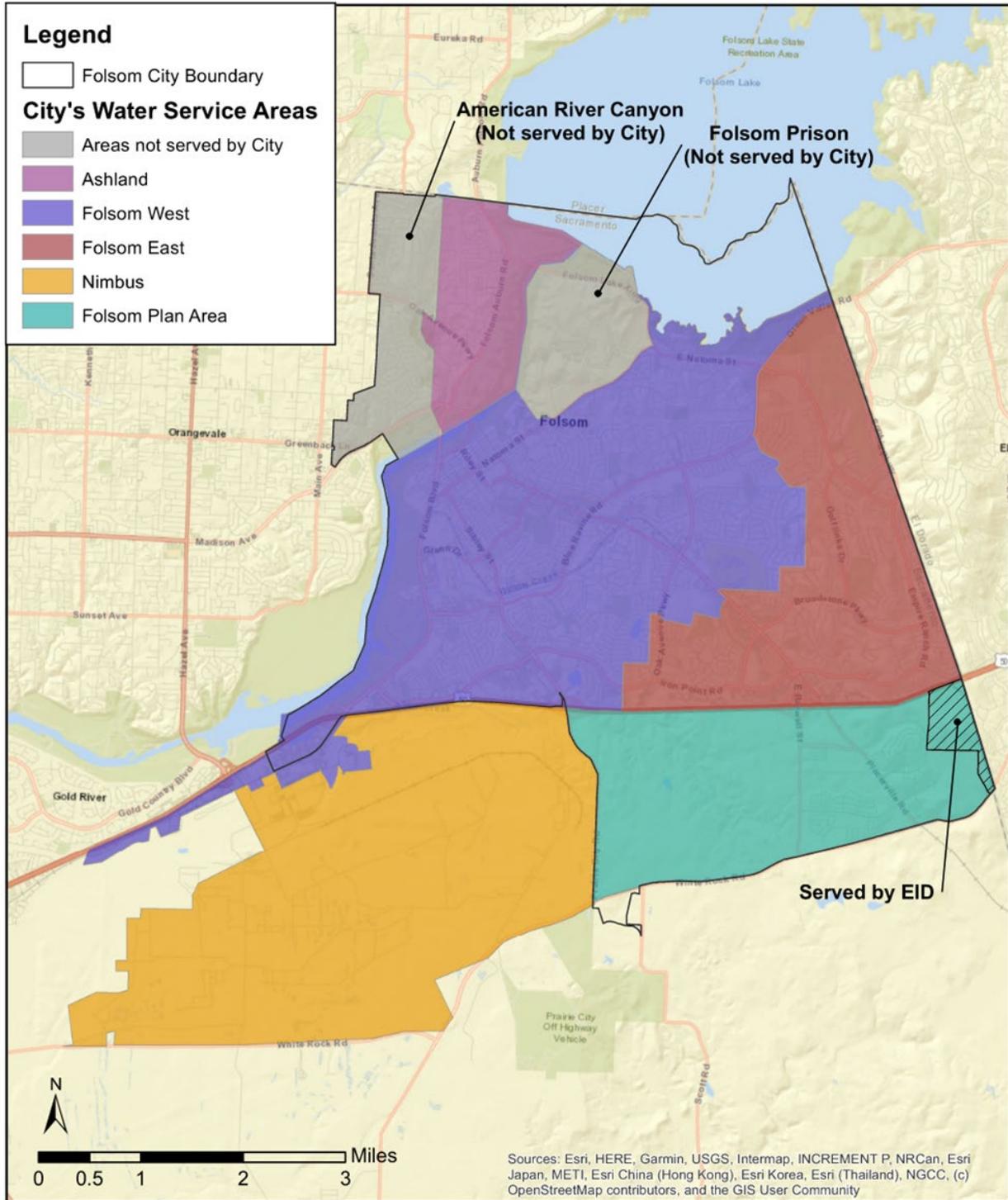


Figure 1. City of Folsom Water Service Areas

The City previously delivered raw water supplies to Aerojet at its industrial facilities; however, remediated water derived from GET A and GET B is now directly plumbed into Aerojet facilities for non-potable purposes. Even though the City does not deliver remediated water to Aerojet, the City does have rights to the remediated water, which they can utilize for non-potable use within the City’s water service areas. This remediated supply could offset raw or potable water demands on the City’s water system that are derived from its water entitlements and contracts and delivered from Folsom Reservoir.

The City’s 2023 demands from its own surface water entitlements and contracts are approximately 17,700 acre-feet. At the peak of the City’s surface water diversions from its own entitlements and contracts in 2008, total surface water diverted was 29,560 acre-feet serving a population of approximately 53,375. The 2023 population served using the City’s entitlements and contracts was approximately 71,550. The overall water use reduction from 2008 to 2023 is approximately 40% while the population increased by approximately 34% during that same period.

The City’s projected build-out demands derived from the City’s water entitlements and contracts are approximately 25,500 acre-feet per year in 2045 to serve a population of approximately 108,530. For the Ashland Water Service Area, from San Juan Water District’s water entitlements and contracts, 2023 demands were approximately 1,100 acre-feet and build-out demands are approximately 1,120 acre-feet per year. **Table 1** summarizes the City’s water entitlements and contracts. The Ashland Water Service Area is mostly built-out with a 2023 population of approximately 3,400 with an expected population of 3,600 at build-out.

Table 1. Water Entitlements and Contracts

Water Rights	Supply (AFY)	Diversion Point	Place of Use	Transferable
Pre-1914 Appropriative Right	22,000	Folsom Reservoir, Folsom South Canal	Folsom Service Area	Yes
Pre-1914 Appropriative Rights	5,000	Folsom Reservoir, Folsom South Canal	Folsom Service Area	Yes
CVP Repayment Contract	7,000	Folsom Reservoir	Folsom Service Area	Yes
SJWD Agreement ¹	1,100	Folsom Reservoir	Ashland Service Area	No
GET A and GET B Supply	3,250	Direct Application	Folsom Service Area	Yes
Total Supply	38,350	--	--	--

¹ The SJWD Agreement states that the City will receive the water supply needed for the Ashland Service Area from SJWD unless there are shortage reductions required under the agreement between the City and SJWD. This water supply does not impact City’s water supplies available under other Contracts.

CVP= Central Valley Project; GET= Groundwater Extraction and Treatment; SJWD= San Juan Water District

Surface Water and Groundwater Management³⁶

Some of the City's water supplies are subject to reduction under certain conditions. These conditions may manifest through (a) hydrological circumstances, like a drought; (b) the City's regional relationships, like the Water Forum; and (c) legal and regulatory constraints, like species protection in the Sacramento-San Joaquin Bay Delta, curtailment orders from the State Water Resources Control Board, or an Executive Order from the Governor. Water supply reductions impact the availability of each water asset in a different way that may impact the City's operations and long-term planning. These aspects of the City's water supplies are outlined below. The City does not currently pump any groundwater and does not have any groundwater pumps or related infrastructure to pump groundwater.

Pre-1914 Rights for 22,000 AFY

The City's 22,000 acre-feet per year (AFY) entitlement is based on a pre-1914 appropriative right from the South Fork of the American River established by the Natoma Water Company in 1851. The Natoma Water Company's original pre-1914 water right established a maximum diversion rate "to fill a Canal Eight feet wide and Four feet deep with a current running ten miles per hour." This correlates to a diversion rate of 60 cubic feet per second (cfs) and a maximum allocation of 32,000 AFY. This right is held jointly with Golden State Water Company (GSWC) pursuant to a co-tenancy agreement. The co-tenancy agreement means that both the City and GSWC have the right to use the water to the fullest extent possible as desired by the respective entities. The City and GSWC have allocated the supplies under the entire 32,000 AFY water right. The City unilaterally controls 22,000 AFY and GSWC controls the remaining 10,000 AFY.

The 1851 filing is the earliest in priority of perfected appropriative rights on the South Fork of the American River and is recorded. The entire 22,000 AFY of this water right is formally recognized in the settlement agreement between the U.S. Bureau of Reclamation (Reclamation) and the City. Under this agreement, Reclamation delivers this entire water supply without reduction on a permanent basis. This water asset may be diverted at its point of diversion in the water right itself, as well as Folsom Reservoir and Folsom South Canal pursuant to the settlement agreement between Reclamation and the City. The settlement agreement also requires Reclamation to deliver the entire supply under this water asset in all year types.

Pre-1914 Rights for 5,000 AFY

The City's 5,000 AFY entitlement is also based on Natoma Water Company's pre-1914 appropriative water right from the South Fork of the American River. In November 1994, the City executed a contract with Southern California Water Company-Folsom Division (SCWC) under which the City acquired the right to lease 5,000 AFY of water per year. As described above, SCWC controlled the remaining 10,000 AFY of the 32,000 AFY total water right under the original co-tenancy of the Natoma Water Company purchase. As such, the basis of this water asset is held with GSWC pursuant to the co-tenancy agreement, but the lease of the water asset to the City is pursuant to a lease agreement. This water right is also formally recognized in the settlement agreement between Reclamation and the City.

³⁶ The City of Folsom does not currently pump any groundwater. Although the City does not currently pump any groundwater, the City is a member of the Sacramento Groundwater Authority and the Sacramento Central Groundwater Authority.

This water asset for 5,000 AFY has the same diversion provisions as the 22,000 AFY diversion right above since both assets are derived from the same water right. Moreover, this water asset has the same priority as the 22,000 AFY water asset which makes it extremely resilient against drought conditions and regulatory curtailment.

Central Valley Project Repayment Contract for 7,000 AFY

On April 8, 1999, Reclamation entered Contract No. 6-07-20-W1372 with the Sacramento County Water Agency (SCWA) under Section 206 of Public Law 101-514, which was sponsored by Representative Vic Fazio. The contract dedicated 22,000 AFY of water, commonly called “Fazio Water,” to SCWA. The City was specifically named in the SCWA-Reclamation contract as a subcontractor to gain benefit of a portion of the Fazio Water supply. On April 25, 2000, SCWA entered a separate contract with the City to provide the City with 7,000 AFY of the 22,000 AFY of Fazio Water.

The Fazio Water supply is a standard Central Valley Project (CVP) “Project Supply” water entitlement – derived entirely from federal CVP water supplies. The sole source of supply for the Fazio Water is the American River water rights held by Reclamation for diversion and storage at Folsom Reservoir. Reclamation’s CVP rights to divert water are junior to the water rights that existed prior to the development of the CVP. The Fazio Water contract entitlement for the City is fairly reliable. In normal and wet years, the City may call upon the supply for delivery and should receive 100% allocation. In dry years, the water supply is subject to Reclamation’s Municipal and Industrial (M&I) Water Shortage Policy.

In December 2016, the City became a direct CVP Contractor, and no longer a sub-Contractor to SCWA, through a partial assignment of the City’s 7,000 AFY under Contract No. 6-07-20-1372B with Reclamation. The purpose of this assignment is to consolidate the City’s water assets derived from the City’s relationship with Reclamation to better facilitate administration of those water assets. In February 2020, the City and Reclamation executed a contract (Contract No. 6-07-20-W1372B-P) to convert³⁷ the CVP water service contract into a CVP repayment contract as authorized under the Water Infrastructure Improvements for the Nation Act.

Current Diversions

Table 2 summarizes the annual pre-1914 and CVP diversions made by the City from 2013 to 2023. These diversions all occurred from Folsom Reservoir and include both potable and non-potable uses. These totals do not include water delivered to the Ashland Service Area as that area is supplied from the SJWD water supply portfolio and not from water diverted by the City.

Table 2. Annual Diversions (2013-2023)

Year	Pre-1914 Diversions (AF)	CVP Diversions (AF)	Total Diversions (AF)
2013	23,293	1,391	22,990
2014	18,668	750	19,418
2015	16,456	450	16,906
2016	14,687	3,860	18,547
2017	15,217	4,040	19,257
2018	14,255	3,983	18,238

³⁷ At the time of signing the WFA, this and similar contract conversions are pending litigation.

Year	Pre-1914 Diversions (AF)	CVP Diversions (AF)	Total Diversions (AF)
2019	13,687	4,017	17,704
2020	15,808	2,910	18,718
2021	16,425	1,500	17,925
2022	16,794	1,000	17,794
2023	11,497	6,200	17,697

Future Projected Diversions

The future projected diversions under “normal” conditions (as shown below) are for when the Unimpaired Inflow to Folsom Reservoir (UIFR) is above 950 TAF. The City’s 2020 Urban Water Management Plan (UWMP) identified these diversions in five-year increments to 2045, which is also the planning date for build-out of the City. The current 5-year UWMP projections will serve as the basis of diversions when the UIFR is above 950 TAF. Diversions will derive from a combination of the City’s pre-1914 and CVP water supplies. **Table 3** shows the diversions under this condition.

Table 3. Future Projected Diversions

	2025	2030	2035	2040	2045
Demand Totals	20,517	22,746	24,214	25,145	25,519

Wet Conditions Management

Wet conditions will be assumed to be when the UIFR is greater than 1.6 MAF. This threshold is not considered a formal definition of what constitutes a “wet year” or “wet conditions” on the American River but was utilized in the original Water Forum agreement as a basis for surface water commitments. It is expected that additional analysis and discussions will be conducted as part of the American River Climate Adaptation Program (ARCAP) to explore and define what other potential criteria could be used to guide regional operations in wet times. Where possible, the City will support the use of regional surface water supplies to assist in regional groundwater recharge.

Drier Conditions Management

When the UIFR is between 950 TAF and 400 TAF, the City will reduce surface water diversions up to 10 percent or as required by the City’s Water Shortage Contingency Plan³⁸, whichever is greatest. The City will also reduce CVP diversions (included in the overall 10%) as required by the CVP M&I Water Shortage Policy.

Driest Conditions Management

When the UIFR is less than 400 TAF, the City will reduce surface water diversions up to 20 percent, as required by the City’s Water Shortage Contingency Plan, or as required by any mandates issued by the State of California, whichever is greatest. The City will also forego scheduling any CVP Repayment water during these conditions (included in the overall 20% or more). The City can offset surface water

³⁸ The City’s Water Shortage Contingency Plan is based on water shortage events that directly impact the availability of the City’s water supplies. The Plan is not based on the UIFR.

reductions through conjunctive use opportunities with neighboring purveyors or through water stored in existing or future surface water storage.

As an example, if the City is able to bank water in the groundwater basin and another purveyor with access to surface water and groundwater can extract the banked groundwater and use this banked water to meet their demands while at the same time reducing their surface water diversions, the City will be able to deliver this surface water to meet its customer demands. Under these arrangements, other purveyors will use groundwater in lieu of surface water equivalent to the amount that the City would continue to divert.

However, it is recognized that in years when the projected UIFR to Folsom is less than 750,000 AF there may not be sufficient water to provide the purveyors with driest year quantities specified in their agreements and provide the expected flows to the mouth of the American River. In those years, Folsom will participate in a conference year with other stakeholders on how the available water should be managed. The conferences will be guided by the conference year principles described in the Water Forum Agreement.

Critically Low Storage Conditions

The City's sources of water are all delivered through an M&I intake in Folsom Dam, which is at an elevation that would be subject to air entrainment at approximately 110,000 AF of storage in Folsom Reservoir. Because this entrainment could result in significant damage to the impellers of the pumps that Reclamation uses to pump the supplies brought through the intake to Folsom, Reclamation will install 10 floating pumps with a total capacity of 30 cfs. This arrangement will allow delivery of emergency supplies in extreme conditions even when the storage level is as low as 60,000 AF. The 30 cfs capacity of these emergency pumps is half the flow rate Reclamation is required to deliver to the City under its pre-1914 settlement agreements.

The City completed a Water Vision planning study that is a comprehensive 50-year strategy designed to secure and strengthen the City's long-term water supply. This included an analysis of risks and vulnerabilities associated with infrastructure failure and a changing climate. The primary objective was to evaluate and recommend ways to improve the reliability and redundancy of the City's water supplies, including but not limited to, a scenario of not having access to water supplies from Folsom Reservoir. Ultimately, the Water Vision developed a phasing plan with recommended projects that would diversify the City's water supply portfolio if access to current water supplies from Folsom Reservoir could not be achieved.

The City could also work with neighboring water purveyors to deliver treated groundwater through existing or new interties with the City. The City would also have to implement its Water Shortage Contingency Plan that aligns with a potential water supply shortage and would have to comply with any applicable mandates issued by the State of California.

Contributions to River Corridor Health

- Reduce direct surface water diversions from Folsom Reservoir
- Continued long-term funding for the Water Forum Successor Effort (WFSE)

- Contribute to funding for regional advocacy for the implementation of the Water Forum Agreement
- Contribute to enhanced science and monitoring along the Lower American River

Contributions to Water Supply Reliability

1. Implement conjunctive use opportunities with neighboring purveyors
2. Evaluate surface and groundwater storage options
3. Contribute to funding for regional advocacy for the implementation of the Water Forum Agreement

Demand Management

At the time of signing, key requirements are associated with the 2024 “Making Conservation a California Way of Life” regulations, Assembly Bill (AB) 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELO) which encourages low-water use and native landscaping for new development.

Potential³⁹ demand management actions could include the following:

- Develop programs to assist in the conversion of publicly owned, commercial, and institutional landscaping to low-water-use native landscaping
- Expand and strengthen regional conservation messaging about plant watering needs
- Provide water use efficiency rebates to residential and non-residential customers
- Track residential and non-residential customer water use and develop targeted outreach opportunities for high water use customers
- Maintain and implement water waste prevention programs
- Maintain customer outreach and communication programs to educate and inform customers of state water use efficiency requirements
- Maintain customer programs to support the implementation of Best Management Practices for the Commercial, Industrial, and Institutional (CII) sector
- Evaluate the feasibility of implementing residential customer programs that may include landscape conversions, irrigation system tune-ups, or water monitoring devices

Including any requirements identified in the California Water Code, the City commits to abiding by the relevant conservation and water use efficiency regulations, including following the water use reduction stages as set forth by the City’s most recently adopted Water Shortage Contingency Plan.

³⁹ While the list of potential demand management actions is included in the City’s PSA, future regulatory requirements or actions by the Folsom City Council may necessitate the need to update this list.

Project List and Future Water Supply Reliability Efforts

Structural

The following infrastructure projects will support efforts to implement the City’s proposed PSA, and to support the Water Forum coequal objectives.

- New or improved interties with other purveyors that have access to groundwater and surface water
- Groundwater storage opportunities in the Sacramento Regional Water Bank
- Non-potable infrastructure to deliver remediated groundwater for non-potable irrigation purposes within the City’s water service area
- Alternative raw water supply projects to improve reliability and redundancy of delivering raw water from Reclamation to the City consistent with existing water rights and contract flow rates and volumes

Non-Structural

The following list of non-structural projects will support efforts to implement the City’s proposed PSA, and to support the Water Forum’s coequal objectives.

- Agreements with neighboring purveyors for conjunctive use opportunities
- Continued water use efficiency programs for the City
- Funding for water use efficiency rebates for the City
- Conserved water transfers consistent with the California Water Code that do not negatively impact the Lower American River
- Water banking transfers consistent with the Sustainable Groundwater Management Act
- Support and participate in regional partnership opportunities with other water purveyors that provide reliability to regional water supply systems and benefits to the Lower American River
- Support, and participate as needed, SCWA and other regional partners that would consider opportunities to utilize the Freeport Regional Water Authority to benefit the co-equal objectives

Caveats and Assurances

1. The ability for any individual purveyor to implement the surface water diversion principles will depend on their respective opportunities and constraints.
2. In circumstances where excess water is made available by Reclamation by Article 3(f) of a purveyor’s Water Repayment Contract or by a Section 215 Contract between the purveyor and Reclamation due to flood control or “uncontrolled season” operations at Folsom Reservoir, for the purposes of groundwater recharge, that water would not be counted as diversion water within their PSA, regardless of year type.

3. Support for the development of redundant water supplies that do not negatively impact the co-equal objectives of the Water Forum Agreement and are consistent with the existing water rights and contract volumes included in the City's 2035 General Plan (amended and adopted on August 27, 2024).
4. Water demands in future UWMPs shall be re-visited and updated in the surface water diversions table.
5. Proposed reductions in surface water diversions shall demonstrate a positive impact to the fisheries or habitat along the Lower American River, i.e., the City is not reducing diversions only for the sake of reducing diversions.

Future regulatory changes may require modifications to dry-year actions because achieving certain reductions may not be feasible or achievable.



WATER FORUM AGREEMENT 2050

City of Roseville Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

The City of Roseville Environmental Utilities Department (Roseville) is a public utility owned and operated by the City of Roseville, providing drinking water, wastewater, recycled water, and waste services to the Roseville community.

Roseville recognizes that climate change, population growth, and regulatory requirements are creating increasing challenges in balancing water supply and demand. Groundwater and surface water alike are under pressure, and Roseville is committed to advancing sustainable solutions that protect both resources for future generations, while maintaining our commitment to the health of the lower American River (LAR).

To address these challenges, Roseville participated in the American River Basin Study (ARBS) that was completed in 2022. The study was developed by the U.S. Bureau of Reclamation (Reclamation) in partnership with Roseville and other regional water agencies. Building on earlier statewide studies, the ARBS focused specifically on the American River Basin; developing tools, analyses, and climate adaptation strategies to strengthen water supply reliability, protect endangered species, and support sustainable reservoir operations. Roseville's participation reflects our awareness of climate change challenges and our commitment to working collaboratively with local, state, and federal partners to bring forward long-term, regional water solutions for our community, the region, and the LAR.

In addition, Roseville has embraced the requirements of the Sustainable Groundwater Management Act (SGMA) and is an active member of the West Placer Groundwater Sustainability Agency (WPGSA), which manages a portion of the North American Subbasin alongside Placer County, the City of Lincoln, Placer County Water Agency (PCWA), and California American Water. Through this partnership, Roseville and our Groundwater Sustainability Agency Partners are implementing a Groundwater Sustainability Plan (GSP) that protects against groundwater overdraft, supports reliable supplies for residents, agriculture, and businesses, and contributes to land and habitat conservation.

Roseville also continues to expand our Aquifer Storage and Recovery (ASR) program as part of a conjunctive use strategy, which is further discussed in this Purveyor Specific Agreement (PSA). This innovative approach safeguards our groundwater basin, improves regional resilience, secures reliable

water supplies and can be used in a conjunctive way to benefit the LAR, particularly during the driest years.

Together, these efforts underscore Roseville’s commitment to climate change adaptation, groundwater sustainability, and regional collaboration, helping to ensure a resilient water future for our community, the region, and the LAR.

With these challenges, Roseville has developed diversity in its water supply and its water infrastructure over the past three decades to become more resilient and positioned to meet the Water Forum’s coequal objectives of water supply reliability and river corridor health.

The primary water supply for Roseville is surface water diversions from Folsom Reservoir. Roseville has contracts with Reclamation for up to 32 thousand acre-feet (TAF) of water per year, and PCWA for up to 34 TAF per year. Raw water from Folsom Reservoir is conveyed to Roseville’s water treatment plant in the Granite Bay area and is then distributed through Roseville’s 600 miles of water mains to customers. Current surface water entitlements total around 66 TAF per year. Roseville maintains options for an additional 10 TAF of water supplies from PCWA, and although those options are contractually available, they have not yet been exercised.

Roseville also currently has 7 Aquifer Storage and Recovery (ASR) wells providing a maximum extraction capacity of 23.5 TAF/year. Roseville is planning to expand their groundwater program to have a more robust water supply available in the event of a water shortage. Roseville’s ASR program also has the capacity to inject approximately 11 TAF of treated water back into the groundwater basin.

Roseville has a Recycled Water Program with source water from two regional wastewater treatment plants that operate with an annual production rate of approximately 3.8 TAF of recycled water annually. This water serves the landscape watering needs of parks, golf courses, and medians in the newer western section of Roseville.

Roseville has 17 interties with the surrounding purveyors including PCWA, San Juan Water District (SJWD), California-American Water Company, Citrus Heights Water District, and Sacramento Suburban Water District (SSWD).

Roseville has invested heavily in long-term water efficiency efforts over the last couple of decades, and, as per capita water use has declined, water demands have remained relatively stable despite population growth in the area.

Surface Water and Groundwater Management

The following sections outline the opportunities for Roseville to contribute to both of the Water Forum coequal objectives, while adhering to the guiding principles for surface water diversions.

1. Roseville intends to prioritize alternative water supplies to surface water supplies from the American River system in dry conditions to provide flow and water quality⁴⁰ benefits for the LAR, such as:
 - Pursuing opportunities for increased groundwater pumping to allow surface water to remain in the LAR.

⁴⁰ Including temperature, dissolved oxygen, and potentially other characteristics.

- Pursuing opportunities for increased diversions from the Sacramento River as an alternative to surface water from the American River system.
2. Ensure surface water commitments are in balance with regional efforts for groundwater sustainability.
 - Prioritize surface water diversions in wet conditions to allow groundwater recharge.
 3. Protect regional surface water entitlements to ensure local control of water to benefit the coequal objectives, with the following benefits:
 - Enabling contributions to river corridor health.
 - Reducing surface water diversions from Folsom Reservoir in the driest conditions.
 - Contributing to water supply reliability.
 - Enabling the expansion of groundwater infrastructure to allow for conjunctive use.

Current and Projected Surface Water Diversions

Current Roseville demands are approximately 32 TAF per year, including ASR, and are expected to grow to just under 63 TAF per year in 2040.

Wet Conditions Management

Roseville's intent for managing surface and groundwater under wet conditions is to follow the groundwater management guiding principles in the Water Forum Agreement 2050 (WF2050), as follows:

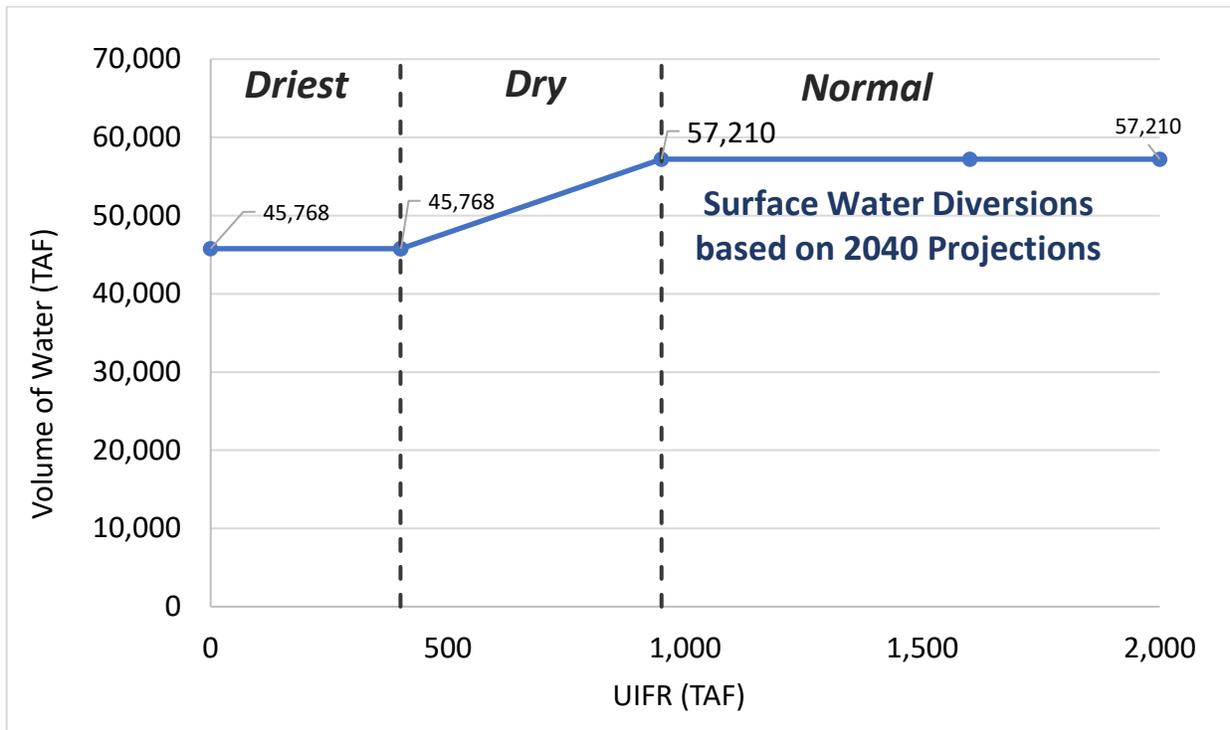
- Support conjunctive management of regional groundwater basins with surface water supplies to enhance water supply reliability and provide flow and water quality benefits to the LAR.
- Prioritize use of groundwater in dry conditions to help mitigate the impacts to surface water shortages in the LAR by supplementing Central Valley Project (CVP) water allocations from the American River with groundwater using our existing and planned aquifer storage and recovery wells.
- Work with Reclamation to maximize groundwater recharge with Repayment Contract Article 3(f) water⁴¹ during wet years⁴² with the goal of minimizing impacts to the LAR.
- Participation with our regional partners in the Sacramento Regional Water Bank Project.
- Continued investments in Aquifer Storage and Recovery (ASR) facilities.
- Commitments related to reduced surface water diversions that are based on hydrologic conditions.

⁴¹ Article 3(f) water is what Reclamation provides currently, when available, based on Reclamation's preference. Section 215 water has been available to Roseville by Reclamation in the past. As such, the source of the water made available for recharge purposes has varied and may vary in the future.

⁴² Wet conditions will be assumed to be when the Unimpaired Inflow Folsom Reservoir (UIFR) is greater than 1.6 MAF. This threshold is not considered a formal definition of what constitutes a "wet year" or "wet conditions" on the American River but was utilized in the original Water Forum agreement as a basis for surface water commitments. It is expected that additional analysis and discussions will be conducted as part of the American River Climate Adaptation Program (ARCAP) to explore and define what other potential criteria could be used to guide regional operations in wet times.

Drier Conditions Management

The sections below describe the proposed commitments in Baseline (Normal), Dry, and Driest conditions. The proposal follows the existing Water Forum Agreement structure with Unimpaired Inflow to Folsom Reservoir (UIFR) as the index. The levels of surface water diversions are proposed to be updated based on 5-year projections for demand estimates as reported in Roseville’s Urban Water Management Plan (UWMP). These diversions would be updated based on each 5-year update to the Roseville UWMP.



Normal Conditions

Normal conditions would be defined as when the UIFR is projected to be **greater than 950 TAF**. In normal conditions, Roseville’s surface water diversions would be defined by the most recent UWMP’s 5-year projected demand. Roseville’s strategy in normal years is to not pump groundwater from groundwater wells in excess of what was injected, thus creating a bank of water for future use.

Dry Conditions

Dry Conditions could be defined as when the **UIFR is between 950 TAF and 400 TAF**. In the first Water Forum Agreement, surface water commitments during these conditions generally follow a “wedge” shape (decreasing linearly from normal levels to the driest conditions). Per Roseville’s 2020 Water Shortage Contingency Plan (WSCP), if a significant drought stage is reached, Roseville can pump additional groundwater to augment its surface water supply and make up for deficits of the surface water supply. Roseville continues to invest in development of groundwater infrastructure to increase supply reliability in times of drought, however in any given year type, Roseville must make determinations of drought stage without consideration of groundwater supplies, per the terms of the Roseville Municipal Code.

In both Dry and Driest hydrological year types, Roseville committed to forego 4,460 AF of surface water in 3 out of 8 years to support the health of the LAR. The American River Terms for Ecosystem Support and Infrastructure Assistance Needs (ARTESIAN) project agreement with the Regional Water Agency (RWA) was created to govern the administration of California Department of Water Resources (DWR) funds provided to RWA on behalf of the participants for early implementation of the American River region's 2019 Voluntary Agreement proposal.

In consideration of the funding provided by DWR under this Funding Agreement, the American River water suppliers who receive that funding agreed to jointly provide 30,000 acre-feet of groundwater-substitution water to augment, through Reclamation's operation of Folsom Dam and Reservoir as part of coordinated CVP and State Water Project (SWP) operations, stream flows in the LAR in each of three out of eight 8 years beginning in 2025. Each of those three years will be either a critical or dry year on the Sacramento Valley Index under the State Water Resources Control Board's Revised Decision 1641. This commitment is referred to as the "Flow Contribution" and each annual contribution is referred to as an "Annual Flow Contribution." Roseville, as a Participant in the RWA joint powers agreement and a recipient of grant funding, has committed to 4,460 AF.

Driest Conditions

The driest conditions are proposed to be defined as when the UIFR is 400 TAF or lower. In the driest conditions, Roseville proposes to reduce surface water diversions from Normal Diversions by 20%. This proposal is specific to surface water diversions and is not to be confused with demands. Roseville's WSCP guides operations and demands based on expected supply availability. Per Roseville's 2020 WSCP, if a significant drought stage is reached, Roseville can pump additional groundwater to augment its surface water supply and make up for deficits. Roseville continues to invest in development of groundwater infrastructure to increase supply reliability in times of drought, however in any given year type, Roseville must make determinations of drought stage without consideration of groundwater supplies, per the terms of the Roseville Municipal Code.

Critically Low Storage Conditions

Roseville's sources of surface water are all delivered through a municipal and industrial (M&I) intake in Folsom Dam, which is at an elevation that would be subject to air entrainment at approximately 110,000 AF of storage in Folsom Reservoir. Because this entrainment could result in significant damage to the impellers of the pumps that Reclamation uses to pump the supplies brought through the intake to Roseville, SJWD, and the city of Folsom, this level of storage is likely to cause "dead pool" conditions, which to date, has never occurred.

If the water level drops below the M&I intake, Reclamation would use an emergency pump on one of the three power penstocks in the dam to deliver water to Roseville and SJWD and floating barges to deliver water to Folsom. The emergency pump has a capacity of 60 cfs (43,500 AF/yr), and the barges have a capacity of 30 cfs. These facilities would allow Reclamation to access water in Folsom Reservoir between the 110,000 AF at which the M&I intake goes dry and the approximately 53,000 AF storage level at which the power penstocks go dry.

To further prepare for and mitigate this possible "dead pool" scenario, below are the current and future emergency plans on how Roseville would navigate a "dead pool" scenario at Folsom Reservoir. Additional information is provided in the Project List and Future Water Supply Reliability Efforts.

Current conditions

Max Day Demand = 55 million gallons per day (MGD)

Emergency pump at Folsom Reservoir = 19.4 MGD

- Demand Reduction at 20% realized water conservation = 11 MGD. Implement immediate water conservation to reduce customer demand during this emergency, using the powers prescribed in the Roseville Municipal Code and the City’s Water Shortage Contingency Plan.⁴³
- ASR Well Production = 16.7 MGD. Immediately activate Roseville’s Aquifer Storage and Recovery (ASR) Wells.⁴⁴
- Activate emergency interties = 17.3 MGD. Through mutual aid and other agreements request emergency water from PCWA and SSWD.

Buildout conditions

Max Day Demand (MDD) at buildout = 100 MGD

Emergency pump at Folsom Reservoir = 19.4 MGD

- Demand Reduction at 20% realized water conservation = 20 MGD. Implement immediate water conservation to reduce customer demand during this emergency, using the powers prescribed in the Roseville Municipal Code and the City’s Water Shortage Contingency Plan.
- ASR Well Production = 25.9 MGD. Immediately activate Roseville’s Aquifer Storage and Recovery (ASR) Wells.⁴⁵
- Utilize capacity from future water supply reliability projects:
 - Raw Water Pipeline (Middle Fork Project Supply) via PCWA: 10 MGD
 - RiverArc Project: 57 MGD

Summary of Dry Conditions Management

Roseville has strategically positioned itself to meet current and buildout water demands while enhancing supply reliability and supporting environmental stewardship of the LAR. Through a combination of diversified water sources, infrastructure investments, and collaborative regional planning, Roseville demonstrates its commitment to long-term water sustainability.

Current Demand & Supply Capacity:

- MDD: 55 MGD
- For Critically Low Storage Conditions
 - With a planned 20% target demand reduction via water conservation (Revised MDD: 44.0 MGD)
- Available Supply
 - Emergency pump at Folsom Reservoir: 19.4 MGD
 - ASR Extraction Capacity: 16.7 MGD

⁴³ Roseville’s Municipal Code requires water conservation levels for each drought stage; from 10% for a stage one drought and up to 50% for a stage five drought.

⁴⁴ Currently, Roseville has 7 active ASR wells with a production capacity of 16.7 MGD.

⁴⁵ Four additional ASR wells are planned by 2028 increasing the production capacity to 25.9 MGD of groundwater to serve to our customers’ demands under mandatory water conservation.

- Emergency interties: 17.3 MGD
- TOTAL Projected Available Supply = 19.4 + 16.7 + 17.3 = 53.4 MGD

This summary reflects a supply capacity that exceeds projected demand, which Roseville plans to leverage as a key strategy for mitigating critically low storage conditions.

Buildout Demand & Supply Capacity:

- MDD: 100 MGD
- For Critically Low Storage Conditions
 - With a planned 20% target demand reduction via water conservation (Revised MDD: 80 MGD)
- Available Supply
 - ASR Extraction Capacity (11 wells): 25.9 MGD
 - Raw Water Pipeline (MFP Supply) via PCWA: 10 MGD
 - RiverArc Project: 57 MGD
 - TOTAL Projected Available Supply = 25.9 + 10 + 57 = 92.9 MGD

This summary, a conservative approach (without the emergency pump at Folsom, and without supply from emergency interties) reflects a supply capacity that exceeds projected demand, which Roseville plans to leverage as a key strategy for mitigating critically low storage conditions. These enhancements create resilience during critical shortage conditions such as droughts or potential “dead pool” scenarios at the Folsom Reservoir.

Through these efforts, the City of Roseville continues to be a regional leader in integrated water resource management, supporting both water supply reliability and the ecological health of the LAR.

Demand Management

Roseville understands that Water Code Section 10632 (a)(3)(A) requires purveyors to plan for reductions of 10%, 20%, 50%, and beyond. Roseville’s current Water Shortage Contingency Plan (WSCP), as approved by the City Council, stipulates a 20% reduction in demand at a Stage 2 shortage level (when annual supplies are expected to meet 80% of the expected demand). The WSCP also includes shortage levels up to Stage 5 when supplies are only projected to meet 50% of the demands. The WSCP would continue to guide Roseville’s operations and if supplies were projected to be reduced to a level requiring greater reductions, those reductions would be implemented.

To meet long-term water use targets associated with the 2024 “Making Conservation a California Way of Life” regulations and other state ordinances and ensure a sustainable supply, Roseville implements a comprehensive set of Demand Management Measures (DMMs) as outlined in its UWMP.

Core DMMs per Water Conservation Act of 2009 (Senate Bill X7-7) Requirements

- **Water Waste Prevention Ordinance:** Enforced through patrols and public reporting to curb non-essential use.
- **Metering Program:** Allows for efficient usage tracking and leak detection.
- **Conservation Pricing:** A uniform rate structure reflects true water cost and encourages efficient use.

- **Public Education & Outreach:** Ongoing campaigns, school programs, and exhibits at the Utility Exploration Center, a facility that focuses on educating Roseville customers, promote water-saving behaviors.
- **System Loss Management:** Annual audits, in-house and third-party leak detection, and potable water pipeline rehabilitation projects help reduce water loss.
- **Program Coordination & Staffing:** Certified staff manage and implement conservation programs and customer engagement initiatives.

Current Residential & Commercial Conservation Programs

- **Residential:** Includes Water Wise House Calls, toilet replacement rebates, turf replacement (“Cash for Grass”), irrigation rebates, and landscape water budget tracking.
- **Commercial:** Offers irrigation budgets and surveys, customized rebates for irrigation and appliances, and interior water use audits.
- **Additional Measures**
 - Water waste investigations
 - Advanced Metering Infrastructure (AMI) program monitoring
 - High water use investigations

Other Ongoing Conservation Efforts

- Monthly water use reporting (SB 606 & AB 1668)
- Ban on wasteful practices (SB 606 & AB 1668)
- Leak reduction initiatives (SB 606 & AB 1668)
- Model Water Efficient Landscape Ordinance (MWELo) enforcement and annual reporting to DWR
- Developing policy for non-functional turf (AB 1572) compliance
- Ongoing Roseville Municipal Code revisions to align with state water use regulations (AB 1572)
- Cross-departmental collaboration to ensure compliance with non-functional turf requirements (AB 1572)

Regional Collaboration

- **RWA Partnership:** Continued expansion of education and awareness through the Regional Water Efficiency Program (WEP) - Roseville participates in outreach, rebates, events, and award-winning campaigns such as “Summer Strong” and “Your Weekend, Your Rules,” reaching millions across the region.

Future Plans

To continue to ensure that Roseville is meeting the goals and targets of the 2024 “Making Conservation a California Way of Life” regulations, Assembly Bill (AB) 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELo), the following proposed combination of strategies are future considerations.

- Expand customer access to real-time water use data through AMI portal enhancements to continue to create awareness of water use and consistently influence behavior for lower water use.

- Enhance outdoor water education efforts via the Inspiration Garden for both residential customers and commercial businesses.
- Continuously adapt programs based on effectiveness, funding availability, and community needs.

Caveats and Assurances

- If, and when, the City of Roseville exercises all or part of the additional 10 TAF of PCWA water, Roseville's PSA and all information herein will be updated upon written notice to the Water Forum.
- In circumstances where excess water is made available by Reclamation by Article 3(f) of Roseville's Water Repayment Contract or by a Section 215 Contract between Roseville and Reclamation due to flood control operations at Folsom Reservoir, for the purposes of groundwater recharge, that water shall not be counted as diversion water within this PSA, regardless of year type.
- Future projects and investments are described in a point in time and project aspects and details may be subject to change, at Roseville's sole discretion, to meet its water supply reliability objectives.
- Roseville and other signatories to this agreement, via the RiverArc Project, have proposed to divert water from the Sacramento River rather than diverting from the American River under certain hydrologic conditions. This would allow water to continue to flow down the LAR. Signatories conceptually endorse this RiverArc Project, subject to environmental analysis of the impact to the Sacramento River. This RiverArc Project will require certain changes to Roseville's CVP contract, including an additional point of diversion on the Sacramento River. Roseville's CVP place of use is unchanged at this point in time and still remains within the limits of Roseville. Signatories will endorse these changes to Roseville's CVP contract subject to continued endorsement of the RiverArc Project.

Project List and Future Water Supply Reliability Efforts

The following projects are key to Roseville looking out to 2040 and are designed to increase water supply reliability for Roseville and have the potential to support the Water Forum's coequal objectives.

Additional ASR Wells

Additional construction of ASR wells, with four additional ASR wells planned to be completed by the late 2020's or early 2030's, which would add 9.2 MGD to Roseville's groundwater production capacity available for emergency use; with current efforts underway to identify additional infill property that could house more ASR wells in the future. Addition of ASR wells to the service portfolio can be constrained by available land, suitable hydrogeology, and water quality. The number of additional wells, beyond the additional four planned, will be determined based on these constraints, among others.

Raw Water Pipeline

With a joint venture project between PCWA, the U.S. Army Corp of Engineers (USACE), and the City of Roseville, Roseville intends to utilize the Raw Water Pipeline to access the Roseville's existing American River Middle Fork Project (MFP) raw water supply by constructing a direct pipeline from PCWA's Foothill Raw Water Pipeline to Roseville's Barton Road Water Treatment Plant (reducing reliance on the water

intake at Folsom Reservoir). Roseville anticipates earliest completion of this facility will be the late 2030's or beyond. This project is intended as a redundant way to access already contracted MFP water supplies and mitigate the potential future risk of "dead pool" conditions at Folsom Reservoir's intake structure where almost all Roseville's surface water conveyance capacity is for both CVP and PCWA MFP surface water supplies. *This denotes the project in a point in time and project aspects and details may be subject to change to meet this water supply reliability objective.*

Treated Water Capacity Improvements

Preliminary feasibility assessments are being conducted to evaluate future treated water capacity improvements in PCWA's and Roseville's systems, including shared interties to build more capacity to serve water demands to Roseville, in case there is an emergency, or in the event that Roseville experiences a constriction of water supply deliveries due to "dead pool" conditions at Folsom Reservoir. *This denotes the project in a point in time and project aspects and details may be subject to change to meet this water supply reliability objective.*

Projects at Folsom Reservoir

Support water access projects at Folsom Reservoir that increase intake infrastructure redundancy and reduce the risk posed to water supplies by potential future "dead pool" conditions.

The Folsom Reservoir Raw Water Delivery Reliability Project seeks to improve the reliability of delivery of senior water rights by Reclamation pursuant to settlement contracts for CVP water from Folsom Dam to the City of Folsom, Roseville, and SJWD. These three entities (collectively, Partners) share a single municipal and industrial (M&I) water supply intake within Folsom Dam that can become inoperable because of mechanical/structural failure, disaster, or low reservoir water levels. The ARBS, recently prepared by Stantec in collaboration with Reclamation and water purveyors in the region, projected that climate change will likely worsen with associated impacts to the American River watershed, including deterioration of water supply and delivery reliability for the Partners.

The project objectives are to develop engineering alternatives to secure a reliable water delivery system from Folsom Reservoir under a wide range of hydrologic conditions and emergencies to meet the Partners' demand requirements during:

1. Planned outages for maintenance of Reclamation facilities,
2. Unplanned outages, and
3. Low lake levels potentially occurring under drought conditions.

The Partners have been evaluating multiple alternatives for redundant intake structures and pump stations or siphons located at/or in the vicinity of the Folsom Reservoir. Additional future meetings and efforts between the stakeholders and Reclamation are necessary to arrive at the best-fit solution for the stakeholders, which would further clarify project concepts, implementation logistics, potential cost optimization, funding opportunities, and proponent responsibilities.

RiverArc Project

With investment in the RiverArc Project, Roseville intends to secure 20 MGD (22,403 AFY) of Sacramento River surface water in the 2030's; and an additional 37 MGD (41,445 AFY) in the 2040's, as an alternative to diverting water from the American River in dry or drought conditions. Once operational, this project

could significantly reduce diversions from the American River by up to 57 MGD (63,848 AFY). This alternative CVP supply diversion will be delivered via new transmission mains to Roseville's potable water distribution system in the western side of Roseville. The current project partners are in the very early stages of the project, developing the Environmental Impact Report (EIR) and project description. An analysis to determine whether Sacramento River water will be available for diversion at this facility under a wide range of hydrologic conditions will be conducted as part of the CalSim modeling portion of the EIR. CalSim is the model used to simulate SWP and CVP operations. These findings from the EIR should also be incorporated into the ARCAP analysis. The final project size and scope will depend on EIR findings, project costs, and Roseville's water reliability needs at the time of project implementation.



WATER FORUM AGREEMENT 2050

City of Sacramento Purveyor Specific Agreement

Updated: December 19, 2025

The City of Sacramento (City) is committed to supporting good stewardship of the American River watershed and recommits its membership in the Water Forum as a model for this effort. The City will continue its advocacy for the health of the river through actionable, meaningful efforts supporting cold water carry-over at Folsom reservoir, the Modified Flow Management Standard (MFMS), habitat restoration efforts, a new temperature control device at Folsom, and advocacy at the federal level with our U.S. Bureau of Reclamation (Reclamation) partners to balance the Water Forum coequal objectives. Achieving the co-equal objectives requires action every year. The City will also continue its commitment to water affordability, water efficiency and to “house” the many administrative functions of the Water Forum as a City entity to support the greater good of a healthy watershed. The Water Forum has endeavored to provide “peace on the river” while knowing that a healthy water supply is reliant upon a healthy river.

Purveyor Background

Service Area

The water system began providing service in the City in approximately 1854. Today, the City’s retail water service area covers approximately 63,182 acres within a boundary that is largely contiguous with the City limits. The Sacramento Suburban Water District (SSWD) serves a small portion of City residents and businesses on the eastern side of the City, and the water system serves a number of customers in the unincorporated portion of the County of Sacramento (County) adjacent to the service area of California American Water (Cal Am). The population within both areas is roughly equivalent. The City wholesales water to Cal Am, SSWD, Natomas Unified School District (NUSD), and Sacramento County Water Agency (SCWA) for service to Sacramento International Airport and Metro Air Park, a 1,320-acre business park, and wheels water to the SCWA for the South Sacramento Zone 40 service area. The differentiation between the terms “wholesale” and “wheeling” are a function of water rights accounting. In either case, the City is treating and delivering potable water through its distribution system to those customers. In addition to SSWD, Cal Am, and SCWA, additional water agencies such as Tokay Park Water Company, Golden State Water Company, and Florin County Water District share (in whole or in part) the approved place-of-use (POU) to receive surface water from American River entitlements through potential wholesale arrangement.

The City uses the same surface water treatment facilities, groundwater wells, storage tanks, pumping facilities, and distribution/transmission pipelines to deliver water to retail, wholesale, and wheeling customers. The water system operates as a single network, with supplies from one source of water being interconnected within the system to meet demands.

Water System Facilities

The water system includes two surface-water treatment facilities, groundwater wells, storage facilities, pumping facilities, and distribution/transmission pipelines. The City maintains eight metered wholesale/wheeling connections to adjacent agencies and 21 emergency interties.

Water Treatment Plants

The City treats surface water diverted from the Sacramento and American Rivers through the Sacramento River Water Treatment Plant (SRWTP), while the E.A. Fairbairn Water Treatment Plant (FWTP) treats surface water diverted from the American River.

Sacramento River Water Treatment Plant

Water diversion and treatment from what is now known as the SRWTP began in the early 1900's. By 1924, with improvements to filtration and chlorination, the capacity was 32 million gallons per day (MGD), followed by a near-term doubling to 70 MGD. The facility treats water diverted approximately one-half mile downstream of the American River confluence with the Sacramento River. A new intake structure was completed in 2004. The most recent major project in 2016 returned SRWTP peak capacity to 160 MGD. The project included rehabilitation and replacement work on the sedimentation basins, high-service pump station, filters, solid dewatering facilities, and electrical switchgear. Operation of SRWTP at 160 MGD is limited to the period from May 15 to September 30 of each year, which includes the warmer summer months when peak capacity is needed. At other times of the year the treatment is limited to 120 MGD. The actual available capacity of SRWTP may also be adversely affected by drought conditions if low river elevations reduce the operating efficiency of supply pumps. A project to rejuvenate aging infrastructure and potentially add advanced water treatment technology to adapt to climate-induced water quality changes is being planned and environmental documentation is being developed, along with potential expansion to meet future demands.

E.A. Fairbairn Water Treatment Plant

The FWTP is located on the American River approximately seven miles upstream of the confluence of the American and Sacramento Rivers. The FWTP began operation in 1964 and has a current design capacity of 200 MGD following an expansion completed in 2005. Currently, the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) permitted the FWTP with a capacity of 160 MGD. The facility is further constrained by "Hodge" and "Conference year" conditions (described in greater detail later in this document) that the City agreed to in the original Water Forum Agreement and subsequently added to its binding water rights documentation with the SWRCB. Currently, pursuant to the City's capital infrastructure planning schedule, facility production is maintained at 100 MGD or below. A project to rejuvenate aging infrastructure and potentially add advanced water treatment technology to adapt to climate-induced water quality changes is currently being planned and environmental documentation is being developed.

Groundwater Wells

The City currently has 22 wells permitted by DDW in the North American Subbasin and the South American Subbasin that are connected to the potable water system, with a current production capacity of approximately 5-20 MGD. The majority of these wells have been in service for 50-80 years and are nearing the end of useful life. The range in capacity is largely a function of recurring maintenance and adaptation to evolving water quality standards. Between 2015 and 2024, the City completed a groundwater infrastructure master plan and Environmental Impact Report for the systematic replacement of nearly all its well inventory. That information is incorporated into approved Groundwater Sustainability Plans in the North and South American Subbasins. Capacity and flexibility of operations is expected to change over time as facilities are replaced. These forecasted changes are also included in the relevant Groundwater Sustainability Plans and developing programs like the Sacramento Regional Water Bank.

The City maintains a policy that irrigation areas of greater than 5 acres consider utilizing non-potable irrigation wells or recycled water for dedicated irrigation purposes. Examples of this can be found at locations such as William Land Park, Sacramento Historic City Cemetery, or Bartley Cavanaugh Golf Course. A small number of City residents and businesses own and operate private wells for onsite use. The City does not manage, test, control, or meter privately owned wells.

Additional Sources of Water

Two of the City's previously described wholesale interties are designed to allow both the delivery of water from the City to the adjacent water agency and the receipt of potable water from those agencies to the City. Both facilities are permitted by the State of California. The first is with SSWD, which can deliver up to 17 MGD of potable groundwater to the City. The second intertie is with SCWA which can deliver up to 10 MGD of groundwater. The City would look to these facilities to support programs that leave water in the river during periods of water scarcity such as groundwater substitution transfers, leaving surface water in the ecosystem without rediversion under an agreement with the State of California, to augment City-operated supply facilities in the event of an emergency, and to support the development of more robust region-wide conjunctive use programs (e.g., Sacramento Regional Water Bank).

Surface Water Supplies

Between the City's various surface water entitlements and agreements with other parties, the following table identifies the volumetric limits of its water supplies per City contract with Reclamation. The City also maintains a history of diverting water from the Sacramento River under "Pre-1914" entitlements, but that is exclusive to the Sacramento River. American River entitlements can be taken at the FWTP or the SRWTP facilities. The Sacramento River permit (Permit 992) and two of the four American River permits (Permits 11358 and 11361) provide for the direct diversion of water. Two of the four American River permits (Permits 11359 and 11360) provide for both direct diversion as well as rediversion of previously stored water in various reservoirs from Nimbus to the upper reaches of the American River Basin.

Table 1. Surface Water Supplies – Projected

Water Source	Projected Water Supply Volume				
	2025	2030	2035	2040	2045
Sacramento River	81,800	81,800	81,800	81,800	81,800
American River	228,000	245,000	245,000	245,000	245,000
Total	309,800	326,800	326,800	326,800	326,800

Notes: Units are in acre-feet (AF). The above values are non-inclusive of City Pre-1914 water supplies

Pre 1914 Rights

Independent of the Sacramento River and American River permits, the City claims and maintains a Pre-1914 entitlement for 75 cubic feet per second (CFS) with a priority date of 1849. The POU for Pre-1914 rights is not limited in the same fashion as other City permits.

Reclamation Operating Contract

The City's ability to use its permits for the Sacramento and American Rivers is subject to the provisions of the "Operating Contract Relating to Folsom and Nimbus Dams and Their Related Works and to Diversions of Water by the City of Sacramento," Contract No. 14-06-200-6497, entered in 1957 by the City and Reclamation. Under the contract, the City agreed to limit its combined diversion under its American River water right permits to a maximum rate of 675 CFS, and a maximum amount that may scale up to 245,000 acre-feet (AF) a year by the year 2030. The City also agreed to limit diversion under its Sacramento River post-1914 water right permit to a maximum rate of 225 CFS and a maximum amount of 81,800 MG per year. This limits the City's total diversions of Sacramento and American River water under the contract to 326,800 AF per year. In return, the Operating Contract requires Reclamation to operate its facilities to make enough water available in the rivers to enable the agreed-upon diversions by the City. The agreement is permanent and not subject to renewal.

Surface Water and Groundwater Management

The production facilities in the water system are interconnected and operated in a dynamic fashion. The City utilizes its various facilities to meet demands and other water resources mandates. Operational limitations to meet minimum levels of service (e.g., water pressure, water quality, fire suppression support) for customers do exist. So, while certain flexibility exists to shift between sources, it is not without limit.

Generally, the City equally balances surface water operations between the SRWTP and FWTP to optimize level of service delivery to customers and reduce the need for any one facility to operate at unusually high energy load. That said, the City has, and intends to continue, a practice of preferentially shifting from either SRWTP or FWTP to maintain the level of service needs, if one river or another is under pressure, or if raw water quality is notably different. The need to deliver clean, safe drinking water with an adequate level of service per all legal, permit, and policy direction of the Sacramento City Council will remain at the forefront of operational decisions of the water system.

The City includes the instantaneous (Hodge) and annual diversion limitations (Unimpaired Inflow to Folsom Reservoir (UIFR) < 400TAF) at FWTP as part of its long-range infrastructure planning.

When conditions allow, the City will reduce overall surface water operations and preferentially shift to groundwater. Drivers for this action may be overall poor surface water hydrologic conditions, opportunities for groundwater substitution transfers that leaves surface water in the ecosystem until delivered to a downstream user, managed actions as part of the Sacramento Regional Water Bank whereby the City will extract groundwater that has previously been recharged and stored in the basin, or a recently approved set of agreements with the State of California to provide the additional surface water for ecosystem benefits without a downstream diverter. To provide a sense of scale, in the drier periods of 2018 and then 2020-2022, City water demand served by groundwater rose from a historic 15-20% to approximately 35%. This shift benefits the achievement of the coequal objectives and all steps to expand on the ability to make this shift are a priority.

In any set of conditions that indicate a preference to shift toward groundwater, the City engages with local Groundwater Sustainability Agencies to ensure the extraction pattern (either from its own wells or through receipt of groundwater from others) is consistent with local Groundwater Sustainability Plans. Groundwater substitution transfers and Sacramento Regional Water Bank actions require additional groundwater monitoring to ensure no other user of groundwater is impacted and to further ensure consistency with local groundwater sustainability plans.

With the Regional Water Authority as the leading voice, the City of Sacramento, along with other local purveyors, is supporting the statewide Healthy Rivers and Landscapes Proposal (HRLP) to provide increased river flows during Dry and Critically Dry periods (Sacramento Valley Index D1641) and expand habitat in the Sacramento and San Joaquin Rivers and Bay-Delta. The proposal, if approved by SWRCB, would serve as an implementation pathway for an updated Bay-Delta Plan and would present itself as a priority for the City of Sacramento. In absence of that approval, the City of Sacramento remains obligated to provide environmental flows after a series of agreements were executed in 2023 and 2024 that guarantee a shift from surface water to groundwater when called upon by the State for ecosystem benefits.

In acknowledging the potential benefits of leveraging groundwater as a resource during periods of surface water scarcity, the City also supports maintaining a sustainable groundwater basin in the North and South American Subbasins. Seeking opportunities to recharge that resource requires equal focus if groundwater is to be present when most needed. Maintaining consistency with local Groundwater Sustainability Plans and meeting the requirements of the Sustainable Groundwater Management Act present legal boundaries that the City remains cognizant of.

The City is also an active supporter and participant of the developing “Sacramento Regional Water Bank”, with the Regional Water Authority as the lead organization. The stated goals of the Water Bank program at the writing of this Purveyor Specific Agreement (PSA) are as follows:

“The GOAL of the Water Bank is to expand conjunctive use, thereby increasing water banking operations throughout the region to:

- 1) Improve long-term regional reliability and provide statewide water supply opportunities when possible; and*

2) *Support healthy ecosystem function on the lower American River*

Given the totality of anticipated climate change pressures on water resources, the anticipated need to respond more dynamically to hydrologic conditions, participate in opportunities to leave surface water in the ecosystem until diverted elsewhere, and to ensure the success of the recently executed agreements to make environmental water available without a downstream diverter through shifts to groundwater, the City is taking the following steps:

- Expanding the capacity of City groundwater infrastructure through a comprehensive groundwater well replacement program and identifying connections to others that can assist in leveraging groundwater as a strategic resource to enhance water supply reliability and to provide ecosystem benefits.
- Within the Hodge or Conference year constraints, ensure groundwater recharge actions are occurring in the basin to maintain readiness for the turn to groundwater in the poorer surface water conditions.

To the degree that extremes in weather from wet and cold to dry and hot presented by climate change occur, so too do the needs for flexible operations to adapt to such changing conditions.

The City anticipates future additions to surface water infrastructure. As part of the 2000 Water Forum Agreement, and the expansion of FWTP, the City also committed to the construction of other facilities such as expansion/rehabilitation of the Sacramento River Water Treatment Plant and river intake to assure that a reliable alternative supply (groundwater, pump back, and/or diversion from the Sacramento River) is available whenever it is needed. The City completed a rehabilitation project at SRWTP in 2007, which set aside land for future expansion, and has initiated environmental review for the expansion of SRWTP and other projects (see “Water+” below). Extensive evaluations on the viability of a previously contemplated “pump-back” project, which would have entailed a new intake on the Sacramento River and a large raw water pipeline connecting the new intake with FWTP have identified that project as infeasible.

Demand Management

The City’s baseline water usage per capita for the purpose of compliance with SBX 7-7 was 282 gallons-per-capita-per-day (gpcd) (years 1996-2005), with a 2020 target of 225 gpcd. At the SBX7-7 compliance date of 2020, the City customer usage was down to 169 gpcd, thereby meeting legislative mandates. For the last several years, the City has hovered around 150 gpcd. This was achieved through a variety of means including an accelerated Advanced Metering Infrastructure (AMI) metering program and expanded water conservation incentive and outreach efforts.

Moving forward, through the Long Term Water Conservation Framework legislation (SB 606 and AB 1668), the State of California has created real-time targets for water suppliers, including the City, that involve a dramatic water use reduction target over the next 15 years tied to a residential indoor water use reduction as well as a landscape water efficiency target that involves reporting on landscape water demand as compared to landscape water need as calculated by the State. This system-wide budget-based approach also includes a reduction in water suppliers’ system water loss (gallons per connection per day). To achieve these targets, the City anticipates that it will need to dramatically expand customer participation in its programs and anticipates making refinements to existing programs as well as adding programs that will achieve these requirements. An analysis and prioritization of these potential

programs is underway and engagement with Water Forum membership is ongoing. Draft and final work products will be provided to the Water Forum membership.

Current City conservation programs elements are advertised on the City web page.

<https://www.cityofsacramento.gov/utilities/water-conservation>

While subject to change as program effectiveness is evaluated, examples of likely program enhancement beyond existing include:

- Monitoring and analysis of meters dedicated solely to irrigation
- High efficiency toilet retrofit programs
- Landscape rebate programs
- Enhanced leak repair incentive programs
- Enhanced water and energy partnership rebates
- Enhanced residential water surveys

Water+

<https://www.cityofsacramento.gov/utilities/projects/waterplus>

The Department of Utilities in 2021 launched Water+, a program designed to help ensure safe, high-quality drinking water supply for customers. The program will help protect long-term drinking water reliability, resiliency to climate change, and help meet future retail and wholesale water demands of the City of Sacramento POU.

Water+ has several goals, which include:

- Improving water treatment methods to meet changing water quality in the Sacramento and American rivers as well as changing drinking water regulations.
- Improving the safety and reliability of the City's surface water treatment plants -- the E.A. Fairbairn Water Treatment Plant and the Sacramento River Water Treatment Plant.
- Providing consistent drinking water treatment and distribution to City customers.
- Increasing water treatment supply and capacity to meet future water demands.
- The program will replace and expand aging facilities, improve water treatment methods to be safer and more environmentally friendly, and make overall system improvements.

The first phase of Water+ includes the Treatment Plants Resiliency and Improvements Project, which will help improve the long-term safety, reliability and resiliency of the City's water supply, and address several issues defined in the City's 2035 General Plan.

The project will feature several water treatment improvements, including:

- Replacing aging infrastructure and facilities that are reaching the end of their useful lives
- Improvements to the treatment process at both water treatment facilities
- A new Sacramento River water intake structure and new pipelines to SRWTP to allow for increased future diversions and greater reliability of existing diversions
- Improvements to water transmission and distribution systems near SRWTP

River Arc

Concurrent with the planned expansion of SRWTP, a group of local water agencies with the support of select Water Forum environmental members have initiated early planning for a new facility on the Sacramento River. The RiverArc Project is an ecosystem, capacity, and resiliency project that will provide significantly improved backup and flexibility to water sources available for City customers, and to surrounding communities. The project would divert water through an existing water intake structure on the Sacramento River to offset water currently planned to be diverted from Folsom Reservoir or from the American River at the Placer County Water Agency (PCWA) pumping plant near the Auburn Dam site. Reduction of draws from the American River has been identified as a potential adaptation measure for climate change impacts to the lower American River ecosystem and water supply reliability in the American River watershed as described in the 2022 American River Basin Plan. In 2015 and 2021, Folsom Reservoir levels were very close to not being able to meet minimum municipal water supply intake elevations. The flow of the Sacramento River, which is many times the size of the American River, has the capacity to reduce reliance on the American River.

The RiverArc Project presents a more complex governance structure with multiple participating agencies, is located further from the City's core water transmission infrastructure, requires additional staffing, and may present a reduced financial economy of scale that a SRWTP expansion could offer. However, the City recognizes the potential benefits to the region RiverArc could bring to the Water Forum coequal objectives and the potential to support the Water Forum 2050 initiative. At present, the City is focusing on RiverArc as the next diversion and treatment capacity project, ahead of a SRWTP expansion with the understanding and expectation of ongoing Water Forum signatory support.

Current Diversions

Table 2. Current Diversions

Year	FWTP	SRWTP	Total Surface Water	Groundwater	Imported Groundwater	Wholesale/ Wheeling	Total Retail Water	Total Water
2006	62,827	55,848	118,676	18,476	-	6,512	130,640	137,151
2007	46,888	83,568	130,457	19,570	-	12,333	137,694	150,027
2008	56,264	64,029	120,293	20,388	-	8,182	132,499	140,681
2009	53,067	52,669	105,736	20,056	-	6,176	119,616	125,792
2010	53,632	44,594	98,227	18,433	-	5,254	111,406	116,660
2011	41,053	54,738	95,791	18,109	-	5,279	108,621	113,901
2012	44,259	63,452	107,712	14,617	-	8,075	114,253	122,328
2013	48,319	58,336	106,655	12,834	244	2,286	117,447	119,733
2014	31,899	48,903	80,802	14,637	80	262	95,257	95,519
2015	32,155	39,511	71,666	13,706	659	1,199	84,832	86,031
2016	28,523	40,621	69,144	18,008	-	958	86,194	87,152
2017	34,636	32,836	67,472	26,348	-	2,460	91,360	93,820
2018	22,300	40,604	62,904	25,963	4,028	1,027	691,868	92,895
2019	38,477	37,033	75,510	21,869	-	8,465	88,914	97,379
2020	31,337	39,576	70,913	21,140	8,426	3,607	96,872	100,479
2021	23,486	52,021	75,507	18,837	974	4,518	90,800	94,318

Water Forum Agreement 2050

2022	27,084	34,796	61,880	19,024	6,610	1,777	85,737	87,514
2023	30,437	47,571	78,007	12,232	28	9,589	80,678	90,267
2024	41,096	41,749	82,845	9,858	0	11,102	81,601	92,703

- All values in acre-feet per year
- Diversion and delivery of SCWA water through COS facilities (Wheeling) is only from Sac River facilities

Future Projected Diversions

Table 3. City of Sacramento Projected Water Demands (from 2020 UWMP)

Use Type	Additional Description (as needed)	Projected Water Use* Report To the Extent that Records are Available				
<u>Drop down list</u> May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		46,913	47,491	48,069	48,647	51,098
Multi-Family		15,334	16,085	16,837	17,588	18,474
Commercial	Includes Industrial Use Type	17,871	19,068	20,266	21,464	22,545
Institutional/Governmental		6,094	6,200	6,306	6,412	6,736
Landscape		5,087	7,144	9,200	11,257	11,824
Other Potable		2,366	4,054	5,742	7,430	7,804
Losses		13,767	13,767	13,766	13,766	14,460
TOTAL		107,432	113,809	120,187	126,564	132,942
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Units are in acre-feet (AF).						
Use Type	Additional Description (as needed)	Projected Water Use * Report To the Extent that Records are Available				
<u>Drop down list</u> May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool.		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Sales to other agencies	SCWA - Airport	1,056	1,400	1,400	1,400	1,400
Sales to other agencies	SCWA - Zone 50 Metro Air Park	2,545	5,000	5,000	5,000	5,000
Sales to other agencies	SSWD - Arden	1,945	3,500	14,782	26,064	26,064
Sales to other agencies	SSWD - Northridge	0	0	2,130	4,260	4,260
Sales to other agencies	Golden State Water Company	0	0	518	1,037	1,037
Sales to other agencies	Del Paso Manor Water District	0	0	672	1,344	1,344
Sales to other agencies	Cal Am Arden	457	913	1,384	1,855	1,855
Sales to other agencies	Cal Am Fruitridge	4,479	8,692	8,692	8,692	8,692
Sales to other agencies	Cal Am Parkway	2,803	4,480	6,258	8,036	8,036
Sales to other agencies	Cal Am Rosemont	3,591	6,160	8,163	10,166	10,166
Sales to other agencies	SCWA - Arden Park	0	0	2,106	4,211	4,211
Sales to other agencies	SCWA - Zone 41 CSA Wholesale	4,800	9,600	10,122	10,644	10,644
Sales to other agencies	SCWA - Zone 41 NSA, CSA, and SSA	6,661	13,321	12,836	12,350	12,350
Sales to other agencies	Tokay Park	0	0	47	95	95
Sales to other agencies	Florin County Water District	0	0	919	1,837	1,837
Sales to other agencies	Natomas Unified School District	69	69	69	69	69
TOTAL		28,406	53,135	75,098	97,060	97,060
* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.						
NOTES: Units are in acre-feet (AF). Projected wholesale water use estimates were developed in the on-going Water Master Plan Update. 2030 wholesale projected water use is equal to the probable estimate (average likely water delivery in the on-going Water Master Plan Update) of future wholesale demands. 2040 and 2045 wholesale projected water use is equal to the maximum estimate assuming that all water agencies in the American River Place of Use Boundary receive wholesale water. Interim years (2025 and 2035) were linearly interpolated. The City estimates that it will deliver approximately 69 AF to Natomas Unified School District.						

Drier Conditions Management

In all years when the California Department of Water Resources (DWR) annual projected unimpaired runoff into Folsom Reservoir is greater than 550,000 AF, or the March through November projected unimpaired inflow into Folsom Reservoir is greater than 400,000 AF, the City may divert water at FWTP in accordance with the following criteria.

1. Diversion up to 310 cfs (200 million gallons per day [MGD]) so long as the flow bypassing the diversion at FWTP is greater than the Hodge Flow Criteria⁴⁶.

Table 4. Hodge Flow Criteria

Period	American River Hodge Flow Criteria, cfs
October 15 through February	2,000
March through June	3,000
July through October 14	1,750

2. Whenever flow bypassing the diversion at the FWTP is lower than the Hodge Flow Criteria, City diversions may not be greater than the following:

Table 5. Maximum Rate of Diversion to the FWTP During Hodge Flows

Period	Maximum Diversion	
	cfs	MGD
January through May	120	77.6
June through August	155	100.2
September	120	77.6
October through December	100	64.6

City water diverted at FWTP in drier conditions in accordance with the foregoing limitations could be used anywhere within the City's authorized POU as it exists now and in the future.

Provision for Use of FWTP Design Capacity Over 100MGD

The City added the Hodge restrictions to FWTP to its surface water entitlement in October 2010 following approval of the original Water Forum Agreement. The goal of these restrictions was to ensure adequate flow for the fishery at certain times of the year. This goal is embedded in the Flow Management Standard. The prior Water Forum effort also anticipated a potential pathway for collective support of all caucuses for the removal or amendment of these terms.

If the City and the ongoing Water Forum successor efforts agree that some combination of actions could provide a net benefit to the lower American River and allow for better use of the capacity added to FWTP (over the 100 mgd prior to the first Water Forum Agreement) in 2000, the City will have the

⁴⁶ As no stream flow gauge currently exists in a location coterminous with FWTP, the Fair Oaks gauge, as maintained by USGS, is typically used as a surrogate measurement point.

support of all signatories if it chooses to pursue regulatory approvals. The implementation of the MFMS is actively planned into Reclamation's operations and augments D893-flows as being protective measures consistent with Water Forum coequal objectives and provides an example of improved conditions.

Driest Conditions Management

In extremely dry years (i.e., years in which the DWR annual projected unimpaired inflow into Folsom Reservoir would be 550,000 acre-feet annually [AFA] or less, also referenced as the March through November projected unimpaired flow into Folsom Reservoir being less than 400,000 AF) the City would limit its diversions of city water at the FWTP to not greater than 155 cfs and not greater than 50,000 AFA. Any additional water needs would be met by diversions at other locations and/or other sources.

City water diverted at the FWTP in extremely dry years in accordance with the foregoing limitations could be used anywhere within the City's authorized POU as it exists now and in the future.

Critically Low Storage Conditions

In conjunction with aforementioned commitments to reduce diversions at FWTP when Hodge Flows are present (see drier year actions) or the March through November projected unimpaired flow into Folsom Reservoir being less than 400,000 AF (see driest year actions), the City will continue to support infrastructure at the FWTP intake structure that will allow operation near the low minimum flow requirement of the MFMS at 500 cfs. 500 cfs passing the FWTP is understood to correlate with the river elevation necessary to meet the minimum design of the intake pumps to avoid adverse operation. The City is committed to this balanced approach which is intended to support conservation of storage in Folsom and a minimum release pattern for ecosystem needs.

Project List

It is understood that to support the coequal objectives and mitigate challenges facing the region under future conditions, structural and non-structural projects will be needed. The City must prioritize projects that maintain the affordability of water in advancing the coequal objectives. The experience of the last couple of decades has shown that the extremes of climate change are the biggest threat to the coequal objectives and that the ability of the City to advocate for improved operations of the State and Federal projects, both internally and through local partnerships to advance conjunctive use, will be the most effective way from a cost and sustainability standpoint, to enhance the achievement of the coequal objectives. Actions can be taken in all years to improve water reliability from the most environmentally beneficial source.

Structural

The following infrastructure projects will support efforts to implement the City's proposed PSA, and to support the coequal objectives.

- New or improved interties with other purveyors, in particular ones that promote groundwater recharge and conjunctive use and water supply reliability
- Rehabilitation and modernization of existing water facilities

- New or expanded facilities on the Sacramento River (e.g., RiverArc or SRWTP expansion) and treatment, storage, and conveyance systems necessary to provide clean, safe, potable water
- New groundwater facilities consistent with adopted groundwater sustainability plans and the City of Sacramento's completed California Environmental Quality Act (CEQA) process to modernize its groundwater facilities
- Expanded groundwater monitoring infrastructure and data transparency platforms
- Projects as defined in basin groundwater sustainability plans
- Structural and Non-structural projects and programs to ensure success of the Healthy Rivers and Landscape Program (i.e., Voluntary Agreement) for the American River region or a similar tributary-specific program that improves the ecosystem, protects local existing water entitlements for participants in that program, and maintains better cold water pool conditions in Folsom and the lower American River.

Non-Structural

- Agreements with neighboring purveyors for conjunctive use opportunities and water supply reliability
- Continued water use efficiency programs and funding support for the City, including expanded relationships and/or agreements to facilitate the City's Climate Action Plan and successful implementation of water use efficiency targets
- Water transfers consistent with groundwater sustainability plans and the California Water Code
- Points of diversion on Sacramento River for City of Sacramento
- Implementation of longstanding contractual agreement for water exchange between City and the Sacramento Municipal Utility District (SMUD) for SMUD's Rancho Seco water demands
- Extension and/or License of Existing Water Entitlements for the City of Sacramento
- Support for identifying underground storage as a beneficial use of surface water
- Changes in water rates and fees, as compliant with legal requirements to support projects consistent with the coequal objectives (e.g., water efficiency, climate change adaptation projects, and water supply reliability projects)
- Continued staffing support, when requested, for implementation of lower American River ecosystem projects (e.g., Machine Operators)
- Additional funding support from the City for science and ecosystem benefits as part of the 2024 Healthy Rivers proposal to SWRCB or a tributary-specific alternative for the American River region
- Local and Statewide advocacy for the MFMS on the lower American River and improved carryover storage within Folsom Reservoir

- Management actions as defined in basin groundwater sustainability plans
- Periodic 5-year groundwater sustainability plan evaluations and updates, compliant with SGMA
- Consolidation of water districts as approved by the State of California

Caveats and Assurances

1. All signatories to the *Water Forum Agreement* will fully endorse City of Sacramento water entitlements for the benefit of the coequal objectives. This includes the use thereof and extension and/or license under SWRCB procedures. If the SWRCB or the Legislature proposes global changes to water rights, each Water Forum member may decide what position to take on the proposal without rescinding agreed upon support for City of Sacramento water entitlements for the benefit of the coequal objectives.
2. Recognizing the commitments executed by the City of Sacramento in the first Water Forum Agreement, including changes made to its water entitlements, and in recognition in the 2000 Water Forum Agreement of full signatory support for City of Sacramento projects to divert, treat, and serve from the Sacramento River, all signatories continue to endorse this effort with the following detailed delineations:

- a. Fully endorse (as defined in the *Process for Project Endorsement* section of the Water Forum 2050 Agreement) the City's Water+ Project, including the diversion, treatment, storage, and conveyance systems necessary to provide clean, safe, potable water, as well as the funding and processes necessary to implement this project. The Project will partially recover diversion impacts to City stemming from the first Water Forum, and as contemplated by the 2000 Water Forum.

<https://www.cityofsacramento.gov/utilities/projects/waterplus>

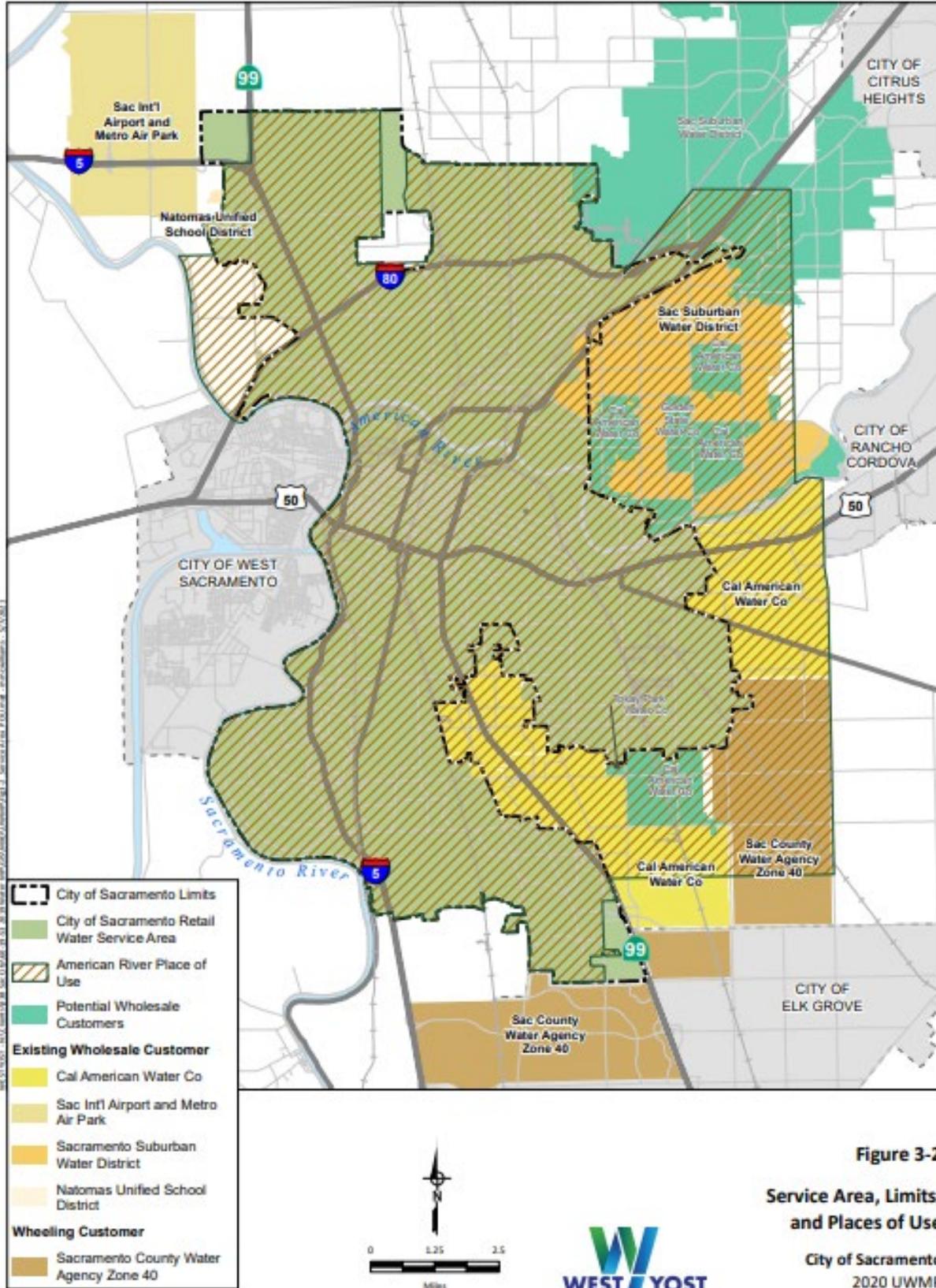
- b. Fully endorse City of Sacramento efforts to develop environmental documentation of the RiverArc project and conditionally endorse (as defined in the *Process for Project Endorsement* section of the Water Forum 2050 Agreement) the implementation of the RiverArc Project, subject to environmental analysis of the impact to the Sacramento River for the City of Sacramento, including the points of diversion modifications, diversion, treatment, storage, and conveyance systems necessary to provide clean, safe, potable water, as well as the funding and processes necessary to implement this project. Upon completion of CEQA analysis all signatories agree that an official determination on full endorsement will occur and Water Forum documentation and positions of support will be updated to reflect this determination no later than six months from publications of environmental Notice of Determination or equivalent filing. It is the intention of all signatories to fully endorse this project if the environmental analysis and Notice of Determination remain consistent with the Notice of Preparation and the outcomes sought in support of the Water Forum objectives. The City intends to provide outreach engagement to the Water Forum on project development and analyses prior to completion of the CEQA analysis.

<https://www.cityofsacramento.gov/utilities/projects/riverarc>

3. All signatories conceptually support (as defined in the *Process for Project Endorsement* section of the Water Forum 2050 agreement) all other structural and non-structural projects contained within this PSA and the funding and processes necessary to implement them with the exception of two non-structural projects identified above: 1) Groundwater Substitution Transfers, and 2) Implementation of contractual agreement for water exchange between City and SMUD.
4. Endorsement of water entitlements in this PSA means that signatories will expend reasonable efforts to:
 - a. Speak before stakeholder boards and regulatory bodies,
 - b. Provide letters of endorsement,
 - c. Provide supportive comments to the media
5. The City of Sacramento acknowledges concern of some signatories that voluminous requests for endorsement for routine operational and maintenance activities could apply pressure to limited resources. The City of Sacramento does not expect to pursue full endorsement for all projects with conceptual endorsement per this PSA. The City will maintain sensitivity to fellow members' capacity and will limit requests for full endorsement to the most impactful matters contained with this PSA and the related work of the Water Forum.
6. All signatories will support the funding of the City's water utility operations and capital investment/reinvestment. Endorsement of funding in the context of this PSA is not intended to limit future Water Forum engagements on how rates and fees are determined within applicable laws.
7. Any solution that provides for future needs will have costs. New diversion, treatment, and distribution facilities, wells, conservation programs, and required environmental mitigation will be needed. This PSA identifies that these solutions must be equitable, fiscally responsible, and make the most efficient use of the public's money. Prioritizing affordability of these programs and alignment with state laws surrounding appropriate use of water rate-payer dollars is supported by all signatories.
8. Water suppliers have both capital costs for facilities and operations and maintenance costs. This PSA recommends that charges imposed to recover capital costs associated with water acquisition, treatment, or delivery be equitable. Any costs for facilities funded through bonds will be recovered as provided by law. In addition, signatories to the Water Forum Agreement agree that operational, maintenance, and replacement costs should be recovered from beneficiaries of the system in accordance with California Government Code Sections 53720 to 53730 (Proposition 62) and California Constitution, Articles XIII, C and XIII, D (Proposition 218) and other laws to the extent they are applicable.
9. All parties acknowledge that language or commitments within this PSA may find themselves in conflict with other documents or regulatory proceedings/direction. Where inconsistencies occur, legally binding documents (e.g., water rights) or direction from regulatory bodies shall govern. Additionally, the Water Forum and versions of the Water Forum 2050 Agreement do not supersede local, state, or federal boards, councils, commissions, or regulatory entities governing water suppliers, or does it present itself as a regulatory body or legally binding agreement.

10. PSA language will have priority over any language in the main Water Forum 2050 Agreement should there be an interpretation that deems the language in the two documents to be in conflict.
11. All Signatories 1) conceptually endorse City of Sacramento alignment of its water operations in support of the Sacramento Regional Water Bank and relevant groundwater sustainability plans, and 2) fully endorse the City's focus to invest in a resilient water system that can be adjusted to advance the Water Forum coequal objectives.
12. Parties shall acknowledge and accept that the Sacramento City Council recently adopted an updated Climate Action & Adaptation Plan and that nothing within this agreement is intended to supersede that action or any successor. Included within that plan is the following: "An environment that feels healthy, with clean air, clean water, and ample access to parks, trees, and other green spaces," is the key to a truly livable city.

Attachment 1 – City of Sacramento Place of Use 2024





WATER FORUM AGREEMENT 2050

East Bay Municipal Utility District Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment for a large part of Alameda and Contra Costa counties. Based on 2010 census data and Association of Bay Area Government's (ABAG) Projections 2040, approximately 1.4 million people are currently served by EBMUD's water system in a 332-square-mile area extending from Crockett on the north, southward to San Lorenzo and portions of Hayward (encompassing the major cities of Oakland and Berkeley), eastward from San Francisco Bay to Walnut Creek, and south through the San Ramon Valley (including Alamo, Danville, and San Ramon). The wastewater system serves approximately 740,000 people in an 88-square-mile area of Alameda and Contra Costa counties along the Bay's east shore, extending from Richmond in the north, southward to San Leandro. EBMUD water customers include residential, industrial, commercial, institutional, and irrigation water users. A map of EBMUD's service area is included in **Figure 1**, sourced from EBMUD's 2020 Urban Water Management Plan (UWMP).

Surface Water and Groundwater Management

Supply Portfolio

In non-drought years, EBMUD primarily serves its customers using Mokelumne River water, local runoff collected in the East Bay reservoirs (San Pablo, Upper San Leandro, and Briones), and recycled water for non-potable uses. During droughts, EBMUD's water supplies are supplemented by diversions from the Freeport Regional Water Authority (FRWA) Intake on the Sacramento River.

Mokelumne River

The Mokelumne River serves a variety of uses, including agriculture, fisheries, hydropower, recreation, and municipal and industrial use. EBMUD has water rights that allow for delivery of up to a maximum of 325 million gallons per day (MGD) from the Mokelumne River, subject to the availability of Mokelumne River runoff and numerous flow release obligations. EBMUD's Mokelumne River flow commitments are determined by hydrology, water rights priorities, agreements with state and federal regulatory agencies, California State Water Resources Control Board (SWRCB) orders and decisions, federal directives, court decrees, and numerous agreements between EBMUD and other Mokelumne River users, both upstream and downstream of EBMUD's Mokelumne River facilities.

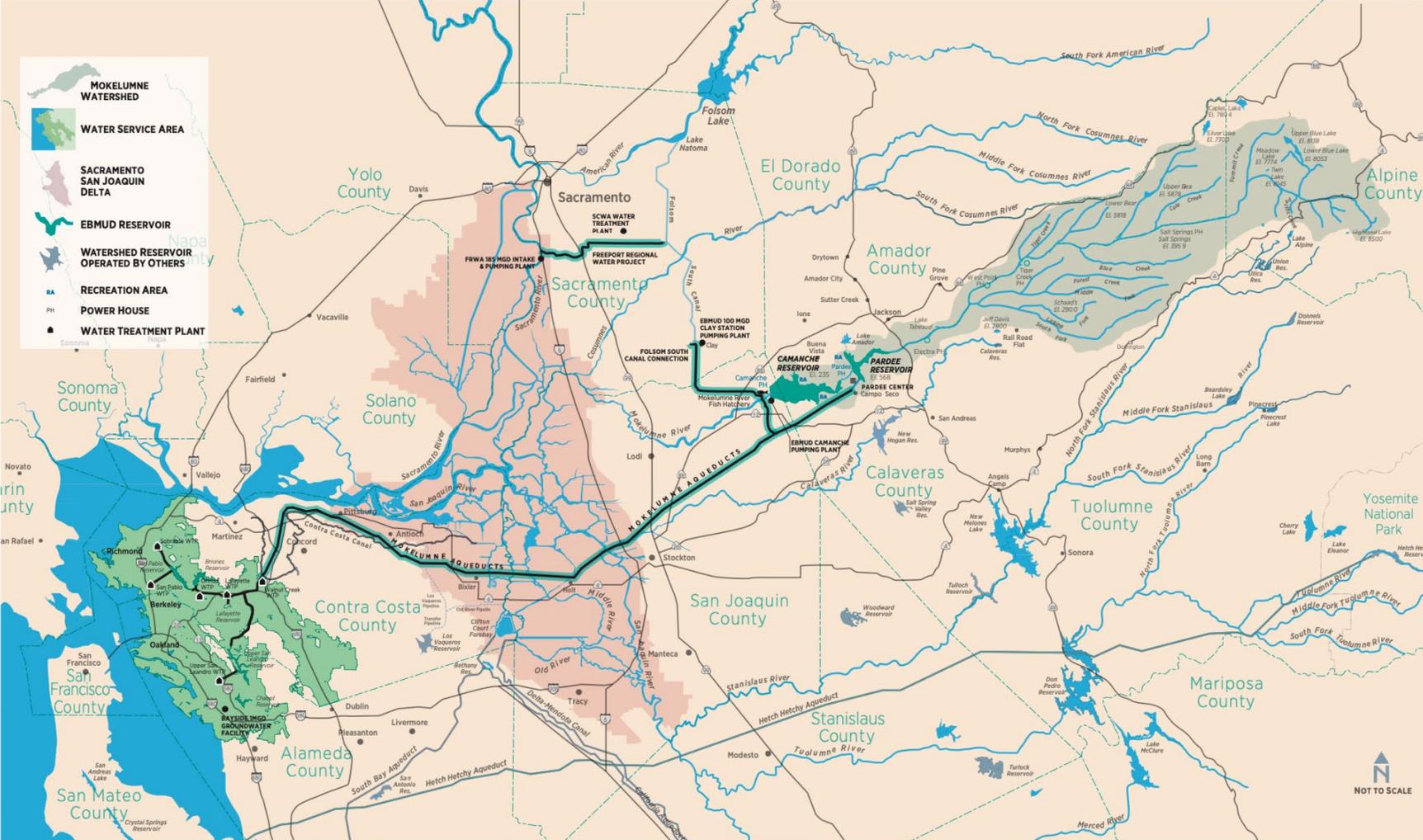


Figure 1. EBMUD Water Supply System (from EBMUD’s 2020 Urban Water Management Plan)

To comply with the requirements of the 1998 Joint Settlement Agreement (JSA) among EBMUD, U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW), EBMUD continues to meet its flow commitment to protect the lower Mokelumne River by providing in-stream flow releases from EBMUD's Camanche Dam to improve fishery conditions. The Mokelumne River provides important habitat for fall run Chinook salmon, which migrate from the ocean and reach the Mokelumne in late summer and early fall to spawn. In the spring, the juvenile salmon then migrate to the ocean, grow, and ultimately return to the Mokelumne two to three years later to spawn. Salmon spawn in the river below Camanche Dam and many also enter the Mokelumne River Fish Hatchery located at the base of EBMUD's Camanche Dam, where eggs are collected, fertilized, incubated, and raised for release in the spring. The Mokelumne River also supports a population of Federally Threatened Central Valley Steelhead. Both the River and Hatchery support the listed population, and based on a robust science plan in recent years steelhead numbers have been trending upward, signifying successful management of the species through collaboration between EBMUD and the fish agencies.

In collaboration with the CDFW, the USFWS, and the National Marine Fisheries Service, EBMUD uses many strategies to protect and enhance Mokelumne River fisheries resources. These strategies include spawning and rearing habitat restoration, screening riparian diversions, conducting a comprehensive science program, and investing in one of the most modern and productive salmon hatcheries in the Central Valley. Additionally, Mokelumne origin salmon comprise approximately 20% to 50% annually of the recreational and commercial catch off the California Coast.

Since implementation of the JSA flow releases and temperature management practices, the Mokelumne River's average salmon returns to the river have more than doubled from 3,636 (1940 to 1997 average) to 11,164 (1998 to 2024 average). **Figure 2** shows the increase in returns of fall-run Chinook Salmon over time, with a record of over 35,000 fish in the 2024 season.

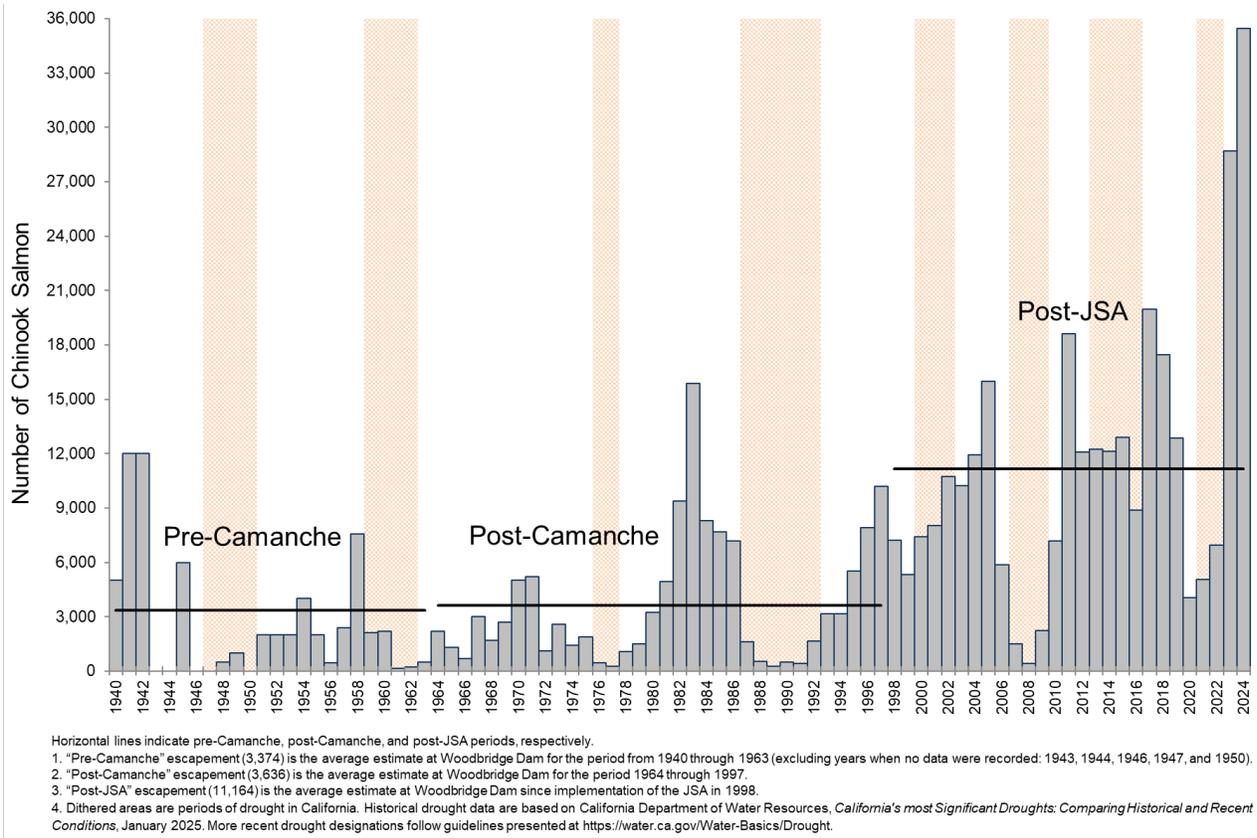


Figure 2. Returns of fall-run Chinook Salmon over time

East Bay Area Watershed and Hydrology Runoff Characteristics

EBMUD’s secondary water supply source is local runoff from the East Bay area watersheds, which is stored in the terminal reservoirs within EBMUD’s service area. The availability of water from local runoff depends on two factors: hydrologic conditions and terminal reservoir storage availability. In dry and critically dry years, evaporation can exceed runoff, resulting in net loss of local supply. Local runoff supplies the East Bay, on average, 23 MGD during normal hydrologic years.

Recycled Water

EBMUD’s recycled water program has grown significantly since EBMUD began using recycled water at its Main Wastewater Treatment Plant (MWWTP) in 1971. The program has expanded to provide more recycled water to a diverse array of customers for a variety of non-potable uses. EBMUD has also worked to develop partnerships with other wastewater treatment entities to make recycled water available more broadly in its water service area. Regional partnerships like the Dublin San Ramon Services District– EBMUD Recycled Water Authority have broadened the recycled water customer base, and EBMUD has led or participated in research studies related to recycled water.

In calendar year 2020, EBMUD provided approximately 8.3 MGD of recycled water to customers for a variety of non-potable uses. Based on EBMUD’s current assumptions about which projects it is likely to implement, **Table 1** (from EBMUD’s 2020 UWMP) shows the projected quantity of recycled water use by specific type for the years 2020-2045.

Table 1. EBMUD Projections of Recycled Water Service Through 2045 (from 2020 EBMUD UWMP)

Project	Recycled Water Deliveries (MGD)				
	2025	2030	2035	2040	2045
<i>Existing Projects</i>					
North Richmond Reclamation Plant	3.5	3.5	3.5	3.5	3.5
Richmond Advanced Recycled Water (RARE)	3.6	3.6	3.6	3.6	3.6
East Bayshore Recycled Water Project, Phase 1A	0.14	0.15	0.15	0.15	0.15
San Ramon Valley Recycled Water Project, Phase 1	1.04	1.04	1.04	1.04	1.04
Recycled Water Truck Program	0.002	0.002	0.002	0.002	0.002
Chuck Corica Golf Course Complex	0.05	0.05	0.05	0.05	0.05
Total Existing Recycled Water Use	8.28	8.29	8.29	8.29	8.29
<i>Future Projects</i>					
Diablo Country Club Satellite	0.22	0.22	0.22	0.22	0.22
San Ramon Valley Recycled Water Project	0.71	0.98	1.3	1.3	1.3
Phillips 66 Refinery Recycled Water Project	0	2.6	3.7	3.7	3.7
East Bayshore Recycled Water Project, Phase 1	0.04	0.05	0.05	0.05	0.05
East Bayshore Recycled Water Project, Phase 2	0	0.25	2.1	2.1	2.1
Richmond Advanced Recycled Water (RARE) / North Richmond	0	0	0	3.84	3.84
Other Potential Projects	0.25	0.25	0.5	0.5	0.5
Total Future Projections	1.22	4.35	7.87	11.71	11.71
Total Recycled Water Projected Demand	9.50	12.64	16.16	20.00	20.00

Supplemental Water Supplies Potentially Available during Drought

- Dry-year only Central Valley Project (CVP) contract with the American River Division
 - EBMUD is contractually entitled to request CVP water when EBMUD projects end-of-September total system storage (TSS) below 500 thousand acre-feet (TAF). Water is limited to maximum 133 TAF in a year, and 165 TAF over three years, subject to reduction for unavailability under applicable U.S. Bureau of Reclamation (Reclamation) policies.
 - Although EBMUD is an American River Division contractor, EBMUD's diversion point is located on the Sacramento River downstream of the American River confluence, and EBMUD may receive water from any source available to the CVP.
- Water Forum releases from Placer County Water Agency (PCWA)
- Yuba Accord reservoir reoperation transfers
- Short-term crop idling transfers with Sacramento Valley irrigators
- Expanded San Joaquin County groundwater banking project in the Eastern San Joaquin Groundwater Subbasin

- EBMUD is currently developing a project in collaboration with local partners. The project yield is being evaluated.
- Existing Bayside well to be decommissioned in Fiscal Year 2026 but a new well may be constructed (up to 2 MGD over 6 months) if necessary to meet future water needs.

Distribution System Features of Note

Points of diversions

- Pardee Reservoir
- Freeport Regional Water Authority Intake
- Terminal Reservoirs (See **Table 3** sourced from EBMUD's 2020 UWMP)

Reservoirs

- See **Tables 2 and 3** below from EBMUD's 2020 UWMP.

Raw Water Interties

- Contra Costa Water District (CCWD)-EBMUD Raw Water Intertie
 - EBMUD to CCWD: 90 MGD
 - CCWD to EBMUD: Operationally infeasible without infrastructure improvements

Emergency Potable Water Interties (not currently authorized for drought emergencies)

- 30 MGD San Francisco Public Utilities Commission-City of Hayward-EBMUD Potable Intertie
- Small diameter potable interties with City of Hayward, CCWD, and Dublin San Ramon Services District

Note: EBMUD's potable interties are generally authorized for emergencies such as earthquake, flood, landslide, or other major accident. Currently, there is limited opportunity to use these interties in drought scenarios. Many of the interties are small diameter and neighboring agencies have limited hydraulic capacity to send water to EBMUD. EBMUD's raw water intertie with Contra Costa Water District is the largest of the interties and is not limited to emergencies.

Groundwater infrastructure

- Demonstration Recharge Extraction and Aquifer Management (DREAM) pilot project booster pump station, 700 gpm capacity (was used to support injection of extracted groundwater into the Mokelumne Aqueducts and may be used to support an expanded groundwater banking project in the future).

Table 2. EBMUD Water Supply System Characteristics

Reservoir Data		
Capacities (Dead Storage¹)		
Mokelumne River Facilities		
Pardee (Licensed Capacity)	209,950 AF (12,200 AF)	
Camanche (Permitted Capacity)	431,500 AF (4,000 AF)	
Service Area Facilities		
Local Terminal Reservoirs (East Bay)	151,670 AF (17,500 AF)	
Aqueduct Data		
	Gravity Flow	Pumped Flow
Maximum Capacity Total²	202 MGD	325 MGD
Aqueduct 1 (65-inch)	41 MGD	67 MGD
Aqueduct 2 (67-inch)	54 MGD	87 MGD
Aqueduct 3 (87-inch)	107 MGD	172 MGD
Hydropower Plant Capacities (Nameplate)		
Power Generation		
Pardee	23.6 MW	
Camanche	10.7 MW	

NOTES:

1. Dead storage capacity is defined as the volume of a reservoir below the level of the lowest outlet.
2. Aqueduct capacity is dependent on Pardee elevation. Higher flow rates (up to 325 MGD maximum capacity) require pumping at the Walnut Creek Pumping Plant.
AF = acre-feet; MGD = million gallons per day; MW = megawatts

Table 3. Total System Storage (TSS), Total Operational Storage, and Terminal Reservoir Water Sources

Mokelumne River Facilities		Capacity (AF)
Pardee		203,795
Camanche		417,120
Subtotal		620,915
Terminal Reservoirs	Water Sources	Capacity (AF)
Briones	Mokelumne Aqueducts, Bear Creek	58,960
Upper San Leandro	Mokelumne Aqueducts, San Leandro Creek and tributaries	38,905
San Pablo	Mokelumne Aqueducts, San Pablo Creek, Bear Creek, and Briones Reservoir	38,600
Chabot	Mokelumne Aqueducts, San Leandro Creek, Upper San Leandro Reservoir, Miller Creek	10,350
Lafayette	Lafayette Creek ¹	4,250
Subtotal		151,065
Total System Storage		771,980
Inaccessible Volume		74,500
Total Operational Storage		697,480

NOTES:

1. The raw water line for the Mokelumne Aqueducts was disconnected from the reservoir in 1971.
AF = acre-feet

Current and Projected Demands

Current and projected demands are provided in **Table 4** below from EBMUD's 2020 UWMP. **Table 5** from EBMUD's 2020 UWMP presents the demands in context of EBMUD's need for water during droughts given the water supplies previously described.

Table 4. Average Annual Water Demand Forecast – 2050 Demand Projections (MGD)

	2020	2025	2030	2035	2040	2045	2050
Forecasted Water Demand	238	245	254	264	277	287	297
Water Conservation ¹	-48	-53	-58	-61	-63	-65	-66
Recycled Water ¹	-5	-6	-6	-9	-13	-13	-13
Raw Water	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Planning Level of Demand (Rounded)	181	186	190	194	201	209	218

1. See 2020 EBMUD UWMP Chapters 6 and 5 for program details on conservation and water recycling, respectively. The goals reflected in this table consider the uncertainty described in Section 5.2.3 and Section 6.1.3 of the 2020 EBMUD UWMP.

Table 5. Supply & Demand Assessment, 2020 – 2050

EBMUD Planning Level of Demand (PLOD)		2020	2025	2030	2035	2040	2045	2050
Normal Year	Mokelumne Supply (MGD)	>181	>186	>190	>194	>201	>209	>218
	EBMUD PLOD (MGD)	181	186	190	194	201	209	218
	Need For Water (TAF)	0	0	0	0	0	0	0
Single Dry Year	Mokelumne Supply (MGD)	121	126	129	132	138	144	151
	CVP Supplies (MGD)	60	60	60	60	60	60	60
	Total Supplies (MGD)	181	186	189	192	198	204	211
	Voluntary Rationing (%)	0	0	1	1	2	2	3
	Need For Water (TAF)	0	0	0	0	0	0	0
Second Dry Year	Mokelumne Supply (MGD)	82	86	89	92	98	104	111
	CVP Supplies (MGD)	74	74	74	74	74	74	74
	Total Supplies (MGD)	156	161	164	167	172	178	185
	Mandatory Rationing (%)	13	13	13	14	14	14	15
	Need For Water (TAF)	0	0	0	0	0	0	0
Third Dry Year	Mokelumne Supply (MGD)	141	145	146	145	132	118	108
	CVP Supplies (MGD)	12	12	12	12	12	12	12
	Total Supplies (MGD)	153	157	158	157	144	130	117
	Mandatory Rationing (%)	15	15	15	15	15	15	15
	Need For Water – Base Condition (TAF)	0	0	0	0	28	52	75
	Need For Water – High Demand Condition (TAF)	0	0	21	35	60	97	125
	Need For Water – Extreme Drought Condition (TAF)	0	0	0	13	32	55	84

Sustainable Groundwater Management Act (SGMA)

EBMUD has interests in two groundwater subbasins: the East Bay Plain Subbasin and the Eastern San Joaquin Groundwater Subbasin. Details are provided below.

East Bay Plain Subbasin

As a result of three legislative bills (Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319) signed into law in September 2014 and collectively known as SGMA, EBMUD initiated stakeholder outreach efforts in 2015 to identify eligible local agency interests in the formation of a Groundwater Sustainability Agency (GSA) for the East Bay Plain Subbasin. Stakeholders requested EBMUD to take the lead in SGMA compliance efforts and form a GSA as EBMUD was deemed suited to undertake the SGMA compliance responsibilities. On November 29, 2016, EBMUD became an exclusive GSA for the portion of the East Bay Plain Subbasin which underlies its service area pursuant to Water Code §10723.8(c) and (d). The City of Hayward is the GSA for the portion of the East Bay Plain Subbasin that underlies its service area.

In January 2022, EBMUD and City of Hayward collectively adopted and submitted the East Bay Plain Subbasin Groundwater Sustainability Plan (GSP), fulfilling the requirements established under SGMA. The GSP establishes management actions that ensure the East Bay Plain Subbasin is sustainable within 20 years of implementation. EBMUD and the City of Hayward are responsible for implementing the GSP management actions.

Eastern San Joaquin (ESJ) Groundwater Subbasin

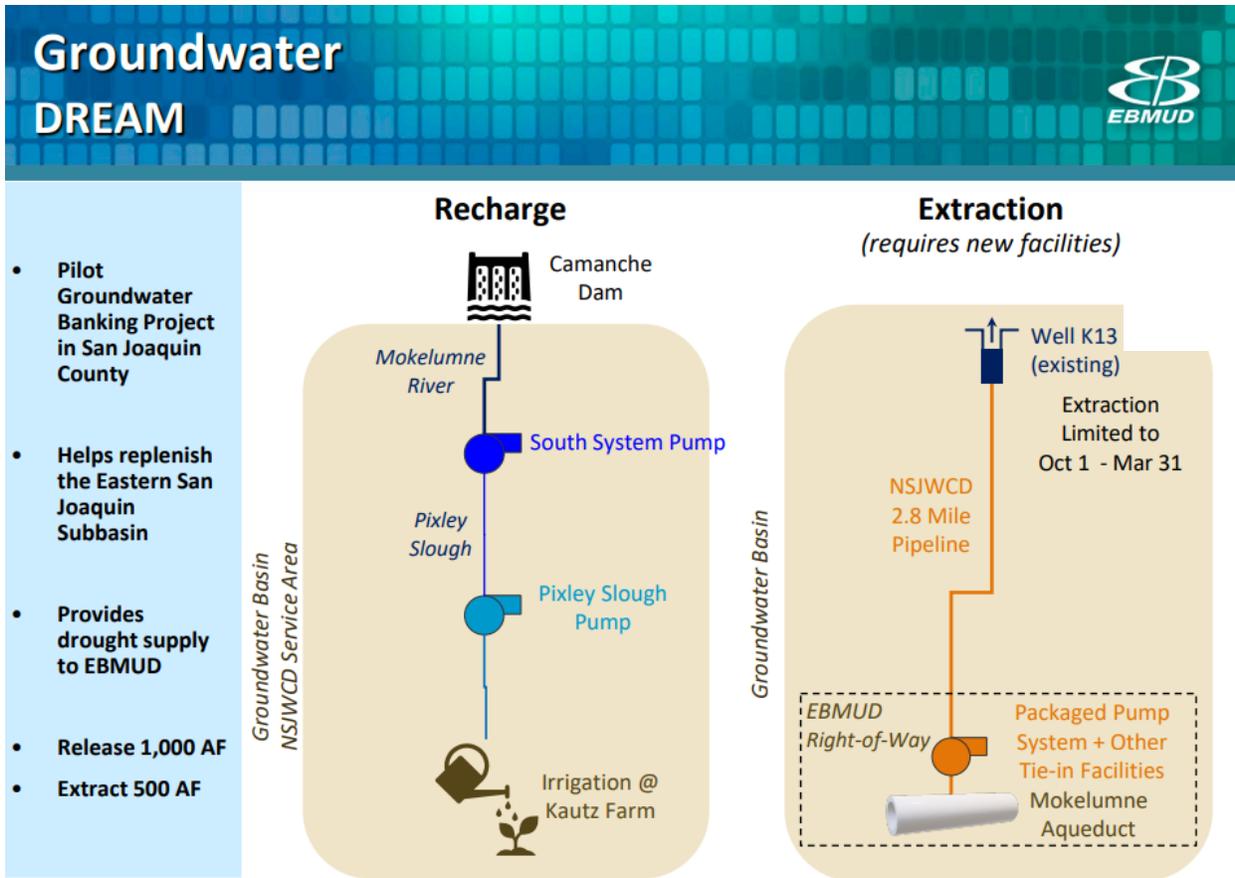
EBMUD and partners in Eastern San Joaquin County completed the DREAM Pilot Project, a pilot groundwater banking project, to determine whether a larger groundwater banking project is feasible in the ESJ Subbasin. A larger groundwater banking project has been identified in the ESJ Groundwater Sustainability Plan as a Potential Project to achieve groundwater sustainability.

Groundwater Banking

Groundwater banking efforts are currently focused in Eastern San Joaquin County where the DREAM Pilot Project was located.

The DREAM Pilot Project provided North San Joaquin Water Conservation District (NSJWCD) with up to 1,000 AF of EBMUD surface water from the Mokelumne River that participating landowners used for irrigation in lieu of pumping groundwater from the ESJ Subbasin; thereby, storing groundwater for future use. During dry years, EBMUD could recover up to half of the banked groundwater for use within its service area. The DREAM Pilot Project provided multiple benefits, including replenishment of the critically-over drafted ESJ Subbasin and dry year supplemental water supply for EBMUD. See **Figure 3** for a visual depiction of the DREAM Pilot Project.

Pending further evaluation of the results of the DREAM Pilot Project and planning level evaluation for an expanded groundwater banking project, EBMUD, NSJWCD, San Joaquin County, and the Eastern Water Alliance may pursue a larger, longer-term groundwater banking project. The expanded project capacity is currently planned for EBMUD to deliver up to 3 to 8 TAF Mokelumne River water to project partners for recharge depending on EBMUD water supply conditions. Due to the project location, the American River watershed is not anticipated to be impacted by the expanded project.



DREAM: Demonstration, Recharge, Extraction, Aquifer Management

Figure 3. DREAM Pilot Project

Demand Management

EBMUD commits to meeting the current conservation and water use efficiency regulations, which include the 2024 “Making Conservation a California Way of Life” regulations, Assembly Bill (AB) 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELO) which encourages low-water use and native landscaping for new development. EBMUD will meet the aforementioned requirements by continuing to implement a combination of customer education, incentive programs, and efficiency improvements.

The [Water Conservation Strategic Plan](#) will guide EBMUD over the next few decades to encourage water conservation and invest in solutions which boost water conservation. The key components of its demand management portfolio are:

- **Supply Side Conservation** (leak detection, water loss reduction, pressure management, replace leaky pipes)
- **Water Management Services** (Online water consumption portal for customers, water budget reports, single family and multi-family housing consultations, WaterSmart certifications, and more)

- **Research and Development** (partnership with UC Davis and California Water Efficiency Partnership)
- **Rebates and Incentives** (low-flow plumbing hardware, landscape conversion, irrigation equipment, flowmeters, grey-water, landscape design assistance grant, mulch coupons, custom rebates for large projects)
- **Education and Outreach** ([EBMUD website](#) education materials, marketing, community events, WaterSmart Gardener program and demonstration garden grants, K-12 classroom materials)

The estimated water conservation through 2050 by implementing the Water Conservation Strategic Plan is shown below in **Figure 4**.

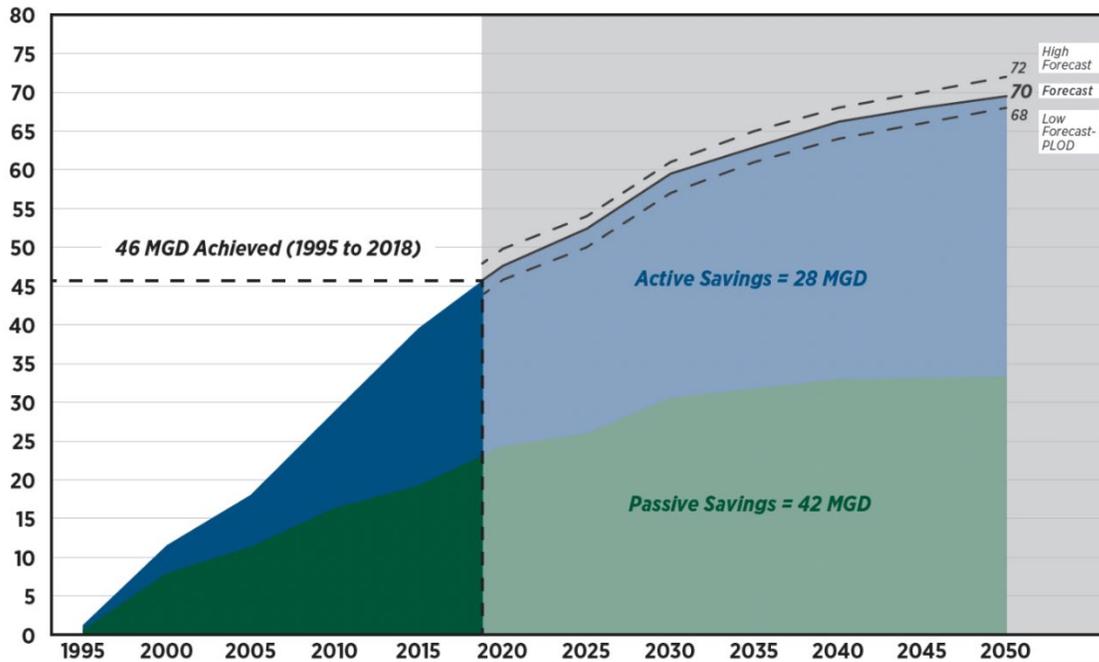


Figure 4. Forecasted EBMUD Water Conservation (Million Gallons per Day)

Climate Change

EBMUD recognizes climate change is a growing threat to the reliability of water resources. In preparation for the future uncertainties associated with climate change, EBMUD has undertaken a rigorous evaluation of potential impacts.

EBMUD continually considers climate change impacts and takes actions to understand, mitigate, and adapt to those impacts. EBMUD maintains a Climate Change Monitoring and Response Plan (CCMRP) to inform planning efforts for future water supply, water quality, and infrastructure, and to support water and wastewater infrastructure investment decisions. Assessments were made to identify potential impacts to EBMUD in the areas of water supply and demand, water quality and the environment, flood control management, infrastructures, and energy:

- In water supply, decreased runoff and timing of runoff poses impacts to carryover storage.

- Water demand and usage could increase as a result of warmer climate, as well as result in increased frequency of rationing due to water supply shortages.
- Water quality could decrease as a result of warmer air temperatures shifting in spring runoff, and increasing peak runoff. Managing cold water pool levels in Camanche and Pardee Reservoirs becomes more challenging with more frequent dry water year types and warming rivers and reservoirs. Any modifications to temperatures in the river could lead to impacts to fisheries.
- Rising sea levels could lead to increase in storm surge flood events, thereby posing challenges for flood control management due to the timing of the runoff and increased peak runoff. Sea level rise could damage infrastructure in the Delta and near the shore; primary concerns for EBMUD include the potential inundation of the Mokelumne Aqueducts from levee failure/overtopping in the Delta.
- Lastly, climate change could negatively affect hydropower generation as a result of changes in runoff timing and patterns, and management of cold water pool. The electricity transmission lines could lose transmitting capacity in high air temperatures, and there is an increase in the probability of wildfire exposure for some major transmission lines.

Managing Severe Droughts

EBMUD's Drought Management Program (DMP) provides a framework to manage customer demand and pursue a diversified portfolio to reach a goal of providing 85-percent reliability for customers in EBMUD's service area while continuing to meet all stream flow obligations on the lower Mokelumne River. The DMP guided EBMUD in managing demand and supply during the 2014-2016 and 2020-2022 droughts when mandatory and voluntary rationing was imposed, and water supplies were limited. During both the 2014-2016 and 2020-2022 droughts, EBMUD faced unanticipated constraints and updated and implemented measures to assist with demand and supply management. The DMP was revised to reflect lessons learned and actions that were taken.

The triggers to implement water shortage response action are defined by the Total System Storage (TSS) as illustrated in **Figure 5**. **Table 6** shows the types of programs and actions that EBMUD might undertake at each stage of drought.

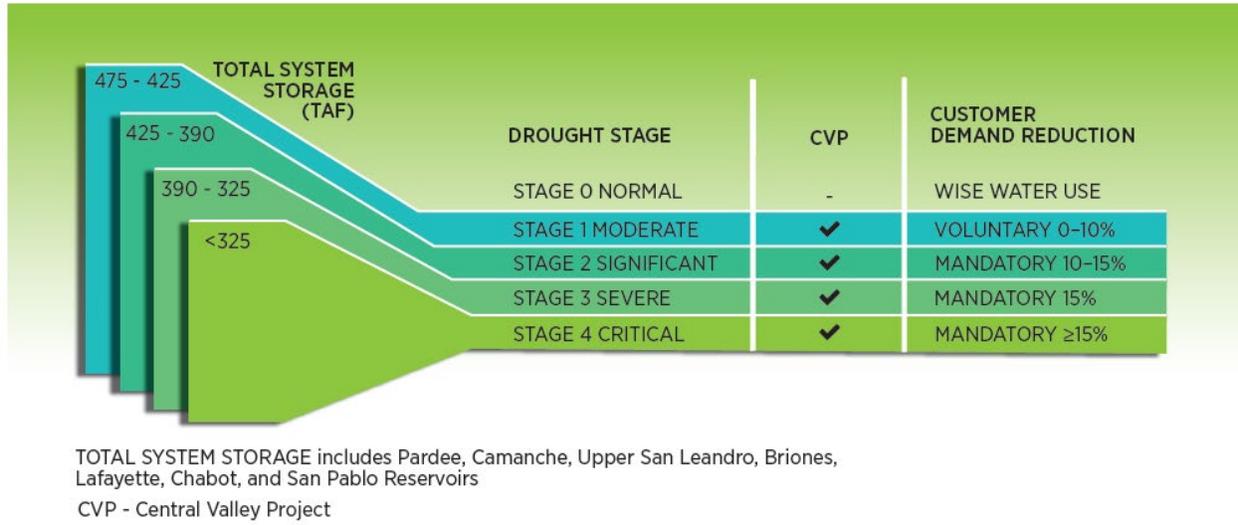


Figure 5. EBMUD Drought Management Program Guidelines

Table 6. Drought Management Program Elements by Stage for TSS Scenario

EBMUD Drought Stage	Drought Program Elements Considered
Stage 1 Moderate <i>Voluntary</i> <i>0-10% Rationing</i>	<ul style="list-style-type: none"> Apply Stage 1 Drought Surcharge Establish voluntary water use reduction goals and determine use restrictions Initiate a public information campaign to explain the water supply situation and customer responsibilities Outreach and education may include EBMUD’s website, social media, media outreach, advertising, workshops and events, bill inserts and bill messaging Initiate community water waste hotline and online water waste reporting Issue up to 50,000 single family residential (SFR) home water reports Provide commercial and residential landscape water budgets to up to 5,000 accounts Provide conservation audits and WaterSmart home survey kits Issue up to 5,000 indoor plumbing fixture and appliance rebates Conduct water audits Provide up to 5,000 free water saving devices Expand water loss control program (e.g. acoustic loggers, leak detection crew)
Stage 2 Significant <i>Mandatory</i> <i>10-15% Rationing</i>	In addition to elements of Stage 1: <ul style="list-style-type: none"> Apply Stage 2 Drought Surcharge Continued outreach and education Provide online EBMUD store ordering (restaurant and hotel tent cards, stickers) Increase SFR home reports to 75,000 households

EBMUD Drought Stage	Drought Program Elements Considered
	<ul style="list-style-type: none"> • Increase commercial and residential landscape water budgets to 25,000 accounts • Issue up to 10,000 free water savings devices
<p>Stage 3 Severe <i>Mandatory</i> <i>15% Rationing</i></p>	<p>In addition to elements in Stage 2:</p> <ul style="list-style-type: none"> • Apply Stage 3 Drought surcharge • Advanced media outreach/response • Advance customer outreach & education • Consider water saving campaigns, challenges • Consider supplementing education and outreach with website tools and information; outdoor, radio, publications, and online advertising; drought theaters or other education for children; contests and pledges; promotional items, signs, drought newsletters, customer outdial messages, postcard mailings, etc. • Institute Excessive Use Penalty for SFR customers with use > 60 ccf/month • Initiate supersaver recognition program • Increase SFR home reports to 100,000 households • Increase commercial and residential landscape water budgets to 50,000 accounts • Issue up to 7,000 indoor plumbing fixture and appliance rebates • Issue up to 8,000 outdoor landscape & irrigation rebates • Issue up to 15,000 free water savings devices • Provide field enforcement of regulations and water use restrictions
<p>Stage 4 Critical <i>Mandatory</i> <i>≥15% Rationing</i></p>	<p>In addition to elements in Stage 3:</p> <ul style="list-style-type: none"> • Apply Stage 4 drought surcharge • Institute Excessive Use Penalty for SFR customers with use >40 ccf/month • Increase SFR home reports to 325,000 households • Increase commercial and residential landscape water budgets to 150,000 accounts • Issue up to 2,000 free water savings devices

Note:

This table is based on the Drought Management Program adopted by EBMUD’s Board of Directors on 06/22/2021 and revised on 07/01/2025. EBMUD may revise the DMP elements from time to time.

The availability of water to EBMUD may be impacted depending on the nature of an emergency. In such cases, EBMUD would determine the applicable shortage response actions with reference to its Water Shortage Contingency Plan.

For example, the shortfall in Year 3 of a drought at 2050 demands as presented earlier in the Supply & Demand Assessment results on Table 5 would be mitigated by a combination of water transfers, San Joaquin County groundwater banking (potential expanded DREAM project), and future non-potable/potable reuse. This is in addition to demand rationing and EBMUD's CVP contract. EBMUD is

currently updating the Need for Water as part of the 2025 Urban Water Management Plan. Updates to this PSA document will be made as needed during the Water Forum 2050 comprehensive 5-year reviews.

Water Code Section 10632 requires water shortage contingency plans to provide water supply shortage levels at 10, 20, 30, 40, 50, and >50 percent thresholds. Urban water suppliers with existing water shortage contingency plans may meet this requirement by cross-referencing the water utility’s existing water shortage stages to the State of California’s six standard water shortage levels. In general, EBMUD brings in supplemental supply water and requests customers to reduce demand when the total operational storage is reduced by almost one-third. **Table 7** presents EBMUD's water shortage levels cross-referenced with the State’s new standardized water shortage levels. EBMUD's water shortage levels for this cross-referencing are determined by the total operational storage available.

Table 7. Shortage Levels Cross-Referenced With State’s Shortage Stages

Shortage Level	Percent Shortage Range	Shortage Response Actions
		<i>(Narrative description)</i>
1	Up to 10%	EBMUD WSCP Stage 1 - Moderate; Regulations and restrictions on water use is in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.
2	Up to 20%	EBMUD WSCP Stage 2 - Significant; Regulations and restrictions on water use and drought surcharge are in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.
3	Up to 30%	EBMUD WSCP Stage 3 - Severe; Emergency regulations and restrictions on water use during water shortage emergency condition, Regulations and restrictions on water use, Drought Surcharge, and Excessive Use Ordinance are in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.
4	Up to 40%	EBMUD WSCP Stage 4 - Critical; Emergency regulations and restrictions on water use during water shortage emergency condition, Regulations and restrictions on water use, Drought Surcharge, and Excessive Use Ordinance are in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.
5	Up to 50%	EBMUD WSCP Stage 4 - Critical; Emergency regulations and restrictions on water use during water shortage emergency condition, Regulations and restrictions on water use, Drought Surcharge, and Excessive Use Ordinance are in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.
6	>50%	EBMUD WSCP Stage 4 - Critical; Emergency regulations and restrictions on water use during water shortage emergency condition, Regulations and restrictions on water use, Drought Surcharge, and Excessive Use Ordinance are in effect. Refer to UWMP Attachment 1 (WSCP) Table W-6 for shortage response actions.

It is difficult to quantify the reduction in gap between supplies and demand due to the implementation of the response actions as outlined in Table 6. The response actions would be adjusted based on the level of rationing that is achieved and to meet EBMUD's policy of providing 85% reliability to its customers. At each stage, EBMUD will consider augmenting its supplies as outlined in Figure 5 with the quantities determined based on antecedent conditions and projected demand. The response actions to close the gap between supply and demand as well as the augmented supplies needed that year are outlined in the annual water supply availability assessments.

EBMUD CVP Contract

In years when EBMUD is authorized to take water under the terms of its CVP contract, which is limited only to specified water storage conditions, Reclamation allocates the water in the same manner as it does for other north-of-Delta American River Division municipal and industrial contractors. Like other CVP contractors, EBMUD’s service area is included within the consolidated place of use for all the CVP

water rights. EBMUD is willing to discuss this matter further during the American River Climate Adaptation Program process if requested by the Environmental Caucus.

Management and Protection of the Mokelumne River

As part of its Strategic Plan, EBMUD has committed to manage the Mokelumne and East Bay watersheds to ensure a high-quality water supply and protect natural resources while providing appropriate public access. EBMUD has several ongoing and planned actions to meet this goal, including Mokelumne River water temperature management, EBMUD's pending Healthy Rivers and Landscapes (HRL) proposal, and forestry health work with the Upper Mokelumne River Watershed Authority (UMRWA).

Existing Water Temperature Management

The JSA includes a provision for cold water management to support downstream temperatures. It requires EBMUD to use its best efforts to maintain Pardee and Camanche Reservoir stratification with a minimum of 28,000 acre-feet of hypolimnetic volume (the volume of water colder than 16.4°C) in Camanche Reservoir through October, whenever Pardee Reservoir volume exceeds 100,000 acre-feet. This provision for temperature management necessitates adaptive, flexible operations of both Pardee and Camanche reservoirs.

This water temperature requirement and other water quality requirements were established to support fall run Chinook salmon and Steelhead in the Mokelumne River during the critical fall spawning and incubation period. To manage the system to achieve that volume, or a comparable adaptive approach to ensure cold water for salmon in the fall, there are multiple actions that EBMUD can take. These include the following:

- Joint operation of Pardee and Camanche reservoir releases to maximize cold water transfer efficiency from Pardee to Camanche and minimize cold water losses within the system
- Releasing warmer surface water from the Camanche Reservoir high level outlet in place of cold water releases from the bottom of the reservoir when acceptable downstream (typically April through September) to conserve cold water for fall
- Minimizing cold water diversions into the Pardee Reservoir Tower (which serves the aqueducts to the service area) to preserve cold water in Pardee for supporting the downstream cold-water pool in Camanche Reservoir

Mokelumne River HRL Flow Proposal

The goal of the Mokelumne River HRL Flow Proposal is to build on the JSA successes in the Lower Mokelumne River through a mix of flow and non-flow measures that benefit anadromous fish. If the EBMUD HRL Flow Proposal is accepted by the SWRCB, spring flow contributions will be increased without any significant effect on Camanche Reservoir release temperatures.

The Mokelumne HRL Flow Proposal was developed to provide biologically beneficial flow regimes below Camanche Dam based on ambient conditions and when those flows are most beneficial to Mokelumne River fisheries. The proposal provides that the entirety of the obligated block flow (except in off-ramp years) will be released during the designated year. The Mokelumne River Proposal anticipates 70 to 90 percent of full annual volume to be released in the March through May period for fry and juvenile

rearing and outmigration, and 10 to 30 percent to be released in October for adult migration, spawning, and incubation.

In summary, the Mokelumne River HRL flow proposal has been designed to build on the substantial fishery benefits achieved with the JSA over the past 26 years, providing enhanced ecosystem conditions through a combination of flow and non-flow measures while maintaining the ability to manage temperatures in the Lower Mokelumne River.

Mokelumne River HRL Non-Flow Proposal

If EBMUD's HRL proposal is accepted by the SWRCB, 25 acres of new floodplain rearing habitat enhancement measures will be created. In addition, EBMUD has committed to the annual maintenance of a restored 1-mile (15 acres) spawning reach. No designated spawning habitat is required under minimum required habitat goals, but EBMUD has implemented 1.27 acres of new spawning habitat and 2.67 acres of maintenance of existing habitat as early implementation actions and will continue to implement habitat improvements above the minimum required as landowner and funding opportunities allow. One acre of suitable instream rearing habitat will be implemented through screening diversions and providing habitat complexity during spawning habitat restoration work. Habitat enhancement measures will be implemented in accordance with the design criteria established for habitat restoration projects under the HRL Non-Flow initiatives, as outlined in Table 15 in the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Watershed (CSWRCB, 2025).

Watershed Forestry Health

EBMUD and its partners in UMRWA are implementing forest health projects that improve wildfire resiliency and protect water quality, particularly in areas along roadways where wildfires are most likely to ignite. Catastrophic wildfires in the Mokelumne Watershed would significantly impact the quality and reliability of EBMUD's supply. Forest thinning, meadow restoration, and related projects reduce that threat.

UMRWA is a Joint Powers Authority comprised of six water agencies and three counties working collaboratively to address natural resource issues in the Upper Mokelumne watershed in Alpine, Amador, and Calaveras counties. UMRWA was formed in 2000. Over its 25-year existence, UMRWA has facilitated solutions to a variety of water, forest, and associated watershed issues. Since 2011, UMRWA has secured and administered nearly \$40M in state and federal grants for water and forest projects in the watershed.

UMRWA is currently seeking a contractor for the El Dorado National Forest Projects Plan–Phase 1. The Forest Projects Plan–Phase 1 is a 25,671-acre timber stand and wildlife habitat improvement and protection project located on lands administered by the Eldorado National Forest (ENF) Amador Ranger District, within the upper Mokelumne and South Fork American River watersheds. The Phase 1 project is designed to help prevent high-intensity, large-scale wildfires, improve forest conditions, and protect important wildlife habitat and other resources. Non-commercial actions to reduce forest fuels are presently underway on 7,900 acres within the Phase 1 project area. The 11,695 +/- Phase 1 acres remaining to be treated are shown in Pending Projects Map, Forest Projects Plan–Phase 1. UMRWA has an annual fuel treatment goal of 4,000 acres per year.

Historical EBMUD Contributions to the Co-Equal Objectives

Although EBMUD would be a new signatory to the Water Forum Agreement, EBMUD has financially contributed to the success of the co-equal objectives. The investment and continued partnership with Sacramento County Water Agency in the FRWA intake on the Sacramento River and accompanying Folsom South Canal Connection (FSCC) system was a significant investment to convey EBMUD's supplemental supplies. In total, EBMUD spent approximately \$500 million to construct the FRWA/FSCC systems. The FRWA intake is located downstream of the American River confluence and, when opportunities arise, allows for American River water to be diverted after it has traveled the full distance of the Lower American River (LAR), thus providing potential benefits for LAR corridor health.

EBMUD has also been an integral partner to PCWA's PSA by purchasing the Water Forum releases during dry years. PCWA's releases to the LAR provide both flow and temperature benefits to anadromous fish during the late summer/fall months of the driest years when the flows are most important to fish survival. Since EBMUD and PCWA began their partnership in 2013, EBMUD has purchased approximately 37 TAF for \$20.4 million from PCWA.

In addition to EBMUD's specific investments, EBMUD has indirectly supported LAR habitat enhancement through contributions to the Central Valley Project Improvement Act (CVPIA) Restoration Fund. Since 2013, EBMUD has contributed approximately \$1.8 million to the CVPIA Restoration Fund.

EBMUD Surface Water Framework

This section summarizes the EBMUD proposal for Water Forum 2050 commitments related to surface water diversions in terms of their contributions to the coequal objectives and proposed investments (Projects).

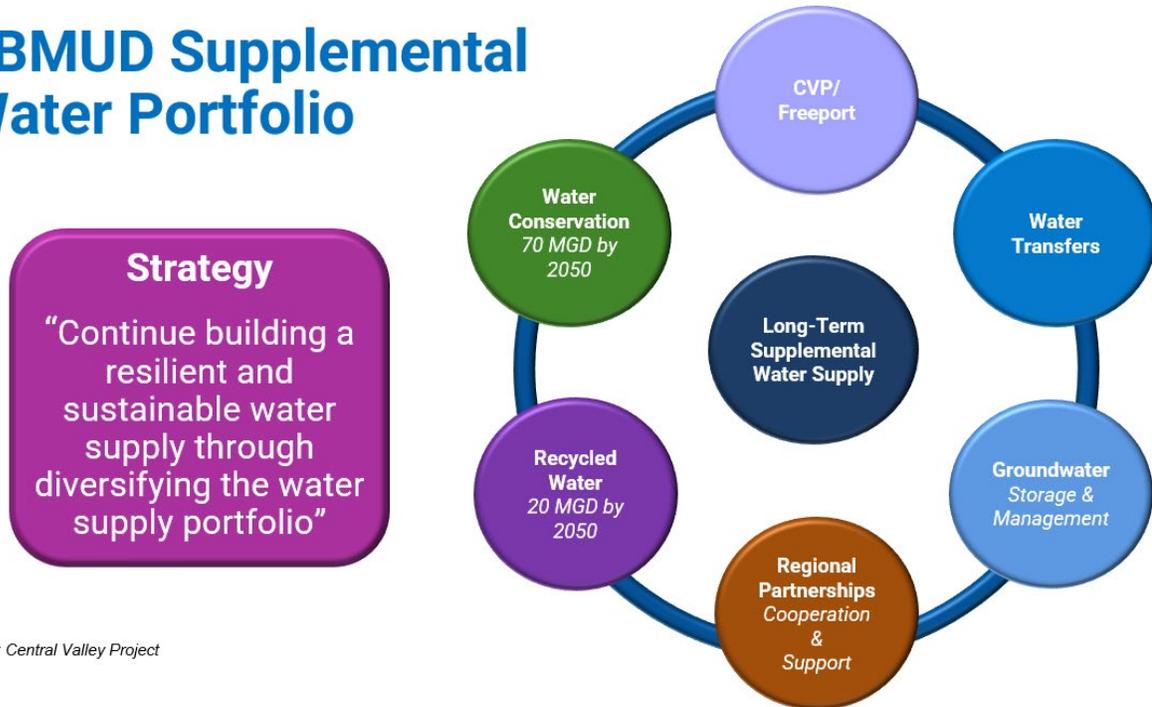
Contributions to River Corridor Health

- Minimize direct surface water diversions on the LAR by taking water at Freeport.
 - EBMUD's intake facility at the Freeport project offers a unique opportunity in dry years. When water resources are scarce, and other purveyors may be letting water flow down the American River for out-of-basin transfers and/or relying more heavily on groundwater resources, EBMUD can continue to take water at Freeport to alleviate drought conditions while also allowing surface water to provide flow and temperature benefits for the LAR.
- Contribute to the CVPIA Restoration Fund pursuant to EBMUD's CVP contract (\$1.8 million to date).
- Long-term commitment, pursuant to contract between PCWA and EBMUD, to purchase PCWA Water Forum releases intended for the flow and temperature benefit of the LAR during dry years.

Contributions to Water Supply Reliability

1. Continued evaluation and investment where appropriate in a diverse water supply portfolio that meets water supply needs and limits reliance on the American River watershed. See Figure 6 for EBMUD’s water supply portfolio concept approach.

EBMUD Supplemental Water Portfolio



CVP: Central Valley Project

Figure 6. EBMUD’s Water Supply Portfolio

Potential Future EBMUD Projects and Investments

(Note: this list is not a commitment by EBMUD to pursue these projects. Pursuit of these projects will be at the discretion of EBMUD’s Board of Directors and depend on EBMUD’s need for water during dry years, trends in customer demands, and financial capacity to pay for the projects. EBMUD may decide to pursue a subset of the included projects or none at all.)

- Expanded water conservation and water loss reduction programs
- Expanded DREAM project (expanded yield to be determined)
- Expanded recycled water, including evaluation of potable reuse potential and feasibility
 - Updated goal: 20 MGD by 2050 (non-potable reuse and future potable reuse)
- Evaluate potential participation in the Sacramento Regional Groundwater Bank
- 10 TAF CVP Contract Assignment from SMUD to participate in future potential storage projects (surface or groundwater)
 - If EBMUD seeks the SMUD assignment, EBMUD currently intends to divert all supplemental supply into the Folsom South Canal from Freeport, not Nimbus Dam,

unless there is a request from Reclamation and support from stakeholders to do so that supports LAR health.

- Long-Term Water Purchase Agreement with Placer County Water Agency for Water Forum releases
- Long-Term Water Transfer Agreement with Yuba Water Agency for Yuba Accord releases
- Short-term crop idling transfers with Sacramento Valley irrigators
- Mokelumne River Healthy Rivers and Landscapes Agreements
- [Mokelumne Aqueducts Resiliency Project \(MARP\)](#)



WATER FORUM AGREEMENT 2050

El Dorado Irrigation District Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

El Dorado Irrigation District (District) provides water, sewer, recycled water, and water-related recreation services within its service area. The District is the major water supplier located on the western slope of the Sierra Nevada Mountains in El Dorado County. The contiguous service area of the District spans approximately 220 square miles and includes a variety of urban, suburban, and rural communities and land uses. The population of the District's service area is approximately 130,000, accounting for approximately two thirds of the total population of El Dorado County.

The District operates over 1,119 miles of water pipe, 27 miles of ditches, 5 water treatment plants (WTP), 4 sewage treatment facilities, 456 miles of sewer lines, 60 lift stations, 36 water and 5 recycled water storage and regulating reservoirs, and 38 water and 5 recycled water pump stations. The District's WTPs have a total treatment capacity of approximately 102.6 million gallons per day (mgd).

The District also owns and operates a 21-megawatt hydroelectric generation project (Project 184) licensed by the Federal Energy Regulatory Commission (FERC) which consists of 4 reservoirs (Echo Lake, Lake Aloha, Caples Lake, and Silver Lake), dams, a forebay, a penstock, a powerhouse, and approximately 22 miles of flumes, canals, siphons, and tunnels located in the Sierra Nevada Mountains east of Placerville in the counties of El Dorado, Alpine, and Amador. The District acquired this hydroelectric generation project from Pacific Gas and Electric Company (PG&E) in 1999. The District operates the hydroelectric generation facilities, including recreational features, incidental to delivery of water and sells the generated power on the wholesale market. While the District generates revenue from operating Project 184, the project was purchased primarily to preserve the pre-1914 water rights associated with the facilities and to facilitate the acquisition of additional water rights thereafter obtained by Permit 21112 (described in more detail below).

Water Supply

The District's primary supplies come from tributaries to the American and Cosumnes Rivers as described below.

Jenkinson Lake

The District owns, operates, and supplies water from Jenkinson Lake through licensed appropriative water rights on Camp and Sly Park Creeks, both tributaries to the North Fork Cosumnes River. The available consumptive supply from Jenkinson Lake is approximately 23,000 acre-feet annually.

Folsom Reservoir

Pursuant to a permanent repayment contract between the District and the United States Bureau of Reclamation (USBR) (the Folsom Reservoir Repayment Contract), the District can divert up to 7,550 acre-feet per year of Central Valley Project water from Folsom Reservoir to serve the El Dorado Hills and western Cameron Park area. Additionally, in August 2010, the District and USBR executed a long-term Warren Act Contract (the Ditch/Weber Warren Act Contract) to enable the District to utilize up to 4,560 acre-feet of water per year at Folsom Reservoir from four pre-1914 water rights formerly associated with historic District ditches.

The District also has an appropriative water right (Permit 21112) to make consumptive use of 17,000 acre-feet annually of the water previously used only for Project 184's hydroelectric power operations. Pursuant to this right, water may be taken from Folsom Reservoir. On August 3, 2016, the District and USBR finalized and signed a long-term Warren Act Contract for use of the full 17,000 acre-feet until 2030, after which the contract is eligible for renewal.

Finally, pursuant to Public Law 101-514 (enacted in 1992), El Dorado County Water Agency (EDCWA) and USBR signed a long-term water service contract on October 23, 2019, for 15,000 acre-feet per year of water from Folsom Reservoir. Though the District and EDCWA have not yet negotiated a contract that will enable the District to utilize this supply, the District expects that, pursuant to a prior contract with the EDCWA, the District will receive at least one-half, or 7,500 acre-feet, of the water subject to future negotiation of repayment costs. This contract entitlement, if secured, will be in addition to the current Folsom Reservoir Repayment Contract entitlement of 7,550 acre-feet of water, the Ditch/Weber Warren Act Contract entitlement of 4,560 acre-feet of water, and the Permit 21112 Warren Act Contract entitlement of 17,000 acre-feet of water.

Forebay Reservoir

Forebay Reservoir is part of Project 184. Water stored in Silver, Caples, and Echo lakes and Lake Aloha is released and then diverted, along with natural river flows, into the El Dorado Canal near Kyburz and Highway 50. The El Dorado Canal conveys up to 165 cubic feet per second (cfs) approximately 22.5 miles to Forebay Reservoir in Pollock Pines. At the Forebay Reservoir, the District diverts up to 15,080 acre-feet per year for drinking water treatment at Reservoir 1 WTP.⁴⁷ The balance of the flows entering Forebay Reservoir is utilized for power generation at Project 184's El Dorado Powerhouse.

Crawford Ditch

The District has pre-1914 water rights to 5,000 acre-feet of water annually from both the North Fork Cosumnes River and Clear Creek points of diversion into the Crawford Ditch, a Gold Rush era ditch.

⁴⁷ The District also delivers some water originating in the District's Project 184 facilities into Jenkinson Lake via its Hazel Creek Tunnel.

Water from Crawford Ditch is available only as raw water for irrigation and agricultural customers located along the Crawford Ditch and none of this supplemental supply is included in the District's system firm yield water supply calculations.

In 2021, the calculated system firm yield from the first three of the sources of water supply described above totaled 63,500 acre-feet. Current surface water entitlements from both the American River and Cosumnes River total around 81,500 acre-feet, with 44,200 acre-feet originating in the American River and its tributaries.

The District has no interties with surrounding purveyors although the District's connectivity to Folsom Reservoir provides connection to other purveyors that receive Folsom Reservoir supplies. The District does, however, have multiple interties between the American and Cosumnes basins internal to both the District's raw water intake system and treated water distribution system.

The District currently does not use groundwater as a source of supply, nor does it overlie any groundwater basins identified by DWR Bulletin 118. Given the lack of any groundwater basins on the western slope of El Dorado County, it is extremely unlikely that the District will ever utilize groundwater as a supply in the future. While the District remains open to considering opportunities for conjunctive use projects within or outside of its service area, no such projects have been identified at this time. However, the District is participating in the Regional Water Authority's Sacramento Groundwater Bank.

The District also has a recycled water system with source water from two regional wastewater treatment plants that operate with an annual production rate of approximately 3,500 acre-feet. The District has used recycled water to meet non-potable demands such as industrial processes and irrigation of golf courses, landscaping, outdoor residential irrigation, and road medians within the El Dorado Hills service area. Potable water has been used to supplement the recycled water system since 2002 to meet peak demands. Construction of seasonal storage for recycled water would reduce or eliminate the need to supplement the recycled system with potable water, but the estimated costs to construct seasonal storage make it infeasible at this time.

Surface Water Management

Current and Projected Demands

The District has invested in long-term water efficiency efforts that have kept water demands relatively stable despite population growth in El Dorado County. Current District demands are on average approximately 35 thousand acre-feet (TAF) annually. This is down from approximately 45 TAF in 2008 but demands are expected to return to approximately 40 TAF by 2045. See **Figure 1**, below, for historic District diversions from both the American River and Cosumnes River to meet customer potable demand at WTPs.

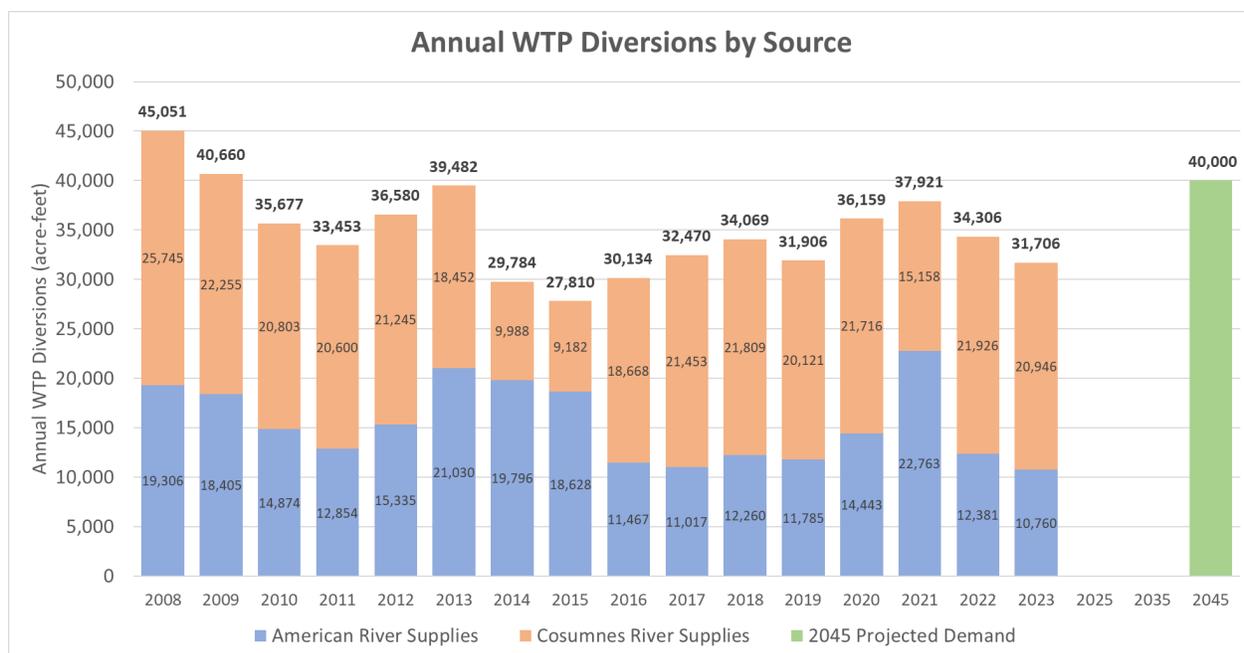


Figure 1. District American River and Cosumnes River Diversions to Meet Customer Potable Demand

The percentage of water demands met by the American River or Cosumnes River supplies described above varies with hydrologic conditions and the operational constraints of the District’s water delivery system. Recent hydrologic modeling indicates that hydrologic conditions affecting Cosumnes River supplies during dry and critically dry water years will limit the District’s ability to meet increased customer water demands through increased reliance on Cosumnes River supplies. During such dry conditions with future water demands, the District proportional reliance on American River supplies may increase if Cosumnes River supplies are inadequate. As described in more detail below, there may be opportunities for the District to shift from one source of supply (i.e., American River) to another (i.e., Cosumnes River) during certain times to help meet the Water Forum’s coequal objectives.

Notably, the District has invested heavily over the last decade in infrastructure improvements that help meet the Water Forum’s coequal objectives. Examples include the \$50-million construction of a temperature control device at the District’s Folsom Lake intake, the \$25-million piping of an open and unlined ditch, and the recently awarded \$50-million contract to construct the Sly Park Intertie pipeline between the District’s two primary supply sources on the American and Cosumnes Rivers.

El Dorado Irrigation District Surface Water Management Proposal

In service to the Water Forum’s coequal objectives, and subject to all of the terms and conditions of the Water Forum 2050 agreement, including the caveats and assurances described herein, the District offers the following proposal. Commitments are discussed generally and in four different sections specific to:

- Normal (Most) and wet conditions
- Drier conditions
- Driest conditions
- Critically Low Folsom Reservoir Storage conditions

This proposal was prepared with the following guiding principles in mind:

1. *Reduce surface water diversions from the Lower American River (LAR) in dry conditions to provide for river health.*
2. *Prioritize surface water diversions in wet conditions to allow groundwater recharge.*

As presented in detail above, the District meets customer demand with supplies deriving from both the American River and Cosumnes River watersheds. Consistent with the guiding principles listed above, the District will reduce surface water diversions from the American River in dry conditions by adhering to its then-adopted Drought Action Plan and Water Shortage Contingency Plan. The Drought Action Plan includes specific actions for the management of the District’s water supply and demand, addresses the impacts associated with drought, and facilitates the timely implementation of effective drought responses. When and to the greatest extent possible, the District will rely upon Cosumnes River supplies to meet customer demand.

The District does not have access to groundwater and is, therefore, unable to substitute surface water diversions with groundwater extraction in times of surface water scarcity. However, as an operator of reservoirs upstream of Folsom Reservoir, the District is capable of releasing water from storage in Normal (Most) and Wet years for affordable transfer to LAR purveyors, which would allow purveyors that would otherwise need groundwater to forgo groundwater pumping in wet years and thereby promote groundwater recharge. The District is also able to provide additional transfer water in Drier and Driest years – amounts subject to hydrologic conditions and potential curtailments to District entitlements. The District is currently participating in the Regional Water Authority’s Sacramento Groundwater Bank and through that venue will seek partnerships with LAR purveyors for the transfers described above.

Normal (Most) and Wet Conditions Management

In normal (most) and wet conditions, the District will use American River supplies to meet up to 50% of its *forecasted 5-year total potable demand* and potentially provide transfer water for conjunctive use to improve groundwater conditions.

- Normal conditions exist when the forecasted unimpaired inflow into Folsom Reservoir (UIFR) is greater than 950 TAF.
- Wet conditions exist when the forecasted UIFR is greater than 1.6 MAF.

In normal and wet conditions, the District’s surface water diversions would be defined by the *forecasted 5-year total potable demand* in the most recent Urban Water Management Plan (UWMP). Because the District meets customer demand from both the American and Cosumnes River supplies, the *forecasted total potable demand* must be reduced to account for only the diversions from the American River. The reduction would be informed by recent diversion patterns in the preceding 10-year period with the maximum single-year ratio of demands met with American River supplies being applied to normal conditions (up to 50%). This 10-year maximum ratio of demand met by American River supplies would be applied to the UWMP *forecasted 5-year total potable demand*.

Below is a theoretical example:

- UWMP Forecasted 5-year Total Potable Demand: 40 TAF
- 10-year maximum ratio of American River-derived supplies to meet demand: 50%
- Total American River Surface Water Diversions: $40 \text{ TAF} * 0.50 = 20 \text{ TAF}$

In addition to the commitments for surface water diversions in normal and wet conditions, the District proposes to provide transfer water to LAR purveyors when the UIFR is above 950 TAF and supplies allow. The transfer of water could improve groundwater conditions in the lower reaches of the watershed through direct groundwater recharge or wheeling of water to users that are traditionally served by groundwater in these year types.

Drier Conditions Management

In drier conditions, the District will implement the conservation measures required by its adopted Drought Action Plan, limit use of American River supplies to meet up to 70% of UWMP forecasted 5-year total potable demand, and potentially provide transfer water for conjunctive use to improve groundwater conditions.

- Drier conditions exist when the forecasted UIFR is between 400 TAF and 950 TAF.

In drier conditions, the proportion of diversions from the American River will increase relative to normal and wet conditions due to limited Cosumnes River supplies. Instead of surface water diversion reductions, the District proposes to provide downstream benefits through the reoperation and transfer of stored supplies and entitlements to LAR purveyors. The quantity of water available in drier conditions will be dependent on watershed conditions and reservoir storage. The commitment of potential volumes available for transfer to LAR purveyors or south of the Sacramento-San Joaquin Delta (south-of-Delta) demand and the source of this water can be defined at a later stage.

Driest Conditions Management

In driest conditions, the District will implement the conservation measures required by its adopted Drought Action Plan, limit use of American River Supplies to meet up to 75% of forecasted 5-year total potable demand, and potentially provide transfer water for conjunctive use to improve groundwater conditions.

- Driest conditions exist when the forecasted UIFR is less than 400 TAF.

In driest conditions, the proportion of diversions from the American River will increase relative to drier, normal, and wet conditions due to increasingly limited Cosumnes River supplies. Instead of surface water diversion reductions, the District proposes to provide downstream benefits through the reoperation and transfer of stored supplies and entitlements to LAR purveyors. The quantity of water available in driest conditions will be dependent on watershed conditions and reservoir storage. The commitment of potential volumes available for transfer to LAR purveyors or south-of-Delta demand and the source of this water can be defined at a later stage.

Critically Low Storage Conditions in Folsom Reservoir

Climate change is expected to greatly increase the frequency of critically low storage in Folsom Reservoir. Below characterizes potential District operations that might help the American River under the following two conditions:

1. Potential operations in spring and summer when Folsom Reservoir storage is forecasted to reach 110 TAF at some point in the calendar year:
 - Rely on Cosumnes River supplies to meet customer demand to the greatest extent possible

- Conserve water as described in the District's Drought Action Plan
 - Potentially provide transfer water stored higher in the watershed
 - Plan for the potential installation of temporary barge and pumps at Folsom Lake
2. Potential operations in summer and fall when Folsom Storage is below 110 TAF:
- Rely on Cosumnes River supplies to meet customer demand to the greatest extent possible
 - Conserve water as described in the District's Drought Action Plan
 - Potentially provide transfer water stored higher in the watershed
 - Potentially install temporary barge and pumps at Folsom Lake

Demand Management

As noted above, the District invested in long-term water efficiency efforts that successfully reduced demands notwithstanding population growth within its service area. Current District demands are on average approximately 23% lower than the peak demand of 45,000 acre-feet in 2008.

In 2019, the District converted its Main Ditch into an underground pipeline, at a cost of approximately \$20 million, to reduce system water losses. That project resulted in annual savings of approximately 1,500 acre-feet of water from seepage and evaporation. The District successfully defended a lawsuit brought by local opposition under the California Environmental Quality Act—see *Save the El Dorado Canal v. El Dorado Irrigation District* (2022) 75 Cal.App.5th 239 (upholding El Dorado Irrigation District's Environmental Impact Report and denying the petition for writ of mandate).

The District's Office of Water Efficiency offers several programs and services to commercial and residential customers to help conserve and achieve higher water efficiency. For example, District water efficiency staff perform water audits for homes and businesses to evaluate irrigation systems, plumbing retrofits, and detect system leaks. The District also offers rebates for qualifying purchases of water-efficient appliances.

The District is committed to abiding by current and future relevant conservation and water use efficiency regulations. At the time of signing the Water Forum 2050 agreement, key requirements are associated with the following: 2024 Making Conservation a California Way of Life regulations, Assembly Bill 1572 related to irrigation of non-functional turf with potable water, and the Model Water Efficient Landscape Ordinance (MWELo) which encourages low-water use and native landscaping for new development.

The District's anticipated approach to comply with current water conservation efforts remains under development. On September 22, 2025, the District awarded a contract to Hoch Consulting to assist the District in developing a compliance and reporting plan to implement the Making Conservation a California Way of Life regulation. The approach will be guided by input from District staff, members of the communities we serve, and regional partners through the Water Forum. A similar process will be employed to roll out programs and actions to meet future regulatory calls for conservation. District staff will leverage the Water Forum to engage and update the region as progress is made.

Contributions to River Corridor Health

To contribute to the co-equal goal of river corridor health, the District will take the following actions:

- Release water below District reservoirs (Lake Aloha, Caples Lake, Silver Lake on the South Fork American River and Jenkinson Lake on the Cosumnes River) that provide downstream benefits to aquatic resources year-round. On the South Fork American River and its tributaries, the District's minimum instream releases are set forth in its FERC license for Project 184 and streamflow is measured at USGS reviewed gaging stations. On the Cosumnes River, minimum instream releases are included in the District's licensed water rights for Camp and Sly Park Creeks. Bypass flows are maintained through an 8" pipe at the Camp Creek diversion dam and release requirements to Sly Park Creek below Sly Park Dam (Jenkinson Lake) are maintained and measured by the District. The instream releases described above in both the American River and Cosumnes River are ongoing and will continue to promote and protect watershed health.
- Conserve water as described in the District's Drought Action Plan to increase instream flows both above and below Folsom Reservoir.
- Make payments to the Central Valley Project (CVP) Restoration Fund. As conditions under its CVP contract, and as a requirement to divert water from Jenkinson Lake (previously considered a CVP facility), the District pays a per-acre foot restoration fee, as authorized by the Central Valley Project Improvement Act. Annual payments depend on hydrology and customer demand in any given year. In 2023, the District paid over \$500,000 in restoration payments to USBR.
- Release additional water from storage for instream flow as part of the American River Tributary portion of the proposed Intra-Tributary Agreement to Implement Healthy Rivers and Landscapes, an alternative to the unimpaired flow approach recommended by the State Water Resources Control Board in the proceedings to update Bay-Delta Water Quality Control Plan.
- Operate its Folsom Lake intake to maximize the benefit of its temperature control device, diverting water above 60 degrees Fahrenheit while USBR is managing the cold-water pool (which may occur annually April through November, depending on conditions).
- Rely on Cosumnes River supplies to meet customer demand to the greatest extent possible, effectively reducing surface water diversions from Folsom Reservoir and the South Fork American River.
- Pursue a feasible alternate supply for customers served by upper Crawford Ditch. Presently, the District diverts up to 15 cfs (closer to 6 cfs on average) from the North Fork Cosumnes River under Pre-1914 water rights from May through October to supply non-potable uses for a small number of customers. If the District can identify a feasible alternative, it could refrain from diverting the water, leaving the water in the North Fork Cosumnes to contribute to in-stream beneficial uses.
- Potentially provide transfer water in normal/wet years for groundwater recharge through the Sacramento Groundwater Bank and during drier/driest years to meet LAR and south-of-Delta demand to increase instream flows below Folsom Reservoir.

Contributions to Water Supply Reliability

To contribute toward the co-equal goal of water supply reliability, the District will take the following actions:

- Continue investing in water supply reliability by adhering to its annually adopted 5-year capital improvement plan. Notable projects in that plan include:
 - Construction of the Sly Park Intertie (currently under construction in 2025)
 - Replacement of wooden flumes with concrete
 - Replacement of hypalon water storage reservoirs with concrete
 - Replacement of the Silver Lake Dam (scheduled to begin in 2027)
- Expand its water treatment and transmission facilities as described in its then current Water and Recycled Water Master Plan (adopted on June 24, 2024).
- Potentially provide transfer water in normal years (groundwater recharge) and during drier/driest years (meet LAR demand) to increase instream flows below Folsom Reservoir.

The final section of this document includes a list of completed and ongoing District projects.

Caveats and Assurances

1. The signatories hereby acknowledge that the District's existing Urban Water Management Plan forecasts an increase in future customer potable water demand. The signatories further acknowledge that (1) the District will need to ensure that it has sufficient available water supplies to meet forecasted future water demands throughout the District's service area; and (2) ensuring sufficient available water supplies may require the District to undertake infrastructure and non-infrastructure projects that impact District water rights and supplies.
2. Without foregoing any current or future rights or remedies with respect to any project in particular, the Signatories hereby commit to work in good faith toward understanding each party's respective interests and to seek to resolve any concerns regarding present and future water rights projects.
3. In the event of unforeseen circumstances, the District must be relieved of the commitments included herein. Unforeseen circumstances include, but are not limited to, curtailment of senior water rights, unanticipated infrastructure failures, forecasted carryover storage that falls below historical averages, changes in statute or regulation that inhibit the District's ability to meet commitments, etc.

Project List and Future Water Supply Reliability Efforts

The following projects and initiatives are key to the District meeting the commitments contained herein and its water supply reliability in 2030 and beyond:

- Regional water transfers and agreements (partnerships)
- Addition of upstream point of diversion to Permit 21112

Table 1 provides a listing of major completed and ongoing District projects.

Table 1. Major Water Supply Projects that Promote Water Forum Coequal Objectives

Project(s) Identified in Water Forum Agreement		Project Status
Completed	Main Ditch Piping project	<i>Project completed in 2022</i>
	Replacement of wooden flumes with concrete	<i>Many sections completed with others in the planning/design phase</i>
	Folsom Lake Intake project with temperature control device (TCD)	<i>The project is complete and TCD operational as of 2023</i>
Ongoing/Pending	Sly Park Intertie	<i>Intertie construction active in 2025</i>
	Replacement of Silver Lake Dam	<i>Dam construction to begin in 2027</i>
	Addition of upstream point of diversion for Permit 21112	<i>Public engagement and environmental document preparation</i>
	Improved and expanded transmission with the District distribution system	<i>See Water and Recycled Water Master Plan for details</i>
	Expanded treatment capacity of El Dorado Hills Water Treatment Plant	<i>Planning and public engagement phase</i>
	Recycled water storage project	<i>Planning phase</i>
	Negotiation of agreement with El Dorado Water Agency to utilize Fazio water	<i>TBD</i>
	Potentially provide transfer water to meet LAR needs	<i>TBD based on potential agreements with LAR purveyors</i>
	Pursue a feasible alternate supply for customers served by upper Crawford Ditch (North Fork Cosumnes River)	<i>Planning phase</i>



WATER FORUM AGREEMENT

2050

Golden State Water Company Arden System and Cordova System Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

Golden State Water Company (GSWC) is a subsidiary of American States Water Company, an investor-owned utility dedicated to increasing value through the expert management of utility assets and services. GSWC, then known as Southern California Water Company, was formed in 1929. In the 1960's, GSWC purchased multiple water systems in Sacramento County to form the GSWC Cordova and the GSWC Arden systems. The two water systems are not hydraulically connected to each other. Today, the GSWC Cordova serves a portion of the City of Rancho Cordova and the unincorporated community of Gold River. In 2023, GSWC Cordova served approximately 15,424 connections. GSWC Arden serves a portion of the unincorporated community of Arden within the political jurisdiction of the County of Sacramento. In 2023, GSWC Arden served approximately 1,770 connections.

Supply Portfolio

GSWC Cordova's water supplies have been augmented over time to adapt to changing conditions and provide a diverse and flexible water supply portfolio.⁴⁸ GSWC Cordova's primary water supply consists of groundwater pumped from the Sacramento Valley Groundwater Basin through GSWC-owned wells, and surface water from the American River that is treated at the Coloma Water Treatment Plant. Water assets include a pre-1914 appropriative water right, Aerojet GET (Groundwater Extraction and Treatment) water supplies from a remediation agreement, and native groundwater supplies. GSWC Cordova also maintains emergency connections with neighboring agencies that allows it access to additional sources of water in emergency conditions.

GSWC Arden derives its supply from the Sacramento Valley Groundwater Basin through GSWC-owned wells. GSWC Arden also maintains emergency connections with neighboring agencies that allow it access to additional sources of water in emergency conditions.

⁴⁸ GSWC Cordova 2020 UWMP, July 2021, page ES-2.

Surface Water Supplies⁴⁹

For GSWC Cordova, GSWC possesses a pre-1914 appropriative right from the South Fork of the American River established by the Natoma Water Company in 1851. Natoma Water Company's original pre-1914 water right established a maximum diversion rate "to fill a Canal Eight feet wide and Four feet deep with a current running ten miles per hour." This correlates to a diversion rate of 60 cubic feet per section (cfs) and a maximum allocation of 32,000 acre-feet per year. This water right is held jointly with City of Folsom pursuant to a co-tenancy agreement. The co-tenancy agreement means that both the City of Folsom and GSWC have the right to use the water to the fullest extent possible as desired by the respective entities. The City of Folsom and GSWC have allocated the supplies under the entire 32,000 acre-foot water right. The City of Folsom unilaterally controls 22,000 acre-feet and GSWC controls the remaining 10,000 acre-feet of which 5,000 acre-feet is under contract. In November 1994, the City of Folsom and GSWC executed a contract under which the City of Folsom acquired the right to lease 5,000 acre-feet of water per year. As such, the basis of this water asset is held with GSWC pursuant to the co-tenancy agreement but the lease of the water asset to the City of Folsom is pursuant to a lease agreement. The 1851 filing is the earliest in priority of perfected appropriative rights on the South Fork of the American River and is recorded.

GSWC Cordova's surface water supply is diverted from the Folsom South Canal and is treated at the Coloma/Pyrites Water Treatment Plant.

GSWC Arden does not rely on surface water supply.

Groundwater Supplies⁵⁰

Groundwater supplies constitute a major component of the GSWC Cordova's water supply portfolio. The groundwater supplies for GSWC Cordova are derived from the South American Subbasin of the Sacramento Valley Groundwater Basin. The aquifers in the area are recharged from rainfall, applied irrigation water, streambed recharge, and irrigation channel recharge. The American River provides substantial stream channel infiltration.

GSWC Cordova has eight active groundwater wells. These wells are located throughout GSWC Cordova's service area and include both typical wells and those with wellhead treatment to address the Aerojet contamination issues in the service area.

Groundwater supply constitutes the entirety of the GSWC Arden's water supply portfolio. The groundwater supplies for GSWC Arden are derived from the North American Subbasin of the Sacramento Valley Groundwater Basin. GSWC Arden has six active groundwater wells.

Aerojet GET Water Supply⁵¹

As of 2015, GSWC had nine wells in GSWC Cordova. Prior to 2015, fourteen wells had to be destroyed due to contamination, and another was transferred to Aerojet for use as a remediation well. As part of a settlement agreement, Aerojet is obligated to deliver 5,000 AF of granted water to GSWC each year.

⁴⁹ GSWC Cordova 2020 UWMP, July 2021, page 3-1.

⁵⁰ GSWC Cordova 2020 UWMP, July 2021, page 3-3.

⁵¹ GSWC Cordova 2020 UWMP, July 2021, page 3-9.

This water is discharged by Aerojet remediation wells into the American River for extraction and treatment at the Carmichael Water District (CWD) water treatment plant. The treated water is then pumped under the American River and into the GSWC Cordova service area. This agreement with CWD allows GSWC to divert and use the Aerojet GET Water replacement supply.

Per GSWC’s 2020 Urban Water Management Plant (UWMP), it should be noted that additional groundwater wells may be taken offline in the future due to contamination. GSWC’s Settlement Agreement requires Aerojet to supply up to an additional 10,200 acre-feet of water per year.

Distribution System of Note

GSWC Cordova maintains an intertie with CWD, an intertie with Sacramento County Water Agency (SCWA), and emergency interconnections with SCWA, the City of Folsom, and two locations with California American Water. GSWC Arden maintains two emergency connections with Sacramento Suburban Water District (SSWD).

Current and Projected Demands

GSWC Cordova

Table 1 summarizes the GSWC Cordova demand over the last 10 years. The current GSWC Cordova service area is primarily characterized by low- to medium-density residential land use, with some mixed use, commercial, and light industrial land use also present, mostly along Sunrise Boulevard and Coloma Road.⁵² There is a corridor of parks and open space along the American River Parkway in the northern portion of the service area. Most development in the service area existed prior to 2015 and is not expected to change significantly through 2045 (2020 UWMP planning period).

Table 1. GSWC Cordova—Historical Annual Demands

Year	Total Demand (AFY)*
2014	13,954
2015	11,594
2016	12,790
2017	13,293
2018	13,456
2019	13,037
2020	14,360
2021	13,592
2022	12,561
2023	12,308

* Includes non-revenue water use

Development and redevelopment in the existing GSWC Cordova service area, where expected, will consist mostly of incremental infill that does not significantly change existing land uses. Transit Oriented Development and mixed-use infill along Folsom Boulevard and the Gold Line light rail route will likely be among the most significant changes from current conditions within the existing service area. The

⁵² GSWC Cordova 2020 UWMP, July 2021, page 2-5.

unincorporated community of Gold River is primarily residential and near full build-out; future land use is expected to closely resemble current land use in this portion of the service area.

Projected water demands (**Table 2**) are from GSWC Cordova’s 2020 UWMP for the planning period of 2025 through 2045.⁵³ GSWC may expand its service area boundary in the future to serve the proposed Westborough Development Project (Westborough Project) which is planned to be developed on land southeast of the current service area, east of Sunrise Boulevard and south of Folsom Boulevard. The Westborough Project site is located on lands that were once part of the Aerojet-Rocketdyne facilities and would consist of 1,665 acres of new residential, mixed-use development including 7,072 dwelling units, a town center and commercial area, parks, a school, water delivery facilities, and open spaces. The Westborough Project could potentially begin construction within the next five years and may reach full buildout by 2040.

Table 2. GSWC Cordova—Projected Water Demands, AFY (2025 – 2045)

Year	2025	2030	2035	2040	2045
Current Service Area	13,605	13,949	14,301	14,662	15,032
Westborough Project	2,400	2,796	4,028	4,028	4,028
Total	16,005	16,745	18,329	18,690	19,060

Note:

- GSWC Cordova 2020 UWMP Table 4-5.
- GSWC Cordova 2020 UWMP Table 4-6.
- Per the 2020 UWMP, demand assumptions for Westborough are based on the Westborough internal planning documents, which are currently in draft form and subject to change but represent the reasonable information available to GSWC at the time of the 2020 UWMP preparation.

GSWC Arden

Table 3 summarizes the GSWC Arden demand over the last 10 years. The current GSWC Arden service area is primarily characterized by low- to medium-density residential land use, with some commercial land use. The GSWC Arden System is considered near build-out. Most new connections are likely to be generated by redevelopment rather than new development. Preparation of a UWMP is not required for GSWC Arden; for the planning period of 2025 through 2045, projected demands are expected to be relatively constant compared to the existing demands.

Table 3. GSWC Arden—Historical Annual Demands

Year	Total Demand (AFY)*
2014	896
2015	778
2016	793
2017	854

⁵³ GSWC Cordova 2020 UWMP, July 2021, page 4-6.

Year	Total Demand (AFY)*
2018	836
2019	836
2020	932
2021	925
2022	852
2023	828

* Includes non-revenue water use

Surface Water Management

Surface water is integral to GSWC Cordova’s water supply portfolio. The following sections describe how surface water is managed for the GSWC Cordova System. GSWC Arden does not rely on surface water.

Current Diversions

Table 4 summarizes the annual diversions from the American River.

Table 4. GSWC Cordova—Historical Diversions from the American River

Year	GSWC Cordova (AFY)	City of Folsom Leased Water* (AFY)	Total Diversion (AFY)
2014	4,768	4,470	9,238
2015	3,569	3,988	7,557
2016	4,068	3,510	7,578
2017	4,596	-	4,596
2018	4,994	-	4,994
2019	4,623	-	4,623
2020	2,500	-	2,500
2021	3,929	-	3,929
2022	4,649	-	4,649
2023	5,053	-	5,053

* From 2014 – 2016, GSWC leased American River water supply from the City of Folsom due to a short-term emergency to mitigate the loss of groundwater due to contamination. In 2017, the American River pipeline became operational and GSWC Cordova started receiving supplies from CWD. See *Aerojet GET Water Supply* Section for more detail.

Future Projected Diversions

GSWC Cordova will continue to use its pre-1914 appropriative right from the South Fork of the American River.

Drier Conditions Management

The fundamental management tenet for GSWC Cordova's water service reliability in dry periods is to coordinate with the City of Folsom and United States Bureau of Reclamation (Reclamation) for its pre-1914 appropriative surface water rights, Sacramento Central Groundwater Authority for groundwater management, and CWD for the treated Aerojet supply.⁵⁴ Discretion over the amount of groundwater pumped allows GSWC Cordova to match its total supplies to meet annual demands which increases GSWC Cordova's dry year resilience.

In 2015, the driest year in the last 100 years in California, the State Water Resources Control Board curtailed some pre-1914 appropriative water rights with priority dates as early as 1903. The 1851 water right was protected from curtailment because of its seniority. As such, the entirety of this water right was available to GSWC in all year types which makes it extremely resilient against drought conditions and regulatory curtailment.

In February 2024, the California Public Utilities Commission (CPUC) approved GSWC's request to enter into the American River Terms of Ecosystem Support and Infrastructure Assistance Needs (ARTESIAN) Project Agreement. The ARTESIAN Agreement would require GSWC to forebear the use of up to 763 acre-feet of its surface water rights from the South Fork of the American River during three dry or critical years from 2025 through potentially 2036. In exchange, GSWC would receive grant funding to upgrade its interconnections with SCWA. This Agreement to intermittently encumber water will be similarly followed by eight other entities, working together through a Department of Water Resources (DWR) endeavor to reduce diversions from the Lower American River during dry years and increase instream flows necessary to support ecosystems and fish species, by encumbering a total of 30,000 AF of water each of those years.

GSWC acknowledges and supports the goals and general framework of the Sustainable Groundwater Management Act (SGMA) and intends to operate its surface water and groundwater supplies in a manner broadly consistent with SGMA objectives, to the extent applicable to the company and subject to regulatory and contractual obligations.

Driest Conditions Management

See previous section for Drier Conditions Management.

Critically Low Storage Conditions

See previous section for Drier Conditions Management.

Demand Management

From the perspective of GSWC, demand management is a critical strategy for ensuring long-term water supply reliability, regulatory compliance, and operational efficiency while staying committed to customer service and environmental stewardship. By offering programs such as conservation incentives, employing tiered rate structures, performing reoccurring leak detection efforts, and engaging in public education, GSWC can more effectively manage consumption, especially during drought or peak demand periods

⁵⁴ GSWC Cordova 2020 UWMP, July 2021, page ES-4.

Project List and Future Water Supply Reliability Efforts

Structural

- Upgrades to GSWC Cordova interconnections with SCWA due to the ARTESIAN Agreement
- Ongoing water main and service replacements to reduce water loss for both systems (GSWC Cordova and GSWC Arden)
- Ongoing replacement of aged water meters to control and/or reduce non-revenue water for both systems

Non-Structural

- Continued water use efficiency programs for both systems.

Caveats and Assurances

1. The ability for any individual purveyor to implement the surface water diversions principles will depend on their respective opportunities and constraints.
2. In circumstances where excess water is made available by Reclamation by a Section 215 Contract between the purveyor and Reclamation due to flood control or "uncontrolled season" operations at Folsom Reservoir, for the purposes of groundwater recharge, that water would not be counted as diversion water within their Purveyor Specific Agreement (PSA), regardless of year type.
3. Protection of purveyor's water entitlements. This Agreement shall not modify or diminish any vested water rights, including GSWC's pre-1914 appropriative right on the Lower American River. Use of surface water for the purpose of maintaining hydraulic control to prevent groundwater contaminant migration resulting from basin pumping shall remain a fully protected and recognized exercise of GSWC's water entitlements.
4. Support aquifer storage and recovery for the purposes of groundwater recharge and surface banking within purveyors' water entitlements.
5. Water demands in future UWMPs shall be re-visited and updated in the surface water diversions table.
6. GSWC is contractually obligated to use its 5,000 acre-feet of surface water rights as the baseline supply for the GSWC Cordova system. Deviation from this requirement requires consent from the other party. This consent would be sought during severe adverse conditions, but a positive outcome cannot be assured.
7. GSWC is regulated by the California Public Utilities Commission (CPUC). GSWC's implementation of this PSA is subject to review by the CPUC. GSWC may modify or terminate implementation of this PSA upon receiving an adverse decision related to implementation by the CPUC.



WATER FORUM AGREEMENT 2050

Placer County Water Agency Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

Placer County Water Agency (PCWA) was created in 1957 by a special act of the California Legislature known as the Placer County Water Agency Act. The boundaries of PCWA are coterminous with the boundaries of Placer County. PCWA has a five-member board of directors elected in each of the county's supervisorial districts for four-year terms.

PCWA carries out a broad range of responsibilities including water resource planning and management, wholesale and retail supply of water, and hydroelectric energy production. PCWA has access to stored surface water appropriative rights and contract entitlements totaling roughly 500,000 acre-feet per year (AFY), with about half this amount being planned for consumptive use. PCWA also has access to a regionally managed sustainable groundwater supply.

PCWA currently delivers approximately 100,000 AFY of treated and untreated water to retail customers and approximately 30,000 AFY to neighboring water suppliers for resale, serving a total population of over 250,000 people in Placer County directly or indirectly. In addition, PCWA regularly makes surface water available through transfers to assist fishery protection goals in the lower American River while simultaneously providing water supplies to water purveyors across the state with limited access to water in dry years and periods of drought.

In the future, it is anticipated that PCWA will have a buildout water demand of approximately 253,000 AFY. PCWA is actively engaged in regional water planning, such as conservation and conjunctive use, to ensure sufficient water supply is available to meet demands.

Service Area

In accordance with its act, PCWA's district boundary overlays the entire area of Placer County. However, PCWA formed Zone 6 as a boundary to reflect its practical service area under current planning in western Placer County (**Figure 1**). The Zone 6 service area is a financial and operational amalgamation of four separate systems acquired or developed over time. Each of these underlying systems is designated as a PCWA Zone; numbered 1, 2, 3 and 5.⁵⁵ PCWA refers to Zone 6 as the "Western Water System."

⁵⁵ Previously, PCWA served an area called Zone 4. Zone 4, located in Martis Valley near Truckee, California, is now served by Northstar Community Services District.

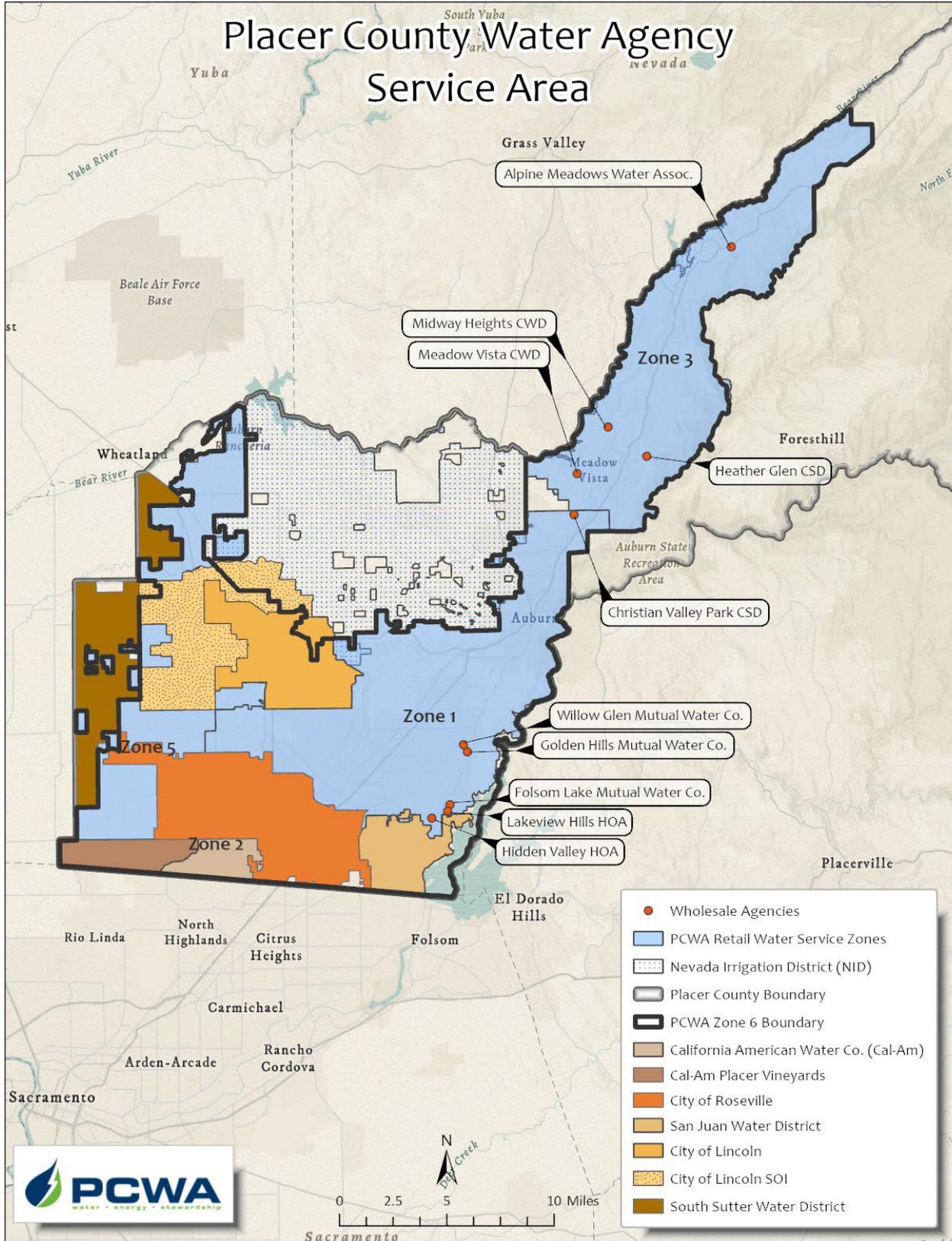


Figure 1. PCWA's Service Area and Zones

The Zone 6 service area extends from the community of Alta on the east, westward down the Interstate 80 corridor, and bounded by the Nevada Irrigation District to the north, the South Sutter Water District to the west, Sacramento County to the south, and El Dorado County to the east. The service area includes retail treated water deliveries to the communities of Alta, Monte Vista, Applegate, Colfax, Auburn, Loomis, Rocklin, and much of the surrounding unincorporated areas within Placer County. PCWA also provides wholesale treated water to the City of Lincoln and California American Water for use in their franchise area west of Roseville and south of Baseline Road, and to other relatively small community water systems throughout PCWA’s service area.

In addition to treated water service, PCWA provides untreated water through its extensive canal system to individual customers and water for treatment and resale by other retail water purveyors. Untreated water comprises more than half of PCWA’s delivery by volume.

PCWA also provides untreated water under its North Fork American River water rights into Folsom Lake for delivery to the San Juan Water District (SJWD), the City of Roseville, and Sacramento Suburban Water District (SSWD). Thus, PCWA’s place of use for its American River water rights extends outside of its district boundary (**Figure 2**).

Supply Portfolio

PCWA uses surface water as its primary water supply for delivery to its wholesale and retail customers. PCWA may also use groundwater in dry hydrologic conditions to meet demands and may use recycled water – produced by the cities of Roseville and Lincoln – to meet demands in the future. Existing and planned supplies are described below and summarized in **Table 1**.

Table 1. PCWA’s Existing and Planned Supplies, AFY

Supply Source	2020	2025	2030	2035	2040	Buildout
Middle Fork Project (MFP)	120,000	120,000	120,000	120,000	120,000	120,000
MFP Downstream ¹	47,000	47,000	47,000	47,000	47,000	47,000
Central Valley Project ² (CVP)	0	0	35,000	35,000	35,000	35,000
Pacific Gas and Electric (PG&E)	125,400	125,400	125,400	125,400	125,400	125,400
Pre-1914 Appropriative Rights	3,400	3,400	3,400	3,400	3,400	3,400
Recycled Water	0	0	2,500	5,000	7,000	9,000
Groundwater	2,000	2,000	4,000	4,000	5,000	5,000
TOTAL SUPPLY	297,800	297,800	337,300	339,800	342,800	344,800

1. MFP supply to be delivered to an expanded place of use downstream in dry years, see Surface Water Management.
2. CVP supply is currently not available due to physical limitations until infrastructure is in place to access this supply, which is assumed to be in 2030.

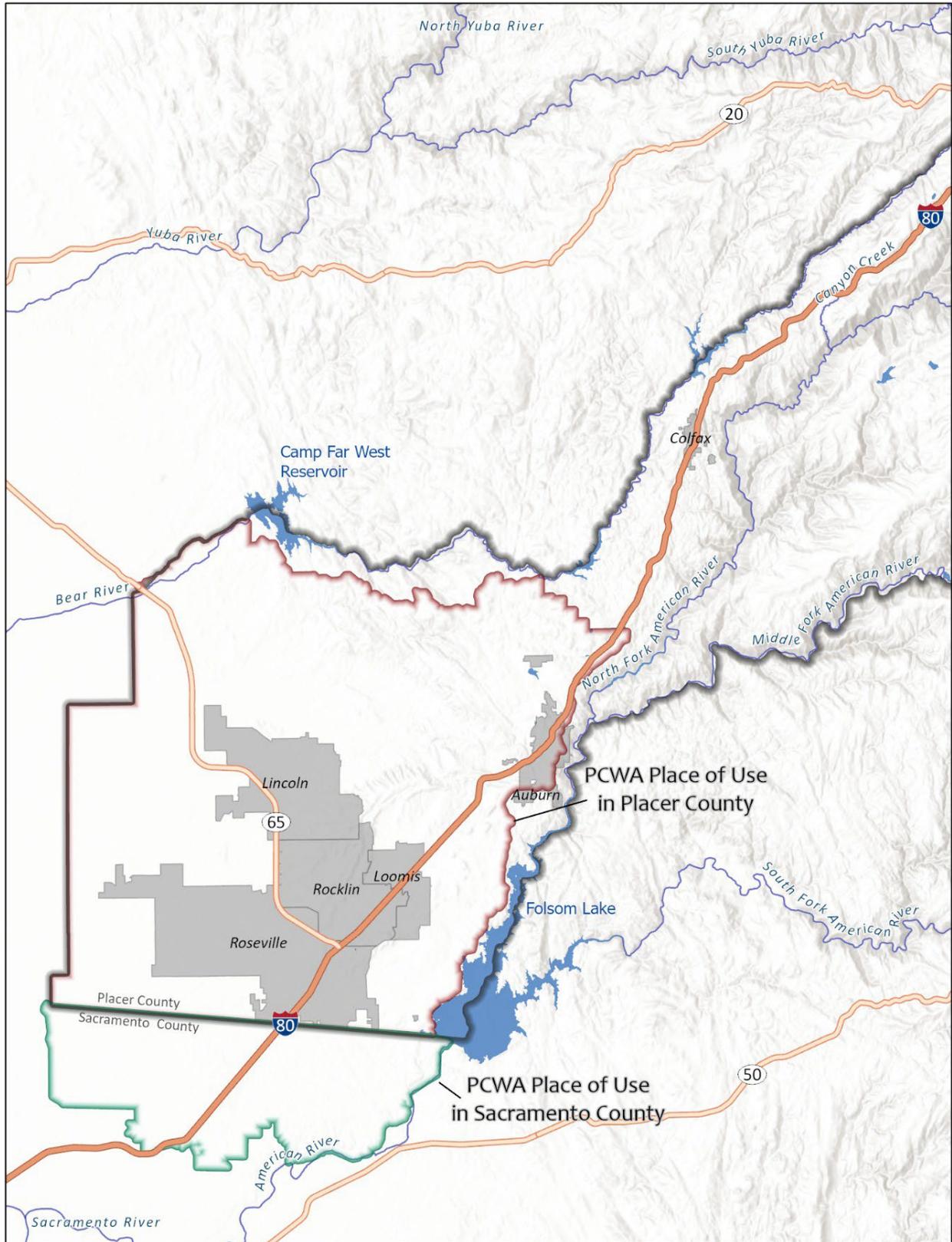


Figure 2. PCWA's American River Water Rights Place of Use

Surface Water

PCWA's surface water supplies consist of water diverted from the Yuba, Bear, and North Fork American Rivers and its tributaries which includes the following:

- Water purchased from Pacific Gas and Electric Company (PG&E) from the Yuba and Bear Rivers (via the Drum-Spauling hydropower system) under the 1982 Zone 3 Contract Purchase Agreement and the 2015 Water Supply Agreement
- Direct diversions from the North and Middle Forks of the American River and water stored in its Middle Fork Project (MFP) under water rights permits 13856 and 13858;
- Central Valley Project (CVP) water under CVP Repayment Contract 14-06-200-5082A-IR1-P from the American River
- Surface water from various small creeks under pre-1914 water rights

A description of PCWA's existing surface water supplies is provided below.

PG&E Contracts

PCWA has two water supply contracts with PG&E for the purchase of up to 125,400 AFY for irrigation and domestic purposes—100,400 AFY under an agreement for the “Western Water System” (formerly Zones 1, 2, and 5) and 25,000 AFY under another agreement for Zone 3. The underlying rights for the PG&E supply are PG&E's pre-1914 appropriative rights to water in the Yuba and Bear Rivers, which were established prior to the time that PG&E developed hydroelectric facilities throughout the Yuba and Bear watersheds and are dedicated to consumptive needs in Nevada and Placer Counties. The water supply that PCWA purchases from PG&E is used to meet both untreated and treated water demands within PCWA's service area.

PG&E Drum-Spauling water supplies have historically been very reliable. However, during recent droughts the allocation of this supply has been reduced, and climate change projections indicate that this water supply will not be as reliable due to warming temperatures and reductions in precipitation as snowfall. Additionally, the age of the infrastructure in PG&E's Drum Spaulding System has resulted in an increase in infrastructure failures and periods of outage for repairs that affect the reliability of this water supply.

American River Water Rights

PCWA holds appropriative water rights on the North Fork and Middle Fork of the American River and various tributaries thereof pursuant to Permits 13856 and 13858 through the California State Water Resources Control Board (State Water Board), Division of Water Rights, and owns and operates the MFP, a multi-purpose water supply and hydroelectric-generation project. Major components of the MFP include two storage reservoirs, five regulating reservoirs and diversion pools, and five powerhouses. The MFP seasonally stores and releases water to meet consumptive water demands within western Placer County and northern Sacramento County while simultaneously generating clean and renewable power for the California electric grid. Currently, PCWA's use of American River water for consumptive purposes is diverted at two locations: (1) American River Pump Station (ARPS); and (2) Folsom Dam.

The two water rights permits provide water supplies to PCWA's treated and irrigation water customers from the ARPS and to PCWA's wholesale customers from Folsom Dam. PCWA may use water under its

permitted water rights in western Placer County, as well as portions of northern Sacramento County, including SJWD and its wholesale family, SSWD, and Rio Linda/Elverta Community Water District service areas. PCWA's wholesale customers with deliveries out of Folsom Dam currently include the City of Roseville, SJWD, and SSWD.

The year of priority for water right Permits 13856 and 13858 is 1958, one year after PCWA was established by the Placer County Water Agency Act. These water rights were originally part of a State Filed Application filed pursuant to California Water Code section 10500 and were released from priority pursuant to California Water Code section 10504. The release from priority operates as a limited exception to the rule of priority, precluding the eventual assignee of the original State Filed Application from asserting priority against PCWA.

The consumptive volume of water available to PCWA from its American River water rights is currently limited by agreement with the U.S. Bureau of Reclamation (Reclamation). This limitation is related to performance by Reclamation in providing an alternate supply to PCWA pursuant to their CVP contract. The contextual relationship of these supplies is described below.

In November 2007, PCWA timely filed petition for extension of time with the State Water Board requesting an additional 36 years (until the year 2043) in which to put water allocated under these permits to full beneficial use. This petition was supported by members of the Environmental Caucus of the Water Forum. In March 2008, the State Water Board issued a Notice of Petition for Extension of Time (Petition) for Water Right Permits 13856 and 13858. PCWA's Petition for Extension of Time is pending before the State Water Board.

Central Valley Project Contract

PCWA has a CVP water supply contract with Reclamation for delivery of up to 35,000 AFY for municipal and industrial purposes, including groundwater recharge programs that are consistent with applicable State law. The CVP Repayment Contract 14-06-200-5082A-IR1-P (dated February 28, 2020) remains in effect in perpetuity. Reclamation reserves the right to apportion the available CVP water supply among PCWA and other CVP water contractors under its Municipal and Industrial Water Shortage Policy.

PCWA's point of diversion for CVP water under the CVP Contract is Folsom Dam, but the contract also includes potential for other points of diversion, including the Sacramento River, if agreed to by the Contracting Officer. PCWA does not currently own or control facilities that are capable of conveying CVP water from Folsom Dam to the PCWA service area. As such, the availability of the water supply is currently affected by physical limitation. PCWA is engaged in negotiations with Natomas Central Mutual Water Company and other regional entities to utilize existing facilities to divert and deliver PCWA's CVP project water supplies from the Sacramento River.

PCWA is a partner agency on the RiverArc Project, which would diversify water supplies by shifting a portion of regional water demand from the American River and Folsom Reservoir to the Sacramento River. PCWA anticipates the future opportunity to divert all or a portion of its CVP contract water from a diversion on the Sacramento River as part of the RiverArc Project.

Contextual Relationship of American River Water Rights and CVP Contract

PCWA completed construction of its MFP in 1967. This project has a current total storage capacity of 342,583 acre-feet (AF) in two major reservoirs and several smaller reservoirs. As originally planned, the

MFP was to be comprised of three major reservoirs: French Meadows, Hell Hole, and American Bar. American Bar Dam was to be located just south of Foresthill, below the current Oxbow Powerhouse. American Bar Dam and Reservoir would have provided an additional 100,000 AF of water storage for the people of Placer County, as well as another large hydroelectric plant. Reclamation opposed PCWA's water right applications for the MFP and specifically American Bar Dam, because it was planned in the upper reaches of the flooded area of the future Auburn Dam. PCWA had also protested Reclamation's applications for water on the American River, including for the Auburn Dam. PCWA and Reclamation then entered negotiations to resolve the protests in a way that would allow construction of both projects.

The negotiations resulted in a series of agreements which provided, in pertinent part, that PCWA would abandon plans to build American Bar Dam, instead moving the lowest of the MFP dams to Ralston Afterbay. PCWA also agreed to limit consumptive use diversions from the MFP to 120,000 AFY. In exchange, Reclamation was to provide PCWA with an additional 117,000 AFY of CVP water. This agreement insured PCWA that it had sufficient water supplies to meet the demands of Placer County and was memorialized in a 1966 "Agreement and Stipulation" between PCWA and Reclamation. The amount of CVP supply was subsequently agreed to be reduced to 35,000 AFY, which is now provided for in PCWA's 2020 long-term repayment contract.

PCWA's consumptive water rights from the MFP are still under development. PCWA's agreement to limit its diversion of MFP supply to 120,000 AFY subject to Reclamation's agreement to provide 35,000 AFY provides PCWA with a total of 155,00 AFY from the American River watershed. This amount combined with PCWA's water delivered by PG&E from the Drum-Spaulding system is sufficient to meet buildout demands. This amount diverted from the American River is well within PCWA's MFP storage capacity of 342,583 AF. Should Reclamation fail to fulfill its obligations under the various settlement agreements with PCWA, PCWA would be ready, willing, and able to obtain the full amount from its MFP storage. In addition, PCWA is planning to deliver an additional 47,000 AFY of MFP water for consumptive use downstream of the confluence of the American and Sacramento Rivers. This consumptive use would be in dry years as part of a mitigation strategy for the lower American River, as discussed elsewhere in this document.

Pre-1914 Appropriative Rights

PCWA holds four pre-1914 appropriative water rights for diversion of water from various small creeks and their tributaries in western Placer County. These rights are generally for agricultural purposes, including irrigation and livestock watering.

Surface Water Summary

Table 2 identifies the source, purpose of use, maximum available quantity, and place of use for each PCWA surface water supply.

Table 2. PCWA’s Surface Water Supply Summary

Supply	Source	Purpose of Use	Volume, AFY	Place of Use
Water Right Permits 13856 and 13858	American River	Irrigation, Domestic, Municipal, and Industrial, Recreation	120,000 ¹	Western Placer County and Portions of Sacramento County (see Figure 2)
Water Right Permits 13856 and 13858	American River	Irrigation, Domestic, Municipal, and Industrial, Recreation	47,000 ²	Proposed expanded place of use to include East Bay Municipal Utility District and other potential downstream buyers
Central Valley Project Contract	American River ³	Municipal and Industrial	35,000	Place of use pursuant to contract (generally PCWA’s Zone 1)
PG&E Water Supply Agreement (2015)	Yuba and Bear Rivers	Irrigation and Domestic	100,400	Western Water System (generally PCWA’s Zone 6)
PG&E (Zone 3) Purchase Agreement (1982)	Yuba and Bear Rivers	Irrigation and Domestic	25,000	PCWA’s Zone 3
Pre-1914 Appropriative Right (S000959)	Canyon Creek	Irrigation and Domestic	40 cfs (Max.)	Alta, Colfax, Monte Vista and rural areas (Not limited to Zone 3)
Pre-1914 Appropriative Right (S000967)	Tributary to Auburn Ravine	Irrigation and Stock Watering	Not Stated	“Boardman Canal” Area
Pre-1914 Appropriative Right (S010397)	South Fork Dry Creek Tributary to Coon Creek	Irrigation	Not Stated	Localized Irrigation Just East of Auburn
Pre-1914 Appropriative Right (S010398)	North Fork Dry Creek Tributary to Coon Creek	Irrigation	Not Stated	Localized Irrigation Just East of Auburn

1. See Contextual Relationship of American River Water Rights and CVP Contract.
2. Environmental flows to be sold downstream, see Surface Water Management.
3. PCWA is pursuing relocation of this point of diversion to the Sacramento River.

Groundwater

PCWA has historically produced a limited quantity of groundwater. PCWA does not anticipate utilizing groundwater to support its normal year water deliveries. PCWA has two wells – the Sunset Well and the Tinker Well – each with a production capacity of about 1,000 AFY. These wells are for backup and dry-year supplies. The proposed Regional University development plans to construct one new well and the current Placer One development plans to construct two new wells, increasing PCWA’s groundwater supply from the current 2,000 AFY to 5,000 AFY in 2040 (Table 1).

Recycled Water

The County of Placer has access to recycled water through its wastewater service arrangements with the cities of Roseville and Lincoln and has dictated use of these supplies as a condition of development in the

Placer Vineyards, Placer One, and Regional University projects. Potential retailers of these supplies are the county, PCWA, and California American Water. Regardless of who the retailer is, these supplies would be available as conditions of those development projects. PCWA anticipates the quantities of recycled water presented in Table 1 to be made available. The details of recycled water delivery are being developed as part of on-going regional planning.

Distribution System

Untreated Water

The PCWA untreated water conveyance system consists of 170 miles of earthen and lined canals, with flumes and pipelines where appropriate, beginning in the community of Alta, flowing southwest, generally following Interstate 80, and ending in Roseville. The main canal in the system is the Boardman Canal, which flows contiguously from Alta to Roseville. In Auburn the canal system begins to distribute outward into branch canals. There are also two canals in western Placer County that divert water from the Auburn Ravine. PCWA purchases water at several connections to the PG&E canal system called “Buy Points,” positioned at key locations between Alta and the end of PG&E’s South Canal. Water can also enter the canal system from accretion flows, pre-1914 water rights, and return flows from PCWA untreated water customers (water that is delivered to customers and flows back into the canal).

PCWA can also pump MFP water out of the North Fork of the American River at the ARPS, into the 3-mile Auburn Tunnel under the City of Auburn to a valved outlet into Auburn Ravine, where the water is delivered to the two canals in western Placer County. MFP water can also be pumped out of the tunnel at the Ophir Road Pump Station into the PG&E South Canal, to PCWA’s Dutch Ravine Canal, or to the Foothill and Ophir (future) water treatment plants.

Treated Water

PCWA owns and operates nine water treatment plants between Alta and Rocklin, producing approximately 40,000 AF of potable water each year. Treated water is distributed by 615 miles of pressurized pipe and delivered to various retail and wholesale customers.

PCWA also has several treated water interties with neighboring water agencies: Nevada Irrigation District, SJWD, the City of Lincoln, and the City of Roseville. Some of these connections are one-way due to pressure differences, while other connections can flow water in either direction with the use of pumps or pressure-reducing valves.

Current and Projected Demands

PCWA’s water use is broken down into four classifications: retail treated, retail untreated, wholesale treated, and wholesale untreated. PCWA’s current (2020) treated and untreated retail demands are 101,613 AFY and are projected to increase to 125,134 AFY at buildout. PCWA’s current (2020) treated and untreated wholesale demands are 31,376 AFY and are projected to increase to 128,282 AFY at buildout. **Table 3** provides the total current and projected PCWA customer demands for 5-year increments through 2040 and buildout conditions. The treated water demand estimates account for an appropriate amount of water use reduction resulting from the successful implementation of Senate Bill 7x-7, “20 by 2020,” and anticipated reduction from the regulation titled “Making Conservation a California Way of Life.”

Table 3. Summary of PCWA's Total Customer Demand Projections, AFY

Classification of Water Use	2020	2025	2030	2035	2040	Buildout
Treated Retail	29,065	33,182	37,773	43,780	52,637	62,036
Untreated Retail	72,548	71,208	69,298	67,681	66,313	63,098
RETAIL SUBTOTAL	101,613	104,390	107,071	111,461	118,950	125,134
Treated Wholesale	11,450	15,413	18,388	22,710	27,032	47,276
Untreated Wholesale	19,926	54,923	58,712	63,289	81,006	81,006
Untreated Downstream ^{1,2}	19,000	47,000	47,000	47,000	47,000	47,000
WHOLESALE SUBTOTAL	50,376	117,336	124,100	132,999	155,038	175,282
PCWA TOTAL WATER USE	151,989	221,726	231,171	244,460	273,988	300,416

1. MFP supply to be delivered to an expanded place of use downstream in dry years, see Surface Water Management.
2. This demand will only be in dry years to provide environmental flows to the lower American River, 47,000 AFY will be the maximum amount.

Surface Water and Groundwater Management

PCWA was a signatory to the 2000 Water Forum Agreement. The Water Forum Agreement has two coequal objectives: (1) provide a reliable and safe water supply for the region's economic and planned development; and (2) preserve the fish, wildlife, recreational, and aesthetic values of the lower American River.

The Water Forum Agreement's supportive Environmental Impact Report fully analyzed buildout demand in PCWA's place of use and identified purveyor specific agreements for PCWA's wholesale customers (City of Roseville, SJWD and SSWD) which placed restrictions on the use of North Fork American River water depending on unimpaired inflow into Folsom Reservoir. In addition, PCWA voluntarily agreed to release up to 47,000 AF (27,000 AF for PCWA and 20,000 AFY for the City of Roseville) of additional water⁵⁶ (Water Forum environmental releases) in drier years through reoperation of MFP reservoirs. When projected March through November Unimpaired Inflow to Folsom Reservoir (M-N UIFR) is between 950,000 and 400,000 AF, the amount of these environmental releases is linearly interpolated between 0 and 47,000 AF. When projected M-N UIFR is less than 400,000 AF, it is considered a "conference year" where Water Forum participants meet to determine how best to manage the available water, recognizing that there may not be sufficient water to meet both deliveries and environmental release requirements specified in the agreement. Under this program of environmental releases, PCWA has released more than 200,000 AF of water to the lower American River in dry years.

When projected M-N UIFR is greater than 1.6 million AF, there is a provision for PCWA to sell surface water to groundwater pumpers in Sacramento County as part of a conjunctive use program to alleviate groundwater overdraft. PCWA's place of use was expanded into Sacramento County as shown on Figure

⁵⁶ The Water Forum environmental releases represent additional water (up to 47,000 AF) in drier years that would not otherwise be released from storage for power generation or for consumptive delivery purposes within western Placer County and northern Sacramento County were it not for the Water Forum Agreement requirements.

2 to provide for this program. The primary purchaser has been SSWD, who has recharged more than 200,000 AF of PCWA water in the North American Subbasin. This program could be expanded to other water purveyors within the current place of use.

The Water Forum environmental releases were intended to offset effects of higher diversion of water from the ARPS (PCWA) and Folsom Dam (City of Roseville) above the historical delivery baseline used in the Water Forum Agreement⁵⁷. The Water Forum Agreement evaluated the diversion of 35,500 AFY of water from the ARPS with recognition that PCWA would pursue an additional diversion of 35,000 AFY. Currently it is expected that the ARPS diversions will increase to 70,500 AFY in the future pending additional environmental analysis.⁵⁸ This, combined with its PG&E and CVP contract water, is estimated to meet PCWA’s buildout demands. The 35,000 AFY of CVP water is currently being pursued at the Sacramento River (RiverArc Project) pursuant to 2000 Water Forum Agreement.

The following sections provide information on PCWA’s current and projected American River diversions and how PCWA intends to manage surface waters in support of Water Forum objectives in drier, driest, and critically low conditions.

MFP-Related Surface Water Management

PCWA’s Federal Energy Regulatory Commission (FERC) license, which was issued in 2020 and has a 40-year term, has numerous requirements that were collaboratively developed to enhance environmental conditions in the MFP area. These conditions include higher instream flow and reservoir storage requirements, spring pulse flows, and reservoir spill ramp down flows. These additional flows have reduced hydropower generation nominally 5%, which will be partially mitigated by the addition of raising Hell Hole Dam for additional wet year storage. Additional measures include large woody material management, trout spawning habitat improvements, and sediment augmentation, among others. All the FERC requirements were developed in anticipation of continued implementation of the Water Forum Agreement.

Current American River Diversions

Table 4 summarizes PCWA’s American River diversions for the previous 10-year period (2014–2023). PCWA’s current level of American River diversions (2023) was 26,200 AFY.

⁵⁷ In the Water Forum Agreement, PCWA’s baseline was 8,500 AFY and the assumption was that at full buildout PCWA would divert 35,500 AFY at the ARPS (difference of 27,000 AFY); the City of Roseville baseline was 19,800 AFY and the assumption was that at full buildout Roseville would divert 39,800 AFY at Folsom Dam in drier years (difference of 20,000 AFY). The total additional water above baseline for PCWA and City of Roseville is up to 47,000 AFY.

⁵⁸ In the Water Forum Agreement, PCWA’s baseline was 8,500 AFY and the assumption was that at full buildout PCWA would divert 35,500 AFY at the ARPS (difference of 27,000 AFY); the City of Roseville baseline was 19,800 AFY and the assumption was that at full buildout Roseville would divert 39,800 AFY at Folsom Dam in drier years (difference of 20,000 AFY). The total additional water above baseline for PCWA and City of Roseville is up to 47,000 AFY.

Table 4. PCWA's American River Diversions (2014–2023), AFY

Year	American River Pump Station	City of Roseville ¹	San Juan Water District ¹	Sacramento Suburban Water District ¹	Central Valley Project ²	Total
2014	16,039	12,164	8,727	0	0	36,930
2015	24,028	18,296	253	0	0	42,577
2016	4,394	1,116	8,884	11,274	0	25,668
2017	3,459	0	9,028	12,145	0	24,632
2018	4,466	0	9,258	12,002	0	25,726
2019	4,457	0	8,274	12,382	0	25,113
2020	10,947	7,146	9,663	661	0	28,417
2021	35,7713	14,267	8,775	0	0	58,813
2022	12,831	27,713	9,570	0	0	50,114
2023	13,088	2,363	0	10,749	0	26,200
Average	12,948	8,307	7,243	5,921	0	34,419

1. MFP water that is rediverted through the municipal intake at Folsom Dam, which is authorized under existing Warren Act contracts held by PCWA's current wholesale customers.
2. PCWA's point of diversion for CVP water is Folsom Dam, but its contract also includes potential for other diversions, including the Sacramento River, if the points of diversion are agreed to by the Contracting Officer.
3. Exceeded 35,000 AF of pumping due to PG&E canal outages and reduced water supply allocation.

Future Projected American River Diversions

Table 5 summarizes PCWA's projected American River diversions at buildout when the M-N UIFR is above 950,000 AFY. PCWA's projected American River diversions at buildout are 155,000 AFY; however, this amount would be 120,000 AFY if the RiverArc Project is successful.

See the section above describing the contextual relationship of PCWA's American River water rights and their CVP contract for an explanation of the 120,000 AFY limitation. The total of 155,000 AFY combined with PCWA's water delivered by PG&E from the Drum-Spaulding system is sufficient to meet buildout demands. In addition to these diversions, PCWA plans in dry-years to divert up to 47,000 AFY of its American River water rights downstream of the confluence with the Sacramento River. This water is associated with continued environmental flows described herein. These flows are currently conducted under one-year water transfers through the State Water Board, however, PCWA is pursuing expansion of its place of use to facilitate these downstream diversions. PCWA's intent to expand its American River water rights place of use is further stated under the "Project List" and "Caveats and Assurances" of this Purveyor Specific Agreement.

Table 5. PCWA's Projected American River Diversions (Buildout), AFY

Supply	Diversion Point	Amount
Water Rights Permits 13856 and 13858 (consumptive)	American River Pump Station, Folsom Dam Municipal Intake	120,000
Central Valley Project*	Folsom Dam, or other diversion point agreed to by the Contracting Officer	35,000
TOTAL		155,000

*Currently being pursued at the Sacramento River (RiverArc Project) pursuant to 2000 Water Forum Agreement.

Drier Conditions Management

Condition: MN-UIFR is between 950,000 and 400,000 AF.

During drier years, PCWA will divert up to 155,000 AFY from the American River and will replace up to 47,000 AFY (27,000 AFY for PCWA and 20,000 AFY for City of Roseville) of water through reoperation of MFP reservoirs (environmental releases). The environmental releases are intended to offset effects of higher diversion of PCWA's MFP water from the ARPS (PCWA) and Folsom Reservoir (City of Roseville) above the historical delivery baseline used in the current Water Forum Agreement (8,500 AFY for PCWA and 19,800 AFY for City of Roseville).

This 47,000 AFY is the environmental release at full (buildout) diversion of PCWA's American River water rights. The amount of these environmental releases would be interpolated between 0 and 47,000 AFY based upon M-N UIFR and the combined PCWA and Roseville diversion rate above baseline in any given year. Although the environmental releases could be interpolated to be less than 10,000 AFY in a specific year, PCWA will typically release a minimum of 10,000 AFY; this is a change from the 2000 Water Forum Agreement.⁵⁹ **Figure 3** presents a chart of the calculation of these releases relative to M-N UIFR at full diversion rates above baseline for both PCWA and Roseville; note the minimum of 10,000 AF commencing at M-N UIFR of 950,000 AF. A more comprehensive look-up table at variable PCWA and Roseville combined diversion rates above baseline is provided in **Attachment 1** to this Purveyor Specific Agreement.

⁵⁹ Released as part of a long-term water delivery contract with a downstream buyer.

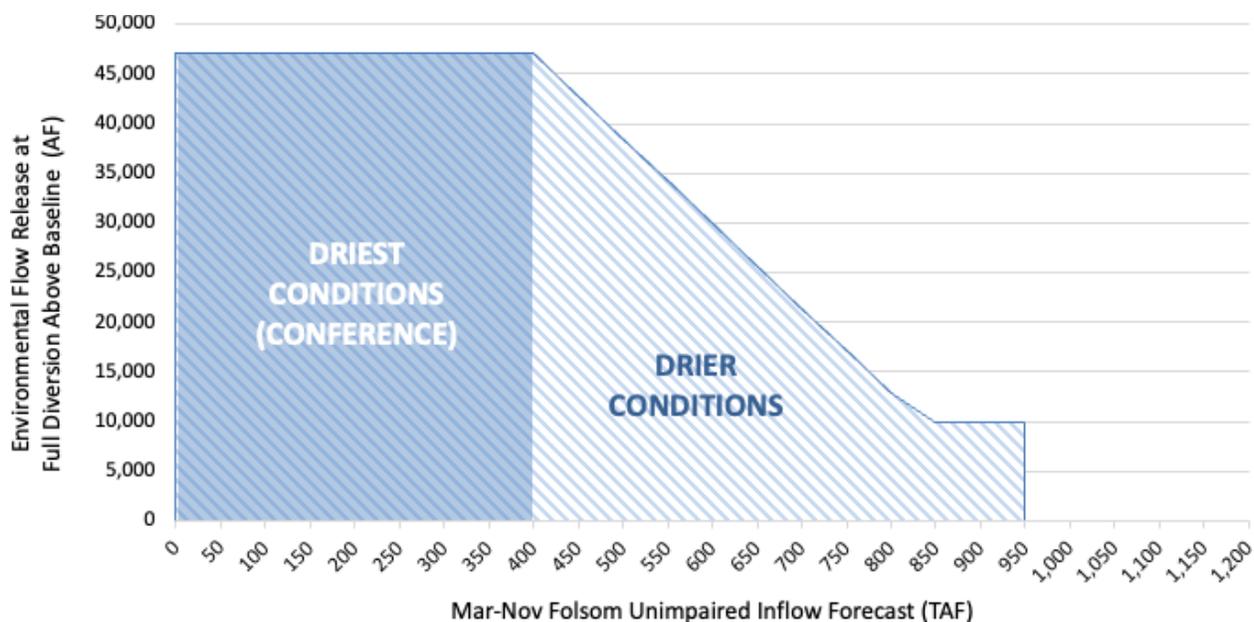


Figure 3. Proposed PCWA Environmental Flow Releases⁶⁰

The environmental releases from PCWA reservoirs represent water (up to 47,000 AFY) that would not otherwise be released in drier years were it not for this commitment. PCWA will make the environmental releases contingent upon the following conditions:

1. Continued cooperation of Reclamation in storage and timing of releases from Folsom Reservoir consistent with PCWA’s recently executed Warren Act Contract.
2. PCWA’s ability to transfer/sell the released water for use below the lower American River on terms acceptable to PCWA. To facilitate this provision, PCWA is pursuing an expanded place of use of its American River Water Rights to include water purveyors that currently purchase these releases through single year transfers.
3. PCWA’s determination that it has sufficient water in its reservoirs to make the additional releases to mitigate conditions in dry years without jeopardizing the supply for PCWA’s customers or commitments under PCWA’s FERC license.

Details related to PCWA’s proposal for these environmental releases which support the Water Forum objectives are provided below.

Long-Term Water Delivery Contract

To provide certainty that the environmental releases into the lower American River occur in the future, PCWA executed a Memorandum of Understanding (MOU) with East Bay Municipal Utility District (EBMUD) in August 2013 regarding the long-term purchase of the environmental releases. Under the MOU, PCWA would release 10,000 to 47,000 AFY of environmental releases from the MFP into Folsom Reservoir for rediversion at the Freeport Regional Water Authority (FRWA) Intake (Freeport Intake) by EBMUD in years when the projected M-N UIFR is less than 950,000 AFY. The releases would provide

⁶⁰ Environmental releases in conference years are subject to availability as described.

environmental benefits to the lower American River consistent with the objectives of the Water Forum, as well as increase dry-year water supply reliability for EBMUD.

If EBMUD is unable to use the environmental releases, PCWA would develop a back-up buyer agreement with Reclamation for use of the water downstream of the confluence of the lower American River and Sacramento River. If neither EBMUD nor Reclamation can put to beneficial use the drier year environmental releases, then PCWA would deliver the water to another willing buyer downstream.

Environmental releases may be scheduled and coordinated with the Water Forum and Reclamation. This coordination would be intended to enhance cold-water pool conditions in Folsom Reservoir, thus optimizing the opportunity for maintaining cooler temperatures in the lower American River. This option is subject to terms of PCWA's recently executed Warren Act Contract with Reclamation for storage of water in Folsom Reservoir longer than 30 days.

Operations

Specific operations that PCWA is proposing in support of the Water Forum objectives include:

- Temporary storage (greater than 30 days, but less than a year) of environmental releases and/or timing of deliveries to wholesale customers via Folsom Reservoir to enhance cold-water pool and maintain/enhance temperature conditions in the lower American River; subject to Reclamation and regulatory approval.
- Rediversion of environmental releases downstream of the lower American River and Sacramento River confluence for consumptive use in PCWA's proposed expanded place of use for this water at either the Freeport Intake, or alternatively at other CVP facilities by Reclamation, as appropriate and as authorities allow, or to other downstream buyers.
- Collaboration with the Water Forum and Reclamation to optimize the temperature benefits of environmental releases.
- Forego PCWA's CVP deliveries from Folsom Reservoir on the American River, and instead take delivery from the Sacramento River at RiverArc.

Driest Conditions Management

Condition: MN-UIFR is less than 400,000 AF.

It is recognized that in years when the projected M-N UIFR is less than 400,000 AFY there may not be sufficient water available to provide the purveyors within the Water Forum with the driest years quantities specified in their agreements and provide the expected driest years flows to the mouth of the American River. In those years, PCWA will participate in a conference with other stakeholders on how the available water should be managed.

In the driest of drier years, years when M-N UIFR is less than 400,000 AFY, PCWA would implement actions to preserve MFP storage. PCWA would institute reduced deliveries (water cutbacks), as needed. In those years, PCWA's irrigation water deliveries may be reduced by up to 50 percent and PCWA's

treated water deliveries may be reduced by up to 20 percent.⁶¹ In addition, PCWA may use groundwater to reduce shortages in those years.

During Driest Conditions, delivery of environmental flow releases up to 47,000 AF pursuant to “Drier Conditions Management” will be subject to available supplies, as detailed under that section.

Critically Low Storage Conditions

Condition: Potential operations in spring and summer when Folsom Reservoir storage is forecasted to reach 110,000 AF at some point in the next 12-months.

During the spring and summer, if Folsom Reservoir storage is forecasted to reach 110,000 AF at some point in the year, PCWA would conference with stakeholders, including Reclamation, on how available water should be managed.

Condition: Potential operations in summer and fall when Folsom Reservoir storage is below 110,000 AF.

If Folsom Reservoir storage is projected to be below 110,000 AF, PCWA would conference with stakeholders, including Reclamation, on how available water should be managed. PCWA would coordinate with both the City of Roseville and SJWD pursuant to their respective water supply contracts. Several projects are being pursued to mitigate the frequency of this occurring and/or to mitigate the impact to the co-equal objectives if this does occur. These projects include: the RiverArc Project, the Sacramento Regional Water Bank, the PCWA-Roseville Cooperative Pipeline, and conservation programs.

Compliance with Making Conservation a California Way of Life

No later than January 1, 2025, and by January 1 every year thereafter, each urban retail water supplier shall calculate its urban water use objective and beginning January 1, 2027, annually demonstrate compliance with its objective.

The calculation shall be based on the supplier’s water use conditions for the previous state fiscal year.

The objective is composed of the sum of the following:

1. A budget for indoor residential water use
2. A budget for outdoor residential water use
3. A budget for commercial, industrial, and institutional landscape with dedicated irrigation meters or equivalent technology
4. A budget for real losses
5. Budgets for variances and temporary provisions

⁶¹ PCWA’s existing water conservation efforts support local water supply reliability goals and are consistent with California’s 20x2020 Program and Making Conservation a California Way of Life.

Based on initial calculations, the State Water Board projects PCWA to have 0% reductions required in 2025, 0% reductions required in 2030, less than 5% reductions required in 2035, and 5-10% reductions required in 2040.

PCWA's Approach to Compliance

PCWA is a leader in water efficiency programs in the region. PCWA has a robust water efficiency program and will expand on this program as described.

PCWA will continue participation in the Regional Water Efficiency Program, especially for regional compliance with the CII best management practices and regional non-functional turf outreach, along with regional messaging. PCWA will also participate in the statewide conservation partnership (CalWEP).

Education and Outreach

PCWA will maintain its Environmental Protection Agency (EPA) WaterSense award-winning education and outreach program as follows:

- Water efficiency messaging in newsletters, e-blasts, WaterWiseWednesday social media posts, paid ads on Facebook and Google
- Partnerships with local Master Gardener Programs and California Native Plant Society
- Local demonstration gardens to showcase low water use plants and local native plants

Enhanced Rebates

Prior to final adoption of the regulation, PCWA enhanced its rebate program by adding a leak rebate to assist customers in finding and fixing indoor and outdoor leaks. In one year, it's become the Agency's most utilized rebate. Commercial rebates were added, and rebate amounts were increased for turf replacement, irrigation upgrades, and smart controllers. The enhanced turf replacement can be marketed to assist with replacement of non-functional turf.

Advanced Metering Infrastructure (AMI) Data

As the Agency replaces meters and meter reading technology is replaced with AMI, customers will have real-time access to their water use and could set up leak alerts through a customer portal.

Water usage data will be evaluated and a program developed to notify customers of potential leaks, breaks or overuse.

Customers Services

Water Wise House Calls and Water Wise Business Calls will be offered to help customers find ways to use less water.

High-use letters and leak-verify work orders are generated every month after the billing department evaluates consumption, prior to sending a bill.

Commercial, Industrial, and Institutional (CII) Accounts

Landscapes of CII mixed use meters will be measured to determine which are ½ acre or greater. New CII requirements will be implemented as follows:

- Classify CII customers into 22 water use categories, defined by Energy STAR and the State Water Board, and maintain the list annually.

- Design and implement best management practices for top CII users.
- Design and implement turf replacement programs.

Caveats and Assurances

1. This agreement is entered into with recognition that PCWA has agreed with Reclamation to limit consumptive use of its American River water rights to 120,000 AFY – see section on “Contextual Relationship of American River Water Rights and Central Valley Project (CVP) Contract.” PCWA has a long-term CVP contract with Reclamation for 35,000 AFY. This is a total of 155,000 AFY from the American River. This amount combined with PCWA’s water delivered by PG&E from the Drum-Spaulding system (Yuba and Bear Rivers) is sufficient to meet buildout demands. If for any reason these supplies are significantly reduced in amount or duration, it will be considered a changed condition, and signatories will work in good faith to renegotiate relevant portions of this Purveyor Specific Agreement.
2. During dry years, PCWA proposes to release up to 47,000 AFY of water from its upstream reservoirs, pursuant to **Attachment 1**, for the benefit of the lower American River environment. This proposal is discussed in detail under “Drier Conditions Management” and included in PCWA’s American River Water Rights Extension currently being processed with the State Water Board. In the 2007 petition for this extension, PCWA’s commitment to the Water Forum and stewardship of its water supply was noted by certain members of the Environmental Caucus in the letter included as **Attachment 2**. Signatories recognize the continuation of PCWA’s American River Water Rights is integral to achieving the proposed environmental releases. Accordingly, they are willing to support the proposal and highlight the environmental benefits before the State Water Board, including a re-petition for this extension, if necessary, and an expanded place of use to include EBMUD. EBMUD is not a guaranteed buyer, even in dry years, thus it would be advantageous to have a downstream place of use adequate to ensure these environmental releases. For this reason, PCWA is also seeking to add other areas of the CVP, including refuges. PCWA will keep the parties apprised of the development of this expansion with the State Water Board and the parties will communicate in good faith their concerns, support, or objection to this expansion as it is developed.
3. PCWA and other signatories to this agreement have proposed to divert water from the Sacramento River rather than diverting from the American River. This would allow water to continue to flow down the lower American River. Signatories conditionally endorse this proposal, branded as “RiverArc,” subject to environmental analysis of the impact to the Sacramento River. This proposal will require certain changes to PCWA’s CVP contract, including a change in point of diversion from Folsom Reservoir to the Sacramento River and expanding PCWA’s CVP place of use to include all western Placer County. Signatories will endorse these changes to PCWA’s CVP subject to continued endorsement of the RiverArc Project. In addition to its CVP contract, PCWA would like to explore an exchange provision to divert its American River water rights at the RiverArc Project.

Project List and Future Water Supply Reliability Efforts

The following is a list of PCWA planned projects related to the co-equal objectives of the Water Forum. These include both structural and non-structural projects.

1. American River Water Rights Extension Project, which includes the following supporting projects:
 - a. Expanded American River water rights place of use to include the CVP place of use for dry-year supply to EBMUD and other back-up buyers downstream of the confluence with the Sacramento River.
 - b. Warren Act Contract with Reclamation to provide storage of environmental releases longer than 30-days in Folsom Reservoir and conveyance of water delivered to EBMUD through Folsom South Canal via Freeport Intake (acquired at time of writing this agreement).
 - c. Enhanced coldwater pool development in Folsom Reservoir by extended storage of environmental releases in Folsom Reservoir, coordinated with the Water Forum and Reclamation.
2. Ecological Forest Health – PCWA is partnering with a diverse group of stakeholders to implement the French Meadows Forest Restoration Project, which is a 28,800-acre collaborative forest health project intended to reduce wildfire risk in the upper Middle Fork American River watershed. In an effort to build upon the momentum of the French Meadows Project, PCWA, and several partners, has recently embarked on the Long Canyon Watershed Restoration Project. The Long Canyon Project will use proven forest health and fuels reduction treatments on 16,500 acres in an area near other public and private forest health projects that together provide landscape-level wildfire resilience in upper American River watershed.
3. RiverArc Project – PCWA is a partner and the administrator of the RiverArc Project. This project is a proposed regional treated water supply that will construct a new treatment plant and pipelines using an existing diversion on the Sacramento River. This project is intended to shift regional reliance on water supply from the American River to the Sacramento River. RiverArc is a project that was originated in the Water Forum, with current partners including Sacramento County Water Agency, the City of Sacramento, the City of Roseville, and PCWA. Other regional water suppliers may join the project in the future.
4. Conservation Programs
 - a. Treated Water Conservation – PCWA was the first water purveyor in the Water Forum to comply with the best management practices of the Urban Water Conservation Council and currently has an EPA WaterSense award-winning program. PCWA complied with its Senate Bill 7x-7 target of 20% conservation and is preparing for compliance with the regulation resulting from the Conservation as a California Way of Life program.
 - b. Untreated Water Conservation – Nominally 50% of PCWA's water use is used for agriculture in its service area. This agriculture is served by an extensive canal system of 170 miles that includes flow control devices, elevated flumes, and “spills” that return water to the watershed at the end of each canal. Though most of this water supply comes from PCWA's Yuba River source, water conservation is taken very

seriously. PCWA has installed lining to prevent seepage and flow control automation to minimizing spilling, thus reducing water loss in the canal system.

- c. Looking at the last decade, PCWA is serving a population of 30% more people with 25% less water supply as a result of these conservation programs. The source of this comparison is PCWA's 2023 year-end report, comparing 2013 to 2023.
5. County-Wide Masterplan – PCWA implemented a County-Wide Masterplan to meet its statutory obligation to support sustainable resource management and water supply needs throughout Placer County. This plan is a process for supporting the development of projects and seeking funding to implement them, organized into eight elements as follows:
 - a. Unserved Areas
 - b. Water Infrastructure Reliability
 - c. Water Supply Reliability
 - d. Renewable Energy Development
 - e. Watershed Stewardship
 - f. Agriculture
 - g. Conservation and Water Use Efficiency
 - h. Public Education and Outreach

This masterplan is a “living” database of projects that are entered by stakeholders county-wide, thus creating a transparent process for implementation. Funding sources include state and federal grants and PCWA funding from water transfers and net revenues from hydropower sales. Projects include those within PCWA's service area and the service areas of other public water agencies throughout the Placer County.

6. Placer County Conservation Program (PCCP) – The PCCP will set aside natural lands as a mitigation in balance with proposed development and other activities in western Placer County. This program is being implemented by a Joint Powers Authority of member entities. The PCCP includes permitting and mitigation for Endangered Species Act (federal), Natural Community and Conservation Planning Act (state), and Clean Water Act (federal). It is the most comprehensive Habitat Conservation Program in the nation. Permit and mitigation fees go to purchase of set-aside properties within the program area.
 - a. Land Development – The demarcation of natural lands and proposed land development has been established in western Placer County under this program.
 - b. PCWA Canal System – PCWA's canal operations, including projects such as canal lining, have been permitted under the PCCP.
 - c. PCWA Infrastructure – Certain proposed PCWA treated water infrastructure, including the Ophir Water Treatment Plant and west Placer County transmission main have been permitted under the PCCP.

7. Groundwater:
 - a. Conjunctive use – In the 2000 Water Forum Agreement, PCWA committed to the sale of American River surface water to SSWD to help recover groundwater levels in the North American Subbasin (NASb). This provision was for “normal” and “wet” years, as defined by Folsom Reservoir Unimpaired Inflow, for the first ten years of the agreement, and only wet years thereafter. PCWA will continue in this commitment for any willing buyer in the Sacramento County portion of PCWA’s American River water rights place of use, subject to PCWA having adequate water for its service area, adequate storage in MFP reservoirs, and agreeable terms with the buyer.
 - b. PCWA could expand the geographic extent of selling American River surface water in wet years by expansion of its place of use beyond the current extent in north Sacramento County. This expansion could cover the entire NASb, or beyond that boundary if desired for expanded conjunctive use.
 - c. Prohibition on use for new development – The County of Placer has a General Plan policy prohibiting groundwater as a sole source of water supply for new development in western Placer County. This policy exists for two reasons: to protect groundwater levels of the NASb and to encourage vesting in the use of MFP supply that was bonded and paid for by the people of Placer County. Groundwater may be used as a backup source in drought years, as described in PCWA’s Urban Water Management Plan. This policy has resulted in stable groundwater levels in Placer County, evidenced by levels relative to Sacramento and Sutter counties. PCWA supports this policy by working with developers in the planning and investment towards water supply infrastructure.
8. Wholesale Water Supply Contracts – PCWA provides both Yuba River and American River water to wholesale customers in its Zone 6 service area of western Placer County and within the American River water rights place of use. Wholesale service is provided pursuant to individually negotiated water supply contracts with the following:
 - a. City of Roseville, as amended on May 18, 2023, 30,000 to 44,000 AFY via Folsom Reservoir.
 - b. SJWD, as amended on April 17, 2025, 10,000 AFY via Folsom Reservoir.
 - c. SSWD, as amended on November 16, 2020, 8,000 AFY via Folsom Reservoir.
 - d. EBMUD, as amended on July 30, 2018, 47,000 AFY via Sacramento River at Freeport.
 - e. City of Lincoln, December 10, 2012, 35,986 AFY via treated water deliveries⁸.
 - f. California American Water, July 6, 2025, 10,825 AFY via treated water deliveries⁸.
 - g. Small water systems throughout PCWA’s Zone 6 service area, 2,971 AFY via untreated and treated water deliveries.⁶²

⁶² These wholesale demands are the amounts provided by PCWA’s 2020 Urban Water Management Plan.

Attachment 1: Lookup Table of Environmental Flow Releases (AF)

		Folsom Mar-Nov Unimpaired Flow Projection (TAF)											
		400	450	500	550	600	650	700	750	800	850	900	950
PCWA and Roseville Combined Diversion above 1995 Baseline (AF)	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	1,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	2,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	3,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	4,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	5,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	6,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	7,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	8,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	9,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	11,000	11,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	12,000	12,000	10,909	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	13,000	13,000	11,818	10,636	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	14,000	14,000	12,727	11,455	10,182	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	15,000	15,000	13,636	12,273	10,909	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	16,000	16,000	14,545	13,091	11,636	10,182	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	17,000	17,000	15,455	13,909	12,364	10,818	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	18,000	18,000	16,364	14,727	13,091	11,455	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	19,000	19,000	17,273	15,545	13,818	12,091	10,364	10,000	10,000	10,000	10,000	10,000	10,000
	20,000	20,000	18,182	16,364	14,545	12,727	10,909	10,000	10,000	10,000	10,000	10,000	10,000
	21,000	21,000	19,091	17,182	15,273	13,364	11,455	10,000	10,000	10,000	10,000	10,000	10,000
	22,000	22,000	20,000	18,000	16,000	14,000	12,000	10,000	10,000	10,000	10,000	10,000	10,000
	23,000	23,000	20,909	18,818	16,727	14,636	12,545	10,455	10,000	10,000	10,000	10,000	10,000
	24,000	24,000	21,818	19,636	17,455	15,273	13,091	10,909	10,000	10,000	10,000	10,000	10,000
	25,000	25,000	22,727	20,455	18,182	15,909	13,636	11,364	10,000	10,000	10,000	10,000	10,000
	26,000	26,000	23,636	21,273	18,909	16,545	14,182	11,818	10,000	10,000	10,000	10,000	10,000
	27,000	27,000	24,545	22,091	19,636	17,182	14,727	12,273	10,000	10,000	10,000	10,000	10,000
	28,000	28,000	25,455	22,909	20,364	17,818	15,273	12,727	10,182	10,000	10,000	10,000	10,000
	29,000	29,000	26,364	23,727	21,091	18,455	15,818	13,182	10,545	10,000	10,000	10,000	10,000
	30,000	30,000	27,273	24,545	21,818	19,091	16,364	13,636	10,909	10,000	10,000	10,000	10,000
	31,000	31,000	28,182	25,364	22,545	19,727	16,909	14,091	11,273	10,000	10,000	10,000	10,000
	32,000	32,000	29,091	26,182	23,273	20,364	17,455	14,545	11,636	10,000	10,000	10,000	10,000
	33,000	33,000	30,000	27,000	24,000	21,000	18,000	15,000	12,000	10,000	10,000	10,000	10,000
	34,000	34,000	30,909	27,818	24,727	21,636	18,545	15,455	12,364	10,000	10,000	10,000	10,000
	35,000	35,000	31,818	28,636	25,455	22,273	19,091	15,909	12,727	10,000	10,000	10,000	10,000
	36,000	36,000	32,727	29,455	26,182	22,909	19,636	16,364	13,091	10,000	10,000	10,000	10,000
	37,000	37,000	33,636	30,273	26,909	23,545	20,182	16,818	13,455	10,091	10,000	10,000	10,000
	38,000	38,000	34,545	31,091	27,636	24,182	20,727	17,273	13,818	10,364	10,000	10,000	10,000
	39,000	39,000	35,455	31,909	28,364	24,818	21,273	17,727	14,182	10,636	10,000	10,000	10,000
	40,000	40,000	36,364	32,727	29,091	25,455	21,818	18,182	14,545	10,909	10,000	10,000	10,000
	41,000	41,000	37,273	33,545	29,818	26,091	22,364	18,636	14,909	11,182	10,000	10,000	10,000
	42,000	42,000	38,182	34,364	30,545	26,727	22,909	19,091	15,273	11,455	10,000	10,000	10,000
	43,000	43,000	39,091	35,182	31,273	27,364	23,455	19,545	15,636	11,727	10,000	10,000	10,000
	44,000	44,000	40,000	36,000	32,000	28,000	24,000	20,000	16,000	12,000	10,000	10,000	10,000
	45,000	45,000	40,909	36,818	32,727	28,636	24,545	20,455	16,364	12,273	10,000	10,000	10,000
	46,000	46,000	41,818	37,636	33,455	29,273	25,091	20,909	16,727	12,545	10,000	10,000	10,000
47,000	47,000	42,727	38,455	34,182	29,909	25,636	21,364	17,091	12,818	10,000	10,000	10,000	

Attachment 2: Letter of Support for Petition for Extension of Time with State Water Resources Control Board



December 21, 2007

Ms. Victoria Whitney
Chief, Division of Water Rights
SWRCB
P.O. Box 2000
Sacramento, CA 95812

**Re: Placer County Water Agency Petition for Extension of Time to Complete Use;
Water Right Permits 13856 and 13858 for Applications 18085 and 18087**

Dear Ms. Whitney,

We understand that Placer County Water Agency (PCWA) has submitted a petition to the SWRCB for an Extension of Time to the year 2043 to complete use for consumptive Water Right Permits 13856 and 13858. In considering the petition from PCWA, we ask that the SWRCB take into account the water agency's demonstrated commitment to urban water conservation.

The Mother Lode Chapter of the Sierra Club and Friends of the River are signatories to the Water Forum Agreement. Convened in 1993, the Water Forum was able to reach consensus among diverse stakeholder interests in providing a reliable water supply for planned growth, while preserving the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

A key component of the Water Forum Agreement was the Water Conservation Element. Water purveyors agreed to implement a series of water conservation programs or BMPs. Purveyors were provided four years in which to ramp up the BMPs so that they would be fully implemented by 2004.

In December 2005 the Water Forum released its Year-Four Water Conservation Report. It revealed that fourteen of the fifteen purveyors failed to fully implement their water conservation programs. The only Sacramento region water purveyor to fully implement all of its agreed upon water conservation BMPs was Placer County Water Agency.

Letter continues
on next page.

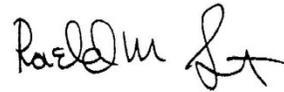
Attachment 2: Letter of Support for Petition for Extension of Time with State Water Resources Control Board

PCWA's commitment to water conservation has been one contributing factor in the agency not yet fully utilizing its water rights. We believe the SWRCB should recognize and encourage PCWA's superior stewardship of its water supply in the Board's decision regarding the request for Extension of Time.

Sincerely,



Terry Davis
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WATER FORUM AGREEMENT 2050

Sacramento County Water Agency Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

Sacramento County Water Agency (SCWA) encompasses seven service areas and provides retail water service to 70,000 residential and commercial customers in Sacramento County. SCWA also wholesales water to Elk Grove Water District.

SCWA's seven service areas are served with a unique set of water supplies including surface water, groundwater, and non-potable (recycled) water. **Figure 1** presents a map of each of SCWA's service areas.

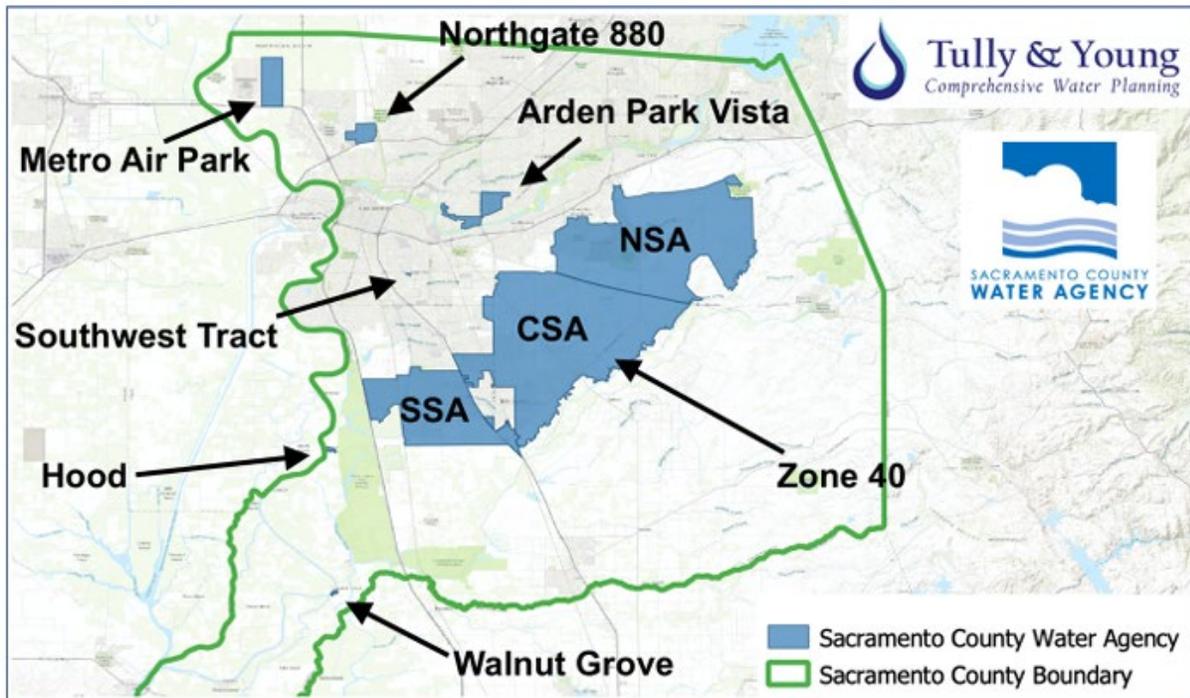


Figure 1. SCWA Service Areas

Surface Water and Groundwater Management

Current demands in the SCWA service are close to 40 thousand acre-feet (TAF) per year and are expected to grow to just below 80 TAF/year by 2045 (though the updated regulations on water use efficiency will need to be considered). The most recent estimates for buildout predict a total demand of 102,400 acre-feet per year (AFY) in the year 2052. **Table 1** summarizes SCWA annual demands.

Table 1. SCWA Demands (Nearest TAF Annually)

	Current	2045	2052
Demand	40	80	102

The highest surface water availability on a yearly basis is calculated in the 2016 Water System Infrastructure Plan (WSIP) at 89,000 AFY with the lowest being 32,100 AFY. The long-term annual average is 71,858 AFY. Any demand not made up by surface water is first made up with recycled water (up to 3,300 AFY at buildout) and finally groundwater. **Table 2** is extracted from Table 4-3, Zone 40 Water Supply Portfolio, in the 2016 WSIP.

Table 2. Surface Water Availability (AFY)

Wet/Average Year	Drier Year	Driest year	Long-term average
89,300	43,350	32,100	71,858

Below is a list of the SCWA service areas outside of Zone 40 and a general description of current supplies. A summary is provided as **Table 3**.

- Metro Air Park: Water supply delivered from the City of Sacramento to meet current demands of approximately 125 acre-feet and 2045 demands of approximately 5,715 acre-feet.
 - City of Sacramento Wholesale/Wheeling Agreement - Metro Air Park (1.1 TAF)
- Northgate 880: Water supply is derived from SCWA's groundwater supplies to meet current demands of approximately 1,345 acre-feet and 2045 demands of approximately 1,365 acre-feet.
- Arden Park Vista: Water supply is derived from SCWA's groundwater supplies to meet current demands of approximately 3,560 acre-feet and 2045 demands of 3,217 acre-feet.
- Southwest Tract: Water supply is derived from a water supply contract with California American Water to meet current demands of approximately 30 acre-feet and 2045 demands of approximately 24 acre-feet.
 - Contract with California American Water is for 30 acre-feet per year
- Hood Water Maintenance District: The Hood Water Maintenance District service area water supply is entirely derived from SCWA's groundwater supplies to meet current demands of approximately 30 acre-feet and 2045 demands projected to be 31 acre-feet.
- East Walnut Grove: The East Walnut Grove service area water supply is entirely derived from SCWA's groundwater supplies to meet current demands of approximately 60 acre-feet and projected 2045 demands of 56 acre-feet.

Table 3. Summary of Service Area Descriptions

Service Area	Demand (af/yr)		Supplies
	Current	2045	
Metro Air Park	125	5,715	City of Sacramento Contract
Northgate 880	1,345	1,365	Groundwater
Arden Park Vista	3,560	3,217	Groundwater
Southwest Tract	30	24	Cal Am Contract
Hood Water Maintenance District	30	31	Groundwater
East Walnut Grove	60	56	Groundwater

Self-supplied groundwater is the sole source of water served in all areas where a contract or entitlement is unavailable. Most of these areas are legacy systems that were taken over by SCWA and are at or near buildout.

Zone 40 Demand and Supply

Below is a general description of Zone 40 and its supplies.

Zone 40 has multiple sources of surface water and remediated groundwater taken through the Freeport Regional Water Authority (FRWA) intake and pipeline and treated at Vineyard Surface Water Treatment Plant (VSWTP), recycled water, and groundwater to meet customer demands (**Table 4**).

- Zone 40 potable water supplies consist of three water rights from the Sacramento River, two Central Valley Project contracts, a contract for remediated groundwater with Aerojet, a contract supply from North Delta Water Agency, and groundwater supplies to meet current demands of approximately 37,620 acre-feet and 2045 demands of 74,388 acre-feet.
- Zone 40 non-potable supplies consist of a contract for recycled water supplies from Sacramento Area Sewer District to meet current non-potable demands of approximately 962 acre-feet and 2045 demands of approximately 3,300 acre-feet.

Table 4. Zone 40 Demand (AFY)

Service Area	Current	2045
Zone 40	37,620	74,388

Surface Water and Groundwater taken as Surface Water Available in Zone 40 includes:

- Appropriative Water Right Permit 21209 (71 TAF)
- Central Valley Project, SMUD Contract (30 TAF)
- Central Valley Project, Fazio Contract (15 TAF)
- Aerojet Groundwater Extraction and Treatment (GET) Water—remediated Groundwater taken as Surface Water (8.9 TAF)
- License 1062 (805 AF) (Airport Water Right)
- License 4060 (101 AF) (Airport Water Right)
- North Delta Water Agency Contract (450 AF)
- Recycled Water (3.9 TAF)

- Southern California Water Company Water - Emergency Supply – (1.6 TAF)
- City of Sacramento American River Place of Use (Small Overlap Area – Volume Determined by Demands in Area)

It is evident that the SCWA service area with the largest demand, by far, is the Zone 40 area. The Zone 40 Water Supply Master Plan details operational policy for the area. Groundwater is the last supply source used with preference to surface and recycled water when feasible. SCWA is beginning the process to update the Zone 40 Water Supply Master Plan as of the writing of this Purvey Specific Agreement (PSA). Any Zone 40 Water Supply Master Plan will be available to the public for review. The Master Plan is available from SCWA.

Historical SCWA Contributions to the Co-Equal Objectives

Since the signing of the original Water Forum Agreement, SCWA has invested heavily in supporting the Water Forum co-equal objectives through investment in its conjunctive use system as described in the 2000 Water Forum Agreement PSA. Conjunctive use is practiced in the largest SCWA service area – Zone 40. The investment and continued partnership in the FRWA intake on the Sacramento River and accompanying VSWTP have been a costly undertaking both for current and future customers in Zone 40. The FRWA intake is located downstream of the American River confluence and, when opportunities arise, allows for American River water to be diverted after it has traveled the full distance of the Lower American River (LAR), thus allowing this water to be used for LAR corridor health.

Introduction of surface water into the Zone 40 area has directly benefited groundwater elevations in the South American Subbasin. **Figure 2** shows the 20 Year Groundwater Level Trends, the green dots indicating increasing groundwater elevations. The map clearly shows that there is a positive trend in groundwater levels in the SCWA service area since the startup of VSWTP and the FRWA intake. This is also in stark contrast to the trends in other parts of the State of California.

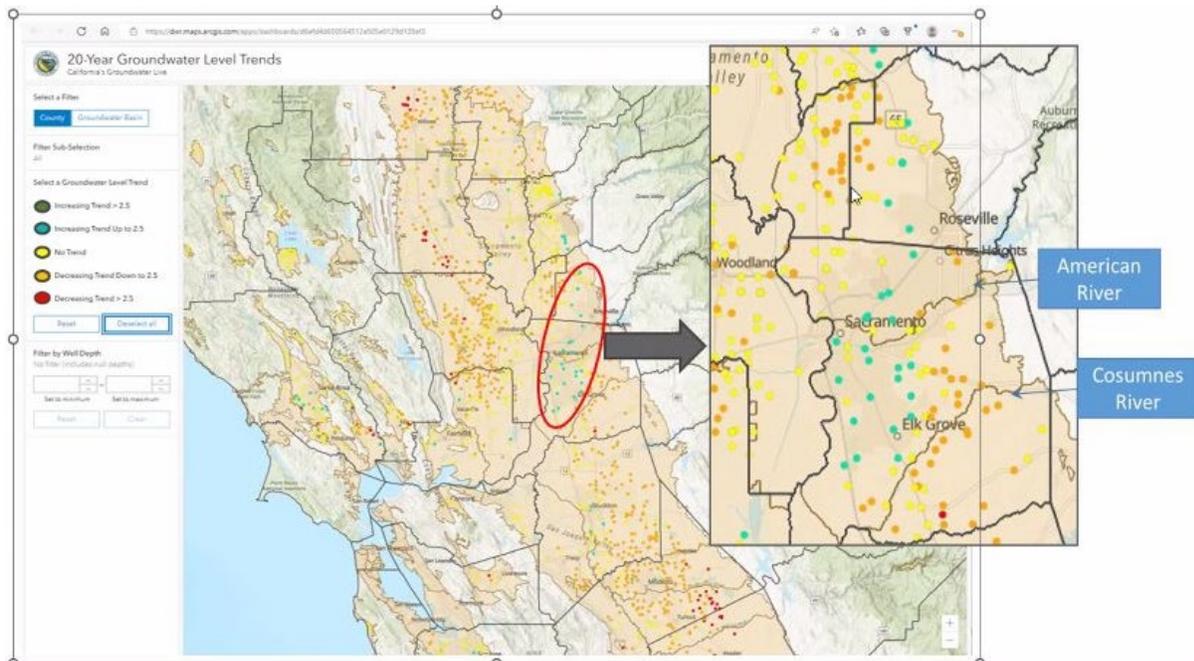


Figure 2. 20-Year Groundwater Level Trends

SCWA is proud to have met the commitments of its 2000 PSA. Along with the partnership of the caucuses in the Water Forum, the will of the SCWA Board, partnership with East Bay Municipal Utility District (EBMUD) through FRWA, investment by current customers, and investment by the development community ensured that there were resulting positive effects.

SCWA has developed a Water Shortage Contingency Plan which addresses the requirements in California Water Code Section 10632 of the Urban Water Management Planning Act. The Water Shortage Contingency Plan may be used by SCWA to address water shortages as they may arise. See the plan, located on SCWA’s website, for an up-to-date list of Water Shortage Stages and Suggested Actions.

Along with SCWA specific investments, SCWA has also been a major financial contributor to the Water Forum Successor Effort and Habitat Management Effort since signing the 2000 Water Forum Agreement. There have been many projects in and around the LAR that benefited from this funding.

SCWA Surface Water Framework

SCWA’s supply portfolio and location offers unique opportunities to support the Water Forum coequal objectives moving forward. This section reviews those opportunities and describes the proposed framework for commitments related to surface water diversions.

SCWA Opportunities in Water Forum 2050

Opportunities in Zone 40

The FRWA intake facility has a total capacity of 185 MGD while SCWA’s capacity in the facility is 85 million-gallons-per-day (MGD) (equivalent to approximately 95 TAF/year). SCWA has a design treatment capacity of 50 MGD (permitted for 60 MGD at the very upper limit of production) at the VSWTP (equivalent to approximately 56 TAF/year and 67 TAF/year, respectively). Plans include expanding the VSWTP to 100 MGD capacity (112 TAF/year) but this investment is at least 10 years in the future. Additionally, SCWA has an agreement with the City of Sacramento for firm capacity of 11 MGD at the Franklin Intertie (12 TAF/year). **Table 5** presents a summary of these capacities.

Table 5. Zone 40 Major Surface Water Facilities Capacity

Facility	Capacity (MGD)	
	Current	Buildout
Freeport Diversion (FRWA) SCWA Share	85	85
Freeport Diversion (FRWA) Total Capacity	185	185
Vineyard WTP Capacity	50/60	100
Franklin Intertie (City of Sacramento)	11	11

In 2023, SCWA’s maximum day surface water production was 31 MGD. 2023 was an unconstrained year and SCWA had full access to its surface water entitlements.

In dry times, SCWA faces surface water curtailments. In the summer of 2022, SCWA had no Central Valley Project water available and Term 91 was in effect, so the Permit 21209 water right was curtailed. This curtailment was based on statewide conditions, despite near average precipitation in the American River watershed. During this time, SCWA was only able to operate the VSWTP part time since the only water supplies available were the smaller, more senior water rights and Aerojet GET water. The vast majority of

the SCWA capacity in the FRWA intake and VSWTP plant was unused during this time. SCWA met the majority its demands with groundwater. If SCWA had access to surface water there would have been an opportunity to deliver surface water to customers rather than groundwater, which would have benefitted the groundwater basin. Additionally, since the FRWA intake is located downstream of the confluence of the LAR and the Sacramento River, any American River surface water deliveries would have travelled down the LAR providing benefit to the entirety of the LAR by improving flow conditions. The potential benefits for the LAR could be especially significant in years like 2021 when precipitation across the state (including the American River watershed) was exceptionally low through the summer months. Flows in the LAR in the summer of 2021 were very low, and river temperatures were dangerously warm due to the extended drought conditions. Additional LAR flows, in the form of cold water from upstream or Folsom storage, could have been beneficial if coordinated and timed based on the needs of the river.

Given the junior nature of the majority of SCWA's surface water entitlements there is capacity available at the FRWA intake and through the VSWTP that could be used to meet SCWA demands. There may be partnership opportunities that could take advantage of this situation to move both more and colder surface water through the LAR.

Any decision to take additional surface water in partnership with others in the region would have to include affordability as a parameter.

The opportunities for SCWA, in its Zone 40 service area, to contribute to both Water Forum co-equal objectives of water supply reliability and river corridor health, while adhering to the guiding principles for surface water diversions are stated below:

1. *Increased surface water diversions at the FRWA intake at times when additional flow could help the LAR or benefit the co-equal objectives.*
 - *Utilize partnership opportunities.*
 - *Support the City of Folsom as they explore a partnership which could add reliability to the regional water supply system as well as allow more flow in the LAR. SCWA commits to supporting the effort from a technical perspective as well as working on the affordability of the partnership.*
 - *Support Golden State Water Company with any future planning that could involve partnership and FRWA. SCWA will continue to work on upgraded intertie projects as well as other opportunities as they arise.*
 - *Continue partnership with the City of Sacramento. This partnership has been critical to Bay Delta processes. SCWA and the City of Sacramento have a formal agreement to work together to provide environmental surface water flows as a part of the Regional Water Authority American River Terms for Ecosystem Support and Infrastructure Assistance Needs (ARTESIAN) Project Agreement. SCWA commits to continuing to foster this partnership and working together to continue to have positive effects on the co-equal objectives. SCWA and the City of Sacramento have removed some barriers to partnership by working on affordability of wholesale supplies, trading of water, and encouraging surface*

water use above and beyond what would be required to provide environmental flows through groundwater substitution.

- *SCWA will continue its partnership with EBMUD. Both are a part of the FRWA Board. SCWA will continue to work with EBMUD on projects that support the coequal objectives such as supporting partnerships that EBMUD develops with others to move more water through the LAR at times those additional flows are a benefit.*
 - *SCWA will continue its partnership with California American Water, working to expand wholesale water delivery to the water company from SCWA's conjunctive use system.*
 - *SCWA will look to expand partnerships with upstream purveyors to establish projects that could benefit Water Forum co-equal objectives and make full use of the FRWA intake and the SCWA system.*
2. *Prioritize surface water diversions in wet conditions to allow groundwater recharge.*
- *Effectively this means taking surface water to the maximum extent possible when it is available.*
3. *As of 2025, SCWA is piloting an Aquifer Storage and Recovery (ASR) well located on the same parcel as the VSWTP. While SCWA can supply potable water sustainably to its customers today and through buildout, SCWA is looking at ASR opportunities to expand system storage in preparation for climate change impacts into the future.*

Opportunities Outside of Zone 40

Opportunities exist outside of Zone 40 in the groundwater-supplied service areas where a potential partner is close. For example, there could be the possibility of partnerships that would supply the Northgate 880 and Arden Park service areas with surface water. Entitlements that had a place of use to cover these areas would need to exist and interties would need to be built. Affordability would be a major concern.

Demand Management

SCWA currently lists Water Efficiency and Conservation requirements on its website. Some of these include the following:

- SCWA limits the outdoor water schedule of its customers' lawns and landscapes to certain days based upon street address.
- SCWA recommends water efficiency actions such as Stress Your Lawn, Save Your Trees; Check Soil Moisture; Water Plants Early; Transition to a Low-Water Garden; and the overarching Be Water Wise program.
- SCWA currently provides rebates such as Cash for Grass, High Efficiency Clothes Washers, High Efficiency Toilets.
- SCWA also asks customers to report water waste through the website and provides a discount on the customer's bill for low water usage.

Finally, SCWA maintains a Water Shortage Contingency Plan which details conservation actions to be taken when different stages of conservation are required.

Changes in regulations, such as those in the Making Conservation a California Way of Life regulation, have occurred and will continue to change during the life of this agreement. SCWA is legally bound to follow the regulations and SCWA commits to working to meet these requirements. The Making Conservation a California Way of Life regulation will likely require SCWA customers to limit the use of water per the regulation.

SCWA commits to thoroughly exploring the topic of demand management through the Master Plan update process. Part of the scope of work of the update will be to project demands moving forward, compare them to the regulatory requirements, and assess if additional work needs to be done to lower demands. SCWA's goal would be to develop and implement a cost-effective plan to meet its legal requirements while also providing for the livability of the community and keeping potable water as affordable as possible to the end users.

Framework Summary

This section summarizes the SCWA proposal for Water Forum 2050 commitments related to surface water diversions in terms of their contributions to the coequal objectives and proposed investments (projects).

Contributions to River Corridor Health

- Reduce direct surface water diversions on the LAR by taking water at FRWA.
 - The FRWA facilities offer a unique opportunity in dry years. When water resources are scarce, and other purveyors may be reducing diversions to allow flow down the American River for out-of-basin transfers and/or relying more heavily on groundwater resources, SCWA can continue to take water at Freeport to alleviate potential stress on the groundwater basin while also allowing surface water to provide flow and temperature benefits for the LAR. Future opportunities would rely on partnerships with other agencies to ensure there are buyers and sellers of water available for any transfers.
- Continued long-term funding for the Habitat Management Element (HME) and the Water Forum Successor Effort (WFSE) has been a crucial factor for supporting healthy and viable conditions for LAR salmonids through the installation of critical habitat and development of the Flow Management Standard.

Contributions to Water Supply Reliability

- Reduced dependence on groundwater
 - This has been implemented as part of the commitments of the original WFA and the completion of FRWA.
- Delivery of surface water supplies to other service areas.

Future SCWA Projects and Investments

- Regional Water Transfers and Agreements (partnerships)

- Ensure affordability in all hydrologic conditions
- Investments in Water Supply Infrastructure
 - Improved interties
 - Improved groundwater infrastructure including possible ASR
 - Expand treatment capacity at VSWTP
 - Provide surface water supplies to groundwater-only service areas
 - Continue planning level investment in the RiverArc (or similar northern Sacramento County surface water diversion) project.
 - Potential infrastructure to connect existing outlying service areas.

Water Forum Commitments to SCWA

Full Endorsement of the following, including letters of support:

- Support Protection of Existing Surface Water Entitlements Including:
 - Signatories will support the continued use of Permit 21209 as an important means to supporting the coequal objectives, specifically groundwater management and the protection of the LAR. SCWA intends to continue to use Permit 21209 surface water when available to support the coequal objectives and to sustain the groundwater table. Use of these supplies is often more expensive than groundwater but may be essential to managing groundwater objectives, including drought reserves to be available during curtailments. If the State Water Board or the Legislature proposes global changes to water rights, each Water Forum member may decide what position to take on the proposal without rescinding agreed-upon support for the use of Permit 21209 as an important means to supporting the coequal objectives.
 - Signatories will support the use of higher cost surface water supplies when available to build historic use so that groundwater will be available during curtailments. This will require SCWA to continue to use the surface water when it meets the co-equal objectives to build historic use as well as to rest the groundwater table. Use of these supplies is more expensive than groundwater.
- Signatories will support the following Capital Projects which are described in the WSIP and contemplated in the 2005 WSMP or amendments to serve lands within the Urban Services Boundary (as of 12/1/2025) and have completed the CEQA process (before 12/1/2025). No Capital project endorsement is considered Full Endorsement if it wasn't listed as a capital project in the existing 2016 WSIP.
 - Expansion of VSWTP to 100 MGD. The FRWA intake and VSWTP were developed to leave flows in the American River to protect the LAR and the Parkway. Water is diverted downstream of the confluence of the American River and Sacramento River, off the Sacramento River, at the FRWA intake and treated at the VSWTP to meet potable

demands in the Zone 40 area. Expansion of the VSWTP to its ultimate capacity is essential to continue the project to the ultimate extent envisioned in the original Water Forum Agreement.

- Expansion of the Agency's Transmission Main and water production system, including the North Service Area (NSA) Phase B pipeline project and NSA Terminal Tank Facility, as described in the 2005 Zone 40 Water Supply Master Plan (including amendments up to November of 2025) and further refined in the 2016 Zone 40 Water System Infrastructure Plan to allow surface water to efficiently flow to service areas within Zone 40.
- SCWA agrees that the Capital Improvement List in the 2016 Zone 40 Water System Infrastructure Plan that is fully endorsed is the one that existed in 2016. Any updates to the capital improvement list will not have full endorsement.
- Signatories will support investment and funding for projects and programs through equitable and fair rates and fees required to honor commitments in this PSA and support the coequal objectives.

Conceptual Endorsement of the following, meaning a commitment by signatories to explore the ideas:

- River Arc Project
- Support for SCWA's participation in the Water Bank and expansion of conjunctive use
- Support for implementation of the South American and North American Groundwater Sustainability Plans
- Partnerships that expand water availability for use through FRWA including expansion of existing entitlement place of use, changes in point of diversion to include FRWA, etc.
- Additional interties between partner agencies to expand conjunctive use in the region.
- Additional surface water entitlements, either procured or by contract through partnerships.



WATER FORUM AGREEMENT 2050

Sacramento Municipal Utility District Purveyor Specific Agreement

Updated: January 8, 2026

Purveyor Background

The Sacramento Municipal Utility District (SMUD) serves electricity to most electricity users in Sacramento County and small portions of Yolo and Placer Counties.

SMUD's core value of environmental leadership is a guiding principle that drives efforts to minimize impacts and encompass all aspects of SMUD operations. These principles support collaborations with the Water Forum and their referenced coequal objectives.

In the 1950s and 60s, SMUD developed a system of reservoirs on the tributaries to the south and middle forks of the American River for power generation. SMUD also developed Rancho Seco Nuclear Generating Station in the southeastern part of Sacramento County, which was later decommissioned, with Cosumnes Power Plant (CPP) later being constructed nearby. The CPP uses American River water for thermal power generation. SMUD maintains Rancho Seco Lake onsite, which serves as a backup water supply for the CPP.

In 1970, SMUD entered a Water Service Contract (WSC) with U.S. Bureau of Reclamation (USBR) for delivery of up to 60,000 acre-feet per year (AFY) of CVP water for municipal and industrial use. In 2006, with concurrence by USBR, SMUD assigned Sacramento County Water Agency (SCWA) the right, title, and interest on a portion of SMUD's Central Valley Project (CVP) contract consisting of 30,000 AFY. The assignment allowed SCWA rights to renew the contract. The original SMUD WSC agreement expired in 2012 but was replaced by a repayment CVP contract (which does not expire). SMUD currently has a repayment contract with USBR for 30,000 AFY.

The point of diversion for SMUD's entitlement is the Folsom South Canal. SMUD does not have a current need for this entitlement, though it could require the full amount depending on future energy generation-related needs. Unless or until SMUD determines that it should make a permanent transfer of that entitlement, SMUD may choose to make temporary transfers and any water that would otherwise be diverted under that entitlement will presumably be released by USBR to other entitlement holders or for other beneficial purposes. If SMUD is considering water transfers that are expected to reduce flows in the lower American River, the transfer will be disclosed to the Water Forum.

The Folsom South Canal is located approximately 3.6 miles west of the SMUD Rancho Seco property. The Canal is a 26.98-mile conveyance owned and operated by USBR as part of the CVP. The canal typically operates at less than 1 percent of its hydraulic capacity and traverses generally south from Lake Natoma on the American River in eastern Sacramento County to a pumping plant owned and operated by East Bay Municipal Utility District. In terms of overall volume conveyed, SMUD is the primary user of the Folsom South Canal, which supplies both the Cosumnes Power Plant and Rancho Seco Lake.

Rancho Seco Lake is an off-stream storage reservoir located approximately one mile east and upstream of Cosumnes Power Plant. The lake is kept full year-round with Folsom South Canal water and incidental rainfall runoff. Water is delivered through a turnout located approximately 700 feet upstream from the Laguna Creek siphon, on the Folsom-South Canal. Water from the turnout is pumped east through a 3.2-mile long, 66-inch diameter pipeline to the Rancho Seco site, and other pipelines convey water to Rancho Seco Lake and CPP.

Rancho Seco Lake is a small reservoir near Clay Creek. The surface area of Rancho Seco Reservoir is approximately 165 acres and is contained by an earthen dam constructed in 1972. The reservoir has a capacity of 2,850 acre-feet (AF). The maximum dam height is approximately 60 feet, total length is 1,800 feet, and crest width is 28 feet. The dam was designed and constructed to standards established by the State of California, which include consideration for earthquake and extreme flood events.

Surface Water Management

Current Diversions

During the last 10 years, SMUD's diversions from the American River for consumptive purposes have ranged from 6,131 AF in 2013 to 3,674 AF in 2023. These diversions could increase should SMUD decide to reoperate the CPP to use alternative fuels that have a greater water demand or undertake other power generation related projects with a consumptive demand, including but not limited to hydrogen production or alternative renewable generation. SMUD has also made temporary assignments of its entitlement to the City of Roseville. SMUD will continue to explore and participate in assignments, transfers, and similar arrangements.

Future Projected Diversions

It is difficult to predict how much water SMUD will divert and use over time. SMUD's current diversions could increase should SMUD decide to reoperate the CPP to use alternative fuels that have a greater water demand or undertake other power generation related projects with a consumptive demand, including but not limited to hydrogen production or alternative renewable generation. SMUD has also made temporary assignments of its entitlement to the City of Roseville. SMUD will continue to explore and participate in assignments, transfers, and similar arrangements.

Drier Conditions Management

In drier years, any assignments of SMUD's water service entitlement will be subject to USBR's available supply. The CPP will need to operate during drier years to meet critical local and regional electrical demands. In fact, the need to operate the CPP could increase in drier years due to dry year reductions in hydroelectric supply or potentially higher temperatures leading to increased use of air conditioning.

Driest Conditions Management

During driest conditions, any assignments of SMUD's water service entitlement will be subject to USBR's available supply. The CPP will need to operate during drier years to meet critical local and regional electrical demands. In fact, the need to operate the CPP could increase in drier years due to dry year reductions in hydroelectric supply or potentially higher temperatures leading to increased use of air conditioning.

Critically Low Storage Conditions

In critically low storage years, any assignments of SMUD's water service entitlement will be subject to USBR's available supply. The CPP will need to operate during critically low storage conditions years to meet critical local and regional electrical demands. In fact, the need to operate the CPP could increase in drier years due to dry year reductions in hydroelectric supply or potentially higher temperatures leading to increased use of air conditioning.

However, it is recognized that in years when the projected unimpaired inflow to Folsom Reservoir is less than 750,000 AF there may not be sufficient water available to provide the purveyors with the driest years' quantities specified in their agreements and provide the expected driest years' flows to the mouth of the American River. In those years, SMUD will participate in a conference with other stakeholders on how the available water should be managed. It is also worth noting that the CPP depends on the Folsom South Canal for its water supply. The pumping station needs a canal level of 107 feet at its intake. This requirement, as well as others, would be discussed in stakeholder conferences mentioned above.

Project List

Non-Structural Projects

- Water transfer agreement with Roseville for 2,000 AFY (through February 2026)



WATER FORUM AGREEMENT 2050

Sacramento Suburban Water District Purveyor Specific Agreement

Updated: November 26, 2025

Sacramento Suburban Water District (SSWD) is committed to supporting good stewardship of the American River watershed and recommits to its membership in the Water Forum as a model for this effort. SSWD will continue its advocacy for the health of the river through actionable, meaningful efforts supporting cold water carry-over at Folsom reservoir, supporting the Flow Management Standard, habitat restoration efforts and advocacy at the federal level with our U.S. Bureau of Reclamation (USBR) partners to balance the co-equal goals. Achieving the co-equal goals requires on-going actions, not just in dry years, to keep the river and groundwater basin healthy and ensure a reliable, safe, and sustainable water supply. Ultimately the Water Forum has endeavored to provide “peace on the river” while knowing that a healthy water supply is reliant upon a healthy river.

Purveyor Background

SSWD was formed on February 1, 2002, under the State of California’s County Water District Law by the consolidation of the Arcade Water District (AWD), established in 1956, and the Northridge Water District (NWD), established in 1958.

The Local Area Formation Commission approved the reorganization of Del Paso Manor Water District (DPMWD), established in 1954, into SSWD as of June 30, 2025. After June 30, 2025, DPMWD ceased to exist and SSWD officially integrated all aspects of the former district into operations of the SSWD as the Del Paso Manor Service Area (DPMSA). The DPMSA will be operated as a separate water system until the DPMSA system facilities have been sufficiently rehabilitated and replaced to the same standard as the SSWD water system, and the SSWD Board of Directors determines that the two service areas will be merged and operated as a single water system.

SSWD is in Sacramento County, north of the American River and serves a large suburban area, including portions of Citrus Heights, Carmichael, North Highlands, City of Sacramento (City), Antelope, Arden Arcade, and McClellan Park (formerly McClellan Air Force Base). SSWD’s service area covers approximately 37 square miles (23,690 acres of land) and serves water to an estimated population of 199,298 (based on the 2020 census) through approximately 48,853 service connections, 47,162 of which are metered. There are 1,691 unmetered service connections in the DPMSA that will be metered by 2035. SSWD’s territory is substantially built out. Other than residential and commercial in-fill projects,

and industrial and commercial development at McClellan Park, SSWD does not expect significant additional development within its territory.

Water System Facilities

SSWD's distribution system, including storage, pump stations and interconnections, has approximately 720 miles of pipeline that range in size from 48-inch transmission mains down to 4-inch distribution mains. There are 48 emergency interties with neighboring agencies along SSWD's service boundary. SSWD has 6 storage tanks with a collective capacity to hold approximately 15.8 million gallons of water. SSWD has a total of 7 booster pumping stations, three of which are co-located with major storage tanks. SSWD pumps its groundwater from approximately 80 permitted groundwater wells. All the groundwater wells pump directly into the distribution system and range between 270 and 1,036 feet deep. SSWD also has facilities to receive treated surface water from Folsom Reservoir and the Lower American River.

Groundwater Wells

SSWD currently has 80 permitted wells in the North American Subbasin (NASb) that are connected to the potable water system, with a current production capacity of approximately 125 million gallons per day (MGD).

SSWD is, by regulation, 100% reliant on groundwater to ensure continuous supply to its customers. Therefore, SSWD must maintain groundwater production capacity necessary to meet 100% of its customers' needs. SSWD's groundwater wells and storage facilities are capable of producing 100% of SSWD's annual water demand.

SSWD pumps from the NASb, which is jointly managed on behalf of SSWD and other municipal pumpers by the Sacramento Groundwater Authority under a Groundwater Sustainability Plan adopted consistent with the Sustainable Groundwater Management Act (SGMA). SSWD works with other groundwater pumpers in the basin to sustainably manage groundwater supply consistent with SGMA.

Surface Water

In addition to groundwater, SSWD imports surface water, when available, from two supply sources: Folsom Reservoir and the Lower American River. SSWD has no surface water rights, but has two contractual entitlements to surface water, one from the Placer County Water Agency (PCWA) for up to 29,000 acre-feet and one from the City for up to 26,064 acre-feet.

When available, SSWD purchases surface water from PCWA supplied from the Middle Fork American River and delivered to Folsom Reservoir. The PCWA water is treated by San Juan Water District (SJWD) at the Peterson Water Treatment Plant pursuant to contract and then conveyed through purchased pipeline capacity in the Cooperative Transmission Pipeline and District-owned transmission pipelines into SSWD's water distribution system in the North Service Area. SSWD also purchases surface water when available from the City supplied from the Lower American River, which is diverted and treated by the City at its E.A. Fairbairn Water Treatment Plant and conveyed through purchased and District-owned pipeline capacity for distribution to customers in SSWD's South Service Area.

In addition to the two contractual entitlements, SSWD purchases Central Valley Project Section 215 surface water from USBR under a long-term Warren Act contract when available.

Surface Water and Groundwater Operations

SSWD has no surface water rights.

Contractual Entitlements

As noted, SSWD has two contractual entitlements to surface water, one from the City and one from PCWA. SSWD regularly enters individual annual contracts with USBR to receive surplus Central Valley Project Section 215 water deliveries when available.

One of SSWD's two predecessor agencies, AWD, entered into an agreement with the City to reserve a water supply for AWD's service area within the City's American River Place of Use. That agreement committed a portion of the City's surface water supplies for future use by AWD, subject to annual payments. After SSWD was formed in 2002, it continued AWD's payments to the City for the American River Place of Use water supply and AWD's planning and design of facilities that enabled SSWD to receive treated water from E.A. Fairbairn Water Treatment Plant.

In 2004, SSWD and the City entered into a Wholesale Water Supply Agreement under which the City agreed to supply up to 20 million gallons per day (mgd) of treated surface water to SSWD under the former AWD entitlement. The agreement will continue in full force and effect unless terminated by mutual written agreement of the parties or by operation of law.

In 2000, SSWD's other predecessor agency, NWD, entered into an agreement to purchase water from PCWA. When SSWD was formed in 2002, it assumed this agreement. The agreement provides that SSWD would buy surface water from PCWA at an increasing volume each year until the maximum contract amount of 29,000 acre-feet per year was reached in 2014 and then maintain this level through the expiration of the agreement in 2025. The PCWA agreement was amended in 2018 to extend its term through 2045. This permitted SSWD to secure a Long-Term Warren Act Contract for the same term (i.e., through 2045) from the USBR to wheel PCWA water supplies through Folsom Reservoir to SJWD for treatment by SJWD and then delivery to SSWD through the Cooperative Transmission Pipeline. The PCWA agreement was further amended in 2020 to reduce SSWD's annual "take or pay" obligation from 12,000 acre-feet to 8,000 acre-feet, with the provision that if PCWA can make additional water available to SSWD in any year, SSWD has the right to take up to 21,000 acre-feet of additional water in that year.

The PCWA entitlement has limitations.

- American River Flows
 - PCWA may not deliver water to SSWD in any year when the March through November unimpaired inflow into Folsom Reservoir is less than 1,600,000 acre-feet.
 - Notwithstanding the foregoing, PCWA may deliver water to SSWD in the following December through February provided water is being released from Folsom Reservoir for purposes of flood protection.
- PCWA Needs
 - The agreement is subject to cutback if PCWA needs any portion of the SSWD entitlement to serve PCWA customers in Placer County, or to meet PCWA's Middle Fork Project power generation obligations to PG&E.

- SSWD Use
 - SSWD Customers – SSWD may only use the PCWA water in PCWA’s expanded Place of Use which covers SSWD’s North Service Area.
 - Sale and Transfer – SSWD may sell or transfer any portion of its available PCWA entitlement within PCWA’s expanded Place of Use (e.g., to the California American Water Company).

Use

SSWD uses surface water in-lieu of groundwater pumping during water year types or conditions when such supplies can be diverted and used in portions of the SSWD service area when available under PCWA’s and the City’s water rights and it provides benefits to SSWD customers or aids in meeting other local or regional objectives such as in-lieu groundwater recharge, which SSWD actively engages in as part of its Water Forum commitments.

Conjunctive Use Program

As one of the original signatories of the Water Forum Agreement (through its predecessor agency, Northridge Water District), SSWD has operated an active Conjunctive Use Program since 1998. Under this program, SSWD provides treated surface water to its customers under its City and PCWA entitlements in lieu of providing pumped groundwater. This reduces SSWD’s need to extract groundwater, which in turn allows SSWD’s groundwater supplies to be replenished through natural groundwater recharge. This operation is referred to as “in-lieu recharge” or more colloquially as “conjunctive use.”

SSWD’s groundwater wells are in the NASb, which is part of the Sacramento Valley Groundwater Basin. While groundwater levels normally fluctuate in response to hydrologic conditions, groundwater levels in the NASb declined between 1950 and 2000. There is a regional consensus that this decline was largely the result of excessive groundwater pumping.

Throughout the history of SSWD, investments in its Conjunctive Use Program have had a significant effect on bolstering groundwater supplies in the region. By supplementing its supplies with surface water when it is available, SSWD’s groundwater pumping has been reduced, thereby allowing for more groundwater recharge.

SSWD supports maintaining a sustainable groundwater basin in the NASb. Seeking opportunities to recharge groundwater requires focus if the resource is to be present when most needed. SSWD remains cognizant of the need to maintain consistency with local Groundwater Sustainability Plans and meeting the requirements of SGMA.

Water Banking

- SSWD’s in-lieu recharge program has contributed to the regional banking of over 400,000 acre-feet of groundwater since 1998.
- SSWD has banked greater than 245,000 acre-feet of groundwater to improve supply reliability since 2003.
- SSWD files annual reports with the State Water Resources Control Board to document its efforts to bank groundwater. These efforts have been recognized and substantiated by the State of California Department of Water Resources’ data and reporting.

Aquifer Recovery

- Since 2003, groundwater levels have stabilized in the portion of the NASb from which SSWD pumps water. This was the result, in large part, of an increase in SSWD's in-lieu recharge practice (i.e., increased surface water purchases by SSWD when available) and enhanced conservation practices on the part of SSWD's customers spurred by SSWD's various education and incentive programs.
- Groundwater level recovery, combined with absence of a robust aquifer storage (i.e., direct groundwater recharge) effort in the area, underscore the general effectiveness of conjunctive use programs and in-lieu groundwater banking efforts.
- As demonstrated by historical groundwater level data for the Sacramento Valley, this water supply management strategy reversed the historical trend of groundwater level decline by reducing groundwater pumping to allow the aquifer to naturally stabilize and then begin to recharge.

Demand Management

SSWD's baseline water usage per capita for the purpose of compliance with Senate Bill (SB) X7-7 was 257 gallons per capita per day (gpcd) for the years 1995-2010, with a 2020 target of 206 gpcd. At the SB X7-7 compliance date of 2020, SSWD customer usage was down to 172 gpcd, meeting the legislative mandate. For the last several years, SSWD's gpcd has hovered around 143 gpcd. This was achieved through a variety of means, including an accelerated Advanced Meter Infrastructure program and expanded water conservation incentive and outreach efforts.

Moving forward, through the Long Term Water Conservation Framework legislation (SB 606 and Assembly Bill 1668), the State of California created real-time targets for water suppliers, including SSWD, that involve a dramatic water use reduction target over the next 15 years that is tied to a residential indoor water use reduction as well as a landscape water efficiency target that involves reporting on landscape water demand as compared to landscape water need (as calculated by the State). This system-wide budget-based water use approach also includes a reduction in water suppliers' system water loss (gallons per connection per day). To achieve these targets, SSWD anticipates that it will need to dramatically expand customer participation in its programs and anticipates making refinements to existing programs as well as adding programs to achieve these requirements. An analysis and prioritization of potential programs is underway and engagement on this topic with the Water Forum membership is ongoing. Draft and final work products will be provided to the Water Forum members.

Current SSWD conservation program elements are advertised on SSWD's web page:

<https://www.sswd.org/departments/conservation>

While subject to change, as program effectiveness is evaluated, examples of likely program enhancements beyond existing elements include:

- Monitoring and analysis of meters dedicated solely to irrigation
- Expanded rebate programs for all customer classes targeting both indoor and outdoor water efficiency efforts
- Enhanced leak repair incentive programs
- Enhanced water and energy partnership rebates

- Enhanced residential water surveys and leak investigations
- Enhanced outreach regarding best practices for water efficiency and water conservation

See “Specific Demand Management Measures by Water Conservation Stage” in Appendix E of SSWD’s Urban Water Management Plan:

<https://www.sswd.org/departments/engineering/reports/urban-water-management-plan>

SSWD understands that Water Code Section 10632 (a)(3)(A) requires purveyors to plan for reductions of 10%, 20%, 50%, and beyond. SSWD will follow the stages set forth in its [Water Shortage Contingency Plan](#) as declared by its Board of Directors based on operational service conditions and water supply availability.

All hyperlinks used within this PSA will be maintained and active for the duration of the agreement, or if changes are made to the online content, the changes will be communicated to the Water Forum and updated links provided.

Current Diversions

N/A

Future Projected Diversions

N/A

Drier Conditions Management

In drier years, SSWD will switch to groundwater in a discretionary fashion to meet customer demands as water resource conditions warrant. Decisions will include, but not are limited to, the need to maintain adequate levels of service, consideration of local surface water resource conditions, groundwater sustainability conditions, and successful outcomes of local banking and extraction program such as the Water Bank or agreements to make water available for the environment (e.g. Healthy Rivers and Landscapes). The surface water supplies available to SSWD (e.g., PCWA, City, USBR) may be subject to significant reductions, up to and including curtailment, during dry years (seasonal and climatic shortages).

Based on historical data, SSWD’s water supply available from groundwater has not been impacted by annual hydrology. Groundwater reliability is consistent in all water years and is not subject to vulnerabilities from seasonal and climatic factors. After several consecutive dry years, the groundwater levels may decline, but this does not reduce the pumping capacity of SSWD’s wells. The reliability of SSWD’s groundwater supply is related to its sustainable groundwater pumping yield estimate, water banking efforts, and its reliable well field capacity that can be used to meet demands in all water year types.

Driest and Critically Low Storage Conditions Management

In the driest years, SSWD will switch to groundwater in a discretionary fashion to meet customer demands as water resource conditions warrant. Decisions will include, but not are limited to, the need to maintain adequate levels of service, consideration of local surface water resource conditions, groundwater sustainability conditions, and successful outcomes of local banking and extraction program

such as the Water Bank or agreements to make water available for the environment (e.g., Healthy Rivers and Landscapes). The surface water supplies available to SSWD from its PCWA and City surface water entitlements may be subject to significant reductions, including curtailments, during dry years (seasonal and climatic shortages).

Based on historical data, SSWD's water supply available from groundwater has not been impacted by annual hydrology. Groundwater reliability is consistent in all water years and is not subject to vulnerabilities from seasonal and climatic factors. After several consecutive dry years, groundwater levels may decline, but this does not reduce the pumping capacity of SSWD's wells. On average, the groundwater level declines are reduced and recover faster because SSWD's water banking efforts have protected and increased the reliability of its groundwater supply.

Project List

SSWD understands that to support the coequal objectives and mitigate challenges facing the region under future conditions, structural and non-structural projects will be needed.

Structural

The following infrastructure projects will support efforts to implement SSWD's Purveyor Specific Agreement (PSA), and support the coequal objectives.

- New replacement groundwater facilities consistent with adopted groundwater sustainability plans
 - Select new replacement wells will strategically be equipped with Aquifer Storage and Recovery capability
- New or improved interties with other purveyors, in particular ones that promote groundwater recharge
- Rehabilitation and modernization of existing water facilities
- Structural projects and programs to help ensure the success of the Healthy Rivers and Landscapes Program (previously known as Voluntary Agreements) or similar tributary-specific programs (e.g., the ARTESIAN program) that improve the ecosystem, protect local water entitlements, and maintain better cold water pool conditions and management in Folsom Reservoir and the Lower American River

Non-Structural

- Consolidation of water districts as approved by the State of California or the Local Agency Formation Commission
- Agreements with neighboring purveyors for conjunctive use opportunities and water supply reliability
- Continued water use efficiency programs and funding support
- Water transfers consistent with groundwater sustainability plans and the California Water Code
- Support for identifying underground storage as a beneficial use of surface water
- Active participation in management and other actions under the groundwater sustainability plans for the NASb

Caveats and Assurances

1. The ability for any individual purveyor to implement the surface water diversions principles will depend on their respective opportunities and constraints.
2. In circumstances where excess water is made available by USBR Article 3(f) of a purveyor's Water Repayment Contract or by a Section 215 Contract between the purveyor and USBR due to flood control operations at Folsom Reservoir, for the purposes of groundwater recharge, that water would not be counted as diversion water within their PSA, regardless of year type.
3. Acknowledge that the duty of a water purveyor is to provide an affordable, reliable, and high-quality water supply to its customers.
4. Agree that evolving regulatory conditions may trigger changed conditions and Water Forum commitments shall evolve to adapt to those changed conditions.
5. Acknowledge that the achievement of the coequal objectives must consider ramifications on water affordability, reliability, availability, and quality.
6. Continue to utilize SSWD's conjunctive use program in a discretionary manner to ensure a safe and reliable water supply is maintained.



WATER FORUM AGREEMENT

2050

San Juan Water District Consortium Purveyor Specific Agreement

(Includes Citrus Heights Water District, Fair Oaks Water District, Orange Vale Water Company, San Juan Water District, and a portion of the City of Folsom)

Updated: January 8, 2026

Purveyor Background

San Juan Water District's (SJWD) wholesale service area is composed of the SJWD's retail service area located in both Sacramento and Placer Counties, Citrus Heights Water District (CHWD), Fair Oaks Water District (FOWD), Orange Vale Water Company (OVWC), and a portion of the City of Folsom. These referenced Districts and the relevant portion of the City of Folsom are hereinafter collectively referred to as "the SJWD Consortium".

SJWD's wholesale surface water supplies consist of three sources – 33,000 acre-feet (AF) per year of water rights allocations (vintages 1854 and 1928), up to 25,000 AF/year in a water supply agreement with Placer County Water Agency for water from their Middle Fork Project, and 24,200 AF/year of Central Valley Project water supplies in a repayment contract with the U.S. Bureau of Reclamation (Reclamation). The water-right water must be provided by Reclamation without diminution, pursuant to a 1954 settlement agreement with SJWD. The other two sources are subject to shortage provisions, but only Reclamation has ever implemented shortage allocations.

These sources of water are all delivered through a municipal and industrial (M&I) intake in Folsom Dam, which is at an elevation that would be subject to air entrainment at approximately 110,000 AF of storage in Folsom Reservoir. All of SJWD's surface water is diverted from the Folsom Reservoir and treated at the Sidney N. Peterson Treatment Plant. Treated water is then stored in a 62-million-gallon treated storage reservoir.

CHWD and FOWD supplement their surface water supply with groundwater. OVWC may supplement its supply with groundwater in the future. Additional supplies may be available from other sources, via interconnections.

SJWD's projected 2030 surface water demand in the 2000 Water Forum Agreement was 82,200 AF/year (the full complement of SJWD's water supplies). In a conference year, under the 2000 Agreement, SJWD's projected surface water demands would decrease to 54,200 AF/year, which was also the baseline surface water use reported by SJWD for 1995. This use increased in SJWD's wholesale service area to 57,900

AF/year by 2004 but has since declined to 32,700 AF/year in 2022 (a reduction of 44%). Even if groundwater use in SJWD's wholesale area is included (a total of 7,200 AF, including a total of 4,000 AF of incremental groundwater pumping for the groundwater substitution transfer in 2022), the total use would be 31% lower than in 2004 (even assuming minimal groundwater use that year).

Surface Water and Groundwater Management

Baseline diversions are those described in SJWD's 2020 Urban Water Management Plan (UWMP), for total and surface water use in 2020. The baseline for the SJWD's American River diversion is 40,642 AF total and 36,301 AF of surface water diversions.

Agreement for meeting the SJWD Consortium's water supply needs to the year 2040:

1. Normal years

As it applies to the SJWD Consortium's portion of the agreement, normal years is defined as follows: years when the projected March through November unimpaired inflow to Folsom Reservoir is greater than 950,000 AF.

In normal years, SJWD will divert and the SJWD Consortium will use no more than 38,603 AF of surface water supplies for customer requirements within the current SJWD wholesale service area. Additional surface water supplies may be used for banking purposes.

2. Drier years

As it applies to the SJWD Consortium's portion of the agreement, drier years is defined as follows: years when the projected March through November unimpaired inflow to Folsom Reservoir is less than 950,000 AF and equal to or greater than 400,000 AF.

In drier years, SJWD will divert and the SJWD Consortium will use a decreasing amount of surface water from 38,603 AF to 30,882 AF within the current SJWD wholesale service area. During drier years, the SJWD Consortium will reduce its surface water demand by additional conservation (up to 20% or as required by the Districts' Water Shortage Contingency Plans) and potential increased use of groundwater.

3. Driest years

Defined for purposes of the Water Forum Agreement 2050 as follows: years when the projected March through November unimpaired inflow to Folsom Reservoir is less than 400,000 AF.

In the driest years, SJWD will reduce its diversion to no more than 30,882 AF for use within the current SJWD wholesale service area, which is lower than its baseline amount. During driest years the SJWD Consortium will reduce its surface water demand by additional conservation (up to 20% or as required by the Districts' Water Shortage Contingency Plans) and potential increased use of groundwater.

In addition, it is recognized that in years when the projected unimpaired inflow to Folsom Reservoir falls below 750,000 AF, there may not be sufficient water available to provide the purveyors with the drier or driest years quantities specified in their Purveyor Specific Agreements (PSA) and provide the expected driest years flows to the mouth of the American River. In those years, the SJWD Consortium will participate in a conference with other stakeholders on how the available water should be managed. The

conferees will be guided by the conference year principles described in Chapter 4, Section I of the Water Forum Agreement.

Demand Management

As noted in the Demand Management element of this Agreement, “All purveyors commit to abiding by the relevant conservation and water use efficiency regulations.” The SJWD Consortium agencies reiterate that commitment in this PSA. The specific measures that the SJWD Consortium agencies will take to meet these obligations have yet to be defined, and they will evolve over time as the different regulatory requirements come into effect. Those measures will be described in the documents referenced below. However, at the time of the signing of the Water Forum Agreement, the San Juan Consortium agencies do anticipate that a major focus of their programs will be on the use of water on irrigated landscapes, and on assisting their customers in reducing this category of use, to the extent that such reductions are necessary and appropriate to allow SJWD Consortium agencies to meet the requirements of the conservation regulations. The SJWD Consortium agencies will consider the various tools and techniques listed in the Appendix as they develop the suite of actions that they may take to facilitate the required changes in water use on landscapes by their customers.

The SJWD Consortium operates extensive demand management programs throughout the service areas of its members, as well as regionally, partly through the programs operated by the Regional Water Authority (RWA). Information about RWA’s demand management programs is available at the following locations:

<https://rwah2o.org/programs/wep/>

<https://bewatersmart.info/>

Information about demand management measures for each member of the SJWD Consortium is available in their respective Urban Water Management Plans, at the following locations:

2020 Urban Water Management Plans:

CHWD (pp. 54-61) https://chwd.org/wp-content/uploads/2020-UWMP-06_21_2021-1.pdf

FOWD (pp. 59-64) https://www.fowd.com/files/b2161c5ba/FOWD+2020+UWMP_FINAL.pdf

Folsom (pp. 9-1 – 9-8)

<https://www.folsom.ca.us/home/showpublisheddocument/6766/637629066033570000>

OVWC (pp. 4-7 – 4-16)

<https://www.orangevalewater.com/files/a20283cf8/OVWC+2020+UWMP+Pubilc+Hearing+July+13.pdf>

SJWD (pp. 4-6 – 4-18)

<https://www.sjwd.org/files/5f7a2a821/SJWD+2020+UWMP+Final+06.23.21.pdf>

Department of Water Resources statewide library of UWMPs:

<https://wuedata.water.ca.gov/>

Current information about water efficiency programs and activities, including rebates, site surveys, water conservation ordinances, etc. for each consortium member is available on its respective website. Those water efficiency web pages include:

CHWD: <https://chwd.org/water-efficiency/>

FOWD: <https://www.fowd.com/water-efficiency>

Folsom: <https://www.folsom.ca.us/government/environmental-water-resources/water/water-conservation>

OVWC: <https://www.orangevalewater.com/drought-stages>

SJWD: <https://www.sjwd.org/water-efficiency>

Information is also available for each agency concerning the water use objectives and corresponding annual water use, which are tracked and reported pursuant to the 2024 urban conservation regulations. That information is available for SJWD Consortium agencies and all affected urban water agencies at DWR's statewide library website, under the "Urban Water Use Objective Reporting" section, at the following link: <https://wuedata.water.ca.gov/>.

Demand management and conservation program information is available in the annual water supply and demand assessments that are submitted by water agencies (including SJWD Consortium members). Those reports are available on DWR's statewide library webpage, under the "Water Shortage Assessment Reports" section.

The members of the SJWD Consortium will update their water conservation ordinances to include the requirements of AB 1572 before January 1, 2027, as required by that statute.

Critically Low Storage Conditions

SJWD's sources of water are all delivered through a municipal and industrial (M&I) intake in Folsom Dam, which is at an elevation that would be subject to air entrainment at approximately 110,000 AF of storage in Folsom Reservoir. Because this entrainment could result in significant damage to the impellers of the pumps that Reclamation uses to pump the supplies brought through the intake to SJWD, Roseville, and Folsom, this level of storage is one variation of "dead pool" being discussed in the Water Forum. This version of "dead pool" has never occurred.

If the water level drops below the M&I intake, Reclamation would use an emergency pump on one of the three power penstocks in the dam to deliver water to Roseville and SJWD and floating barges to deliver water to Folsom. The emergency pump has a capacity of 60 cfs (43,500 AF/year), and the barges have a capacity of 30 cfs. These facilities would allow Reclamation to access water in Folsom Reservoir between the 110,000 AF at which the M&I intake goes dry and the approximately 55,000 AF storage level at which the power penstocks go dry – a second version of "dead pool".

Project List and Future Water Supply Reliability Efforts

Projects for which the SJWD Consortium requests conceptual endorsement by all signatories:

1. Infrastructure repair and replacement projects

2. Expansion of water use efficiency programs to reduce demands on American River supplies
Members of the SJWD Consortium may seek support or endorsement by other Members and/or the Water Forum for the following projects. Should any SJWD Consortium Member choose to seek such support or endorsement, they will do so pursuant to the process defined in in the Water Forum 2050 Agreement.

1. Alternative raw water supply projects to improve reliability and redundancy of delivering raw water from Folsom Reservoir
2. Renovation or installation of facilities necessary to conduct robust conjunctive use activities, such as groundwater production and injection facilities, including those necessary to support expansion of the regional water bank
3. Development and implementation of projects to meet all new regulatory requirements
4. Water rates that are necessary to provide funding to meet the financial needs of SJWD Consortium parties

Glossary of Common Terms

Sources of definitions are indicated in italics

Acre-foot (AF)

An acre is about the size of a football field. An acre-foot is the amount of water that would cover one acre of land one foot deep. It equals 325,800 gallons. That is approximately how much water five people use a year for drinking, washing, and landscape watering.

Aquifer

A geologic formation that stores, transmits, and yields significant quantities of water to wells and springs. *Water Education Foundation*

Anadromous Fish

Fish that spend a part of their life cycle in the sea and return to freshwater streams to spawn.

Best Management Practices (Water Conservation)

A policy, program, practice, rule, regulation, or ordinance of the use of devices, equipment, or facilities that is an established and generally accepted practice that results in more efficient use or conservation of water, or a practice that has been proven to indicate that significant conservation benefits can be achieved. *MOU Regarding Water Conservation in California*

Biological Opinion

A Biological Opinion is a document produced by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) as part of a formal consultation under Section 7 of the Endangered Species Act (ESA). It determines whether a proposed action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

California Environmental Quality Act

An act conceived primarily to require public agency decision makers to document and consider the environmental implications of their actions. *Guide to the California Environmental Quality Act: Remy & Thomas*

Central Valley Project Improvement Act (CVPIA)

Amends the Central Valley Project (CVP) reauthorization act of 1937 and reauthorizes the CVP to add mitigation, protection, and restoration of fish and wildlife as project purposes equal to agricultural and domestic uses, and to make fish and wildlife enhancement a project purpose equal to power. *USBR ARWRI*

Changed Conditions

This refers to significant changes in circumstances such as laws, regulations, and even the health of the river, which may occur after a *Water Forum Agreement 2050* is signed. If changed conditions arise that may interfere with the implementation of the Agreement, the Water Forum will reopen negotiations.

Conjunctive Use

The planned joint use of surface and groundwater to improve overall water supply reliability.

Conservation Pricing

Pricing that provides an incentive to reduce average or peak use, or both.

Contractual Entitlement

A water entitlement based on a contract, such as a contract with the United States Bureau of Reclamation for Central Valley Project water.

Cost-Effective

A case where the financial benefits of a project are greater than the overall cost.

CVPIA Programmatic Environmental Impact Statement

The program-level document, prepared by the United States Bureau of Reclamation, on the Central Valley Project Improvement Act, complies with the requirements of the National Environmental Policy Act.

Groundwater

The water in an aquifer. For human use and consumption, this water is generally pumped to the surface through a well.

Interested Party

In a negotiation, a person, organization, or entity entrusted to represent those with an interest in the outcome. There are 46 stakeholder organizations participating in the Water Forum.

Inter-basin Transfer

Water transfers from entities outside of a watershed to entities within a watershed.

Landscape Efficiencies

What is achieved through skillful planting and irrigation design, appropriate use of plant materials, and intelligent management to assure landscape development that avoids excessive water demands and is less vulnerable to periods of severe drought.

Low Water Use and Native Plants

Plants that thrive with minimal irrigation typically requiring only one watering per week or less. This includes native plants adapted to the region's climate, as well as drought-tolerant species. Native plants often have deep root systems that tap into groundwater, reducing the need for frequent watering.

Memorandum of Understanding (MOU)

A means of gaining formal consensus between two or more parties on a particular complex issue.

Point of Diversion

The place along the stream channel where a diverter takes control of the water. *How to File an Application to Appropriate Water, State Water Resources Control Board*

Public Trust Doctrine

California's legal doctrine requires the balancing of competing public interests while protecting the rights of the public to use water courses for commerce, navigation, fisheries, recreation, open space, preservation of ecological units in their natural state, and similar uses for which those lands are uniquely suited. It is based on the California State Constitution and goes back to English Common Law. The California Supreme Court stated, "*The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.*" *National Audubon (33Cal.3d 419 1983)*

Purveyor

An agency or district that provides water to customers for a fee.

Reasonable-Feasible

Practicable and in accord with reason.

Riparian Vegetation

Of, adjacent to, or living on, the bank of a river or, sometimes, of a lake, pond, etc. *Webster's Ninth New Collegiate Dictionary*

State Water Project

California's state-owned and operated water project, consisting of 22 dams and reservoirs, delivers water 600 miles from the Sacramento Valley to Los Angeles. *Water Education Foundation*

Subsidence

Sinking of the land surface due to a number of factors, of which groundwater extraction is one.

Surface Water Diversions

Water that is diverted and/or pumped from above-ground sources such as rivers, streams, reservoirs, and lakes, as opposed to groundwater, which is water pumped from the aquifer.

Sustainable Yield

Sustainable yield is a balance between pumping and basin recharge, expressed as the number of acre-feet of water per year that can be pumped from the basin on a long-term, average annual basis.

Water Forum

A community collaboration process involving interested organizations and commitment to the coequal objectives of *providing a reliable and safe water supply for the region's economic health and planned development through the year 2050, and preserving the fishery, wildlife, recreational, and aesthetic values of the lower American River.*

Water Forum 2050

The formal agreement among the Water Forum representatives will be presented to stakeholder organizations in the fall of 2025 for ratification without revision.

Quick Reference for Common Acronyms

AB	Assembly Bill
ACWA	Association of California Water Agencies
AF	Acre feet
AHTT	Ad Hoc Technical Team
ARCH	American River Corridor Health Program Area
ARFCD	American River Flood Control District
ARFO	American River Flows and Operations Program Area
ARG	American River Group
ARPF	American River Parkway Foundation
BC	Business Caucus
BiOp	Biological Opinion
CCOWMP	City County Office of Metropolitan Water Planning (the formal title for the Water Forum under the original Water Forum Agreement)
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFS	Cubic feet per second. One cubic foot is about 7.5 gallons.
CII	Commercial, Industrial, and Institutional water users/uses
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DAC	Disadvantaged Community
DFW	California Department of Fish and Wildlife
DOFA	Declaration of Full Appropriation
DM	Demand Management (water conservation practices)
DPMWD	Del Paso Manor Water District
DTA	Dry Time Actions (element of the Water Forum Agreement)
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
EDCWA	El Dorado County Water Agency
EID	El Dorado Irrigation District
EC	Environmental Caucus
ECOS	Environmental Council of Sacramento

FOR	Friends of the River
FIRO	Forecast-Informed Reservoir Operations
FMS	Flow Management Standard
FOR	Friends of the American River
GFA	Governance, Funding, and Administration Program Area
HME	Habitat Management Element (of the Water Forum Agreement)
HR&L	Healthy Rivers and Landscapes Program (also known as Voluntary Agreements)
LAFCo	Local Agency Formation Commission
LAR	Lower American River
LOWV	League of Women Voters
M&I	Municipal & Industrial
mFMS	Modified Flow Management Standard
MGD	Millions of Gallons Per Day
MOU	Memorandum of Understanding
NASb	North American Subbasin (groundwater)
NEPA	National Environmental Policy Act
NSC	Negotiating Steering Committee
PC	Public Caucus
PCWA	Placer County Water Agency
PSA	Purveyor Specific Agreement
Reclamation	U.S. Bureau of Reclamation
RWA	Regional Water Authority
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SARA	Save the American River Association
SASb	South American Subbasin (groundwater)
SB	Senate Bill
SCGA	Sacramento Central Groundwater Authority
SCWA	Sacramento County Water Agency
SDAC	Severely Disadvantaged Community
SGA	Sacramento Groundwater Authority
SJWD	San Juan Water District
SME	Subject Matter Expert

SRBX	Sacramento Regional Builders Exchange
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet
TUCP	Temporary Urgent Change Petitions
UIFR	Unimpaired Inflow into Folsom Reservoir
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VAs	Voluntary Agreements
WC	Water Caucus
WF	Water Forum
WF2050	The current Water Forum Agreement
WFA	Water Forum Agreement
WFSE	Water Forum Successor Effort (relevant terms from original WFA)
WG	Working Group
WSCP	Water Shortage Contingency Plan (component of Urban Water Management Plans)
WSS	Water Supply Sustainability Program Area

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Appendix 1: Advancing the Seven Elements of the First Water Forum Agreement

The first Water Forum Agreement (WFA), signed in the year 2000, included seven key elements that represent the strategies members used to meet the coequal objectives of water supply reliability and environmental stewardship. Over the past 20 years, these strategies shaped water management in the Sacramento region, addressing both immediate needs and long-term sustainability.

1. Increased Surface Water Diversions
2. Dry Year Actions
3. Flow Standard
4. Habitat Management
5. Water Conservation
6. Groundwater Management
7. Water Forum Successor Effort (WFSE)

The WF2050 Agreement restructures the original seven elements into five program areas. The following section outlines the original seven elements from the first WFA and highlights the progress made under each.

1. Increased Surface Water Diversions

The first WFA detailed plans to increase surface water supplies from rivers to support Sacramento's anticipated population and economic growth through 2030. Recognizing that conservation and sustainable groundwater use alone would not meet projected future demand, the agreement specified the amount of surface water each provider would divert during average, wet, dry, and very dry years, as well as the necessary infrastructure and projects to meet customer demand. Additionally, the agreement included emergency flow strategies to protect salmon and steelhead, as well as measures to reduce river water demand by shifting to groundwater and enhancing conservation efforts.

Progress: This element played a crucial role, alongside the WFA's Groundwater Management strategy, in restoring the region's groundwater basin to sustainable levels. By committing to increased surface water use during wet times, water providers allowed groundwater levels to recover. Over the past 20 years, regional groundwater levels have stabilized or risen in many areas.

For example, the Sacramento County Water Agency (SCWA), which was once completely dependent on groundwater, increased its surface water use by 29 percent in 2023 compared to the previous year, thanks to the Freeport Water Intake, a project outlined in the WFA. This shift stored approximately 10,220 acre-feet of groundwater in aquifers, enough to meet the annual needs of over 30,600 households.

2. Dry Year Actions

The "Dry Year Actions" section of the WFA was designed to help ensure sufficient water supplies during dry years for people while also protecting the environment of the American River. The agreement outlined increased water diversions from the American River in wet and average years, but during dry years, water providers agreed to reduce these diversions to protect fish, wildlife, and recreation on the river. To compensate for reduced river water in dry years, water providers planned to use strategies such as increasing groundwater use, re-operating reservoirs, increasing conservation, and utilizing recycled water. Each provider had specific targets for reducing river water use in dry years, which were detailed in the agreement.

Progress: This element was successfully tested over the years and particularly during California's extreme drought in 2014-15. Members worked together to reduce demands on the river by increasing groundwater use, boosting water conservation efforts, and reoperating reservoirs upstream of Folsom Reservoir. Through the Water Forum's Dry Year Conference, members also worked together to advise the U.S. Bureau of Reclamation on emergency flow strategies for Folsom Reservoir, aiming to minimize harm to salmon and steelhead as water levels in the lower American River reached historic lows.

3. Flow Standard

The WFA included plans to establish a new flow standard for the lower American River that would improve water releases to better support fish, especially fall-run Chinook salmon, while also preserving water storage in Folsom Reservoir to safeguard against drought.

Historically, water releases from Folsom Dam did not align with the fish's life cycle, negatively impacting the fishery. To address this, a team of fish biologists and experts from agencies such as the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife collaborated with the Water Forum to design a release pattern that prioritized the needs of the fish, while still meeting the reservoir's water supply and flood control objectives.

This new approach involved reducing summer flows to conserve water for increased releases in the fall, to provide better water conditions for salmon. The plan also included flexibility for adjustments based on real-time environmental needs.

Progress: In 2006, the Water Forum published the first Flow Management Standard (FMS) for the lower American River. The FMS utilizes the best available science to establish targets for minimum river flows and cold-water storage at Folsom Reservoir, aiming to preserve water storage, mitigate drought impacts, and enhance water temperature in the Lower American River for the benefit of salmon and steelhead. Since then, this science-based methodology has evolved with advancements in modeling and technical analysis, as well as real-world experience. After nearly 20 years of study and refinement, the Modified FMS is now recognized as the best path forward for protecting and restoring steelhead and fall-run Chinook salmon in the lower American River, while enhancing local water supply reliability without adverse impacts elsewhere in the state.

The Modified FMS is integrated into the most recent federal Biological Opinion, guiding the operation of Folsom Reservoir. To further support its understanding and implementation, the Water Forum is working on a consolidated version of the methodology for reference by the U.S. Bureau of Reclamation and other state and federal agencies.

Moreover, the Water Forum's science and habitat work positioned the region to successfully negotiate a voluntary agreement with the State Water Resources Control Board as part of the Healthy Rivers and Landscapes (HR&L) Program. This agreement incorporates the flow management standard in combination with habitat enhancement and increased river flows during dry years.

4. Habitat Management

The Habitat Management Element (HME) of the WFA focused on preserving the fishery, wildlife, recreational, and aesthetic values of the lower American River. The LAR Salmonid Habitat Enhancement Projects are at the core of the program, largely supported by federal funding through the Central Valley Project Improvement Act (CVPIA) and State of California funding. Key HME projects included habitat enhancement for salmon and steelhead, such as constructing spawning and rearing habitats. The element also focused on scientific research to better understand how river operations and enhancement efforts affected fish migration. The HME also specified collaboration with partners, including co-convening the Lower American River Task Force with the Sacramento Area Flood Control Agency and supporting water-related education.

Progress: The Water Forum's contribution to the lower American River environment is unmatched. No other organization invests in the lower American River environment like the Water Forum. With support from local, state, and federal partners, it has invested over \$38.8 million in habitat improvement and public education since 2000. These efforts include constructing more than 30 acres of spawning beds and 1.2 miles of side channels to support salmon and steelhead rearing.

The pace of the Water Forum's habitat enhancement work has accelerated significantly over the past five years. In 2020, the Water Forum secured \$5 million in Prop 68 funding from the State to support the early implementation of the Healthy Rivers and Landscapes Program (HR&L). This funding complemented existing program resources, enabling faster, larger-scale implementation. The Water Forum focused on refining designs, conducting necessary analyses, and implementing phased construction at each of the 10 approved habitat project sites. Additionally, the Water Forum assessed other potential habitat enhancement sites along the lower American River and advanced multi-benefit projects, such as the naturalization of Cordova Creek.

The Water Forum employs a science-based approach to habitat improvement and monitoring, linking each study to specific goals that support adaptive management. This work supports decisions related to the FMS and evaluates the feasibility of future habitat enhancement projects. With a changing climate, this program has become increasingly vital.

Moreover, the Water Forum has contributed to the scientific understanding of anadromous fish in the lower American River through studies that produce underwater maps and monitor salmon behavior during drought. These studies help identify locations for habitat enhancement that avoid impacts to flood safety. Years of adaptive management have allowed the Water Forum to refine conditions for optimal salmon spawning, such as gravel depth, flow rate, and substrate size, advancing sustainable habitat practices for the river.

The Water Forum's scientific work has earned it a place as a trusted regional voice among state and federal agencies overseeing Folsom Reservoir and the statewide water system. This work has enabled the Water Forum to provide consensus-based recommendations on critical issues, including temperature modeling, fisheries, and hydrology.

5. Water Conservation

Under the first WFA, water providers committed to comprehensive conservation plans to meet regional water needs while reducing reliance on both groundwater and surface water, including diversions from the American River. Initially, providers followed the 2000 Water Conservation Plans specified in the WFA, with a focus on maximizing conservation in a way that was accountable, measurable, and effective. Later, they adopted Best Management Practices (BMPs) under the guidelines of the California Urban Water Conservation Council (CUWCC) as a means of meeting the state's water conservation requirements to reduce per capita water use by 20 percent by 2020. These requirements had been mandated by Senate Bill x7-7 of 2009, which created the 20 x 2020 program.

Progress: The WFA led to the creation of the Regional Water Authority and its Water Efficiency Program. For over two decades, this program has engaged local water providers in a regional strategy to conserve local water resources, share best practices, and pool resources to maximize impact and meet state requirements. Working together, participants have leveraged funds with other regional utilities, increased economies of scale for securing grants, and optimized advertising dollars for extensive customer outreach. The program also runs a regional school education initiative and manages the customer-focused website BeWaterSmart.info, which promotes water-saving practices across the region.

This award-winning program empowers members to optimize their investments in water efficiency and capitalize on available grant opportunities. Since 2003, it has successfully secured nearly \$19.9 million in competitive grants to support outreach, advertising, rebate programs, and services that would be challenging for individual agencies to implement independently. Since 2013, local water use has decreased by 23 percent, despite a 15 percent increase in population. This strong regional effort has positioned local water providers to meet the new *Making Conservation a California Way of Life* standards set by the State Water Resources Control Board, pursuant to the water conservation legislation adopted in 2018.

6. Groundwater Management

The Groundwater Management Element focused on protecting the region's groundwater resources, which supply about half of the region's annual water supply. The goal was to help ensure that groundwater remains available for future generations while balancing its use with that of surface water supplies.

As part of the WFA, the region established several local agencies, such as the Sacramento Groundwater Authority (SGA) and Sacramento Central Groundwater Authority (SCGA), to monitor groundwater use and implement a conjunctive use program, a strategic approach to managing groundwater that combines the planned use of both surface water from lakes and rivers and groundwater via wells. The practice optimizes water availability in the region over the long term even as the climate changes.

Progress: The WFA provided a crucial collaborative foundation essential to developing the Sacramento region's successful conjunctive use program. Over the course of two decades, this program enabled the once-overdrafted North American Subbasin to recover and reach sustainable levels, while also providing a path for water providers to reduce their reliance on the river during critical habitat periods for endangered fish.

The SGA was a pioneer in groundwater management and served as a model for the Sustainable Groundwater Management Act (SGMA), California's landmark law passed in 2014 to safeguard California's groundwater resources for the long term.

SCGA has also played a critical role in implementing sustainable groundwater management in the South American Subbasin. One of the most significant efforts underway in this area is the Harvest Water project, California's largest agricultural water recycling initiative, led by the Sacramento Area Sewer District (SacSewer).

SGMA required local agencies to establish Groundwater Sustainability Agencies (GSAs) and develop and implement Groundwater Sustainability Plans (GSPs) for more than 100 high- and medium-priority subbasins statewide. In the greater Sacramento region, local agencies formed multiple GSAs for the North and South American Subbasins. They were well-positioned to develop GSPs for these subbasins, which were subsequently adopted locally in 2022 and approved by the DWR.

7. Water Forum Successor Effort

The Water Forum Successor Effort (WFSE) was established to guide the ongoing implementation and adaptation of the WFA through 2030. It provides a structured approach to addressing emerging issues, adapting to policy changes, and maintaining continued collaboration among interested parties.

The WFSE was designed to emphasize cooperative problem-solving, requiring participants to engage collaboratively, respect diverse viewpoints, and work toward mutually beneficial

solutions. The Agreement also established that all parties involved would participate on equal footing within the WFSE.

Under the structure outlined in the WFA, the City-County Office of Metropolitan Water Planning oversees the WFSE, funded through agreements with member agencies, primarily water providers. Representatives of member agencies set policy direction, while staff, managed by the City of Sacramento, carry out the work of the WFSE.

Progress: The framework for the WFSE is a hallmark of the Water Forum process and WFA. It has allowed immediate focus on new issues, provided members with flexibility to realign when necessary, and helped sustain trust and momentum throughout the decades of implementation. Membership has remained stable, with many signatories of the first WFA still actively involved. New participants continue to join, strengthening the collaborative framework established in the first WFA.

Appendix 2: ARCAP Two-Year Workplan

SCOPE OF WORK

This workplan describes the intended activities related to the Water Forum American River Climate Adaptation Program (ARCAP) for the first two years of implementation. The focus for the first two years will include confirming the priority issues for resolution, establishing data, tools, and methods for evaluation, conducting analyses, and is also expected to include trial operations. The work will be phased to align with the approved Water Forum budget for the 2026 Fiscal Year (FY) and includes a Progress Report and an opportunity for workplan refinement after the first year. The budget presented within this work plan only includes the activities identified for the first year. The second-year activities and budget will be refined based on the progress made in year one.

ARCAP TASKS

The Work of ARCAP will be organized into the following tasks. Some of these tasks will take place simultaneously and are not necessarily sequential.

Task 1: Water Forum Member Coordination (ongoing)

An ARCAP Working Group will be created to inform and guide the activities of the ARCAP. The Working Group will be co-convened with the Water Forum and RWA, will include two members from each caucus as primary representatives, and will be open to all Water Forum members. The primaries will commit to making reasonable efforts to attend all working group meetings and to review related materials prior to the meetings. The primaries will also be expected to act as representatives of their caucuses by reporting ARCAP progress to the caucus and providing feedback to the Working Group on matters affecting the caucus. The ARCAP working group will be tasked with:

- Reviewing and commenting on work products
- Providing input on program direction, scope, and pace
- Deliberating, refining, and providing answers to ARCAP Questions

Meetings will be held monthly and supported by facilitation staff, with the option of additional meetings as necessary.

The Working Group decisions and recommendations (including answers to ARCAP Questions) will be developed by consensus and will be presented to the Plenary for approval. This process is consistent with the decision process as defined in the Water Forum Agreement 2050.

Task 2: Refine and Focus ARCAP Questions

The initial list of questions associated with the ARCAP program was identified in the Water Forum 2.0 negotiations. The list is extensive and reflects the broad interests of the Water Forum Members (see ARCAP agreement language, Program Element 1). The key questions to be addressed within the first two years of ARCAP implementation will be refined and agreed upon by

the ARCAP Working Group within the first three months of this two-year work plan. It is acknowledged that as ARCAP is implemented, the questions to be answered will evolve, be refined, and re-prioritized as necessary.

Task 2 Deliverable: *Refined list of questions to be addressed within the two-year work plan, building from ARCAP Program Element 1.*

Target Schedule for Completion: *Early 2026*

Task 3: Regional Data Collection and Synthesis

This task will be divided into two sub-tasks, with the first centered on collecting and synthesizing information directly from Water Forum purveyors, and the second focused on organizing and preparing data and information for the Technical Analysis (Task 4).

Subtask 3.1 Regional Water Purveyor Data Collection and Synthesis

Water Forum staff and consultants will coordinate with regional purveyors to identify operational scenarios that address various questions defined in Task 2. The information to be collected about these scenarios will include specific types of transactions that could be implemented to provide measurable quantities of water that could meet the program objectives. The information will be synthesized to provide a regional perspective, illustrating the best opportunities for ARCAP Water to be generated and tracked.

This activity is expected to be done in an iterative manner. Initially, the information collection will focus on identifying operational opportunities and constraints for potential ARCAP actions. Later information collection activities will involve more quantitative information on facility capacities, water demands, and available supplies. This information will be used to refine and answer ARCAP Questions related to the potential performance, rules, or structure.

Data synthesis will involve summarizing and packaging the information into regional overviews, highlighting and illustrating potential ARCAP opportunities. In many cases, WF staff will prepare draft syntheses for consideration and deliberation by the ARCAP Working Group.

Subtask 3.1 Deliverable: *Regional Supply and Operations Synthesis Report*

Target Schedule for Completion: *Summer 2026*

Subtask 3.2 Other Regional Data Identification, Organization, and Preparation

Water Forum staff, with input and guidance from the ARCAP working group, will work to collect and organize data and tools for technical analyses, which are expected to begin in the second year of the ARCAP program. Activities related to subtask 3.2 are outlined below:

- Review and consideration of existing analyses and information
 - Acknowledging the possibility that some ARCAP questions may be answered by other efforts, consideration will be given to opportunities to align analyses with other regional efforts, including efforts by Groundwater Sustainability Agencies (GSAs) and the Regional Water Authority (RWA).
- Define Baseline
 - A baseline will be established for evaluating program effectiveness.
- Identify operational scenarios for evaluation.
 - To be informed by the outcomes from Subtask 3.1 (*Regional Water Purveyor Data Collection and Synthesis*), which the ARCAP Working Group will review.

Subtask 3.2 Deliverable: *ARCAP Data and Approach Summary Document*

Target Schedule for Completion: *Fall 2026*

Task 4: Technical Analyses

This task may include the following activities and will depend on the outcomes of Tasks 2 and 3, and ultimately, the extent of further analysis that is recommended by the working group and approved by the Plenary. The list below provides a preliminary outline of how the work may be organized, which will be refined by the working group.

- Identify hydrologic scenarios for evaluation.
 - It will be informed by relevant regional and statewide climate modeling and will be reviewed by the ARCAP Working Group.
- Identify and prepare tools.
 - Tools considered for further evaluation will include those capable of analyzing trends and conditions for surface water, groundwater, water temperatures, water distribution analyses, etc.
 - Selection of tools will be reviewed by the ARCAP Working Group.
- Conduct Analyses
 - Operational and hydrologic scenarios will be analyzed, and results will be reviewed and discussed with the ARCAP Working Group at various stages.

Deliverable: *ARCAP Technical Analysis Report(s)*

Schedule for Completion: *TBD*

Task 5: Trial Operations and Tracking

It is expected that opportunities may arise to implement certain ARCAP operation scenarios during the first two years of implementation, potentially while technical analyses are still pending. Within Water Forum 2050, it is acknowledged that sources for ARCAP Water will include existing sources and may include operations that are currently being conducted. The ARCAP will provide a mechanism to account for and track the outcomes of these regional activities. Based on the findings of Task 3 (*Regional Data Collection and Synthesis*), opportunities for early trial runs will be identified and considered by the ARCAP Working Group.

As trial runs are performed, individual reporting will be completed on the outcomes of the specific activities.

Deliverable: *Memo(s) reporting results of early trial runs*

Schedule for Completion: *TBD*

Task 6: Synthesis and Documentation

This task will involve synthesizing and documenting all ARCAP activities and analyses. Key reporting is listed below; other documentation may be identified after the first-year progress report.

Year One Documentation

- Year One Progress Report
 - Summarize all activities completed and outcomes for the first year
 - Identify areas for refinement for the second year

Year Two Documentation (tentative)

- Two-Year Report and Recommendations
 - Summarize all activities completed and outcomes
 - Recommend next steps and activities for the ARCAP program. These recommendations will be developed with the ARCAP Working Group.

Task 7: Engagement with Partners (ongoing)

Engagement with ARCAP partners will be ongoing during the entire two-year work plan. Engagement will include regular meetings, coordination, and strategic messaging based on the status of ARCAP activities and the specific partner. Engagement will be guided by input from the ARCAP Working Group. Expected ARCAP partners are listed in the ARCAP Agreement language.

SCHEDULE

Pending: To be added and will reflect the schedule described in the Tasks above after the WF2050 agreement is finalized.

YEAR ONE BUDGET

The budget below reflects the expected costs for the first-year activities of this work plan, including consultants (hours and estimated costs), and indicates the expected level of effort for Water Forum staff (hours and percentage of time for one full-time employee [FTE]). Note, year two costs will be developed as part of the Year One Progress Report.

ARCAP Workplan - Year One Budget

	WF Staff (1 FTE)		Consultants			
			Technical		Facilitation	
	Hours	% Time for Year One	Hours	\$	Hours	\$
Task 1: Water Forum Member Coordination	72	3.5%	90	\$27,000	84	\$21,000
Task 2: Refine and Focus ARCAP Questions	20	1.0%	5	\$1,500	10	\$2,500
Task 3: Regional Data Collection and Synthesis	150	7.2%	150	\$45,000	0	\$0
Task 4: Technical Analyses ^a	--	--	--	--	--	--
Task 5: Trial Operations and Tracking ^a	--	--	--	--	--	--
Task 6: Synthesis and Documentation	40	1.9%	15	\$4,500	0	\$0
Task 7: Engagement with Partners	50	2.4%	20	\$6,000	0	\$0
Total	332	16.0%	280	\$84,000	94	\$23,500

a. Task 4 and 5 are expected to be initiated in year two of ARCAP implementation and costs will be developed as specifics for the associated activities are refined

Appendix 3: Engagement with the US Bureau of Reclamation

The Water Forum's ongoing engagement with the U.S. Bureau of Reclamation (Reclamation) has been and will continue to be key to supporting the coequal objectives. The operations of Reclamation at Folsom Reservoir play a critical role in maintaining the health of the lower American River and ensuring the reliability of regional water supplies. By carefully managing water releases from Folsom Dam, Reclamation helps maintain flow conditions that support aquatic ecosystems, including the habitat needs of species like the Central Valley steelhead and Chinook salmon. These operations are also essential for balancing water supply demands for agricultural, municipal, and industrial use in the Sacramento region, especially during periods of drought or fluctuating hydrological conditions.

DESIRED OUTCOMES

The Water Forum will continue to engage and coordinate with Reclamation through various mechanisms and forums and will pursue the following outcomes in efforts to support both coequal objectives. The signatories' shared commitment to the stated outcomes will enhance the region's ability to adapt to and meet the challenges of climate change.

1. Implementation of the Flow Management Standard (FMS), reflective of the latest data, science, and understanding.
 - a. This includes all features of the FMS (storage targets, minimum flows, temperature protocols, etc.).
2. Reduce regional risks associated with critically low storage in Folsom Reservoir.
3. Leverage regional actions to support healthy conditions on the LAR and regional water supply reliability.
4. Representation of LAR interests in the development and sharing of best available data, science, and methods in regional and statewide collaborative planning and monitoring efforts.
5. Secure funding for habitat planning, implementation, and monitoring efforts on the LAR.
6. Improvements to infrastructure at Folsom and Nimbus dams necessary to support conditions on the LAR.
7. Balanced considerations for American River interests within broader CVP operations, and the regulatory processes to develop operational plans.

In pursuing these outcomes, Water Forum members will coordinate internally to ensure that messaging and communication are consistent and aligned with the interests of all four caucuses.

MECHANISMS FOR ENGAGEMENT

The list below provides an overview of current and planned mechanisms for engagement. This list is likely to change over time.

- Water Forum and Reclamation Memorandum of Understanding (MOU)
 - “*Coordination of Communication and Information-Sharing Activities Related to Lower American River Operations*”
 - Water Forum intends to work with Reclamation to maintain the current MOU and to seek opportunities to update the MOU as needed.
- American River Group (ARG)
 - Monthly meetings with stakeholders on the lower American River to discuss current conditions and planned operations.
 - Key participants include Reclamation, CDFW, NMFS, and Water Forum.
- Monthly cross-caucus meetings with Reclamation
 - Conversations scheduled prior to the ARG meetings provide an opportunity for members to have a more informal discussion with Reclamation.
 - Focused on real-time operations, management, constraints, and forecasts.
- Weekly staff meeting with WF and Reclamation
 - Staff hold weekly staff-to-staff meetings to check in on near-term items.
- Convening LAR Salmonid Habitat Agency Technical Advisory Committee (TAC)
- Participating in and supporting the Central Valley Program Improvement Act, Science Integration Team (CVPIA SIT)
 - Structured Decision-Making and Near-Term Restoration Strategy Guidance
- HR&L Program Participation and Collaboration
- Ongoing Data Sharing
 - Two-way sharing of data and information, including:
 - Latest forecasts
 - Conditions
 - Operations decisions
 - Modeling
 - Fisheries and physical conditions data
 - Utilization of accepted public data venues such as the EDI portal

Appendix 4: List of Temperature Management Projects and Programs

This will be a living document.

			Ways to Support Coequal Objectives Through Partnership			
Project/Idea	Type	Location	Advocacy or Coordination	WF Member Resources	WF Staff Time	Notes
Upgrade of Temperature Control Shutters	Project	Folsom Dam	x		x	35% design is complete, and funding is secured for the remaining design and implementation
Access cold water below the power penstocks	Idea	Folsom Dam				Elephant's Trunk, additional powerhouse on lower outlets, power bypass, etc.
Lake Natoma Temperature Curtain	Idea	Lake Natoma				link
Lake Natoma Shade	Idea	Lake Natoma				-
Lake Natoma Value Planning Study	Study	Lake Natoma		x	x	
Upstream Operations						
Geothermal river cooling						

Appendix 5: ARCH Program Planning Matrix

See the following page.

Appendix 5: ARCH Program Planning Matrix

				Water Forum Led Efforts Current Funding Mix (%)	
Category	Subcategory	Action/Idea	Other Opportunities "Outer Container"	Grants *	HME Operating Fund*
Habitat + Education	LAR Salmon Habitat	LAR Spawning and Rearing Program Build + Maintain**		99	1
Habitat + Education	LAR Salmon Habitat	LAR Rearing Site Planning (RM 0-23)		None	None
Habitat + Education	Parkway Multibenefits	New LAR tributary restoration projects: Carmichael Creek, Buffalo Creek (43)		None	None
Habitat + Education	Parkway Multibenefits	LAR Tributaries (ex. Cordova Creek – Phase 2 Design)		75	25
Habitat + Education	Parkway Multibenefits	LAR Tributaries (ex. Cordova Creek – Ph. 3 Permit + Construct)		None	None
Flows and Ops Decision-Support	Temperature	LAR Temperature Modeling. Conduct temperature Modeling, QA/QC, Temperature Management Plan Review, and support Cross-Caucus and ARG discussions (inform seasonal operational and power bypass)		85	15
Flows and Ops Decision-Support	Hydrologic Conditions	LAR FMS. Weekly review of river conditions, MRR calculations and forecasting; meetings with Reclamation, and Cross-Caucus to inform operations occur per our FMS.		0	100
Flows and Ops Decision-Support	Water Quality	Dissolved Oxygen Continuous Monitoring Pilot Study. Documenting/analyzing continuous DO concentrations below Nimbus Dam, and at Watt Avenue, which is the regulatory compliance point for LAR temperatures. This work will inform our understanding of diurnal and seasonal Cordova Creek temperature monitoring. Assists with project planning and baseline conditions understanding – a longer term dataset informs site understanding and illustrates commitment of Water Forum to defensible science when applying for next phase grant funds.		0	100
Science & Monitoring	Temperature			0	100
Science & Monitoring	Adaptive Management	Gravel Monitoring and Maintenance Plan/Tracking. Required by regulators for continued programmatic authorization of salmon habitat program site implementation (gravel projects)		100	0
Adaptive Management	Habitat	5-Year LiDAR/top/2D Model Update. Necessary to document change in the LAR bed and banks as a result of typical flows, high flows, and habitat projects. Understanding how the river changes over time informs future design.		100	0
Science & Monitoring	Adaptive Management	Aerial salmonid redd surveys. Measure Habitat Project Effectiveness, Adaptive Management and Project Planning. Understand effectiveness of project via salmon utilization and comparison of site utilization patterns over time. Expensive but more cost-effective than in-river surveys – covers LAR from Nimbus to confluence.		100	0
Science & Monitoring	Adaptive Management	In-river salmonid redd surveys. Understand effectiveness of project via salmon utilization. Required by granting agency for funded projects. Cost-prohibitive to conduct for whole river.		100	0
Science & Monitoring	Adaptive Management	Snorkel (juvenile) surveys. Understand effectiveness of project via salmon utilization. Required by granting agency for funded projects. Cost-prohibitive to conduct for whole river.		100	0
Science & Monitoring	Adaptive Management	Off-Channel rearing and Growth Study. Understand current extent/effectiveness and inform future need and spatial extent of rearing habitat.		98	2
Science & Monitoring	Adaptive Management	Emigrating Salmonid Habitat Estimation (ESHE) Model Update. Utilize results from Off-Channel rearing and Growth Study to inform future rearing habitat implementation		98	2
Science & Monitoring	Adaptive Management	Genetic Mark-Recapture Study. Understand and directly measure production of juvenile fish from habitat sites. Measure Habitat Project/Program Effectiveness Adaptive Management and Project Planning		98	2
Science & Monitoring	Adaptive Management	Otolith Salmonid Life History Study. Understand behavior and life history of naturally spawning Chinook in LAR and how different water year types influence out-migration timing.		98	2
Habitat + Science		Statewide Voluntary Agreements. Science Committee, Habitat Planning, Funding, Implementation, Tracking, Accounting and Science Plan Development. Ensure VA implementation and accounting leverages Water Forum's existing and planned program activities appropriately.		0	100
Habitat + Education	Upper Watershed	Forestry/Watershed health projects (13)	X		
Habitat + Education	Parkway Multibenefits	Improve Riparian Corridor (38a): Protect existing resources – flow/misuse of Parkway			

Appendix 5: ARCH Program Planning Matrix

				Water Forum Led Efforts Current Funding Mix (%)	
Category	Subcategory	Action/Idea	Other Opportunities "Outer Container"	Grants *	HME Operating Fund*
Habitat + Education	? Ask Leo Intent	Improve Riparian Corridor (38b): Increase?			
Habitat + Education	Partnership/Advocacy	Improve Riparian Corridor (38c): Support Regional Parks Natural Resource Management Plan - relevant areas to the HME. Concurrent with ongoing NRMP and Monitoring Plan Implementation TAC involvement.		None	None
Functional Flows	Habitat/Multibenefits	Identify needed Fundamental/Functional Flows (28)		None	None
Habitat + Education	LAR Salmon Habitat	Improve LAR Temperature Infrastructure and Management		None	None
Habitat + Education	LAR Salmon Habitat	Voluntary Agreements: Habitat Planning/Construction		0	100
Habitat + Education	Vegetation	Invasive Species Removal on LAR Parkway		None	None
Habitat + Education	Other Multibenefits	Cosumnes River Projects	X	None	None
Habitat + Education	Other Multibenefits	Sacramento River and Small Tributaries	X	None	None
Habitat + Education	Recreation	LAR Recreation (core HME programmatic element - no projects)		None	None
Habitat + Education	Education	Soil Born Farms K-12 Curriculum Support		None	None
Habitat + Education	Education	Effie Yeaw Nature Center Curriculum/Interpretive Signage		None	None
Habitat + Education	Education	Promotion of regional waterways and their unique qualities	X	None	None
Habitat + Education	Education	Education on the interconnection of local watersheds and groundwater basins	X	None	None
Habitat + Education	Education	Upper Watershed Forest Health Improvements and Advocacy	X	None	None
Habitat + Education	Education	Regenerative and/or Water-Efficient Landscaping	X	50	50
Habitat + Education	Parkway Multibenefits	Bushy Lake Restoration (Ecocultural/Western pond turtle)		None	None
Science & Monitoring	Tracking/Reporting	State of the River Report		0	100
Science & Monitoring	Potential Need	Monitoring for Additional Species and/or Parameters	X	None	None
Habitat + Education	Partnership/Advocacy	Lower American River Task Force		0	100
Habitat + Education	Partnership/Advocacy	American River Group		0	100
Science & Monitoring	Tracking/Reporting	FISH Plan Updates	X	None	None
Habitat + Education	Partnership	Mitigation Coordination American River Common Features (SAFCA/USACE)		None	None
Habitat + Education	LAR Salmon Habitat	Support local funding for spawning and rearing areas in the LAR (46)			
Hatchery	Advocacy	Nimbus Fish Hatchery Management and Operations	X	None	None
Hatchery	Advocacy	Nimbus Hatchery genetics/measurement. Increased survival of salmonids (40)	X		
Hatchery	Advocacy	Improve survival rate of hatchery releases (timing and location of releases) (56)	X		
Hatchery	Advocacy	Support the creation of a WF team to evaluate the operation of the Nimbus Hatchery to better support the genetics of river-spawning salmonids and to improve the survival skills of hatchery-raised salmonids. (62)	X		
Habitat + Education	Upper Watershed	Introduce Salmon above Folsom (47)	X		
Science & Monitoring	Tracking/Reporting	Coequal objectives with metrics specific to LAR (39)			
Habitat	Vegetation	Management/Removal of hydrophilic vegetation along the LAR (Spanish Broom, Yellow Star Thistle, Giant Reed (Arundo donax)		100	0
Habitat	Vegetation	Plant pollinator habitat vegetation on electrical right of ways within the LAR			
Recreation	Flows	Provide for recreational (rafting flows) during the period of most use.			
Recreation		Provide (through donations or outright purchase) webbed garbage bags for each raft			
Recreation	Trails	Provide support to Sac County for recreational trail management; specifically restoration of social trails along the LAR.			
Habitat	Fishery	Identify locations off, and fill in side channel stranding pools.			
Flows and Ops	Temperature	Identify use, management and efficiency of EID Temperature Control Device			
Flows and Ops	Temperature	Identify use, management and efficiency of San Juan/Roseville Temperature Control Device located at their water supply intake.			

Appendix 6: Declaration of Full Appropriation

The WF2050 negotiations included the formation of a subgroup tasked with the review, assessment, and discussion of commitments made in the original Water Forum Agreement related to the existing declaration of full appropriation on the Lower American River. Based on the review and discussion, the subgroup is not recommending the Water Forum pursue an amendment to the Declaration of Full Appropriation (DOFA) in Water Forum Agreement 2050. The explanation follows:

Fully appropriated stream systems are those where there is insufficient supply for new water right applications, either during certain months or conditions, or all year long. The program is administered by the State Water Resources Control Board (SWRCB). SWRCB, which administers major parts of California's water rights system, does not accept applications for new water rights on fully appropriated streams, except in certain specified circumstances.⁶³

The subgroup confirms their understanding that the American River's current status as a fully appropriated stream helps reduce potential new competition for scarce water supplies to the benefit of existing rights holders and water users, as well as public trust watershed resources. The status is therefore a positive one.

The subgroup notes that the SWRCB does not administer the fully appropriated streams program to affect existing water rights and contracts, or applications for assignment of state filings or for rights under the state's Area of Origin protections such as might be made by one or more of the Water Forum 2050 negotiation participants, as provided for by SWRCB orders.⁶⁴

In the SWRCB's administration of its fully appropriated streams system and its responsibilities under the California Wild & Scenic Rivers Act and realities of the National Wild & Scenic Rivers Act designations in California, SWRCB has issued orders that state or federal wild & scenic river designations result in twelve-month declarations of full appropriations on the designated reaches. SWRCB orders also state that any declaration that a stream system is fully appropriated encompasses all upstream sources that contribute to the stream system if such upstream sources are hydraulically continuous to the stream system.

Thus, the existence of insufficient unappropriated supply at times in the American River watershed and the wild & scenic river status of the lower American River is expected to constrain the acceptance and processing of new water right applications outside of the specified exceptions.

Thus, the subgroup sees little utility in recommending that amendments to the existing declarations of full appropriations be sought in Water Forum 2050.

⁶³ https://www.waterboards.ca.gov/waterrights/water_issues/programs/fully_appropriated_streams.

⁶⁴ SWRCB Order WR 98-08 (in response to a petition to reconsider Order WR 89-25, the SWRCB adopted Order WR 90-2 on February 15, 1990. Order WR 90-2 modified and affirmed Order WR 89-25 as modified).

Appendix 7: Bridge to the Regional Groundwater Sustainability Agencies and Water Forum 2050

The purpose of this appendix to the Water Forum Agreement is to address the relationship between groundwater management entities and the Water Forum Agreement. The Water Forum Agreement, initially signed in 2000 and revised in 2015, includes a Groundwater Management Element (GME).

In 2014, the State of California passed the Sustainable Groundwater Management Act (SGMA), which created the foundation for the sustainable management of the state's groundwater basins/subbasins. Under SGMA, to avoid potential state intervention and state control of groundwater, local agencies can signal to the State their intention to form as Groundwater Sustainability Agencies (GSA) to locally manage groundwater within each subbasin. As required in SGMA and newly completed regulations, GSAs prepared, adopted, and began implementing Groundwater Sustainability Plans (GSPs) within subbasins throughout the state.

In the Sacramento County portion of the North American subbasin, the Sacramento Groundwater Authority (SGA) serves as the GSA governed by a joint powers agreement (JPA). SGA works collaboratively with four other GSAs in the subbasin to implement the North American Subbasin GSP.

In the South American subbasin, there are currently seven GSAs working collaboratively to implement the South American Subbasin GSP. The largest GSA in the basin is the Sacramento Central Groundwater Authority or SCGA, which is governed by a JPA, and whose members are largely signatories to the Water Forum Agreement.

The Cosumnes subbasin includes seven GSAs and is governed by the Cosumnes Groundwater Authority (CGA). The CGA serves as the coordinating body for the Cosumnes subbasin GSAs, facilitating communication, data sharing, and the implementation of projects and management actions.

Because SGMA now defines the sustainability metrics of groundwater through the adopted GSPs, the sustainable yield listed in the original Water Forum Agreement is now obsolete. Also, because groundwater management in the three regional subbasins now includes parties that are not signatories to Water Forum 2050, it is important to define the intersection between regional groundwater management and the Water Forum.

The signatories to the Water Forum who are also members of the SGA JPA and the SCGA JPA recognize the shared goal of managing groundwater resources in Sacramento sustainably.

The signatories also recognize the importance of transparent governance and the sharing of information related to groundwater management.

The signatories remain committed to conjunctive use as defined in the original Water Forum Agreement as the balanced use of groundwater and surface water. Conjunctive use prioritizes the use of surface water during wet times and prioritizes groundwater during dry times. The signatories agree that the Sacramento Regional Water Bank will help expand and formalize the practice of conjunctive use.

Appendix 8: WSS Demand Management Actions

Acknowledging that each Water Forum purveyor must consider the timing and level of effort required for each potential demand management action in relation to their opportunities and constraints, the list below is provided as a reference for consideration and is not intended to be any form of a mandate. The ability of each purveyor to identify the most effective demand management actions for their respective service area will be critical as the region endeavors to support the coequal objectives while meeting relevant targets and standards.

1. Create and implement policies and programs that convert publicly owned, commercial, and institutional landscaping to low-water use native landscaping that supports native pollinator, insect, bird, and animal species.
2. Implement staggered outdoor irrigation schedules for twice a week during summer (e.g., based upon a last digit of street address) for residential customers, and one day a week for commercial customers.
 - a. Note: An exception would be needed for newly planted vegetation that requires additional water for healthy root development.
3. Expand and strengthen regional conservation messaging to amplify information about plant watering needs; encourage no irrigation during the cooler, wetter winter months and, in dry winters, significantly reduced irrigation due to lower transpiration rates during the non-growing season.
4. Provide rebates to all customers for indoor and outdoor WaterSense labelled products.
5. Implement programs to identify water users that are using excessive amounts of water (well above the mandated objectives) and support those users in reducing excessive use through education and access to resources (i.e., rebates), as available.
6. Implement water rate structures to promote equity and encourage water conservation (tiered, decoupled, others).
7. Implement leak detection, notification and enforcement.
8. Strengthen and expand regional program(s) that retrofit rental and low-income housing with water efficient devices and landscaping.
9. Expand and strengthen landscape conversion education and incentive programs and emphasize low-water use native plants (which require less summer water and support native pollinator, insect, bird and animal species), and improvements to irrigation practices and systems which increase water-use efficiency.
10. Maintain and strengthen active water waste prevention programs, including public messaging and intervention steps when waste is observed physically or through meter data (i.e., leak alert programs, water waste hotlines).
11. Create messaging and other information programs to positively promote and support customer efforts to help suppliers implement state requirements.
12. Encourage the use of demand management measures such as reuse, gray-water, recycling, and rainwater-harvesting.
13. Establish and support programs targeting implementation of the Commercial, Industrial, and Institutional (CII) Best Management Practices (BMPs).

Appendix 9: Metrics and Reporting Development and Tables

See the following page.

Metrics and Reporting Development and Tables

This appendix provides summary tables of the data and documentation metrics used in the Water Forum metrics and reporting program element, and their respective categories and relevant program areas. The summary tables include the ARFO, ARCH, WSS, and GFA program areas. Metrics related to ARCAP will be developed as the program is launched and the members identify specific to metrics for long-term tracking and reporting. Contextual data are not featured in this appendix. That data is informative in terms of the status of the coequal objectives but is not necessarily indicative of the success of the Water Forum's activities. A figure and description of steps taken to develop the Water Forum Metrics and Reporting framework are identified in the figure below.



Figure 9.A. Steps taken for development of Metrics and Reporting framework

Each step is elaborated in detail as follows:

1. **Review of Guiding Principles and Available Data:** Guiding principles were reviewed along with available data and information, including existing data reporting mechanisms, to identify potential metrics applicable for each principle.
2. **Determine Type of Metrics:** An explanation was documented of whether these metrics were quantifiable data, or more qualitative and descriptive in nature (see the Types of Metrics explanation below).
3. **Identify Overlaps and Efficiencies:** Metrics were reviewed to determine potential overlaps, whereby a given metric could be tracked that demonstrates progress in supporting more than one Guiding Principle. These overlaps can also provide opportunities for efficiencies in reporting by reducing the overall total number of metrics that are tracked and reported.
4. **Identify Reporting Mechanism:** A potential form of reporting (e.g., Annual Report, Water Forum 2050 Five-Year Status Report, reporting during a standing meeting [Caucus, Plenary]) was identified for each metric. This step leveraged existing forms of reporting and existing venues for Water Forum member and staff engagement, rather than creating additional meetings. Similarly, this step supports providing progress updates that inform standing meetings and existing reporting processes and documentation.
5. **Map Reporting Schedule:** Metrics were reviewed to create an overall reporting and member engagement timeline that could be pursued within a given year to regularly communicate progress made in supporting the coequal objectives and implementing guiding principles.

Appendix 9: Metrics and Reporting

Category	Documentation Metric Description	Coequal Objectives	WF2050 Principles				Reporting Mechanism			
			ARFO	ARCH	WSS	GFA	Website	Annual Report	Meeting	5-Year Status Report
Water Quality	Nov-Feb river temperatures relative to upper tolerable thresholds for both species	X	X				✓	✓		✓
Water Quality	Mar-Oct river temperatures relative to upper tolerable thresholds for both species (where applicable)	X	X				✓	✓		✓
Water Quality	Maximum weekly average temperature (MWAT), and temperature on Nov 1. To be presented relative to peak spring/summer storage.	X	X					✓		✓
Water Quality	Dissolved Oxygen	X	X	X			✓		✓	
Storage	Storage in Folsom reservoir: annual minimum, end-of-May, and end-of-December	X	X	X	X		✓	✓		✓
Storage	Coldwater volume in Folsom Reservoir on October 15th	X	X	X			✓	✓		✓
Habitat	Nov-Feb 90% exceedance flows provide access to X% of available spawning habitat	X	X	X						✓

Appendix 9: Metrics and Reporting

Category	Documentation Metric Description	Coequal Objectives	WF2050 Principles				Reporting Mechanism			
			ARFO	ARCH	WSS	GFA	Website	Annual Report	Meeting	5-Year Status Report
Habitat	Mar-Oct flows provide access to X% of available rearing habitat	X	X	X						✓
Habitat	Number of salmonid habitat projects implemented and documentation of their total acreage and effectiveness through utilization monitoring and sharing of data.	X		X			✓	✓		✓
Habitat	Number (and acreage) of "non-salmonid" natural resource projects implemented and documentation of their utility/ effectiveness through relevant monitoring and sharing of data.	X		X			✓	✓		✓
Water Supply	Synthesis and reporting of GSP data: change in storage, sustainable yield, GW levels, GW extraction, etc..	X			X		✓	✓	✓	✓
Water Supply	Summarize and compare SW and data and information and evaluate for trends relative to hydrologic conditions	X			X		✓	✓		✓
Water Supply	Synthesis of key demand management data from existing reporting (to be summarized by region and on a purveyor basis): actual annual and monthly demands, projected annual demands, and status of meeting relevant regulations.	X			X	X	✓	✓		✓

Appendix 9: Metrics and Reporting

Category	Documentation Metric Description	Coequal Objectives	WF2050 Principles				Reporting Mechanism			
			ARFO	ARCH	WSS	GFA	Website	Annual Report	Meeting	5-Year Status Report
Water Supply	Summary of water supply data summarized by purveyor and region	X			X	X	✓	✓		✓
Water Supply	Annual and seasonal quantification of diversions from the American River	X			X		✓	✓		✓
Funding	Total funding from local, state, and federal grant entities leveraged with operating funds in support of a program area.	X	X	X	X	X		✓		✓
Other	Records of participation in Plenary and Caucus meetings	X				X		✓		
Other	Unimpaired Inflows to Folsom Reservoir (Mar-Oct)	X					✓	✓		✓
Other	Number of individuals/organizations reached (e.g., contacted or content read)	X	X	X	X	X		✓		✓
Other	Number of individuals engaged (e.g., provided input, feedback, responded to requests for information or actively participated in activities).	X	X	X	X	X		✓		
Other	Member Survey to understand perspectives on effective implementation of mutual gains approach, collaborative participation, and leadership among members and WF staff.	X				X				✓

Appendix 9: Metrics and Reporting Table

Category	Documentation Metric Description	Coequal Objectives	WFA Principles				Reporting Mechanism				
			ARFO	ARCH	WSS	GFA	Project Reporting	Website	Annual Report	Meeting(s)	5-Year Status Report/Symposia
Accountability	FMS documentation will clearly communicate flow benefits above MRRs, with quantifications where possible.	X	X				✓				
Accountability	FMS documentation will clearly communicate the importance of DO for river health, with quantifications where possible.	X	X	X			✓				
Accountability	Enumerating and documenting the outcome of meetings attended, briefings held, any beneficial legislative or regulatory outcomes resulting from WF efforts related to advocacy to support WF efforts on the LAR.	X	X	X	X	X			✓		✓
Accountability	Provide a summary of the tools, data, and assumptions used for GW evaluations within the SaSB, NaSB, and CSB.	X			X						✓
Accountability	Documentation of implemented and planned demand management programs and projects (summarized by region and on a purveyor basis).	X			X						✓
Accountability	Maintain documentation on ongoing strategies and outcomes for engagement with Reclamation.	X	X	X	X	X	✓				
Accountability	Document agreed to messages related to water conservation in dry times.	X			X		✓				
Accountability	Document when conferences are convened and include enumeration of meetings conducted.	X			X				✓		
Benefits	FMS includes evaluation of expected impacts/benefits to water quality, flows, habitat availability, and frequency of critically low storage relative to identified thresholds.	X	X	X			✓				
Benefits	Annual project/program tracking and reporting related to opportunities for enhanced operational flexibility within the American River watershed.	X	X	X	X				✓		

Appendix 9: Metrics and Reporting Table

Category	Documentation Metric Description	Coequal Objectives	WFA Principles				Reporting Mechanism				
			ARFO	ARCH	WSS	GFA	Project Reporting	Website	Annual Report	Meeting(s)	5-Year Status Report/Symposia
Benefits	Annual project/program tracking and reporting related to operational and infrastructure improvements for temperature and other water quality issues within the American River watershed.	X	X	X					✓		
Benefits	Annual project/program tracking and reporting related to opportunities for study and implementation and utilization of collected data in LAR-specific and regional/statewide decision support.	X		X					✓		✓
Benefits	Number of targeted public outreach and education activities focused on building support for WF programs and activities and sharing out the results of WF efforts on the LAR and the contribution made to broader regional or statewide goals or best available science.	X		X		X			✓		✓
Benefits	Enumerating and documenting the outcome of meetings attended, briefings held, any beneficial legislative or regulatory outcomes resulting from WF collaboration with partners.	X	X	X	X	X			✓		
Benefits	Document project monitoring and evaluation results for corridor health, can include: physical and fisheries monitoring of project sites based upon established protocols and other river science, monitoring and project and special studies results.	x		x			✓		✓		✓
Partnership	Host annual meeting with regional GSAs to present and discuss GSP status and contents of Annual Reports.	X			X					✓	
Partnership	Host annual meeting to review data and discuss trends related to regional water use and current regulations	X			X					✓	

Appendix 9: Metrics and Reporting Table

Category	Documentation Metric Description	Coequal Objectives	WFA Principles				Reporting Mechanism				
			ARFO	ARCH	WSS	GFA	Project Reporting	Website	Annual Report	Meeting(s)	5-Year Status Report/Symposia
Partnership	Annual learning and engagement sessions will be planned and topics will include all aspects of Water Forum work, and will include communities outside of the signatories (as relevant).	X				X				✓	
Process & Structure	FMS includes features for establishing storage targets/requirements for early-summer and end-of-year	X	X				✓				
Process & Structure	FMS includes evaluation of expected impacts of FMS features on out of basin users	X	X				✓				
Process & Structure	FMS features, specifically storage and flow prescription's, are not in conflict with flood rules and operations	X	X				✓				
Process & Structure	Qualitative description and reporting of scientific data and methodology/methods advocated for and used, decisions made, overview of progress in monitoring and reporting processes.	X		X					✓		✓

Appendix 10: Water Forum and Department of Utilities MOU

See the following page.

**Memorandum of Understanding for
Financial Services Provided to the
City County Office of Metropolitan Water Planning
(also known as the Water Forum)**

The following are terms of mutual understanding of responsibilities between the Department of Utilities (DOU) and the City County Office of Metropolitan Water Planning (CCOWMP) as it relates to financial services for the CCOMWP. All parties have collaborated on the contents of this document and have agreed to follow this agreement. The terms of the memorandum will be reviewed on an annual basis to ensure the language is accurate and consistent with current operations. The Executive Director of the CCOMWP reports jointly to the City and County with the primary oversight provide by the Director of Utilities. However, neither DOU nor the CCOMWP is a separate legal entity. Therefore, this MOU does not legally bind the City of Sacramento, the City Council, the City Manager, or the City Manager’s designee regarding any future conduct of either DOU or the CCOMWP.

The signatures below indicate the understanding by DOU and the CCOMWP to abide by the following terms and conditions of this document.


Pravani Vandeyar (Mar 6, 2025 20:50 PST)
Pravani Vandeyar, Director
Department of Utilities


Ashlee Casey (Mar 7, 2025 11:38 PST)
Ashlee Casey Interim Executive Director
City County Office of Metropolitan Water
Planning

The CCOMWP Financial Goal Statement: Provide accurate financial reporting in accordance with the annual adopted budget that optimizes the use of financial resources and provides fiscal transparency.

Purpose for Services: DOU and the CCOMWP have agreed to enter into this interdepartmental services agreement for financial oversight provided by DOU to the CCOWMP for accurate financial reporting and fiscal transparency. The CCOMWP will dedicate one Administrative Analyst (position number 00042742) to DOU for these purposes. The assigned CCOMWP Administrative Analyst (position number 00042257) and Senior Staff Assistant will be the primary points of contact for the CCOMWP. DOU Fiscal Operations team members will provide support depending on the expertise needed to accomplish the individual tasks, in an effort to reduce funding impacts on the CCOMWP’s annual budget. The DOU assigned CCOMWP Administrative Analyst (position number 00042742) will provide support to DOU to help offset costs to the CCOMWP. DOU will pay 90% and CCOMWP will pay 10% of the leave hours associated with this position.

Overview of DOU Services Provided: DOU Fiscal Operations Team will provide financial oversight, including the City annual budget and yearend deliverables, assist with accurate

financial reporting, and day-to-day fiscal oversight including all financial eCAPS approvals. DOU will also provide the following services:

Financial Services

Review, approve and provide assistance as needed with the preparation of the annual City budget deliverables for the CCOMWP, including, but not limited to, augmentations, net-zero adjustments, position moves, budget adjustments (including revenue, operating, and transfer adjustments), non-budgeted position report, fund analysis, five-year forecast, and Hyperion entry.

- Review, approve, and provide assistance as needed with the preparation of yearend deliverables as provided by Central Accounting for the CCOMWP. Including but not limited to coordinating project closures, grant roll forward reporting, grant compliance, reclassifying expenses as needed, review and report uncollected revenues, fixing overspent projects, p-card reconciliation, voucher payments, and preparation and/or approval of accounting journals and budget journals as needed for yearend closeout.
- Review and approve day-to-day, quarterly, and annual financial tasks as required for the adopted budget, including but not limited to quarterly projections, interfund reimbursements, accounting journals, revenue invoicing in eCAPS (grant billings and annual water purveyors), monitor doubtful accounts, etc.
- Review and approve budget journals, project requests, project closures, and status changes prepared by CCOMWP staff.
- Approve requisitions and payment vouchers in eCAPS to ensure accuracy, such as the correct budget lines, program codes/projects, sales tax, use tax, etc.
- Review and approve all grant billing packages, including all granting agency's required backup for invoicing requirements, and invoice processing in eCAPS. Grant billing should be completed on a regular basis and wherever possible in the same fiscal year as the expense occurred.
- Review and approve all training and travel requests in eCAPS and the Supervising Financial Analyst will approve in K2 prior to the DOU Director.
- Review and approve all council reports, including approval in Legistar.
- Other financial activities as needed and mutually agreed upon.

CCOMWP Deliverables: The CCOMWP will be responsible for the following tasks:

- Prepare and provide annual City budget deliverables including, but not limited to, augmentations, net-zero adjustments, position moves, budget adjustments (including revenue, operating, and transfer adjustments), non-budgeted position

MEMORANDUM OF UNDERSTANDING FOR FINANCIAL OVERSIGHT

report, fund analysis, five-year forecast, and Hyperion entry. The budget should align with the approved budget as presented to the Plenary and approved by the Executive Director.

- Prepare and provide yearend deliverables documents such as project closures, grant billing accuracy and compliance, support for uncollected revenue, preparing p-card reconciliations, and budget journals.
- Prepare and provide day-to-day, quarterly, and annual financial tasks as required for the adopted budget, including but not limited to quarterly projections, interfund reimbursements, accounting journals, revenue invoicing in eCAPS (grant billings and annual water purveyors), monitor doubtful accounts, etc.
- Prepare and input budget journals, new project requests, project closures, and project status changes in eCAPS for DOU approval.
- Obtain, negotiate, review all documentation from outside parties for contracts, change requests, and requisition requests.
- Provide travel and training documentation for processing.
- Executive Director or Designee will approve all requisitions, travel, and invoices in K2 for approval in eCAPS by DOU.
- Program Manager/Senior Engineer will lead the processes for requests for proposals, requests for qualifications, and contracts.
- Other support for financial activities as needed and mutually agreed upon.

Funding: The CCOWMP is responsible for funding the financial oversight provided by DOU and will provide one Administrative Analyst position (position number 00042742) to DOU through this MOU. This position will report to the DOU Supervising Financial Analyst and will be located in DOU (1395 35th Avenue, Sacramento, CA 95822). The costs associated with this position is included in the CCOWMP's annual budget.

The DOU Fiscal Operations Team will provide overall financial oversight with a team that includes one Supervising Financial Analyst, one Senior Accountant Auditor, one Program Specialist, one Accountant Auditor, four Administrative Analysts (including one CCOWMP Analysts), one Administrative Technician, and two Accounting Technicians. This support will be paid at actual cost with no markup through an annual interfund transfer based on actual costs charged to Program Code 14B03. DOU will complete an annual review of time spent supporting the CCOWMP and prepare an interfund transfer that will charge or reimburse the CCOWMP based on position costs minus actual costs charged. Utilizing the Fiscal Operations Team to support the CCOWMP allows DOU to assign tasks to all levels, which will minimize costs.

MEMORANDUM OF UNDERSTANDING FOR FINANCIAL OVERSIGHT

Insurance: During the term of this agreement the CCOWMP shall maintain a policy of commercial general liability insurance in the amount of not less than \$1,000,000 per occurrence. The policy shall include products and completed operations coverage and the City of Sacramento shall be covered by endorsement or policy terms as additional insured.

Appendix 11: Five- and One-Year Water Forum Budget

See the following page.

Water Forum Budget Projection Summary

Fiscal Year 2025/26 - 2029/30

	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
	Adopted	Proposed	Proposed	Proposed	Proposed	Proposed
Fund 7103 - Water Forum Successor Effort	1,393,949	1,050,519	1,029,021	1,062,956	1,099,060	1,133,266
Fund 7104 - Habitat Management Element	940,286	922,621	1,070,163	1,047,620	1,093,275	1,153,975
Total Revenue Need	2,334,235	1,973,140	2,099,183	2,110,576	2,192,334	2,287,241

Note: FY25 is for informational purposes only and includes the Water Forum 2.0 funding.

Water Forum Budget Projection Summary

	FY 25 Adopted	FY 26 Proposed
Fund 7103 - Water Forum Successor Effort	1,393,949	1,050,519
Fund 7104 - Habitat Management Element	940,286	922,621
Total Revenue Need	2,334,235	1,973,140

**Water Forum Successor Effort (WFSE)
Fund 7103 FY26
Projected Costs**

	Account Codes	FY 25 Adopted	FY 26 Proposed ⁽⁴⁾
Staff / Labor and Benefits		1,165,126	1,172,520
Permanent staff ⁽¹⁾		1,165,126	1,082,724
Employee services contingency	413240		89,796
Operating Services and Supplies		122,516	153,536
Office and Supplies		75,131	109,006
Leased office space	444010	58,451	53,538
Office Parking spaces	444010	4,680	4,860
Postage	461010	200	207
Printing and Binding	455010	900	932
Office Supplies	461020	2,000	2,070
Rental of Equipment (photocopier)	444020	900	932
Food Program	463010	6,500	6,500
Security Services	434030	1,500	1,148
Insurance	452010	0	38,820
Travel and Training		19,385	19,773
Training/Conferences	432010	12,735	12,990
Transportation	458010	1,900	1,938
Meals	458020	925	944
Lodging	458030	2,850	2,907
Other Travel Expenses	458030	975	995
Information Technology		24,000	20,617
Telecommunications		12,000	8,257
Cellular Telephone	453020	2,000	506
Communication Lines	453030	10,000	7,751
Equipment and Software		12,000	12,360
Computer Software	461210	5,500	5,665
Computer Equipment	474410	5,000	5,150
Computer Software Maintenance	443050	1,500	1,545
Human Resources (recruitment, memberships)		4,000	4,140
Subscriptions And Publications	464020	1,000	1,035
Memberships and Sponsorships	481150	3,000	3,105
City of Sacramento/HME - Shared Resources Costs		(546,753)	(493,037)
Accounting ⁽²⁾		39,000	0
Legal		9,533	9,628
Citywide Cost Plan ⁽²⁾		0	52,250
DOU Fiscal & Admin Services (Reimbursement)/Charge		(100,000)	(103,700)
HME Cost Share Reimbursement		(495,286)	(451,215)
Consulting Services for General Operations		653,060	191,000
Communications and Outreach	433060	50,000	56,000
Facilitation Support	433060	0	70,000
Grant Support	433030	0	30,000
Legal	433020	5,000	25,000
Website and SharePoint	433060	30,000	10,000
Water Forum 2.0 MYOP		568,060	
Total Expenses		1,393,949	1,024,019
Operating Reserve Needs⁽³⁾		-	26,500
Total Revenue Need		1,393,949	1,050,519

Notes:

1) There are no assumptions for additional staff; however, if the Water Forum is successful in obtaining substantial grant funding, an augmentation could be needed in the future.

2) The Accounting budgeted transfer will be deleted in FY26 when the Citywide Cost Plan charges are implemented. The City of Sacramento has covered the Citywide Costs in error since WF inception. The Citywide Cost Plan includes all citywide shared services including but not limited to Finance, Human Resources, City Council, City Clerk, Information Technology, etc.

3) The Operating Reserve will be funded over the first five years of the new agreement to minimize funding impacts to purveyors and to maintain at least \$100,000 in available fund balance for unplanned needs. The Operating Reserve excludes costs associated with operating programs. In the event of full revenue loss, programs will be suspended until revenues are available.

4) FY26 Final includes the adjustments for the final position budgeting report, updated liability insurance premium, final adjustments to COS cost share, final adjustments to citywide cost plan, and misc. IT adjustments. Savings will be added to professional services that will later be applied to employee services to support possible overages for Executive Director or Senior Engineer when either position is filled at a higher total compensation rate.

**Water Forum Habitat Management Element (HME) Fund 7104 FY26
Projected Costs**

	FY 25 Adopted	FY 26 Proposed
City of Sacramento/WFSE - Shared Resources Costs	495,286	451,215
WFSE Cost Share Reimbursement	495,286	451,215
Consulting Services for Core Programs	445,000	591,406
Grant Support	30,000	76,406
River Corridor Health - Habitat Enhancement Projects	150,000	-
River Corridor Health - Required Monitoring and Decision Support	95,000	120,000
State of the River - Metrics Reporting and Data Informatics/Visualization	-	150,000
River Corridor Health Program - Technical Support	-	110,000
Flows and Operations - Technical Expertise	170,000	135,000
Total Expenses	940,286	1,042,621
Grant Reserve Funds	491,000	296,000
Grant Reserve Annual Allocation	-	18,500
River Corridor Health - Science and Monitoring	-	(120,000)
Grant Match for USBR WaterSMART Grant (\$650,000)	(195,000)	-
Remaining Grant Reserve	296,000	194,500
Total Revenue Needs	940,286	922,621

Water Forum Successor Effort (WFSE - 7103)
Fund 7103 FY26 - FY30
WFSE (7103 Fund) Projected Fund Balance and Reserve Needs

	FY25	FY 26	FY 27	Projected		
				FY 28	FY 29	FY 30
Fund Balance & Reserves						
Beginning Fund Balance⁽¹⁾	285,000	275,000	100,000	100,000	100,000	100,000
Fund Balance Changes ⁽²⁾	(10,000)	26,500	26,500	26,500	26,500	23,258
Emergency Operating Reserve Balance ⁽³⁾	-	(201,500)	(26,500)	(26,500)	(26,500)	(23,258)
Ending Fund Balance	275,000	100,000	100,000	100,000	100,000	100,000
Operating Reserve Balance		201,500	228,000	254,500	281,000	304,258

Notes:

1) FY24 Yearend Actuals have not been audited. The ending fund balance for FY24 and beginning fund balance for FY25 are subject to change until the Annual Comprehensive Financial Report (ACFR) is released in January 2025.

2) FY25 Fund Balance usage is estimated at \$10K for the University Enterprises contract that was not fully spent in FY24. Future years will be used to fund the Emergency Operating Reserve for WFSE operating costs only.

3) The Emergency Operating Reserve will be funded over the first five years to minimize funding impacts to purveyors. Initial funding comes from remaining WFSE fund balance (7103). In the event of full revenue loss, programs will be suspended until revenues are available. The Reserve will be available for emergencies and will cover 120-day of operating costs, and excludes costs associated with consulting services for general operations and core programs. In addition, the Water Forum will maintain at least \$100,000 in available fund balance for unplanned needs.

Water Forum FY26 - FY30

HME (7104 Fund) Projected Fund Balance and Reserve Needs

	Projected					
	FY25	FY 26	FY 27	FY 28	FY 29	FY 30
Fund Balance & Reserves						
Beginning Fund Balance⁽¹⁾	541,000	50,000	50,000	50,000	50,000	50,000
Fund Balance Changes ⁽²⁾	(491,000)	18,500	18,500	18,500	18,500	-
Transfers to Grant Reserve	-	(18,500)	(18,500)	(18,500)	(18,500)	-
Ending Fund Balance	50,000	50,000	50,000	50,000	50,000	50,000
Grant Fund Reduction for Projects/Matches	(195,000)	(120,000)	-	-	-	-
Grant Reserve Balance	296,000	\$ 194,500	\$ 213,000	\$ 231,500	\$ 250,000	\$ 250,000

Notes:

1) FY24 Yearend Actuals have not been audited. The ending fund balance for FY24 and beginning fund balance for FY25 are subject to change until the Annual Comprehensive Financial Report (ACFR) is released in January 2026.

2) Water Forum will create a grant reserve at the end of FY25 to ensure funding availability to pursue grants by using all but \$50,000 of the remaining HME fund balance (7104). There is a need of \$195,000 for a grant match in FY25 and grant related operating expenses of \$120,000. If grant reserves are used in any given Fiscal Year, the reserve will be replenished to \$250,000 over the next five years to limit the impacts on contributors. HME funding was contributed by the County of Sacramento Zone 13 and the City of Sacramento. Funding from the grant match will be used to fund grant related HME efforts only.

Appendix 12: Cost Allocation Methodology Description

During negotiations, it was determined that a new cost allocation methodology would be necessary to fund the work of the Water Forum, commencing in Fiscal Year 2025-2026 (FY26). Previously, funding for multiple agencies was derived from assessments through the Sacramento County Water Agency (SCWA) Zone 13. However, Zone 13 was established 38 years prior without an inflation adjustment, and its revenue has remained static while the Water Forum's budget grew annually to accommodate inflation. As a result, contributions from Zone 13 towards the Water Forum's work became unsustainable. Zone 13 funds historically comprised nearly 50% of the Water Forum's annual budget.

Over several months, water agencies and other funders explored several new funding models to distribute the Water Forum costs equitably. In November 2024, stakeholders agreed on an approach involving proportional cost allocations based on agency connection counts, five-year average groundwater production, and a five-year average of American River diversions. Each dataset is weighted relative to the benefits derived from Water Forum participation (**as summarized in Table 1 below**).

Specific adjustments were made for the agencies summarized below to fully capture the unique benefits and opportunities derived from Water Forum membership and participation:

EBMUD: EBMUD's data was adjusted for the cost allocation calculation to reflect unique characteristics of its service area and water usage relative to the Water Forum. The adjustment was made based on the following factors:

1. EBMUD's service area lies entirely outside the Sacramento region.
2. EBMUD uses water from the American River only as a dry-year supply and does not rely on groundwater from the Sacramento regional groundwater basins.
3. The American River water used by EBMUD flows through the lower American River (LAR) before being diverted at the Freeport intake.

To account for these considerations, EBMUD's connection count was adjusted to reflect the proportion of its service area supplied with American River water on an annual basis, using a five-year average.

PCWA: PCWA's water collection and distribution system is complex, relying on multiple sources and diversion points for its surface water supply. PCWA is also both a wholesaler and a retailer of both treated and untreated water from these multiple sources. For the purposes of the Water Forum cost allocation calculations, only the volume of American River water that is diverted and used within PCWA's own retail service area, treated and untreated, is included. PCWA water diverted by or on behalf of its wholesale customers is excluded from PCWA's cost calculations

Golden State: An adjustment was made to GSWC’s data within the Water Forum cost allocation model to account for its unique water supplies and operations. GSWC uses treated groundwater that is discharged into the American River and later diverted at the Carmichael Water District’s intake on the LAR, then the treated water is delivered to GSWC, putting the groundwater back to beneficial use. To accurately reflect this process, both GSWC’s American River diversion and groundwater production volumes were adjusted accordingly in the model.

Table 2 illustrates the application of the agreed-upon funding allocation methodology, which includes the relative percentages for each of the respective datasets, the resulting weighted percentage calculated using the factors listed in **Table 1**, and the final cost allocations for FY26 for each relevant funder. The weighted percentage shown in **Table 2** for each agency will be used for five years, and an updated weighted percentage will be calculated in 2030 to be applied in FY2030-2031 and the subsequent five years (pending approval from the funders).

Table 1. Water Forum Cost Allocation Weighting Factors and Benefits

Agency Data Set	Weighting Factor	Associated Benefits
Connection Counts	0.40	<ul style="list-style-type: none"> • Environmental Stewardship • Maintaining peace on the river • Assistance in the regulatory settings
Groundwater Production	0.20	<ul style="list-style-type: none"> • Regional water supply reliability • Support for more conjunctive use activities • Regional collaboration and partnerships for projects, programs, and funding
American River Diversions	0.40	<ul style="list-style-type: none"> • Regional coordination and strategy with the U.S. Bureau of Reclamation • Protecting the value and function of the Lower American River corridor

Table 2. Water Forum Cost Allocation Results

Agency	Base %			Weighted %	FY 26 Contribution Based on 5-Year Avg 2019-2023
	Connections	American River Diversions	Groundwater Production		
El Dorado Irrigation District	0.07	0.09	0.00	0.07	\$128,452
Placer County Water Agency	0.07	0.07	0.00	0.06	\$109,635
City of Folsom (minus Ashland)	0.04	0.12	0.00	0.06	\$119,623
City of Roseville	0.09	0.19	0.00	0.11	\$212,506
San Juan Water District - Wholesale ¹	0.09	0.21	0.05	0.13	\$106,938
Citrus Heights Water District	0.04	0.06	0.02	0.04	\$81,691
Fair Oaks Water District	0.02	0.04	0.03	0.03	\$63,181
Carmichael Water District	0.02	0.03	0.03	0.03	\$53,445
City of Sacramento	0.25	0.19	0.21	0.22	\$422,537
Sacramento Suburban Water District	0.08	0.06	0.21	0.10	\$187,724
Golden State Water Company	0.03	0.03	0.05	0.03	\$61,706
California American Water	0.11	0.00	0.24	0.09	\$179,501
Sacramento County Water Agency	0.11	0.00	0.21	0.08	\$160,600
East Bay MUD	0.04	0.00	0.00	0.02	\$29,602
Total²	1.00	1.00	1.00	1.00	\$1,917,140

1. San Juan Water District Wholesale contributions include San Juan Retail, Orange Vale, and Ashland (Folsom) service areas.

2. Total funding amount shown excludes contributions of flat fee contributions from SMUD, SAFCA, and EDWA.

Appendix 13: Interagency Agreement for Water Forum Administration

See the following page.

**THIRD INTERAGENCY AGREEMENT FOR THE
ADMINISTRATION AND MANAGEMENT OF THE WATER FORUM**

THIS THIRD INTERAGENCY AGREEMENT FOR THE ADMINISTRATION AND MANAGEMENT OF THE WATER FORUM (“AGREEMENT”) is made and entered into this __ day of _____ 2025, by and among the City of Sacramento, the El Dorado Irrigation District, the Placer County Water Agency, the City of Folsom, the City of Roseville, the San Juan Water District (retail), Citrus Heights Water District, Fair Oaks Water District, Orange Vale Water Company, Carmichael Water District, Sacramento Suburban Water District, Golden State Water Company, California-American Water, Sacramento County Water Agency (“SCWA”), County of Sacramento, and East Bay Municipal Utility District referred to collectively as “the Parties.”

RECITALS

- A. Each of the Parties to this Agreement is a local governmental entity or public water supplier functioning within or adjacent to the Sacramento Metropolitan Area.
- B. On October 30, 1991, the Sacramento City Council, the Sacramento County Board of Supervisors and the Board of Directors of SCWA authorized the execution of the "Interagency Agreement for the City-County Office of Water Planning" to create a City County organization known as the City-County Office of Water Planning.
- C. The City-County Office of Water Planning, subsequently renamed the City-County Office of Metropolitan Water Planning (hereafter referred to as the “CCOMWP”), was formed to provide City-County staffing necessary to undertake planning and analysis needed for, and to facilitate the participation of numerous stakeholders in, the development of a comprehensive plan to provide a reliable water supply for the region while protecting the environmental values of the area's water resources.
- D. On January 9, 2001, the Sacramento City Council, the Sacramento County Board of Supervisors and the Board of Directors of SCWA entered into the “Second Interagency Agreement for the City-County Office of Metropolitan Water Planning” to provide for the continued existence and operation of the CCOMWP.
- E. The Parties are all members of the Water Forum, a coalition of business leaders, citizens, environmentalists, water managers, and local governments (individually “Members”). The Water Forum was governed by the 2000 Water Forum Agreement, updated in October 2015 (the “Water Forum Agreement”). The renegotiation of the Water Forum Agreement through the Water Forum 2050 process resulted in a need to update the Second Interagency Agreement for the City-County Office of Metropolitan Water Planning to reflect participation of all of the Parties. The purpose of this Agreement is to delineate an efficient and effective arrangement for administration and management of Water Forum staff. Funding for the Water Forum staff and operations will be allocated on a cost-share

basis between the Parties in a separate funding agreement for the Water Forum (“Funding Agreement”).

- F. The City of Sacramento and the County of Sacramento wish to express their long time and continuing support for the Water Forum and its mission of the co-equal objectives.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the Parties hereby agree as follows:

1. **Water Forum Office.** The renegotiated Water Forum Agreement has restructured roles and responsibilities of the participating water agencies. To reflect those changes, the name of the CCOMWP is hereby changed to the Water Forum Office. The Water Forum Office is a division of the City of Sacramento, not an independent legal entity. The Water Forum Office is hereby authorized to continue operating in accordance with the provisions of this Agreement. This Agreement replaces and supersedes the Second Interagency Agreement for the City-County Office of Metropolitan Water Planning.
2. **Objectives and Duties of the Water Forum Office.** The objective of the Water Forum Office is to promote the implementation and continued vitality of the Water Forum Agreement. This objective shall be accomplished by providing administrative support and assistance to the Water Forum Members as the Members oversee, monitor, and report on implementation of the Water Forum Agreement. Specific tasks necessary to accomplish this purpose may be performed by Water Forum Office staff, or by other individuals, firms or entities pursuant to contracts or agreements authorized as set forth in Section 5, below.
3. **Water Forum Office Operations.** The City of Sacramento shall continue to provide the Water Forum Office with suitable office space and administrative, clerical, and technical support resources as an entity of the City of Sacramento. The City of Sacramento will be responsible for overseeing the following arrangements for the Water Forum Office:
 - a. Procurement of leased office space including conference facilities and necessary furnishings to house the Water Forum Office.
 - b. Preparation of an operating budget, operating reserves of 120 days, and necessary appropriation resolutions.
 - c. Establishment of accounting records and procedures for capturing expenditures of the Water Forum Office.
 - d. Allocation of operating costs for the Water Forum Office on a cost-share basis among the Parties pursuant to the Funding Agreement. "Operating costs" shall include all office lease, equipment, personnel and other staffing costs, contracting costs, and other costs incurred in the performance of the Water

Forum Office's duties, together with associated direct and indirect overhead and other administrative costs.

- e. Implementation of the staffing plan for the Water Forum Office including such things as classification of positions, salary resolution amendments, recruitment, and selection.
4. **Water Forum Office Costs.** The Parties shall fund the Water Forum Office operating costs in accordance with the cost-sharing provisions of the Funding Agreement. Annual Operating costs shall not exceed the funding available for such costs under the Funding Agreement or available from other funding sources approved by the Parties and shall be consistent with the Water Forum Office budget approved by the Parties.
5. **Staff Arrangements.**
 - a. The Water Forum Office shall have an Executive Director and adequate staff to support the following functions: River Corridor Health Program, Water Resources engineering, and administrative support staff. These positions, whether new hires or existing staff, shall be considered City of Sacramento employees. These employees shall continue to be paid at the designated salaries and employee benefits for their respective classifications within the City of Sacramento, and shall be entitled to the same promotions, and merit or other salary increases as City of Sacramento fulltime employees. In addition, the services of other City of Sacramento staff may be used from time to time to provide technical assistance for the Water Forum Office.
 - b. As an entity of the City of Sacramento, the Water Forum Office has established funds that pay the full cost of the assigned positions and any staff assistance for all salaries, employee benefits and indirect employee costs.
 - c. The Executive Director shall be the chief administrative officer of the Water Forum Office, shall supervise the Water Forum Office employees, and shall be responsible for the administration of the Water Forum Office pursuant to this Agreement. The Executive Director shall report to the Director of the City of Sacramento Department of Utilities (“DOU Director”). The DOU Director shall implement a process to solicit the Parties’ input on the selection and performance of the Executive Director but shall retain sole authority to take any and all employment actions related to the Executive Director.
 - d. Water Forum Office staff, including but not limited to the Executive Director, are not employees of any Party other than the City of Sacramento and shall not be entitled to any wages, retirement benefits, or other benefits enjoyed by employees of any Party other than the City of Sacramento.
 - e. When requested by the Water Forum’s Coordinating Committee, or at least every five years, the Water Forum may conduct a compensation survey to

ensure that the total compensation of the Executive Director is appropriate. The compensation survey will be paid for by the Water Forum office. Should the survey indicate the compensation should be adjusted, the City of Sacramento shall consider adjusting the compensation accordingly, but is not required to do so. All Water Forum office employee salaries are funded by the water agencies that contribute to the Water Forum office, the funding for their salaries does not come solely from the City of Sacramento. Nothing in this agreement, in action or intent, will preempt City of Sacramento employment practices.

6. **Contracting Procedures.** All Water Forum Office contracting shall follow procedures used by the City of Sacramento. The Executive Director may recommend the approval of contracts for services required by the Water Forum Office and the Sacramento City Manager or the City Manager's designee shall be authorized to approve and execute such contracts in accordance with applicable provisions of the Sacramento City Code relating to authority to enter into contracts. All other contracts shall be submitted to the Sacramento City Council for approval and execution. All contracts shall be approved as to form by the Sacramento City Attorney or use standard formats approved by the Sacramento City Attorney. The City shall require and verify that all contractors and subcontractors maintain insurance coverage that meets the minimum scope and limits of insurance coverage appropriate for the work performed. Costs incurred under contracts that are consistent with the Water Forum Office budget approved by the Parties shall be allocated on a cost-share basis between the Parties as specified in the Funding Agreement.

7. **Insurance; Excess liability.**

a. The City of Sacramento shall procure and maintain a liability insurance policy sufficient to cover the Water Forum Office's potential liabilities, with a minimum limit of \$1 million per occurrence and \$4 million aggregate. The Parties recognize that the coverage and terms of insurance may be subject to change based on insurance market conditions, but the City of Sacramento shall immediately disclose changes and obtain approval of the other Parties to an approach that most closely preserves compliance with requirements of this section. The coverage must be at least as broad in scope as Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury, and contractual liability coverage for liabilities assumed under this Agreement as an "insured contract." The City of Sacramento will provide proof of this insurance to each Party on an annual basis for the duration of this Agreement and will immediately notify Parties of any changes in coverage. Liability coverage will be in effect for Water Forum work plan activities or activities communicated in writing to the Plenary Water Forum.

- b. The City of Sacramento shall use available insurance proceeds to defray the cost of liability arising from the Water Forum Office or its functions or work. If the Water Forum Office's liability insurance, or any other available insurance policy, does not fully cover all liability of the Water Forum Office or of the City of Sacramento arising from a covered employee action, omission, or injuries, then any excess amount of such liability ("Excess Liability"), except Excluded Liability, shall be allocated among the Parties pursuant to the cost allocation formula specified in the Funding Agreement. The term "Excluded Liability" includes each of the following: (i) any liability arising from any employee action, omission, or injury that is intentional, fraudulent, reckless, or outside the course or scope of the employee's position with the Water Forum; (ii) any liability arising from any class actions, representative actions, actions under the Private Attorneys General Act; or (iii) any liability arising from claims for punitive or exemplary damages; or (iv) recovery of attorneys' fees. Excess liability costs for Excluded Liability may be submitted to the Parties for consideration through the annual budget process. The Parties (as defined in Attachment A) are to be covered as additional insureds on the Water Forum Office's CGL policy with respect to liability arising out of this Agreement. For any claims related to this Agreement, the Water Forum Office's insurance coverage shall be primary and non-contributory as respects the Parties. The Water Forum Office will promptly notify each Party of any claim that has arisen or that may arise and keep them informed as to the status of the claim until resolved.

The City of Sacramento shall procure, maintain, and be solely responsible for the provision of workers' compensation insurance for its employees assigned to the Water Forum Office or performing duties related to the Water Forum Office. The City shall maintain excess workers' compensation insurance and waive subrogation against the Parties.

8. **Disclaimer of Liability; Mutual Indemnification.** No Party nor any officer or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by another Party under or in connection with any work, authority, or jurisdiction delegated to another Party. Each Party shall fully defend (upon the request of the indemnitee), indemnify, and hold each Party harmless from and against all claims, losses and liabilities occurring by reason of anything done or omitted to be done by the indemnifying Party under or in connection with any work, authority, or jurisdiction delegated to the indemnifying Party under this Agreement. Except as limited by this section 8, Excess Liability, except Excluded Liability, may be allocated among the Parties in the manner and circumstances described in subsection (b) of section 7.
9. **Effective Date.** This Agreement shall become effective when it has been signed by each Party.

10. **Termination.** This Agreement shall remain in effect until December 31, 2050, unless terminated sooner in the manner described herein. This Agreement may be terminated by two-thirds written consent of the Parties. Nothing in this Agreement shall prevent any individual Party from withdrawing as provided in this Agreement. Upon termination of this Agreement, any surplus funds on hand shall be returned to the then Parties in proportion to the contributions made.

A Party may unilaterally withdraw from this Agreement without requiring termination of this Agreement, effective upon 90 days' written notice to the other Parties, provided that the withdrawing Party shall remain responsible for any indebtedness incurred by the Party under the Funding Agreement, and further provided that the withdrawing Party pays or agrees to pay its share of debts, liabilities and obligations of the Water Forum Office incurred by the Party under this Agreement prior to the effective date of such withdrawal. Terms of the Funding Agreement may include a not-to-exceed amount equaling a two-year funding obligation from each agency.

If the City of Sacramento wishes to withdraw from this Agreement, the City of Sacramento shall provide 180 days' written notice to the other Parties; provided that the City of Sacramento shall remain responsible for any indebtedness incurred by the City of Sacramento under any funding agreement, and further provided that the City of Sacramento pays or agrees to pay its share of debts, liabilities and obligations of the Water Forum Office incurred by the City of Sacramento under this Agreement prior to the effective date of such withdrawal. In such case, the City of Sacramento shall cooperate in good faith with other Parties if they wish to continue the Water Forum Office under the auspices of another entity.

11. **Notices.** Any notices or other communication to be given Parties pursuant to this Agreement shall be given in writing by U.S. Mail, email, or by personal delivery to the Parties at the addresses set forth in Attachment B, incorporated herein by this reference.
12. **Amendments.** This Agreement may be amended only by a subsequent writing, approved and signed by the authorized representative or agent for each Party, except the representatives and contact information contained in Attachment B may be amended by providing an updated copy of Attachment B to all Parties.
13. **Entire Agreement.** This Agreement and any attachments hereto constitute the entire Agreement and understanding among the Parties regarding the administration and management of the Water Forum Office. If any provision of this Agreement conflicts with any provision of any other agreement related to the Water Forum Office, the conflicting provision of this Agreement shall control.
14. **Successors and Assigns.** This Agreement shall bind, and inure to the benefit of, the successors, assigns, heirs, and legal representatives of the Parties hereto.

15. **Waiver.** The waiver at any time by any Party of its rights with respect to a default or other matter arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent default or matter.
16. **Construction and Interpretation.** The Parties agree and acknowledge that this Agreement has been arrived at through negotiation, and that each Party has had a full and fair opportunity to revise the terms of this Agreement. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting Party shall not apply in construing or interpreting this Agreement.
17. **Counterparts and Digital Signatures.** This Agreement may be executed by the Parties in separate counterparts, each of which when so executed and delivered shall be an original. All such counterparts shall together constitute but one and the same instrument. Signatures scanned and transmitted electronically shall be deemed original signatures for purposes of this Agreement, with such scanned signatures having the same legal effect as original signatures. This Agreement may be executed through the use of an electronic signature and will be binding on each party as if it were physically executed.
18. **Choice of Law.** This Agreement shall be governed by the laws of the State of California.
19. **Severability.** If one or more clauses, sentences, paragraphs or provisions of this Agreement is held to be unlawful, invalid or unenforceable, it is hereby agreed by the Parties that the remainder of the Agreement shall not be affected thereby.

ATTACHMENT A
ADDITIONAL INSURED

The following Parties to this Agreement are named as additional insured pursuant to Section 7.b of this Agreement:

- City of Sacramento
- El Dorado Irrigation District
- Placer County Water Agency
- City of Folsom
- City of Roseville
- San Juan Water District
- Citrus Heights Water District
- Fair Oaks Water District
- Orange Vale Water Company
- Carmichael Water District
- Sacramento Suburban Water District
- Golden State Water Company
- California-American Water Company
- Sacramento County Water Agency
- County of Sacramento
- East Bay Municipal Utility District