Water Resources Development and Management Plan

August 29 Draft for PAG Review Only

Mission Statement

Ensure that El Dorado County has adequate and affordable water to maintain economic prosperity, protect the environment, and support the rural-agriculture way of life for today and in the future.

Board of Directors

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Rebecca Guo, P.E.

Preface

TBD.

Lori Parlin

Board Chair

El Dorado Water Agency
and El Dorado County Supervisor, District IV

Rebecca Guo, P.E.

General Manager

El Dorado Water Agency

Executive Summary

The Water Recourses Development and Management Plan (WRDMP) is the cornerstone document for the Agency's actions and investment and is subject to periodic updates in years ending in 4 and 9. The WRDMP was formulated to be a policy document with durable policies and guidance for long-term implementation to support sustainable and responsible water resources planning and economic prosperity in El Dorado County per the Agency's authorizing act, 1959 El Dorado County Water Agency Act (Act). It is also the countywide water plan that satisfies the requirements of Ordinance 5096 adopted by the County of El Dorado (County).

Consistent Approach for Collaboration and Results

The 2019 WRDMP reflected a major change of the Agency's priorities to refocus the Agency's actions and investments to be consistent with its countywide charges provided by the 1959 Act. This change also allows the Agency to assist the County to realize the vision of its adopted General Plan in terms of long-term water resources planning and management, and to support County's efforts for associated economic development, environmental protection, and maintaining the preferred rural-agricultural way of life. At the same time, the Agency has taken a role in participating and facilitating regional collaboration and transparency to create countywide benefits and respect the role and responsibilities of each partner during implementation. The resulting WRDMP is a policy document with durable resource management strategies and flexible implementation with periodic updates to reflect changed conditions. To support long-term and stable implementation, the Agency's Board of Directors (Board) adopted specific policies and guidance, as well as streamlined its business practices for consistent investments in five programs: Governance and Partnership, Water Security, Watershed Management, Assistance and Innovation, and Communication and Advocacy.

The success of 2019 WRDMP development rested on the collaborative approach and transparency, which were carried forward in the subsequent collective implementation and coordinated advocacy for our unique conditions. The Countywide Plenary for Water as part of the Agency's implementation also further strengthened the partnership and extent of collaboration,

shaping our common future. The WRDMP 2024 update (WRMDP24) continues these same goals and principles, including the concise format focusing on policy directives.

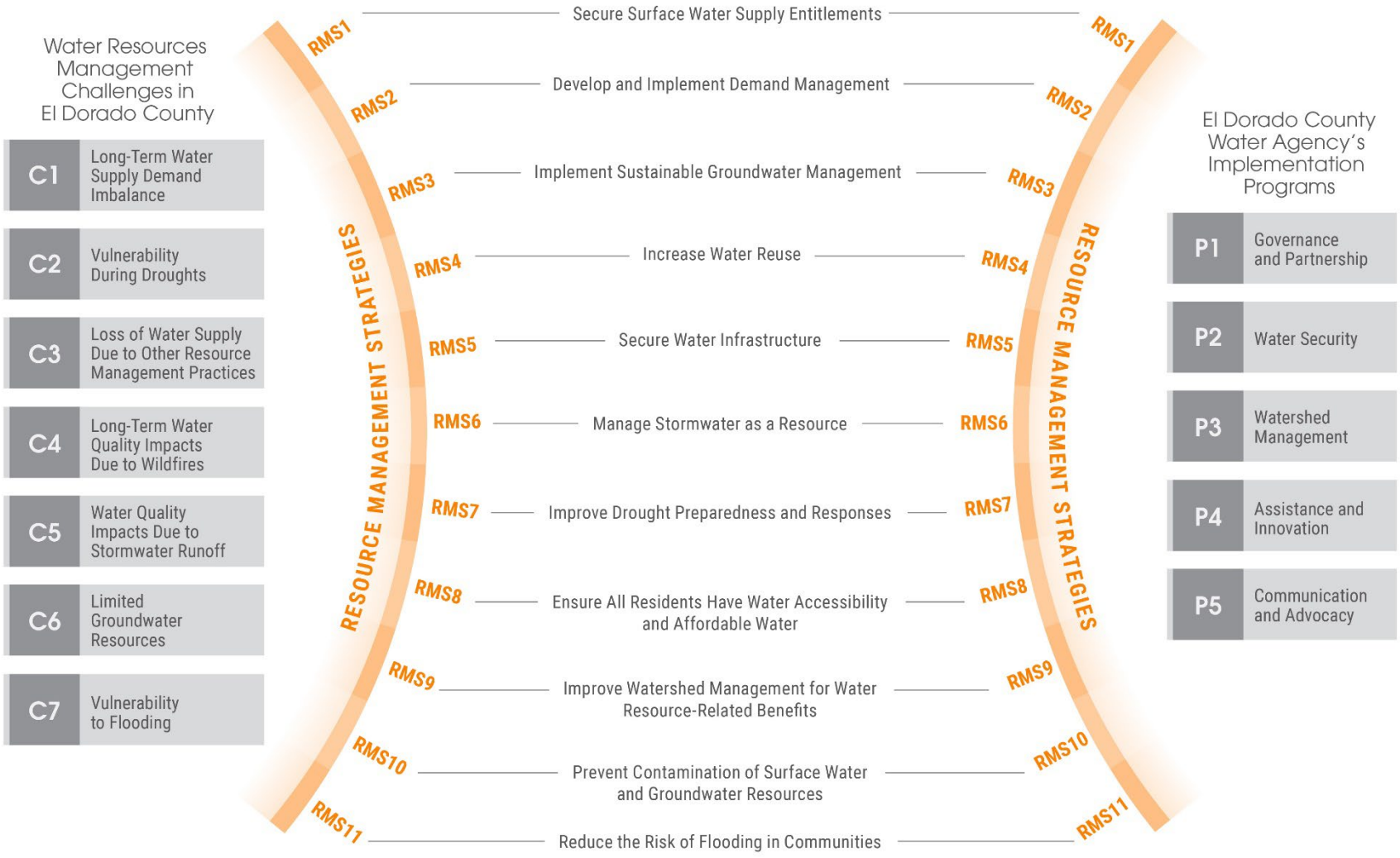
Changed Conditions and Update Focus

The focus of the WRDMP24 is to evaluate the needs to update countywide resource management strategies and management actions to address changed conditions. The land use under the adopted County General Plan remains stable since 2019 ; however, El Dorado County experienced many changes in natural resource and social conditions including the COVID-19 pandemic and impacts from severe droughts and associated emergency regulations, as well as destruction of the 2021 Caldor Fire and 2022 Mosquito Fire. Many major changes in law and regulations as responses to these disasters on a temporary or permanent basis (e.g., senior water right curtailments, efficient urban water use regulations) and state and federal climate and equity policies have significant effects on future water resource managements in EL Dorado County.

As a result of cohesive coordination of agencies within El Dorado County, progress has been made to collectively advance the resource management strategies identified in the 2019 WRDMP, including the following major accomplishments:

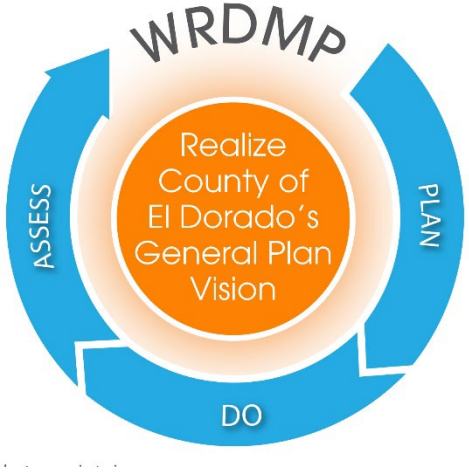
- Execution of the Central Valley Project Water Service Contact with U.S. Department of the Interior, Bureau of Reclamation (Reclamation) after 19 years of delay
- Completion of the American River Basin Study with Reclamation and regional partners to set forth climate adaptation portfolios that address unique basin conditions and needs;
- Approval by California Department of Water Resources for the Alternative Plans for managing the Tahoe South Subbasin.
- Acceleration of on-the-ground project implementation through funding from the federal American Rescue Plan Act of 2021, Federal Emergency Management Agency, and State of California for needed water infrastructure recovery and improvements;
- Completion of the Upper American River Basin Regional Drought Contingency Plan to improve regional collaboration and support for drought resilience and set foundations for assistance to rural communities served by small water suppliers and domestic wells;

A Collaborative and Adaptive Approach to a Resilient Future



- Convening of the Upper American River Watershed Group to develop a Programmatic Watershed Plan (PWP) for the upper American River watershed to support the WRDMP's water resource management strategies and align broader resource management strategies for healthy watershed and resilience community; and
- Development of purposeful and coordinated efforts among partners in El Dorado County and Sacramento and Tahoe regions to make progress in federal and state advocacy to advocate for countywide benefits and recognition of our unique conditions and needs.

The WRDMP24 refreshes our awareness and assessments of water resource-related challenges ahead to achieve the County General Plan vision and the preferred way of life, including the needed economic development and community resilience for areas currently not served by public water purveyors that are commonly referred to as the Other County Areas. Based on these findings, the WRDMP24 also updates the resource management strategies (RMS), which represent strategic directives to mitigate the identified challenges through coordinated and collective efforts of partners with implementation responsibility. Key management actions for each RMS are also reviewed for effectiveness and relevancy with identified primary responsible agency(ies), and corresponding Agency's roles in leading, facilitating, or supporting contributing actions and activities consistent with the Act and its intent to create direct value and benefits for all communities in El Dorado County.



The Plan-Do-Assess cycle of adaptative management through the 5-year updates will keep the resource management strategies and associated management relevant to emerging and changed needs. By design, the background supporting PWP is also subject to a 5-year update in years ending 3 and 8, providing a nice synergy for timely input and continued progress in the watershed management that we need for the successful implementation of the WRDMP.

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Abbreviations and Acronyms

AB	Assembly Bill
Act	El Dorado County Water Agency Act
Agency	El Dorado Water Agency, a public agency created under the 1959 El Dorado County Water Agency Act
BLM	U.S. Department of the Interior, Bureau of Land Management
Board	El Dorado Water Agency's Board of Directors
CABY	Cosumnes, American, Bear, Yuba
County	County of El Dorado
CSD	Community Service District
CVP	Central Valley Project
CW3E	Center for Western Weather and Water Extremes, Scripps Institution of Oceanography at University of California, San Diego
CWC	California Water Code
DWR	California Department of Water Resources
EDWA	El Dorado Water Agency
EID	El Dorado Irrigation District
EMD	Environmental Management Department
FEMA	Federal Emergency Management Agency
FSC	Fire Safe Council
GDPUD	Georgetown Divide Public Utility District
GFCSD	Grizzly Flats Community Services District
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
LAFCO	Local Agency Formation Commission
M&I	Municipal and Industrial
OCA	Other County Areas

PAG	Plan Advisory Group
Plenary	El Dorado Countywide Plenary for Water
PG&E	Pacific Gas and Electric Company
PWP	Programmatic Watershed Plan for the upper American River watershed
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RMS	Resource Management Strategy/ies
RWA	Regional Water Authority
SAFCA	Sacramento Area Flood Control Agency
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SMUD	Sacramento Municipal Utility District
SWRCB	State Water Resources Control Board
STPUD	South Tahoe Public Utility District
TAF	Thousand Acre-Feet
TCPUD	Tahoe City Public Utility District
TROA	Truckee River Operating Agreement
TRPA	Tahoe Regional Planning Agency
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
West Slope	El Dorado County area west of the Sierra Nevada Crest
WRDMP	Water Resources Development and Management Plan

Photo Credits

TBD

Section 1 – Introduction

The El Dorado Water Agency (Agency or EDWA) was created in 1959 through the El Dorado County Water Agency Act (Act) to ensure countywide water resources management for the conservation, development, control, and use water for the public good and for the protection of life and property in El Dorado County. The Agency's authority covers the entire El Dorado County, on both sides of the Sierra Nevada including both headwaters and national forests. This authority differentiates the Agency from water districts, municipalities, and water conservation districts that have authorities within portions of the county. The Agency's authorities address hydroelectric energy; controlling flood and stormwater; storing, conserving, and managing water resources; and procuring additional water supplies. To plan and develop priorities, the Agency cooperates with local water purveyors, federal, state and local agencies, and others to carry out its responsibilities.

El Dorado County's diverse landscapes include a portion of the Tahoe Basin located on the east of the Sierra Nevada Crest, which has unique governance and ecological sensitivities. The vast West Slope foothill area (West Slope) is located to the west of the Sierra Nevada Crest in El Dorado County. The West Slope has some urbanized areas along the boundary with Sacramento County, although the majority has a rural-agricultural setting, reflecting the preferred way of life for residents.

The Agency does not own or operate any water facilities. It collaborates with special districts, such as water purveyors and conservation districts, to develop water resource management programs and activities. The Agency holds a Central Valley Project (CVP) water service contract with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for water supply to support El Dorado County's continued economic development in the western portion of the county. The 1959 Act provides the Agency the charge of a water resource manager for El Dorado County that is parallel to the County of El Dorado's (County) land use and administrative authorities. It provides the Agency to lead collaboration with federal, state and local agencies and interests to promote sustainable and responsible water resource development and management for countywide benefits that are often beyond the capacity of individual water purveyors.

1.1 Purposes of the Water Resources Development and Management Plan

The Water Resources Development and Management Plan (WRDMP) is the Agency's cornerstone document to outline its role and responsibilities for fulfilling the charges provided by the 1959 Act. It further contains long-term strategies and short-term actions to improve countywide water resources development and management with a set of implementation policies and guidance adopted by the Agency's Board of Directors (Board). The WRDMP and associated adopted implementation policies and guidance provide direction to the Agency's actions and investments, in collaboration with federal, state, and local agencies and interested parties, to implement water resource management actions through five distinct but interconnected programs to promote sustainable countywide benefits. These five programs are Governance and Partnership, Water Security, Watershed Management, Assistance and Innovation, and Communication and Advocacy.

El Dorado Water Agency's five implementation programs are mutually supportive and guided by the adopted policies and guidance, providing a focus on outcomes to benefit the communities in El Dorado County.

The Agency developed its first WRDMP in 1993 to outline its strategy and actions for water resources development and management in El Dorado County. The 2007 update of the WRDMP brought forth emerging issues including climate change. In 2014, the Agency completed an update that was limited to only the West Slope water use demands. With heightened awareness during the 2012-2016 drought, equity in water supplies and climate change resiliency became a key priority for related resource management in El Dorado County. Thus, the Agency modernized the WRDMP in its 2019

update, in close collaboration with local jurisdictions, and interested parties, to include principles of integrated water management and measures for climate resilience and sustainable countywide benefits.

In 2018, the County and the Agency entered into an MOU to outlines their roles and responsibilities in the preparation of a countywide water management plan through the capacity conditions of County General Plan and facilitate coordination among public water purveyors in their Urban Water Management Plan (UWMP) preparation. The primary purpose of the MOU is to align water resources planning with land use, environmental management, and economic sustainability activities within the county. The WRDMP met the intent of a countywide water management plan described in the MOU, County Ordinance No. 5096, and the Agency's role as a countywide water agency.

1.2 Goals

The primary goal of the WRDMP is to through coordinated water resource planning and management, support the County to realize its adopted General Plan through prudent and integrated land use and water resources management. The County's adopted General Plan is unique in several ways in that it:

- Contains a land use plan for economic development and integrated natural resource protection and management.
- Plans for land capacity for all purposes by considering future economic development beyond the typical near-term urbanization focus.
- Incorporates policies and considerations that allow for urbanization but also preserve the rural-agricultural way of life that residents value significantly.

Additional goals of the WRDMP include:

- Develop a concise, adaptable, and policy-focused plan with actions that are commensurate with the Agency's role and responsibilities.
- Incorporate an integrated countywide, long-term water management approach into sustainable investment strategies and implementation.
- Address changes in countywide water supply conditions, regulations, as well as the evolving understanding of climate change and its effects.
- Promote transparency and common understanding of the Agency's investment priorities in water resources development and management.

Through the WRDMP, the Agency developed corresponding resource management strategies based on an integrated water management concept and corresponding investment priorities to fulfill the vision presented in the County General Plan.

1.3 Development of the Water Resources Development and Management Plan

The Agency outlined several principles for its WRDMP including:

- ***Respect the roles and responsibilities of water purveyors and other local agencies.*** The Agency has broad authority and charge from the Act; however, it considers its greatest value to be promoting countywide broad benefits and focusing on improving water supply and other related water resource management issues that are not fully covered by other local agencies.
- ***Promote dialogues among local agencies, economic interests, and stakeholders for mutual understanding.*** The Agency believes the County's long-term vision can only be realized through collaboration, so it formed various advisory groups for the WRDMP development and established a foundation for long-term collaborative forums for countywide water management issues.

The Agency established a Plan Advisory Group (PAG) to collaborate in the WRDMP 2024 update, extending the same successful approach used in the 2019 WRDMP 2019 and continued in the Countywide Plenary for Water hosted by the Agency per Board Policy E-1001 adopted for implementing the WRDMP. consists of representatives from multiple departments of the County, Agricultural Commissioner, Tribes, public water purveyors, business interests, and environmental interests. In addition, a subgroup to the PAG, the Water Supply-Demand Imbalance Subgroup, was organized to assist in demand projections, water supply-demand imbalance projections, and consistency with participation from County planning department and agricultural commissioner, public water purveyors, business interests and academic representative. The collaboration reflects the above principles for WRDMP development and implementation.

Focus of 2024 Update

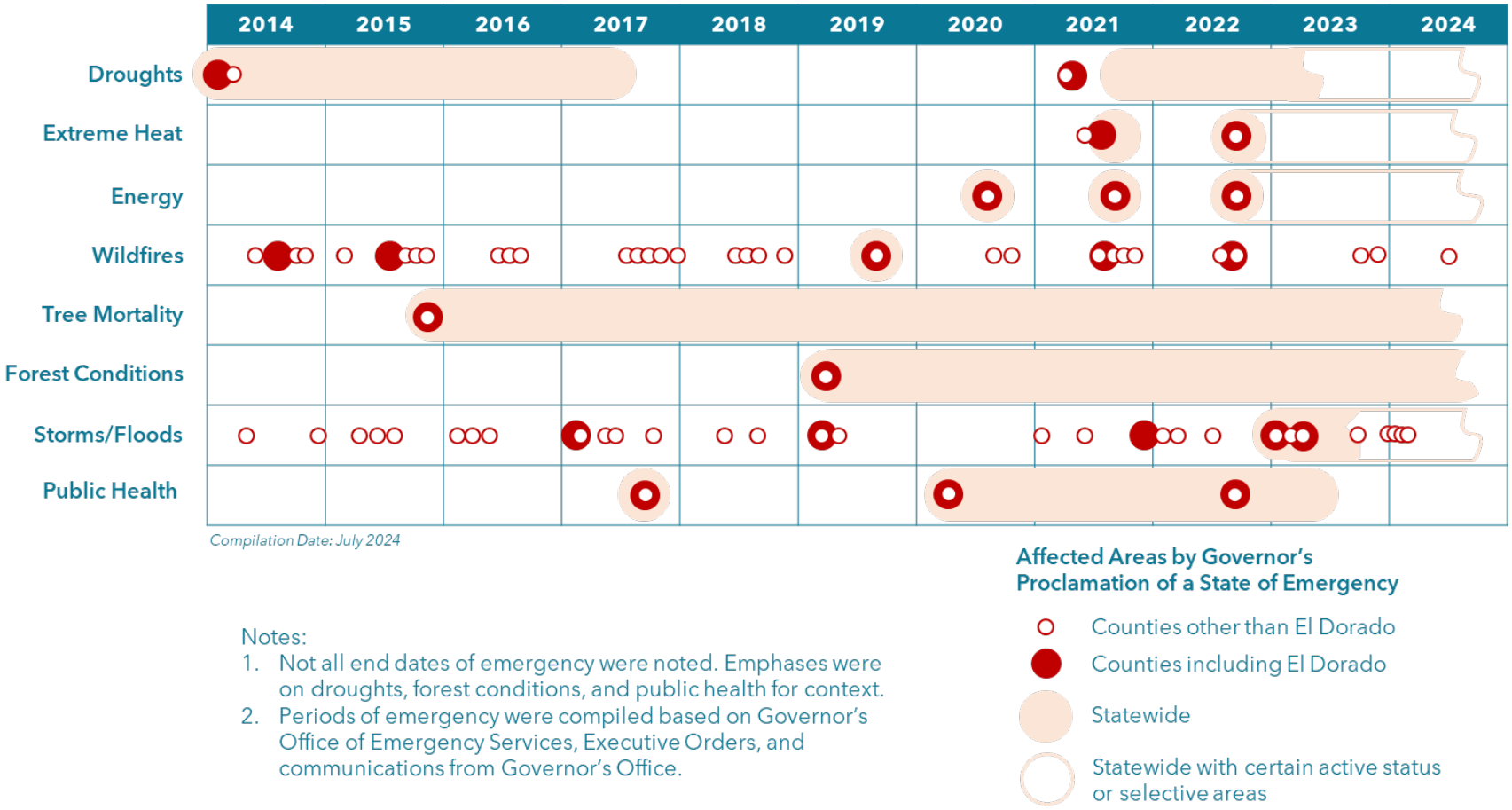
The Agency's Board formalized a 5-year update cycle for the WRDMP to address changed conditions and maintain focus on its investments to result in sustainable countywide benefits. Since the 2019 update, major emergencies and natural disasters that affect El Dorado County and beyond occurred in an unprecedented manner, including the 2020-2022 drought, 2020-2023 COVID pandemic, major wildfire events (2021 Caldor Fire and 2022 Mosquito Fire), and over 20

atmospheric events hitting California from December 2022 through March 2023. New laws and regulatory changes in response to these rapidly emerging threats have also significantly impacted the future of water management in the county and demand significant resources to expand and refine management programs and actions.

The WRDMP 2019 was intentionally developed to present durable and yet adaptable resource management strategies (RMS) and management actions to address identified water resource-related challenges. Although the overall strategies are not significantly changing, some tactical actions to address near-term needs and preserve future options are included in this 2024 update. In addition, the Agency incorporated the applicable RMS and management actions of the 2023 Programmatic Watershed Plan (PWP) for the upper American River watershed. The PWP was completed by the Upper American River Watershed Group (UARWG) which was convened by the Agency under its Watershed Program. The PWP identified watershed-scale challenges and RMS and management actions to improve watershed health and community resilience. Many of these RMS augment the water resource-related RMS in the 2019 WRDMP and hence were included in the 2024 WRDMP.

The WRDMP and PWP complete a holistic management construct on a watershed level that are mutually supportive. The outcome of the WRDMP 2024 update will inform the PWP update in 2028. This leapfrogging planning process is to ensure the Agency maintains unwavering attention to its role and responsibilities, as well as fostering efficiency in managing scope, workflow, and partnership.

The compounded effects from increasing extent and severity of natural disasters and emergencies in the past decade that affect El Dorado County in a fundamental way. They also signal that county's water future to be managed in an integrated and holistic manner and through broad collaboration to address the underlying interrelated issues and symptoms.



1.4 Organization

The WRDMP is organized into 5 sections:

- **Section 1:** Introduction describes the charge of the Agency and the purpose of the WRDMP, including clarification of the Agency's goals and collaborative principles.
- **Section 2:** Current Water Management provides a description of land use and environmental protection outlined in the County General Plan, current water management practices and responsibilities, and existing major infrastructure that supports the implementation of the County General Plan.
- **Section 3:** Challenges Ahead identifies water resource-related challenges and recent changes that El Dorado County is facing, recognizing the differences between the West Slope and the Tahoe Basin, as well as the integrated nature of water resource management.
- **Section 4:** Resource Management Strategies describes resource management strategies to mitigate identified water resource-related challenges in El Dorado County including corresponding roles and responsibilities for implementation. Specific roles and responsibilities for the Agency are highlighted as appropriate and consistent with its authority.
- **Section 5:** Implementation describes the Agency's implementation policies and guidance, and the programs necessary to organize and coordinate the Agency's implementation efforts. For accountability, both recent accomplishments and prioritized actions for the next five years are described.

Section 2 – Current Water Management

An understanding of current water management practices, responsibilities, capital improvements, and commitments is critical to developing water management strategies and investment priorities that will provide opportunities for sustained economic development. This understanding forms the basis of the Agency's efforts in assisting the County in fulfilling the vision in its adopted General Plan.

2.1 Economic Development

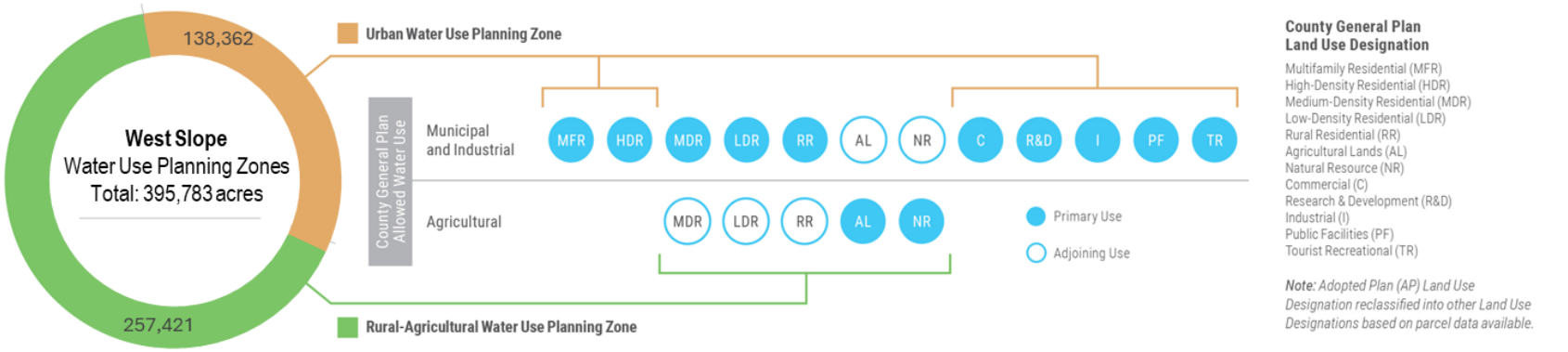
The County General Plan designates lands for economic development and identifies areas where community and agricultural development may occur. These lands are outside of national forest lands, private timber lands, and other state and federally managed lands. The County shares responsibility for land use regulation in the Tahoe Basin with the Tahoe Regional Planning Agency (TRPA), established through the Congressionally ratified Bi-State Compact between the states of California and Nevada. The resulting Tahoe Regional Plan is intended to provide orderly growth and development in the Tahoe Basin that is consistent with that area's environmental carrying capacity. The County General Plan reflects the intended coordination and alignment of land use. All projects in the Tahoe Basin area must be consistent with the Tahoe Regional Plan including TRPA and County codes and regulations. Decades of planning and development have resulted in the Tahoe Basin's economic development being more "mature" compared to the West Slope that is experiencing new growth.

For the West Slope, the County General Plan lays out a rural-agricultural dominated landscape with high density urban development concentrated in areas adjacent to Sacramento County and along Highway 50 using a combination of land use designation, zoning ordinance designation, and policies. Constrained by the terrain, commercial farming operations in El Dorado County are small in comparison to the Central Valley, on average less than 3 acres; large corporate farming operations do not exist in El Dorado County. For planning purposes, two water use planning zones are established, consistent with the County General Plan:

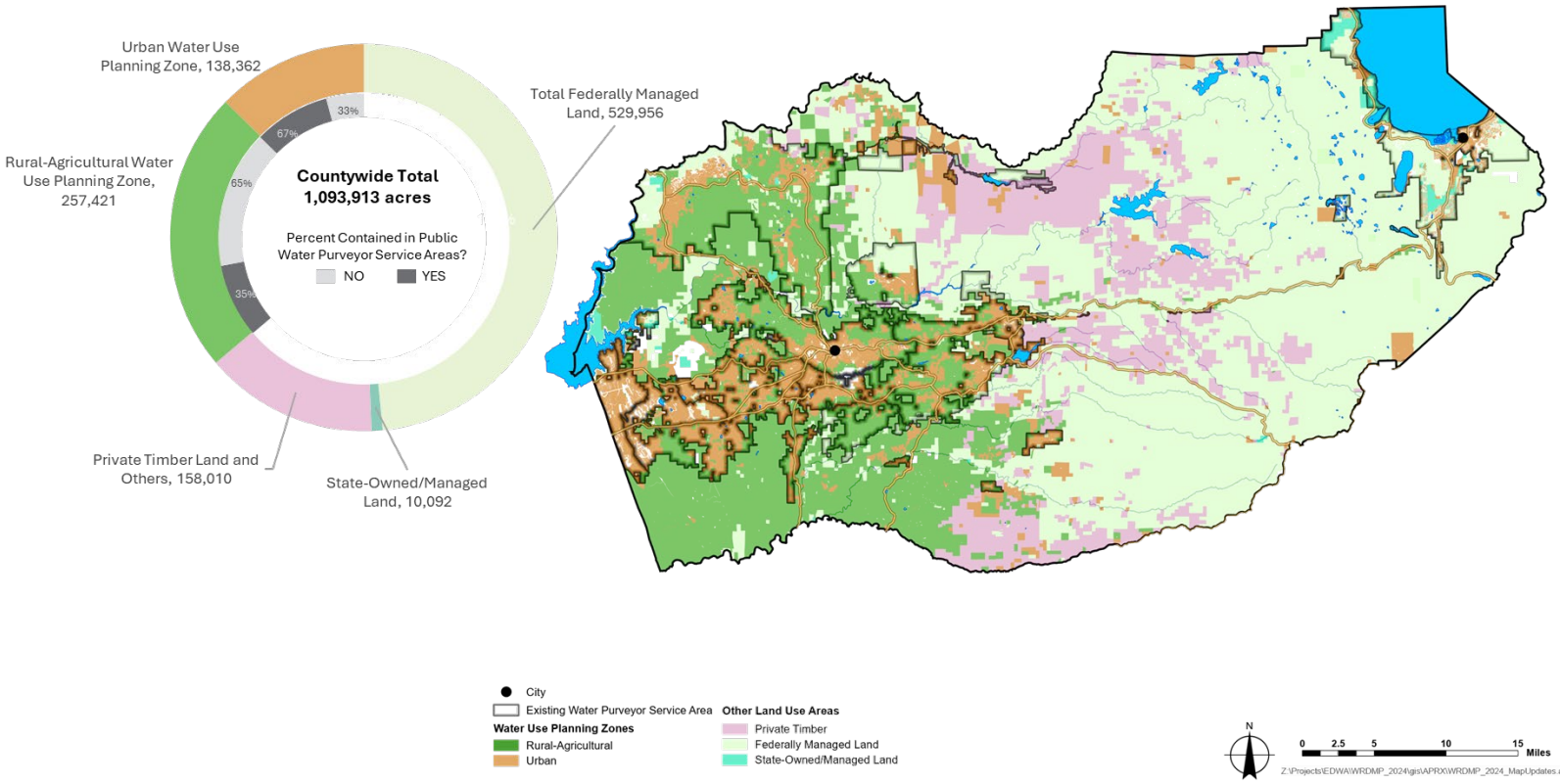
- **Urban water use planning zone:** Lands for economic development where the County General Plan allows only M&I water use. The delineation of this zone is relatively straightforward.
- **Rural-agricultural water use planning zone**: Lands for economic development where the County General Plan allows both M&I use (including rural domestic use) and agricultural use. The delineation of this zone is more

complex because the presence of M&I use and agricultural use may vary based on the County General Plan land use designation. For example, parcels within the Low-Density Residential land use designation are for residential use, resulting in M&I water use (i.e., primary use). However, the County General Plan also permits agricultural practices on larger residential parcels, resulting in agricultural water use (i.e., adjoining use). Similarly, a parcel designated as Agricultural Lands is dedicated to agriculture, resulting in agricultural water use (i.e., primary use). A farmhouse with domestic water use could also be permitted for complementing the intended farming operation, resulting in M&I water use (i.e., adjoining use). The preferred rural-agricultural way of life means that permitted agricultural practices in El Dorado County include both commercial and non-commercial purposes where non-commercial practices are to limited household consumption or limited local farmer's market sales.

These zones reflect the foundational policies in the County General Plan in terms of where and what water use may occur, and why. These policies do not guarantee water demands will be realized, as that requires consideration of other conditions such as physical constraints (e.g., slope and soil types), preferences (e.g., community centers and agricultural districts), and management strategies (e.g., water use efficiency and applied technology).



Reliable water supplies are foundational to ensure economic development and prosperity into the future. In the West Slope, a substantial portion of the land designated for economic development in the County of El Dorado General Plan is not currently served by any major water purveyor. Approximately 71 percent of the urban water use planning zone and 35 percent of the rural-agricultural water use planning zone are served by a public water purveyor. In the Tahoe Basin, areas of economic development are completely within the service areas of existing water purveyors.



2.2 Roles and Responsibilities in Water Management

Many entities have active water management roles at the local or regional level including the Agency, County, public water purveyors, private water companies, and those that are considered self-supplied. Under the 1959 Act, the Agency is charged with developing a countywide water plan and participating in statewide water planning. It can negotiate contracts with the California Department of Water Resources (DWR), Reclamation, and other local, state, and federal agencies for water management, facility construction and water wholesale. The Agency supports actions to protect existing uses of water rights on which water purveyors and their customers depend and applies additional water rights as needed to augment water supply for beneficial uses in El Dorado County.

County is the authority of land use in El Dorado County, which translates into water supply and its reliability needs. The Agency provides expertise to assist the County in water resource planning and management issues per 2018 MOU and many other project/program-specific MOU and agreements. With the expanded collaboration, the County and the Agency are strengthening communication and coordination for efficiency and mutually supported functions.

The Agency collaborates with six public water purveyors in El Dorado County for water management. El Dorado Irrigation District (EID), Georgetown Divide Public Utility District (GDPUD), City of Placerville, and Grizzly Flats Community Services District (GFCSD) serve surface water in the West Slope. The City of Placerville receives wholesale treated water from EID and provides retail services within the city limits. EID's service area also includes lands of the Shingle Springs Band of Miwok Indians, a federally recognized tribe, and a small, planned development area in the City of Folsom located south of U.S. Highway 50, next to the county boundary.

In the Tahoe Basin, South Lake Tahoe Public Utility District (STPUD) uses groundwater to serve their customers in and near the City of South Lake Tahoe. STPUD and the Agency have an MOU to manage the underlying groundwater basin. Tahoe City Public Utility District (TCPUD) uses both groundwater and spring wells to serve the areas spanning both Placer and El Dorado counties on the west shore of Lake Tahoe.

EID, GDPUD, STPUD and TCPUD are considered urban water suppliers per California Water Code (CWC) Section 10617; GFCSD and City of Placerville are considered small water suppliers per CWC Section 10609.51(k). The aggregated service area of these six public water purveyors does not cover the entire El Dorado County. Currently, the

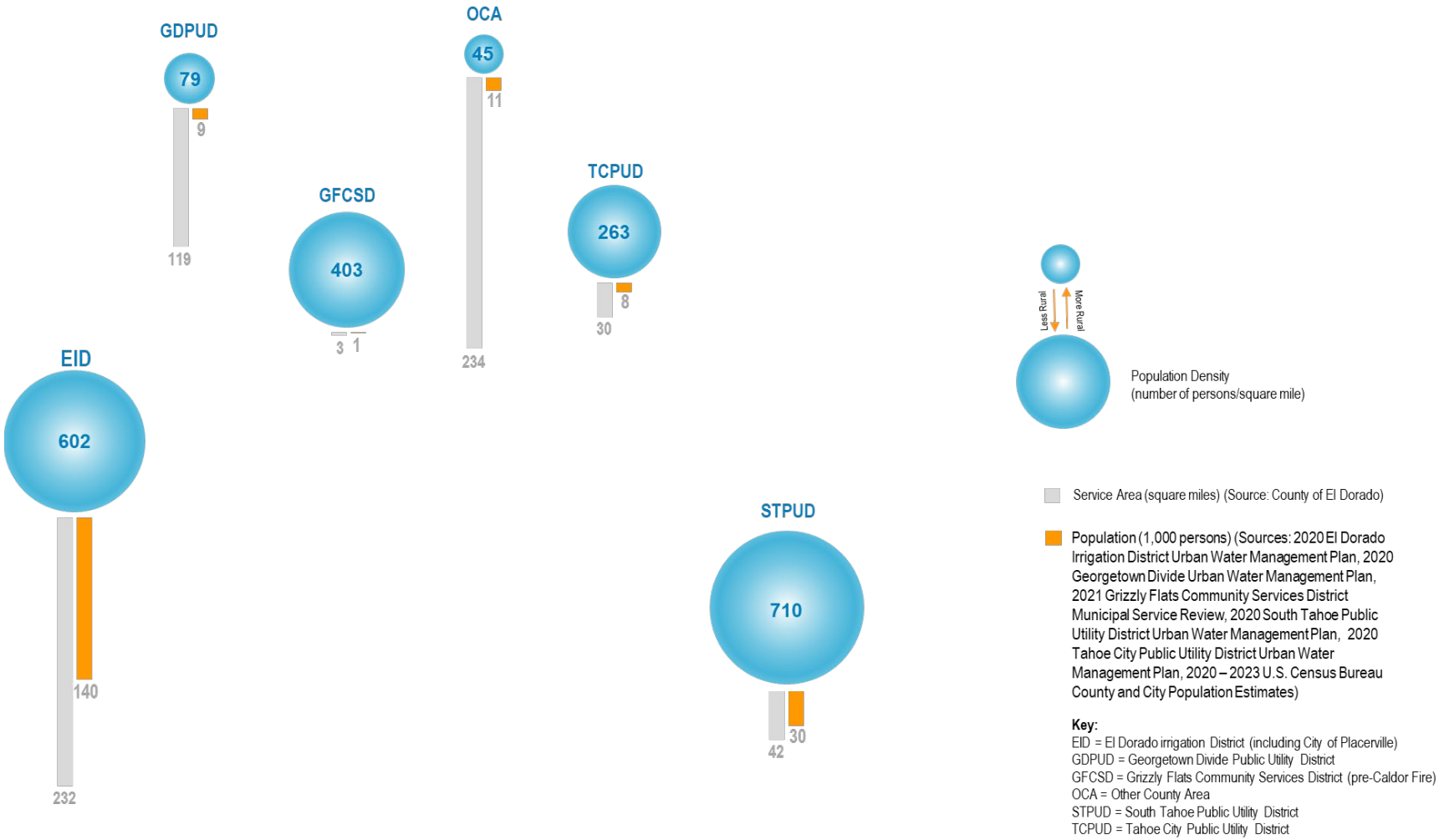
Agency represents the Other County Areas (OCA), comprised of areas in El Dorado County that currently fall outside of the service areas of the above six public water purveyors, private timber land, and state and federally managed land.

Residents, farms, ranches, and businesses located outside of major water purveyor jurisdictions often rely on domestic wells or other small water systems for their consumptive use. In the Tahoe Basin, groundwater is extracted from either the Tahoe South or Tahoe West Subbasins in and near the service areas of STPUD and TCPUD, respectively. Per the regulatory requirements of the 2014 Sustainable Groundwater Management Act (SGMA), STPUD and the Agency assumed the roles of Groundwater Sustainability Agencies (GSA) for the Tahoe South Subbasin in areas within and outside of the STUPUD service area, respectively. DWR determined that the Tahoe West Subbasin is of a very low priority per the SGMA and thus, requires no establishment of a GSA or a Groundwater Sustainability Plan (GSP).

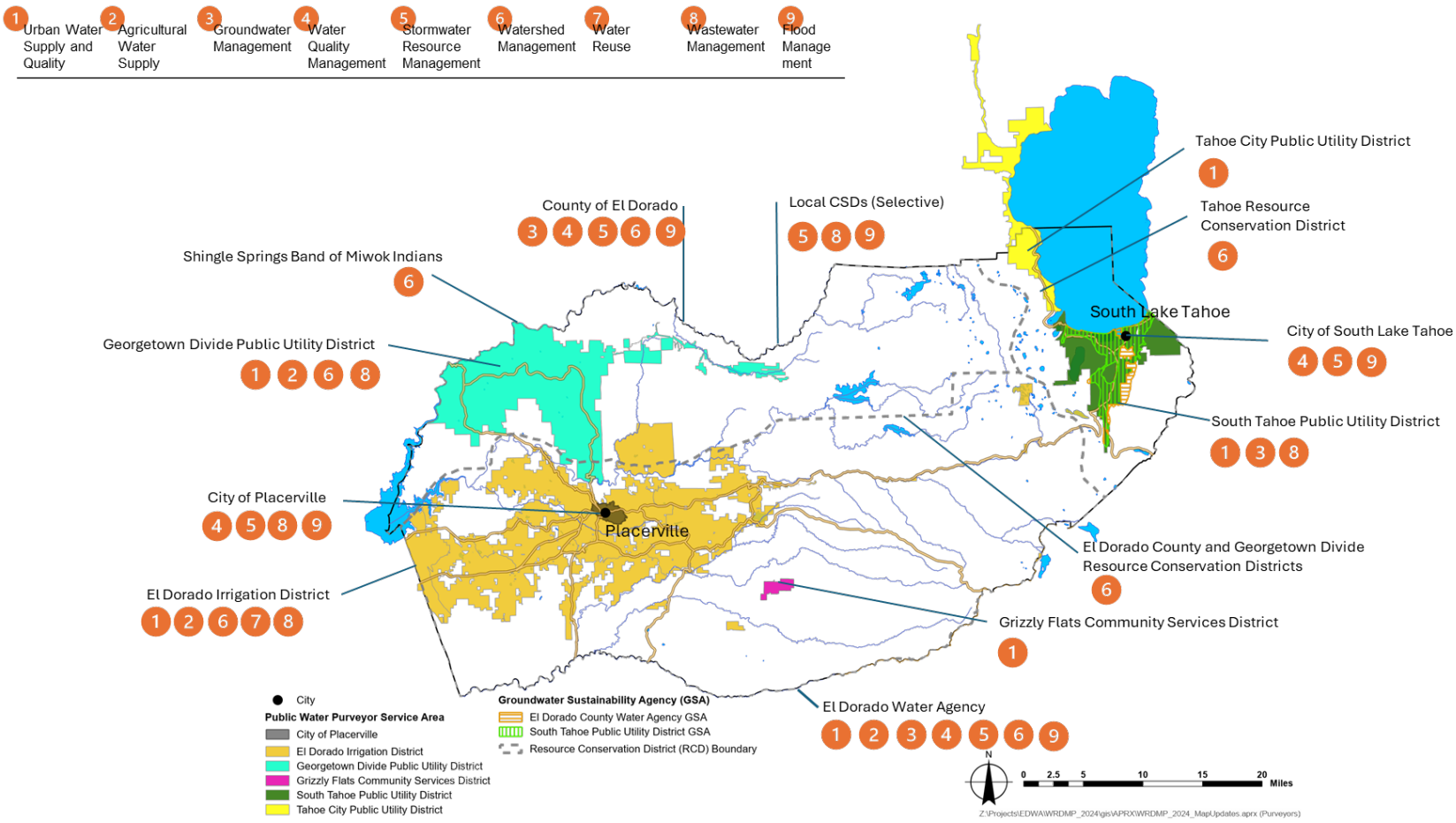
In the West Slope, the shallow groundwater wells draw from a fractured rock formation, which is not recognized as groundwater basins in California due to its unreliable and inconsistent water storage characteristics. It is worth noting that the sphere of influence (SOI) of existing irrigation and special districts includes a significant portion of the OCA that are south and north of the South Fork American River. Currently, long-term planning by the public water purveyors is limited. Due to relatively low projected growth rates within the OCA, future planning is set up to respond to proposals for development within the OCAs. Extending service to the SOI areas is evaluated on a case-by-case basis as needed, and largely based on existing infrastructure capacities. Changes to improve or develop water resources services in the OCA will require a review by the El Dorado County Local Aea Formation Commission (LAFCO).

It is challenging to differentiate between stormwater management and flood management. In general, stormwater management refers to managing the drainage onsite associated with certain development and major infrastructure (e.g., highways); flood management refers to managing the water receiving from elsewhere in a hazardous way including considerations for reducing chance of flooding (i.e., the traditional concept of flood control) and for reducing consequence of flooding (i.e., floodplain management). The scale of the matter is an important consideration but not a sole determinant, and these two categories of water resource management are also subject to different rules and regulations. California policies also encourage managing stormwater and flood for multi-benefit outcomes, creating additional nexus to water supply, water quality, and even habitat and environmental benefits. In El Dorado County, the County, the cities of Placerville and South Lake Tahoe, the Agency, and some selective CSDs have roles and responsibilities in stormwater and flood management.

The differences in population density of public water purveyor's service area suggest their relative urban/rural characteristics. In comparison, the Other County Areas are the most rural.



El Dorado Water Agency, the County of El Dorado, cities, public water purveyors, small private water systems, self-supplied entities, resource conservation districts, and other community services districts and group have active but different water resources management roles across El Dorado County.



2.3 Major Built Water Infrastructure

Water supplies in El Dorado County originate as runoff from the Sierra Nevada snowpack that replenishes the rivers and lakes, as well as groundwater, on both sides of the mountain ridge. Assembly Bill (AB) 2480 of 2016 recognizes that headwaters are part of the overall water supply infrastructure for the state. The UARWG's 2023 PWP supports this recognition that both natural and built water supply infrastructure are needed to support continued economic prosperity of our communities.

The Agency does not own any built water facilities at this time. In the past, the Agency has collaborated with water purveyors within El Dorado County to develop funding, secure permits or agreements, planning, acquisitions for water supplies, water infrastructure and other related assets. Historically, once development is achieved for a new asset, the water purveyor often assumed ownership and management responsibilities. For equity and to share any future benefits, this practice should be modified, as appropriate when capital improvements could provide countywide benefits in the OCAs to ensure a countywide perspective for water management.

In the West Slope, water is stored and distributed throughout El Dorado County for supply and hydropower generation purposes. Most of the water infrastructure in the Sacramento Municipal Utility District (SMUD) Upper American River Project (UARP) is in El Dorado County including 11 dams, 8 powerhouses to meet electricity demands, and Loon Lake (a major water storage reservoir). SMUD operates the UARP to meet energy demands in its service area in Sacramento County and its hydropower operation is a major component of water management in El Dorado County. As part of the hydropower license conditions from Federal Energy Regulatory Commission (FERC), SMUD entered into a settlement agreement with parties in El Dorado County in 2005 to collaborate management actions and operations to create benefit for residents in El Dorado County. Under the terms of this El Dorado-SMUD Cooperation Agreement, the Agency is the *El Dorado Designed Representative* for the El Dorado Parties, which includes the County of El Dorado, El Dorado Irrigation District, El Dorado Water Agency and Georgetown Divide Public Utility District. In addition to SMUD, EID and other small producers also have hydropower facilities in El Dorado County. Facilities previously owned by Pacific Gas & Electricity (PG&E), other than its transmission system, were sold and transferred to different parties.

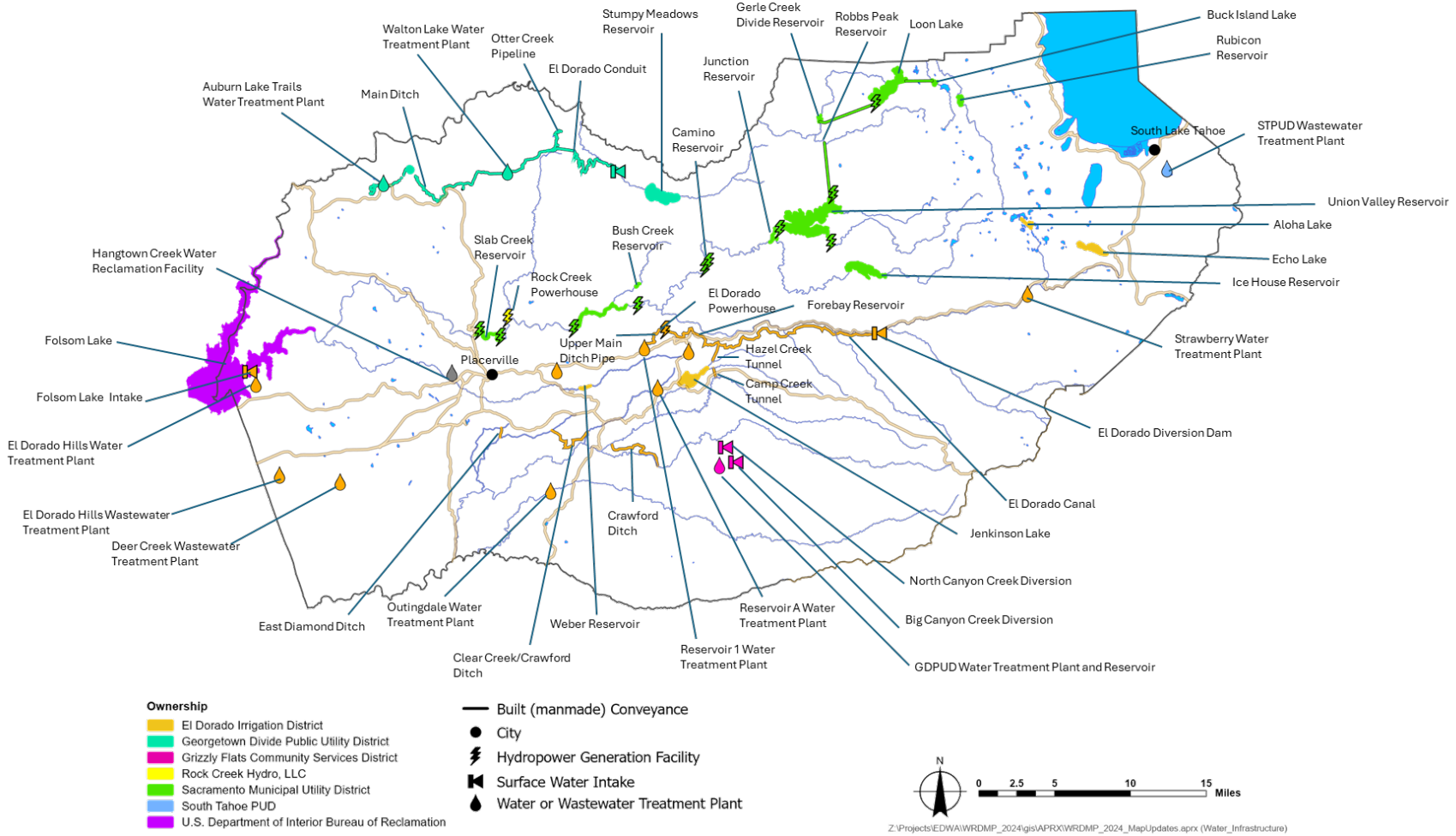
At the western edge of the county, Folsom Reservoir is owned and operated by Reclamation as part of the CVP to provide flood control, hydropower, and water supplies. The Agency acquired a CVP water service contract with Reclamation in 2019 to provide additional water supply to support continued economic development in the western portions of El Dorado

County. Other water storage reservoirs are owned and operated by EID, GDPUD, and GFCSD. EID owns and operates Jenkinson Lake Reservoir in Pollock Pines with imported water from the Cosumnes River and Project 184 on the South Fork American River including Echo, Aloha, Caples, and Silver Lakes. EID also diverts its CVP contract water from Folsom Reservoir to serve the demands in El Dorado Hills and adjacent areas. GDPUD owns and operates the Stumpy Meadows Reservoir east of Georgetown in addition to several ditches used for conveyance. Some of the infrastructure owned by EID and GDPUD are from the Gold Rush era and consist of several wooden flumes used for conveyance. Many of these facilities were impacted by recent wildfires and rebuilt for improved durability and wildfire resistance. With a much smaller service area compared with EID and GDPUD, GFCSD owns and operates its own reservoir and diverts water from North Canyon Creek and Big Canyon Creek.

In the Tahoe Basin, snowmelt runoff recharges groundwater basins and drains into Lake Tahoe and then to the Truckee River. Water purveyors rely on the groundwater for water supply and lack other major water infrastructure. In the Tahoe Basin, STPUD and TCPUD serve their customers from wells although both have surface water rights managed by the California State Water Resources Control Board (SWRCB). Specifically, TCPUD uses groundwater in lieu of surface water diversions. STPUD does not currently divert or use surface water.

Most rural areas in both the West Slope and the Tahoe Basin are served from groundwater wells by either small private water companies or are self-supplied. In addition to the major water purveyors, there are many small water systems owned and operated by various entities and communities that provide water supply with mostly groundwater from generally low-yield fractured rock aquifers.

Wastewater services are limited in El Dorado County due to its associated costs and the prevalent use of septic tank systems in a rural-agricultural setting. EID is the largest wastewater service provider in West Slope, serving El Dorado Hills, Cameron Park, and other smaller unincorporated areas. Recycled water from Deer Creek and El Dorado Hills Wastewater Treatment Plants is used for outdoor irrigation and recreation facilities such as golf courses. STPUD has the only wastewater facility in South Lake Tahoe. STPUD exports recycled water to Alpine County due to regulatory constraints for in-basin discharge. The City of Placerville provides wastewater services but no recycled water use. Onsite disposals (e.g., septic tank systems) are prevalent in El Dorado County and is discussed in Section 3.


Walton Lake Water Treatment Plant
Otter Creek Pipeline
Stumpy Meadows Reservoir
Gerle Creek Divide Reservoir
Robbs Peak Reservoir
Loon Lake
Buck Island Lake
Rubicon Reservoir
Auburn Lake Trails Water Treatment Plant
Main Ditch
El Dorado Conduit
Junction Reservoir
Camino Reservoir
South Lake Tahoe
STPUD Wastewater Treatment Plant
Union Valley Reservoir
Aloha Lake
Echo Lake
Ice House Reservoir
Hangtown Creek Water Reclamation Facility
Slab Creek Reservoir
Bush Creek Reservoir
Rock Creek Powerhouse
El Dorado Powerhouse
Forebay Reservoir
Strawberry Water Treatment Plant
Folsom Lake
Folsom Lake Intake
Placerville
Upper Main Ditch Pipe
Hazel Creek Tunnel
Camp Creek Tunnel
El Dorado Diversion Dam
El Dorado Hills Water Treatment Plant
El Dorado Hills Wastewater Treatment Plant
Deer Creek Wastewater Treatment Plant
Crawford Ditch
El Dorado Canal
Jenkinson Lake
North Canyon Creek Diversion
Big Canyon Creek Diversion
GDPUD Water Treatment Plant and Reservoir
East Diamond Ditch
Outingdale Water Treatment Plant
Weber Reservoir
Reservoir A Water Treatment Plant
Clear Creek/Crawford Ditch
Reservoir 1 Water Treatment Plant
Ownership
El Dorado Irrigation District
Georgetown Divide Public Utility District
Grizzly Flats Community Services District
Rock Creek Hydro, LLC
Sacramento Municipal Utility District
South Tahoe PUD
U.S. Department of Interior Bureau of Reclamation
Built (manmade) Conveyance
City
Hydropower Generation Facility
Surface Water Intake
Water or Wastewater Treatment Plant
N
0 2.5 5 10 15
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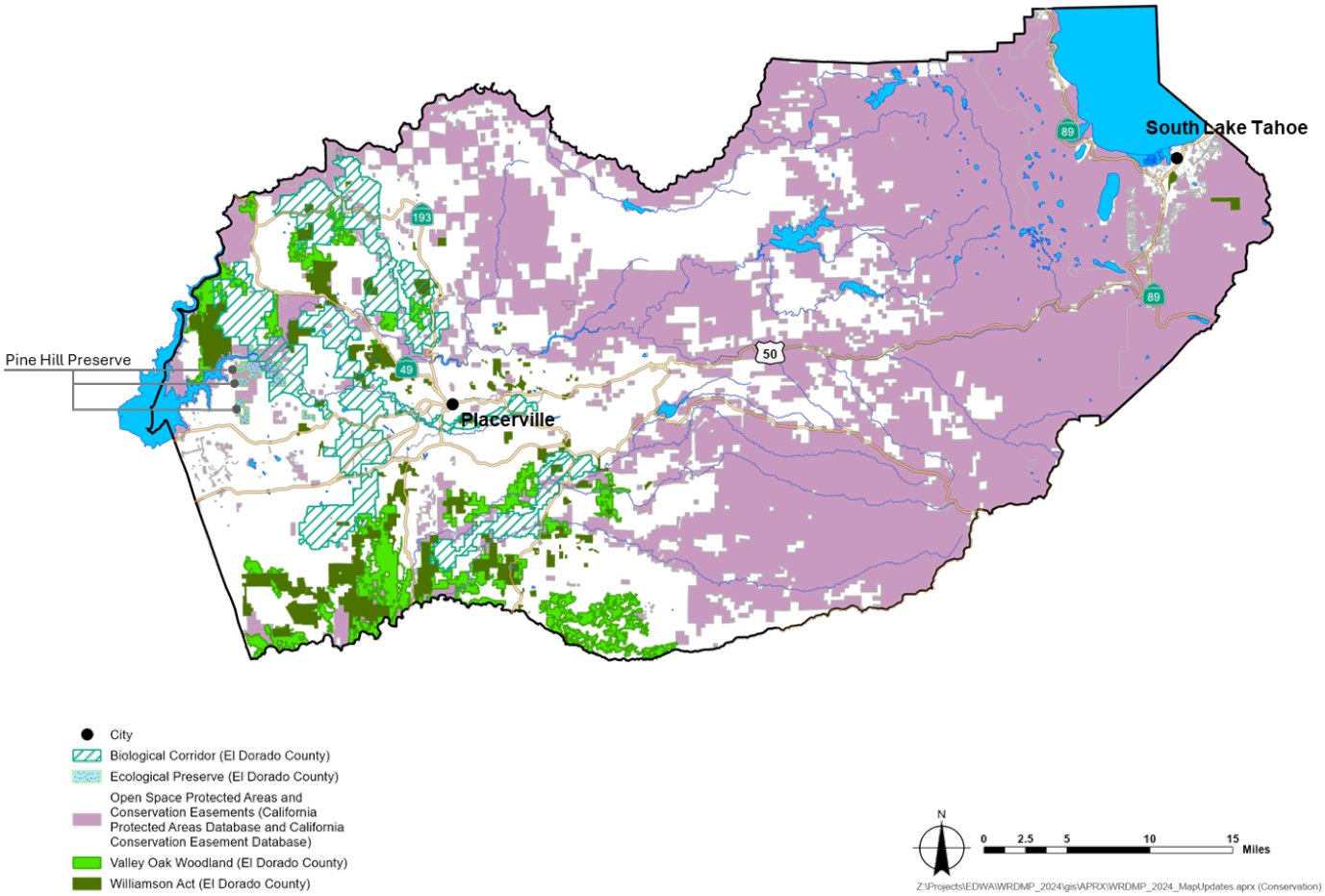
2.4 Environmental Conservation

The County General Plan includes land use designations for integrated natural resource protection and management. Federal, state, and non-profit organizations (e.g., American River Conservancy) also contribute to environmental conservation. These include the following:

- The Williamson Act – Enacted in 1965, this state law enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal.
- Biological Corridors – Biological Corridors in El Dorado County apply to lands having high wildlife habitat values because of extent, habitat function, connectivity, and other factors. Biological Corridors are home to large mammals such as mountain lions, bobcats, mule deer, the American black bear, and coyotes.
- Ecological Preserves – These lands have been or will be established as habitat preserves for rare or endangered plant and animal species, critical wildlife habitat, and natural communities of high quality or of statewide importance. These lands are in addition to the resources managed by state and federal agencies, such as national forests. Pine Hill Preserve, the only Ecological Preserve in El Dorado County, has rare plant species and habitats. The County General Plan identifies necessary mitigation for the planned economic development. Parcels in El Dorado County are characterized for the needed level of mitigation should they be used for economic development purposes. Ecological Preserves are areas classified as Mitigation Area 0, which do not allow any level of development as described in the County's Zoning Ordinance 130.71.030.

Through the implementation of the WRDMP and PWP, the Agency incorporates considerations of these conservation efforts in water use planning to promote integrated approach to sustainable water management for economic development.

The County of El Dorado General Plan recognizes the importance of protecting natural resources contained in the Williamson Act, biological corridors, and ecological preserves for long-term environmental protection and ecological needs, adding to those managed by state and federal agencies. The Pine Hill Preserve is an example of such policy implementation and is currently managed by the U.S. Department of the Interior, Bureau of Land Management.



Section 3 – Challenges Ahead

Many have invested considerable time, effort, and funds over the years to ensure continued water reliability and economic prosperity in El Dorado County. But ever-changing conditions—both within and outside the direct control of local government and residents—mean that we must remain attentive and forward-thinking to prepare for the challenges that may lie ahead. Through the "lens" of the Agency's authority, these water resources-related challenges are summarized by category: water supply, water quality, and public safety. These three inter-related issues in the West Slope and the Tahoe Basin are shown separately to highlight the differences in water resource management priorities between the two regions. The rest of the section provides more detail.

Level of Concern in the summary tables.

High	Moderate High	Moderate Low	Low

Water-Resource Related Challenges in the West Slope						
Water Supply			**Water Quality**			**Public Safety**
Long-Term Water Supply-Demand Imbalance	Vulnerability During Droughts	Loss of Water Supply Due to Other Resource Management Practices	Long-Term Water Quality Impacts Due to Wildfires	Water Quality Impacts Due to Stormwater Runoff	Concerns Over Groundwater Contamination	Vulnerability to Flooding
• Expected increase in demands and less reliable supplies due to limited availability of groundwater from local fractured rock aquifers and changes in surface water availability. • Climate change-impacted hydrology and loss of snowpack result in long-term reduction in reliable water supply. • The Other County Area is not serviced by a water purveyor and therefore may lack reliable water supply for planned economic growth	• There is no meaningful groundwater supply in the region and water supply can be vulnerable due to reliance on a single source of water (surface water). • Small water systems and domestic wells are vulnerable to water shortage due to drought or other contributing factors including power shutoff during extreme weather conditions. • Increasing agricultural well permitting requests in small residential parcels served by public water purveyors create administrative challenges and increase drought vulnerability	• Dense forests prevent snow from reaching the ground, resulting in a reduction in water supply availability. • Stormwater is managed as a hazard and for water quality compliance purposes but not as a potential resource for broader benefits. • Water infrastructure includes historic unlined ditches and wooden flumes that are susceptible to destruction by fires or landslides. Loss of these major conveyance structures would hinder water deliveries.	• Increasing frequency and intensity of wildfires result in both temporary and long- term water quality degradation on a landscape scale. • Increase in sediment, turbidity and algae growth in source water due to lack of trees after wildfires.	• Stormwater runoff may impact water quality, especially along the highway corridor. • Wastewater discharges or spills from damaged facilities located near surface water could create water quality concerns.	• Septic tank systems and pollution from runoff pose potential threats to local groundwater quality, although no significant issues have been identified to-date. • Natural occurrence of arsenic in the West Slope could affect water quality in certain areas.	• Riverine flooding is not a substantial threat in the West Slope; however, localized flooding is common in some communities with chronic drainage problems and increase in storm intensity.

Water-Resource Related Challenges in the Tahoe Basin						
Water Supply			**Water Quality**			**Public Safety**
Long-Term Water Supply-Demand Imbalance	Vulnerability During Droughts	Loss of Water Supply Due to Other Resource Management Practices	Long-Term Water Quality Impacts Due to Wildfires	Water Quality Impacts Due to Stormwater Runoff	Concerns Over Groundwater Contamination	Vulnerability to Flooding
• The planned economic development areas are covered by the existing service areas of major water purveyors, although many small water systems exist. • The growth restrictions and land use in the Tahoe Regional Plan significantly reduce the risk of water supply-demand imbalance • Emerging needs of using surface water due to groundwater contamination threat • Uncertain outcomes of ongoing water right proceeding for the California's share of Truckee River	• The Tahoe Basin is less susceptible to extended droughts, relying on both surface water and groundwater. • Existing drought ordinances do not provide coverage to the entire Tahoe Basin, although most areas have human consumption. • Small water systems and domestic wells are susceptible to water shortage due to drought or other contributing factors including power shutoff during extreme weather conditions.	• Dense forests prevent snow from reaching the ground, resulting in reduced water supply available to the Tahoe Basin as groundwater via recharge. • Stormwater is presently being managed as a hazard and for water quality compliance purposes but not as a potential resource for broader benefits.	• Increasing frequency and intensity of wildfires result in both temporary and long- term water quality degradation.	• Stormwater runoff may impact water quality in Lake Tahoe and along the highway corridor.	• Septic tanks are not prevalent in the Tahoe Basin, but leakage could affect groundwater quality. • Long-term groundwater availability is less of a concern because runoff and snowmelt, even under climate change, are adequate for recharge. • Historical contamination of Perchloroethylene, Methyl tert-butyl ether, uranium, and natural occurring arsenic, and emerging PFAS/PFOA contamination.	• Riverine flooding is not a substantial threat in the Tahoe Basin; however, rain on snow often causes extensive street flooding in certain areas. • Inflow and infiltration during flooding may overload the sewer system and prevent access sewer lines running through low-lying meadows.

3.1 Water Supply-Demand Imbalance

The economic prosperity that balances urbanization and the rural-agricultural way of life envisioned in the County General Plan requires clean, affordable, and reliable water supplies. Moving into the future, continued economic growth, climate change effects, technological advancements, and regulatory changes may affect both demand and water supply outlooks, resulting in a potential "water supply-demand imbalance" (an aggregated outcome of these changing factors).

To assist the County in realizing the vision of its General Plan, a water supply-demand imbalance assessment was completed at the capacity level defined in the County General Plan. The capacity level is generally considered to extend beyond a 50-year planning horizon. The water supply-demand imbalance assessment does not analyze interim or nearer-term conditions (e.g., the next 20 years as required for an UWMP).

Changes and Adaptation

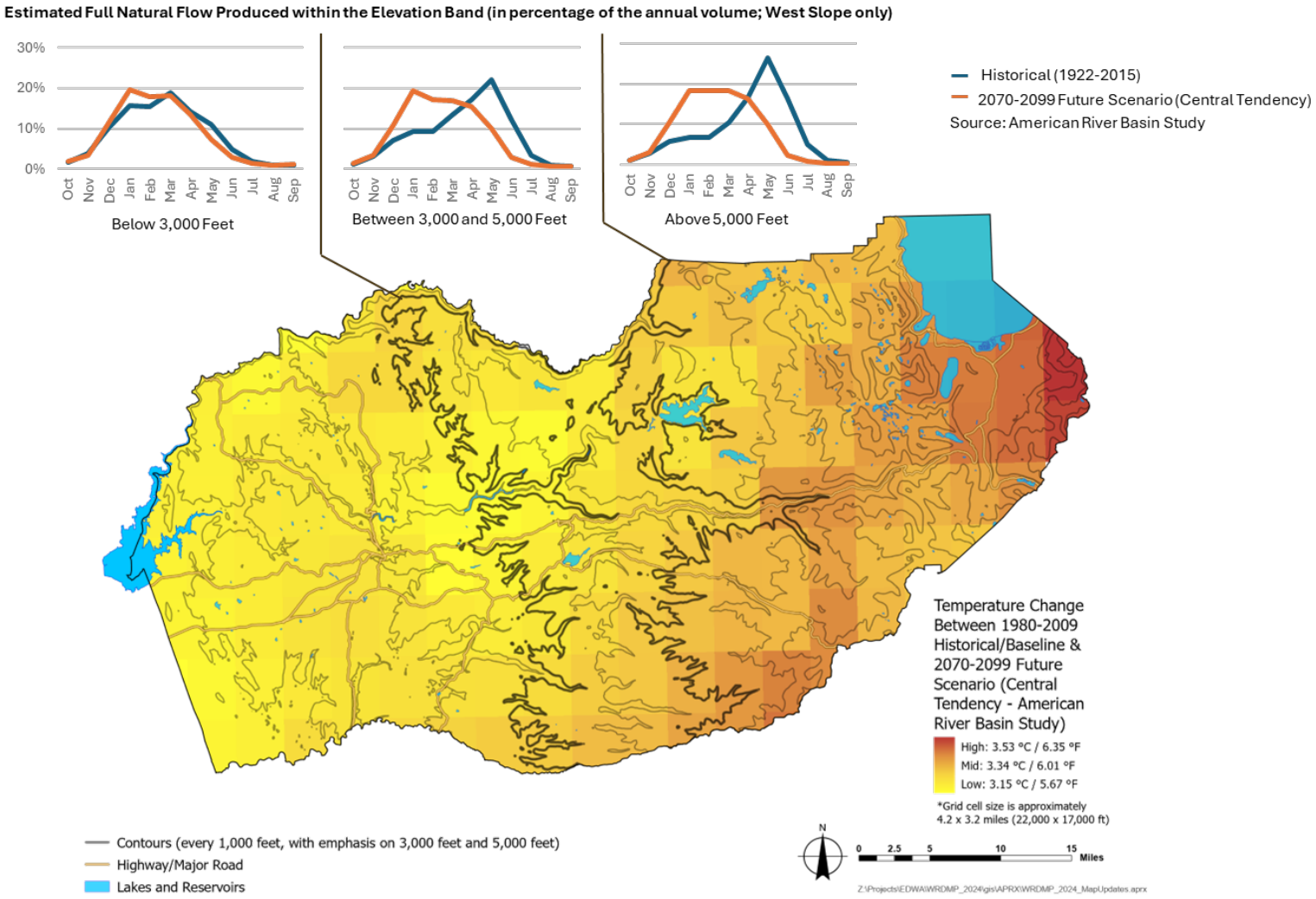
Many state, federal, and regional entities, including the Agency, are engaged in activities to improve understanding of the potential imbalance, and update policies and develop short-term and long-term actions to lessen the impacts. The concepts of safe yield and firm yield and any perceived assurance of water availability from senior water rights or major infrastructure are gradually fading into the past. Investment decisions in structural and non-structural measures should consider integration of resource management with institutional arrangements to reduce both individual and collective vulnerabilities over a broad range of future scenarios. This approach has proven to be a more effective and financially sustainable way to weather the vast uncertainties from numerous influencing factors.

The history of conflicts in the Tahoe Basin was settled under 1990 Truckee-Carson-Pyramid Lake Water Rights Settlement Act (Settlement Act) (Pub. Law 101-618), and a negotiated agreement known as the Truckee River Operating Agreement (TROA). TROA provides a watershed approach to guide the use of Truckee River by all parties from its headwaters at Lake Tahoe to its terminus at Pyramid Lake. TRPA and other regional collaborations prioritized actions and aligned focus for investment needs. Significant federal and state resources are dedicated to improving understanding and implementing actions to protect the unique ecosystem and associated communities.

Conditions in the West Slope are very different. Expansive federal and state managed lands are present along with significant private timber lands. The vast OCA areas are without a public water purveyor. Regional collaboration to

improve water management has improved since the Agency's adoption and implementation of the 2019 WRDMP update; however, its long-term success also needs the support of sustainable watershed management. The Agency's effort in convening UARWG to develop the 2023 PWP, highlights the importance of maintaining watershed health to enable water and other resources to continue benefiting county residents and beyond.

Climate change will likely result in increased runoff during winter months and reduced snowmelt in spring months for water supply. The existing facilities, which were designed and operated based on historical hydrology, will be overwhelmed and unable to provide adequate flood protection or water supply for all beneficial uses. The projected changes in hydrology vary between different elevation bands signaling potential significant impacts on the way of life in foothill communities particularly in areas above 3,000 ft in elevation.



The Agency, in partnership with Reclamation and other regional agencies, completed the *American River Basin Study* to evaluate potential effects of climate change and develop adaptation strategies for the American River Basin, of which the upper watershed is mostly within the West Slope. Projected climate change through 2100 is expected to reduce snowpack (the primary source of water for the West Slope communities and downstream Sacramento region) due to more precipitation falling as rain instead of snow.

Projected increases in temperature will increase agricultural and urban outdoor water needs. More importantly, the seasonal distribution of precipitation will shift – the runoff midpoint (when 50 percent of the total annual runoff has occurred) may shift from March to between 30 and 35 days earlier according to the mid-century and end-of-century, respectively, projections although the total volume of runoff may remain about the same. This shift will result in "flashier" hydrology that could overwhelm existing facilities for water supply and flood management that were designed and are operated according to historical hydrology.

Changing climate conditions have already impacted water use by residents and resulted in agricultural cultivation practices to migrate upward in elevation. Losing snowpack, which is the predominant storage for El Dorado County and the state, is particularly troublesome for the West Slope due to limited opportunities for alternative water supplies from fractured rock formation or water reuse. Expanding conjunctive use in the lower American River basin can help attenuate the changing hydrology in Sacramento region but is not a viable source of water for this upper watershed due to the thousands of feet in elevation difference. Thus, the American River Basin Study also identifies a specific adaptation portfolio for the upper watershed; the Alder Creek Storage and Conservation Portfolio consists of a high-elevation offstream storage that is modest in size but provides necessary storage to preserve water supply reliability in the upper watershed and support operation flexibility of Folsom Reservoir. The portfolio also includes the basic elements of continued water conservation and forest management which are included in all portfolios. The Agency plays a key role in the forest management element (more in Headwaters Management).

Water management in California adjusts its trajectory after each major drought. In the short but intense 1977-78 drought, statewide demands for water supply and environmental protection were still relatively low. Changes in water management were mostly reflected in operations and continued implementation of major water infrastructure projects. The persistent 1987-92 drought, and subsequent endangered species protection needs, drastically changed water system operational priorities and increased conflicts in providing for all beneficial uses, resulting in substantial reductions in yields from both

the federal CVP and California's State Water Project. Positive outcomes from this period, however, included (1) emergence of market-based water management tools such as water banking and water transfers, which public water purveyors in West Slope have historically limited participation, and (2) interest in integrated regional water management incentivized by state policies and financial assistance. Technological advancements resulted in increased water use efficiency, operational efficiency, and opportunities to diversify sources of water (e.g., water reuse). However, the Sacramento-San Joaquin Rivers system continues to experience ecosystem collapse, prompting the call for additional environmental protection even as statewide economic development continues to drive up water supply needs.

Despite the improvements, the increasing frequency and severity of extreme conditions continue testing the limits of water management throughout the state. California experienced two back-to-back severe droughts in 2023-16 and 2020-22; both with record-breaking persistence and intensity that stressed and overwhelmed the Sacramento and San Joaquin Rivers system. While the larger water purveyors in the county had sufficient water stored in their local reservoirs to meet customer demand, some smaller water systems and domestics wells had springs and groundwater wells run dry. Furthermore, under emergency drought declarations during these two droughts, the SWRCB implemented unprecedented curtailments of senior water rights and statewide mandatory water conservation that impacts communities throughout the state including El Dorado County.

Regulatory changes related to environmental protection and other public benefits will push water managers to improve efficiency and effectiveness in managing limited water supplies for all beneficial uses and the overall water supply and demand. The SWRCB recently adopted efficient urban water use standards, variances, and performance measures per Senate Bill (SB) 606 and AB 1668 of 2018. The budget-based water conservation requirements, termed as "Making Conservation a California Way of Life," replaced the volume-based water conservation approach as required in SB X7-7 of 2009. In El Dorado County, EID, GDPUD, STPUD, and TCPUD are among the urban retail water suppliers who are subject to the new requirements effective on January 1, 2025.

Representing the collective interests of the county, the Agency has engaged with DWR and SWRCB throughout the recommendation development and rulemaking process. This adopted regulation has many implementation details unresolved, imposing significant uncertainties on water demands and supply reliability. The resources needed for developing individual bottom-up water budgets for distinct uses is likely significant. There is a large amount of detailed data needed to estimate allowable water budget on a purveyor-level because most does not manage water use in such a

refined level. Separately, additional details also need to capture unique water use as variances for approval by the SWRCB; outdoor residential water use, small farm operations in rural residential areas, and seasonal populations are among the primary identified challenges for El Dorado County. Continued conservation is necessary and beneficial; however, it also hardens demands, requiring more robust drought preparedness and response actions.

Other concurrent state policies – such as the SGMA implementation, and voluntary and mandatory water system consolidation – also actively promoted to enhance regional self-reliance and more rigorous drought protection efforts, especially as they relate to vulnerable populations and rural communities. SB 552 of 2021 also provides further requirements for certain small water systems and counties to improve drought planning and resilience. Such significant changes in practices will be critical to planning for future water supply needs. More discussions are included later in this section.

One unique challenge in the Tahoe Basin is the pending water rights actions by the SWRCB per the Settlement Act and TROA. The Settlement Act provides for the permanent allocation of water between the States of California and Nevada in the Lake Tahoe, Truckee River, and Carson River Basins. For the Lake Tahoe Basin, the Settlement Act provides that the total gross diversions for use within the basin in the State of California, from all natural sources, including groundwater, and under all water rights shall not exceed 23,000 acre-feet per year. As the SWRCB administers surface water rights and groundwater rights differently, reconciliation of the different institutional requirements and limitations must be a high priority for affected Tahoe Basin public water purveyors (TCPUD, STPUD, and North Tahoe Public Utility District) to ensure long-term water supply reliability. Both TCPUD and STPUD hold surface water rights and have pending petitions for new water rights or changes; however, with only some exceptions in TCPUD, both public water purveyors met their demands via groundwater using conjunctive use accounting due to the SWRCB's moratorium on processing water rights applications and change petitions as a result of the Settlement Act and TROA.

Imbalance Assessment

Supporting the vision of the County General Plan requires that land use, at the capacity level, be consistent with the policies, requirements, and conditions in the adopted County General Plan. Section 2.1 (see page x) sets forth the eligibility criteria for certain water uses based on land use designations and zoning ordinances. While a given parcel may be identified as eligible for a certain water use, it does not imply that demands will be realized because additional factors will affect the owner's decision and County's approval to incur certain demands such as:

- Physical conditions (e.g., soil types, slopes)
- Setting (e.g., access roads, limits in dwelling density, preferences in agricultural districts or community center designations)
- Economic development potential (e.g., promote agritourism or ag-commercial)
- Other policies in the County General Plan and associated regulations and permitting requirements (e.g., the total population cap)

These factors can be used to screen parcels to inform the demand estimate, where applicable economic activities, demand management practices, use of technology, and other water management strategies are also considered.

Such an assessment must be updated regularly to reflect changing conditions and new information, re-evaluate risks and uncertainties, and account for the lengthy lead time to go from planning to implementation of an action or infrastructure. Preliminary findings from the ongoing effort to assess the water supply-demand imbalance in both the West Slope and in the Tahoe Basin are summarized below.

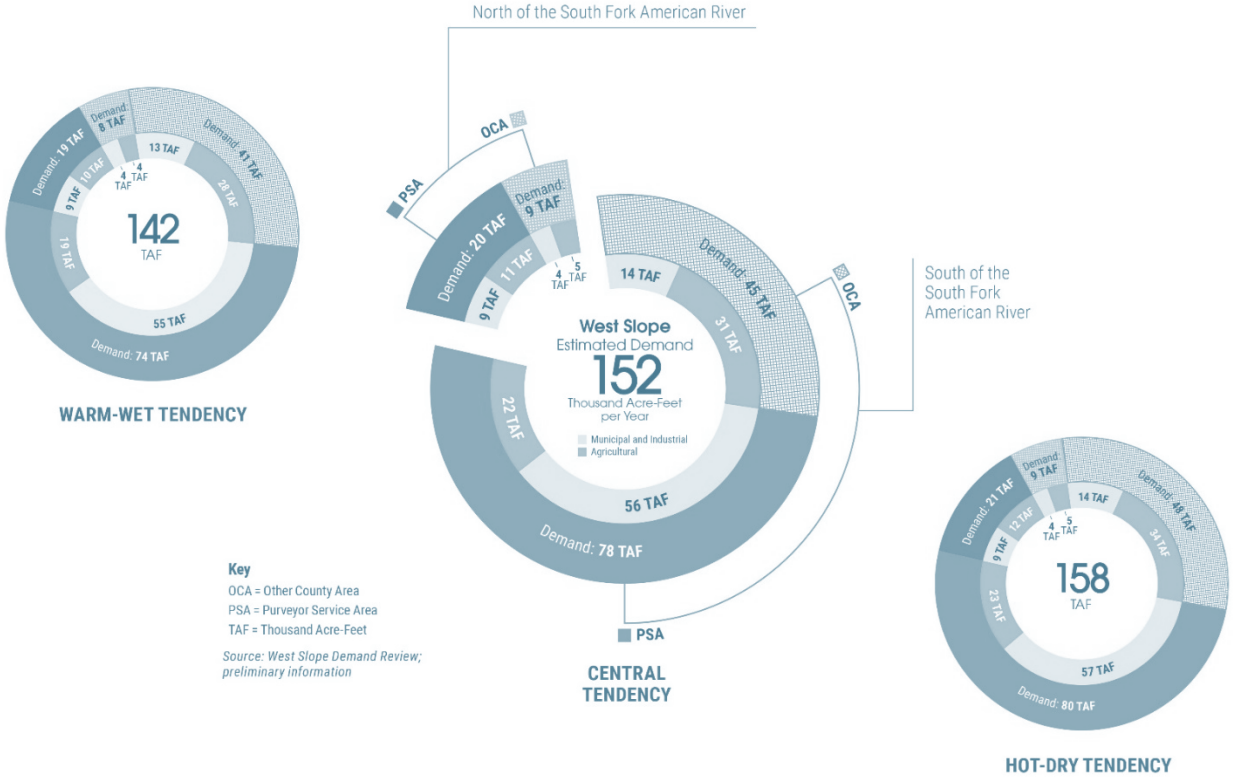
West Slope. The ongoing assessment integrates an in-progress demand revision that includes scenarios for future implementation of urban water conservation requirements, and market-informed economic development potential for commercial agricultural practices and agritourism. Hydrology, precipitation, and evaporation potential under climate change conditions were obtained from the *American River Basin Study* with supplemental information from the State. The findings suggested that existing facilities and operations are likely to be less effective in providing flood protection that is also used for capturing needed water supply. As a result, a substantial water supply-demand imbalance is likely to occur at the capacity level defined in the County General Plan. The imbalance is expected to be intensified during drought conditions. These findings are consistent with those of previous studies that identified the need for additional long-term water supply to sustain countywide socioeconomics, and to provide adequate drought protection with updates and refined details.

Tahoe Basin. The ongoing assessment integrates interim findings from both the pending water right entitlement discussion and demand evaluation. Tahoe Basin demands are based on population growth, economic development, and water-based tourism. A unique consideration in this area is the considerable fluctuation in water use – both seasonally, and during the weekends and holidays – with the influx of tourists. Transient water demands due to seasonal populations present a challenge to implement water management strategies effectively and a major consideration for variance process

under the new urban water use efficiency standards adopted by SWRCB in 2024. Fortunately, the water supply-demand imbalance is likely to be minimal in the Tahoe Basin because projected demands are relatively low in comparison to the available snowpack, even under climate change conditions. Groundwater recharge is expected to continue, irrespective of the form of precipitation. Any imbalance is likely to be tempered by both groundwater accessibility and the limitations on growth and other uses imposed by the TRPA. Tahoe Basin water purveyors in the Tahoe Basin will need to secure the water rights under the TROA, allowing alternative water supply for concerns over emerging groundwater contamination.

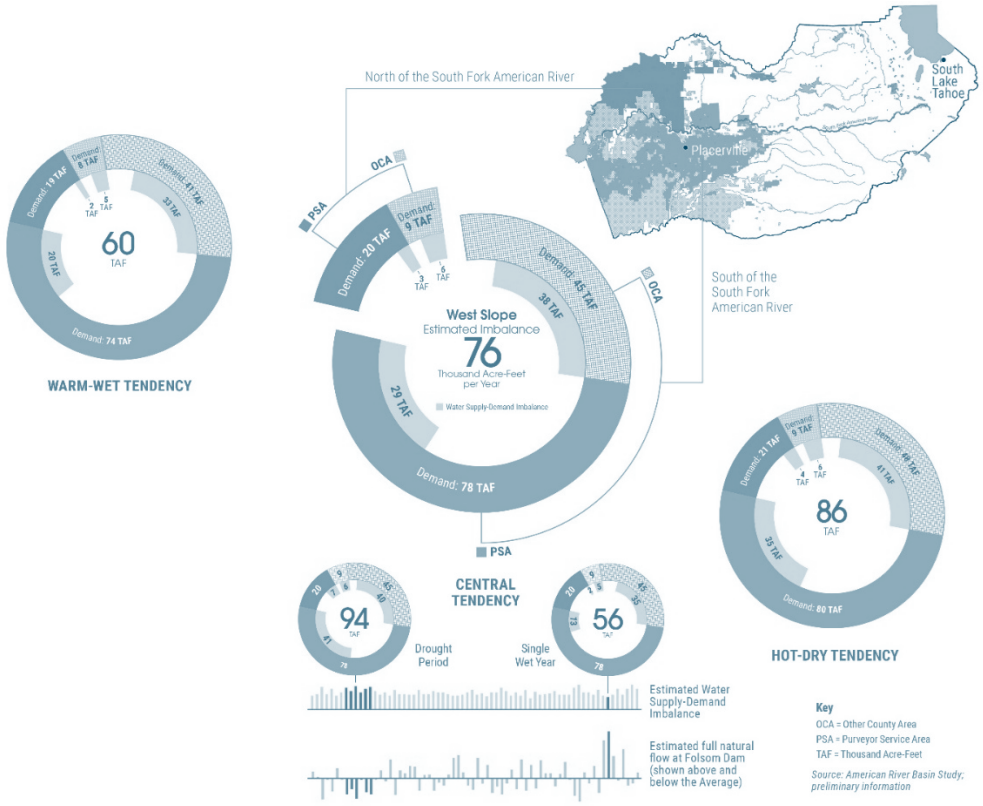
The projected water demand associated with the economic activities and way of life at the capacity level envisioned in the County of El Dorado General Plan is assumed to be realized by 2070. The projected capacity-level demands incorporate considerations of foreseeable demand management practices, technology advancement, and regulatory changes. Climate change also affects agricultural demands and municipal and industrial outdoor demands.

[Note to reviewers: analysis still under development through support from the Water Supply-Demand Imbalance Subgroup. The figure from 2019 WRDMP serves as a placeholder and shows intended information.]

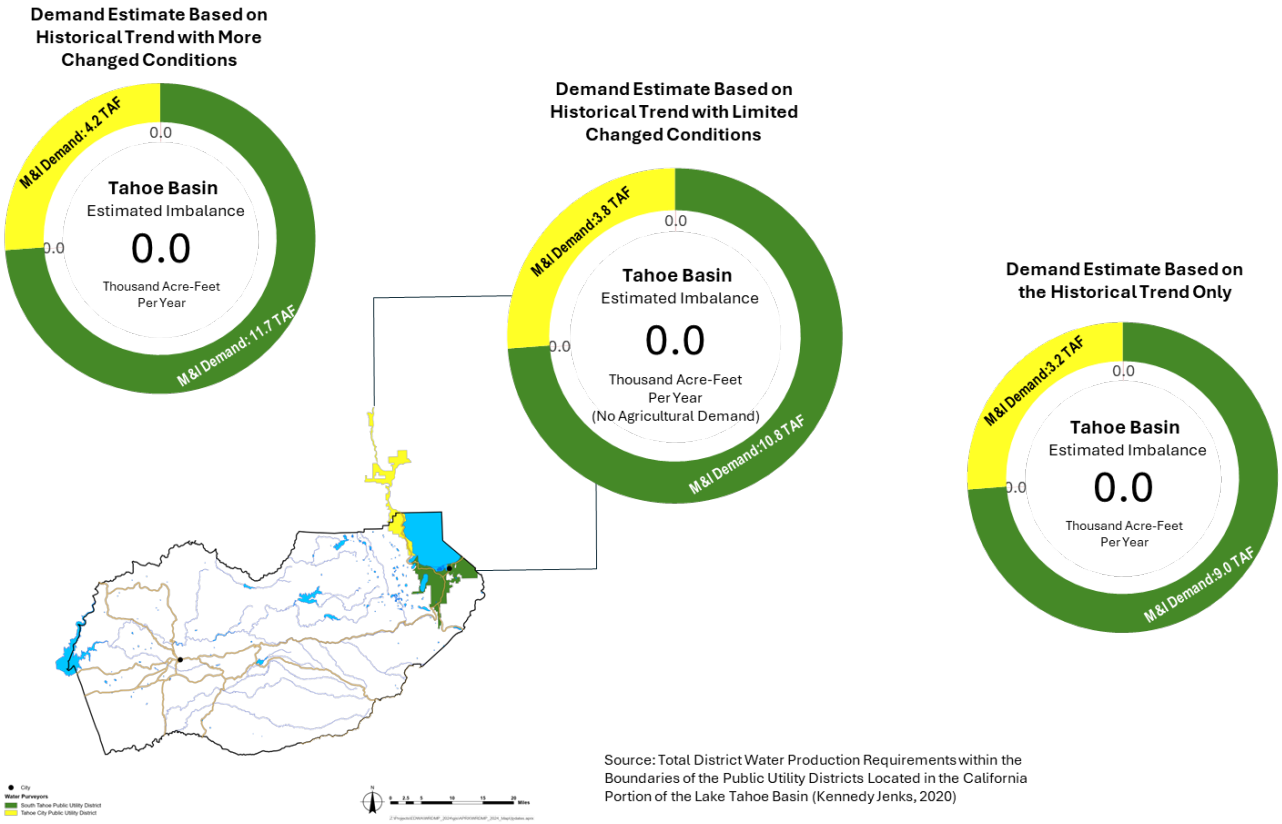


The results from applying the demand projection and climate hydrology in 2070 suggest a significant water supply-demand imbalance at the capacity level, especially during drought conditions, based on existing facilities and operations. Additional adaptation strategies are required for sustaining the socioeconomic conditions and way of life in the West Slope.

[Note to reviewers: The analysis is still under development through support from the Water Supply-Demand Imbalance Subgroup. The figure from 2019 WRDMP serves as a placeholder and shows intended information.]



The Tahoe Basin is unlikely to have a water supply-demand imbalance because of the relatively low demands in comparison with the available snowpack and runoff, even under climate change conditions; however, seasonal populations are one of the major challenges in demand projection and both STPUD and TCPUD are conducting continued reviews but expected to be fully accommodated by California's share of 23,000 acre-feet per year along with other legal water uses.



Source: Total District Water Production Requirements within the Boundaries of the Public Utility Districts Located in the California Portion of the Lake Tahoe Basin (Kennedy Jenks, 2020)

3.2 Limited Groundwater Resources

There are two recognized groundwater basins in El Dorado County: Tahoe Valley South Subbasin and Tahoe Valley West Subbasin; both in the Tahoe Basin. Groundwater in the Tahoe Basin is replenished by local snowmelt and stream flows, meaning that recharge is sensitive to snowpack conditions and potential climate change effects.

Tahoe Valley South Subbasin is the source of water supply for STPUD and other local water suppliers (small public water systems) on the south shore of Lake Tahoe. This subbasin is of medium priority under SGMA regulations. STPUD and the Agency are serving as the Groundwater Sustainability Agencies (GSA) for areas in and outside of the STPUD service area, respectively, with an approved Alternative to a Groundwater Sustainability Plan (GSP) developed by STPUD in coordination with the Agency. The majority of TCPUD's water supply is from deep wells in the Tahoe Valley West Subbasin, which is located in between El Dorado County and Placer County; mostly in Placer County. This subbasin is of very low priority and thus requires no GSA or GSP under SGMA.

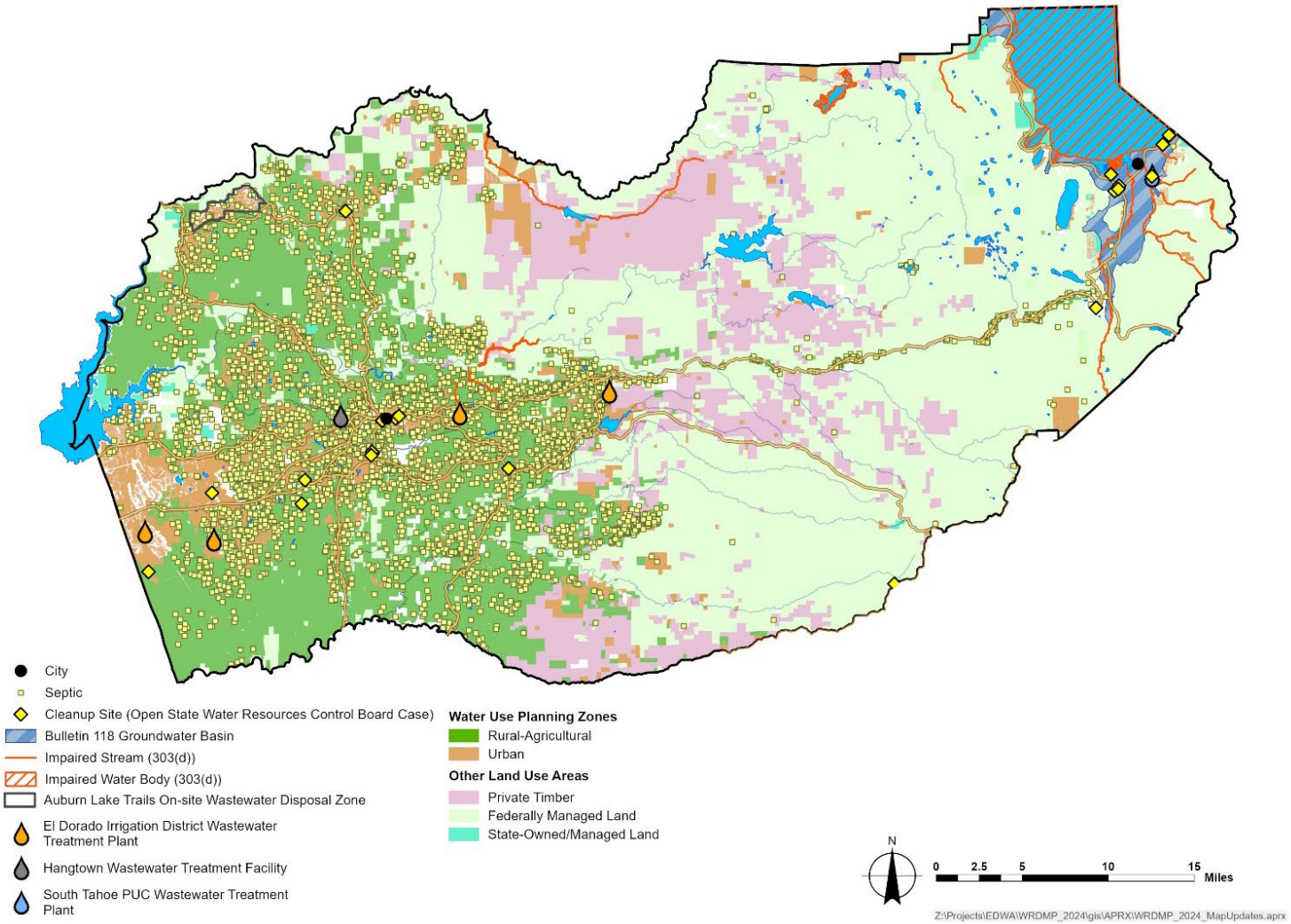
In the rest of the Tahoe Basin and the West Slope, localized groundwater resources are often shallow and unreliable in fractured rock formation. In these areas, groundwater provides limited water supply to existing agricultural practices and domestic uses from the permitted small water systems or domestic wells that could be vulnerable during prolonged droughts and other factors causing water shortage conditions (e.g., power shutoffs during severe weather conditions). The County EMD administrates well permits. The records suggested that there were more than 14,000 wells in El Dorado County; however, well use changed as more areas were served by public water purveyors with more reliable water supplies. Domestic well drilling has been limited to parcels greater than or equal to four and one-half (4.5) acres since 1977 and greater than or equal to five (5) acres since the adoption of the 2004 General Plan. Recently, the County EMD also experienced administrative challenges about agricultural well permit applications for small residential parcels in the West Slope. Although allowed by zoning on face value, commercial agricultural practices are not likely to be developed due to its limited developable area for agricultural use. However, the agricultural well application requires no supporting agricultural development plan nor concurrence by the Agricultural Commissioner. This situation does not only create administrative challenges, but also increases drought vulnerability and potential confusion in overall water management and land use policies.

Groundwater is also susceptible to pollution from runoff or contamination from highways, urban development, and agricultural practices. In the Tahoe Basin, the Tahoe Valley South Subbasin has historical contamination of

perchloroethylene and methyl tert-butyl ether near the intersection of Highways 50 and 89 (i.e., the South Lake Tahoe Y Area) since the 1980s, and naturally occurring uranium and arsenic sometimes resulted in temporarily shutdown of affected wells. Recently, emerging contamination of per-and polyfluoroalkyl substances has been detected in the STPUD system and prompting the consideration of exploring potential use of surface water supply. In the West Slope, naturally occurring arsenic can sometimes create water quality concerns, resulting in water supply challenges. The extensive agricultural practices in the West Slope are of low toxicity and pose a limited risk of groundwater contamination. In rural areas, spreading and leach field discharges are used by EID's Camino Heights Wastewater Treatment Plant and Gold Ridge Forest Wastewater Treatment Facility under the regulatory oversight of the Central Valley Regional Water Quality Control Board.

There have been reported incidents of contamination from the septic tank systems found throughout the West Slope along the highway corridor. Although there is no current prevailing problem of polluted runoff or septic tank systems impacting the limited groundwater resources, it is worthwhile to monitor the water quality of shallow and localized groundwater resources. Mobile home parks and other areas close to water bodies may pose greater contamination threats. The County EMD is responsible for permit issuance and administration of septic tank systems in El Dorado County. There are two onsite maintenance districts or zones in El Dorado County: Auburn Lake Trails (managed by GDPUD) and Greenstone Estate Mobile Home Park. Separately, Greenstone CSD oversees the septic tank systems in its service area boundaries.

In general, water quality concerns in El Dorado County are low. However, monitoring to protect surface water and groundwater resources from pollution should continue.



3.3 Vulnerability During Droughts

Water purveyors and agencies continue to actively plan for emergencies and extended droughts. The Agency was proactive in previously sponsoring regional drought plans to provide overall broad coverage throughout El Dorado County. Historical drought response in El Dorado County has been positive. For example, after the 1976-1977 drought, water meters were installed to improve water management. There were no widespread water shortages during recent droughts (e.g., 2012-2015 and 2022-2022) with the implementation of emergency regulations and mandatory water conservation.

The West Slope is vulnerable to drought because it relies primarily on surface water and the underlying fractured rock formation does not provide reliable groundwater. Water reuse is limited and challenging for rural foothill communities. EID and STPUD are two public water purveyors who have portions of their service area that are conducive for recycled water use. The current water reuse is mostly for outdoor landscape irrigation. EID had completed a master plan to increase water reuse with its Deer Creek and El Dorado Hills Wastewater Treatment Plants. EID's recycled water system is nearing buildout as stated in the 2020 UWMP. EID does not anticipate growth in the recycled systems service area; and the economic feasibility to expand the system is not justified in consideration of the additional capital costs of the infrastructure, long term operational costs, and sufficient potable water supplies already exist. Due to the stringent discharge requirements in the Tahoe Basin, STPUD has limited water reuse for alfalfa growing and exports most of the recycled water from its wastewater treatment facility to Alphine County. STPUD is exploring options under its strategic planning effort.

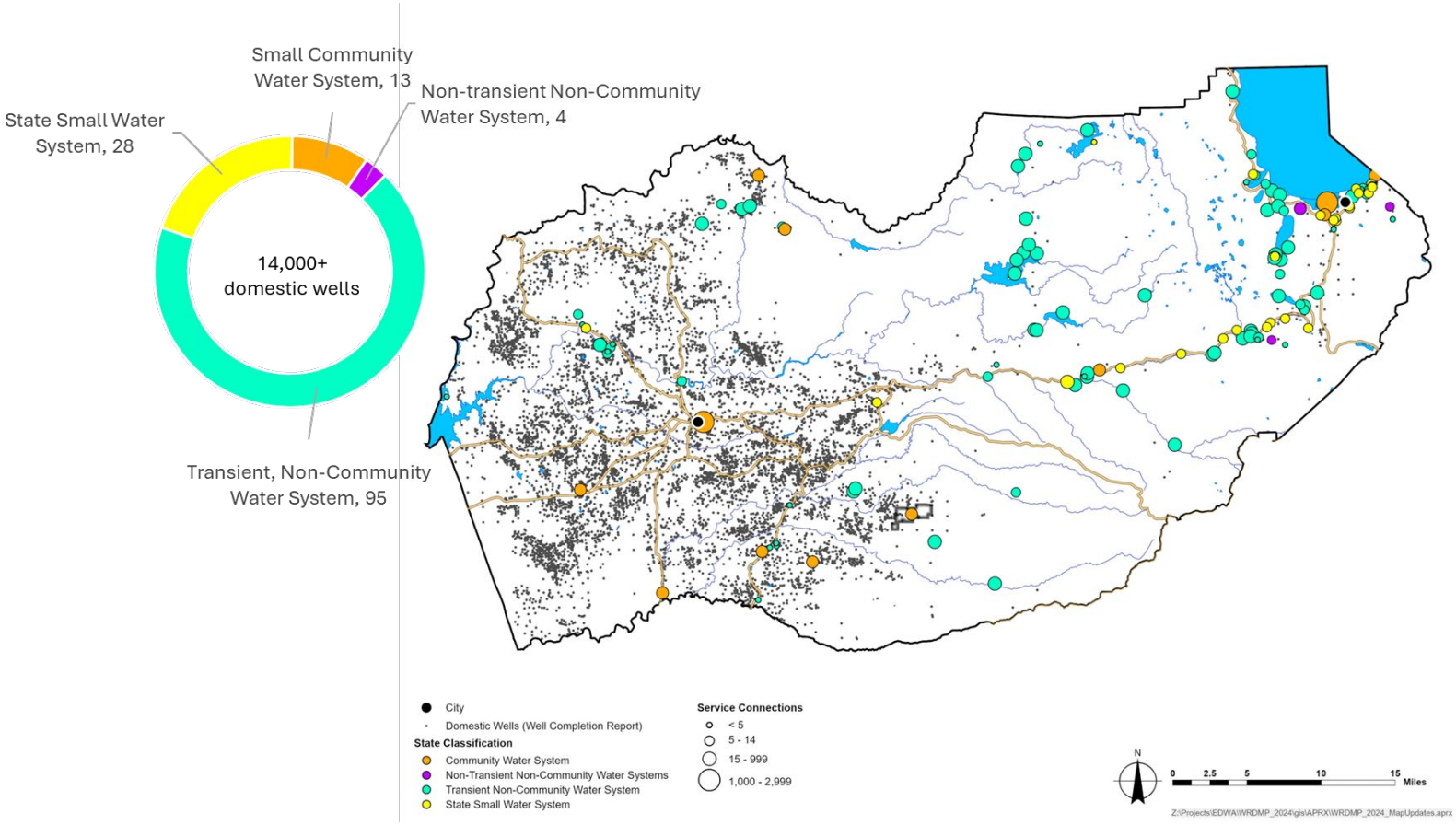
Per requirements under SB 606, urban water suppliers like EID, GDPUD, STPUD, and TCPUD were required to update their UWMP and develop a Water Shortage Contingency Plan (WSCP) to improve drought preparedness. In the Tahoe Basin, water suppliers are less susceptible to drought conditions and are managed under TROA. Most of this area is covered by drought ordinances overseen by STPUD and TCPUD, and the OCA areas in the Tahoe Basin is primarily open space. In the West Slope, the OCA and small water suppliers are likely to experience hardships as a result of not having secure water supplies or lack of backup supplies. GFCSD is the largest small water system in the West Slope and oversees its own drought plan. In the recent droughts, residents with dry wells obtained needed water supplies from EID's bulk water stations.

Through a Local Primary Agency agreement with the SWRCB, the County EMD oversees 112 small public water systems. With the delegated authority from the County Health Officer, EMD also oversees 28 state small water systems. Larger public water systems (e.g., water systems of major water purveyors) are overseen by the SWRCB directly. These small public water systems and state small water systems are often isolated – not connected to larger water purveyors and agencies, even if they are in close proximity – increasing the likelihood of water supply impacts during drought conditions as well as reductions in the quality of groundwater when wells are used. Most of the small public water systems in El Dorado County serve transient populations. There are hundreds of domestic wells providing domestic water use as well.

Small water suppliers (i.e., small public water systems, state small water systems, and domestic wells) are often less resilient to natural disasters, such as drought and fire, have more difficulty adjusting to regulatory changes, and may struggle to fund infrastructure maintenance and replacement due to poor economies of scale and lack of staff. To improve drought resilience, the SWRCB encourages water system partnerships and voluntary consolidation, and SB 88 of 2015 further authorizes the SWRCB to require certain water systems that consistently fail to provide safe drinking water to consolidate with, or receive an extension of service from, another public water system. The County EMD has worked with water purveyors and small public water system owners on potential consolidations to achieve better water supply reliability and public health under the SWRCB's water system partnerships and voluntary consolidation program. The successful cases are mostly in the Tahoe Basin. The substantial infrastructure needed for a small water system to overcome the difficult terrain and extensive distance to connect to a major public water purveyor is often cost prohibitive. Even if federal or state governments provide financial assistance to cover initial infrastructure costs for connection, the long-term operation and maintenance costs are likely unaffordable for most rural communities.

To improve the understanding of drought impacts in the West Slope and develop response and mitigation actions on a regional level, the Agency completed an Upper American River Basin Regional Drought Contingency Plan (UARB RDCP) in 2023 in collaboration with Reclamation, County, public water purveyors, and interested parties. The Agency is currently expanding the planning efforts to develop an El Dorado County Drought Resilience Plan (CDRP) for the County to cover the requirements by SB 552 of 2021 to improve drought planning for small water suppliers. Going beyond SB 552 requirements, the Agency's County Drought Resilience Plan will include water shortage vulnerability assessment and identified response and mitigation actions for all small water suppliers to ensure equity and comprehensive coverage. In addition, the Agency also worked with County's Office of Emergency Services to update the drought component of the Multi-Hazard Mitigation Plan to further improve alignment, leveraging information from the UARB RDCP and CDRP.

Upon completion of the County Drought Resilience Plan per SB 552, El Dorado County will have complete drought planning coverage for all residents. Based on County's records, around 4,000 domestic wells are active in El Dorado County.



Pending update

3.4 Impacts of Wildfires

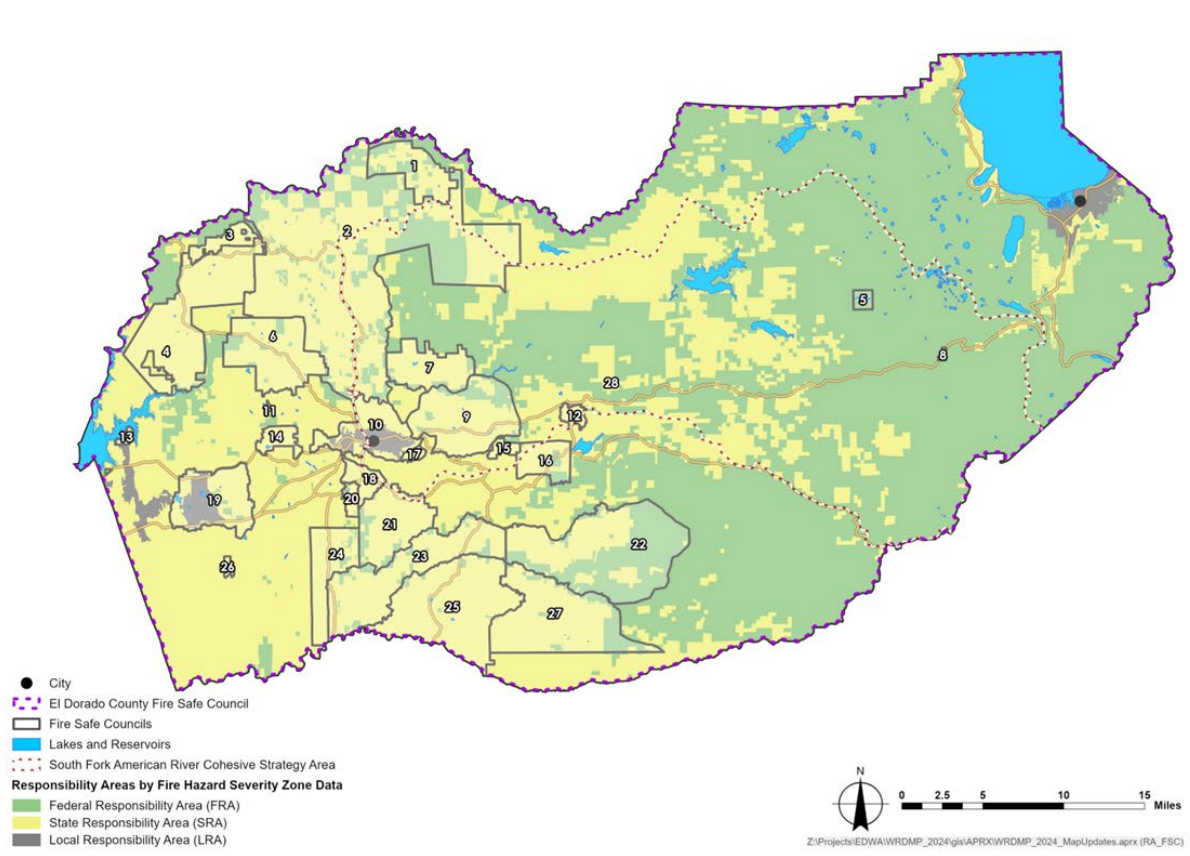
Wildfire damage and suppression costs have risen continuously over time. In addition, the frequency, size, and intensity of these fires are expected to continue to grow – another effect of climate change, past forest management decisions, overly dense forests, and prolonged droughts. Loss of life and structures as a direct or proximate result of wildfires is at an all-time high. The significant high wildfire risks highlighted in 2019 WRDMP unfortunately became reality in 2021 Caldor Fire and 2022 Mosquito Fire. FEMA recently published its National Risk Index system, which suggests that El Dorado County is over 91 percentile in the nation for wildfire risk and over 32 percentile in California when considering expected annual loss, social vulnerability, and community resilience.

Fire protection is divided between Federal, State and Local responsibility. Within the State and Local Responsibility Areas, the California Department of Forestry and Fire Protection identified zones likely to experience fire hazards. Although equivalent information is not available for the Federal Responsibility Area the fire hazard is considered high because of the accumulation of biomass in the national forest areas.

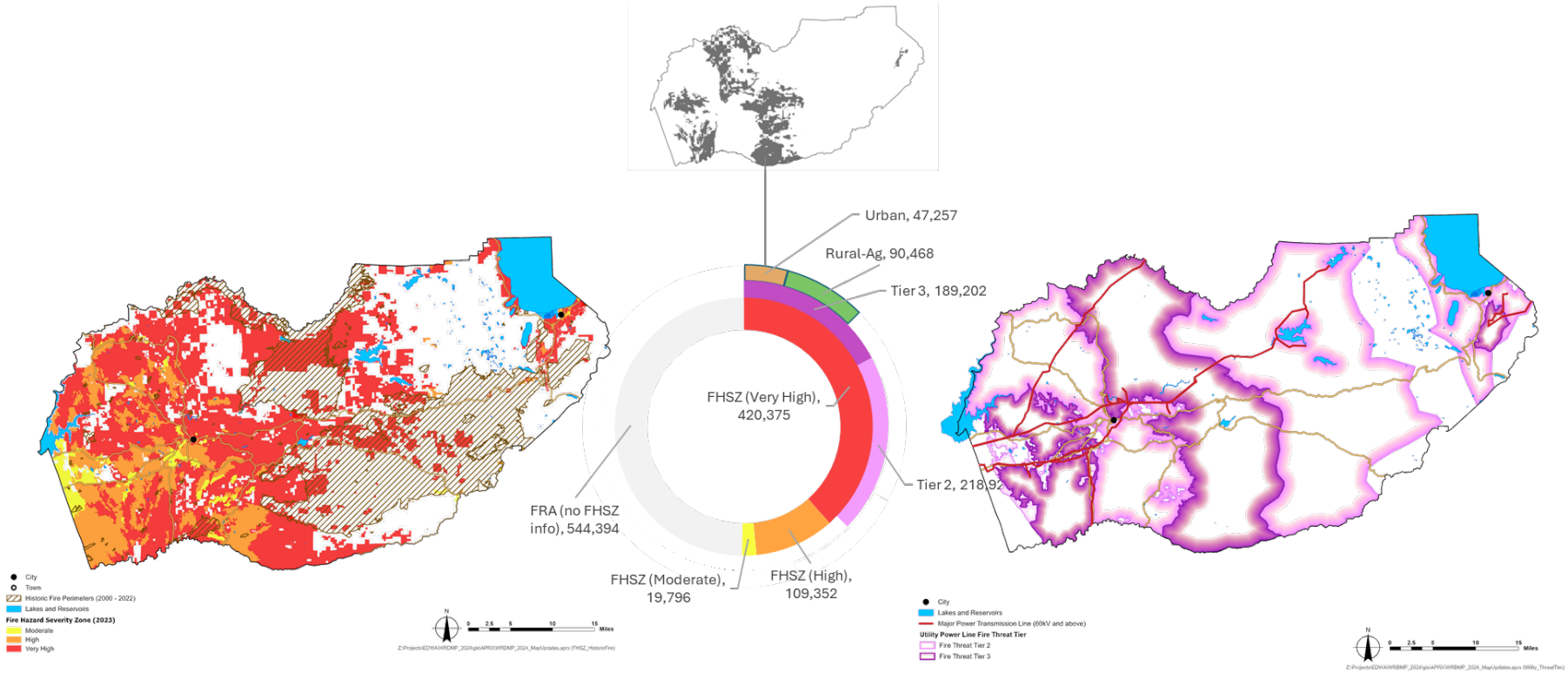
As part of the U.S. Forest Service-led National Cohesive Strategy for forest fire management, the South Fork American River Cohesive Strategy is being implemented in collaboration with both federal and state management agencies. Recognizing sizeable areas in El Dorado County are without this level of attention, the County established the Office of Wildfire Preparedness and Resilience after the Caldor Fire to organize local agencies and communities to provide resources, outreach, and planning support to foster coherent and coordinated mitigation to wildfire risk. It also leading the effort to update the Community Wildfire Protection Plan for the West Slope in collaboration with community-based Fire Safe Councils to identify projects and activities needed to protect communities from the risk of wildfire and provides a framework for local communities, organizations, and agencies to take action. El Dorado County was named in the 2024 Fire Risk Reduction Community List per Public Resources Code Section 4290.1 by the California Department of Forestry and Fire Protection (CAL FIRE). Prior, TCPUD was named in CAL FIRE’s inaugurating 2022 list.

Wildfires do not observe jurisdictional boundaries and communities with mixed responsible parties need to take leadership in coordinating implementation of mitigation actions. That is why community-based planning and efforts need to be integrated as part of regional wildfire management which is divided among federal, state and local agencies. The County's Office of Wildfire Preparedness and Resilience plays an important role in bridging this coordination.

Label	Fire Safe Council (FSC)
1	Volcanoville FSC
2	Georgetown FSC
3	Auburn Lake Trails FSC
4	Cool-Pilot HIll FSC
5	Wrights FSC
6	Coloma-Lotus FSC
7	Mosquito FSC
8	Strawberry FSC
9	Camino FSC
10	Placerville FSC
11	Gold Hill Estates FSC
12	Gold Ridge Forest FSC
13	Lakehills FSC
14	Greenstone FSC
15	Rancho Del Sol FSC
16	Sierra Springs Regional FSC
17	Texas Hill FSC
18	Diamond Springs FSC
19	Greater Cameron Park Area FSC
20	Patterson Ranch FSC
21	Oak Hill FSC
22	Grizzly Flats FSC
23	Sandridge FSC
24	Logtown FSC
25	Aukum Fairplay FSC
26	Royal Equestrian FSC
27	Omo Ranch FSC
28	El Dorado County FSC



The overlapped areas of the Very High Fire Hazard Severity Zone and Tier 3 Utility Power Line Fire Threat area are of the most concern in the West Slope with planned development shown by water use planning zone designations. There is also a small overlapping area in the Tahoe Basin.



(Note: Currently working with USFS for representative information equivalent or similar to FHSZ; will apply to the left map when available)

The fire hazard severity zones are based on relevant factors such as fuels, terrain, and weather and are described according to their potential for ignition to buildings. The fire hazard severity zones also relate to building codes designed to reduce ignition to buildings. New buildings associated with the anticipated economic growth in El Dorado County in the State and Local Responsibility Area must comply with the Wildland Urban Interface Codes designed to ensure that structures are built with fire resistant material that minimize damage to those structures during a wildfire. A large fraction of the areas in the “very high” fire hazard severity zone are timber lands that are managed by private entities and federal lands in national forests.

The U.S. Geological Survey’s 2018 study on *Historical Patterns of Wildfire Ignition Sources in California Ecosystems,* indicates that wildfires can be effectively decreased in California, except for those caused by utility power or transmission lines. It states that the most devastating fires could occur in areas with both abundant vegetation (forests, grasses, agricultural activities, etc.) and utility power transmission lines. In recent years, most wildfires of concern in the state (fires in Mendocino, Santa Barbara/Ventura, Sonoma, and Butte Counties in 2017 and 2018) are reported to be related to falling utility power transmission lines, although official data on some of these fires are yet to be confirmed. California Public Utility Commission publishes risk maps with different tiers for public awareness. In El Dorado County, the 2000 Latrobe Fire and 2016 Emerald Fire were caused by utility power line issues. The 2022 Mosquito Fire may be another example, but the determination is not final.

The prevalent utility fires resulted in significant liabilities on utilities at fault; even with the State’s assistance, this resulted in major energy rate hikes by PG&E, which also is the primary energy purveyor in El Dorado County, raising challenges in affordability in rural communities. In response, Pioneer Community Energy began its service in El Dorado County as a local community choice aggregate in 2022. The concern over wildfires caused by utility facilities also resulted in Public Safety Power Shutoffs in severe weather conditions by utilities. Without backup power, rural communities cannot use groundwater pumps for basic water supplies, creating a water shortage condition independent of drought.

Another unique aspect in El Dorado County is that the wooden flumes from the Gold Rush era and other delivery structures are particularly vulnerable to both direct impacts (destruction during a wildfire) and indirect impacts (damage from later mudslides and trees falling, originating at the burned site). In many cases, unlined ditches and canals are also subject to indirect impacts from wildfires. The wooden flumes and unlined ditches are major water conveyances in the West Slope, and interruption of water supply due to fire damage would be significant. EID’s wooden flume system was

heavily damaged in 2021 Caldor Fire, impacting one third of its water supply as an example and now has a more durable replacement.

Water resources-related impacts from wildfires can be direct or indirect, with both affecting the ability to reliably deliver water of acceptable quality. In El Dorado County, direct impacts on water supply from the damage to water supply-related infrastructure (treatment facilities, powerhouses, conveyance, etc.), and indirect impacts (such as increased risks for landslides, erosion, water pollution and flooding that can cause damage) are often realized long after the disaster. Vegetation management can be important for minimizing the direct and indirect impacts from wildfires. EID and GFCSD have observed an increase in sediments and turbidity in their source water, as well as more algae growth due to lack of tree covers after the Caldor Fire. GDPUD only reported an increase in sediments and turbidity after the Mosquito Fire. On the other hand, GFCSD also reported increased summer flow post-Caldor Fire at the springs in its watershed that provide water supply to the wildfire-battered Grizzly Flats community. The threats for future wildfires can be addressed through support for effective forest management, and removal of the high concentrations of dead trees, which can be attributed to the prolonged droughts and accumulated biomass. These compounded effects support the need for a more holistic approach to headwaters management.

3.5 Headwaters Management

Headwaters significantly contribute to California's water quality and water supply reliability. But variables such as climate change, increasing wildfires, groundwater overdraft, and reduced snowpack are looming and will threaten headwaters' ability to continue serving that purpose. El Dorado County is in the American River headwaters, and the health of the headwaters and its management directly affect El Dorado County water supplies, especially in communities relying on local minor streams or springs. Properly managed American River headwaters could also have broader effects on statewide water supply because the American River flows regulated at Folsom Reservoir are a major source of statewide water supply.

Two areas of headwaters management are critical: (1) Meadow health that can affect water retention and water quality; and (2) Forest management to address both high tree density with significant canopy cover that intercepts snowpack and post-wildfire forest density reduction - both reduces water retention, and increase evapotranspiration, resulting in less water supply.

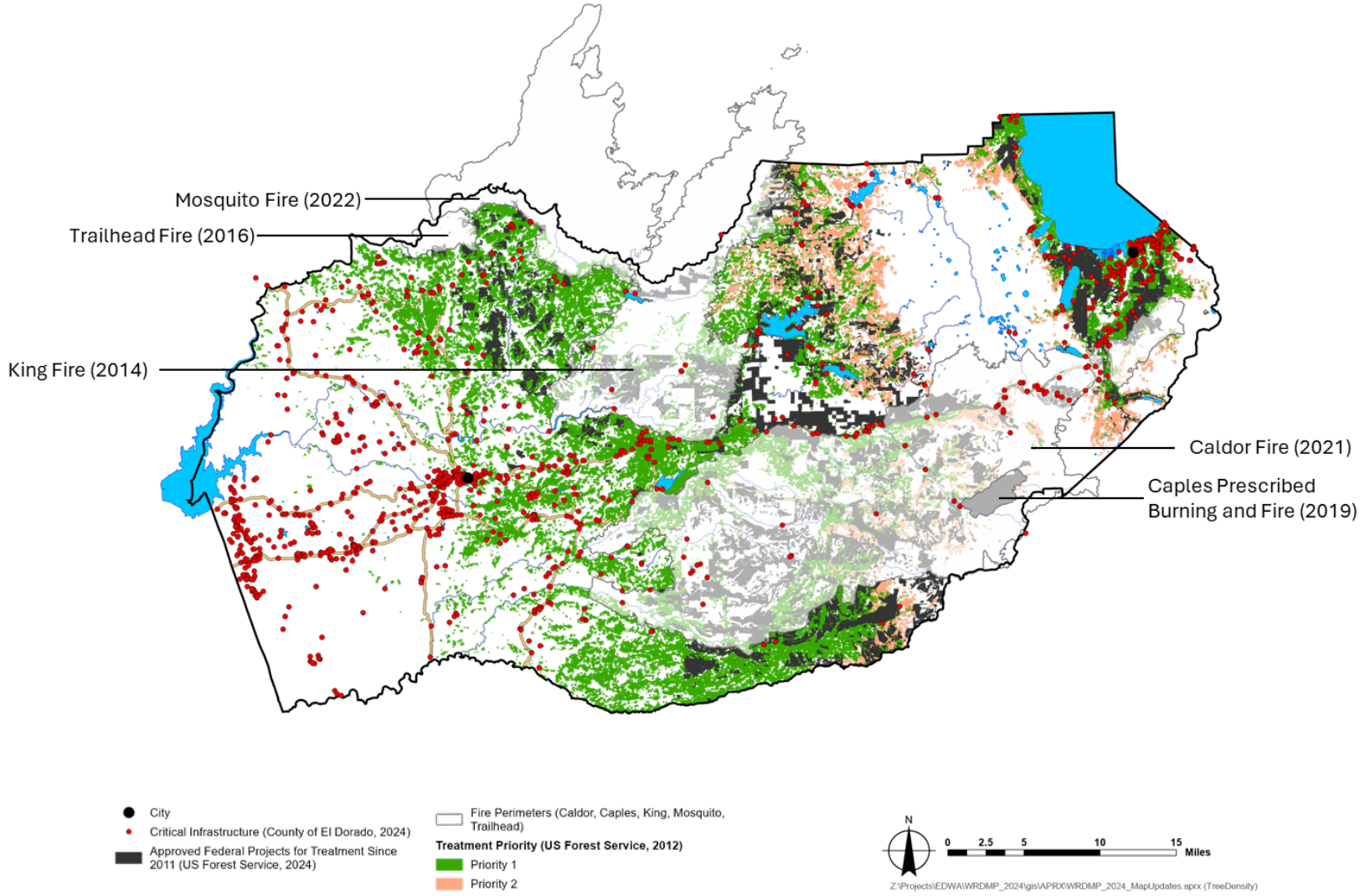
El Dorado County is part of the Cosumnes, American, Bear, Yuba (CABY) Integrated Regional Water Management region, and these headwaters management issues were included in the plan; however, implementation was limited due to lack of funding for these low population areas and the plan was not vertically integrated with local jurisdictions. Decades of improper forest management have resulted in dense forests that not only affect water supply but also increase the threat of wildfires. According to the 2011 *Forests and Water in the Sierra Nevada: Sierra Nevada Watershed Ecosystem Enhancement Project*, first-order estimates based on average climate information suggest that reducing forest cover by 40 percent of the maximum levels across a watershed can potentially increase water yields by 9 percent.

Exacerbating fire risk is the increase in development in the urban/wildland interface and pervasive tree mortality due to prolonged drought conditions across the Central and Southern Sierra Nevada. It is estimated that over 129 million trees have died across the state since 2010, and this number continues to grow. El Dorado County is not immune to this epidemic and declared an emergency for unprecedented tree mortality in March of 2016 due to drought conditions and related bark beetle infestations. The emergency declaration is still in effect today.

The Agency convened the UARWG to develop the PWP in 2023 to develop a cohesive and comprehensive plan for managing the upper American River watershed for long-term sustainability and promote resilience of the communities within. The holistic approach to leverage natural, built, and social capitals to create and reinforce the expansion of natural, built, and social capacities in the watershed. The Agency is currently working closely with U.S. Forest Service, RCDs, and other partners to promote changes in management and project implementation on a landscape level.

California Department of Finance published its new 2060 population projection in March 2024 showing consistent decline of rural communities across all headwater regions and increase into the dangerous floodplains in the Central Valley. This is unavoidably contributed in part due to the unrelenting wildfire incidents and other natural disasters, increasing regulatory requirements in urban wildland interface areas, and unaffordable or unavailable home insurance. Recovery of wildfire-impacted communities like Grizzly Flats is slow and challenging. The overall management of headwaters must change and fit regional needs and unique conditions. Recently, the Agency further developed a first-ever watershed-level valuation of ecosystem goods and services to support the implementation of the PWP. The anticipated utility of this new information is to facilitate state and federal policy changes and develop innovative funding mechanisms that are durable and equitable for maintaining healthy forests and rural communities.

Overly dense forests reduce water yield and increase wildfire risks to the communities and critical infrastructure. Approved forest treatments need to be at an increased pace to prevent additional catastrophic wildfire events, especially in the Georgetown-Quintette area.



3.6 Stormwater as a Resource

For many years, stormwater was considered a nuisance to be managed to reduce pollution of rivers, lakes, and the ocean. Stormwater runoff has limited water quality impacts in most of El Dorado County, and runoff tends to occur along transportation corridors. Urban stormwater runoff is the largest source of pollution in Lake Tahoe. Stormwater discharges are regulated through National Pollutant Discharge Elimination System permits.

In El Dorado County, there are some impaired bodies of water on the Clean Water Act 303(d) list because they have a high presence of mercury, aluminum, manganese, Escherichia coli, invasive toxic species, sediment, or iron. This means that stormwater management is an important issue to protecting water quality and supply. During intense rain events, wastewater treatment plants could present a risk to water quality if collection lines overflow or leak into nearby water bodies. The cities of Placerville and South Lake Tahoe are areas where this risk exists.

Recent changes in state water management policy present an opportunity to treat stormwater as a source of water that can be leveraged for reliability purposes, in particular, for groundwater recharge. In the Tahoe Basin, groundwater recharge from stormwater occurs naturally to serve as a reliable water supply, but the West Slope is sitting on a fractured rock formation with no significant groundwater capacity to realize such a benefit. Stormwater resource planning requires customization for these local conditions, as reflected in the stormwater resource plans for the West Slope and Tahoe-Sierra Region which recognize stormwater as an additional water resource that will require continued efforts for implementation.

3.7 Vulnerability to Flooding

El Dorado County is not completely immune from flood risks being in a headwater setting with steep terrains. There is a fragmented presence of the 500-year floodplain in El Dorado County as delineated by Federal Emergency Management Agency. This floodplain is designated as a Moderate Flood Hazard Area, meaning that the areas are not in immediate danger from floods caused by overflowing rivers or hard rains but are still at risk of flooding. The floodplain closely follows some of the West Slope local rivers and streams, Tahoe Basin tributaries, and Lake Tahoe itself.

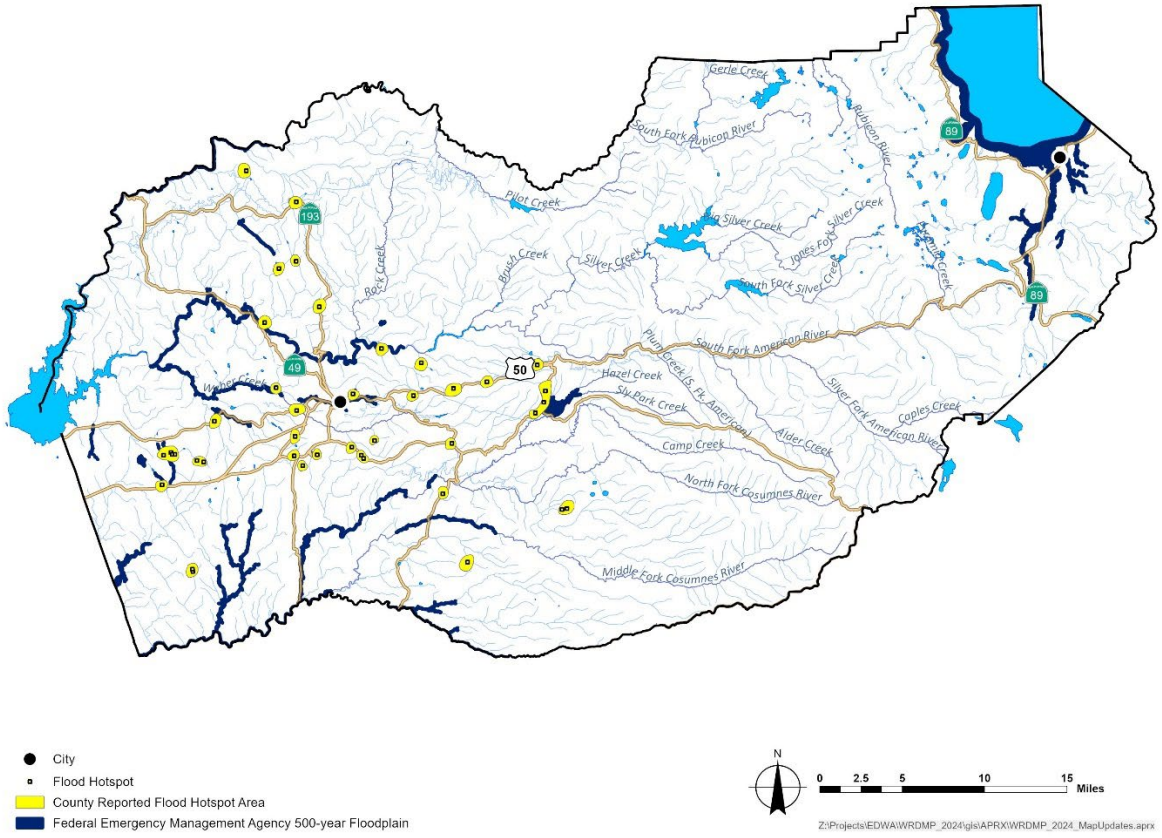
The combination of West Slope hydrology, soils, and land-surface slopes means that it generally experiences infrequent and localized flooding. Chronic drainage problems and resulting occasional flooding have occurred in low-lying areas of established communities. Runoff that is discharged into local creeks and tributaries can also be constrained by culverts

that are undersized or are blocked with debris and sediment, which intensify that flooding. The increase in rainfall intensity under climate change could overwhelm aged system designs in some communities. More than 10 atmospheric river events with intense precipitation during the early months of 2023 created localized flooding in some neighborhoods.

Flooding reported in the Tahoe Basin is mostly from rainfall on snow events. Residential areas and roads plowed for snow removal are likely to experience flooding during rain events when runoff cannot infiltrate through the snow layer or the impermeable plowed surfaces.

Most flooding in the West Slope is localized and often constrained by drainage conveyance capacity. In the Tahoe Basin any flooding generally results from rain-on-snow events. In addition to the floodplain information used for Federal Emergency Management Agency's National Flood Insurance Program, County's Department of Transportation identified a list of hotspots under the Phase II Municipal Separate Storm Sewer Systems permits for various reasons including flooding concerns.

Pending addition of Tahoe Basin information from DOT.



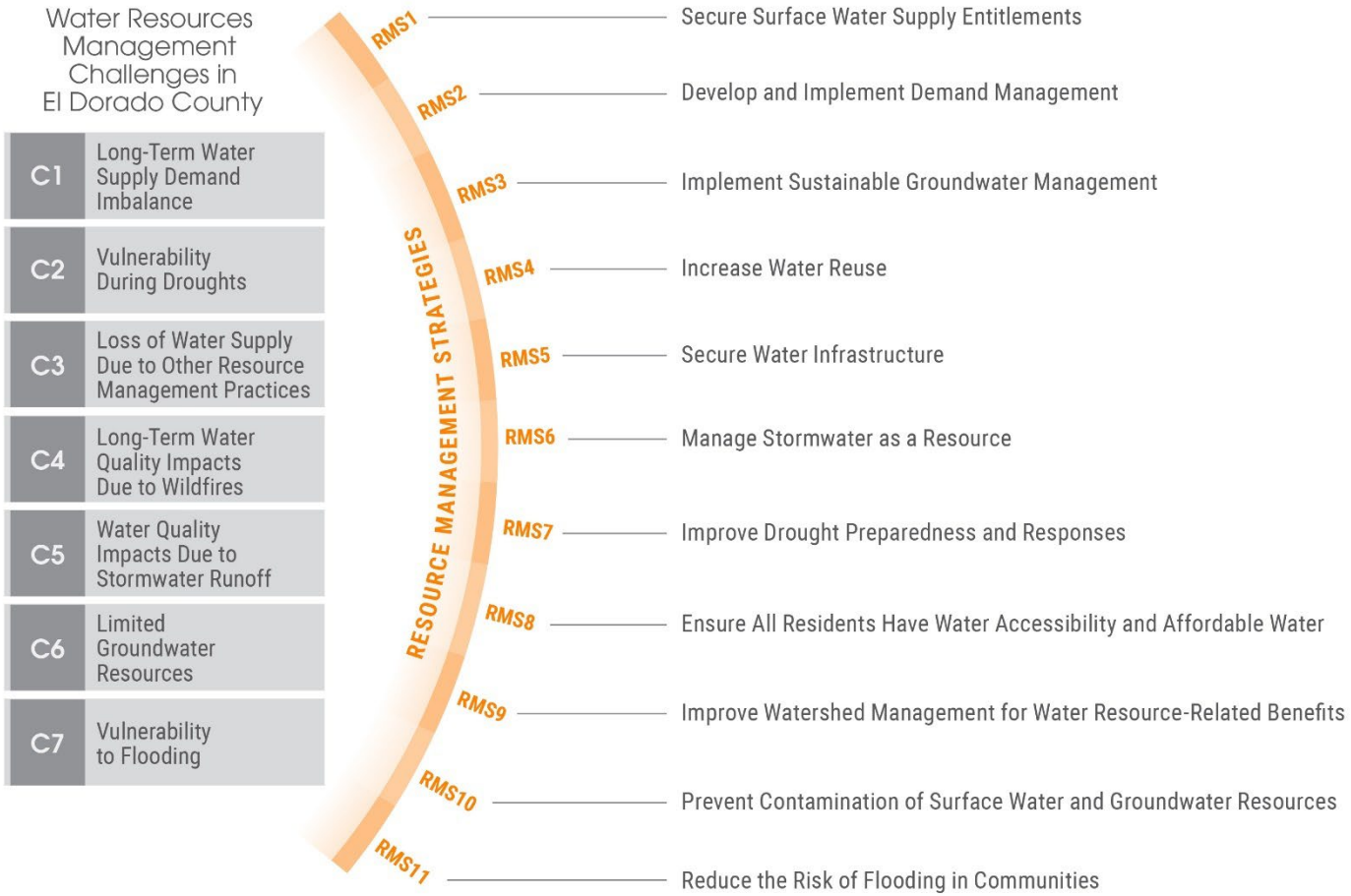
Section 4 – Resource Management Strategies

Achieving the vision in the County General Plan requires an integrated approach and comprehensive strategies that accommodate continual changes in climate variability, regulatory environment, and progress made in various mitigation and adaptation actions. Although partnerships with other regional/state/federal agencies cannot be overemphasized for successful implementation, we, as resource managers in El Dorado County, must take the initiative.

Broad Resource Management Strategies (RMS) were developed to help address identified water resource-related challenges described in Section 3. For an issue as complex as water resource management, an identified challenge may be mitigated with the combination of multiple RMS. Similarly, an RMS may contribute to improvements of multiple identified challenges.

Each RMS represents *what* needs to be done on a broad, strategic level as well as *who* is (or are) primarily responsible for making it a reality. Correspondingly, the Agency has different roles and responsibilities for identified management actions to advance a RMS. The Agency's role may be to lead, facilitate, or support an RMS, or some combination of those roles with specific emphases and focused outcomes, consistent with its authority and the principles of engagement (described in Section 1).

As implementation continues, RMS and associated management actions need to be updated and refreshed to reflect changed conditions, emerging threats, and the elevated foundation built on our accomplishments to date. Particularly, the WRDMP24 incorporates RMS and management actions identified in the PWP relevant to water resource management to reinforce the mutual support and consistency in implementation.


Water Resources Management Challenges in El Dorado County
C1 Long-Term Water Supply Demand Imbalance
C2 Vulnerability During Droughts
C3 Loss of Water Supply Due to Other Resource Management Practices
C4 Long-Term Water Quality Impacts Due to Wildfires
C5 Water Quality Impacts Due to Stormwater Runoff
C6 Limited Groundwater Resources
C7 Vulnerability to Flooding
RESOURCE MANAGEMENT STRATEGIES
RMS1 Secure Surface Water Supply Entitlements
RMS2 Develop and Implement Demand Management
RMS3 Implement Sustainable Groundwater Management
RMS4 Increase Water Reuse
RMS5 Secure Water Infrastructure
RMS6 Manage Stormwater as a Resource
RMS7 Improve Drought Preparedness and Responses
RMS8 Ensure All Residents Have Water Accessibility and Affordable Water
RMS9 Improve Watershed Management for Water Resource-Related Benefits
RMS10 Prevent Contamination of Surface Water and Groundwater Resources
RMS11 Reduce the Risk of Flooding in Communities

4.1 RMS1 – Secure Surface Water Supply Entitlements

At its core, water supply planning is about looking at all aspects of available water sources (e.g., yield, reliability, quality, infrastructure, cost, etc.). The basis for a surface water supply includes water rights and contract entitlements, and such a supply is subject to increasing hydrologic variability and regulatory constraints. Protecting existing water rights and contract entitlements from further reductions in reliability is as important as securing pending and planned water rights and contract entitlements – planning for robust economic development cannot leverage what does not yet exist. The Agency secured the Public Law 101- 514 (Fazio) CVP Water Supply Contract in 2019 and continues to pursue additional area-of-origin water rights and facilities as climate adaptation strategies.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
1a. Secure and protect water rights for projected needs	X	X	EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Acquire 40-TAF water right and integrate with use of Sacramento Municipal Utility District storage agreement, and other opportunities that could contribute to long-term water supply reliability **S** – Support water purveyors in SWRCB water right process for implementing the TROA. **S** – Support and coordinate water purveyors and users in advocacy and federal and state engagement for protecting senior and area-of-origin water rights
1b. Manage and leverage the collaboration and provisions in the El Dorado-Sacramento Municipal Utility District Settlement Agreement	X		EDCWA as EDDR, SMUD	**L** – Administrate and manage the El Dorado-Sacramento Municipal Utility District Settlement Agreement for countywide benefits, and in coordination with water purveyors, lead the development of the plan and actions for greater benefits within El Dorado County **L** – Develop management strategies for strategic use in coordination with water purveyors and other potential water users
1c. Develop regional water master plan or equivalent to demonstrate the beneficial uses of available water rights and contract entitlements in an integrated and efficient manner for projected needs and climate resilience	X	X	City of Placerville, County, EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Represent OCA in water planning efforts **L** – Lead the collaborative development of a regional water master plan in the West Slope to accommodate the collective projected needs including the agricultural development opportunities identified to advance County General Plan implementation. **S** – Coordinate with Tahoe Basin water purveyors on master planning efforts and collaboration with TRPA **S** – Support communications, information sharing and advocacy efforts
1d. Determine water purveyors for OCA	X		County, EDWA, El Dorado County LAFCO	**L** – Develop work plan and actions in collaboration with County for option development, and coordinate with El Dorado County LAFCO for approval process

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
1e. Develop operational agreements as needed for flexible use of collective water rights and contract entitlements to promote countywide benefits	X	X	City of Placerville, EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Develop additional agreements with water purveyors and regional partners for use of Agency's CVP contract, as well as Agency's water rights, once acquired **F** – Coordinate with water purveyors on compatible strategy for water use within El Dorado County **S** – Support complementary regional water management strategies in areas adjacent to El Dorado County that create benefits to water purveyors or broad countywide benefits **S** – Support communications, information sharing and advocacy efforts

4.2 RMS2 – Develop and Implement Demand Management

Water is a precious resource, and it supports multiple beneficial uses directly and indirectly, both in El Dorado County and beyond. Responsible use of this limited resource is a shared duty of all Californians. A comprehensive approach to efficient M&I and agricultural uses is important to align with the statewide implementation of long-term water conservation policies. At the same time, local implementation of water conservation policies should account for El Dorado County's unique conditions, affordability of implementation, availability of supplemental water, and complementary needs and planning for emergencies (e.g., severe droughts and wildfires).

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
2a. Review and update capacity-level demand projection by incorporating regulatory changes, best management practices, and climate change information	X	X	City of Placerville, County, EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Update West Slope agricultural and M&I demands consistent with the County General Plan and applicable efficient water use standards and best management practices **S** – Support the update of M&I demands in the Tahoe Basin **S** – Support communications, information sharing and advocacy efforts
2b. Develop implementation strategy and plan to address the needs for compliance with regulatory requirements per efficient urban water use standards, variances and performance measures.	X	X	City of Placerville, EDWA, EID, GDPUD, STPUD, TCPUD	**F** – Coordinate with the state in developing data and tools to support urban water supplier's use for reporting purposes, and developing applicable variances (e.g., seasonal populations, commercial/noncommercial agricultural use, and animal use) **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
2c. Engage in the continued development and implementation of statewide long-term water conservation policies, regulations, and legislation to ensure applicability in foothill and forested/ mountain communities and preserve countywide interests	X	X	City of Placerville, County, EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Participate in state-led compliance studies and process for implementing newly adopted efficient urban water use regulations, and engage in the development of climate resilience-related state policy, regulation, and legislation **F** – Coordinate consistent messages and approach amongst water purveyors, and regional and statewide organizations **S** – Support communications, information sharing and advocacy efforts

4.3 RMS3 – Implement Sustainable Groundwater Management

SGMA defines sustainable groundwater management as the management of groundwater supplies in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Groundwater use is prevalent throughout El Dorado County; the principles of sustainable groundwater management apply everywhere it is used. However, Tahoe Basin uses are drawn from recognized groundwater basins that are regulatorily governed by SGMA and West Slope uses from underlying fractured rock formation are vulnerable. The strategy needs to reflect the sustainability principles and regional unique conditions.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
3a. Implement sustainable groundwater management in the SGMA-regulated groundwater basins consistent with the approved plan and best practices		X	EDWA, STPUD, TCPUD	**L** – Collaborate with STPUD to manage the Tahoe Valley South Subbasin and provide as-needed support as the GSA for the area outside of the STPUD service area. **S** – Support TCPUD in groundwater monitoring for the Tahoe Valley West Subbasin and provide as-needed support. **S** – Support communications, information sharing and advocacy efforts
3b. Engage in the development of statewide sustainable groundwater management policies, regulations, and legislation related to the preservation of El Dorado County interests	X	X	County, EDWA, STPUD	**F** – Coordinate consistent messages and engagement approach with STPUD and other groundwater users in El Dorado County **S** – Support communications, information sharing and advocacy efforts
3c. Enhance alignment in groundwater management, drought resilience, and well permitting practices	X	X	County, EDWA, STPUD, TCPUD	**F** – Coordinate with County and STPUD to explore potential ordinances to enhance coordination with GSAs (i.e., STUPUD and the Agency) **F** – Coordinate with County for well permitting process in the Tahoe Basin for consistency with the applicable management plan or settlement agreement and avoid impacts to existing groundwater users. **F** – Coordinate with County to explore potential ordinances to strengthen consistency with land use management and avoid increase in drought vulnerability in areas of fractured rock formation. **S** – Support communications, information sharing and advocacy efforts

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
3d. Improve understanding of groundwater conditions and long-term sustainability in fractured rock formation	X	X	County, EDWA	**F** – Explore data sufficiency and adequacy in collaboration with County for groundwater monitoring and condition assessment and coordinate efforts for improving understanding as appropriate **F** – Integrate data and information for countywide coverage with emphasis on small water suppliers and domestic wells, identify gaps and potential assistance needs (see RMS7d). **S** – Support communications, information sharing and advocacy efforts

4.4 RMS4 – Increase Water Reuse

Where possible, water reuse should be considered. In the long run, use of recycled water (water reuse) can be separated into two categories – *potable reuse* (recycled water used to augment drinking water supplies and includes both indirect and direct uses) and *non-potable reuse* (all recycled or reclaimed water applications except those related to water supply augmentation and drinking water). SWRCB has approved the regulations for direct potable reuse in 2023 and approved provisions in favor of potable reuse to meet the efficient urban water use standards in 2024. Currently, water reuse in El Dorado County is for landscape irrigation in El Dorado Hills and EID's service area. In the Tahoe Basin, stringent regulatory requirements for discharge resulted in the use of regional facility outside of the service area (e.g., TCPUD) or exporting recycled water outside of the Tahoe Basin (e.g., STPUD)

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
4a. Increase implementation of cost-effective water reuse to improve drought resilience and benefit compliance with efficient urban water use regulations where possible.	X	X	City of Placerville, EID, STPUD	**S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
4b. Explore the feasibility of non-potable reuse for instream flow augmentation or nonrestricted irrigation use with third parties.		X	STPUD	**S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
4c. Encourage greywater reuse and rainfall harvest practices on household and individual facility level	X	X	City of Placerville, County, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)

4.5 RMS5 – Secure Water Infrastructure

The lifespan of any infrastructure is finite, and the consequences of neglected infrastructure can be expensive, wasteful, and harmful. Owners of existing water infrastructure in El Dorado County must responsibly continue their ongoing operations, maintenance, repair, and rehabilitation to ensure that facilities are working properly, safe, free from contaminants, and cleared of nearby hazards. New infrastructure that augments water supply reliability and operational flexibility and improves climate resilience should also be investigated and developed based on collaborative principles and multi-benefit considerations. Particularly, additional water supply and infrastructure needs to support the agricultural opportunity development that is essential for the El Dorado County requires active planning and development as the lead time for implementation can be more than a decade.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
5a. Ensure water infrastructure integrity, operations, and maintenance through agency-specific Capital Improvement Programs	X	X	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Support communication, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
5b. Develop new high-elevation, offstream storage to replace lost snowpack and increase water supply reliability as a climate adaptation strategy	X		County, City of Placerville, EDWA, EID, GFCSD	**L** – Develop Congressionally-authorized Alder Creek Water Storage and Conservation Project with Reclamation for countywide and regional benefits **L** – Collaborate with regional partners and organizations to advocate for a climate adaptation measure that could serve equivalent functions as the snowpack, which was historically the primary storage and source of water in the West Slope
5c. Reduce vulnerability of water infrastructure to wildfires	X	X	City of Placerville, County, EID, GDPUD, GFCSD, SMUD, STPUD, TCPUD	**L** – Develop hazard mitigation and recovery guide for water purveyors, small water suppliers and domestic wells **F** – Coordinate with County in updating and synthesizing wildfire risk information and develop a list of at-risk water infrastructure in coordination with facility owners **S** – Support communications, public information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)

5d. Update emergency response and communication plans regularly, including consideration of wildfires and potentially extended power shutoffs	**X**	**X**	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD; small water systems, domestic wells	**F** – Integrate and streamline response actions and their implementation per individual Water Shortage Contingency Plans, Regional Drought Contingency Plan, and the County Drought Resilience Plan (see RMS7d) **S** – Support communications, information sharing and advocacy efforts
5e. Assess the regional infrastructure needs to support the implementation of a regional water and drainage master plans or equivalent	**X**		City of Placerville, County, EDWA, EID, GDPUD, GFCSD, El Dorado County LAFCO	**L –** Represent OCA in water planning efforts **L** – Lead the collaborative development of a regional infrastructure assessment in the West Slope to accommodate the collective projected needs including agricultural development opportunities identified to support County General Plan vision (see RMS1c) **S** – Support communications, public information sharing and advocacy efforts

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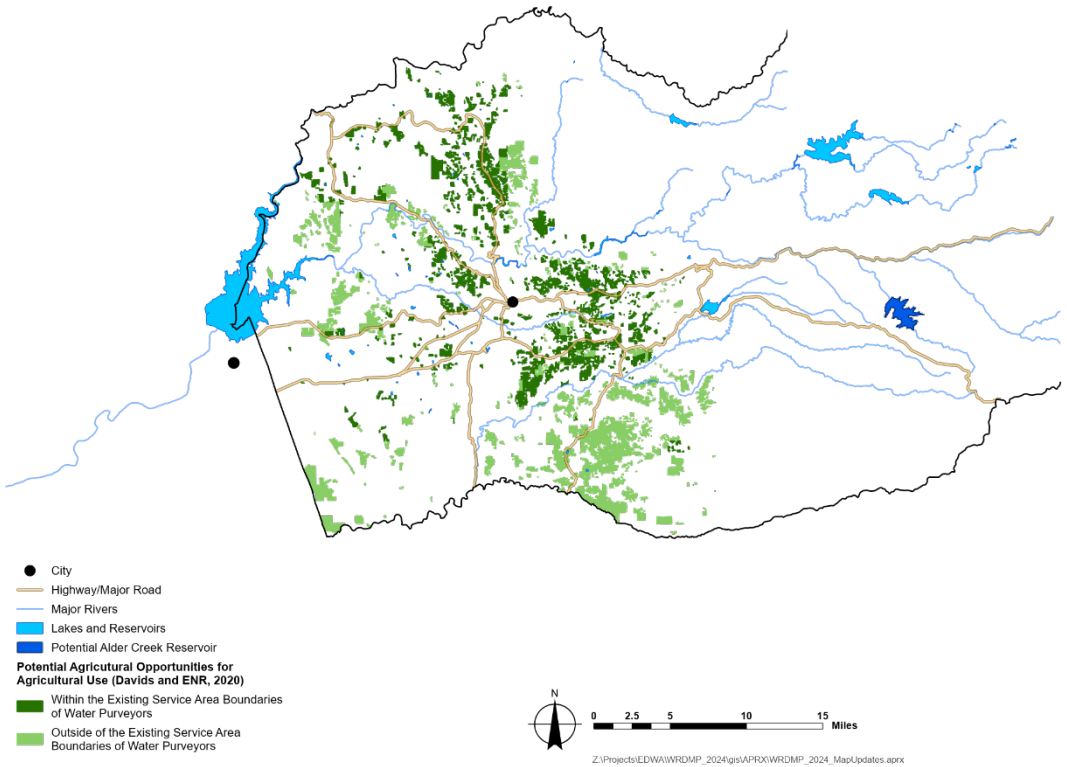


The high-elevation, off-stream Alder Creek Storage and Conservation project can help our vulnerable headwater communities which rely on the snowpack for water supply to adapt to a changing climate. Conceptually described in the American River Basin Study with a storge of up-to 168,000 acre-feet (18 percent of Folsom Lake), the potential Alder Creek Reservoir of could provide needed water supply under a changing hydrology to accommodate agricultural development opportunities, generate affordable hydropower to reduce the energy cost burden in foothill communities, and contribute to flood risk reduction for local communities and downstream metropolitan areas. It offers additional opportunities for Reclamation to enhance its operational flexibility of Folsom Reservoir by satisfying CVP water contract delivery to El Dorado contractors and potentially the City of Folsom in most years. The Agency is collaborating with Reclamation to develop a feasibility study that was previously authorized by Congress in 2005..

4.6 RMS6 – Manage Stormwater as a Resource

No longer perceived as a hazard, stormwater is a recognized alternative source of water in the context of integrated water management. Stormwater Resource Plans for the West Slope and Tahoe-Sierra Region were developed as the beginning of this new approach in El Dorado County, thereby providing eligibility for future state financial assistance. Implementation of this new approach requires additional organizational and budgetary support. The Stormwater Resources Plans are one of the several methods for implementing agencies to prioritize their projects and support funding decisions to implement stormwater projects.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
6a. Update Stormwater Resource Plans to address changed conditions and unique foothill characteristics and needs.	X	X	City of Placerville, City of South Lake Tahoe, County, EDWA	**L** – Update West Slope Stormwater Resource Plan and provide program management support with implementing agencies **F** – Coordinate with implementing agencies on the update of the Tahoe-Sierra Region Stormwater Resource Plan **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
6b. Develop implementation strategy to finance program implementation align state policy implementation, and improve project readiness, as appropriate, for capitalizing on funding opportunities	X	X	City of Placerville, City of South Lake Tahoe, County, EDWA	**F** – Collaborate with implementation agencies to identify priority of implementation and actions for advancing project readiness **F** – Facilitate considerations of partnership and project collaboration opportunities with water purveyors for multi-benefit outcomes **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)
6c. Implement water quality control measures and best management practices to address runoff from highways, streets, and other priority impervious areas	X	X	City of Placerville, City of South Lake Tahoe, County	**S** – Support communications, information sharing and advocacy efforts

6d. Implement Stormwater Management Plan (now also as part of the Stormwater Resource Plan), and implement California Municipal Separate Storm Sewer Systems Permits – Phase I (Tahoe Basin) and Phase II (West Slope)	**X**	**X**	City of Placerville, City of South Lake Tahoe, County	**S** – Support communications, information sharing and advocacy efforts

4.7 RMS7 – Improve Drought Preparedness and Responses

California is drought-prone, and climate change may further increase the frequency, duration, and intensity of future droughts. Legal and regulatory changes require urban water suppliers to prepare a Water Shortage Contingency Plan to accompany their UWMP that includes the definition of drought stages and corresponding actions. To elevate drought planning in the West Slope to match the Tahoe Basin, the Agency collaborated with water purveyors, the County, and tribes to develop a Regional Drought Contingency Plan. Additionally, small water systems and rural communities in El Dorado County are particularly vulnerable during extended droughts. The Agency was heavily involved in developing state policies and implementation programs that consider the unique conditions of rural counties and foothill communities. Also, the County requested the Agency support the establishment and convening of a long-standing County Drought and Water Shortage Task Force and the development of the County Drought Contingency Plan to comply with the requirements of SB 552. Recurring situation assessments and improvements are critical to ensure all residents in El Dorado County have adequate water supplies and to preserve options for leveraging available state and federal assistance when necessary.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
7a. Convene a long-standing County Drought and Water Shortage Task Force to facilitate drought and water shortage preparedness for small water suppliers and rural communities, and provide consistency for countywide drought planning	X	X	County, EDWA	**L** – Convene the County Drought and Water Shortage Task Force to address drought planning and mitigation needs in coordination with County **F** – Facilitate drought awareness and information sharing through a drought application on the Agency's portal **S** – Support communications, information sharing and advocacy efforts
7b. Implement and update the Regional Drought Contingency Plan and urban water supplier-specific Water Shortage Contingency Plans	X	X	EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Coordinate the implementation and update of the Upper American River Basin Regional Drought Contingency Plan (including the West Slope) and represent the OCA in drought planning **F** – Coordinate consistency of drought planning efforts in El Dorado County **S** – Support Tahoe Basin drought planning in coordination with water purveyors **S** – Support communications, information sharing and advocacy efforts

7c. Update drought component in El Dorado County's Multi-Jurisdictional Hazard Mitigation Plan for emergency response coordination and potential future FEMA assistance	**X**	**X**	County, EDWA	**F** – Coordinate with County OES for updates on drought and flood elements within the County MHMP to be consistent with various drought plans and applicable regulatory changes in drought planning and mitigation **S** – Contribute to County long-range planning as appropriate **S** – Support communications, information sharing and advocacy efforts
7d. Develop and implement County Drought Resilience Plan for addressing water shortage vulnerability for small water suppliers and rural communities	**X**	**X**	County, EDWA, EID, El Dorado County LAFCO GDPUD, STPUD, small water suppliers, TCPUD	**L** – Develop and update the County Drought Resilience Plan to address changed conditions and unique vulnerability of foothills communities and the intent to cover all small water suppliers and domestic wells beyond the requirements of SB 552. **F** – Facilitate collaborative implementation of the County Drought Resilience Plan among small water systems, domestic wells, County and other interested parties including water purveyors, emergency services and state and federal managing agencies **S** – Advocate continued state and federal assistance needs for sustainability of rural communities and small water systems **S** – Support communications, information sharing and advocacy efforts

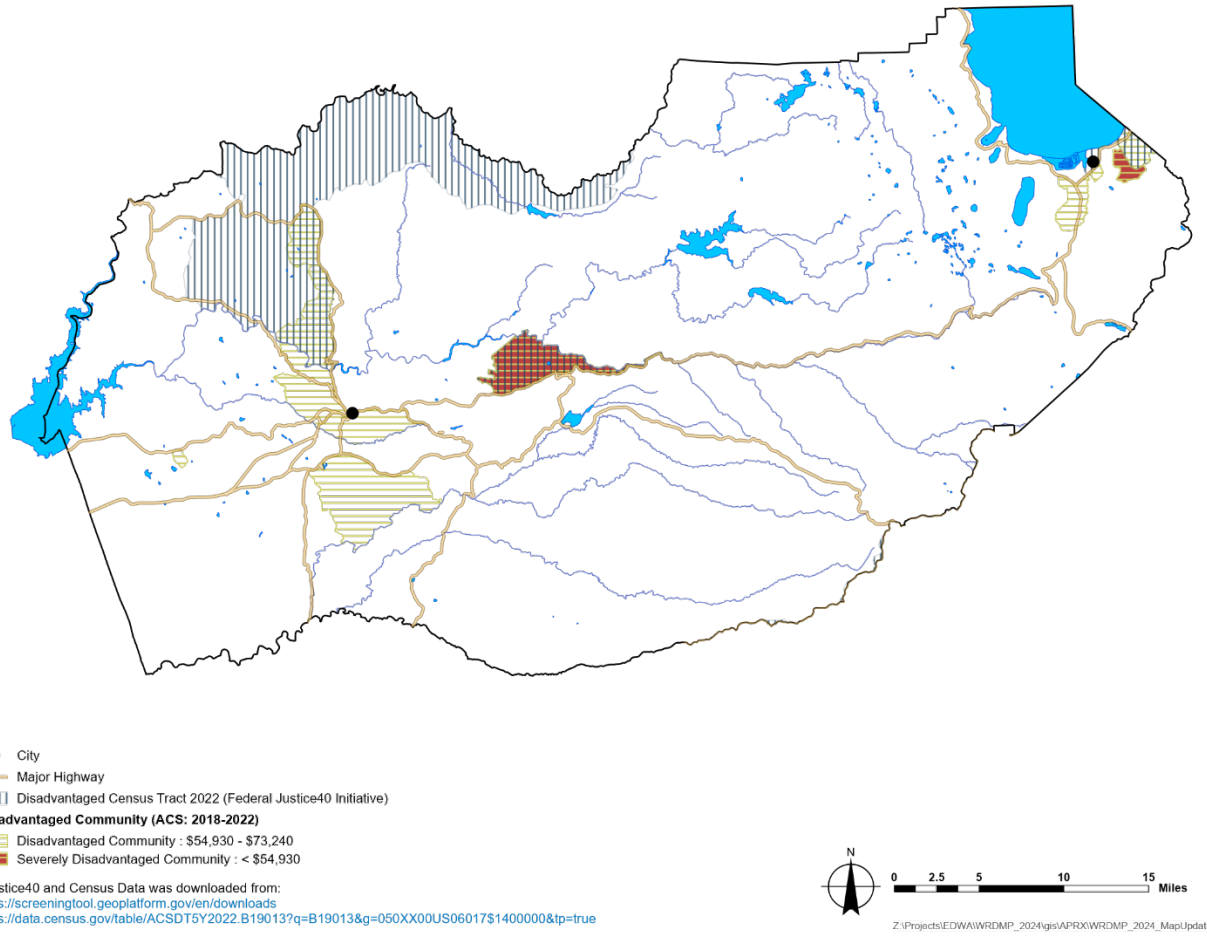
4.8 RMS8 – Ensure All Residents Have Water Accessibility and Affordable Water

California leads the nation in recognizing the human right to water. As stated in California Water Code Section 106.3, it is "*…the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes*." The legislative intent is consistent with the water management policy in El Dorado County, as reflected in the Agency's mission statement. To protect residents and foster economic development in El Dorado County, it is essential that sufficient, safe, acceptable, physically accessible, and affordable water be available for personal and household uses, requiring collaboration of many departments and agencies.

It is also recognized that the provisions in Proposition 218 of 1996 prohibit public water agencies from providing a subsidized rate for low-income households, creating a significant obstacle to water accessibility and affordability. However, it is possible for water purveyors (e.g., STPUD) to provide assistance using an alternative revenue source. At the state level, implementation details are currently under development, so it is critical to understand needs throughout El Dorado County and continue working with state agencies and other communities to formulate adequate implementation strategies and protocols.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
8a. Assess challenges in water accessibility and affordability in El Dorado County (Human Right to Water, California Water Code Section 106.3)	X	X	City of Placerville, County, EID, El Dorado County LAFCO, GDPUD, GFCSD, STPUD, TCPUD	**F** – Coordinate with County to conduct situation assessment **S** – Support communications, information sharing and advocacy efforts
8b. Assess viability assessment for water system consolidation and implementation challenges to support advocacy and acquisition of state and federal assistance	X	X	City of Placerville, County, EID, El Dorado County LAFCO, GDPUD, GFCSD, STPUD, TCPUD	**F** – Coordinate with County to conduct viability assessment **F** – Coordinate with County and interested parties and organizations in advocacy and funding acquisition **S** – Support communications, information sharing and advocacy efforts
8c. Participate in statewide efforts to develop policy, regulations, and legislation related to water affordability that is workable for specific communities	X	X	City of Placerville, County, EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Represent OCA **F** – Coordinate with purveyors as cooperating party to improve affordability and accessibility **S** – Support communications, information sharing and advocacy efforts

Implementation of the 2012 human right to water legislation is being reflected in many state programs and funding opportunities with increasing emphasis on equity and preservation of funding for qualified disadvantaged communities. Similar practices were taken by federal agencies per the Biden administration's Justice40 initiative. A keen awareness of eligibility criteria is essential for a successful funding acquisition, including recognition of certain funding opportunities are not for El Dorado County (e.g., no eligibility in El Dorado County for the disadvantaged communities under the California Climate Investments authorized by the California Global Warming Solution Act of 2006).



4.9 RMS9 – Improve Watershed Management for Water Resource-Related Benefits

Successful watershed management integrates and coordinates activities that affect a watershed's natural resources and water quality in a comprehensive manner. It requires the expertise, authorities, engagement, and actions of multiple agencies and organizations involved in land use, water management, and related efforts, meaning that no one entity can accomplish it alone. Watershed management is broad in both scope and geographic coverage. Many watershed management actions have direct (or indirect) effects on water availability and quality and contribute to public safety. The benefits of a healthy watershed go beyond the scope of water resource management and the beneficiaries of a watershed's ecosystem goods and services go significantly beyond the footprint of the watershed. For sustainable watershed management, collaboration commensurate with individual's roles and responsibilities and shared financial and implementation burdens equitably throughout beneficiaries are critical.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
9.1a. Improve hydrological and meteorological data acquisition to support planning needs and improve short-term flood and seasonal water supply forecasting.	X	X	EDWA, EID, GDPUD, SMUD, STPUD, TCPUD	**L** – Collaborate with implementing agencies, state and federal agencies (e.g., DWR, Reclamation, USGS) to develop strategy and implementation plan to improve watershed-scale water hydrometeorological data acquisition and sharing. **F** – Coordinate with implementing agencies, SAFCA, state and federal agencies (e.g., DWR, Reclamation, NWS), regional partners (e.g., PCWA), and research institutes (e.g., CW3E) to improve forecast skills to improve operations for water and power generation benefits in the El Dorado County as part of the American River Watershed Forecast-Informed Reservoir Operation Program (see RMS11e) **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
9.1b. Expand knowledge base and coordinate the policy development to address equity for investments in watershed health	X	X	EDWA, County, RCD, EID, GFCSD, GDPUD, Tribes, El Dorado County Farm Bureau, TCPUD, STPUD, City of Placerville, City of South Lake Tahoe	**L** – Coordinate with implementing agencies and relevant state and federal managing agencies (e.g., California Natural Resource Agency and USFS to develop special investigations based on EGS values to characterize fully the impacts of wildfire, value of water produced from headwaters, and other topics. **F** – Explore potential alternative funding mechanisms for watershed health that are more sustainable and equitable and incorporate considerations of EGS values in coordination with other headwater regions and organizations **S** – Support communications, information sharing and advocacy efforts
9.1c. Maintain and update a common platform that is publicly accessible for sharing water resource-related data and analytical tools, to avoid duplicate investments in their development and promote transparency	X	X	EDWA, EDC, RCD	**L** – Coordinate with implementing agencies in collaboration with County to maintain and update a common platform for water resource-related data and information sharing **F** – Coordinate with Tahoe-Central Sierra Initiative and other agencies, where applicable, to streamline project tracking to provide consistent and timely updated information **S** – Support communications, information sharing and advocacy efforts
9.1d. Develop a cultural heritage management strategy in collaboration with Tribes, including protocols for collaboration and consultation.	X	X	County, Tribes, EDWA	**F** – Coordinate with Shingle Springs Band of Miwok Indians, County and other local, state, and federal agencies, practitioners and professionals to develop a cultural heritage management strategy.
9.1e. Collaborate with resource management agencies, power utilities, water purveyors, and interested parties to promote sustainable forest management strategies that provide long-term benefits to water supply, infrastructure, biodiversity, and ecosystem functions.	X	X	ARC, County, EDWA, EID, GDPUD, GFCSD, SPI, PG&E, RCD, SMUD, STPUD, TCPUD, Tribes, TRPA	**L** – Convene the Countywide Plenary for Water to foster and reinforce the continued collaboration to improve water resource planning and management to promote countywide benefits **L** – Convene the UARWG for update and implementation of the PWP consistent with the principles and guidance adopted by the Agency's Board **F** – Coordinate with implementing agencies and state and federal managing agencies (e.g., CAL FIRE, SNC, USFS) for watershed-scale data development and resource condition assessment, where appropriate

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
				S – Support implementing agencies and state and federal managing agencies (e.g., USFS) for regional plan development and implementation, including multi-purpose post-fire reforestation and financial planning, and biomass use and disposal, where appropriate, especially in relationship with improvement in drought resilience **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)

4.10 RMS10 – Prevent Contamination of Surface Water and Groundwater Resources

Overall, El Dorado County's surface water and groundwater are of good quality. Yet it is critically important to maintain the water quality we currently enjoy. Contamination of water supplies – either surface water or groundwater – can have dire consequences. Contamination can restrict potable uses, exacerbate the existing supply-demand imbalance, be expensive to remediate, have negative effects on the environment, and impact agriculture and recreation thereby endangering economic prosperity in the long run.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
10a. Apply advanced technologies for water quality monitoring (surface water and groundwater), including remote sensing, for areas susceptible to water quality problems	X	X	County, EID, El Dorado County Agricultural Water Quality Management Corporation	**F** – Facilitate innovation and pilot for advanced technology
10b. Implement Sewage System Management Plans in coordination with system owners including emergency response protocols and vulnerability assessment	X	X	City of Placerville, County, EID, GDPUD, STPUD, TCPUD, CSD(Sewage)	**F** – Coordinate with the County and water purveyors to identify vulnerable sewage lines with high risk of contaminating surface water or groundwater resources **S** – Support communications, information sharing and advocacy efforts
10c. Implement the Nutrient Management Plan for agricultural practice to reduce the risk of long-term effects on the quality of surface water and groundwater resources	X	X	County	**F** – Coordinate with the County to evaluate the monitoring of data available and synthesize the data for public access and information sharing **S** – Support communications, information sharing and advocacy efforts **S** – Support grant applications for monitoring and best management practices implementation (where appropriate)
10d. Implement County Local Agency Management Plan for Onsite Wastewater Treatment Systems, including enforcement on guidelines for approval and repairs	X	X	County	**F** – Coordinate with the County to evaluate the monitoring of data available and synthesize the data for public access and information sharing **S** – Support communications, information sharing and advocacy efforts
10e. Conduct public outreach and education activities to encourage prevention of water supply contamination	X	X	City of Placerville, County, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Support communications, information sharing and advocacy efforts

10f.	Implement the Local Agency Management Plan for Onsite Wastewater Treatment Systems (e.g., septic tanks) and comply with relevant Waste Discharge Requirement Orders	**X**	**X**	County, GDPUD, Greenstone County CSD	**S** – Support communications, information sharing and advocacy efforts

4.11 RMS11 – Reduce the Risk of Flooding in Communities

Historically, most flooding in El Dorado County has been localized due to the terrain and headwater location, or as a result of rainfall on snow. However, climate change may result in more extreme flooding conditions, with expanded areas of impact and increased severity as well as potential effects on critical infrastructure (including major water facilities). Continued flood management efforts are critical for local communities and may produce additional benefits to downstream communities outside of El Dorado County.

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
11a. Update potential risks of flooding and infrastructure vulnerability	X	X	City of Placerville, City of South Lake Tahoe, County, CSD(Flood), EDWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**F** - Collaborate with implementing agencies in risk and vulnerability assessments **F** – Communicate flood risks in coordination with the County, City of Placerville and City of South Lake Tahoe **F** – Develop and maintain coordination with facility owners, and an inventory of water infrastructure that is vulnerable to flooding **S** – Support communication, information sharing and advocacy efforts
11b. Develop and implement flood risk reduction projects to reduce localized and neighborhood flooding with considerations of increase in frequency and intensity of flood-causing storms in facility planning (siting and design) for long-term sustainability	X	X	City of Placerville, City of South Lake Tahoe, County, CSD(Flood), EDWA	**F** – Collaborate with the implementing agencies in developing and implementing localized and neighborhood flood risk reduction projects (see RMS5e and RMS6a) **S** – Support acquisition of state and federal assistance (where appropriate) **S** – Support communications, information sharing and advocacy efforts
11c. Improve implementation of residual flood risk mitigation actions including participation of the National Flood Insurance Program and voluntary use of flood resistant materials and other California Building Code requirements as appropriate	X	X	City of Placerville, City of South Lake Tahoe, County	**S** – Support communications, information sharing and advocacy efforts
11d. Develop strategies and collaborate to combine nature-based solutions to reduce expenditure, facilitate additional flexibility of pooled funding use, and prolong the effectiveness of hard	X	X	County, EDWA, EID, GDPUD, GFCSD, RCD, SMUD, STPUD, TCPUD, TRPA	**L** – Collaborate with SAFCA in the development of the American River Watershed Forecast-Informed Reservoir Operation Program, in coordination with implementing agencies, state and federal agencies (e.g., DWR, Reclamation, USACE), regional partners (PCWA) and research institute (e.g., CW3E), to

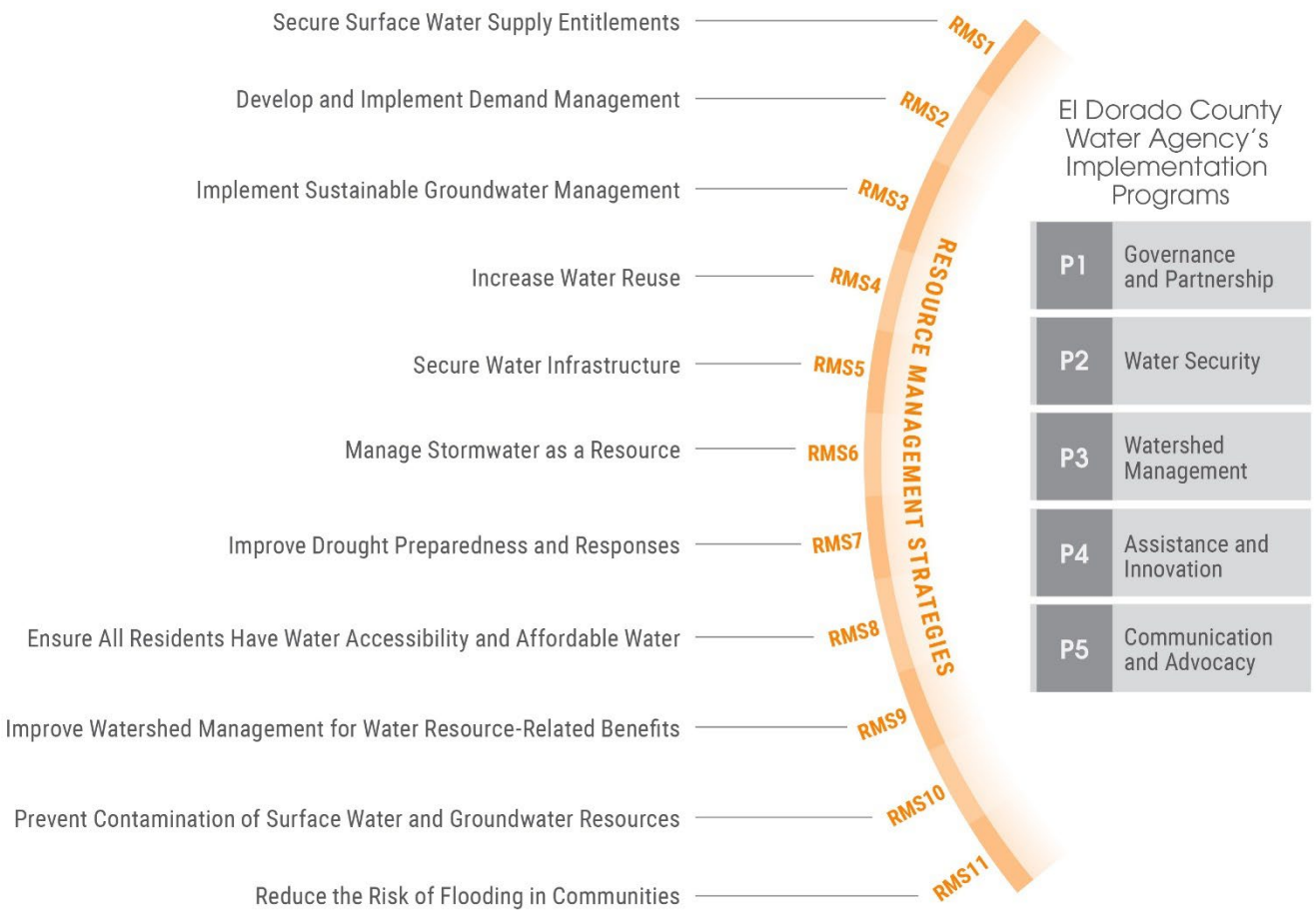
RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
infrastructure investment and operational changes for regional flood risk reduction.				incorporate nature-based solutions and other related elements for countywide benefits (see RMS9.1a) **F** – Facilitate the coordination of implementing agencies in the Tahoe Basin to incorporate nature-based solutions in flood risk reduction planning and implementation **S** – Support communications, information sharing and advocacy efforts **S** – Support acquisition of state and federal assistance (where appropriate)

Section 5 – Implementation

Reminder for PAG members: This section is for the Agency's implementation of the WRDMP. It is a work in progress, more so than other sections. Continued revisions are in progress. Suggestion: Focus on major omission and errors.

Implementation of the WRDMP will be a continual, incremental, and adaptive process. Progress on many actions has been made, while other actions are underway or will be completed before the next update of the WRDMP in 2029, and still others will require more time to develop and implement. This section describes the *how* and the *when* for the Agency's involvement in water resources development and management in El Dorado County in collaboration with other local/regional and federal entities to realize the vision in the County General Plan.

The implementation of the wide-ranging RMS identified in Section 4 is a shared responsibility among the principal implementing agencies, which requires coordination, collaboration, and cooperation. The Agency will play a vital role in advancing actions that are consistent with its authorities and priorities and rely on its Board's policies and guidance for continued involvement and assessing priorities. The summary of long-term and near-term actions in this section expands the Agency's roles described in Section 4 under various RMS and management actions. The connection between actions and Board's policies and guidance, as well as the periodic updates provide accountability for the Agency's investments and actions. Subject to the practices and policy, detailed actions of other primary implementation agencies, individually and jointly, are to be developed per their corresponding roles in advancing the shared responsibility with applicable reporting requirements and accountability.



5.1 Implementation Programs

Five implementation programs are created to further the RMSs and associated management actions outlined in Section 4:

- Governance and Partnership
- Water Security

- Watershed Management
- Assistance and Innovation
- Communication and Advocacy

These programs align with the Agency's authorities and are reflective of its levels of engagement in the RMS and actions. Together, the programs encompass the work required of the Agency.

Governance and Partnership Program

The Governance and Partnership Program focuses on how the Agency will function throughout WRDMP implementation to create countywide benefits for El Dorado County. The extent of this program is defined by the Agency's authority and includes the Agency's involvement to support governing and partnerships that advance the RMS. This includes coordinating or sharing program management activities, executing partnership agreements, and supporting local programs that may have countywide value and other water-related actions.

Water Security Program

The Water Security Program focuses on the Agency's effort to prepare El Dorado County for both a projected and uncertain water future. This program is the highest priority program for the Agency requiring the most effort and the greatest financial investment in comparison with other programs. It encompasses the Agency's role to ensure countywide water supply needs are planned and secured through water demand gap analysis, water supply development, drought protection and response planning, stormwater development and planning as a water resource, flood management planning, and water quality through planning and watershed protection.

Watershed Management Program

Long-term water resources resiliency and reliability is intrinsically tied to the health of the watershed. This nexus was highlighted by the recent natural disasters experienced in the county which impacted water quality, water security, and water supply costs. The Agency has broad authority to engage in water management actions related to water supply, water quality and flood management. As such, the Agency's Watershed Management Program involves participating in actions that meaningfully contribute to long-term water supply reliability and water quality protection for El Dorado County, in the areas of headwater management, water quality management for rural and agricultural communities, and habitat and other ecosystem function enhancement.

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Assistance and Innovation Program

Innovation is the key to continued improvement of both the understanding and management of water resource-related challenges. Through the Assistance and Innovation Program, the Agency aims to encourage the development and use of innovative ideas in water planning and management, as well as provide technical and educational assistance to other entities involved in RMS and action development and implementation. At present, the Agency's ability to provide direct financial assistance is limited; however, the Agency continues to explore alternative mechanisms such as grants and funding partnerships that are within its authority.

Communication and Advocacy Program

The intent of the Communication and Advocacy Program is to coordinate efforts throughout El Dorado County to achieve consistency, efficiency, and effectiveness for release of public information, countywide communications, and federal and state advocacy related to water resource issues and management. This program is crucial to WRDMP implementation, as it fosters coherent and effective messages regarding investments and actions. This program also facilitates consistent Agency engagement to implement and coordinate efforts with other local/regional, state and federal agencies, stakeholders and interested parties.

5.2 Implementation Policies and Guidance

Related to WRDMP implementation, the Agency's Board of Directors (Board) adopted the following policies in 2019 to affirm the purposes of the WRDMP and associated adaptive management for its long-term implementation.

- **Policy WRDMP-01:** The WRDMP shall be the countywide water plan to support the realization of the vision established in the County General Plan.
- **Policy WRDMP-02:** The WRDMP shall include resource management strategies to improve water resources management in El Dorado County, with anticipated economic and public benefits accrued in all communities throughout El Dorado County.
- **Policy WRDMP-03:** The WRDMP shall identify and prioritize the Agency's implementation actions and priorities consistent with the authority and roles provided by the Act.

- **Policy WRDMP-04:** The implementation of the WRDMP shall be based on collaborative principles for developing partnership with regional, state, and federal agencies who share resource management responsibilities and cooperate in creating mutual benefits.
- **Policy WRDMP-05:** The WRDMP shall be updated every 5 years in years ending in 4 and 9 to address changed conditions, assess progress of implementation, and realign priorities of the Agency's actions.

The Board also adopted the following guidance for the Agency's implementation of the WRDMP.

- **Guidance WRDMP-01:** The Agency shall convene a chartered Countywide Plenary for Water (Plenary) to foster collaboration on the water resources development and management in El Dorado County. The Agency shall convene the Plenary up to two times per year with representation from, at a minimum, the County's planning department, cities, water purveyors, and other water-resource related resource management entities.
- **Guidance WRDMP-02:** The Agency shall develop alternative revenue sources to support incentives and innovations to improve countywide water management.
- **Guidance WRDMP-03:** The Agency shall maximize available state and federal technical and financial assistance for implementation, where feasible.
- **Guidance WRDMP-04:** The Agency shall allocate the cost of project development and implementation fairly among beneficiaries.
- **Guidance WRDMP-05:** The Agency shall leverage significant opportunities for hydropower generation in El Dorado County in its project development, where feasible, as a cost-offset mechanism.
- **Guidance WRDMP-06:** The Agency shall consider regional and statewide water market transfers in its project development, where appropriate, as a cost-offset mechanism. No water market transfers can result in water supply impacts within El Dorado County.

5.3 Recent Accomplishments (2020–2024 Fiscal Years)

Water resources are fundamental for El Dorado County to achieve economic prosperity, protect the environment, and support the rural-agriculture way of life for today and in the future. The Agency is entrusted to provide a countywide perspective for reliable, high-level water resources planning within El Dorado County. To a large extent, this is achieved

through the support of entities within El Dorado County that are focused on specific activities to protect and preserve the county's water resource and environmental assets. Over the past five years, since the completion of the 2019 WRDMP, the Agency, in partnership with numerous other entities, has the following major accomplishments:

Governance and Partnership Program

- Through the memorandum of understanding with the County, the Agency provided management and program assistance to the County for the response and recovery efforts from the Caldor Fire.
- Through an agreement with the County, the Agency provided support to the County to identify, manage, and administer water infrastructure projects eligible for American Rescue Plan Act of 2021 funding. The Agency continues to assist the County in administering funds for the water-related projects.
- After working with Reclamation, DWR, and three California water resources agencies to complete the Sacramento-San Joaquin Basin Study, the Agency developed, in collaboration with Placer County Water Agency, an agreement with Reclamation to create the American River Basin Study which focused on the key challenges and strategies to address recurring drought and projected climate change impacts within the American River watershed.
- Continued to work with STPUD for the sustainable management of the Tahoe Valley South Subbasin through the 2018 GSA agreement between the Agency and STPUD.
- Continued to participate with the Regional Water Authority as an associate member agency for regional planning studies and activities related to the American and Consumnes Rivers.
- In cooperation with the County and through its role as the El Dorado Designated Representative under the El Dorado-SMUD Settlement Agreement, the Agency continued to support the County's efforts to work with the SMUD to address increased costs of services for recreation, public safety and transportation maintenance within the upper American River.
- Continued to work with STPUD and TCPUD on key projects to secure and protect water reliability in the Tahoe Basin, including: 1) improving the quality of surface and groundwater supplies; 2) creating reliable water supplies; 3) mitigating and reducing flood damages; 4) improving snowpack retention and natural watershed enhancements; 5) reducing energy use and greenhouse gas emissions; and 6) creating jobs, enhancing workforce development.

Water Security Program

- Executed the water supply contract with Reclamation for the long-term Central Valley Project water service contract, referred as the Fazio water service contract, for an amount of up to 15,000 acre-feet per year.
- Continued to develop the El Dorado Water Reliability Project draft environmental impact report for the acquisition of area-of-origin water rights of up to 40,000 acre-feet and use of carryover storage from the American River consistent with the El Dorado-SMUD Settlement Agreement. This water supply will help meet a portion of water demands to support the agricultural development and OCA in El Dorado County, and to improve overall water reliability and drought resiliency in El Dorado County.
- Continued to pursue the Alder Creek Reservoir and Conservation Project, which would create a 168,000 acre-feet high-elevation, off-stream storage project in the upper American River. The project would help adapt to changing climate conditions by replacing lost storage resulting from reduced snowpack and earlier snowmelt. This is consistent with the American River Basin Study which identified the upstream storage as an important climate adaptation strategy.
- Completed the Upper American River Basin Regional Drought Contingency Plan in collaboration with the U.S. Department of the Interior, Bureau of Reclamation, tribes, public water purveyors, land use agencies, and environmental interests for the West Slope of El Dorado County. The plan improves long-term water resiliency to drought and expands mitigation planning to areas outside of public water purveyor service areas.
- Completed, with STPUD, the Alternative Plan for Tahoe South Basin, which serves as the Groundwater Sustainability Plan for this portion of the Tahoe Basin.
- Assisted the County in establishing and convening a County Drought Task Force as part of SB 552 requirements in coordination with the County's Environmental Management Department, which oversees the small water systems as the Local Primacy Agency, and the County Public Health Officer, which oversees state small water systems with 5 to 14 service connections. This effort will also develop the Agency's County Drought and Water Shortage Plan.
- Collaborated with County and City of Placerville to implement the West Slope Stormwater Resource Plan.

Watershed Management Program

- Facilitated through the federal 2021 Cooperative Watershed Management Program, Phase I Grant, formed the UARWG. The UARWG initiated efforts to further develop countywide watershed planning and action/project development by including a diverse group of stakeholders, including local land use authorities, water purveyors,

resource conservation districts, non-governmental organizations, tribal governments, and federal agencies. The UARWG's goal is to create a resilient watershed in the West Slope that can fulfill the ecological, economic, and social needs of the region through implementable, collaborative, and integrated strategies.

- Through the UARWG, completed the 2023 PWP that serves as a roadmap for collectively to improve watershed health and community resilience in the upper American River watershed.
- Developed the valuation of ecosystem goods and services in the upper American River watershed as an Agency's PWP implementation action. The report developed, *Working Landscapes: The Natural Capital of the Upper American River Watershed*, provides an overview of the beneficiaries of the watershed's natural capital, and recommendations for supporting a healthy watershed towards guiding future watershed and related investments. Subsequently, a research article based on the valuation study was published in an international, peer-reviewed journal to promote awareness and provide additional validation of the work.
- Initiated fuels reduction project to reestablish cattle grazing in a portion of the Auburn State Recreation Area to lower wildfire risks. Working with local cattle rancher and Reclamation to use working landscapes to provide wildfire reduction and protection of water resources in that area.

Assistance and Innovation Program

- Continued to support and manage the Irrigation Management System program that monitors and assists small, rural farmers to irrigate in an efficient manner. The Agency contracted with agricultural irrigation specialists to work directly with farmers to increase water efficiency for their crops. This is a tool to demonstrate the county's efficient use of agricultural water supplies and is an adopted best management practice for meeting state water quality regulations - an important element to support the needs for future water supplies. This program is especially critical to assist growers that rely on wells that have not been sufficiently recharged in recurring years.
- Supported recovery efforts of local water agencies impacted by wildfires. This included providing FEMA Public Assistance support to the Grizzly Flats Community Services District to aid in their post-Caldor Fire recovery.
- Secured $1.875 million for watershed restoration in the areas damaged by wildfires to protect the source watershed of the Grizzly Flats community. Collaborating with the Resource Conservation Districts and U.S. Forest Service for implementation of the project.
- Partnered with El Dorado County's Office of Wildfire Preparedness and Resilience to provide technical expertise and advisory support towards state and federal cost recovery challenges.

- Assisted the County to administer funds provided by the American Rescue Plan Act (ARPA) to help water agencies to identify water infrastructure projects as a response to acute pandemic response needs, fill revenue shortfalls, and support the communities hardest-hit by the COVID-19 crisis. EDWA is currently administering water-related ARPA funds for the county.
- Completed installation of two stations with University of California, Merced as part of the Intelligent Hydroclimatic Information System for Water and Power Management in the American River Basin using the funding provided by Reclamation's WaterSMART Program.
- Secured $875,000 for developing the ARWIN to develop strategy and implementation plan to improve watershed-scale water hydrometeorological data acquisition and sharing
- Established GIS Online Mapping and Data portal in coordination with County to improve information sharing. Subsequently, with OWRP, developed OWPR Interactive Map to enable local agencies and the public to view geographic information related to wildfire preparedness and resilience within the county.
- Partnered with El Dorado County Ag in the Classroom which provides hands-on agricultural education reaching more than 2,500 students in the county each year about the role of water in the county to foster water conscious stewards.

Communications and Advocacy Program

- Hosted the recurring Countywide Plenary for Water which involve key representatives from water and energy utilities; federal, state, local and tribal governments; business groups; and community organizations to collaborate and modernize water resource management in the county. Each plenary includes panel and breakout discussions that are focused on building community resilience and the nexus among drought, wildfire, water supply, and watershed management.
- Collaborated with partners at various levels of government to ensure El Dorado County is included in water and environmental policies; funding opportunities; and regulatory decisions at the local, state and federal levels. The Agency has facilitated discussions at the local level and engaged in state advocacy efforts to advance El Dorado County's priority water-related and environmental issues. A key success has been focused to support the countywide perspective for the watershed by working with lobbyists in Washington D.C. to seek financial assistance for forest management, watershed protection, climate change adaptation and agricultural programs and policies that have a nexus to water resources management.

5.4 Near-Term Priority Actions (2025-2029 Fiscal Years)

The Agency has prioritized near-term actions under its five implementation programs. This list of actions is neither exhaustive nor is it static. The Agency expects it will need to be flexible, adapting to changing conditions and new developments to ensure adequate water for today and in the future.

Governance and Partnership Program

- Continue to develop and foster new partnerships with state and federal agencies, water communities, non-profit organizations and other interest parties to advance the Agency's goals and functions.
- Continue the established governance and partnership roles and responsibilities in the RWA, Water Forum, CABY Integrated Regional Water Management Region, Tahoe Valley South Subbasin GSA, El Dorado-SMUD Agreement, and various partnerships with Reclamation including the Alder Creek Water Conservation and the Storage Project Feasibility Study.
- Prepare the 2029 WRDMP update to include tracking and reporting progress towards effective plan implementation.

Water Security Program

- Complete the draft environmental impact report for the El Dorado Water Reliability Project towards securing long-term water supplies for the county.
- Revise the Agency's grant program policy and guidelines to clarify the qualifying criteria and intended outcomes.
- Explore alternative revenue incomes to support the development of and to implement innovative solutions for identified water resource-related challenges.
- Provide financial and technical assistance to water purveyors, County and cities, and water users as appropriate to the meet the Agency's mission and policies when funding is available.
- Collaborate with Reclamation to secure federal cost share funding for the Alder Creek Water Conservation and Storage Project and execute the required planning documents once the funding becomes available (as one of the recommended climate adaption portfolios in the American River Basin Study).

- Collaborate with the RWA and regional partners regarding a specific focus for planning and approval of the Sacramento Regional Groundwater Bank (as one of the recommended climate adaption portfolios in the American River Basin Study).
- Develop the County Drought and Water Shortage Plan to improve small water supplier reliability during water shortage events.
- Collaborate with the County's Health and Human Service Agency and EMD to complete and implement actions to improve water accessibility, quality, and affordability in El Dorado County communities, where appropriate, that address the intent of Senate Bill 552.
- Continue to implement the West Slope Stormwater Resource Plan, prepare annual progress reports, provide project development assistance to the County (where appropriate), and provide grant application assistance (where appropriate).
- Collaborate with the County's Long-Term Planning to develop water master plans in key areas identified for agricultural, residential, commercial and industrial development within the county to support economic sustainability and future investment opportunities within the county.
- Continue to collaborate with the County to address agriculture water supply reliability and related crop economics in the continued refinements of West Slope agricultural opportunity development. This effort supports the County's agricultural economy since agricultural water demands are a critical element for long-term planning with respect to long-term water supplies.

Watershed Management Program

- Implement the PWP for the upper American River watershed consistent with Agency Board-adopted policies and guidance, including continue convening the UARWG. Develop landscape-scale projects through the UARWG that improve watershed health and resilience and pursue funding to implement relevant projects.
- Support local implementation of the National Cohesive Wildland Fire Management Strategy, including participating with the South Fork of the American River group and other efforts to reduce the likelihood of wildfires in areas of high risk (as appropriate).
- Participate in resource conservation efforts related to headwaters management, forest management, watershed conservation, and meadow restoration (as appropriate).

- Collaborate with the County to develop drainage master plans in key areas identified for agricultural, residential, commercial and industrial development within the county.
- Complete the pilot grazing project in the Auburn Project Area with Reclamation.
- Partner with SAFCA to implement Watershed FIRO.

Assistance and Innovation Program

- Continue to foster public water education and social awareness about the importance of sustainable water management.
- Explore the development of a potential grant application assistance program to support state and federal grant applications.
- Explore the development of formal assistance criteria and priorities under the Agency's Grant Program or to implement RMSs identified in this plan.
- Implement initial actions under the ARWIN based on available funding and secure additional funds for implementation.

Communications and Advocacy Program

- Continue the Countywide Plenary for Water as a forum for water resources management, and to encourage collaboration on the water resources development and management in El Dorado County between the County's planning department, cities, water purveyors, and other water-resource related resource management entities.
- Continue to support communications, information sharing, and provide information to the public regarding water resources challenges, strategies and actions
- Continue the Agency's federal and state advocacy efforts to address changing regulations, pursue funding opportunities and create partnerships that help to resolve long-term water resource-related issues within the county.
- Continue to advocate federal representatives and agencies to secure federal funding for the Alder Creek Water Conservation and Storage Project (as one of the recommended climate adaption portfolios in the American River Basin Study).

- Promote public water education and social awareness through sponsorship to the Water Education Foundation, the El Dorado County Ag in the Classroom Program, and other outreach programs to help the Agency cultivate an understanding and appreciation of El Dorado County water resources challenges and strategies.

Glossary

The following key terms are listed below for easy reference. Where applicable, existing definitions from the statute and regulations are provided.

adjoining use. The type of water use (agricultural water use or municipal and industrial water use) that can be allowed by the adopted County General Plan when the primary use for a parcel in the rural-agricultural water use planning zone has been established. Also see the definition of primary use.

capacity. The buildout capacity for an undetermined point in time when all land use capacity is utilized, as defined in the County General Plan.

Community Services District. A form of independent local government used to provide services in unincorporated areas of a county under the Community Services District Law (California Government Code Sections 61000-61850) to provide a wide variety of services including water, wastewater, solid waste, fire protection, and other essential services.

community water system. A public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system, as described in California Health and Safety Code Section 116275(i).

County Drought Resilience Plan. A plan demonstrating the potential drought and water shortage risk and proposed short-term response actions and long-term mitigation actions for state small water systems and domestic wells within a county, as described in California Department of Water Resource's 2023 *County Drought Resilience Plan Guidebook*.

disadvantaged community. A community with a median household income less than 80 percent of the statewide average, as described in California Public Resources Code Section 75005(g).

domestic well. A groundwater well used to supply water for the domestic needs of an individual residence or a water system that is not a public water system and that has no more than four service connections, as defined in California Health and Safety Code Section 116681(g) and California Water Code Section 10609.51(k).

federal poverty guidelines. The U.S. Department of Health and Human Services updated the guidelines at least annually for administrative purposes as a financial eligibility criterion by Medicaid and some other federal programs, as

described in Section 673(2) of the Omnibus Budget Reconciliation Act (OBRA) of 1981 (42U.S.C. 9902(2)). The poverty guidelines are a simplified version of the poverty thresholds that the Census Bureau uses to prepare its estimates of the number of individuals and families in poverty.

Justice40 Initiative. A policy to establish a goal that 40 percent of the overall benefits of certain federal climate, clean energy, affordable and sustainable housing, and other investments flow to disadvantaged communities that are marginalized by underinvestment and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care, as described in the President Biden's Executive Order 14008 of January 27, 2021.

local primacy agency. A local health officer that has applied for and received primacy delegation pursuant to California Health and Safety Code Section 116330 (California Health and Safety Code Section 116275(r)).

non-community water system — A public water system that is not a community water system, as described in California Health and Safety Code Section 116275(j).

non-potable reuse — All recycled or reclaimed water applications except those related to water supply augmentation and drinking water.

non-transient, non-community water system. Means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year, as defined in California Health and Safety Code Section 116275(k). Example of this includes a school (California Water Code Section 10609.51(g)).

Other County Area. Comprised of areas in El Dorado County that fall outside federally-managed land and a water purveyors' service area.

potable reuse. Recycled water used to augment drinking water supplies and include both indirect and direct uses.

primary use. The type of water use (agricultural water use or municipal and industrial water use) associated with the land use designation of a parcel within the rural-agricultural water use planning zone, allowed by the adopted County General Plan.

Public Utility District. A public utility district is a community-owned, locally-regulated utility authorized to provide electricity, water and sewer services, and wholesale telecommunications. A public utility district may provide one or more of these services, depending on the needs of the community under the Public Utility District Act (California Public Utilities Code Sections 15501-18055).

public water system. A system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year, as described in Health and Safety Code Section 116275(h) and California Water Code Section 10609.51(g). A public water system includes the following:

(1) Any collection, treatment, storage, and distribution facilities under control of the operator of the system that are used primarily in connection with the system.

(2) Any collection or pretreatment storage facilities not under the control of the operator that are used primarily in connection with the system.

(3) Any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

Resource Conservation District. Resource conservation districts are special districts of the state of California, set up to be locally governed agencies with their own locally appointed or elected, independent board of directors to conserve soil and water, control runoff, prevent and control soil erosion, manage watersheds, protect water quality, and develop water storage and distribution (Public Resources Code §9001-9972). California resource conservation districts implement projects on public and private lands, and educate landowners and the public about resource conservation.

rural community. A community with fewer than 15 service connections or regularly serving less than 25 individuals daily at least 60 days out of the year, including domestic wells (California Water Code Section 10609.51(i)). In other words, rural communities in the context of water services defined by California law covers all water systems or domestic wells for human consumption that are not a public water system.

rural-agricultural water use planning zone. A geographic delineation of land in the West Slope of El Dorado County defined by El Dorado Water Agency that may have both agricultural water use and municipal and industrial water use (including rural domestic water use) allowed by the adopted County General Plan.

severely disadvantaged community. A community with a median household income less than 60 percent of the statewide average, as described in Public Resources Code § 75005(g).

small water supplier. A community water system serving 15 to 2,999 service connections and that delivers less than 3,000 acre-feet of water annually, as described in California Water Code Section 10609.51(j).

state small water system. A system for the provision of piped water to the public for human consumption that serves at least 5, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year as defined in California Health and Safety Code Sections 116275(n) and 116681(m), and California Water Code Section 10609.51(m).

transient non-community water system. A non-community water system that does not regularly serve at least 25 of the same persons over six months per year, as described in California Health and Safety Code §116275(o).

water use planning zone. A geographic delineation of land in the West Slope of El Dorado County defined by El Dorado Water Agency that may have a certain type of water use allowed by the adopted County General Plan. Also see the definitions of the urban water use planning zone and rural-agricultural water use planning zone.

urban water supplier. A supplier, either publicly or privately owned, provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers, as described in California Water Code Section 10617.

Urban Water Use Planning Zone. A geographic delineation of land in the West Slope of El Dorado County defined by El Dorado Water Agency that may have only municipal and industrial water use allowed by the adopted County General Plan.

Urban Water Management Plan. A plan required per California Water Code Section 10610 et seq. for publicly and privately owned urban water suppliers that provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail or wholesale cost for municipal purposes

vulnerability. The propensity or predisposition to be adversely affected. Such predisposition constitutes an internal characteristic of the affected element, whereas exposure to a hazard is a condition or event to which the affected element (i.e., supplier or community) is subjected. In the field of disaster risk management, this includes the characteristics of a person or group and their situation that influences their capacity to anticipate, cope with, resist, and recover from the adverse effects of physical events (Wisner et al. 2003).

water shortage. An insufficient quantity of water to meet indoor water uses, such as drinking and sanitation, and other critical water needs, which can be caused by chronic conditions, extreme events, or both. This includes the physical lack of supply coming out of the tap, a problem that can be caused by dry wells or surface water, a regulatory restriction on accessing surface water, or some physical obstruction impeding water supply.

Water Shortage Contingency Plan. A document required per California Water Code Section 10617.5 for publicly and privately owned urban water suppliers that incorporates the provisions detailed in California Water Code Section 106329(a).

risk. Consistent with the Intergovernmental Panel on Climate Change 2012 Special Report (Cardona et al. 2012) and its upcoming Sixth Assessment Report, risk is the combination of vulnerability and the extent of exposure to a hazardous event or conditions, including projected future hazards (IPCC 2017)