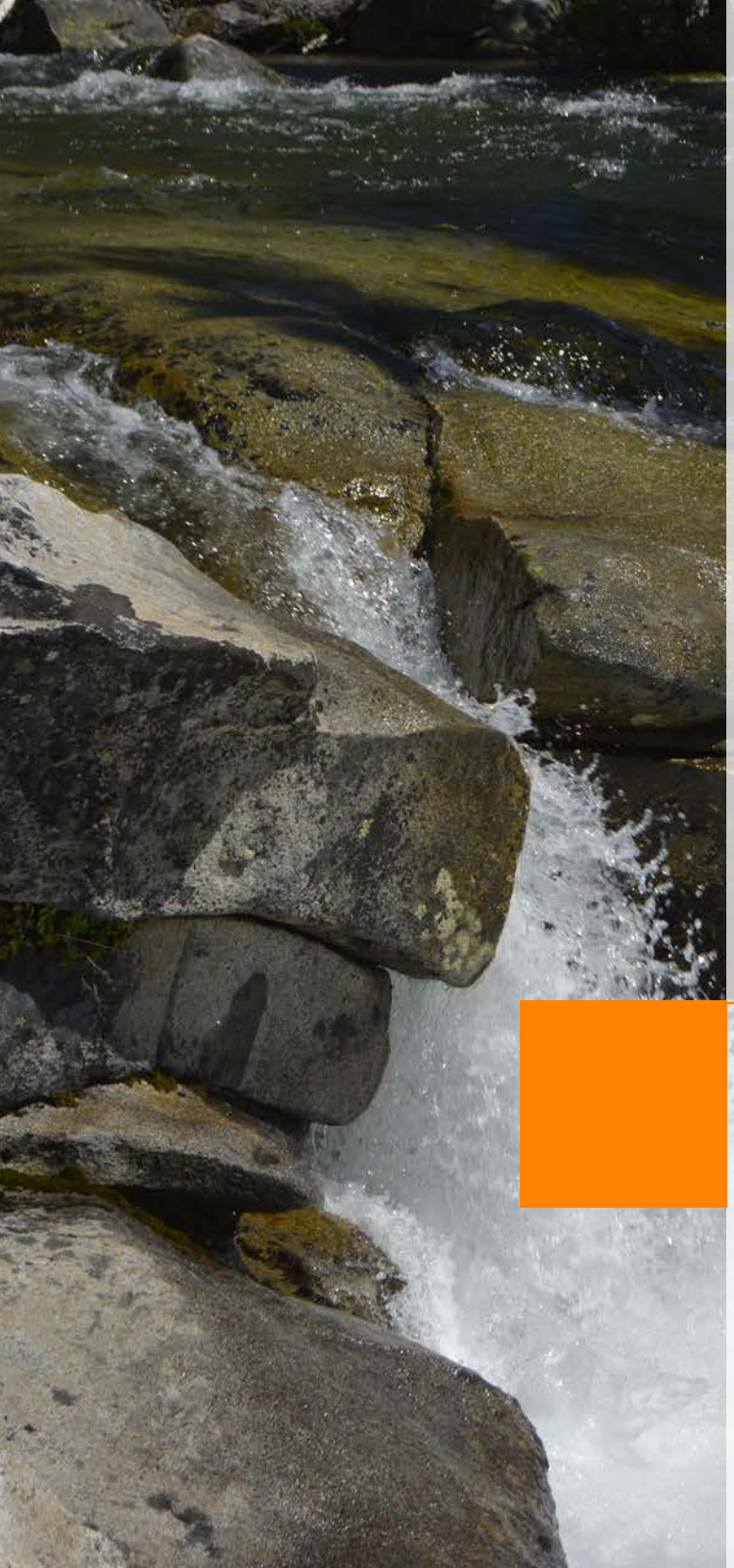


El Dorado County Water Agency

Water Resources Development and Management Plan

October 9, 2019 (Draft)

Stantec

El Dorado County Water Agency's
Mission Statement

Ensure that El Dorado County has adequate water for today and in the future.

A New Era

To be developed after the Board workshop.

Executive Summary

Through the 1959 El Dorado County Water Agency Act, the El Dorado County Water Agency's (EDCWA or Agency) mission is to ensure that El Dorado County has adequate water for today and in the future. The Agency's responsible area covers the entire El Dorado County, on both sides of the Sierra Nevada in the Tahoe Basin as well as the West Slope foothill area (West Slope). This diverse landscape has headwaters and national forests with some urbanization and general rural-agricultural surroundings.

This 2019 update of the Water Resources Development and Management Plan (WRDMP) marks a new beginning of the Agency's service to El Dorado County. It reflects the Agency's progression toward countywide long-term water security and a renewed focus on advancing integrated water management to realize the vision of the General Plan adopted by the County of El Dorado (County) for economic development, environmental protection, and quality of life for all residents.

A Need for a New Perspective

The recent drought from 2012 through 2016 served as a wake-up call for water managers statewide, with the recognition of the severe vulnerabilities we face with our current water management practices. In addition, recent devastating wildfires exposed the weaknesses of current passive forest management and overall headwater management that are critical to climate resiliency in El Dorado County.

California continues to experience rapid growth of its population and economy, and the influence of socioeconomic changes that cross geographic boundaries is becoming more prevalent. Increasing regulatory requirements and rapidly manifesting consequences of climate change also contribute significantly to concerns over long-term water supply reliability and climate resiliency, as well as the overall economy and way of life.

The County General Plan lays out a vision that encourages a strong economy; and also preserves the rural-agricultural way of life in El Dorado County. Imbedded in that vision is the protection of El Dorado County's rich natural resources for future generations. However, about 53 percent of the land in the West Slope that is covered by the County General Plan for economic development lacks adequate water supply for intended land use. The complexity and interrelationship of water resource-related challenges require a more integrated and collaborative approach. Future investments by many local, regional, and federal entities could be better coordinated and leveraged to create broader and long-lasting benefits for all communities countywide.

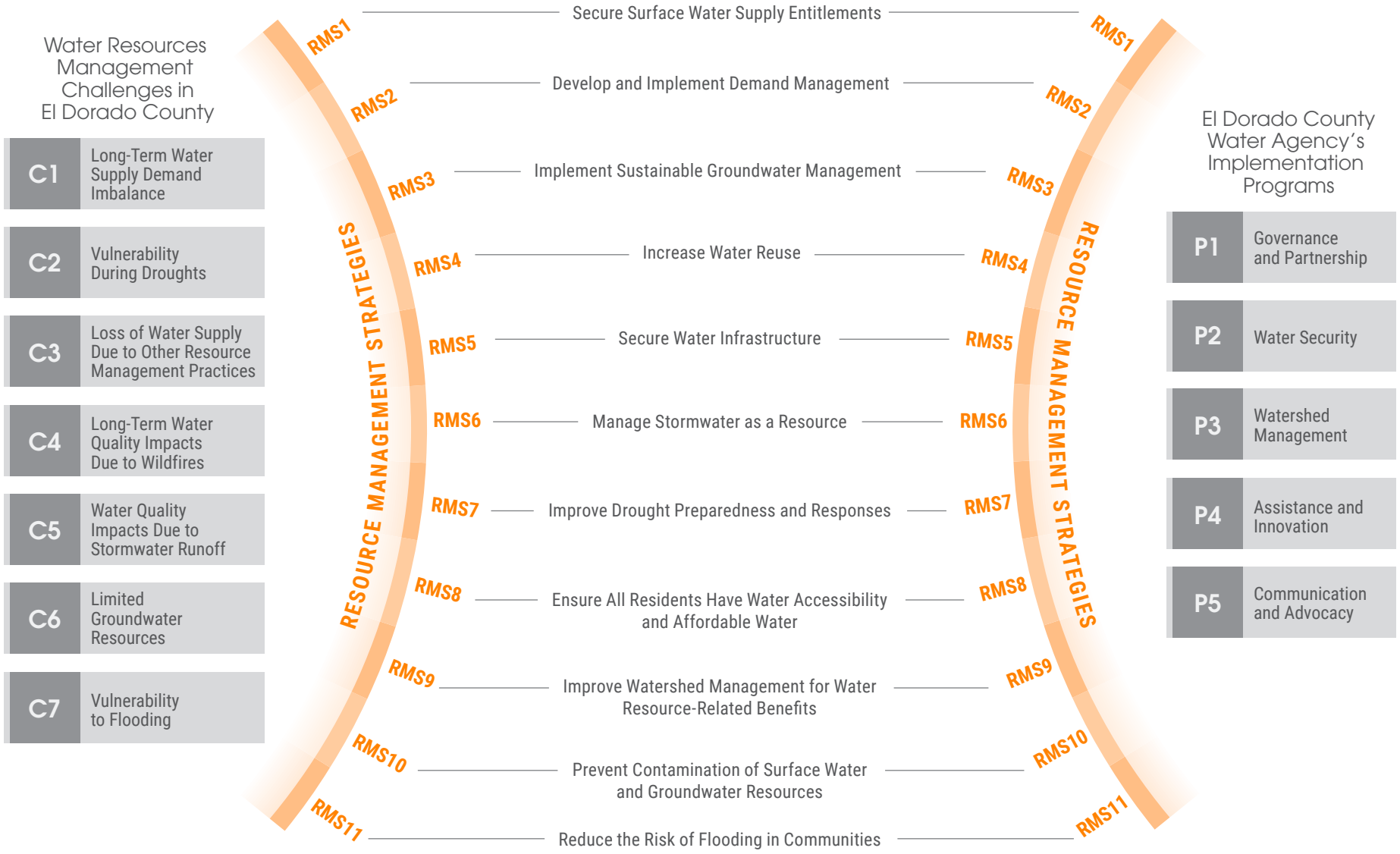
An Integrated and Collaborative Approach to a Better Future

The Agency does not currently own any water facilities nor provide water supply directly to any water users. Rather, it collaborates with water entities to develop local water supplies and is seeking to contract with the U.S. Department of the Interior, Bureau of Reclamation for Central Valley Project water service contract deliveries that support a portion of El Dorado County's domestic uses and economic development.

The Agency's 2016-2020 Strategic Plan calls for improved organization and a renewed focus on a more integrated and comprehensive water management approach to create benefits for El Dorado County, especially those not served by a water purveyor. This intent is fully reflected in this update of the WRDMP through its collaborative development process involving relevant County departments, water purveyors, stakeholders, and interested parties.

The WRDMP connects the identified water resource-related challenges to achieving the County General Plan vision with the Agency's implementation programs through an array of resource management strategies. Resource management strategies represent strategic directives that may mitigate the identified challenges through coordinated and collective efforts of all responsible parties. Key actions are established, along with the primary responsible agency(ies), and Agency's corresponding roles in leading, facilitating, or supporting a given activity are also clarified and consistent with its authority and best ways for the Agency to create direct value and benefits for all communities in El Dorado County.

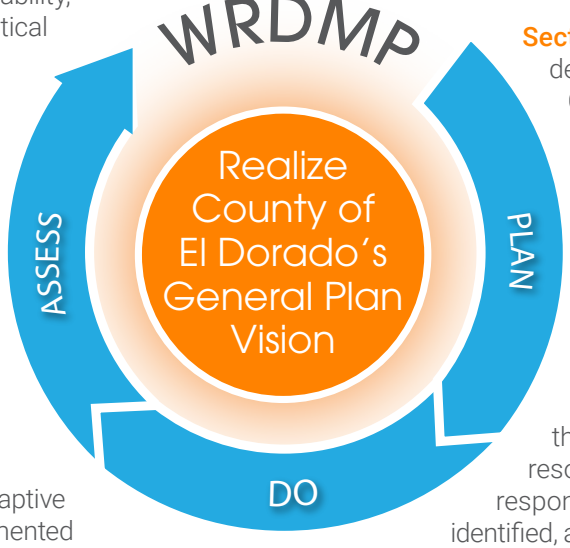
The resource management strategies with focused actions identified in the Water Resources Development and Management Plan align with the water resource-related challenges in El Dorado County and the El Dorado County Water Agency's existing and future implementation programs.



A Policy-Oriented Planning Practice for Adaptive Management

Consistent with the Agency's renewed focus, this WRDMP includes governing policies and guidance that will be required for successful implementation. The plan provides the necessary flexibility and adaptability to allow the collaborating agencies to formulate efficient and effective means to weather the uncertainties of climate variability, regulatory changes, geopolitical influences, and social preferences throughout implementation.

For efficiency of investment and accountability, the Agency prepared this WRDMP as a living document to allow periodic reviews for changed conditions and necessary adjustments in actions and priorities. The Plan-Do-Assess cycle of adaptive management will be implemented through a 5-year update cycle to maintain the WRDMP's relevancy and ensure responsible governance.



Simplified Document Structure for Efficient Updates and Adoption

This WRDMP separates policy directives for Board adoption from the constantly evolving technical detail. Supporting technical information (e.g., data, tools, evaluation methods) are instead incorporated by reference, where needed. This approach results in a concise document with a structure that facilitates future updates. It also highlights the importance of establishing stable policies and guidance for the Agency's operations and implementation.

Section 1: Introduction – This section describes the charge of the Agency and the need for a WRDMP with a new focus. It clarifies the Agency's goals and collaborative principles used in developing the WRDMP.

Section 2: Current Water Management – This section 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 support implementation of the County General Plan.

Section 3: Challenges Ahead – This section summarizes the identified water resources-related challenges ahead for El Dorado County, recognizing the differences between the West Slope and Tahoe Basin, as well as the integrated nature of water resource management.

Section 4: Resource Management Strategies – This section describes the resource management strategies to mitigate for identified water resource-related challenges in El Dorado County. Major actions, primary responsible agency(ies), and the Agency's specific implementation roles are identified, all aiming at an efficient and collaborative approach for collective success.

Section 5: Implementation – This section summarizes 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 by program for the next five years are described. Performance matrices and indicators are fully developed in this WRDMP but will be an area of focus for the next update, supporting efforts for accountability and investment efficiency.

Table of Contents

The Water Resources Development and Management Plan was prepared collaboratively through the contribution of the following groups and individuals.

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Brian Mueller – El Dorado Irrigation District
Charlene Carveth (LeeAnne Mila: Alternate) – County of El Dorado
Jodi Lauther – Grizzly Flats Community Services District
Kenneth Payne – El Dorado County Water Agency
Sean Barclay – Tahoe City Public Utility District
Shannon Cotulla (John Thiel: Alternate) – South Tahoe Public Utility District
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Tiffany Schmid (Anne Novotny, Brenden Ferry: Alternates) – County of El Dorado

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Doug Leisz – Citizens for Water; El Dorado County Chamber of Commerce
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Kenneth Payne – El Dorado County Water Agency
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Lynn Wunderlich – University of California Cooperative Extension
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Abbreviations and Acronyms

Act	El Dorado County Water Agency Act
ACWA	Association of California Water Agencies
Agency	El Dorado County Water Agency
BLM	U.S. Department of the Interior, Bureau of Land Management
Board	El Dorado County Water Agency Board of Directors
CABY	Cosumnes, American, Bear, Yuba
County	County of El Dorado
CVP	Central Valley Project
DWR	California Department of Water Resources
EDCWA	El Dorado County Water Agency
EID	El Dorado Irrigation District
EMD	Environmental Management Department
FEMA	Federal Emergency Management Agency
GDPUD	Georgetown Divide Public Utility District
GFCSD	Grizzly Flats Community Services District
GSA	Groundwater Sustainability Agency
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
LAFCO	Local Agency Formation Commission
M&I	Municipal and Industrial
OCA	Other County Area
Plenary	El Dorado County Plenary for Water
PG&E	Pacific Gas and Electric Company
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RMS	Resource Management Strategies
RWA	Regional Water Authority
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
TRPA	Tahoe Regional Planning Agency
USFS	U.S. Forest Service
West Slope	El Dorado County area west of the Sierra Nevada Crest
WRDMP	Water Resources Development and Management Plan

Photo Credits

Brendan Ferry, County of El Dorado – Page iii

Yung-Hsin Sun, Stantec – Cover, Table of Contents, Pages ES-0, v, 4, 12, 30, 44

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 (Government Code §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 Health and Safety Code §116275(i).

Disadvantaged Community — A community with a median household income less than 80 percent of the statewide average, as described in Public Resources Code §75005(g).

Federal Poverty Level — It is a measure of income used by the U.S. government to determine who is eligible for subsidies, programs, and benefits.

Noncommunity Water System — A public water system that is not a community water system, as described in Health and Safety Code §116275(j).

Non-Potable Reuse — All recycled or reclaimed water applications except those related to water supply augmentation and drinking water.

Nontransient Noncommunity Water System — A public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year, as described in Health and Safety Code §116275(k).

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 including 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 (Public Utilities Code §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 §116275(h). 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-Agricultural Water Use Planning Zone — A geographic delineation of land 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 — Serves 15 to 2,999 service connections or delivers less than 3,000 acre-feet of water in a year.

State Small Water System — System for the provision of piped water to the public for human consumption that serves at least five, 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 described in Health and Safety Code §116275(n).

Transient Noncommunity Water System — Noncommunity water system that does not regularly serve at least 25 of the same persons over six months per year, as described in Health and Safety Code §116275(o).

Water Use Planning Zone — A geographic delineation of land 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 — Means a supplier, either publicly or privately owned, providing 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 Water Code §10617.

Urban Water Use Planning Zone — A geographic delineation of land that may have only municipal and industrial water use allowed by the adopted County General Plan.

SECTION

1

Introduction

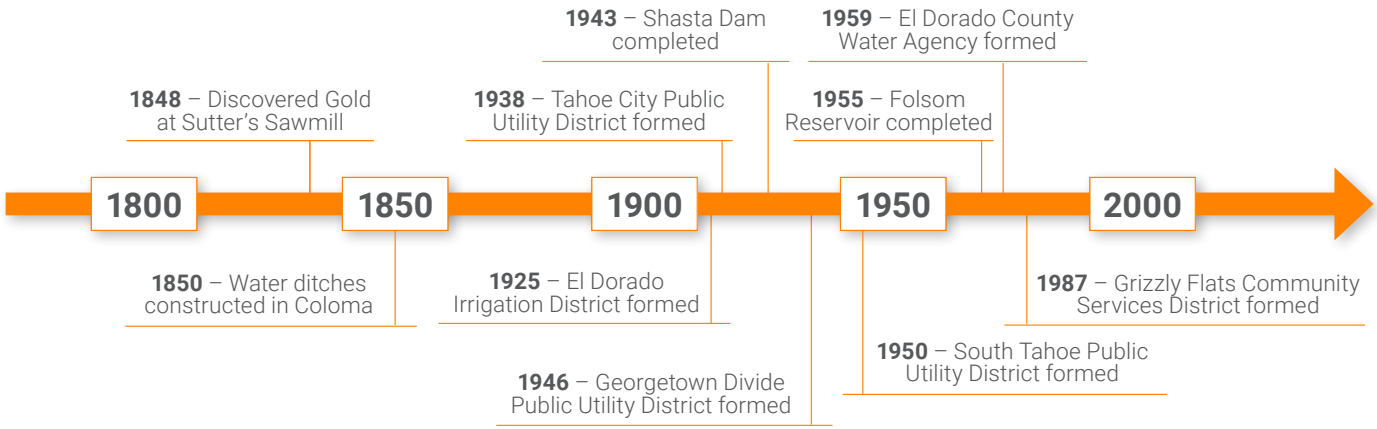
The El Dorado County Water Agency (Agency or EDCWA) was created in 1959 through the El Dorado County Water Agency Act (Act) to ensure that El Dorado County had adequate water to serve its many needs now and into the future. The Agency covers the entire El Dorado County, on both sides of the Sierra Nevada with headwaters and national forests. El Dorado County's diverse landscapes include a portion of the Tahoe Basin located on the east of the Sierra Nevada Crest, that has unique governance and ecological sensitivities. The vast West Slope foothill area (West Slope) located to the west of the Sierra Nevada Crest in El Dorado County, has urbanized areas in the west near Sacramento County. The majority of the West Slope has a rural-agricultural setting, which is a preferred way of life.

The Agency does not currently own any water facilities. It currently collaborates with water purveyors to develop local water supplies and is finalizing a contract with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for a Central Valley Project (CVP) water service contract for deliveries that support El Dorado County's continued economic development.

1.1 Needs

The Agency developed its first Water Resources Development and Management Plan (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 some emerging issues such as climate change. In 2014, the Agency completed a update that was limited to the West Slope water use demands only.

The recent drought from 2012 through 2016 left water managers throughout California, like the Agency, with changed perspectives regarding their water supply vulnerabilities and the importance of being climate resilient. In 2016, the Agency completed its 2016-2020 Strategic Plan that called for improved organization and a renewed focus on a more integrated and comprehensive water management approach to create benefits for the entire El Dorado County, especially those residents not served by a water purveyor. As these directives required the Agency to reevaluate and adjust, if needed, its focus in future investments and its associated role and responsibilities, the Agency conducted a full update of the WRDMP.



1.2 Goals

The primary goal of the WRDMP is to assist the County of El Dorado (County) in realizing its adopted General Plan through prudent and integrated water management. The County General Plan is unique in several ways in that it:

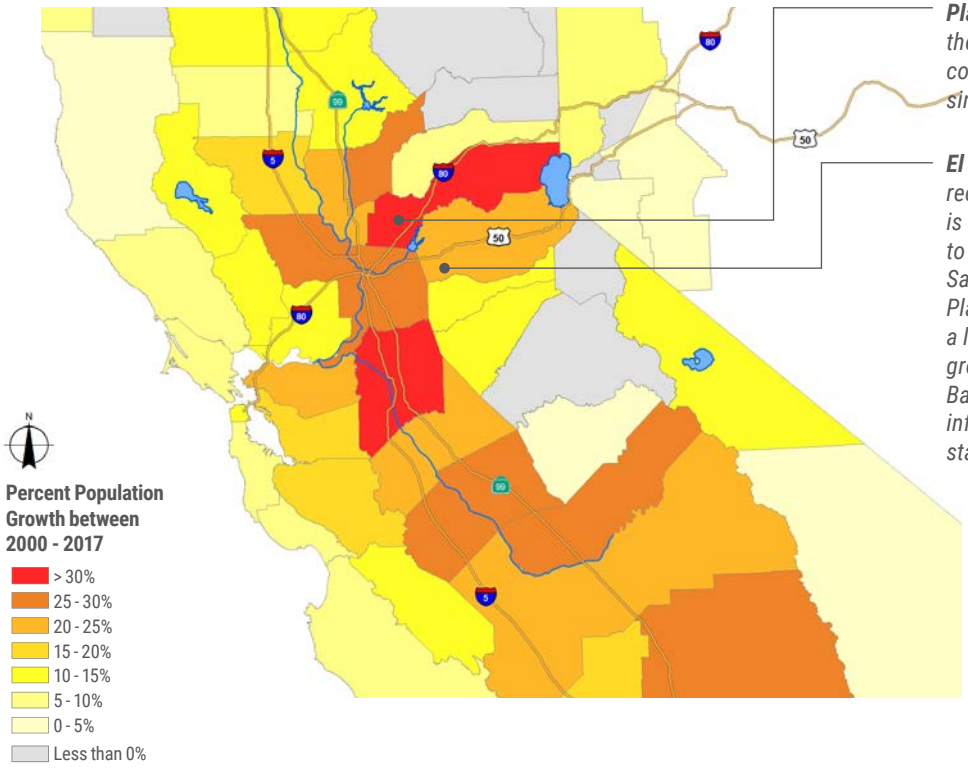
- Contains a land use plan for economic development and integrated natural resource protection and management.
- Plans for land capacity for all purposes by considering future economic development beyond the typical near-term urbanization focus.
- Incorporates policies and considerations that allow for 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 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.

In Northern California, economic development and housing challenges in the Bay Area resulted in population growth along major transportation corridors including El Dorado County. In anticipation of future growth, the County of El Dorado General Plan vision allows for economic development while preserving the way of life in rural-agricultural communities. In 2014, the El Dorado County Board of Supervisors approved a 1.03 percent annual growth rate for the next 20 years.



***Placer County** is the fastest growing county in California since 2000.*

***El Dorado County's** recent development is mostly adjacent to its boundary with Sacramento and Placer Counties. To a less degree the growth in the Tahoe Basin is somewhat influenced by the state of Nevada.*

Source: United States Census, 2000 and 2017 Quickfacts

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.

For plan development, the Agency organized a Plan Advisory Group to provide input. This group met monthly and included representatives from County departments and commissions as well as local water purveyors. In addition, an Agricultural Advisory Group and a Municipal and Industrial (M&I) Advisory Group also assisted with demand projections and consistency. It is the Agency's intention to continue collaborating with these entities and stakeholders into the future.

1.4 Organization

The WRDMP is organized into 5 sections:

- **Section 1: Introduction** describes the charge of the Agency and the need for a WRDMP update with a fresh perspective, 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 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 for 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.

Why We Do It

Who Are Responsible

What Is Ahead

How We Do It

What We Do

SECTION

2

Current Water Management

Understanding current water management practices, responsibilities, infrastructure, and commitments is critical to developing water management strategies and investment priorities that will provide opportunities for sustained economic development and help the Agency fulfill the vision in the County General Plan.

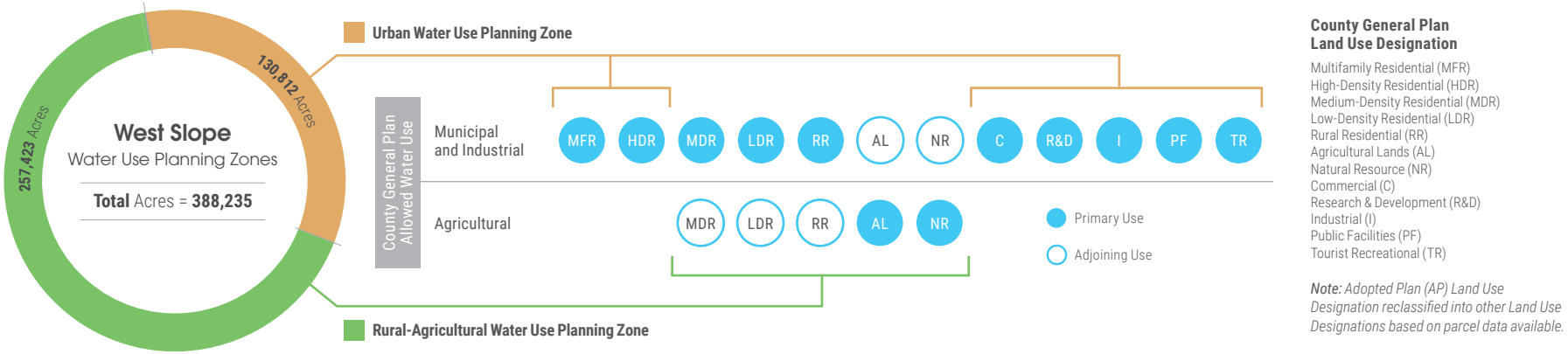
2.1 Economic Development

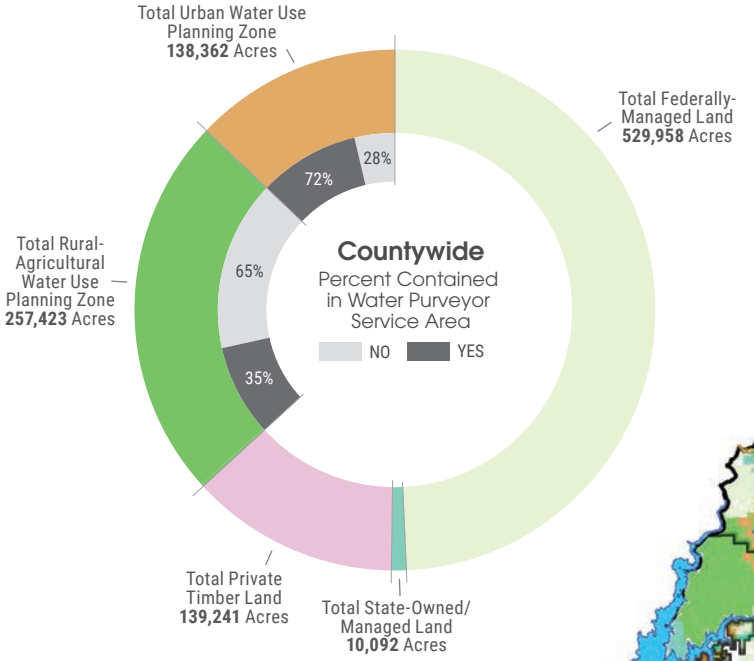
The County General Plan designates lands for economic development and identifies areas where community and agricultural development may occur. These lands are outside of national forest lands, private timber lands, and other state and federally-managed lands. The County shares responsibility for land 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.

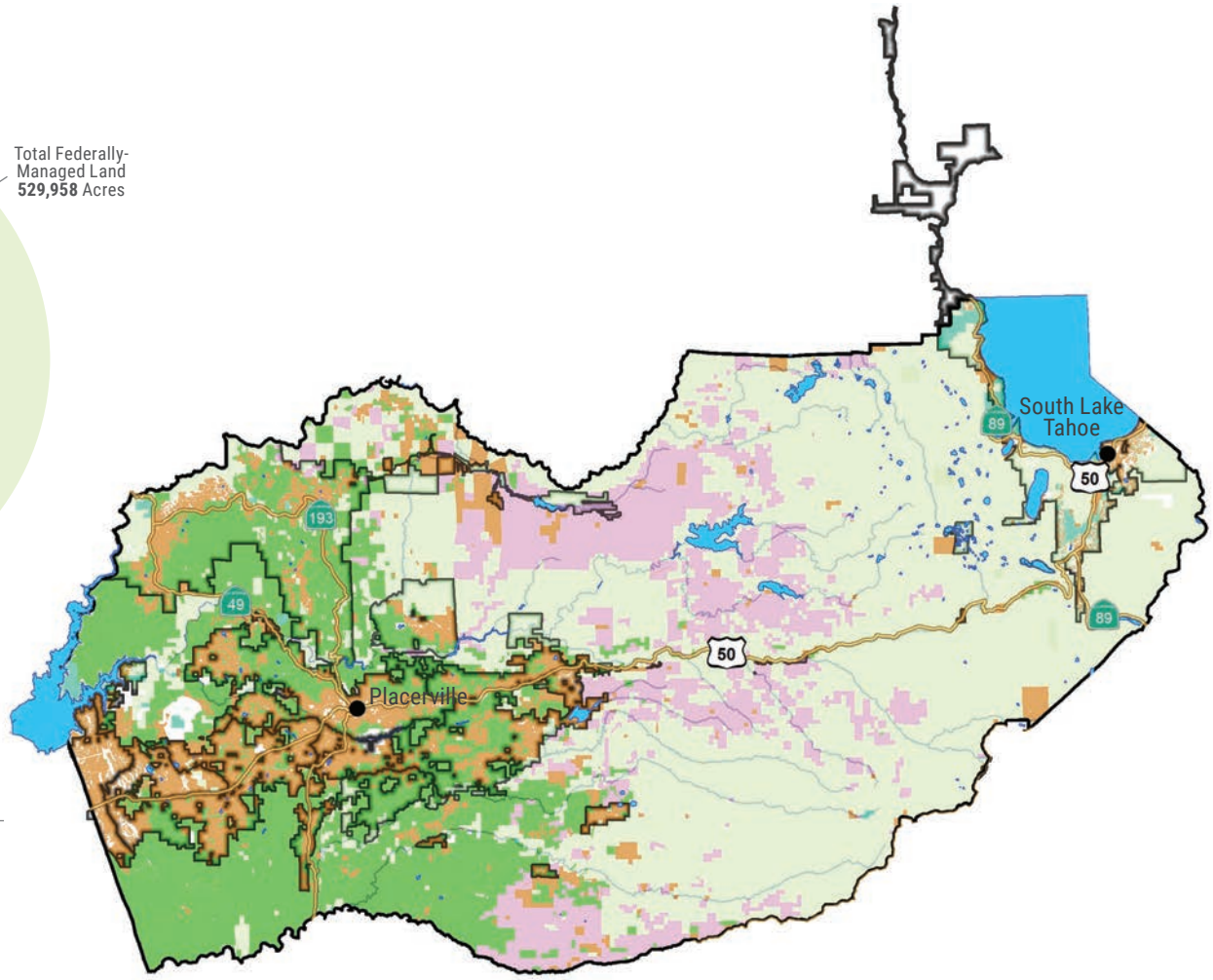
For the West Slope, the County General Plan lays out a rural-agricultural dominated landscape with high density urban development concentrated in areas adjacent to Sacramento County and along Highway 50 using a combination of land use designation, zoning ordinance designation, and policies. Constrained 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.

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 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.

Water Use Planning Zone
- Rural-Agricultural
- Urban

Areas Not in General Plan Land Use Designation
- Private Timber
- Federally-Managed Land
- State-Owned/Managed Land
- City
- Existing Water Purveyor Service Area

Source of parcel information; County of El Dorado, March 2019

N

0 2.5 5 10 15 20 Miles

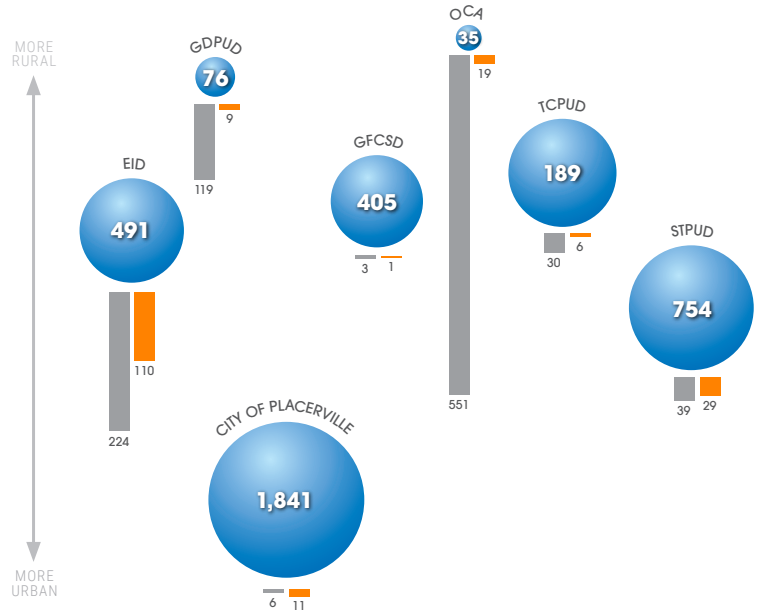
2.2 Roles and Responsibilities in Water Management

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. The Agency is charged with developing a countywide water plan and participating in statewide water planning. It can negotiate, under the Act, contracts with the California Department of Water Resources (DWR), Reclamation, and other local, state, and federal agencies for water management and facility construction. The Agency supports actions to protect existing uses of water rights on which water purveyors and their customers depend, and it applies for the use of additional water rights as needed for the beneficial use of future customers or to extend service boundaries to include existing landowners.

There are six public water purveyors in El Dorado County. 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 water from EID. South Lake Tahoe Public Utility District (STPUD) serves groundwater, and Tahoe City Public Utility District (TCPUD) serves water from both groundwater and spring wells in the Tahoe Basin. These purveyors' service areas do not cover the entire El Dorado County. Residents, farms, ranches, and businesses outside these purveyors' boundaries primarily rely on groundwater. In the West Slope, shallow groundwater wells are used, and in the Tahoe Basin, groundwater is extracted from either the Tahoe South or Tahoe West Subbasin.

The Agency collaborates with EID, GDPUD, GFCSD, STPUD, TCPUD, and the City of Placerville in water management. Currently, the Agency represents the Other County Area, comprised of areas in El Dorado County that fall outside private timber land, state and federally-managed land, and a water purveyors' service area.

Water purveyors in El Dorado County have different population densities, suggesting their relative urban/rural characteristics. In comparison, the Other County Area is the most rural.



LEGEND AND SOURCES

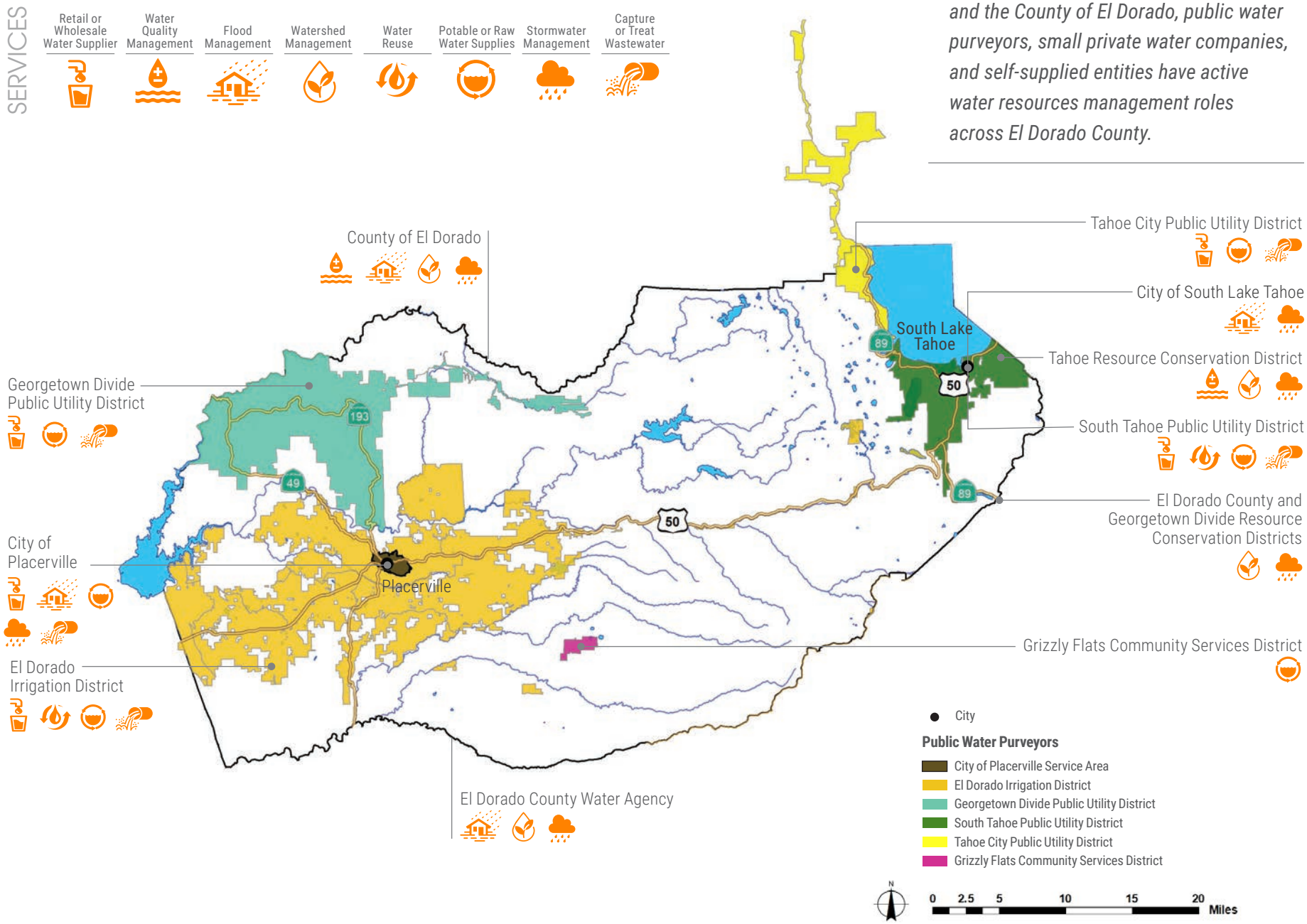
Population Density (number of persons/square miles)

Total Service Area Including Area Outside El Dorado County (square miles)
(Source: County of El Dorado)

Total Population Including Area Outside El Dorado County (square miles)
(Source: 2015 El Dorado Irrigation District Urban Water Management Plan, 2015 Georgetown Divide Urban Water Management Plan, 2014 Grizzly Flats Community Services District Municipal Service Review, 2015 South Tahoe Public Utility District Urban Water Management Plan, 2015 Tahoe City Public Utility District Urban Water Management Plan, United States Census QuickFacts, City of Placerville Economic Development website)

Key
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
OCA = Other County Area
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

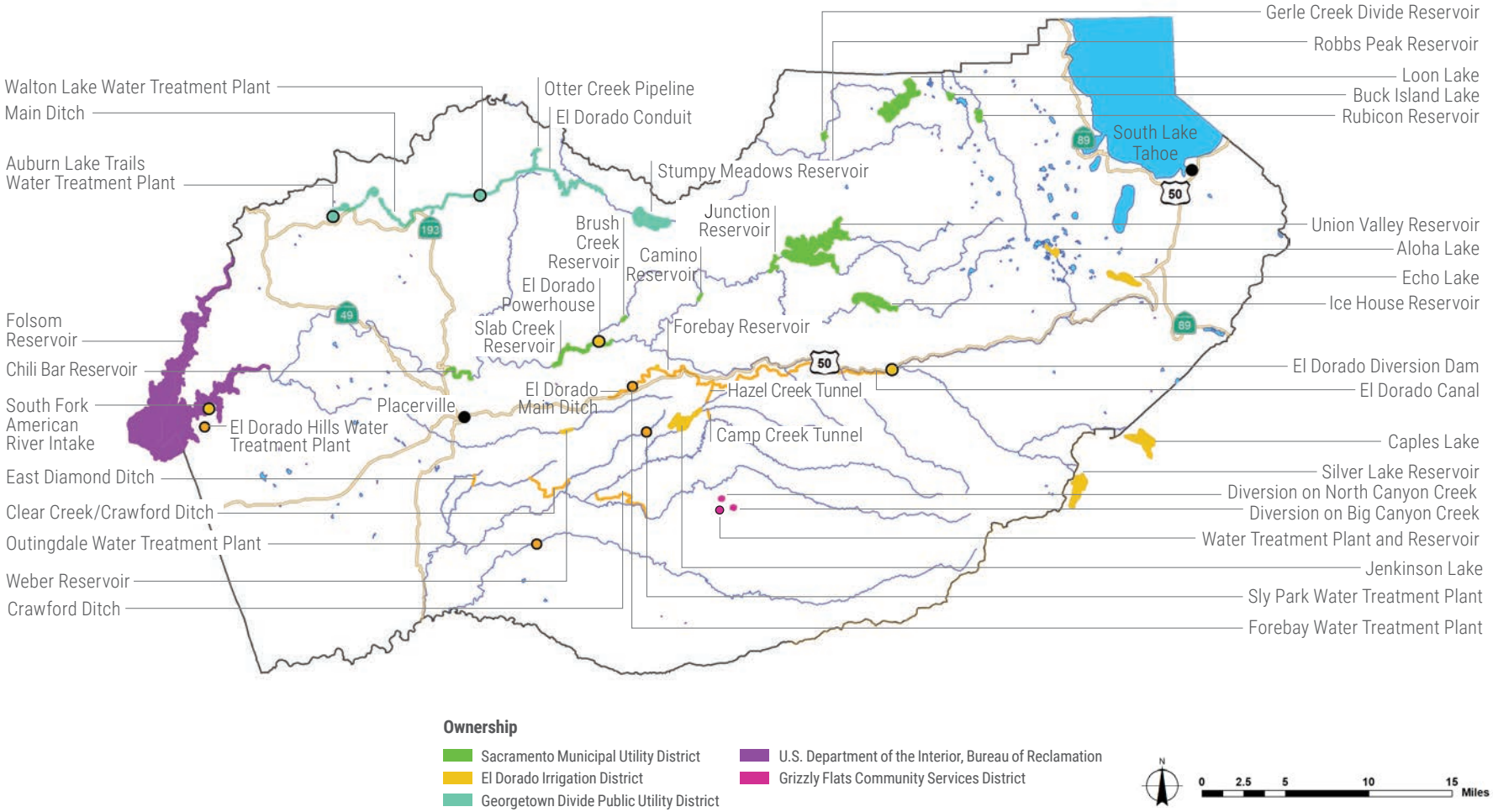
El Dorado County Water Agency, cities and the County of El Dorado, public water purveyors, small private water companies, and self-supplied entities have active water resources management roles across El Dorado County.



2.3 Major Raw Water Infrastructure

The Agency does not own any water facilities at this time. In the past, the Agency collaborated with water purveyors within El Dorado County to develop water infrastructure and other related assets. After acquisition of new assets, a water purveyor often assumed ownership and management responsibilities. This practice could be modified in the future, when appropriate, as the Agency assumes a more active role in its mission to ensure countywide water management.

Water supplies in El Dorado County originate as runoff from the Sierra Nevada snow pack that replenish the rivers and lakes on both sides of the mountain ridge. 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 is located in El Dorado County including 11 dams, 8 powerhouses to meet electricity demands, and Loon Lake (a major water storage reservoir).



Folsom Reservoir is owned and operated by Reclamation as part of the CVP to provide flood control, hydropower, and water supplies. EID owns and operates Jenkinson Lake Reservoir in Pollock Pines and Project 184 including Echo, Aloha, Caples, and Silver Lakes. According to EID's 2013 Integrated Water Resources Master Plan, EID also diverts its CVP contract water from Folsom Reservoir. GDPUD owns and operates Stumpy Meadows Reservoir east of Georgetown in addition to several ditches used for conveyance. GFCSD owns and operates its own reservoir and diverts water from North Canyon Creek and Big Canyon Creek. Some of the infrastructure owned by EID and GDPUD are from the Gold Rush era and consist of several wooden flumes used for conveyance.

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 serves its customers from wells. TCPUD serves its customers from 10 groundwater and 2 spring wells.

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.

2.4 Environmental Protection

The County General Plan includes land use designations for integrated natural resource protection and management. Areas in El Dorado County that the Agency will help protect include several types of conservation areas:

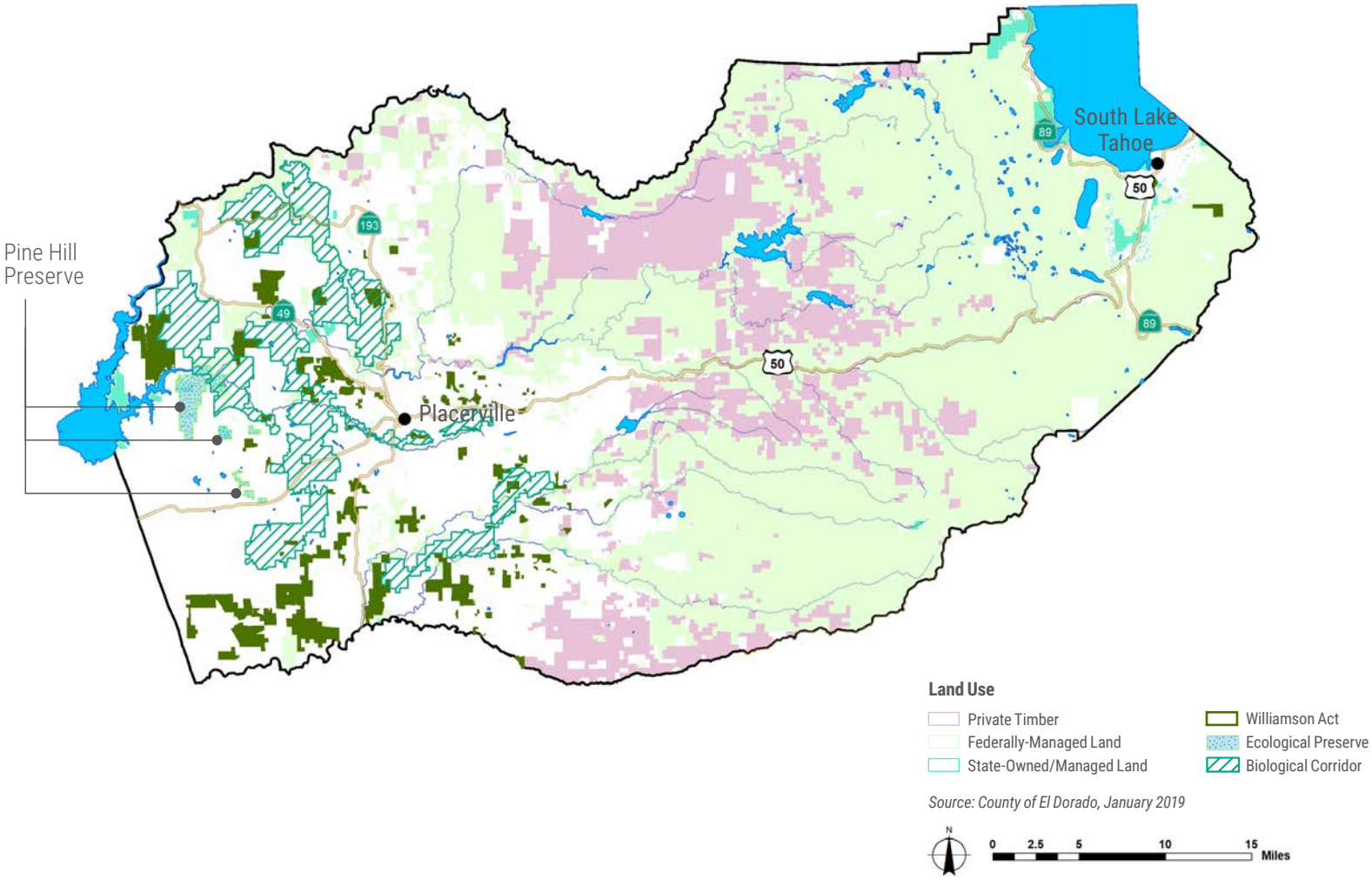
The Williamson Act – Enacted in 1965, this state law enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal.

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 of El Dorado Zoning Ordinance 130.71.030.

Through the WRDMP development and implementation, the Agency will also include conservation objectives outlined above in its 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 to ensure continued water reliability and economic prosperity in El Dorado County over the years. 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.

Water-Resource Related Challenges in the West Slope

Water Supply			Water Quality			Public Safety
C1 Long-Term Water Supply-Demand Imbalance (3.1)	**C2 Vulnerability During Droughts (3.2)**	**C3 Loss of Water Supply Due to Other Resource Management Practices (3.3, 3.4, 3.5)**	**C4 Long-Term Water Quality Impacts Due to Wildfires (3.3)**	**C5 Water Quality Impacts Due to Stormwater Runoff (3.5)**	**C6 Limited Groundwater Resources (3.6)**	**C7 Vulnerability to Flooding (3.7)**
• 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 and other factors result in long-term reduction in water supply reliability. • 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). • The Other County Area is not covered by an existing active drought mitigation planning. • More than 100 small public water systems are susceptible to the effects of drought.	• 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.	• 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.

Level of Concern

High | Moderate High | Moderate Low | Low

Water-Resource Related Challenges in the Tahoe Basin

Water Supply			Water Quality			Public Safety
C1 Long-Term Water Supply-Demand Imbalance (3.1)	**C2 Vulnerability During Droughts (3.2)**	**C3 Loss of Water Supply Due to Other Resource Management Practices (3.3, 3.4, 3.5)**	**C4 Long-Term Water Quality Impacts Due to Wildfires (3.3)**	**C5 Water Quality Impacts Due to Stormwater Runoff (3.5)**	**C6 Limited Groundwater Resources (3.6)**	**C7 Vulnerability to Flooding (3.7)**
• 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. • Ongoing water right proceeding and process to resolve the 23,000 AF allocation for California parties per Public Law 101-618 (Settlement Act) poses uncertainty in long-term water supply.	• 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 public water systems are susceptible to the effects of drought such as the temporary loss of water supply.	• 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 conditions, are adequate for recharge. • Perchloroethylene contamination has been observed in the South Tahoe Basin.	• Riverine flooding is not a substantial threat in the Tahoe Basin; however, rain on snow often causes extensive street flooding in certain areas.

Level of Concern

High | Moderate High | Moderate Low | Low

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. To assist the County in realizing the vision of its General Plan, a water supply-demand imbalance assessment was completed at the capacity level, as defined in the County General Plan, and not under an interim condition for a mandated time period in the near future (e.g., the next 20 years as required for an Urban Water Management Plan).

Changes and Adaptation

As discussed in Section 2.1 (see page 6), much of the West Slope planned development areas are not within water purveyors' existing service areas which could result in lengthy lead times to acquire the sources of water and needed facilities to provide reliable water supplies to these areas. Moving into the future, continued economic growth, climate change effects, technological advancements, and regulatory changes may affect both the demand and supply outlooks, resulting in a "water supply-demand imbalance" (an aggregated outcome of these changing factors).

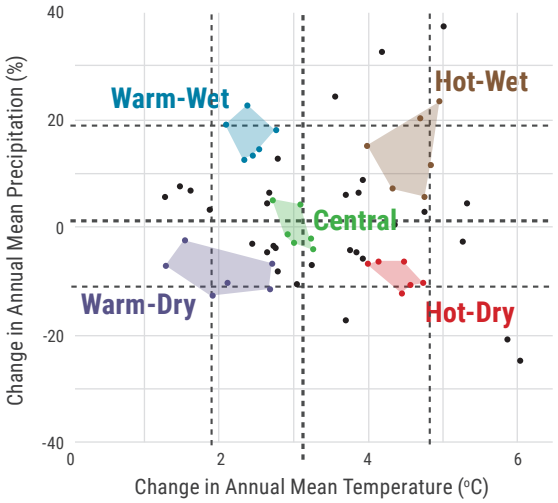
Many state, federal, and regional entities including the Agency are engaged in activities to improve understanding of the potential imbalance, and update policies and develop short-term and long-term actions to lessen the impacts. The concepts of safe yield and firm yield and any perceived assurance 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 in order to reduce both individual and collective vulnerabilities over a broad range of future scenarios. This approach has proven to be both a more effective and financially sustainable way to weather the vast uncertainties associated with influential factors.

The Agency, in partnership with Reclamation and other regional agencies, is conducting 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 of El Dorado County. Projected climate change through 2100 is expected to reduce snowpack (the primary source of water in El Dorado County) as a result of more precipitation falling as rain instead of snow. 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 in the mid-century and end-of-century projections. This shift will result in "flashier" hydrology that could overwhelm the existing facilities that were designed and are operated according to the historical hydrology.

The increasing frequency and severity of extreme climatic events (droughts and flooding) will likely have devastating effects on communities. Historical annual precipitation totals in the American River Basin have fluctuated between 50 to 200 percent of average, but those amounts are not an indicator of future conditions, and water managers should recognize that any "state-of-the-art" water supply analysis based on monthly projections may not show the full extent of these extremes for use in adaptation strategy development and that complementary emergency response and preparedness effects must continue.

Estimated Changes in Precipitation and Changes in Temperature from Latest Climate Change Studies Published by the United Nations Intergovernmental Panel on Climate Change

Historical: 1980-2009, Future: 2070-2099



Source: American River Basin Study; preliminary information

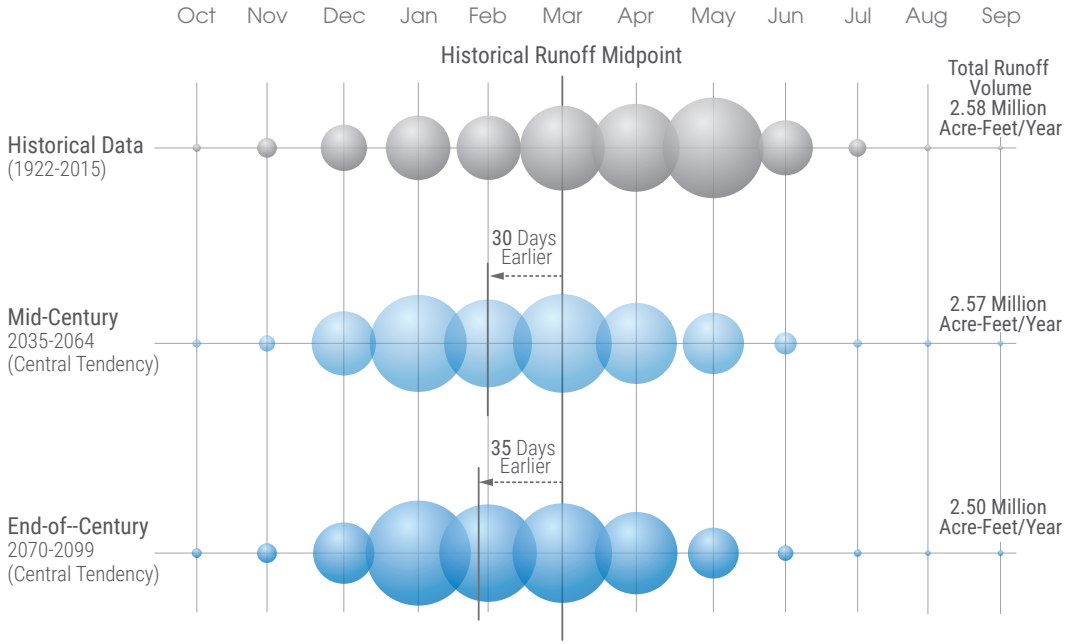
An ensemble approach to climate change impact assessments is standard and accounts for the effects of simulated changes influenced by assumed adaptation and differences in various, Global Circulation Models. Five representative trends that cover the range of possibilities but are not overly aggressive are often considered for assessing potential effects of climate change. Typically, the hot-dry and warm-wet tendencies would bracket potential water supply impacts.

Regulatory changes could also influence future demands and supply availability. California will soon transition from a volume-based conservation goal as required in Senate Bill X7-7 of 2009 to budget-based conservation requirements per Senate Bill 606 and Assembly Bill 1668 of 2018 after the State Water Resources Control Board (SWRCB) adopts various water use efficiency standards in 2023. Pending implementation of the new regulation imposes additional uncertainties on water demands and supply reliability. Continued conservation is necessary and beneficial; however, it also hardens demands, requiring more robust drought preparedness and response actions. It also requires attention to water supply reliability for vulnerable populations and disadvantaged communities.

As climate change effects continue to be felt, 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.

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 water purveyors in El Dorado County 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 (such as water reuse). However, the Sacramento-San Joaquin Rivers system continues to experience ecosystem collapse,



Source: American River Basin Study; Preliminary Information

Climate change will likely result in increased runoffs during winter months, and reduced snowmelt in spring months for water supply. The existing facilities designed and operated based on historical hydrology will be overwhelmed and unable to provide adequate flood protection or water supply for all beneficial uses.

prompting the call for additional environmental protection even as statewide economic development continues to drive up water supply needs.

In the 21st Century, during the historic 2012-16 drought the Sacramento and San Joaquin Rivers system was highly stressed and overwhelmed due to its recent record-breaking persistence and intensity. Under an emergency drought declaration, the SWRCB expanded its response to implement unprecedented curtailments of senior water rights and mandatory water conservation statewide. Other concurrent state policies – such as the Sustainable Groundwater Management Act (SGMA) implementation, and; voluntary and mandatory water system consolidation – also actively promote enhanced regional self-reliance and more rigorous drought protection efforts, especially as they relate to vulnerable populations and rural communities. Such significant changes in practice will be critical to planning for future water supply needs.

Imbalance Assessment

Supporting the vision of the County General Plan requires that the 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 5) sets forth the eligibility criteria for certain water use based on land use designations and zoning ordinances. This basic eligibility does not imply that demands will be realized at a given parcel because additional factors would affect the owner's decision to incur certain demands including:

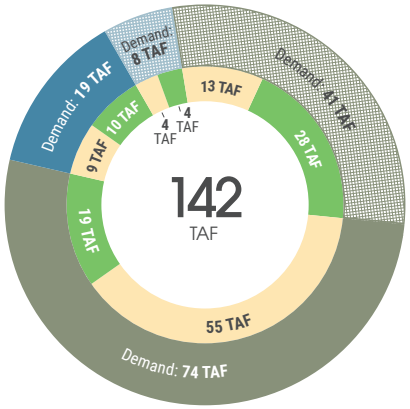
- Physical conditions (e.g., soil types, slopes)
- Settings (e.g., access roads, limits in dwelling density, preferences in agricultural districts or community center designations)
- Other policies and limitations in the County General Plan and associated regulations and permitting requirements (e.g., the total population cap)

The resulting screened parcels will be used in a demand estimate where applicable economic activities, demand management practices, use of technology, and other water management strategies are considered.

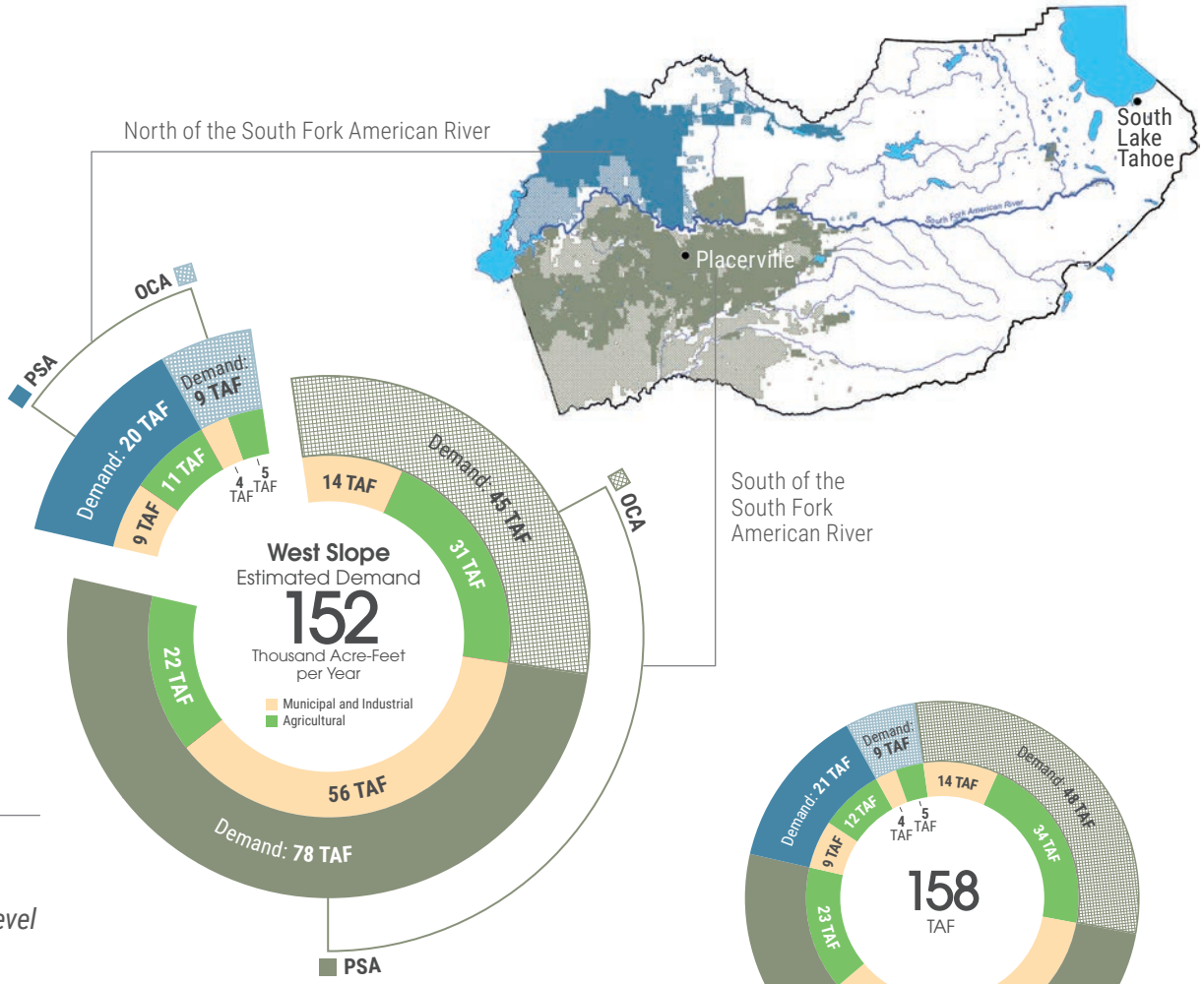
Such an assessment must be updated regularly to reflect changing conditions and new information, re-evaluate risks and uncertainties, and account for the sometimes lengthy lead time to go from planning to implementation of an action or infrastructure. Preliminary findings from the ongoing effort to assess 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 ongoing American River Basin Study. Preliminary findings suggest that (1) existing facilities and operations are likely to be less effective in providing flood protection or capturing needed water supply, and (2) 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, and the need for additional long-term water supply to sustain countywide socioeconomics, and to provide adequate drought protection are not anticipated to change as assessment refinement continues.

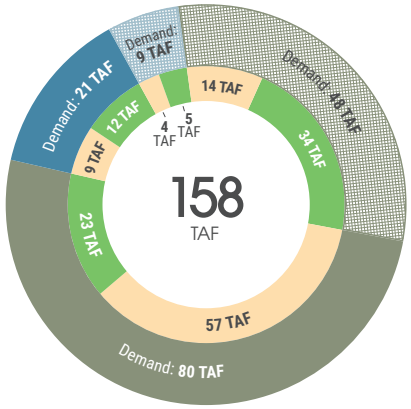
Tahoe Basin. The ongoing assessment integrates interim findings from both the in-progress water right entitlement discussion and demand evaluation. Tahoe Basin demands are based on population growth, economic development, and water-based tourism. A unique consideration in this area is the considerable fluctuation in water use – both seasonally, and during the weekends and holidays – with the influx of tourists. Transient water demands present a challenge to implement water management strategies effectively. 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 Truckee River Operating Agreement. This agreement was negotiated to satisfy provisions of Public Law 101-618 (Settlement Act) which limits California's total gross diversions in the Lake Tahoe Basin to 23,000 acre-feet per year from all natural sources, including both direct diversion from Lake Tahoe and groundwater. 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 water purveyors (TCPUD, STPUD, and North Tahoe Public Utility District) to ensure long-term water supply reliability.



WARM-WET TENDENCY



CENTRAL TENDENCY



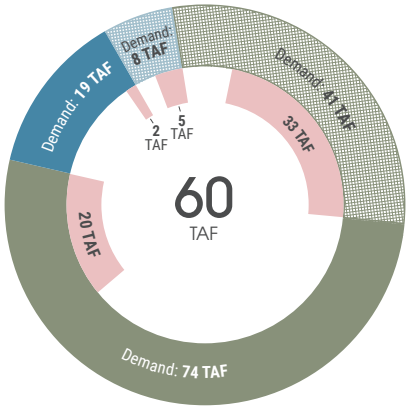
HOT-DRY TENDENCY

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 preliminary results from ongoing economic-based agricultural development opportunity and municipal and industrial demand review incorporates considerations of foreseeable demand management practices, technology advancement, and regulatory changes. The climate change also affects agricultural demands and municipal and industrial outdoor demands.

Key

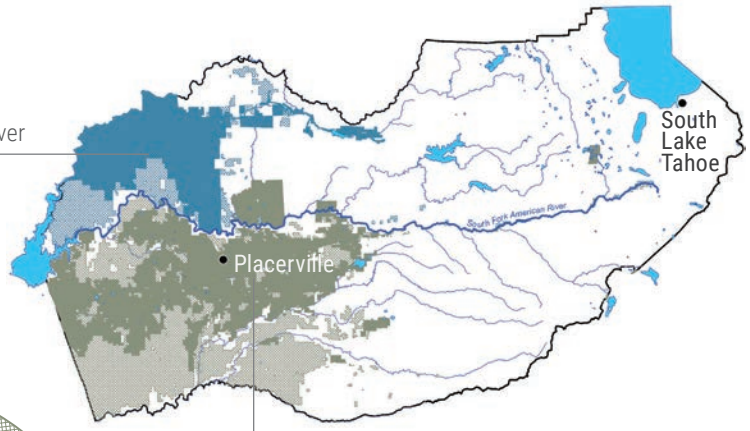
OCA = Other County Area
PSA = Purveyor Service Area
TAF = Thousand Acre-Feet

Source: West Slope Demand Review; preliminary information



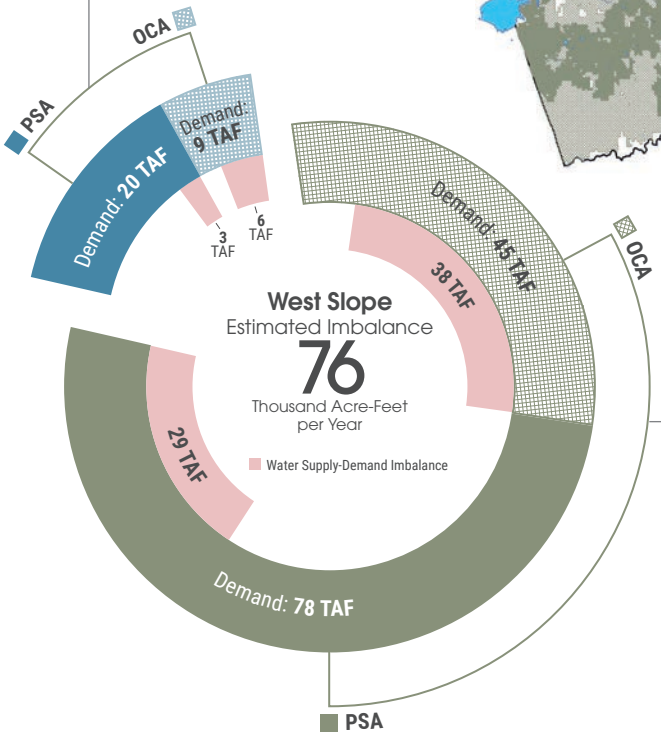
WARM-WET TENDENCY

The preliminary results from applying the demand projection and climate hydrology in 2070 suggest a significant water supply-demand imbalance, 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.



North of the South Fork American River

South of the South Fork American River



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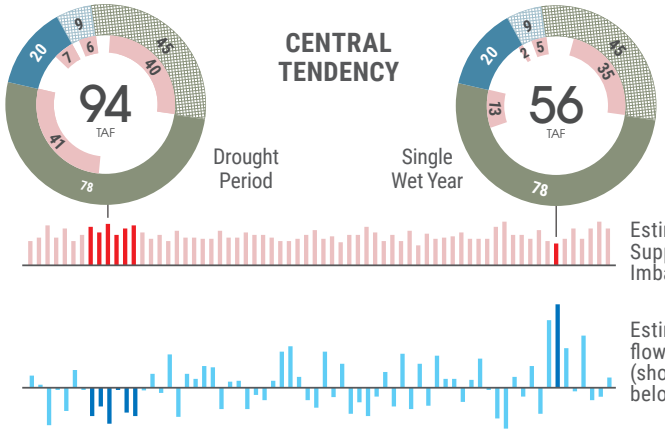
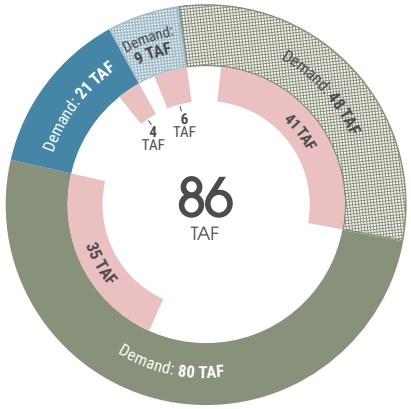




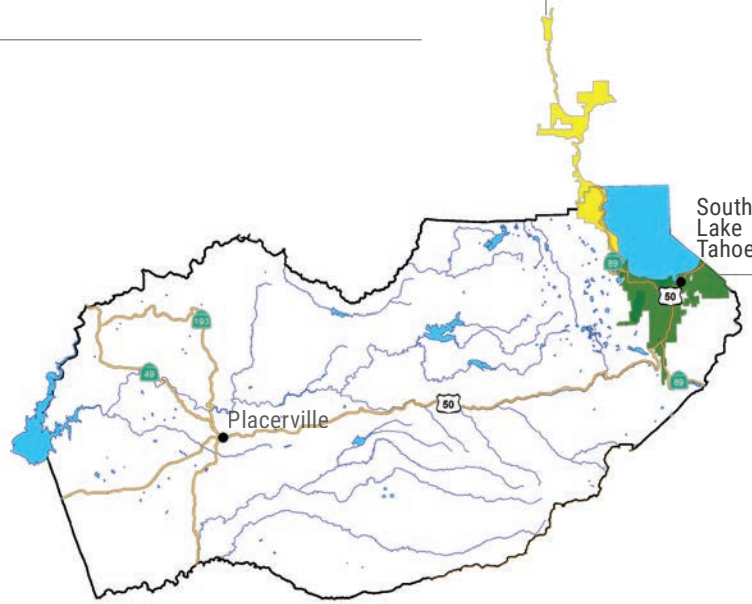
HOT-DRY TENDENCY

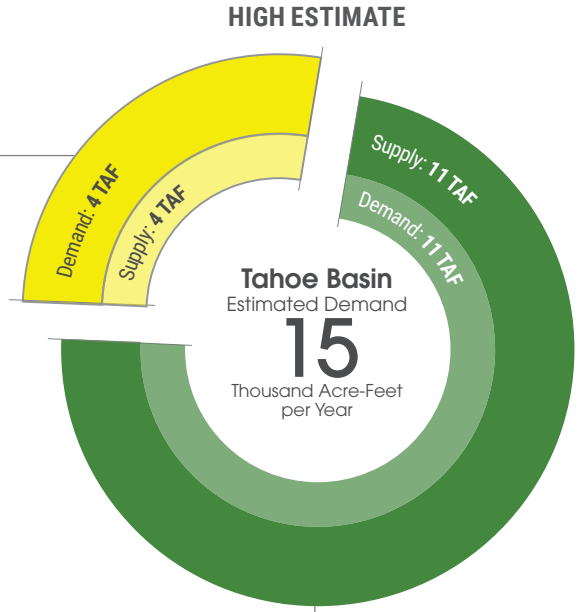
Key

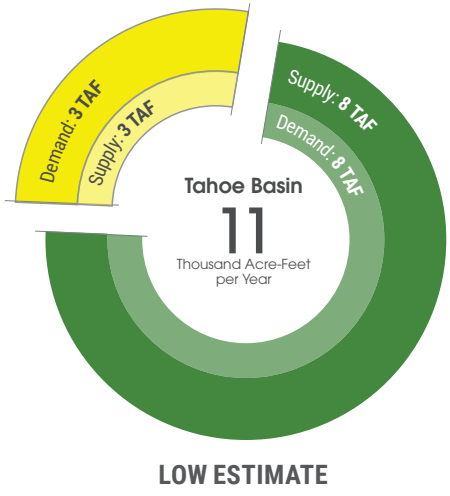
OCA = Other County Area
PSA = Purveyor Service Area
TAF = Thousand Acre-Feet

Source: American River Basin Study; preliminary 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 the climate change conditions.







Source: Tahoe Basin Ongoing Assessment

3.2 Vulnerability During Droughts

Water purveyors and agencies continue to actively plan for emergencies and extended droughts. Overall, there is broad coverage throughout El Dorado County which has resulted from the Agency being proactive and previously sponsoring drought plans. All agencies are required to have drought plans (or be in compliance with drought ordinances) and have established ways to respond when needed. Historical drought response in El Dorado County has been positive such that after the 1976-1977 drought, water meters were installed to improve water management.

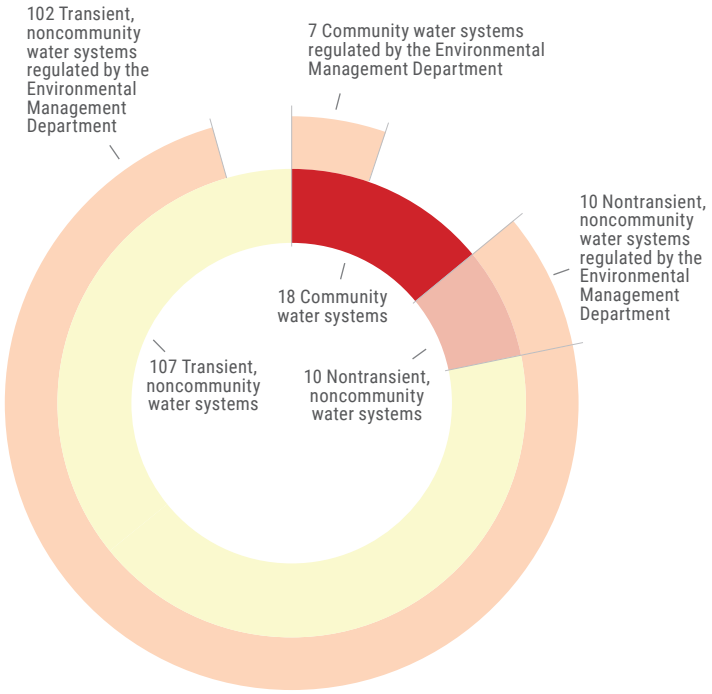
The West Slope is vulnerable to drought because it relies primarily on surface water and does not have access to much groundwater or other alternative water supplies in dry periods. GFCSD, EID, and GDPUD oversee drought plans, but in the rest of the West Slope, the Other County Area is likely to experience hardships as a result of not having secure water supplies. In the recent drought from 2012 through 2016, residents obtained supplemental water supplies from EID's bulk water stations. Understanding how droughts affect areas in El Dorado County is a first step to be taken in mitigating future drought impacts.

The Tahoe Basin is managed under the Truckee River Operating Agreement and is less susceptible to drought conditions. The majority of this area is covered by drought ordinances overseen by STPUD and TCPUD, and the Other County Area in the Tahoe Basin is primarily open space.

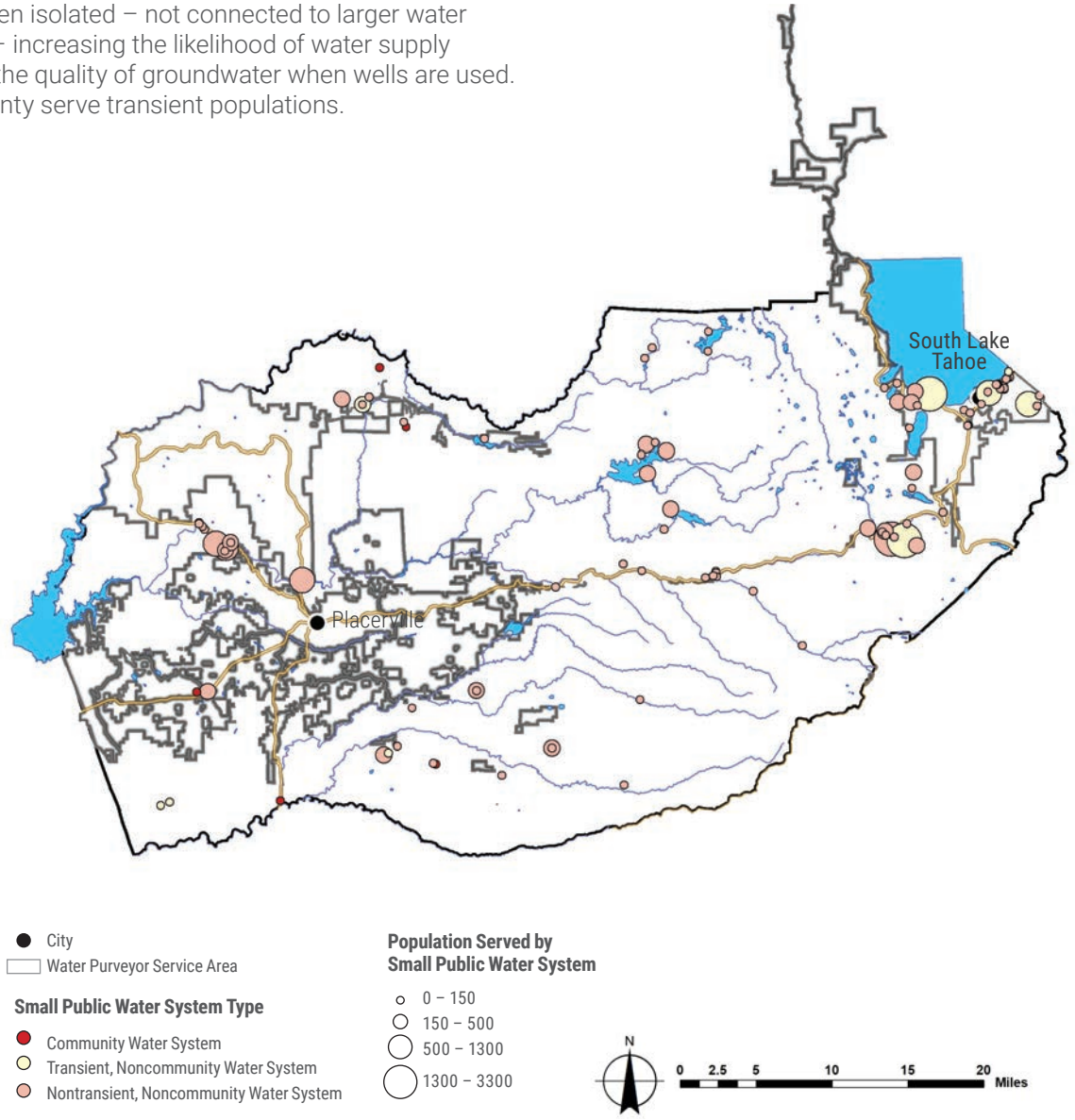
There are several small public water systems that provide drinking water supplies to various populations in the diverse, terrain-challenged El Dorado County. Small public water systems are often less resilient to natural disasters, such as drought and fire, have more difficulty adjusting to regulatory changes, and may struggle to fund infrastructure maintenance and replacement due to poor economies of scale and lack of staff. As small public water systems tend to have less resources and be more vulnerable, the SWRCB encourages water system partnerships and voluntary consolidation, and Senate Bill 88 (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. In the past few years, the County Environmental Management Department (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. Between 2017 and 2018, 9 small public water systems completed the consolidation process. As a result of these efforts, the County EMD received a consolidation award from the Division of Drinking Water in 2017. It is anticipated that small public water system consolidation will continue in El Dorado County.

Currently, the major water purveyors in El Dorado County have either a drought plan or drought ordinance to manage water supply shortages during droughts. However, the Other County Area is not actively managed by any agency. Many small public water systems permitted by the County of El Dorado in the West Slope are also vulnerable due to potential shortfalls in limited local groundwater supplies or local springs during droughts.

Through a Local Primary Agency agreement with the SWRCB, the County EMD oversees 119 small public water systems and 18 registered state small water systems as of June of 2019. 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. Majority of the small public water systems in El Dorado County serve transient populations.



Source: June 2019 State Water Resources Control Board and County of El Dorado Environmental Management Department



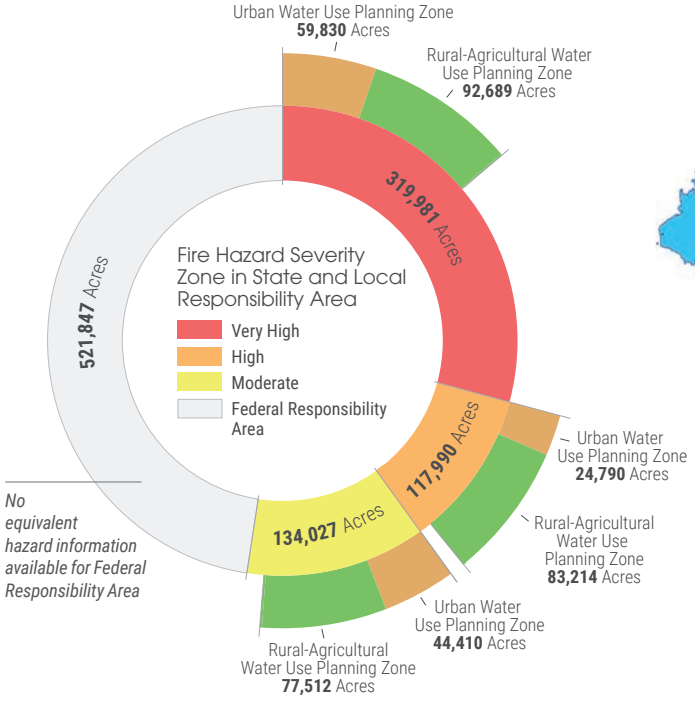
3.3 Impacts of Wildfires

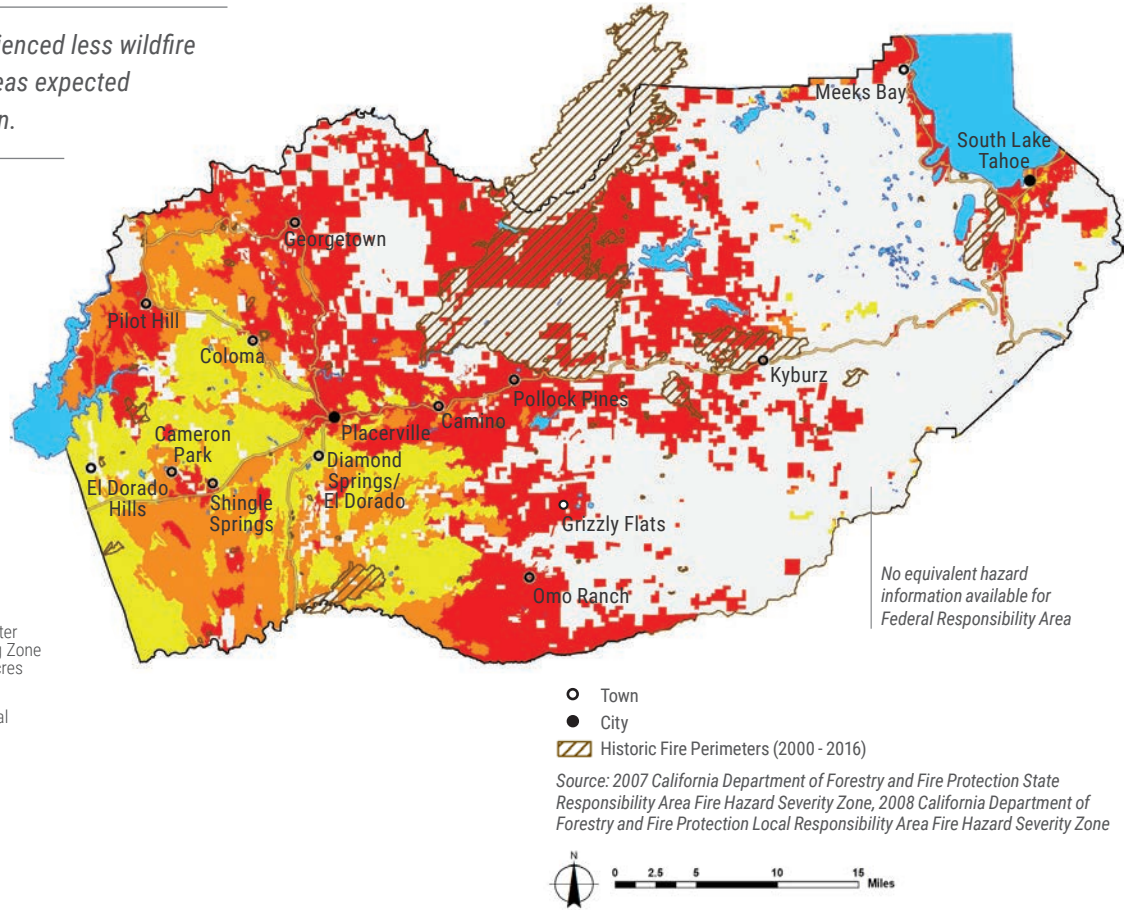
Wildfire damages and suppression costs have risen continuously over time. And the frequency, size, and intensity of these fires are expected to grow – another effect of climate change, overly dense forests, and prolonged droughts. Loss of life and structures as a direct or proximate result of wildfires is at an all-time high. However, compared to statewide trends, El Dorado County has had fewer occurrences, accumulated acreage burned, and overall damages.

Fire protection is divided between Federal, State and Local responsibility. Within the State and Local Responsibility Area, 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.

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 the 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.

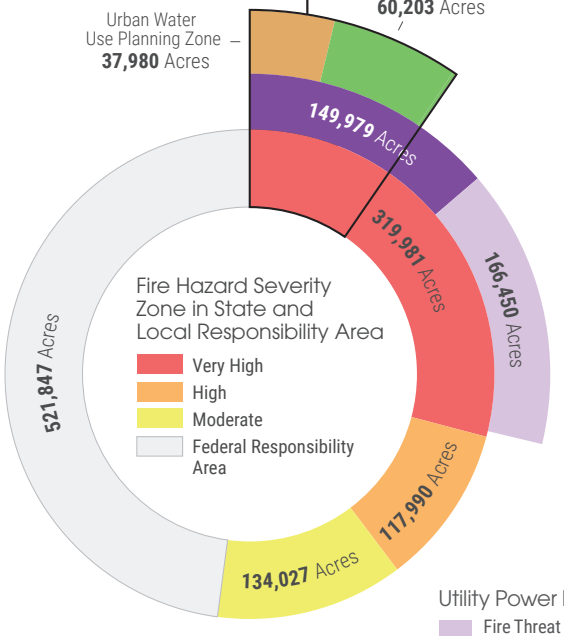
Compared to statewide trends, El Dorado County has experienced less wildfire damages. However, potentially devastating risks exist in areas expected to have economic growth in the West Slope and Tahoe Basin.

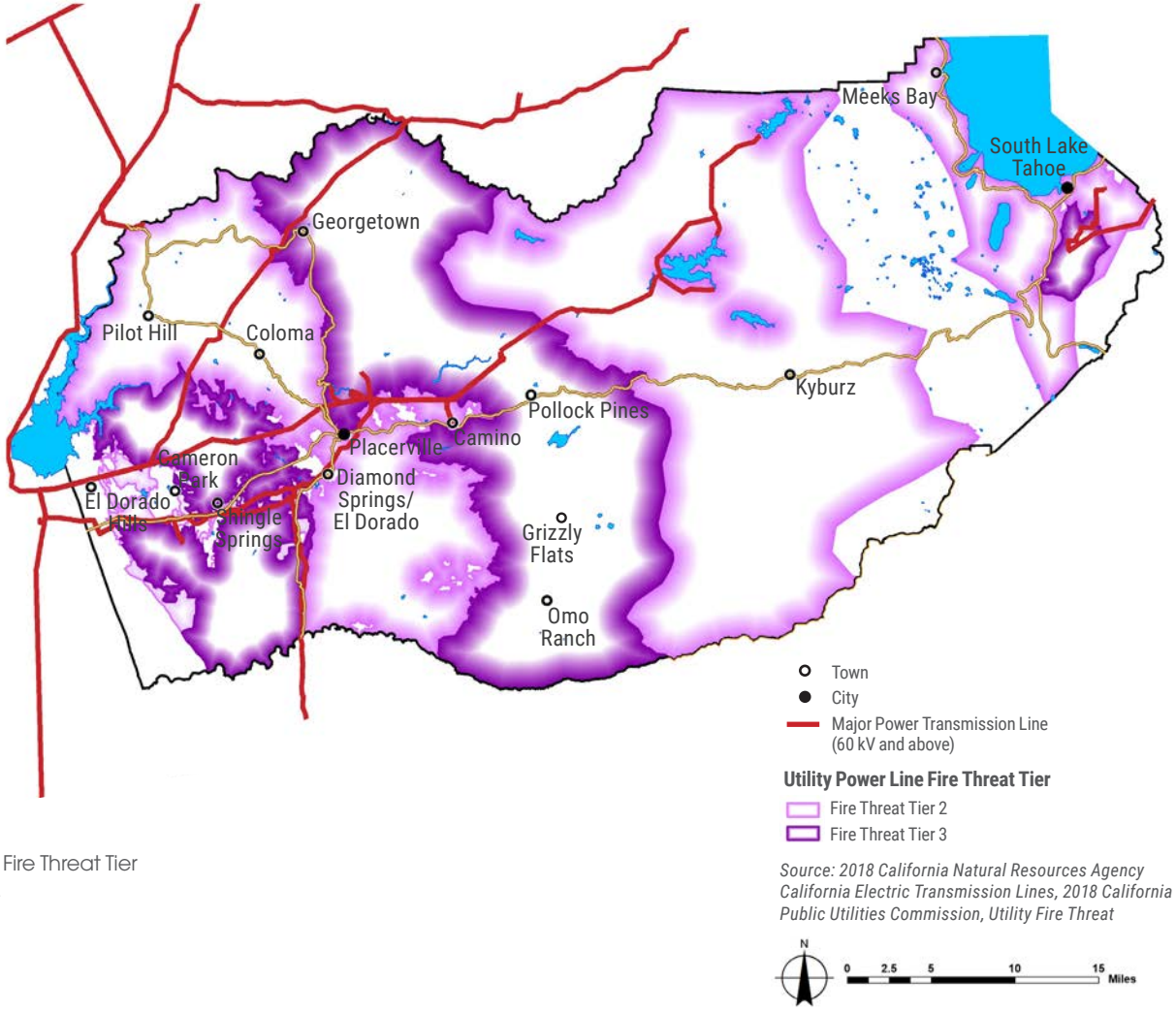




Areas with the highest threat of utility power line fires in El Dorado County (Utility Power Line Fire Threat Tier 3, map, below right) are those where both utility power lines and vegetation are present (black and white overlap map, left). Most of these areas are located in the West Slope.

Fire Hazard Severity Zone very high and Utility Power Line Fire Threat Tier 3 overlap





Source: 2018 California Natural Resources Agency California Electric Transmission Lines, 2018 California Public Utilities Commission, Utility Fire Threat

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. Areas with both abundant vegetation (forests, grasses, agricultural activities, etc.) and utility power transmission lines are where the most devastating fires could occur. In recent years, the majority of 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. In the past two decades in El Dorado County, only the Latrobe Fire in 2000 and the Emerald Fire in 2016 were caused by a utility power line. The Latrobe Fire was in the Fire Threat Tier 3, and the Emerald Fire was in the Fire Threat Tier 2 for utility power line fires, recently published by the California Public Utilities Commission.

El Dorado County agencies and residents, however, cannot overlook other potential causes of wildfire. As an example, the largest fire in El Dorado County—the 2014 King Fire—was caused by arson. 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 critical for minimizing the direct and indirect impacts from wildfires.

A unique aspect in El Dorado County, wooden flumes from the Gold Rush era and other delivery structures are particularly vulnerable to both direct impacts (destruction during a fire) and indirect impacts (damage from later mudslides and trees falling, originating at the burned site). These 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.

One critical lesson learned is that the ever-increasing wildfires are also a symptom of improper forest management, and high concentrations of dead trees are often the result of prolonged droughts (discussed in the next section, *Headwaters Management*).

3.4 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 could 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

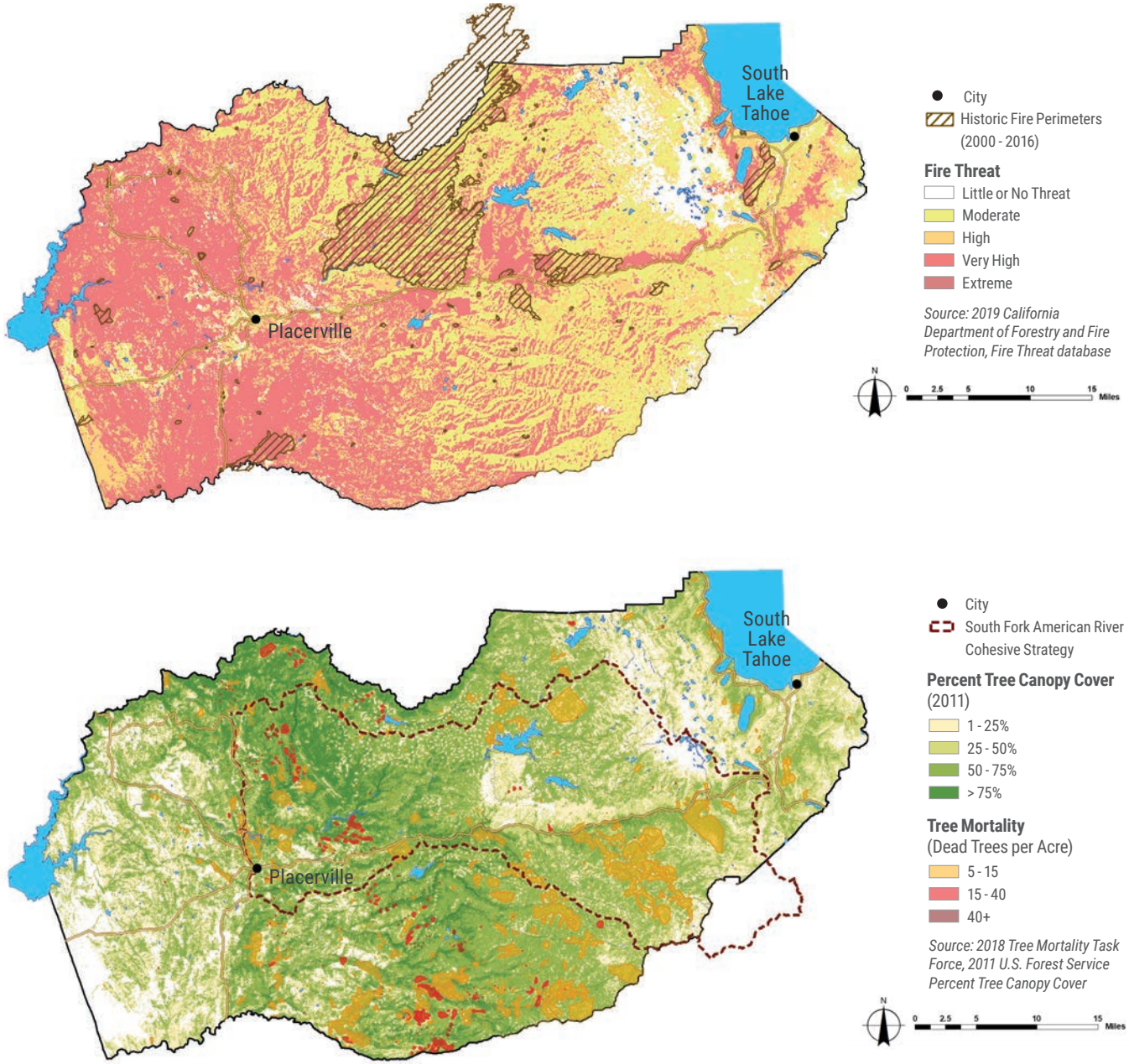
(2) Forest management to avoid high tree density with significant canopy cover that intercepts snowpack and reduces water retention.

El Dorado County is part of the Cosumnes, American, Bear, Yuba (CABY) Integrated Regional Water Management region, and these headwaters management issues are included in that effort. However, forest thinning is not often considered or implemented. 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 increased urban/wildland interface and prolonged drought conditions that have caused pervasive tree mortality 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.

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 developed and implemented in collaboration with both federal and state management agencies. However, there are still sizeable areas in El Dorado County that need the same level of attention. In separate efforts, Yuba Water Agency and Placer County Water Agency recently launched their corresponding partnership in forest restoration with the U.S. Forest Service, Sierra Nevada Conservancy, California Tahoe Conservancy, non-profit organizations, an academic research institute, water supply and hydropower owners, and private landowners to restore forest health and resilience and reduce wildfire risks. This activity could generate significant insights to entities in El Dorado County about adequate measures that are suitable in the Sierra Nevada for a sustainable forest management approach on a landscape scale.

In areas not already managed by an entity, organized efforts to manage forest density and meadow health in El Dorado County are likely to improve both water quality conditions and water retention in the headwaters. Adequate snowpack levels with reasonable tree canopy cover can be achieved.



3.5 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 City of Placerville is an area 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, but the West Slope is more of a foothill setting with no significant groundwater capacity to realize such a potential benefit. Stormwater resource planning requires customization for these local conditions, as reflected in recently-completed stormwater resource plans for the West Slope (2018) and Tahoe-Sierra Region (2018) that recognize stormwater as an additional water resource that will require continued efforts for implementation.

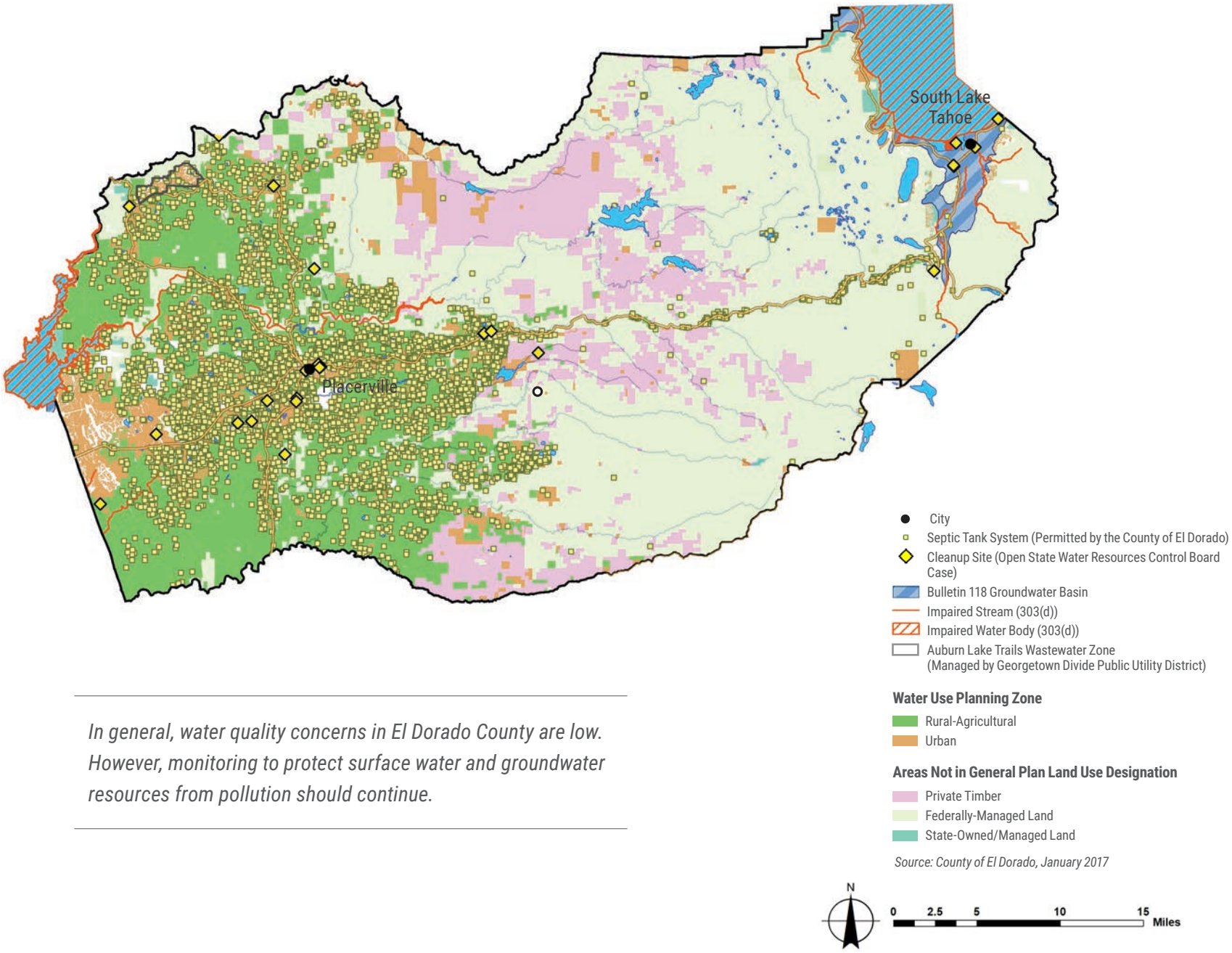
3.6 Limited Groundwater Resources

The only recognized groundwater basin in El Dorado County is in the South Tahoe Basin area, where it is the primary source of water supply for STPUD and other local water suppliers (small public water systems). This is the only groundwater basin in El Dorado County that is subject to the requirements and regulatory framework under SGMA. Currently, STPUD and the Agency are serving as the Groundwater Sustainability Agencies (GSA) under SGMA for areas in and outside of the STPUD service area. Groundwater is replenished by local snowmelt and stream flows, meaning that recharge is sensitive to snowpack conditions and potential climate change effects.

In the South Tahoe Basin, groundwater quality issues include perchloroethylene contamination. The perchloroethylene plume that has been slowly migrating from the "Y" area of the South Tahoe Basin towards Lake Tahoe has been studied since the 1980s.

In the rest of the Tahoe Basin and the West Slope, groundwater resources are shallow and localized. In these areas, groundwater provides limited water supply to existing agricultural practices and domestic uses from the permitted small public water systems.

Groundwater becomes potentially vulnerable in prolonged drought conditions and is also susceptible to pollution from runoff or contamination from septic tank systems found throughout the West Slope along the highway corridor. There have been reported incidents of septic tank systems contaminating local water supplies. Although there is no current prevailing problem of polluted runoff or septic tank systems impacting 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. In the Auburn Lake Trails Wastewater Zone, GDPUD is charged by the state to manage and inspect septic tanks systems. 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 general, water quality concerns in El Dorado County are low. However, monitoring to protect surface water and groundwater resources from pollution should continue.

3.7 Vulnerability to Flooding

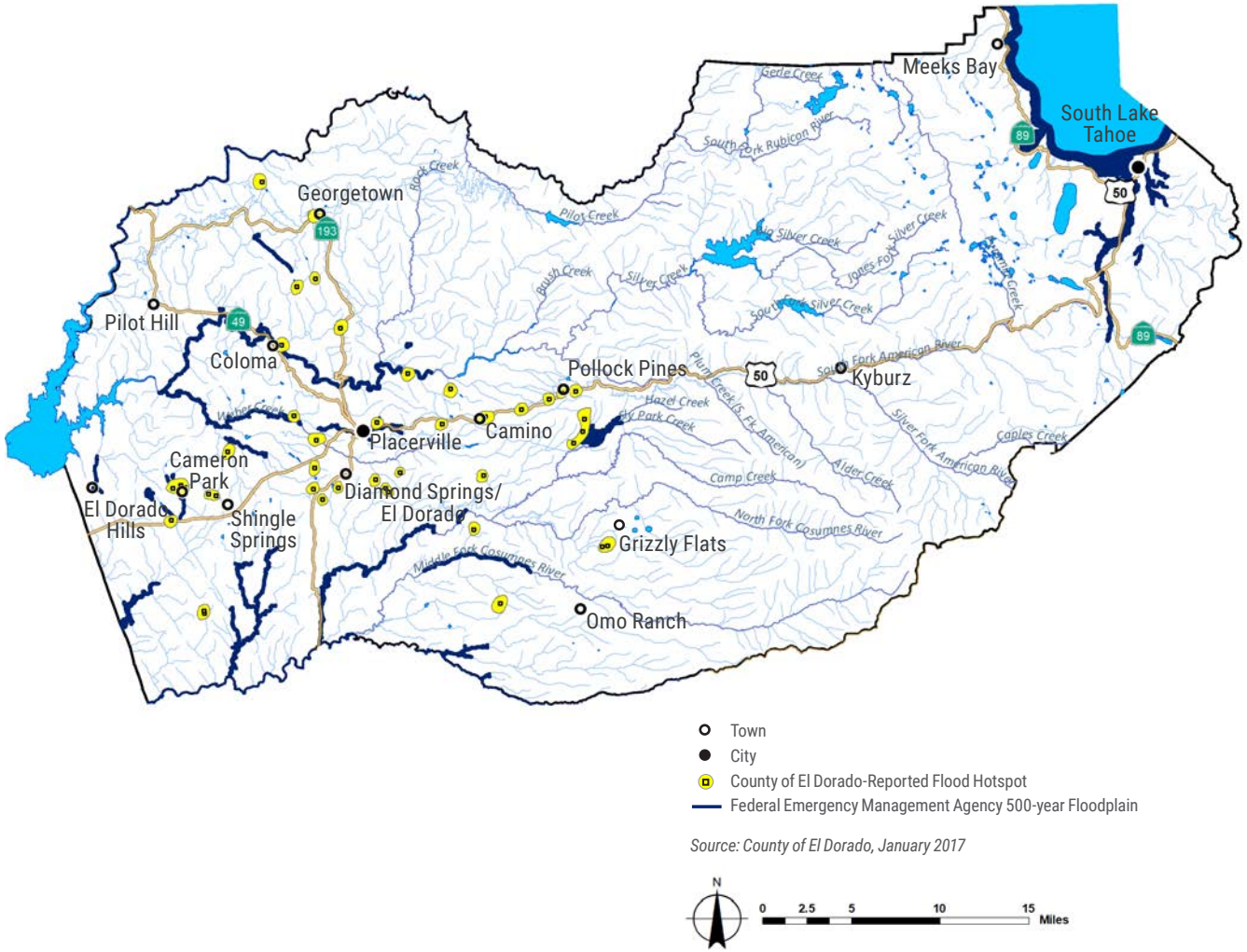
El Dorado County is vulnerable to flood risk. The combination of West Slope hydrology, soils, and land-surface slopes means that this area experiences frequent and localized flooding. The Tahoe Basin experiencs flooding as a result of rainfall on snow.

Drainage problems and occasional flooding have occurred in low-lying areas such as Cameron Park and similarly located communities. Any runoff is discharged into local creeks and tributaries, and that flow contributes to occasional flooding. Culverts that are undersized or blocked with debris and sediment intensify that flooding, such as near Slate Creek in the Town of El Dorado and the Sly Park Portal Subdivision in Pollock Pines.

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

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

Most flooding is localized, and hotspots are often related to capacity conveyance issues in the West Slope. In the Tahoe Basin flooding results from rainfall on snow.



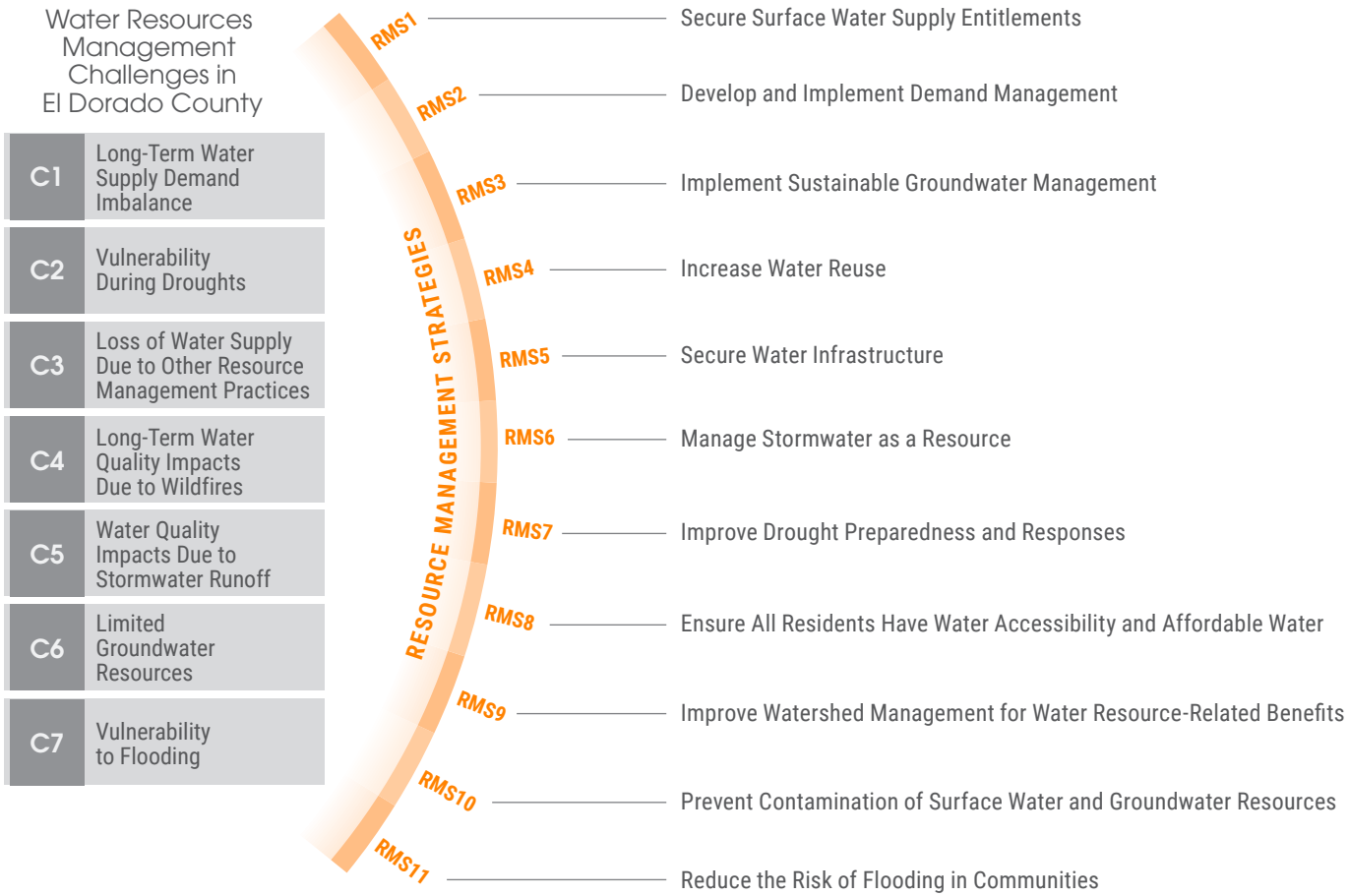
SECTION

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. For an issue as vexing as water management, there is not a 1-to-1 relationship between a challenge and a management strategy or action. 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) have been developed to help address identified water resource-related challenges described in Section 3. 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. 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).



4.1 RMS1 – Secure Surface Water Supply Entitlements

At its core, water supply planning is about looking at all aspects of available water sources (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. One example of such a pending contract entitlement is the Public Law 101- 514 (Fazio) CVP Water Supply Contract that has been in-process since 1990.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* *C6* *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
1a. Secure CVP long-term water service contracts with Reclamation	**X**		EDCWA, EID, GDPUD	**L** – Complete contract negotiation and execution for 15-TAF CVP (Fazio) Water Service Contract, and in coordination with water purveyors and regional partners, lead the development of additional plan and actions for full utilization **S** – Support water purveyors and regional partners in engagement with Reclamation and federal advocacy
1b. Secure water rights for projected needs	**X**	**X**	EDCWA, 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 water right proceedings (e.g. surface water and groundwater rights) and advocacy
1c. Develop water infrastructure to meet projected needs	**X**	**X**	City of Placerville, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Represent OCA in water supply and infrastructure planning **F** – Coordinate with water purveyors on water supply needs, to improve overall countywide infrastructure planning and Agency's actions
1d. Manage and leverage Sacramento Municipal Utility District storage agreement	**X**		EDCWA	**L** – Administrate and manage the El Dorado Sacramento Municipal Utility District Agreement for countywide benefits, and in coordination with water purveyors, lead the development of the plan and actions for full utilization **L** – Develop management strategies for strategic use in coordination with water purveyors and other potential water users
1e. Develop operational agreements as needed for flexible use of water supply entitlements	**X**	**X**	City of Placerville, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Develop additional agreements with water purveyors and regional partners for use of Fazio contract and EDCWA's water rights, when acquired **F** – Coordinate with water purveyors on compatible strategy for water use
1f. Determine water purveyors for OCA	**X**	**X**	County, EDCWA, El Dorado County LAFCO	**L** – Develop work plan and actions for the determination in collaboration with County, and coordinate with El Dorado County LAFCO for approval process

Key

L = **Lead** – Assuming the responsibility in advancing an RMS
F = **Facilitate** – Organizing and assisting in advancing an RMS, but not directly responsible
S = **Support** – Providing as-needed coordination, advocacy, and occasional assistance

County = County of El Dorado
CVP = Central Valley Project
EDCWA = El Dorado County Water Agency
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
LAFCO = Local Agency Formation Commission
OCA = Other County Area
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

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 water use efficiency in 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 conservation policies should account for El Dorado County's unique conditions, availability of supplemental water, and complementary needs and planning for emergencies (e.g., severe droughts and wildfires).

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* *C6* *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
2a. Review and update demands by incorporating regulatory changes and best management practices	**X**	**X**	City of Placerville, County, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Update West Slope agricultural and M&I demands consistent with the County General Plan **F** – Coordinate the development of agricultural and M&I demands (including seasonal demands due to transient visitors) consistent with TRPA's Tahoe Regional Plan for the Tahoe Basin **S** – Support communications, information sharing and advocacy efforts
2b. Engage in the development of statewide long-term conservation policies, regulations, and legislation to ensure applicability in foothill and forested/ mountain communities and related to preservation of countywide interests	**X**	**X**	City of Placerville, County, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Participate in and contribute to the development of state policy, regulation, and legislation **F** – Coordinate consistent messages and approach amongst water purveyors **S** – Support communications, information sharing and advocacy efforts

Key

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S = **Support** – Providing as-needed coordination, advocacy, and occasional assistance

County = County of El Dorado
EDCWA = El Dorado County Water Agency
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District

M&I = Municipal and Industrial
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District
TRPA = Tahoe Regional Planning Agency

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. Although groundwater is primarily used in the South Tahoe Basin and is limited in other parts of El Dorado County, the principles of sustainable groundwater management apply everywhere it is used, and that is the focus of this strategy. For this strategy, the Agency has an oversight role in the West Slope (outside the STPUD service area) but has a less prominent role in the Tahoe Basin.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* ***C6*** *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
3a. Implement sustainable groundwater management consistent with the SGMA for major groundwater basins		**X**	EDCWA, STPUD	**F** – Coordinate development and implementation of the Tahoe Valley South Basin Groundwater Sustainability Plan, working with STPUD as the Groundwater Sustainability Agency in that basin **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, EDCWA, 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. Improve understanding of conditions and use of localized and shallow groundwater resources outside of the major groundwater basins	**X**	**X**	County, EDCWA	**L** – Explore data sufficiency and adequacy in coordination with the County for groundwater monitoring and condition assessment and coordinate efforts for improving understanding as appropriate **F** – Integrate data and information for countywide coverage and assessment needs **S** – Support communications, information sharing and advocacy efforts
3d. Improve understanding of level of public health concerns associated with private wells that are not subject to regulations	**X**	**X**	County, EDCWA	**F** – Explore data collection in terms of use, water level and water quality in coordination with the County to improve understanding and identify potential needs for assistance **S** – Support communications, information sharing, and advocacy efforts

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S = **Support** – Providing as-needed coordination, advocacy, and occasional assistance

County = County of El Dorado
EDCWA = El Dorado County Water Agency
SGMA = Sustainable Groundwater Management Act
STPUD = South Tahoe Public Utility District

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). Currently, non-potable reuse in El Dorado County is mostly limited to landscape applications. In the Tahoe Basin, both the terrain and cost effectiveness may limit opportunities to implement water reuse, especially for TCPUD, as wastewater from the portion of its service area in El Dorado County is collected and treated by another agency down slope from TCPUD.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* *C6* *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
4a. Explore potential for and implement potable reuse of treated wastewater	**X**	**X**	City of Placerville, County, EID, STPUD	**S** – Support communications, information sharing and advocacy efforts **S** – Support state and federal grant applications (where appropriate)
4b. Increase non-potable reuse of treated wastewater onsite	**X**		City of Placerville, County, EID	**S** – Support communications, information sharing and advocacy efforts **S** – Support state and federal grant applications (where appropriate)
4c. Increase non-potable reuse of treated wastewater for instream flow augmentation		**X**	STPUD	**S** – Support communications, information sharing and advocacy efforts **S** – Support state and federal grant applications (where appropriate)
4d. 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, public information sharing and advocacy efforts **S** – Support state and federal grant applications (where appropriate)

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EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District

GFCSD= Grizzly Flats Community Services District
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

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, are safe, are free from contaminants, and are cleared of nearby hazards. New infrastructure that augments water supply reliability and flexibility and reduces risks to water supply and quality should also be investigated and developed (where appropriate).

Primary Challenges Addressed

C1 ***C2*** ***C3*** ***C4*** *C5* ***C6*** *C7*

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 state and federal grant applications (where appropriate)
5b. Develop new high mountain storage to increase water supply reliability	**X**		County, City of Placerville, EDCWA, EID, GFCSD	**L** – Develop Congressionally-authorized Alder Creek Water Storage and Conservation Project with Reclamation for countywide and regional benefits
5c. Reduce vulnerability of water infrastructure to large-scale wildfires	**X**	**X**	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD	**F** – Compile and synthesize 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 state and federal grant applications (where appropriate)
5d. Update emergency response and communication plan regularly to maintain current, including consideration of wildfire and potentially extended power shutoff under threat	**X**	**X**	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Support communications, information sharing and advocacy efforts

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EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District

GFCSD = Grizzly Flats Community Services District
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

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.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* ***C5*** ***C6*** ***C7***

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
6a. Update Stormwater Resource Plans	**X**	**X**	City of Placerville, City of South Lake Tahoe, County, Tahoe Resource Conservation District	**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 state and federal grant applications (where appropriate)
6b. Implement water quality control measures 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
6c. 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

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County = County of El Dorado

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. Small public water systems and rural communities in El Dorado County are particularly vulnerable during extended droughts. 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.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* ***C6*** *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
7a. Expand current agency-specific drought plans to address drought planning requirements specified in Assembly Bill 1668/Senate Bill 606	**X**	**X**	County, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Develop and update plan for the Other County Area (as necessary) **F** – Coordinate consistency of drought planning efforts in El Dorado County **S** – Support communications, information sharing and advocacy efforts
7b. Include droughts as a hazard in El Dorado County's Multi-Jurisdictional Hazard Mitigation Plan for emergency response coordination and potential future FEMA assistance	**X**	**X**	County	**F** – Coordinate plan development with the County's Long Range Planning department **S** – Support communications, information sharing and advocacy efforts
7c. Conduct vulnerability assessments for small water systems and rural communities	**X**	**X**	County, EDCWA	**L** – Develop vulnerability assessments **S** – Support communication, information sharing and advocacy efforts
7d. Develop countywide plan for addressing drought vulnerability for small public water systems and rural communities	**X**	**X**	County, EDCWA	**L** – Develop countywide plan **S** – Support communications, information sharing and advocacy efforts
7e. Develop West Slope Regional Drought Contingency Plan to coordinate and align all drought plans in the West Slope	**X**		County, EDCWA, EID	**L** – Develop West Slope Regional Drought Contingency Plan per Reclamation's WaterSMART Program guidance and requirements

Key

L = **Lead** – Assuming the responsibility in advancing an RMS
F = **Facilitate** – Organizing and assisting in advancing an RMS, but not directly responsible
S = **Support** – Providing as-needed coordination, advocacy, and occasional assistance

County = County of El Dorado
EDCWA = El Dorado County Water Agency
EID = El Dorado Irrigation District
FEMA = Federal Emergency Management Agency

GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

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.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* *C5* *C6* *C7*

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, GDPUD, GFCSD, STPUD, TCPUD	**F** – Coordinate with County to conduct situation assessment **S** – Support communications, information sharing and advocacy efforts
8b. 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, EDCWA, 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

Key

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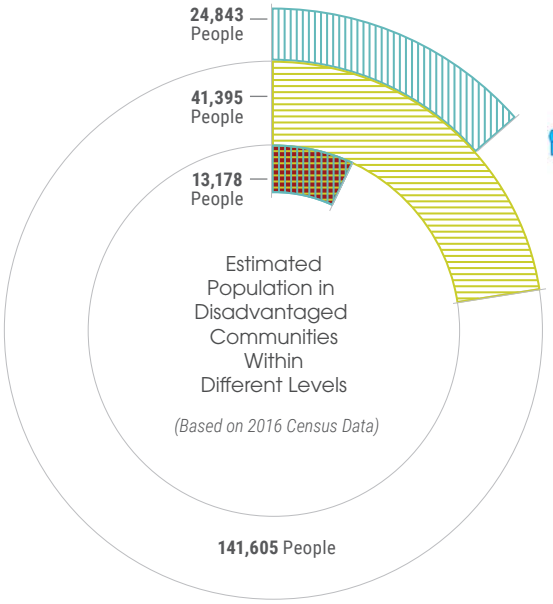
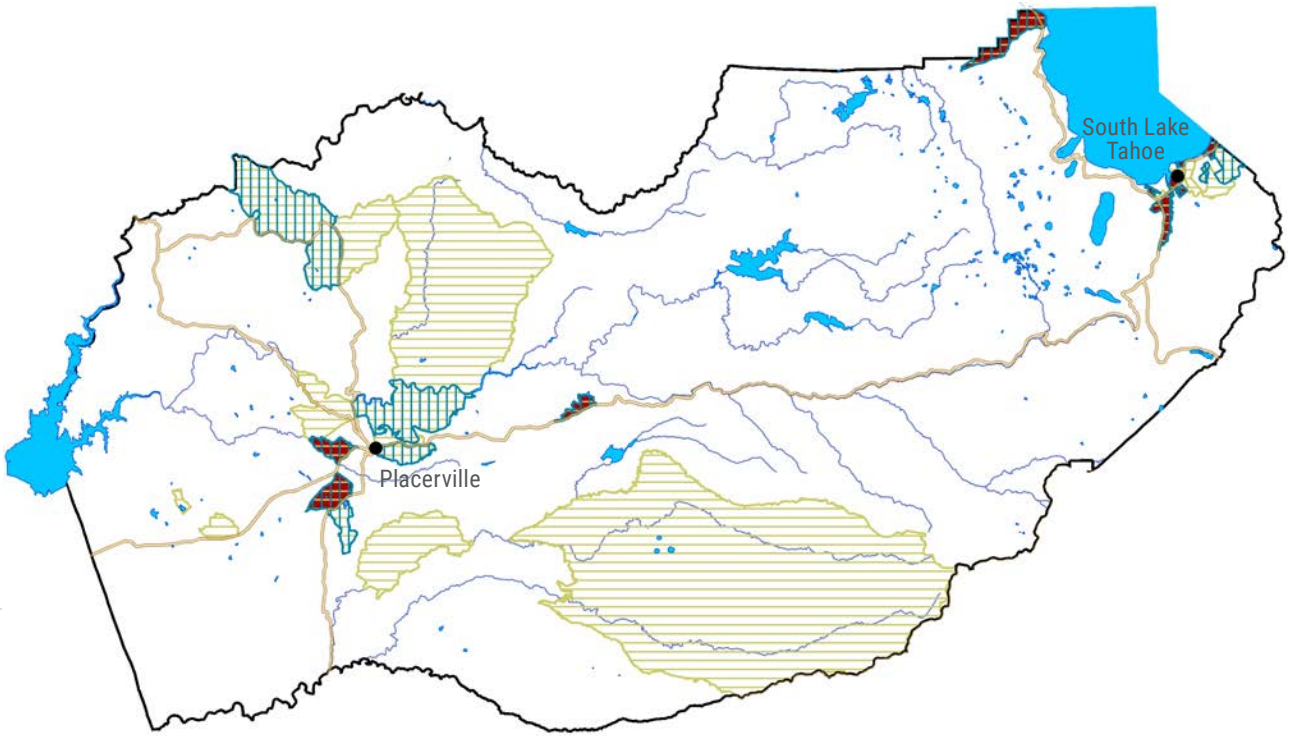
F = **Facilitate** – Organizing and assisting in advancing an RMS, but not directly responsible
S = **Support** – Providing as-needed coordination, advocacy, and occasional assistance

County = County of El Dorado
EDCWA = El Dorado County Water Agency
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
OCA = Other County Area
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

Implementation of the 2012 human right to water legislation is under development. In the State Water Resources Control Board's January 2019 draft recommendation to the legislature, it proposes that households with income below 2 times the federal poverty level to be eligible for the Low-Income Water Rate Assistance Program. The corresponding communities are mapped together with the Disadvantaged Communities and the Severely Disadvantaged Communities in El Dorado County.





Sources:
** Census GIS Data was downloaded from: https://data.cnra.ca.gov/database/census-block-group-disadvantaged-communities-2016*
*** https://aspe.hhs.gov/2017-poverty-guidelines#threshholds*

Notes:
1. *Refer to the Glossary in the Table of Contents for definitions of disadvantaged community, severely disadvantaged community and federal poverty level.*
2. *The federal poverty level is based on the size of household, similar to the criteria set forth for the Air Resource Board to implement the loan and grant eligibility under the California Greenhouse Gas Reduction Fund Project as directed by Assemble Bill (AB) 1550 (2016). The AB 1550 mapping method is used for mapping the community with income below 2 times federal poverty line.*

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; however, while both the County and the Agency will advise and assist with broad watershed management, many state and federal agencies are ultimately responsible for forest and headwater health. As such, collaboration and observation roles and responsibilities are important in implementation of watershed management.

Primary Challenges Addressed

C1 ***C2*** ***C3*** ***C4*** *C5* ***C6*** *C7*

RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
9a. Implement headwater meadow restoration for water retention and water quality management	X	X	USFS, CABY and Tahoe Sierra IRWMs implementing agencies	**S** – Participate in CABY and Tahoe Sierra Integrated Regional Water Management (IRWM efforts) **S** – Support communications, information sharing and advocacy efforts
9b. Implement invasive species management	X	X	El Dorado County Noxious Weed Group, Tahoe Basin Weed Coordinating Group	**S** – Support communications and information sharing efforts
9c. Collaborate with resource management agencies, power utilities, water purveyors, and stakeholders to promote sustainable forest management for long-term benefits of water supply infrastructure protection, biodiversity and ecosystem functions	X	X	BLM, California Department of Forestry and Fire Protection, private entities (e.g., Sierra Pacific Industries), Sierra Nevada Conservancy, Tahoe Conservancy, USFS and Liberty Utilities, PG&E, SMUD and EID, GDPUD, GFCSD, STPUD, TCPUD	**F** – Participate in the South Fork American River Cohesive Strategy Group and explore feasibility of establishing similar efforts or collaborative forums for the remainder of El Dorado County **F** – Coordinate effort to develop, collect, synthesize and distribute information on forest health and associated benefits, including water retention and fuel management, to strengthen science-based decisions and promote support for changes in forest management policies, implementation and funding authority **S** – Support communications, information sharing and advocacy efforts; Support state and federal grant applications (where appropriate)
9d. Expand options for utilizing and disposing of woody biomass	X	X	County, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Collaborate with implementation agencies and stakeholders to explore options including incentives for biomass energy productions, coordination with logging companies, and other creative solutions

Key

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BLM = U.S. Department of the Interior, Bureau of Land Management
CABY = Cosumnes, American, Bear, Yuba
County = County of El Dorado
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District

IRWM = Integrated Regional Water Management
PG&E = Pacific Gas and Electric Company
SMUD = Sacramento Municipal Utility District
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District
USFS = U.S. Forest Service

4.10 RMS10 – Prevent Contamination of Surface Water and Groundwater Resources

Overall, El Dorado County's surface water and groundwater are of good quality. But 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.

Primary Challenges Addressed

C1 ***C2*** *C3* *C4* ***C5*** ***C6*** ***C7***

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	**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. Inspection of permitted septic tank systems in the Auburn Lake Trails Wastewater Zone	**X**		GDPUD	Not applicable

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TCPUD = Tahoe City Public Utility District

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.

Primary Challenges Addressed

C1 C2 C3 C4 C5 C6 **C7**

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, EID, GDPUD, GFCSD, STPUD, TCPUD	**F** – Communicate flood risks in coordination with the County and 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	X	X	City of Placerville, City of South Lake Tahoe, County	**F** – Collaborate with the implementing agencies in developing and implementing flood risk reduction projects **S** – Support state and federal grant applications (where appropriate) **S** – Support communications, information sharing and advocacy efforts – See RMS6a for relevant actions
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. Incorporate the effects of climate change in the frequency and intensity of flood-causing storm events in facility planning (siting and design) for long-term sustainability	X	X	County, EID, GDPUD, GFCSD, STPUD, TCPUD	**S** – Support state and federal grant applications (where appropriate) **S** – Support communications, information sharing and advocacy efforts

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GFCSD = Grizzly Flats Community Services District

STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District

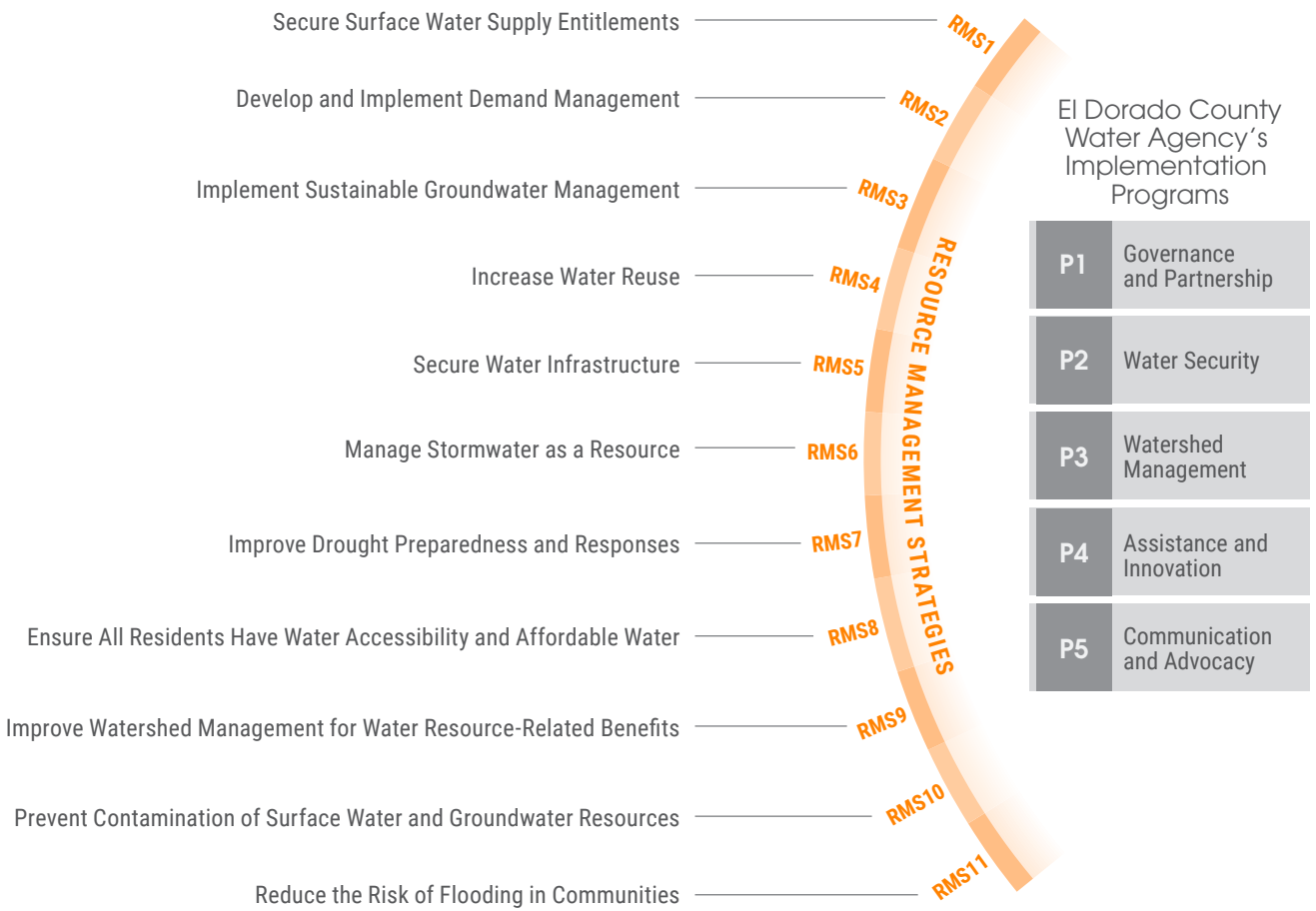
SECTION

5

Implementation

Implementation of the WRDMP will be a continual, incremental, and an adaptive process. Some progress on actions has already been made, other actions will be underway or completed before the next update of the WRDMP in 2024, and still others will require more time to develop and implement, not being finished in the next 20 years.

The RMSs and actions identified in Section 4 are wide-ranging, and their implementation will be a shared responsibility between the identified principal implementing agencies, requiring both organization and coordination. The Agency will play a vital role in advancing actions that are consistent with its authorities and priorities, and it will need to develop policies and guidance for its continued involvement, to evaluate progress, and to focus its efforts. 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.



5.1 Implementation Programs

To do its part in furthering the RMSs and actions outlined in the previous section (Section 4), the Agency has created five implementation programs:

- **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 RMSs 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 in creating benefits for all El Dorado County. The extent of this program is defined by the Agency's authority in the Act, and it includes the Agency's involvement in advancing RMSs, actions, water sale agreements, coordinated operations, and other water-related efforts. Initial program activities include the strategic formation of a governing body (or authority) for WRDMP implementation and building capacity to support future Agency activities.

Water Security Program

The Water Security Program focuses on the Agency's effort to prepare El Dorado County for an uncertain water future, and it is the most important program for the Agency. It encompasses the Agency's role in the ongoing water supply and demand gap analysis, water supply development, drought protection and response, developing stormwater as a resource, flood management, and water quality. This program is at the center of the Agency's work, requiring the most effort and the greatest financial investment in comparison with other programs.

El Dorado County 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.

Watershed Management Program

The Agency has broad authority to engage in water management actions related to water supply, water quality and flood management. It is more likely to take a supporting (rather than leading) role in watershed management and primarily in areas with direct correlations to water 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.

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, but it may explore alternative mechanisms 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 so they are more consistent, efficient, and effective. It consists 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 in implementation and coordination efforts with other local/regional, state and federal agencies, stakeholders and interested parties.

> *"Ensuring WATER SECURITY at the local level includes efforts to conserve and use water more efficiently, to protect or create habitat for local species, to ensure food security, to recycle water for reuse, to capture and treat stormwater for groundwater recharge and reuse, and to remove salts and contaminants from brackish or contaminated water or from seawater. But, mostly it requires integrating disparate or individual government efforts into one combined regional commitment where the sum becomes greater than any single piece."*
>
> – California Water Action Plan, 2016 Update

5.2 Implementation Policies

Related to WRDMP implementation, the Agency's Board of Directors (Board) adopted the following policies that 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 by June 30 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 twice 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 assistances in implementation actions, where feasible.
- **Guidance WRDMP-04:** The Agency shall allocate 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 (2017–2019 Fiscal Years)

The Agency's completion of its 2016-2020 Strategic Plan marked a pivotal point for water resource management in El Dorado County. This transition is reflected in the 2016-2020 Strategic Plan's vision statement:

> *"Within the next five years, El Dorado County Water Agency will be known as the trusted, countywide leader on water-resource issues, representing the long-term interest of our community, purveyors and residents through a dedicated team of professionals, responsive and accountable to the public we serve."*

Since that time, the Agency has focused on implementing that vision in concert with the County's efforts in promoting and realizing the vision of the County General Plan. Described below is the summary of accomplishments between fiscal years 2017 through 2019; a fiscal year is from July through June of the following year. In the two years since completion of the Agency's 2016-2020 Strategic Plan, the Agency has been in continual transition, while making significant strides in the planning and management of water resources in El Dorado County.

Governance and Partnership Program

- Renewed the Joint Exercise of Powers Agreement with EID, Placer County Water Agency, and the Nevada Irrigation District in 2016 related to the CABY Integrated Regional Water Management Plan (IRWMP) for regional planning studies and implementation activities with a focus on the interests of El Dorado County in the Sierra Nevada.
- Participated with the Regional Water Authority (RWA) as an associate member agency on a continued basis for regional planning studies and implementation activities with a focus on the interests of El Dorado County in the American River Basin and statewide (including the CVP-State Water Project system).
- Formed a GSA with STPUD in 2018 to sustainably manage groundwater resources in the areas found in the Tahoe Valley South Subbasin (outside of STPUD's service area). The Agency and STPUD are responsible for the compliance with the law and regulations pertinent to the SGMA.
- Continued implementation of the El Dorado-SMUD Agreement as the lead agency in 2019 for integration with the Agency's long-term planning activities in coordination with the County, water purveyors and interested parties.
- Entered into cost-share agreements with Reclamation for the American River Basin Study in 2017 under Reclamation's WaterSMART program (with other non-federal partners, namely Placer County Water Agency, City of Roseville, City of Folsom, City of Sacramento, and the RWA). In coordination with EID, the Agency also entered into a cost-share agreement for the Alder Creek Water Conservation and Storage Project Feasibility Study in 2018.
- Completed the environmental and contract negotiation process for the long-term CVP (Fazio) water service contract with Reclamation in 2019 for scheduled contract execution in the winter of 2019 to provide additional water supply of up to 15 TAF per year for long-term water needs within the service areas of EID, GDPUD and possibly a portion of the Other County Areas.
- Continued negotiation with Reclamation for developing long-range planning studies under Reclamation's WaterSMART program, including the American River Basin Water Marketing Strategy Project with Placer County Water Agency, Sacramento Suburban Water District, City of Folsom, City of Sacramento, and the RWA; and the Upper American River Basin and Upper Cosumnes River Basin Regional Drought Contingency Plan with EID.

Water Security Program

- Refocused the development of the El Dorado Water Reliability Project for acquisition of water rights of additional 40 TAF and issued a Notice of Preparation for the Environmental Impact Report in 2017.
- Facilitated the completion of a Stormwater Resource Plan for the West Slope in 2018 in collaboration with the County and City of Placerville, the first annual implementation report, and implementation program. The Agency submitted selective projects to the American River Basin IRWMP and CABY IRWMP in 2019 to preserve eligibility for potential state financial assistance. The County and City of Placerville would incorporate needs for further project refinement and implementation in their budgetary processes.
- Participated in regional planning efforts through the RWA, including the North American River Basin Regional Drought Contingency Plan, the RWA Regional Water Reliability Plan, and the Sacramento Regional Groundwater Bank development to improve long-term regional collaboration and water supply reliability.
- Received the award of federal assistance in 2016 for developing the American River Basin Study under Reclamation's WaterSMART program; completed the Plan of Study in 2017; currently actively engaging in study development in partnership with Reclamation and other non-federal partners to unify the data and tools for future planning efforts, develop the climate adaptation portfolios that are actionable and create mutual benefits for Reclamation and the American River Basin region.
- Awarded federal assistance in 2017 for development of the American River Basin Water Marketing Strategy Project to advance regional initiative to incorporate water markets and associated opportunities as part of the tactics to improve long-term regional water supply reliability and climate resiliency. The Agency is currently actively negotiating the study agreement with Reclamation and developing the workplan.
- Completed the Plan of Study for the Alder Creek Water Conservation and Storage Project Feasibility Study in collaboration with Reclamation, including an update of the project cost estimate. The feasibility study is pending in anticipation of federal cost-share funding.
- Awarded with EID, federal assistance in 2018 for development of the Upper American River Basin and Upper Cosumnes River Basin Regional Drought Contingency Plan under Reclamation's WaterSMART program. The Agency is currently actively negotiating the study agreement with Reclamation and developing a workplan.
- Completed the Environmental Impact Statement and contract negotiations in collaboration with Reclamation for the long-term CVP (Fazio) water service contract of up to 15 TAF in 2019 for the needs within water service areas of EID and GDPUD, and possibly a portion of the Other County Area. The contract finalization is scheduled in the winter of 2019.
- Initiated studies to revise the M&I and agricultural demands for the West Slope consistent with the County General Plan in collaboration with water purveyors and water users to characterize the economic development opportunities and included considerations of climate change, long-term conservation efforts and other regulatory changes. The revised demands will focus on the long-term capacity level envisioned by the County General Plan and would be used consistently in various ongoing and future project development and studies. The study is scheduled for completion in the fall of 2019.
- Developed the WRDMP in collaboration with County, water purveyors and interested parties as a policy document to cover the broad charges of the Agency authorized by the Act, define actionable resource management strategies, and focused implementation actions by the Agency that are consistent with the charges and the broad benefits of El Dorado County. The WRDMP is scheduled for completion and potential adoption by the Board in the fall of 2019.

- Engaged actively in state-led workgroups for advancing the implementation of the 2018 legislation for long-term water conservation and drought planning (Senate Bill 606 and Assembly Bill 1660) in coordination with the Association of California Water Agencies (ACWA) and other water user communities. The Agency particularly participated in the Countywide Drought Planning Advisory Group to ensure that the interests of El Dorado County and foothill communities will be properly considered and the resulting law and regulations are implementable.

Watershed Management Program

- Completed initial concept development for the watershed management program and conducted desktop information gathering for review.
- Collaborated with ACWA Headwaters Work Group in developing recommendations on policy and implementation for improving forest health, water retention and yield, biodiversity, and environmental services.

Assistance and Innovation Program

- Promoted public water education and social awareness through sponsorship to the Water Education Foundation as a contributing member for impartial dialogue and original content. Through sponsorship to the El Dorado County Ag in the Classroom Program, the Agency helped cultivate an understanding and appreciation of how important an all-encompassing agriculture is in our daily lives through an exhibit at the El Dorado County Kids Expo.
- Commenced the clarification of criteria and purposes for the potential assistance from the Agency and explored alternative revenue incomes to support the development and implement innovative solutions for identified water resource-related challenges.
- Provided financial and technical assistance to water purveyors, County and cities, and water users as appropriate and as needed.

Communications and Advocacy Program

- Engaged actively with federal agencies and elected officials with an emphasis on Reclamation and Congressional representatives, including Agency-specific actions and advocacy, and collaborated efforts with the RWA, ACWA, the Sacramento Metropolitan Chamber of Commerce, and other entities with common interests.
- Reviewed and developed action plans to improve the effectiveness of communication, advocacy, and overall presence of the Agency in water communities and the government structure.
- Participated in the development of prioritization for policy and project development with a federal nexus.
- Participated in state advocacy efforts through DWR's Countywide Drought Planning Advisory Group.

5.4 Near-Term Priority Actions (2020–2024 Fiscal Years)

Following adoption of the WRDMP and through its first update in 2024, the Agency has prioritized several distinct actions. This list of actions is neither exhaustive nor is it static. The Agency expects that 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 the established governance and partnership roles and responsibilities in the CABY Integrated Regional Water Management Region, RWA, Tahoe Valley South Subbasin GSA, El Dorado-SMUD Agreement, and various partnerships with Reclamation including CVP (Fazio) Water Service Contract, the American River Basin Study, and the Alder Creek Water Conservation and the Storage Project Feasibility Study.
- 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.

Water Security Program

- Lead (where appropriate) and participate in water supply and drought planning efforts as part of the focus of the Agency to improve the countywide water future, including:
  - Continue developing the El Dorado Water Reliability Project to complete the environmental review process and advance the water right acquisition process.
  - Complete the American River Basin Study in collaboration with Reclamation and regional partners to achieve the anticipated outcome with integrated data and tools for future planning needs, and climate adaption portfolios that are appropriate and supportable by El Dorado County interests and regional benefits.
  - Complete the cost-share agreement negotiation and subsequent execution with Reclamation and regional partners for the American River Basin Water Marketing Strategy Project, and the Upper American River Basin Regional Drought Contingency Plan.
  - Collaborate with Reclamation in securing federal cost share funding for the Alder Creek Water Conservation and Storage Project Feasibility Study and execute the Plan of Study once the funding becomes available (as one of the recommended climate adaption portfolios in the American River Basin Study).
  - Continue engaging in the CABY IRWMP update to ensure the realized benefits and outcomes to meet El Dorado County needs and interests.
  - Continue developing the plan and protocol for use of the newly acquired CVP (Fazio) water service contract with EID and GDPUD, and developing the necessary exchange agreement with Placer County Water Agency to facilitate the use for GDPUD as originally anticipated in the Congressional authorization for constructing the American River Pump Station and restoring the Auburn Dam site.

  - Collaborate with the RWA and regional partners to implement RWA's Regional Water Reliability Plan, with a special focus on the planning and approval of the Sacramento Regional Groundwater Bank (as one of the recommended climate adaption portfolios in the American River Basin Study).
- Complete the 2019 WRDMP for adoption and develop the 2024 WRDMP update that includes tracking and reporting progress towards effective plan implementation.
- Update the West Slope Stormwater Resource Plan, prepare annual progress reports, provide project development assistance to the County (where appropriate), engage the SWRCB for approval of the Stormwater Resource Plan to ensure state grant funding eligibility, and provide grant application assistance (where appropriate).
- Conduct in collaboration with the County (e.g., Health and Human Service Agency, and EMD), one comprehensive situation assessment or multiple ones with a focused scope to improve understanding of potential levels of concerns over water accessibility, quality, and affordability in all communities of El Dorado County to formulate potential courses of action, where appropriate, to address the intent of Assembly Bill 685 of 2012 related to the human right to water.
- Explore options to facilitate the management and public dissemination of water management data that builds on the synthesized information contained in the WRDMP and improve public accessibility.
- Support conducting a special study for agricultural needs given that agriculture is the largest water demand in the West Slope.

Watershed Management Program

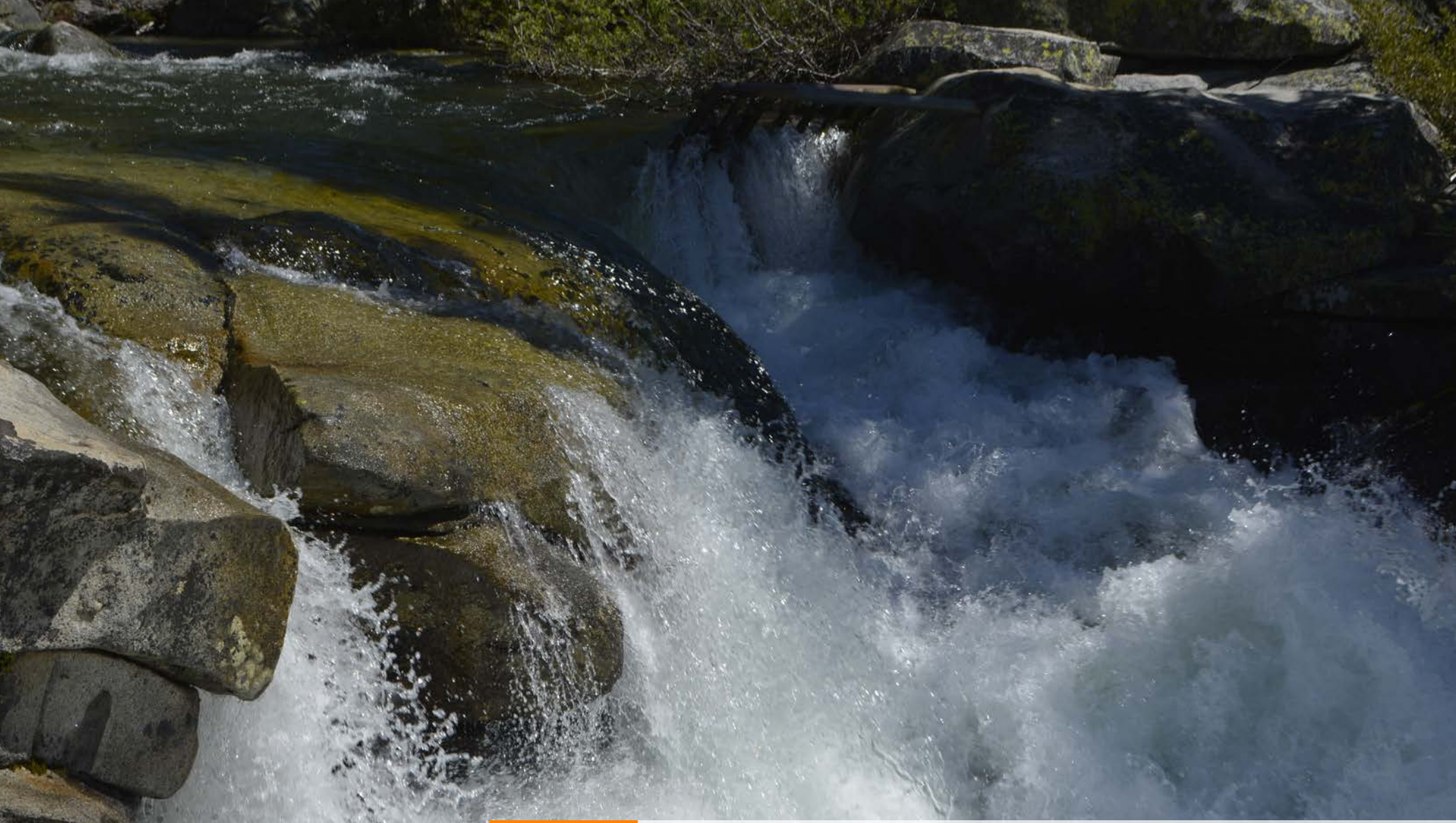
- Support local implementation of the National Cohesive Wildland Fire Management Strategy, including participating with the South Fork of the American River group and other efforts to reduce the likelihood of wildfires in areas of high risk (as appropriate).
- Participate in resource conservation efforts related to headwaters management, forest management, watershed conservation, and meadow restoration (as appropriate).

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. This would include the development of formal assistance criteria and priorities (where needed and appropriate).

Communications and Advocacy Program

- Conduct a Countywide Plenary for Water, a forum for water management, 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, provide information to the public and advocacy efforts (as needed).



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Water Resources Development and Management Plan

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