El Dorado County Water Agency

Water Resources Development and Management Plan

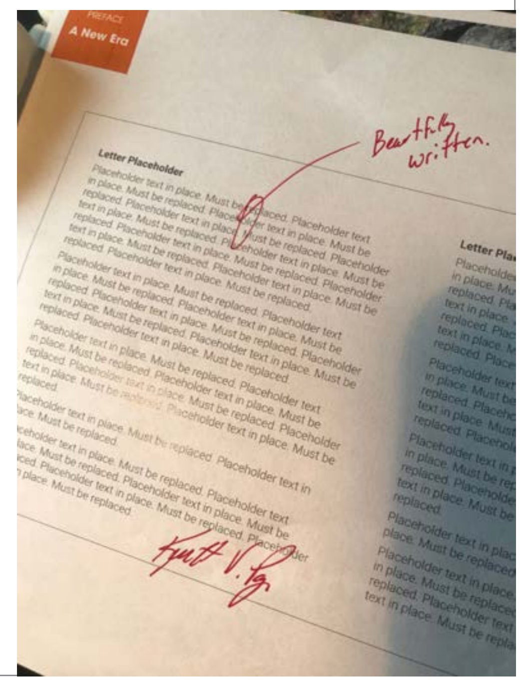
July 24, 2019 DRAFT

Stantec

Mission Statement:

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

A joint statement from the Board Chair and General Manager



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 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. This diverse landscape has headwaters and national forests.

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 presents both the Agency's progress toward long-term water security and a renewed focus on advancing countywide 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. And recent devastating wildfires exposed the pitfalls and weaknesses of 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.

The County General Plan lays out a vision that encourages urbanized economics but also preserves the rural and agricultural quality of life in El Dorado County. Imbedded in that vision is protection of El Dorado County's rich natural resources for future generations. However, about 53 percent of the land in the West Slope covered by the County General Plan for economic development lacks adequate water supply to facilitate realizing that vision, and investments by many local, regional, and federal entities should be better coordinated to create benefits for all communities countywide.

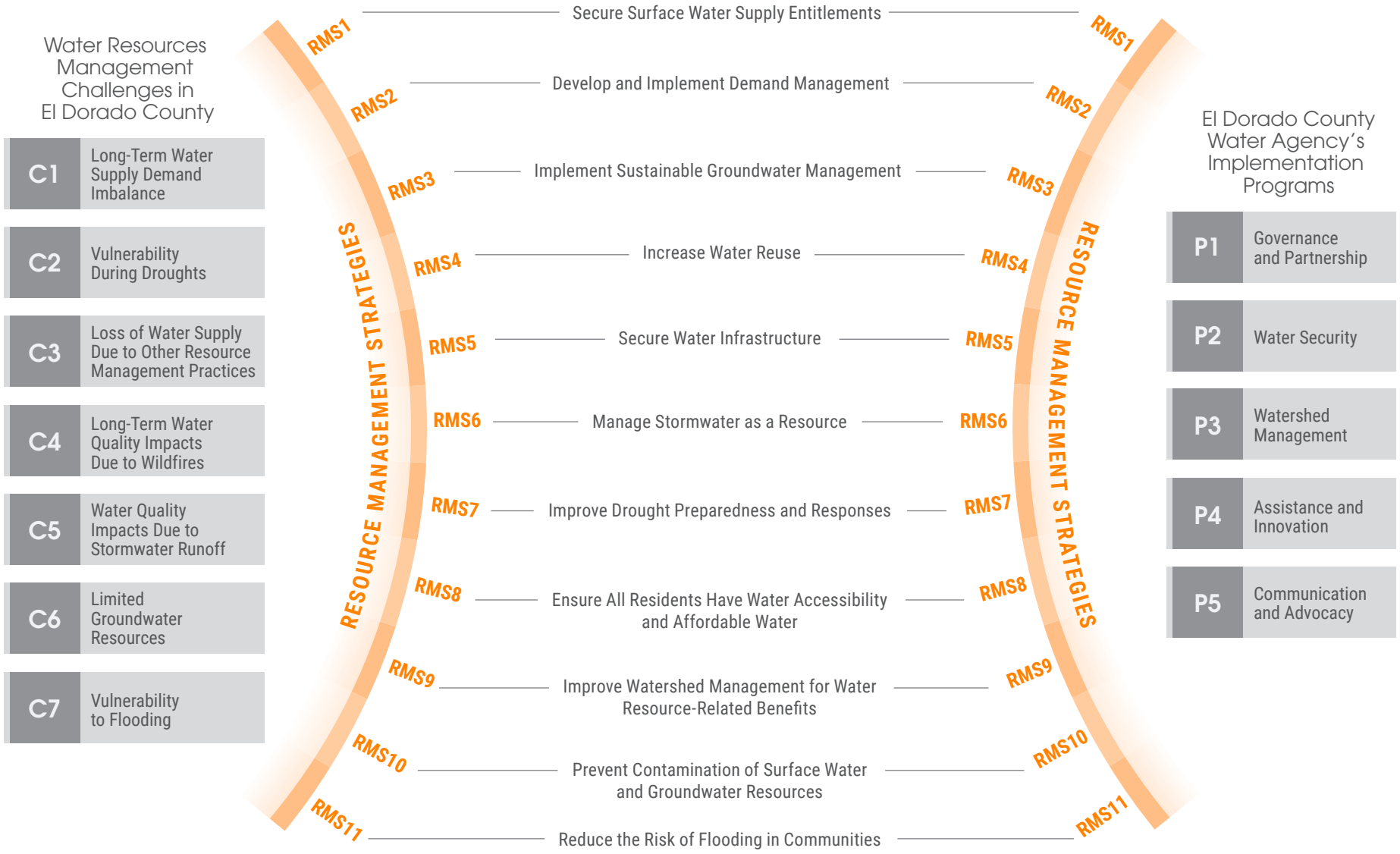
An Integrated and Collaborative Approach to A Better Future

Although the Agency does not currently own any water facilities, it collaborates with water purveyors to develop local water supplies and is contracted with the U.S. Department of the Interior, Bureau of Reclamation (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 the entire El Dorado County, especially for those not served by a water purveyor. This intent is fully reflected in the WRDMP through its collaborative development process involving County departments, water purveyors, stakeholders, and interest parties.

The 2019 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). More importantly, the Agency's corresponding roles in implementation are also clarified. The Agency's roles in leading, facilitating, or supporting a given activity are consistent with its authority, and are the most advantageous ways for the Agency to create value and benefits for all communities in El Dorado County.

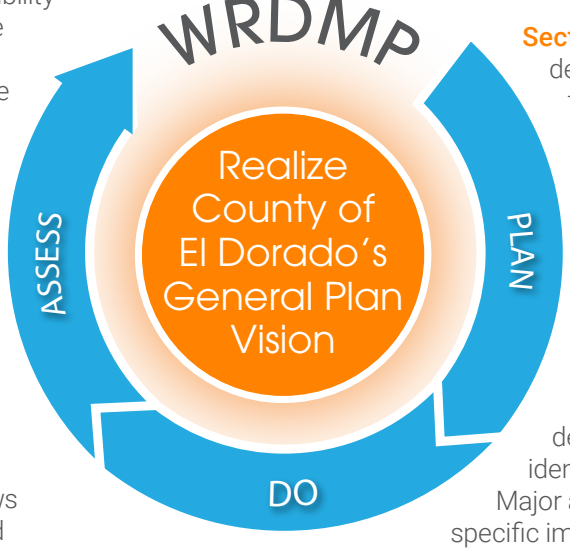
The integrated resource management strategies with focused actions identified in the Water Resources Development and Management Plan align with the water resource-related challenges in El Dorado County and the El Dorado County Water Agency's implementation programs.



A Policy-Oriented Planning Practice for Adaptive Management

Consistent with the Agency's renewed focus, preparation of the WRDMP had an emphasis on development of governing policies and guidance that will be required for successful implementation. This concise plan spotlights these policies and guidance as they relate to all actions and investments. The plan provides the necessary flexibility and adaptability to allow the collaborating agencies to devise efficient and effective means to weather the uncertainties of climate change, regulatory environment, geopolitical influences, and social preferences throughout the implementation.

For efficiency of investment and accountability, the Agency prepared this WRDMP as a living document that allows periodic reviews of 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 2019 WRDMP focuses on policy directives and adoption, separating those from the evolution of technical data, tools, and analyses that are constantly evolving. Technical details are instead incorporated by reference, where needed. This approach resulted in a concise document with a structure that facilitates future updates.

Section 1: Introduction – This section describes the charge of the Agency and the need for the WRDMP with a new focus. It clarifies the Agency's goals and collaborative principles 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 supports the 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 the 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 have not been fully developed in this WRDMP but will be an area of focus for the next update, thereby reinforcing the needs 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.

Plan Advisory Group Members
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
Steve Palmer (Adam Brown: Alternate) – Georgetown Divide Public Utility District
Tiffany Schmid (Anne Novotny, Brenden Ferry: Alternates) – County of El Dorado

Agricultural Advisory Group Members
Brian Mueller – El Dorado Irrigation District
Charlene Carveth (LeeAnne Mila: Alternate) – County of El Dorado
Christa Campbell – Rainbow Orchards, El Dorado County Chamber of Commerce
Dave Pratt – El Dorado Farm Bureau
Dedrian Kobervig – El Dorado Agricultural Water Quality Management Corporation
Doug Leisz – Citizens for Water; El Dorado County Chamber of Commerce
Greg Boeger – Boeger Winery, El Dorado Wine Grape Growers Association
Jim Abercrombie – El Dorado Irrigation District
Jodi Lauther – Grizzly Flats Community Services District
Kenneth Payne – El Dorado County Water Agency
Lloyd Walker – Walker Vineyard, El Dorado Wine Grape Growers Association
Lynn Wunderlich – UC Cooperative Extension
Steve Palmer – Georgetown Divide Public Utility District

Municipal and Industrial Advisory Group Members
Brian Mueller – El Dorado Irrigation District
Jodi Lauther – Grizzly Flats Community Services District
Kenneth Payne - El Dorado County Water Agency
Sean Barclay (Matt Homolka: Alternate) – Tahoe City Public Utility District
Shannon Cotulla – South Tahoe Public Utility District
Steve Palmer (Adam Brown: Alternate) – Georgetown Divide Public Utility District
Tiffany Schmid (Anne Novotny, Brendan Ferry: Alternates) – County of El Dorado

Topic-Specific Consultations
Cynthia Freeland – County of El Dorado
Frederic Schaefer – El Dorado County Water Agency
Greg Stanton – County of El Dorado
Jeffrey Warren – County of El Dorado
Jose Crummett – County of El Dorado
Kathryn Jeanfreau – County of El Dorado
Olivia Byron-Cooper – County of El Dorado
Patty Moley-Dunn – County of El Dorado

Plan Development Team
Kenneth Payne – El Dorado County Water Agency
Maritza Flores Marquez – Stantec
Rebecca Guo – Stantec
Vanessa Nishikawa – Stantec
Yung-Hsin Sun – Stantec

Technical Support
Ben Wiley – Wiley Designs
Brandon Ertis – Davids Engineering
Duncan MacEwan – ERA Economics
Grant Davids – Davids Engineering
Harriett Ross – ESA
Kimberly Clyma – Stantec
Kristen Hunter – EN2
Leslie Moulton-Post – ESA
Megan Murray – Stantec
Raymond Hoang – Stantec
Rick Lind – EN2
Robert Eckard – ESA
Sachi Itagaki – Kennedy Jenks
Samuel Price – Stantec
Tracey Eden-Bishop – EN2

Abbreviations

Act ..... El Dorado County Water Agency Act
ACWA ..... Association of California Water Agencies
AP ..... Adopted Plan
Agency ..... El Dorado County Water Agency
BLM ..... Bureau of Land Management
Board ..... Agency's Board of Directors
CABY ..... Cosumnes, American, Bear, Yuba
Cal Fire ..... California Department of Forestry and Fire Protection
County ..... County of El Dorado
CPUC ..... California Public Utilities Commission
CSD ..... Community Services District
CVP ..... Central Valley Project
DWR ..... California Department of Water Resources
E. Coli ..... Escherichia coli
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
LAFCO ..... Local Agency Formation Commission
M&I ..... Municipal and Industrial
NPDES ..... National Pollutant Discharge Elimination System
OCA ..... Other County Area
PCE ..... Perchloroethylene
Plenary ..... El Dorado County Plenary for Water
PUD ..... Public Utility District
RCD ..... Resource Conservation District
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
TRP ..... Tahoe Regional Plan
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, 4, 12, 28, 42

Glossary

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

Community Services District (CSD) — A form of independent local government used to provide services in unincorporated areas of a county under the Community Services District Law (GC §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 HSC §116275(i).

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

Noncommunity Water System — A public water system that is not a community water system, as described in HSC §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 HSC §116275(k).

Other County Area (OCA) — Comprised of areas in El Dorado County that fall outside federally-owned/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.

Public Utility District (PUD) — A PUD is a community-owned, locally-regulated utility authorized to provide electricity, water and sewer services, and wholesale telecommunications. A PUD may provide one or more of these services, depending on the needs of the community under the Public Utility District Act (PUC §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 HSC §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 (RCD) — RCDs 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 (PRC §9001-9972). California RCDs implement projects on public and private lands, and educate landowners and the public about resource conservation.

Severely Disadvantaged Community — A community with a median household income less than 60 percent of the statewide average, as described in PRC § 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 HSC §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 HSC §116275(o).

Water Use Planning Zones — See the following page.

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 WAT §10617.

Water Use Planning Zones — Consistent with the County General Plan and based on the land use information provided by the County of El Dorado's Surveyor Office, three water use planning zones were developed for the West Slope only for sequent demand estimates for Municipal and Industrial (M&I) and agricultural economic development. The three water use planning zones are: 1) Urban water use planning zone with potential M&I water demands only, 2) Rural/agricultural water use planning zone with both potential M&I and agricultural water demands and 3) Agricultural water use planning zone with potential agricultural water demands only. The table below shows a summary of potential water use eligibility by land use designation. Please see Section 2.1 for additional information.

County General Plan Land Use Designation[8]	Potential Water Use Eligibility Consistent with the County General Plan*	
	Municipal and Industrial Water Use	Agricultural Water Use
Multifamily Residential (MFR)	Eligible[1,2,3,4]	Not eligible
High-Density Residential (HDR)	Eligible[1,2,3,4]	Not eligible
Medium-Density Residential (MDR)	Eligible[1,2,3,4]	Eligible[1,2,6]
Low-Density Residential (LDR)	Eligible[1,2,3,4,5]	Eligible[1,2,6,7]
Rural Residential (RR)	Eligible[1,2,3,4,5]	Eligible[1,2,6,7,8]
Agricultural Lands (AL)	Eligible[1, 2, 11]	Eligible[1,2]
Natural Resource (NR)	Eligible[1, 2, 12]	Eligible[1,2,9]
Commercial (C)	Eligible[1,2]	Not eligible
Research & Development (R&D)	Eligible[1,2]	Not eligible
Industrial (I)	Eligible[1,2]	Not eligible
Open Space (OS)	Not eligible[13]	Not eligible
Adopted Plan (AP)	Per Adopted Plan[1,2,10]	Per Adopted Plan[1,2,10]
Public Facilities (PF)	Eligible[1,2]	Not eligible
Tourist Recreational (TR)	Eligible[1,2]	Not eligible

* The eligible lands will be further evaluated for demand estimate depending on their other attributes (e.g., soil types, slope, etc.)

Eligibility Conditions:

[1] Excluding non-jurisdictional areas with federal and state ownerships.

[2] Outside of Mitigation Area 0, per County Zoning Ordinance 130.71.030 to protect the Gabbro Soils Rare Plant Ecological Preserve area.

[3] Residential parcels with Assessor Parcel Number Status Code 00 (i.e., taxable).

[4] Residential parcels over 1,815 square feet (inclusive) based on the maximum density of 24 dwelling units per acre for MFR per Policy 2.2.1.2 of the County General Plan.

[5] Residential parcels within the Agricultural Districts, which the Board of Supervisors has determined should be preserved primarily for agricultural uses, should have a lot size of 20 acres or the minimum lot size established by the underlying land use designation, whichever is greater, per Policy 2.2.2.2 of the County General Plan.

[6] Residential parcels with zoning ordinance designations of Agricultural Grazing (AG), Limited Agricultural (LA), Planned Agricultural (PA) or Rural Lands (RL), per Table 2-4 of the County General Plan.

[7] Residential parcels over 10 acres (inclusive) with Residential Estate (RE) zoning ordinance designation. The criterion is added for practical reasons to reflect general practices. LDR and RR are the only residential land use designations that allow RE per Table 2-4 of the County General Plan.

[8] Residential parcels over 10 acres (inclusive) with Timber Production (TPZ) zoning ordinance designation. This criterion is added for practical reasons to reflect general practices. LDR and RR are the only residential land use designations that allow TPZ per Table 2-4 of the County General Plan.

[9] Natural resources parcels with zoning ordinance designations of AG, LA, PA or RL, per Table 2-4 in the County General Plan.

[10] The Adopted Plan (AP) Land Use Designation recognizes areas for which specific land use plans have been prepared and adopted. The specific parcel-level land use designation information is not available from the County's GIS database for land use; therefore, the primary assessed land use from the parcel data was used to refine the land use designation. This approach was applied to the City of Placerville as well.

[11] Parcels with AL land use designation allow a maximum of 2 residential dwellings used to support agricultural use, per Policy 2.2.1.2 of the County General Plan.

[12] Parcels with NR land use designation may have one dwelling unit per 40 acres maximum density if not suitable for timber production, per Policy 2.2.1.2 of the County General Plan. Thus, the M&I water use eligibility would exclude the parcels with both NR land use designation and TPZ zoning ordinance designation.

[13] Parcels with OS land use designation can be used to designate public lands under governmental title (County, State Parks, Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Forest Service, etc.), where no development other than that specifically needed for government-related open space uses is desired, per Policy 2.2.1.2 of the County General Plan. Few of such existing uses with relatively significant water use are included in M&I water use planning, including Marshall State Park, Placerville Nursery, and the U.S. Forest Service Institute of Forest Genetics.

SECTION

1

Introduction

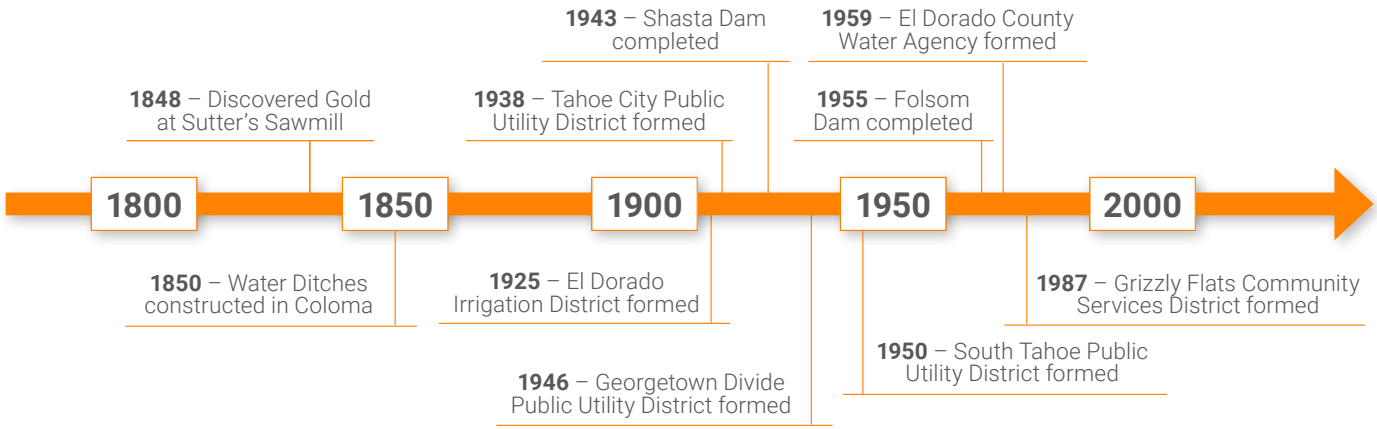
The El Dorado County Water Agency (Agency or EDCWA) was created in 1959 through the El Dorado County Water Agency Act (Act) to ensure that El Dorado County had adequate water to serve its many needs now and into the future. The Agency covers the entire El Dorado County, on both sides of the Sierra Nevada 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 where future growth is anticipated. The West Slope also has rural areas where there is a desire to preserve a rural-agricultural way of life, presenting both significant challenges and opportunities for water management.

Although the Agency does not currently own any water facilities, it collaborates with water purveyors to develop local water supplies and is contracted with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for Central Valley Project (CVP) water service contract deliveries that support El Dorado County's domestic uses and 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 continued water resources development and management. The WRDMP was subsequently updated in 2007 and 2014 (for West Slope demands only).

The historic drought from 2012 through 2016 left water managers throughout California with changed perspectives regarding their water supply vulnerabilities and the importance of being climate resilient. The Agency was no different. The Agency completed its 2016-2020 Strategic Plan in 2016 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 for those not served by a water purveyor. This 2019 update of the WRDMP also includes the reevaluation and adjustment, if warranted, of the Agency's current investments and future investment priorities to reflect direction provided in the 2016-2020 Strategic Plan.



1.2 Goals

The primary goal of the 2019 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:

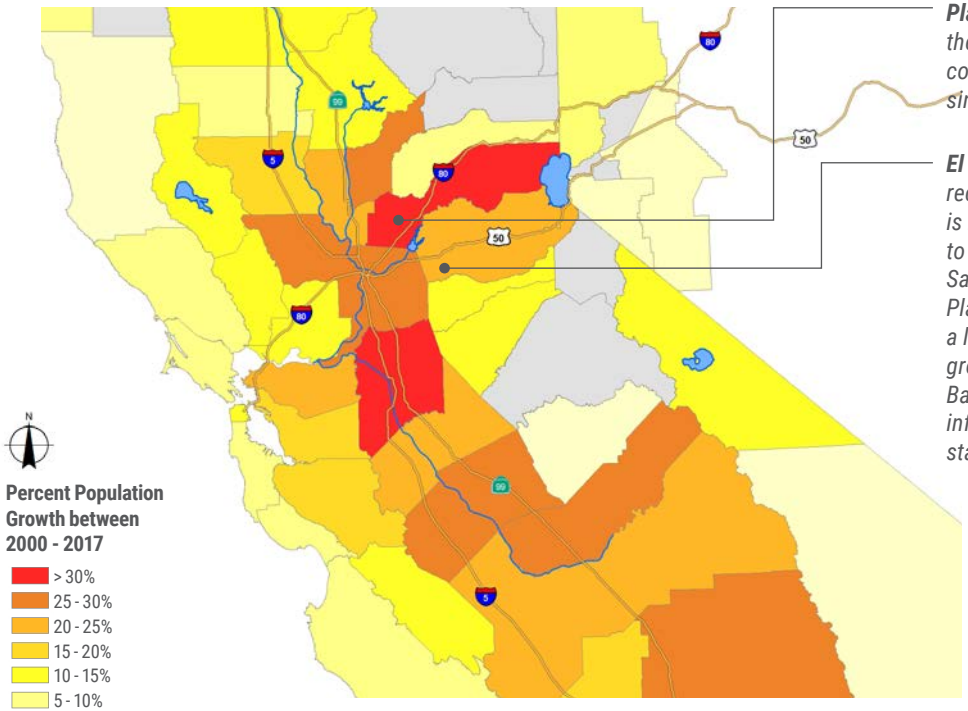
- It contains a land use plan for economic development and integrated natural resource protection and management.
- It plans for the land capacity for all purposes in considering future economic development beyond the typical near-term urbanization focus.
- It contains policies and considerations that allow for urbanization but also preserves the way of life of rural-agricultural communities that residents value significantly.

Additional goals of the WRDMP include to:

- Develop a concise, adaptable, and policy-focused document to be adopted by the Agency's Board that is 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, and the evolving understanding of climate change and its effects.
- Promote transparency and common understanding about the Agency's investment priorities in water resources development and management.

Through the 2019 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 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 WRDMP

The Agency outlined several principles for its 2019 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 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 that once connected, these entities will continue to collaborate to further resource management in El Dorado County.

1.4 Organization

The 2019 WRDMP is organized into 5 sections:

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

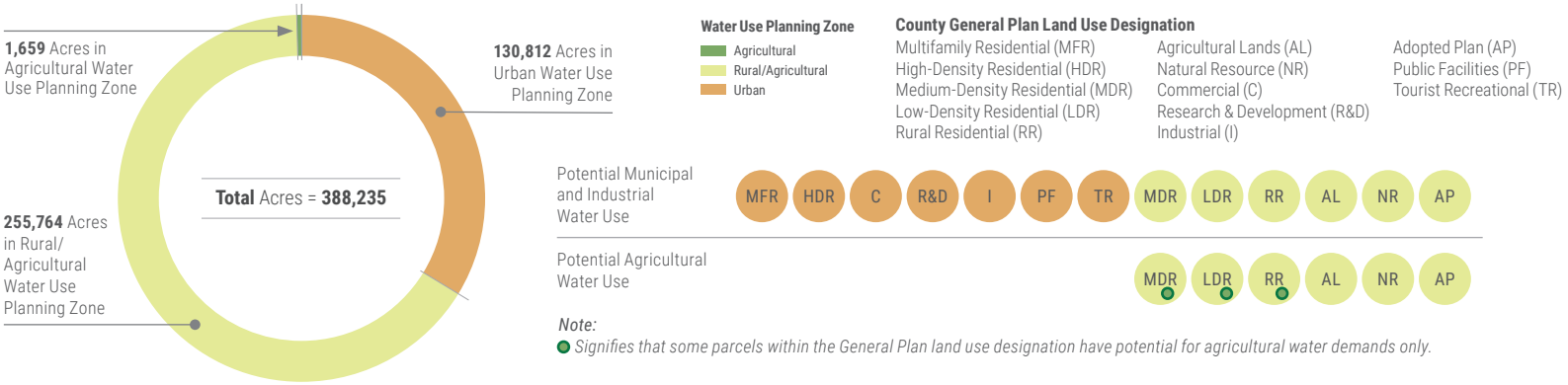
The County General Plan designates lands for economic development and identifies areas where community development and agricultural development may occur. These lands are outside of national forest lands, private timber lands, and other state and federally-managed lands. The County of El Dorado shares responsibility for land use regulation for the Tahoe Basin with the Tahoe Regional Planning (TRPA), established through the Congressional rectified Bi-State Compact between the state of California and Nevada. The resulting Tahoe Regional Plan (TRP) is intended to provide for the orderly growth and development within the Tahoe Basin consistent with the environmental carrying capacity of the area. The County General Plan reflects the intended coordination and alignment in land use. All projects within the Tahoe Basin area must be consistent with the TRP including codes and regulations of the TRPA and the County. Due to the past decades of planning and development, the economic development within the Tahoe Basin is more mature in comparison with the new growth in the West Slope.

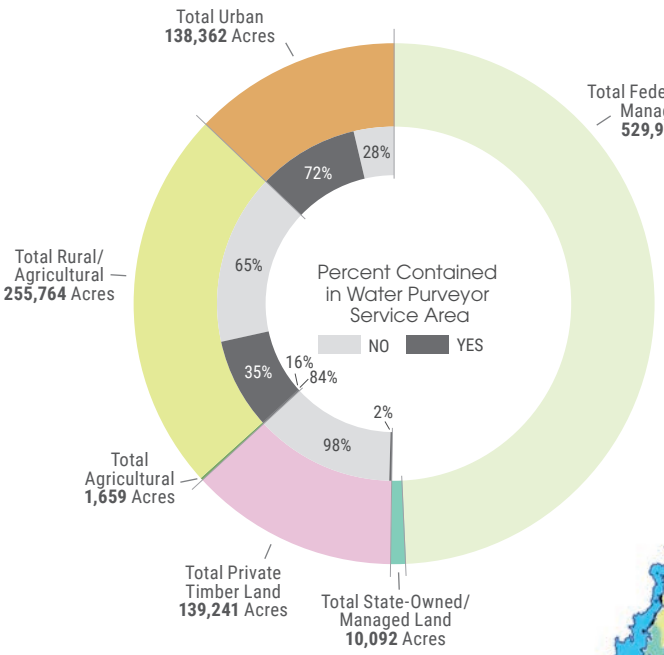
For the West Slope, the County General Plan designates the high-density development in the west side of the County, and along Highway 50, many lands are designated as medium and low-density development that may also allow small farming practices, the predominant agricultural economic development model in El Dorado County.

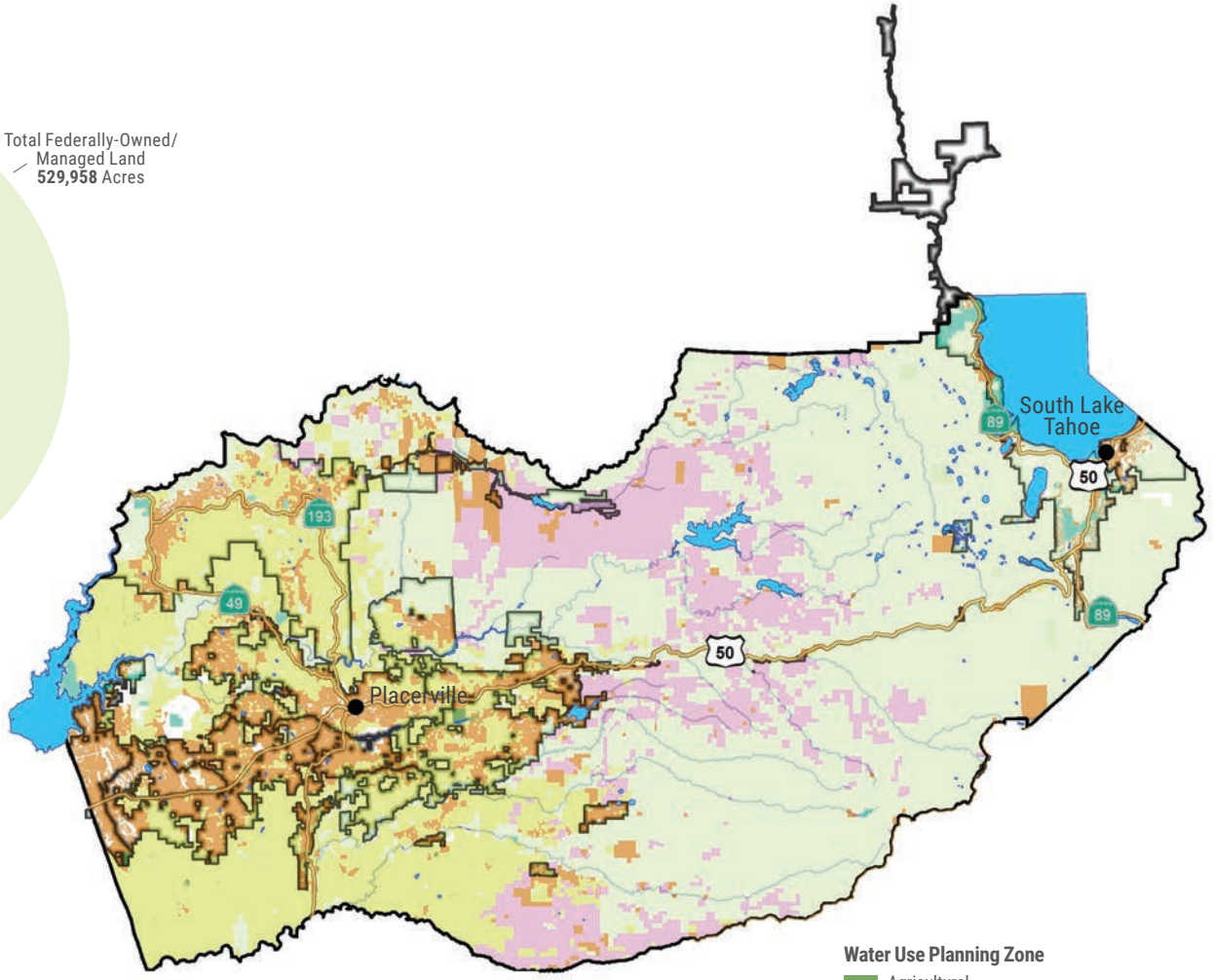
For the purposes of water use planning and demand estimates in the West Slope, three zones with economic development interests were formed based on the County General Plan land use designations and zoning ordinance designation (see Water Use Planning Zones term in the Glossary for more information how the water use planning zones were developed):

- **Urban water use planning zone** with potential M&I water demands only
- **Rural/agricultural water use planning zone** with both potential M&I and agricultural water demands
- **Agricultural water use planning zone** with potential agricultural water demands only

Currently in the West Slope, approximately 84 percent of the agricultural water use planning zone, 71 percent of the urban water use planning zone, and 34 percent of the rural/agricultural water use planning zone are in areas currently served by three public water purveyors. Realizing the vision for sustained economic growth in the remaining areas of the West Slope will depend on the development of reliable, long-term water supplies. The economic development in the Tahoe Basin is subject to additional conditions specified by the TRP. In the General Plan, the TRP is recognized under the Adopted Plan (AP) land use designation. In the Tahoe Basin, areas of economic development are fully covered by a public water purveyor.







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 General Plan is not served by any major water purveyor. In the Tahoe Basin, areas of economic development are covered by a major water purveyor.

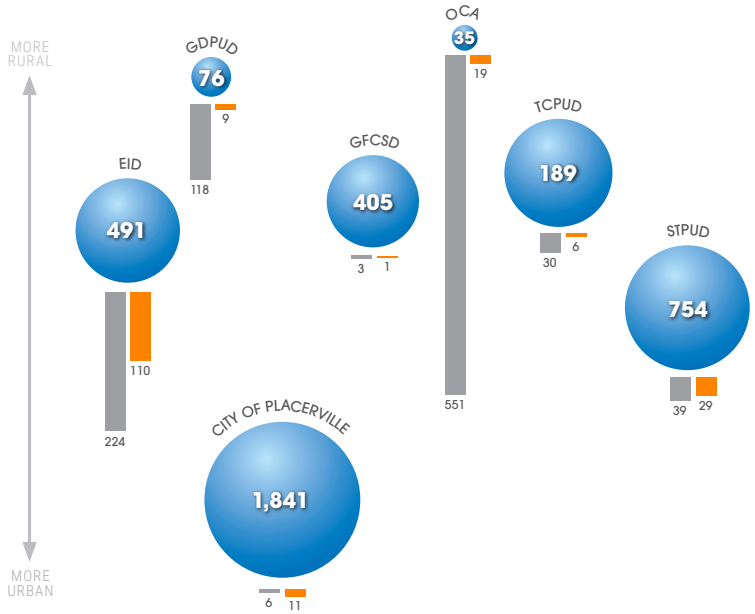
2.2 Roles and Responsibilities in Water Management

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 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 works 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.

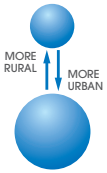
There are five public water purveyors in El Dorado County. El Dorado Irrigation District (EID), Georgetown Divide Public Utility District (GDPUD), and Grizzly Flats Community Services District (GFCSD) serve surface water in the West Slope. South Lake Tahoe Public Utility District (STPUD) serves groundwater, and Tahoe City Public Utility District (TCPUD) serves water from both groundwater and spring wells to the Tahoe Basin. Additionally, EID wholesales water to the City of Placerville. These purveyors' service areas do not cover the entire El Dorado County. Residents, farms, ranches, and businesses outside the 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 (OCA), comprised of areas in El Dorado County that fall outside federally-owned/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 (OCA) is the most rural.



LEGEND AND SOURCES

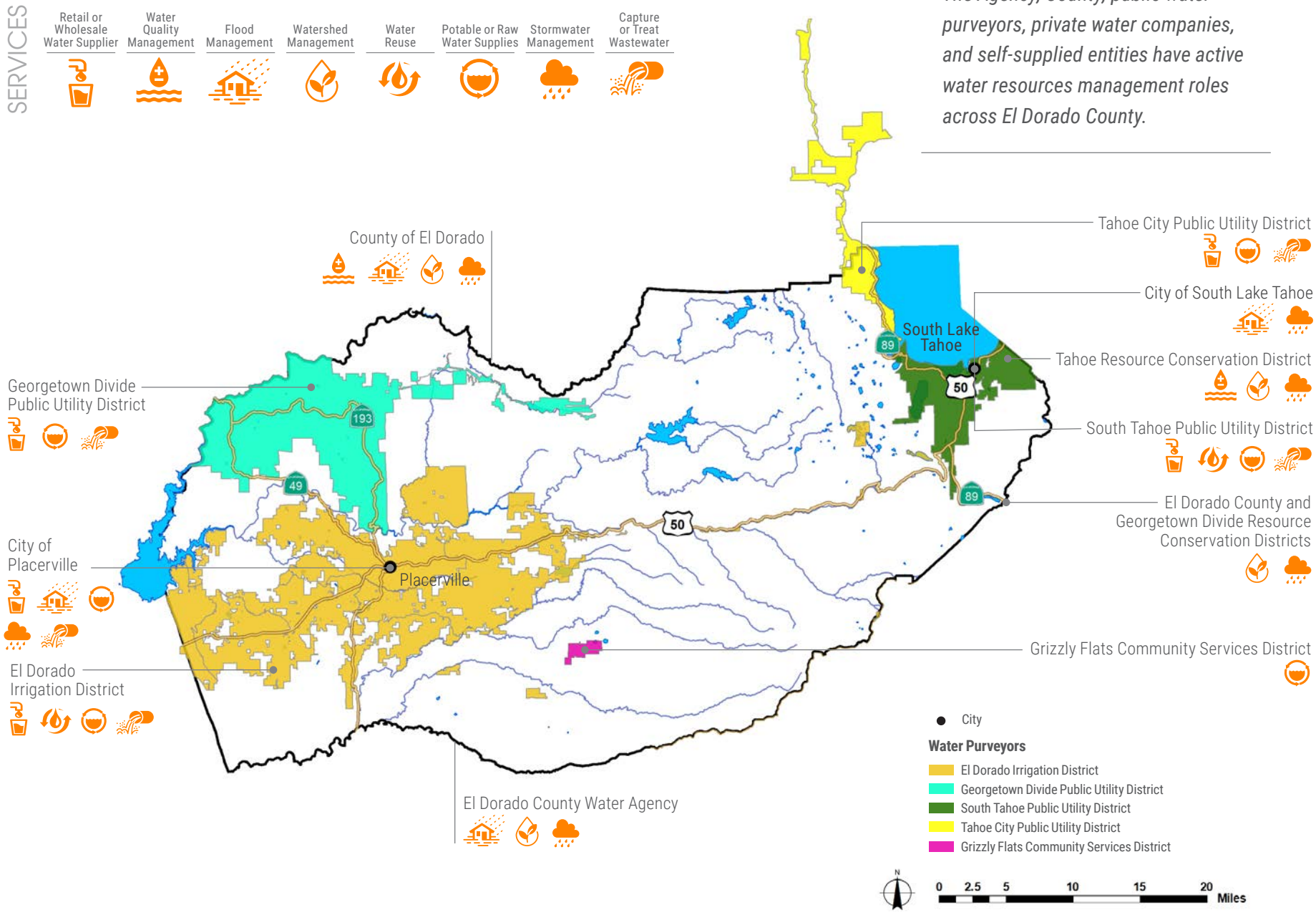


Population Density (number of persons/square miles)

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)

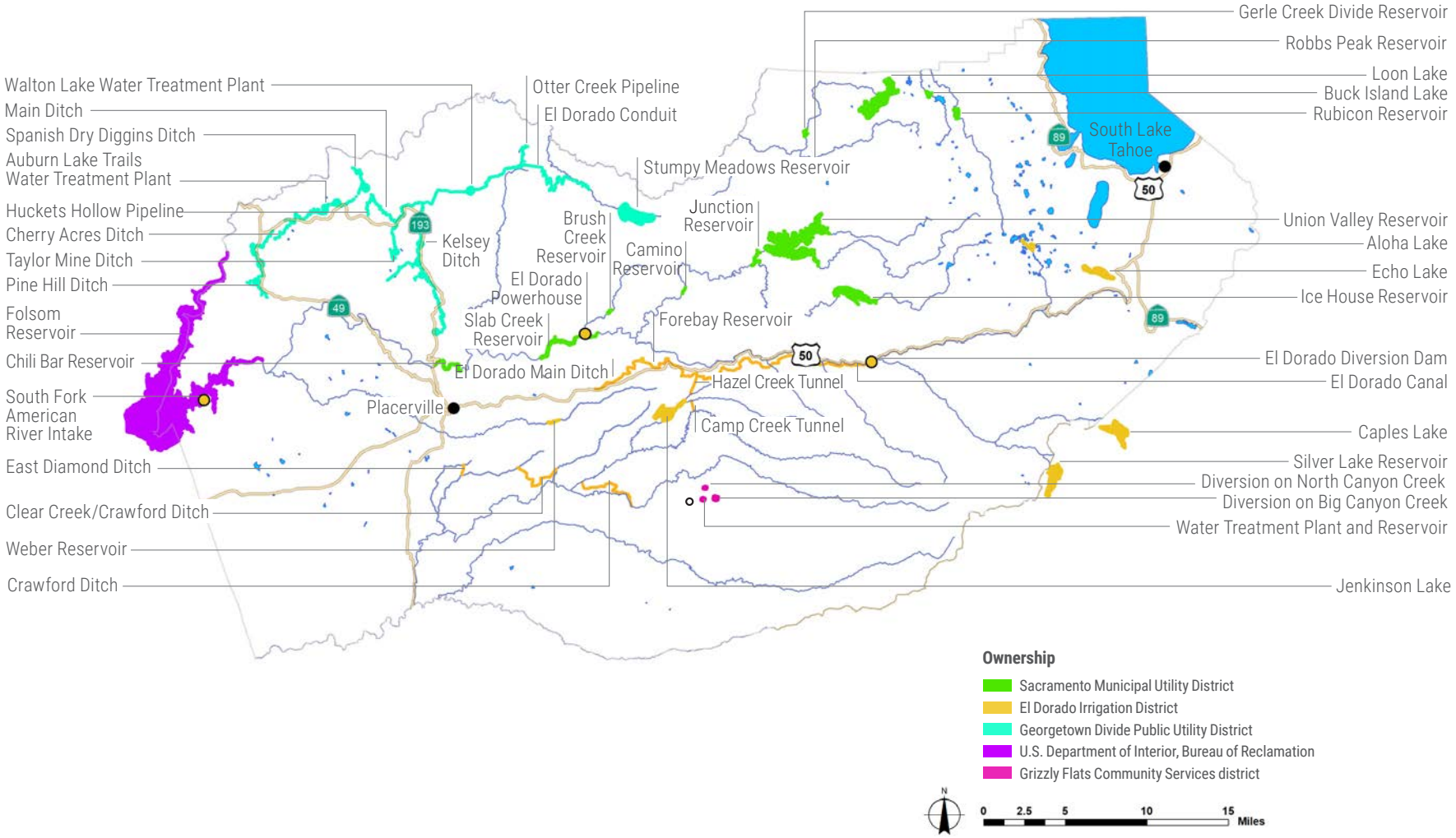
Key
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
OCA = Other County Area
STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District


SERVICES
Retail or Wholesale Water Supplier
Water Quality Management
Flood Management
Watershed Management
Water Reuse
Potable or Raw Water Supplies
Stormwater Management
Capture or Treat Wastewater
The Agency, County, public water purveyors, private water companies, and self-supplied entities have active water resources management roles across El Dorado County.
County of El Dorado
Tahoe City Public Utility District
City of South Lake Tahoe
South Lake Tahoe
Tahoe Resource Conservation District
Georgetown Divide Public Utility District
South Tahoe Public Utility District
El Dorado County and Georgetown Divide Resource Conservation Districts
City of Placerville
Placerville
Grizzly Flats Community Services District
El Dorado Irrigation District
El Dorado County Water Agency
City
Water Purveyors
El Dorado Irrigation District
Georgetown Divide Public Utility District
South Tahoe Public Utility District
Tahoe City Public Utility District
Grizzly Flats Community Services District
N
0 2.5 5 10 15 20
Miles

2.3 Major Water Infrastructure

The Agency does not own any water facilities at this time. The majority of El Dorado County water supplies originates as runoff from the Sierra Nevada snowpack.

In the West Slope, water is stored and distributed throughout El Dorado County for supply and hydropower generation purposes. Some 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 (GDPUD Ditch Water System Map). GFCSD owns and operates its own reservoir and diverts water from North Canyon Creek and Big Canyon Creek (GFCSD 2017 Water Supply and Demand Update). 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.

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:

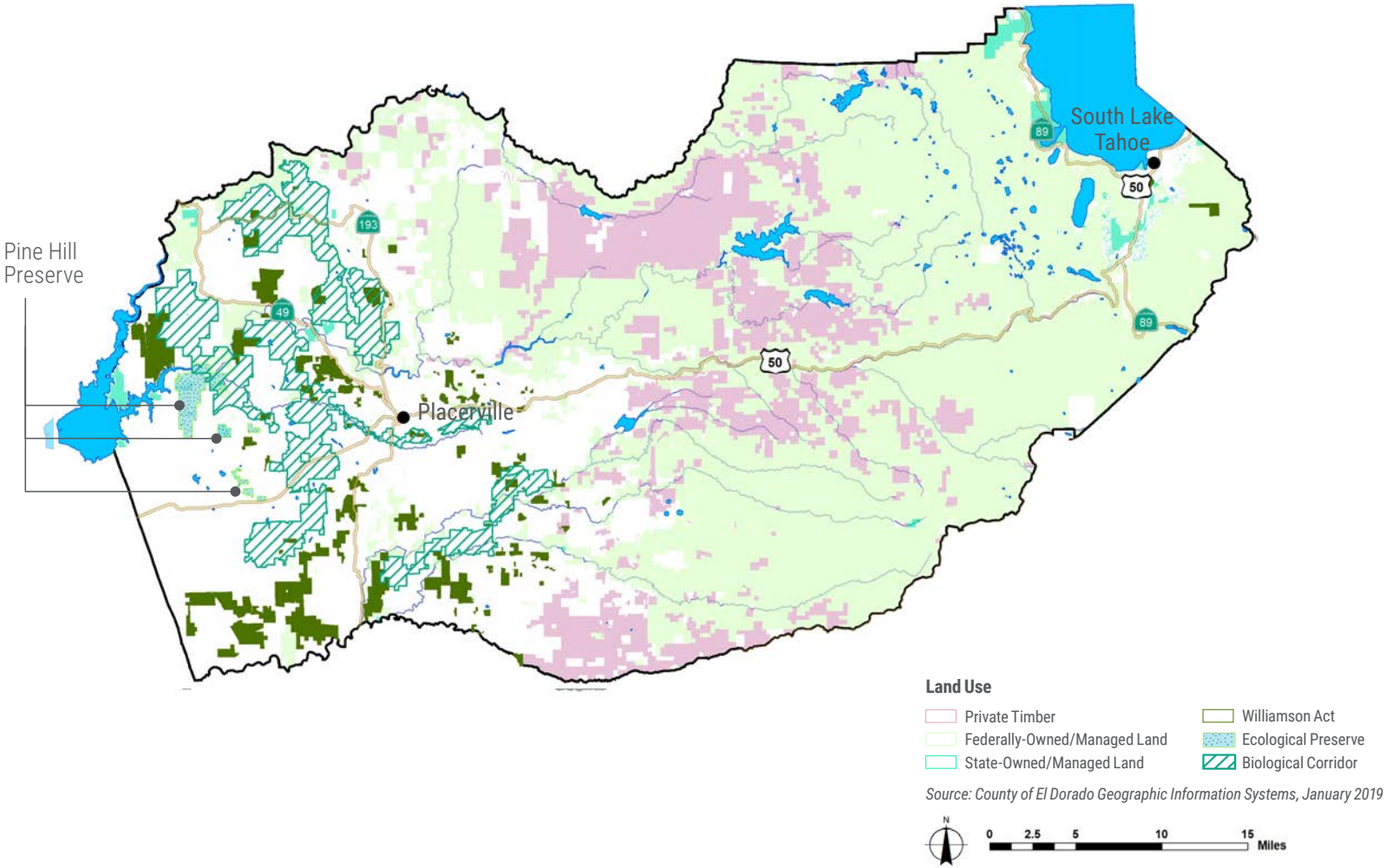
The Williamson Act – Enacted in 1965, this state law enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal.

Biological Corridors – The 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 is such an area because of the presence of rare plant species and habitats. Within the ecological preserve, lands classified into Mitigation Area 0 will continue to address mitigation for impacts to rare plants and habitats. Land within Mitigation Area 0 are therefore excluded from economic development.

The Agency will also include conservation objectives in its integrated approach to sustainable water management.

The County General Plan recognizes the importance of protecting natural resources contained in the Williamson Act, Biological Corridors, and Ecological Preserves that are not managed by state or federal agencies. The Pine Hill Preserve is 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 health. These three inter-related issues in the West Slope and the Tahoe Basin are shown below separately to highlight the differences in water resource management priority between these 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 from climate change and other factors, means demands are anticipated to exceed available supplies in the future. • The other county area is not serviced by a water purveyor and therefore lacks 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 (American River). • 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 wooden canals that are susceptible to destruction by fires or landslides. Loss of these major convey-ance structures would hinder water deliveries.	• Increasing frequency and intensity of wildfires result in both temporary and long-term water quality degradation.	• 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 tanks 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.	• 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)**
• Parts of the Tahoe Basin within the other county area, are not serviced by a major water purveyor. These areas use the local groundwater supply. • Due to the availability of groundwater and the limitations imposed by the Tahoe Regional Planning Agency, the risk of water supply-demand imbalance is less. However, the Tahoe Basin water supply is subject to the settlement of the Truckee River Operating Agreement and the water purveyors are working on securing allocated water rights.	• 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. • The small public water systems in the Tahoe Basin 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. • Much of the Tahoe Basin water supplies stems from regional snowmelt that infiltrates into the groundwater basin. • 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.

Level of Concern

High | Moderate High | Moderate Low | Low

3.1 Water Supply-Demand Imbalance

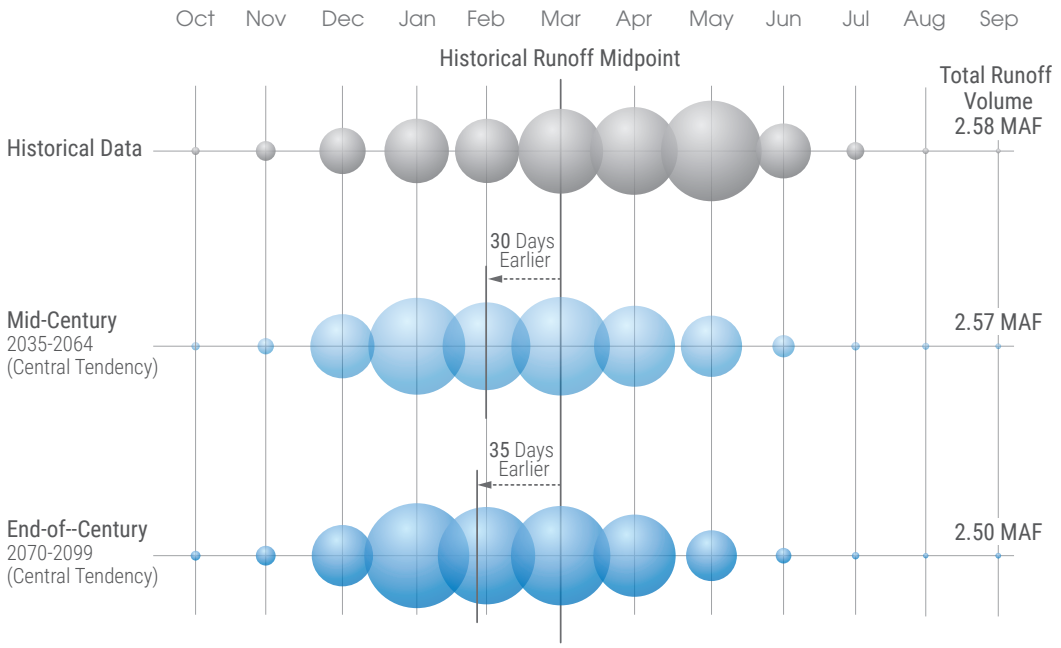
In California, we live in a Mediterranean-type climate that is highly variable. Our precipitation is seasonal, with most of it occurring between November and March, and in the Sierra Nevada region, annual precipitation totals historically have fluctuated between about 50% to 200% normal from year to year.

Climate change is already underway, affecting heat and precipitation extremes, with long-term warming trends, declining snowpack, and changes in streamflow timing – all harbingers of much larger changes to come that will aggravate the existing water supply-demand imbalance both in El Dorado County and statewide. Therefore, resiliency will be important in order to adapt to a changing climate.

On the supply side…

California relies on the delicate orchestration of both the Sierra snowpack and its engineered reservoirs to maintain a reliable water supply, its economy and way of life. As the climate changes, so could the hydrologic patterns that we've relied on for decades past.

Data from the American River Basin Study shows the effects of projected climate trends on unimpaired inflows into Folsom reservoir: earlier and flashier runoff, compared to historical conditions. Historical data shows that the runoff midpoint — the point at which 50% of the annual volume has run off — is in March. The mid-century and end-of-century projections show a shift in runoff timing due to the warming trend, resulting in more precipitation falling as rain instead of snow during the winter months. By mid-century (2035-2064), the runoff midpoint could be 30 days earlier than the historical average. By the end of the century (2070-2099), the midpoint of runoff could be 35 days earlier.



Source: Reclamation's 2019 American River Basin Study

With climate change, the West Slope could experience earlier and flashier runoff that will be harder to capture and store than a steady, dependable flow from gradual snowmelt.

With existing storage facilities and associated operational requirements, much of the runoff would be difficult to capture and less surface water would be available going into the summer months. Such reductions in summertime surface water availability place both natural and human communities at great risk, as well as elevate widespread wildfire risks. As a result of climate change, the water supplies available for California and the West Slope is anticipated to be less consistent and more difficult to manage.

For the Tahoe Basin surface water supply is subject to the settlement of the Truckee River Operating Agreement as it has a limited allocated water right. Under the Truckee River Operating Agreement the water purveyors in the Tahoe Basin have a total cap on their water right entitlement of 23,000 AF per year that is not currently maximized. To maximize their water right entitlement, water purveyors in the Tahoe Basin are seeking to secure groundwater rights consistent with the settlement of the Truckee River Operating Agreement, an action that may prove difficult without the appropriate support.

On the demand side…

There are several components of the County General Plan that contribute to changes in water demands – among them population growth, economic development, agricultural usage, and water-based tourism and recreation. Some of these demand increases are seasonal – we often need more water in the summer months when temperatures are hotter, and our crops and gardens are thirstier – while others such as industrial and commercial uses are more constant year-round. As the ambient temperature further increases with climate change, even more water will be required to sustain those same crops and gardens.

The West Slope's prominent water demands stem from population growth, economic development and agriculture. As shown in Section 2, a large fraction of the West Slope is agricultural with vineyards, apples, miscellaneous deciduous, irrigated pasture and Christmas trees making up 93 percent of the total existing West Slope irrigated area. These crops are a bulk of what is produced, account for the bulk of water used, and are anticipated to have the greatest potential for West Slope agriculture expansion.

The Tahoe Basin's prominent water demands stem from population growth, economic development and water based tourism. The Tahoe Basin attracts a flux of visitors during the weekends and holidays. Therefore, water demands in the Tahoe Basin are sporadic throughout the year as a result of visitors.

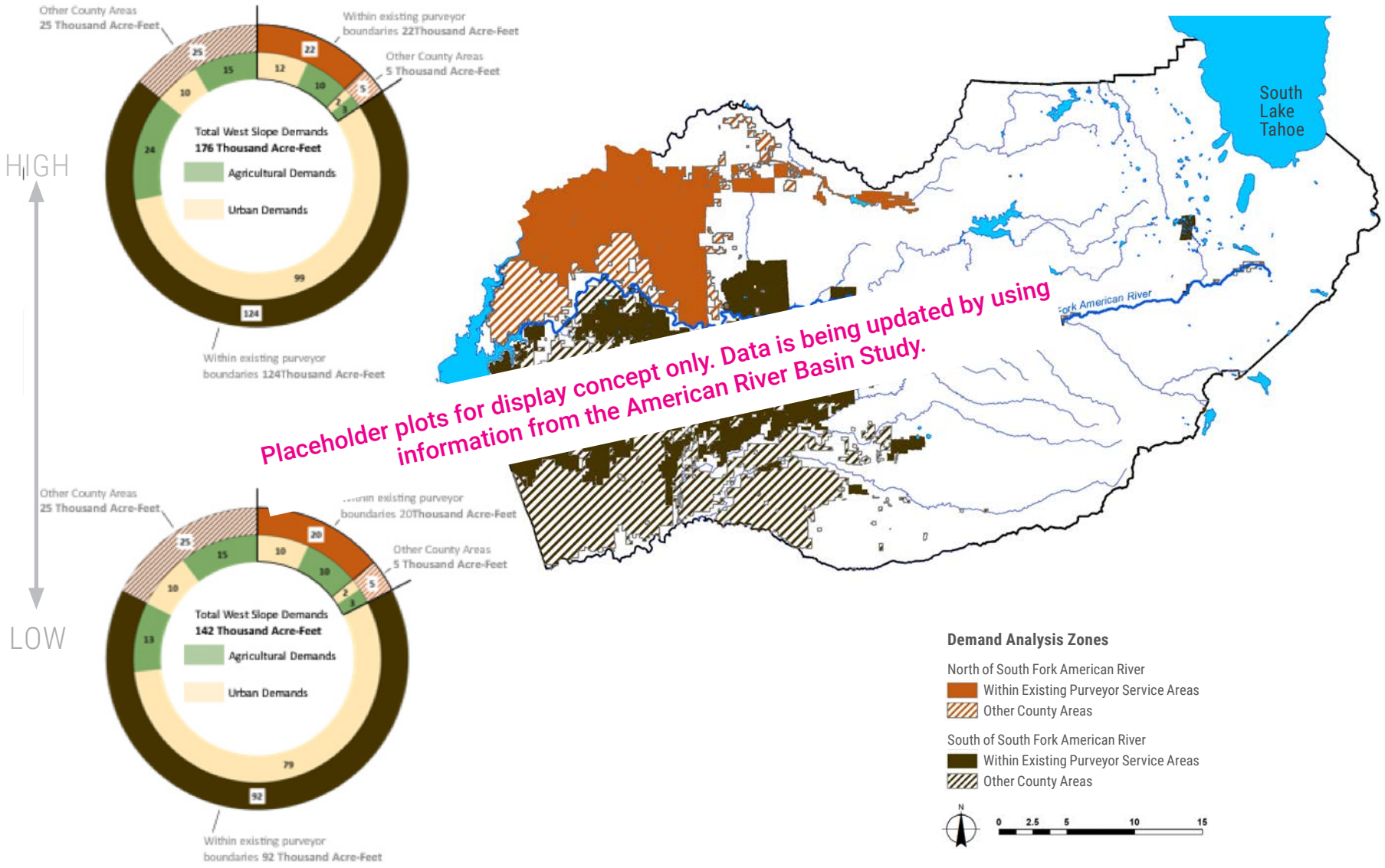
…and water conservation

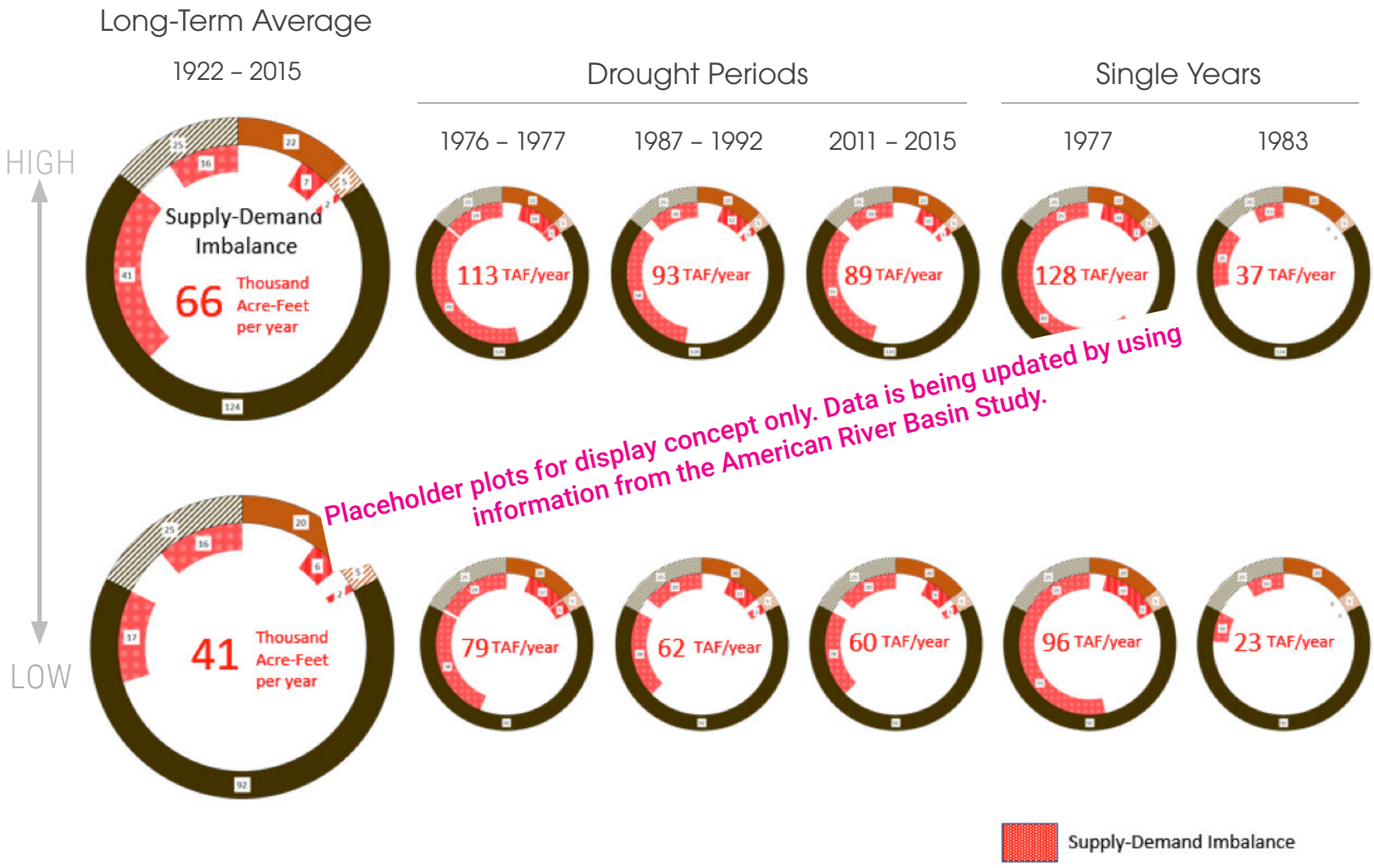
It is uncertain as to what conservation measures will take place in the future. However, the West Slope and the Tahoe Basin can prepare for the future through adaptive water management by applying required conservation measures as they are introduced and voluntarily set additional measures as deemed appropriate.

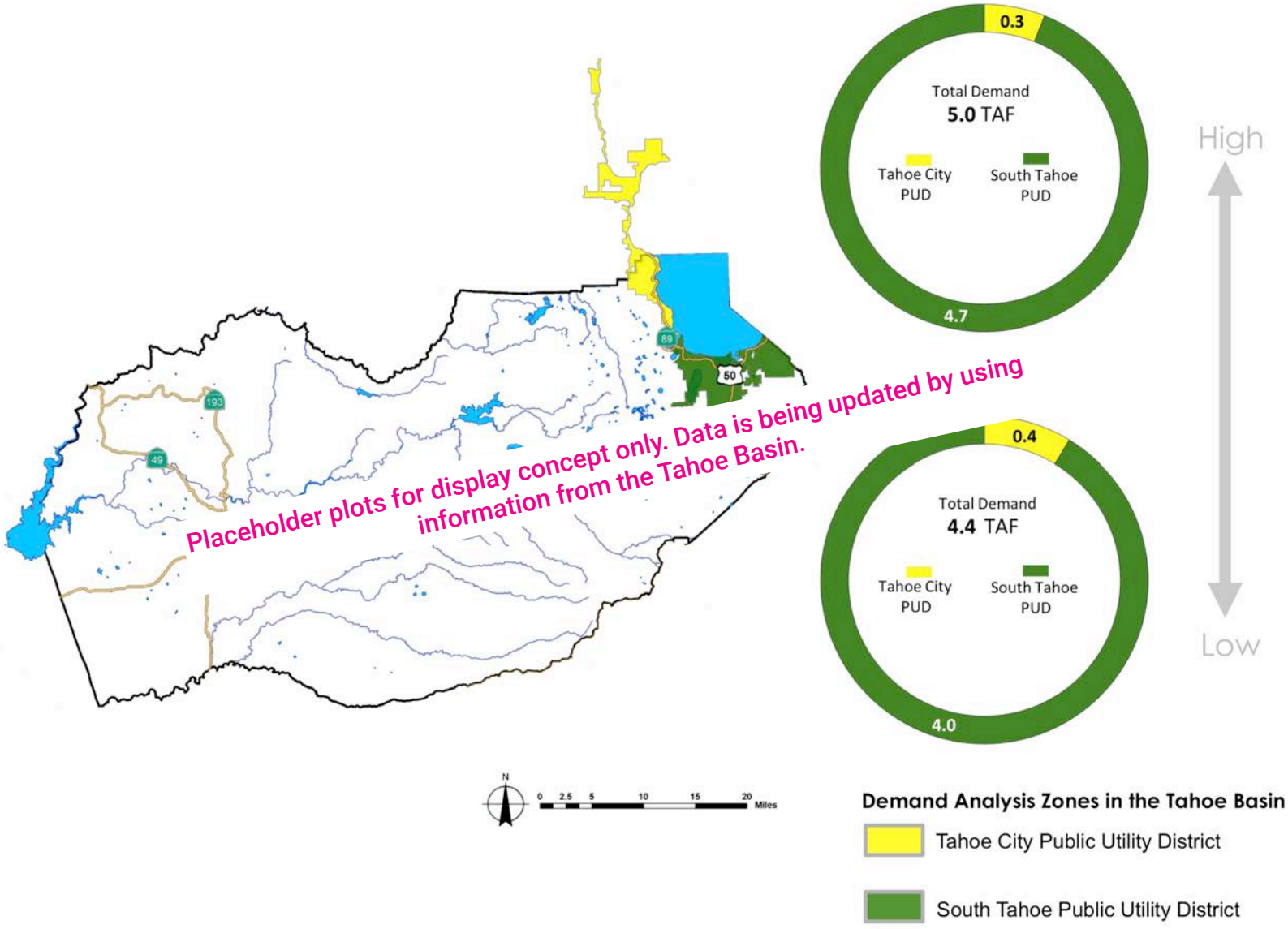
To improve water conservation and drought planning, the California legislature and governor passed Senate Bill 606 (Hertzberg) and Assembly Bill 1668 (Friedman) into law in 2018. Collectively, these efforts provide a road map for all Californians to work together to ensure that we will have enough water now and in the future.

California Department of Water Resources, the State Water Resources Control Board, and other state agencies are working to further develop data, information, guidelines, and other technical assistance to help realize the bills' intended outcomes. These guidelines and requirements must be implemented by urban water suppliers (e.g. EID, GDPUD, STPUD, TCPUD). Small water suppliers (e.g. GFCSD), rural communities, and agricultural water suppliers are not held to the same water conservation standards and regulations as urban water suppliers but will still need to make an effort to apply conservation measures. However many implementation specifics and required changes that may limit water supply availability for various uses are presently unknown.

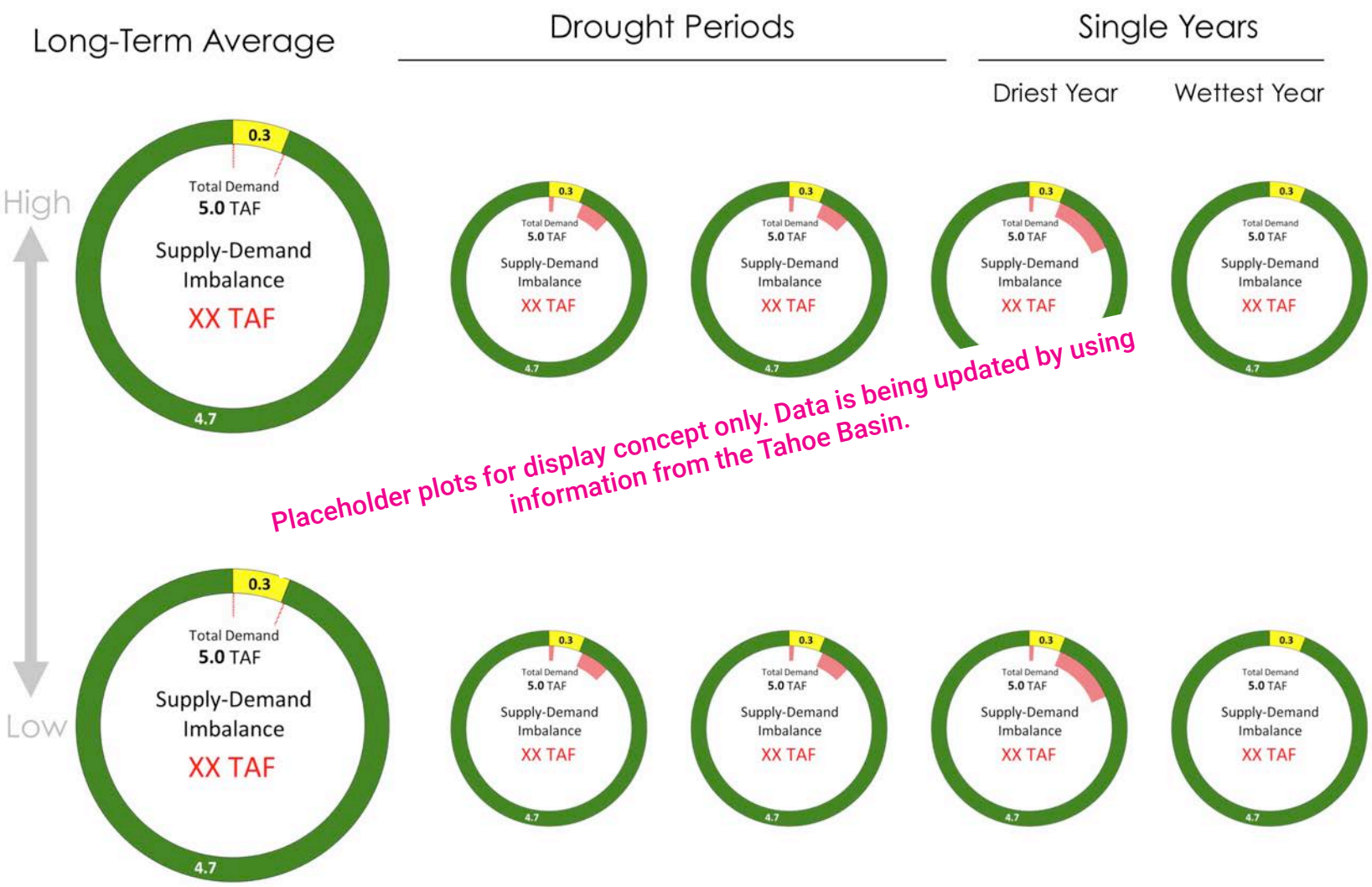
Although the future can't be predicted, we know that no matter what actions are taken locally, statewide, nationally, and globally, we will experience some level of climate change impacts on water supplies and demands, so it is essential that we take a holistic approach in preparing to adapt.


HIGH
LOW
Other County Areas
25 Thousand Acre-Feet
Within existing purveyor
boundaries 22Thousand Acre-Feet
Other County Areas
5 Thousand Acre-Feet
Total West Slope Demands
176 Thousand Acre-Feet
Agricultural Demands
Urban Demands
Within existing purveyor
boundaries 124Thousand Acre-Feet
Other County Areas
25 Thousand Acre-Feet
Within existing purveyor
boundaries 20Thousand Acre-Feet
Other County Areas
5 Thousand Acre-Feet
Total West Slope Demands
142 Thousand Acre-Feet
Agricultural Demands
Urban Demands
Within existing purveyor
boundaries 92 Thousand Acre-Feet
South
Lake
Tahoe
Placeholder plots for display concept only. Data is being updated by using
information from the American River Basin Study.
Demand Analysis Zones
North of South Fork American River
Within Existing Purveyor Service Areas
Other County Areas
South of South Fork American River
Within Existing Purveyor Service Areas
Other County Areas
0
2.5
5
10
15


Long-Term Average
1922 – 2015
Drought Periods
Single Years
1976 – 1977
1987 – 1992
2011 – 2015
1977
1983
HIGH
LOW
Supply-Demand Imbalance
66 Thousand Acre-Feet per year
41 Thousand Acre-Feet per year
113 TAF/year
93 TAF/year
89 TAF/year
128 TAF/year
37 TAF/year
79 TAF/year
62 TAF/year
60 TAF/year
96 TAF/year
23 TAF/year
Placeholder plots for display concept only. Data is being updated by using information from the American River Basin Study.
Supply-Demand Imbalance


0.3
Total Demand
5.0 TAF
Tahoe City PUD
South Tahoe PUD
4.7
High
Low
0.4
Total Demand
4.4 TAF
Tahoe City PUD
South Tahoe PUD
4.0
Placeholder plots for display concept only. Data is being updated by using information from the Tahoe Basin.
N
0 2.5 5 10 15 20 Miles
Demand Analysis Zones in the Tahoe Basin
Tahoe City Public Utility District
South Tahoe Public Utility District

Supply-Demand Imbalance



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.

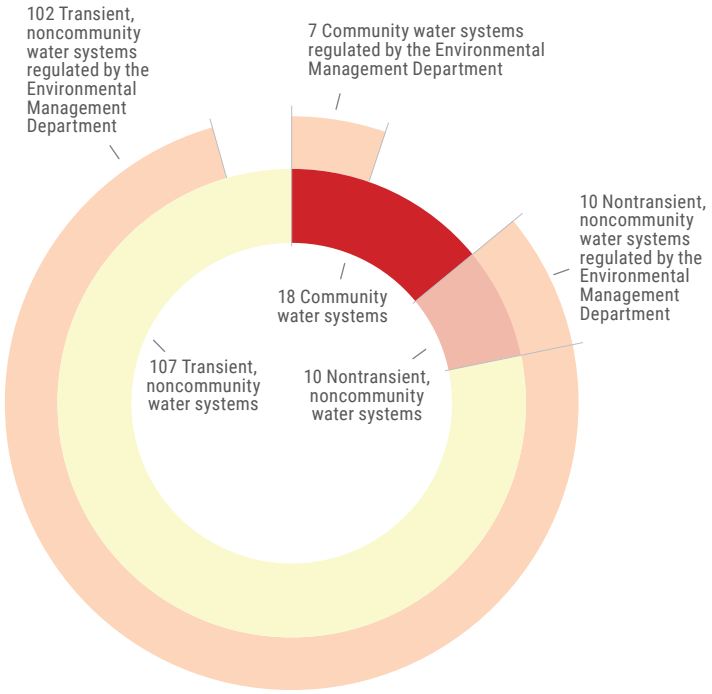
Through the lens of climate change, the West Slope is vulnerable to drought because it relies primarily on surface water and does not have access to much groundwater or other alternative water supply during drought. GFCSD, EID, and GDPUD oversee drought plans, but in the rest of the West Slope, the other 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. To mitigate drought impacts, efforts will need to be established to identify and collect information from the areas in El Dorado County that have experienced hardship from a drought.

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 generally open space.

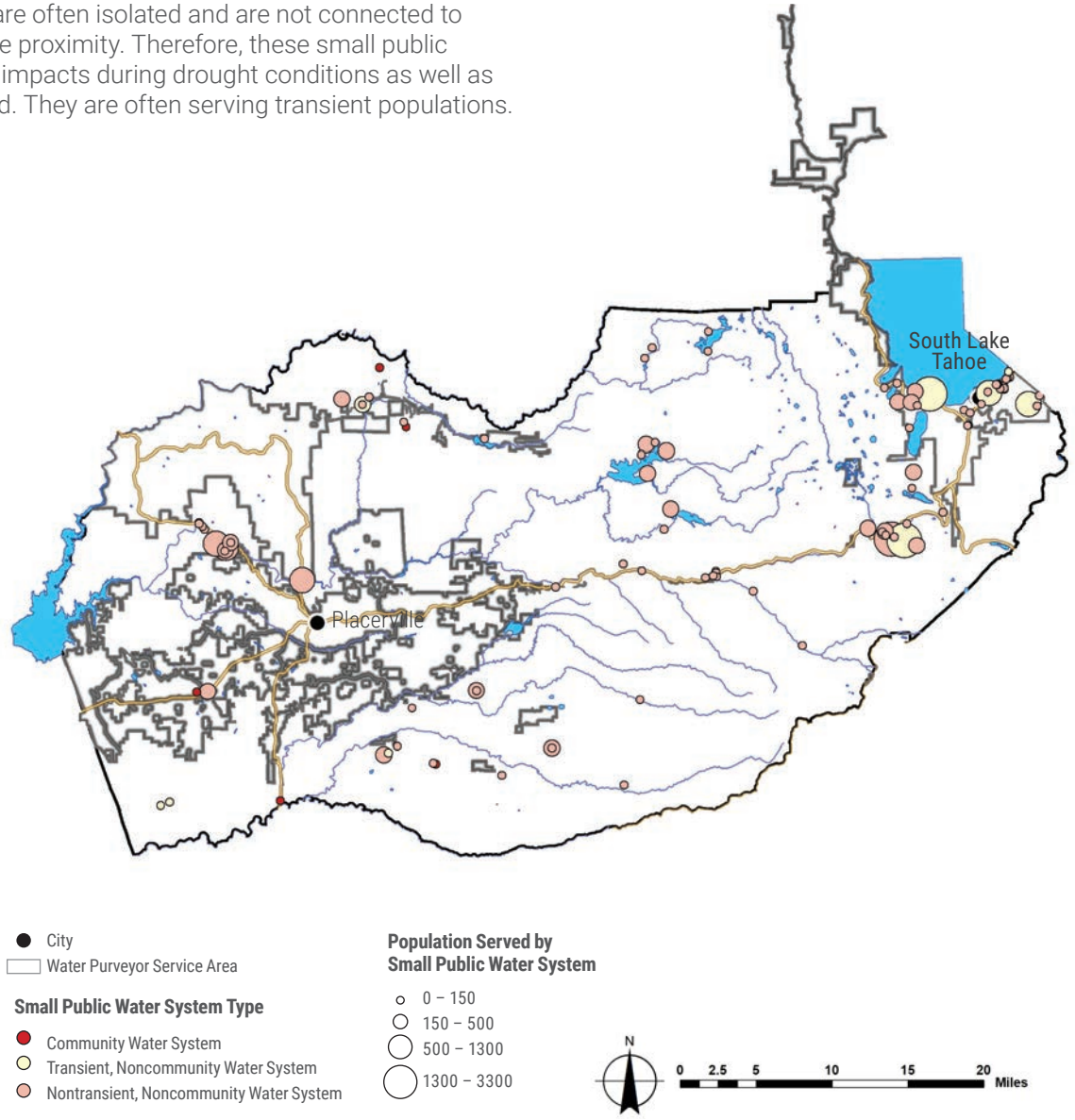
There are several small public water systems that provide drinking water supplies to various populations in the diverse, terrain-challenged El Dorado County. Small public water systems are often less resilient to natural disasters, such as drought and fire, have more difficulty adjusting to regulatory changes, and may struggle to fund infrastructure maintenance and replacement due to poor economies of scale and lack of staff. Overall, the small public water systems tend to have less resources and be more vulnerable. The State Water Resources Control Board (SWRCB) therefore encourages water system partnerships and voluntary consolidation, and Senate Bill 88 of 2015 further authorizes the SWRCB to require certain water systems that consistently fail to provide safe drinking water to consolidate with, or receive an extension of service from, another public water system. In the past few years, the County Environmental Management Department (EMD) has worked with water purveyors and small public water system owners for potential consolidation to achieve better water supply reliability and public health under the SWRCB's water system partnerships and voluntary consolidation program. Between 2017 and 2018, a total of 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 the consolidation process for small public water systems will continue.

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 (OCA) is not actively managed by any agency. Many small public water systems permitted by the County 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 and are not connected to larger water purveyors and agencies, even if they are in close proximity. Therefore, these small public water systems have an increased likelihood of water supply impacts during drought conditions as well as reductions in the quality of groundwater when wells are used. They are often serving transient populations.



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

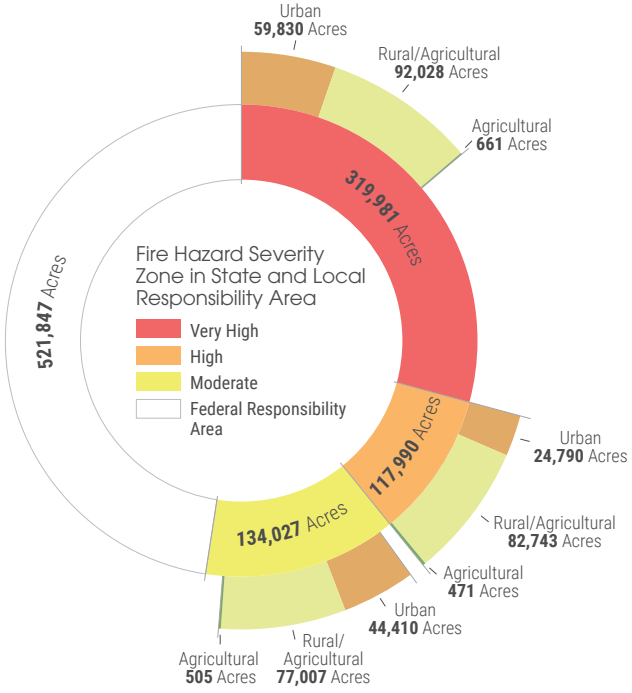


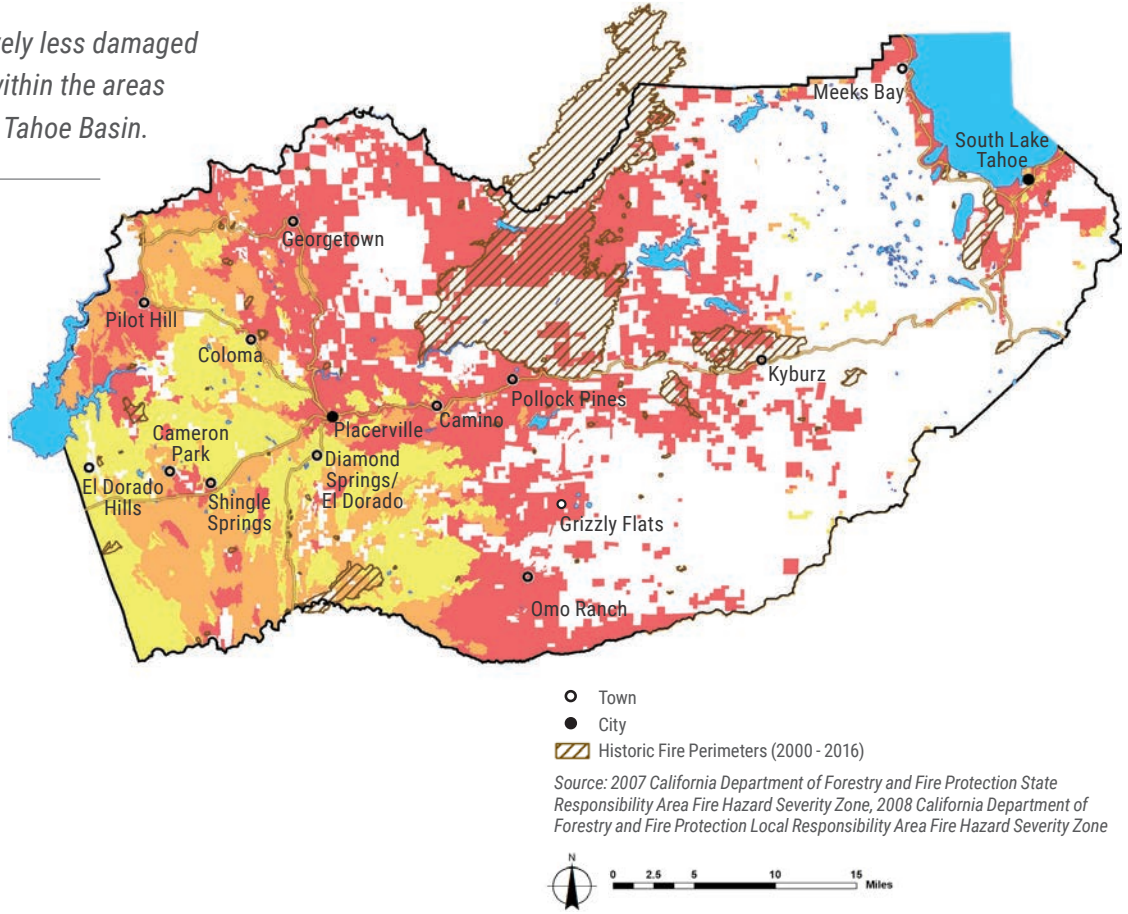
3.3 Impacts of Wildfires

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 drought. 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. Under the Federal Responsibility Area, information equivalent to fire severity zones is not available. The fire hazard severity zones are based on relevant factors such as fuels, terrain, and weather and are described according to their potential for causing ignitions to buildings. The fire hazard severity zones also relate to building codes designed to reduce the ignition potential to buildings. New buildings that will be developed from the anticipated economic growth in El Dorado within the State and Local Responsibility Area, shall comply with the Wildland Urban Interface Codes designed to ensure that structures are built with fire resistant material that minimize damage to structures during a wildfire. Significant areas in the "very high" Fire Hazard Severity Zone are timber lands that are managed by private entities and federal lands in national forests.

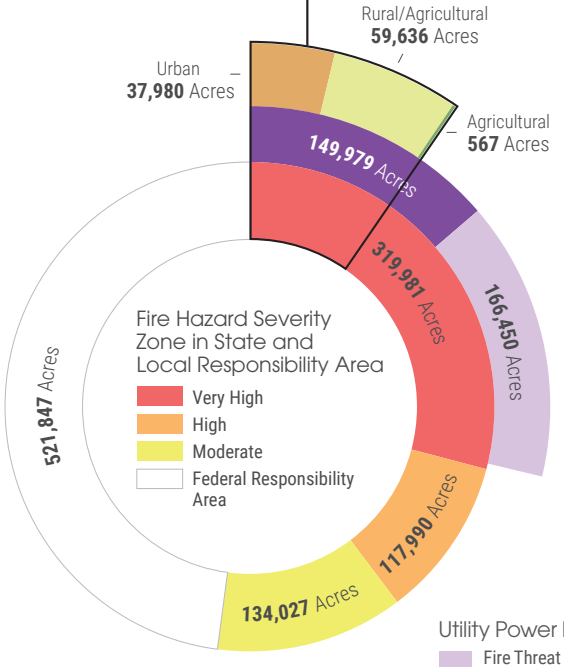
Compared to statewide trends, El Dorado County is relatively less damaged by wildfires. However, potentially devastating risks exist within the areas expected to have economic growth in the West Slope and Tahoe Basin.

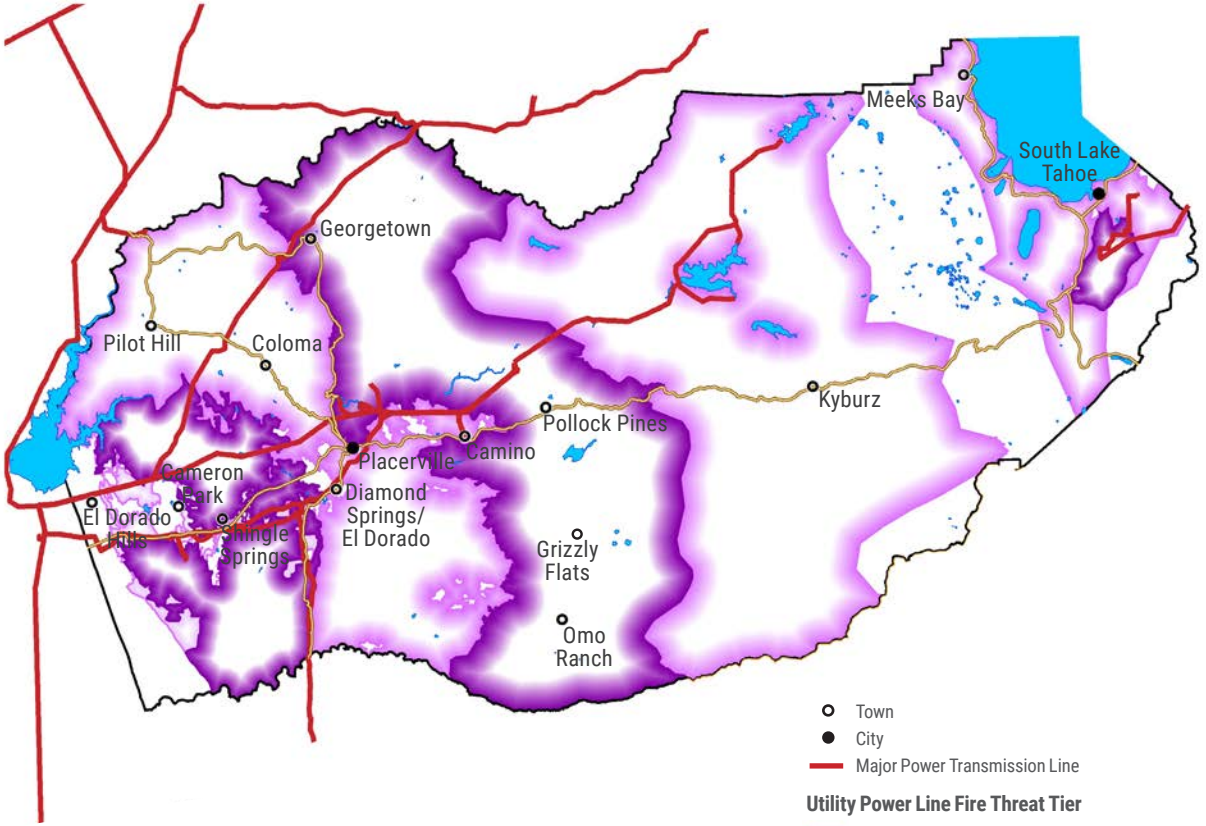




Areas with the highest threat of utility power line fires in El Dorado County (Utility Power Line Fire Threat Tier 3, map, below right) are those where both utility power lines and vegetation are present (black and white overlap map, left). Most of these areas are located in the West Slope.

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 United States Geological Survey's study on *Historical Patterns of Wildfire Ignition Sources in California Ecosystems,* states that with continued fire prevention activities, wildfires can be effectively decreased in California, except for those caused by utility power or transmission lines. It is in areas with both abundant vegetation (forests, grasses, agricultural activities, etc.) and utility power transmission lines 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 (CPUC).

El Dorado County agencies and residents, however, cannot overlook other potential causes of wildfire as well. 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 are from the damage to water supply-related infrastructure (treatment facilities, powerhouses, conveyance, etc.), and indirect impacts that include the increased risks for landslides, erosion, water pollution and flooding that can cause damage often realized long after the disaster.

A unique aspect in El Dorado County, are wooden flumes from the Gold Rush era and other delivery structures that are particularly vulnerable to both direct impacts (destruction during a fire) and indirect impacts (damage from later mudslides originating at the burned site). These wooden flumes are major water conveyances in the West Slope, the interruption of water supply due to fire damage would be significant.

One critical lesson learned from the past forest wildfires is that the ever-increasing wildfires are also a symptom of improper forest management, and high concentrations of dead trees are often the effects 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. Proper managed American River headwaters could also have broader effects on statewide water supply because the American River flows regulated at Folsom Reservoir is 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

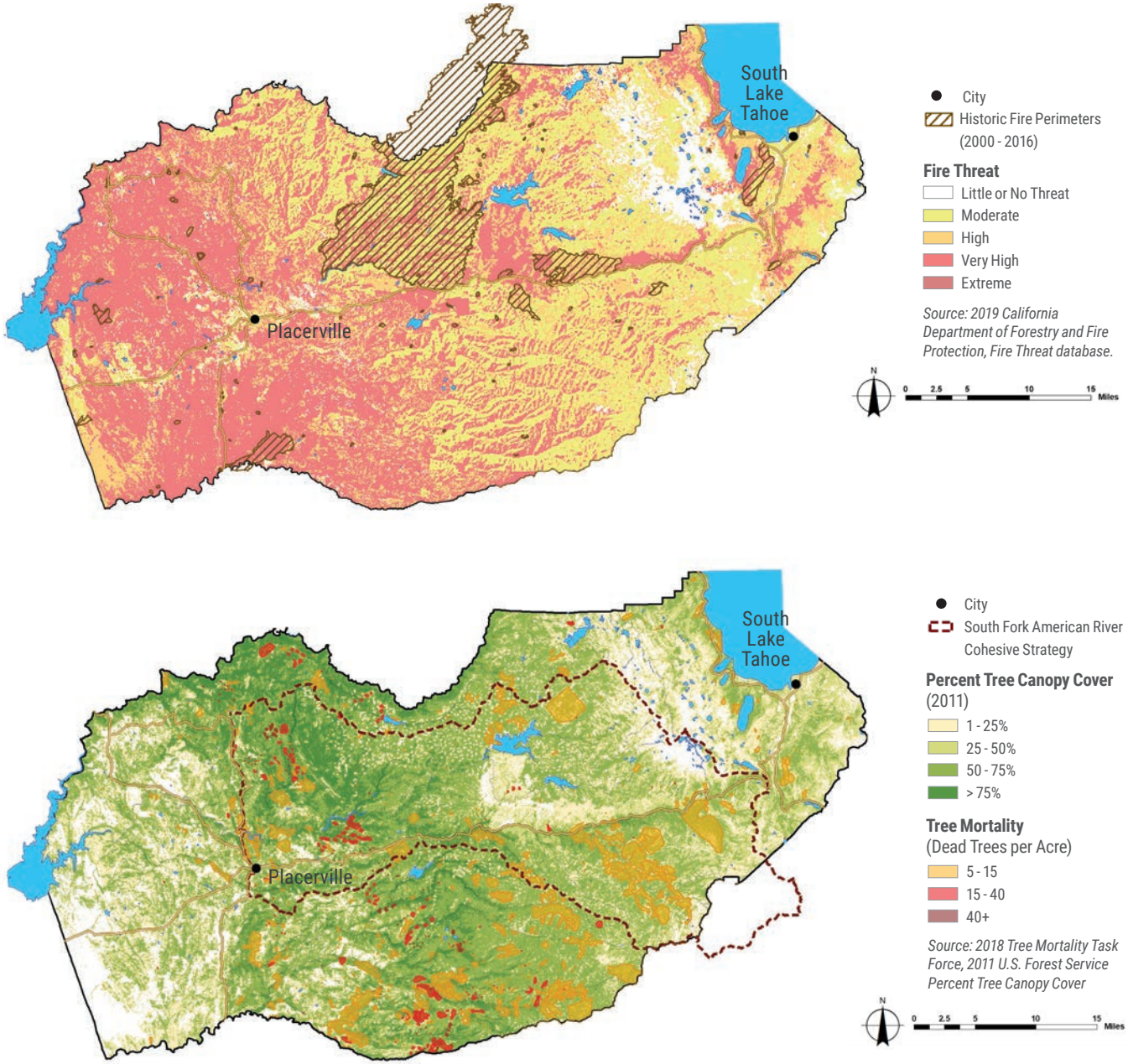
(2) Forest management to avoid high tree density with significant canopy cover that intercepts snowpack and reduces water retention.

El Dorado County is part of the Cosumnes, American, Bear, Yuba 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 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 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, State Conservancy, non-profit organizations, an academic research institute, water supply and hydropower owners, and private land owners 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 for the Sierra Nevada for a sustainable forest management approach on a landscape scale.

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



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. For Lake Tahoe, the largest source of pollution is urban stormwater runoff. Stormwater discharges are regulated through the National Pollutant Discharge Elimination System (NPDES) 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 (E. 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 is present.

Recent changes in state water management policy present the opportunity to treat stormwater as a different 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. Therefore, 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). These plans recognize how stormwater can be used as an additional water resource but continued plan implementation efforts are needed.

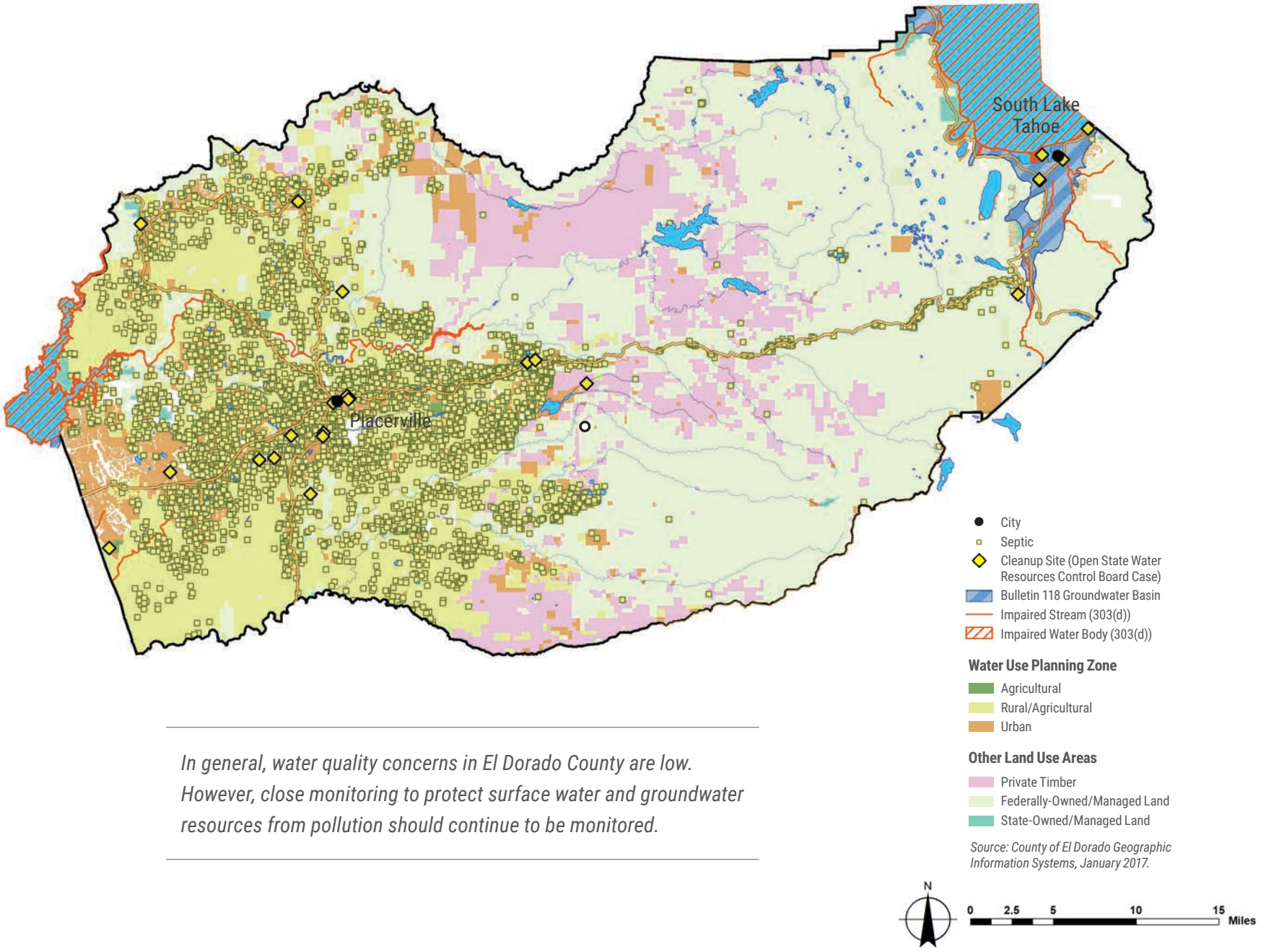
3.6 Limited Groundwater Resources

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 the Sustainability Groundwater Management Act (SGMA). Currently, STPUD and the Agency are serving as the Groundwater Sustainability Agencies 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.

Groundwater issues in the South Tahoe Basin have included contamination from perchloroethylene (PCE). Since the 1980s, there has been a great deal of study on a PCE plume that has been slowly migrating from the "Y" area of the South Tahoe Basin towards Lake Tahoe.

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.

This resource becomes potentially vulnerable in prolonged drought conditions and is also susceptible to pollution from runoff or contamination from septic tanks found throughout the West Slope along the highway corridor. In the past, there were reported incidents of septic tanks contaminating local water supplies. Although, there is no current prevailing problem of polluted runoff or septic tanks 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. In the West Slope, the naturally occurring arsenic can sometimes create water quality concerns, resulting in water supply challenges. Despite the extensive agricultural practices in the West Slope, the practices are of low toxicity and therefore impose a limited risk on groundwater contamination.



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

3.7 Vulnerability to Flooding

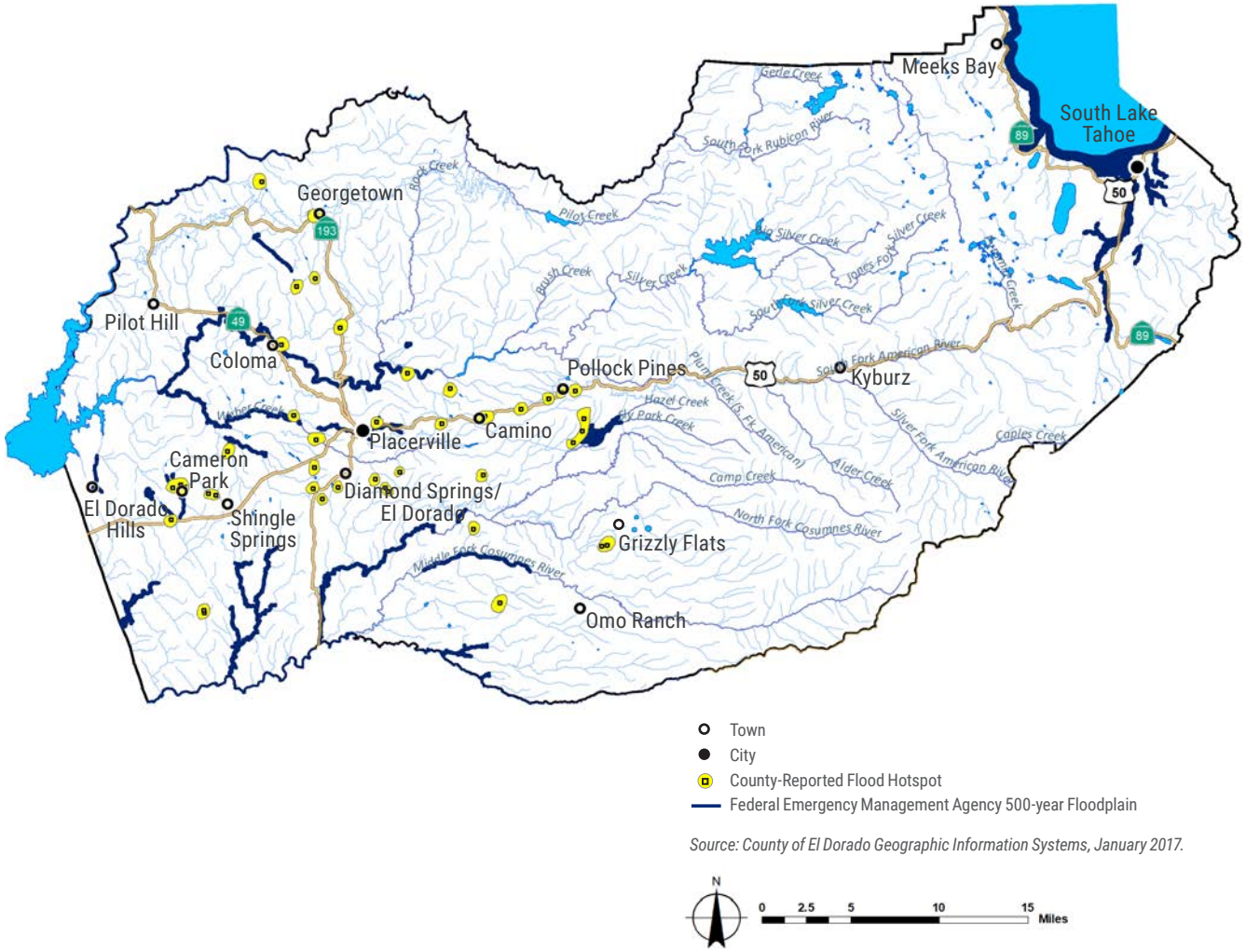
El Dorado County is vulnerable to flood risk. The combination of West Slope hydrology, soils, and land-surface slopes means that this area has frequent and localized flooding. The Tahoe Basin will experience flooding as a result of rainfall on snow.

Drainage problems and occasional flooding have occurred in low-lying areas such as Cameron Park and similarly located communities. Any runoff generated is discharged into local creeks and tributaries, and that high 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. During rain events, runoff will pool because it cannot infiltrate through the snow layer or the impermeable plowed surfaces.

There is a fragmented presence of the Federal Emergency Management Agency (FEMA) 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 will occur from rainfall on snow.



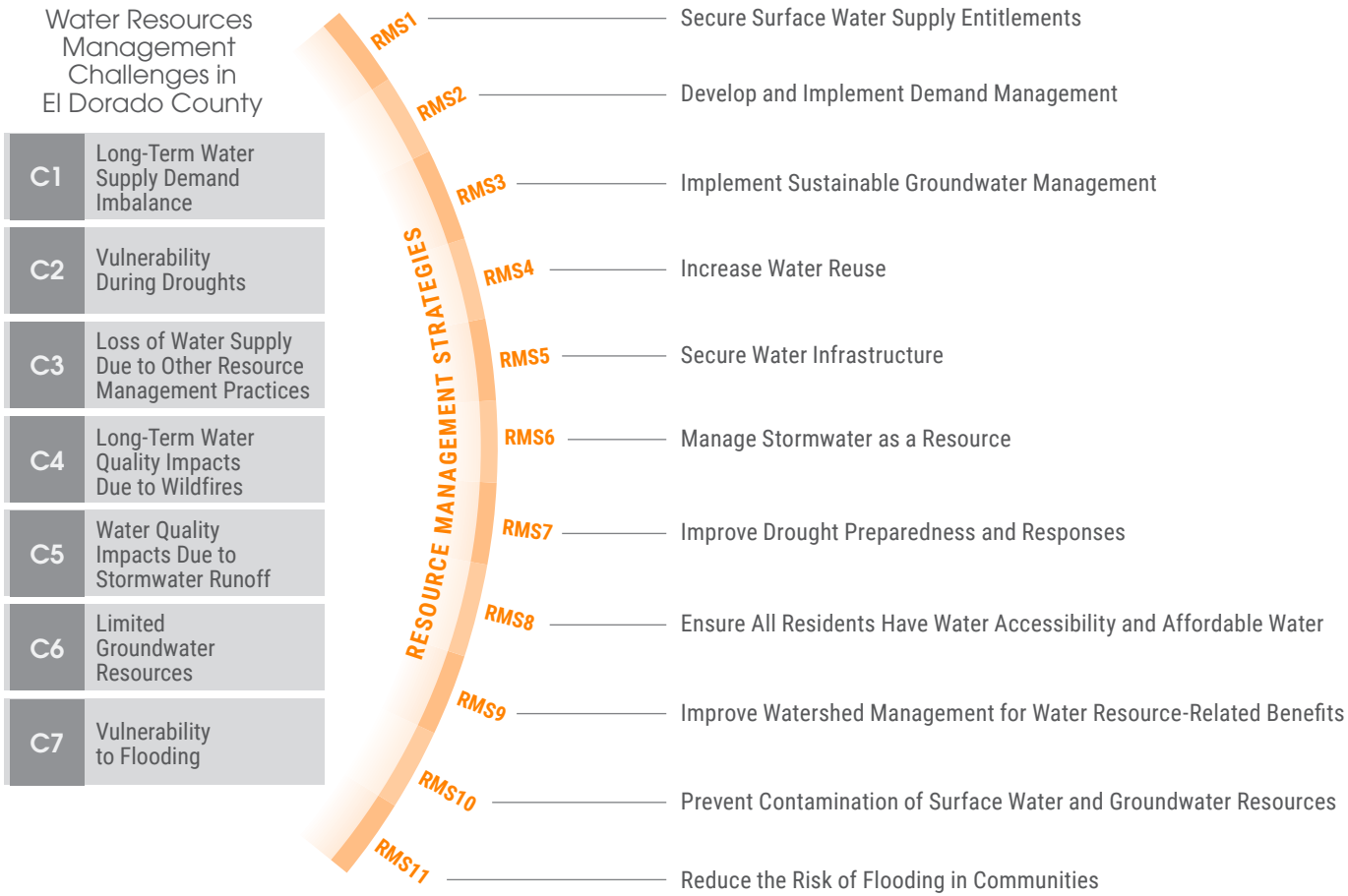
SECTION

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. Partnerships with other regional/state/federal agencies cannot be overemphasized for successful implementation. However, we, resource managers in the County, have to take the initiatives.

Broad Resource Management Strategies (RMS) have been developed to help address identified water resource-related challenges, as 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 that are consistent with the authority and the principles of engagement described in Section 1. 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.



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 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 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, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Update West Slope agricultural and M&I demands consistent with the County's 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, EDCWA, EID, GDPUD, GFCSD, STPUD, TCPUD	**L** – Participate in and contribute to 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

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

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

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

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
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)

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
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 water infrastructure in El Dorado County must responsibly continue with their ongoing operations, maintenance, repair, and rehabilitation to ensure that existing 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

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
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 the 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 update of 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

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

4.7 RMS7 – Improve Drought Preparedness and Responses

California is drought-prone, and climate change could further increase the frequency, duration, and intensity of future droughts. Many small public water systems and rural communities in El Dorado County are extremely vulnerable during extended droughts. Recurring situation assessments and improvements are critical to ensure all residents in El Dorado County have adequate water supplies and preserve options to leverage 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**	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 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 West Slope	**X**		EDCWA	**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 the 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 its residents and foster the economic development, it is essential that sufficient, safe, acceptable, physically accessible, and affordable water for personal and household use be available. This requires collaboration of many departments and agencies. It is also recognized that the provisions in Proposition 218 of 1996 prohibits the public water agencies to providing a subsidized rate for low-income households, creating a significant obstacle for the implementation. However, it is possible for water purveyors (e.g., STPUD) to provide assistance with 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*

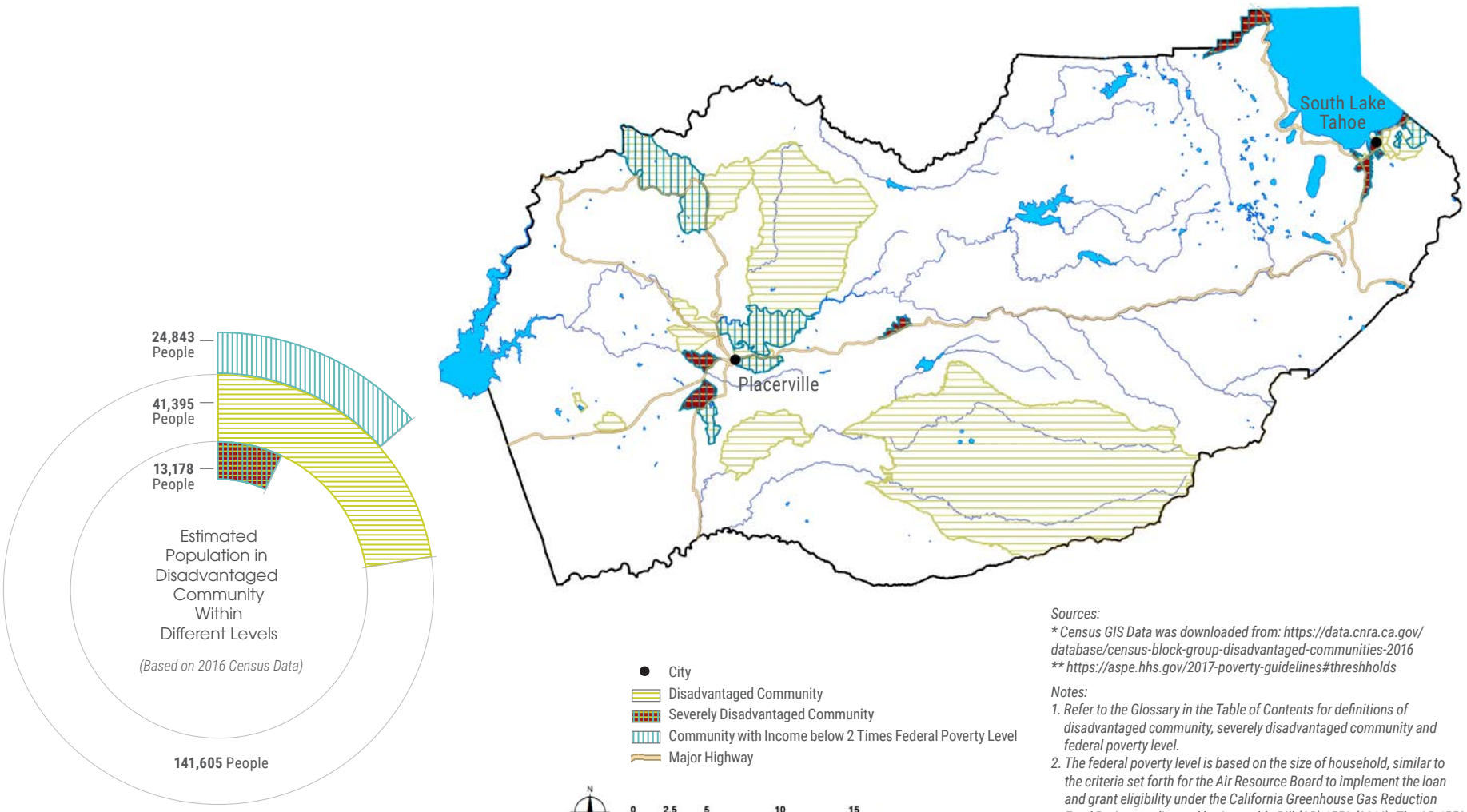
RMS Actions	West Slope	Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
8a. Assess challenges in water accessibility and affordability in El Dorado County (Human Right to Water, California Water Code Section 106.3)	**X**	**X**	City of Placerville, County, EID, GDPUD, GFCSD, STPUD, TCPUD	**F** – 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

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
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

The implementation of the 2014 human rights to water legislation is under development. In the draft recommendation to the legislature, the State Water Resources Control Board is proposing 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 Community and the Severely Disadvantaged Community 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 may 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 and stakeholders to promote sustainable forest management for long-term benefits of water supply, 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	**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 with other agencies and interested parties to develop, collect, synthesize and actively distribute information on forest health and associated benefits, including water retention and fuel management, to strengthen science-based decision making and promote broad support for responsible changes in forest management policies, implementation and funding authority **S** – Support communications, information sharing and advocacy efforts
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 lugging companies, and other creative solutions

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

BLM = Bureau of Land Management
CABY = Cosumnes, American, Bear, Yuba
County = County of El Dorado
EID = El Dorado Irrigation District
IRWM = Integrated Regional Water Management

STPUD = South Tahoe Public Utility District
TCPUD = Tahoe City Public Utility District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Services District
USFS = US 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. It 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, El Dorado County Agricultural Water Quality Management Corporation, EID	**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 risks 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 County to evaluate the monitoring data availability 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 County to evaluate the monitoring data availability 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

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
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

4.11 RMS11 – Reduce the Risk of Flooding in Communities

Flooding in El Dorado County is usually 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 County and City of Placerville and City of South Lake Tahoe **F** – Develop and maintain in coordination with facility owners, 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

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
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

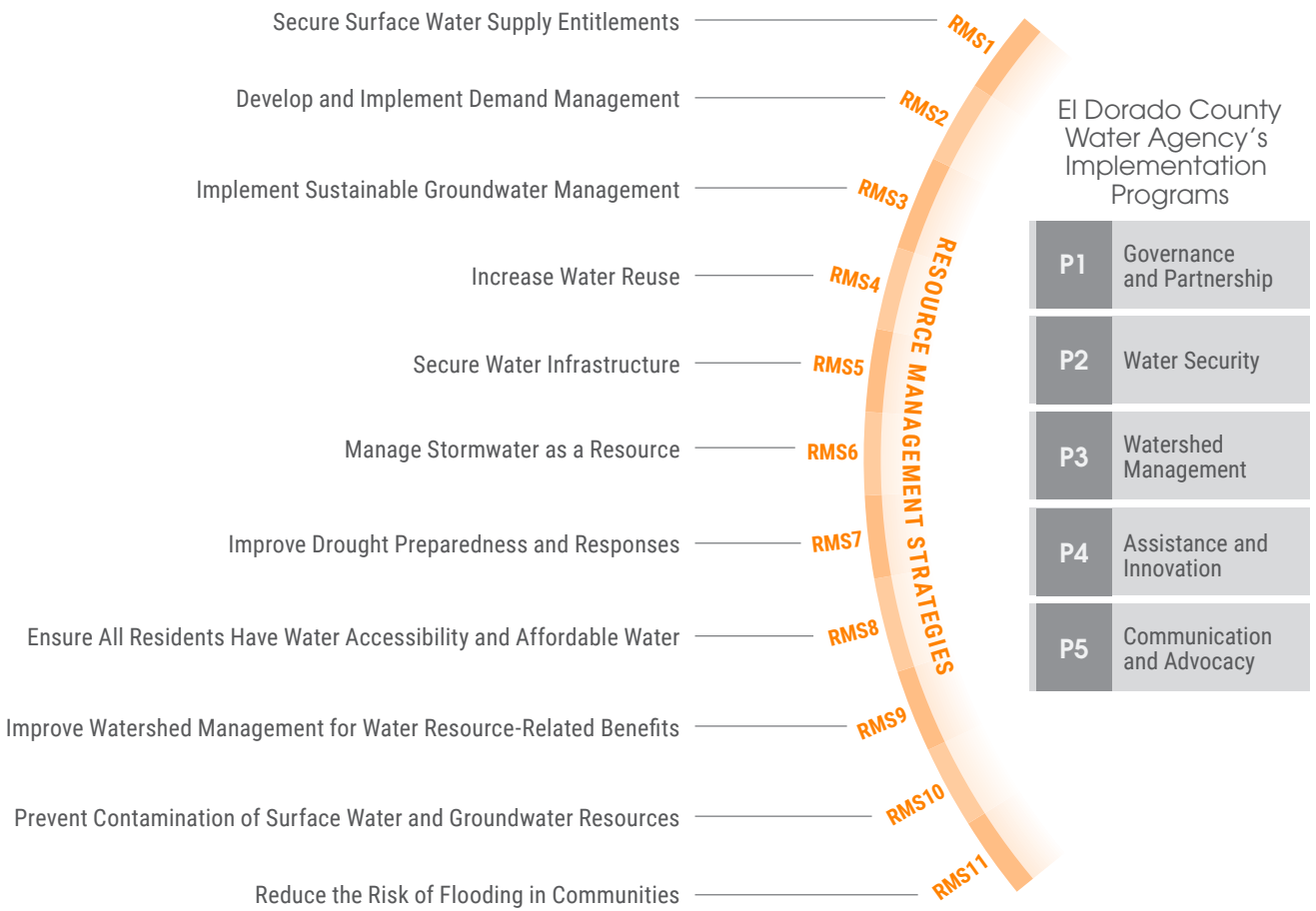
SECTION

5

Implementation

Implementation of the 2019 WRDMP will be a continual, incremental, and adaptive process. Some progress 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 proposed in Section 4 are wide-ranging, and their implementation will be a shared responsibility 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 delineates the ***how*** and the ***when*** for the Agency's involvement in water resources development and management in El Dorado County. In concert with the efforts of other local/regional and federal entities, the vision in the County General Plan can be fulfilled.



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 strategies and actions. Together, the programs encompass the work required of the Agency.

Governance and Partnership Program

The Governance and Partnership Program is focused on how the Agency will function throughout the WRDMP implementation. The extent of this program is defined by the Agency's authority in the 1959 Water Agency Act, and it includes the Agency's involvement in progressing 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. Although this program is envisioned to be a lesser financial investment than others (i.e., Water Security Program), it is extremely important to taking care of El Dorado County as a whole.

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, likely requiring the most effort and the greatest financial investment.

The 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 in 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, and while it will sometimes require a considerable time investment, it will be a lesser financial investment than other programs.

> *"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

For the implementation, the Agency's Board of Directors (Board) has adopted the following policies that affirm the purposes of the WRDMP and the 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's 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 1959 El Dorado County Water Agency 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 the vision in its 2016-2020 Strategic Plan 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 for regional planning studies and implementation activities with a focus on the interests of El Dorado County in Sierra Nevada.
- Participated with the Regional Water Authority (RWA) as a 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 Groundwater Sustainability Agency (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 negotiation for the long-term CVP (Fazio) water service contract with Reclamation in 2019 for scheduled contract execution in July 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 OCA.
- Continued negotiation with Reclamation for developing long-range planning studies under Reclamation's WaterSMART program, including the American River Basin Water Marketing Strategy Project, and the Upper American River Basin and Upper Consumes River Basin Regional Drought Contingency Plan.

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 of potential state financial assistance. The County and City of Placerville would incorporate needs for further project refinement and implementation in their budgetary process.
- 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 active 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
- Received the award of federal assistance in 2017 for developing 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 the update of the project cost estimate. The feasibility study is pending in anticipation of federal cost-share funding.
- Received the award of federal assistance in 2018 for developing 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 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 OCA. The contract finalization is scheduled in July 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 2019 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 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 RWA, ACWA, the Sacramento Metro, 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 2019 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 IRWM 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 participated 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 Environmental Management Department), 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 the 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 2019 WRDMP and improve public accessibility.
- Support conducting a special study for agricultural needs given that agriculture is 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

- Continued 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).