



El Dorado County Water Agency

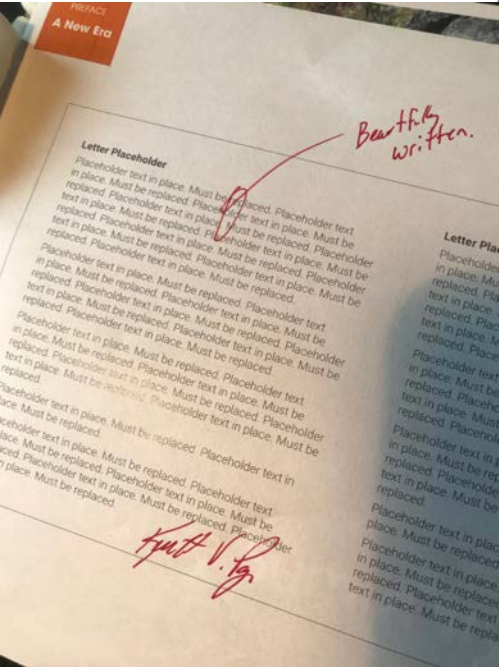
Water Resources Development and Management Plan

May 22, 2019 DRAFT

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 1969 El Dorado County Water Agency Act, the El Dorado County Water Agency's (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 Lake 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 the 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 historic 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 adopted County General Plan lays out a vision that encourages urbanized economics but also preserves the rural and agricultural quality of life in the county. Imbedded in that vision is protection of El Dorado County's rich natural resources for future generations. However, about 45 percent of the land covered by the 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.

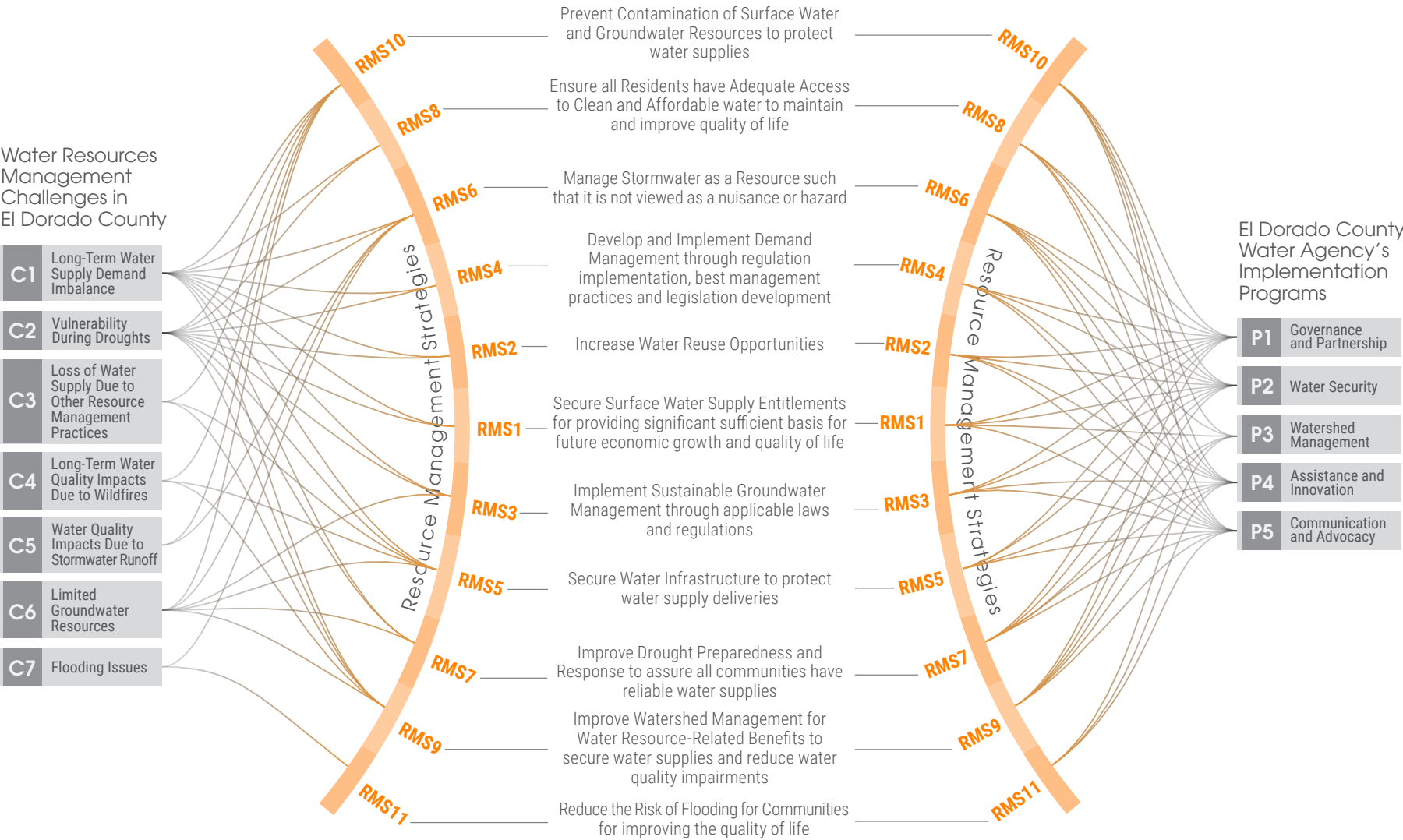
An Integrated and Collaborative Approach to A Better Future

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 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 Water Resources Development and Management Plan includes a comprehensive set of inter-related resource management strategies to address the identified water resource-related challenges in El Dorado County and to form specific implementation programs for the El Dorado County Water Agency that are consistent with its authority and mission to ensure long-term adequate water supply for adequate water for today and in the future for the county.



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 that 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 General Plan, current water management practices and responsibilities, and existing major infrastructure that supports the implementation of the 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 the West Slope and the Lake 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.

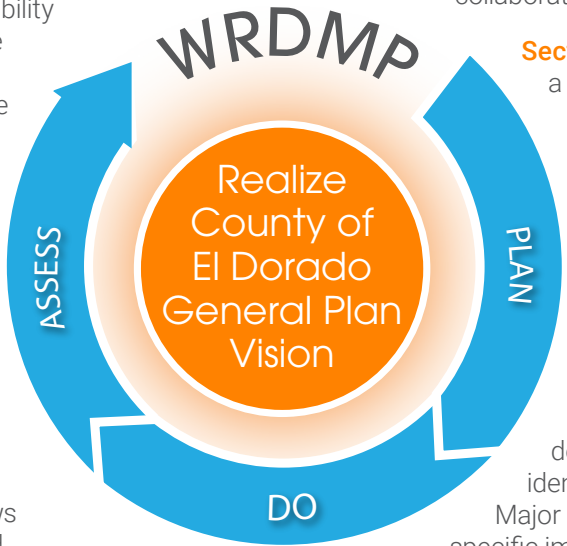




Table of Contents

Executive Summary	ES1
Table of Contents.....	i
Abbreviations	iii
Photo Credits	iii
Glossary.....	iv
1 Introduction.....	1
1.1 Needs.....	1
1.2 Goals.....	2
1.3 Development of the WRDMP	3
1.4 Organization.....	3
2 Current Water Management.....	4
2.1 Economic Development.....	5
2.2 Roles and Responsibilities in Water Management.....	7
2.3 Major Water Infrastructure.....	9
2.4 Environmental Protection.....	10
3 Challenges Ahead.....	12
3.1 Water Supply – Demand Imbalance.....	15
3.2 Vulnerability During Droughts	19
3.3 Impacts from Wildfires	21
3.4 Headwaters Management	23
3.5 Stormwater as a Resource	25
3.6 Limited Groundwater Resources.....	25
3.7 Localized Flooding Hazards	27
4 Resource Management Strategies	28
4.1 RMS1 – Secure Surface Water Supply Entitlements	30
4.2 RMS2 – Develop and Implement Demand Management.....	31
4.3 RMS3 – Implement Sustainable Groundwater Management.....	32
4.4 RMS4 – Increase Water Reuse.....	33
4.5 RMS5 – Secure Water Infrastructure.....	34
4.6 RMS6 – Manage Stormwater as a Resource	35
4.7 RMS7 – Improve Drought Preparedness and Responses.....	36
4.8 RMS8 – Ensure All Residents Have Water Accessibility and Affordable Water.....	37
4.9 RMS9 – Improve Watershed Management for Water Resource-Related Benefits.....	39
4.10 RMS10 – Prevent Contamination of Surface Water and Groundwater Resources.....	40
4.11 RMS11 – Reduce the Risk of Flooding in Communities	41
5 Implementation.....	42
5.1 Implementation Programs.....	44
5.2 Implementation Policies.....	46
5.3 Recent Accomplishments (2017 – 2019 Fiscal Years)....	47
5.4 Near-Term Priority Actions (2020 – 2024 Fiscal Years) ..	48

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

Greg Stanton – County of El Dorado
Jeffrey Warren – County of El Dorado
Olivia Byron-Cooper – County of El Dorado
Kathryn Jeanfreau – County of El Dorado
Patty Moley-Dunn – County of El Dorado
Frederic Schaefer – El Dorado County Water Agency

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

Jose Crummett – County of El Dorado
Raymond Hoang – Stantec
Megan Murray – Stantec
Kimberly Clyma – Stantec
Samuel Price – Stantec
Rick Lind – EN2
Tracey Eden-Bishop – EN2
Kristen Hunter – EN2
Leslie Moulton-Post – ESA
Robert Eckard – ESA
Harriett Ross – ESA
Grant Davids – Davids Engineering
Brandon Ertis – Davids Engineering
Duncan MacEwan – ERA Economics



Abbreviations

Act El Dorado County Water Agency Act
ACWA Association of California Water Agencies
Agency El Dorado County Water Agency
BLM Bureau of Land Management
Board.....Agency’s Board of Directors
CABY Cosumnes, American, Bear, Yuba
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
FEMA Federal Emergency Management Agency
GDPUD..... Georgetown Divide Public Utility District
GFCSD Grizzly Flats Community Services District
GSAGroundwater Sustainability Agency
IRWM Integrated Regional Water Management
M&I Municipal and Industrial
NPDES National Pollutant Discharge Elimination System
OCAOther County Area

PCE.....Perchloroethylene
Plenary El Dorado County Plenary for Water
PUD Public Utility District
RCDResource 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
STPUDSouth Tahoe Public Utility District
TAF Thousand Acre-Foot
TCPUDTahoe City Public Utility District
USFS U.S. Forest Service
West Slope El Dorado County area west of the Sierra Nevada Crest
WRDMPWater Resources Development and Management Plan

Photo Credits

Brendan Ferry, County of El Dorado – Page ii
Yung-Hsin Sun, Stantec – Cover, Table of Contents,
Pages ES-0. 4, 14, 34, 50

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 §116257(i).

Disadvantaged Community — A community with a median household income of less than 80 percent of the statewide average.

Noncommunity Water System — A public water system that is not a community water system.

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.

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.

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. 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) — A RCD is a local, independent, non-enforcement, non-regulatory district that is self-governed. It advises and assists individual landowners and public agencies in planning and implementing conservation practices for the protection, restoration, or development of land, water, and related natural resources. A RCD has a role in watershed management, water quality management, and stormwater management.

Severely Disadvantaged Community — A community with a median household income of less than 60 percent of the statewide average.

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.

Transient Noncommunity Water System — Noncommunity water system that does not regularly serve at least 25 of the same persons over six months per year.



The El Dorado County Water Agency (Agency) 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 then 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 Lake Tahoe Basin that has unique ecological sensitivities, and the vast West Slope foothill area (West Slope) that 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.

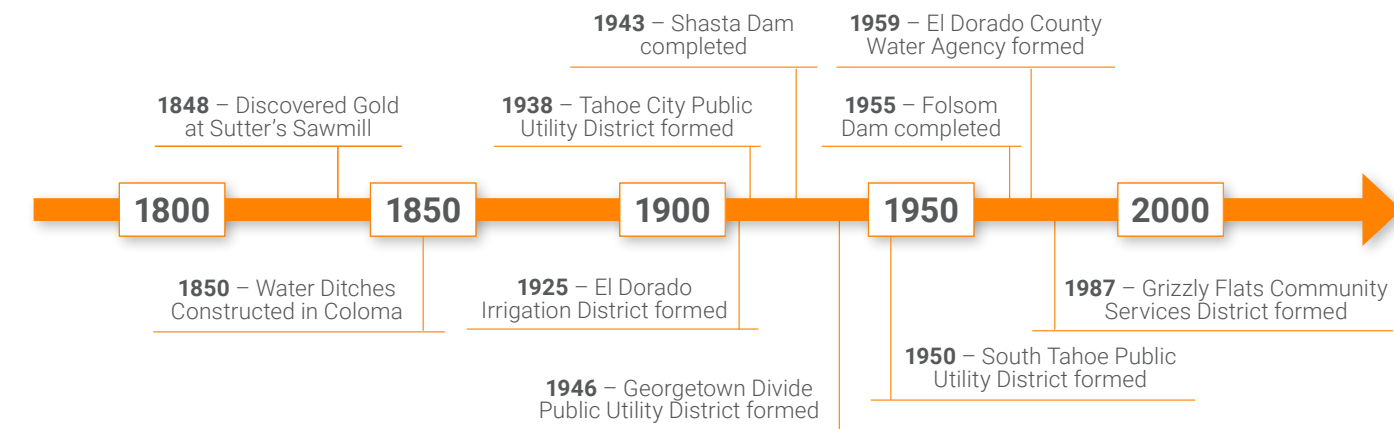
Although the Agency does not currently own any water facilities, it collaborates with water purveyors to develop local water supplies and is contracted with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for Central Valley Project (CVP) water service contract deliveries that 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 extent of potential impacts from climate change. 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:

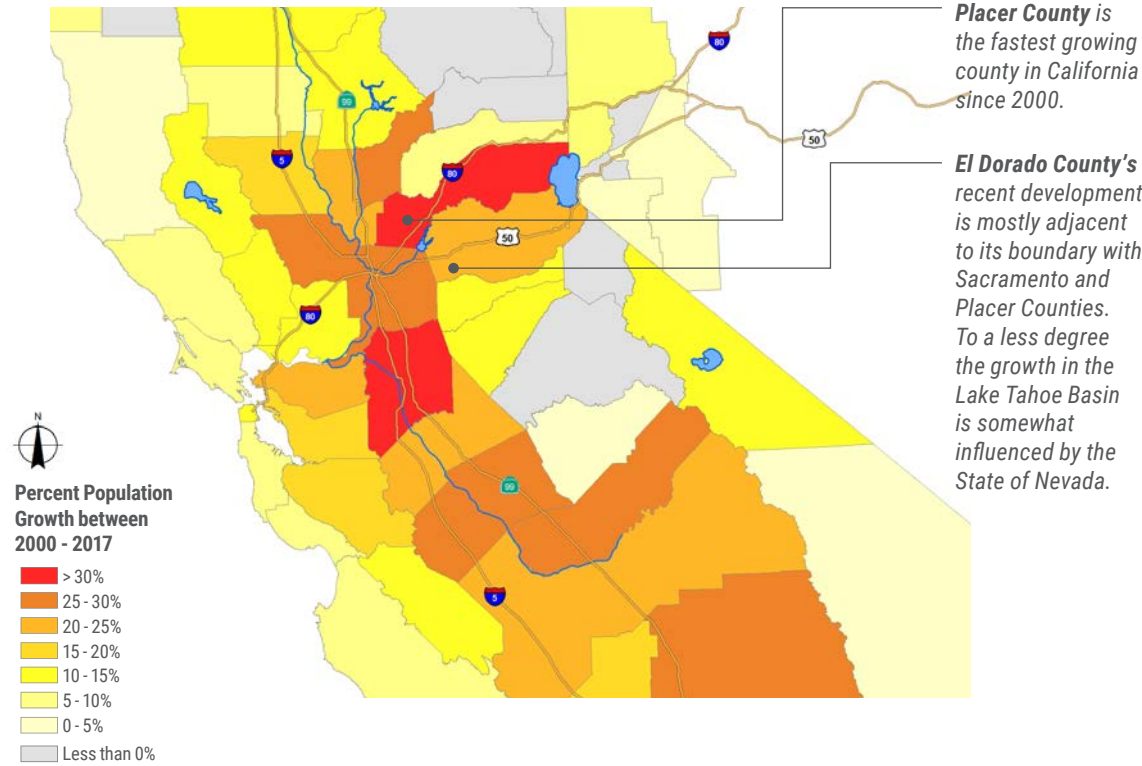
- It contains a land use designation for economic development and integrated natural resource protection and management.
- It plans for the land capacity for all purposes in considering future economic development beyond the typical near-term urbanization focus.
- It contains policies and considerations 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. And El Dorado County is experiencing the pressure to develop. In anticipation of future growth, the County General Plan vision allows for urban development while preserving the way of life on 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.



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 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 Agriculture Advisory Group and a Municipal and Industrial (M&I) Advisory Group also assisted with demand projections and consistency. It is the Agency's hope 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:

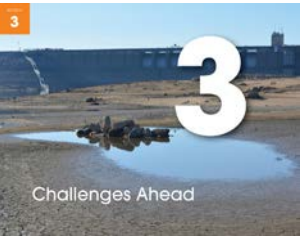
- **Section 1: Introduction** describes the charge of the Agency and the need for the WRDMP with a new focus. It clarifies that the Agency’s goals and collaborative principles in developing the WRDMP.
- **Section 2: Current Water Management** provides a description of land use and environmental protection outlined in the General Plan, current water management practices and responsibilities, and existing major infrastructure that supports the implementation of the General Plan.
- **Section 3: Challenges Ahead** identifies water resource-related challenges on which the County is facing, recognizing the differences between the West Slope and the Lake 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.
- **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



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.

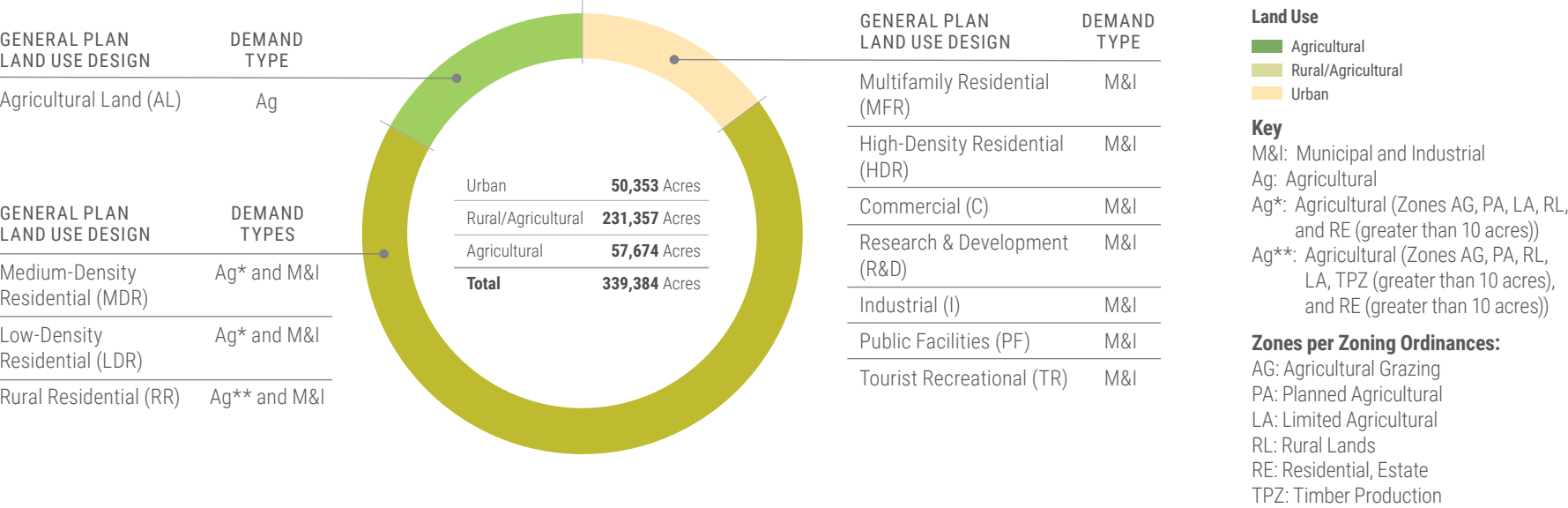
2.1 Economic Development

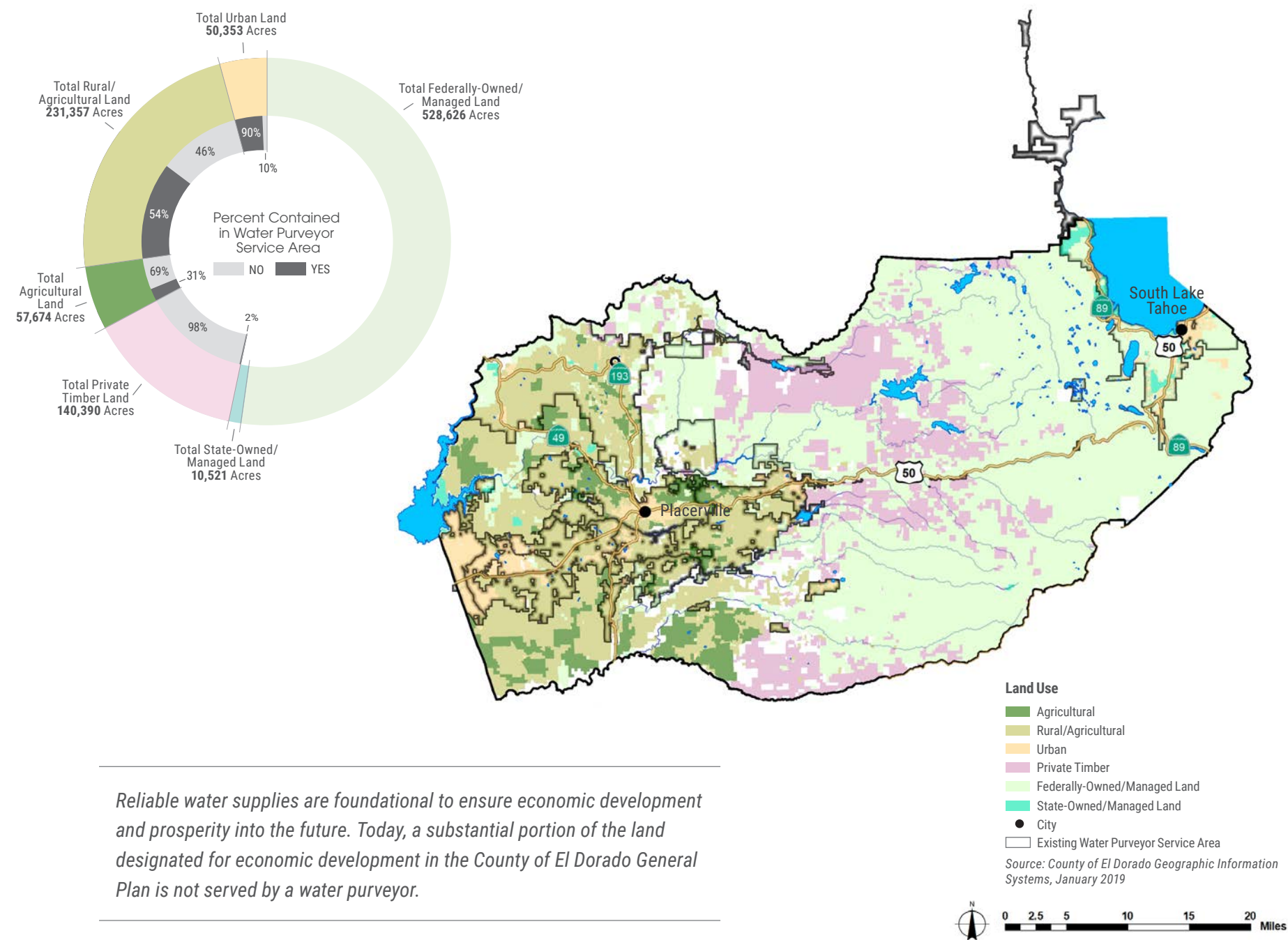
The County General Plan designates lands for economic development and identifies areas where community development and agricultural development may occur. These lands are outside of national forest lands, private timber lands, and other state and federally-managed lands. The County General Plan designates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

As a result, lands in El Dorado County designed for economic development (i.e., with M&I or agricultural water demands) are grouped into 3 categories based on the General Plan land use designations and zoning ordinances:

- Urban land (only M&I water demands)
- Rural/agricultural land (both M&I and agricultural water demands)
- Agricultural land (only agricultural water demands)

At present, approximately 31 percent of designated agricultural lands, 90 percent of designated urban lands, and 54 percent of designated rural/agricultural lands are in areas currently served by five public water purveyors. Realizing the vision for sustained economic growth in the remaining areas will depend on development of reliable, long-term water supplies.





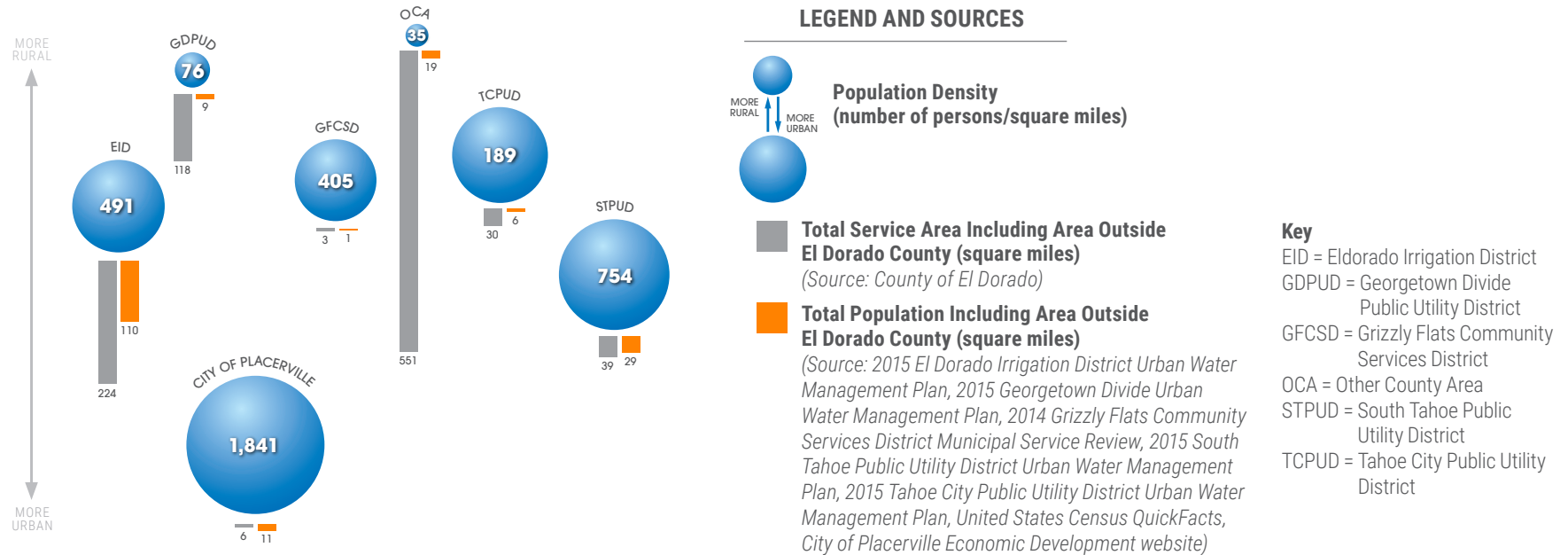
Reliable water supplies are foundational to ensure economic development and prosperity into the future. Today, a substantial portion of the land designated for economic development in the County of El Dorado General Plan is not served by a water purveyor.

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; 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 Lake 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 Lake Tahoe Basin, groundwater is extracted from either the Tahoe South or Tahoe West Subbasin.

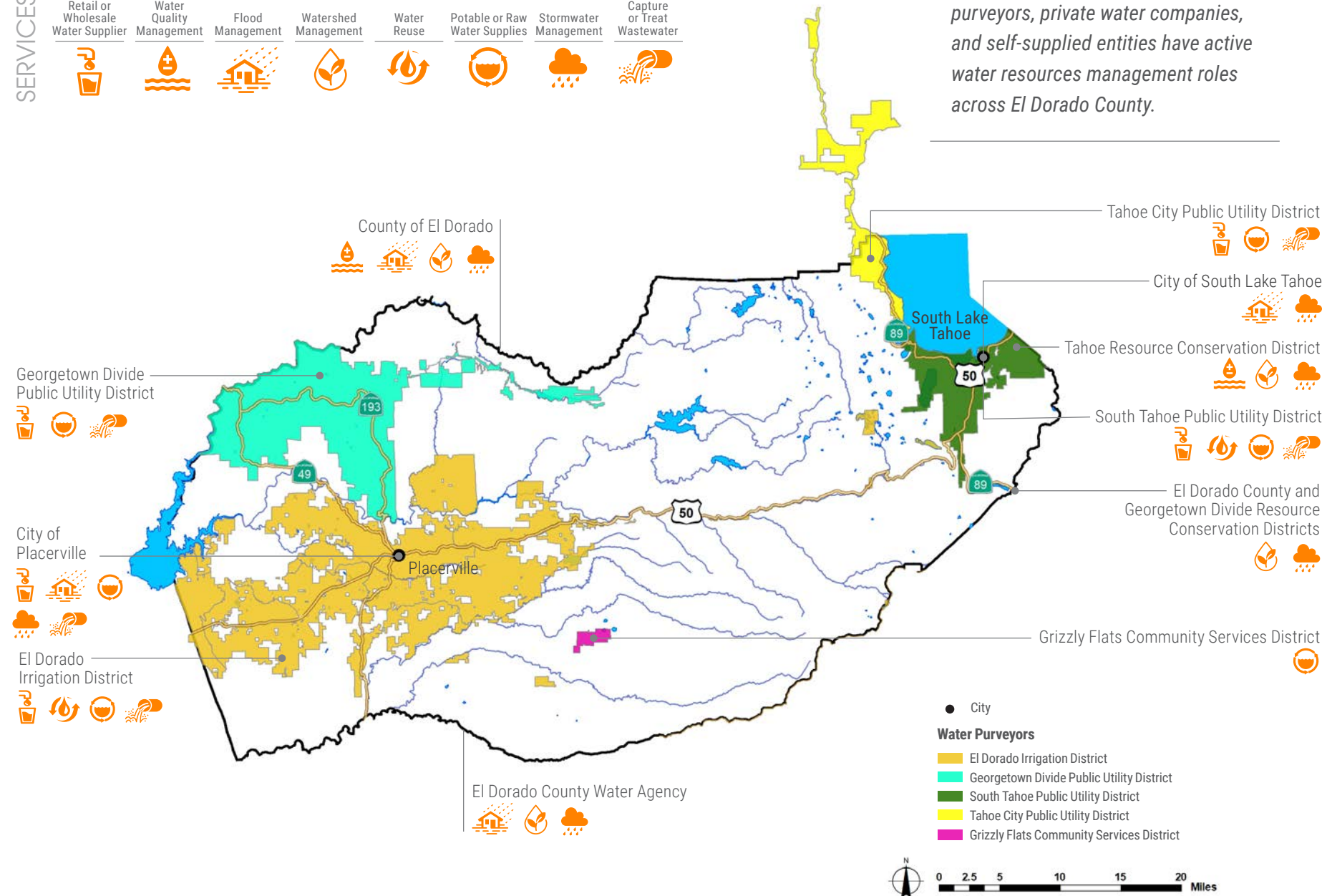
The Agency collaborates with EID, GDPUD, GFCSD, STPUD, TCPUD, and the City of Placerville in water management. Currently, the Agency represents the Other County Area (OCA), comprised of areas in El Dorado County that fall outside federally-owned/managed land and a water purveyors’ service area.



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.

- 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

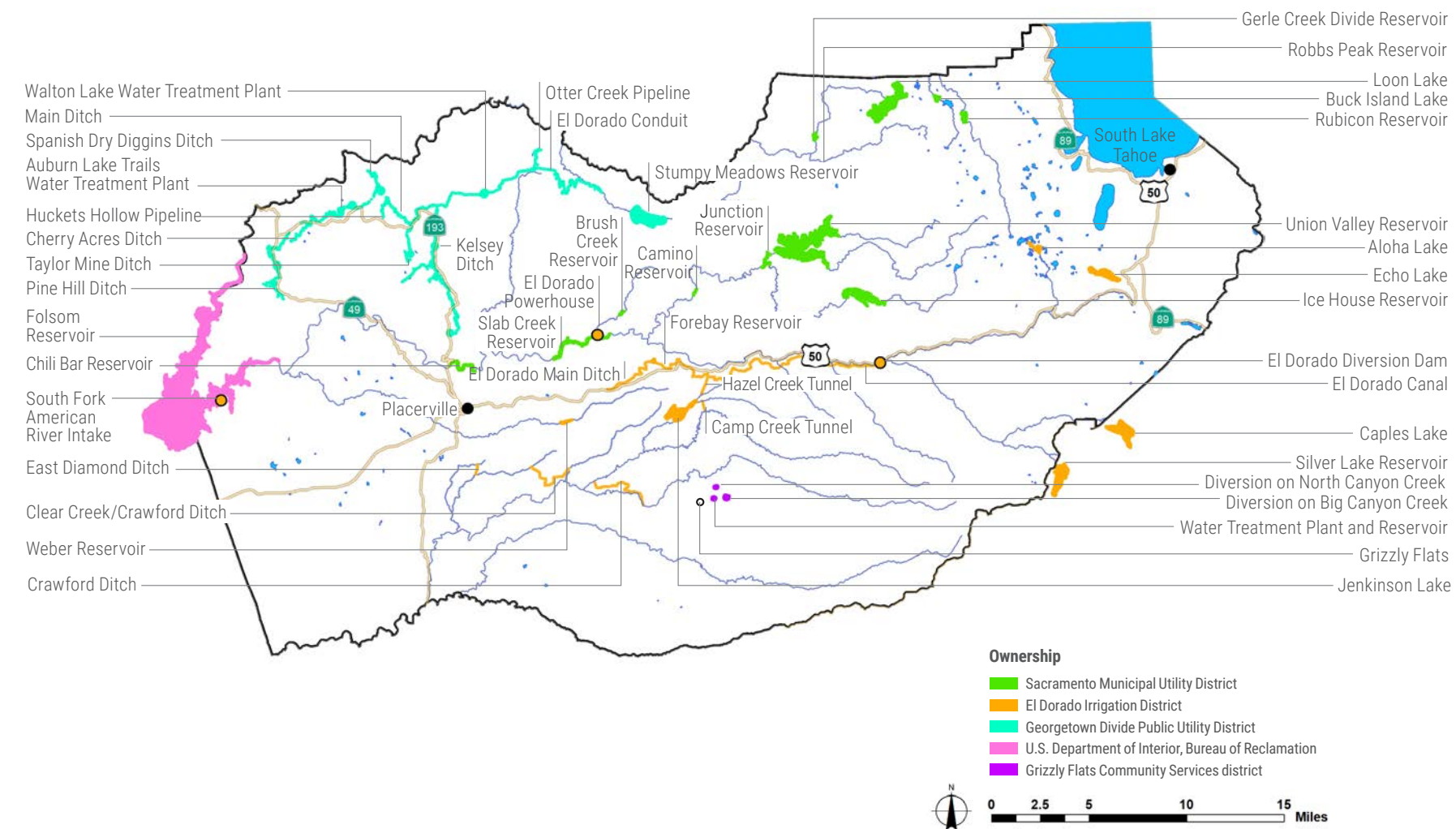
The Agency, County, public water purveyors, private water companies, and self-supplied entities have active water resources management roles across El Dorado County.



2.3 Major Water Infrastructure

The Agency does not own any water facilities at this time. The majority of El Dorado County water supplies originate 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 Lake 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 Lake 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 Lake 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:

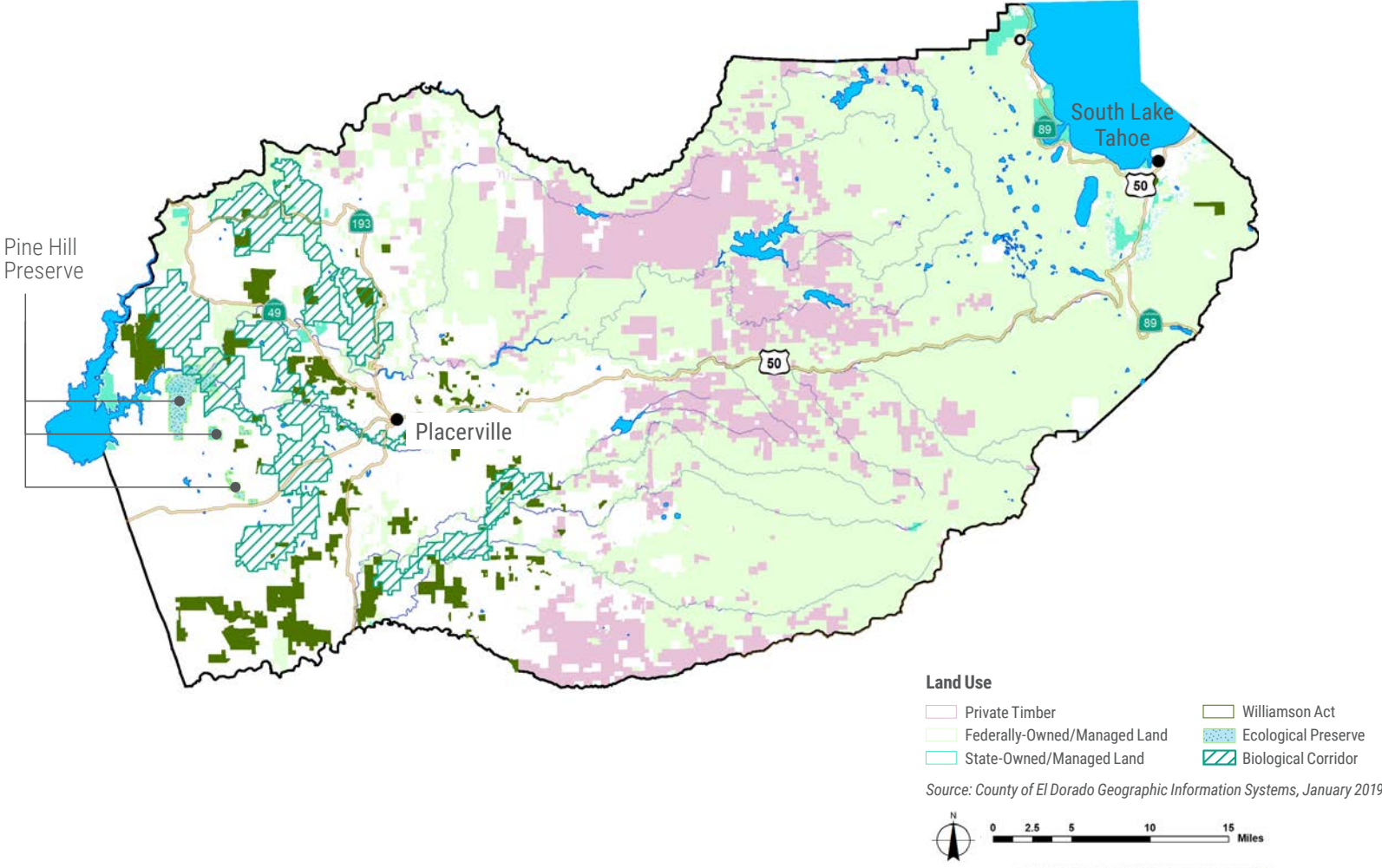
The Williamson Act – Enacted in 1965, this state law enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal.

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.

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

The County of El Dorado 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.





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 Lake 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 Loss of Life and Property Damages from Flooding (3.7)
<ul style="list-style-type: none">• 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; therefore they are at risk for supply-demand imbalances as they lack interconnections with others that could provide supplies during times of need.	<ul style="list-style-type: none">• The other county area is vulnerable during droughts because they are dependent on a single source of water.• The other county area is not covered by existing drought plans.• More than 100 small public water systems are susceptible to the effects of drought.	<ul style="list-style-type: none">• Dense forests prevent snow from reaching the ground, thereby decreasing snowpack and the resulting water supply available (snowmelt).• Stormwater is being 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 conveyance structures would hinder water deliveries.	<ul style="list-style-type: none">• Increasing frequency and intensity of fires means both temporary and long-term water quality degradation would become more commonplace.	<ul style="list-style-type: none">• Stormwater runoff may impact water quality, especially along the highway corridor. Overflow from wastewater treatment plants may impact the quality of surface water supplies, the City of Placerville is susceptible.	<ul style="list-style-type: none">• Leakage from septic tanks could affect groundwater quality. Septic tanks and existing agricultural practices pose potential threats to local groundwater quality, although no significant issues have been identified to-date.• Contamination concerns on the West Slope include arsenic.	<ul style="list-style-type: none">• Riverine flooding is not a substantial threat in the West Slope.

Level of Concern

High

Moderate High

Moderate Low

Low

5.22.2019 DRAFT

El Dorado County Water Agency – Water Resources Development and Management Plan 13

Water-Resource Related Challenges in the Lake 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 Flooding Issues (3.7)
<ul style="list-style-type: none"> Parts of the Lake Tahoe Basin (OCA) are not serviced by a major water purveyor. These areas use the local groundwater supply. The Lake Tahoe Basin surface water supply is subject to settlement of the Truckee River Operating Agreement and has a limited allocated water right. 	<ul style="list-style-type: none"> The Lake Tahoe Basin has little to no susceptibility to extended droughts, relying on both surface water and groundwater. Existing drought ordinances do not provide coverage to the entire Lake Tahoe Basin. The many small public water systems in the Lake Tahoe Basin are susceptible to the effects of drought such as temporary loss of water supply or decreased water quality. 	<ul style="list-style-type: none"> Forests continue to increase in density. Dense forests prevent snow from reaching the ground, thereby decreasing snowpack and the resulting water supply available to the Lake Tahoe Basin as groundwater via groundwater recharge. Stormwater is presently being managed as a hazard and for water quality compliance purposes but not as a potential resource for broader benefits. 	<ul style="list-style-type: none"> Inappropriate forest management poses a threat of short-term water quality degradation resulting from wildfires. 	<ul style="list-style-type: none"> Stormwater runoff may impact water quality such as in Lake Tahoe and along the highway corridor. 	<ul style="list-style-type: none"> Septic tanks are not prevalent in the Lake Tahoe Basin, but leakage could affect groundwater quality. Much of the Lake Tahoe Basin water supplies stems from regional snowmelt that infiltrates into the groundwater basin. Perchloroethylene (PCE) contamination has been observed in the South Lake Tahoe Basin. 	<ul style="list-style-type: none"> Riverine flooding is not a substantial threat in the Lake Tahoe Basin.

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.

On the supply side...

Historically, the ability to save water that comes in the winter for use in the hotter months is critical to California’s economy and way of life. Engineered reservoirs can store some of what arrives in the form of rain, but not all of it. Snowpack is a natural water reservoir on which our water system depends. According to the 2018 Climate Change in the Sierra Nevada report, the Sierra Nevada provides more than 60 percent of the water used by communities, agriculture, and industry across the state, with mountain snowpack accounting for about half of this resource.

If nothing is done to address climate change, temperatures in the Sierra Nevada could increase by as much as 10°F (depending on the month and elevation) by the end of the 21st century, compared with 1981–2000. Such a change in temperature would alter the timing of runoff in the future, because warming causes a greater share of precipitation to fall as rain instead of snow, and rain runs off immediately. Warming also causes snow to melt faster.

Such changes mean that by the end of the century, the midpoint of runoff could 50 days earlier, on average, than in 1981–2000. With existing storage facilities and associated operational requirements, much of that water would be not be captured 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.

Earlier, flashier runoff is harder to capture and store than a steady, dependable flow from gradual snowmelt.

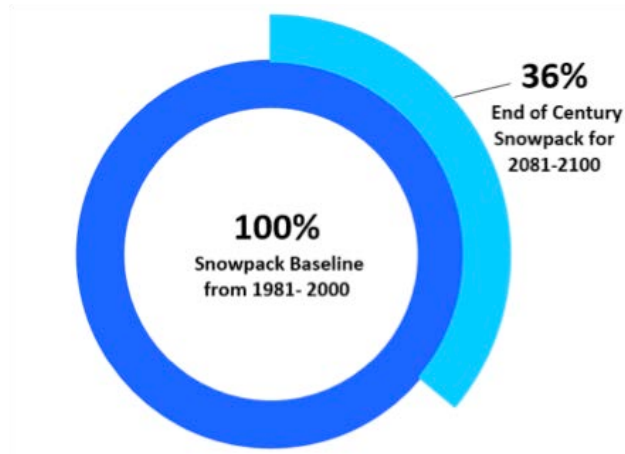
As a result of climate change, the water supplies available for California and the West Slope is anticipated to be less consistent and more difficult to manage. For the Lake Tahoe Basin surface water supply is subject to the settlement of the Truckee River Operating Agreement as it has a limited allocated 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 Lake 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 Lake Tahoe Basin’s prominent water demands stem from population growth, economic development and water based tourism. The Lake Tahoe Basin attracts a flux of visitors during the weekends and holidays. Therefore, water demands in the Lake Tahoe Basin are sporadic throughout the year as a result of visitors.



Source: UCLA Center of Climate Science, Climate Change in the Sierra Nevada, 2018

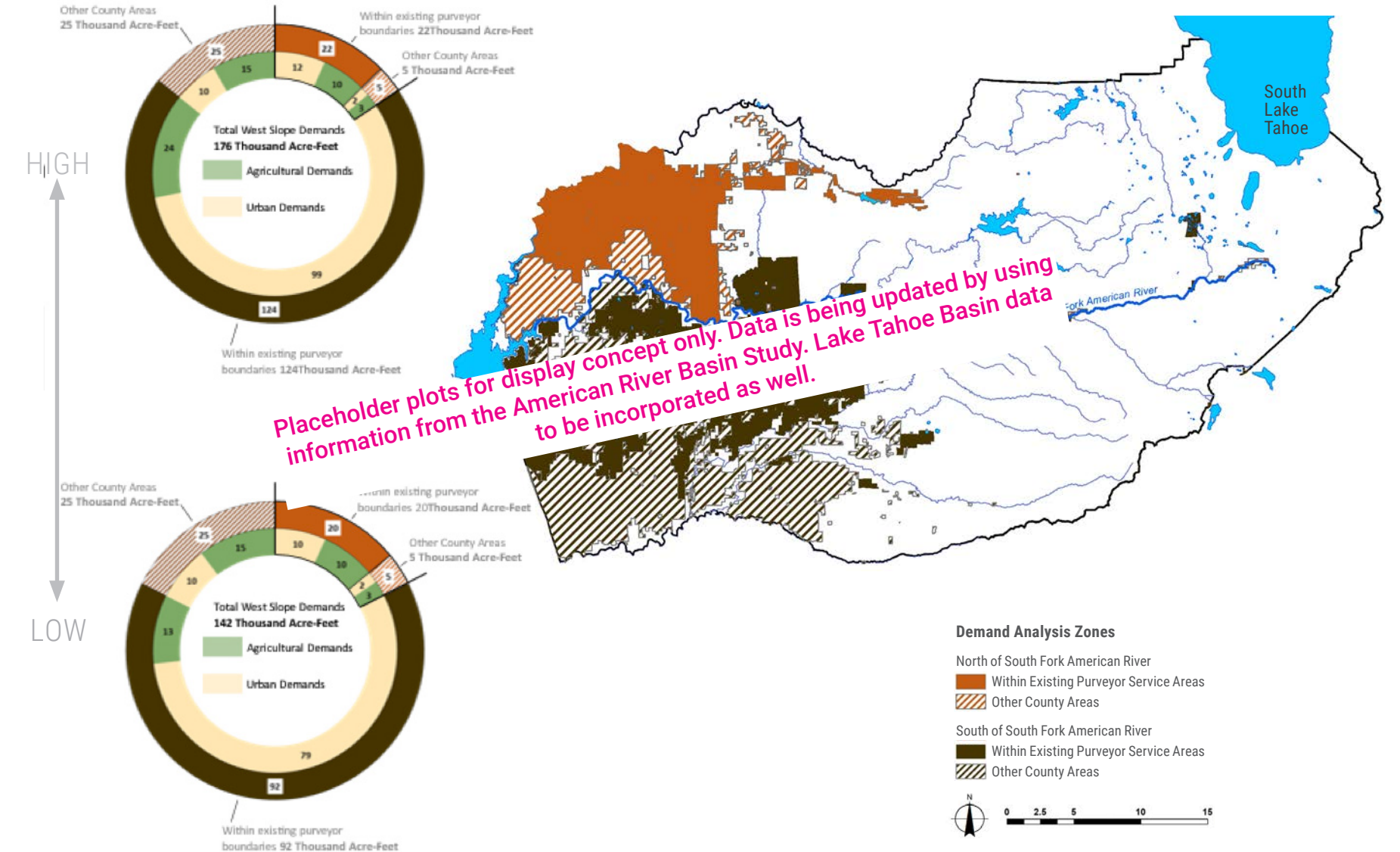
California measures the Sierra snowpack to assess the health of the water year. In the past, April 1 measurement has generally captured the snowpack at its peak, with later measurements reflecting snowmelt and runoff due to the spring thaw. By the end of the century, springtime snowpack on April 1 could be only 36 percent of what it was during an average year in 1981-2000. The most snow would be lost between 5,000 and 8,000 feet, and below 5,000 feet, April 1 snow would disappear almost entirely.

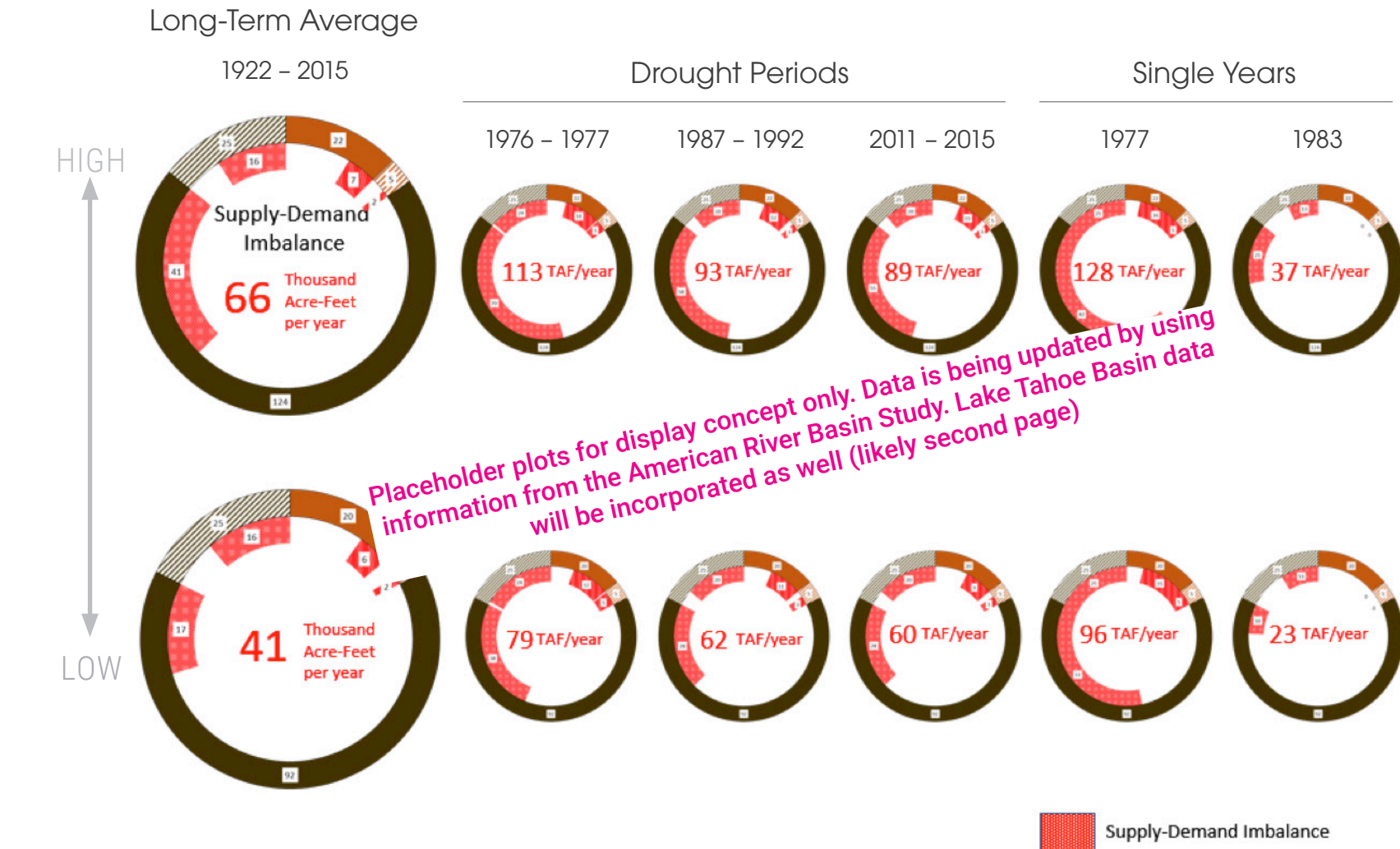
...and water conservation

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 will affect urban water suppliers, small water suppliers and rural communities, and agricultural water suppliers, 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.





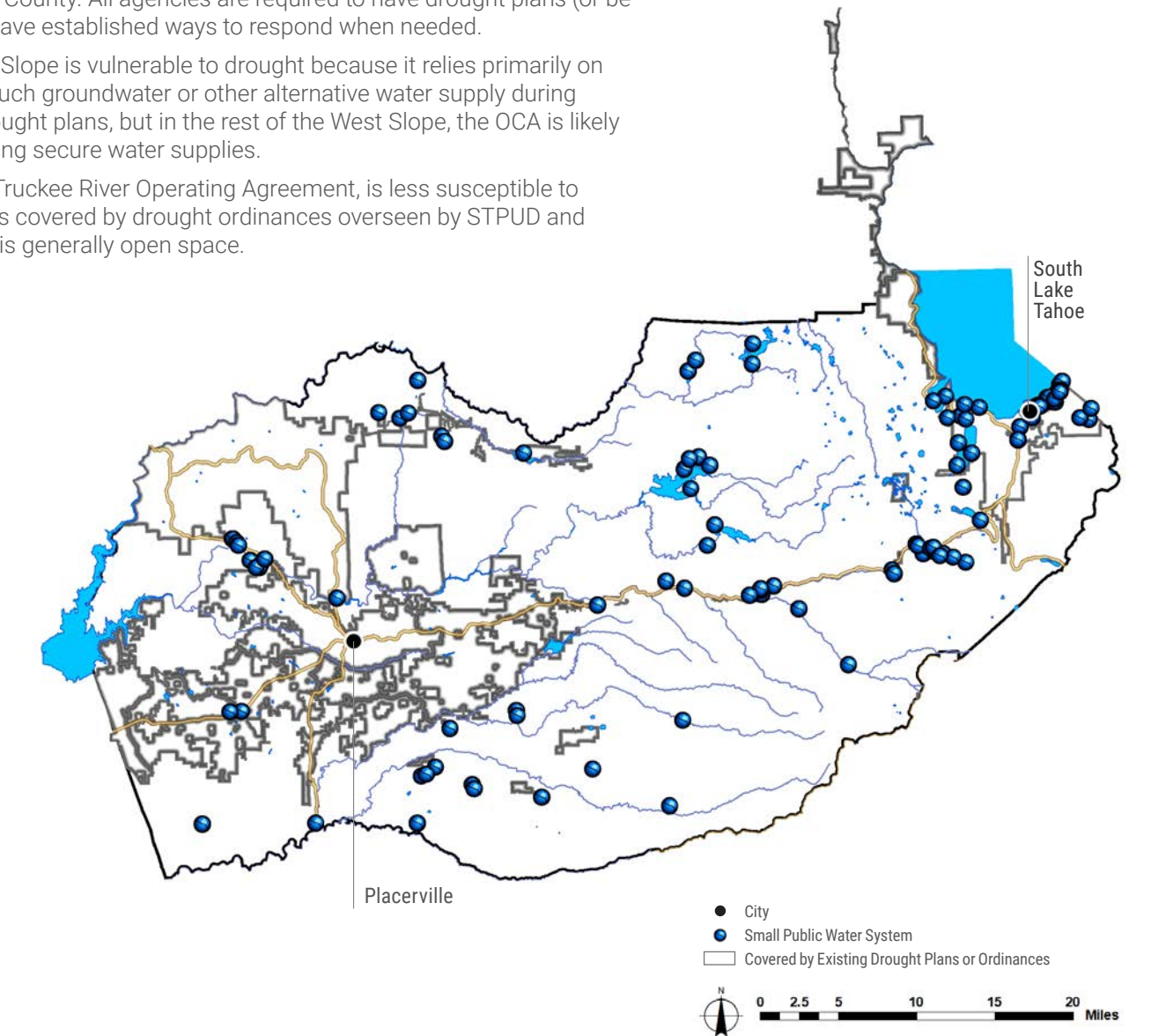
3.2 Vulnerability During Droughts

Water purveyors and agencies continue to actively plan for emergencies and extended droughts, and overall, there is broad coverage throughout El Dorado County. All agencies are required to have drought plans (or be in compliance with drought ordinances) and have established ways to respond when needed.

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 OCA is likely to experience hardships as a result of not having secure water supplies.

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

Currently, the major water purveyors in El Dorado County have either a drought plan or drought ordinances to manage water supply shortages during droughts. However, the 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 during droughts.



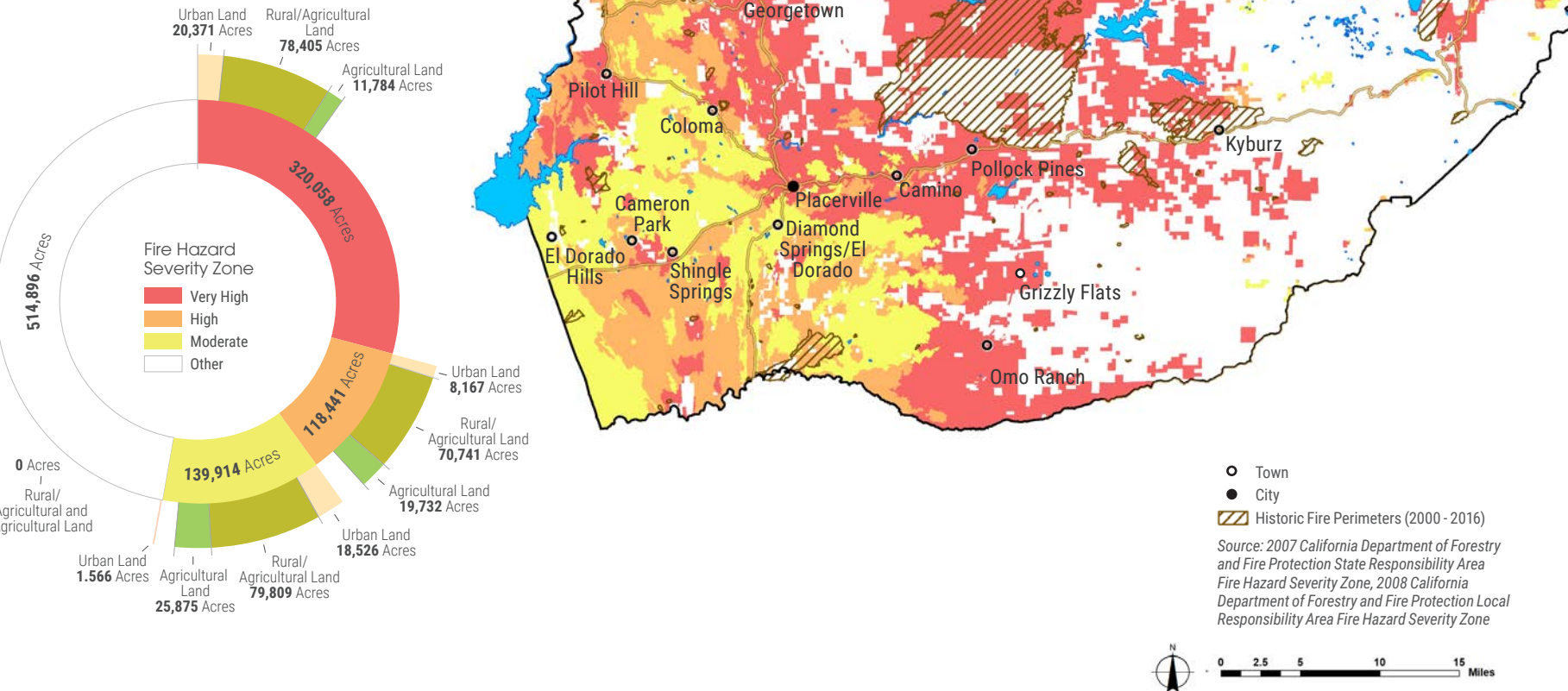
The County’s Environmental Management Department oversees 119 small public water systems through the Small Water System Program. Among the the 119 small public water systems consist of 7 Community Water Systems, 10 Nontransient Noncommunity Water Systems, 95 Noncommunity Water Systems, 1 surface water Community Water System, and 6 surface water Noncommunity Water Systems. (See Glossary for definition of these systems.) These small public water systems serve a total population of more than 25,000 in both the West Slope and Lake Tahoe Basin. These small public water systems are often isolated and 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.

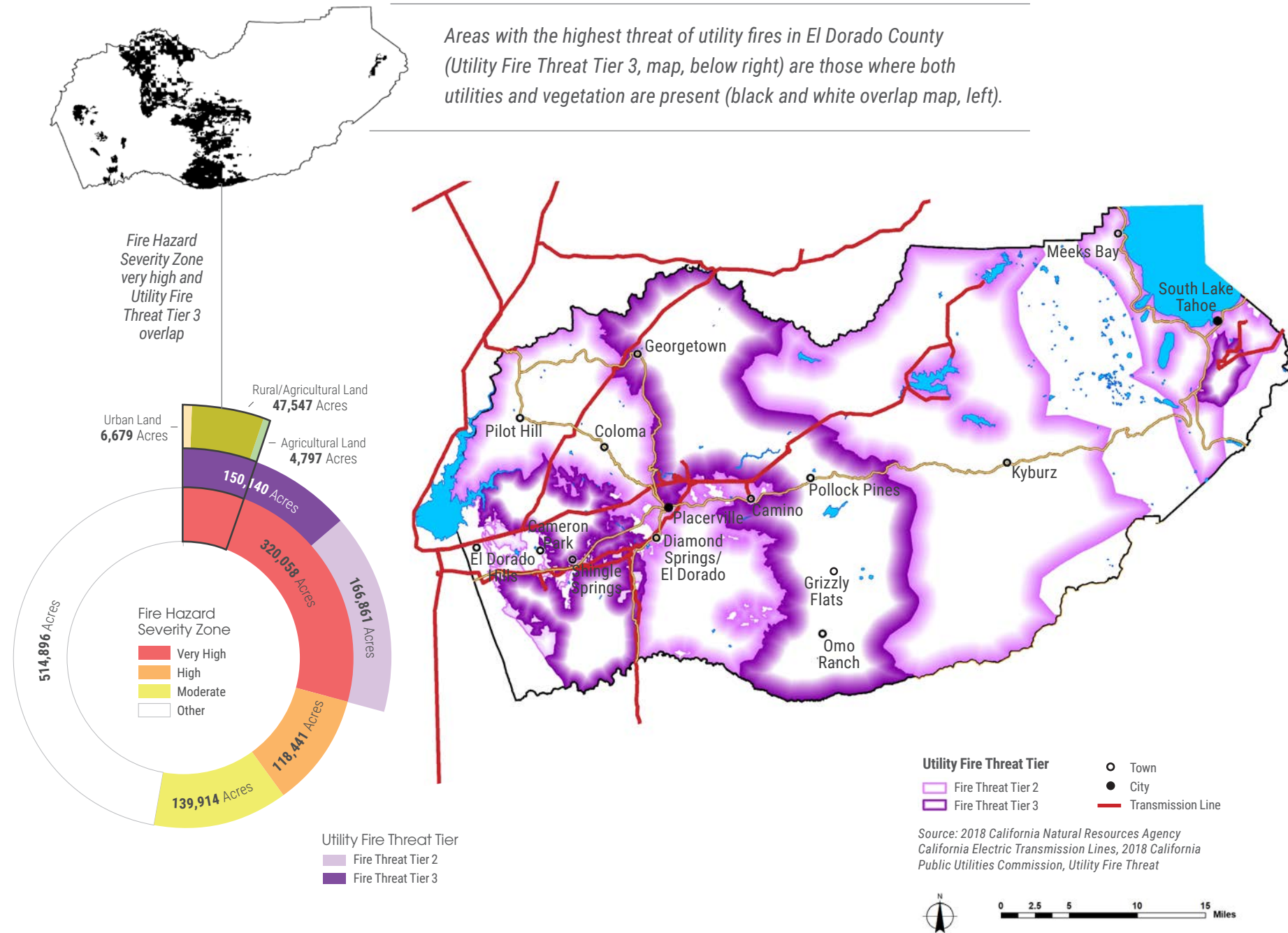
Additional info is under development.

3.3 Wildfire Impacts

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. 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 for economic activities and human lives.





United States Geological Survey’s study on *Historical Patterns of Wildfire Ignition Sources in California Ecosystems*, with continued fire prevention activities, wildfires can be effectively decreased in California, except for those caused by utility or transmission lines. It is in areas with both abundant vegetation (forests, grasses, agricultural activities, etc.) and utility 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 utilities and 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 was caused by a power line. The Latrobe Fire was in the Tier 3 high hazard zone for utility 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 include the increased risks for landslides, erosion, water pollution and flooding that can cause damage often realized long after the disaster.

As an unique aspect in El Dorado County, wooden flumes from the Gold Rush era and other delivery structures are particularly vulnerable to both direct impacts (destruction during a fire) and indirect impacts (damage from later mudslides

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 lessons 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.

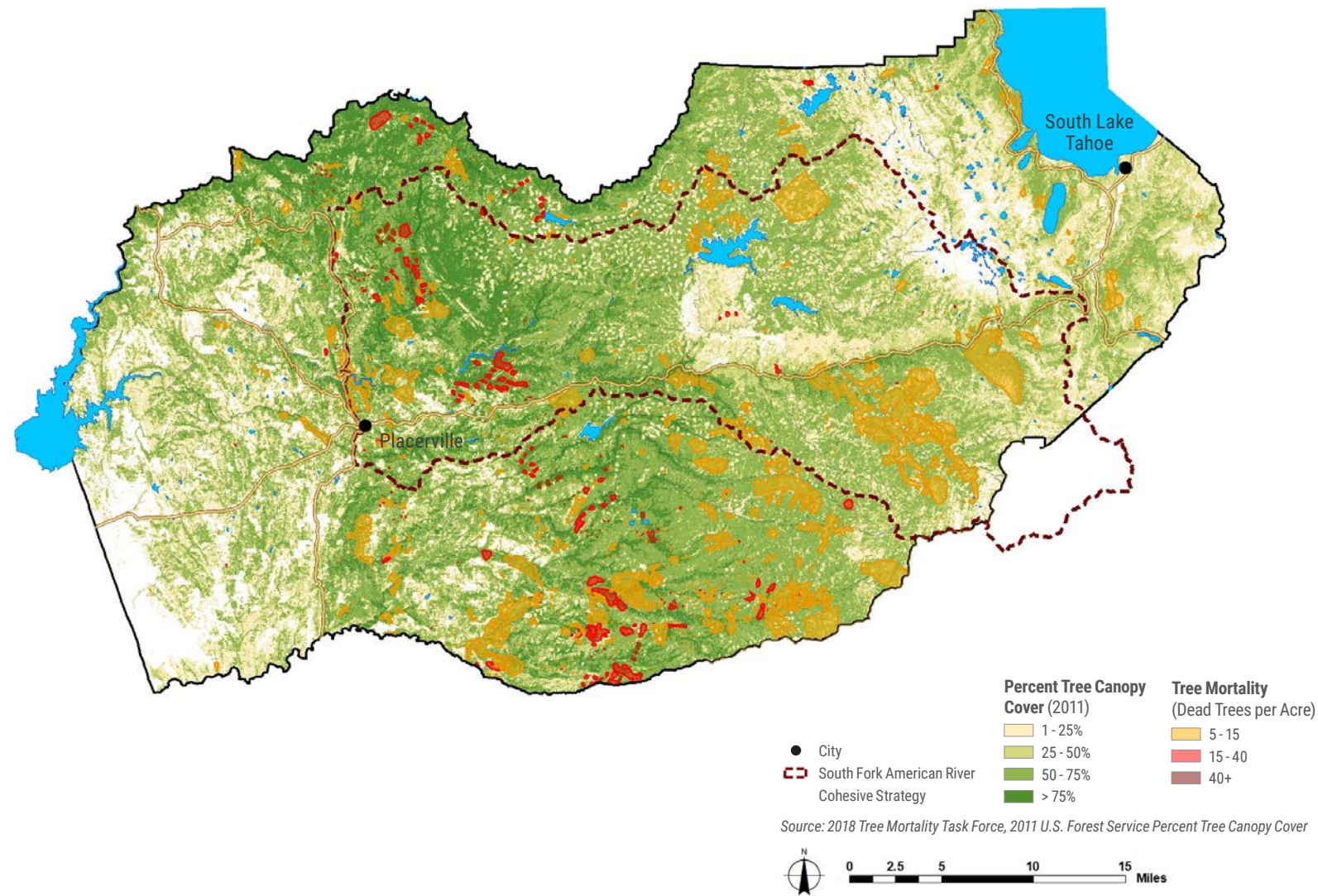
El Dorado County is part of the Cosumnes, American, Bear, Yuba Integrated Regional Water Management region, and these headwaters

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.

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 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 US Forest Service, State Conservancy, non-profit organizations, 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.

The South Fork American River Cohesive Strategy covers the South Fork American River drainage area above the City of Placerville. Significant areas of El Dorado County are without organized efforts to improve conditions.



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 tends to have limited water quality impacts in most of El Dorado County, and runoff tends to occur along transportation corridors. However, Lake Tahoe’s 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 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 Lake 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

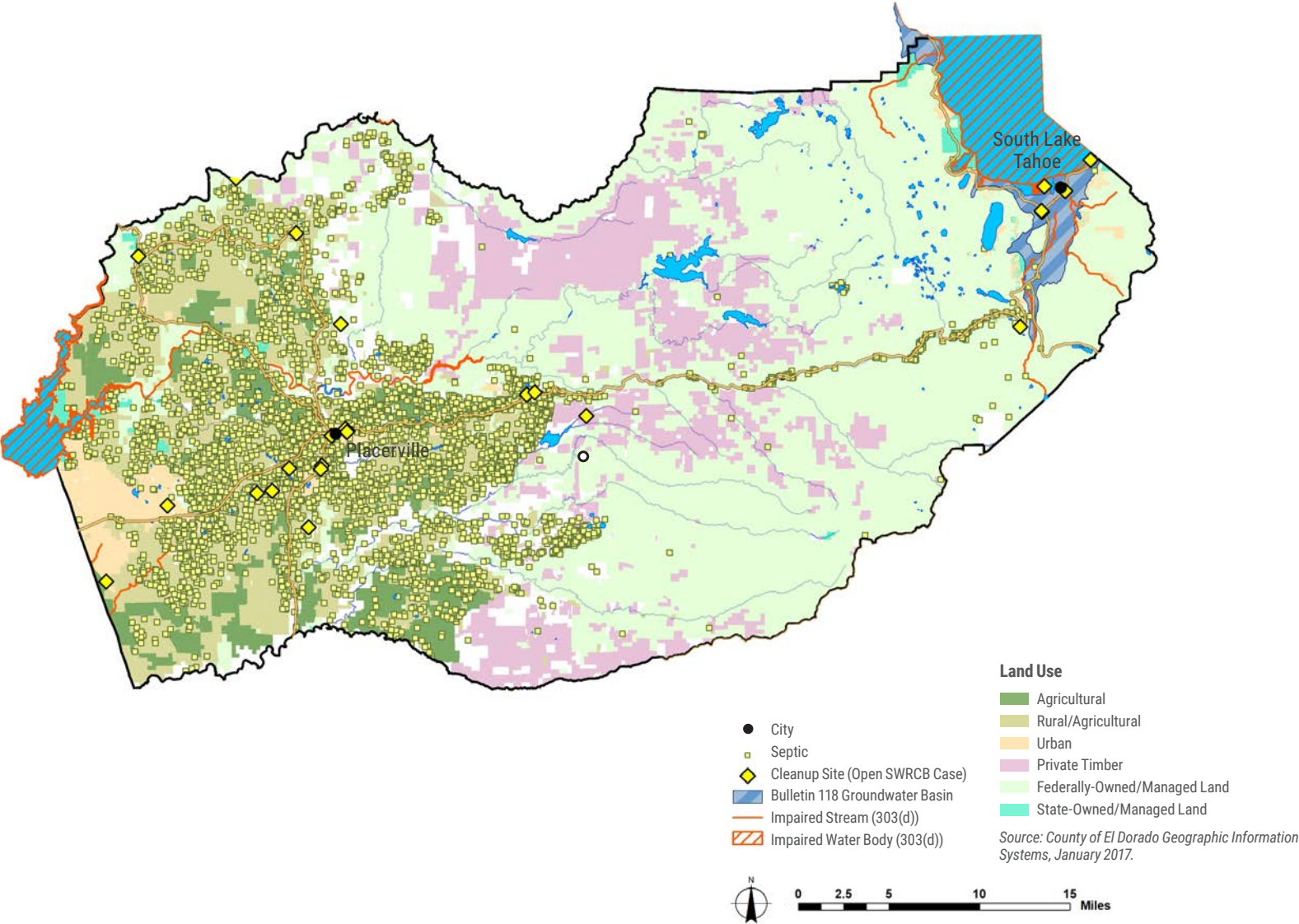
The only recognized groundwater basin in El Dorado County is in the South Lake Tahoe area, where it is the primary source of water supply for STPUD and other local water suppliers (small public water systems). This is the only groundwater basin in El Dorado County that is subject to the requirements 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 Lake Tahoe Basin have included contamination from perchloroethylene (PCE). Since at least the 1980s, there has been a great deal of study on a PCE plume that has been slowly migrating from the “Y” area of South Lake Tahoe towards Lake Tahoe.

In the rest of the Lake 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 potential contamination from the many septic tanks and agricultural water use throughout the West Slope along the highway corridor. In the past, there were reported incidents of septic tanks contaminating local water supplies. Although there have not been widespread incidents, it is worthwhile to monitor the water quality of shallow and localized groundwater resources. If there were widespread incidents, a different management approach would be warranted. 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.

In general, water quality concerns in El Dorado County are low. However, pollution from major transportation corridors, prevailing septic tank use in the West Slope, and local agricultural practices still require close monitoring to protect surface water and groundwater resources.



3.7 Localized Flooding Hazards

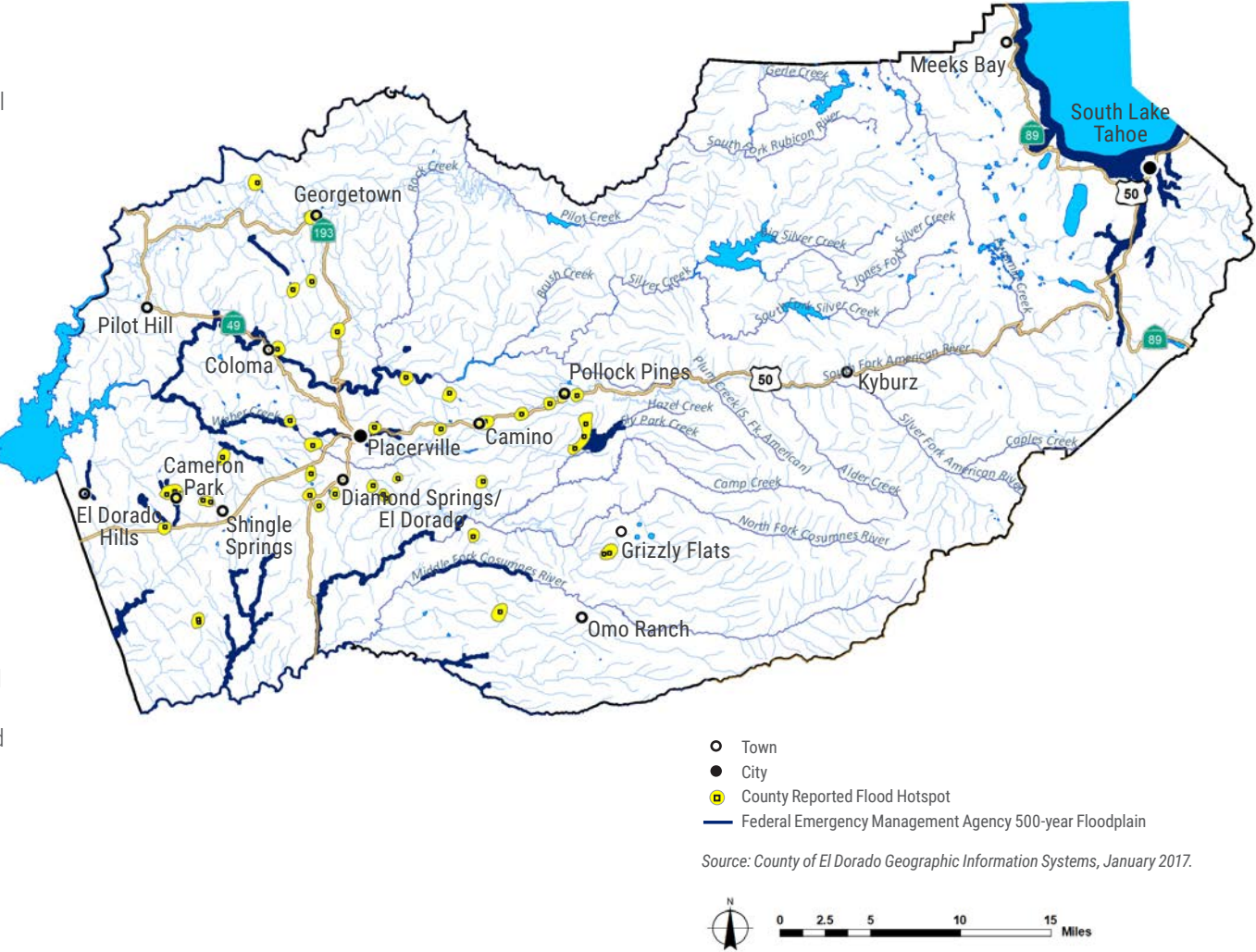
Overall, El Dorado County has a relative low level of flooding risk due to its terrain. The combination of West Slope hydrology, soils, and land-surface slopes means that this area sees more frequent and localized flooding than the Lake Tahoe Basin.

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.

Localized flooding has not been reported in the Lake Tahoe Basin. But when there is both snow and rainfall, runoff is often generated as the rain cannot infiltrate the soil through the layer of snow.

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, Lake Tahoe Basin tributaries, and Lake Tahoe itself.

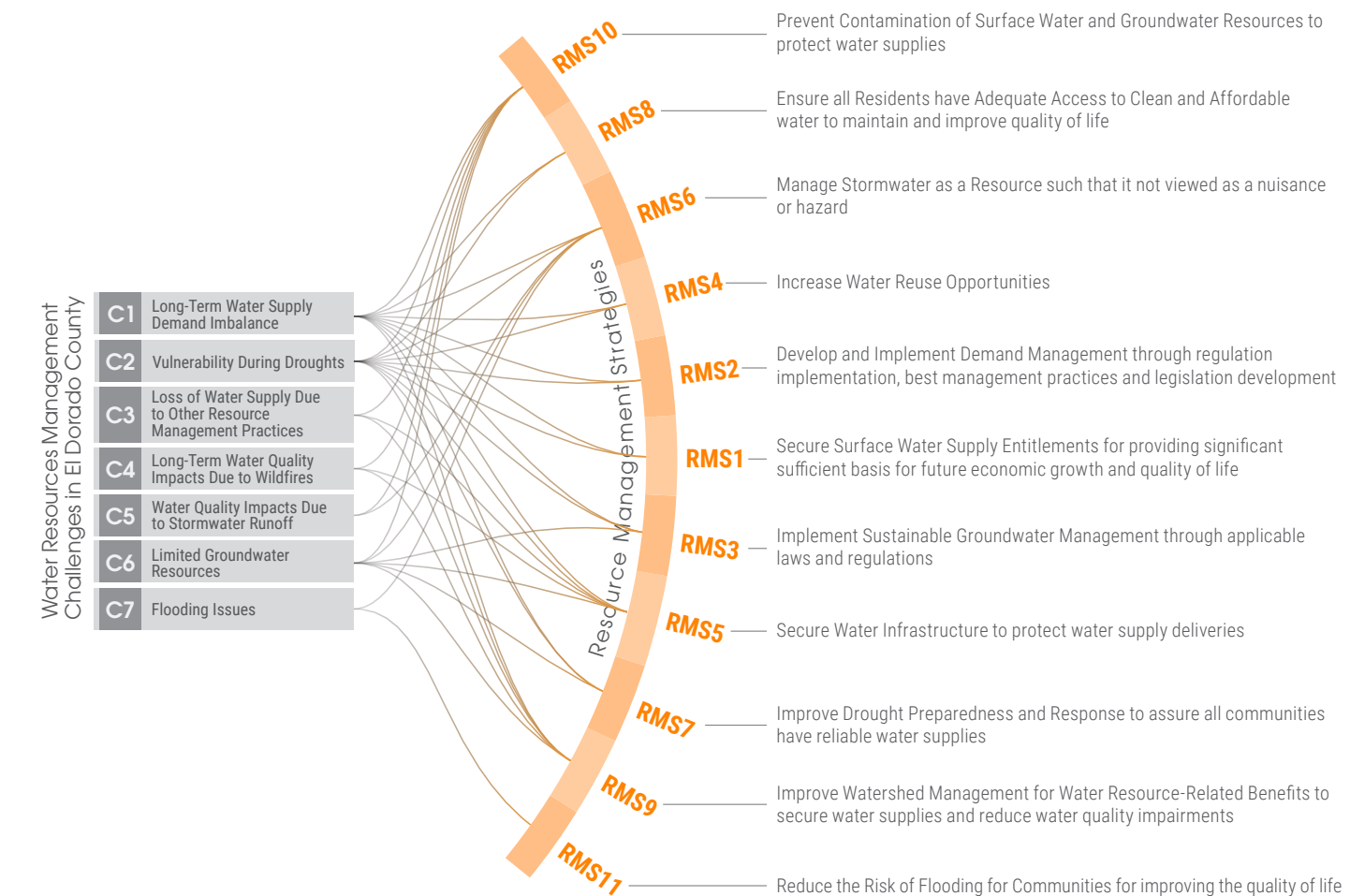
Because of the terrain, El Dorado County is not at risk for widespread riverine flooding. Most flooding is localized, and hotspots are often related to capacity conveyance issues.



Resource Management Strategies

Achieving the vision in the County General Plan requires a 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 doesn’t 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	Lake Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
1a. Secure Central Valley Project service contracts with Reclamation	X		EID, GDPUD, EDCWA	L – Complete contract negotiation and execution for 15-TAF CVP (Fazio) Service Contract S – Support water purveyors with other CVP contracts in engagement with Reclamation and federal advocacy (as needed)
1b. Secure water rights for projected needs	X	X	EID, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	L – Acquire 40-TAF water right and integrate with use of Sacramento Municipal Utility District agreement S – Support of water purveyors in corresponding water right proceedings and activities (e.g. surface water and groundwater rights)
1c. Develop water infrastructure to meet projected needs	X	X	EID, City of Placerville, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	L – Represent OCA in water supply planning F – Coordinate with water purveyors on water supply needs, based on Local Agency Formation Commission's sphere of influence planning area boundaries
1d. Manage and leverage Sacramento Municipal Utility District storage agreement	X		EDCWA	L – Administrate and manage Sacramento Municipal Utility District agreement for countywide benefits F – Coordinate with water purveyors on water needs , based on projected service needs
1e. Develop operational agreements as needed for flexible use of water supply entitlements	X	X	EID, City of Placerville, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	L – Develop of agreement for use of Fazio contract and EDCWA-acquired entitlements F – Coordinate with water purveyors on compatible strategy for water use
1f. Determine water purveyors for OCA	X	X	County, EDCWA, El Dorado County Local Agency Formation Commission	L – Development of OCA water supply plan

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

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	Lake 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, EID, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	L – Update West Slope agricultural and M&I demands consistent with capacity condition specified in County’s General Plan F – Coordinate development of countywide agricultural and M&I demands (including Tahoe Basin M&I demand fluctuation due to increasing visitation) consistent with capacity condition specified in the Regional Plan for the Tahoe Basin S – Support communications, public information sharing, and advocacy efforts
2b. Engage in development of statewide demand management policies, regulations, and legislation to ensure applicability in foothill and forested/ mountain communities and related to preservation of El Dorado County interests	X	X	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	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, public 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

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 Lake Tahoe area 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 a less prominent role in the Lake Tahoe Basin.

Primary Challenges Addressed
C1 C2 C3 C4 C5 C6 C7

RMS Actions	West Slope	Lake Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
3a. Manage groundwater basin consistent with SGMA and other applicable laws and regulations	X		STPUD, EDCWA	F – Coordinate development and implementation of Tahoe Valley South Basin Groundwater Sustainability Plan, working with STPUD as the Groundwater Sustainability Agency in that basin S – Support communications and public information sharing
3b. Engage in development of statewide sustainable groundwater management policies, regulations, and legislation related to preservation of El Dorado County interests	X	X	STPUD, EDCWA, County	F – Coordinate consistent messages and approach with STPUD and other groundwater users in El Dorado County S – Support communications, public information sharing, and advocacy efforts
3c. Conduct groundwater monitoring and condition assessments	X	X	EDCWA, County	F – Coordinate with County on groundwater management approach and provide assistance for continued groundwater monitoring and condition assessments (as needed) S – Support communications and public information sharing

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

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

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	Lake 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, and TCPUD	S – Support advocacy efforts S – Support state and federal grant applications (where appropriate)
5b. Develop new high mountain storage to increase water supply reliability	X		EDCWA, County, City of Placerville, EID, GFCSD	L – Develop Congressionally-authorized Alder Creek Water Storage and Conservation Project with Reclamation
5c. Reduce vulnerability of water infrastructure to large-scale wildfires	X	X	City of Placerville, EID, GDPUD, GFCSD, STPUD, TCPUD	F – Compile list of at-risk water infrastructure based on owner input S – Support advocacy efforts; support state and federal grant applications (where appropriate)
5d. Develop post-fire water quality management plan	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

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	Lake Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
6a. Update Stormwater Resource Plans	X	X	City of Placerville, County, City of South Lake Tahoe, 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, County, City of South Lake Tahoe	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 (Lake Tahoe Basin) and Phase II (West Slope)	X	X	City of Placerville, County, City of South Lake Tahoe	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

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 county residents 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	Lake 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	EID, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	L – Develop and update plan for OCA (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 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

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

California led the nation in recognizing the human right to water. As stated in California Water Code Section 106.3, it is "...the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." The legislative intent is consistent with 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 essentials that sufficient, safe, acceptable, physically accessible, and affordable water for personal and household use. This also 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 significant obstacle for the implementation. At the state level, implementation details are currently under development, so it is critical to understand needs throughout the county and continue working with state agencies and other communities to formulate adequate implementation strategies and protocols.

Primary Challenges Addressed

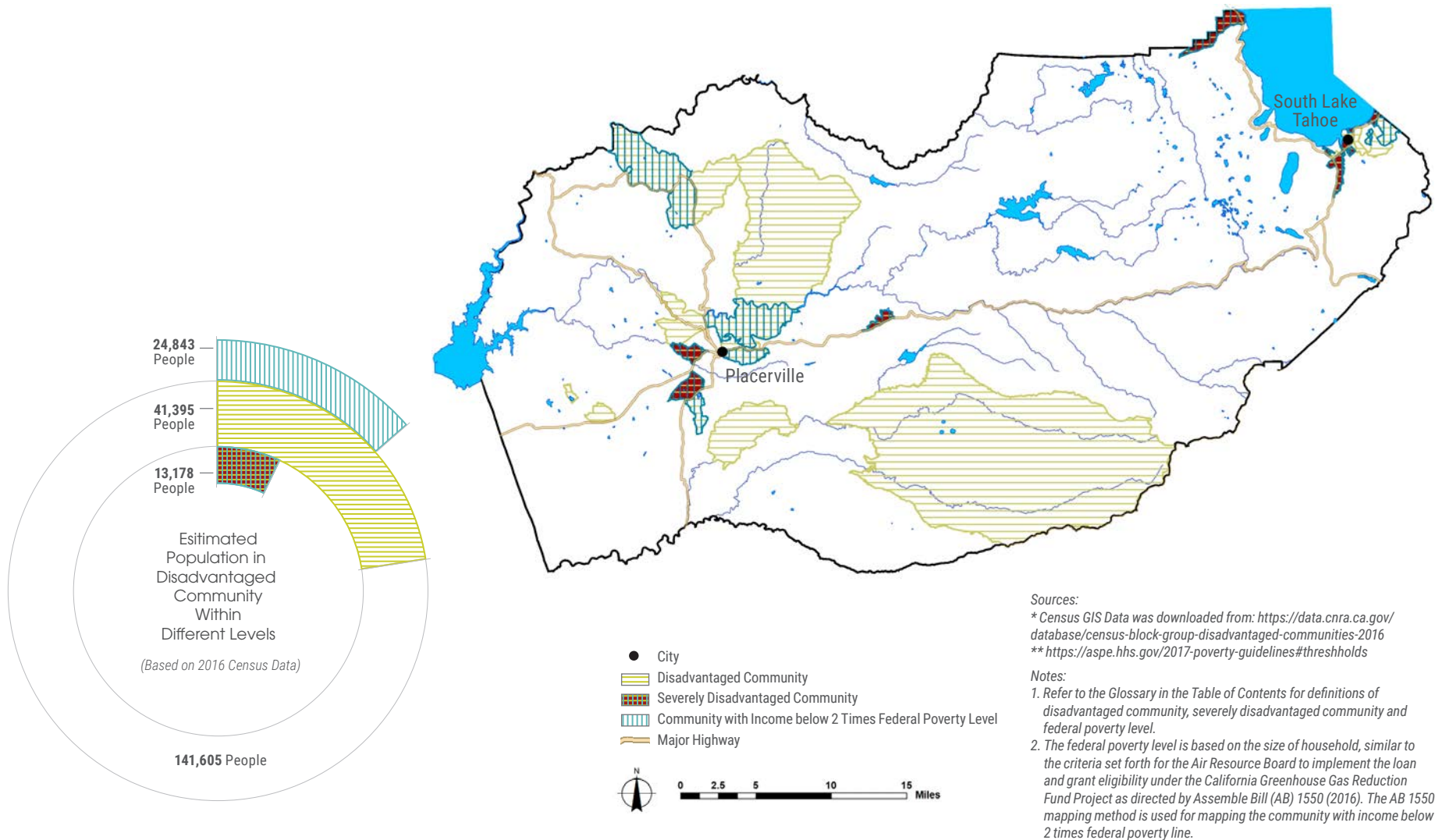
C1 C2 C3 C4 C5 C6 C7

RMS Actions	West Slope	Lake 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, EID, GDPUD, GFCSD, STPUD, TCPUD, EDCWA	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

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 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.



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	Lake Tahoe Basin	Principal Implementing Agencies	Agency's Role(s)
9a. Implement headwater meadow restoration for water retention and quality management	X	X	USFS, CABY and Tahoe Sierra IRWMs implementing agencies	S – Participate in and provide funding support to Cosumnes, American, Bear, Yuba (CABY) and Tahoe Sierra Integrated Regional Water Management (IRWM efforts) S – Support communications and information sharing efforts
9b. Implement invasive species management	X	X	El Dorado County Noxious Weed Group; Lake Tahoe Basin Weed Coordinating Group	S – Support communications and information sharing efforts
9c. Cooperate with US Forest Service (USFS) and Bureau of Land Management (BLM) on improving forest management for water retention and fuel management, including potential forest thinning and dead tree removal	X	X	USFS, BLM	F – Participate in the South Fork American River Cohesive Strategy Group and explore feasibility of establishing similar groups for remainder of El Dorado County F – Coordinate with other entities for information on water retention and overall water supply benefits from forest thinning in Sierras (Northern portion of California) S – Support communications and information sharing efforts
9d. Expand options for utilizing and disposing of woody biomass	X	X	County, EID, GDPUD, STPUD, TCPUD	F – Facilitate efforts of implementation agencies
9e. Develop policies, implementation protocols, and possible incentives to assist individual homeowners or landowners with onsite fuel management	X	X	County, EID, GDPUD, STPUD, TCPUD	

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

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	Lake Tahoe Basin	Principal Implementing Agencies	Agency’s Role(s)
10a. Implement applicable laws and regulations	X	X	County, EID, GDPUD, STPUD, TCPUD	S – Support communications, information sharing, and education efforts
10b. 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
10c. Monitor septic tanks for potential contamination	X	X	County, GDPUD, EID	F – Coordinate with County and City of Placerville on development of regular status summary or website information
10d. Identify potentially vulnerable sewage lines	X	X	City of Placerville, County, EID, GDPUD, STPUD, TCPUD	S – Support communications, public information sharing, and advocacy efforts
10e. Manage agricultural practices to reduce potential contamination of local shallow groundwater	X	X	County, RCDs	F – Coordinate with County to summarize and potentially visualize information on monitoring data and relevant info S – Support communications, public information sharing, and advocacy efforts S – Support grant applications for monitoring and best management practices implementation (where appropriate)
10f. Manage and inspect septic tanks to reduce potential groundwater contamination (and/or surface water contamination)	X	X	County, GDPUD, EID	F – Coordinate with County to maintain information on monitoring data, and relevant info S – Support communications, public information sharing, and advocacy efforts
10g. Conduct public outreach and education activities to encourage prevention of water supply contamination	X	X	City of Placerville, County, EID, GDPUD, STPUD, TCPUD	S – Support communications, public 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

4.11 RMS11 – Reduce the Risk of Flooding for Communities

Flooding in El Dorado County is usually localized due to the terrain and headwater location. 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	Lake Tahoe Basin	Principal Implementing Agencies	Agency’s Role(s)
11a. Develop inventory of water facilities in El Dorado County at risk of flooding	X	X	County, EID, GDPUD, STPUD, TCPUD	F – Coordinate with facility owner to develop a status summary and update regularly
11b. Reduce localized flooding	X		City of Placerville, County	S – Support communications, public information sharing, and advocacy efforts
11c. Develop and implement flood risk reduction projects as outlined in the Stormwater Resource Plan	X		City of Placerville, County, City of South Lake Tahoe	S – Support communications, information sharing, and advocacy efforts – See RMS6a for relevant actions
11d. Participate in National Flood Insurance Program	X	X	City of Placerville, County, City of South Lake Tahoe	S – Support communications, public information sharing, and advocacy efforts
11e. Design and size existing and future infrastructure to be adaptable to climate change	X	X	County, EID, GDPUD, GFCSD, STPUD, TCPUD	S – Support communications, public information sharing, and advocacy efforts

Key

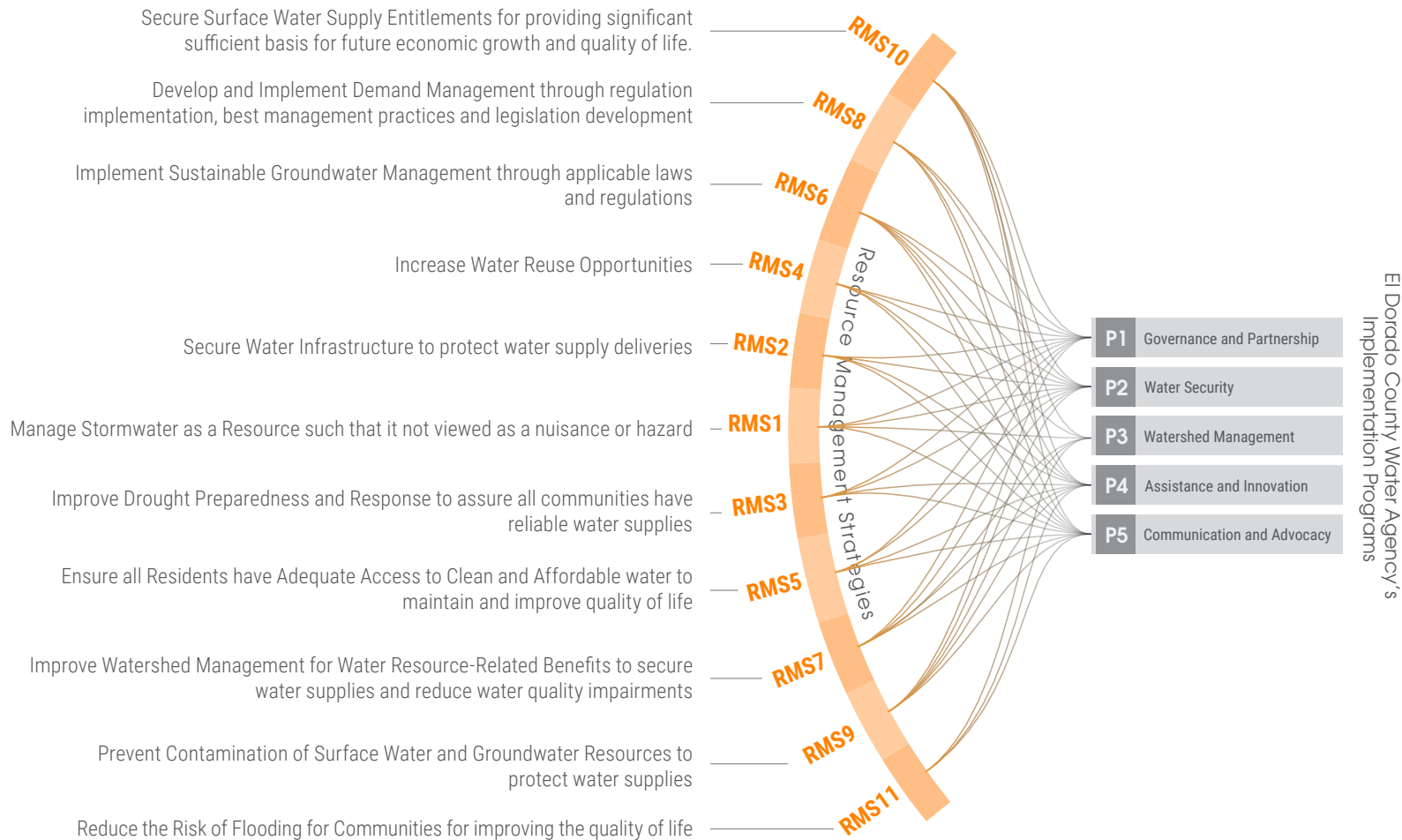
L = Lead – Assuming the responsibility in advancing an RMS
F = Facilitate – Organizing and assisting in advancing an RMS, but not directly responsible
S = Support – Providing as-needed coordination, advocacy, and occasional assistance



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**
- **Communications and Advocacy**

These programs align with the Agency’s authorities 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 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 sales 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.

Communications and Advocacy Program

The intent of the Communications 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 the 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 that plan’s vision statement:

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

Since that time, the Agency has focused on implementing that vision which goes hand-in-hand with helping the County realize the vision of the County General Plan. Accomplishments between 2017 and adoption of this WRDMP in 2019 as well as near-term priority actions (2020 – 2024) are described in this section and the next. In the two years since completion of its 2016-2020 Strategic Plan, the Agency has been in continual transition, while still making significant strides in the planning and management of water resources in El Dorado County.

Governance and Partnership Program

- Participated in CABY IRWM Region for planning and implementation
- Participated with the Regional Water Authority (RWA) on regional collaboration and other collective efforts
- Formed Groundwater Sustainability Agency (GSA) with STPUD to manage groundwater in areas in Tahoe Valley South Subbasin (outside of STPUD’s service area)
- Transitioned El Dorado-SMUD Agreement to Agency to integrate with Agency planning activities
- Partnership with Reclamation- American River Basin Study water drought contingency plan

Water Security Program

- Redefined El Dorado Water Reliability Project and issued Notice of Preparation for Environmental Impact Report
- Completed West Slope Stormwater Resource Plan, first annual implementation report, and implementation program in collaboration with County and Placerville
- Participated in regional planning efforts (e.g., North American River Basin Regional Drought Contingency Plan, RWA Regional Water Reliability Plan, and initial development of the Sacramento Regional Groundwater Bank)
- Finalized Fazio contract with Reclamation for CVP water supply of up to 15 TAF per year

- Completed 2019 WRDMP with realigned Agency focus and priority, and revised the agricultural and M&I water demands
- Secured and executed financial assistance awards from federal and state agencies, and participated in studies and projects with other water retailers (e.g. participation in the American River Basin Study)

Watershed Management Program

- Completed initial watershed management scoping

Assistance and Innovation Program

- Sponsored educational effort – El Dorado County Ag in the Classroom
- Sponsored educational effort – Water Education Foundation
- Exhibited at educational event – El Dorado County Kids Expo

Communications Program

- Participated in advocacy efforts with federal agencies and elected officials
- Participated in development of prioritization for policy and project development with federal nexus
- Participated in state advocacy effort on California Department of Water Resources’ (DWR) Countywide Drought Planning Advisory Group
- Continued advocacy efforts through RWA, Association of California Water Agencies (ACWA), and other entities

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

- Participate in CABY IRWM Region for planning and implementation
- Participate with RWA on regional collaboration and other collective efforts
- Collaborate with STPUD as GSA to manage groundwater in areas in Tahoe Valley South Subbasin

Water Security Program

- Lead (where appropriate) and participate in water supply and drought planning efforts such as American River Basin Water Marketing Strategy Project, Upper American River Basin Regional Drought Contingency Plan, El Dorado Reliability Project, Alder Creek Water Conservation and Storage Project Feasibility Study, CABY IRWMP update, utilization plan for CVP (Fazio) Contract, and continued development of the Sacramento Regional Groundwater Bank
- Update West Slope Stormwater Resource Plan, prepare annual progress reports, provide project development assistance to County (where appropriate), and provide State Water Resources Control Board (SWRCB) grant application assistance (where appropriate)
- Conduct assessments on water issues and affordability for disadvantaged communities and small public water systems

- Complete 2024 WRDMP that includes tracking and reporting progress toward and effectiveness of plan implementation
- Support the conduction of a special study for agricultural needs.

Watershed Management Program

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

Assistance and Innovation Program

- Explore development of potential grant application assistance program
- Develop formal assistance criteria and priorities (where needed and appropriate)

Communications And Advocacy Program

- Conduct Countywide Plenary for Water (a forum for water management)
- Continue advocacy efforts (as needed)
- Provide information to public (as needed)