

2020 EXECUTIVE SUMMARY

UPPER SANTA ANA RIVER WATERSHED
**INTEGRATED REGIONAL URBAN
WATER MANAGEMENT PLAN**



Due to the dedicated and collaborative efforts of the regional water community, water resources in the upper Santa Ana River watershed continue to support thriving communities and are vital to protect and enhance natural resources. Water supply reliability over the next 25 years continues to remain strong and will be able to withstand uncertainties, including a 30-year drought.

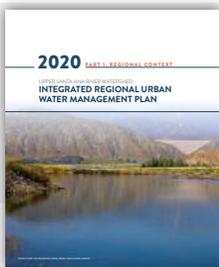
Leading the Way in Integrated Regional Water Management

The 2020 Integrated Regional Urban Water Management Plan for the Upper Santa Ana River Watershed Region sets a new standard for integrated water resources planning in California

The water management agencies within the Upper Santa Ana River (SAR) Watershed Region (Region) have a long history of collaboration to deliver regional water resource solutions. They collaborate to collect and manage water resource data and prepare multiple planning documents to meet regulatory requirements while guiding effective regional and local decision-making. Two of the Region’s foundational documents are the Upper Santa Ana River Watershed Integrated

Regional Water Management Plan (IRWMP) and the San Bernardino Valley Regional Urban Water Management Plan (RUWMP). Since both documents were due to be updated for the 2020 planning cycle and considering the overlap and interdependence of these two documents, Valley District and its regional partners envisioned a consolidated document that combines these two plans, merges the common elements, and creates a cohesive water resources planning framework for the future.

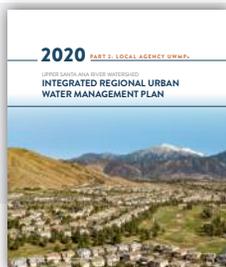
This document is called the Integrated Regional Urban Water Management Plan (IRUWMP or Plan) and is the first of its kind, setting a new standard for integrated water resources planning and reporting in California.



Regional Context

Part 1 contains the information needed to meet the requirements of the IRWM Planning Act for the Region and a portion of the UWMP Act requirements for the local agencies who are using this Plan to meet their 2020 UWMP Requirements

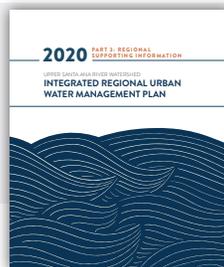
- CONTENTS**
1. Introduction
 2. Region Description
 3. Regional Water Sources and Management
 4. Regional Water Use
 5. Comparison of Regional Supplies and Demands
 6. Water Management Goals, Objectives, and Strategies
 7. Projects
 8. Implementation, Performance and Adaptive Management



Local Agency UWMPs

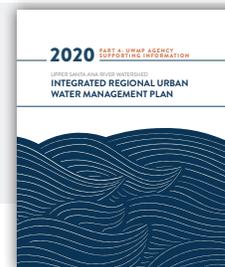
Part 2 provides supplemental information for the eleven local agencies who are using this Plan to meet their 2020 UWMP requirements.

- CONTENTS**
1. San Bernardino Valley Municipal Water District
 2. City of Colton
 3. City of Loma Linda
 4. City of Redlands
 5. City of Rialto
 6. East Valley Water District
 7. Riverside Highland Water Company
 8. San Bernardino Municipal Water Department
 9. South Mesa Water Company
 10. West Valley Water District
 11. Yucaipa Valley Water District



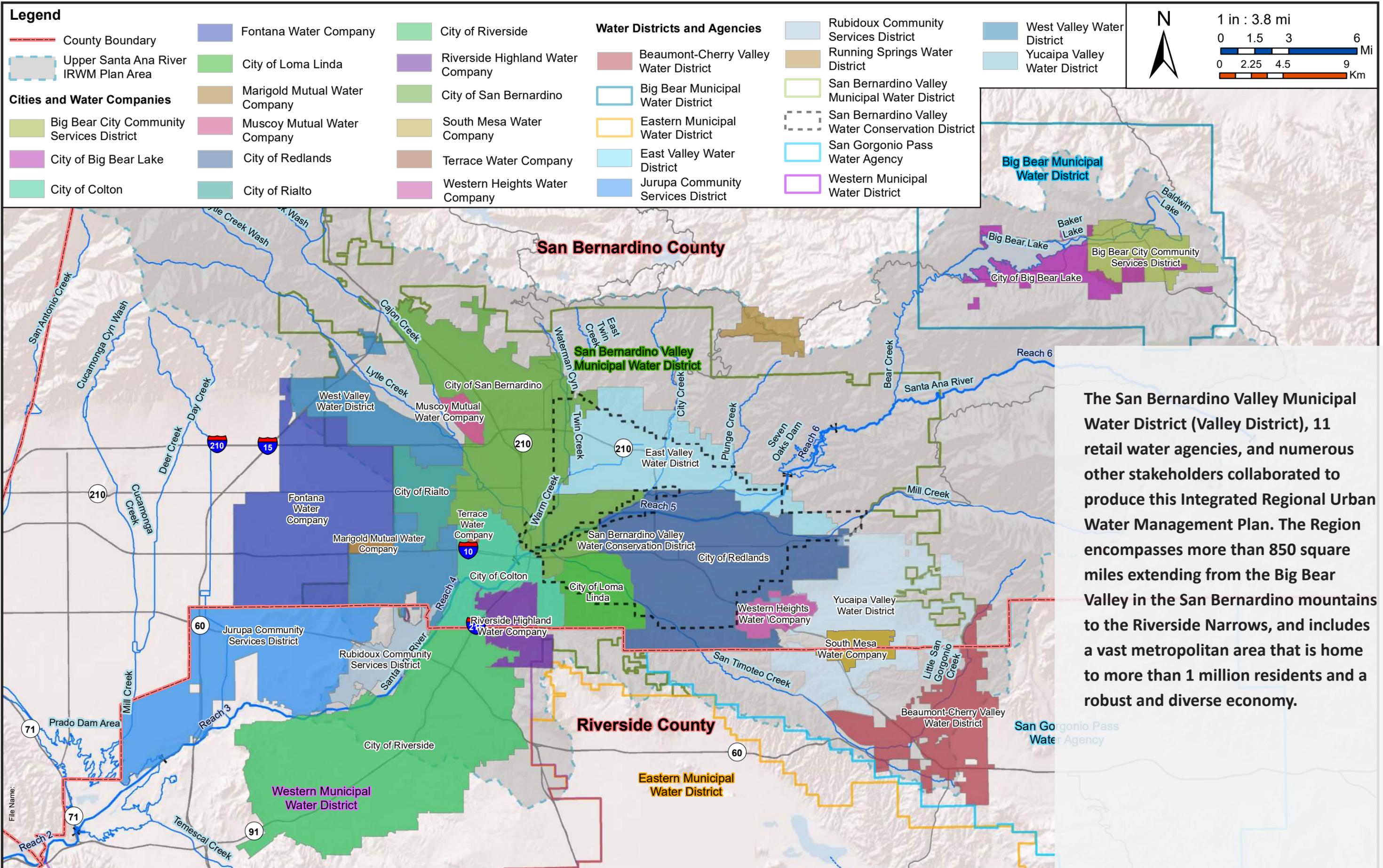
Regional Supporting Information

Part 3 includes all of the supporting documentation referenced in Part 1 that is applicable to the region as well as the regulatory compliance guide that DWR will use to verify that Part 1 meets the IRWM requirements.



UWMP Agency Supporting Information

Part 4 includes a set of supporting documentation for each UWMP Agency corresponding to their respective chapters in Part 2. Documents will include the regulatory compliance guide that DWR will use to verify the agency has met the UWMP Act requirements, the agency’s Water Shortage Contingency Plan and other documents specific to each agency



The San Bernardino Valley Municipal Water District (Valley District), 11 retail water agencies, and numerous other stakeholders collaborated to produce this Integrated Regional Urban Water Management Plan. The Region encompasses more than 850 square miles extending from the Big Bear Valley in the San Bernardino mountains to the Riverside Narrows, and includes a vast metropolitan area that is home to more than 1 million residents and a robust and diverse economy.

File Name:

The 2020 IRUWMP is a Foundational Part of Water Planning in the Region

The Plan integrates with many other regional and local planning efforts for planning consistency

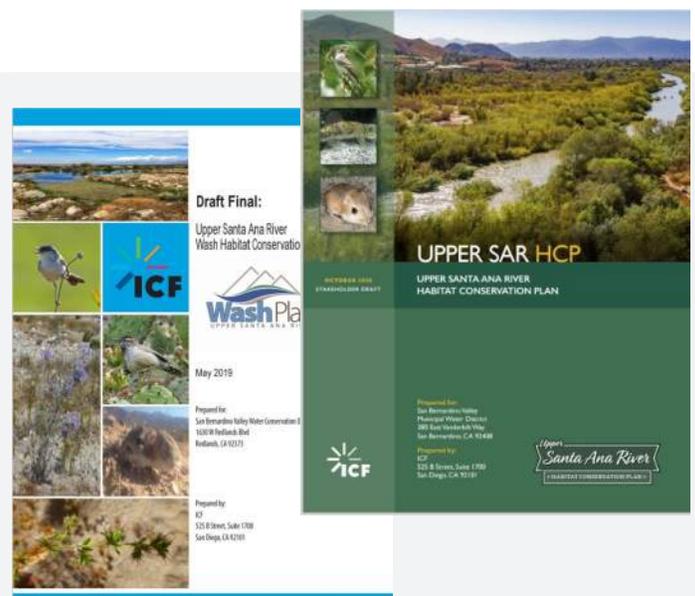
The agencies within the Region regularly coordinate with neighboring and overlapping entities at the local, regional, and state level.

The Santa Ana Watershed Project Authority (SAWPA), a JPA comprised of San Bernardino Valley Municipal Water District, Western Municipal Water District, Inland Empire Utilities Agency, Eastern Municipal Water District and Orange County Water District, has developed an IRWM Plan for the entire SAR watershed titled the One Water One Watershed (OWOW) Plan. The OWOW Plan is a “macro-level” broad planning document that is the framework for overall water management in the watershed. This 2020 IRUWMP for the Upper SAR Region is a complementary planning process that informs the SAWPA OWOW Plan. The purpose of the Upper SAR planning process is to focus on local issues specific to the upper watershed and to assess water management opportunities in greater detail.

Two neighboring regions also prepare integrated regional water management plans. The Mojave IRWM Region encompasses the entire Mojave River watershed in the California High Desert area of San Bernardino County. The San Gorgonio IRWM Region is located in the San Gorgonio Pass area between the Upper Santa Ana River Watershed and the Coachella Valley IRWM Region.

Within the Region, local planning is conducted by counties, cities, local agencies, and special districts. San Bernardino County, cities, and water agencies within the Region also inform the Water Element of the the San Bernardino Countywide Vision Process. Part of this process involves collaboration between water resource managers and land use planners on the water element to create mutually beneficial opportunities that ensure adequate water supplies and quality to support future population and economic growth within the County.

The Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan HCP), which was approved in 2020, and the Upper Santa Ana River Habitat Conservation Plan (River HCP), which is nearing completion, are separate coordinated regional conservation and compliance efforts that will help balance the protection of local natural resources with critical water supply management activities. The plans specify how species and their habitats will be protected, enhanced, restored and managed in the future and enable the incidental take permits needed by the water resource agencies under the federal and State endangered species acts to maintain, operate, and improve their water resource infrastructure.



Connecting with Stakeholders and the Public

The Region's water agencies are committed to informing and engaging stakeholders and the general public

The Basin Technical Advisory Committee (BTAC) is the regional water management group responsible for developing and implementing the Plan. The BTAC is open to any agency in the Region that chooses to participate and is a forum for discussion and early resolution of water issues in the Region. The BTAC members provide recommendations to their respective governing bodies who then make decisions regarding water resources planning and projects in the Region.

Stakeholder participation and public engagement are critical to the success of the Plan. The agencies in the Region and the larger SAR watershed have a long history of working together to solve water resources related issues. These agencies recognize planning efforts such as IRWM and urban water management planning as additional opportunities to work together to manage water resources on a regional level.

In general, the stakeholders for this planning process include: (1) members of the BTAC as listed to the right, (2) other regional stakeholders and water agencies located in the Upper SAR watershed region, (3) watershed-based stakeholders located in the SAR watershed that are part of the larger integrated planning for the region discussed in the SAWPA Plan, and (4) federal and State of California agencies that were encouraged to participate throughout development of the Plan. The BTAC has encouraged local agencies to be active in the development of the Plan and to participate in the planning process.

The IRUWMP process continued to include efforts to coordinate with disadvantaged communities (DACs) and Tribes to identify potential water resource needs. Since DAC areas are encompassed within water agencies' service areas, they are represented by the agencies participating in the Plan. In addition to inviting stakeholders from DACs and Tribes to Plan workshops, a larger watershed wide outreach effort was recently conducted by SAWPA

Agencies that participate in the Basin Technical Advisory Committee (BTAC) at the time of this plan include:

- Bear Valley Mutual Water Company
- City of Colton
- East Valley Water District
- Elsinore Valley Municipal Water District
- City of Loma Linda
- City of Redlands Municipal Utilities and Engineering Department
- City of Rialto
- City of Riverside Public Utilities Department (Riverside Public Utilities)
- Fontana Water Company
- San Bernardino County Flood Control District
- San Bernardino Municipal Water Department
- San Bernardino Valley Municipal Water District
- San Bernardino Valley Water Conservation District
- West Valley Water District
- Western Municipal Water District
- Yucaipa Valley Water District

Santa Ana Watershed-based Stakeholders

- SAWPA and its member agencies (Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, Western Municipal Water District)



Due to the COVID-19 pandemic, stakeholder collaboration for plan development was conducted remotely. Stakeholders participated in a series of interactive virtual workshops where they broke into small groups to provide input on needs, goals and objectives using a virtual whiteboard and sticky notes.

to evaluate the strengths and needs of disadvantaged, economically distressed or underrepresented communities in the SAR Watershed. This effort, funded through DWR’s Disadvantaged Communities Involvement Program, was completed in 2019 and included listening sessions with local communities, Tribal communities, elected officials, water agencies, and mutual water companies. The findings of this effort are recorded in the Community Water Ethnography of the Santa Ana Watershed, and needs relevant to the Upper SAR Watershed are incorporated into this Plan.

The BTAC solicited public involvement in the planning process by presenting updates at regularly scheduled BTAC meetings, regularly scheduled Board and Council meetings of some BTAC agencies, at the Valley District Advisory Commission on Water Policy and by soliciting public comments on the draft IRUWMP via email announcements and website postings. In addition, several stakeholder workshops were conducted to develop additional information needed for the IRUWMP to meet the IRWM Plan requirements in the 2016 Integrated Regional Water Management Grant Program Guidelines and UWMP requirements as described in the 2020 Urban Water Management Plan Guidebook. The BTAC encouraged public participation in preparation of this Plan to ensure the public’s comments were considered in decisions about water management in the Region.

Other Regional Water Agencies and Stakeholders

- Beaumont-Cherry Valley Water District
- Big Bear Area Regional Wastewater Agency
- Big Bear City Community Services District*
- Big Bear Lake Department of Water and Power*
- Big Bear Municipal Water District
- City of Beaumont
- City of Calimesa
- City of Fontana
- City of Grand Terrace
- City of Highland
- City of Jurupa Valley
- City of Yucaipa
- County of Riverside
- County of San Bernardino
- Inland Empire Resources Conservation District
- Jurupa Community Services District
- Metropolitan Water District of Southern California
- Marygold Mutual Water Company
- Muscoy Mutual Water Company
- Orange County Flood Control District
- Regents of the University of California
- Riverside County Board of Supervisors
- Riverside County Flood Control and Water Conservation District
- Riverside Highland Water Company*
- Rubidoux Community Services District
- San Bernardino County Flood Control District
- San Bernardino County Board of Supervisors
- San Geronio Pass Water Agency*
- San Manuel Band of Mission Indians
- South Mesa Water Company*
- Terrace Water Company
- Western Heights Mutual Water Company

State and Federal Stakeholders

- California Department of Fish and Game
- California Department of Public Health
- California Department of Toxic Substances Control
- California Department of Water Resources
- California State University San Bernardino/Water Resources Institute
- Santa Ana Regional Water Quality Control Board
- State Water Resources Control Board (SWRCB)
- U.S. Army Corps of Engineers (USACE)
- U.S. Forest Service

*Participated in the development of this Plan

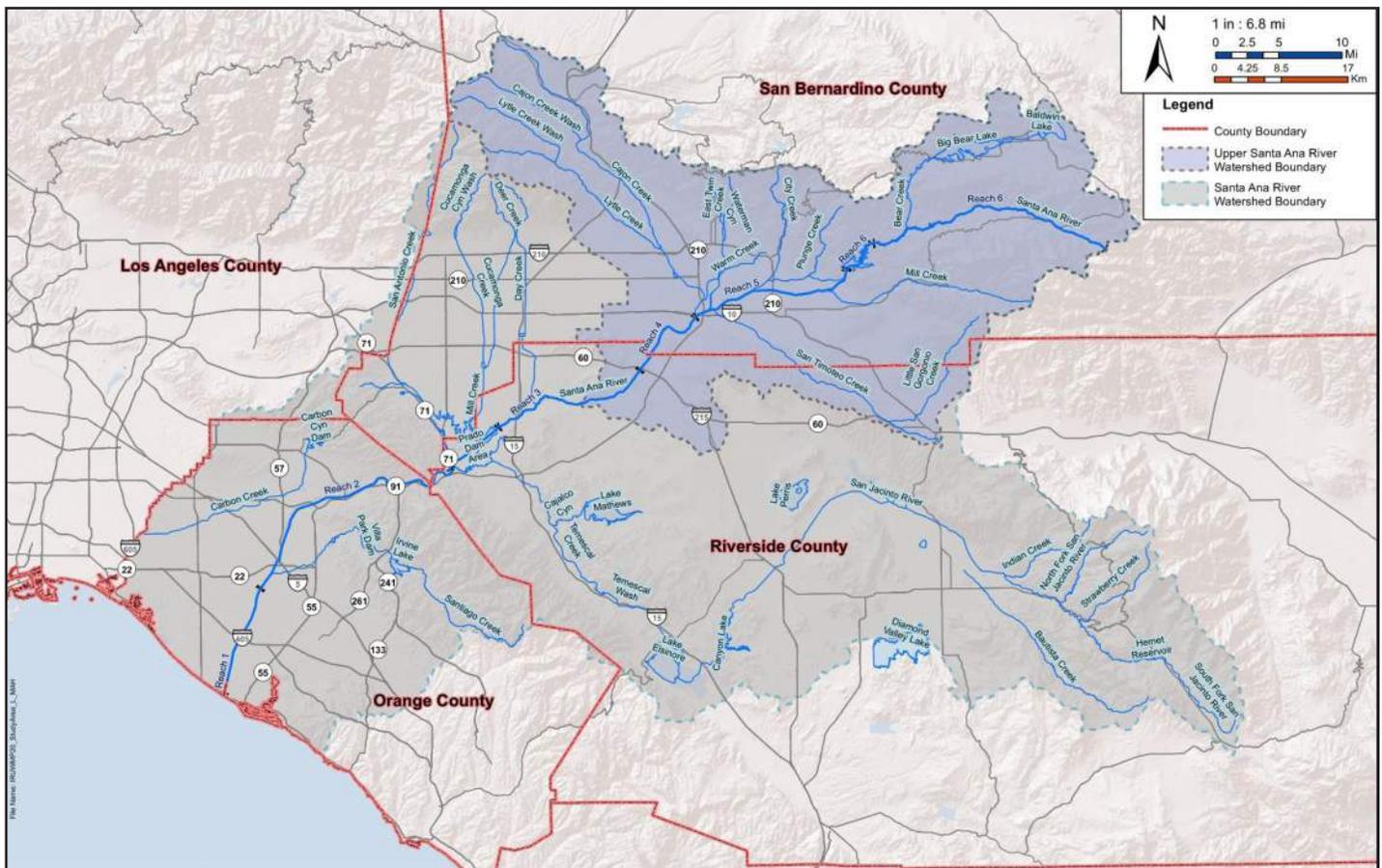
Description of the Upper Santa Ana River Watershed Region

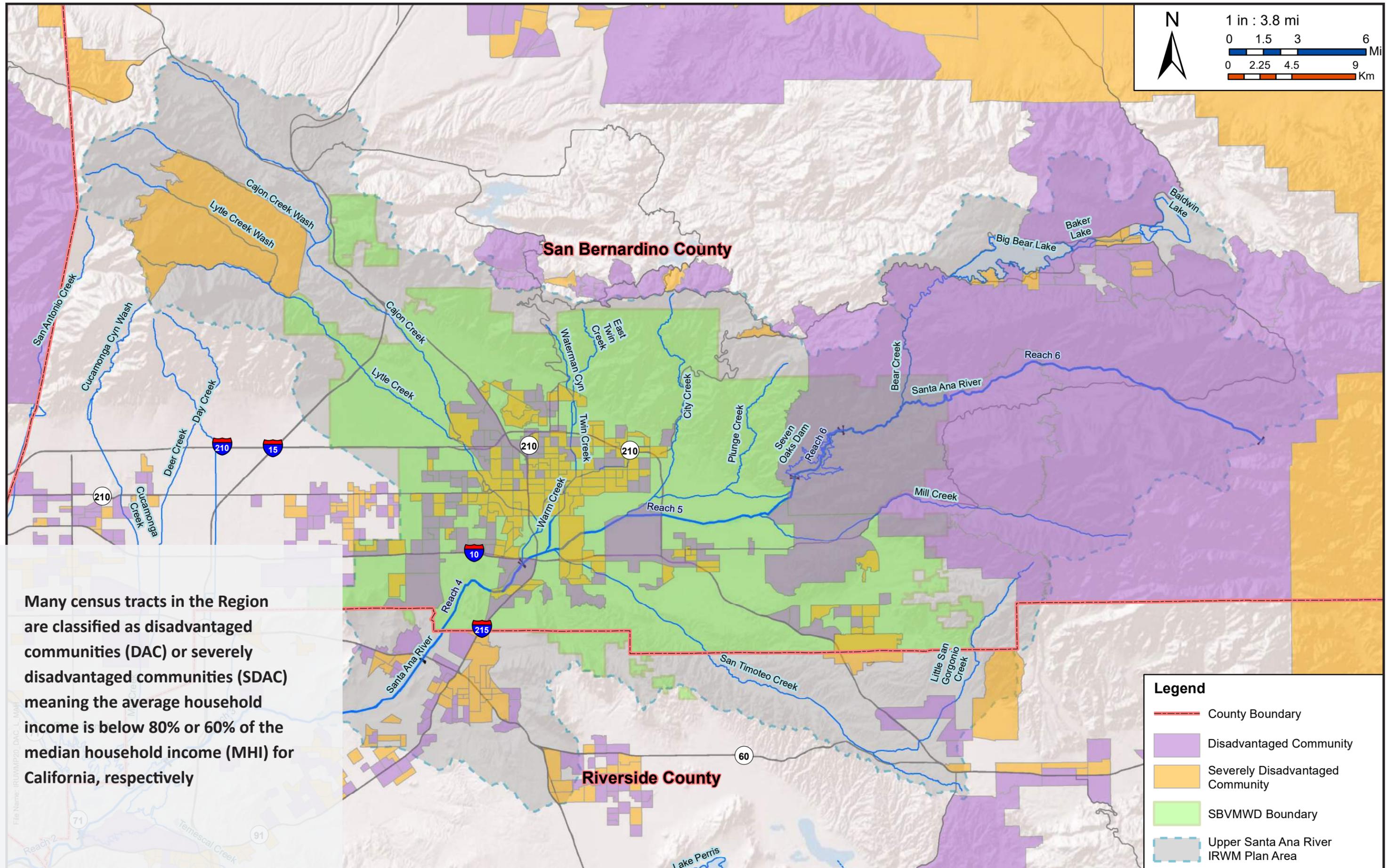
The Region Supports a diverse population, economy and environment.

The SAR watershed is the largest stream system in Southern California and nearly all of the surface flow generated in the headwaters of the San Bernardino Mountains flows through the IRUWMP region before being discharged to the Pacific Ocean approximately 100 miles to the southwest between Newport Beach and Huntington Beach. The SAR watershed covers over 2,650 square miles of widely varying forested, rural, and urban terrain and covers the more populated urban areas of San Bernardino, Riverside, and Orange Counties, as well as a lesser portion of Los Angeles County.

The Upper SAR watershed covers 852 square miles, approximately 32% of the total SAR watershed, and is primarily located in San Bernardino and Riverside Counties. The Region includes the Big Bear Valley as well as the cities and communities of San Bernardino, Yucaipa, Redlands, Highland, Rialto, Mentone, Colton, Grand Terrace, Loma Linda, Beaumont, and Riverside. Total population in the Region is estimated at just over 1 million people in 2020 and is projected to grow to over 1.25 million people by 2045.

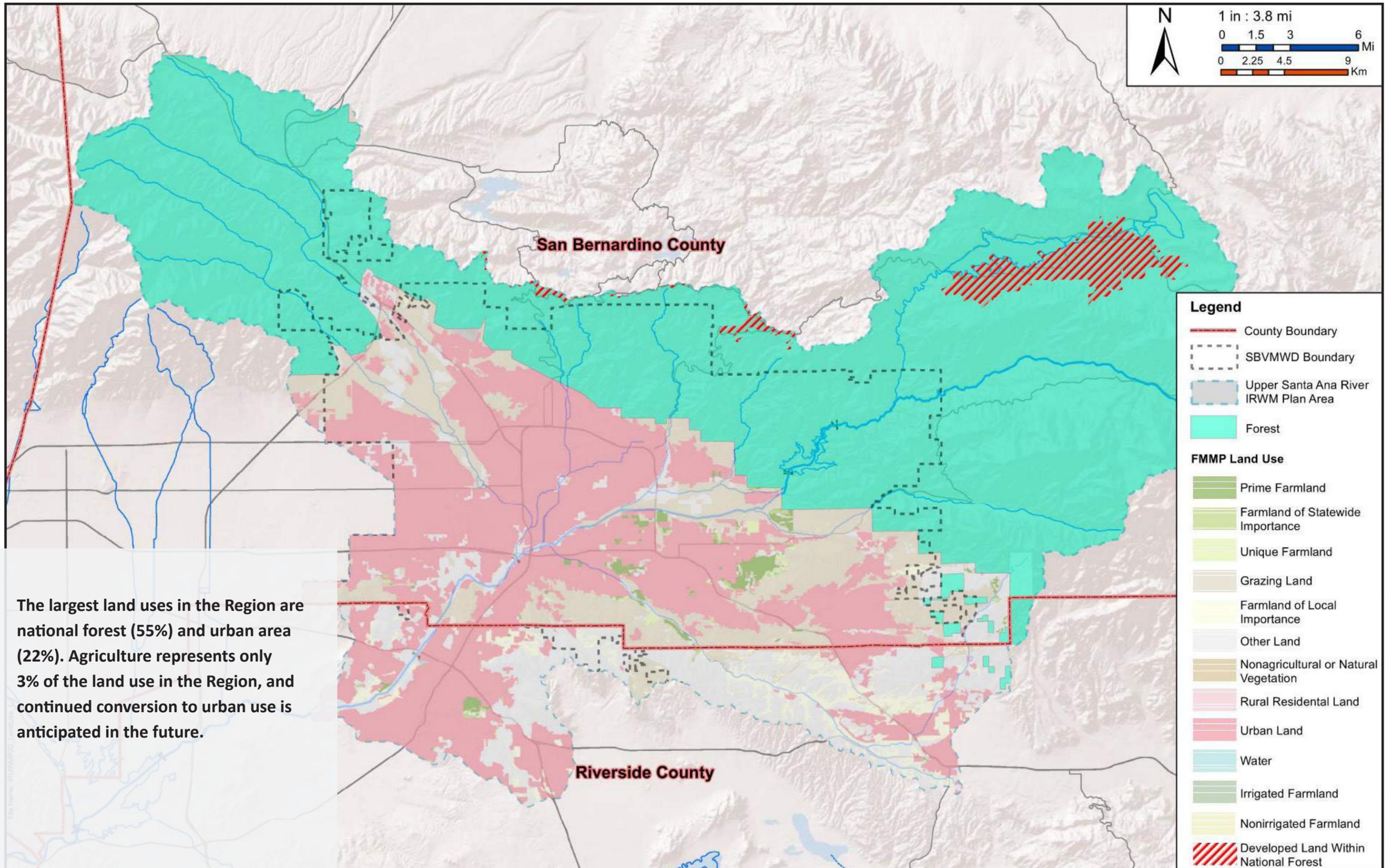
The Upper SAR watershed covers 852 square miles, approximately 32% of the total SAR watershed, and is primarily located in San Bernardino and Riverside Counties.





Many census tracts in the Region are classified as disadvantaged communities (DAC) or severely disadvantaged communities (SDAC) meaning the average household income is below 80% or 60% of the median household income (MHI) for California, respectively

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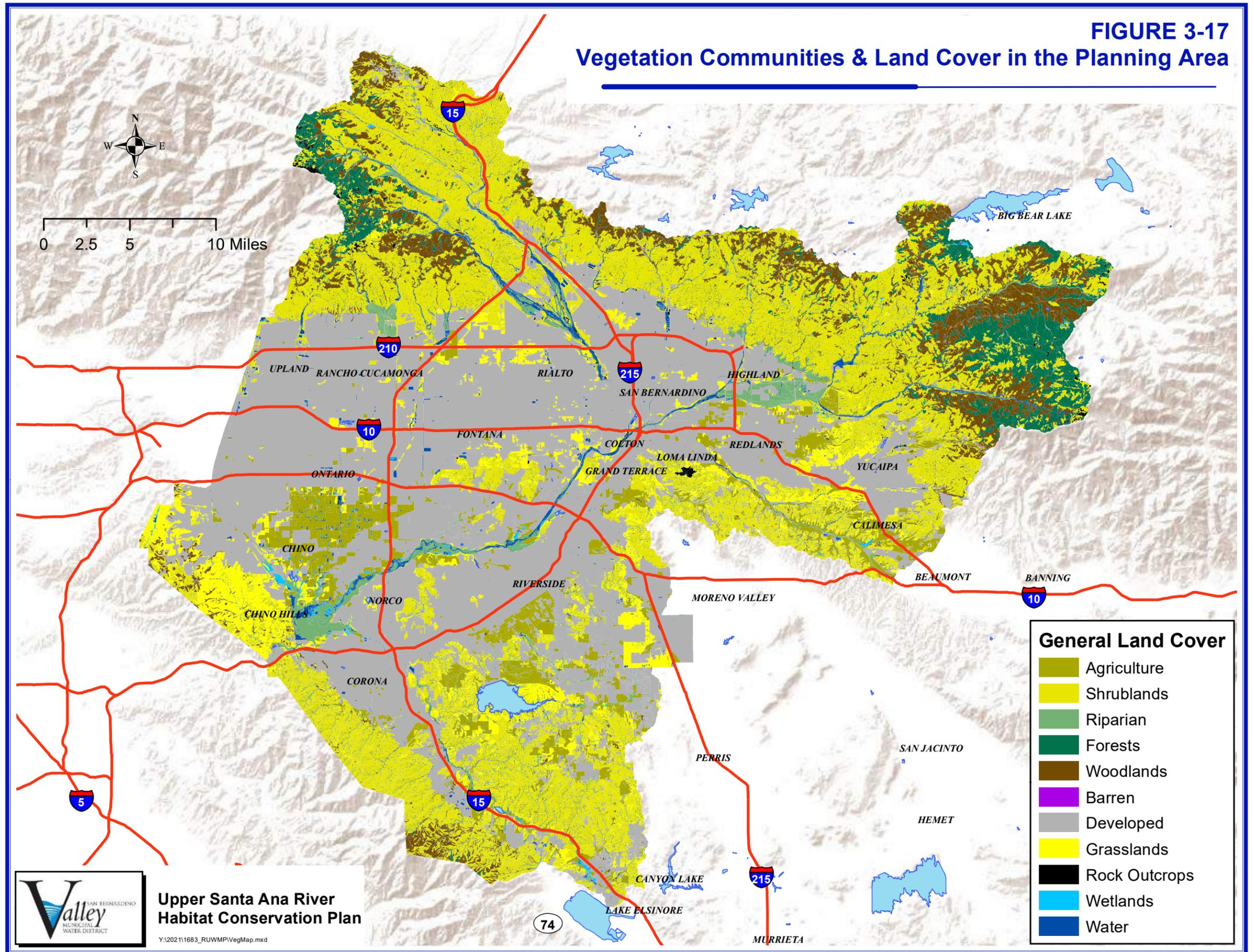


The largest land uses in the Region are national forest (55%) and urban area (22%). Agriculture represents only 3% of the land use in the Region, and continued conversion to urban use is anticipated in the future.

File Name: IRUWMP20_LandUse

The Region contains unique and valuable ecological and environmental resources including riparian habitats along the SAR, forests, shrublands and grasslands. Many of these resources are managed through a variety of local, state and federal plans and jurisdictions, such as the Wash Plan HCP and the River HCP.

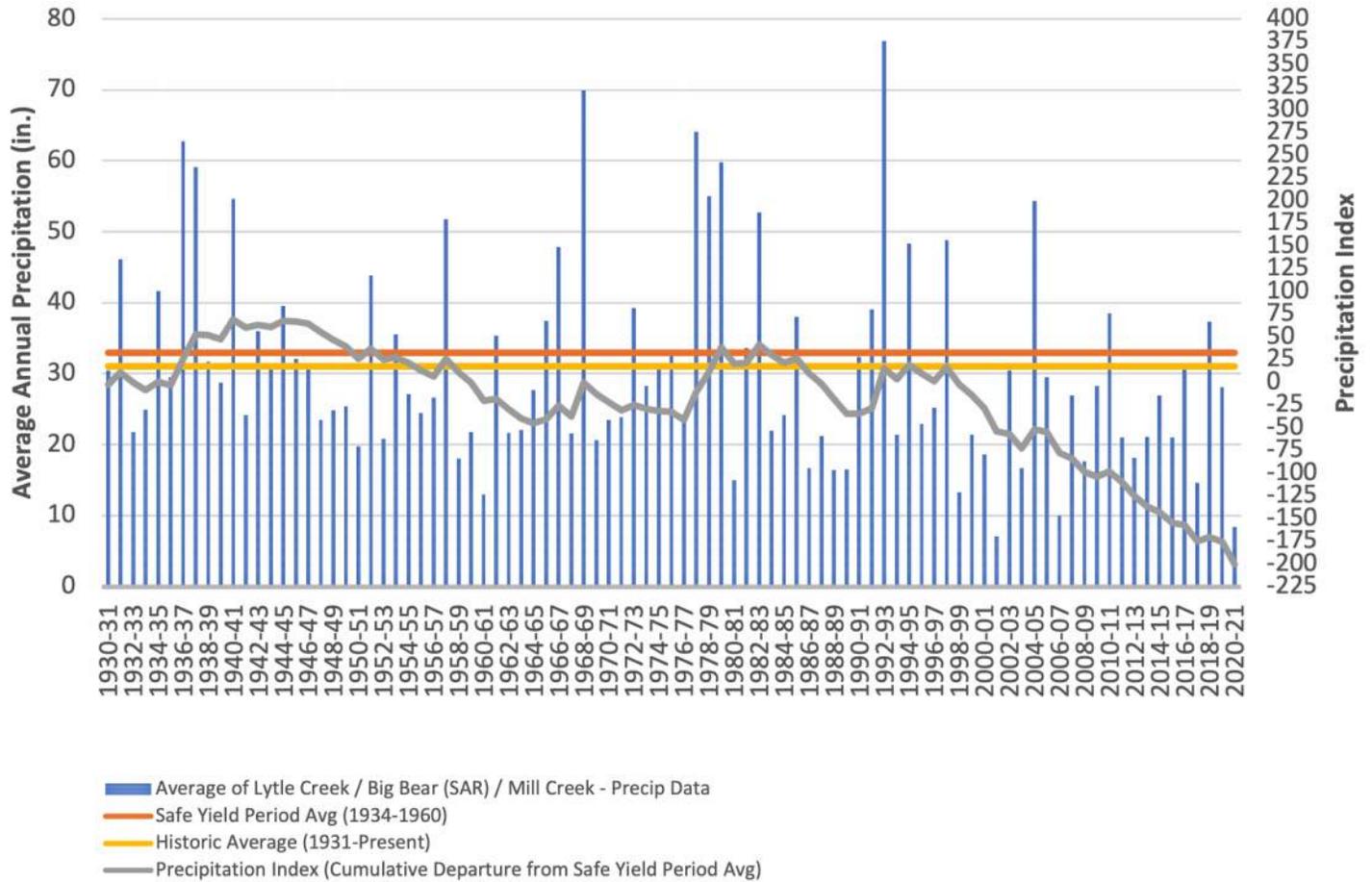
FIGURE 3-17
Vegetation Communities & Land Cover in the Planning Area



**Upper Santa Ana River
Habitat Conservation Plan**

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Climate in the Region is characterized by relatively hot, dry summers and cool winters with intermittent precipitation. The historical record indicates that periods of above or below-average precipitation can last more than 30 years, such as the recent dry period that extended from 1947 to 1977, and the ongoing dry period that began around 1998.



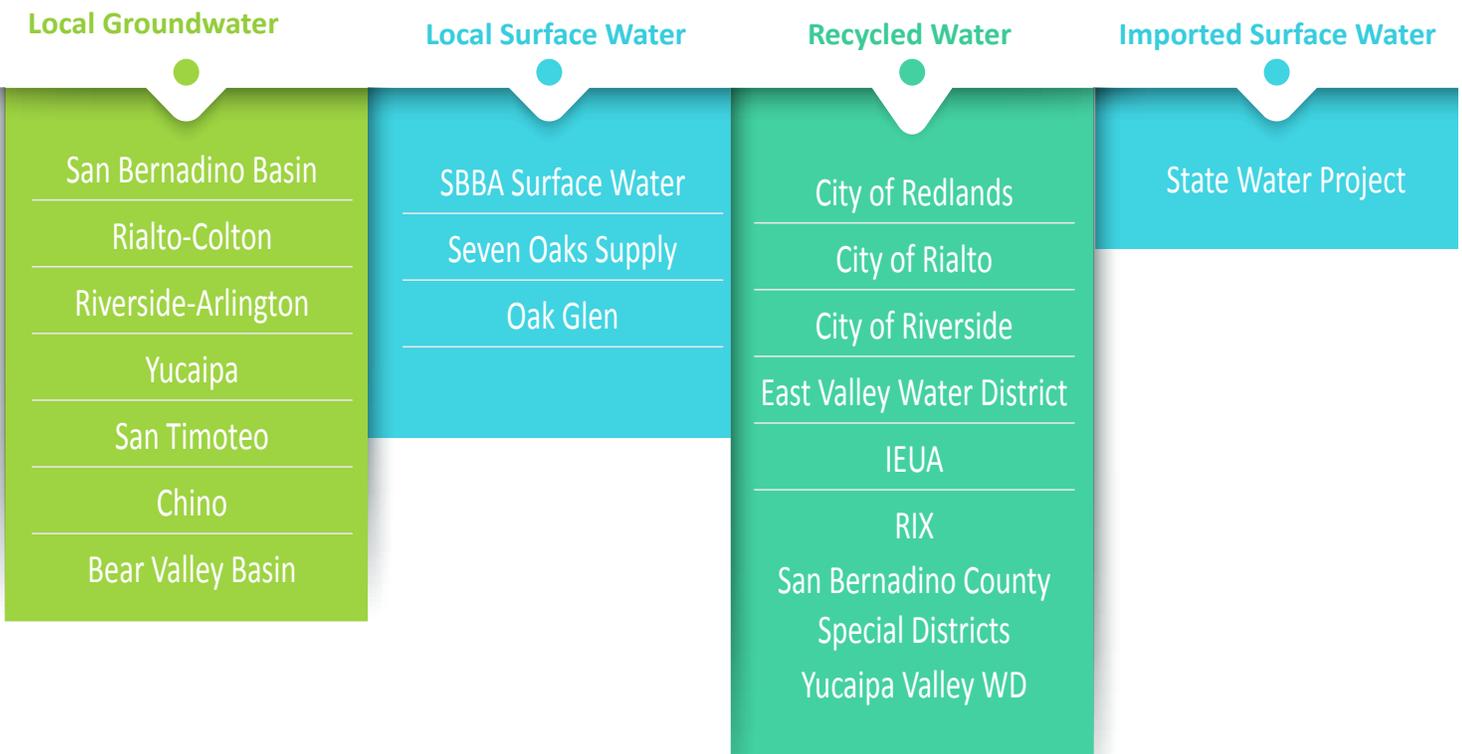
Water Sources and Uses in the Region

The Region’s diverse and plentiful water supplies support the regional economy, environment and quality of life.

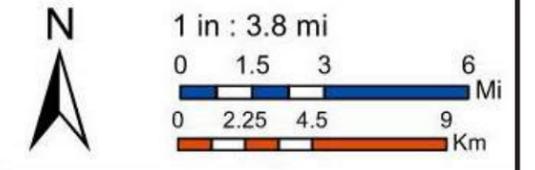
The region’s water supplies include both local and imported sources. The local surface water is derived from the Santa Ana River and its tributaries and developed local supplies are either treated for domestic use or delivered for irrigation or groundwater recharge. Nearly all of the Region’s groundwater is produced from seven distinct groundwater basins. Five basins provide the majority of the groundwater supply to the region: San Bernardino Basin (SBB), Rialto-Colton, Riverside-Arlington, Yucaipa and San Timoteo. Together, these five basins provide over 12 million acre-feet (AF) of available local storage for use in dry years. Recycled water is produced at several water

resource recovery facilities in the region for irrigation, industrial use and groundwater recharge. A portion of the recycled water produced in the Region is discharged to the SAR and its tributaries to support habitat and meet downstream flow obligations. Imported water for most of the Region is provided by Valley District, who is a State Water Project (SWP) contractor. San Gorgonio Pass Water Agency, also a SWP contractor, and Western Municipal Water District, a member agency of Metropolitan Water District of Southern California, provide supplemental imported water to the portions of the Region within Riverside County.

The Region’s water sources include local groundwater, local surface water, imported surface water and recycled water.

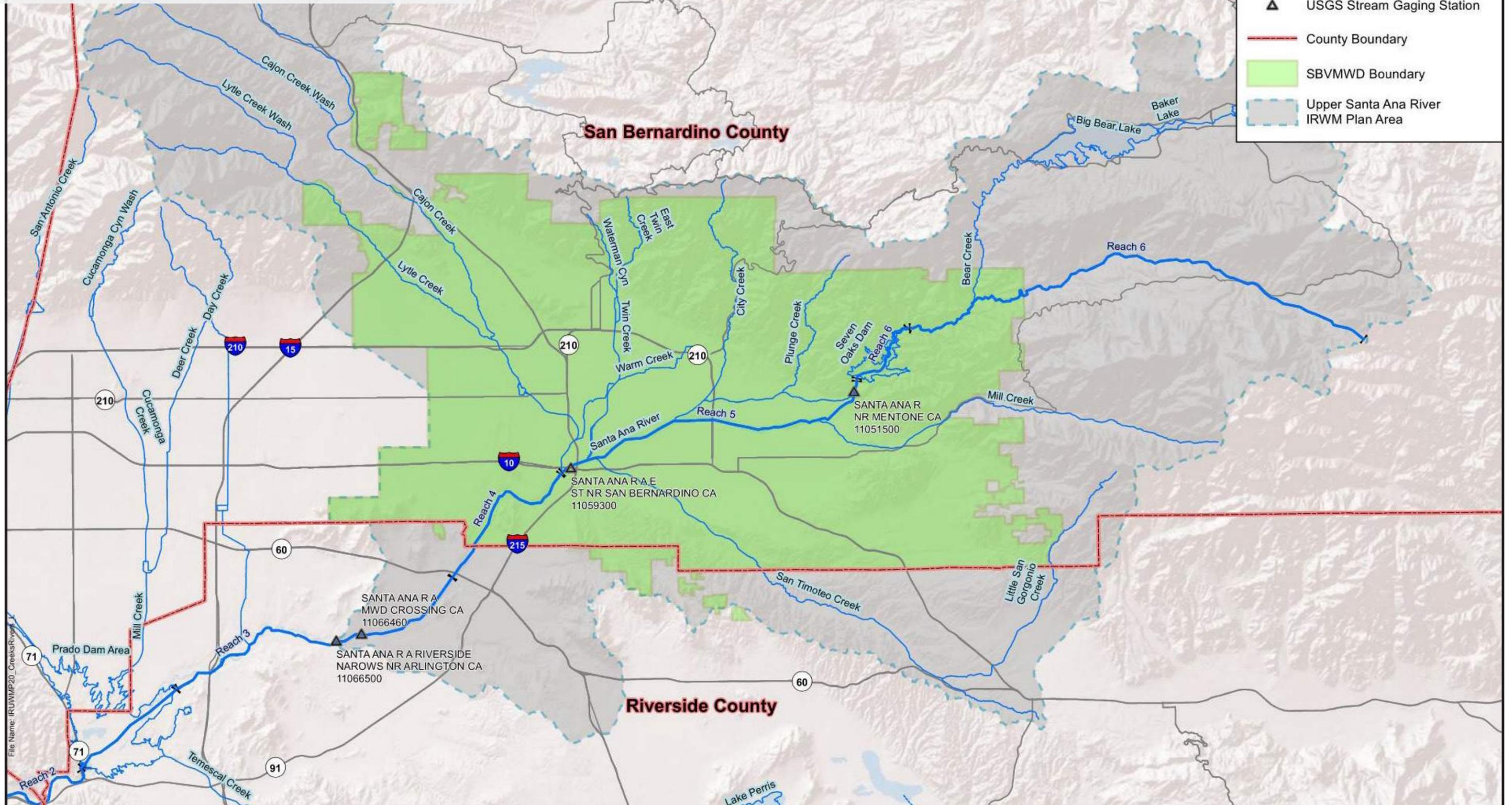


Local surface water is provided by the Santa Ana River and its tributaries.

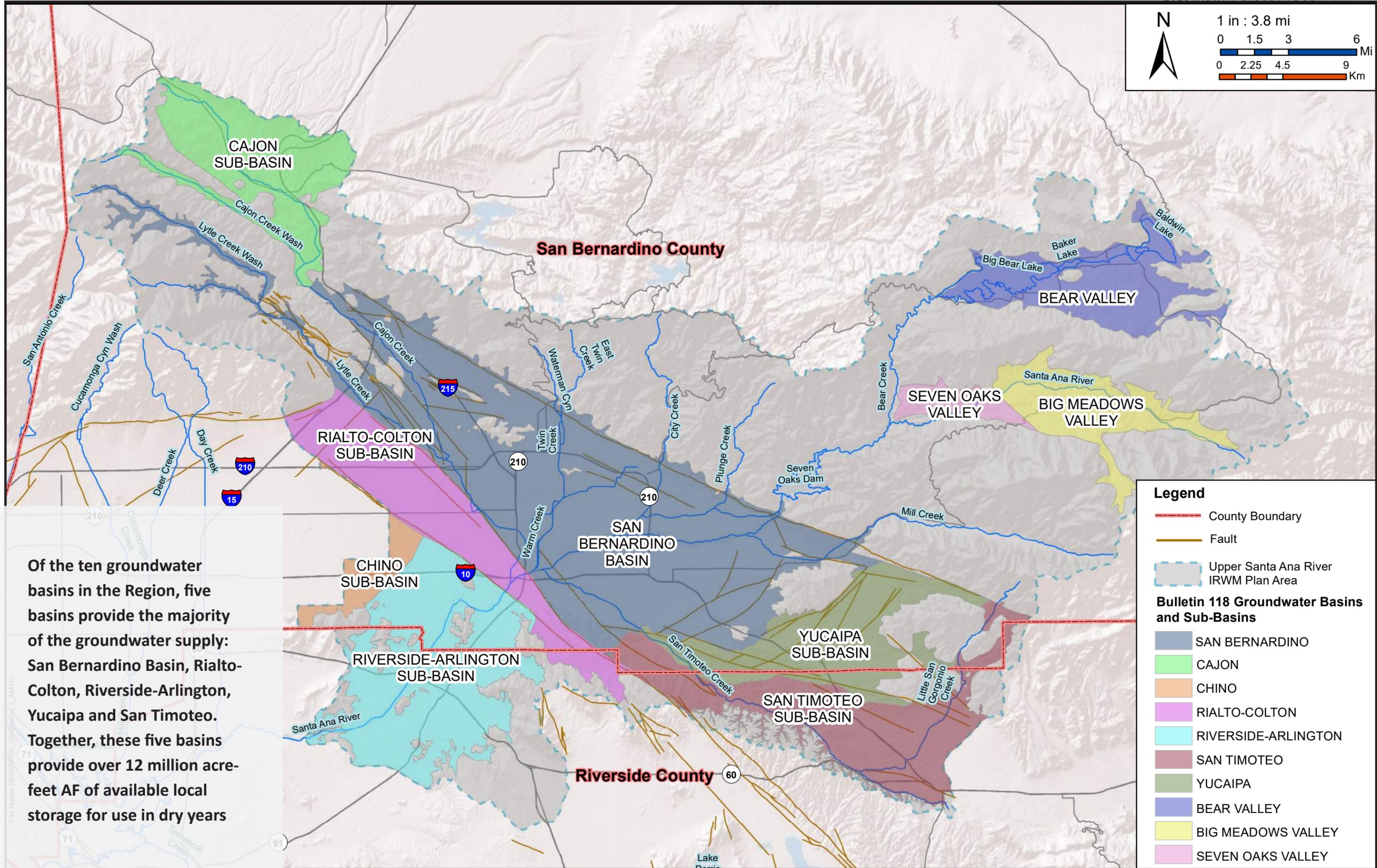


Legend

- USGS Stream Gaging Station
- County Boundary
- SBVMWD Boundary
- Upper Santa Ana River IRWM Plan Area

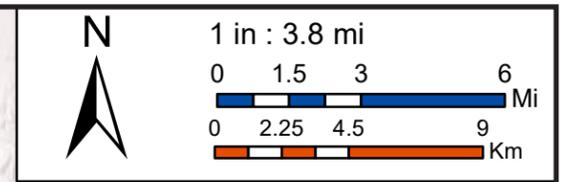


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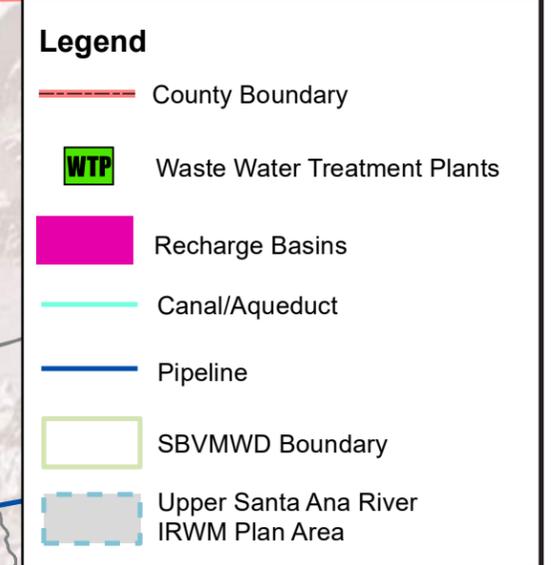
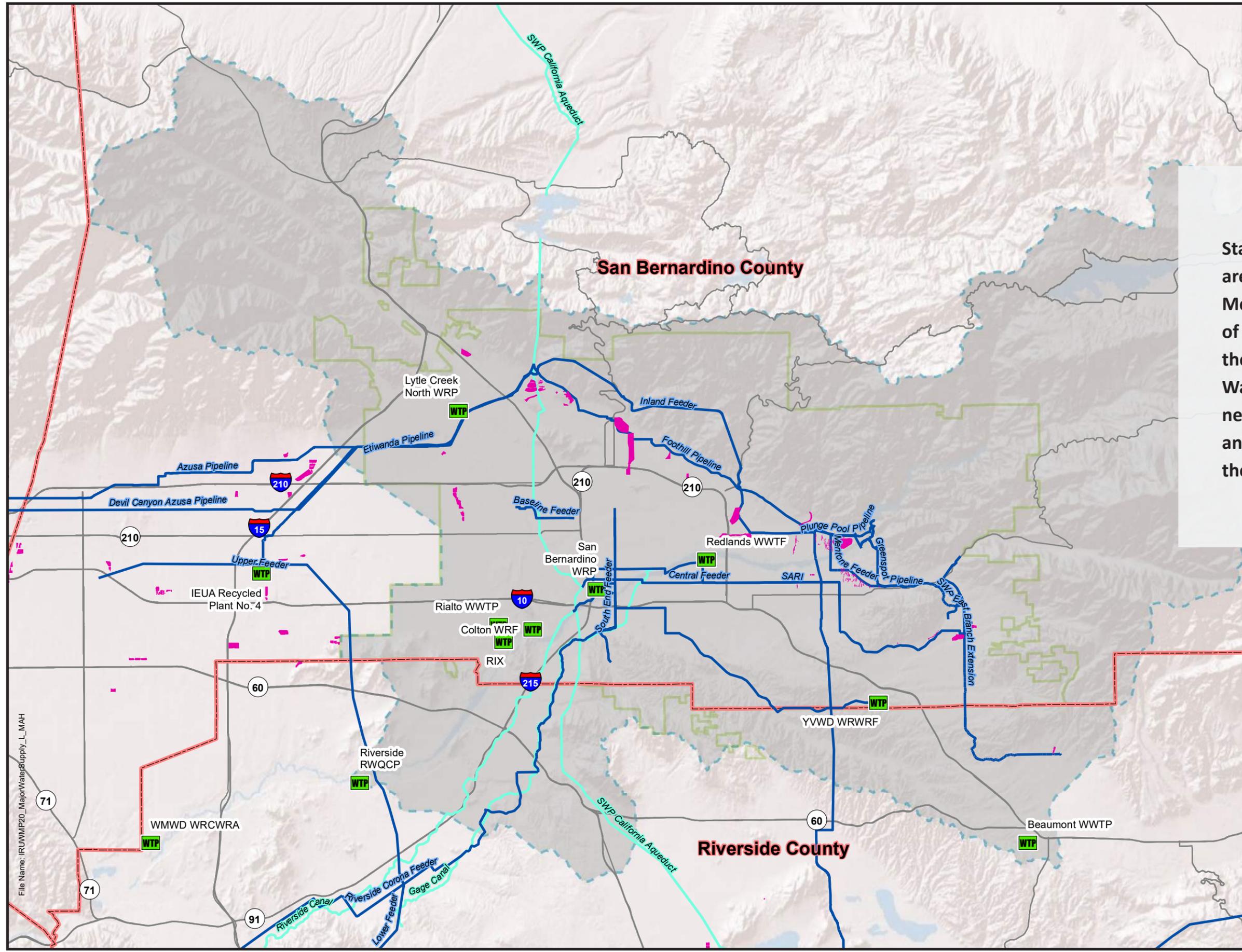


Of the ten groundwater basins in the Region, five basins provide the majority of the groundwater supply: San Bernardino Basin, Rialto-Colton, Riverside-Arlington, Yucaipa and San Timoteo. Together, these five basins provide over 12 million acre-feet AF of available local storage for use in dry years

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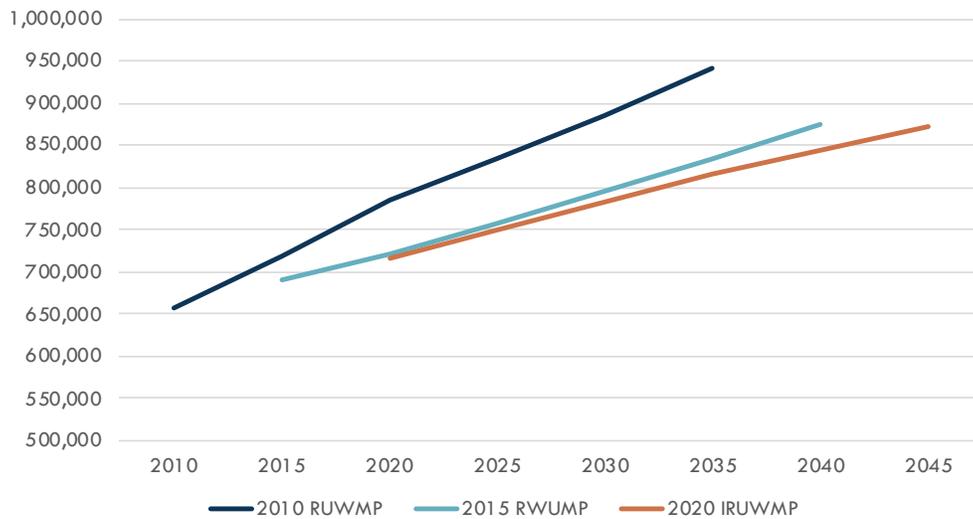
State Water Project supplies are delivered by Valley District, Metropolitan Water District of Southern California and the California Department of Water Resources through a vast network of pipelines, storage and pump stations throughout the region.



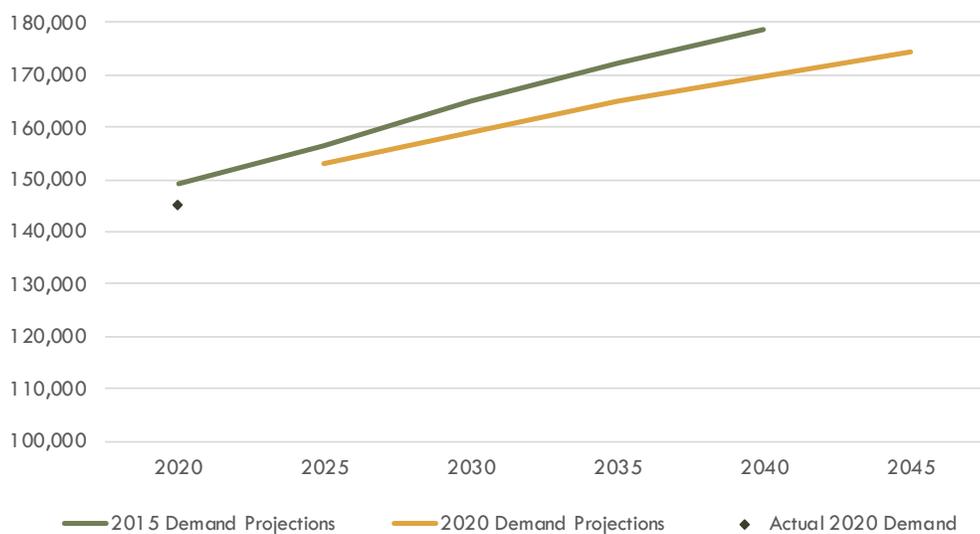
File Name: IRUWMP20_MajorWaterSupply_L_MAH

Population growth projections developed by the Southern California Association of Governments (SCAG) have declined significantly in the last 10 years. While SCAG’s latest 2020 Demographics and Growth Forecast projects slower growth than previous plans, the result is still a substantial increase in population within the Valley District service area and the Region. The population within the Valley District service area is projected to reach 870,000 by 2045 and the population of the Region as a whole is projected to reach over 1.25 million people.

Population Projection Trends for the Valley District Service Area



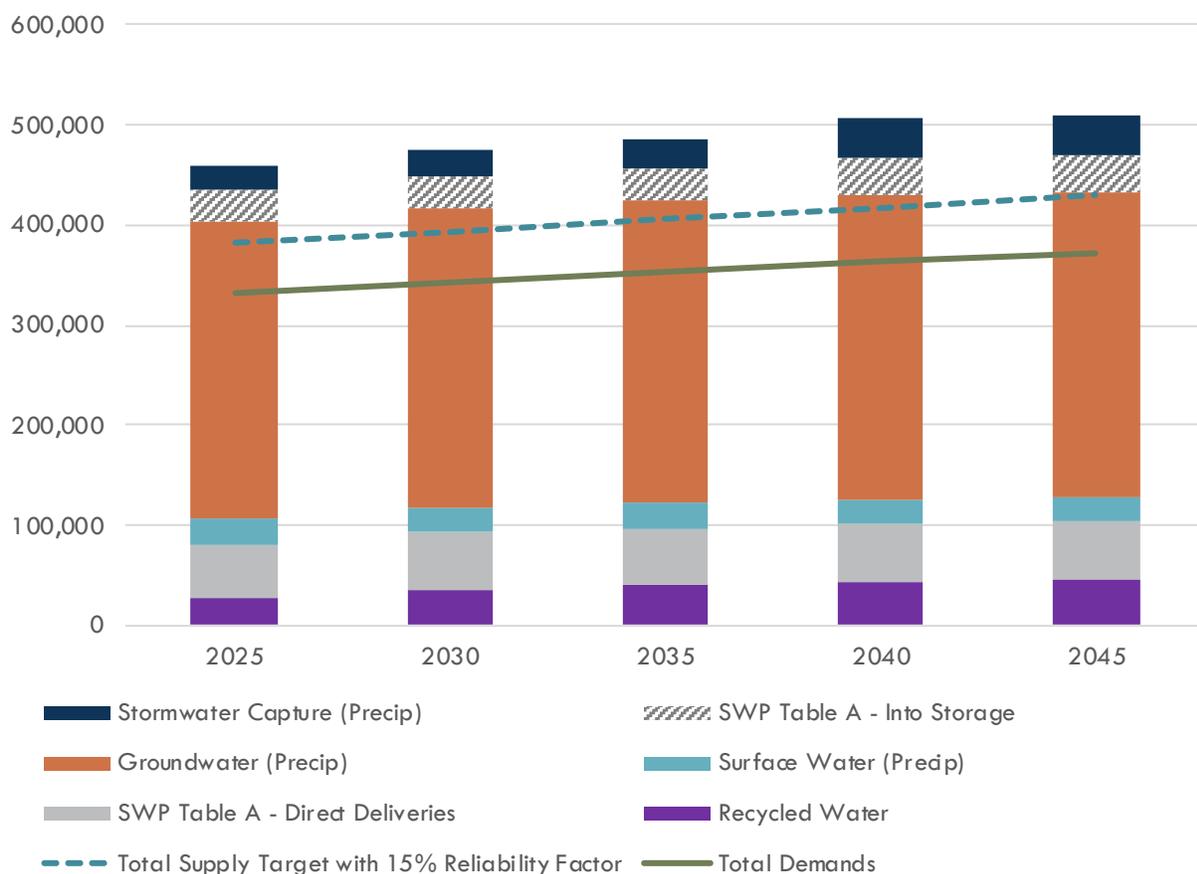
Comparison of Demand Projections for the Valley District Service Area, AFY



Since the last planning cycle in 2015, total demand projections for the 9 agencies who participated in the 2015 RUWMP have dropped slightly due to slower population growth projections and increased water use efficiency.

Total projected water demands for all of the retail water agencies within the Region are expected to reach nearly 400,000 AFY by 2045. Normal year supplies meet or exceed regional demands including a 15% reliability factor that accounts for uncertainty factors in the projections, including population growth, per capita water use, climate change impacts, SWP project hydrology and local surface water hydrology.

Region Wide Supply and Demand Comparison for a Normal Year (AFY)

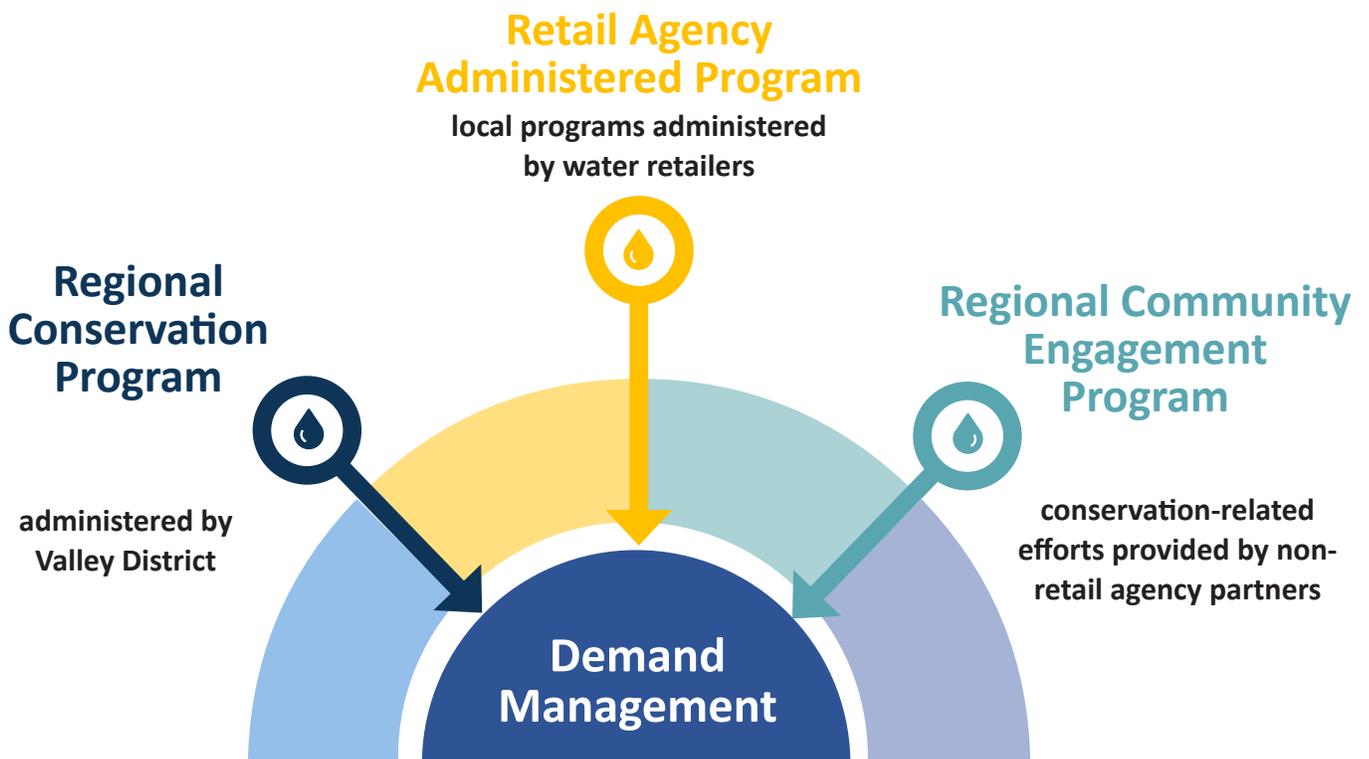


Using Water Wisely

The Region’s water suppliers prioritize conservation and efficient use of water.

The Region has been successful at improving water use efficiency and every retail water agency in the Region has reduced demand. For the nine (9) participating agencies in the 2015 RUWMP, their collective 2020 actual demand was almost 40,000 acre-feet lower than projected and 15% lower than 2009 actual demand, despite a 7% increase in population.

Currently, every retail agency develops and implements its own water conservation plan and programs. Now with California state law “Making Water Conservation a Way of Life” (SB 606 and AB 1668), increasingly stringent indoor and outdoor water use standards are expected. Therefore, Valley District and its retail agency partners are considering a coordinated regional and local water conservation program.



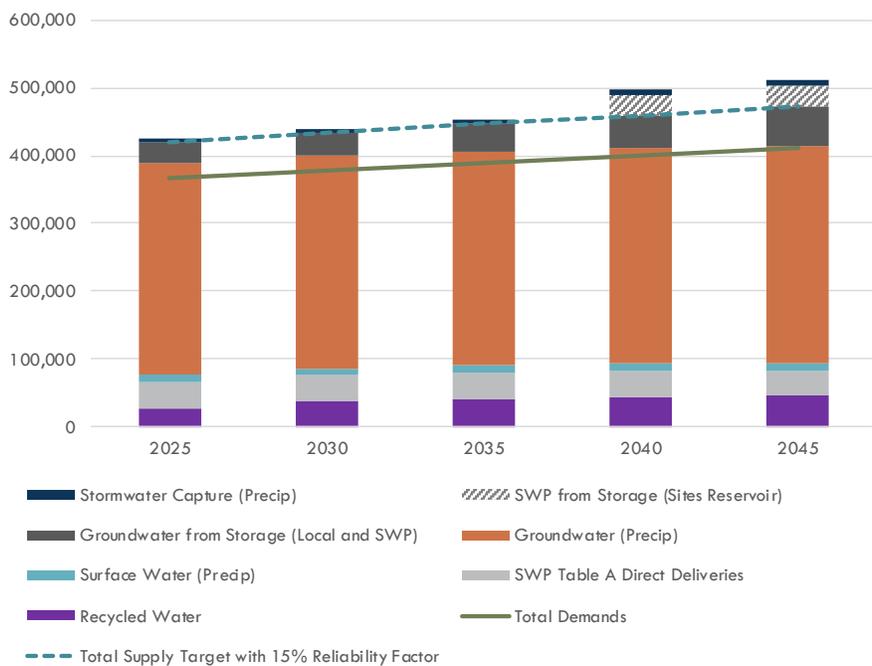
Investing in our retail partners, end-users/taxpayers, and other partners to increase the efficiency of water consumption and ensure regional water reliability.

The Region's Supplies Continue to be Reliable, Even in a 30-year Drought

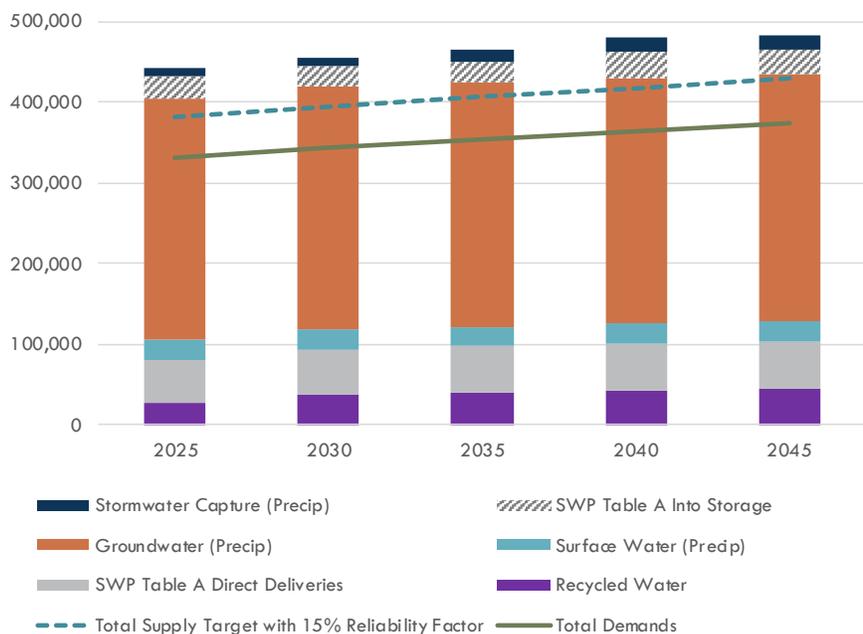
Diverse supplies and continued investments provide reliable water for the Region's future.

Although local and imported surface water supplies are highly dependent on local and statewide hydrology, the Region benefits from more than 12 million acre-feet of groundwater storage that can be used to store water when supplies are plentiful and then be pumped during extended droughts. By maximizing deliveries of State Water Project water in wet years when those supplies are available, and supplementing that with other local supplies like stormwater capture and recycled water, the Region can accrue sufficient storage to enable a high level of water supply reliability, even during an 30-year drought. Although the UWMP Guidebook does not require agencies to demonstrate the ability to withstand a 30-year drought, the Region decided, on its own, to evaluate a 30-year drought because it has experienced a drought of this length in the past and is currently in the midst of a drought that has lasted longer than 20 years and is still continuing.

Region Wide Supply and Demand Comparison for a Single Dry Year (AFY)



Region Wide Supply and Demand Comparison for a 30-Year Drought (AFY)



Planning for Short-Term Water Shortages – A Regional and Local Approach

Water Shortage Contingency Plans (WSCPs) describe how the Region’s water agencies are preparing for and may respond to potential water shortage.

A water shortage occurs when water supply available is insufficient to meet the normally expected customer water use at a given point in time. A shortage may occur due to several reasons, such as water supply quality changes, climate change, drought, regional power outage, and catastrophic events (e.g., earthquake). Additionally, the State may declare a statewide drought emergency and mandate that water suppliers reduce demands, as occurred in 2014. The WSCPs serve as the operating manuals that Valley District and the retail water agencies

will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. Each WSCP provides a process for an annual water supply and demand assessment and structured steps designed to respond to actual conditions. Although the water agencies in the Region do not foresee implementing water shortage levels under normal conditions, this level of detailed planning and preparation provide accountability and predictability and help the Region’s water agencies maintain reliable supplies and reduce the impacts of any supply shortages and/or interruptions.

Defining Goals and Objectives for Integrated Water Resources Management

The Region’s water resources management goals reflect a balanced view social, environmental and economic values.

The BTAC identified several water resources-related needs and issues for the Region, including:

- Increased diversification of water supplies
- Improved groundwater management
- Protection of water quality
- Flood management with recharge benefits
- Habitat and open space preservation
- Disaster prevention
- Sustainability
- Climate change resilience

Based on these needs and issues, progress since the 2015 IRWM Plan, and input from the public and stakeholders, the BTAC updated goals and objectives for the Region through a series of collaborative stakeholder workshops. As a result of stakeholder discussions, a new Goal #5 was added – Address Climate Change Through Adaptation and Mitigation.

IRWM Region Goals and Objectives for the Next 5 Years



GOAL #1 IMPROVE WATER SUPPLY RELIABILITY

- 1a:** Comply with conservation legislation requirements (AB1668 and SB606)
- 1b:** Increase utilization of local supplies by 20,000 AFY
- 1c:** Proactively manage groundwater basins by storing 10,000 AF water in wet years
- 1d:** Improve system resiliency and the ability to respond to emergency supply interruptions by increasing back-up facilities, increasing interties, adding redundant power sources and treatment facilities
- 1e:** Continue to ensure equitable access to clean drinking water for all communities



GOAL #2 BALANCE FLOOD MANAGEMENT AND INCREASE STORMWATER RECHARGE

- 2a:** Implement 4 MOUs to use flood control retention/detention basins for recharge when not needed for flood control
- 2b:** Implement 20 acres of integrated flood projects that also provide multiple benefits, where possible
- 2c:** Continue to ensure equivalent implementation of flood projects in DAC areas and implement at least 1 flood control project in a DAC area
- 2d:** Identify 4 urban stormwater capture projects to increase recharge and improve surface water quality



GOAL #3 IMPROVE WATER QUALITY

- 3a:** Ensure no violations of drinking water quality standards
- 3b:** Improve surface and groundwater quality by treating groundwater supply
- 3c:** Manage total dissolved solids and nitrogen in groundwater



GOAL #4 IMPROVE HABITAT AND OPEN SPACE

- 4a:** Preserve or improve habitat by conserving or restoring 350 acres of riparian, wetland and permanent water areas
- 4b:** Identify “multi-use” opportunities to increase recreation and public access and identify 4 multi-use projects



GOAL #5 ADDRESS CLIMATE CHANGE THROUGH ADAPTATION AND MITIGATION

- 5a:** Identify projects to address or management climate change impacts
- 5b:** Implement 4 projects to reduce or offset energy consumption or reduce GHG emissions associated with water and wastewater systems

Strategies, Projects and Plan Implementation – Delivering Long-term Water Security

The regional water agencies have identified an ambitious portfolio of projects to provide multiple regional benefits.

Keeping the Region’s unique issues and challenges in mind, the BTAC compiled a listing water management strategies and water resources-related projects to help them reach their goals and objectives. The strategies, listed below, intentionally align with the resource management strategies (RMS) listed in the California Water Plan and reflect the unique aspects of the Region’s water resources.

Strategies:

1. Continue Basin Management in Local Groundwater Basins
2. Incorporate cultural intelligence into water supply and demand management
3. Continue Headwaters Forest Management and Hazardous Fuels Reduction
4. Coordinate Land Use Planning and Management with Water Resources Management
5. Develop Desalination if needed
6. Develop Watershed Management Projects and Programs
7. Improve Drinking Water Treatment and Distribution
8. Identify Corridors for Species
9. Identify and Implement Projects that Increase Recharge
10. Identify and Implement Projects that Increase Surface Water and Groundwater Storage Inside and Outside the Region
11. Identify and Implement Water Transfer Opportunities where necessary
12. Implement Agricultural Lands Stewardship
13. Implement Agricultural Water Use Efficiency
14. Implement Pollution Prevention Measures
15. Implement System Reoperation
16. Implement Urban Water Use Efficiency
17. Improve Imported Water Supply Conveyance – Delta
18. Improve Supply Conveyance – Across the Regional/ Local
19. Incorporate Environmental Opportunities and Constraints into the Design Process for Facilities
20. Incorporate Opportunities to Improve Habitat and Increase Recreation and Public Access During the Facilities Design Process
21. Increase Outreach and Engagement
22. Increase Recycled Water Use
23. Increase Stormwater Capture
24. Maintain and Improve Water-Dependent Recreation
25. Manage High Groundwater and Liquefaction Potential in the SBB
26. Manage Flood Risk
27. Manage Salt and Salinity
28. Manage Sediment
29. Manage Urban Runoff
30. Match Water Quality to Use
31. Monitor Consumer Confidence Reports
32. Operate Existing Facilities to Increase Recharge
33. Optimize Wet Year Storage and Dry Year Pumping (Conjunctive Management & Groundwater)
34. Participate in the SAWPA Basin Management Task Force
35. Protect Recharge Areas
36. Provide Economic Incentives
37. Remediate Groundwater Contamination Plumes
38. Restore Ecosystems
39. Support the Bay-Delta Conservation Plan /Delta Conveyance Project

The Region has a history of working together to support the development and implementation of projects, and has continuously worked to develop regional, integrated projects. The Plan includes a listing of over 120 projects submitted by agencies throughout the Region that will help achieve the goals and objectives of this plan. The Project list is a living document, and projects can be submitted to the BTAC for review, ranking and prioritization, per the approved criteria, at any time.

The BTAC will be the primary entity responsible for implementation of the IRUWMP, and project sponsors will be responsible for implementation of projects and tracking of project benefits. Continued regional coordination and outreach to stakeholders will be key to implementing the Plan. The BTAC will continue to look for opportunities to coordinate with land use planning efforts and incorporate land use planning issues and strategies into water management decisions.

The IRUWMP represents the current state of water resources planning in the Region and continues to

recognize that water management needs, issues and strategies will continue to evolve in response to changing conditions. A continued adaptive management approach will allow the IRUWMP to stay current considering changing conditions and will rely on regular plan and project performance monitoring and review.



Looking to the Future - Data Management, Plan Performance and Adaptive Management

The BTAC has already made significant progress implementing the Plan.

The BTAC has already made significant progress implementing the various management strategies and accompanying projects and continue to monitor progress toward their goals and objectives. The Region plans to continue within its current governance structure and, wherever possible, improve by enhancing coordination, governance, outreach, funding and financing.

The IRUWMP represents the current state of water resources planning in the Region, based upon the latest available information, and recognizes that water management strategies will continue to evolve in response to changing conditions. In recognition of the fluid nature of water management in the Region, the IRUWMP continues

to incorporate an adaptive management approach that allows the Plan to stay current in light of changing conditions, such as local and regional water needs and changing regulatory requirements.

The adaptive management framework is based on an iterative process of:

- Collecting information and data regarding the conditions within the Region
- Evaluating the new data to determine plan/project performance
- Formulating a plan in response to these changing conditions

This process will allow the Region to proactively manage its available resources, including making investments in the planning and implementation of new projects and programs. This includes preparation of periodic updates of the IRUWMP to respond to changing conditions (including climate change and the re-evaluation of any impacts and benefits) through a continued working relationship with the BTAC, and to inform project participants and stakeholders about changes to the IRUWMP.

With full implementation of the Plan, the Region can expect to realize significant benefits, including:

- Continued water supply reliability during drought periods through a diverse water supply portfolio consisting of both local and imported supplies.
- Continued management of the Region's surface water and groundwater resources, including new opportunities for conjunctive management of groundwater and surface water resources and recharge of groundwater basins.
- Continued emphasis on water quality through effective management of groundwater resources, expediting cleanup process of contaminant plumes in the Region, and improving stormwater management.
- Continued emphasis on improved flood protection.
- Plan to address climate change vulnerabilities including reduced GHG emissions and energy usage.
- Continued distribution and water quality to disadvantaged communities.
- Continued environmental stewardship.
- Enhancement of water-dependent environmental assets.
- Continued water-related education, recreation, and public access opportunities in the Region.
- Continued understanding of the Region's water resources, including focused regional monitoring to ensure groundwater is used in a sustainable manner.
- Continued coordination of water management activities of the Region through sharing of ideas and mutually beneficial management of project opportunities.
- Continued coordinated development of water management strategies and associated projects.
- Continued emphasis on improved preparation for a disaster.



Photo Credit: San Bernardino Valley Water Conservation District