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SCAG™

# Water Resolution White Paper

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# Executive Summary

SCAG adopted the Water Action Resolution in 2022 to advance regional collaboration and ensure a clean, safe, affordable, and reliable water supply for Southern California's communities. The Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy reinforces this commitment by integrating climate resilience, sustainable water management, and coordinated land use planning into regional policy and implementation strategies.

To inform next steps, SCAG developed the "Water Resolution White Paper" to evaluate shared water management challenges and identify opportunities for stronger coordination, investment, and technical support across jurisdictions. The findings underscore that while water issues vary locally, several systemic barriers consistently affect agencies throughout the region and require collective, policy-level solutions.

## Key Water Management Issues in the SCAG Region

While the SCAG region is vast and many water management issues differ by county and community, there are challenges relevant across the region. The key findings that follow are regionally applicable and were identified through stakeholder interviews and accompanying research.

1. **There is an opportunity for more coordination between planning agencies and water managers to support sustainable water management.** Several counties in the SCAG region are experiencing rapid population growth and growth in new, water-intensive industries. Yet projections for population growth and water demand are not developed on the same timeline. For example, Regional Housing Needs Assessments are completed every eight years while urban water management plans are completed every five. This misalignment in timelines creates challenges for ensuring that water supply can meet projected demand. Creating opportunities for planners and water managers to coordinate on a regular basis can support water districts to ensure that necessary water resources are in place to meet projected growth in population and in demand from new, water-intensive industries.
2. **Increased funding for water conveyance, storage, and flood control infrastructure can improve the region's resilience to climate change.** Water districts across the region face challenges with accessing funding for water infrastructure and upgrades. For example, infrastructure funding can be tied to an area's tax base, limiting funding in low-income areas. In other cases, funding for maintenance can compete with funding for capital improvements, creating the need to choose between new infrastructure or upgrades to existing networks. Smaller water agencies face similar challenges accessing funding because they often have lower revenues and limited staff capacity to dedicate to grant funding applications. Recently, some water agencies have had to increase their water rates to support infrastructure improvements and increase the reliability and resiliency of their systems. Greater funding for maintenance and capital improvements can reduce the financial burden on water districts when upgrading infrastructure and improving regional resilience.
3. **Creating consistent datasets for key water management metrics can provide greater clarity for water managers, local jurisdictions, policymakers, and community organizations across the region.** While watersheds span county, city, and water district boundaries, many water management-related datasets are not available or consistent across the region. For example, there is currently no comprehensive dataset at the regional level that consolidates information on the number and type of water supplies used in each district or jurisdiction. This creates a barrier

to understanding water reliability throughout the SCAG region. Similarly, information on groundwater levels and quality is inconsistent and can be challenging to access. Consolidating and sharing key water management datasets across the region can help local planners, policymakers, and community organizations better understand their local water context.

4. **Technical assistance to support water managers with utilizing state and regional datasets can help improve consistency in the use of the datasets and reduce the burden on smaller agencies.** Water supply and demand projections are essential for understanding future water needs and supporting sustainable growth. Water districts develop these projections every five years for their urban water management plans and rely on datasets such as regional growth forecasts and statewide climate models to do so. Utilizing these datasets can be burdensome for local agencies with limited staff capacity or resources. Providing technical assistance to water managers could support these agencies with utilizing these datasets in their local contexts.

## Promising Strategies: Two Case Studies

In support of SCAG's Water Action Resolution, the agency held a Toolbox Tuesday webinar session in May 2025, with representatives from several water management agencies. These representatives highlighted how their agencies are working to address water management challenges in their jurisdictions through collaboration with partners. This section highlights two case studies, one from an urban subregion and one from a rural subregion, to demonstrate the potential for collaboration to support sustainable water management.

### URBAN CASE STUDY: L.A. COUNTY WATER PLAN

Los Angeles County Public Works is facilitating collaboration across many agencies in Los Angeles County to promote sustainable water management through the L.A. County Water Plan. The L.A. County Water Plan is an ongoing, collaborative effort between 28 public agencies to achieve safe, clean, and reliable water resources for the county. (L.A. County Water Plan, n.d.) The plan helps to identify and address the current water infrastructure gaps that exist throughout the county, with the goal of increasing local water supply 600,000 acre-feet by 2045. (L.A. County Water Plan, n.d.) To achieve this, the plan focuses on the key areas:

1) Regional water supply reliability.
2) Groundwater management and quality.
3) Small at-risk system resilience and drinking water quality.
4) Watershed sediment management. (L.A. County Water Plan, n.d.)

The L.A. County Water Plan facilitates collaboration through four task forces that convene key agencies on specific elements of the plan on a quarterly basis. These task forces focus on implementation of the plan's actions related to

1) Water communications.
2) Regional water reliability.
3) Small water systems.
4) Nature-based solutions. (L.A. County Water Plan, n.d.)

Task forces may also periodically call for additional working groups as needed. Task force members include representatives from the county, such as the Los Angeles County Sanitation Districts, L.A. County Public Works, and the Los Angeles County Chief Sustainability Office; local cities; large and small water districts; conservancies; researchers; Tribal groups; and community-based and environmental

organizations. The plan is already advancing a shared vision in the county, with 11 agencies formally adopting the plan to date. (L.A. County Water Plan, n.d.)

## RURAL CASE STUDY EXAMPLE: RIVERSIDE COUNTY WATER TASK FORCE

The Riverside County Task Force is a promising example of water managers and planning agencies working together to plan for a region that is anticipating major growth in the coming years. Riverside County is the fastest-growing county in the state. (Governor Gavin Newsom, n.d.) The Riverside County Water Task Force promotes communication between planning agencies and water districts through regular convenings, supporting sustainable water management in the county. The task force is a collaboration between Western Municipal Water District, Eastern Municipal Water District, and Western Riverside Council of Governments. (Western Municipal Water District, n.d.) Task force meetings facilitate dialogue between these water managers and the subregional government to discuss current and future water issues across the county. This Task force meets on a quarterly basis to discuss water legislation at the state and federal levels, development and growth projections, water rate increases, funding opportunities, water supply conditions, and partnership opportunities. (Shaw, 2025) Previous Task force topics have included investing in resiliency strategies, managing growth and water supply, and preparing for droughts, floods, and fires. (Western Municipal Water District, n.d.)

# SCAG Water Resolution White Paper

## Introduction

In 2022, SCAG Regional Council adopted a Water Action Resolution that called for regional collaboration "to address the region's water challenges and catalyze opportunities to ensure a clean, safe, affordable, and reliable water supply for the region." (SCAG, 2024) The Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy advances the priorities set forth in the resolution. Namely, the plan's climate resilience policies and implementation strategies promote priorities such as sustainable water management, integrated housing and water use planning, and nature-based solutions.

In response to the Water Action Resolution, SCAG developed the "Water Resolution White Paper," which provides a preliminary scan of major water management challenges in the region and promising strategies to address them. The white paper will inform SCAG's future efforts to support member jurisdictions with addressing the region's most pressing water management issues.

## Methodology

Findings in the white paper are based on a combination of desk research and interviews with 22 stakeholders from across the region. More specifically, SCAG spoke with the following types of entities reaching the following geographies:

**Stakeholder Types:**

- State water agency (1)
- Groundwater management agency (1)
- Water districts, including wholesalers and retailers (6)
- Public works/flood control district (2)
- Regional conservation authority (1)
- Community-based organizations (11)

**Geographies Reached:**

- Statewide (1)
- Regional (1)
- Imperial County (3)
- Los Angeles County (4)
- Orange County (3)
- Riverside County (4)
- San Bernardino County (3)
- Ventura County (3)

Findings in this white paper are organized into five sections that align with five indicators for water equity:

- Reliable
- Clean and Safe
- Affordable
- Accessible
- Resilient

These five indicators (defined in each section) align with California's Water Code, which states that "every human being has the right to safe, clean, affordable, and accessible water…" (California State Water Resources Control Board, n.d.) They also align with the US Water Alliance's inclusion of resilience in its Pillars of Water Equity. (US Water Alliance, n.d.) The white paper concludes with a short discussion of next steps for SCAG.

## Key Water Management Issues in the SCAG Region

Water is central to the future growth of the SCAG region. SCAG estimates that there will be an additional two million people living in the region by 2050 (as compared to 2019), and that the region will need additional housing to address current shortages and future need. (SCAG, n.d.) Some counties are also experiencing major growth in water-intensive industries due to the mining of local resources such as lithium. (Resources for California, 2023) With increased population, housing production, and industrial growth, agencies overseeing housing development, land use planning, and water management will need to coordinate to ensure that water supply and conveyance infrastructure can keep pace with growing demand.

Due to the number of water management entities in the region, increased collaboration within and across counties will require careful coordination. The six-county SCAG region contains hundreds of water agencies—including regulatory agencies, public and private utilities, groundwater management agencies, flood control districts, and more. These agencies are tasked with ensuring an adequate supply of clean water and managing runoff. Water purveyors rely on a variety of water sources—from imported water, such as from the State Water Project, the Colorado River, to groundwater from local aquifers. Water portfolios differ between counties, but also within counties and across local water districts, adding to the complexity of the water management network. Despite this complexity, there is no unifying, regional vision for water management, which creates an opportunity for regional collaboration.

Meanwhile, water managers are dealing with ongoing and nascent challenges to water reliability, quality, affordability, accessibility, and resilience that require more collaboration and funding to advance integrated strategies. Climate change threatens both imported and local water resources, increasing the uncertainty of the water supply and, at times, requiring coordination across district and county lines to distribute water to areas in need. Water agencies also must grapple with varied histories of industrial pollution and groundwater over-extraction, which affect the viability of some local water sources and require new technologies to mitigate their impacts. Many local jurisdictions are investigating strategies that can address polluted runoff while also storing water during extreme wet periods for use in dry ones—a cycle expected to become more frequent with climate change. Lastly, some districts are also in the process of updating their water conveyance infrastructure to replace aging pipes and improve network resilience to seismic and climate hazards. To address these challenges, additional funding will be required. In particular, the $3.8 billion in funding dedicated to drought, flooding, and water supply in the recently approved State Proposition 4 presents an opportunity for Southern California agencies to collaborate to secure sizable funds for the region. (California Legislative Analyst's Office, 2024)

SCAG's focus on regional coordination and its strength as a convener position the agency to support collaboration among the numerous planning and water management entities working to address these multifaceted issues in the region. The following sections explore the challenges detailed above and identify existing strategies that can inform SCAG's future work.

## WATER EQUITY INDICATOR: RELIABLE

Water reliability considers the number of water sources and the reliability of each source to which a jurisdiction or water service area has access. This section describes findings from interviews and supplemental research related to water reliability.

**Increased demand from anticipated residential and industrial growth might strain limited water supplies, requiring increased coordination between water managers and local planning agencies.** Interviewed water district representatives emphasized the importance of coordination between water managers and local jurisdictions in planning for anticipated residential and industrial growth to ensure that water supply can meet demand. Several counties in the SCAG region are experiencing rapid population growth and are projected to experience more population growth in the coming decades, such as Riverside and San Bernardino counties. (Governor Gavin Newsom, n.d.) (San Bernardino County Community Indicators, n.d.) Water districts are taking this population growth into account in their water demand forecasting. One water district interviewee cited the agency's plans to provide the necessary water infrastructure to meet growing population demands.

Several counties are also experiencing growth in new, water-intensive industries. For example, there is a rise in geothermal and lithium mining in and around the Salton Sea, a terminal lake that spans Imperial and Riverside counties and is located in an area with enough lithium for 375 million electric-vehicle batteries. (Resources for California, 2023) Lithium and geothermal mining are anticipated to require significant quantities of water for operations. (Wilson & Rode, 2022) Other counties have also seen growth in water-intensive industries, such as biotechnology in Ventura County and artificial intelligence servers in San Bernardino County. As these examples demonstrate, industrial and residential growth will require coordination between planners and water managers to align water supplies with demand.

**Reliance on a limited number of water sources is increasing pressure for local water agencies to diversify water supplies to respond to climate change.** Climate change threatens the reliability of both imported and local water resources. Many water districts in the region rely on imported water from the State Water Project or Colorado River as their main source of water. Research demonstrates that these imported sources are vulnerable to climate hazards such as drought. (James, 2024) In individual interviews, water districts shared their concerns about the impact of climate change on the reliability of their imported water sources in the coming years. Counties that rely on local groundwater are also facing challenges with climate change affecting the reliability of this source. (Orange County Water District, n.d.) (City of San Bernardino Water Department, n.d.) (County of Ventura, n.d.) (Fox Canyon Groundwater Management Agency, 2021) For example, a water district interviewee shared that drought is impacting groundwater levels and requiring the district to consider supplemental water resources. Because of the impact of climate change on the reliability of both imported and local water sources, water districts are focusing on and investing in a combination of strategies, such as stormwater capture, water recycling, and groundwater recharge, to diversify their water portfolios.

**Extreme wet and dry periods due to climate change amplify the need for more water storage to capture rainwater during wet years and support water availability during dry periods.** Water districts are considering more water storage opportunities to mitigate the effects of climate change on water reliability. In an individual interview, a water district that relies on water from the State Water Project shared the importance of having more storage at the state level. Other districts are hoping to capture water locally during periods of heavy precipitation as a means of water banking flood mitigation. Water district representatives from numerous counties shared that they are considering local water storage infrastructure—including groundwater recharge and nature-based solutions—prepare for periods of drought. For example, Los Angeles County is investing in multi-benefit stormwater capture projects

through its Safe Clean Water program, which funds projects that mitigate flooding, collect runoff, and provide other community benefits. (Safe Clean Water LA, 2024) Through these investments, water districts are recognizing the importance of water storage projects for increasing the reliability of their water supplies.

## Existing Regional Strategies to Address Reliability Challenges

This section describes examples of regional strategies that agencies have implemented, or are in the process of implementing, to address the challenges described above. These strategies can help inform SCAG's future work to support sustainable water management efforts in the region.

- **Coordinated efforts between public agencies:** Coordination and collaboration between water managers and local planning entities are essential for water supply planning. Some examples of coordination and collaboration between government agencies include:
    - Imperial County: To address recent Colorado River shortages, the Imperial Irrigation District has entered into short- and long-term water conservation agreements facilitated by the U.S. Department of the Interior. (U.S. Department of the Interior, 2024) These short-term conservation strategies will conserve 700,000 acre-feet of water in the Lake Mead reservoir through 2026. (U.S. Department of the Interior, 2024) There is already evidence that these conservation agreements are succeeding, with Imperial Irrigation District demonstrating the potential to use its lowest amount of Colorado River water allocation since 1941. (Fleck, 2024)
    - Los Angeles County: The L.A. County Water Plan is a collaborative effort between multiple public agencies and community stakeholders and looks at regional water supply reliability, groundwater management and quality, at-risk system resilience and drinking water equity, and watershed sediment management. (L.A. County Public Works, n.d.) The plan takes a "birds-eye" view on water management efforts in the county and, rather than propose new efforts, makes recommendations on what must be done to leverage and align existing activities. (L.A. County Public Works, n.d.)
    - Riverside County: The Riverside County Water Task Force regularly convenes Western Water, the Eastern Municipal Water District, and the Western Riverside Council of Governments. (Western Municipal Water District, n.d.) The Task Force's meeting topics range from presentations from water experts to funding opportunities and important legislation happening at the state and federal levels. (Western Municipal Water District, n.d.)
- **Integrated water management and development policy:** The state of California adopted a statewide green building code, known as CALGreen, to promote sustainable construction practices, which include water conservation and efficiency. (California Department of Housing and Community Development, n.d.) Locally, cities in the region have explored the implementation of water neutral development ordinances to manage water demand alongside new development. For example, in 2017, the city of Santa Monica adopted a Water Neutrality Ordinance, which requires new buildings to comply with standards aimed at ensuring that new development does not increase water demand for the city. (City of Santa Monica, n.d.) The city of Ventura previously had a similar water neutral policy in place, which aimed to address water demand from new development. (Ventura Water, n.d.)
- **Recycled water projects:** Several counties have turned to recycled water projects to reduce reliance on imported water supplies and increase local water supply reliability. Some examples of these projects are:
    - Los Angeles County: The Metropolitan Water District and Los Angeles County Sanitation Districts are partnering on Pure Water Southern California, a regional wastewater recycling program that,

once completed, will create up to 150 million gallons of water each day. (Metropolitan Water District, 2024)

- Orange County: Moulton Niguel Water District is in the process of developing the OASIS Water Resource Center, which will recycle residential and commercial water for irrigation and potentially for direct reuse in homes and businesses. (Moulton Niguel Water District, n.d.)
- Riverside County: Western Municipal Water District's Recycling Facility can treat up to three million gallons of wastewater per day and provides recycled water for irrigation to local cemeteries, golf courses, schools, and parks. (Western Municipal Water District, n.d.) Eastern Municipal Water District has four regional treatment plants that treat over 49 million gallons of wastewater and distribute this water through 260 miles of pipelines to be used for irrigation purposes within their service area. (Eastern Municipal Water District, 2024)

- **Groundwater replenishment projects:** Some groundwater managers are investing in recharge projects to help replenish groundwater supplies by infiltrating water from the surface into underground aquifers. (California Department of Water Resources, n.d.) These projects will contribute to managing groundwater storage systems effectively. Some examples of these projects include:
  - Los Angeles County: The Los Angeles Department of Water and Power partnered with the Los Angeles County Flood Control District on the Tujunga Spreading Grounds Enhancement Project. (LADWP, n.d.) This project, which spans 150 acres, is designed to recharge local groundwater supplies.
  - Orange County: The Orange County Water District's Groundwater Replenishment System treats wastewater for indirect potable reuse through recharge throughout the Orange County groundwater basin. (Orange County Water District, n.d.)
  - San Bernardino County: The San Bernardino Valley Municipal Water District's Enhanced Recharge Project aims to increase groundwater recharge capacity, create 337.4 acres of new recharge basins, and provide an additional 10,807 acre-feet of water a year. (San Bernardino Valley Municipal Water District, n.d.) The San Bernardino Valley Municipal Water District also broke ground on the Weavers Basin to store recycled water with the potential to replenish Bunker Hill Basin with 10 million gallons of recycled water a day. (San Bernardino Valley Municipal Water District, n.d.)
- **Multi-benefit, nature-based stormwater projects:** Stormwater capture projects offer multiple benefits, including rain capture, water filtration, and urban greening. L.A. County Public Works implemented the Elmer Avenue Project–a multi-benefit project in Sun Valley that includes water conservation strategies on both private and public property, such as rain barrels, bioswales, permeable pavers, and underground filtration. (L.A. County Public Works, n.d.) Additionally, in San Bernardino County, the Cactus Basin project will mitigate increased stormwater flow and recharge groundwater basins, while also providing trails and bike lanes accessible to the public. (San Bernardino County Public Works, 2023)
- **Native water management practices:** Native water management practices can provide helpful insight for addressing the region's challenges. An interviewee from a community-based organization shared that Tribal knowledge is essential to their water advocacy work and that their Tribal partners lead seminars and workshops on effective and holistic water management practices to support community organizations and local jurisdictions.

## WATER EQUITY INDICATOR: CLEAN AND SAFE

Clean and safe water translates to the quality of water for purposes such as human consumption, cooking, and sanitation. The quality of water delivered is affected by the source water, treatment methods, and the material, age, and operations of the applicable conveyance and delivery systems. Clean and safe also refers to the quality of environmental water. This section describes findings from interviews and supplemental desk research related to water cleanliness and safety.

**Aging infrastructure and untreated water impact the quality of local water supplies.** Poor water quality due to different sources of contamination is a concern and priority for communities, community-based organizations (CBOs), and water districts across the SCAG region. One concern is referred to as "premise plumbing," where the water at the source is clean, but the plumbing itself, likely due to aging municipal and residential water pipes, contaminates the drinking water. (NRDC, 2024) (Villegas et al., 2023) Interviewed CBOs shared that the communities they work with, many of which are low-income, have expressed concerns about premise plumbing due to the poor tap water they receive in their homes. Interviewed water district representatives recognized the importance and need to upgrade their existing plumbing infrastructure, but cited funding as a significant barrier to these upgrades.

Some residents in Imperial County utilize untreated canal water for certain purposes, which poses water quality issues for these residents if consumed without proper treatment. As part of the terms of use for canal water, the local water district requires these rural homes to have a contract with a bulk or bottled water delivery service in accordance with the Safe Drinking Water Act. (Imperial Irrigation District, n.d.) Residents are required to coordinate these services, with financial discounts from the Imperial Irrigation District to help with the delivery costs for customers who qualify. (Imperial Irrigation District, n.d.) Interviewed CBO representatives expressed concerns about the quality of untreated canal water, as many families still use it to wash dishes or bathe.

**Industrial and agricultural runoff negatively impact drinking water supplies in several parts of the region; this runoff can also have broader implications for local watersheds and communities, requiring coordination between planning agencies and water managers.**

Another major source of water contamination comes from runoff from local industries. Interviewed CBOs across multiple counties shared that urban runoff from local industry, such as manufacturing, contaminates groundwater and surface water sources; some of these contaminants include per- and poly-fluoroalkyl substances (PFAS), arsenic, and Chromium-6, which have been shown to cause cancer and other serious chronic illnesses. (Bartell, 2023) (Brogan, 2024) (California State Water Resources Control Board, 2024) Water districts in Orange County are addressing some of these pollutants through investments in technologies to remove PFAS and other contaminants from drinking water. (Huang, 2024) (Orange County Water District, n.d.) Additionally, CBO interviewees shared concerns about runoff from the agricultural industry. They emphasized the importance of stronger enforcement of regulations over pesticide use to minimize impacts on local watersheds.

In addition to its impact on drinking water supplies, agricultural runoff can also affect local watersheds and communities. For example, the Salton Sea's main water source is agricultural runoff. (Bittle, 2022) Efforts to reduce agricultural water use, such as fallowing (coordination between water managers and farmers to shut off irrigation for certain crops over a specified period), have lowered the Salton Sea's levels. (Water Education Foundation, 2020) Lowered sea levels have exposed seabed dust, which has become toxic from decades of accumulated agricultural runoff. This dust has been associated with higher rates of asthma among members of nearby communities, many of which are low-income communities of color. (Peterson, 2024) (Gewin, 2024) Due to these public health impacts and the impact of fallowing on

local farmworker jobs, interviewed CBO representatives underscored the importance of balancing water conservation goals with strategies to address health and economic impacts in their communities.

### Existing Regional Strategies to Address Challenges With Clean and Safe Water

This section describes examples of regional strategies that agencies have implemented, or are in the process of implementing, to address the challenges described above. These strategies can help inform SCAG's future work to support sustainable water management efforts in the region.

- **Emerging contaminant treatment technologies:** Water districts are investing in technologies that address PFAS in local drinking water supplies. For example, Orange County Water District is a leader in this area; the agency already removes PFAS in some of its operations, including the Groundwater Replenishment System. (Orange County Water District, n.d.) The agency is expanding its work in this area and recently put out a call for bids to develop a PFAS treatment center. (Orange County Water District, n.d.) The city of Yorba Linda also built a PFAS treatment center with 22 tanks that hold 4,500 gallons of water and provide treated water to 80,000 people. (Huang, 2024)
- **Nature-based solutions that address water quality:** In addition to supporting water storage and flood mitigation, nature-based solutions can also promote improved water quality in creeks, rivers, the ocean, and other natural water bodies. (Duke University, 2025) Entities in several counties are using nature-based solutions to help address their water and climate challenges. For example, the Safe Clean Water Program in Los Angeles County generates approximately $285 million per year through a special tax and funds projects, studies, and educational programs that capture water and promote improved water quality. (Safe Clean Water LA, 2024) As an additional example, the CBO-led Surfrider Ocean Friendly Garden program in Ventura County provides guidance on how residents can plant gardens that use native plants and other water conservation strategies to reduce water runoff and filter pollutants. (Surfrider Foundation, n.d.)
- **Community-led education and research initiatives:** Communities are leading clean water initiatives or campaigns that focus on advocacy and community education on water quality and health issues. For example, Orange County Environmental Justice's Communities Organizing for Better Water campaign focuses on addressing and raising awareness about water inequality in the county through a community-based research model. (Orange County Environmental Justice, 2018)

## WATER EQUITY INDICATOR: AFFORDABLE

Water affordability refers to the portion of household median income allocated to paying for water. Low affordability of water means that communities pay a relatively high cost for water, which can disproportionately impact income-constrained communities. This section describes findings from interviews and supplemental desk research related to water affordability.

**Low-income communities across the SCAG region are struggling to afford rising water rates due to the increased costs of water management.** The cost of water management has increased for water districts due to factors such as increased water quality regulations. (James, 2024) An interviewed water district representative shared that their district has had to increase water utility rates to keep up with the rising costs of managing water supplies. Interviewed representatives from community-based organizations (CBOs) emphasized that increased rates have disproportionate financial impacts on low-income communities, which may struggle to cover increases in their water bills. While residents might be aware of subsidies to support paying for electrical bills, one CBO representative shared that more education regarding monthly discount programs for water is needed for qualifying families. As water districts invest in new technologies to meet regulatory standards, they will also need to consider strategies to address the financial impacts on their low-income customers.

### Existing Regional Strategies to Address Affordability Challenges

This section describes examples of regional strategies that agencies have implemented, or are in the process of implementing, to address affordability challenges. These strategies can help inform SCAG's future work to support sustainable water management efforts in the region.

- **Water rate structures that promote water conservation and affordability:** To help address concerns with water rate affordability, water districts are employing innovative rate structures that anticipate water demand. Moulton Niguel Water District, Western Water Municipal Water District, and others use a budget-based water rate system that calculates efficient water use for a household based on anticipated need, where customers who use waterwithin an allocated budget pay lower rates. (Moulton Niguel Water District, n.d.) (Western Municipal Water District, n.d.) "Need" can be calculated based on a combination of factors, such as landscaped area, household members, and localized weather conditions.

## WATER EQUITY INDICATOR: ACCESSIBLE

Access to water refers to the presence and condition of water conveyance and flood control infrastructure. Areas that have aging infrastructure that can lead to water main breaks or that lack existing or comprehensive distribution networks have lower accessibility. This section describes findings from interviews and supplemental research related to water accessibility.

**Funding the costs of needed upgrades to aging water conveyance and flood control infrastructure is challenging, especially for small water systems that have limited funding capacity.** Due to the vulnerability of aging infrastructure to climate hazards and the effect of some aging pipes (e.g., lead pipes) on water quality, it is imperative to upgrade aging infrastructure to ensure communities have reliable access to water and have reliable stormwater infrastructure. However, doing so is costly, and several interviewed representatives from water districts and planning agencies cited obtaining the necessary funding to cover the costs of infrastructure upgrades as one of their biggest challenges. For example, an interviewed county representative shared that because the funding structure of their flood control district is tied to each area's tax base, there is often limited funding for much-needed stormwater infrastructure upgrades in low-income areas. Additionally, an interviewed groundwater management agency noted that securing funding for needed upgrades can be challenging because it often competes with funding for capital improvements.

The challenge of securing funding for necessary infrastructure upgrades is felt most heavily by small water systems due to their limited funding and staff capacity. Research shows that because of their limited revenue and staff resources, small water systems struggle with infrastructure maintenance more than larger water systems. (California Water Resources Control Board, n.d.) (California State Water Resources Control Board, 2021) (Bardeen, 2021) Therefore, it is important to provide funding support to small water districts.

**New infrastructure is needed in some rural parts of the region to provide reliable water access for historically disinvested communities.** Some rural and low-income communities have limited access to water infrastructure. For example, some communities in Imperial County rely on untreated canal water for non-potable uses, as noted above. Interviewed representatives from community-based organizations (CBOs) also shared that many trailer park communities (called "Polanco Parks") in rural Riverside County do not have sufficient water infrastructure. Polanco Parks, which are typically occupied by farmworker communities, have a legacy of disinvestment. (Mendez, 2015) Funding is needed to support the construction of new water conveyance infrastructure, especially in historically disinvested communities in the region.

### Existing Regional Strategies to Address Accessibility Challenges

This section describes examples of regional strategies that agencies have or are in the process of implementing to address the challenges described above. These strategies can help inform SCAG's future work to support sustainable water management efforts in the region.

- **Cross-sector infrastructure planning:** The Coachella Valley Water District's (CVWD's) Disadvantaged Communities Infrastructure Task Force is an interdisciplinary body made up of representatives from CVWD, CBOs, elected officials' offices, and government agencies. (Coachella Valley Water District, n.d.) The group has successfully secured $100 million in funding for several infrastructure projects that will provide reliable, clean drinking water and sewage waste systems for the Eastern Coachella Valley, which is home to many Polanco Parks and trailer parks. (Coachella Valley Water District, 2024)

## WATER EQUITY INDICATOR: RESILIENT

Resilience refers to the ability to "bounce back" from environmental and climate change impacts such as droughts, floods, and sea level rise, as well as earthquakes or other disasters. This section describes findings from interviews and supplemental research related to resilience.

**With more extreme climate impacts projected, there is a need to invest in adaptive and resilient solutions to climate and other natural hazards.** To support adaptation and resilience to climate risks, investments in climate resilient water management strategies are needed. As previously discussed, water districts have shared that climate hazards such as drought and wildfires, and other natural hazards such as earthquakes, affect their service areas and infrastructure. (FEMA, 2021) To ensure that their water supply is available during these crisis periods, water districts are assessing how best to prepare for these hazards. One water district interviewee shared that the district is investing in emergency planning and infrastructure upgrades to support their ability to provide uninterrupted water supply during local fires and that their water storage is resilient to earthquakes. As the region braces for more climate extremes and projected seismic activity, water districts will continue to plan for and implement strategies to shore up their existing infrastructure.

#### Existing Regional Strategies to Address Resilience Challenges

This section describes examples of regional strategies that agencies have or are in the process of implementing to address the challenges described above. These strategies can help inform SCAG's future work to support sustainable water management efforts in the region.

- **Planning and investments in wildfire resilience strategies:** To promote preparedness in the event of a wildfire, Moulton Niguel Water District developed its Emergency Preparedness Program, which focuses on ensuring water reliability during a fire event. The district is also investing in improvements to increase its resilience to wildfires. (Moulton Niguel Water District, n.d.) These include investments in water conveyance infrastructure, fire hydrants, and backup generators.
- **Wildfire resilience educational resources:** In addition to planning for and investing in strategies that promote resilience, Moulton Niguel also provides free educational resources to its customers to further promote wildfire resilience across its service area. The district has hosted free community workshops on residential home hardening measures to help improve the resilience of the homes within their district to wildfires and to help mitigate contaminated runoff from flowing into water systems after a fire. (Moulton Niguel Water District, 2022)

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