

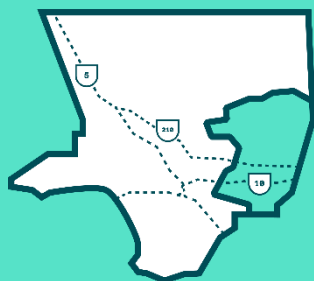


**SAFE
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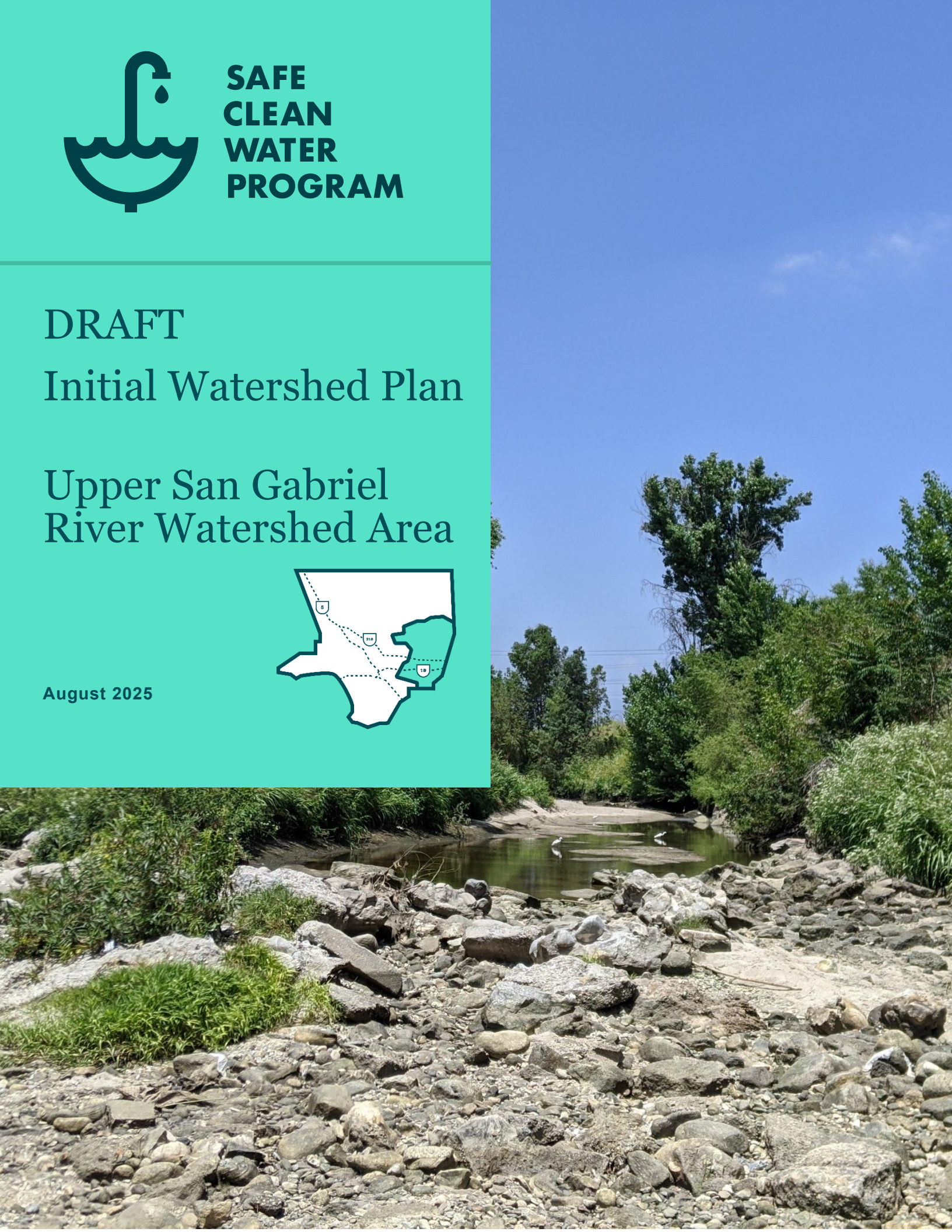
DRAFT

Initial Watershed Plan

Upper San Gabriel River Watershed Area



August 2025





DRAFT Initial Watershed Plan

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Chapter 1. Introduction

The Upper San Gabriel River (USGR) Initial Watershed Plan represents a historic milestone in the Safe, Clean Water (SCW) Program, by providing targeted guidance on what can be achieved within the scope of the SCW Program and reflects the diverse landscape of the USGR Watershed Area (WA). The Initial Watershed Plans should be used to inform regional stormwater priorities to ensure that Project and Program¹ implementation aligns with both the SCW Program 14 Ordinance-established Goals² (Goals) and community needs.

The SCW Program was established to improve water quality, enhance local water supply, and invest in communities. Grounded in the principles of sustainability, equity, and resilience, the SCW Program supports multi-benefit Projects and Programs that improve water quality while simultaneously delivering meaningful outcomes for communities—such as improved air quality, reduced urban heat, and increased access to green space, etc.—across the Los Angeles region.

The USGR WA Initial Watershed Plan serves as a strategic blueprint for what can be accomplished using SCW Program funds as well as through coordinated efforts that leverage additional local, state, federal and other resources, and funding by setting targets and defining strategies tailored to local challenges and opportunities. It reflects the collective insights and priorities of the Regional Oversight Committee (ROC), Watershed Area Steering Committees (WASCs), Municipalities, Community Leaders, and Community-Based Organizations (CBOs). This Initial Watershed Plan is intended

¹ As defined in Chapter 16 of the Los Angeles County Flood Control District (LACFCD; District) Municipal Code (LACFCD Code §16):

- “Project” means the development (including design, preparation of environmental documents, obtaining applicable regulatory permits, construction, inspection, and similar activities), operation and maintenance (including monitoring), of a physical structure or facility that increases Stormwater or Urban Runoff capture or reduces Stormwater or Urban Runoff pollution in the SCW Program Watershed Areas.
- “Program” means a planned, coordinated group of activities related to increasing Stormwater or Urban Runoff capture or reducing Stormwater or Urban Runoff pollution in the SCW Program Watershed Areas.
- A “multi-benefit Project” must have (1) a Water Quality Benefit, and (2) a Water Supply Benefit or a Community Investment Benefit, or both.
- 16.05.C. Projects implemented through the Municipal Program shall include a Water Quality Benefit. Multi-Benefit Projects and Nature-Based Solutions are strongly encouraged.
- 16.05.D.1. Infrastructure Program. This program shall implement Multi-Benefit watershed-based Projects that have a Water Quality Benefit, as well as, either a Water Supply Benefit or Community Investment Benefit, or both.

² As defined in Chapter 18 of the LACFCD Municipal Code (LACFCD Code §16).

for use by the ROC, the USGR WASC, Project and Program proponents, Municipalities, Planners, CBOs, and Community Leaders. Infrastructure Program Project Applicants are expected to align with the Initial Watershed Plan, which can be streamlined by following the strategies outlined in this Plan. The WASC will incorporate Projects and Programs that reflect this alignment and deliver multiple benefits to ensure that funding addresses the highest-priority WA needs while maximizing Water Quality, Water Supply, and Community Investment Benefits (CIBs). For additional information, please visit [the SCW Program Watershed Planning webpage](#).

This Initial Watershed Plan provides a tailored set of baselines (Chapter 3), targets (Chapter 4), and strategies (Chapter 5) for the USGR WA. This Initial Watershed Plan outputs draw on the USGR WA's unique characteristics (Chapter 2), findings from key efforts to date—including SCW Program Scientific Studies—best available data, and input from interested parties (Section 1.4). They offer practical guidance for Los Angeles County Public Works (Public Works), the ROC, USGR WASC, Municipalities, and Project and Program proponents to implement Projects and Programs that deliver multiple benefits, address diverse needs, and support progress toward achieving multiple SCW Program Goals. Importantly, the Initial Watershed Plans are not intended as comprehensive watershed management plans. Instead, they provide targeted guidance based on what can be achieved within the scope of the SCW Program and its WAs. Project and Program proponents are required to align implementation with these Plans when planning and applying for SCW Program funding.

Complementing this Initial Watershed Plan are two key resources:

- A SCW Program-wide Executive Summary³, developed as a separate companion document to the Initial Watershed Plans. This Executive Summary serves to distill the key elements of each WA's Initial Watershed Plan—such as baselines, targets, strategies, and opportunities—while also providing broader context about Goals, structure, and implementation framework. It is intended to help readers quickly understand the core components of each Initial Watershed Plan and how local planning efforts fit into the overarching objectives of the SCW Program.
- The [Watershed Planning Tool](#) (Planning Tool; Chapter 6), an online interactive, living resource that tracks progress, supports Project and Program planning,

³ To be released with the final Initial Watershed Plans in early 2026.

and helps to inform strategic funding decisions. Integrated with the SCW Program Portal—including the Stormwater Investment Plan (SIP) Tool, Projects Module, and Reporting Module—it enables WASCs to evaluate funding scenarios, assess Project contributions, and ensure alignment with current Project data and implementation progress.

These resources are companions to the Initial Watershed Plans and communicate their outputs and progress to interested parties and community members. These planning elements are summarized in Figure 1-1 and their functions and users are summarized in Section 1.3 and detailed throughout this plan. Additionally, the Initial Watershed Plans will establish a shared language to promote a clear understanding of Watershed Planning concepts and Initial Watershed Plan outputs. Key definitions and acronyms are presented in Appendix A and Appendix B respectively.

Together, the Initial Watershed Plans, Planning Tool, and SCW Program-wide Executive Summary launch an adaptive cycle that will assess progress and adjust outputs through future Watershed Planning efforts, such as Adaptive Watershed Plans (Chapter 7). Informed by community input, scientific findings, and performance data, this approach enables responsive and effective planning.



Figure 1-1. Major Initial Watershed Plan inputs and outputs of SCW Program Watershed Planning

1.1 Safe, Clean Water Program Background

In November 2018, Los Angeles County voters approved Measure W, establishing a special parcel tax to fund the SCW Program in the Los Angeles region. The SCW

Program collects approximately \$280M annually to support implementation of multi-benefit Projects and Programs, making it the largest program for delivery of stormwater capture Projects and Programs in the nation. All investments from Projects and Programs align with the SCW Program's 14 Goals. Funding is distributed across three sub-programs: the Regional Program, Municipal Program, and District Program. Each sub-program and its funding allocation are detailed in Figure 1-2 below.

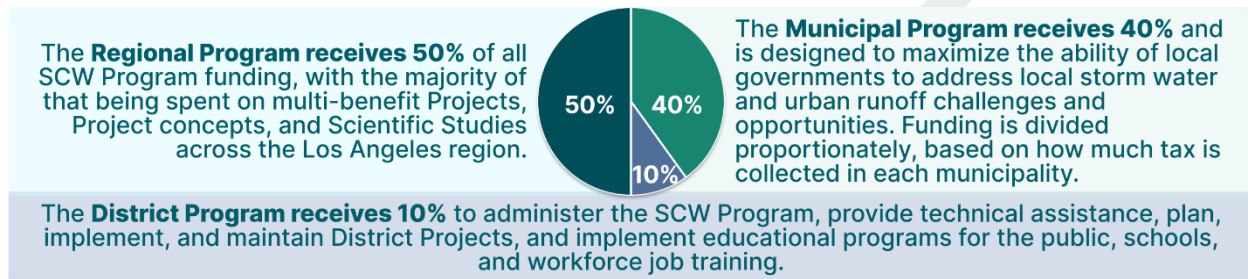


Figure 1-2. Funding allocations by each of the three main programs of the SCW Program

The SCW Program is organized around nine WAs within the Los Angeles region, capturing the unique circumstances and challenges of each WA by diverse representation, as shown in (Figure 1-3).

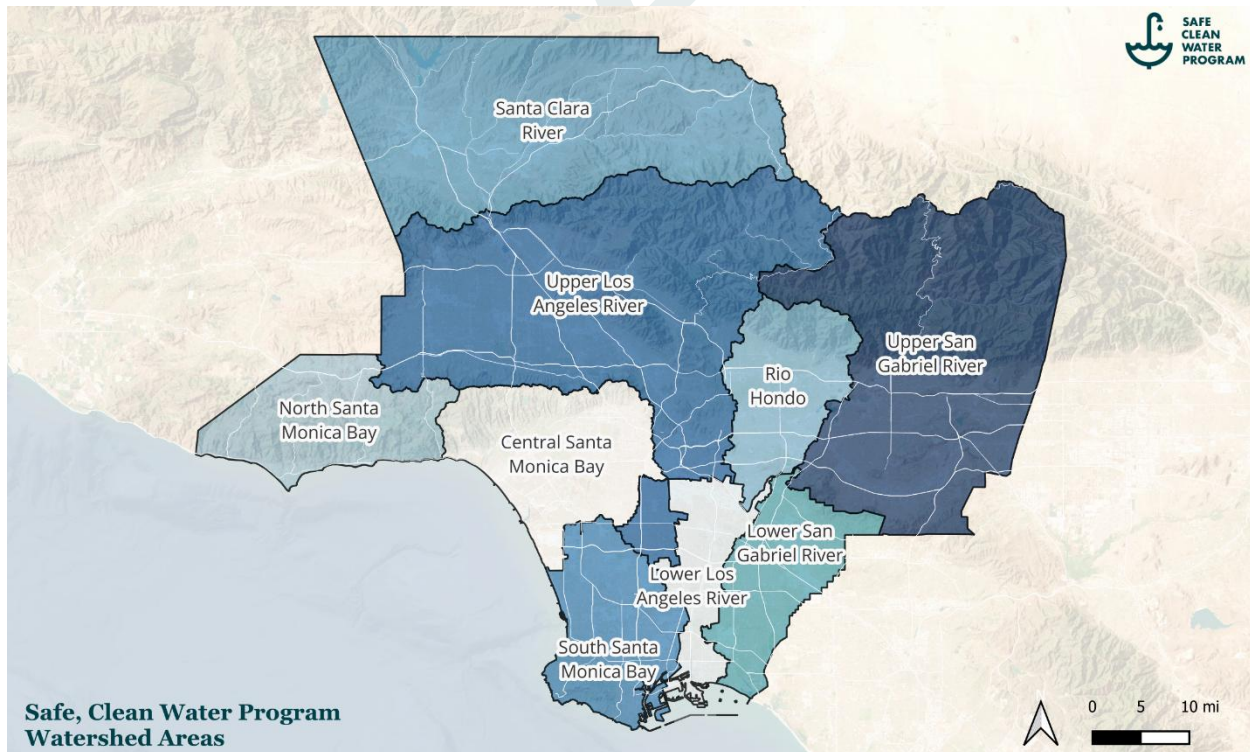


Figure 1-3. Nine SCW Program WAs

11 committees, listed below, oversee the effective governance of the SCW Program and help ensure that the SCW Program and its funded activities are fulfilling its objectives and goals.

- The **ROC** is responsible, on a program-scale, for assessing whether Goals are being met. The ROC consists of subject matter experts with knowledge in Water Quality Benefits, Water Supply Benefits, Nature-Based Solutions (NBS), CIBs, public health, sustainability, and other relevant issue areas.
- The nine **WASCs** are occupied by municipal, agency, and community stakeholders. They review proposed Projects, Project Concepts, and Scientific Studies and develop SIPs for their respective WAs as part of the Regional Program. Each WASC is supported by at least one Watershed Coordinator, who assists in guiding Projects from concept to implementation and promotes engagement throughout the process.
- The **Scoring Committee** works in partnership with Public Works to review and finalize scores for Projects being considered by each WASC for the Regional Program. The Scoring Committee is comprised of subject matter experts in Water Quality, Water Supply, NBS, and CIBs.

1.2 Why Watershed Planning?

The first five years of the SCW Program have been a tremendous success, with over \$1.4 billion in funding allocations projected by 2030 for more than 200 multi-benefit Regional and Municipal Program Infrastructure Projects, 23 Scientific Studies Program Studies⁴, 53 Technical Resources Program Project Concepts⁴, 12 Watershed Coordinators, and a spectrum of valuable Programs for the 86 Municipalities across the nine SCW Program WAs.



Recognizing this momentum and the opportunity to increase community benefits through improved stormwater management, the Los Angeles County Board of Supervisors (BOS) adopted a motion in July of 2023 to accelerate SCW Program implementation. This motion led to the formation of the SCW Program Watershed Planning Section within Public Works—a dedicated team tasked with guiding regional and watershed-based planning. Subsequent motions further defined the vision for Watershed Planning, with Figure 1-4 highlighting examples of these BOS motions.

⁴ Counts Scientific Studies and Project Concepts included in the FY25-26 SIPs.

“A vision document that identifies areas within each watershed with the greatest potential opportunities for improvements would ensure continuity and connectivity between interventions. The vision would lessen the burden on both applicants and committees as they consider which suites of Projects could be most impactful.” (2023-07-25)¹

“These efforts are progressing toward a single publicly accessible planning portal that would provide direction for implementation. This comprehensive Planning Tool would likely assist a more diverse set of applicants to identify Projects that could achieve multiple benefits and best serve our communities.” (2023-07-25)¹

“These goals must be balanced with essential flexibility in the Program for governance committee discretion and changing conditions and community needs.” (2023-07-25)¹

“The watershed plans will help foster the design and implementation of the most impactful Projects and will also aid the District and governance committees in considering Project submissions and evaluating Program progress.” (2023-11-27)²

“These plans will build upon other plans, in-progress efforts, and assessment of community needs to identify the most promising opportunities for achieving high-impact water quality, water supply, and community enhancing multi-benefit outcomes.” (2023-11-27)²

“...watershed-specific needs and capabilities should be considered in planning, and...the Program needs to better quantify Program success and progress towards Goals.” (2024-03-19)³

“Performance measures (or metrics) as well as related population indicators (targets) are already being incorporated to guide Watershed Planning, inform project development and solicitation, and to evaluate achievement of the [SCW Program] Goals.” (2024-06-20)⁴

“The Watershed Planning process will involve extensive engagement with the WASCs, the ROC, Municipalities, community groups, and other interested parties.” (2024-06-20)⁴

Figure 1-4. Board of Supervisors Motions describing a vision for Watershed Planning

¹ BOS Motion of July 25, 2023, Agenda Item 23 Accelerating Implementation of the SCW Program

² BOS Motion of July 25, 2023, Agenda Item 23, 120 Day Report Back (2023-11-27)

³ BOS Motion of March 19, 2024, Agenda Item 19 Progress and Adaptive Management of the SCW Program

⁴ BOS Motion of March 19, 2024, Agenda Item 19, 90-day Report Back (2024-06-20)

At this critical point for water in the Los Angeles region, the Initial Watershed Plans aim to accelerate implementation by providing guidance for future investments by Public Works, WASCs, and Municipalities toward the most impactful multi-benefit Projects and Programs. Developed through a collaborative and responsive phased engagement approach⁵, this guidance, and its highlighted priorities, are driven by engagement input from governance committees (i.e., the WASCs and ROC) and informed by technical analyses. The Initial Watershed Plans directly reflect governance committee priorities and draw on their regional expertise to provide Public Works, the ROC, WASCs, Municipalities, and Project and Program proponents with SCW Program-specific resources to guide implementation and establish targets for tracking progress toward Goals.

Additionally, the Initial Watershed Plans will support broader planning initiatives beyond the SCW Program by providing a framework for decision-making that aligns with and contributes to regional and local objectives. These include efforts such as the

⁵ The Initial Watershed Plan engagement process followed a “listen—confirm—advance” approach—listening to input from the WASC and ROC, confirming a shared understanding to ensure alignment, and using validated input to guide analyses and set priorities.

OurCounty Sustainability Plan, County Water Plan (CWP), Watershed Management Programs (WMPs), Vision 2045, County of Los Angeles 2045 Climate Action Plan (2045 Climate Action Plan), etc.

1.3 Watershed Planning Process & Structure

SCW Program Watershed Planning is an iterative process that incorporates elements of the Results-Based Accountability Turn the Curve Thinking framework (Mark Friedman, 2005) and the United States Environmental Protection Agency (USEPA)'s [*Handbook for Developing Watershed Plans to Restore and Protect Our Waters*](#). These foundational approaches guided the development of the Initial Watershed Plans, the online Planning Tool, and the framework for Adaptive Watershed Plans. To communicate progress toward achieving Goals and describe the shared vision of capturing and cleaning stormwater while also enhancing communities, Watershed Planning organizes concepts and results around each Goal. Goals are then grouped into nine Planning Themes, as illustrated in Figure 1-5.

The Watershed Planning process integrates interested party input, regional and local plans and requirements, key effort objectives and findings, technical analyses, and progress by SCW Program Projects to establish WA targets (Chapter 4) and strategies (Chapter 5). These elements are brought together in the nine Initial Watershed Plans and Planning Tool to guide the implementation of impactful, multi-benefit Projects and Programs.



*While not aligned with a specific theme, Goal L is supported by Watershed Planning as a whole.

Figure 1-5. Planning Themes and SCW Program Goals (Section 18.02 of the LACFCD Municipal Code)

Figure 1-6 outlines Watershed Planning's adaptive, iterative process and each of its core elements. Throughout this process, outreach and engagement play a central role, informing and shaping each component.

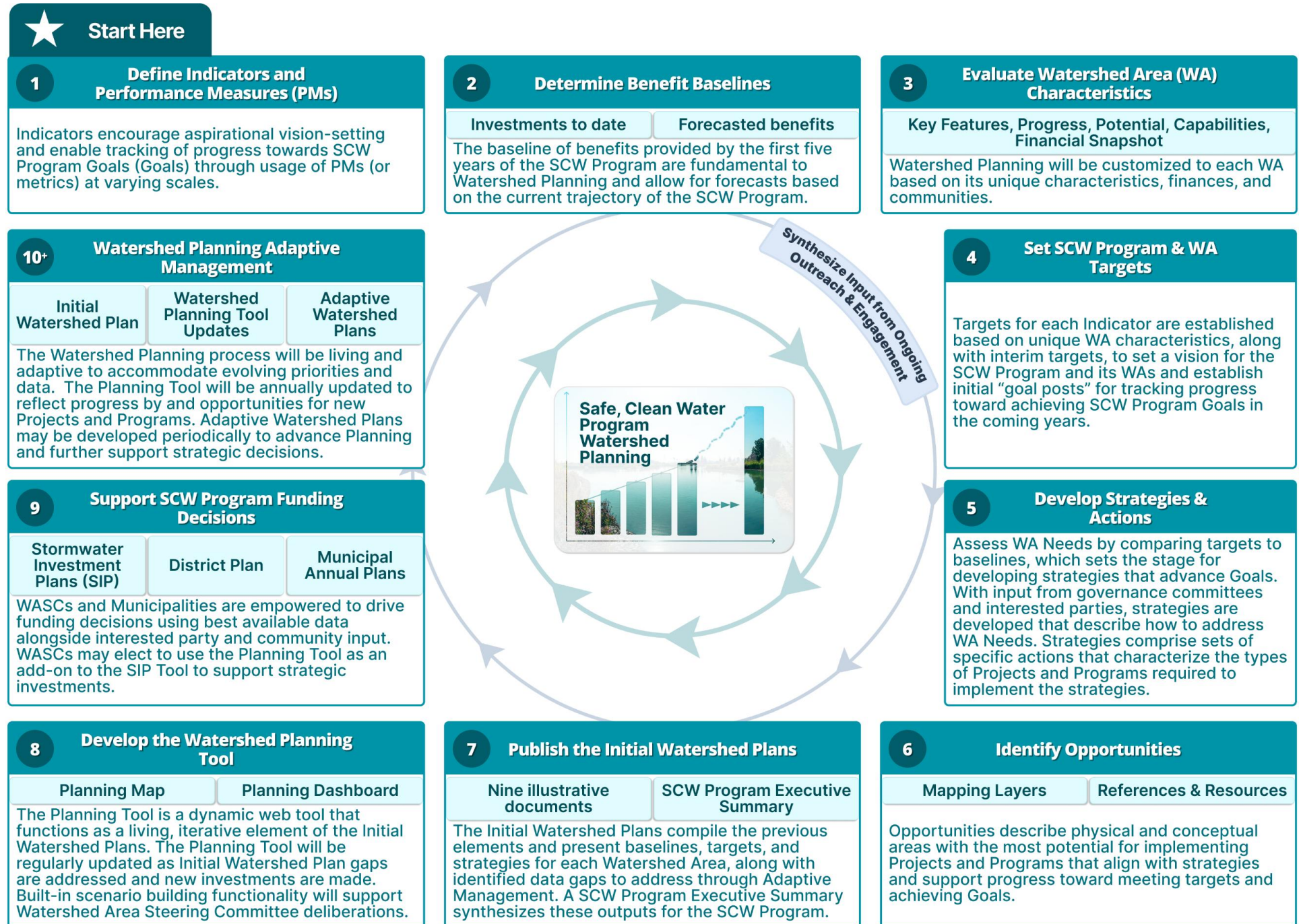


Figure 1-6. SCW Program Watershed Planning Elements

Building on this process, the Initial Watershed Plans and the Planning Tool serve as living, iterative resources that can be used by a range of interested parties—Public Works, WASCs, the ROC, Municipalities, Project and Program proponents, and community members—to:

- **Support** the acceleration of SCW Program implementation (e.g., planning, funding, and progress tracking across the WAs and SCW Program).
- **Expand** and enhance the range of benefits provided by new and continuing Projects and Programs.
- **Communicate** progress and governance committee priorities clearly.

Specifically, the Initial Watershed Plans and the Planning Tool can be used by the interested parties mentioned above to collaboratively accelerate progress toward Goals as described below:

- **WASCs, the ROC, and BOS** can use these resources to communicate priorities, assess Project benefits, and guide future SIPs and funding decisions.
 - **Assess baselines and targets:** Review WA baselines, metrics, targets, WA Needs, and key quantification methods.
 - **Communicate priorities:** Share priorities and strategies with Project Proponents, Municipalities, community members, and other interested parties.
 - **Identify synergies and study gaps:** Align funding decisions with local and regional planning efforts and flag needs for Scientific Studies.
 - **Plan next steps:** Consider near- and long-term recommendations for Watershed Planning.
 - **Review progress:** Evaluate individual and cumulative Project benefits to assess progress to date and inform planning.
 - **Consider funding scenarios:** Test Regional Program SIP Project and Program funding scenarios developed in the SIP Tool using the Planning Tool to evaluate progress and potential contributions by Project and Program applicants.
 - **Identify overlaps and gaps:** Spot Project benefit redundancy and opportunities to directly support Goals to inform future funding decisions.
 - **Incorporate community insight:** Use findings from the Community Strengths and Needs Assessment (CSNA) to understand community priorities and inform future decisions.
- **Municipalities and Project and Program proponents** can refine and align their Projects and Programs with governance committee and community

priorities, identify opportunities, and select design features that address local needs and support multiple Goals.

- **Understand WA context:** Evaluate potential and challenges for achieving Goals.
- **Refine Project Concepts and scopes of work:** Ensure Projects and Programs are designed with clear reference to SCW Program targets and strategies and alignment with Goals. Refine Project Concepts to stay responsive to evolving watershed and community needs. Well-defined scopes with distinct Project components can help the identification of specific leveraged funding opportunities (e.g., grants) and support leveraging outside resources. Clear articulation of multi-benefit elements can make Projects more competitive for complementary funding programs.
- **Utilize opportunities:** Leverage composite geographic information system (GIS)-based opportunities to identify the best areas where Projects can provide both Water Quality Benefits and co-benefits like Water Supply Benefits and CIBs.
- **Align with community input:** Ensure Projects reflect community priorities and concerns by incorporating insights from the CSNA Survey and Dashboard into Project-specific engagement and design choices.
- **Community members and other interested parties** are empowered with knowledge, tools, and data to track progress, engage meaningfully, and advocate for impactful, equitable watershed investments.
 - **Learn about Watershed Planning and Projects:** Understand SCW Program Watershed Planning, local WA characteristics, and local planned and constructed Project benefits.
 - **Understand targets and strategies:** Explore WA-specific targets and priorities to inform future Projects and Programs.
 - **Advocate for local priorities and Projects:** Get involved in Watershed Planning engagement through the CSNA and identify locations for beautification and voice individual priorities and concerns.
 - **Identify local challenges:** Recognize water issues and how Projects and Programs are prioritized.
 - **Track progress:** Use the Planning Tool to monitor progress toward Goals and view the latest Project and Programs

Together, the Initial Watershed Plans and Planning Tool launch an Adaptive Watershed Planning cycle that assesses progress and adjusts strategies to address evolving priorities.

1.4 Working Together

The Initial Watershed Plans synthesize input from interested party engagement, technical studies, and local and regional planning efforts to develop coordinated targets and strategies. These strategies are designed to be both practical and aligned with broader planning initiatives (examples listed in Table 1-1), supporting the SCW Program's Goals while contributing meaningfully to other local and regional priorities. This integrated, collaborative approach strengthens collective problem-solving and positions the SCW Program to effectively help address complex water and climate challenges facing the Los Angeles region.

1.4.1 Engagement with Interested Parties

Watershed Planning activities facilitated both regional and WA-specific engagement across a range of interested parties. Watershed Planning was guided by a robust 2024–2025 engagement schedule designed to support genuine dialogue and timely input from SCW Program governance committees—ROC, WASCs, and the Scoring Committee—as well as other interested parties. The engagement strategy prioritized focused, structured facilitation—rather than open-ended discussion—to ensure input had a meaningful and actionable impact on technical analyses and planning decisions.



Figure 1-7. Initial Watershed Plan engagement and collaborators

Watershed Planning’s collaborative, cross-sector approach engaged a diverse range of interested parties (Figure 1-7) across key areas of expertise. The Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit Group contributed insights on regulatory compliance and water quality; OurWater LA provided guidance on equity-focused CIB analyses, NBS, and green jobs; the schools working group emphasized school greening; and Rebuild Southern California Partnership offered expertise in workforce development and Project delivery. These are examples of how engagement led to broad expertise contributing to strategy development across all Goals.

A phased engagement approach was implemented, with input from each phase informing the development of the Initial Watershed Plans. This input directly supported the identification of WA-specific and SCW Program-wide priorities and strategies, as presented in Chapter 5. A full summary of engagement activities conducted with governance committees, interested parties, and the public—including public meetings—is provided in Appendix C.

1.4.2 Community Strengths and Needs Assessment (CSNA)

In November 2024, the SCW Program Watershed Planning Section launched the CSNA, which consists of a Survey and an online Dashboard that gathers community perspectives to strengthen the achievement of Goals. The CSNA allows community members to share their concerns, priorities, and what they value about their communities. Using CSNA Survey results as a reference, Projects and Programs can be more responsive to those community-stated priorities. Those who live, work, study, or serve in a community often best understand the challenges and strengths of their community. Responsiveness to ideas shared by a community can support greater relationships related to a specific Project and bolster long term partnerships between a community and the agencies and representatives that serve them.

The [CSNA Survey](#) (Figure 1-8) consists of 11 questions, allowing the community to identify their priority areas of concern for stormwater-related issues and potential improvements. Additionally, the [CSNA Dashboard](#), a GIS online platform, visually displays survey response trends, which can be filtered by WA, Municipality, and specific community. The public CSNA Dashboard may also be used to support other planning initiatives beyond the SCW Program. Data from the CSNA is also featured in the Watershed Planning Tool to support Watershed Planning and Project implementation. Additional information on the CSNA is in Appendix D and details how

the CSNA can be leveraged to support Watershed Planning, and Project and Program implementation are outlined in Chapter 5.

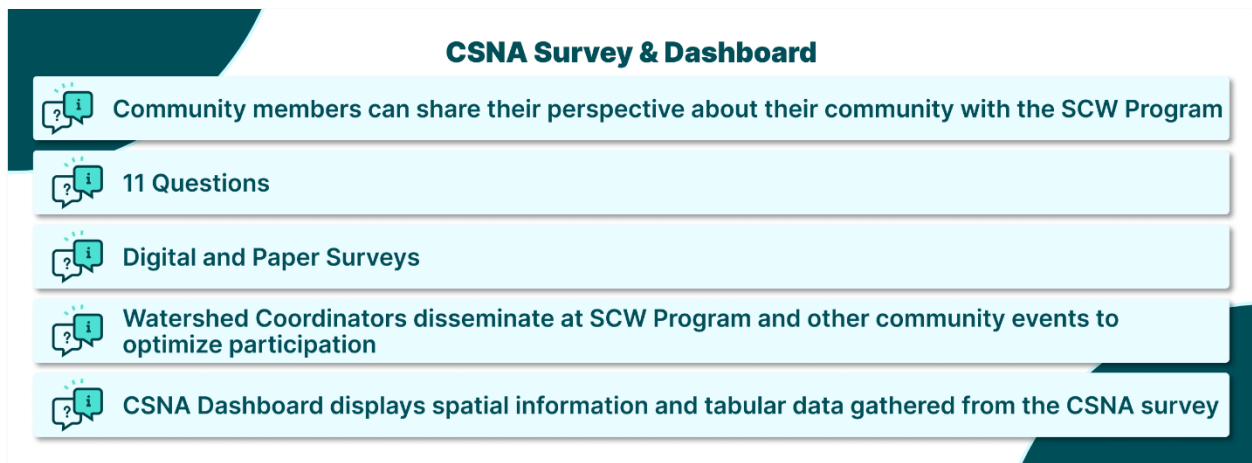


Figure 1-8. CSNA Survey and Dashboard Summary

1.4.3 Leveraging Key Efforts to Date

A wealth of regional and local studies as well as planning and engagement efforts were considered and incorporated where appropriate to support development of the several elements of this Initial Watershed Plan, including targets and strategies. SCW Program efforts to date, such as the Metrics and Monitoring Study (MMS) and SCW Program Scientific Studies, were similarly leveraged as described in the subsections below.

1.4.3.1 Metrics and Monitoring Study

The SCW Program MMS was developed to establish consistent methods and definitions for measuring the performance and outcomes of SCW Program Projects. As part of its process, MMS convened a Stakeholder Advisory Committee and conducted public workshops and analyses about Community Investment, Water Quality, and Water Supply Benefits. Input from equity-focused engagements was synthesized into a white paper titled [*Equity in Stormwater Investments: Measuring Community Engagement and Disadvantaged Community Benefits for Equitable Impact in the Safe, Clean Water Program*](#). The white paper advised the SCW Program to develop an interactive survey tool to gather community input on needs and preferences that resulted in the CSNA, which will be discussed later in this Initial Watershed Plan. Also, the white paper recommended the creation of metrics to evaluate Projects and Programs based on community priorities and vulnerabilities, to

guide decision-making and strengthen how Projects and Programs seek to meet community priorities and address concerns. Figure 1-9 summarizes the key SCW Program Adaptive Management⁶ recommendations identified by MMS and which were included in the SCW Program's iterative Watershed Planning process, when applicable.

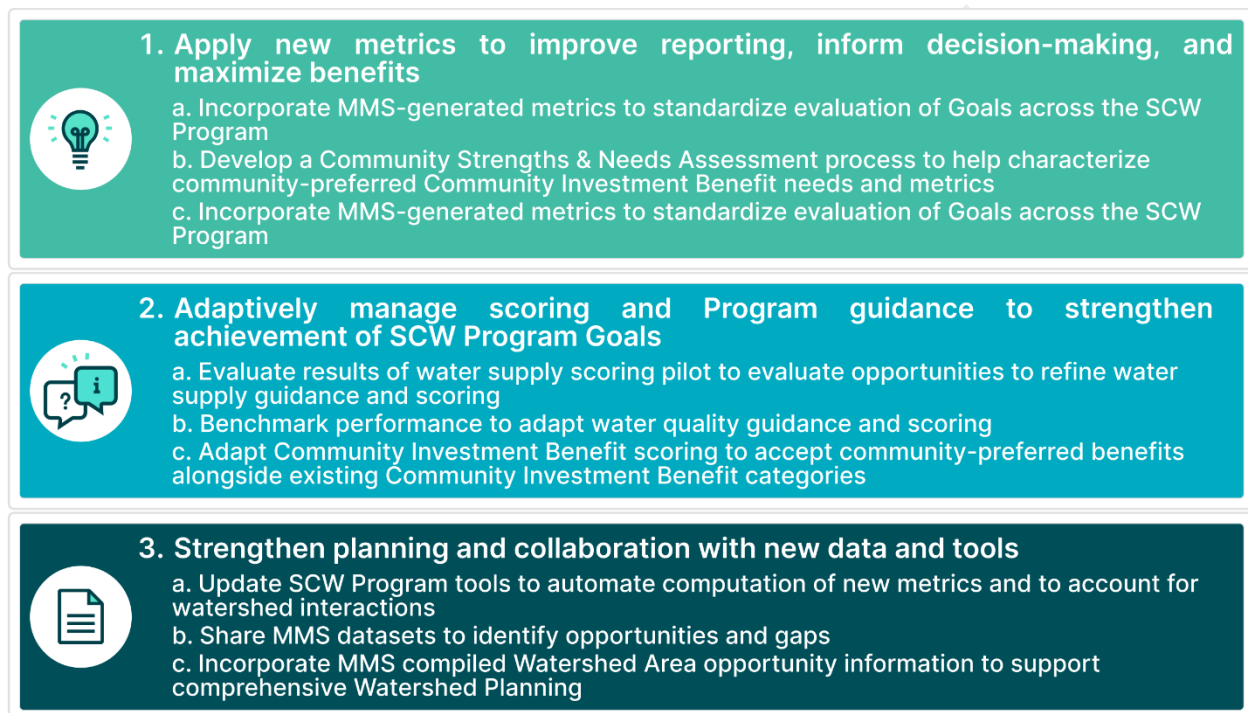


Figure 1-9. SCW Program Metrics and Monitoring Study Recommendations

The Initial Watershed Plans build on these key MMS outcomes by using the datasets, analytical insights, and metrics to develop baselines (Chapter 3) and quantify progress toward Goals (Chapter 4). Early Watershed Planning efforts evaluated and summarized MMS outcomes in the context of each WA to ensure key insights were incorporated into the Initial Watershed Plans and to begin filling identified data and definitional gaps.

1.4.3.2 Local and Regional Planning Efforts

In addition to the MMS, the Initial Watershed Plans also capitalize on results from other key planning and implementation efforts to date, identified through regional expertise and engagement input, and include local and regional plans, databases of

⁶ "Adaptive Management" is an iterative, incremental approach to making decisions and adjustments in response to new learnings.

funded Projects and Programs, regional studies, and more. These efforts informed the Initial Watershed Plan technical analyses so that recommendations here align with existing local and countywide efforts and contribute toward parallel countywide goals and targets (e.g., OurCounty Sustainability Plan, County Water Plan, Vision 2045) where applicable.

Table 1-1 below highlights specific efforts referenced that are applicable to the USGR WA. The full list of key efforts to date, which were reviewed to help inform the Initial Watershed Plans is in Appendix E.

Table 1-1. Highlights of key efforts to date in the USGR WA

Effort Category	Effort Name	Source/Agency	LINK	Related Planning Element(s)
Water Supply	Main San Gabriel Basin Watermaster	Main San Gabriel Basin Watermaster Board	LINK	Strategies
Water Quality	Enhanced Watershed Management Program Plan (WMP)	Upper San Gabriel River Watershed Management Group (WMG)	LINK	WA Characteristics, Targets, Strategies, Opportunities
Water Quality	Revised Coordinated Integrated Monitoring Program (CIMP)	Upper San Gabriel River WMG	LINK	WA Characteristics
Regional Plan	2021 LA County Climate Vulnerability Assessment	Los Angeles County Chief Sustainability Office	LINK	Targets, Strategies, Opportunities
Regional Plan	Los Angeles County Parks Needs Assessment (PNA) and Assessment Plus (PNA+)	Los Angeles County Department of Parks and Recreation	LINK	Targets, Strategies, Opportunities
Regional Plan	Los Angeles County Water Plan (CWP)	Los Angeles County Public Works (LACPW)	LINK	Targets, Strategies
Regional Plan	OurCounty Sustainability Plan	Los Angeles County Chief Sustainability Office	LINK	Targets, Strategies, Opportunities
Regional Plan	The Los Angeles County Community Forest Management Plan (CFMP)	Los Angeles County Chief Sustainability Office	LINK	Targets, Strategies, Opportunities

Effort Category	Effort Name	Source/Agency	LINK	Related Planning Element(s)
Regional Plan	Using Watershed Science to Build Consensus and Maximize Benefits of L.A. County's Safe Clean Water Program	Accelerate LA	LINK	Strategies
Regional Plan	Vision 2045: Thriving in a Hotter and Drier LA County through Local Stormwater Capture and Pollutant Reduction	Heal the Bay	LINK	Strategies
Local Plan	San Gabriel Valley Greenway Network Strategic Implementation Plan	Los Angeles County Public Works (LACPW)	LINK	Strategies, Opportunities
Local Plan	Upper San Gabriel River Watershed Strategic Outreach & Engagement Plan	Upper San Gabriel River Watershed Steering Committee	LINK	WA Characteristics

1.4.3.3 SCW Program Scientific Studies

Outputs developed by the Scientific Studies Program, implemented as part of the Regional Program, are a key resource for Watershed Planning. The Scientific Studies Program is designed to fund research, data collection, and technical tools that improve the effectiveness, efficiency, and equity of SCW Program investments. Its primary purpose is to advance understanding of stormwater management challenges and solutions—such as pollutant behavior, climate impacts, and community benefits—and to inform planning, design, and evaluation of Projects and Programs.

To date⁷, the SCW Program has funded 23 Scientific Studies, including nine within the USGR WA. Outputs from completed Scientific Studies—such as the [San Gabriel Valley Regional Confirmation of Infiltration Rates](#)—are incorporated into the strategies and opportunities in Chapter 5 to support the USGR WASC, Municipalities, and Project proponents in developing effective multi-benefit Projects. This completed Scientific Study provided site-specific data on infiltration rates across multiple locations in the San Gabriel Valley, helping to confirm and refine assumptions used in Project siting, design, and feasibility evaluations. Its findings serve as a critical

⁷ As of the FY25-26 SIP. Note that the Infrastructure Program did not accept applications for the FY25-26 Call for Projects.

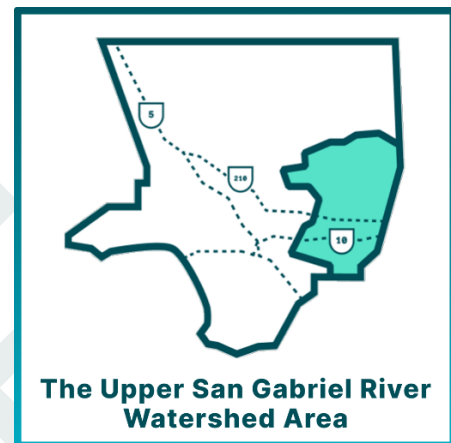
reference for planning future stormwater capture and infiltration Projects within the USGR WA. WASCs, Municipalities, and Project proponents are encouraged to apply insights from completed Scientific Studies to enhance the effectiveness, efficiency, and long-term impact of stormwater management efforts in the USGR WA. Appendix E details all Scientific Studies conducted in the nine WAs funded through the SCW Program.

Continued investment in research, such as the nine Scientific Studies funded to date in the USGR WA, and the dissemination of their findings is critical for identifying new, evidence-based approaches and for developing an understanding of the region's unique challenges and opportunities. Scientific Study results support Watershed Planning by informing strategies (Chapter 5) and filling gaps (Section 7.1).

Working together—through engagement efforts, identified governance committee priorities, key efforts to date, and technical analyses—this Initial Watershed Plan is built on a shared foundation of collaboration and best available data. These collective efforts establish a clear understanding of WA characteristics, which directly inform the development of targets (Chapter 4), strategies, and opportunities (Chapter 5). The resulting framework enables Public Works, the ROC, WASCs, Municipalities, and Project and Program proponents to align planning efforts and funding applications with the Initial Watershed Plans, a prerequisite under the SCW Program. By identifying current limitations and data gaps (Chapter 7), this Plan also provides recommendations for ongoing investment in research, Scientific Studies, and data development to advance adaptive planning and implementation over time.

Chapter 2. Watershed Area Characteristics

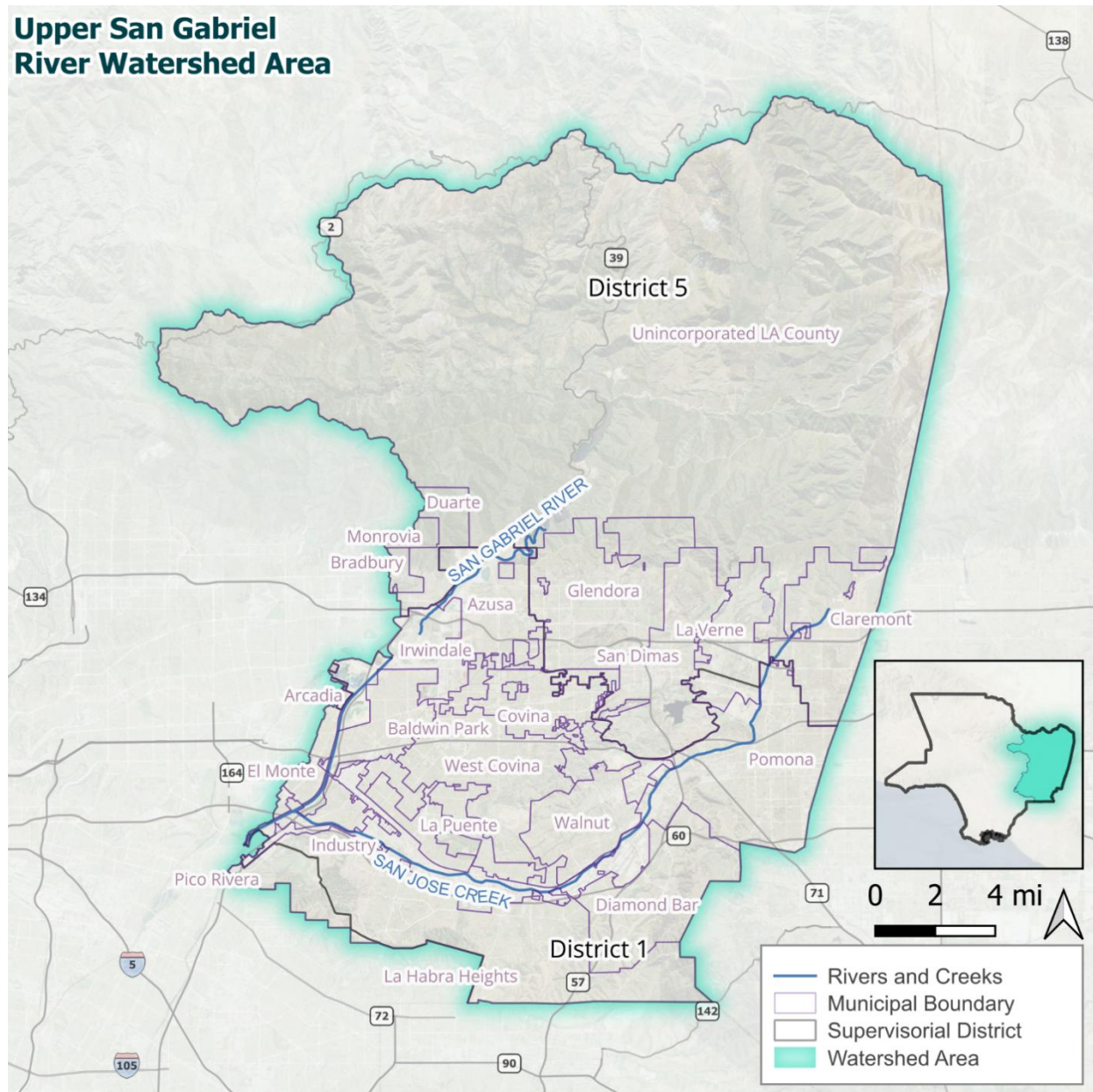
WA characteristics provide the physical, social, and environmental context needed to develop targeted, effective strategies. Understanding factors such as land use, hydrology, infrastructure, and community demographics allows the Initial Watershed Plans to support establishment of targets and identification of multi-benefit solutions that are tailored to local conditions. The following sections summarize information from key efforts to date (Table 1-1), such as the MMS, USGR WA Strategic Outreach and Engagement Plans, and WMPs, highlighting key WA characteristics that set the stage for establishing WA-based targets, strategies, and opportunities.



2.1 Key Watershed Area Features

The USGR WA approximately 313,900 acres in the San Gabriel Mountains, spanning through unincorporated and Mideastern portions of Los Angeles County, to the river's outlet at the Pacific Ocean in Long Beach (Figure 2-1). The USGR WA includes 20 Municipalities and parts of Unincorporated Los Angeles County, with the majority of area falling within Unincorporated Los Angeles County (68%). This WA is among the largest in size in Southern California and second largest among the nine SCW Program WAs. Land development within the USGR is unique, with a wide diversity of land uses, from low development in the upper elevation of the WA in the San Gabriel Mountains, to the densely urbanized San Gabriel Valley. Although impervious surfaces make up only 18% of the overall land cover, this lower percentage is largely due to extensive open space in the San Gabriel Mountains. The high levels of urban development in the San Gabriel Valley results in substantial annual stormwater runoff of 180,000 acre-feet per year (ac-ft/yr), the largest volume of stormwater runoff of the nine SCW Program WAs. The watershed's unique physical characteristics and diverse population demographics contribute to a substantial need for stormwater management projects to address water quality, manage runoff, and protect ecosystems to maintain the recreational opportunities of the San Gabriel Mountains.

Upper San Gabriel River Watershed Area



The following Municipalities are located within the USGR WA, with the Municipality covering the largest portion of the WA listed first.
 Unincorporated County, Pomona, Glendora, San Dimas, West Covina, Diamond Bar, Claremont, Industry, Azusa, Walnut, Irwindale, La Verne, Covina, Baldwin Park, Duarte, La Puente, El Monte, Bradbury, Monrovia, South El Monte, Arcadia

Figure 2-1. USGR WA and its Municipalities

Table 2-1 below summarizes key WA statistics to highlight how the USGR WA compares to other WAs in the SCW Program. Figure 2-2 presents example characteristics of the USGR WA that were used to inform target settings. The following sections highlight these key WA features, which help establish WA-based targets and identify WA Needs, targets, and strategies.

Table 2-1. Summary of key WA features

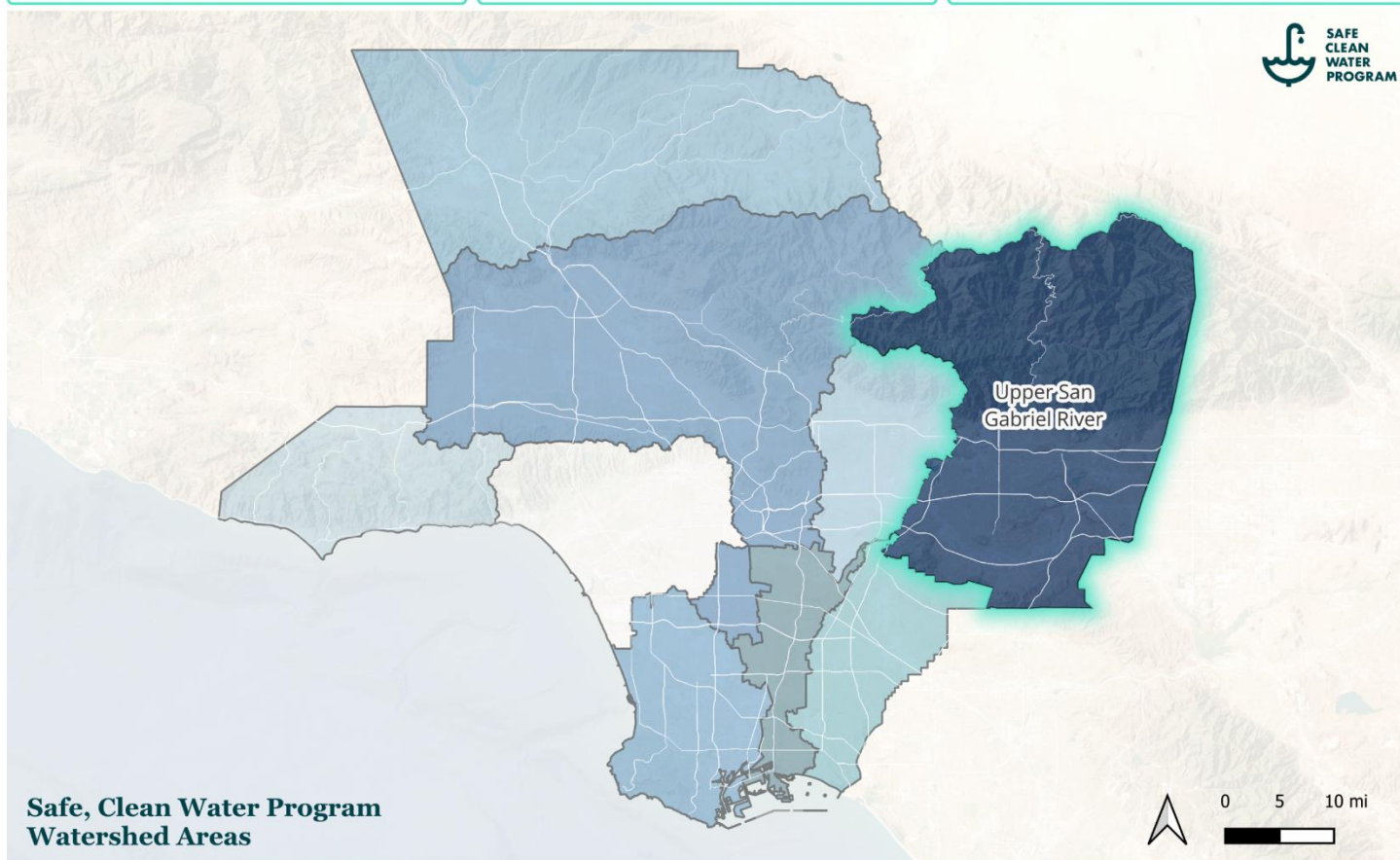
Watershed Area	Total Area (acres)	Impervious Area (acres) (% of total area)	Total Avg. Annual Runoff (ac-ft)	Priority Pollutants ¹	Est. Total Population ²	Required DAC Ratio ³
Central Santa Monica Bay	118,000	52,400 (44%)	70,000	Zinc, Bacteria	1.8M	45%
Lower Los Angeles River	54,500	35,800 (66%)	37,300	Zinc, Bacteria	869.7k	67%
Lower San Gabriel River	80,800	46,600 (58%)	60,000	Zinc, Bacteria	889.2k	22%
North Santa Monica Bay	99,800	6,600 (7%)	26,000	Total Phosphorus, Bacteria	71.2k	N/A
Rio Hondo	84,600	32,400 (38%)	52,100	Zinc, Total Phosphorus, Bacteria	743.7k	33%
Santa Clara River	306,900	20,100 (7%)	94,600	Bacteria	278.3k	12%
South Santa Monica Bay	92,700	51,000 (55%)	50,000	Zinc, Total Phosphorus, Bacteria	995.3k	30%
Upper Los Angeles River	392,00	113,100 (29%)	176,000	Zinc, Total Phosphorus, Bacteria	3.0M	45%
Upper San Gabriel River	313,900	57,700 (18%)	180,000	Zinc, Total Phosphorus, Bacteria	1.0M	22%

¹Priority pollutants selected based on the limiting pollutants identified in each WA's WMPs.

²Based on 2020 American Community Survey data.

³Per Goal J, the required DAC ratio is determined as 110% of the proportion of the DAC population relative to the total population within the WA.

Total Area 313,900 acres	Impervious Area 57,700 acres (18% of total area)	Average Annual Stormwater Runoff 180,000 ac-ft/yr
Local & Regional Park and Open Space 180,700 acres (58% of total area)	“The Upper San Gabriel River is among the largest in Southern California” - Upper San Gabriel River Watershed Area Steering Committee	Required DAC Ratio 22%



Percent Tree Canopy Cover in Urban Areas 20%	Total Population 1.0M residents	Managed Unconfined Aquifer* Main San Gabriel Basin Central Basin Puente Basin
Watershed Management Program Implementation Cost \$883.3M	Priority Pollutants Zinc Total Phosphorus Bacteria	Regional and Municipal Program Tax Collected to Date (FY20-25) \$167.3M


*Three largest managed unconfined aquifers shown.

Figure 2-2. Summary of key USGR WA characteristics used for target setting

2.1.1 Physical and Natural Features

The physical and natural features of the USGR WA define the hydrology and existing conditions of the WA that influence approaches to stormwater management and strategies to improve waterbody conditions. The following are notable conditions and features of the USGR WA:

The Upper San Gabriel Watershed is among the largest in Southern California. The USGR WA contains a mix of urban areas in the southern section and more rural, mountainous areas in the northern section.



- The Upper San Gabriel River is a primarily natural river that meanders through canyons and is later controlled by dams, including the Cogswell, San Gabriel, Morris, Santa Fe and Whitter Narrows dams. Unlike the lower reaches of the San Gabriel River that is channelized with concrete-lined flood controls channels, the Upper San Gabriel River has natural features, too.
- The headwaters of the San Gabriel River originate in the San Gabriel Mountains, characterized by steep slopes of the USGR WA, and is formed by its East, West, and North forks which each have their own unique characteristics:
 - **East Fork:** Flows through a deep gorge, known as the Narrows, and is a popular recreation destination.
 - **West Fork:** Flows at lower elevations than the East Fork and supports a large forest of native trees like the big cone Douglas-fir and live oaks.
 - **North Fork:** Contains the only natural lake in the San Gabriel Mountains, Crystal Lake, and is the shortest and steepest of the three forks and contains the only natural lake in the San Gabriel Mountains: Crystal Lake.
- The main tributaries of the San Gabriel River include the Walnut Creek Wash, San Jose Creek, and Coyote Creek. Additionally, there are unnamed tributaries draining unincorporated Los Angeles County areas that discharge into Coyote Creek and Puddingstone Reservoir.
- The upper reaches of the San Gabriel River contain extensive areas of undisturbed riparian and woodland habitats.
- Runoff from the steep slopes of the San Gabriel Mountains forms narrow valleys that contribute significant sediment loads to downstream areas. This unique topography (Figure 2-3) drives high-velocity flows and increases the potential for intense flooding during large storm events.
- The geologic makeup in the upper USGR WA generally includes impermeable igneous and metamorphic bedrock materials. While the lower portions include

sedimentary materials originating from alluvial fans from the San Gabriel Mountains. Marine sedimentary deposits within the San Jose and Puente Hills, resulting in varying natural infiltration potential throughout the WA.

- Overlays and recharges the Main San Gabriel Basin via several groundwater spreading grounds where water is allowed to pond and slowly seep into the underlying basin.
- During dry-weather, surface water from the San Gabriel Mountains infiltrates rapidly into the fluvial deposits of the flatter areas of the USGR WA, providing hydraulic separation of the between the Upper and Lower San Gabriel River WAs.

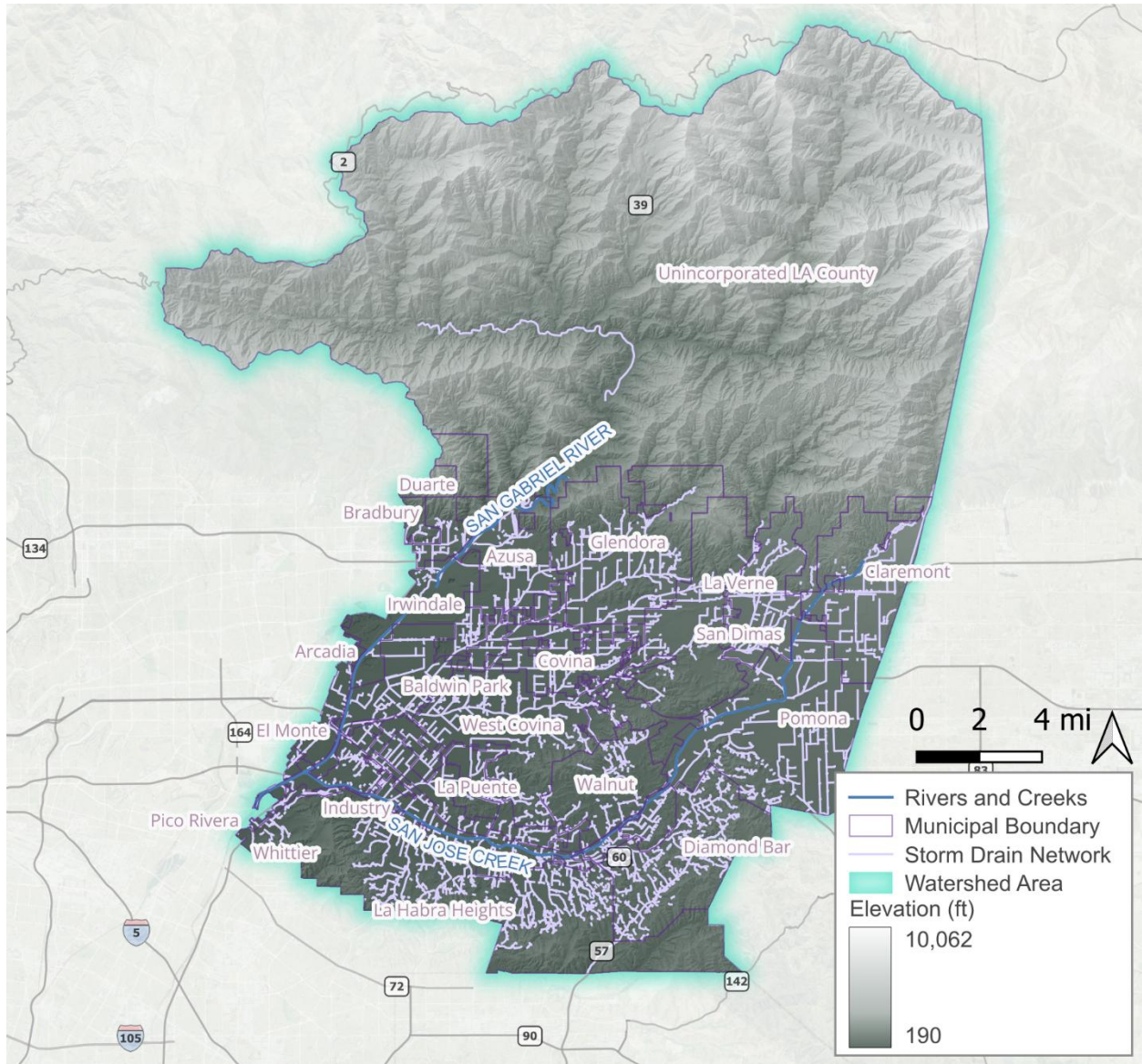


Figure 2-3. USGR WA elevation profile

2.1.2 Land Use and Population Characteristics

In addition to the physical aspects detailed above, development patterns, industries, and the people that make up the watershed often influence not only the conditions experienced in a watershed, but also the needs of that watershed that can be addressed through programs like the SCW Program. The following summarizes key characteristics for the USGR WA, with a focus on those that most strongly define its needs, potential, and challenges in supporting the achievement of Goals:

- Predominantly undeveloped natural areas including extensive riparian and woodland habitats in the northern USGR WA. However, these areas are subject to heavy recreational use that contributes trash, debris, and habitat destruction.
- Predominantly residential, commercial and transportation (major freeways such as Interstates 10, 210, and State Route 60, along with a network of arterial roads and commercial corridors) and utilities land uses within the southern urbanized areas of the USGR WA.
- High levels of impervious surfaces and compacted and engineered soils in the urban clusters of the southern USGR WA contribute to rapid runoff generation, reducing infiltration and increasing pollutant transport.
- High need for green infrastructure⁸ and NBS to enhance public health and community well-being.
- Targeted enhancement and restoration efforts are a priority to improve synchronicity between the natural and urbanized areas of the watershed. These efforts are particularly critical in historically underserved communities (~16% of the USGR WA population), where investments in green infrastructure can advance environmental justice by addressing disparities in access to quality open space, climate resilience, and public health outcomes.

⁸ “Green infrastructure” includes methods for naturally managing rain and flood waters to reduce and treat stormwater runoff while also improving the local environment by mimicking natural processes, as defined in Appendix IV of the [OurCounty Los Angeles Countywide Sustainability Plan](#).

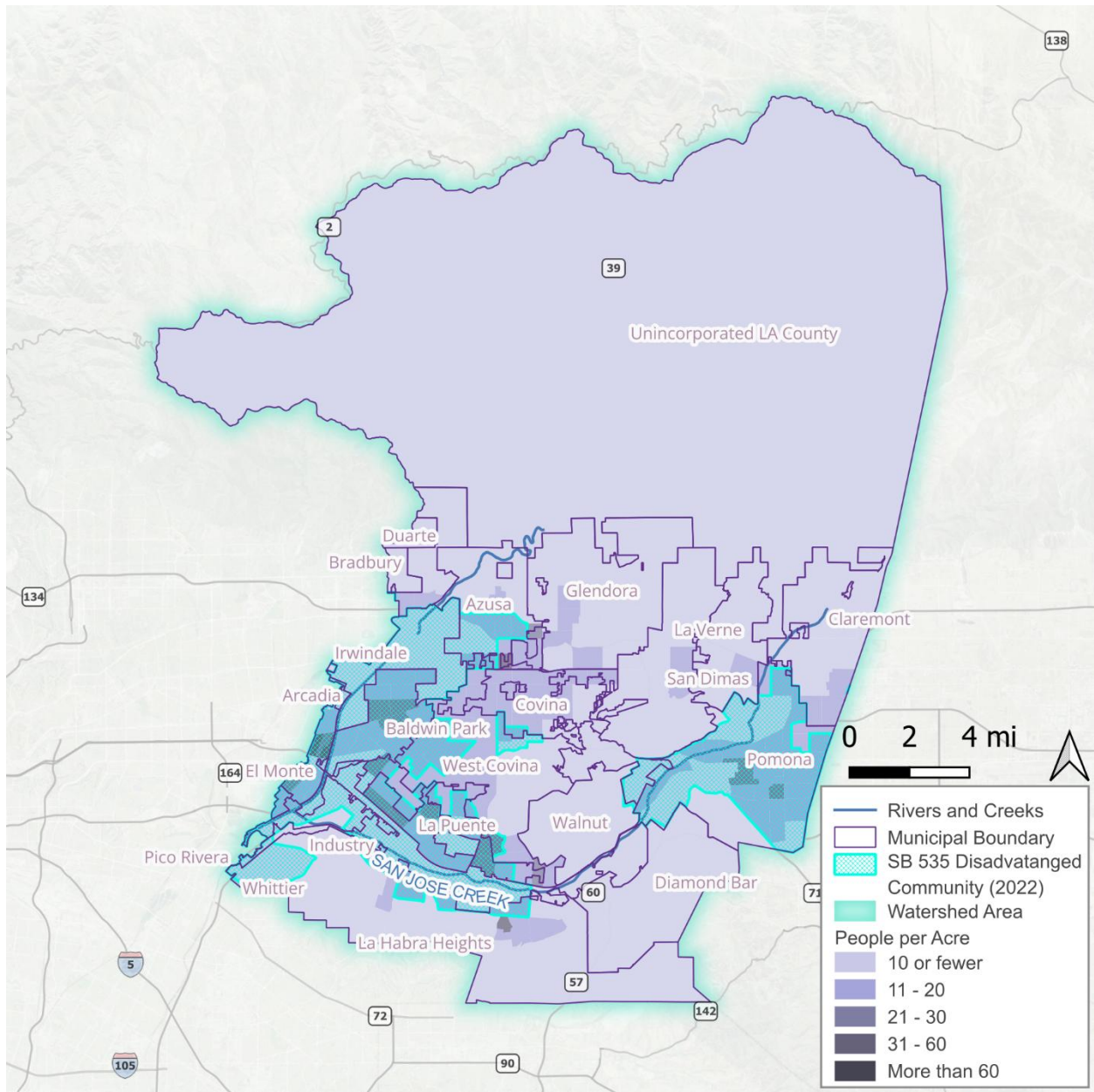


Figure 2-4. Population density and DACs in the USGR WA

2.1.3 Waterbody Conditions

Water quality regulations aim to improve the conditions of water bodies so they can support their full range of beneficial uses. These conditions are often shaped by the cumulative influence of the watershed's physical, natural, and land use characteristics detailed in the sections above and may lead interested parties within the USGR WA to pursue certain strategies over others to address the WA's impairments more effectively. The following are general waterbody conditions for the USGR WA, which have been summarized from key efforts to date, such as those shown in Table 1-1, that may influence related strategies:

- [Impaired waterbodies](#) (San Gabriel River and tributaries) with regulatory Total Maximum Daily Loads (TMDLs) for metals (lead, copper, zinc, selenium, and mercury), nutrients (total nitrogen and phosphorus), and legacy pollutants⁹ including polychlorinated biphenyls (PCBs), chlordane, dieldrin, and dichlorodiphenyltrichloroethane (DDT).
- High annual pollutant load, especially metals (zinc, copper, lead) (Figure 2-5).
- Water runoff from the steep San Gabriel Mountain slopes creates steep valleys that contribute to massive downstream sediment loads.
- Pollutants stem from a combination of the USGR WA natural terrain, recreational activity, urban runoff from development adjacent and within the WA, and legacy contamination.
- The San Gabriel River is typically dry upstream of the confluence with San Jose Creek and downstream of Whittier Dam.
- Existing water quality Projects (trash capture, dry-weather diversions, green streets) partially address impairments, but significant opportunities for improvement remain.
- In January 2025, ten wildfires devastated Los Angeles County, generating post-fire conditions with significantly elevated water quality risks that should be considered in the design of stormwater management Projects. Burned areas contribute high sediment loads, ash, nutrients, and fire-related contaminants (e.g., heavy metals, polycyclic aromatic hydrocarbons (PAHs)) to downstream flows. These pollutants can impair receiving waters, reduce infiltration efficiency, and overload pretreatment systems in stormwater capture infrastructure.

⁹ "Legacy Pollutants" are contaminants that were once widely used but have been banned or had their uses restricted yet remain in the environment and surrounding waterbodies (US EPA).

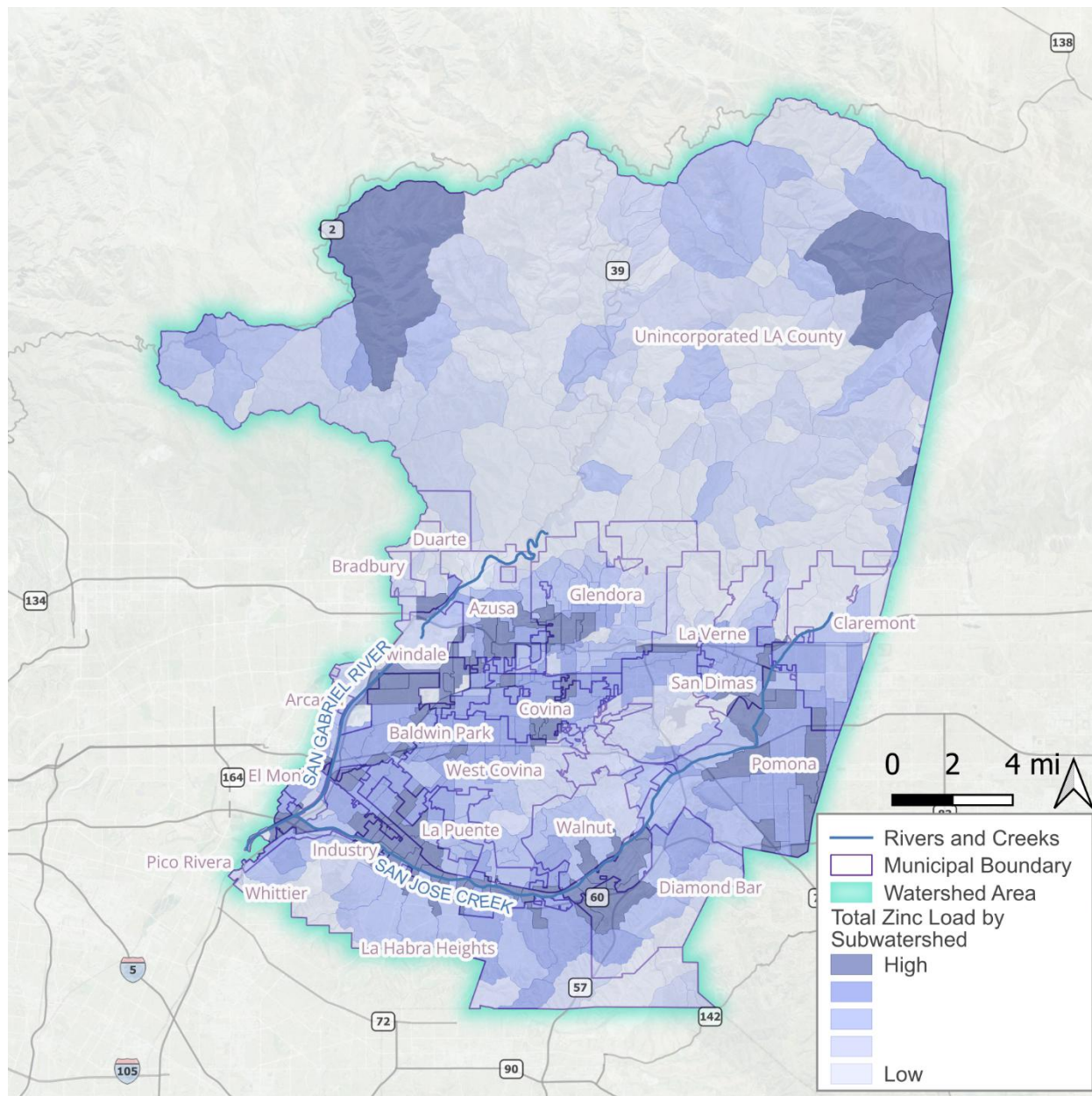


Figure 2-5. Total zinc load in stormwater runoff across the USGR WA

2.1.4 Existing Stormwater Capture Facilities & Non-SCW Program Projects

In developing a full picture of WA characteristics, it is also important to understand the other major existing or planned infrastructure in the watershed. Many of these non-SCW Program projects are complementary to the Goals of the SCW Program and may contribute towards meeting the needs of the USGR WA. These may include Projects

that have already been completed and operational or those that are planned for construction under other regional programs and efforts. Major efforts and infrastructure for the USGR WA are summarized below in Table 2-2.

Table 2-2. Summary of existing major stormwater capture facilities and non-SCW Program Projects

Program	Project count	Est. Project Stormwater Capture (ac-ft/yr)
MS4 Watershed Control Measures Completed & Planned ¹	16	1,713
Integrated Regional Water Management Plan (IRWMP) ²	1	21,750
Major Capture Facilities ³	20	163,941
Total	37	187,404

¹ Watershed Control Measures as defined in item IX.B.5.b of the Los Angeles Region Regional Phase I MS4 National Pollutant Discharge Elimination System Permit. These Projects were summarized using data collected via the Watershed Reporting Adaptive Management & Planning System (WRAMPS). Est. Project stormwater capture assumes capture is three times the Projects' daily storage capacity, as reported by WRAMPS users ([link](#)).

² Values as reported via the Greater Los Angeles County IRWMP OptiTool ([link](#))

³ Major capture facilities include spreading grounds, dams/reservoirs, and debris basins with footprints in the WA. For the USGR WA this includes 7 spreading grounds, 5 dams/reservoirs, and 8 debris basins. Estimated Project stormwater capture is based on results by the Los Angeles Basin Study ([link](#)).

2.2 Summary of Potential and Challenges for SCW Program Projects and Programs in the Watershed Area

The potential and challenges for each SCW Program WA were identified through a comprehensive assessment of WA-specific characteristics. These characteristics include existing water quality conditions, natural and physical features—such as topography, soil types, underlying groundwater basins, and hydrologic connectivity—as well as land use patterns and population demographics. In addition, the assessment considers predicted climate change effects, recognizing that the Los Angeles region is projected to experience more frequent and severe wildfires, coupled with less frequent but more intense storm events¹⁰. These shifts are expected to increase the volume and velocity of runoff, elevate pollutant loads, and exacerbate flood risks. Together, these factors shape both the opportunities for implementing effective multi-benefit stormwater Projects and the constraints that must be addressed to ensure their success.

¹⁰ See the [Los Angeles Basin Study](#) for more information.

To inform this assessment, data and insights were drawn from a range of technical and planning sources, including applicable WMPs, Coordinated Integrated Monitoring Programs (CIMPs), and SCW Program Strategic Outreach and Engagement Plans. Additional context was provided by relevant local and regional plans, such as General Plans, Groundwater Sustainability Plans (GSPs), and climate adaptation strategies. See Table 1-1 for direct links to these referenced documents. By integrating these diverse sources of information, the SCW Program is better positioned to support equitable, data-driven decision-making and to tailor strategies that respond to each WA's unique environmental, infrastructural, and community conditions.

The USGR WA presents a unique combination of potential and challenges in advancing the Goals of the SCW Program. Although the land use of the USGR WA is approximately only 18% impervious surfaces, the dense concentration of urbanization within the San Gabriel Valley (southern USGR WA) leads to the annual runoff production of 180,000 ac-ft/year, the highest of all nine SCW Program WAs. The upstream reaches of the watershed contain substantial open space to implement nature-based stormwater management solutions. The extensive urbanization in downstream areas of USGR WA limits the availability of pervious land for implementing similar solutions, which is also where the majority of water quality degradation occurs.

Therefore, the mixed levels of urbanization within the USGR WA offers both potential and challenges. To leverage the USGR WA's unique composition, the USGR WASC recommended prioritizing small footprint multi-benefit Projects both upstream and downstream to achieve stormwater management, environmental, and public health outcomes. In the near term, prioritizing distributed green infrastructure, in combination with enhanced O&M (Section 5.2.1.8), was also recommended to maximize localized benefits.

This section highlights additional unique characteristics of the USGR WA, which provide essential context for setting targets and identifying effective, locally relevant strategies. The summaries in the sections below are organized by Planning Themes, illustrate how the USGR WA's specific conditions influence its potential and challenges in supporting the following SCW Program Goals:

- Improve Water Quality (*Goal A*),
- Increase Drought Preparedness (*Goal B*), and
- Improve Public Health (*Goal C*), Deliver Multi-Benefits with NBS and Diverse Projects (*Goals E, F, and G*), and Equitably Distribute Benefits (*Goals J and K*).

2.2.1 Improve Water Quality

Water quality improvement is a key Goal of the SCW Program and is a required benefit for all SCW Regional and Municipal Program Projects and Programs. The USGR WA has high annual pollutant loads, especially metals (zinc, copper, lead), which is a result of its level of urbanization within its southernmost communities. For Watershed Planning purposes, priority pollutants in the USGR WA include zinc, total phosphorus, and bacteria. However, Municipalities should consider implementing Projects that address a broad range of pollutants that are prevalent within the WA, including trash, bacteria, legacy pollutants, and contaminants commonly found in urban runoff. In addition, Projects should, where feasible, be designed to support compliance with their TMDLs and other relevant regulatory water standards to ensure comprehensive watershed improvements. The USGR WA's potential and challenges for improving water quality and contributing to this Goal are summarized below and begin to point to the formulation of Initial Watershed Plan targets (Chapter 4) and strategies for meeting those targets and achieving Goals (Chapter 5).

Potential Opportunities:

- Large areas of open space in the unincorporated areas of Los Angeles County provide opportunities for regional Projects or nature-based surface that require larger footprints. This also presents the potential for upstream stormwater management that will reduce runoff volumes that reach and are contaminated in southern urban areas.
- The upper reaches of the San Gabriel River are soft bottom riverbeds, which promote natural infiltration, playing a vital role in maintaining and improving water quality through natural processes.
- Existing plans and efforts—such as WMPs—have identified numerous additional Project opportunities at both the regional and site-specific scale. These plans establish objectives focused on regional collaboration, stormwater runoff capture, pollutant reduction, and compliance with MS4 permit-driven TMDL requirements. Supported by CIMP, which track water quality trends and evaluate the effectiveness of BMPs, these planning efforts provide a strong foundation for data-driven decision-making. Building on this prior analysis and monitoring, the SCW Program is well-positioned to fund Projects that are strategically designed to improve water quality at the watershed scale.

Challenges and Constraints:

- Pockets of dense urbanization within the San Gabriel Valley may limit opportunities for large regional Projects and may require numerous Low Impact Development (LID)¹¹ features.
- Complexity, infrastructure conflicts, and high costs may be associated with obtaining land within the unincorporated areas of the USGR WA that have the most potential for larger scale Projects. For example, the 2015 Los Angeles Department of Water and Power Stormwater Capture Master Plan details retrofit complexity such as utility relocation, excavation, interagency coordination when implementing stormwater capture infrastructure in urban clusters with limited space.
- The river's use for recreational purposes has historically degraded water quality.
- The USGR WA is home to several well-maintained dams that support watershed management, however, in general, dams could alter natural sediment transport and nutrient cycling processes, which may impact water quality.



Figure 2-6. Morris Reservoir (courtesy of LA County Department of Public Works)

¹¹ Low Impact Development (LID) is a stormwater management approach that aims to mimic a site's natural hydrology by utilizing design techniques that infiltrate, filter, store and evaporate stormwater runoff at or near its source

2.2.2 Increase Drought Preparedness

Another Goal of the SCW Program is to increase drought preparedness by capturing stormwater and/or urban runoff to augment local water supply and reduce reliance on potable water supplies to support long-term water sustainability and reliance. The [SCW Program 2025 Interim Guidance](#) defines new water supply sources as follows.

What Counts as New Locally Available Water Supply Under the SCW Program?

Per the [2025 SCW Program Interim Guidance](#), the following fates of captured water **count as new locally available water supply** and a Water Supply Benefit (claims to be confirmed through modeling, geotechnical analysis, and/or engagement):

- Net water used onsite for potable offset (not including offset of Project-created water supply demand)
- Diverted to existing treatment/reuse plant
- Diverted to future planned treatment/reuse plant operational within 10 years with concurrence from treatment/reuse plant on timeline and capacity
- Infiltration to managed useable groundwater aquifers
- Infiltration to unmanaged aquifers with geotechnical analysis and/or community acknowledgement to confirm infiltration and use
- Treated and discharged to storm drain or receiving water when tributary to a downstream water recharge facility if the Project facilitates the recharge of water that would otherwise not be used to augment water supply.

The following **do NOT count towards new locally available water supply** but do provide Water Quality Benefits:

- Water that would have already been captured downstream by an existing water recharge facility (see adjustment factors in Watershed Planning Framework that can be used to prorate the net new local water supply when captured upstream from existing facilities) and
- Maintenance of existing capture/conservation infrastructure (i.e. sediment removal behind dams).

Environmental water does not count as locally available water supply nor a Water Quality Benefit unless analysis proves that discharging clean water to channels to support ecological functions will offset potable supplies. Environmental water may provide a Water Quality Benefit if site-specific studies demonstrate improvement in flow ecology.

The USGR WA's capability to achieve this Goal can be summarized by highlighting opportunities and potential challenges and constraints identified in the USGR WA to date. These are summarized below and begin to point to the formulation of Initial Watershed Plan strategies that will be further contextualized with quantitative Indicators and targets in subsequent chapters.

Potential Opportunities:

- Dense urbanization in the San Gabriel Valley produces a large volume of runoff for potential capture and reuse in the USGR WA.
- Three water reclamation plants (WRP) discharge into water bodies within the USGR WA that ultimately get discharged into the Pacific Ocean with no beneficial reuse. Thus, Projects in the USGR featuring diversions to sanitary sewers that produce recycled water represent a significant opportunity to augment water supply.
- The Los Angeles region relies heavily ([~73%](#)) on imported water supplies for potable demands; stormwater can offset use of potable water for non-potable activities such as irrigation.

Challenges and Constraints:

- Higher pollutant loading rates in stormwater in the USGR WA may also require pre-treatment before conveyance to recoverable points, resulting in higher capital and O&M costs.
- Impervious landscape and limited open space within urbanized areas may limit the potential for large-scale regional capture that can make the expense of reuse implementation more cost-effective.
- The Los Angeles region has been historically vulnerable to long dry periods superseded by intense storms ([U.S. Drought Monitor](#)). Water Year 2023 exemplified this pattern, as the severe drought from 2020 to 2022 was abruptly followed by an extraordinarily wet winter and spring driven by a series of atmospheric rivers. Designing infrastructure to manage both extremes of this hydrologic whiplash is complex.

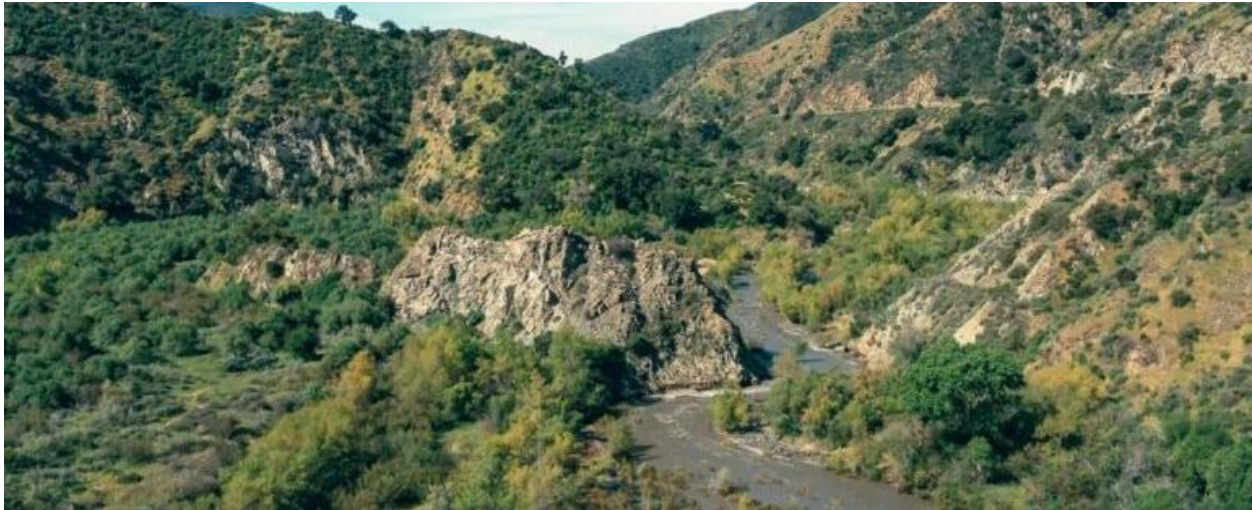


Figure 2-7. San Gabriel River Basin (courtesy of LA County Department of Public Works)

2.2.3 Improve Public Health, Deliver Multi-Benefits with NBS and Diverse Projects, and Equitably Distribute Benefits

The WA characteristics summary used datasets newly proposed by MMS to provide an initial snapshot of WA characteristics related to these Planning Themes/Goals. Every new Project is viewed as a chance to improve public health in underserved communities and DAC, whether through adding walking paths, sports fields, community gardens, or simply shade and aesthetic improvements. Employing a diverse set of Project types, including NBS, provides multiple benefits to the surrounding community, including water quality, water supply, and improvements to public health. The bullets below summarize some of the key opportunities and challenges/constraints of implementing multi-benefit Projects that have been identified in the USGR WA to date. This will be further contextualized with quantitative Indicators and Targets in subsequent chapters.

Potential Opportunities:

- High Park Needs¹² in the USGR WA (East San Gabriel Valley) could be addressed in conjunction with Projects that include a Water Quality Benefit, particularly those targeting unmanaged stormwater or urban runoff.
- Projects in the USGR WA have the potential to deliver significant multi-benefit outcomes—in addition to improved water quality—to a broad cross-section of the population. Notably, approximately 16% of residents in the USGR WA live

¹² Informed by the [LA County Parks Needs Assessment](#).

in DACs. Providing benefits in this WA can advance environmental justice by ensuring that communities disproportionately burdened by pollution to receive targeted, high-impact improvements.

- Environmental restoration, increased vegetation and canopy, and enhanced green spaces, particularly at schools and in the most intensively developed areas of the WA would improve the delivery of multi-benefits and improve place-based measures of SCW Program benefits.
- Regional greening efforts at schools, such as the Los Angeles Unified School District's (LAUSD) Green Schools for All Plan, represent opportunities for partnerships that promote Projects that include Water Quality Benefits and greening elements along with other multi-benefits.

Challenges and Constraints:

- Limited existing green space and available land within the built-out communities of the USGR WA make the development of new recreational areas particularly challenging. For traditional park development, property acquisition is required, which can be cost-prohibitive—estimated at approximately [\\$650 per square foot](#) in urban/residential areas of Los Angeles County, compared to a national urban average of around [\\$7 per square foot](#).
- Varying levels of development within the USGR (pristine undisturbed land upstream and urbanization in the southeastern San Gabriel Valley) will require creativity and nuance to harmonize Projects and Programs with existing industries.
- The USGR WA is subject to environmental burdens including pollutants and other stressors that accumulate over time and directly impact public health that may increase the scope and cost of effective Projects ([PNA+ Map Viewer](#)).
- Ensuring equitable distribution of resources and benefits requires careful, data-driven planning and robust engagement—adding complexity and sensitivity to Project outcomes



Figure 2-8. Artist rendering of Glendora Avenue Green Streets Project, City of Glendora (USGR WA)

2.3 SCW Program Financial Snapshot

The following provides brief financial snapshots of both the Regional and Municipal Programs within the USGR WA. These summaries highlight SCW Program funding, allocations, and eligible expenditures¹³ to date, offering financial context for past and ongoing investments. This information also provides insight for interim target and strategy development (Chapter 5).

2.3.1 Regional Program Financial Snapshot and Outlook

Table 2-3 presents a summary of funding budgets and expenditures in the USGR WA by the Regional Program based on the last five Fiscal Years (FYs). The USGR WA receives approximately \$18.6M annually from Regional Program funds. The latest USGR WA SIP (FY25-26) shows that 32%¹⁴ of the expected Regional Program

¹³ SCW Program eligible expenditure types include:

- Infrastructure development tasks
- Scientific and technical studies, and Stormwater or Urban Runoff modeling and monitoring
- Projects or studies to pilot or investigate new technologies or methodologies to increase or improve Stormwater or Urban Runoff capture or reduce Stormwater or Urban Runoff pollution
- The development of Feasibility Studies
- The modification, upgrade, retrofit, or expansion of an existing Project to incorporate new elements to increase Stormwater or Urban Runoff capture and reduce Stormwater or Urban Runoff pollution
- Stormwater or Urban Runoff Programs such as, but not limited to, school education and curriculum, public education, watershed coordination efforts, and local workforce job training.

See Appendix A or the SCW Program Implementation Ordinance (LACFCD Code §16) for the complete list and definitions of eligible expenditures.

¹⁴ See the [SCW Program SIP Tool](#) for more information.

funding from FY25-30 is already allocated to previously funded Projects and Programs in the USGR WA. As more Projects progress to construction or completion, additional Regional Program funds may be earmarked for these existing Projects to ensure their completion and/or ongoing O&M.

While five-year funding allocations are reassessed and established annually through the SIPs, it is not uncommon for Projects to experience unexpected cost increases, schedule shifts, or other implementation challenges. Project Modification Requests (PMRs) serve as an important SCW Program mechanism that allows Project proponents to submit revised funding requests in response to changing conditions, such as updated cost estimates, changes in scope, or delays.

In recent years, higher-than-average inflation and rising construction costs have prompted several Project proponents to submit PMRs to request funding adjustments and ensure Project completion. These adjustments often result in increases from the Project's original SIP allocations, drawing from a WA's uncommitted funds. While this can reduce available funding for new Projects, PMRs play a critical role in supporting the Adaptive Management of SCW Program investments—ensuring that Projects already in the pipeline remain viable and deliver their anticipated benefits.

Additionally, as Projects are completed and as a greater proportion of Regional Program funding is dedicated to the O&M of those Projects, the future available funding to support new Projects and Programs is anticipated to decrease. This highlights the importance of utilizing leveraged funding from outside the Regional Program to responsibly manage available resources. Maximizing leveraged funding supports the initiation of new Projects and Programs while also funding later phases of existing efforts, helping support the achievement of Goals efficiently and efficiently. Further discussion of Regional Program financial outlooks and programming forecasts is below.

Leveraging other funding sources is also one of the 14 SCW Program Goals (Goal D). The SCW Program aims to maximize leveraged funding from state, federal, private, and philanthropic sources to amplify the impact of SCW Program investments. Leveraged funding can help offset capital and operational costs, enabling the development of more ambitious, cost-effective, and equitable multi-benefit Projects and Programs. Related strategies for leveraging other funding sources are available in Section 5.2.1.5.

Table 2-3. Regional Program financial snapshot for the USGR WA

Program	Regional Program Financial Snapshot for the USGR WA ¹							
	SCW Program Funding					Expenditures (FY20-25) ²		
	Regional Program Funds Collected and Anticipated (FY20-25)	Total Budgeted and Projected (FY20-30) ³	Total Budgeted to Date (FY20-25)	Total Leveraged Funds	Total Number of Projects/Studies Funded ⁴	SCW Program Expenditures	Leveraged Funding Expenditures	Total Expenditures
Infrastructure Program	\$93.4 M	\$113.0M	\$86.3M	\$37.8M	13	\$13.2M	\$9.2M	\$22.4M
Scientific Study Program		\$4.8M	\$2.0M	\$109.8K	9	\$736.4K	\$0	\$736.4K
Technical Resources Program		\$1.2M	\$1.2M	N/A	4	N/A ⁵	N/A ⁵	N/A ⁵
Watershed Coordinators		\$2.0M	\$1.0M	N/A	1	N/A	N/A	N/A
Total		\$121.0M	\$90.4M	\$37.9M	26	\$13.9M	\$9.2M	\$23.1M

¹Counts Infrastructure Program Projects, Scientific Studies, and Project Concepts funded in FY20-21 through FY25-26 SIPs. The Project/Study count reflects unique Projects and Scientific Studies. Note that the Infrastructure Program did not accept applications for the FY25-26 Call for Projects.

²Based on completed Regional Program reports as of July 2025. Includes expenditures through Q2 of FY24-25; Q3 and Q4 data are not yet available.

³Projected values are based on those in the FY25-26 SIP.

⁴Total does not count Watershed Coordinators.

⁵Reporting data not available for Technical Resources Program Project Concepts.

While many Project Concepts have been evaluated and funded to date in this WA, the time for a Project to mature from a conceptual idea to constructed and operational infrastructure can span multiple years. To date, four of five Project Concept applications submitted in the USGR WA have been funded and included in their respective SIPs. Of those, one has advanced to apply for and receive funding through the Infrastructure Program. Table 2-4 summarizes the pipeline of Projects currently receiving funding that are in development phases ranging from planning to construction in the USGR WA.

Table 2-4. Backlog of Regional Program Projects in the USGR WA as of July 2025

Concepts in Technical Resource Program ¹	Infrastructure Program Projects Current Phase ²				
	Projects in Planning	Projects in Design	Projects in Bid/Award	Projects in Construction	Projects Constructed
3	4	4	2	3	0

¹Based on Project Concepts included in SIPs FY20-21 through FY25-26. Note that in the USGR WA, one Project Concept has since progressed and been approved for funding through the Infrastructure Program.

²Current phase is the based on completed Regional Program FY24-25 Midyear Reports as of July 2025. For Projects that have not yet begun reporting (e.g., FY24-25 Projects), the Project's earliest funded phase was assumed to represent the current phase to support this discussion.

To explore how much leveraged funding may be needed to complete the pipeline of Projects already in the USGR WA SIP, a financial model was developed using data provided by Project proponents in applications and reporting. For each Project in the USGR WA SIP, the financial outlook models the future capital costs (i.e., design and construction), O&M costs, and potential cost escalations due to inflation that are not currently included in SIP projections. This is important because the SIP only includes requested funding and does not earmark SCW Program funding for future phases (i.e., if a Project only requests design funding from the Regional Program, its construction costs are not earmarked in the SIP). **This “backlog” of potential future costs is hypothetical**—Project proponents may pursue other funding sources outside the Regional Program to complete their Projects, and funding for Projects in the SIP may be discontinued in future years; however, the results provide useful insights to bracket expectations for Regional Program funding in this WA.

The USGR WA receives approximately \$18.6M per year from the Regional Program to fund Projects and Programs. Forecasts of future capital, O&M, and inflation costs for Regional Program Projects and Project Concepts already in an approved SIP suggests the need for funds equivalent to five years of the USGR WA's annual Regional Program budget. As shown in Figure 2-9, substantial leveraged funds would

be needed by Municipalities and Project Proponents who plan to request Regional Program funds for new Projects if previously funded Projects and Project Concepts were approved for funding for their later Project phases. Figure 2-9 shows the forecasted capital and O&M costs for Regional Program Projects already in the SIP (accounting for inflation), and the amount of leveraged funding that would be needed if all Projects requested Regional Program funding in the coming years. Although forecasted costs could be deferred to future years, it carries risk of substantial cost escalation due to inflation. Note that the forecasts presented herein only consider Infrastructure Program Projects already in approved SIPs, and do not forecast lifecycle costs for Technical Resources Program Project Concepts that may also apply to the Infrastructure Program in the future.

Over the next 10 years, forecasted capital and O&M costs for Regional Program Projects that have already entered the SCW Program funding pipeline for the Project implementation phases such as planning, design, and construction could amount to 24% of the anticipated annual Regional Program funds collected for the USGR WA. O&M costs alone could amount to 8% of annual USGR WA funding and will continue to increase as more Projects complete construction. This is important to consider when programming future SIPs because sufficient funds may need to be reserved for O&M or Project proponents will need to leverage O&M funding from outside the Regional Program.

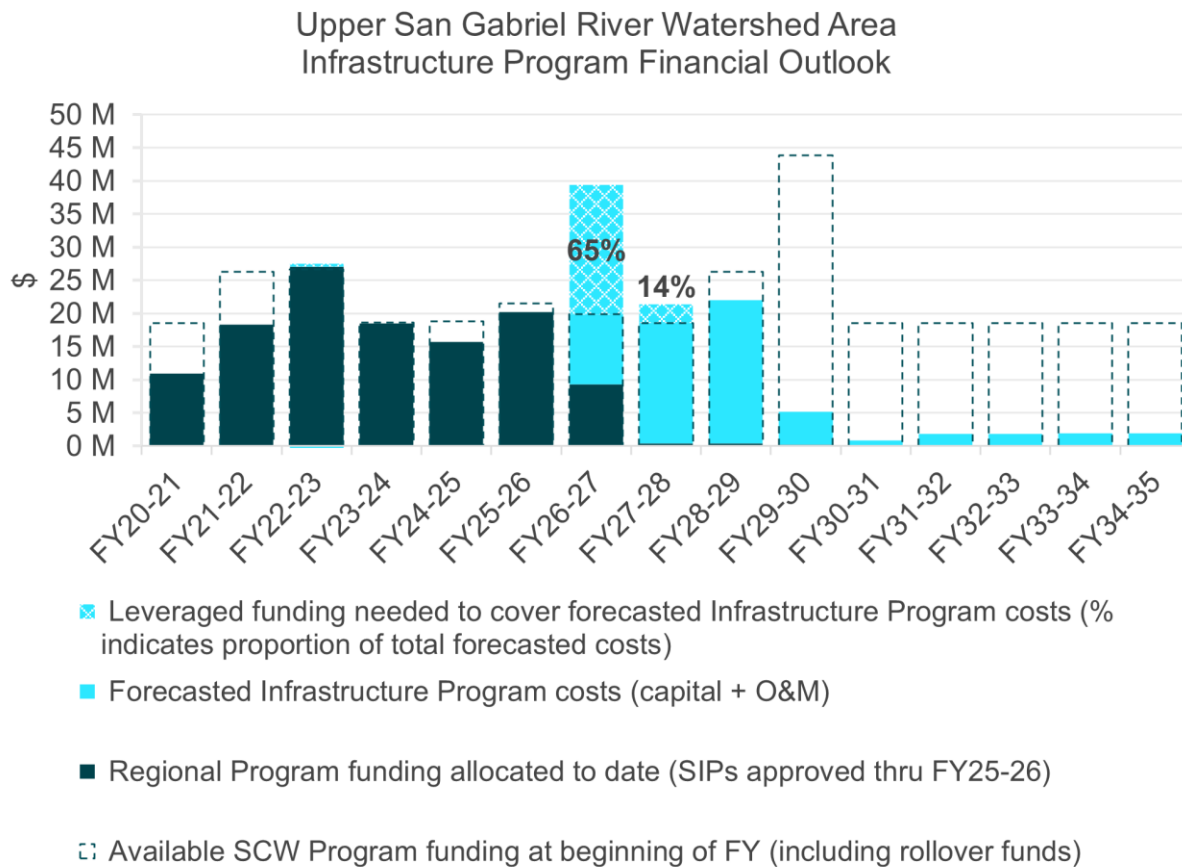


Figure 2-9. USGR WA Regional Program Infrastructure Program financial outlook

2.3.2 Municipal Program Financial Snapshot

Table 2-5 presents a summary of Municipal Program funding, expenditures, and allocated budget for the USGR WA. Since municipal boundaries do not align with WA boundaries (some Municipalities may straddle two WAs), Table 2-5 presents Municipal Program totals for the Municipalities in the USGR WA. Municipalities receive direct funding from the Los Angeles County Flood Control District (LACFCD) via the Municipal Program proportional to the revenues generated within its boundaries¹⁵. Municipalities have discretion over which Projects and Programs to fund with their respective Municipal Program disbursements, and there is no proportional split of Municipal Program funding by WA.

¹⁵ See the [SCW Program Handbook for Municipalities](#) for more information.

Table 2-5. Municipal Program financial snapshot for Municipalities included in the USGR WA

Municipality ¹	Municipal Program Disbursements ²	Total Interest Accrued to Date ²	Total Expenditures in Annual Reports ²	FY23-24 Est. Rollover to future FY ³	FY24-25 Annual Plan Allocations
Unincorporated County	\$44.9M	\$0.3M	\$45.2M	\$0	\$11.1M
Pomona	\$7.5M	\$0.3M	\$2.7M	\$5.1M	\$1.8M
Glendora	\$3.6M	\$18.3K	\$0.8M	\$2.8M	\$1.2M
San Dimas	\$2.4M	\$59.7K	\$0.9M	\$1.5M	\$0.7M
West Covina	\$5.4M	\$0.2M	\$1.0M	\$4.6M	\$4.7M
Diamond Bar	\$3.3M	\$0	\$1.4M	\$1.9M	\$1.8M
Claremont	\$2.3M	\$57.3K	\$1.2M	\$1.1M	\$0.6M
Industry	\$0	\$0	\$0	\$0	\$0
Azusa	\$2.4M	\$0	\$0.8M	\$1.7M	\$0.8M
Walnut	\$2.0M	\$9.1K	\$1.3M	\$0.7M	\$0.5M
Irwindale	\$1.7M	\$0	\$0.5M	\$1.2M	\$0.7M
La Verne	\$2.2M	\$25.4K	\$67.7K	\$2.2M	\$0
Covina	\$2.9M	\$0	\$1.4M	\$1.5M	\$0.8M
Baldwin Park	\$2.9M	\$0.4M	\$3.0M	\$0.3M	\$1.0M
Duarte	\$1.0M	\$15.2K	\$0.6M	\$0.4M	\$0.1M
La Puente	\$1.4M	\$10.1K	\$0.8M	\$0.6M	\$0.6M
El Monte	\$4.4M	\$0	\$2.3M	\$2.0M	\$1.1M
Bradbury	\$0.2M	\$0	\$0.1M	\$75.0K	\$50.0K
Monrovia	\$2.1M	\$11.9K	\$1.3M	\$0.8M	\$0.6M
South El Monte	\$1.8M	\$0	\$0.3M	\$1.5M	\$1.6M
Arcadia	\$4.1M	\$51.1K	\$1.7M	\$2.4M	\$1.2M
Total	\$98.4M	\$1.4M	\$67.4M	\$32.5M	\$30.9M

¹Municipalities included in the USGR WA.

²Reflects total Municipal Program Disbursement to each Municipality from FY20-21 to FY23-24. For Municipalities that span multiple WAs, disbursements and expenditures may not be exclusive to this WA. Municipal Program Annual Reports for FY24-25 are due in February 2026 and are not yet available. Information is self-reported by each Municipality and may be incomplete.

³Rollover to FY24-25.

Chapter 3. Baseline of Benefits Provided by Funded Projects (FY20-21 to FY24-25)

A fundamental element of Watershed Planning is the compilation and summary of progress to date in terms of SCW Program Projects and Programs. This chapter compiles Regional and Municipal Program Projects, collectively referred to as “SCW Program Projects”, funded prior to the development of this Initial Watershed Plan (FY20-21 through FY24-25)¹⁶ and summarizes their benefit baselines—referred to as *baselines* throughout this Plan—as well as the forecasted potential benefits to assist with target-setting, assuming a similar linear trajectory of the benefits achieved during the first five years of the program can be achieved by future Projects.

These baselines provide a snapshot of SCW Program Project benefits at the start of the Watershed Planning process, serving as a reference point for measuring future investments and progress. They inform key Initial Watershed Plan elements, including target-setting (Chapter 4), the quantification of WA Needs (Chapter 5), and the identification of strategies to address those needs (Chapter 5). Baselines also form a foundation for an adaptive, long-term Watershed Planning process (Chapter 7)¹⁷. While baselines represent a static starting point, ongoing SCW Program Project implementation will be tracked and updated through the [Planning Tool](#) to reflect progress and evolving Project implementation.

Baselines and forecasts include all SCW Program Projects funded to date, regardless of their implementation status (in progress or constructed). By capturing both anticipated benefits (from in-progress Projects) and realized benefits (from constructed Projects), the Initial Watershed Plans present a more accurate picture of current investments—helping inform data-driven strategies rooted in past decisions.

¹⁶ Note that “baseline” throughout this Initial Watershed Plan refers to the benefits of SCW Program Projects. These included Regional Infrastructure Program Projects included in SIPs FY20-21 through FY24-25 and Municipal Program Projects with expenditures in FY20-21 through FY23-24 Municipal Annual Reports and funding allocations in FY24-25 Municipal Annual Plans. Baselines are static by design; new and/or realized benefits will be tracked and reported as progress updated. Baselines do not include Project Concepts, Scientific Studies, or other Municipal Program Activities such as outreach and engagement, O&M, post-construction monitoring, or other Programs. A key gap and recommendation for Adaptive Management is the establishment and quantification of Program benefits so that they may be considered in assessments of progress to date (Chapter 7).

¹⁷ Progress will be continuously tracked via the Planning Tool as new investments are made, while forecasts may be refined through Adaptive Management if targets are reassessed (Chapter 7).

As more Projects are constructed and post-construction monitoring metrics are established, these metrics will be integrated into the SCW Program Portal—including the Planning Tool—and Adaptive Watershed Plans. Progress summaries will adjust to reflect realized benefits (Chapter 7).

While this Initial Watershed Plan focuses on quantifying Project benefits, future Watershed Planning efforts may quantify and assess benefits provided by SCW Program funded Programs and Scientific Studies (Chapter 7). As new Projects, Programs, and Scientific Studies are included in SIPs and Municipal Program Annual Plans, and as Project post-construction monitoring and metrics are established and reported, progress will be tracked and annually updated via the [Planning Tool](#) to communicate progress toward meeting targets (set in Chapter 4) and achieving Goals.

3.1 SCW Program Projects in the Upper San Gabriel River Watershed Area

In the first five years of the SCW Program, the SCW Program allocated \$88.6M in the USGR WA in the form of 26 Projects (13 from the Infrastructure Program and 13 from the Municipal Program)¹⁸, five of which have been constructed so far. Figure 3-1 below summarizes SCW Program Projects funded to date in the USGR WA and whose benefits define the baselines presented in this chapter. These Projects have a total 24-hour storage capacity¹⁹ of approximately 295 ac-ft, managing runoff from over 10,000 acres, and reflect a wide variety of Project types and configurations. See Figure 3-2 for a map of the USGR WA SCW Program Projects. See Table 3-1 and Table 3-2 for additional Project details for these SCW Program Projects in the USGR WA, respectively.

¹⁸ The Regional Program Project count herein reflects unique Projects while the [SCW Program Portal](#) relies on an application-based database. The SCW Program Portal may list “14” “Projects” in the USGR WA, while the unique Project count is 13 (i.e., one Project applied and received funding in more than one SIP year). Municipal Program Project counts may also differ, as they were manually reviewed to eliminate duplicates and to ensure that only Activities meeting the definition of a “Project” were included in the baselines. Only Projects with expenditures in FY20-21 through FY23-24, or with allocations in FY24-25, are included. Lastly, the SCW Program Portal is a dynamic tool that automatically updates as SCW Program Projects are added or removed from the database. In contrast, the baselines presented herein are static and based on a snapshot of data as of 2025.

¹⁹ 24-hour storage capacity includes a Project’s structural capacity plus the additional capacity that can be treated over a 24-hour period through infiltration or other means. The SCW Projects Module calculates 24-hour capacity as the capacity captured during the 24-hour 85th percentile design storm, with the maximum capacity being 100% of the volume of the design storm. 24-hour capacity is the basis for Project scoring metric A.1 Water Quality Cost Effectiveness.

Note that SCW Program Projects are categorized as either being a wet-weather or a dry-weather Project:

- **Wet-weather Project:** Designed to capture and treat stormwater and non-stormwater runoff. These Projects are typically designed to capture and treat 100% of stormwater runoff generated within their capture area during the 85th percentile, 24-hour storm event.
- **Dry-weather Project:** Designed to capture and treat non-stormwater runoff. These Projects are typically designed to capture and treat 100% of the non-stormwater runoff generated within their capture areas.

Under the Regional Program Infrastructure Program, these two Project types have traditionally been used for scoring purposes, with separate scoring rubrics for assessing Water Quality Benefits applied to each type. While the scoring criteria aligns with most Project designs, there are several unique SCW Program Projects that blur the distinction between the two types. For example, some Projects scored as “dry-weather” may also be designed to capture and treat stormwater runoff.

Although non-stormwater pollutant load reductions achieved by dry-weather Projects are not modeled in this Initial Watershed Plan (acknowledged as a Project data gap in Section 7.1), each dry-weather Regional Program Project was individually evaluated to assess its stormwater capture and treatment abilities. Table 3-1 identified each Project’s type (wet- or dry-weather). To date in the USGR WA, there are no Regional Program Projects flagged as dry-weather Projects that are also anticipated to deliver stormwater pollutant load reduction benefits.

Upper San Gabriel River Watershed Area Summary of Regional and Municipal Program Projects



Funded Projects (FY20-25)

13 Regional Program Projects

13 Municipal Program Projects



Project Status		Project Types		BMP Types			
5 Constructed		15 Wet & Dry Weather Capture		11 Infiltration Facility		0 Diversion to Sanitary Sewer	
21 In Progress		11 Dry Weather Capture		0 Cistern		2 Bioretention	
				0 Infiltration Well		2 Bioinfiltration	
				8 Treatment Facility		0 Permeable Pavement	
				3 Green Street			
Total Capture Area Managed		Capture Area Sizes		Total Project 24-hour Storage Capacity			
10,000 acres		19 < 0-200 acres		295 ac-ft			
		4 200 - 1,000 acres					
		3 >1,000 acres					
Total Cost Share Funding*		Budgeted and Projected to Date (FY20-25)		Projects Benefiting DACs		Projects Implemented Across	
\$37.8 Million		\$88.6 Million		11 Projects		13 Municipalities	
Pollutants Addressed				Projects Providing Water Supply Benefits			
9 Total Zinc		0 Total Phosphorus		11 Connected to Aquifer*			
0 Bacteria		17 Other**		1 Connected to Wastewater Treatment for Reuse			
0 Total Nitrogen				1 Uses Water Onsite			
Projects Providing Community Benefits							
16 Implement Natural Processes				2 Improve Access to Public Waterways			
13 Utilize Natural Materials				14 Provide Recreational Opportunities			
13 Has Local Support*				3 Increase Green Spaces at Schools			
16 Improve Flood Management				16 Reduce Heat Island Impacts			
15 Enhance Habitat or Park Space				16 Increase Shade and Trees			
6 Remove Impervious Area							

*Counts Regional Program Projects only.

**Pollutants Addressed does not apply to dry-weather Projects. "Other" includes dry-weather Projects, Copper, Lead, Toxics, and Chlorides.

Note that baselines reflect only SCW Program Projects, not benefits from parallel initiatives outside the SCW Program. Future Watershed Planning efforts may expand baselines to include Programs, Scientific Studies, and post-construction Project performance data.

Figure 3-1. Summary of SCW Program Projects funded to date in the USGR WA

Upper San Gabriel River Watershed Area

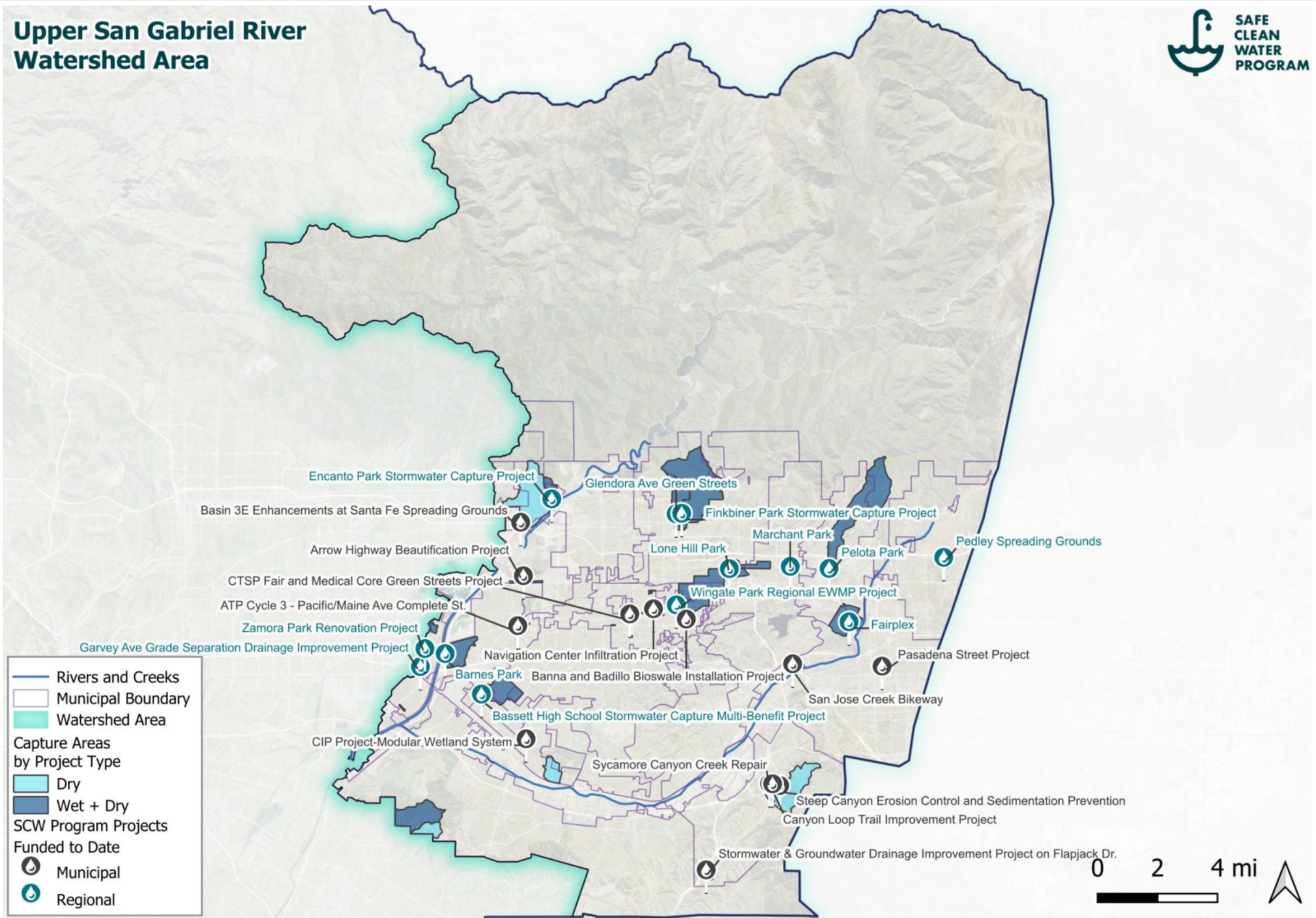


Figure 3-2. SCW Program Projects funded to date in the USGR WA

Table 3-1. Regional Program Projects funded to date in the USGR WA

Regional Program Projects Funded to Date in the USGR WA				
Project Name	SIP Year(s)	Project Type ¹	Funded Phase(s)	Current Phase ²
Barnes Park	FY20-21	Wet	Design, Construction	Construction
Bassett High School Stormwater Capture Multi-Benefit Project	FY20-21	Wet	Design, Construction	Design
Encanto Park Stormwater Capture Project	FY20-21	Wet	Design, Construction	Design
Garvey Avenue Grade Separation Drainage Improvement Project	FY20-21	Wet	Design, Construction, O&M	Construction
Pedley Spreading Grounds	FY20-21	Wet	Design, Construction	Bid/Award
Wingate Park Regional EWMP Project	FY20-21	Wet	Design, Construction	Design
Fairplex	FY21-22	Wet	Construction, Design	Design
Lone Hill Park	FY21-22	Wet	Construction, Design	Planning
Zamora Park Renovation Project	FY21-22	Wet	Construction, O&M	Bid/Award
Finkbiner Park Stormwater Capture Project	FY21-22, FY24-25	Wet	Construction	Construction
Glendora Avenue Green Streets	FY22-23	Wet	Design, Planning	Planning
Marchant Park	FY22-23	Wet	Design	Planning
Pelota Park	FY22-23	Wet	Design	Planning

¹Wet-weather Projects capture both stormwater and non-stormwater runoff. Typically, wet-weather Projects are designed to capture 100% of the design storm event.

²Current phase as reported in the FY24-25 Midyear Reports.

Table 3-2. Municipal Program Projects funded to date in the USGR WA

Municipal Program Projects Funded to Date in the USGR WA			
Project Name	Municipality	Project Type ¹	Status
Arrow Highway Beautification Project; P-1040	Irwindale	Dry	In Progress
ATP Cycle 3 - Pacific/Maine Avenue Complete Street	Baldwin Park	Dry	In Progress
Banna and Badillo Bioswale Installation Project	Covina	Wet	In Progress
Basin 3E Enhancements at Santa Fe Spreading Grounds	Sierra Madre	Dry	In Progress
Canyon Loop Trail Improvement Project (Construction)	Diamond Bar	Dry	Constructed
CIP Project-Modular Wetland System	La Puente	Dry	Constructed
CTSP – FAIR and Medical Core Green Streets Project	Covina	Dry	In Progress
Navigation Center Infiltration Project	Covina	Dry	In Progress
Pasadena Street Project	Pomona	Dry	Constructed
San Jose Creek Bikeway	Pomona	Wet	In Progress
Steep Canyon Erosion Control and Sedimentation Prevention (Design and Construction)	Diamond Bar	Dry	In Progress
Stormwater & Groundwater Drainage Improvement Project on Flapjack Drive (Design and Construction)	Diamond Bar	Dry	Constructed
Sycamore Canyon Creek Repair	Diamond Bar	Dry	Constructed

¹Wet-weather Projects capture both stormwater and non-stormwater runoff. Typically, wet-weather Projects are designed to capture 100% of the design storm event.

3.2 Baselines and Forecasts for the Upper San Gabriel River Watershed Area

The following subsections summarize benefits expected by SCW Program Projects funded to date within the USGR WA. This data provides a foundation for target-setting and strategy development, supporting the achievement of Goals and the planning priorities of the USGR WASC and other interested parties.

3.2.1 Benefit Baselines for the Upper San Gabriel Watershed Area

The 26 SCW Program Projects in the USGR WA improve water quality while also delivering other co-benefits to communities including increased drought resiliency and improved public health. Figure 3-3 below summarizes the USGR WA baselines which are organized by Planning Theme. SCW Program Projects funded to date in the USGR WA are estimated to capture 1,700 ac-ft of stormwater and urban runoff annually, while also removing thousands of pounds of heavy metals (e.g., zinc; 1,300 pounds removed per year). These Projects are anticipated to deliver over 20 acres of enhanced or restored park space, six acres of new tree canopy, cooling and shading surfaces²⁰, and are expected to create 200 jobs in the region. Baseline methodology is provided in Appendix H.

Included in these baselines are load reductions for the priority pollutants zinc and total phosphorus. Zinc, bacteria, and total phosphorus are priority pollutants for the USGR WA because they are identified as limiting pollutants in the area's WMPs. Load reduction baselines for zinc and total phosphorus are estimated using the regionally calibrated Los Angeles County Public Work Watershed Management Modeling System version 2.0 (WMMS2). While bacteria is also a priority pollutant for the USGR WA, a baseline and target for bacteria load reduction cannot be modeled or quantified at this time. Unlike other pollutants, fecal indicator bacteria loads were not calibrated in WMMS2, and a runoff time series is not available. This is due to the unique complexities associated with modeling bacteria, including their high variability and site-specific behavior. As a result, quantification of bacteria load reduction is an Initial Watershed Plan Project data gap (Figure 7-6), which is anticipated to be addressed through near-term Watershed Planning Adaptive Management efforts.

²⁰ These include initial results from Regional and Municipal Program reporting in early 2025 and are subject to additional review and revision.

Overall, SCW Program Projects funded to date will deliver a variety of benefits to the USGR WA. Watershed Planning will support delivery of future additional benefits that align with the Goals as well as the USGR WASC and other interested party priorities.

It is important to note that while many other non-SCW Program funded Projects and Programs provide benefits to the USGR WA, the baselines presented in this chapter do not include those benefits. For this Initial Watershed Plan, Water Quality and Water Supply Benefit baselines were determined through WMMS2 analysis and MMS outcomes and account for stormwater routing and capture by existing major capture facilities and SCW Program Projects. Non-SCW Program Projects, their characteristics, and their Water Quality and Water Supply Benefits are not included in these baselines and instead have been compiled and used to support SCW Program-wide and WA-specific targets, as detailed in Chapter 4.

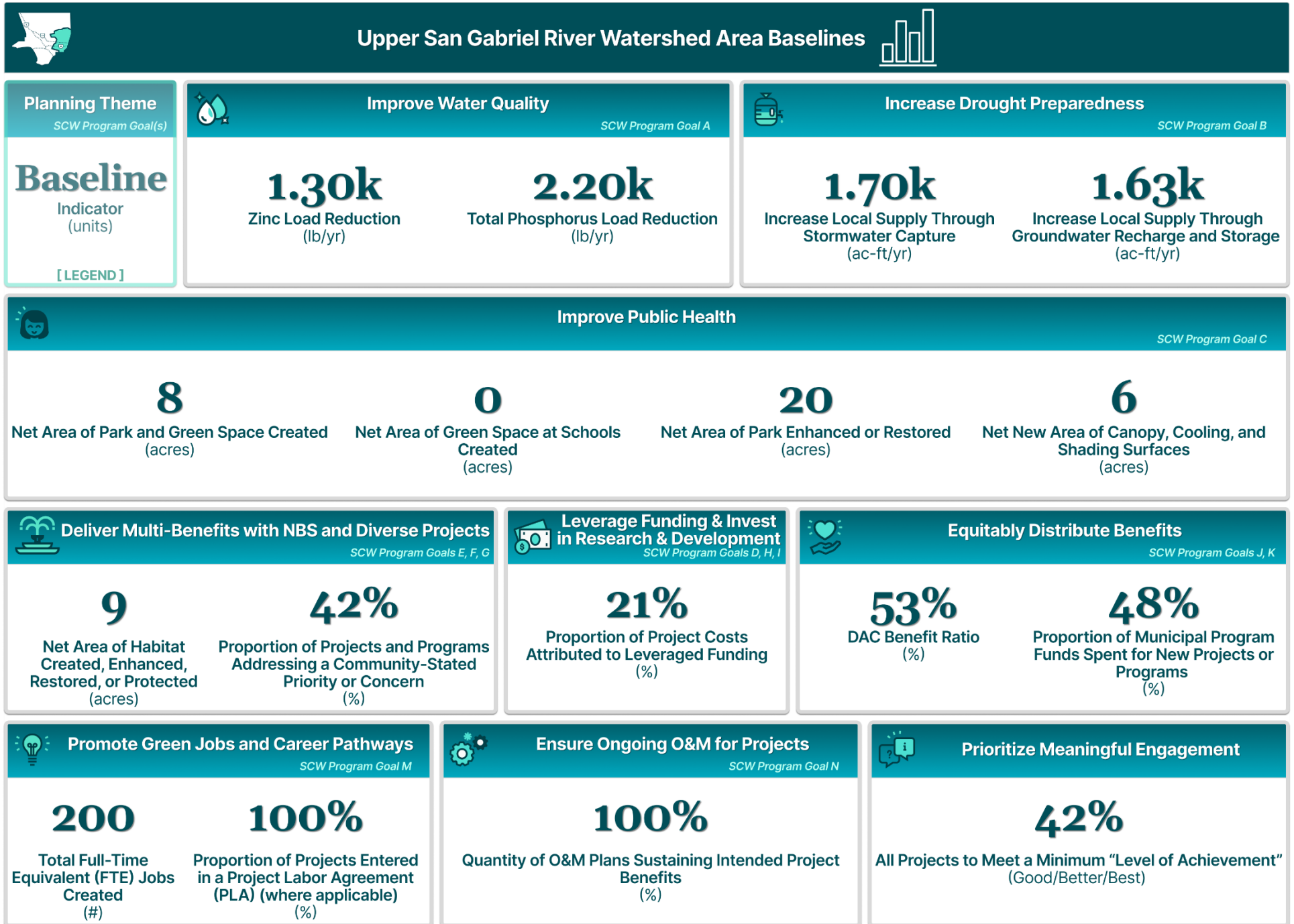


Figure 3-3. Summary of benefits provided by SCW Program funded Projects to date in the USGR WA

3.2.2 Benefit Forecasts for the Upper San Gabriel River Watershed Area

Building upon the baselines, benefit forecasts estimate the potential trajectory of SCW Program Project benefits to provide context for target-setting (Chapter 4). These forecasts are not targets; rather, they are illustrative projections meant to inform planning discussions. Instead, they provide critical context for target-setting and strategy development by estimating how SCW Program benefits might grow over time, if SCW Program Projects (i.e., Regional and Municipal Program Projects) funded to date are implemented as proposed and the SCW Program continues at its current pace.

These forecasts are simplified, linear estimates (illustrated by Figure 3-4) based on SCW Program Projects funded *prior* to the start of the Watershed Planning process (i.e., Projects funded from FY20-21 to FY24-25). To account for the above average number of Projects funded in the first few years of the SCW Program—which stemmed from a backlog of ready-to-go Project Concepts and available budget that could be allocated exclusively to new Projects—forecasts are anchored in the more recent, stabilized implementation pattern observed over the past three fiscal years (FY22-23 through FY24-25). This adjustment reflects the transition from a startup phase with accumulated demand to a more sustainable, ongoing funding cadence, better representing the SCW Program’s expected rate of benefit delivery moving forward.

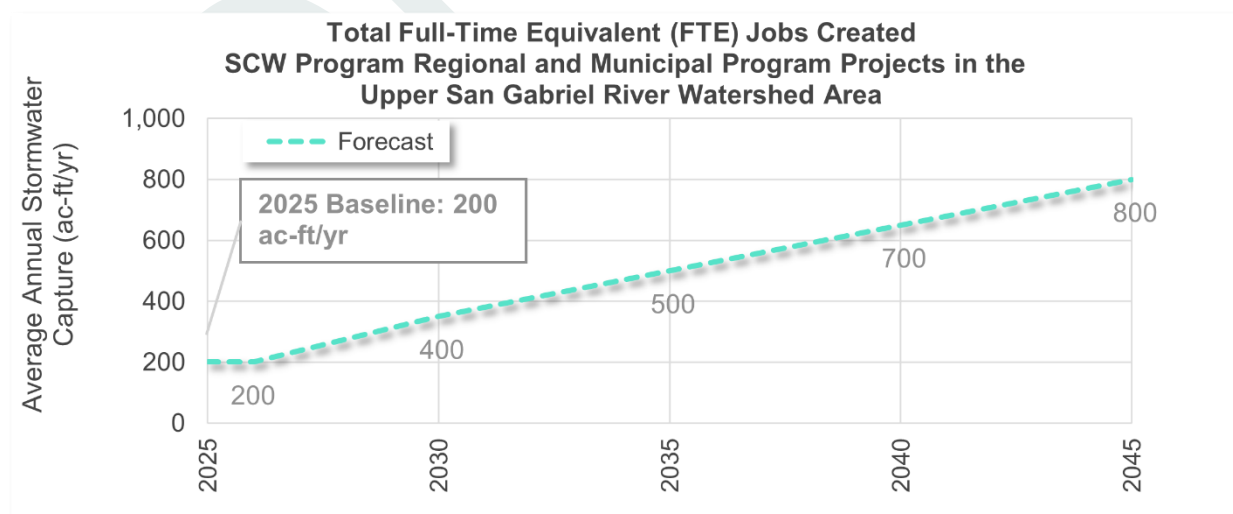


Figure 3-4. Example benefit forecast for the USGR WA Regional and Municipal Program Project

While basing forecasts on the more recent years of SCW Program Projects is generally useful for estimating future Project potential, it can also result in flat forecasts for certain Indicators (described in Chapter 4) despite having a nonzero baseline (e.g., see “Net Area of Park and Green Space Created” in Figure 3-5 below).

This occurs when cumulative benefits to date are primarily attributed to SCW Program Projects funded during the SCW Program’s first two years, while more recently funded Projects have not yet reported anticipated benefits for those same Indicators. This does not necessarily mean that future benefits will be absent. In many cases, the flat forecast may be a result of Project timing:

- **Earlier implementation stages:** Recently funded Projects may be in planning or design phases, making it too early to accurately quantify anticipated benefits.
- **Greater uncertainty:** Projects earlier in development often have greater uncertainty around benefit estimates compared to Projects further along in implementation.
- **Reporting timelines:** Benefits from Regional Program Projects funded under the most recent SIP (FY24–25) may not yet be reflected in available reporting data at the time of data extraction for the Initial Watershed Plan.

These considerations may also affect baselines. For example, a Project proponent may anticipate that their Project will provide CIBs but may be unable to quantify those benefits at its current phase of implementation. As a result, baselines and forecasts may potentially underrepresent long-term anticipated benefits until newer Projects progress and their contributions can be more reliably quantified and incorporated²¹.

For the USGR WA, the lack of difference from baseline to forecast for Indicators under the Planning Theme *Increase Drought Preparedness* is driven by a different factor than those described above. The USGR WA already contains a high concentration of major capture facilities and stormwater capture Projects, which collectively provide significant water supply benefits. Because much of the available runoff is already being captured and utilized for groundwater recharge and other water supply purposes. As a result, forecasts for related Indicators appear flat, reflecting a WA that has already achieved a relatively high level of stormwater capture for increasing water supply and offers fewer opportunities for large-scale increases in local water supply.

²¹ Note that this concept does not apply to baseline and forecast estimates for Indicators under the Planning Themes *Improve Water Quality* and *Increase Drought Preparedness*. These metrics are modeled using Project design details and scope of work information, rather than reported data, and are therefore generally more defined and stable.

It is acknowledged that linear forecasts have significant limitations, and projecting linear progression may not be consistent with findings by the financial outlooks. For example, initial financial outlooks findings show SCW Program-wide limitations for funding of new Projects over the next five years. Further, the potential for new Project benefits may be limited by the growing need for O&M funding for existing SCW Program Projects as they complete construction and begin O&M and monitoring.

It is acknowledged that linear forecasts have significant limitations, and projecting linear progression may not be consistent with findings by the financial outlooks. For example, initial financial outlooks findings show SCW Program-wide limitations for funding of new Projects over the next five years. Further, the potential for new Project benefits may be limited by the growing need for O&M funding for existing SCW Program Projects as they complete construction and begin O&M and monitoring.

While actual progress is expected to fluctuate due to various programmatic, financial, and external factors, the linear approach allows for a consistent frame of reference for comparing targets (Chapter 4) to the current pace of benefits delivery. Similarly, Initial Watershed Plan targets, strategies, and other efforts are expected to lead to improved efficiency and implementation. Forecasts assume an average annual rate of benefit accrual for the sake of clarity and comparability and provide context for target-setting only. If targets are reassessed as part of Adaptive Management (see Chapter 7), then forecasts may be updated at that time. Forecasts may also be updated through future Watershed Planning efforts based on findings from financial outlooks developed concurrently with the Initial Watershed Plans. This linear approach allows targets in Chapter 4 to be viewed relative to the baselines, illustrating how much acceleration or improvement is needed to meet targets.

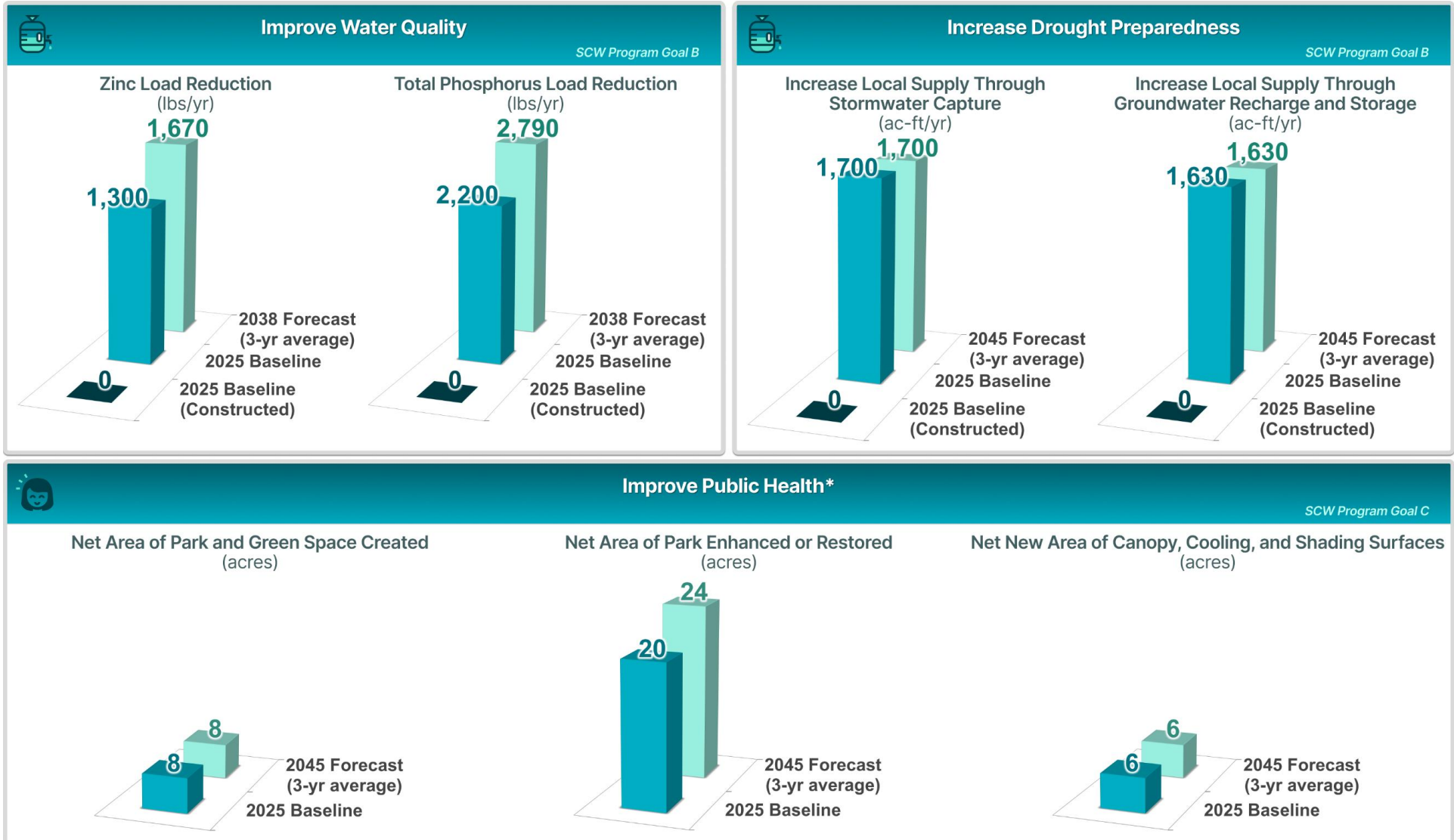
Together, baselines and forecasts serve as foundational tools for setting realistic yet aspirational targets. However, it is essential to recognize that both are primarily informed by the anticipated benefits of Projects that are still in progress, since the majority of SCW Program Projects have not been constructed yet. As the SCW Program progresses, the benefits delivered by in-progress Projects may shift in response to evolving Project-specific priorities, site constraints, or engagement input. Consequently, future progress summaries may diverge from these initial baselines and forecasts. Realized benefits could exceed, fall short of, or align with those in original Project designs. This would underscore the importance of adaptive Watershed Planning and continuous tracking to support data-driven decision-making throughout the SCW Program lifecycle.

For the USGR WA, Figure 3-5 provides example comparisons between:

- 2025 constructed baseline (dark blue column), reflecting realized benefits from constructed SCW Program Projects),
- 2025 baseline (light blue column), reflecting anticipated and realized benefits from all SCW Program Projects, including those not yet constructed, and
- Forecasted trajectory of benefits based on current trends (teal column).

Forecasts for other benefits are provided in Appendix H along with the additional details on forecast methods.

Example Upper San Gabriel River Watershed Area Forecasts



*Given that the baseline for the Indicator "Net Area of Green Space at Schools Created" is 0 acres, a forecast is not available.

Figure 3-5. Example benefit forecasts for the USGR WA under current SCW Program trajectory for key Planning Themes

Chapter 4. Quantifying Progress Toward SCW Program Goals

Metrics and targets are essential Watershed Planning tools, enabling vision-setting and the tracking and assessment of progress toward the achievement of Goals. This chapter outlines an initial set of Project-based metrics that estimate Project benefits at three levels: SCW Program-wide, WA-wide (via Indicators), and at the Project level (Performance Measures). These metrics set the foundation for articulating a vision for the USGR WA and serve as the starting point for tracking progress in the coming years.

4.1 Visioning Setting and Progress Tracking: Indicators & Performance Measures

Visioning and progress tracking are facilitated by Indicators and Performance Measures (PMs). Indicators are metrics which sum cumulative Project benefits across *large spatial scales*, such as the SCW Program as a whole (includes cumulative benefits from Projects in all nine WAs) and across each specific WA (includes cumulative benefits from Projects in one specific WA). Indicators are supported by a set of PMs which are metrics that are quantified and tracked at the *Project scale*.

Indicators and PMs, summarized in Figure 4-1, are anchored in the 14 Goals, and organized into the nine Planning Themes to allow for efficient WA and SCW Program-wide summaries. These Indicators and PMs are used to quantify benefits, establish measurable, aspirational targets, and track progress toward achieving Goals, based on best available Project information and data.

For example, each Project proponent and Municipality submits information and data specific to their Project for the PM: “Community-stated priority or concern addressed.” They identify which community-stated priorities or concerns their Project addresses and cite the source of that engagement input (e.g., CSNA, community engagement meetings, Parks Needs Assessment, etc.). Commonly cited priorities and concerns reported by Projects include addressing impacts of climate change (e.g., flooding, drought, wildfires), outdoor water pollution (e.g., oceans, rivers, lakes), and access to parks and recreational spaces.

This PM directly supports the calculation of the associated Indicator: “Proportion of Projects and Programs addressing a community-stated priority or concern (%).” To quantify this Indicator, the PM data reported by Project proponents and Municipalities for their Projects are assessed to determine how many SCW Program Projects address at least one such priority or concern. The Indicator value is calculated by dividing the number of Projects addressing at least one priority or concern by the total number of SCW Program Projects, at both the Program-wide and WA-specific scales.

For instance, within the USGR WA, 11 SCW Program Projects reported that they address a community-stated priority or concern that was stated through an engagement effort (e.g., CSNA, engagement meetings, Parks Needs Assessment, etc.). These include priorities such as increasing shade trees, reducing local flooding, improving air quality, improving water quality, and concerns about climate change impacts, water pollution, and the condition of public spaces. Using this PM data, the Indicator is calculated as:

$$\frac{11 \text{ Projects addressing a priority or concern}}{26 \text{ SCW Program Projects in the USGR WA}} = 42\% \quad \text{Proportion of Projects and Programs addressing a community-stated priority or concern in the USGR WA}$$

Thus, 42% of Projects in the USGR WA address a community-stated priority or concern. Note that while almost all SCW Program Projects funded to date provide at least one CIB, they may not necessarily address a community-stated priority or concern. This distinction is important because CIBs provided may or may not align with the specific needs expressed by the local community. A Project may meet technical criteria for delivering a CIB without being responsive to the priorities or concerns raised through engagement. Ensuring that future Projects both provide CIBs and directly reflect community-stated priorities and concerns is essential to advancing place-based designs and fostering meaningful engagement.

A total of 19 Indicators and 50 PMs (Figure 4-2) have been selected to quantify and summarize SCW Program progress. These metric selections build on recommendations from the ROC and MMS and incorporate input gathered through engagement with SCW Program governance committees. Details of Watershed Planning Indicators and PMs and each of their tracked data points are presented in Appendix G. While these initial Indicators and PMs are limited to quantifying Project benefits, additional metrics such as post-construction Project metrics and metrics that quantify benefits from Programs and Scientific Studies may be incorporated through Adaptive Management (Chapter 7).

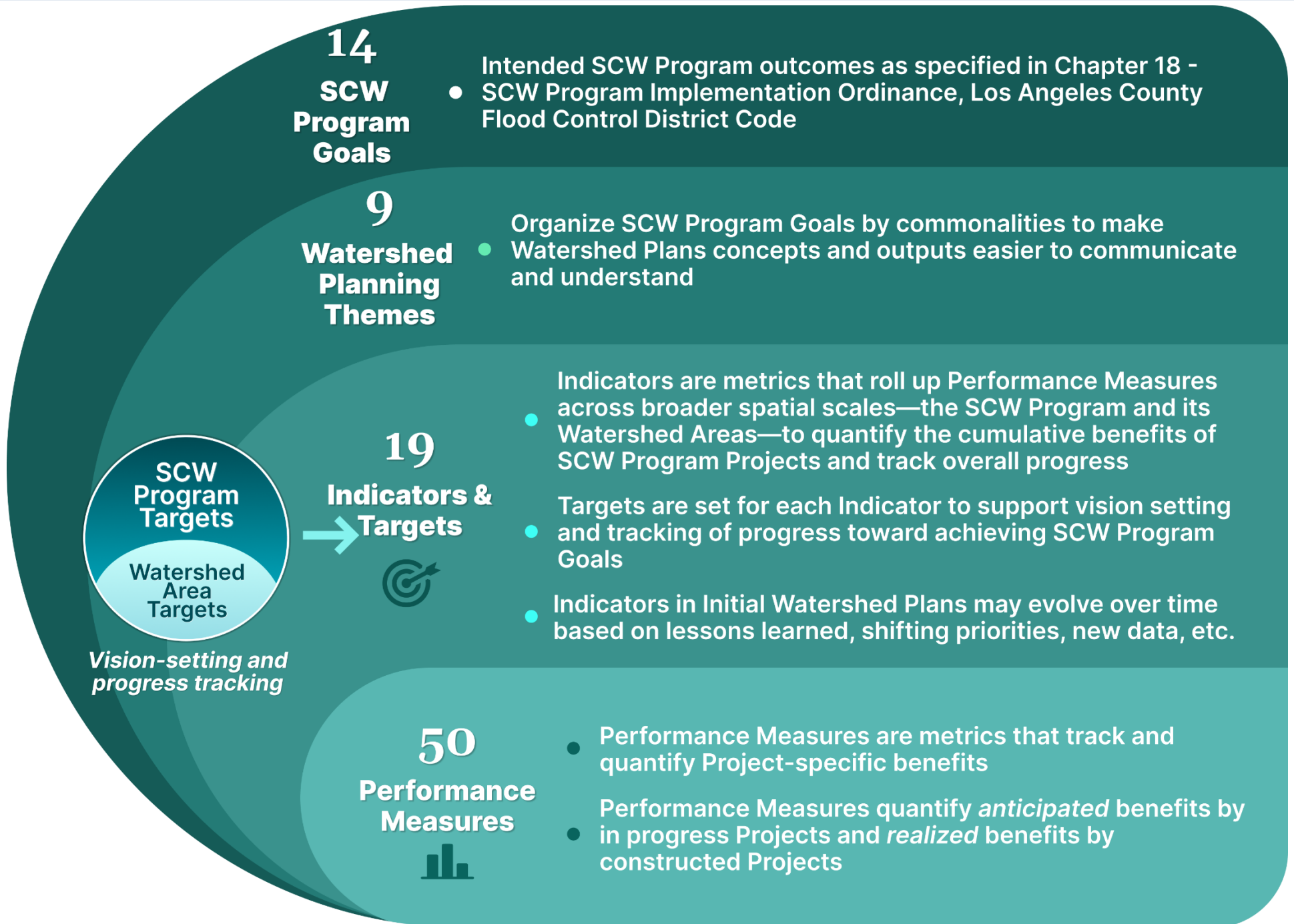


Figure 4-1. Indicators and PMs terminology

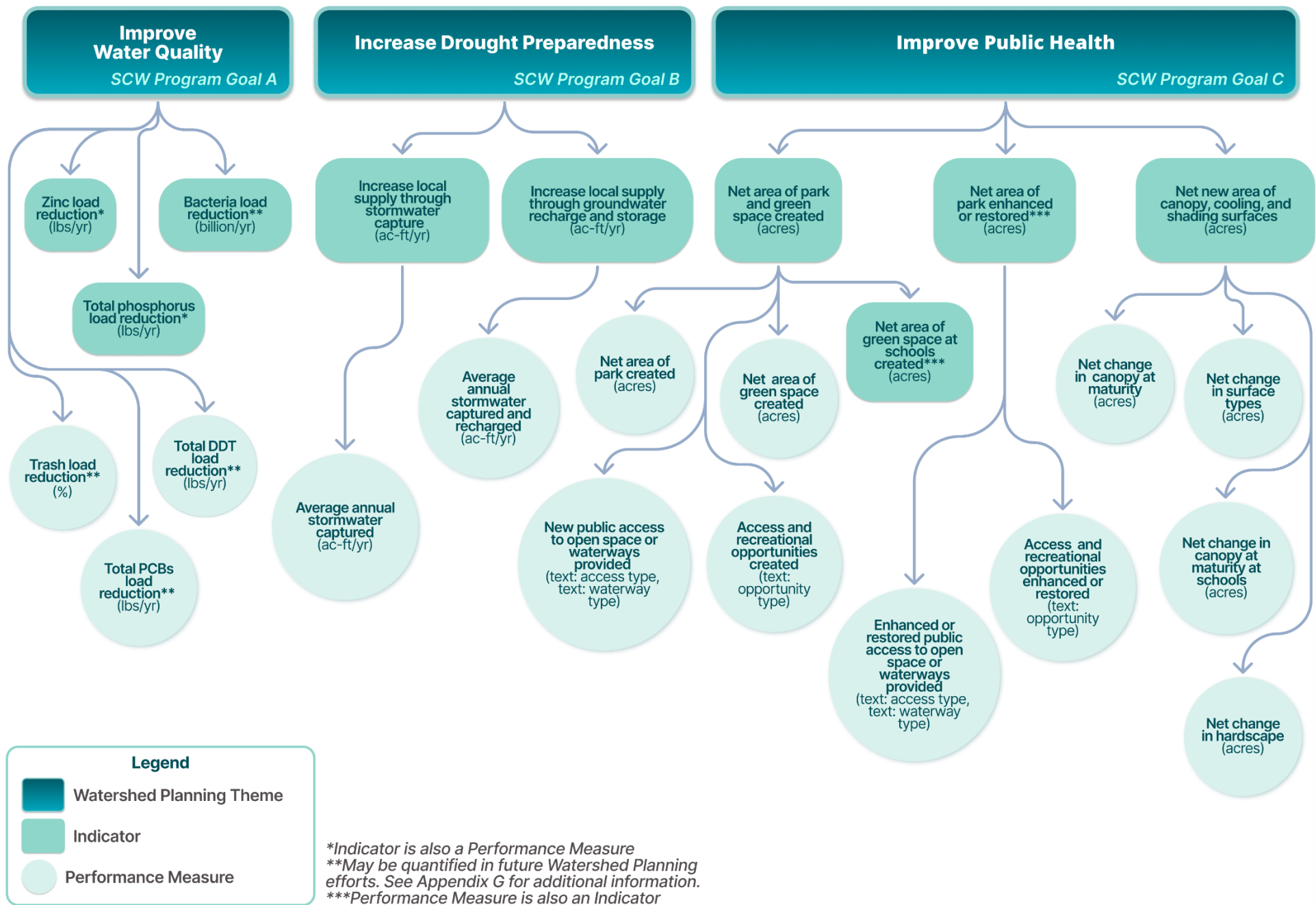


Figure 4-2. Indicators and PMs

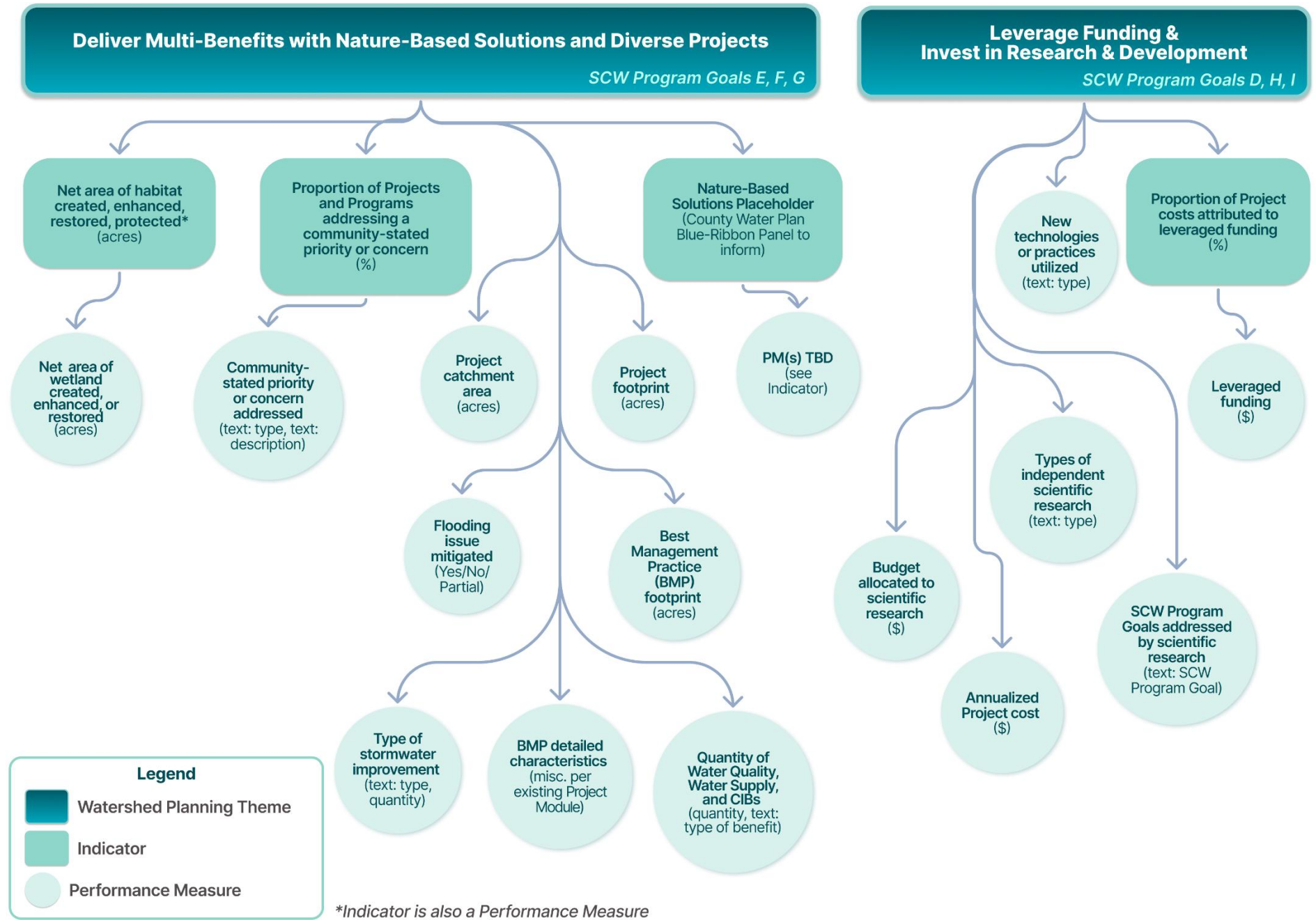


Figure 4-2. Indicators and PMs (continued)

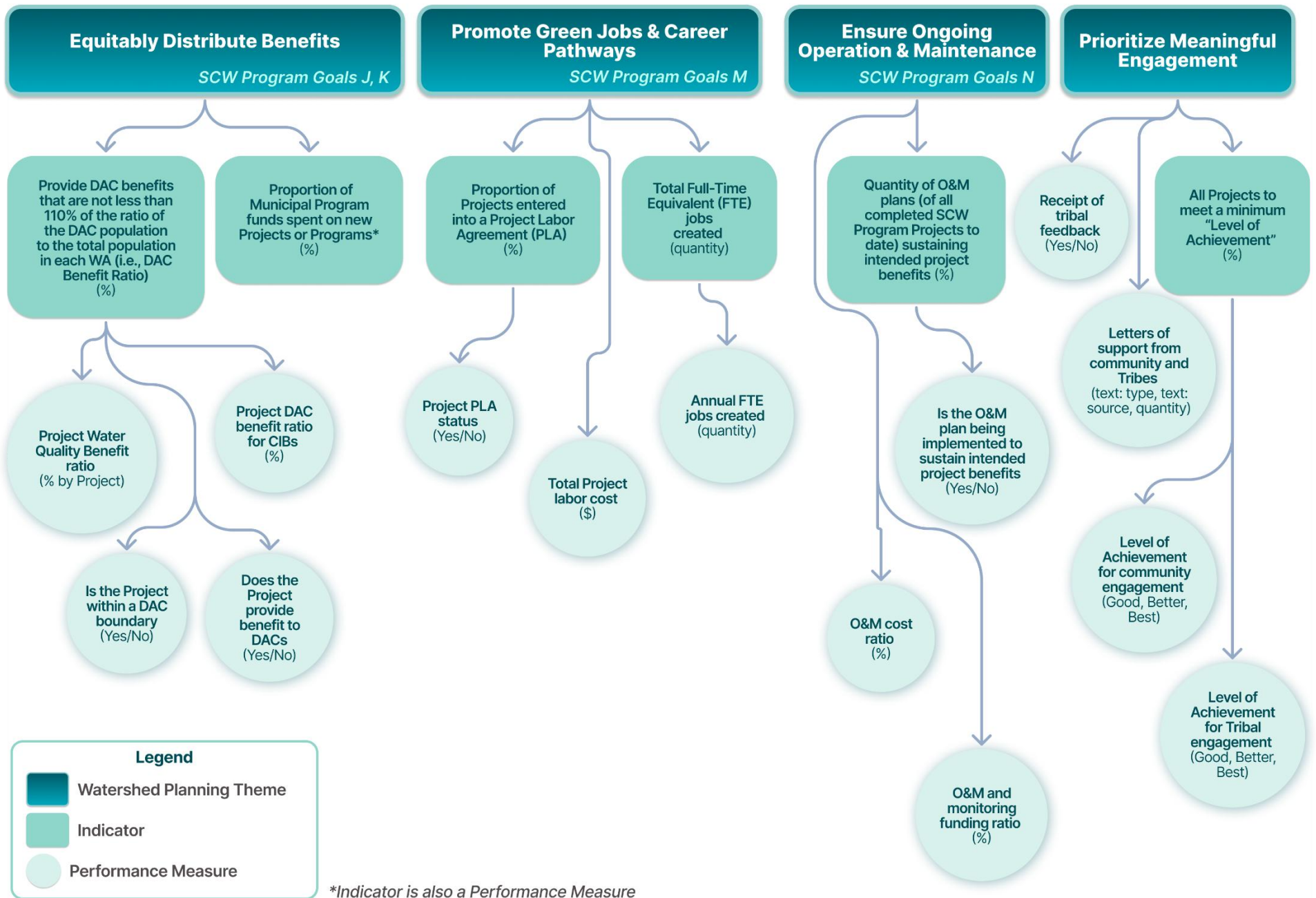


Figure 4-2. Indicators and PMs (continued)

4.2 Establishing Targets

For each Indicator outlined in the subsection above, this Initial Watershed Plan presents targets that reflect the vision for the SCW Program and its desired outcomes of improving water quality, increasing local water supply, and providing CIBs, along with the other 14 Goals. For each of the nine SCW Program WAs, measurable targets have been set with an aspirational lens for each Indicator.

The establishment of Indicators and targets aligns with the [March 2024 BOS motion](#), which called for the development of:

"Indicators and targets for the Program, to be developed with the [ROC], that can be used to measure achievement of Program Goals, guide Watershed Planning, and inform Project development, solicitation, and evaluation efforts."

SCW Program and WA targets are built upon a long history of efforts including engagement workshops and meetings with the WASCs and other interested parties, local planning efforts, funded SCW Program Projects and Scientific Studies, and efforts by the ROC and ROC Water Quality (WQ) and CIB working groups. The following subsections describe this approach.

4.2.1 Determining the SCW Program's Contributions and Targets

The SCW Program is a key contributor in the effort to achieve goals essential to LA County's long-term vision for sustainability and resiliency. Numerous countywide planning and strategy documents have been developed that include countywide goals and targets that will be achieved via a variety of programs, including the SCW Program. For example, the OurCounty Sustainability Plan, County Water Plan, Vision 2045, and Parks Needs Assessment contain their own countywide targets for addressing climate change impacts, local water supply resiliency, and public health improvement through expanded recreational opportunities. Figure 4-3 illustrates a few key planning efforts identified and their targets, as well as how the SCW Program alongside other programs will collectively work to meet them.

An important element of this Initial Watershed Plan is to establish the SCW Program contribution to these and other countywide targets. While several Indicators align with an existing countywide target, not all do. In some cases, targets are informed directly by SCW Program requirements—such as those outlined in the SCW Program Implementation Ordinance (LACFCD Code §16 and §18). For example,

- **Transfer Agreement requirements:** The SCW Program Implementation Ordinance (Chapter 18.09) requires recipients of SCW Program funds to comply with Transfer Agreement provisions. These include:
 - For Projects with an estimate capital cost over \$25M, all contractors must be bound by the provisions of a Project Labor Agreement (Chapter 18.09.B.9).
 - Requirements related to the operation, maintenance, and repair of the Project throughout its useful life (Chapter 18.09.B.15).

These requirements are reflected by a targets of 100% for the Indicators: “Proportion of Projects entered in a Project Labor Agreement (where applicable)” and “Quantity of O&M plans (of all completed SCW Program Projects to date) sustaining intended Project benefits (%)”, respectively.

- **Municipal Program Spending Requirement:** Per the SCW Program Implementation Ordinance (Chapter 18.06.C.1):

“A Municipality must spend at least seventy percent (70%) of its Municipal Program funds annually on eligible expenses related to Projects or Programs implemented on or after November 6, 2018, which also includes operations and maintenance of Projects built to comply with the MS4 Permit, so long as the Project complies with Municipal Program requirements.”

This requirement is reflected by a target of 70% for the Indicator: “Proportion of Municipal Program Funds Spent on New Projects or Programs”.

For Indicators whose targets are not predetermined by a SCW Program Implementation Ordinance requirement, targets are established using a combination of top-down and bottom-up approaches as described below:

- **Top-Down Approach:** Applies a holistic perspective by referencing countywide targets established through broader planning efforts to set aspirational yet achievable SCW Program targets. It accounts for contributions from related initiatives, such as the Integrated Regional Water Management Plans (IRWMPs), WMPs, and MS4 programs. Where a countywide target or SCW Program requirement is not identified for a given Indicator, local targets, outcomes of key efforts to date, and WA characteristics, are considered—alongside baselines and forecasts—to determine a SCW Program target.
- **Bottom-Up Approach:** Analyzes SCW Program Projects funded to date and assesses their baseline and forecasted benefits (Chapter 3). Baselines and forecasts serve as a reference for what could be achieved by the SCW Program under its current pace of implementation. Baselines and forecasts are

combined with the top-down approach, to determine SCW Program and WA targets, and thus the SCW Program's contribution to the countywide targets, when applicable. Note that constraints identified through the Regional Program financial outlooks are not considered in this approach to maintain aspirational targets.



As illustrated in Figure 4-3, each of the nine WAs will contribute to SCW Program targets through individual WA-specific targets. The relative contribution toward SCW Program targets by each WA is largely based on their characteristics (Chapter 2), such as unconfined aquifer availability for recharge or the available park space for enhancement.

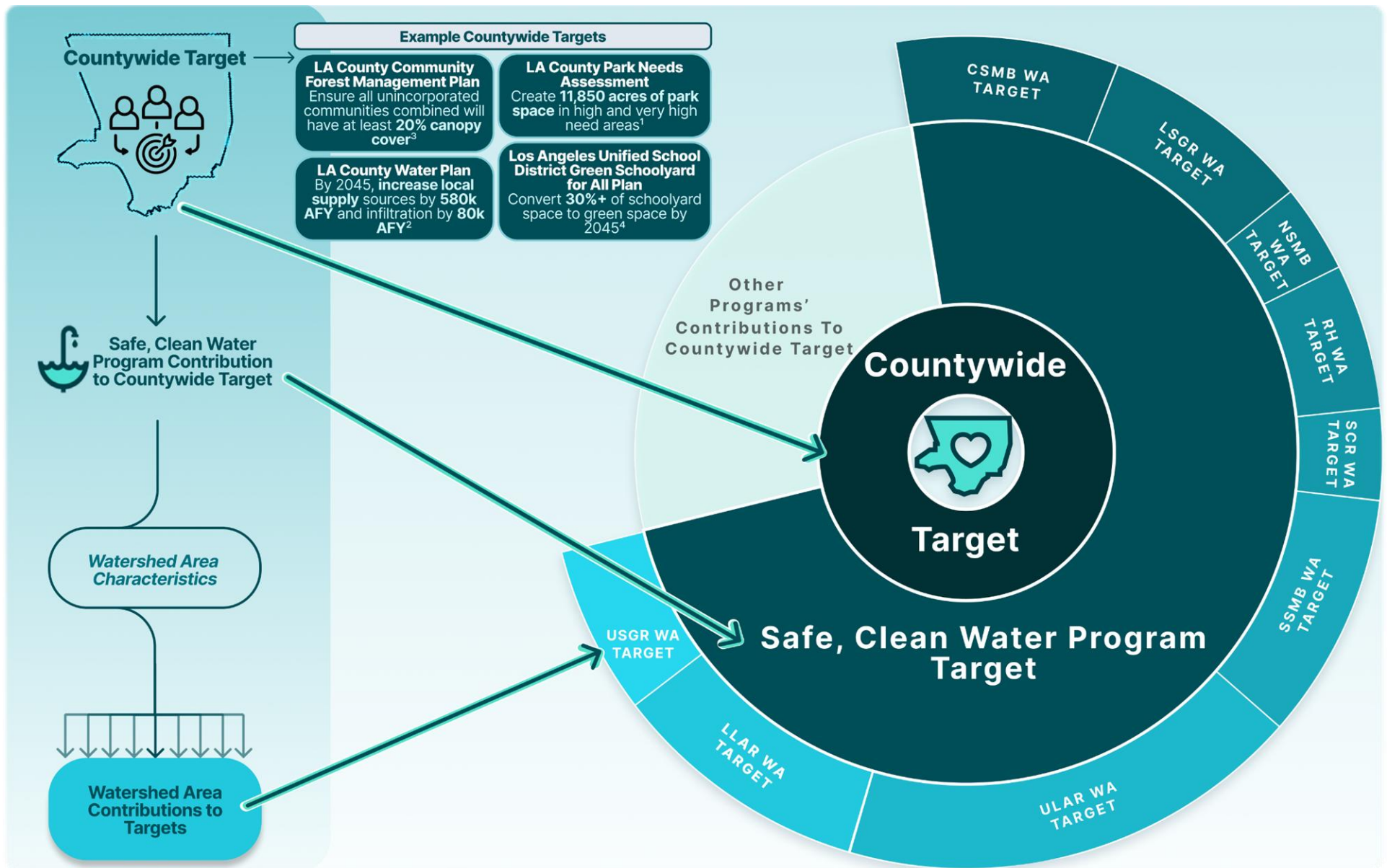


Figure 4-3. Conceptual approach to derive SCW Program target contributions from countywide targets

Note: This figure represents the conceptual process for an Indicator with a corresponding countywide target and does not apply to every Indicator

¹ LA County Department of Parks and Recreation. (2016). LA Countywide Comprehensive Parks & Recreation Needs Assessment (PNA). Page 3-66. May 9, 2016.

² LA County Public Works. (2023). LA County Water Plan: Water Supply Resilience (CWP). Page 22. December 2023.

³ LA County Chief Sustainability Office, Dudek. (2024). Room to Grow: A Community Forest Management Plan for Los Angeles County. Page 36. April 2024.

⁴ Los Angeles Unified School District Facilities Services Division. (2024). Green Schoolyard for All Plan. Page 3. April 2024.

Figure 4-4 below demonstrates how the top-down approach references methods and countywide targets set by the OurCounty Sustainability Plan, the County Water Plan, and the ROC to establish SCW Program-wide and WA targets for the Indicator: “Increase local supply through stormwater capture”.

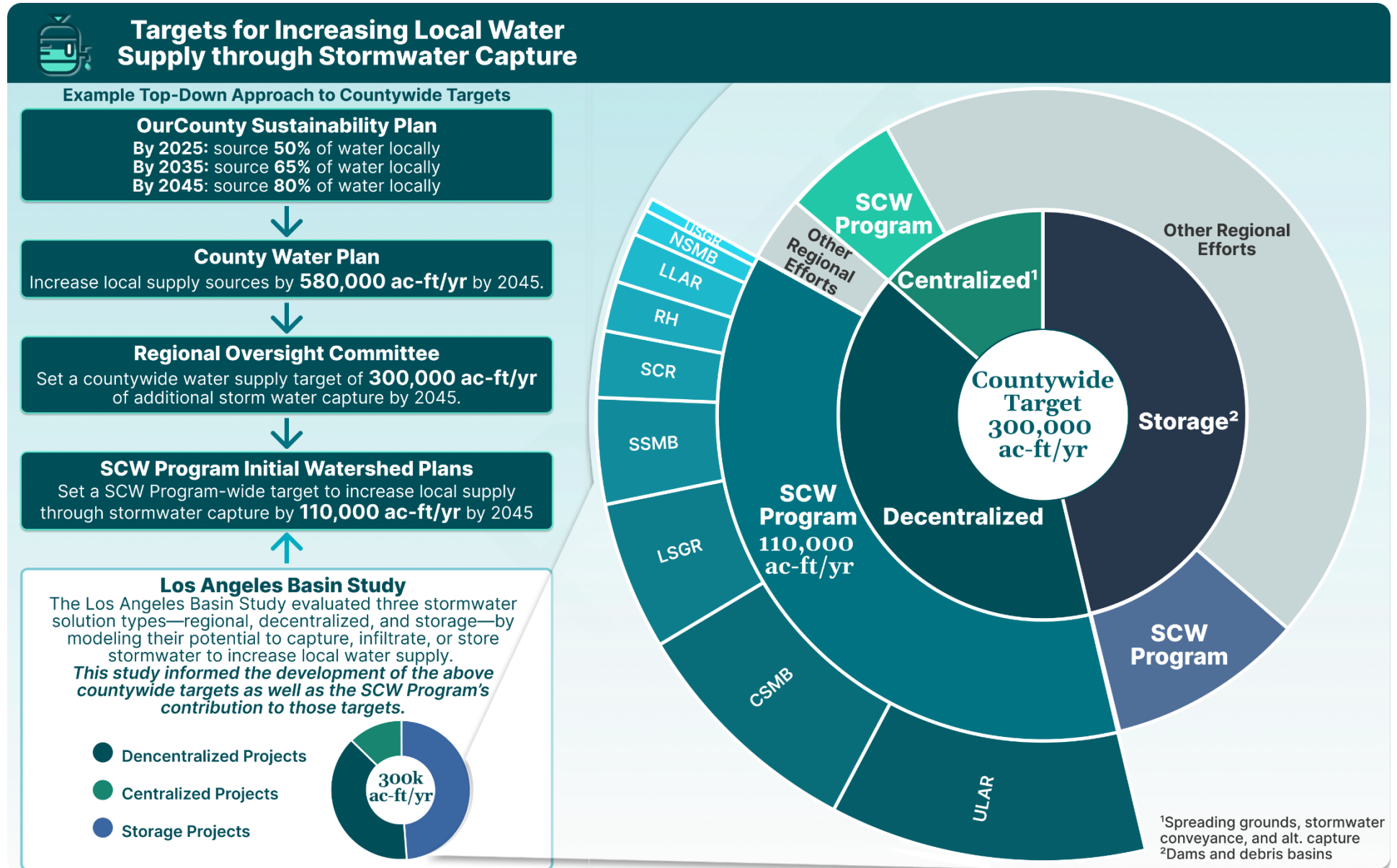


Figure 4-4. Example target setting top-down approach

Figure 4-5 and Figure 4-6 are examples of how the top-down and bottom-up approaches are combined to set targets for an Indicator without an identified countywide target (“Net Area of Park Enhanced or Restored”) and with an identified countywide target (“Net Area of Park and Green Space Created”), respectively.

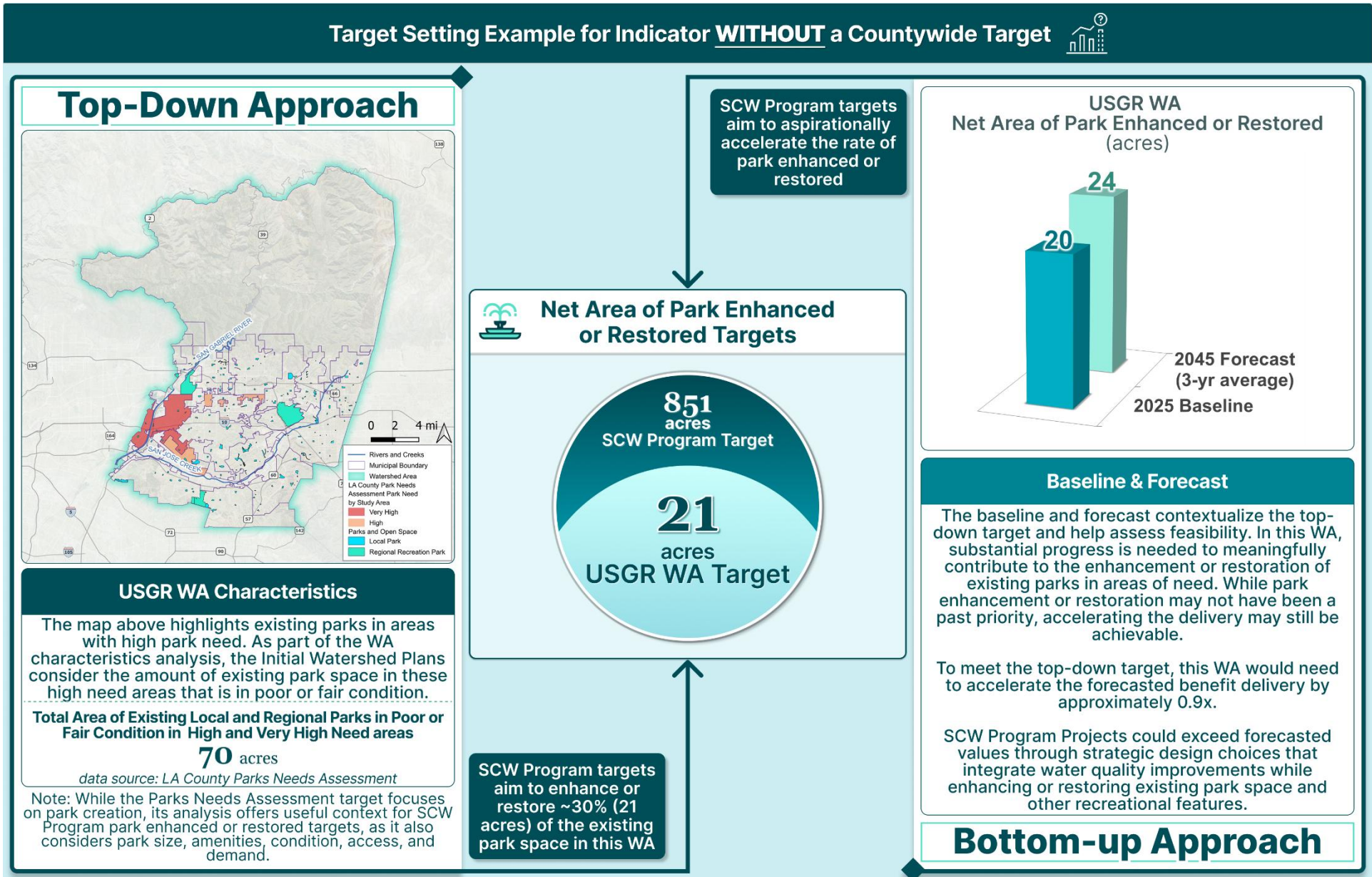


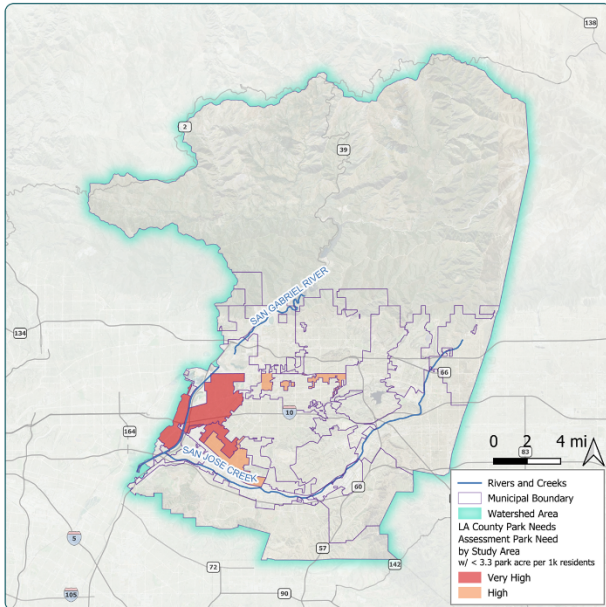
Figure 4-5. Example target setting for an Indicator without a countywide target

Target Setting Example for Indicator WITH a Countywide Target

Top-Down Approach

LA County Park Needs Assessment Countywide target

Create **11,850 acres** of park space in high and very high need areas to provide 3.3 acres per 1k residents



USGR WA Characteristics

The map above highlights areas in need of new publicly accessible park space. The Initial Watershed Plans include the amount of new park space needed as part of the WA characteristics analysis.

New park space needed to meet the Parks Needs Assessment countywide target

450 acres

SCW Program targets aim to aspirationally accelerate the rate of park and green space creation



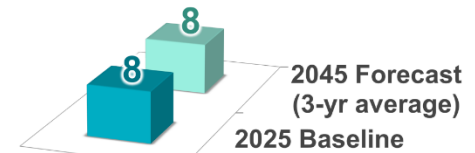
Net Area of Park and Green Space Created Targets

261
acres
SCW Program Target

10
acres
USGR WA Target

WA target aims to address ~2% (10 ac) of the identified need for park and green space.

USGR WA Net Area of Park and Green Space Created (acres)



Baseline & Forecast

The baseline and forecast contextualize the top-down target and help assess feasibility. In this WA, substantial progress is needed to meaningfully contribute to the countywide target. While park and green space creation may not have been a past priority, accelerating the delivery may still be achievable.

Park and green space creation can take many forms. While large new spaces may not always be feasible, smaller-scale interventions—such as pocket parks, green corridors, and integrated green infrastructure—can collectively deliver meaningful benefits and contribute significantly toward meeting targets.

SCW Program Projects could exceed forecasted values through strategic design choices that integrate water quality improvements with the creation of park or vegetated green space.

Bottom-up Approach

Figure 4-6. Example target setting for an Indicator with a countywide target

As described in Section 1.4, the synthesis of WASC and SCW Program governance committee engagement identified several priorities for Watershed Planning, including target setting. Figure 4-7 outlines the items that were considered during target setting for the USGR WA. See Appendix C for additional information and all priorities considered.

Regional Oversight Committee and Watershed Area Steering Committee Engagement		
	SCW Program Committee Priority	Effect on Initial Watershed Plan Targets
USGR Watershed Area Items	Align with targets from San Gabriel Valley Greenway Plan.	» This plan and its numeric targets were reviewed for alignment with Initial Watershed Plan Indicators; while no direct alignment was identified, relevant strategies are considered within this Plan.
	Recognize that all stormwater runoff from urban surfaces is already managed for water supply.	» Water supply targets are based on Watershed Area characteristics. For USGR, limited remaining stormwater results in targets set equal to baseline levels.
	Evaluate how well operated and maintained Projects support balancing benefits with long-term costs.	» The Initial Watershed Plans include an Indicator—and corresponding target—focused on ensuring ongoing operations and maintenance for Projects. This priority is also strongly reflected in the Plan's strategies.
	Municipal Climate Action Plans could be source for target alignment.	» Local climate action plans are referenced to inform the identification of relevant strategies.
SCW Program Items*	Synergize targets of the Program with other agencies' climate and water targets.**	» Countywide targets are incorporate into target setting through the top-down approach.
	Link operations & maintenance spending with workforce development targets.	» Operations & maintenance spending is linked to workforce development through the Indicator "Total Full-Time Equivalent (FTE) Jobs Created" and its corresponding target.
	Define Project scale and then evaluate the diversity of Project sizes to date, informed by Watershed Area characteristics.	» Target setting considers Watershed Area characteristics and SCW Program Program Projects funded to date as part of the bottom-up approach.
Regional Oversight Committee Items	Separate metrics for new from those for enhanced green spaces or recreational spaces as a resource for incentivizing and prioritizing new recreational areas.	» The Initial Watershed Plans include separate Indicators and targets for newly created park and green space versus those that are enhanced or restored.
	Document additional planning documents recommended by the group against the existing list and consider their implications for opportunity analysis and target setting.	» Local climate action plans were reviewed and integrated into target setting, strategies, and opportunities where applicable.
	Continue efforts to support delivery of benefits sought by communities that are or are not aligned with the "such as seven" of the Community Investment Benefits policy.	» The Initial Watershed Plans include an Indicator—"Proportion of Projects and Programs Addressing Community-Stated Priorities or Concerns"—and a corresponding target, to track the delivery of benefits sought by communities.
	Concur that specific benefit types should have different distance benefit service areas dependent on scope and scale.	» Community Investment Benefits and benefit ratio distances range from ¼ to 2 miles depending on Project scope and scale.
	With the MS4 Permits as the policy source, acknowledge a countywide target of meeting water quality standards in all receiving waters directly impacted by dry weather and stormwater runoff by 2038 as well as Develop Watershed Area-specific load reduction interim targets for 2032.	» Both the overall pollutant load reductions and SCW Program contributions are calculated. Each Watershed Area has unique load reduction final water quality targets and interim targets for 2032 and 2038, respectively.

*SCW Program-wide items reflect common priorities amongst all nine WASCs

**This SCW Program-wide item is also a priority for the USGR WASC

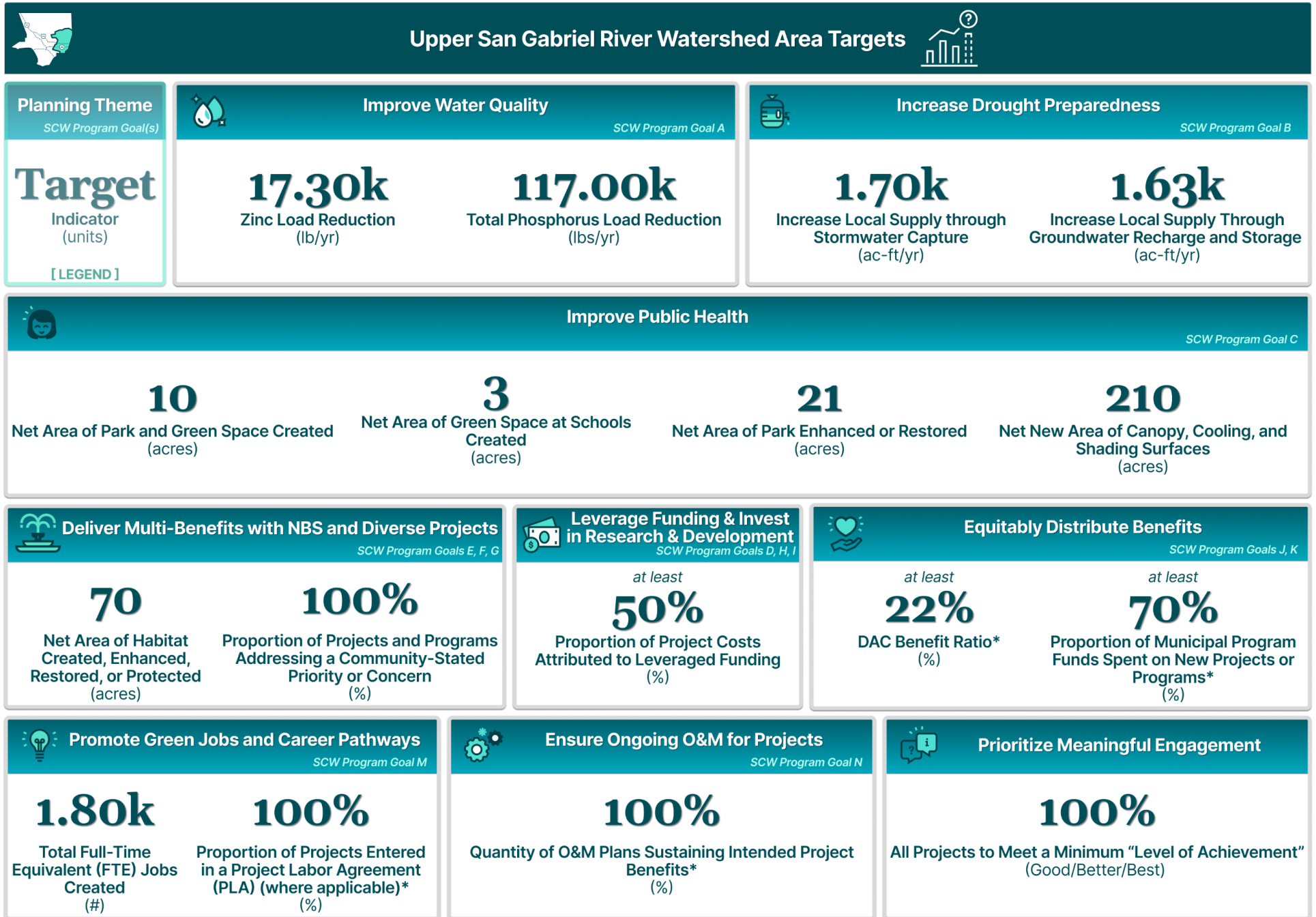
Figure 4-7. Regional Oversight Committee and WASC engagement summary of priorities for target setting

4.2.2 Targets for the Upper San Gabriel River Watershed Area

A comprehensive suite of initial WA targets is established for the USGR WA as shown in Figure 4-8. These targets use a combination of the top-down and bottom-up approaches described in the previous subsection, linking to countywide targets when available and applicable. These WA targets set a vision for the USGR WA and provide a foundation for tracking progress in the coming years toward the 14 Goals. Appendix H provides details on how WA targets were calculated, which other planning initiatives and countywide targets were considered, and allows for relative comparison between USGR targets and those of the other eight WAs.

In addition to final targets, interim targets are set for the USGR WA. Interim targets measure the rate of progress in implementing strategies and actions (Chapter 5) and achieving Goals. Interim targets support Adaptive Management (Chapter 7) by prompting a review of strategies and actions if they are not being met. For the pollutant reduction Indicators under the Improve Water Quality Planning Theme, targets are set for 2032 and 2038, to align with water quality regulatory milestones. For all other Indicators, targets are set for 2030, 2035, and 2045. These milestones align with other ongoing planning initiatives in the Los Angeles region, such as the County Water Plan, the Los Angeles County General Plan 2035, the 2045 Climate Action Plan, and the OurCounty Sustainability Plan. Interim targets are based on the quantification of WA Needs and are detailed and illustrated in Section 5.1.1.

Establishing targets enables the determination of USGR WA's Needs, which represent the remaining progress required to meet targets and achieve Goals. For Watershed Planning, identifying WA Needs informs the development of strategies to address them. Strategies can then guide informed community investment decisions. The assessment of WA Needs and strategies to address them is presented in Chapter 5.

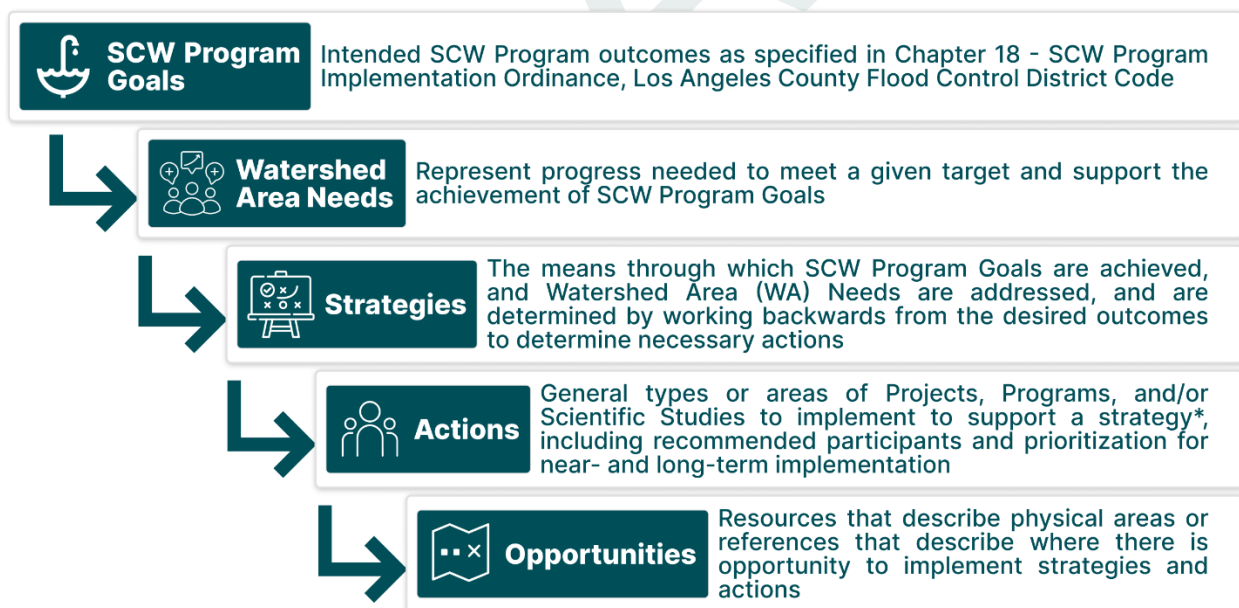


*As required by Chapter 18 of the Los Angeles County Flood Control District Code for the SCW Program Implementation Ordinance (LACFCD Code §18).

Figure 4-8. USGR WA targets by Indicator

Chapter 5. Strategies for Addressing Needs and Achieving Goals

Building on the baselines established in Chapter 3 and the targets defined in Chapter 4, this chapter identifies the USGR WA Needs and presents strategies to address them. These strategies serve as a roadmap for achieving Goals. Each strategy is supported by one or more actions and opportunities, which outline steps and available resources for implementation. Collectively, strategies, actions, and opportunities provide guidance to the USGR WASC, the ROC, Municipalities, Public Works, and Project and Program proponents for addressing WA Needs and advancing the achievement of Goals. Figure 5-1 below defines WA Needs, strategies, actions, and opportunities and their relation to each other. The development of these elements for each WA is informed by a technical analysis of the USGR WA's unique WA Needs and characteristics, a review of key efforts to date, and community-stated and WASC-identified priorities and concerns, gathered through engagement and the CSNA (Section 1.4).



*Strategies may contribute to the achievement of multiple SCW Program Goals and may address more than one WA Need. Actions and opportunities may support multiple strategies. All Projects and Programs must include a Water Quality Benefit as defined in Chapter 16 of the Los Angeles County Flood Control District Code (LACFCD) for the SCW Program Implementation Ordinance (LACFCD Code §16).

Figure 5-1. Strategies, actions, and opportunities

Strategies, actions, and opportunities presented in this section are informed by technical analyses, interested party engagement, and guidance from SCW Program governance committees. These strategies are designed to be iterative and responsive, evolving over time through the SCW Program's Adaptive Management (Chapter 7).

Importantly, the Initial Watershed Plan strategies, actions, and opportunities are intentionally aligned with a broad range of ongoing local and regional planning initiatives to ensure cohesive and mutually reinforcing outcomes. These efforts include the Parks Needs Assessment, 2045 Climate Action Plan, LAUSD Green Schoolyards for All Plan, County Water Plan, Vision 2045, Community Forest Management Plan, and others (Table 1-1 and Appendix E). By aligning with these efforts, the SCW Program advances a unified regional vision that supports improved water quality, enhanced drought and climate resilience, equitable community investment, enhanced and expanded urban forest cover and vegetation, and the creation of healthier, climate-ready communities. This strategic alignment not only enhances the impact of individual Projects and Programs but also accelerates collective progress toward long-term environmental and social goals across the Los Angeles region.

5.1 Quantifying Watershed Area Needs

WA Needs represent the progress that is needed to meet the targets set in Chapter 4. For magnitude-based Indicators expressed in numerical terms (e.g., acres, ac-ft/yr, jobs created), the WA Need is determined as the difference between a target and its baseline (Chapter 3), as illustrated in Figure 5-2. Recall that baselines are informed by SCW Program Projects funded to date and their anticipated benefits, while targets represent aspirational benchmarks for each Indicator.

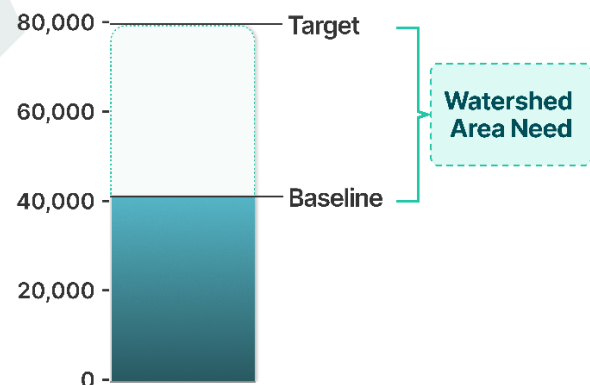


Figure 5-2. WA Need conceptual example for a magnitude-based Indicator

WA Needs for magnitude-based Indicators are expected to decrease incrementally over time, as more multi-benefit Projects and Programs are implemented in alignment with strategies that address multiple WA Needs and advance progress toward achieving Goals.

Unlike magnitude-based Indicators, percentage-based Indicators do not accrue benefits in a linear or additive manner. Instead, they reflect cumulative progress over time. As a result, their progress may fluctuate (either decreasing or increasing from year to year) depending on the evolving proportion of benefits realized throughout the lifetime of the SCW Program. To ensure consistent long-term progress toward targets, WA Needs for percentage-based Indicators are set at their respective targets. This means that the specified percentage or greater must be achieved and sustained to demonstrate continued progress toward targets.

In addition to quantitative WA Needs, Watershed Planning encourages the consideration and addressing of community needs identified through Project-specific engagement, the CSNA, or engagement by other planning initiatives. *Note that the term “Need” used within the CSNA differs in context from WA Need.* For Watershed Planning purposes, Projects and Programs are linked to community-stated priorities and concerns through the Indicator: “Proportion of Projects and Programs addressing a community-stated priority or concern”. This Indicator has a target of 100% (Figure 4-8), reflecting the vision that all Projects and Programs should address one or more community-stated priorities or concerns.

This Indicator provides a direct linkage between Watershed Planning and community input, as gathered through the CSNA and other engagement efforts such as Project or Program-specific engagement, the Parks Needs Assessment, OurCounty Sustainability Plan, County Water Plan, Vision 2045, and Community Forest Management Plan. Even if a WA has already met the 100% target, the WA Need remains at 100% to reflect the ongoing expectation that all future Projects and Programs continue to align with and address community-stated priorities.

5.1.1 Watershed Area Needs for the Upper San Gabriel River Watershed Area

WA Needs are illustrated by bar charts for each Indicator. Outlined by the legend in Figure 5-3, magnitude-based Indicators have three purple lines in the bar chart that represent two interim targets and the final target (2038 for water quality, 2045 for all other Indicators). For percentage-based Indicators, interim targets are not applicable, and their final (2045) targets can be interpreted as perpetual. The darker blue portion illustrates the current (2025) baseline for that Indicator, while the lighter blue bar quantifies the remaining WA Need to meet the final target.

Interim targets for magnitude-based Indicators are informed by the Regional Program Project financial outlooks, as described in Section 2.3.1 and detailed by Appendix F. Interim targets recognize that approximately 32%²² of USGR WA Regional Program funds are already allocated over the next five years (i.e., FY25-26 to FY29-30). This limits near-term financial flexibility to fund new Projects and Programs and advance progress toward targets. While Chapter 5 presents strategies to help address and alleviate this constraint, the interim targets are developed to reflect the current Regional Program funding reality. Specifically, a phased approach is used to distribute progress toward meeting WA Needs across interim target periods. This approach sets more modest interim targets in the next 5-10 years, with increased expectations for progress in the latter part of the implementation timeline. The interim targets for magnitude-based Indicators are distributed as follows:

- For Indicators under the Improve Water Quality Planning Theme:
 - 33% of the current WA Need is targeted by 2032²³.
 - The remaining 67% of the WA Need is targeted for completion between 2032 and 2038.
- For Indicators under all other Planning Themes:
 - 15% of the current WA Need is targeted by 2030 (covering the 2025–2030 period).
 - 33% is targeted by 2035 (covering the 2025–2035 period).
 - The remaining 67% is targeted for completion between 2035 and 2045.

This staggered approach acknowledges immediate Regional Program fiscal limitations while allowing for acceleration in later years as the WA Regional Program budget recuperates or as new funding sources are secured.

The baselines, targets, and WA Needs for the USGR WA are presented in Figure 5-3 for each Indicator and are organized by Planning Theme. Appendix H presents USGR WA Needs in a tabular format. The following section outlines the individual strategies to address the WA Needs presented below as well as opportunities for addressing multiple cross-thematic WA Needs.

²² Per the FY25-26 SIP.

²³ For the pollutant reduction Indicators under the Improve Water Quality Planning Theme (e.g., Zinc Load Reduction), targets are set for 2032 and 2038, to align with water quality regulatory milestones. For all other Indicators, targets are set for 2030, 2035, and 2045. These milestones align with other ongoing planning initiatives in the Los Angeles region, such as the County Water Plan, the Los Angeles County General Plan 2035, the 2045 Climate Action Plan, and the OurCounty Sustainability Plan.



Figure 5-3. USGR WA baselines, targets, and WA Needs

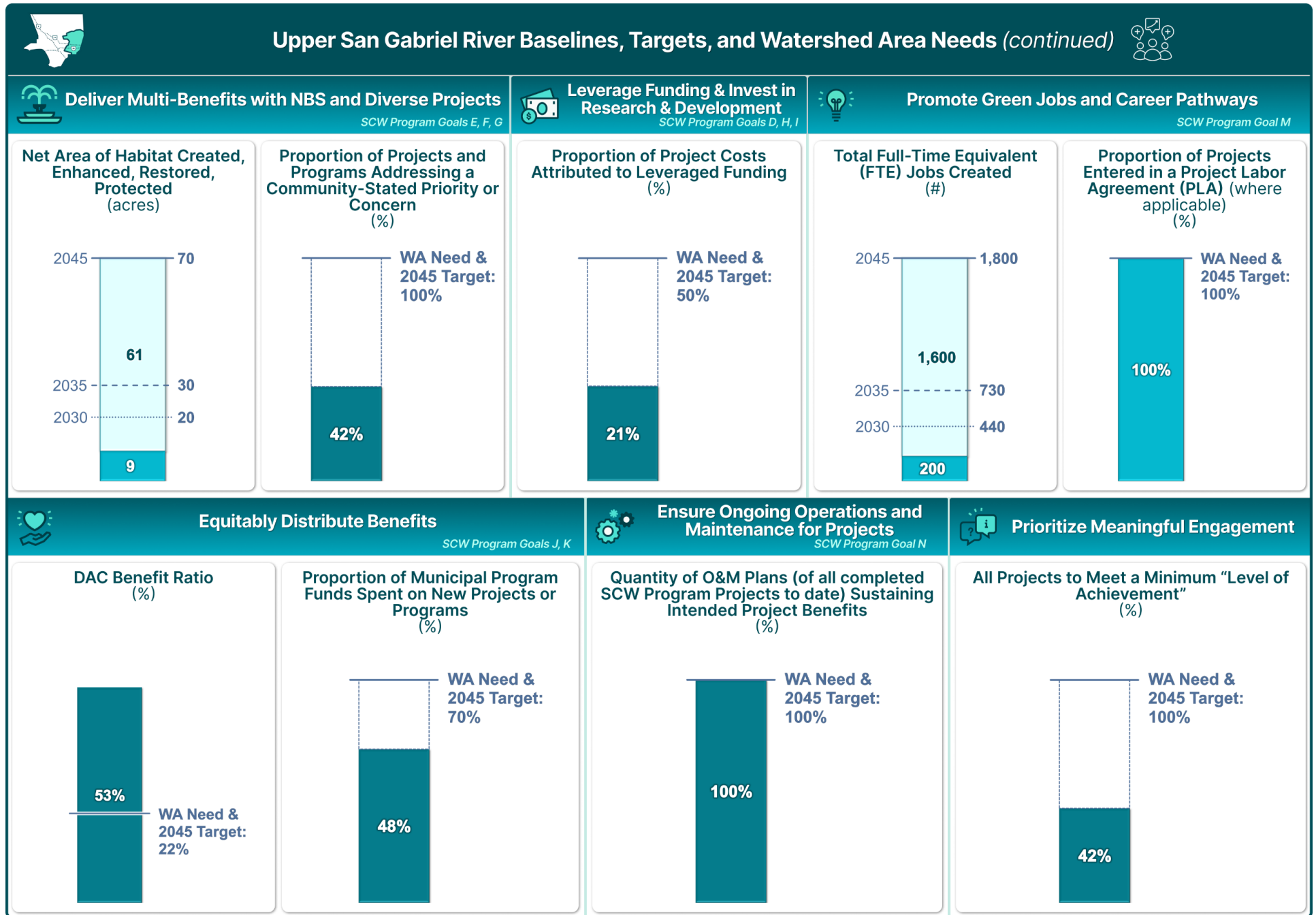


Figure 5-3. USGR WA baselines, targets, and WA Needs (continued)

5.2 Strategies to Address Needs and Achieve Goals

To support Project and Program proponents, the USGR WASC, the ROC, Municipalities, and Public Works in addressing USGR WA Needs and achieving Goals, this section presents an initial set of strategies and actions. While the strategies presented in this Initial Watershed Plan do not describe specific Projects or Programs, they provide general actions and resources to support strategic decision-making in the USGR WA and an initial vision for approaches for achieving SCW Program goals with increased efficiency and higher returns on investment. This Initial Watershed Plan is intended to provide general direction, including tailored baselines, targets, and strategies for the WA. Nothing in this Initial Watershed Plan should be construed as a commitment by any participating entity to fund the implementation of any specific actions identified herein. Adoption of the Initial Watershed Plan is not intended to serve as approval or authorization for any specific activity that would be considered a project under the California Environmental Quality Act (CEQA) and any future proposed Projects would comply with SCW Program requirements, including environmental documentation, as required.

For each strategy, there is one or more identified opportunity. These opportunities represent physical or conceptual areas where implementing Projects and Programs could deliver cumulative SCW Program benefits by aligning with the associated strategies and supporting progress toward achieving the Goals. Areas of higher opportunity are those with the most potential to contribute to a given Indicator and other countywide goals; however, they are not intended to represent precise locations where Projects are most feasible. Feasibility and effectiveness must be evaluated on a Project-by-Project basis.

Opportunities may be used as guides by the USGR WASC, Municipalities, Public Works, and Project and Program proponents in identifying areas where Projects or Program implementation would have the greatest impact. A demonstration of how the key planning elements (WA Needs, strategies, actions, and opportunities) come together to provide a toolkit through which Goals can be effectively achieved, serve as a guide to Project proponents, and support strategic funding decisions by the BOS WASCs, Municipalities, and Public Works is shown in Figure 5-4 below.

Among the strategies presented, several “Priority Strategies” are recommended through WASC Watershed Planning engagement workshops (Chapter 1). WASCs are comprised of Municipalities, agencies, and other interested parties with experience and knowledge of the USGR WA and its communities. Each WASC must be

comprised of seven members from Municipalities within the WA, five members from local agencies, and five members that represent community stakeholders. Due to the strategic and diverse membership requirements—as well as the technical expertise of its members—the WASC’s Priority Strategies can be considered a strong reflection of priorities for future SCW Program Projects and Projects implemented in the USGR WA. As such, Priority Strategies serve as an important component of Watershed Planning. The strategies presented in this Initial Watershed Plan include both USGR WA-specific Priority Strategies as well as those that are common to multiple of the other eight WAs.

Additionally, given the Los Angeles region’s historical vulnerability to wildfires, the Initial Watershed Plans aim to align wildfire resilience measures with water quality improvements to support multi-benefit Projects that enhance both public and environmental health. As a result, wildfire resilience strategies were developed to guide the integration of NBS, O&M best practices, and other fire-adapted infrastructure into Project planning. These strategies are intended to improve water quality in post-wildfire runoff, reduce wildfire risk, promote ecosystem resilience, and ensure that future Projects contribute meaningfully to long-term watershed health and community safety.

Upper San Gabriel River Watershed Area Strategies, Actions, and Opportunities Example



Outcome

SCW Program Goals



Improve Water Quality

SCW Program Goal A. Improve water quality and contribute to attainment of water-quality requirements.

Why?

Watershed Area Needs

Watershed Area (WA) Needs summarize **why** strategies are needed

16,000

Zinc Load Reduction
(lb/yr)

114,800

Total Phosphorous Load Reduction
(lb/yr)

How?

Strategies

Strategies describe **how** to address WA Needs and achieve Goals

Prioritize **high performance Projects and Programs** in areas with the **highest pollutant loads**

(strategy 1.1)

Implementation Timeline

NEAR TERM
(1 - 5 years)

What?

Action(s)

Actions describe **what** general types of Projects, Programs, and Studies to implement

Prioritize wet-weather Projects

990
ac-ft



Estimated Project capacity (24-hour) to meet WA Need

Located in areas with the highest average annual load reduction opportunity for zinc, total phosphorous, and bacteria.

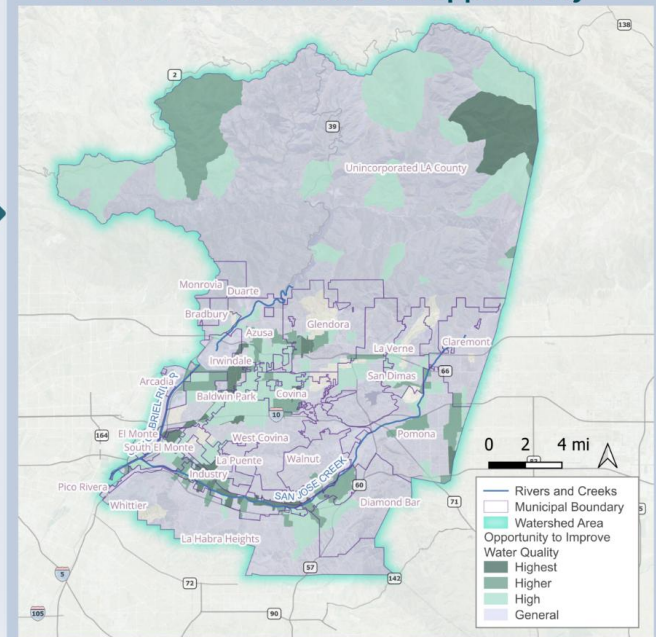
(action 1.1.2)

Where?

Opportunities

Opportunities are mapping layers and/or references to existing efforts that describe **where** there is opportunity to implement strategies and actions

Pollutant Load Reduction Opportunity



Please note that this figure serves only as an example of strategies and actions. See the Initial Watershed Plan Chapter 5.2.1 for a full list of strategies and actions for the USGR WA.

Figure 5-4. Example of using strategies, actions, and opportunities to address WA Needs and achieve Goals

Strategies describe how to achieve Goals and make progress toward targets by addressing WA Needs. Each strategy's supporting actions describe what types of eligible activities²⁴ (i.e., Projects, Programs, or Scientific Studies) or actions to implement that would best support the strategy. For example, actions may describe:

- Projects with desirable attributes (e.g., wet or dry-weather capture, Project type, size, cost effectiveness) and/or locations (e.g., sites that capture portions of the USGR WA that are currently untreated).
- Programs that address WA Needs and/or Goals, including identification of potential Scientific Studies and activities such as monitoring programs or community outreach and education efforts.
- Data collection efforts, such as Scientific Studies, which address key data gaps identified for Adaptive Management.

This section connects strategies to their respective opportunities, aiming to 1) assist Municipalities and Project and Program proponents in identifying the most impactful resources and areas for future Projects and Programs and 2) guide strategic funding decisions made by WASCs, Municipalities, and Public Works that would efficiently and effectively achieve Goals.

As shown in Figure 5-5, opportunities with both spatial and non-spatial attributes are provided as key resources to the WA. While spatial opportunities highlight geographic regions where actions can most effectively address the USGR WA's specific needs and contribute to achieving Goals, non-spatial opportunities provide complementary tools and resources to enhance overall Project and Program implementation. An example of non-spatial opportunities includes the SCW Program's Engagement Calendar and Leveraged Funding Reports.

²⁴ See Appendix A or the SCW Program Implementation Ordinance (LACFCD Code §16) for the complete list and definitions of eligible expenditures.

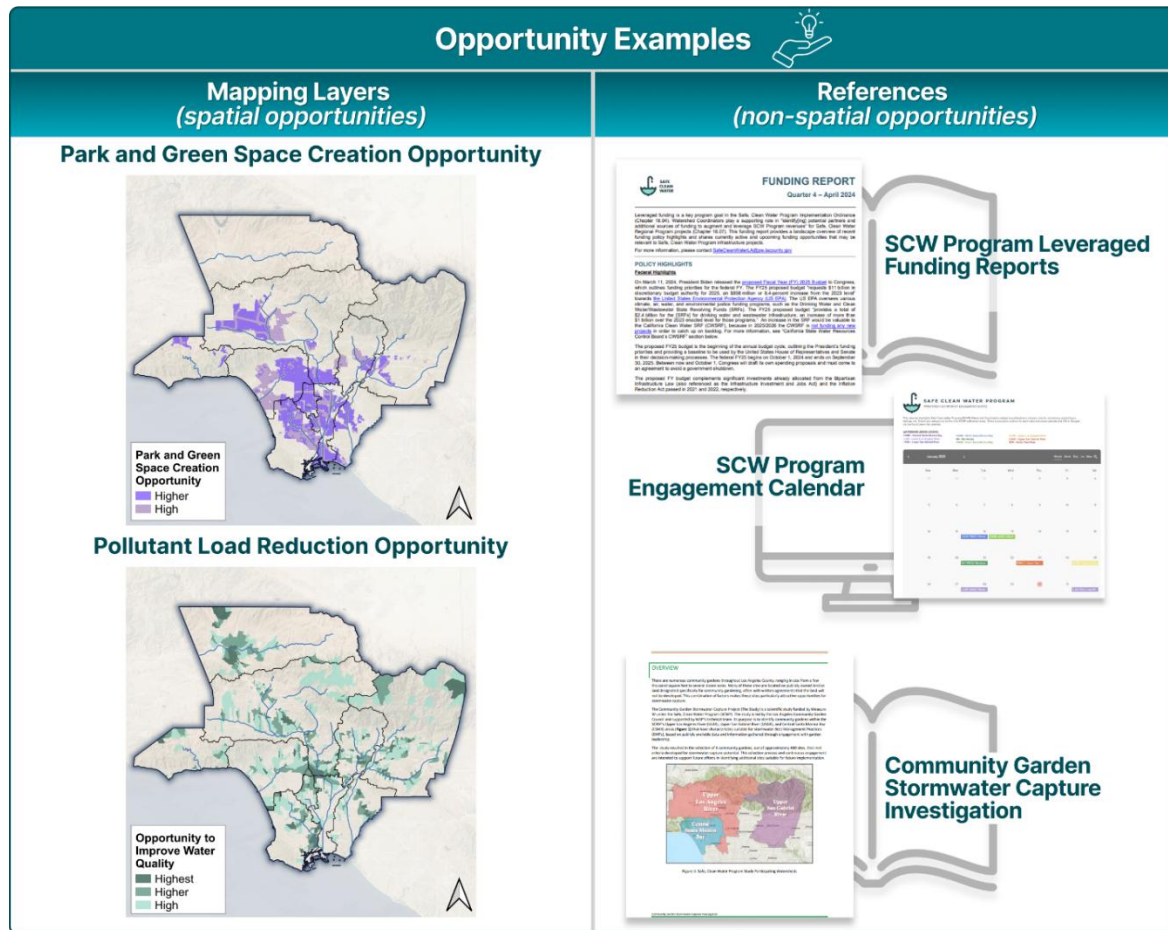


Figure 5-5. Opportunity examples (spatial and non-spatial)

Spatial opportunities are grounded in technical analyses designed to align regional and statewide data with the USGR WA specific strategies and actions. These layers help identify physical areas with the greatest potential to address WA Needs and achieve Goals while supporting broader countywide objectives.

The foundation of spatial opportunities includes a range of input mapping datasets that reflect key WA characteristics or known areas of need. These datasets are sourced from various planning efforts, including those developed by Public Works and other strategic initiatives such as the Parks Needs Assessment, the Los Angeles Community Forest Management Plan, and the Los Angeles River Master Plan²⁵. Each contributes spatial and thematic insight that informs the identification of opportunities. Additionally, community-stated priorities (gathered through the CSNA) are incorporated as their own dedicated opportunity. This ensures that input from

²⁵ Note that the Los Angeles River Master Plan datasets referenced in this Initial Watershed Plan are based on regional analyses that included this WA.

community members is considered on par with technical analyses when identifying where Projects and Programs are most needed.

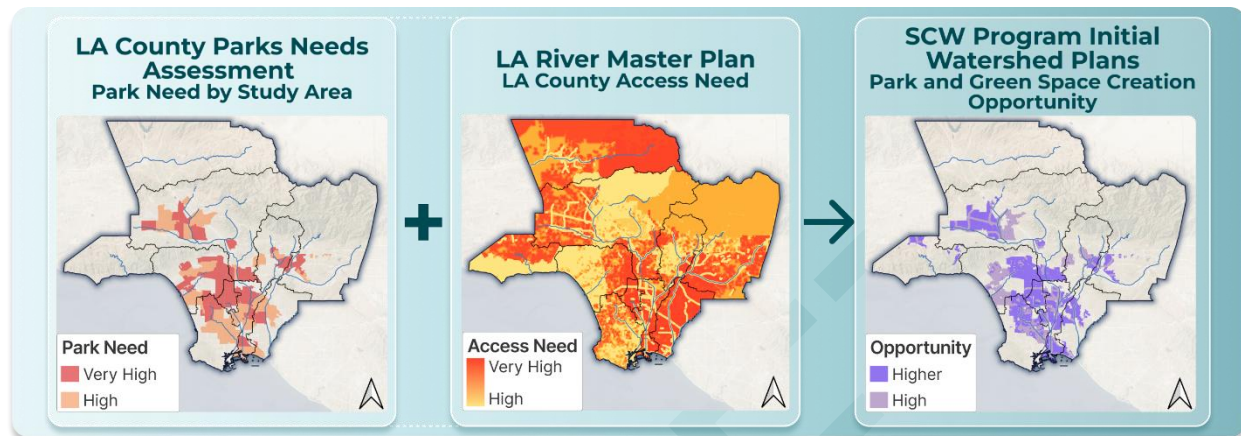


Figure 5-6. Example opportunity layer development

A visual of this process is provided in Figure 5-6, using a single Indicator from the Improve Public Health planning theme as an example, where mapping layers from the Parks Needs Assessment and the Los Angeles River Master Plan are strategically combined using technical expertise and local knowledge to identify areas of opportunity for park and green space creation.

A key element of the SCW Program is to deliver multi-benefit watershed-based Projects and Programs (rather than focusing on individual Planning Themes). As illustrated in Figure 5-7, by combining opportunities across Planning Themes to create “composite” opportunities, the Initial Watershed Plans serve as a strategic foundation for prioritizing investments with the greatest potential to deliver multi-benefit Projects and Programs. These composite layers (presented in the Initial Watershed Plans and Planning Tool) provide a key resource for both the Regional and Municipal Programs to maximize return on investments.

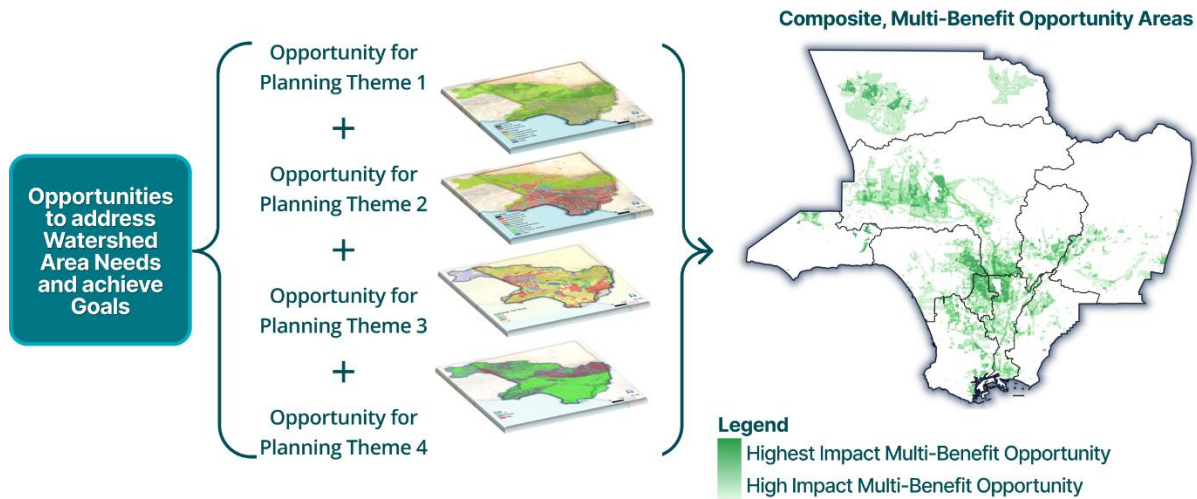


Figure 5-7. Conceptual example for identifying multi-benefit opportunities using “composite” layers

Details on opportunity analyses details and methods are provided in Appendix I and opportunity maps for each individual and composite opportunity for the USGR WASC and its Municipalities and Supervisorial Districts are provided in Appendix J. Over time as implementation progresses, data gaps are addressed, and as lessons are learned during implementation, it is envisioned that the opportunities will evolve.

5.2.1 Strategies, Actions, and Opportunities for the Upper San Gabriel River Watershed Area

This section presents the strategies, actions, and opportunities²⁶ identified for the USGR WA. These elements are designed to advance progress toward the 14 Goals and serve as a roadmap for coordinated, impactful implementation. Developed through technical analysis, interested party input, and alignment with other regional planning efforts, these strategies are intended to guide the USGR WASC, Municipalities, Public Works, and Project and Program proponents in delivering effective, multi-benefit stormwater solutions. Hypothetical high-level estimates of the

²⁶ Strategies, actions, and opportunities may be broadly referred to in this Initial Watershed Plan as ‘strategies’ as they function as a cohesive unit to collectively describe pathways for addressing WA Needs and achieving Goals.

24-hour Project capacities²⁷ and areas²⁸ that could address the WA Needs in the USGR WA for water quality, water supply, public health, and habitat are provided below and in Figure 5-8:

- Approximately 150 ac-ft of 24-hour Project capacity to improve water quality.
- 1 acre of park enhanced or restored,
- 2 acres of park or green space created,
- 204 acres of canopy, cooling, and shading surfaces,
- 61 acres of habitat created, enhanced, restored or protected, and
- 3 acres of green space created at schools.

The hypothetical Project capacities presented in this section are high-level approximations intended to translate water quality and water supply WA Needs (in lbs/year and ac-ft/year, respectively) into a more tangible and accessible metric. Project capacities and its values are not SCW Program Indicators or targets, nor are they compliance measures or definitive solutions. Rather, they provide general context for interested parties to illustrate the scale of implementation needed to address water quality and water supply WA Needs.

When capacity estimates are noted, the phrase “or equivalent” is implied—different Project types and configurations may achieve similar outcomes with greater or lesser capacity. Projects located in areas with high pollutant loads or runoff volumes may demonstrate enhanced performance, addressing WA Needs with smaller footprints or lower capacities. Conversely, Projects targeting dry-weather flows or areas with substantial runoff volumes may deliver greater water supply benefits at lower Project

²⁷ 24-hour Project storage capacity to meet the Water Quality and Water Supply WA Needs for the USGR WA includes a Project’s structural capacity plus the additional capacity that can be treated over a 24-hour period through infiltration or other means. The SCW Projects Module calculates 24-hour capacity as the capacity captured during the 24-hour 85th percentile design storm, with the maximum capacity being 100% of the volume of the design storm. 24-hour capacity is the basis for Project scoring metric A.1 Water Quality Cost Effectiveness.

²⁸ The Project capacities presented in this section for addressing WA Needs (e.g., 1,020 ac-ft of Project to address WA needs for improving water quality) are approximations of the Project size required to address WA Needs. The Project capacities are not considered a SCW Program Indicator or target. Capacities are only used to translate load reduction WA Needs to a more tangible unit, providing context to interested parties regarding approximately how much Project implementation would result in WA Needs being addressed. When capacities are listed in this section, the term “or equivalent” should be inferred: varying Project types and configurations could address WA Needs with higher or lower Project capacities. Targets and WA Needs are the key planning metric for tracking and assessment of progress toward targets (not capacities). For more information on how capacities were approximated, please see Appendix H.

capacities. Progress should be tracked using WA Needs and targets, not capacity estimates. For details on how Project capacities were approximated, see Appendix H.

Each of the following sections (Sections 5.2.1.1 to 5.2.1.9; one per Planning Theme [Improve Water Quality, Increase Drought Preparedness, etc.]) presents details on initial strategies that encompass near-term actions, which can be implemented or prioritized immediately using existing resources and partnerships, and long-term actions that lay the groundwork for sustained progress over a five-plus year horizon. These sections include the following components:

- A **summary** that recaps the potential and challenges in the WA for achieving Goals under the given Planning Theme and highlights input from interested parties and the WASC to emphasize priorities and provide context to the strategies, actions, and opportunities presented on the pages that follow.
- **Strategy and action figures** outline the strategies and actions for achieving Goals under the given Planning Theme. WA Needs and their final target year are included in these figures for context. Additionally,
 - Actions are accompanied by suggested supporting entities (i.e., “who should be involved”) ranging from SCW governance bodies (e.g., Public Works, WASCs, Watershed Coordinators), to Municipalities, CBOs, and regulatory partners like the California State Water Resources Control Board (SWRCB). The USGR WASC, Municipalities, Public Works, and Project and Program proponents are encouraged to reference the “who should be involved” field to identify actions that their investment and implementation decisions may support.
 - As described in Section 5.1.1, the timeline for addressing WA Needs by achieving these actions or equivalent is by 2045 for all Planning Themes except Improve Water Quality, which has a target date of 2038. Interim targets are detailed in Section 5.1.1 and Appendix H, along with additional information on how Project capacities were approximated.
- **Spatial opportunity maps** (*when applicable*) that highlight areas with the most opportunity for new Projects or Programs to implement strategies and contribute to achieving Goals. Each map is accompanied by a short description of key data sources, relevant considerations for their use, and corresponding strategies. Note that full-sized versions of these maps, along with detailed information on data sources, methods, and classification criteria, can be found in Appendix I. All opportunity layers are also available for interactive exploration through the [Planning Tool](#).

- **Non-spatial opportunity tables** (*when applicable*) provide resources and references to support strategy and action implementation. Each entry includes a brief description of the opportunity and its intended use, the source, and a direct link for access.

Following the sections for *individual* Planning Themes, composite multi-benefit opportunities are presented in Section 5.2.1.10 to support the USGR WASC and USGR WA Municipalities in identifying areas with the greatest potential for delivery of Projects and Programs that provide both Water Quality and Water Supply Benefits and those that address *multiple other* Planning Themes, in addition to the Water Quality Benefit requirement.

These composite opportunities combine the individual opportunities developed for each Indicator, offering guidance for delivering multi-benefit Projects as required by the SCW Program Implementation Ordinance, which states:

- “[The Regional Program Infrastructure Program] shall implement multi-benefit watershed-based Projects that have a Water Quality Benefit, as well as, either a Water Supply Benefit or Community Investment Benefit, or both” (LACFCD 16.05.D.1)
- “Projects implemented through the Municipal Program shall include a Water Quality Benefit. Multi-Benefit Projects and Nature-Based Solutions are strongly encouraged” (LACFCD 16.05.C).

Section 5.2.1.11 builds on these composite opportunities with an example of how a Project proponent might align implementation choices with the strategies presented herein. This example illustrates how implementation choices can be aligned to meet SCW Program requirements, maximizing multi-benefit outcomes, and helping guide future Project planning and decision-making within the USGR WA.

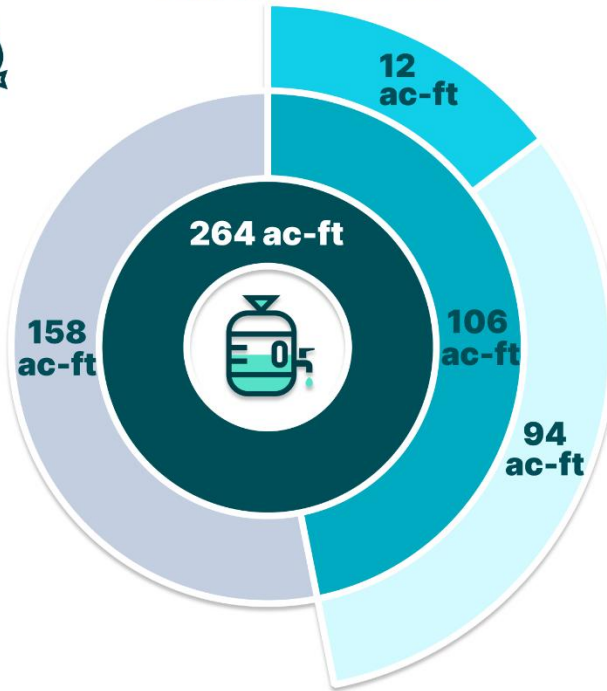


Upper San Gabriel River Watershed Area Strategies and Actions



Summary of Estimated Project Sizes to Meet Watershed Area Needs

Project Storage Capacity
to improve water quality and increase drought preparedness by addressing water quality & water supply WA Needs *



- Improve Water Quality by addressing pollutant load reduction needs
- Improve Water Quality (capture fates do not increase local supply)
- Improve Water Quality (capture fates increase local supply)
- Improve Water Quality + Increase Local Supply (groundwater recharge)
- Improve Water Quality + Increase Local Supply (other stormwater capture fates)

* 24-hour Project capacities are approximate estimates of pollutant load and capture that would be achieved, and will vary depending on Project features. 24-hour storage capacity to meet the Water Quality and Water Supply WA Needs for the LLAR WA includes a Project's structural capacity plus the additional capacity that can be treated over a 24-hour period through infiltration or other means.

Project Footprint
to address WA Needs under *Improve Public Health and Deliver Multi-Benefits with NBS & Diverse Projects*

New Benefits

Enhanced or Restored Benefits

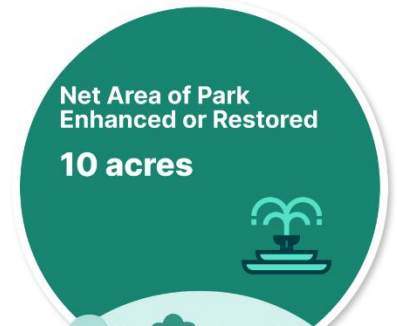
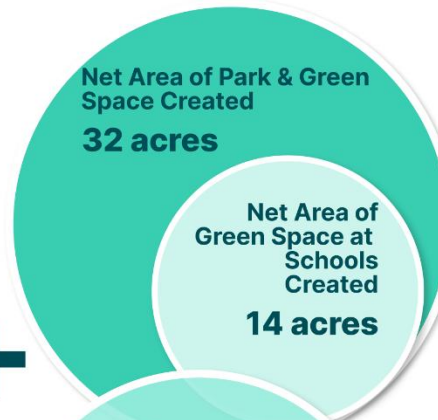


Figure 5-8. Approximate Project capacities and areas that would address USGR WA Needs

5.2.1.1 Improve Water Quality: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Improve Water Quality

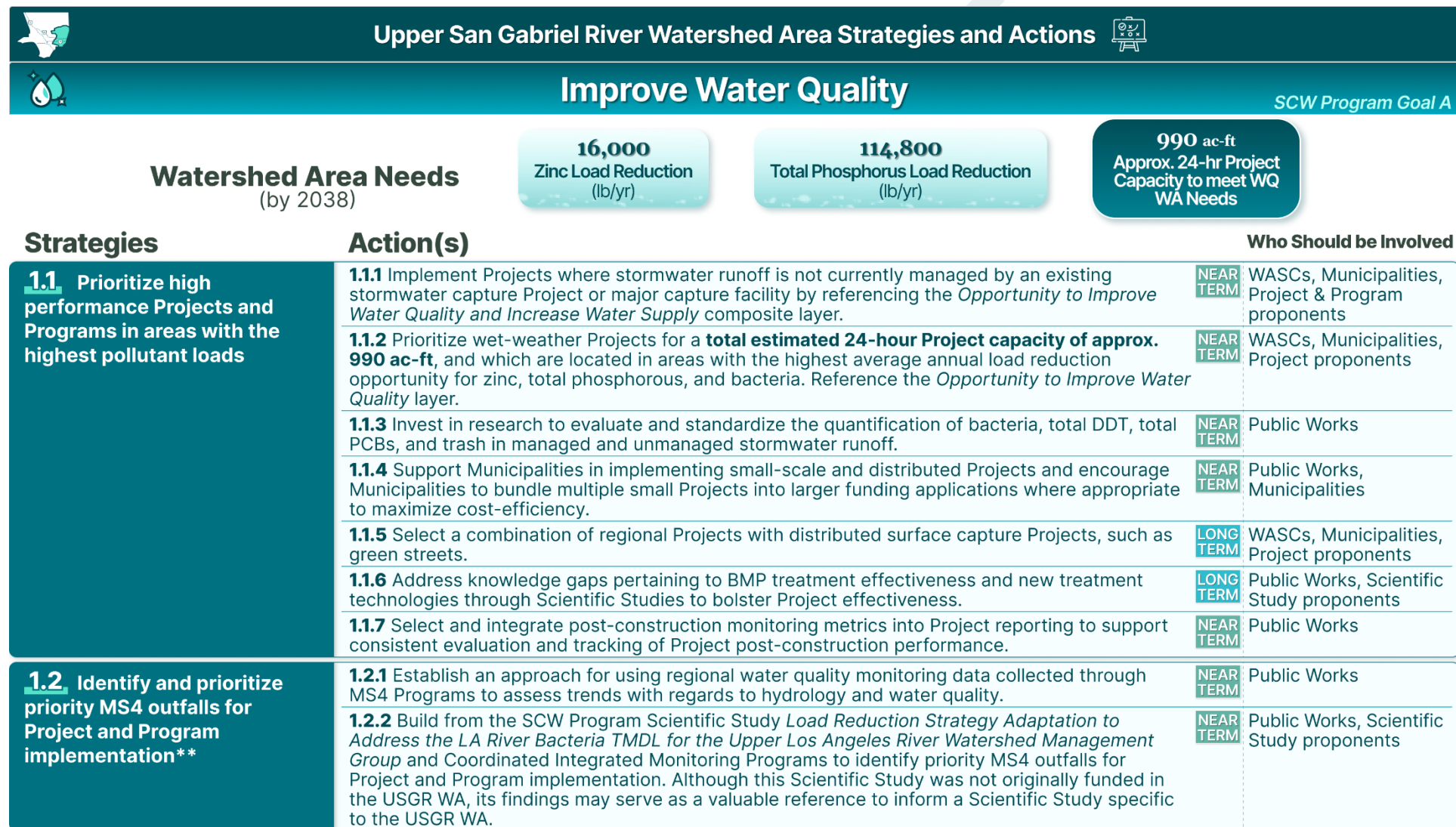
SCW Program Goal A

The USGR WA experiences persistent and complex water quality issues driven by its contrasting land uses ranging from expansive riparian and woodland habitats in the northern region to heavily urbanized areas in the San Gabriel Valley in the southern portion of the watershed. As the highest runoff-producing WA among the nine in the SCW Program, the USGR WA receives significant pollutant loads from urban runoff, including elevated concentrations of zinc, total phosphorus, and bacteria. These three pollutants are identified as the limiting pollutants for the WMPs in the USGR WA, as a result these pollutants are also recognized as the primary pollutants in this Initial Watershed Plan.

While the SCW Program alone cannot fully achieve regional water quality goals, it plays a critical role in supporting progress toward them. The WASCs and Regional Program financial outlooks (Section 2.3.1) have consistently emphasized the need to leverage other funding sources to maximize impact. Given the anticipated limited availability of Regional Program funding for new large-scale Projects in the near term, there is a critical need to strengthen Municipalities' capacity to implement small-scale and distributed stormwater Projects through the Municipal Program. These decentralized Projects are essential for sustaining momentum, delivering localized water quality improvements, and providing immediate community benefits while regional solutions are planned and developed. By supporting Municipalities in delivering a robust pipeline of smaller Projects, the USGR WASC and SCW Program can bridge near-term funding gaps and advance immediate water quality goals. A coordinated approach that combines distributed and regional infrastructure over time is key to maximizing collective impact and accelerating progress toward watershed health.

Improving water quality is a core SCW Program Goal and a requirement for all funded Projects and Programs. To date, SCW Program Projects in the USGR WA have focused on priority pollutants such as zinc, total phosphorus, and bacteria, often achieving above-average pollutant removal efficiencies (i.e., >80%). Given the presence of several large-scale stormwater capture facilities within the USGR WA, much of the watershed's runoff is already effectively managed and is contributing to water supply augmentation. However, despite these major facilities capturing substantial runoff volumes, portions of receiving waters within the USGR WA remain impaired. Implementing distributed Projects that treat and release runoff before it enters waterways can help improve water quality while allowing existing large-scale facilities to continue maximizing groundwater recharge and water supply benefits. The USGR WASC shared a desire to implement an interconnected series of multi-benefit Projects that further improve water quality through decentralized treatment, targeted pollutant load reductions (particularly for zinc, total phosphorus, and bacteria) and the integration of nature-based solutions. These Projects are intended to complement existing infrastructure, address remaining water quality impairments, and provide added hydrologic, ecological, and community benefits.

Looking forward, strategies for water quality improvement are guided by a watershed-scale perspective, considering the spatial distribution and cumulative benefits of funded Projects. In the near term, prioritizing distributed green infrastructure, in combination with enhanced O&M (Section 5.2.1.8), is recommended to maintain momentum, maximize localized benefits, and desired by the USGR WASC. Over time, larger regional Projects can be more feasibly pursued downstream of existing SCW Program investments.



**USGR WASC Priority Strategy based on engagement

Figure 5-9. Improve Water Quality: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Strategies and Actions



Improve Water Quality

SCW Program Goal A

Strategies	Action(s)	Who Should be Involved
1.3 Improve water quality and mitigate post-fire runoff through targeted Nature-Based Solutions	1.3.1 Implement small-scale, distributed nature-based Projects—such as riparian restoration, native vegetation reestablishment, vegetated buffers, and sediment control features—that reduce sediment and pollutant loads, stabilize soils, and support ecological resilience.	NEAR TERM WASCs, Municipalities, Project & Program proponents
	1.3.2 Stabilize slopes and streambanks in priority runoff areas (including post-fire landscapes) with erosion control measures (e.g., native revegetation, mulch, wattles) to minimize sediment transport and protect downstream water quality.	NEAR TERM Public Works, Municipalities
	1.3.3 Implement dry-weather, low impact development Projects that capture and treat urban runoff through localized infiltration, reducing pollutants at the source, maintaining year-round soil moisture to support vegetation health, and helping reduce fire risk and post-fire sediment mobilization.	NEAR TERM WASCs, Municipalities, Project & Program proponents

Figure 5-9. Improve Water Quality: strategies and actions to address USGR WA Needs and achieve Goals (continued)



Upper San Gabriel River Watershed Area Opportunities



Improve Water Quality

SCW Program Goal A

Opportunity to Improve Water Quality (Figure 5-10)

This opportunity highlights areas of the USGR WA with the most potential for new Projects to reduce bacteria, zinc and total phosphorus loads and improve overall water quality. These areas represent where stormwater runoff is not managed by a SCW Program wet-weather capture Project and where runoff volumes (used as a proxy for bacteria loads), zinc loads and total phosphorus loads are highest. All areas not currently treated by a SCW Program funded Project still offer potential for beneficial pollutant capture; Project and Program proponents should always perform local analyses to determine pollutant loading at the Project scale

SCW Program wet-weather capture Projects are designed to manage runoff from the 85th percentile, 24-hour design storm event, as the majority of urban areas' annual runoff is produced by storms equal to or smaller than this storm event. This provides sufficient capture while keeping costs feasible. It is assumed that stormwater runoff from upstream areas is effectively captured and detained during such events, reducing opportunities for additional pollutant load reduction upstream. As a result, capture areas already managed by these Projects are excluded from this opportunity analysis. Separate opportunity maps for individual pollutant load reduction are in Appendix J as well as the Planning Tool.

Supports strategies:

- **1.1** Prioritize high performance Projects and Programs in areas with the highest pollutant loads
- **1.3** Improve water quality and mitigate post-fire runoff through targeted Nature-Based Solutions

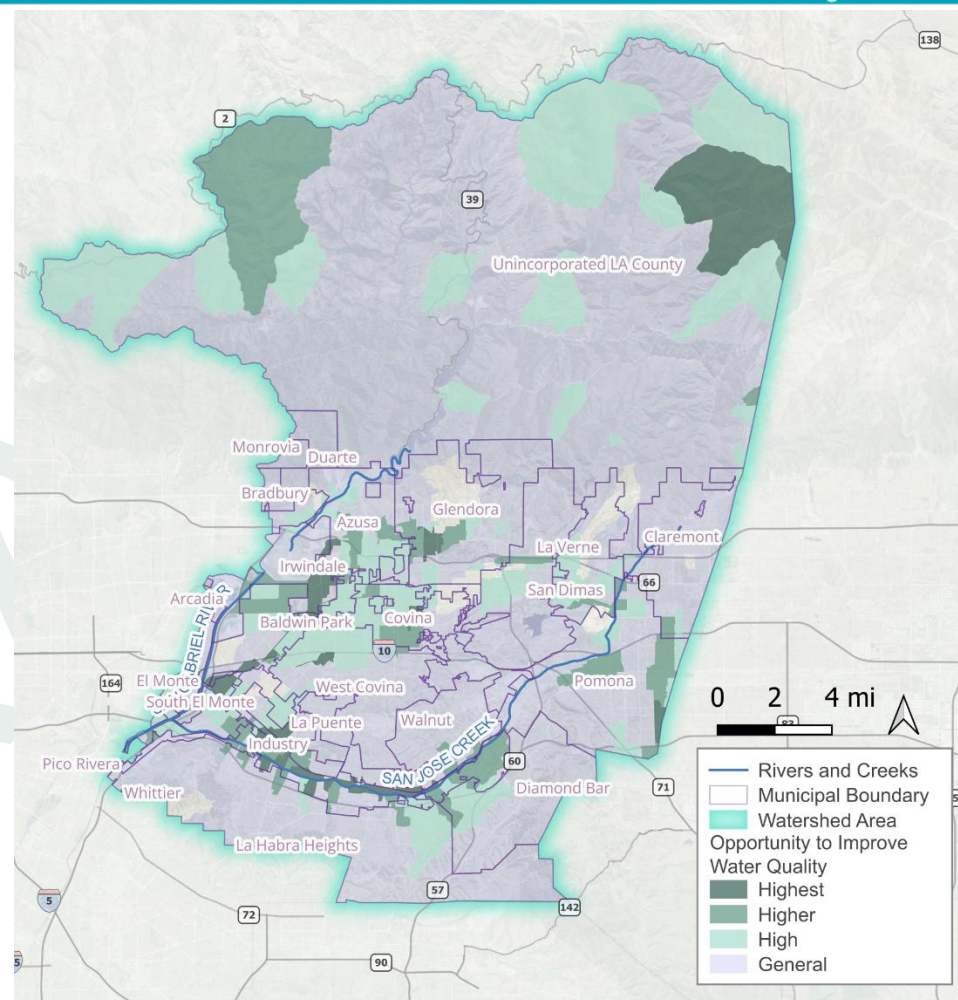


Figure 5-10. Opportunity to Improve Water Quality



Upper San Gabriel River Watershed Area Opportunities



Improve Water Quality

SCW Program Goal A

Table 5-1. Improve Water Quality: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Improving Water Quality				
Opportunity	Strategies	Purpose	Source	LINK
Opportunity to co-locate or coordinate investments with non-SCW Program existing and ongoing stormwater capture efforts	1.1, 2.1, 2.2	WRAMPS2 is a hub for LA County to report progress on watershed-based regulatory requirements and toward water capture goals. The Capture Dashboard presents real-time stormwater capture summaries by green infrastructure and water conservation facilities.	WRAMPS2	WRAMPS2 & Capture Dashboard
	1.1, 2.1, 2.2	The GLAC IRWMP Opti system is an interface that allows stakeholders to directly communicate with one another throughout the IRWMP process and helps to locate, connect, share, and integrate IRWMP project information.	Greater Los Angeles County (GLAC)	GLAC IRWMP Opti

5.2.1.2 Increase Drought Preparedness: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Increase Drought Preparedness

SCW Program Goal B

The USGR WA consists of dense urban and residential areas in the San Gabriel Valley and extensive riparian and woodland habitats in the north, generating the highest runoff volume of the nine SCW Program WAs. While its natural and physical features create favorable conditions for groundwater recharge, existing engineered infrastructure—such as multiple spreading grounds—has already maximized much of this potential. As a result, there is limited remaining opportunity for SCW Program Projects to capture additional runoff to create new, locally available water supply.

To date, SCW Program funds allocated in the USGR WA have delivered multi-benefit Projects that are implemented across parklands, schools, public rights-of-way, and open spaces. These Projects commonly incorporate infiltration systems, bioretention areas, green streets, and diversion infrastructure to manage stormwater at both regional and local scales. Combined with major capture facilities and contributions from other programs, existing infrastructure already intercepts most of the watershed's runoff, significantly contributing to local water supply and reducing both the need and the capacity for new Projects to provide additional Water Supply Benefits without detracting from existing facilities.

The SCW Program's water supply targets, aligned with the County Water Plan countywide target of increasing local supply by 300,000 ac-ft/yr by 2045, face inherent constraints in the USGR WA due to this high existing level of runoff capture. To enhance locally available water supply, the County Water Plan highlights three complementary approaches to stormwater capture: decentralized solutions (small-scale, distributed Projects), centralized solutions (e.g., spreading grounds), and storage solutions (e.g., dams, reservoirs, and debris basins). While decentralized solutions may be less feasible in the USGR WA, the Los Angeles Basin Study highlights opportunities to increase supply through rehabilitation, expansion, or operational improvements of centralized and storage facilities. This suggests that Public Works and Municipalities could enhance existing infrastructure, including the WA's seven spreading grounds, five dams and reservoirs, and seven debris basins, to further boost local water supply, support the countywide target, and strengthen regional drought resilience.



Upper San Gabriel River Watershed Area Strategies and Actions



Increase Drought Preparedness

SCW Program Goal B

Watershed Area Needs
(by 2045)

0
Increase Local Supply through
Stormwater Capture
(ac-ft/year)

0
Increase Local Supply through
Groundwater Recharge and Storage
(ac-ft/year)

Strategies	Action(s)		Who Should be Involved
2.1 Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply*	2.1.1 Plan and implement Projects and Programs that link MS4 compliance and water reclamation planning by prioritizing Projects that align with strategies 1.1, 2.3, and action 2.1.2 and by referencing the <i>Opportunity to Improve Water Quality and Increase Water Supply</i> composite layer.	NEAR TERM	WASCs, Municipalities, Project proponents
	2.1.2 Ensure Projects are included in a stormwater resource plan or a regional Water Management Plan (see SCW Program Implementation Ordinance 18.07.c.3).	NEAR TERM	WASCs, Municipalities, Project proponents
	2.1.3 Incorporate infiltration or onsite reuse into Project design when treat-and-release approaches are not feasible or cost-efficient, or when implementing firewise strategies such as 1.3 and 4.4. Ensure coordination with other non-SCW Program existing and planned water supply Projects to avoid redundant capture and optimize overall watershed benefits by referencing the <i>Opportunity to co-locate or coordinate investments with non-SCW Program existing and ongoing stormwater capture efforts</i> (see Section 5.2.1.1).	NEAR TERM	Public Works
2.2 Enhance local water supply through enhancements to existing LACFCD major capture facilities	2.2.1 Invest in rehabilitation, expansion, and O&M enhancements for spreading grounds, dams, and debris basins to yield approx. 133,090 ac-ft of additional annual water supply per the Los Angeles Basin Study.	NEAR TERM	Public Works

*SCW Program-wide Priority Strategy based on engagement

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-11. Increase Drought Preparedness: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Opportunities



Increase Drought Preparedness

SCW Program Goal B

Opportunity to Increase Water Supply Through Stormwater Capture (Figure 5-12)

This opportunity highlights areas in the NSMB WA where stormwater is not currently captured by an existing SCW Program Project to communicate where there is potential for new wet- or dry-weather Projects.

The darkest blue represents areas with the highest potential for siting either a wet- or dry-weather Project. While the darkest green areas represent areas with the highest opportunity to site a dry-weather Project. The lightest blue and green areas, though lower in potential, are not currently managed by an SCW Program Project and generally present opportunities for new Project implementation.

Note that additional capture potential for new decentralized Projects to increase local water supply is limited in the USGR WA. Future Projects should coordinate with other programs (e.g., IRWMP) to avoid redundancy, prioritize advancing other Goals, and only consider delivering Water Supply Benefits Projects when cost-effective for improving water quality.

Supports strategies:

- **1.1** Prioritize high performance Projects and Programs in areas with the highest pollutant loads
- **2.1** Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply
- **2.2** Enhance local water supply through enhancements to existing LACFCD major capture facilities

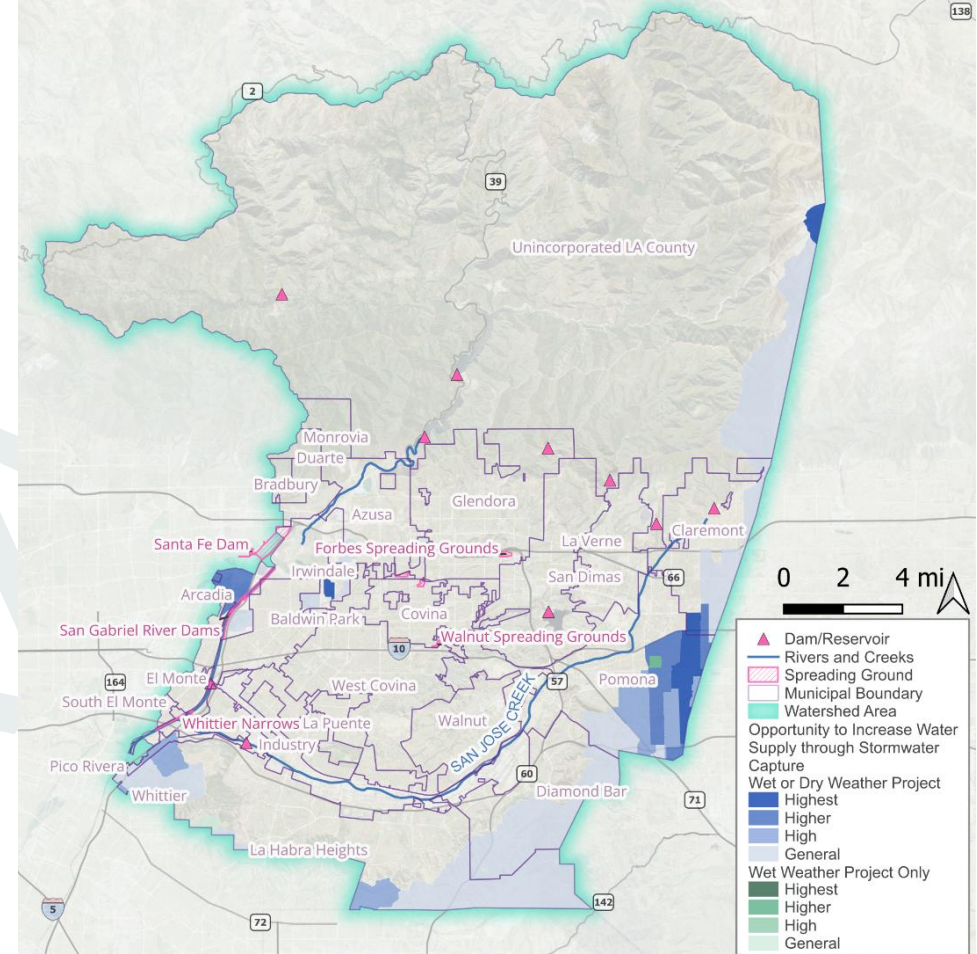


Figure 5-12. Opportunity to Increase Water Supply Through Stormwater Capture



Upper San Gabriel River Watershed Area Opportunities



Increase Drought Preparedness

SCW Program Goal B

Opportunity to Increase Water Supply Through Groundwater Recharge and Storage (Figure 5-13)

This opportunity highlights areas with potential for implementing new Projects that capture and infiltrate stormwater or urban runoff to increase local supply through groundwater recharge via a managed aquifer.

To focus on areas with the greatest remaining potential, capture areas for major facilities that intercept more than 30% of upstream stormwater runoff and areas managed by SCW Program wet-weather capture Projects were excluded from this analysis.

Note that additional capture potential for new decentralized Projects to increase local water supply is limited in the USGR WA. Future Projects should coordinate with other programs (e.g., IRWMP) to avoid redundancy, prioritize advancing other Goals, and only consider delivering Water Supply Benefits Projects when cost-effective for improving water quality.

Supports strategies:

- **1.1** Prioritize high performance Projects and Programs in areas with the highest pollutant loads
- **2.1** Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply

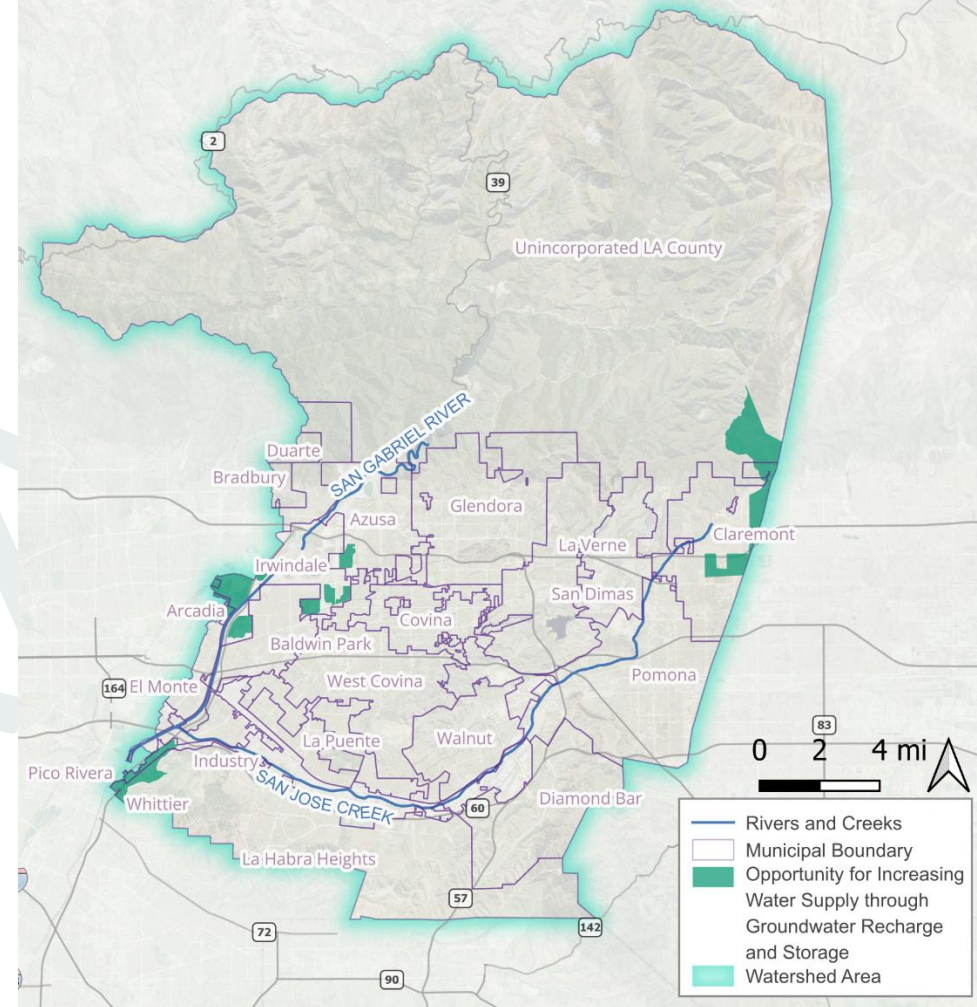


Figure 5-13. Opportunity to Increase Water Supply Through Groundwater Recharge and Storage



Upper San Gabriel River Watershed Area Opportunities



Increase Drought Preparedness

SCW Program Goal B

Table 5-2. Increase Drought Preparedness: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Increasing Drought Preparedness				
Opportunity	Strategies	Description & Purpose	Source	LINK
Opportunity to divert captured stormwater to the sanitary sewer system for reclamation and reuse	2.1	The LA County Sanitation District Facilities Map provides detailed, location-specific information about water reclamation facilities and their service areas and fate of treated water. This makes it a valuable resource for identifying when a Project might consider diverting captured stormwater to the sanitary sewer system to be reclaimed.	LA County Sanitation Districts	LA County Sanitation District Facilities

Note that additional capture potential for new decentralized Projects to increase local water supply is limited in the USGR WA. Future Projects should coordinate with other programs (e.g., IRWMP) to avoid redundancy, prioritize advancing other Goals, and only consider delivering Water Supply Benefits Projects when cost-effective for improving water quality.

5.2.1.3 Improve Public Health: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Improve Public Health

SCW Program Goal C

The lower USGR WA, primarily the San Gabriel Valley, is characterized by extensive impervious surfaces and a significant shortage of high-quality parks, green spaces, and recreational amenities. These conditions have contributed to multiple environmental and public health challenges, including limited access to green spaces, urban heat island effects, and reduced air quality.

To address these interconnected challenges, strategies and actions have been developed that align with key outcomes and goals set forth in ongoing efforts such as the Parks Needs Assessment, Community Forest Management Plan, County of Los Angeles 205 Climate Action Plan, and the LAUSD "Green Schoolyards for All" initiative. These strategies seek to provide meaningful CIBs through SCW Program Projects while directly addressing identified WA Needs.

Acknowledging the significant urban development and associated challenges in the USGR WA, which limits the availability of land for new parks and related public benefits, the USGR WASC has emphasized that community greening and transforming underused or degraded land into vibrant, multi-benefit green spaces will be a defining feature of future Projects, with a strong focus on advancing public health alongside water quality improvements. Other interested parties voiced support for co-benefits such as safer, walkable green streets, more diverse recreational amenities in parks (like games and sensory playgrounds), better lighting, cleaner restrooms, and enhanced park maintenance. Equity remained a central theme during USGR WASC engagement, with calls for ensuring that resource distribution prioritizes park-poor communities.

It is important to recognize that increasing access to open space, providing additional recreational opportunities, and supporting community resilience to climate change are all critical for improving public health. However, under the SCW Program, these benefits must be pursued as co-benefits of Projects and Programs, rather than standalone objectives, as all Projects are required to provide a Water Quality Benefit. These co-benefits should be integrated into Projects and Programs that are primarily designed to address stormwater and urban runoff pollution. During Project planning and design, Project proponents and Municipalities should proactively seek opportunities to incorporate features, such as nature-based solutions or multi-benefit green infrastructure, that meet both the water quality requirements of the SCW Program and the broader needs of the communities they serve. In highly urbanized areas, "leftover" spaces such as vacant parcels, utility corridors and transportation right of ways can often be leveraged to increase shade plantings and to provide neighborhood green spaces.

In the USGR WA, where the majority of stormwater is already captured for water supply through existing major capture facilities, future Projects should prioritize surface-based BMPs, such as bioswales, rain gardens, and green streets that improve water quality

and provide visible, accessible, and meaningful benefits to the community. These features offer greater opportunities for enhancing public spaces and advancing public health, which aligns with the USGR WASC's primary focus on community benefit and water quality improvement, rather than increasing stormwater capture alone. Where feasible, surface BMPs should be prioritized or paired with community amenities to enhance the multi-benefit nature of SCW Program, thereby supporting the achievement of Goal C (Figure 1-5). Findings from the SCW Program Scientific Studies *Community Garden Stormwater Investigation*, may serve as a valuable resource for identifying effective distributed infiltration BMPs that can be integrated into community parks and green spaces.

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Upper San Gabriel River Watershed Area Strategies and Actions



Improve Public Health

SCW Program Goal C

Watershed Area Needs
(by 2045)
2
 Net Area of Park and
Green Space Created
(acres)
3
 Net Area of Green Space at
Schools Created
(acres)
1
 Net Area of Park
Enhanced or Restored
(acres)
204
 Net New Area of Canopy, Cooling,
and Shading Surfaces
(acres)

Strategies	Action(s)		Who Should be Involved
3.1 Evaluate open space and large lot potential, particularly on school campuses*	3.1.1 Address spatial data gaps related to park land opportunities identified through the Parks Needs Assessment (see Chapter 7 for details).	NEAR TERM	Public Works
	3.1.2 Invest in research such as a Scientific Study that evaluates open space and large lot potential for SCW Program Project implementation.	LONG TERM	Public Works, Scientific Study proponents
3.2 Integrate transportation-related planning and implementation efforts with green street development**	3.2.1 Leverage Project opportunities and recommendations identified by the <i>San Gabriel Valley Greenway Network Strategic Implementation Plan</i> to implement multi-benefit Projects that integrate transportation, recreation, habitat, and stormwater management. <i>Note that recommendations from this plan are integrated into strategies and actions where feasible.</i>	NEAR TERM	WASCs, Municipalities, Project proponents
3.3 Implement Projects located at school and in flood control channel right of ways**	3.3.1 Prioritize multi-benefit Projects that create green space at schools, aiming to convert at least 30% of schoolyard area to green space. Reference the <i>Opportunity for Creating Green Space at Schools</i> to guide Project implementation.	NEAR TERM	WASCs, Municipalities, Project proponents
	3.3.2 In alignment with the <i>San Gabriel Valley Greenway Network Strategic Implementation Plan</i> , implement greenway Projects that utilize flood control right of ways to create parks and green spaces.	NEAR TERM	Public Work, LACFCD, WASCs, Municipalities, Project proponents
3.4 Create, enhance, and restore park and green space, especially in high-need communities	3.4.1 Prioritize multi-benefit Projects that enhance and/or restore existing local and regional parks in Parks Needs Assessment priority areas, using the <i>Opportunity for Park Enhancement or Restoration</i> layer to guide implementation.	NEAR TERM	WASCs, Municipalities, Project proponents
	3.4.2 Prioritize multi-benefit Projects that create parks and green spaces—such as pocket parks, linear parks, and greenways with stormwater features—in Parks Needs Assessment priority areas, using the <i>Opportunity for Park and Green Space Creation</i> layer to guide implementation.	NEAR TERM	WASCs, Municipalities, Project proponents
	3.4.3 Invest in safe, walkable green streets, walking and biking paths that enhance mobility, connectivity, community cohesion, and improve stormwater management, especially near parks, schools, and other community hubs.	NEAR TERM	WASCs, Municipalities, Project proponents
	3.4.4 Improve access to existing open spaces—such as spreading grounds along urban rivers—to expand the benefits of parks and green spaces, bringing them closer to communities and increasing equitable access.	NEAR TERM	Public Works, Municipalities

*SCW Program-wide Priority Strategy based on engagement

**USGR WASC Priority Strategy based on engagement

Figure 5-14. Improve Public Health: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Strategies and Actions



Improve Public Health

SCW Program Goal C

Strategies	Action(s)	Who Should be Involved
3.5 Help communities most affected by extreme heat mitigate and adapt to the effects of climate change	3.5.1 Utilize green infrastructure that reduces hardscape and optimizes Project footprints to maximize tree canopy, urban cooling, and shaded surfaces, thereby enhancing climate resilience. Project types may include green streets, tree wells, and other surface-based stormwater capture features, such as vegetated areas designed with integrated water storage capacity.	NEAR TERM WASCs, Municipalities, Project proponents
	3.5.2 Implement multi-benefit Projects that prioritize expanding tree canopy, enhancing urban cooling, and increasing shaded surfaces in communities most vulnerable to climate change by referencing the <i>Multiple Benefit Opportunity Across Planning Themes</i> layer.	NEAR TERM WASCs, Municipalities, Project proponents
	3.5.3 Select tree species based on drought tolerance, community preferences, shade provision capacity, and contributions to local biodiversity. Prioritize the planting, establishment, and maintenance of trees according to industry best management practices, as outlined in the <i>Recommended Tree Species for Los Angeles County and Best Management Practices for Tree Care</i> guidelines.	NEAR TERM WASCs, Municipalities, Project proponents

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-14. Improve Public Health: strategies and actions to address USGR WA Needs and achieve Goals (continued)



Upper San Gabriel River Watershed Area Opportunities



Improve Public Health

SCW Program Goal C

Opportunity for Park and Green Space Creation *(Figure 5-15)*

This opportunity builds on the Parks Needs Assessment and Los Angeles River Master Plan analyses for the Los Angeles Region, including the USGR WA, to highlight areas where multi-benefit Projects that create park and green space are most needed. Rather than identifying specific sites, the opportunity highlights areas that are in need of new park and green space and, therefore, areas where Projects can meaningfully improve community well-being.

Park and green space creation can take many forms. As defined in the MMS, park creation includes amenities like walking paths or exercise equipment, while green space refers to vegetation such as habitat or lawn.

In urbanized areas of USGR WA, developing large parks may be impractical. Instead, smaller-scale interventions—such as pocket parks, green corridors, or integrated green infrastructure—can still deliver recreational and climate resilience benefits to communities. Projects here address both WA Needs and broader planning initiatives such as the OurCounty Sustainability Plan, Los Angeles County 2035 General Plan, and Community Parks and Recreation Plans.

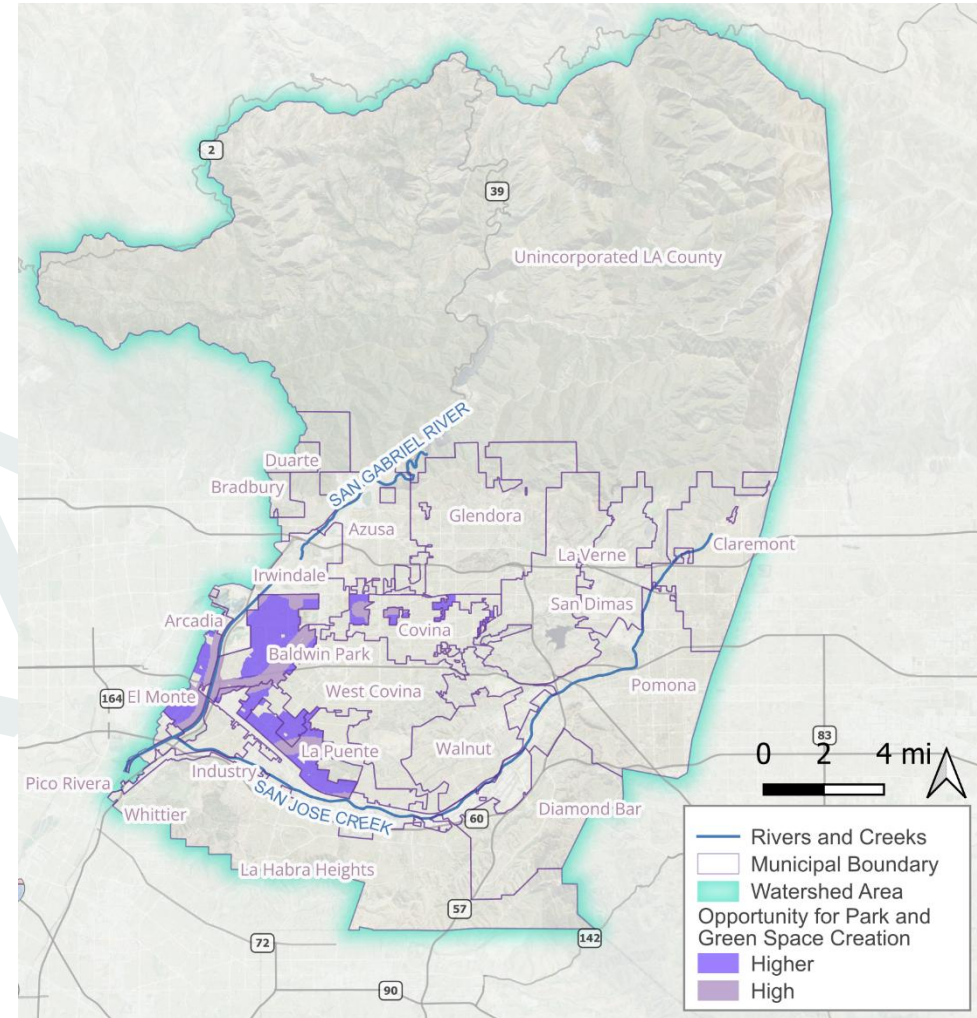


Figure 5-15. Opportunity for Park and Green Space Creation

Supports strategies:

- **3.4** Create, enhance, and restore park and green space, especially in high-need communities
- **3.5** Help communities most affected by extreme heat mitigate and adapt to the effects of climate change
- **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area



Upper San Gabriel River Watershed Area Opportunities



Improve Public Health

SCW Program Goal C

Opportunity for Park Enhancement or Restoration *(Figure 5-16)*

This opportunity builds from the Parks Needs Assessment Park Need results, Los Angeles River Master Plan regional access need analysis, and the LA County Department of Parks and Recreation's existing parks and open space locations and conditions database to highlight where Projects that enhance or restore parks are most needed. The park spaces highlighted by this opportunity prioritize investments in Parks Needs Assessment High and Very High Need areas, particularly those in poor condition and where improved access to open space and waterways is needed.

While the Parks Needs Assessment is focused specifically on park creation, its Park Need results still offer context for identifying enhancement and restoration opportunities, because the Park Need analysis considered a broad set of factors, including park size, amenities, and condition, as well as demographic factors such as park access community pressure, which reflects the demand for high-quality parks in densely populated or underserved areas.

Supports strategies:

- **3.4** Create, enhance, and restore park and green space, especially in high-need communities
- **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area

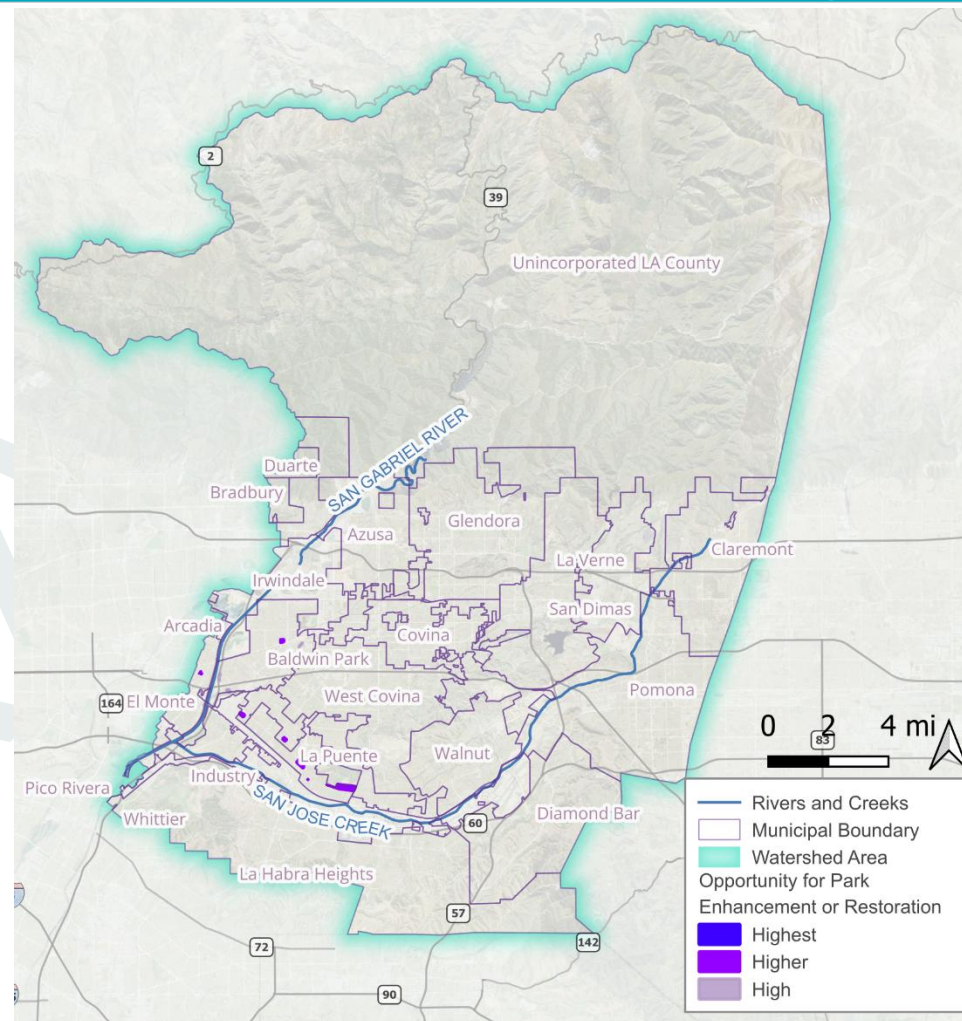


Figure 5-16. Opportunity for Park Enhancement or Restoration



Upper San Gabriel River Watershed Area Opportunities



Improve Public Health

SCW Program Goal C

Opportunity to Create Green Space at Schools *(Figure 5-17)*

This opportunity highlights K-12 public, private, and charter schools with the most need for multi-benefit Projects that replace impervious area to create green space. The layer aligns with methods and definitions presented by the LAUSD Green Schoolyards for All Plan to assign a Greening Index to schools countywide. As a result, this layer emphasizes the development of multi-benefit Projects at schools with highly impervious schoolyards and those located in vulnerable communities as determined by the CalEnviroScreen 2.0 and Extreme Heat Tool analyses. The development of Projects that create green space at the highlighted schools would address WAs Needs and help to implement the OurCounty Sustainability Plan and LAUSD's Green Schoolyards for All Plan.

Supports strategies:

- **3.2** Integrate transportation-related planning and implementation efforts with green street development**
- **3.3** Implement Projects located at school and in flood control channel right of ways
- **3.5** Help communities most affected by extreme heat mitigate and adapt to the effects of climate change
- **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area

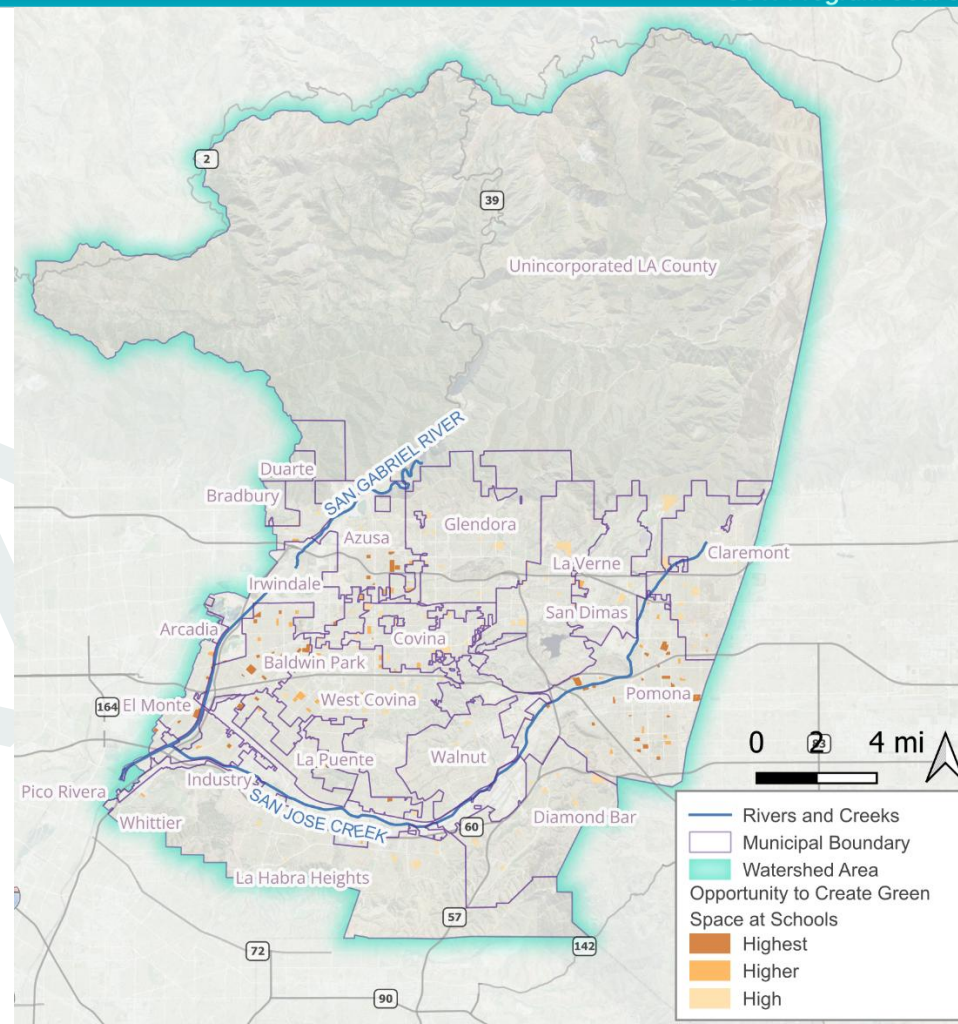


Figure 5-17. Opportunity to Create Green Space at Schools



Upper San Gabriel River Watershed Area Opportunities



Improve Public Health

SCW Program Goal C

Opportunity to Create Canopy, Cooling, and Shading Surfaces *(Figure 5-18)*

This opportunity highlights areas with the most potential to improve public health and invest in vulnerable communities through new multi-benefit Projects that create tree canopy, cooling, and shading surfaces. This opportunity aligns with the County Community Forest Management Plan's canopy need analysis to provide a countywide layer that highlights areas with the lowest canopy coverage, and which are in the most vulnerable communities, as indicated by the LA County Climate Vulnerability Assessment's (CVA) Social Sensitivity Index (SSI).

Supports strategies:

- **3.4** Create, enhance, and restore park and green space, especially in high need communities
- **3.5** Help communities most affected by extreme heat mitigate and adapt to the effects of climate change
- **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area

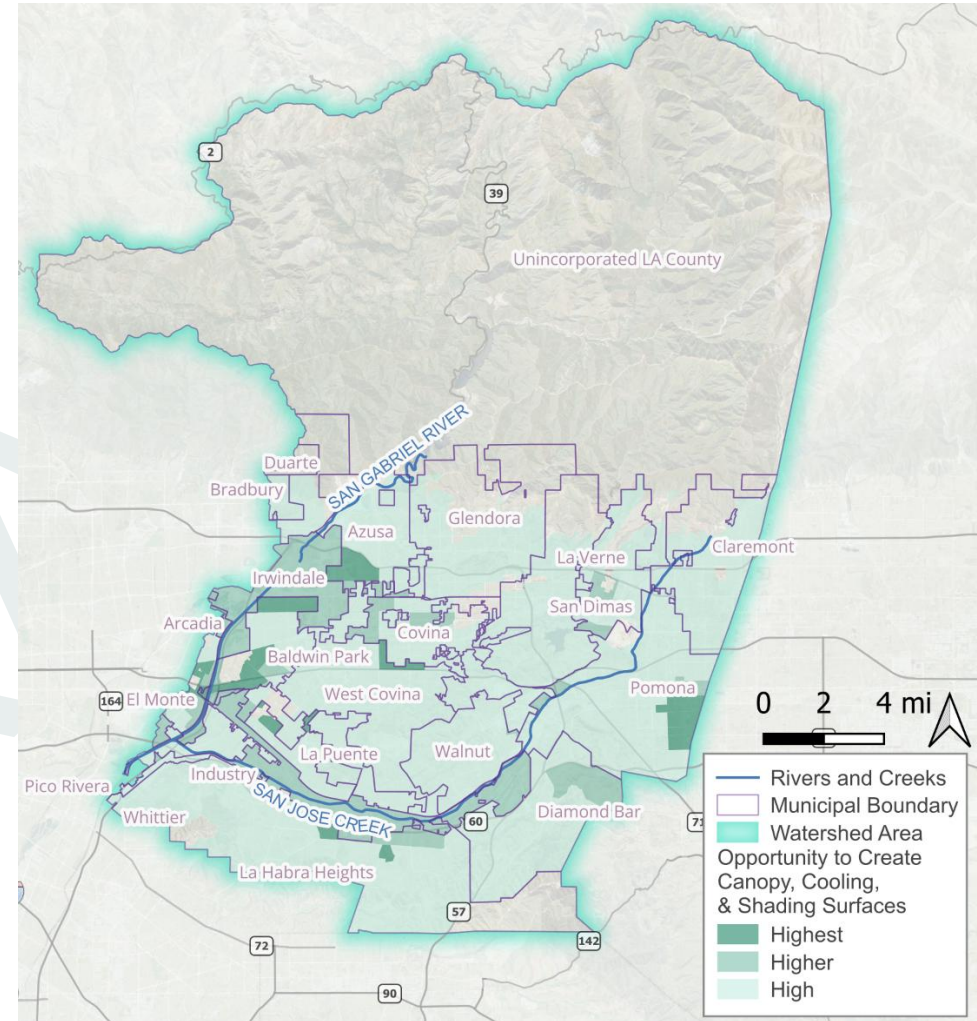


Figure 5-18. Opportunity to Create Canopy, Cooling, and Shading Surfaces



Upper San Gabriel River Watershed Area Opportunities



Improve Public Health

SCW Program Goal C

Table 5-3. Improve Public Health: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Improving Public Health				
Opportunity	Strategies	Description & Purpose	Source	LINK
Recommended Tree Species for LA County and Best Management Practices for Tree Care	3.4, 3.5, 4.4	To ensure creation of resilient tree canopy, utilize the Community Forest Management Plan resources for support in planting and maintain regionally appropriate and climate-resilient trees with the highest chance for successful establishment and long-term survival.	Los Angeles County Chief Sustainability Office (via the Community Forest Management Plan)	Community Forest Management Plan Resources [see 'Recommended Tree Species', Tree Management Practices', and 'Do Not Plant List']
Parks Needs Assessment Priority Areas	3.4, 3.5, 4.3	The Parks Needs Assessment identifies several priority areas that can help guide the integration of co-benefits into SCW Program Projects, including Priority Areas for: <ul style="list-style-type: none"> Increasing Access to Regional Recreation Increasing Access to Rural Recreation Environmental Restoration 	LA County Department of Parks and Recreation (via the Parks Needs Assessment)	Park Needs Assessment Plus - GIS Layers or Parks Needs Assessment Plus Final Report
Opportunity to align Projects with the San Gabriel Valley Greenway Network Plan	3.2, 3.3, 3.4, 3.5, 4.3	The San Gabriel Valley Greenway Network Plan is intended to represent a collaboratively developed common vision among local public agencies and community stakeholders and to serve as resource and guide for project proponents. The plan shows tributary narratives, opportunities, and constraints.	San Gabriel Valley Greenway Network Plan	San Gabriel Valley Greenway Network Plan

5.2.1.4 Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, G

The USGR WA is an urbanized and diverse region that faces an array of challenges—from water quality and supply issues to urban heat, flooding, limited green space, and habitat degradation. Addressing these overlapping issues requires NBS that are tailored to the specific needs of local communities, especially those most vulnerable to climate and environmental stressors.

To date, SCW Program Projects in the USGR WA have consistently integrated NBS across a range of scales and settings—from park retrofits and green street corridors to enhancements to spreading grounds and storm drain systems. While many of these projects include stormwater capture and treatment elements, the primary emphasis has been on delivering visible, surface-based improvements that respond to community-identified needs. These include increasing shade and green space, improving walkability and public safety, expanding recreational access, reducing heat and localized flooding, enhancing water quality, and promoting beautification in historically underserved neighborhoods.

Looking ahead, the USGR WASC would like to continue to implement a series of interconnected small-scale Projects that are centered on community green spaces as a water quality strategy and public health strategy. Outcomes from the MMS will further support such Projects by providing clear guidance and definitions around creating, enhancing, and restoring habitat and green space under the SCW Program. The USGR WASC also reflected that the connection between Projects, which to-date has mostly been a discussion about water quantity and treatment capacity, should also include habitat and recreation linkages in how they are designed and evaluated.

Strategies to guide the design and delivery of future Projects and Programs are informed by the USGR WASC and broader interested party engagement, as well as alignment with regional and local planning efforts, including the Parks Needs Assessment, County of Los Angeles 2045 Climate Action Plan, California NBS Climate Targets, County Water Plan NBS Task Force, and the OurCounty Sustainability Plan. Across these efforts, a consistent message has emerged: multi-benefit Projects must prioritize community-wide outcomes, align with community-stated priorities, and support the growth of small-scale, distributed BMPs that can be integrated throughout the USGR WA.

Ultimately, nature-based, multi-benefit Projects in the USGR WA should be designed not only to achieve technical and regulatory performance targets but also to create tangible, lasting improvements in community quality of life, restore ecological functions, and build a more resilient, inclusive, and livable watershed for future generations.



Upper San Gabriel River Watershed Area Strategies and Actions



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, GWatershed Area Needs
(by 2045)

61

Net Area of Habitat Created,
Enhanced, Restored, Protected
(acres)

100%

Proportion of Projects and Programs Addressing
a Community-Stated Priority or Concern
(%)

Strategies	Action(s)		Who Should be Involved
4.1 Acknowledge, where feasible, other capital improvement programs that can contribute to regional outcomes*	4.1.1 Coordinate with municipal staff during the Project feasibility phase to integrate regional planning efforts with municipal scale capital improvement programs.	NEAR TERM	WASCs, Municipalities, Project proponents
	4.1.2 Refer to <i>section 1.4 Working Together</i> as well as <i>Appendix E. Key Efforts to Date</i> to identify and collaborate with other efforts contributing to benefits and outcomes in this WA.	NEAR TERM	WASCs, Municipalities, Project & Program proponents
4.2 Evaluate distributed BMPs that achieve cost-effectiveness thresholds of the SCW Program**	4.2.1 Initiate a Scientific Study to evaluate the ability for distributed BMPs to collectively achieve cost-effectiveness in the USGR WA.	NEAR TERM	Public Works, Scientific Study proponents
4.3 Deliver nature-based, multi-benefit Projects and Programs that improve water quality while addressing community priorities and concerns	4.3.1 Prioritize nature-based, multi-benefit designs that use NBS such as green streets or planted areas with water storage capacity such as rain gardens with bioswales. Projects should be designed to maximize simultaneous benefits including water quality improvement, stormwater capture, habitat creation, climate resilience, and public health outcomes. Reference the <i>Multiple Benefit Opportunity Across Planning Themes</i> composite layer for Project siting.	NEAR TERM	WASCs, Municipalities, Project proponents
	4.3.2 Develop Projects and Programs that will serve their communities by aligning their implementation to address community-stated priorities or concerns highlighted by the <i>Opportunities to Address Community-stated Priorities and Concerns</i> layer, which incorporates CSNA survey responses.	NEAR TERM	Public Works, Project & Program proponents, CBOs & NGOs
	4.3.3 Strategically increase habitat and improve ecosystem function by implementing Projects and Programs that protect habitat areas and expand them through the creation of habitat buffers and linkages in areas with the highest ecosystem need by using the <i>Opportunity for Habitat Creation, Restoration, Enhancement, and Protection</i> .	NEAR TERM	WASCs, Municipalities, Project & Program proponents, Conservancies
	4.3.4 Leverage pre-screened sites, conceptual Project designs, engagement, and feasibility findings by the SCW Program Scientific Study <i>Community Garden Stormwater Capture Investigation</i> to implement and promote nature-based, small-scale distributed Projects that provide Water Quality and Water Supply Benefits as well as other CIBs.	NEAR TERM	WASCs, Municipalities, Project proponents

*SCW Program-wide Priority Strategy based on engagement

**USGR WASC Priority Strategy based on engagement

Figure 5-19. Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Strategies and Actions



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, G

Strategies	Action(s)	Who Should be Involved
4.4. Advance fire-adapted communities by implementing multi-benefit Projects that employ NBS to reduce wildfire risk and enhance ecosystem resilience	4.4.1 Implement green infrastructure Projects that, <ul style="list-style-type: none"> • Avoid planting highly flammable ornamental species and remove invasive plant species to reduce fuel load • Plant native, fire-resistant vegetation that support regenerative landscapes and adaptive recovery, • Enhance habitat for ecological resilience to aid in post-fire recovery and landscape stabilization, • Create green space and tree canopy that can serve as fire breaks and cooling zones, • Support soil moisture, through infiltration, mulching and shading techniques, and wetland creation, to reduce flammability by making vegetation and soil less likely to ignite during dry conditions, and • Use firewise planting principles to create defensible space around infrastructure while maintaining ecological function and stormwater performance. 	NEAR TERM WASCs, Municipalities, Project & Program proponents
	4.4.2 Use fire risk maps alongside other opportunity layers to implement Projects that can deliver co-benefits such as infiltration and cooling in high-risk wildfire zones. Reference the <i>Opportunity to Create Canopy, Cooling, and Shading Surfaces</i> specifically to identify climate-vulnerable communities which are in need of resilience-building infrastructure.	NEAR TERM WASCs, Municipalities, Project proponents

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-19. Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects: strategies and actions to address USGR WA Needs and achieve Goals (continued)



Upper San Gabriel River Watershed Area Opportunities



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, G

Opportunity for Habitat Creation, Restoration, Enhancement, and Protection

(Figure 5-20)

This opportunity highlights the most impactful areas to improve ecosystem function through biodiversity protection and enhancement, creation of new habitat, as well as linkages between habitat areas. This layer is derived from the Los Angeles River Master Plan, which assessed regional ecosystem needs (including those within the USGR WA) by evaluating habitat areas, buffers, linkages, confluences, and unprotected lands.

The analysis identifies areas with the greatest opportunity to implement multi-benefit Projects that leverage NBS to support healthy, resilient ecosystems. This opportunity combines the need to protect existing habitat with the need to expand these habitat areas through habitat buffers. Areas where habitat creation, restoration, enhancement and/or protection should be considered for incorporation into Project design (if technically and financially feasible) are depicted in Figure 5-20.

Supports strategies:

- **4.3** Deliver nature-based, multi-benefit Projects and Programs that improve water quality while addressing community priorities and concerns
- **4.4** Advance fire-adapted communities by implementing multi-benefit Projects that employ NBS to reduce wildfire risk and enhance ecosystem resilience

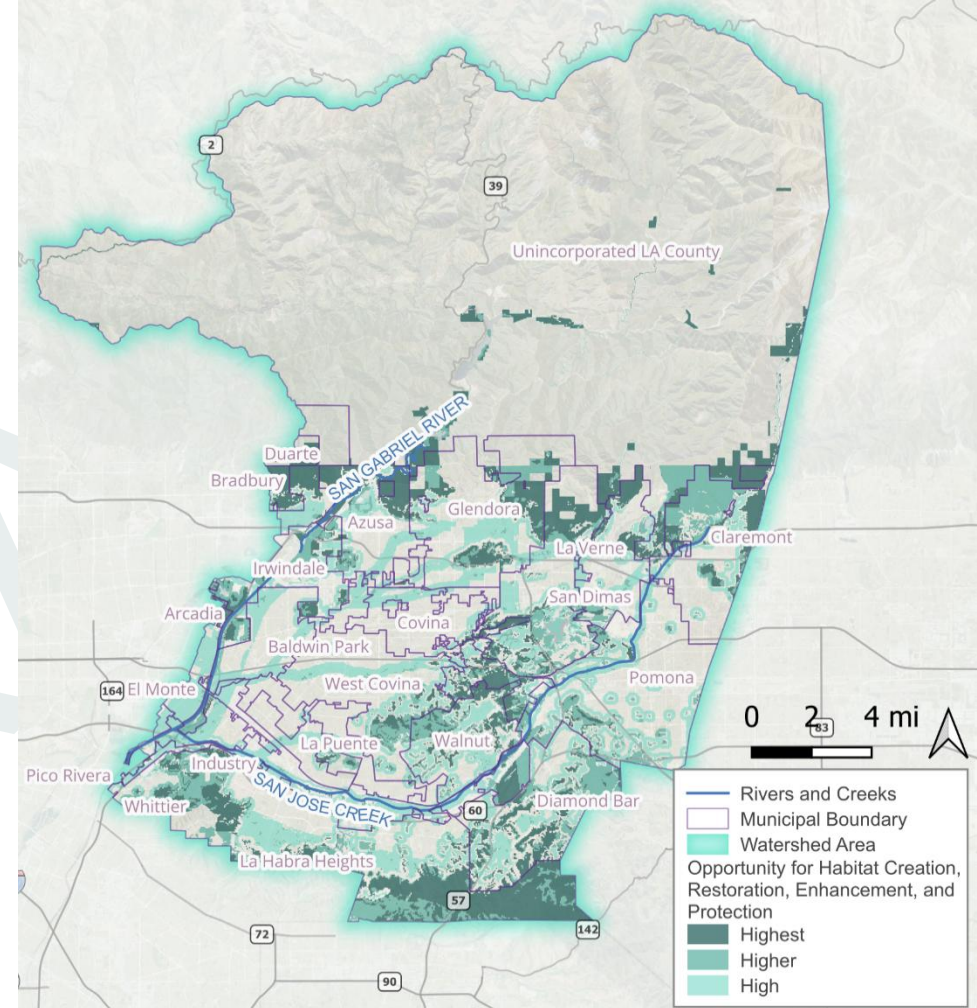


Figure 5-20. Opportunity for Habitat Creation, Restoration, Enhancement, and Protection



Upper San Gabriel River Watershed Area Opportunities



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, G

Opportunities to Address Community-stated Priorities and Concerns *(Figure 5-21)*

This opportunity compiles community-identified priorities and concerns to help guide the development of Projects and Programs that directly serve local needs. The points on the map are from responses to the [CSNA](#) Survey, which includes outdoor areas identified by community members that are in need of beautification (see green points), and drainage issues submitted by Municipalities through the Los Angeles County Drainage Needs Assessment Program (DNAP). For best use, this layer should be viewed through the [Planning Tool](#), allowing users to review individual survey responses in detail. It is important to note that the CSNA dataset is dynamic and will continue to grow over time as more community members take the survey. Additionally, survey responses should not be extrapolated across broad spatial boundaries; instead, they are intended to be reviewed individually, especially when evaluating responses near proposed Projects and Programs.

Supports strategies:

- **4.3** Deliver nature-based, multi-benefit Projects and Programs that improve water quality while addressing community priorities and concerns

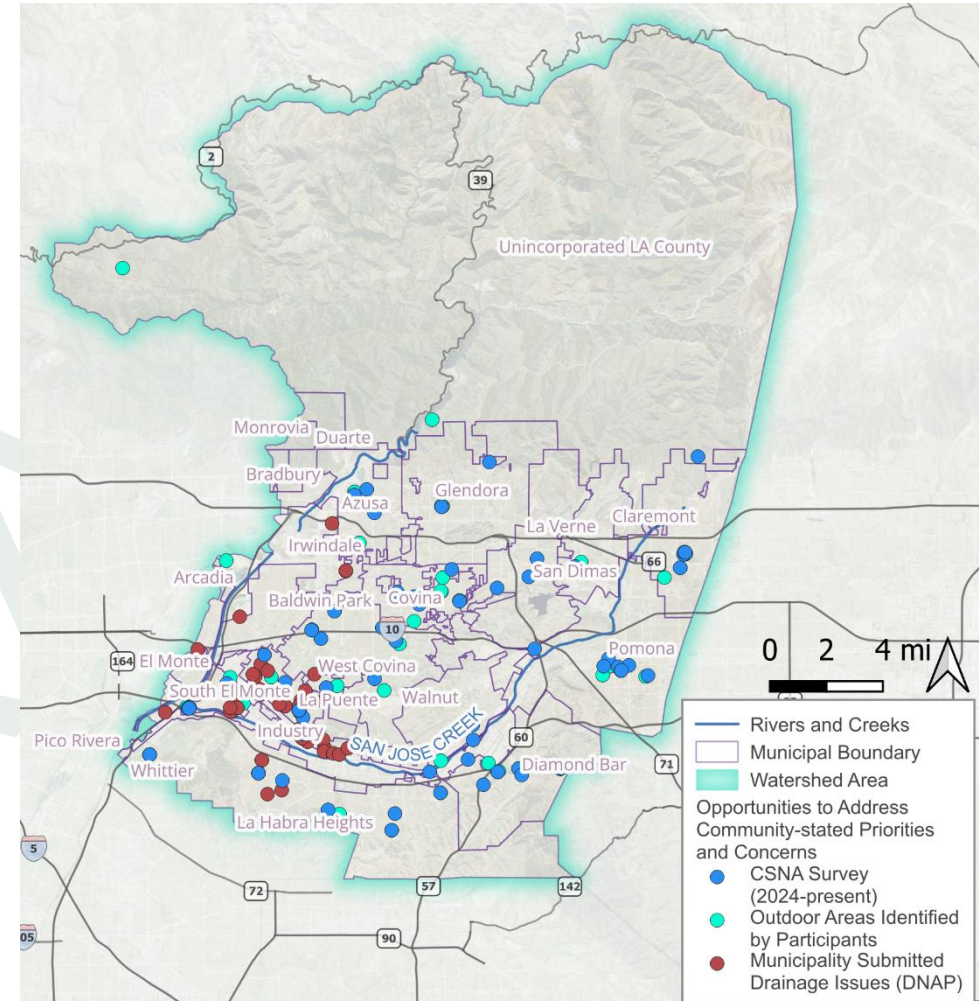


Figure 5-21. Opportunities to Address Community-Stated Priorities and Concerns



Upper San Gabriel River Watershed Area Opportunities



Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects

SCW Program
Goals E, F, G

Table 5-4. Deliver Multi-Benefits with Nature-Based Solutions and Diverse Projects: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Delivering Multi-Benefits with Nature-Based Solutions and Diverse Projects				
Opportunity	Strategies	Description & Purpose	Source	LINK
Opportunity to address community-stated priorities via the Parks Needs Assessment Study Area Profiles	4.3	Reference the Parks Needs Assessment Study Area Profiles to view and incorporate community suggestions for increasing and improving visits to rural parks and facilities, such as more shade, improved infrastructure, or expanded recreation amenities, into Project and Program implementation.	LA County Department of Parks and Recreation (via the Parks Needs Assessment)	Parks Needs Assessment Appendix A: Study Area Profiles Parks Needs Assessment+ Appendix A: Individual Regional Study Area Profiles, Appendix B: Individual Rural Study Area Profiles, and Appendix E: Survey Results
Opportunity to site Projects that utilized NBS to provide multiple benefits	4.3	Use the Greater Los Angeles NBS Assessments developed by the Nature Conservancy to determine the optimal places to site NBS to support biodiversity, manage stormwater and provide a variety of additional benefits to nature and people.	The Nature Conservancy	Greater Los Angeles NBS Assessments
Opportunity for aligning natural and engineering processes to provide multiple benefits	4.3, 4.4	The Engineering with Nature program within the US Army Corps of Engineers provides resources, research, and guidelines for integrating NBS that serve as engineering solutions while providing additional economic, environmental, and social benefits.	US Army Corps of Engineers'	Engineering With Nature
Opportunity to prioritize Project siting in communities vulnerable to extreme changes in climate and wildfire risk	3.4, 3.5, 4.4	The LA County Climate Vulnerability Web Tool provides several climate hazard related layers including those which illustrate wildfire projections.	LA County Climate Vulnerability Assessment	LA County Climate Vulnerability Web Tool – Wildfire Projections for LA County

Other Opportunities for Delivering Multi-Benefits with Nature-Based Solutions and Diverse Projects				
Opportunity	Strategies	Description & Purpose	Source	LINK
Opportunity to enhance ecosystem resilience and biodiversity	3.4, 3.5, 4.3, 4.4	The Biodiversity Analysis in Los Angeles (BAILA) was created with the intention of improving awareness of biodiversity across Greater Los Angeles County and enhance regional conservation. The Biodiversity Assessment dashboard displays the BAILA Urban Typology map, showing differences in urban habitat across LA, and may be used in development of multi-benefit Projects that employ NBS and enhance ecosystem resilience.	The Nature Conservancy, Natural History Museum of Los Angeles County	Biodiversity Assessment dashboard BAILA Final Report
Opportunities for community garden stormwater capture Projects	1.2, 2.2, 4.3, 4.4	This SCW Program Scientific Study provides six suitable community gardens that meet the criteria for effective stormwater capture. These locations are ideal for the integration of distributed BMPs such as rainwater harvesting cisterns, bioretention cells, green roofs, vegetated swales, etc.	SCW Program Scientific Study	Community Garden Stormwater Capture Investigation Scientific Study Final Report

5.2.1.5 Leverage Funding and Invest in Research and Development: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Leverage Funding & Invest in Research & Development

SCW Program Goals D, H, I

The USGR WA has a range of needs, including the need to improve water quality, increase maintenance and enhancement of regional facilities, expand access to green space and recreational corridors along the San Gabriel River and park-poor communities, and continue investments in community-driven benefits, particularly within underserved communities.

Addressing these multifaceted needs requires not only thoughtful planning and design but also strategic financial investment and research to address knowledge gaps. To this end, securing leveraged funding from state, federal, private, and philanthropic sources is a critical strategy for amplifying the impact of SCW Program investments. Leveraged funding sources can help offset capital and operational costs, enabling the development of more ambitious, cost-effective, and equitable multi-benefit Projects and Programs.

To date, USGR WA Regional Program Projects have secured approximately 21% of their funding from leveraged sources, including grant funds from the California Natural Resources Agency via the Urban Greening Grant Program. To meet the leveraged funding target of 50%, future Regional Program Projects that can leverage at least half of Project costs, if not more, should be more readily considered for SCW Program funding than other Projects that leverage less than 50% of Project costs. Note that the Indicator associated with this target, “Proportion of Project Costs Attributed to Leveraged Funding”, is measured at the WA scale. This means that while individual Projects are encouraged to meet the 50% target, the WA target can also be achieved collectively across all Projects within the WA.

The Regional Program’s Scoring Criteria maximum points to Projects that have secured 50% or more of leveraged funding based on the Project’s total cost, which also informed leveraged funding target-setting in this Planning Theme. However, Regional Program financial outlooks indicate that Regional Program funding will be constrained in the near term, with annual revenue insufficient to support the development of new large-scale Projects without additional financial support. These projections suggest that future Projects may need to secure more than 50% of Project costs from leveraged sources. This reinforces the need to proactively pursue external funding sources and highlights the growing importance of bolstering Municipal Program efforts to deliver cost-effective distributed BMPs and community-scale improvements. Proactive pursuit of additional funding streams can increase the financial feasibility of larger or high-impact Projects.

Further, continued investment in research, such as the nine Scientific Studies funded to date in the USGR WA, and the dissemination of their findings is critical for identifying new, evidence-based approaches and for developing an understanding of the

region's unique challenges and opportunities. While these and future studies will not directly identify eligible funding avenues, their findings may inform the design of Projects in ways that enhance Project efficiency and cost-effectiveness.

Several Initial Watershed Plan gaps and limitations, outlined in Section 7.1, highlight the importance of additional research and data collection to strengthen the SCW Program's ability to refine implementation efforts, track progress, and assess achievement of Goals. Addressing these gaps through Scientific Studies and other research efforts will help strengthen decision-making and support the selection and development of Projects across the RH WA. Multiple strategies within the Planning Themes also call for expanded research and Scientific Studies to support Project and Program design and accelerate progress toward Goals.

Embedding leveraged funding strategies early in Project development, supported by robust research, continuous data collection, and innovation, will help ensure long-term sustainability, fiscal efficiency, and community value. This integrated approach reinforces the SCW Program's commitment to delivering holistic, multi-benefit solutions while advancing innovation and technological progress in stormwater management.



Upper San Gabriel River Watershed Area Strategies and Actions



Leverage Funding & Invest in Research & Development

SCW Program Goals D, H, I

Watershed Area Needs
 (by 2045)

at least 50%
 Proportion of Project Costs Attributed
 to Leveraged Funding
 (% additional)

Strategies	Action(s)		Who Should be Involved
5.1 Bolster SCW Program and regional coordination to support identification and communication of alternative funding sources and opportunities	5.1.1 Address knowledge gaps surrounding the availability of alternative funding sources by enhancing the SCW Program Portal to maintain and communicate a regularly updated database of applicable funding opportunities which compiles sources identified through previously funded Projects and Programs, the SCW Program Leveraged Funding Reports, and Watershed Coordinator-identified sources.	LONG TERM	Public Works
	5.1.2 Utilize the <i>SCW Program Leveraged Funding Reports</i> , which are available through the SCW Program website, to evaluate the potential for alternative funding sources.	NEAR TERM	Municipalities, Project & Program proponents
	5.1.3 Coordinate with Watershed Coordinators for assistance in identifying and applying for leveraged funding sources (see also strategy 4.1).	NEAR TERM	Municipalities, Project & Program proponents
	5.1.4 Coordinate with Caltrans to identify opportunities within Caltrans right of ways that contribute runoff to impaired waterways. Partner on the design and funding of NBS that treat stormwater at the source, reduce pollutant loads, and support natural flow regimes while providing habitat and community benefits.	NEAR TERM	Public Works, WASCs, Municipalities, Project & Program proponents, Caltrans
5.2 Bolster the Scientific Study Program through enhanced review, coordination, and dissemination of results	5.2.1 Convene a scientific advisory board to review Scientific Study applications and compile and summarize potential areas for future study (<i>as suggested in the 2024 SCW Program Biennial Progress Report</i>).	NEAR TERM	Public Works
	5.2.2 Summarize and disseminate SCW Program funded Scientific Study results through the SCW Portal and future Adaptive Watershed Plans, to inform future study as well as Project and Program implementation and selection. <i>Note that outcomes from Scientific Studies completed to date have been incorporated throughout this Initial Watershed Plan, where applicable.</i>	NEAR TERM	Public Works

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-22. Leverage Funding & Invest in Research & Development: strategies and actions to address UGSR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Opportunities



Leverage Funding & Invest in Research & Development

SCW Program Goals D, H, I

Table 5-5. Leverage Funding & Invest in Research & Development: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Leveraging Funding & Investing in Research & Development				
Opportunity	Strategies	Description & Purpose	Source	LINK
SCW Program Leveraged Funding Reports	5.1	With support from the Watershed Coordinators, the SCW Program Regional Coordination team publishes quarterly Leveraged Funding Reports which provide an overview of recent funding policy highlights and shares active and upcoming funding opportunities that may be relevant to SCW Program Projects. In the near-term, Municipalities and Project and Program proponents can reference these reports and can work with Watershed Coordinators to identify potential leveraged funding sources. Two of the most recent reports available at the time of this Initial Watershed Plan are linked here for reference. For the latest updates, please visit the SCW Program website.	SCW Program	Q3 – January 2025 SCW Program Funding - Matrix Quarter 1 Funding Report

5.2.1.6 Equitably Distribute Benefits: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Equitably Distribute Benefits

SCW Program Goals J, K

Advancing equity within the USGR WA requires a deliberate and sustained focus on investing in Projects and Programs that directly benefit DACs and park-poor communities. To date, 11 of the 26 SCW Program Projects funded in the USGR WA are providing benefits to DACs such as improved water quality, nearly 20 acres of new or enhanced park space, and over 40 new trees. Together, the benefits provided by these Projects accrue to an estimated 53% of the total benefits provided by SCW Program Projects in the USGR WA. *Note that the DAC population anticipated to receive benefits, referred to as the DAC benefit service area, vary for each CIB type (e.g., park creation, increased tree canopy, water quality benefits, etc.), ranging in a benefit radius of 0.25 miles to 2 miles based on the type and magnitude of benefit provided.* Details on DAC benefit service areas for each benefit type can be found in Appendix H.

During community engagement, the USGR WASC expressed interest in assessing large public parcels as opportunity areas to address environmental injustices and reduce disparities in access to parks and green space. The USGR WASC would also like to focus on implementing multi-benefit Projects within communities near freeways to offset their exposure to environmental stressors.

In response, the following strategies and opportunities recommend prioritizing underserved and climate-vulnerable communities by supporting Projects that deliver multi-benefit outcomes, such as improved water quality, enhanced green spaces, urban cooling, flood reduction, recreational opportunities, and local job creation. These benefits should be accessible, visible, and responsive to the needs of local residents. Community-engaged planning is central to equitable implementation; as such these strategies are supported by those under the Prioritize Meaningful Engagement Planning Theme.

Ultimately, equitable distribution of SCW Program benefits is about more than geography, it requires intentional design, community partnership, and long-term commitment to addressing place-based disparities and strengths. These strategies, when implemented alongside those under the other Planning Themes, can not only support the USGR WA in meeting its technical goals, but also advances justice, inclusion, and well-being for all its communities.



Upper San Gabriel River Watershed Area Strategies and Actions



Equitably Distribute Benefits

SCW Program Goals J, K

Watershed Area Needs
 (by 2045)

at least 22%
 DAC Benefit Ratio
 (%)

at least 70%
 Proportion of Municipal Funds
 Spent on New Projects or Programs
 (%)

Strategies	Action(s)		Who Should be Involved
6.1 Consider historic land use disparities and environmental justice metrics across the SCW Program area*	6.1.1 Prioritize Projects and Programs in historically underserved communities and those with heightened vulnerability to climate hazards. Use the <i>Opportunity to Provide Benefits to DACs</i> and <i>Multiple Benefit Opportunity Across Planning Themes</i> layers to guide equitable Project and Program planning and implementation.	NEAR TERM	Public Works, WASCs, Municipalities, Project & Program proponents
6.2 Advance equity and prioritize new investments particularly in communities not currently served by a SCW Program Project or Program	6.2.1 Prioritize implementation of high-impact water quality Projects and Programs (see strategy 1.1), especially in areas identified by the <i>DAC Benefit Opportunity</i> layer, to expand and enhance Water Quality Benefits for climate-vulnerable communities, DACs, and Municipalities.	NEAR TERM	Public Works, WASCs, Municipalities, Project & Program proponents
	6.2.2 In combination with 6.2.1., provide benefits to DACs that are not currently receiving CIBs from existing SCW Program Projects by leveraging the <i>DAC Benefit Opportunity</i> layer. Prioritize high-impact Projects and Programs located in areas with the greatest potential to deliver multiple benefits across Planning Themes, as identified in the <i>Multiple Benefit Opportunity Across Planning Themes</i> layer. Recall that all SCW Program Projects and Programs must provide Water Quality Benefits.	NEAR TERM	Public Works, WASCs, Municipalities, Project & Program proponents
	6.2.3 Municipalities are to ensure that at least 70% of Municipal Program funds received are spent annually on eligible expenses related to new Activities (i.e., Projects or Programs implemented on or after November 6, 2018), as specified in Chapter 18 - SCW Program Implementation Ordinance, Los Angeles County Flood Control District Code.	NEAR TERM	Municipalities

*SCW Program-wide Priority Strategy based on engagement

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-23. Equitably Distribute Benefits: strategies and actions to address UGSR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Opportunities



Equitably Distribute Benefits

SCW Program Goals J, K

Opportunity to Provide Benefits to DACs

(Figure 5-24)

This opportunity combines the CalEPA DAC and CVA SSI layers to identify areas with the greatest potential for Projects and Programmatic investments to deliver impactful benefits to historically underserved and climate-vulnerable communities.

To reflect current SCW Program investments, this layer excludes areas already served by existing SCW Program Projects, specifically within their CIB service areas. Recognizing that each Project's CIB service area may vary depending on the specific benefits it provides, a default service radius of 0.25 miles was applied to existing SCW Program Projects for the purpose of this opportunity analysis. This conservative approach ensures that the opportunity to invest in DACs is not overly restricted, maintaining flexibility for new investments while avoiding redundancy.

By layering social vulnerability and historic underinvestment datasets, this opportunity aims to guide the USGR WASC, Municipalities, and Project and Program proponents toward strategic, equity-focused investments that promote environmental justice, community resilience, and improved quality of life for the most impacted populations.

Supports strategies,

- **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area
- **6.2** Advance equity and prioritize new investments particularly in communities not currently served by a SCW Program Project or Program

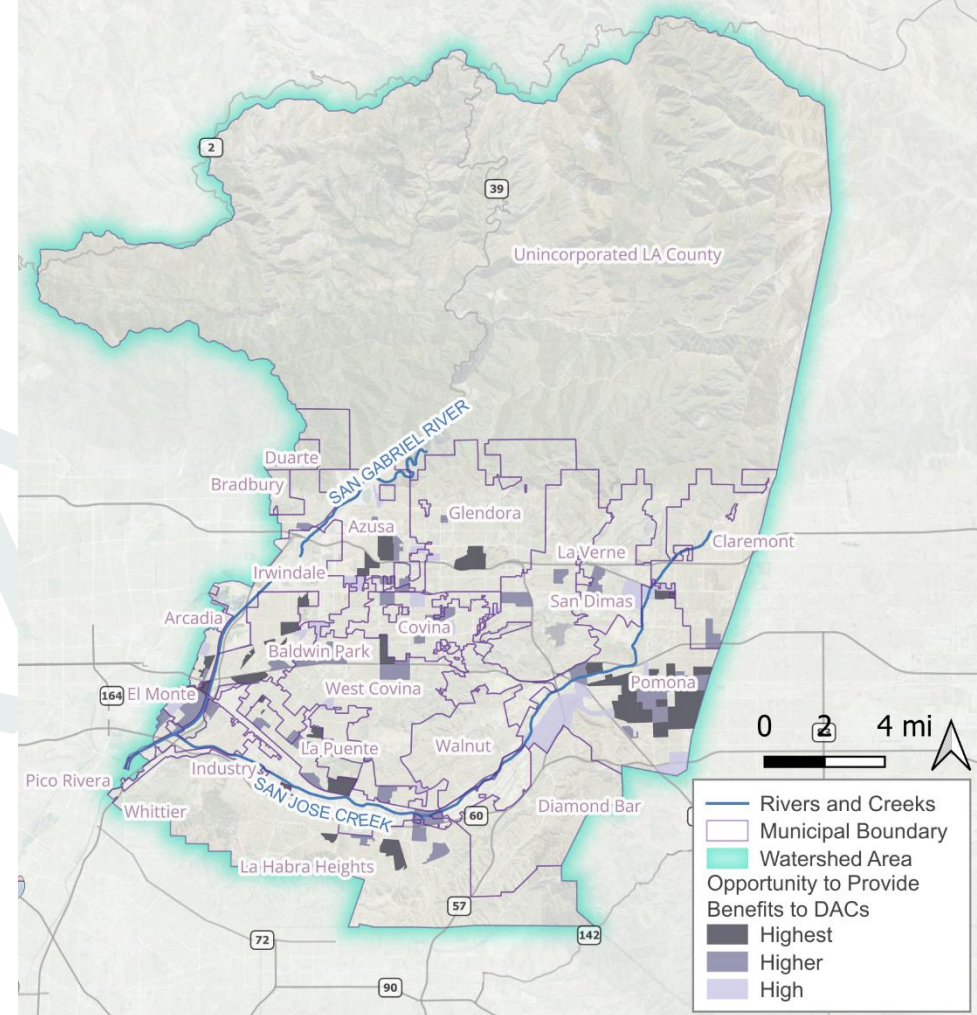


Figure 5-24 Opportunity to Provide Benefits to DACs



Upper San Gabriel River Watershed Area Opportunities



Equitably Distribute Benefits

SCW Program Goals J, K

Table 5-6. Equitably Distribute Benefits: other opportunities to address USGR WA Needs and achieve Goals

Other Opportunities for Equitably Distributing Benefits				
Opportunity	Strategies	Description & Purpose	Source	LINK
Advice for Projects and Programs designed to achieve the equitable impact sought by the SCW Program.	6.1, 6.2, 9.1, 9.2	The Equity in Stormwater Investments white paper provides critical context and recommendations for strengthening equity outcomes for SCW Program Projects including advice for engagement. <i>Note that recommendations have been incorporated in this Initial Watershed Plan, where applicable.</i>	University of California, Los Angeles	Equity in Stormwater Investments White Paper
Opportunity to support communities sensitive to climate-related hazards	6.1	The CVA SSI is a tool used to evaluate how vulnerable a community is to climate-related hazards. While the opportunity layers above incorporate this dataset to identify opportunities within DACs, it can also be applied beyond the DAC context to highlight non-DAC areas that are sensitive to climate hazards and may benefit from infrastructure investments.	Los Angeles County Chief Sustainability Office	Los Angeles County Climate Vulnerability Assessment - Web Tool

5.2.1.7 Promote Green Jobs and Career Pathways: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Promote Green Jobs and Career Pathways

SCW Program Goal M

The UGSR WA presents significant opportunities for strategic investment in the local workforce to support SCW Program Projects and Programs. Given the breadth of the SCW Program's 14 Goals, workforce strategies must be multifaceted and inclusive. Key approaches include targeted hiring, skills training, and career pathway development that align with existing and emerging green infrastructure Projects. These strategies build upon the findings of the SCW Program's Workforce Development white paper, which includes a comprehensive literature review of workforce training programs, models, and other resources that can be leveraged to cultivate a stable, skilled, and locally sourced labor force.

The USGR WASC, the ROC, advocates, and the ROC CIB and Benefits Ratio Working Group emphasized the importance of prioritizing "high quality" jobs, especially 'green' jobs (those that offer stability, living wages, and benefits) over low quality and temporary jobs that lack those kinds of benefits. Notably, engagement with OurWaterLA, a local agency comprised of experts in green jobs and workforce equity, identified public sector maintenance roles as more desirable than private sector alternatives, due to their reliability and long-term potential.

Additionally, workforce development efforts in the USGR WA should be coordinated with regional partners such as the San Gabriel Valley Council of Governments, local workforce development boards, and the Los Angeles County Department of Economic Opportunity (DEO), which are focused on expanding access to job training and employment opportunities. Collaboration with community-based organizations and agencies engaged in environmental stewardship such as Amigos de los Rios, TreePeople, and the Los Angeles Conservation Corps can help create accessible green job pathways in stormwater BMP maintenance, habitat restoration, and water quality monitoring, particularly for underrepresented communities. By connecting job creation to environmental justice and community well-being, the SCW Program can serve as a catalyst for both ecological resilience and economic empowerment in the UGSR WA. The UGSR WASC, advocates, and ROC Working Group expressed interest in linking O&M spending with workforce development.



Upper San Gabriel River Watershed Area Strategies and Actions



Promote Green Jobs and Career Pathways

SCW Program Goal M

Watershed Area Needs
(by 2045)

1,600
Total Full-Time Equivalent (FTE)
Jobs Created
(#)

100%
Proportion of Projects Entered
in a Project Labor Agreement
(PLA) (where applicable)
(%)

Strategies	Action(s)		Who Should be Involved
7.1 Prioritize smaller Projects for which construction and maintenance jobs are more likely to come from a local labor force	7.1.1 Prioritize the implementation of small-footprint distributed BMPs, such as green streets and lower impact development Projects, particularly in areas where they are cost-effective and community-supported, to encourage the creation of jobs for the local labor force that support multiple benefits.	NEAR TERM	WASCs, Municipalities, Project proponents
	7.1.2 Utilize the <i>SCW Program Portal Bid and Project Schedules</i> page and related <i>Reporting Module</i> functionality to solicit job opportunities and promote open procurement.	NEAR TERM	Municipalities, Project & Program proponents
7.2 Invest in research and Programs that promote permanent career pathways	7.2.1 Initiate a Scientific Study, building from the Accelerate Resilience Los Angeles (ARLA) Workforce White Paper, that investigates the resources required to establish permanent career pathways within SCW Programs Projects and Program implementation and O&M.	LONG TERM	Public Works, Scientific Study proponents, ARLA, CBOs
	7.2.2 Establish a job training and certification program to create a career pathway for the SCW Program workforce.	LONG TERM	Public Works, DEO
7.3 Coordinate job placement and partner with workforce training and pre-apprenticeship programs	7.3.1 Collaborate with local training providers (e.g., Los Angeles Alliance for a New Economy, Strategic Concepts in Organizing & Policy Education, community colleges) to support the establishment or expansion of pipelines for underrepresented communities into green careers, including stormwater BMP maintenance, landscape restoration, and water quality monitoring.	LONG TERM	Public Works, Municipalities, Watershed Coordinators
	7.3.2 Utilize the SCW Program Portal—including the Planning Tool—to spatially view current and proposed SCW Program Projects in the WA to identify near- and long-term workforce demands, with a focus on O&M and construction labor needs. Consider resource pooling across multiple Municipalities or Project sponsors when appropriate and feasible.	NEAR TERM	Public Works, Municipalities, Watershed Coordinators
	7.3.3 Partner with regional workforce programs such as the California Conservation Corps, Mountains Recreation and Conservation Authority, and The Bay Foundation to provide on-the-ground training in habitat restoration, wildfire resilience, and green infrastructure maintenance.	LONG TERM	Public Works, Municipalities, Watershed Coordinators

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-25. Promote Green Jobs and Career Pathways: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Opportunities



Promote Green Jobs and Career Pathways

SCW Program Goal M

Table 5-7. Promote Green Jobs and Career Pathways: other opportunities to address USGR WA Needs and achieve Goals

Opportunities for Promoting Green Jobs and Career Pathways				
Opportunity	Strategies	Description & Purpose	Source	LINK
SCW Program Portal – Bid Opportunities and Project Schedules Page	7.1, 7.2	Centralizes information submitted by Developers and Municipalities for upcoming bid opportunities for SCW Program Projects and Studies.	SCW Program	SCW Program Portal - Bid and Project Schedules

5.2.1.8 Ensure Ongoing Operations & Maintenance for Projects: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Ensure Ongoing Operations & Maintenance for Projects

SCW Program Goal N

The long-term viability, performance, and community value of Projects funded through the SCW Program in the USGR WA depend on robust and sustainable strategies for O&M. Sustained O&M ensures that Projects continue to deliver intended benefits such as water quality improvement, flood management, and green space enhancements over their full life cycle. To that end, SCW Program Goal N emphasizes the need for comprehensive O&M planning in Project applications, which requires Project applicants to demonstrate not only upfront design excellence but also clear and feasible O&M plans that when implemented lead to the ongoing operational success of Projects. To date, two Projects in the USGR WA have received SCW Program funding for O&M which requires a formal O&M plan with application submittal to ensure ongoing and long-term effectiveness.

The following strategies are designed to support the development of a qualified, well-trained workforce, embed industry best practices in asset management, and promote adaptive maintenance approaches. These strategies closely align with broader concepts previously discussed under the Leverage Funding and Invest in Research and Development Planning Theme (with particular alignment with strategy 5.1) recognizing that strategic and leveraged funding can and will be necessary to strengthen long-term O&M capacity.

Embedding O&M considerations into the earliest stages of Project planning, design, and budgeting is essential. Proactively integrating these elements will ensure that each Project not only meets its initial objectives but continues to provide reliable, resilient, and equitable benefits for the communities it serves for decades to come.



Upper San Gabriel River Watershed Area Strategies and Actions



Ensure Ongoing Operations & Maintenance for Projects

SCW Program Goal N

Watershed Area Needs
(by 2045)

100%
Quantity of O&M Plans Sustaining
Intended Project Benefits
(%)

Strategies	Action(s)		Who Should be Involved
8.1 Maintain a skilled, local workforce to ensure quality construction and comprehensive O&M	8.1.1 Initiate a Scientific Study that can establish specific construction and O&M best practices for varying BMP and footprint types, and can aggregate lessons learned from constructed Projects that can be used in future Project planning. See related strategy 5.1.	NEAR TERM	Public Works, WASCs, Scientific Study proponents
	8.1.2 Develop and expand workforce pipelines for O&M personnel, with a focus on local hiring and job training programs that support career pathways in water infrastructure, green maintenance, and environmental monitoring. See related strategy 5.1.	LONG TERM	Public Works, Municipalities
8.2 Ensure sufficient resources are set aside for Project O&M and monitoring	8.2.1 Leverage external funding sources—such as state and federal infrastructure and climate adaptation grants—to support long-term O&M costs by establishing funding pathways for O&M and monitoring requirements and best practices, thereby reducing reliance on limited SCW Program funds for recurring expenses. See related strategy 5.1.	NEAR TERM	Public Works, Municipalities, Project proponents
	8.2.2 Embed O&M into the early planning, design, and funding stages of Projects to ensure adequate funds are allocated, set clear expectations and responsibilities for O&M, and identify cost-effective design choices that reduce future maintenance burdens.	NEAR TERM	Public Works, Municipalities, Project proponents
	8.2.3 Develop partnerships with public agencies, CBOs, and maintenance contractors to establish coordinated approaches and share resources where feasible.	LONG TERM	Public Works, Municipalities
8.3 Promote wildfire resilience through fire-resilient O&M protocols for Projects	8.3.1 Manage fire fuel by incorporating into O&M plans the regular removal of dry, excess biomass and dead plant material, particularly during fire season.	NEAR TERM	Public Works, Municipalities, Project proponents
	8.3.2 Maintain and promote use of dual-use infrastructure—such as stormwater channels that can function as fire fuel breaks or emergency access paths.	NEAR TERM	Public Works, Municipalities
	8.3.3 Ensure routine maintenance of major stormwater capture facilities—such as dams, reservoirs, and spreading grounds—to preserve design capacity, control pollutant loads, and maintain hydrologic safety, especially in post-fire and high-runoff conditions.	NEAR TERM	Public Works, Municipalities
	8.3.4 Enhance O&M for major capture facilities to optimize water storage, improve system responsiveness during storm events, and support the strategic use of captured stormwater for drought resilience and wildfire suppression.	LONG TERM	Public Works, Municipalities
8.4 Integrate post-construction monitoring data into O&M plans	8.3.3 Incorporate adaptive O&M plans in Project planning and implementation that account for increased sediment and debris loading following wildfires.	NEAR TERM	Public Works, Municipalities
	8.4.1 Promote adaptive maintenance which integrates post-construction monitoring data for Projects into O&M schedules and plans, ensuring that these metrics directly inform maintenance activities and that issues are addressed proactively.	NEAR TERM	Public Works, Municipalities, Project proponents

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-26. Ensure Ongoing Operations & Maintenance for Projects: strategies and actions to address UGSR WA Needs and achieve Goals

5.2.1.9 Prioritize Meaningful Engagement: Strategies, Actions, and Opportunities



Upper San Gabriel River Watershed Area Strategies and Actions



Prioritize Meaningful Engagement

Meaningful engagement is not only a cornerstone of equitable Project and Program planning but is essential for the long-term success of multi-benefit initiatives that seek to address environmental, social, and infrastructural challenges. To date, 42% of SCW Program Projects funded in the CSMB WA have reported 'Good', 'Better', or 'Best' levels of community engagement, while 46% have reported similar levels of engagement with tribes. These Projects have collectively received 7 letters of support and conducted almost 75 different engagement activities including fact sheets, social media posts, and surveys.

A recurring theme raised by interested parties is the need for accessible and culturally relevant education to help community members understand the SCW Program's funding mechanisms, Project timelines, and anticipated changes. While achieving widespread community awareness and support can be challenging, well-designed engagement and educational initiatives (especially those delivered in partnership with trusted local entities such as Watershed Coordinators, CBOs and WASCs) can build trust and bridge communication gaps. Engagement with the Watershed Coordinators, advocates, and some WASCs highlighted the value of continued collaboration with federally and non-federally recognized Tribal Nations, underserved populations, Municipalities, and other public agencies.

Interested parties not only want to see visible, tangible improvements but also want assurance that their concerns are being heard and addressed. This underscores the need for ongoing dialogue, transparent decision-making, and education that addresses both the opportunities and challenges associated with watershed improvements. The UGSR WA's engagement strategies reflect an inclusive, informed, and community-driven approach, ensuring that residents are not just beneficiaries but active partners in the transformation of their local environment.



Upper San Gabriel River Watershed Area Strategies and Actions



Prioritize Meaningful Engagement

Watershed Area Needs
 (by 2045)

100%
 All Projects to Meet a Minimum
 "Level of Achievement"
 (%)

Strategies	Action(s)		Who Should be Involved
9.1 Promote meaningful and sustained outreach and engagement through regional coordination and expertise	9.1.1 Integrate findings from prior engagement efforts—such as the CSNA and other Countywide and local initiatives—into Project and Program-specific outreach strategies. Tailor engagement activities to reflect and acknowledge community-identified priorities, concerns, and aspirations. By building on existing input, this approach fosters trust, avoids redundancy, and ensures that engagement efforts are both responsive and relevant to the communities they aim to serve.	NEAR TERM	Project & Program proponents
	9.1.2 Utilize the SCW Program Engagement Calendar to identify and align with existing local and Countywide events, meetings, and outreach efforts. By coordinating participation in already-established community gatherings, Project and Program proponents and Watershed Coordinators can increase visibility, reduce outreach fatigue, and engage residents in familiar, trusted spaces.	NEAR TERM	Project & Program proponents
	9.1.3 Develop a centralized, user-friendly online platform—coordinated in partnership with Watershed Coordinators—to serve as a Clearinghouse for outreach and engagement resources and which will be integrated with the SCW Program Portal. This platform would include a directory of potential partnership opportunities, funding leads, and event calendars.	NEAR TERM	Public Works, Watershed Coordinators
	9.1.4 Conduct a comprehensive evaluation of the SCW Program Public Education and Community Engagement Grants Program to assess its effectiveness in advancing the Program's Goals. This evaluation should analyze the reach, impact, and inclusivity of funded initiatives, particularly in DACs. Based on the findings, consider extending and enhancing the Grants Program to support sustained, community-driven engagement and education efforts.	LONG TERM	Public Works, Watershed Coordinators
9.2 Develop and bolster existing resources and support for Project and Program-specific engagement	9.2.1 Enhance the existing engagement assessment criteria, such as the Good/Better/Best framework, to ensure consistent and effective engagement across the SCW Program. This enhancement should involve developing clear metrics, incorporating feedback mechanisms, and providing guidance and trainings for proponents to apply the enhanced framework effectively.	NEAR TERM	Public Works, Watershed Coordinators
	9.2.2 Establish a roster of CBOs and non-governmental organizations (NGOs) that could support engagement and Project Concept development (<i>as suggested in the 2024 SCW Program Biennial Progress Report</i>).	LONG TERM	Public Works, Watershed Coordinators
	9.2.3 If established (see 9.2.2), refer to the SCW Program's roster of CBOs and NGOs to seek technical support for Project Concepts as well as support with engagement, particularly in DACs.	LONG TERM	Project & Program proponents, Municipalities

Figure 5-27. Prioritize Meaningful Engagement: strategies and actions to address USGR WA Needs and achieve Goals



Upper San Gabriel River Watershed Area Strategies and Actions



Prioritize Meaningful Engagement

Strategies	Action(s)		Who Should be Involved
9.2. Develop and bolster existing resources and support for Project and Program-specific engagement (continued)	9.2.4 Strengthen the role of Watershed Coordinators by utilizing their expertise in engagement, education, and capacity building to support the following activities: <ul style="list-style-type: none"> Identify and communicate community priorities by analyzing CSNA findings to understand key community-stated priorities, concerns, and community-identified Project locations. Share these insights with the WASC and incorporate into the Strategic Outreach and Engagement Plans to inform Project and Program development and prioritization. Facilitate coordination among Project proponents and Municipalities to identify synergies, address overlapping or nested Projects, and promote right-sized or co-planned Projects that maximize benefits and avoid conflicts. Provide support and training for SCW Program Portal Tools (e.g., Planning Tool, Projects Module, Reporting Module) and to share best practices for meaningful engagement. This includes helping Project proponents and Municipalities understand and apply the Good/Better/Best engagement framework. Organize collaborative forums, training sessions, and workshops to help interested parties navigate SCW Program processes and reduce participation barriers. 	LONG TERM	Public Works, Watershed Coordinators
	9.3.1 Promote community workshops or engagement programs that explain how green infrastructure can support wildfire resilience.	NEAR TERM	Public Works, Watershed Coordinators
9.3. Promote fire-adapted communities through enhanced education and outreach	9.3.2 Emphasize co-benefits of stormwater investments—like cooling, vegetation health, and fire safety—to increase public awareness and support.	LONG TERM	Public Works, Project & Program proponents
	9.3.3 Collaborate with fire agencies, emergency managers, and fire risk mitigation experts during Project implementation, especially when Projects are sited in wildland-urban interface or high-risk zones.	LONG TERM	Project & Program proponents, Municipalities

Note: Although the strategies and actions under this Planning Theme may not explicitly reference water quality, it is important to remember that, in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16), all SCW Program funded Projects and Programs are required to include a Water Quality Benefit.

Figure 5-27. Prioritize Meaningful Engagement: strategies and actions to address USGR WA Needs and achieve Goals (continued)



Upper San Gabriel River Watershed Area Opportunities



Prioritize Meaningful Engagement

Table 5-8. Prioritize Meaningful Engagement: other opportunities to address USGR WA Needs and achieve Goals

Opportunities for Prioritizing Meaningful Engagement				
Opportunity	Strategies	Description & Purpose	Source	LINK
Opportunity for community members to provide input on their priorities and concerns	9.1, 9.2	The CSNA survey is a key engagement tool of the SCW Program. The survey provides an opportunity for individuals to directly inform the planning and implementation of SCW Program investments. There is ongoing coordinated distribution of the survey by Watershed Coordinators and other entities but all individuals are encouraged to take the survey.	SCW Program CSNA	CSNA Survey
Advice for Projects and Programs designed to achieve the equitable impact sought by the SCW Program	6.1, 6.2, 9.1, 9.2	The <i>Equity in Stormwater Investments White Paper</i> provides critical context and recommendations for strengthening equity outcomes for SCW Program Projects including advice for engagement. <i>Note that recommendations have been incorporated in this Initial Watershed Plan, where applicable.</i>	University of California, Los Angeles	Equity in Stormwater Investments White Paper
Opportunity to coordinate with existing outreach and engagement meetings and event	9.1	Reference the SCW Program SCW Program Watershed Coordinator Engagement Event Calendar to align Project and Program engagement with planned and ongoing meetings and events.	SCW Program	SCW Program Watershed Coordinator Engagement Event Calendar
Opportunity to review existing regional and local engagement results	9.1	The CSNA Dashboard provides survey response trends from the CSNA Survey (2024-present), SCW Program Watershed Coordinator Surveys (2020-2024), and WaterTalks Needs Assessment (2018-2023). This collection of community thoughts should be referenced to inform future Project and Program engagement, reduce burden on community members, and increase the impact of SCW program Projects and Programs.	SCW Program; CSNA Dashboard	CSNA Dashboard – Survey Participation Layers

Opportunities for Prioritizing Meaningful Engagement				
Opportunity	Strategies	Description & Purpose	Source	LINK
		The Parks Needs Assessment included extensive engagement to identify community suggestions and priorities. Refer to the following engagement outputs to understand efforts and community suggestions identified by the Parks Needs Assessment in your community to date.	LA County Department of Parks and Recreation (via the Parks Needs Assessment)	Parks Needs Assessment Appendix A: Study Area Profiles Parks Needs Assessment+ Appendix A: Individual Regional Study Area Profiles, Appendix B: Individual Rural Study Area Profiles, and Appendix E: Survey Results
		Align Project and Program implementation with key engagement takeaways from the OurCounty Sustainability Plan.	LA County Chief Sustainability Office (via the OurCounty Sustainability Plan)	OurCounty Stakeholder Engagement Summary Report
Fire Hazard Reduction Opportunity	3.5, 9.3	Resource guide that legally declares areas that show improved and unimproved properties as a public nuisance, and where necessary, requires clearance of hazardous vegetation to create a defensible space against wildfires.	Cal Fire	Defensible Space Guidelines Los Angeles County Defensible Space Inspection Program LAC Fire Code Inspection Informational Guide
	3.5, 9.3	Visually details the most critical landscape conditions and clarifies what should be done to prepare residential homes for the greatest chance for survival.	LAC Fire Department	A Guide to Defensible Space: Ornamental Vegetation Maintenance

5.2.1.10 Composite Opportunities for Providing a Spectrum of Benefits

Projects and Programs that deliver multiple benefits (such as a Water Quality Benefit alongside a Water Supply Benefit and/or CIB, or both—are a cornerstone of the SCW Program. Synergies exist across strategies to address SCW Program Goals; these strategies support individual Goals on their own but are most effective in supporting Goals when enacted jointly. For example, strategies related to NBS, CIBs, and equity frequently overlap and mutually reinforce one another²⁹.

Consider the following example: creating, enhancing, and restoring park and green space in high-need communities (strategy 3.4) through the delivery of nature-based, multi-benefit Projects and Programs (strategy 4.4) also helps communities most affected by extreme heat (strategy 3.5). At the same time, it contributes to equitable outcomes by considering land use disparities and environmental justice metrics (strategy 6.1). When these green spaces utilize native vegetation and are sited on previously impermeable surfaces, they go beyond satisfying strategy 3.4 by mitigating the urban heat island effect and offering climate resilience benefits, especially when sited in climate-vulnerable areas.

Similarly, strategies to improve water quality and increase water supply are closely interconnected. Strategy 2.1 explicitly reinforces this linkage. For example, maximizing stormwater runoff capture and management for water supply (strategy 2.2) goes hand-in-hand with prioritizing high-performance Projects and Programs in areas with the highest pollutant loads (strategy 1.1). Projects that augment water supply through infiltration to a managed aquifer, diversion to sanitary sewers, or onsite reuse must first treat that stormwater runoff using Project BMPs or existing wastewater treatment and water reclamation facilities. To support the implementation of these synergies, the Initial Watershed Plans introduce two composite opportunities:

- **Multiple Benefit Opportunity Across Planning Themes**
- **Opportunity to Improve Water Quality and Increase Water Supply**

These composite opportunities provide guidance to the USGR WASC, Municipalities, and Project and Program proponents by highlighting areas within the USGR WA, and each Municipality, with the most potential to align strategies to deliver multiple benefits and support multiple Goals.

²⁹ Recall that in accordance with the SCW Program Implementation Ordinance (LACFCD Code §16) all Projects and Programs must include a Water Quality Benefit, and all Regional Program Project must have both a Water Quality Benefit and/or a Water Supply Benefit or CIB, or both. Municipal Program Projects that incorporate multiple benefits and NBS are strongly encouraged.

Multiple Benefit Opportunity Across Planning Themes

This multiple benefit composite opportunity (Figure 5-28) serves as a critical planning and communication tool for the USGR WASC, Municipalities, and Project and Program proponents. Its purpose is to highlight areas within the USGR WA and its Municipalities that offer potential for leveraging multiple strategies to efficiently and effectively deliver community and environmental benefits that address multiple Goals and maximize cumulative benefits rather than addressing needs in isolation. Specifically, this composite opportunity highlights locations where multi-benefit Project and Programs could most effectively provide Water Quality Benefits while supporting two or more of the following Goals and strategies:

- **Increase Drought Preparedness (Goal B)**
 - **2.2** Enhance local water supply through groundwater recharge, diversion to sanitary sewer, and onsite reuse
- **Improve Public Health (Goal C)**
 - **3.4** Create, enhance, and restore park and green space, especially in high-need communities
 - **3.5** Help communities most affected by extreme heat mitigate and adapt to the effects of climate change
- **Deliver Multi-Benefits (Goal F)**
 - **4.3** Deliver nature-based, multi-benefit Projects and Programs that improve water quality while addressing community priorities and concerns
- **Equitably Distribute Benefits (Goal J).**
 - **6.1** Consider historic land use disparities and environmental justice metrics across the SCW Program area
 - **6.2** Advance equity and prioritize new investments particularly in communities not currently served by a SCW Program Project or Program

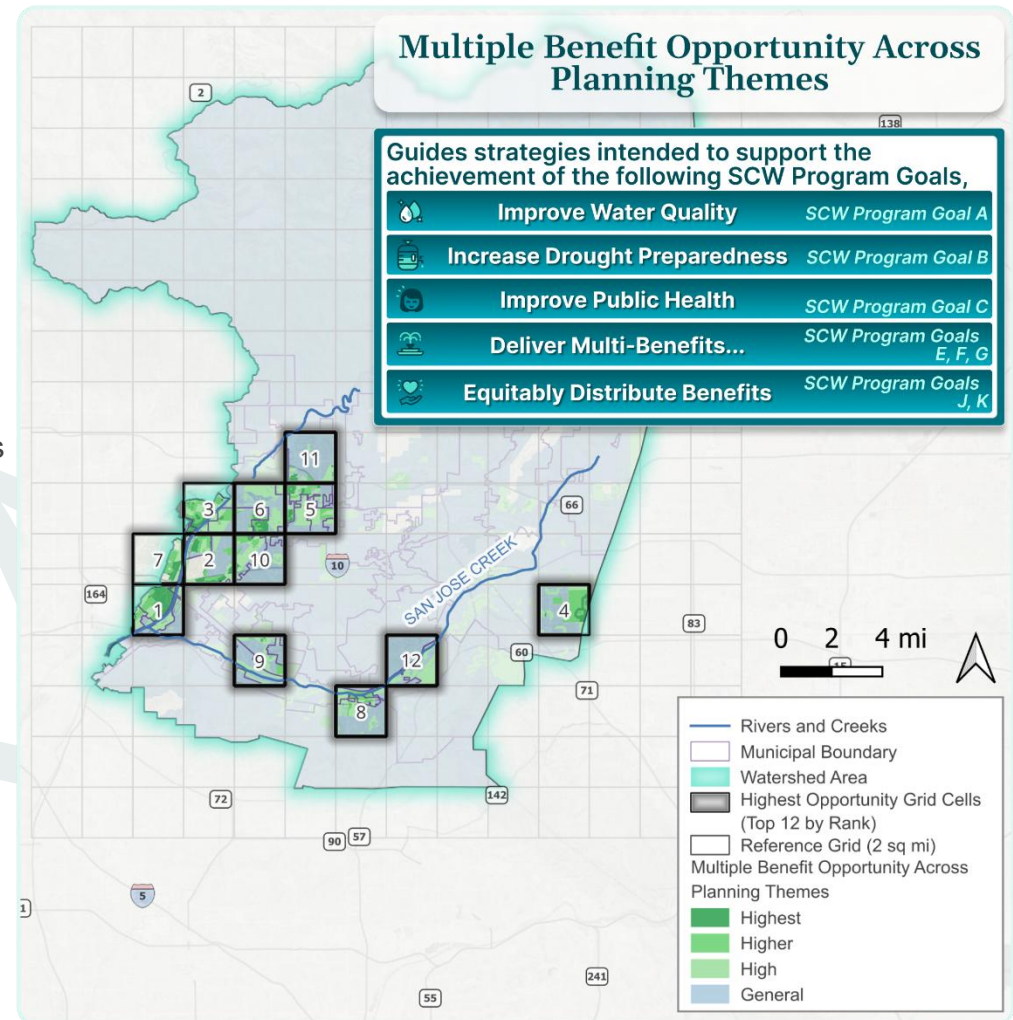
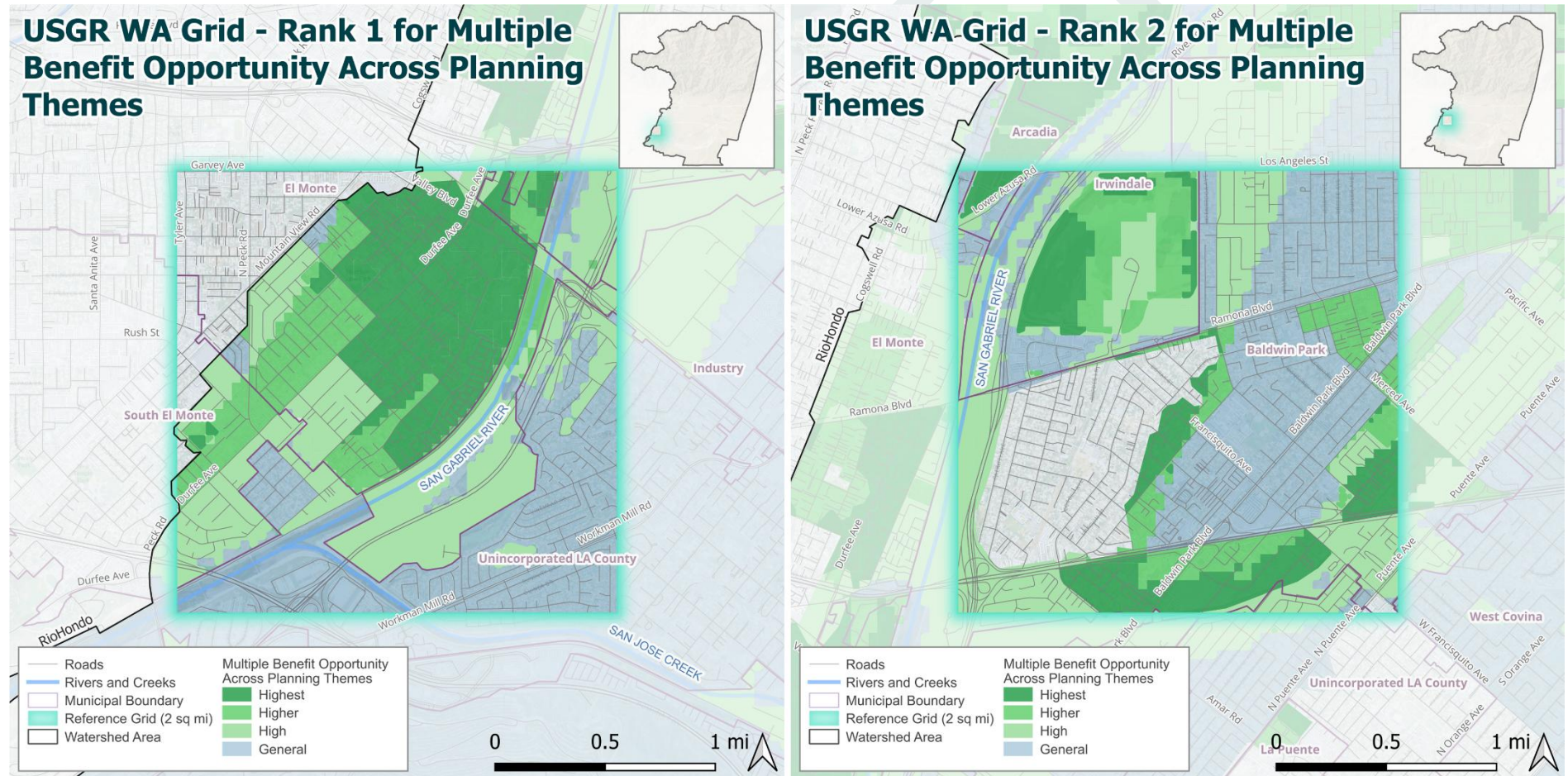


Figure 5-28. Multiple Benefit Opportunity Across Planning Themes

To clearly identify areas with the greatest potential, the USGR WA was divided into 2-square-mile grid cells and ranked based on their capacity to address multiple WA Needs, improve water quality, and advance two or more other SCW Program Goals across Planning Themes. The top two grids in the USGR WA for the Multiple Benefit Opportunity Across Planning Themes are shown in Figure 5-29 to highlight the highest-scoring areas in the USGR WA and guide the USGR WASC and Project and Program proponents toward locations with the most strategic and cumulative impact.

A detailed explanation of the analysis is provided in Appendix I, while full-page versions of the maps for the top twelve grids for this Opportunity within the USGR WA are included in Appendix J. A layer with the top twelve grids for the USGR WA for the Multiple Benefit Opportunity Across Planning Themes is also available for interactive exploration through the [Planning Tool](#).



To support targeted implementation by Municipalities, the Multiple Benefit Opportunity Across Planning Themes was rescaled at the Municipal scale to highlight the relative opportunity levels—high, higher, and highest—within each Municipality. This localized scaling approach ensures that every Municipality, regardless of size or baseline conditions, can identify and prioritize areas with the greatest potential to deliver cumulative, cross-thematic benefits aligned with SCW Program Goals. Figure 5-30 provides an example of the results of this spatial analysis for the Cities of La Puente, South El Monte and West Covina, which have varying opportunity levels and spatial distribution. Appendix I provides a detailed explanation of this analysis, and Appendix J includes full-page versions of the maps shown below. This layer is also available for interactive exploration through the [Planning Tool](#).

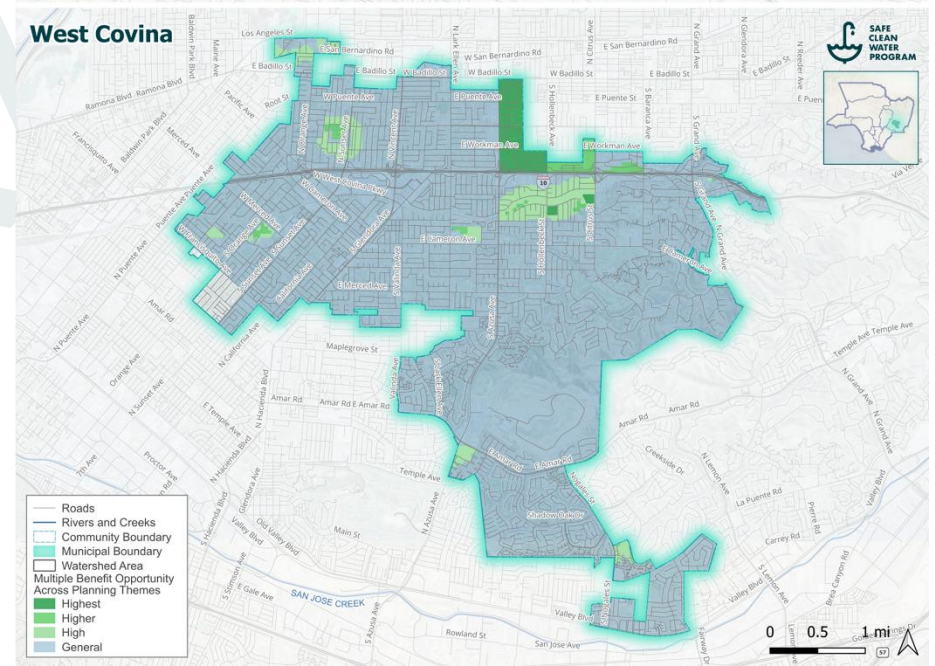
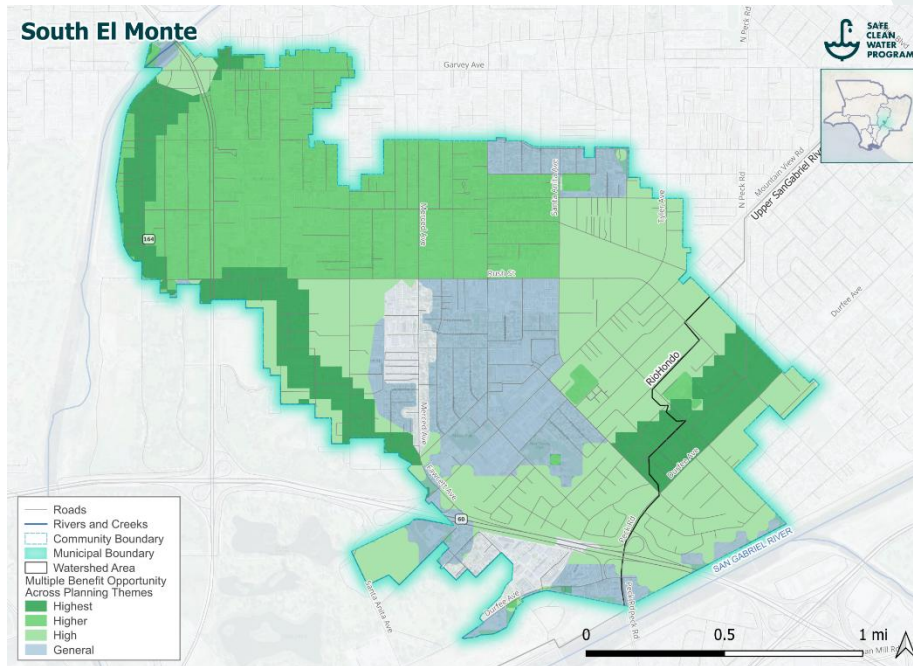


Figure 5-30. Multiple Benefit Opportunity Across Planning Themes: scaled by Municipality

Opportunity to Improve Water Quality and Increase Water Supply

This composite opportunity integrates the Opportunity to Improve Water Quality (Figure 5-10) and Opportunity to Increase Water Supply through Stormwater Capture (Figure 5-12) to identify unmanaged capture areas with the greatest potential to achieve both key objectives: reducing pollutant loads to improve water quality and enhancing local water supply through stormwater capture. Its purpose is to highlight areas within the USGR WA, its communities, and its Municipalities that offer the highest potential for implementing high-impact Projects and Programs,

- **Improve Water Quality (Goal A)**
 - **1.1** Prioritize high performance Projects and Programs in areas with the highest pollutant loads
- **Increase Drought Preparedness (Goal B)**
 - **2.1** Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply
 - **2.2** Enhance local water supply through enhancements to existing LACFCD major capture facilities

In Figure 5-31, teal areas indicate locations with dual-benefit potential, where Projects can simultaneously improve water quality and augment water supply. Areas that present only water quality opportunities, without corresponding water supply potential, are depicted in purple to distinguish them from dual-benefit zones.

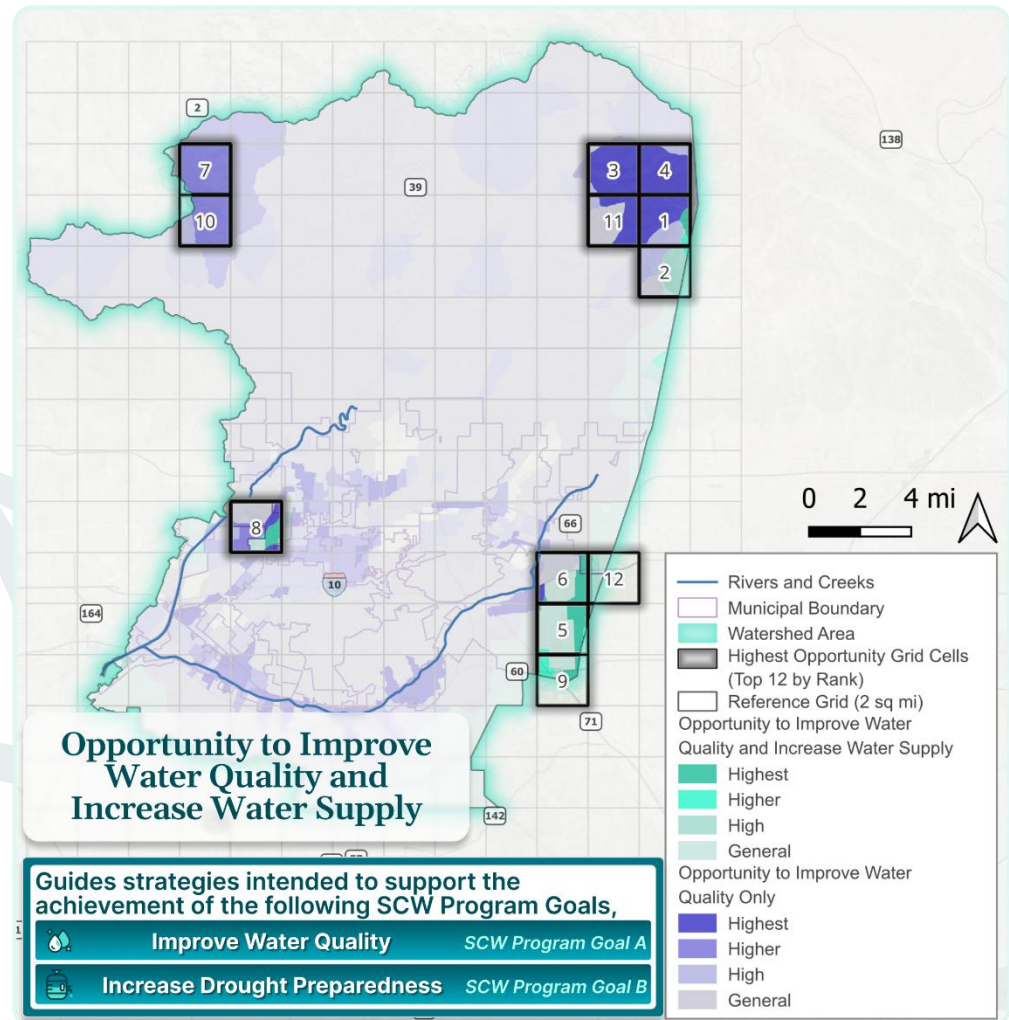


Figure 5-31. Opportunity to Improve Water Quality and Increase Water Supply

To clearly identify areas with the greatest potential, the USGR WA was divided into 2-square-mile grid cells and ranked based on their capacity to both improve water quality and increase drought preparedness. Each of the top two grids in the USGR WA is highlighted in Figure 5-32 for the Opportunity to Improve Water Quality and Increase Water Supply.

A detailed explanation of the analysis is providing in Appendix I, while full-page versions of the maps for the top twelve grids for this Opportunity within the USGR WA are included in Appendix J. This layer is also available for interactive exploration through the [Planning Tool](#).

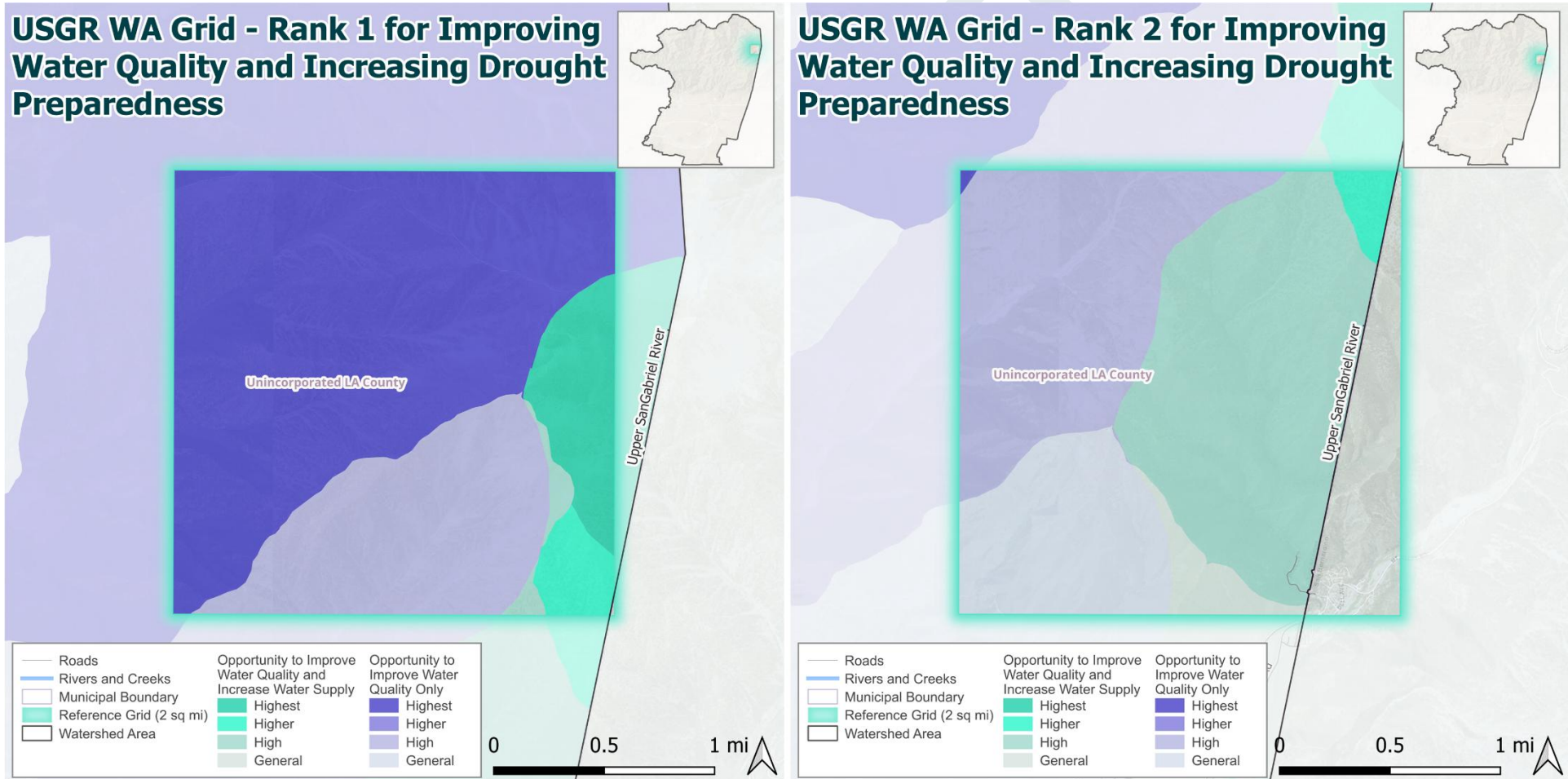


Figure 5-32. Opportunity to Improve Water Quality and Increase Water Supply: top two grid areas with the most opportunity

To support targeted implementation by Municipalities, the Opportunity to Improve Water Quality and Increase Water Supply was reindexed at the Municipal scale to highlight the relative opportunity levels—high, higher, and highest—within each Municipality. This localized scaling approach ensures that every Municipality, regardless of size or baseline conditions, can identify and prioritize areas with the greatest potential to improve water quality and increase water supply. Figure 5-33 provides an example of the results of this spatial analysis for the Cities of La Puente, South El Monte and West Covina, which have varying levels and distribution of opportunity. A detailed explanation of this analysis is provided in Appendix I, while , full-page versions of the maps shown below are included in Appendix J. This layer is also available for interactive exploration through the [Planning Tool](#).

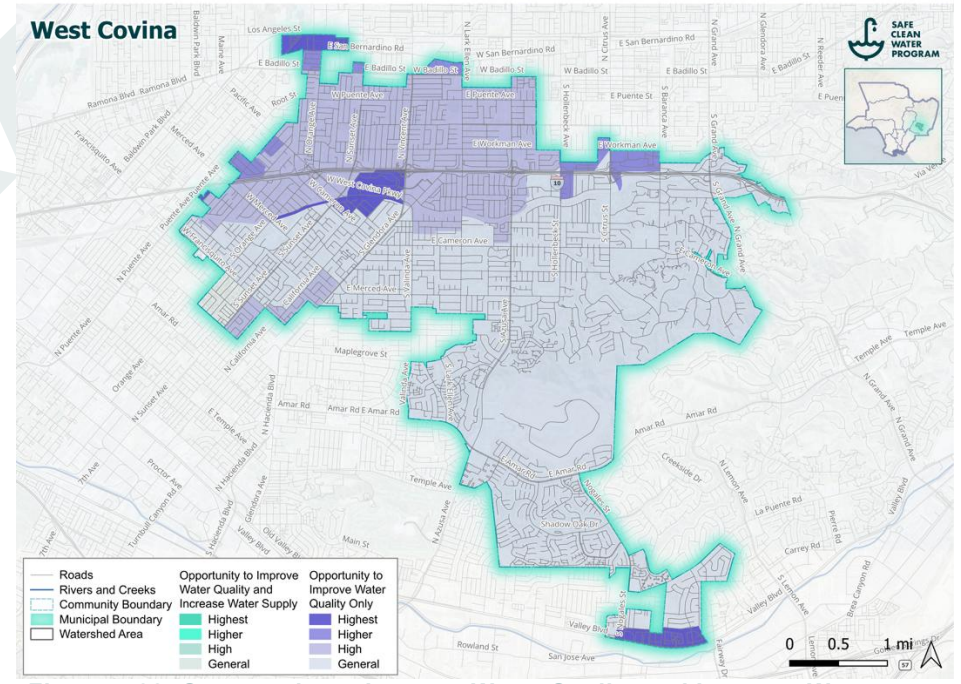
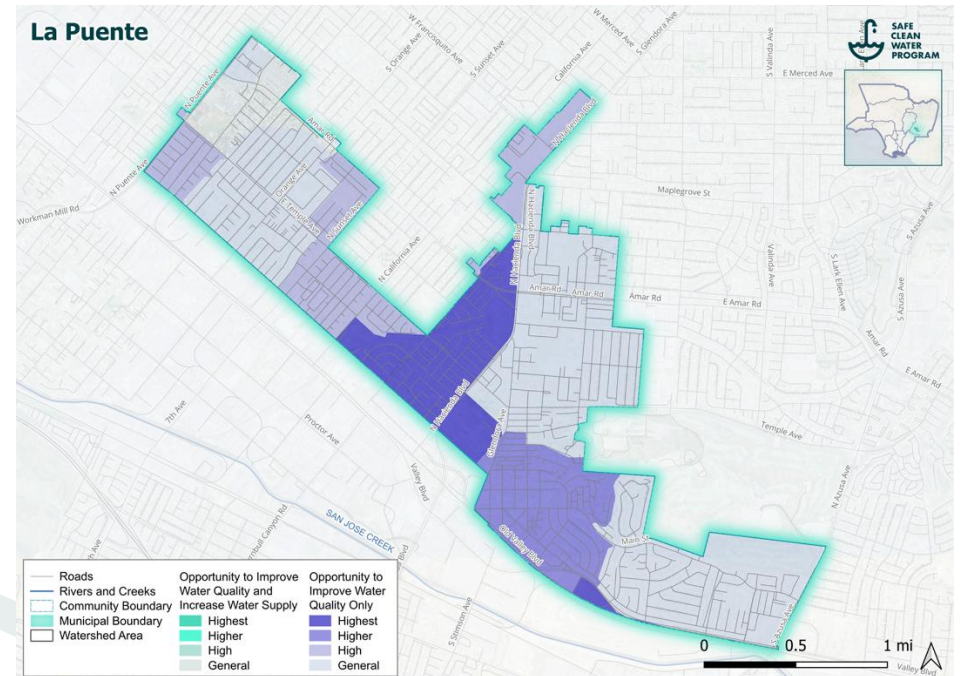
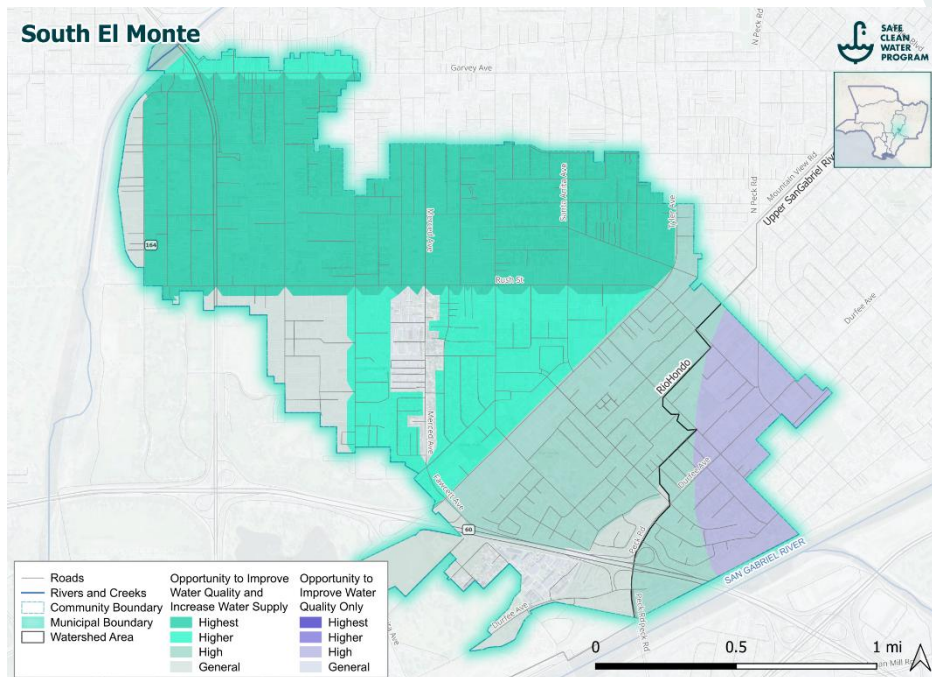


Figure 5-33. Opportunity to Improve Water Quality and Increase Water Supply: scaled by Municipality

5.2.1.11 Aligning Projects with Strategies, Actions, and Opportunities

To help illustrate how Municipalities and Project proponents can intentionally select design features that align with the USGR WA Needs and Initial Watershed Plan strategies, the SCW Program Bassett High School Stormwater Capture Multi-Benefit Project serves as an example. This Project demonstrates how integrated planning can deliver multiple benefits, including improvements to water quality, water supply, and community well-being, while directly supporting several WA Needs and Goals.

As shown in the Figure 5-34, Project elements such as infiltration systems through native soils, permeable pavement, green street bio-cells, and native landscaping can be selected not only for their stormwater management utility, but also for their ability to:

- Improve water quality by targeting pollutants such as zinc, total phosphorus, and bacteria,
- Enhance local water supply through infiltration to underlying groundwater basins,
- Increase urban greening and tree canopy to reduce heat island effects, and
- Provide recreational, ecological, and educational amenities.

These example features and benefits could be strategically aligned with the Initial Watershed Plan strategies and actions to address WA Needs and support Goals across four main Planning Themes:

- **Improve Water Quality (Goal A)**
- **Increase Drought Preparedness (Goal B)**
- **Improve Public Health (Goal C)**
- **Deliver Multi-Benefits with Nature-Based Solutions & Diverse Projects (Goal E, F, G)**

This example offers context for how Projects can be designed to utilize a range of strategies to fulfill multiple WA Needs. While the Project benefits and strategies shown in this example are not exhaustive or prescriptive, the Bassett High School Stormwater Capture Multi-Benefit Project:

- Demonstrates multi-strategy alignment through deliberate feature selection,
- Highlights the potential of integrated design to address community and environmental priorities simultaneously, and
- Serves as a demonstration for Municipalities and Project proponents to build on this example by tailoring innovations to the unique water quality and other needs of their own communities.

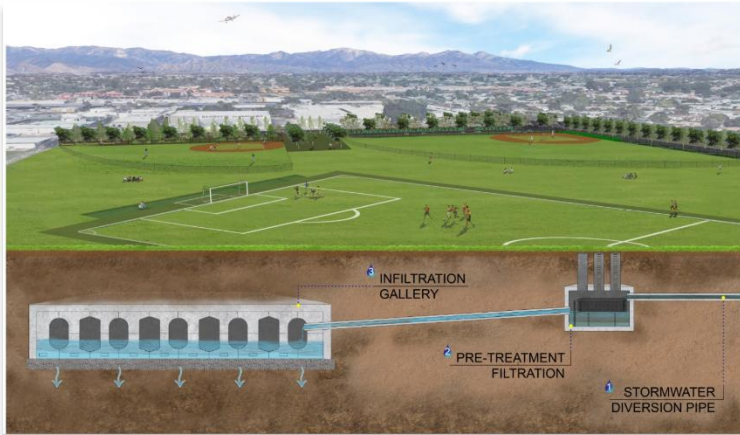
Municipalities and Project proponents are encouraged to use this example as a starting point which can be expanded creatively to support various Goals in addition to improving water quality and to develop customized, high-impact, multi-benefit solutions.



Upper San Gabriel River Watershed Area Strategies and Actions



Aligning Projects with Initial Watershed Plan Strategies, Actions, and Opportunities



Bassett High School Stormwater Capture Multi-Benefit Project

Current Phase: Planning

Project Description:

The Bassett High School Stormwater Capture Multi-Benefit Project will deliver a range of benefits to the local community and environment. This Project includes both **underground and above-ground improvements to improve water quality, augment groundwater storage, and provide community benefits**. The main Project component is the construction of new drainage infrastructure to capture and treat stormwater that will be diverted into an infiltration gallery beneath an open field, where it will percolate and recharge the groundwater aquifer. The Project will also **revitalize green and open space at a school**—such as enhanced athletic fields, shade trees, and a pocket park. Furthermore, the Project will **utilize nature-based features** by planting of new drought-resistant plants and trees in educational gardens creating micro-habitats, enhancing biodiversity, and providing shade, which fosters outdoor learning.

Example Project Benefits Organized by Alignment with Initial Watershed Plan Strategies

Improve Water Quality (Goal A)

- 1.1** Prioritize high performance Projects and Programs in areas with the highest pollutant loads (e.g., action 1.1.1)

Example Project Benefits:

- Total Zinc as the primary pollutant addressed
- ~82 ac-ft of 24-hour Project storage capacity

Increase Drought Preparedness (Goal B)

- 2.1** Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply (e.g., actions 2.1.1, 2.1.2)

Example Project Benefits:

- Increase local supply through infiltration to the underlying Main San Gabriel Basin
- Project opportunity identified by the Lower Los Angeles River Watershed Management Program

Improve Public Health (Goal C)

- 3.3** Implement Projects located at school and in flood control channel right-of-ways (e.g., action 3.3.1)
- 3.4** Create, enhance, and restore park and green space, especially in high-need communities (e.g., action 3.4.1, 3.4.2)
- 3.5** Help communities most affected by extreme heat mitigate and adapt to the effects of climate change (e.g., actions 3.5.1, 3.452)

Example Project Benefits:

- Enhanced recreational features at existing school (pocket park, educational gardens, athletic fields)
- New Areas of Canopy, Cooling, and Shading Surfaces (vegetation and permeable pavement) to reduce urban heat island effect
- Environmental education and stewardship

Deliver Multi-Benefits with Nature-Based Solutions & Diverse Projects (Goal E, F, G)

- 4.3** Deliver nature-based, multi-benefit Projects and Program that improve water quality while addressing community priorities and concerns (e.g., action 4.3.1)

Example Project Benefits:

- Nature-based landscaping in and around bioretention areas

Figure 5-34. Example multi-benefit Project benefits, organized by alignment with Initial Watershed Plan strategies

Chapter 6. Watershed Planning Tool

The [Planning Tool](#) is a living, interactive version of the Initial Watershed Plans that communicates progress and strategies to support WASCs, Municipalities, Public Works, and Project and Program proponents in making strategic funding decisions.

The Planning Tool will live and evolve in the long term to reflect new and potential investments, best available data, and updates to the Initial Watershed Plans or Adaptive Watershed Plans (Chapter 7). The Planning Tool joins a variety of web-based tools that have been developed since the start of the SCW Program, which are currently used to support the administration and implementation of the SCW Program. These tools collectively comprise the SCW Program Portal, which promotes transparency, communicates progress through public-facing modules, and supports decision making by the SCW Program's governance committees, Municipalities, Public Works, and Project and Program proponents.

The Planning Tool seamlessly integrates Initial Watershed Plan outputs throughout the SCW Program Portal, providing updates that are responsive to new Projects and Programs and status updates. For example, at the close of each Regional Program Call for Projects cycle, the Planning Tool will be updated with information from Projects and Programs that are under funding consideration, utilizing data submitted through the Projects Module.

To support WASC deliberations, the Planning Tool will be integrated with the SIP Tool scenario-building functionality. This integration will allow WASCs to use the Planning Tool to visualize and compare different combinations of Projects under funding consideration. As part of this process, WASCs will be able to evaluate how each potential scenario aligns with their WA's targets, strategies, and priorities as outlined in this Initial Watershed Plan. The integration will also enable assessment of each Project's anticipated benefits ensuring that funding decisions are guided by data and aligned targets and strategies.

Additionally, through its connection to the Reporting Module, the Planning Tool will automatically update Project and Program information in each Regional Program Mid-Year and Annual Report and Municipal Program Annual Plan and Report cycles, to reflect current benefit, status, and expenditure updates. Figure 6-1 provides a description of each SCW Program Portal page and Module, including the Planning Tool while Figure 6-2 through Figure 6-4 outline key Planning Tool functionality to showcase how it will support the uses outlined in Figure 6-1.



SCW Program Portal

The SCW Program Portal hosts several modules and tools that work together to promote transparency, quantify and communicate progress, support report generation, broadcast opportunities, and facilitate decision making.



Public-facing Portal Elements

The public-facing SCW Program Portal elements promote transparency and tracking of progress and expenditures.

Map

The Map allows users to view the locations and details of funded and under consideration Projects and Programs. The Map is interactive, and users can pan, zoom, and toggle mapping layers.

Dashboard

The Dashboard provides transparency to the Program and allows for filtering and visualization of program information in an intuitive manner.

Reporting Repository

This repository promotes program transparency by enabling users to quickly access all progress reports and expenditure plans that have been completed to date.

Bid and Project Schedules

This page compiles and publishes information on potential future bid opportunities and Project schedules to enable identification and tracking of upcoming job opportunities.

Watershed Planning Tool

The Planning Tool serves as a living, interactive version of the Initial Watershed Plans. The Planning Tool defines Indicators and Performance Measures (PMs), illustrates benefits expected and realized by Projects and Programs funded to date, supports progress tracking, and communicates priorities.

Planning Map

The Planning Map spatially illustrates Projects and Programs funded to date as well as those under consideration. Opportunity layers help users understand where in the Watershed Area (WA) Projects or Programs could align with strategies and contribute to SCW Program Goals.

Planning Dashboard

The Planning Dashboard provides details on Planning Themes, Indicators, and PMs as they relate to SCW Program Goals. The Planning Dashboard quantifies the cumulative benefits of Projects in terms of each Indicator and PM and provides illustrative visuals that communicate progress to date.



Stormwater Investment Plan (SIP) Tool

The SIP Tool is the centerpiece for facilitating funding decisions by the Watershed Area Steering Committees (WASCs) by enabling the WASCs to develop and compare funding scenarios. The SIP Tool summarizes Regional Program Projects, Project concepts, and Scientific Studies that were previously funded or are under consideration by the WASC and reports the projections of funding and estimated budgets remaining for each WASC.



Projects Module

The Projects Module provides key functionality for Regional Program funding applicants to submit Project, Project concept, and/or Scientific Study applications, streamlines scoring through automated calculations, and supports Watershed Planning through the collection of PM data.



Reporting Module

The SCW Program requires multiple levels of reporting across the Regional, Municipal and District Programs. The Reporting Module provides key functionality to Project Developers and Municipalities for generating reports and enables Public Works to promote transparency and consistency for expenditures and progress. The Reporting Module also supports Watershed Planning through the collection of PM data.



Watershed Coordinator Module

The Watershed Coordinator Module facilitates consistency and transparency with the Watershed Coordinator program while also providing technical tools to support Coordinators in tracking engagement and outreach meetings and events, funded and potential Project concepts, leveraged funding opportunities, interested parties, and more.

Figure 6-1. SCW Program Portal overview

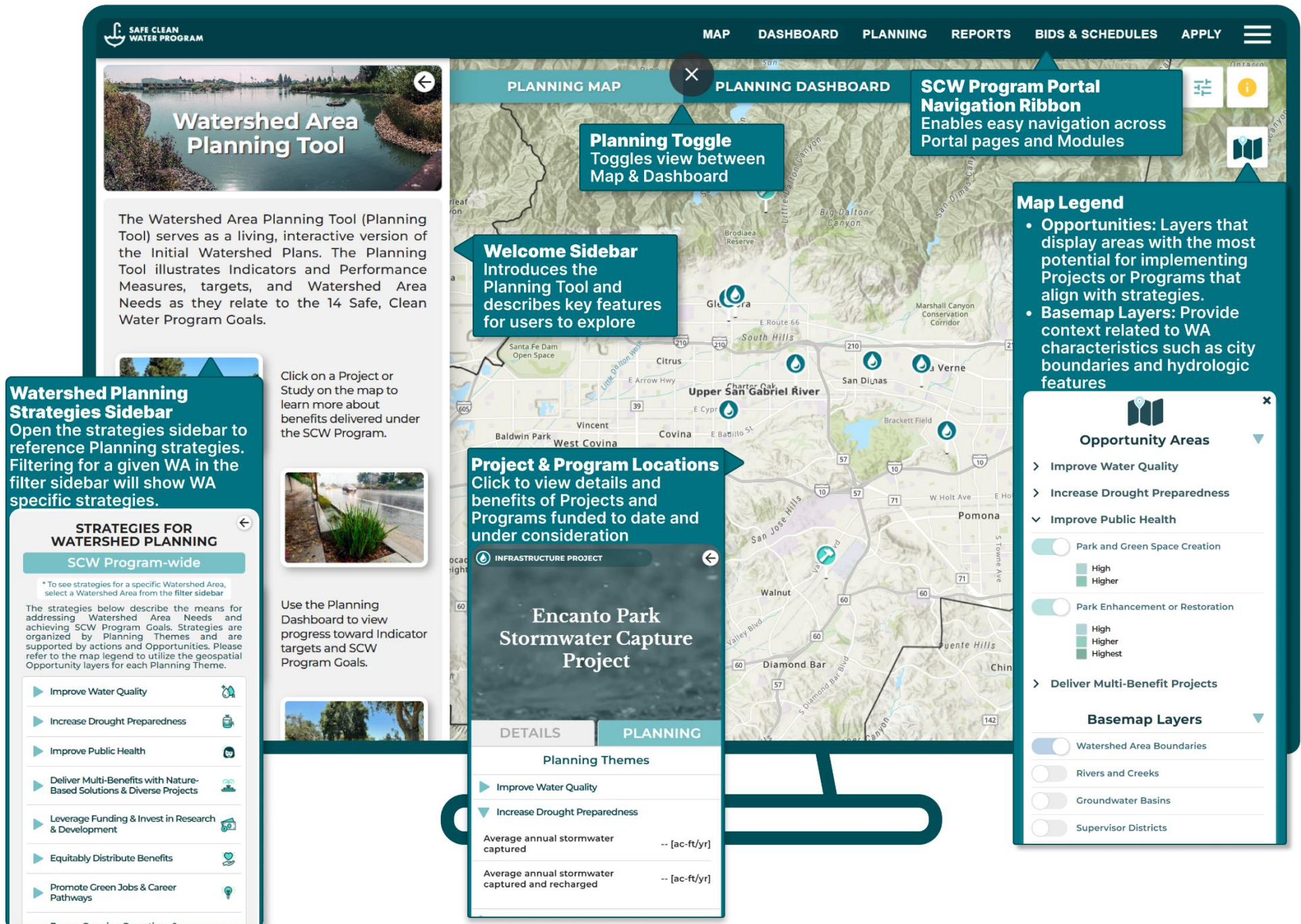


Figure 6-2. Planning Tool Map summary of functionality



Figure 6-3. Planning Tool Dashboard landing page



Figure 6-4. Planning Tool Dashboard Indicators and PMs progress chart examples

Chapter 7. Next Steps and Recommendations

Watershed Planning is an adaptive, evolving process informed by lessons learned, best available data, evolving needs, next steps identified in this Initial Watershed Plan and continued interested party engagement. The delivery of the Initial Watershed Plans and Planning Tools marks a new phase in the SCW Program where these resources can support strategic decision-making, Project and Program planning, and progress tracking. Drawing from concepts in the USEPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (2008), this chapter outlines how an Adaptive Management approach will be applied in both the near and long term. Recommended next steps for advancing Watershed Planning, summarized in Figure 7-1, deliver incremental updates to the Initial Watershed Plans, and through the development of future Adaptive Watershed Plans that incorporate new planning elements as needs evolve.

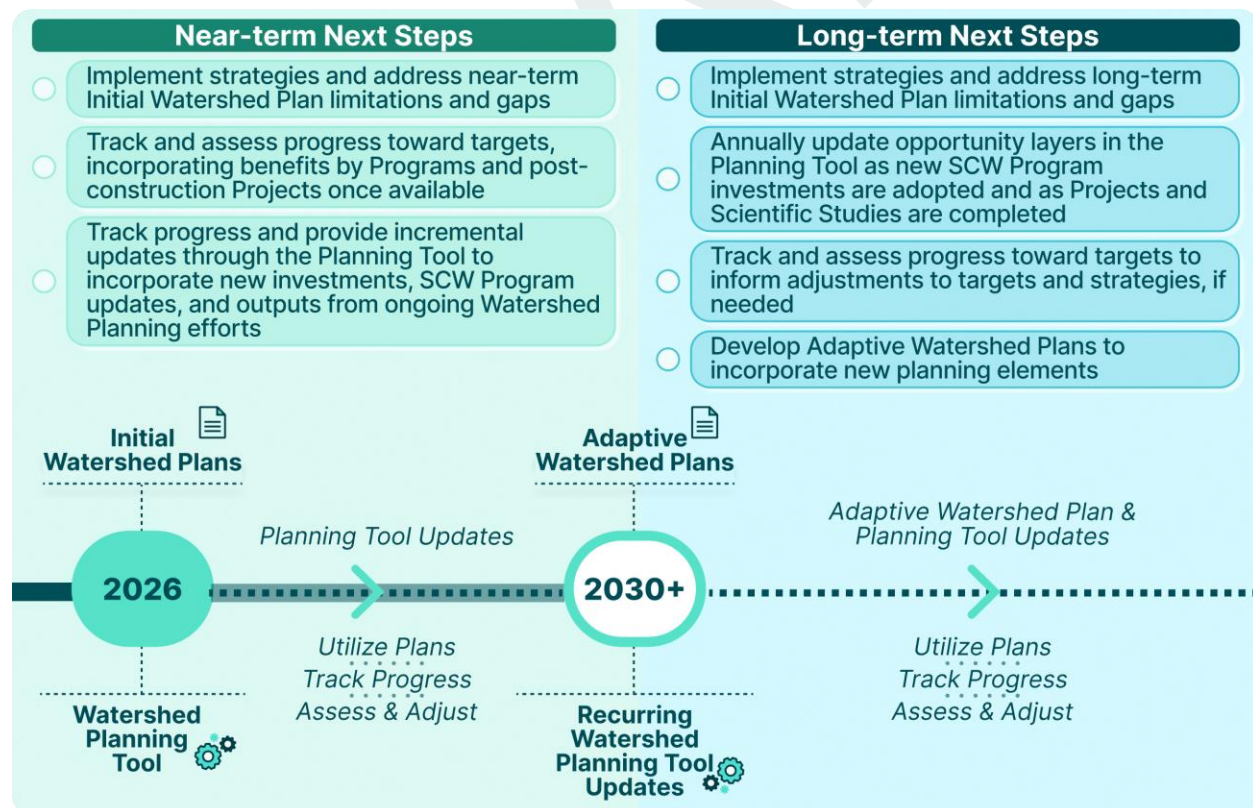


Figure 7-1. Watershed Planning near and long-term next steps

Adaptive Management is an integral component of the SCW Program (Goal L) and is defined as an iterative, incremental approach that is defined by continuous enhancements and adjustments to SCW

L SCW Program Goal (18.04.L)
Implement an iterative planning and evaluation process to ensure adaptive management.

Program planning, implementation, and progress tracking and assessment. This process allows the SCW Program to evolve over time through the application of lessons learned, the incorporation of new data from SCW Program Project, Program, and Scientific Studies as well as outputs from other countywide and local efforts as they become available. Figure 7-2 illustrates SCW Program's Adaptive Management approach highlighting where the Initial and Adaptive Watershed Plans fit into this cycle of planning, implementing, tracking, and assessing that will continually improve the SCW Program to reflect ongoing developments and efforts.

Adaptive Management is an iterative, incremental approach to making decisions and adjustments in response to new learnings

Watershed Planning is a key component in ensuring effective Adaptive Management of the SCW Program

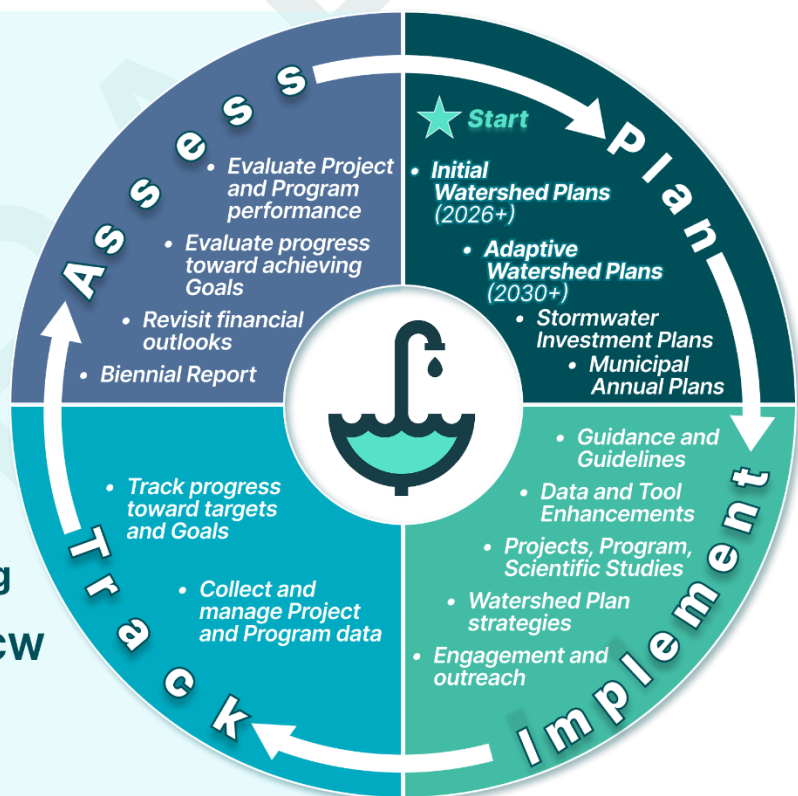


Figure 7-2. SCW Program Adaptive Management conceptual process

To date, the following Adaptive Management efforts have been completed as part of SCW Program development (Figure 7-3):

- Development and adoption of Program guidelines
- Interactive Programming and mapping tools
- Launch of an online application Portal
- Data solicitation and tracking enhancements
- WA-specific and regional studies (Appendix E)

Recent SCW Program Adaptive Management Efforts	
2023	Transfer Agreements Update New SCW Tools Module
2024	Ordinance Revision Update Revised Regional Reporting and Call for Projects frequencies
	Metrics and Monitoring Study (MMS) Indicators, Performance Measures, Recommendations for SCW Program Adaptive Management
	Early Performance Measures for Further Incorporation/Evaluation ROC Strategy Session on MMS Outputs
	Technical Resources Program Update \$300k to \$400k allocation for developing a Feasibility Study
	Project Modification Guidelines Update Clarification and examples of modifications
	Public Education & Community Engagement Grants Program Program Launch and subsequent/ongoing collection of proposals
	RFSQ 2.0 Watershed Coordinators New proposals being evaluated; new WCs to start in 2026 (post-SIP approval)
	Municipal Program New Administration New Public Works team to administer and lead new collaborations
	Watershed Planning Framework Process, progress, & Initial Plans / online Planning Tool key elements
	Community Strengths and Needs Assessment (CSNA) Launch Collect responses from communities served by SCW Program
2025	Regional Program Reporting Module Update New Mid-Year Reports, Metrics & Measures section, new Performance Measure guidance
	Municipal Program Reporting Module Update Metrics & Measures section
	WASC SIP Programming Guidelines Enhanced financial oversight, prioritization, considerations
	Default Provisions and Lapsed Funding Guidelines Default vs good standing, lapsed funding, repayment of SCW funds
	Watershed Planning Supplemental Guidance Key definitions
	Scoring Criteria Pilot Adaptations Water Quality, Water Supply, Project phases, future considerations
	Interim Guidance Update Pilot scoring with phased revisions to 2022 Interim Guidance, to align with Watershed Planning
	Supplemental Guidance to Support Feasibility Study Guidelines Scoring Criteria pilot adaptations, Feasibility Study requirements
2026	Regional Program Reporting & Projects module Updates Projects Module QA/QC, updated Annual Reports
	Post-Construction Monitoring Guidance Initial Watershed Plans & Planning Tool 9 Initial Watershed Plans and a Watershed Planning Tool

Watershed Planning related effort

Figure 7-3. Recent SCW Program Adaptive Management

Watershed Planning efforts are informed through the assessment of progress towards Goals and input from SCW Program implementers (e.g., Public Works, Municipalities, Project and Program proponents), governance committees (e.g., ROC, Scoring Committee, WASCs), and interested parties (regional partners, community groups, and the public).

The following sections outline how Watershed Planning will adapt over time through similar Adaptive Management efforts that aim to address key gaps and Initial Watershed Plan limitations (gaps; Section 7.1). It will also reflect new investments and evolving priorities; both in the near term through Initial Watershed Plan and in the long term through Planning Tool updates and Adaptive Watershed Plans.

7.1 Key Gaps and Limitations

Watershed Planning efforts to date have identified several data gaps and limitations that would strengthen the SCW Program's ability to refine implementation efforts, track progress, and assess achievement of Goals. Watershed Planning defines a gap as a lack of information that is definitionally, temporally, or spatially, needed to create or refine a baseline, target, or opportunity or assess progress towards achieving a Goal. The gaps identified to date fall within five categories:

- Definitional Gaps
- Community Data Gaps
- SCW Program Project & Program Data Gaps
- Knowledge & Spatial Data Gaps
- Other non-SCW Program Activity Data Gaps

Identifying and addressing near-term gaps is the first and most critical step in advancing Watershed Planning. Continuous engagement, intensive data collection, updated guidance and guidelines, and/or Scientific Studies that aim to formulate and understand evolving topics will be vital in addressing long-term gaps as the Program progresses. Figure 7-4 through Figure 7-8 on the following pages describe the near and long-term gaps identified within each of the five categories above as well as the recommended approaches or efforts to address them.

Definitional Gaps

Establishing a shared language and gaining clarity on policy language and metric definitions is needed to appropriately quantify metrics and develop clear and concise Adaptive Watershed Plans. Addressing the following definitional gaps through engagement with SCW Program governance committees and other interested parties in the near-term will support effective communication and watershed planning assessments as the Initial Watershed Plans are advanced to Adaptive Watershed Plans

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Nature-Based Solutions	Create definitions, standards, and criteria - including potential Indicator and/or PMs based on pending panel discussion in mid-2025. CWP NBS Task Force is slated to provide insight and support.	Engagement, Technical Workshops, Regional Coordination	Near-term	Public Works, CWP NBS Task Force
Habitat	Confirm definition and needs related to habitat creation, enhancement, and restoration through engagement with non-governmental organizations and academic experts and coordination with regional planning efforts like the Los Angeles River Master Plan.	Engagement, Technical Workshops, Regional Coordination	Near-term	Public Works, WASC, WMGs
Tree canopy	Confirm definition and needs related to mature tree canopy and guidance for developers to estimate it through engagement with state agencies like CAL FIRE, county departments like Parks and Recreation, and regional planning efforts like the County Community Forests Management Plan (CFMP).	Engagement, Technical Workshops, Regional Coordination	Near-term	Public Works, OWLA
Green jobs	Ensure Performance Measures and Indicators reflect career quality, advancement opportunities, various job classification/ labor distributions, and other input from the ROC and Accelerate Resilience Los Angeles (ARLA).	Engagement, Technical Workshops	Near-term	Public Works, ROC, ARLA
Other activity Indicators and Performance Measures	Define guidance for estimating Performance Measures for SCW Program funded non-structural Activities, and engage with Scoring Committee to determine how funded activities impact co-located Projects. The "Maximizing Impact of Minimum Control Measures" Scientific Study explores the improvement of tracking and optimization of stormwater management to align more efficiently with Watershed Area Goals, increasing their impact and cost-effectiveness, and may be referenced to address this gap.	Engagement, Technical Workshops	Near-term	Public Works, Scoring Committee
Environmental Water Benefits	Refine definition of Environmental Water Benefits in terms of Community Investment Benefits (CIBs) and Water Quality Benefits to support this gap, as Environmental Water Benefits do not count towards Water Supply Benefits.	Engagement, Technical Workshops	Near-term	Public Works, WASC, WMGs

Figure 7-4. Summary of and recommendations for addressing definitional gaps

Community Data Gaps

Community-based perspectives are needed to understand community strengths to reinforce and needs to address. The following community data gaps aim to recognize that community-based perspectives and engagement efforts continuously react and evolve with recent events. These gaps represent long-term considerations for Watershed Planning and Adaptive Management and aim to emphasize the importance of ongoing engagement and thoughtful guidelines.

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Compilation of existing community data	Outcomes of past and ongoing Countywide and local engagement efforts are widespread but identifying and aggregating these efforts and their outcomes is difficult. The compilation of engagement outcomes to date is critical to understanding community needs and avoiding redundancy. A central site that streamlines outcomes and/or resources would help to close this gap and support Project and Program implementation that is in alignment with their communities.	Data collection, Tool updates, Regional Coordination, Guidance & Guidelines	Long-term	Public Works, Watershed Coordinators
Continuously evolving community perspectives	Community-based perspectives may adapt over time based on changing conditions and other events, while engagement effort outcomes inherently represent snapshots in time. Revised and expanded SCW Program engagement guidance that recognizes the adaptive nature of community-based perspectives would support this gap. Recommended guidance may set standards for repeated engagement efforts, and assessments for how to engage both community members who have not participated previously, to capture evolving strengths and needs while avoiding redundancy. Revised guidance should integrate considerations from watershed planning efforts, metrics, past engagement, and the CSNA.	Engagement, revised Guidance & Guidelines	Long-term	Public Works, Watershed Coordinators
Inherent bias in engagement efforts	Inherent bias in engagement efforts is critical to recognize and address in every engagement effort. Outcomes drawn from engagement inherently favor the opinions of community members who both have access to the engagement effort and have the resources to engage with the proprietors of it, while the needs of those that do not participate are no less critical to the engagement process. Revised and expanded SCW Program engagement guidance and resources would support this gap in the long-term by integrating considerations from watershed planning efforts, metrics, past engagement, and the CSNA that are centered around minimizing bias in engagement efforts.	Revised Guidance & Guidelines	Long-term	Public Works, Watershed Coordinators
Reconciliation of general input vs. Project-specific data	CSNA results provide general perspective on community priorities, but in order to more accurately understand community needs and provide support, Project-specific engagement data will also need to be collected. Findings will support Project and Program-specific outreach strategies to reflect and acknowledge community-identified priorities and concerns to foster trust and ensure that engagement efforts are both responsive and relevant to the communities they aim to serve.	Engagement, Data collection, Tool updates, Regional Coordination	Long-term	Public Works, Watershed Coordinators

Figure 7-5. Summary of and recommendations for addressing community data gaps

Community Data Gaps (*continued*)

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Public Education and Community Engagement Grants Program data collection	Through a partnership with the Water Foundation, the SCW Public Education and Community Engagement Grants Program will provide funding to support education and community engagement efforts related to stormwater and urban runoff capture within the LACFCD. Data collected by this Program should also be considered to support community data gaps.	Data collection, Tool updates, Regional Coordination	Long-term	Public Works, Water Foundation

Figure 7-5. Summary of and recommendations for addressing community data gaps (*continued*)

SCW Program Project & Program Data Gaps

While many Project metrics were collected for the Initial Watershed Plans, there are a few outstanding gaps surrounding quantification methods that need to be addressed to enable effective tracking and assessment of progress.

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Load and load reduction quantification for bacteria, DDT, and PCBs	Adoption and use of additional hydrologic simulation criteria for bacteria, dichlorodiphenyltrichloroethane (DDT), and Polychlorinated Biphenyls (PCBs) load generation in stormwater runoff and the load reduction by Projects. Engage with Scoring Committee to assess the impact of new criteria on Project scoring. The "LRS Adaptation to Address the LA River Bacteria TMDL for the ULAR Watershed Management Group" Scientific Study explores hydrologic simulation of bacteria levels in the LA River, and may be employed as a resource for addressing this gap.	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, WMGs, Scoring Committee
Load and load reduction quantification for trash	Standardization of the methods for quantifying trash generation in stormwater runoff and trash reduction by Projects. Developing a standardized approach for quantifying trash captured and removed by SCW Program Projects will enable comparisons and consistent progress tracking with the program. Added technical workshops with the WASCs, WMGs, and Scoring Committee to agree upon an approach and develop corresponding guidance that may be used by the SCW Tools and Adaptive Watershed Plans is recommended.	Guidance & Guidelines, Tool Updates, Technical Workshops	Near-term	Public Works, WASC, WMGs, Scoring Committee
Water Supply fate quantification via simulation	Simulated BMP performance that specifically parses water supply fate; that is, Projects that offer multiple Water Supply Benefits should be accurately simulated to ensure consistent quantification and efficient progress tracking of benefits across SCW Tools and Adaptive Watershed Plans.	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, WMGs
Project monitoring data and post-performance metrics	Selection and integration of post-construction monitoring and performance metrics developed by MMS are not yet confirmed. Establishing a standardized set of metrics and incorporating them into the Reporting Module and Planning Tool will support consistent evaluation and tracking of Project post-construction monitoring and performance. Integration of these metrics and results into future Adaptive Watershed Plans is recommended to ensure alignment across SCW Program tools and planning efforts.	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, WMGs

Figure 7-6. Summary of and recommendations for addressing SCW Project & Program data gaps

SCW Program Project & Program Data Gaps (*continued*)

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Methods and data to quantify benefits provided by non-structural activities	While the Initial Watershed Plans define Indicators and PMs for Projects, to fully understand the benefits provided by the SCW Program and progress toward Goals other non-structural Activity metrics and benefits need to be defined and quantified.	Guidance & Guidelines, Data Collection, Tool Updates	Near-term	Public Works, WASC, Municipalities
DAC CIB ratio user-defined service areas	Support for user-defined DAC and CIB ratio service areas is currently not available within the Planning Tool. At present, the Tool assigns default service areas to Projects based on the benefits they provide, which may not reflect locally defined priorities or service area boundaries. Addressing this gap through the development of clear guidance and guidelines, along with updates to the Planning Tool to accommodate user-defined service areas, is recommended to enhance flexibility.	Guidance & Guidelines, Tool Updates	Near-term	Public Works
Pollutant reductions by dry-weather Projects	Dry-weather Projects are not currently modeled or scored for pollutant load reduction in the SCW Program Portal. Pollutant load reduction performance of dry-weather Projects is not well characterized or standardized, as these reductions are highly site-specific and depend on localized conditions such as flow volumes, pollutant concentrations, and treatment system design. At present, estimating pollutant load reductions for dry-weather Projects relies primarily on site-specific monitoring data rather than predictive modeling, which is not currently available or integrated into the SCW Program Portal. Addressing this gap would improve the ability to quantify and compare pollutant load reductions of dry-weather Projects and more fully capture their potential contributions to watershed pollutant reduction.	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, Scoring Committee

Figure 7-6. Summary of and recommendations for addressing SCW Project & Program data gaps(continued)

Knowledge & Spatial Data Gaps

To support future Adaptive Watershed Planning, the Initial Watershed Planning process identified critical gaps in the spatial coverage of key data layers and research areas where improved understanding would directly advance progress toward SCW Program Goals. Addressing these gaps will require comprehensive data collection efforts and targeted research initiatives.

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Sewer system capacity for diversion for reuse BMPs	Assess, through engagement with local sanitation district staff, sewer system and reclamation plant capacities for additional stormwater diversions	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, Sanitation Districts
Aquifer and groundwater recharge locations	The LACFCD and the United States Geological Survey (USGS) is initiating a collaborative study, "Stormwater Recharge Efficiency in the Greater Los Angeles Region", focused on this topic. Its primary purpose is to enhance the understanding and management of stormwater capture and infiltration for groundwater recharge across the Los Angeles region. The study is expected to span four years and will provide enhanced planning resources such as models and tools that identify effective stormwater recharge opportunities. Once available, Watershed Planning can address this gap and enhance related strategies using this study's outputs.	Guidance & Guidelines, Tool Updates	Near-term	Public Works, WASC, Water Masters
Leveraged funding sources	The identification of leveraged funding sources and grant opportunities has been a long standing knowledge gap which is frequently echoed by engagement input. While the SCW Program published a Leveraged Funding Report once a quarter, this resource should be enhanced through SCW Program Portal updates and a public-facing page which continuously updates as sources are identified or expire.	Data Collection, Tool Updates	Near-term	Public Works, WASCs, State Agencies, Federal Agencies, NGOs
Wildfires' impacts on major capture facility and Project performance and O&M	While it is understood that wildfires have both immediate and long-term impacts on infrastructure and water quality, specific implications and remedial actions for stormwater facilities and Projects are not well defined. Regionally coordinated post-fire monitoring data collection and research is recommended to support implementation of post-fire O&M practices and Watershed Planning in the long-term. The "Fire Effects Study in the ULAR Watershed Management Area" seeks to evaluate the downstream pollutant loading impacts of wildfires and create BMP models to support water quality objectives, and elements may be used to support this gap; however, Study reviewers report that the Study may lack some key details on objectives and clarity about which contaminants will be measured and how. This Study may be referenced, but additional research may be required.	Guidance & Guidelines, Data Collection	Long-term	Public Works, WASC, SWRCB, CAL FIRE

Figure 7-7. Summary of and recommendations for addressing knowledge and spatial data gaps

Knowledge & Spatial Data Gaps (*continued*)

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Geotechnical and soil infiltration rate spatial data	As acknowledged by the SCW Program funded Scientific Study, the Gateway Area Pathfinding Analysis, soil infiltration rates at Project sites are highly uncertain, not well predicted by available datasets, and require geotechnical investigation to accurately estimate. Aggregating site-specific geotechnical estimations from funded Projects would offer added context for WASCs and Project developers who have yet to conduct investigations themselves, enabling more informed Project planning and prioritization that maximizes Water Supply Benefits. “Ground truth: guiding a soils-based strategy for impactful nature-based solutions” is a Scientific Study that primarily explores LLAR soil capacity, but its methods may be applicable across other Watershed Areas as well. The 2024 Scientific Study, “Evaluation of infiltration testing methods for design of stormwater drywell systems,” may also be helpful in evaluating infiltration test methods and understanding how drywells can be utilized to manage stormwater and improve water quality.	Data Collection, Tool Updates	Long-term	Public Works, WASC, WMGs
Site-specific Project opportunities and prioritization information	While the Initial Watershed Plans identify areas of opportunity for Project and Program implementation, Adaptive Watershed Plans may identify and prioritize site-specific Project opportunities. To date there have been several SCW and non-SCW Program key efforts, such as Scientific Studies (e.g., Gateway Area Pathfinding Analysis) or other Countywide and local planning efforts, that have identified site-specific Project opportunities. These datasets should be compiled and made available within the SCW Program Portal to support WASCs, Municipalities, and Project and Program proponents in the near-term, and the development of Adaptive Watershed Plans in the long-term.	Data Collection, Tool Updates, Adaptive Watershed Plans	Long-term	Public Works, WASC, WMGs
Regional water quality monitoring data tracking and assessment	The SCW Program currently lacks a unified, long-term approach for tracking, integrating, and assessing regional water quality monitoring data—such as receiving water and outfall monitoring required by MS4 permits—across all Watershed Areas. Without consistent evaluation of this data, it's challenging to track hydrologic trends, assess water quality improvements, and inform long-term planning for SCW Program-funded Projects. To address this, the Program could establish a long-term framework for tracking, analyzing, and utilizing regional monitoring data to support strategic decision-making and Adaptive Management.	Data Collection, Tool Updates	Long-term	Public Works, WASC, WMGs, Municipalities, SWRCB
Environmental flows	Compile resources on environmental flows like the California Environmental Flows Framework (CEFF; https://ceff.ucdavis.edu) and consider possible benefits Projects and Programs can lend to improvement of environmental flows.	Guidance & Guidelines	Long-term	Public Works, WASC, SWRCB

Figure 7-7. Summary of and recommendations for addressing knowledge and spatial data gaps (*continued*)

Other non-SCW Program Activity Data Gaps

The following gaps describe the data needed to quantify benefits provided by other non-SCW Program Projects and other activities.

Gap	Summary & Recommendations	Effort to Address	Timeline	Who Should Be Involved
Non-SCW Program funded Projects and their benefits	<p>The SCW Program's current Watershed Planning framework does not yet account for non-SCW Program-funded Projects that contribute to Water Quality and Water Supply Benefits. While target setting has considered some efforts—such as GLAC IRWMP and MS4 Program Projects—many other significant stormwater capture initiatives (e.g., Prop O, and local agency investments) are not currently integrated into SCW Program performance assessments or opportunities. <i>(Note that major centralized capture facilities such as dams, spreading grounds, reservoirs, and low flow diversions are already accounted for in baseline and opportunity analyses; this gap is specific to decentralized Projects.)</i></p> <p>The omission of these Projects from both the baseline and opportunity analyses limits the ability to fully understand cumulative watershed-scale outcomes, such as the total volume of stormwater captured and treated. This can affect how accurately SCW Program targets are evaluated and how future investments are prioritized, especially in areas where non-SCW Projects are delivering substantial benefits.</p> <p>To address this gap, future updates to the SCW Planning Tool may include non-SCW Projects from other major funding programs to provide a more comprehensive picture of regional stormwater management efforts. In the near term, narrative data and Project-level details gathered directly from Project proponents can help inform assessments of non-SCW contributions and interactions, enhancing the understanding of upstream/downstream interactions and refining Project selections and programmatic evaluations.</p>	Regional Coordination, Data Collection, Tool Updates	Long-term	Public Works

Figure 7-8. Summary of and recommendations for addressing other Activity data gaps

7.2 Next Steps and Recommendations for Watershed Planning

As SCW Program implementation progresses, it is essential to continuously refine and enhance Initial Watershed Plan outputs to ensure they remain effective and relevant. This section outlines the recommended next steps for advancing Watershed Planning (Figure 7-9).

In the near term, each of the nine Initial Watershed Plans will be adopted in 2026 by the LACFCD Chief Engineer to serve as SCW Program guidance documents and support future decision-making by the Regional, Municipal and District Programs. The Planning Tool will also be used to communicate progress and implementation updates in the near term. Long-term Watershed Planning includes the development of Adaptive Watershed Plans that will integrate updates and new planning elements based on an assessment of progress, emerging priorities, and evolving watershed dynamics. Adaptive Watershed Plans will be considered on five-year intervals and will be developed on an as-needed basis. The assessment criteria for prompting updates to Initial Watershed Plan updates through an Adaptive Watershed Plan are outlined in Section 7.2.3.

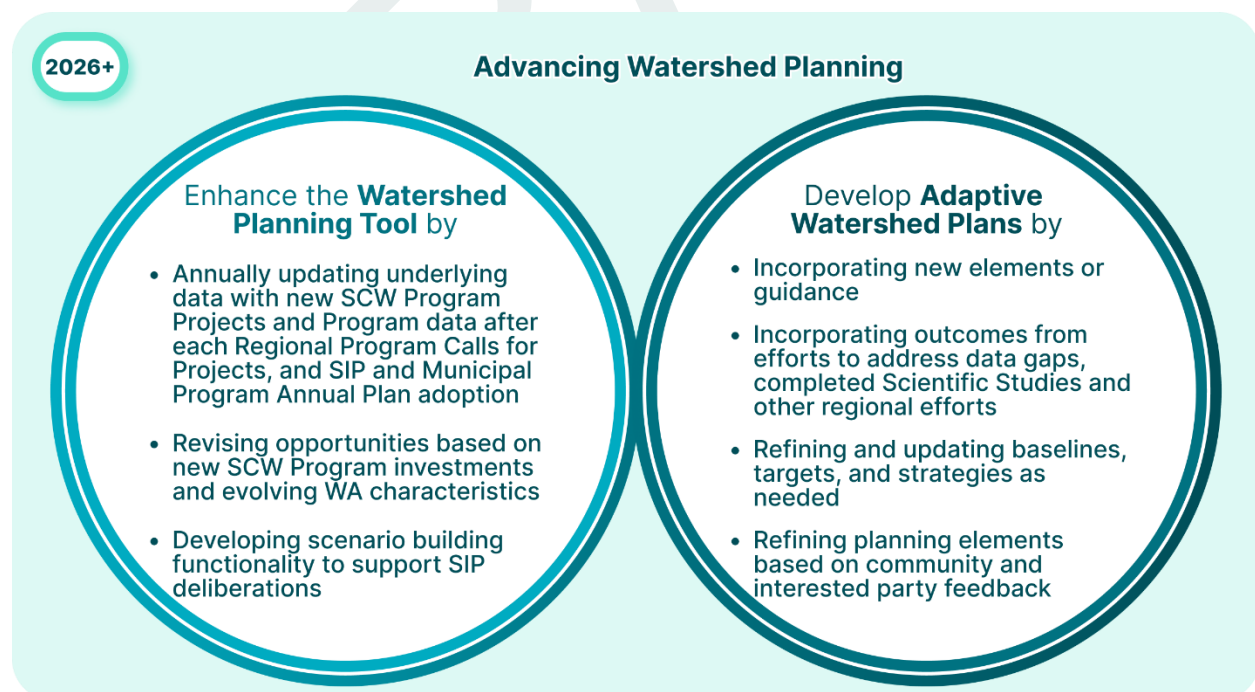


Figure 7-9. Next steps for Watershed Planning

Through an Adaptive Management approach, Watershed Planning will seek to address gaps, assess progress, and adjust targets and strategies in five-year intervals. The following recommendations (Figure 7-10) for the Adaptive Management of Watershed Planning provide near-term and long-term direction for implementation, tracking, and assessment to inform future Watershed Planning efforts.

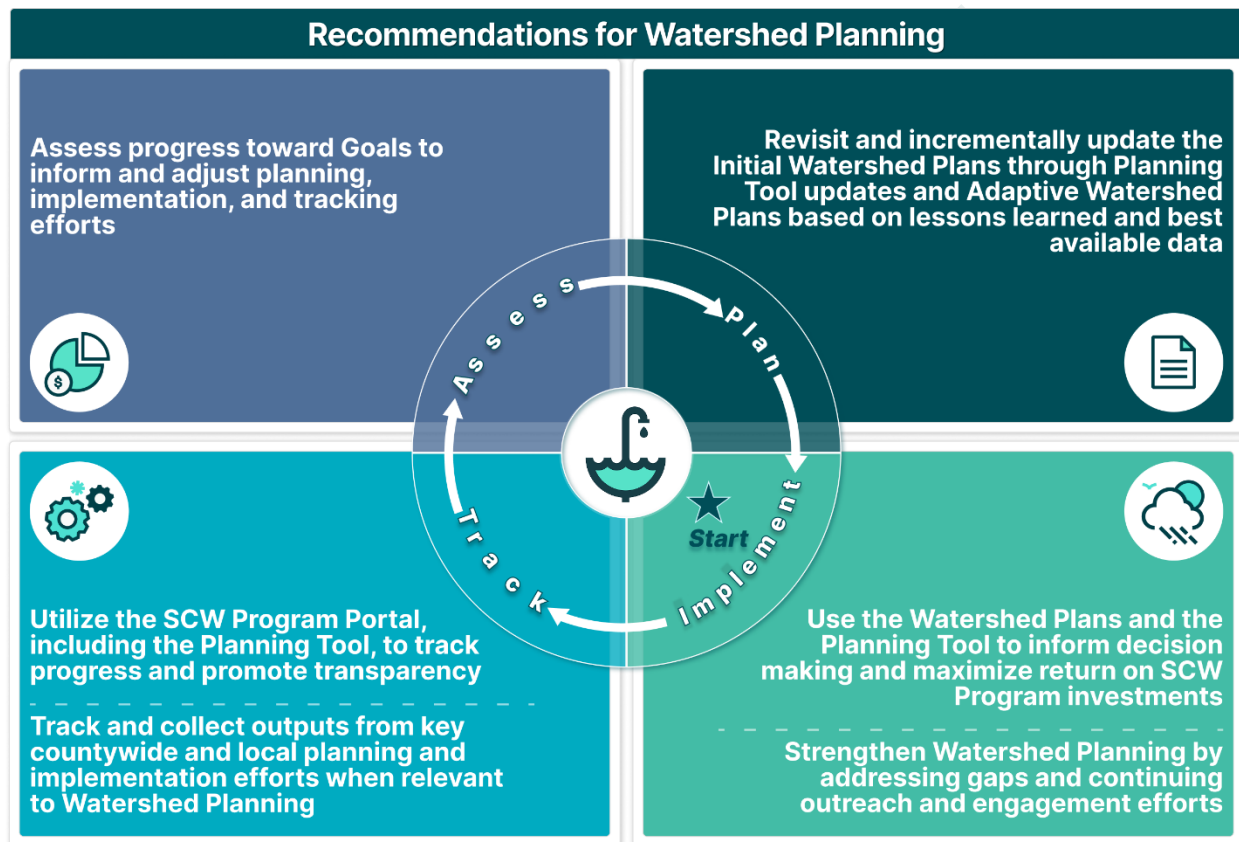


Figure 7-10. Long-term recommendations for Watershed Planning

7.2.1 Implement Strategies



Implement

This subsection provides recommendations to execute strategies to make informed funding decisions and direct funding toward the highest value multi-benefit Projects and Programs



Use the Watershed Plans and the Planning Tool to inform decision making and maximize return on SCW Program investments, including the following:

- WASCs, Municipalities, Public Works, and Project and Program proponents should use the Initial Watershed Plans and Planning Tool to inform funding and implementation decisions **(near-term)**³⁰: As described in Section 1.3, WASCs, Municipalities, Public Works, and Project and Program proponents should use the Initial Watershed Plans to understand WA Needs and strategies to address them. The Planning Tool will serve as a living version of the Plans and is a great resource for Public Works, WASCs, Municipalities, Project and Program proponents, and community members to evaluate progress, understand priorities, and interact with composite opportunities to clearly identify areas with the most potential for delivering multiple benefits across Planning Themes and Goals. In combination with the Initial Watershed Plans, Public Works, WASCs, and Municipalities can reference the Planning Tool to inform Project and Program funding and implementation decisions. This guidance will be further strengthened by integrating the Planning Tool to the SIP Tool (described in Figure 6-1), enabling WASCs to gain a better understanding of potential funding scenarios and the cumulative impacts of Project selections.
- Implement Projects, Programs, and Studies that align with strategies and that address gaps (as described under the following recommendation) **(near-term/long-term)**: To address WA Needs and make progress toward targets, WASCs and Municipalities should prioritize Projects and Programs that align with Watershed Planning strategies, especially those that are situated where there is the most opportunity to provide multiple benefits across Planning Themes and Goals, to provide the greatest cumulative benefits. Public Works and the WASCs may prioritize Scientific Studies and other activities such as,

³⁰ While referencing the Initial Watershed Plans and utilizing its outputs is encouraged, it is not a SCW Program requirement.

but not limited to, technical studies, monitoring, modeling, and other similar activities to help address gaps outlined in Section 7.1.

- **Convene a Public Works led Scientific Study panel to consider studies that support planning, as below (*near-term*):** There have been 17 unique Scientific Studies funded by the SCW Program to date from FY20-21 to FY25-26. It is recommended that Watershed Planning be strengthened by the incorporation of standardized periodic review of Scientific Study outputs by a Public Works led panel as an element of Adaptive Management. As funded Scientific Studies reach completion, it is recommended that their findings be tracked and assessed for integration into Initial Watershed Plan or Adaptive Watershed Plans.
- **Update the SCW Program Feasibility Study Guidelines (*near-term*):** Update the [SCW Program Feasibility Study Guidelines](#) to include a new 20th requirement ensuring that applicants demonstrate alignment of their Projects and applications with the Initial Watershed Plans. This addition will help strengthen coordination between proposed Projects and WA-specific strategies, supporting more effective and regionally consistent stormwater investments. These Guidelines, which describe the minimum requirements for Feasibility Studies, may be periodically updated as deemed necessary or appropriate by the Chief Engineer of the LACFCD per section 18.07.B.3 of the SCW Program Implementation Ordinance (LACFCD Code §18.07.B.3). Feasibility Studies must meet all established requirements, including this proposed alignment criterion, to be eligible for consideration and scoring under the SCW Program. Projects failing to meet these requirements will not advance for further evaluation or funding consideration.



Strengthen Watershed Planning by addressing gaps and continuing outreach and engagement efforts, including the following:

- **Address gaps through new guidance and guidelines, SCW Program Portal updates, outreach and engagement, research, and data collection (*near-term / long-term*):** Gaps identified in the Initial Watershed Plans should be addressed per Section 7.1. Addressing these gaps will likely result in the publication of new guidance and guidelines, SCW Program Portal enhancements, SCW Program Spatial Data Library updates, outreach and engagement events or meetings, research, data collection, technical working group sessions, etc. Gaps flagged as near-term items, particularly those that are essential for quantifying baselines and refining strategies, should be prioritized and

incorporated as part of Initial Watershed Plans and corresponding Planning Tool updates.

- **Continue outreach and engagement efforts to capture shifting priorities (*near-term / long-term*):** As described in Figure 7-5, continued, long-term engagement is critical to Watershed Planning such that evolving community and SCW Program governance committee perspectives and priorities are captured by strategies and reflect ongoing developments in the WAs and Los Angeles region. Watershed Coordinators will take the lead in facilitating engagement to build trust and bridge communication gaps between Project and Program proponents and interested parties.

7.2.2 Track Data



Track

This subsection provides recommendations to collect data and track progress by efforts to date to provide the data necessary for assessing past implementation and for driving future decision making



Utilize the SCW Program Portal, including the Planning Tool, to update baselines, track progress, and promote transparency, including the following:

- **Utilize the Planning Tool to track progress toward meeting targets and achieving Goals (*near-term/long-term*):** Annually update progress to reflect the benefits realized by completed Projects and Programs as well as benefits anticipated by new SCW Program Projects and Program that are under consideration by or funded through SIPs and Municipal Annual Plans and Reports.
- **Support Municipalities and Project proponents and bolster data consistency with enhanced SCW Program Portal Tools (*near-term*):** Enhance the SCW Program Portal—including the Planning Tool—to improve the tracking of Projects and Programs benefits. Portal enhancements should integrate Indicators and PMs, streamline data collection and summaries, and facilitate data validation. For example, improved water quality and water supply modeling capabilities would enable more consistent and reliable benefit estimates while simplifying data entry and reporting for Municipalities and Project proponents.

To promote transparency and support comprehensive progress tracking, the Portal should also be enhanced to better reflect the contributions and funding

allocations of non-structural Programs, such as Municipal Program Activities (e.g., O&M, outreach and engagement, and post-construction monitoring) and Regional Program Scientific Studies.

Integrating Indicators and PMs throughout the SCW Program Portal and across all SCW Program components—including Municipal, Regional, and District Program data inputs, reporting outputs, and public-facing summaries—will improve coordination and consistency, and enable robust, SCW Program-wide tracking of progress and outcomes.

- **Streamline progress tracking and reporting through the SCW Program Portal (*near-term*):** Update reporting outputs such as the Regional Program Mid-Year and Annual Reports, the Watershed Area Regional Program Progress (WARPP) Report, and Municipal Program Annual Plans and Reports to incorporate Indicators and PMs and promote consistency across the SCW Program.



Track and collect outputs from key countywide and local planning and implementation efforts when relevant to Watershed Planning, including the following:

- **Bolster regional coordination by tracking and compiling outputs by countywide and local planning and implementation efforts that are relevant to Watershed Planning (*near-term/long-term*):** The Initial Watershed Plans identified several countywide and local planning and implementation efforts whose goals align with those of the SCW Program. While many of the outputs from these efforts were considered and incorporated into Initial Watershed Plan outputs, several efforts are still ongoing but are expected to produce outputs relevant to the SCW Program. For example, the LA County CFMP includes action items to identify opportunities for depaving and priority tree planting projects which could serve as opportunities for meeting the target for the Indicator *Net New Area of Canopy, Cooling, and Shading Surfaces*. Additionally, water quality monitoring performed and reported by Municipalities and local regulatory updates related to environmental flows from California SWRCB Department of Water Rights will be tracked for impacts to regulated waterbodies with habitat beneficial uses. The development of an approach for compiling and assessing this data will be developed in the long term.

Tracking and compiling of these efforts facilitate the SCW Program's commitment to regional partnerships and bolsters the shared vision of

achieving countywide targets. Tracking this information will support progress assessment and corresponding adjustments to targets and strategies such that the best available data is iteratively incorporated.

- **Track non-SCW Program contribution to countywide targets (*near-term*):** Watershed Planning will consider tracking and updating estimates of contributions to countywide targets made by non-SCW Program stormwater capture programs such as MS4 programs and Integrated Regional Water Management Plans (IRWMPs). This data will support assessments of SCW Program targets and strategies and inform adjustments if needed.
- **Compile results and key findings from Scientific Studies and other relevant research efforts (*near-term*):** In addition to SCW Program funded Scientific Studies, there are several studies underway that may have impacts for SCW Program strategies and WA characteristics. Watershed Planning will compile key findings from SCW Program funded Scientific Studies and consider those of other relevant research efforts.
- **Enhance the SCW Program Portal to track and summarize leveraged funding sources and opportunities (*near-term*):** The need for leveraged funding opportunities is voiced regularly by Project and Program proponents and reiterated in SCW Program governance committee meetings. The importance of leveraged funding opportunities is emphasized by financial outlooks (Appendix F), which show that as Projects are completed, an increasing share of Regional Program funding may be allocated toward O&M to ensure the long-term effectiveness of these Projects and achievement of SCW Program Goal N.

With support from the Watershed Coordinators, the SCW Program has published quarterly Leveraged Funding Reports which provide an overview of recent funding policy highlights and shares active and upcoming funding opportunities that may be relevant to SCW Program Projects. Tracking of these funding opportunities should be enhanced through updates to the SCW Program Portal such as a new element on the public-facing Portal which displays funding opportunities and is automatically updated as new opportunities are identified or as deadlines pass. This page could directly pull from the Watershed Coordinator Module, through which Watershed Coordinators can maintain a list of known and upcoming funding opportunities.

7.2.3 Assess Progress



Assess

This subsection provides recommendations to analyze, synthesize, and evaluate data collected to assess progress and adjust planning, implementation, and tracking



Assess progress toward Goals to inform and adjust planning, implementation, and tracking efforts, including the following:

- Compare progress and realized benefits with their targets and evaluate progress toward achieving Goals (***near-term/long-term***): Watershed Planning will continuously assess the cumulative benefits anticipated and realized by SCW Program Projects and Programs to assess progress toward meeting targets and achieving Goals. To support this process and ensure effective implementation of Watershed Planning efforts, this recommendation incorporates the *USEPA's Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (2008) concept of an evaluation framework. Evaluation frameworks are important tools in the Adaptive Management process that support the documentation of outcomes, evaluation of what works and why, and inform continual changes to plans and efforts. Evaluation frameworks consider three components (inputs, outputs, and outcomes) to demonstrate progress and inform improvements.

The inputs represent the processes needed to implement Watershed Planning (e.g., Initial Watershed Plans), the expected Initial Watershed Plan outputs to be performed (e.g., strategies), and the anticipated outcomes from implementing those activities (e.g., meeting targets and achieving Goals).

Figure 7-11 outlines an evaluation framework for Watershed Planning to illustrate how Watershed Planning will live and evolve in the long-term through regular progress assessments which inform adjustments to targets, strategies, and the Planning Tool to reflect ongoing developments in the region.

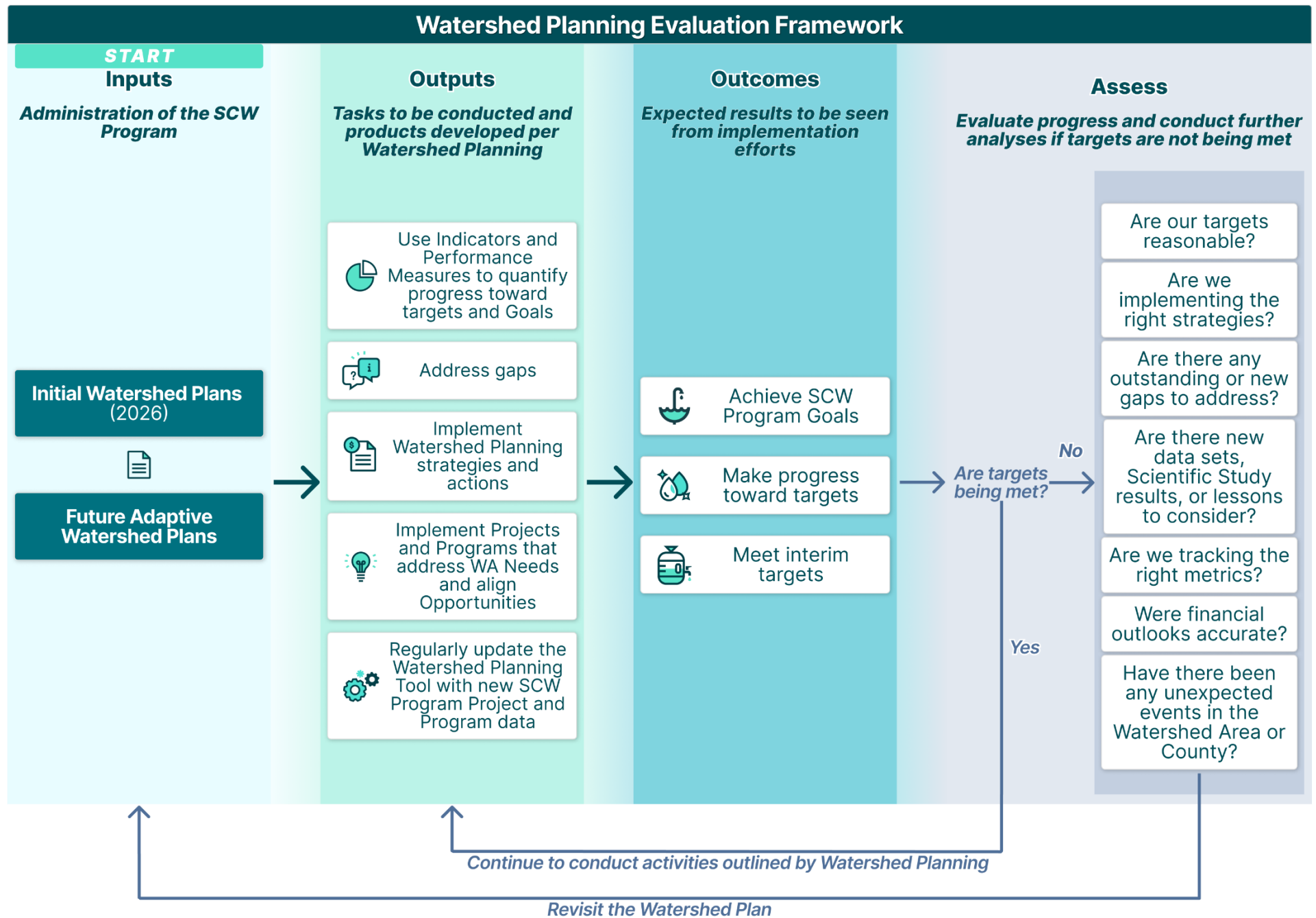


Figure 7-11. Watershed planning evaluation framework

- Compare realized benefits to their targets and evaluate progress toward achieving Goals (continued) (*near-term/long-term*): Referencing the evaluation framework outlined by Figure 7-11, in the event that interim targets are not being met or progress is otherwise not as expected, there are several assessment questions that can be used to determine how best to adjust planning, implementation, and tracking to accelerate progress. Before adjusting planning, implementation, or tracking efforts, the following questions should be asked and assessed:
 - *Are our targets reasonable?* Targets may be revisited and adjusted to reflect ongoing developments in the WAs and region. Target timelines and interim target values can also be evaluated alongside financial outlooks to determine if more time is needed before we can reasonably expect to meet targets. A more robust integration of the Regional Program Project financial models with target-setting may also be considered to determine if targets remain realistic and achievable.
 - *Are we implementing the right strategies?* If strategies are being implemented as expected but progress towards addressing needs and meeting goals is limited or absent, the strategies and their identified opportunities should be adjusted. There may have been gaps addressed, or new data and resources made available that warrant revisions to strategies.
 - *Are there new data sets, Scientific Study results, or lessons to consider?* As more Projects and Programs are funded and completed, Projects and their realized benefits will evolve, and strategies may need to be adjusted to better direct future investments to the right opportunities based on ongoing developments in the WAs. Results from scientific studies should similarly be continuously evaluated for incorporation in underlying data and strategies.
 - *Are we tracking the right metrics?* Consider reviewing Indicators and PMs and their quantification to ensure that they are accurately capturing progress to date. For example, the methods for quantifying proportionality of benefits accruing to DACs may need to be reevaluated and adjusted if progress is less than expected. Additional or revised metrics may need to be considered to ensure a comprehensive summary of progress.
 - *Were financial outlooks accurate?* Funding budgets and projected allocations are published annually via the Regional Program SIPs and Municipal Annual Plans are developed annually. The Projects and Programs reflected in these plans contribute to an assessment of

expected progress. If there is a shortfall in anticipated funding or unforeseen expenses, benefits may not be realized as quickly as expected. An assessment of financial outlooks will provide insight on why progress is less than expected and inform how targets or strategies may need to be adjusted to reflect current conditions and realities of the WAs and SCW Program.

- **Have there been any unexpected or recent events in the WA or Los Angeles region?** Before revising targets and strategies, unexpected or recent events will be considered to determine if they contributed to a lack of progress. Unusual weather, climate disasters, or shifting regulatory or funding conditions for example may impact implementation of strategies and the SCW Program's ability to make progress as expected.
- **Evaluate realized benefits provided by completed Projects and compare to their expected benefit (*near-term/long-term*):** Prior to completion, Project proponents predict benefits to be achieved; at post-construction, the realized benefits will be reported. A critical part of assessment will be evaluating expected vs actual benefits to evaluate differences and reasons for them. Progress may be updated and assessed using Project post-construction monitoring metrics and data reported via Annual Reports.
- **Establish an approach for assessing monitoring data (*near-term*):** As recommended under 'Track', water quality monitoring data will be tracked in the long-term to support an assessment of trends with regards to hydrology and water quality across the SCW Program and its WAs. An approach for how water quality monitoring data will be assessed to inform SCW Program progress and associated strategies will be developed in the long term.

7.2.4 Revisit the Watershed Plans



Plan

This subsection provides recommendations to revisit Watershed Plans and reexamine earlier assessments to apply lessons learned and update outputs through Planning Tool updates and Adaptive Watershed Plans



Revisit and incrementally update the Initial Watershed Plans, Planning Tool updates, and Adaptive Watershed Plans based on lessons learned and best available data, including the following:

- Refine targets and strategies based on findings from ongoing Adaptive Management and other non-SCW Program planning efforts (***near-term***): As needed, the Watershed Planning team will provide incremental updates to targets and strategies. There are several ongoing Adaptive Management and non-SCW Program planning efforts whose goals and outputs align with those of the SCW Program and Watershed Planning. While the timing of these efforts did not align with the Initial Watershed Plans, the incorporation of their outputs would strengthen Watershed Planning by addressing key near-term gaps, improving progress tracking, and refining strategies. Identified topics of interest for Watershed Planning include:
 - [County Water Plan Blue-Ribbon Panel](#) outputs
 - Post-fire relief and water quality monitoring
 - Enhanced water quality modeling and pollutant time series for bacteria, PCBs and DDT and quantification of trash
 - Quantification of benefits provided by SCW Program investments other than Projects (e.g., Municipal Activities, Regional Program Scientific Studies)
 - [Stormwater Recharge Efficiency in the Greater Los Angeles Region](#)
 - Public Works O&M working group
- Adjust targets and strategies based on lessons learned and assessment results (***near-term/long-term***): As new resources become available, Projects, Programs, and Scientific Studies are completed, priorities shift, and progress toward achieving Goals is continuously tracked and assessed, incrementally adjust targets and strategies through Adaptive Watershed Plans. This recommendation incorporates earlier assessment findings to ensure that targets and strategies are adjusted accordingly and that the Plans as well as the Planning Tool continue to serve WASCs, Municipalities, and Project and

Program proponents in making strategic funding and implementation decisions that maximize SCW Program return on investment.

- **Consider the development of Adaptive Watershed Plans based on tracking and assessment results (*long-term*):** Based on assessment results and shifting priorities, the development of Adaptive Watershed Plans may be considered every five years in collaboration with each WASC and the ROC. Adaptive Watershed Plans would support the integration of new elements or guidance such as site-specific opportunities and prioritization and will be developed on an as-needed basis.

This Initial Watershed Plan marks a historic milestone in the timeline of the SCW Program. Over time, the planning, tracking and assessment data and methodologies can be refined and improved to incorporate learnings, leverage the best available science, and adjust to reflect evolving community priorities. The key to success will be adoption of the Watershed Planning framework including the Planning Tool to maximize the benefits delivered through the Regional and Municipal programs by bringing forward and funding Projects and programs that are strategic, efficient, multiple-benefit and community-supported. During SCW Program implementation, Public Works is committed to supporting adoption of the Watershed Planning framework through continued engagement and facilitation across all facets of the SCW Program, thereby ensuring continuous incremental improvement over the coming years.