



**SAFE
CLEAN
WATER
PROGRAM**

DRAFT

Initial Watershed Plan Executive Summary North Santa Monica Bay Watershed Area

August 2025



Introduction to Watershed Planning

The Safe, Clean Water Program (SCW Program) was established to improve water quality, enhance local water supply, and deliver community investments that advance sustainability, equity, and climate resilience. As the nation's largest stormwater-focused program, the SCW Program supports multi-benefit Projects and Programs that improve water quality while delivering meaningful outcomes for communities across the Los Angeles region.

In July 2023, the Los Angeles County Board of Supervisors adopted a motion¹ to accelerate implementation of the SCW Program through a comprehensive Watershed Planning effort to identify areas in the region that provide opportunities for developing impactful water quality, water supply, and community enhancing multi-benefit Projects. This motion also established a new, dedicated team within Los Angeles County Public Works (Public Works), known as the SCW Program Watershed Planning Section, to lead Watershed Planning efforts and facilitate regional and watershed-based planning. Watershed Planning efforts identify opportunities and refine metrics, called Indicators and targets, to support a range of interested parties—Public Works, the Regional Oversight Committee (ROC), the Watershed Area Steering Committees (WASCs), Scoring Committee (SC), Municipalities, Project and Program proponents, advocacy groups, schools and school districts, and others—in tracking SCW Program progress and making strategic investment in the most impactful multi-benefit Projects and Programs. A major milestone of Watershed Planning includes the delivery of nine Initial Watershed Plans, one for each SCW Program Watershed Area (WA), and a companion online Watershed Planning Tool (Planning Tool).

This SCW Program Initial Watershed Plan for the North Santa Monica Bay (NSMB) WA, and the [Planning Tool](#), offer guidance to Public Works, the NSMB WASC, Municipalities, and Project and Program proponents for the advancement of Projects and Programs that deliver multiple benefits to support progress toward achieving the SCW Program's Goals (Goals).

Developed through a collaborative and responsive phased engagement approach², the Initial Watershed Plans incorporate engagement input from the SCW Program governance committees (i.e., the WASCs, ROC, and SC) and other interested parties (i.e., OurWaterLA, schools). The Initial Watershed Plans reflect governance committee

¹ [Board of Supervisors Motion of July 25, 2023, Item 23 Accelerating Implementation of the SCW Program](#).

² 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. See Chapter 1 and Appendix C for more information on engagement.

priorities and draw on their regional expertise. Initial Watershed Plans are not all-purpose watershed management plans; rather, they define what can be achieved within the scope and financial framework of the SCW Program. Key takeaways from this Initial Watershed Plan are listed below with supporting infographics to follow:

- **Key WA characteristics**, including challenges and potential to advance the 14 Goals,
- **Summary of benefits** by SCW Program Projects funded to date (baselines),
- Aspirational and quantitative **SCW Program- and WA-wide targets** for future outcomes that are rooted in the Goals,
- **Strategies, actions, and opportunities** to address WA Needs and local priorities to enhance the delivery of benefits provided by SCW Program Projects and Programs, and
- **Next steps and recommendations for Adaptive Management for the continued advancement and improvement of the SCW Program.**

The Initial Watershed Plans and Planning Tool support the acceleration of progress toward and tracking of Goals and clearly communicate governance committee direction and priorities. The following interested parties can use these resources as follows:

See Chapter 1

- **Public Works, the ROC, the SC, and WASCs** can use these resources to communicate priorities, assess Project benefits, and guide future Stormwater Investment Plans and funding decisions.
- **Municipalities and Project, Program, Project Concept, and Scientific Study proponents** can align Projects and Programs with strategies and WA and community priorities, identify opportunities, and select design features that address WA Needs. For Municipalities, these resources may support Municipal Annual Plans. Alignment with the Initial Watershed Plans is required when planning and applying for SCW Program funding.
- **Community members, the regulatory community, and other interested parties** can learn about Initial Watershed Plan outputs, explore local Project benefits, and advocate for priorities through the Community Strengths and Needs Assessment (CSNA) Survey.

Together, the Initial Watershed Plans and Planning Tool launch an Adaptive Watershed Planning cycle that assesses progress and prompts adjustments to targets and strategies to address future priorities, as needed.

This figure is a visual table of contents which outlines the chapters of the NSMB WA Initial Watershed Plan.

Initial Watershed Plan Table of Contents



1

Introduction

Provides SCW Program background, introduces Watershed Planning and its process, details Watershed Planning engagement, and highlights key supporting efforts, including SCW Program Scientific Studies and the Metrics and Monitoring Study.



2

Watershed Area Characteristics

Summarizes Watershed Area characteristics to provide an overview of its potential and challenges in achieving SCW Program Goals. These characteristics inform tailored targets and strategies for the Watershed Area.

3

Baselines of Benefits Provided by Funded Projects (FY20-21 to FY 24-25)

Summarizes funded SCW Program Projects and estimates baselines and forecasts, providing a foundation for adaptive Watershed Planning.

4

Quantifying Progress Toward SCW Program Goals

Introduces metrics for quantifying SCW Program Project benefits and sets initial targets for tracking progress toward SCW Program Goals.

5

Strategies for Addressing Needs and Achieving Goals

Identifies Watershed Area Needs and outlines strategies, actions, and opportunities to address Watershed Area Needs and support achievement of SCW Program Goals. Composite opportunities—those that integrate strategies which support multiple SCW Program Goals—are also outlined to support streamlined, multi-benefit Project implementation.

6

Watershed Planning Tool

Introduces the online Watershed Planning Tool that supports strategic decision-making and communicates SCW Program progress through an interactive map and dashboard.

7

Next Steps and Recommendations

Outlines key Initial Watershed Plan limitations and data gaps and provides recommendations to advance Watershed Planning through Watershed Planning Tool updates and future Adaptive Watershed Plans.

A-J

Appendices

Provides definitions for key Watershed Planning terms, Indicators, and Performance Measures. Summarizes Watershed Planning engagement and the Community Strengths and Needs Assessment (CSNA). Summarizes analyses and data sources used to establish baselines, set targets, and identify opportunities. Features full-page opportunity maps for the Watershed Area, individual Municipalities, and Supervisorial Districts.

Watershed Area Characteristics

See Chapter 2

The following WA characteristics offer insight into where there is potential to achieve Goals and where challenges persist. Understanding these WA-specific factors helps establish SCW Program targets and identification of meaningful strategies to support the long-term achievement of Goals.

The NSMB WA includes 6 Municipalities with the majority of the WA falling within Unincorporated Los Angeles County (73%) and Malibu (12%), covering approximately 100,000 acres in western Los Angeles County, stretching from the border of Ventura and Los Angeles Counties along 27 miles of coastline in Malibu to Topanga Canyon. While the NSMB WA is primarily rugged open space; pockets of dense urban development generate an average of 26,000 acre-feet/year (ac-ft/yr) of stormwater runoff annually. Although runoff volume is moderate for the WA's size, the impervious landscapes are responsible for disproportionate urban runoff and pollutant loading that is degrading the water quality of local creeks and ultimately Santa Monica Bay—an ecologically rich and highly valued recreational area—raising the need for pollutant load management to maintain environmental and public health.



The following Municipalities are located within the NSMB WA, with the Municipality covering the largest portion of the WA listed first.

Unincorporated County, Malibu, Agoura Hills, Calabasas, Westlake Village, Los Angeles, Hidden Hills

Other key NSMB WA characteristics include:

- Phosphorus and Bacteria are priority pollutants
- 7% of land cover consists of impervious surfaces
- 26% of the urban area is covered by tree canopy
- 45% is parks and open space
- Mostly underlain by fractured bedrock and coastal alluvium, with limited groundwater storage in many areas.

This panel details key potential opportunities and challenges for delivering water quality (top), water supply (middle) and community (bottom) benefits.

Potential & Challenges for Delivering Water Quality Benefits

Local soil types and pockets of urbanization contribute to low natural infiltration and high pollutant loads transported downstream, but opportunities remain for multi-benefit solutions.

Potential

- A majority of the urban Watershed Area is yet untreated by Projects and presents a considerable opportunity to continue to improve water quality.
- Existing open space and topography offer the space and natural drainage features for Nature-Based Solutions to capture and treat stormwater.

Challenges

- Majority of open space within the Watershed Area is preserved by national and state agencies, which may limit open space for large regional Projects or nature-based surface features may require more numerous, smaller-scale distributed solutions.
- Waterbodies within the Watershed Area face impairments from diffuse sources which are more challenging to address with traditional BMPs alone.



Potential & Challenges for Delivering Water Supply Benefits

Local geologic conditions limit groundwater recharge potential; however, alternative stormwater capture and reuse strategies remain viable for augmenting the local water supply.

Potential

- Pockets of dense development produce disproportionate volumes of wet and dry weather runoff for potential capture and reuse in the Watershed Area.
- Untreated areas across the Watershed Area present significant opportunities for additional capture and reuse Projects.

Challenges

- Urban soil conditions and high pollutant loads may limit natural infiltration and require pre-treatment before water can be reused.
- Waterbodies within the Watershed Area transport sediments that help maintain the size and condition of coastal beaches. Alterations to natural flow regimes may negatively affect beach stability and health.



Potential & Challenges for Delivering Community Investment Benefits

Neighborhoods with limited green space and disproportionate exposure to environmental stressors or natural hazards present strong opportunities for equitable, multi-benefit investments that enhance community resilience and quality of life.

Potential

- The presence of riparian corridors and marine environments offers significant opportunities to improve water quality and restore ecological connectivity through wetland rehabilitation, while also enhancing public access to nature and helping to mitigate the urban heat island effect.
- There are opportunities to incorporate green infrastructure in existing public spaces like schools, parks, and roadways, which can reduce runoff pollutant loads and simultaneously provide benefits such as shading, cooling and new or enhanced recreational spaces.

Challenges

- In some areas, local topography may limit the feasibility of creating safe recreational spaces.
- Local soil conditions and existing pollutant levels may limit the effectiveness of Nature-Based Solutions in certain areas, constraining their integration into both existing and planned parks and green spaces.

Baselines, Targets, and Watershed Area Needs

In the first five years of the SCW Program (FY20-21 to FY24-25), \$9 million in SCW Program funds have been invested in 7 Regional and Municipal Program Projects in the NSMB WA. These Projects deliver multiple benefits to communities including improved water quality, increased drought resiliency, and improved public health and form the basis of the current benefit baseline which sets the foundation for adaptive, long-term Watershed Planning.

See Chapters 3, 4, and 5



To track progress toward the achievement of Goals, the Initial Watershed Plans use metrics called Indicators and Performance Measures (PMs). Indicators are metrics used to sum Project benefits and enable progress tracking across *large spatial scales*, such as the SCW Program region or per WA. Indicators are supported by a set of PMs which quantify and track benefits at the *Project scale*. Indicators and PMs are anchored in the 14 Goals and organized into nine Planning Themes to allow for efficient WA and SCW Program-wide summaries.

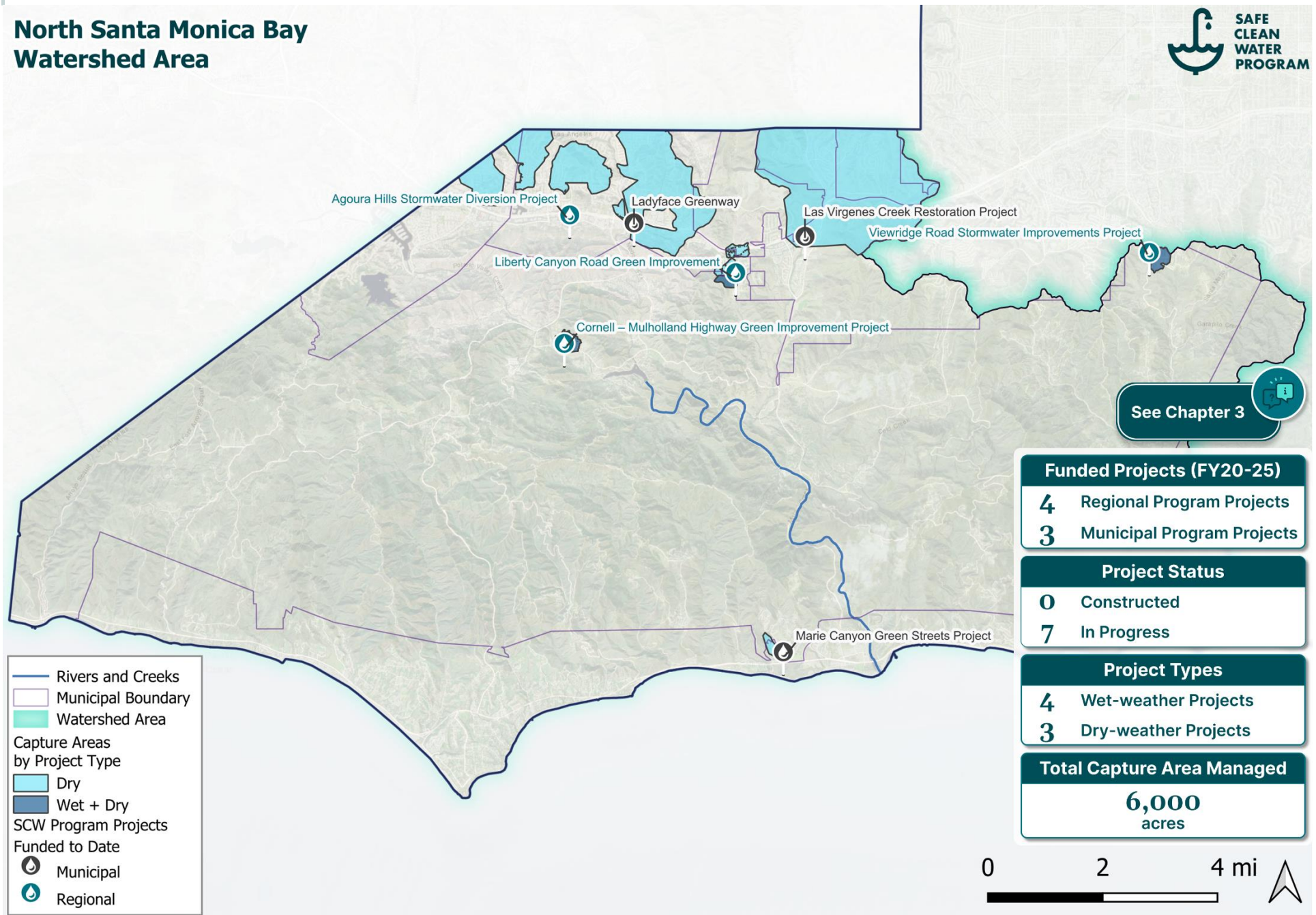
Each Indicator aligns with a Goal, and each Indicator has SCW Program and WA targets that aim to advance progress toward that Goal. Targets are aspirational, calibrated to the scope of the SCW Program, and tailored to each WA based on its unique characteristics. Targets are based on relevant SCW Program Ordinance requirements, WA characteristics, other existing countywide efforts, and data-informed assessments such as the benefit baselines and forecasts developed through the Initial Watershed Plans. Where targets from other countywide efforts (e.g., the County Water Plan) exist for a given Indicator, they guide target setting. The SCW Program target then reflects the Program's potential contribution to these broader regional objectives.

The Initial Watershed Plans also set interim targets to monitor and guide progress. If progress falls short of the targets by the set interim dates, targets and strategies may be reassessed and adjusted to ensure continued progress toward achieving Goals. For each Indicator, its benefit baseline (current progress) is summarized and a target (aspirational outcome) is established, which also defines its 'WA Need' which represents the progress remaining to meet the target.

By establishing baselines, targets, and WA Needs, this Initial Watershed Plan supports SCW Program implementation by promoting data-driven planning, informed decision-making, and transparent progress tracking to ensure that the NSMB WA continues to make measurable progress toward Goals.

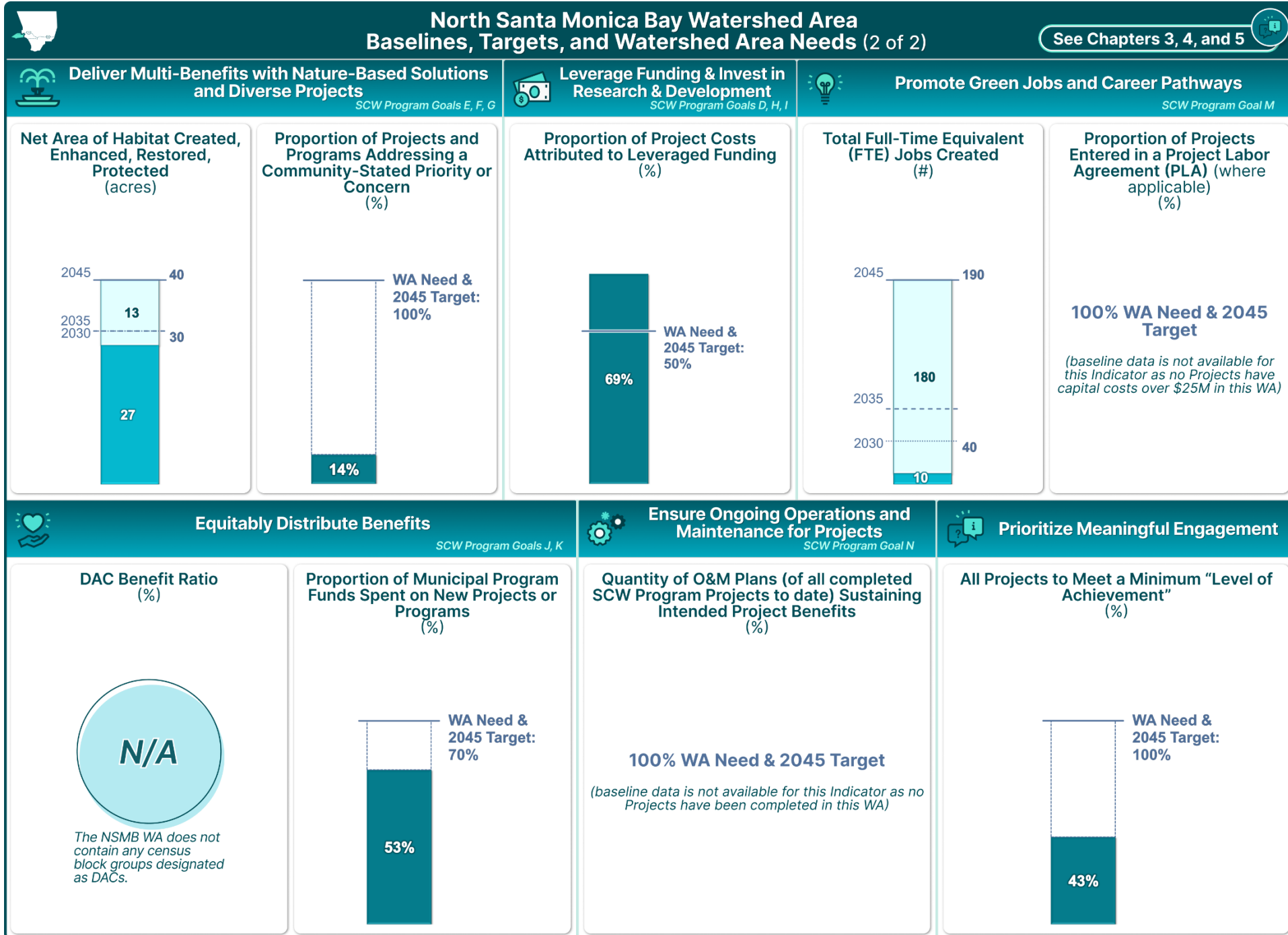
This map summarizes the 7 SCW Program Projects funded to date in the NSMB WA and their capture areas.

North Santa Monica Bay Watershed Area



Indicators, their baselines, interim targets, final targets, and WA Needs are shown below (1 of 2) and are continued on the next page (2 of 2). For magnitude-based Indicators, bar charts display two interim targets and a final target. The dark blue bar represents the current (2025) baseline, while the light blue portion shows the WA Need. Percentage-based Indicators do not include interim targets; instead, the final target is considered perpetual; these Indicators reflect cumulative progress rather than linear gains, meaning values may rise or fall over time. To demonstrate sustained progress, WA Needs for percentage-based Indicators are set equal to their targets, which should be achieved and maintained. Baselines, targets, and WA Needs are discussed in Chapters 3, 4, and 5, respectively, of the Initial Watershed Plan. Methods and inputs are available in Appendix H.





Strategies to Address Needs and Achieve Goals

This Initial Watershed Plan establishes strategies, actions, and opportunities for addressing WA Needs and achieving Goals. Following the strategies offers a pathway to alignment with the Initial Watershed Plans—a requirement for planning and applying to the SCW Program.

See Chapter 5



WA Needs summarize *why* strategies are needed, while strategies describe *how* to strategically address those WA Needs and achieve Goals through multi-benefit Projects and Programs. Each strategy is supported by specific actions that describe *what* general types of activities (Projects, Programs, or Scientific Studies that could be implemented to support a strategy). Strategies and actions are supported by opportunities which are mapping layers or references that describe *where* there is the greatest opportunity to implement strategies and actions. Rather than identifying specific Project sites, opportunities highlight areas where Water Quality Benefits, Water Supply Benefits, or Community Investment Benefits are most needed.

Strategies, actions, and opportunities are tailored to the NSMB WA's characteristics. A key emphasis is on advancing multi-benefit Projects that pair water quality improvements with water supply and community enhancements, while balancing long-term goals with near-term Regional Program funding limitations. NSMB WA strategies promote implementation of stormwater capture Projects including diversions to sanitary sewer, Distributed Nature-Based Solutions, stream restoration, and alignment with regional coastal resilience efforts to mitigate the effects of climate change and post-wildfires.

Strategies are designed to be implemented synergistically to maximize co-benefits in addition to Water Quality Benefits. While each strategy can support individual Goals on its own, they are most effective when enacted together, creating synergies that address multiple Goals simultaneously. To support this integrated approach, the Initial Watershed Plans identify composite opportunities, which highlight areas where a Project or Program could support two or more Goals in addition to water quality improvement. Composite opportunities serve as a strategic foundation for prioritizing investments that combine multiple strategies to deliver multi-benefit Projects and Programs that address multiple Goals.

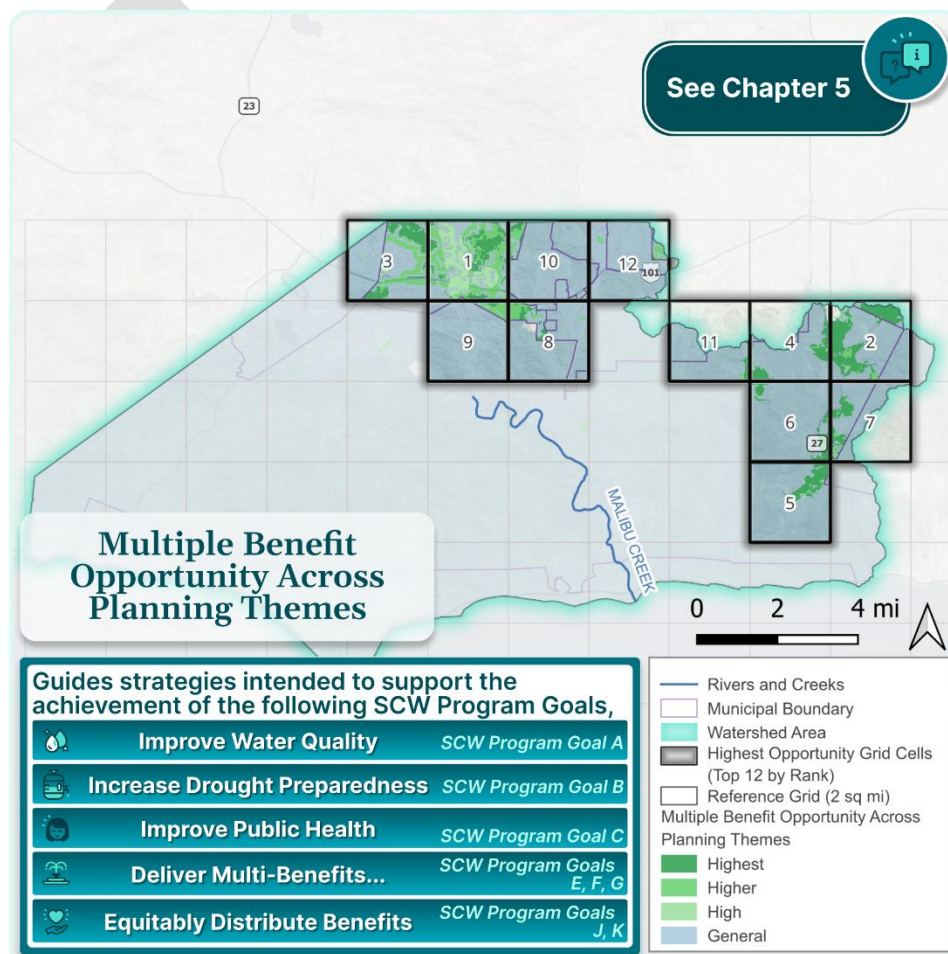
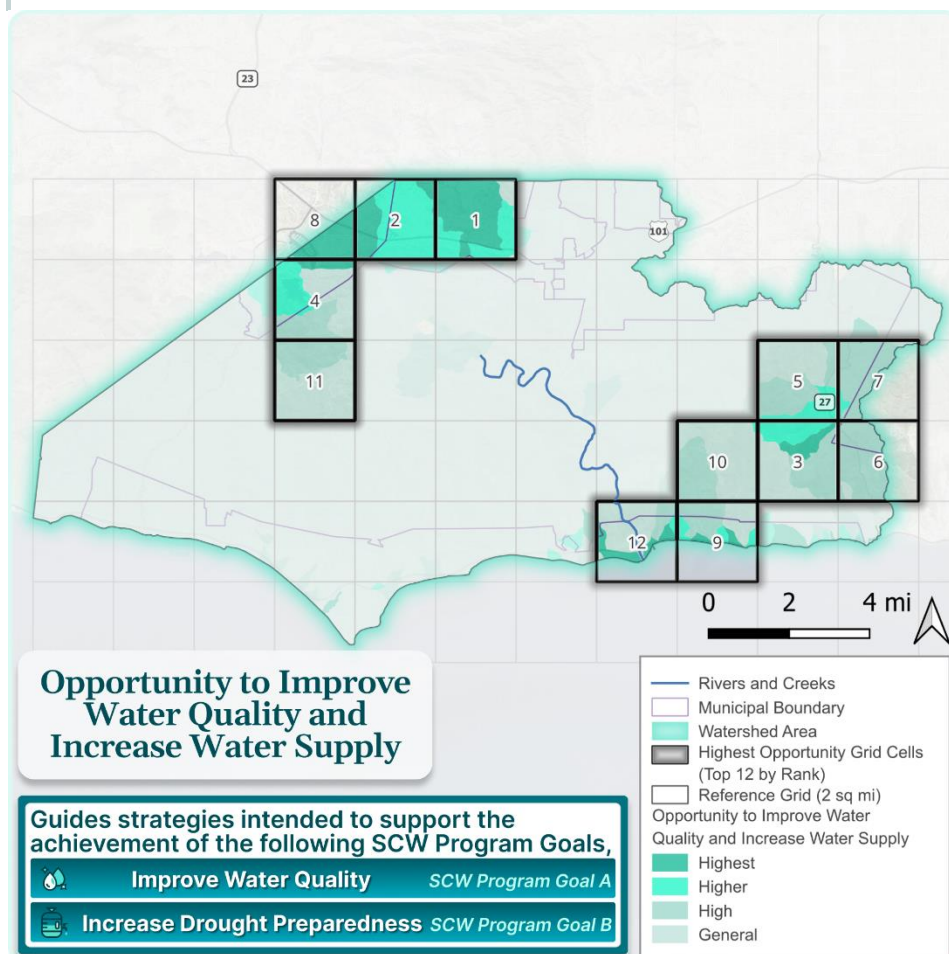
Strategies, actions, and opportunities to address WA Needs are detailed in Chapter 5 of the Initial Watershed Plan, Appendices I and J, and the Planning Tool.

This panel shows strategies developed within each Planning Theme to support strategic decision making in the SSMB WA and facilitate efficient progress toward Goals. Actions and opportunities for each strategy can be found in Section 5.2.1 of the Initial Watershed Plan.

North Santa Monica Bay Watershed Area Strategies 		
	Improve Water Quality	SCW Program Goal A
1.1	Prioritize high performance Projects and Programs in areas with the highest pollutant loads	
1.2	Improve water quality and mitigate post-fire runoff through targeted Nature-Based Solutions	
	Increase Drought Preparedness	SCW Program Goal B
2.1	Link MS4 compliance and water supply planning to maximize stormwater capture for water quality and water supply*	
2.2	Assess remaining capacity and best opportunities to divert captured runoff for reuse **	
2.3	Maximize stormwater runoff capture and management for water supply	
2.4	Enhance local water supply through diversion to sanitary sewer and onsite reuse	
	Improve Public Health	SCW Program Goal C
3.1	Evaluate open space and large lot potential, particularly on school campuses*	
3.2	Create, enhance, or restore park and green spaces to improve water quality, increase water supply, and support ecosystem functions	
3.3	Help communities most affected by extreme heat mitigate and adapt to the effects of climate change	
	Deliver Multi-Benefits with Nature-Based Solutions & Diverse Projects	SCW Program Goals E, F, G
4.1	Acknowledge, where feasible, other capital improvement programs that can contribute to regional outcomes*	
4.2	Evaluate distributed BMPs that achieve cost-effectiveness thresholds of the SCW Program**	
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 Nature-Based Solutions to reduce wildfire risk and enhance ecosystem resilience	
	Leverage Funding & Invest in Research & Development	SCW Program Goals D, H, I
5.1	Bolster SCW Program and regional coordination to support identification and communication of alternative funding sources and opportunities	
5.2	Bolster the Scientific Study Program through enhanced review, coordination, and dissemination of results	
	Equitably Distribute Benefits	SCW Program Goals J, K
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	
6.3	Advance regional environmental equity by protecting shared natural resources	
	Promote Green Jobs and Career Pathways	SCW Program Goal M
7.1	Prioritize smaller Projects for which construction and maintenance jobs are more likely to come from a local labor force	
7.2	Invest in research and Programs that promote permanent career pathways	
7.3	Coordinate job placement and partner with workforce training and pre-apprenticeship programs	
	Ensure Ongoing Operations & Maintenance for Projects	SCW Program Goal N
8.1	Maintain a skilled, local workforce to ensure quality construction and comprehensive operation & maintenance	
8.2	Ensure sufficient resources are set aside for Project O&M and monitoring	
8.3	Promote wildfire resilience through fire-resilient O&M protocols for Projects	
8.4	Integrate post-construction monitoring data into O&M plans	
	Prioritize Meaningful Engagement	
9.1	Promote meaningful and sustained outreach and engagement through regional coordination and expertise	
9.2	Develop and bolster existing resources and support for Project and Program-specific engagement	
9.3	Promote fire-adapted communities through enhanced education and outreach	

*SCW Program-wide Priority Strategy based on engagement **North Santa Monica Bay WASC Priority Strategy based on engagement
 Note: While some strategies may not explicitly reference water quality, in accordance with the SCW Program Implementation Ordinance, all SCW Program Projects and Programs are required to include a Water Quality Benefit.

A series of maps are included in the Initial Watershed Plans and Planning Tool to encourage SCW Program Projects that provide multiple benefits. This panel shows composite opportunities; the left map shows opportunities where Projects could deliver both Water Quality and Water Supply Benefits and the right map shows opportunities for Projects to deliver those benefits plus others such as Community Investment Benefits. While these maps highlight areas with the highest potential, other areas not highlighted may still offer valuable opportunities. Composite opportunities are detailed in Section 5.2.1.10 and Appendix I of the Initial Watershed Plans. Full-page maps and guidance on using these mapping layers in the Planning Tool are available in Appendix J.



Next Steps and Recommendations for Watershed Planning

In early 2026, each of the nine Initial Watershed Plans will be adopted by the Los Angeles County Flood Control District Chief Engineer to serve as SCW Program guidance documents and support future decision-making by the Regional, Municipal and District Programs. The next step for Public Works, the ROC, WASCs, Municipalities, and Project and Program proponents is the use of the Initial Watershed Plans and Planning Tool to assist the advancement of Projects and Programs that align with strategies to address WA Needs and support achievement of Goals.

Near-term next steps for Watershed Planning include addressing key planning gaps through engagement, data collection, new guidance and guidelines, Scientific Studies, and updates to the SCW Program Portal. These updates will also integrate Initial Watershed Plan outputs—such as Indicators and Performance Measures—into reporting and related guidance and guidelines.

See Chapter 7

As the SCW Program progresses, it is essential to continuously refine and enhance Initial Watershed Plan outputs to ensure they remain effective and relevant. This Initial Watershed Plan outlines recommendations for Watershed Planning to apply an Adaptive Management approach to assess Initial Watershed Plan effectiveness and SCW Program progress, and adjust outputs such as targets, strategies, and opportunities to ensure they remain responsive to changing conditions and priorities. In the long term, Adaptive Watershed Plans may be developed, as needed, to incorporate new planning elements and reflect ongoing progress, emerging priorities, and evolving WA conditions.

This figure outlines next steps and illustrates the long-term approach to continual Watershed Planning and SCW Program progress.

