

North Santa Monica Bay Watershed Area Steering Committee (WASC) Meeting Minutes



Thursday, June 8, 2023
1:00pm – 3:00pm
Las Virgenes Municipal Water District Conference Room
4232 Las Virgenes Rd Calabasas, CA 91302

Committee Members Present:

Marcela Benavides-Aguilar, LA County Flood Control District (Agency)
Russ Bryden, LA County Waterworks District (Agency)
Craig Jones, Las Virgenes Municipal Water District (Agency)
*Richard Ambrose, Institute of the Environment and Sustainability UCLA (Community)
Tevin Schmitt, Wishtoyo Chumash Foundation Ventura County (Community)
Jessica Forte, Agoura Hills (Municipal)
Tatiana Holden, Calabasas (Municipal)
Joe Bellomo, Hidden Hills (Municipal)
Bruce Hamamoto, Los Angeles County (Municipal)
Mark Johnson, Malibu (Municipal)
Roxanne Hughes, Westlake Village (Municipal)
Melina Sempill Watts, Melina Sempill Watts Inc. (Watershed Coordinator, non-voting member)

*Committee Member Alternate

Committee Members Not Present:

David Pedersen, Las Virgenes Municipal Water District (Agency), Chair
Madelyn Glickfeld, Institute of the Environment and Sustainability UCLA (Community), Vice-Chair
Chad Christensen, Mountains Recreation and Conservation Authority (Agency)
Doug Marian, California Plumbing and Mechanical Contractors Association (Community)
Elias Garcia, LA Area Chamber of Commerce (Community)
Kirsten James, Resident (Community)
Aaron Ordower, Los Angeles County SD3 (Municipal)

See attached sign-in sheet for full list of attendees.

1. Welcome and Introduction

Member Russ Bryden chaired this meeting of the North Santa Monica Bay (NSMB) Watershed Area Steering Committee (WASC) and welcomed Committee Members and called the meeting to order. District staff provided a brief WebEx tutorial for meeting participants joining online. All Committee Members and LA County Flood Control District (District) staff made self-introductions and a quorum was established.

2. Approval of Meeting Minutes from May 11, 2023

Member Bryden presented the minutes from the previous meeting. Member Tevin Schmitt motioned to approve, seconded by Member Joe Bellomo. The WASC voted to approve the May 11, 2023 meeting minutes with 12 votes in favor, 0 opposed, and 0 in abstention (approved, see vote tracking sheet).

3. Committee Member and District Updates

a. Community Stakeholder Reselection, 2023

[Commission Service Division \(CSD\) – Interest to Serve Form](#)

District staff provided an update, noting:

North Santa Monica Bay Watershed Area Steering Committee (WASC) Meeting Minutes



- The first term for WASC Community Stakeholder seats will end on June 30, 2023. Community Stakeholders interested in joining the WASC for the next three-year term should submit the [interest to serve form](#). Current seat holders interested in reapplying do not need to submit another form. Current seat holders wishing to step down should inform District staff. The timeline and process for appointments is under development to minimize any interruptions to Committee tasks. Existing members will continue to serve at the pleasure of the Board until reappointments have been completed.
- On April 20, 2023, the Regional Oversight Committee voted to advance all nine Stormwater Investment Plans (SIP) to the Board of Supervisors for funding. LA County Public Works is advancing the letter for final submission in the summer.
- The District has released the Regional Program Funding Process Handbook. The handbook provides consolidated information on existing Regional Program requirements and guidance. The handbook is available under the Regional Program – Call for Projects tab on the Safe, Clean Water Program (SCWP) website.
- District staff hosted information sessions for applicants to the Regional Program Round 5 Call for Projects on May 24 and May 25, 2023. Applicants were required to attend one of the two sessions either in person or online. Recordings and slides are available on the SCWP website. The application deadline for Round 5 is July 31, 2023. Project applicants may refer to the Call for Projects webpage on the SCWP website for application details.
- The Alternate Water Supply Scoring Pilot Memo is available on the SCWP website. The memo was sent to the Scoring Committee outlining and describing the pilot rubric. Applicants in all nine Watershed Areas will have the option to use proposed pilot criteria to score the water supply category in Round 5 only, as an outcome of the MMS. This pilot will allow projects with smaller drainage areas to gain more points in the water supply category.

Upon inquiry, District staff noted that after this year, the Pilot Scoring Rubric will be evaluated on its effectiveness and considered for use in future years. District staff confirmed that all links are embedded in the application document and the Alternate Water Supply Scoring Pilot Memo is available on the SCWP website. District staff can be contacted regarding questions.

4. Watershed Coordinator Updates

Watershed Coordinator Melina Sempill Watts offered a land acknowledgement and shared a presentation on Measure W, recent outreach events, plans for upcoming outreach events, project concepts, engagement activities (highlighting their importance to increasing watershed connectivity), and funding opportunities. See slides available on the SCWP website and attached.

Watershed Coordinator Watts shared about the potential project partnership opportunities with Los Angeles County Beaches and Harbor and noted that the Malibu Lagoon permeable parking lot can serve as a model. Watershed Coordinator Watts is working to acquire the engineering plans for the Malibu Lagoon project.

5. Public Comment Period

No comment cards were received in advance. There were no public comments.

6. Discussion

a) Ex Parte Communication Disclosure

There were no Ex Parte Communication Disclosures.

b) Caltrans Potential Partnership Opportunities

North Santa Monica Bay Watershed Area Steering Committee (WASC) Meeting Minutes



Anand Maganti, Caltrans

Anand Maganti (Caltrans) presented on potential partnership opportunities for stormwater treatment funding, which included an overview of the 2022 Caltrans NPDES permit requirements, the Cooperative Implementation Agreements (CIA), and Financial Contribution Only (FCO) programs. Maganti noted that for each program, maintenance is the responsibility of the local agency and projects remain eligible even if not selected. Maganti sent a spreadsheet to Committee Members to submit stormwater project proposals in partnerships with Caltrans. See slides available on the SCWP website and attached.

Maganti clarified that the FCO program cannot be used to reimburse project or construction costs and noted that the CIA program has more flexibility. Maganti displayed the Stormwater GIS Database on screen to share examples of successful applications, including projects at the City of Lakewood and City of Bellflower.

Member Mark Johnson asked if there were ways to find out which specific sections of highway generate significant amounts of trash. Maganti replied that they would work with District staff to share either PDFs of maps or an external web link. Maganti clarified that the Stormwater GIS Database is an internal tool but will explore options to share that information as well.

c) Accelerate Resilience LA Project Overview

Deborah Bloome, Senior Policy Director of Accelerate Resilience Los Angeles (ARLA), and Devon Provo, Policy Manager of ARLA, provided an overview of ARLA and an update on the Stormwater Capture Demonstration Study. The presentation included a description of the study regions, an overview of the modeling approach, metrics analyzed, and modeled project types, as well as preliminary recommendations. Potential pathways specific for the SCWP were also discussed. See slides available on the SCWP website and attached.

Committee Members discussed community entities or community members that have done similar landscape transformation projects and noted the passion that community members have for this type of retrofitting. Those existing projects can be used as models for future efforts. The Committee commented on the potential for leaders to leverage green infrastructure but made the point that a team would be required to carry out the effort.

Upon inquiry, Bloome noted that there is not a clear path to do this type of project through the SCWP. The SCWP guidelines allow creating incentive programs, but relative to regional projects, work on individual homes is less likely to get funded. Administratively, Bloome recommends developing a separate program and following any of the potential SCWP pathway options that were included in the presentation. Bloome noted that at least one agency would be required to take the lead in any of the potential pathways to fully elevate this project and recommended trying to leverage the potential water supply benefits that could come out of a partnership.

Bloome noted that in the Stormwater Capture Demonstration Study, the modeling efforts were done for cisterns up to 5,000 gallons to avoid triggering any permitting requirements. However, if the permitting process was streamlined, it would be possible to work with larger systems, providing even more capture. Committee Members commented that if this program moves forward, it is of great importance to make the application and implementation process easy and accessible. Bloome noted that there would be technical assistance in place for the application process, as well as templates for the required documentation. Committee Members discussed the challenges of finding staff with availability for this work and mentioned that for this to be successful, it might be necessary to follow a turnkey approach.

Bloome reiterated that the workforce development component is being designed to address specific challenges related to the program, particularly in relation to maintenance procedures. Member Bryden

North Santa Monica Bay Watershed Area Steering Committee (WASC) Meeting Minutes



suggested that the program should be very simple and asked if the demonstration study collected data to determine the types of properties that could result in the best return on investment. Bloome and Provo noted that the data collected can be shared for the WASC to analyze the potential pathways for the area. Additionally, Bloome and Provo advised the WASC that if this were something they would like to move forward with, it might be worthwhile to start communicating with the Metropolitan Water District of Southern California.

Member Bryden stated that the first step might be to revisit this more carefully with District staff to get a better understanding of what is permissible and what is not. District staff shared that there is a credit program where community members are eligible for a tax reduction if a stormwater BMP has been installed and quoted Ordinance 16.10D which states: “The Chief Engineer shall work with stakeholders to explore the feasibility of, and options for, additional incentives beyond or in support of the credit, income-based tax reduction, low-income senior exemption, and credit trading programs.” District staff noted that there is a lot of flexibility in Municipal Programs, but that it is a big reach to think that the Regional Program could support a multi-parcel application. A feasibility study would still be required to analyze how this is of benefit to the public.

Provo noted that there have been preliminary conversations with key staff from the Municipal Water District (MWD), where MWD has expressed interest predominantly in disadvantaged communities.

Discussion will continue around this topic in future meetings. Member Bryden asked District staff to add this as an agenda item for the next meeting.

7. Public Comment Period

There were no public comments.

8. Voting Items

There were no voting items.

9. Items for Next Agenda

The next meeting is scheduled for Thursday, July 13, 2023, 1:00pm – 3:00pm and will be held in person at the Las Virgenes Metropolitan Water District Conference Room. See SCWP website for meeting details.

10. Adjournment

Member Bryden thanked the WASC members and the public for their attendance and participation and adjourned the meeting.



Safe, Clean Water Program Watershed Area Steering Committee North Santa Monica Bay

Date Thursday, June 8, 2023
Time 1:00 PM – 3:00 PM
Location Las Virgenes Municipal Water District Conference
Room - 4232 Las Virgenes Rd Calabasas, CA 91302

WebEx Hybrid Meeting – See below or [SCW website](#)
for WebEx Meeting details

WebEx Meeting Details

Committee members are expected to attend in-person at the address listed above. Members of the public may participate by joining the WebEx Event Meeting below. Please refer to the [Video Conferencing Guidelines](#) available on the Safe, Clean Water Program website for additional information.

Join via WebEx Events (recommended)

Event number: 2481 037 5685

Password: scwp (7297 from phones and video systems)

<https://lacountydpw.webex.com/lacountydpw/j.php?MTID=mfc73ea8bf1f10667c809db1f6840c5a6>

Join by phone

+1-408-418-9388 United States Toll or

+1-213-306-3065 United States Toll (Los Angeles)

Access Code: 2481 037 5685

Public Comment

Phone participants and the public are encouraged to submit public comments (or a request to make a public comment) to SafeCleanWaterLA@pw.lacounty.gov. All public comments will become part of the official record.

Please complete the [Comment Card Form](#) available on the Safe, Clean Water website and email to SafeCleanWaterLA@pw.lacounty.gov by at least 5:00pm the day prior to the meeting.

Para solicitudes de comentarios públicos en español, envíe un correo electrónico a SafeCleanWaterLA@pw.lacounty.gov o lláme al (833) 275-7297 dos días antes de la reunión para asegurarse de que haya un traductor presente para transmitir el comentario para consideración del comité.

Requests for accommodations may be made to SafeCleanWaterLA@pw.lacounty.gov or by telephone to 833-ASK-SCWP at least three working days in advance of the meeting.

Supporting documentation will be available on the Safe, Clean Water website at www.safecleanwaterla.org.



Agenda:

- 1) Welcome and Introductions
- 2) Approval of Meeting Minutes from May 11, 2023
- 3) Committee Member and District Updates
 - a) Community Stakeholder Seat Reselection, 2023
[Commission Service Division \(CSD\) – Interest to Serve Form](#)
- 4) Watershed Coordinator Updates
- 5) Public Comment Period
- 6) Discussion
 - a) Ex Parte Communications Disclosure
 - b) Caltrans Potential Partnership Opportunities
- Anand Maganti, Caltrans
 - c) Accelerate Resilience LA Project Overview
- 7) Public Comment Period
- 8) Voting Items
- 9) Items for Next Agenda
- 10) Adjournment

Next Meeting: July 13, 2023 (TBD)
1:00pm – 3:00pm
Las Virgenes Municipal Water District Conference Room
4232 Las Virgenes Rd Calabasas, CA 91302

Requests for accommodations may be made to SafeCleanWaterLA@pw.lacounty.gov or by telephone to 833-ASK-SCWP at least three working days in advance of the meeting.

Supporting documentation will be available on the Safe, Clean Water website at www.safecleanwaterla.org.

NORTH SANTA MONICA BAY WASC MEETING - June 08, 2023

		Quorum Present				Items
Member Type	Organization	Member	Voting?	Alternate	Voting?	Vote to Approve May 11, 2023 WASC Meeting Minutes
Agency	LACFCD	Marcela Benavides-Aguilar	x	Mark Beltran		y
Agency	LAC Waterworks District	Russ Bryden	x			y
Agency	MRCA	Chad Christensen				
Agency	LVMWD	David Pedersen		Craig Jones	x	y
Agency	LVMWD	David Pedersen		Craig Jones	x	y
Community Stakeholder	UCLA	Madelyn Glickfeld		Richard Ambrose	x	y
Community Stakeholder	CPMCA	Vacant				
Community Stakeholder	LA Area Chamber of Commerce	Elias Garcia				
Community Stakeholder	Wishtoyo Chumash Foundation Ventura County	Tevin Schmitt	x			y
Community Stakeholder	Community Stakeholder	Kirsten James				
Municipal Members	Agoura Hills	Jessica Forte	x	Kelly Fisher		y
Municipal Members	Calabasas	Tatiana Holden	x			y
Municipal Members	Hidden Hills	Joe Bellomo	x	Kerry Kallman		y
Municipal Members	LAC Supervisor District 3	Aaron Ordower				
Municipal Members	LAC Public Works	Bruce Hamamoto	x	Allen Ma		y
Municipal Members	Malibu	Mark Johnson	x	Solishia Andico		y
Municipal Members	Westlake Village	Roxanne Hughes	x	Phillipe Eskandar		y
Watershed Coordinator	Melina S. Watts Consulting, LLC	Melina Watts	x			
Total Non-Vacant Seats		17			Yay (Y)	12
Total Voting Members Present		12			Nay (N)	0
Agency		4			Abstain (A)	0
Community Stakeholder		2			Total	12
Municipal Members		6				Approved

Other Attendees

- Scarlet Eskew
- Solishia Andico
- Devon Provo
- Allen Ma
- Andrea Prado Iriarte
- Caroline Koch
- Jenny Chau
- John Mendoza Kelly
- Kelsey Reed
- Anand Maganti
- Mayra Martinez
- Shirley Fontaine
- Taylor Freas



SAFE CLEAN WATER PROGRAM

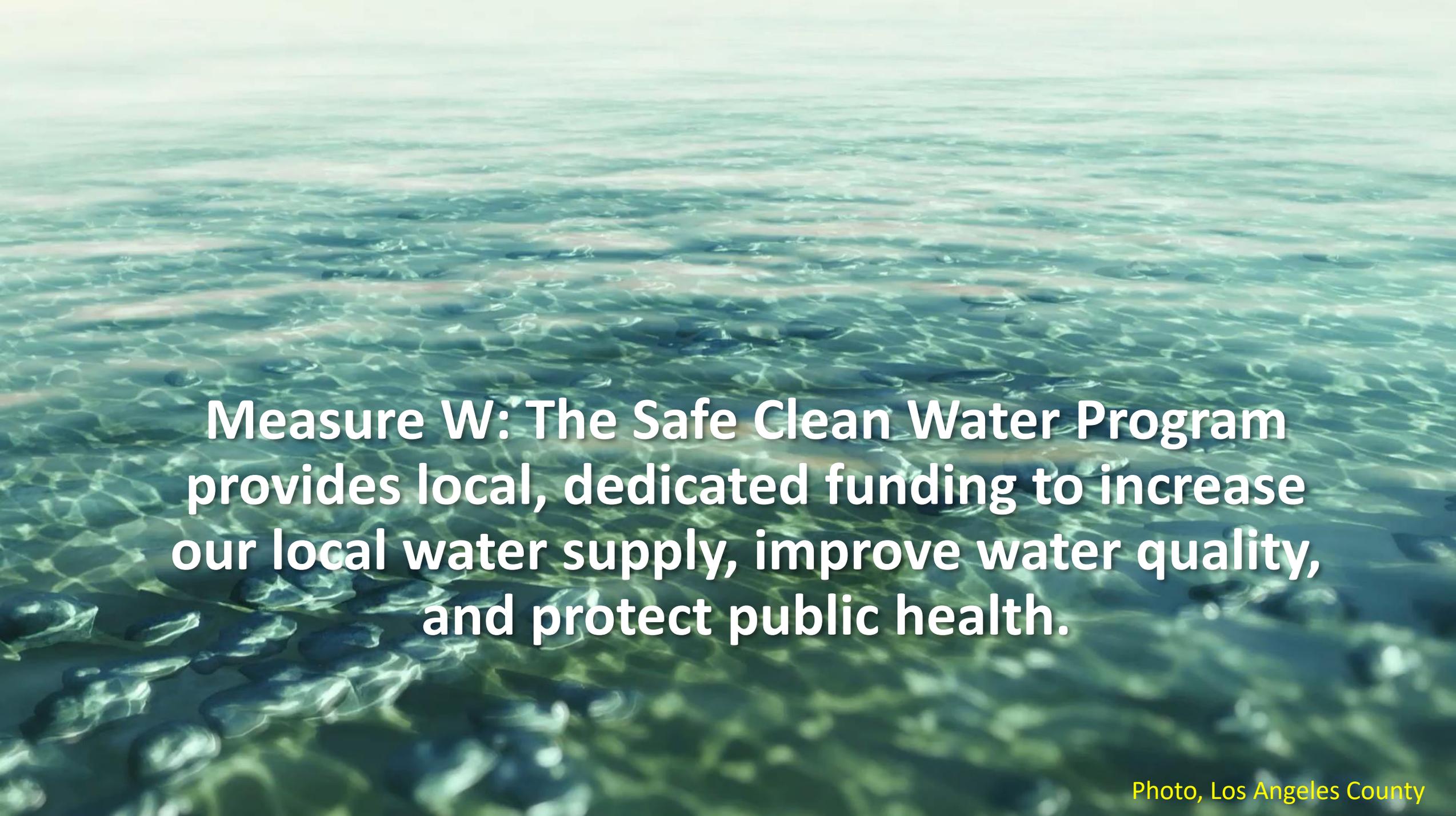
The North Santa Monica Bay Watershed Area Steering Committee Update

By Melina Sempill Watts

Watershed Coordinator, Safe Clean Water L.A.

June 8, 2023

Photo and Logo, Los Angeles County

An aerial photograph showing a vast expanse of water with a complex network of canals or ditches. The water is a deep blue-green color, and the canals create a grid-like pattern across the landscape. The perspective is from a high angle, looking down at the water.

Measure W: The Safe Clean Water Program provides local, dedicated funding to increase our local water supply, improve water quality, and protect public health.



Minnesota-style Land Acknowledgement

What's our plan?

Art on Buses is by Marlena Myles Art & Design; photo is by Marlena Myles



Free-range Watershed Reporting...



OUTREACH, RECENT



North Santa Monica Bay
State of the Watershed Event,
May 11, 2023



A Holistic Snapshot of the State of the Watershed

Rosy, the Steelhead Trout (Not Rosi Dagit the person!)



Daily Valley News

North Santa Monica Bay "State of the Watershed 2023" Will Address Sa

By Melina Watts

Safe, clean water sounds like cold water from a tap, like a stream running down to the sea, like children playing in the surf.

While the drinking water quality for residents in the Santa Monica Mountains and adjacent areas is excellent, the runoff from irrigation and rain that travels through our communities picks up pollutants on the way into natural streams and the Pacific Ocean. This polluted run-off has led to water quality impairments such as sediments, nutrients (like nitrogen and phosphorous in fertilizers), PCB's and DDT's, trash, and bacteria. How can our region get to safe, clean water both for the people in our community and the ecosystem as a whole?

The first inaugural North Santa Monica Bay State of the Watershed 2023 will explore what Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village and unincorporated Los Angeles County such as Topanga and the Santa Monica Mountains are doing to improve local water quality, increase local water supply and use nature-based solutions as a path to safe clean water for people and our shared ecosystem.

To be held in person at Las Virgenes Municipal Water District on Thursday, May 11, from 4:30 to 6:30 pm, this event will be available online as well. While the event is free, seating is limited. RSVP to lvmwd.com on the community events page.

The State of the Watershed event will start with Agoura Hills Councilmember Jeremy Wolf. Keynote address is from former State Senator Fran Pavley, followed by Aaron Ordower, Environmental Deputy for the Office of Supervisor Lindsey Horvath. Dr. Katherine Peasey from Heal the Bay will detail research focusing on the impacts of the Woolsey Fire on water quality and Clark Stevens from the Resource Conservation

District of the Santa Monica Mountains will share the results of the long-running southern steelhead trout surveys in the Santa Monica Mountains, while considering the status of the Malibu Lagoon 10 years after its restoration. Richard Van Sant, Restoration Ecologist and Project Manager will give attendees a look at the proposed Malibu Creek Ecosystem Restoration Project with California State Parks which proposes to remove Rindge Dam (109 feet tall) and eight upstream fish migration barriers to provide vital habitat for endangered southern steelhead trout. Worth noting: southern steelhead trout can take more heat during breeding and early life stages, which will be of utmost importance as the climate heats up.



Water flows freely through Malibu Pool.

Never heard of Rindge Dam? Before 1929, Malibu Creek has blocked access to the rest of the creek for southern steelhead trout, who nevertheless used the remaining two miles of habitat in Malibu Creek for breeding for about 70 years. The proposed projects would provide 16 miles of additional habitat. All speakers will be available

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NEWS

Watershed committee reminds region of Southern steelhead trout's critically endangered status

By **Samantha Bravo** May 19, 2023

1336 0



Agoura Hills City Councilmember Jeremy Wolf. Photo by Samantha Bravo/TMT.

Inaugural State of the Watershed meeting provides updates on panel's efforts to conserve water

The North Santa Monica Bay Watershed Steering Committee held an inaugural State of the Watershed 2023 meeting last Thursday to address its efforts in improving local water quality and the danger of Steelhead trout, also known as the *Oncorhynchus mykiss irideus*, becoming extinct.

In 1997, National Marine Fisheries Service (NMFS) listed Southern steelhead as endangered. In 2012, NMFS designated Malibu Creek as a high-priority recovery river in the Southern California Steelhead Recovery Plan. Malibu

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SAVE THE WATERSHED

Malibu Creek, Santa Monica Bay wildlife threatened
May 19, 2023
By John Loesing
news@theacorn.com

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MESSAGE: Katherine Pines of the Bay discusses her agency's role in the protection of the Malibu Creek Watershed. Photos by JOHN LOESING/Acorn Newspaper

The Southern steelhead trout, a species of rainbow trout that swims back and forth from inland streams to the Pacific Ocean on its annual spawning mission, is now said to be extinct in Malibu Creek, but one expert speaking at a North Santa Monica Bay Watershed symposium last week in Calabasas isn't giving up hope that the fish will make a comeback.



Biologists, environmentalists and resource conservation managers who attended the state of the watershed conference May 11 at Las Virgenes Municipal Water District headquarters expressed confidence that the now 40-year-old movement to protect local streams and beaches is producing positive results.

Rosie Dagli, senior conservation biologist for the Resource Conservation District of the Santa Monica Mountains, told the more than 100 in-person and virtual attendees of the conference that the hearty steelhead is down but not out.

"These are the fish that we want to have into the future, and support, because they're the ones that can handle the climate change and the temperature differences that are coming our way," said Dagli, a key expert in the Southern California pro-ecology movement.



Rosie Dagli from the Resource Conservation District with a catch of the endangered steelhead trout.

But the past hasn't been kind.

The impact of upstream development and pollution from the 2 million people who live in the 200-square-mile North Santa Monica

READ THE PRINT EDITION



2023-06-02 E-Edition



Kurt And Goldie's Beach House Is Worthless

MOST READ ARTICLES

- 1 [Course planning major changes to the Calabasas Commons](#)
- 2 [We're not going to turn this into a](#)



NSMB Strategic Outreach and Engagement Plan

- Will be (or is) posted on Safe, Clean Water L.A. website.
- Will be shared via North Santa Monica Bay Watershed newsletter.

Photo by Watts



OUTREACH, UPCOMING

Photo by Watts



Las Virgenes Creek Restoration Phase III

- **Community-led community outreach**
- **Tatiana Holden, Tra'a Bezdecny and I are inviting members of the Calabasas Mayor's Youth Council AND the Calabasas Environmental Commission to be docents for creek restoration tours at the Calabasas Pumpkin Festival 2023**

DIY Cistern Day 1: Calabasas Pumpkin Festival 2023



Photo by Watts



DIY Cistern Day 2: Topanga Days 2024

**I give us a 50% chance of success
to get vendors access to this
(popular!) event. Stay tuned.**

Photo by @TopangaDays Instagram



Photo by Watts

North Santa Monica Bay State of the Watershed 2024

- Per request of Adam Carnes, The Center for Sustainability and Business Services, Pepperdine University ... Invited them to host the event in 2024.
- Stay tuned.



COMMUNITY PROJECT CONCEPTS

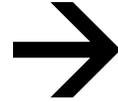
Exploring Setting Up Tour for L.A. County Beaches and Harbors, Leslie Friedman Johnson, Mike Antos, Any Interested Parties of Parking Lot at Malibu Lagoon

- Capture of stormwater from adjacent PCH and from whole parking lot
- Removal of all impermeable pavement in parking lot
- Addition of showers for surfers and unhoused individuals with soapy water captured via rainwater gardens
- Capture of all run-off from cars and treatment via...
- Rainwater gardens with beach-specific native plants
- Graceful integration of view of ocean from parking lot
- Use of gentle hill between parking lot and lagoon to stop direct stormwater flow into lagoon
- Seats for picnics and visiting classes between parking lot and lagoon

Accelerated Resilience L.A. Project Proposal

Safe, Clean Water L.A. is designed to *reflect* community goals and values as we improve water quality and increase local water supply.

Agoura Hills: MS4 Compliance Project



- Soon to break ground.
- Stay tuned!

Calabasas: Las Virgenes Creek Restoration Phase III

Wildlife Life Conservation Board awaiting a full grant application.
Stay tuned.





**MEET AND GREET:
INCREASING WATERSHED
COMMUNITY CONNECTIVITY**



- **Attended Zuma Blue Flag Award Ceremony**
- **Attended Agoura Hills Community Clean Up Day**
- **Continued to help support Westlake High School Garden Club**



Photo by Watts

Remember Earth Day at Westlake Village, Calabasas and Pepperdine University?

- Over 100 people signed up for the North Santa Monica Bay Newsletter

The background is a dark blue-grey color with various abstract geometric elements. There are several overlapping circles and rectangles in a slightly lighter shade of the background color. Some of these shapes have dotted outlines. In the top right corner, there are four horizontal rows of small white dots. In the bottom left corner, there are three vertical lines of small white dots. The main text is centered in the upper half of the image.

**RAINMAKING:
CO-CREATING
FUNDING OPPORTUNITIES**

A Beautiful Maybe...

Connected with,

- Tom Ford, Santa Monica Bay National Estuary Program
- Warren Ontiveros, Maral Tashjian and Team, Los Angeles County Beaches and Harbor
- Are there project partnerships possible?
- Can we use the Malibu Lagoon permeable parking lot as a model?
- Is the Wildlife Conservation Board the answer to beach replenishment via dune restoration projects?

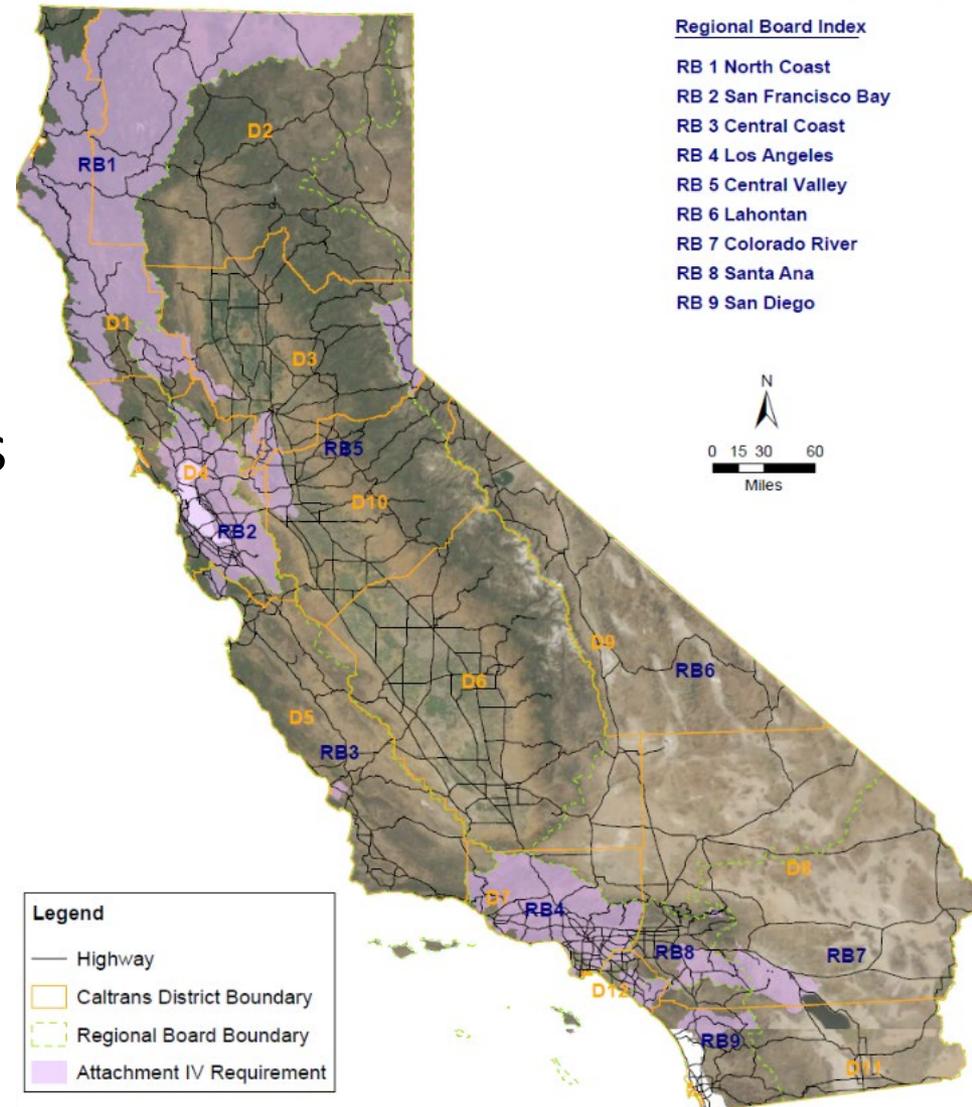




Stormwater Treatment Partnerships

Caltrans TMDLs

- Stakeholder in 87 TMDLs covering 8 Pollutant Categories
- Linear facility: 4,100 miles roadway in TMDLs
- Narrow right of way
- Caltrans Cooperative Agreements for stormwater Partnerships



Caltrans NPDES Permit

The 2022 Caltrans NPDES Permit will require Caltrans to:

- Meet Waste Load Allocations of TMDLs
- Reduce trash in Significant Trash Generating Areas (STGAs)

Partnership Programs

Cooperative Implementation Agreements (CIA)

- Fund available for planning through construction
- Limited amount of funds available each year
- Submit Project proposals by October of each year.
- Final Funding decisions are made by March of each year
- Funds available immediately after Coop execution



Partnership Programs

Financial Contribution Only (FCO)

- Funds capital construction costs
- Caltrans prepares the Project Initiation Document using local agency project scope summary report
- Dedicated funds
- Submit Project proposals by October of each year.
- Final Funding decisions are made by January of odd years
- Funds typically become available after 2 years. For example, project programmed by June 2023 has funding available for construction from July 2026.



Partnership Programs

For each program:

- Maintenance is responsibility of local agency
- Projects remain eligible if not selected



Questions?

Anand Maganti
HQ Stormwater Coordinator
E-mail: anand.maganti@dot.ca.gov
Phone: (916)210-9849



Stormwater Capture Demonstration Study June 2023 Update

ARLA

ONEWATER
— ECON —



waternow
alliance
water leaders. resilient solutions.



craftwater™
engineering, inc.

The Nature
Conservancy 

Define clear metrics and definitions

1. Develop Local Metrics
2. Refine NBS/
Nature-Mimicking
3. Expand Water Supply Benefits

Determine what is technically possible and what the needs are

4. Create Watershed Area Signatures
5. Create Community Engagement Program
6. Conduct Needs Assessments
7. Connect Community Engagement to Technical Resources Program
8. Clarify Scoring for Engagement
9. Prioritize NBS

Assess who benefits

10. Create Clear Equity Standards
11. Determine, Test, and Select Supplemental DAC Indicators
12. Quantify Benefits At Appropriate Spatial Scales
13. Calculate DAC Benefits with Population
14. Include DAC Benefits in Scoring

Set local targets

15. Set Watershed Area Targets

Determine right tools and data

16. Model Project Interactions
17. Build Potential Project Portfolio

Expand opportunities and coordination

18. Incentivize WHAM Coordination
19. **Create a Private Property Incentive Program**
20. Create and Implement A Robust Workforce Development Program

Calibrate scoring

21. Test Alternative Scoring Criteria

Monitor and verify progress

22. Develop a Monitoring Program

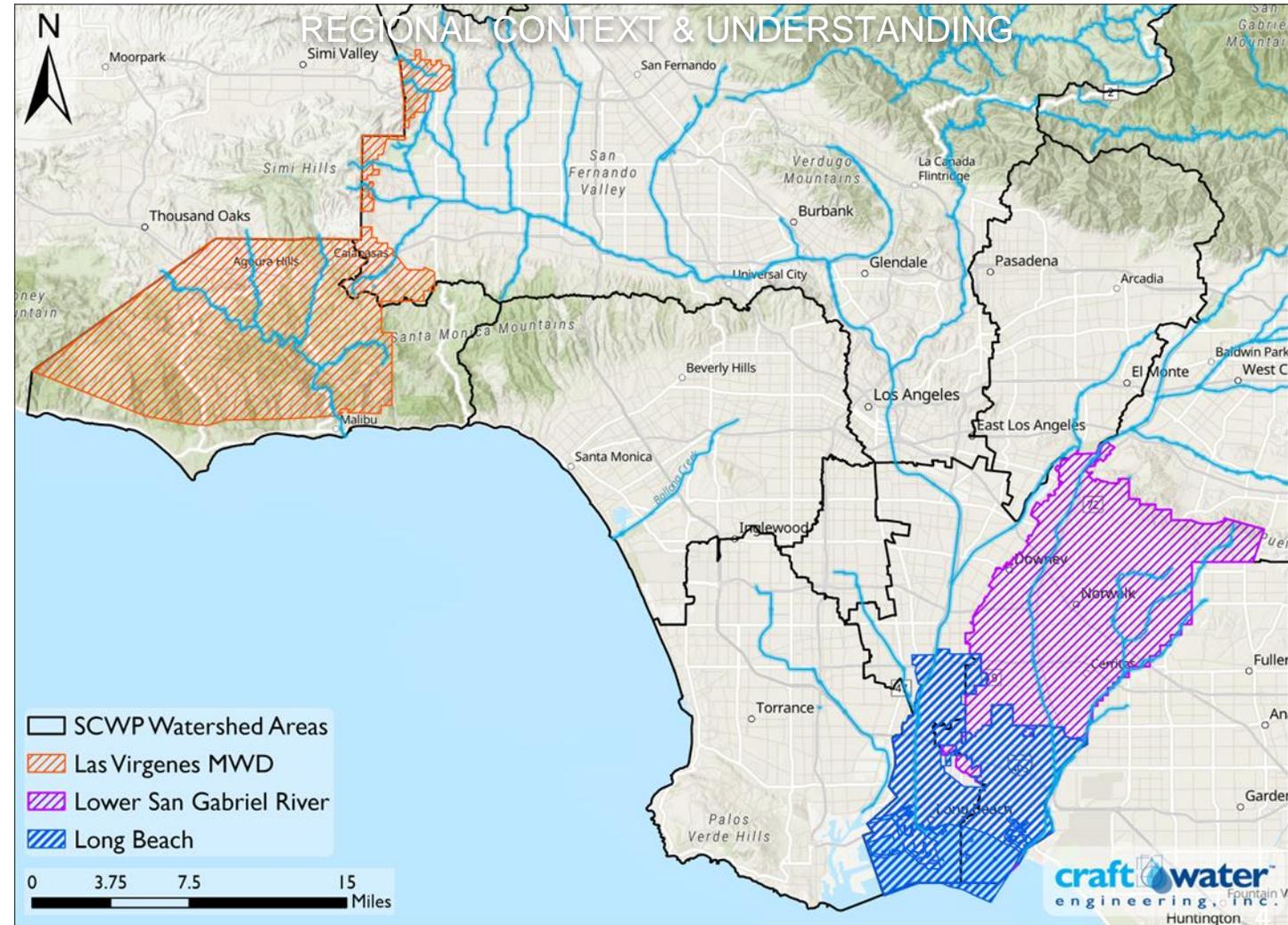
Creating Incentives for Local Water Resilience



How this study advances our current state of understanding:

- Estimates the maximum potential for stormwater capture on private property in three study areas
- Determines the number of parcels and BMPs that could capture flows
- Quantifies co-benefits of BMPs to drive co-investment opportunities and evaluates cost/benefits
- Outlines potential programs and related costs for achieving this potential

Study Regions & Scaled Approach



Modeled Project Types

	Single-Family Residential	Multi-Family Residential	Commercial	Institutional (Public & Private)
Landscape Transformation	X	X	X	X
Above Ground Cisterns	X	X	X	X
Below Ground Cistern	--	--	X	X
Engineered Bioretention	X	X	X	X



Landscape Transformation



Above Ground Cistern



Below Ground Cistern



Engineered Bioretention

Metrics Analyzed

Water Supply

Volume captured by fate

- Infiltrated (recharge)
- Irrigated (demand offset)

Water Quality

“Limiting Pollutant” load reduction

Community Investment Benefits

- Tree canopy
 - New groundcover
- } Proxies for carbon sequestration & air quality improvement
- Water “on-hand” for fire risk reduction/value of property protected*

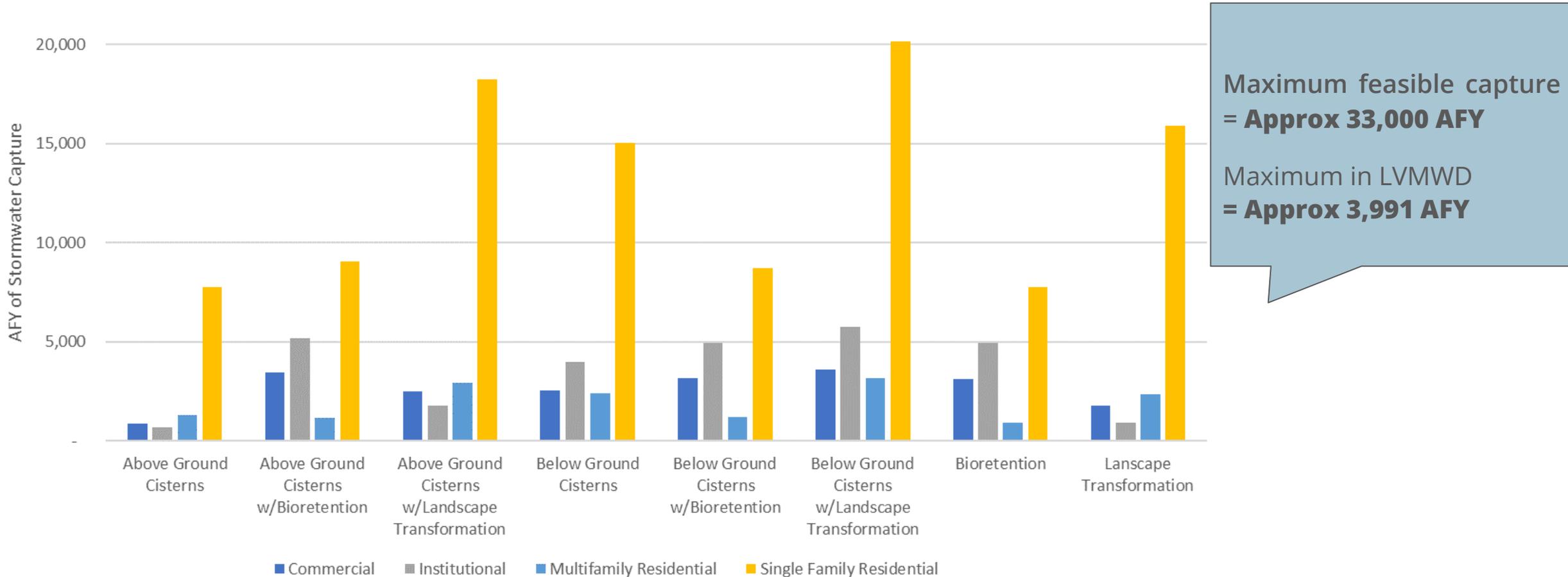
Monetized to \$ Value

Modeling Approach

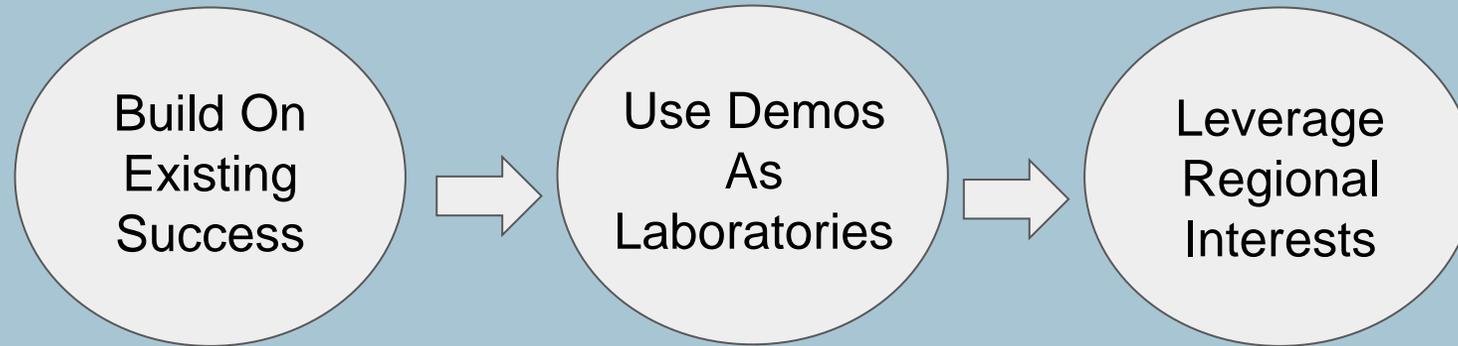


Stormwater Capture Potential Across the Pilot Areas

Potential Acre-Feet of Capture Per Year by BMP and Land Use Type



Preliminary Recommendations



Foundational Principle: Reimagine Turf Replacement Program as Landscape Transformation

Program Recommendations:

1. Climate Resilient Landscapes (Residential Properties)
 - 1a. Landscape transformation w/optional cisterns
 - 1b. Landscape transformation w/optional larger cisterns for fire protection
1. Climate Resilient Businesses (Commercial and Institutional Properties)

Climate Resilient Landscapes (Las Virgenes): Goals & Assumptions

Key targets

- LVMWD **176 AFY** conservation savings (single family)
- Malibu Creek EWMP goal: **24.6 AF** stormwater storage capacity from private property BMPs by 2032

Program goal

- Achieve 50% of conservation target savings (**89 AFY**)
- Meet portion of relevant EWMP goals
- Add storage for fire protection (Zone 1)



Key assumptions

- Landscape transformation: \$19.61/sq. ft., average size ~1,250 sq. ft.
- Cistern: \$1.86 per gallon, average size ~4,100 gallons (max 5,000)

Climate Resilient Landscapes (Las Virgenes)

Incentive bundle:

- Landscape Transformation
- Optional Larger Capacity Above-Ground Cistern
- Tiered rebate covers percentage of unit cost

Property type: Single-Family Residential

How many: 445 pilot installations

Details: Larger cisterns provide additional storage capacity to support defensible space irrigation during 'red flag' warning periods



Climate Resilient Landscapes (Las Virgenes)

Benefits (Annual) and Costs (Capital)

	Practice Type	Single Family Homes	Stormwater Capture (AFY)	Potable Water Supply Offset (AFY)	Water Quality Benefit (Lbs. of Zinc)	Fire protection benefits (\$/year)	Full Cost (cost for all potential co-payors)
Demonstration Scale	Landscape transformation + ~30% cistern uptake	445	37	89	11	\$38.1K	\$12.1 M

- Potable offsets = 50% of LVMWD SF home conservation target of 176 AFY
- Contributes to Malibu Creek EWMP stormwater capture goals, at fraction of cost per AF estimated in EWMP

Climate Resilient Businesses: Program Goals

Key Targets

- CII water savings:
18 AFY (LV) (UWMP)
- Stormwater storage capacity (EWMP):
24.6 AF (LV private property)

Program goals:

- LV: 18 AFY conserved (100% of target)
- Meet portion of EWMP goals



Climate Resilient Businesses (Las Virgenes)

Incentive bundle:

- Landscape transformation
- Bioretention component (~60% uptake of BR)
- Tiered rebate covers percentage of unit cost

Property type: Commercial & Institutional

How many: 50 installations

Details: Modifies current commercial turf program to landscape transformation w/optional bioretention (leverages ban on irrigating non-functional turf)

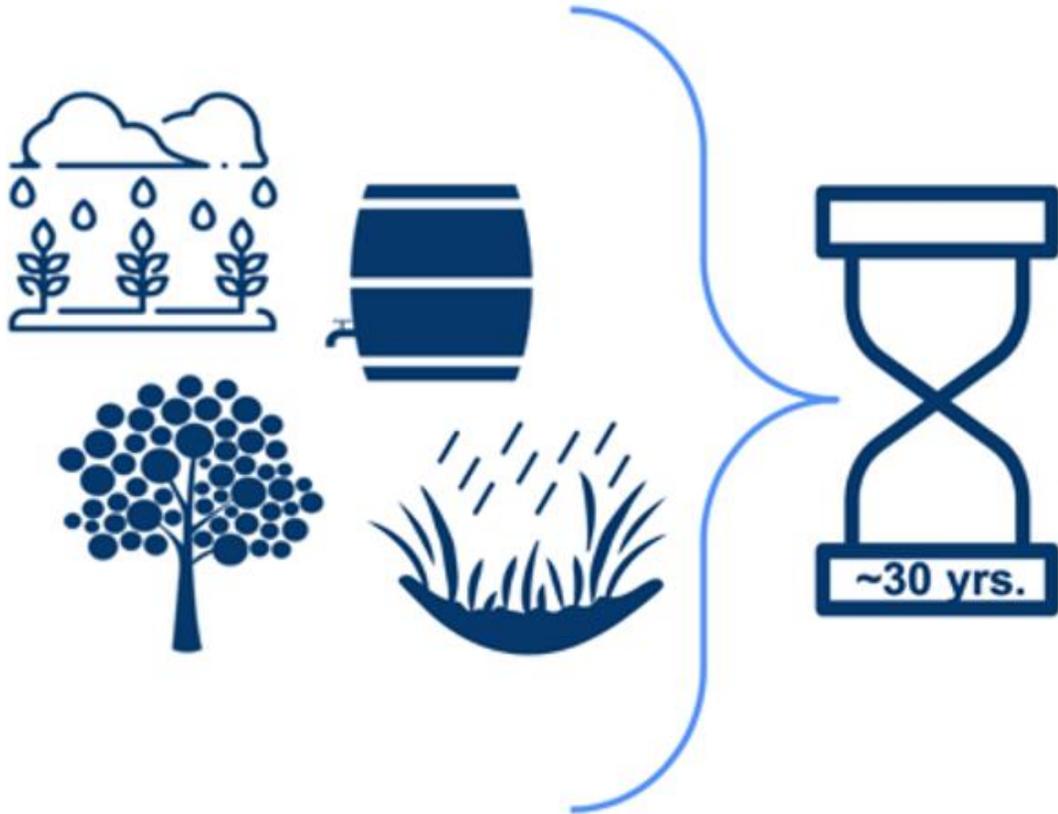


Climate Resilient Businesses: Benefits and Costs

Benefits (Annual) and Costs (Capital)

Demonstration scale	Practice Type	Installations	Stormwater Capture (AFY)	Potable Water Supply Offset (AFY)	Water Quality Benefit (Lbs. of Zinc)	Full Cost (cost for all potential co-payors)
Las Virgenes	Landscape Transformation and Bioretention	50	24	18	29	\$3.9 M

Getting to Scale



Identify Co-Payers and Partners

- SCWP
- Water retail agencies/utilities
- Municipalities
- Grants
- Customers

Consider Debt Financing

- Get to scale
- Lessen rate impacts
- Promote intergenerational equity

Evaluate Delivery Models

- Direct install
- Technical assistance
- P3

SCWP Pathways



SCWP Pathway Options

- Regional Program
 - Potential to meet 19 Feasibility Study Criteria
 - Scoring threshold within reach
 - Technical Assistance can provide support
 - Scientific Study viable for small scale demonstration
- Municipal Program
 - Key element for leveraging Regional Program funds
 - Funds in high demand but highly flexible
- District Funds
 - Potential for some flexible funding
 - Forthcoming grants program could be one source of funds
- Other
 - Biennial Review is an opportunity to recommend other pathways

Thank You

Please visit
acceleratela.org/scwp for ARLA's
SCWP Working Group Report and
Recommendations



Landscape Transformation <ul style="list-style-type: none"> Removal of irrigated turf Replacement with native vegetation Soil-enriching runoff depressions 	Land Uses & Spatial Considerations:	All Land Uses Considered All Regions Considered	
Opportunity Identification:	<ul style="list-style-type: none"> Land cover data from LARIAC were used to identify all Grass and Tall Shrub areas as candidates for Landscape Transformation. Any existing Native Vegetation areas from the USDA Existing Vegetation data layer that coincided with these identified areas were removed so as not to propose Landscape Transformation of areas already in native planting. No parcel line or building setbacks were delineated because Landscape Transformation is designed to retain all runoff without the need to provide any buffer. 	Contributing Runoff:	<ul style="list-style-type: none"> Assumed 1 sf rain garden for every 15 sf of impervious parcel area per sizing recommendations from Pamela Berstler.
Sizing & Cost Calculation:	<ul style="list-style-type: none"> Full conversion of suitable area defined above 6" deep storage, 1.5' soil layer storage with 40% void space on up to 80% of converted area per design guidance from Pamela Berstler 0.57 in/hr infiltration rate per design guidance from Pamela Berstler 	Costs Applied:	<ul style="list-style-type: none"> We applied a cost of \$19.61 per sq. ft. to align with known costs of completing landscape transformation projects in Southern California. We relied on expert opinion from Pamela Berstler from the Green Gardens Group to arrive at this cost. Note that it is significantly higher than the existing rebate offered by MWD (\$2.00/square foot). Costs include labor and materials but <u>not</u> O&M.
Water Supply Benefits Derived:	<ul style="list-style-type: none"> To be conservative, we did not attribute any groundwater recharge benefits to Landscape Transformation projects. Instead, the water supply benefits are only counted as an irrigation demand offset - where the infiltrated water being stored in the root zone of the plants reduces their need for watering. We did, however, factor in the ability for plants to store water in their root zone when calculating the total volume of potential stormwater capture derived from landscape transformation projects. This contributes to water quality benefits through runoff capture (see below). Water supply benefits from Irrigation Demand Offset were valued at \$966/ac-ft based on Earth Economics' monetization prepared for the ARLA SCWP Working Group. 	Water Supply Quantification:	<ul style="list-style-type: none"> SLIDE Rule irrigation demand: The SLIDE rule is a methodology for estimating the irrigation demand of different types of vegetation. The vegetation type was identified using the LARIAC land cover data. 0.55 Irrigation Efficiency applied (from ACWA): The irrigation efficiency value represents the ratio of water actually used by the plants being watered compared to the amount of water being output from an irrigation device. Some irrigation nozzles/sprayers are more efficient than others and we took a conservative approach. Irrigation demands calculated using the SLIDE rule are divided by the Irrigation Efficiency coefficient for more realistic irrigation demand estimates that account for actual water used to irrigate.
Water Quality Benefits Derived:	<ul style="list-style-type: none"> Landscape Transformation removes pollutants from captured stormwater directed to the shallow depressions, generating water quality benefits. Pollutant removal was valued at \$3,173 per pound of zinc removed based on Earth Economics' monetization prepared for the ARLA SCWP Working Group. Zinc was chosen for quantification because it is the limiting pollutant of analysis in most regional Watershed Management Programs. 	Water Quality Quantification:	<ul style="list-style-type: none"> Continuous modeling was carried out using the L.A. County Department of Public Works' LSPC model. Runoff was directed to the shallow depressions associated with the landscape transformation to estimate runoff captured from parcel impervious areas. Zinc loads carried by runoff captured in the modeling were summed to quantify this benefit for the Landscape Transformation.
Community Benefits Derived:	<ul style="list-style-type: none"> Landscape Transformation results in new groundcover and healthier soil, which leads to Community Benefits like improved Air Quality and Carbon Sequestration. The value of Air Quality was set at \$46/sq.ft, and the value of carbon sequestration was set at \$96/sq.ft. based on Earth Economics' monetization prepared for the ARLA SCWP Working Group. 	Community Benefits Quantification:	<p>The full area of Landscape Transformation was assumed to result in beneficial new groundcover to provide the following benefits:</p> <ul style="list-style-type: none"> Air Quality = \$46/sq.ft. Carbon Sequestration = \$96/sq.ft. <p>These benefit values are consistent with those used for the ARLA SCWP Working Group.</p>

ABOVE-GROUND CISTERNS <ul style="list-style-type: none"> Collection/Storage of roof runoff Irrigation demand offset 	Land Uses & Spatial Considerations:	All Land Uses Considered All Regions Considered	
Opportunity Identification:	<ul style="list-style-type: none"> Previous analysis has shown that using LIDAR can be problematic for cistern opportunity identification because it screens out things like trees which you can actually locate a cistern below. Because cisterns in the analysis were sized to capture the 85th percentile storm from rooftops, recommended sizes tend to have a relatively small footprint compared to the rooftop and total parcel area. Additionally, Above-Ground Cisterns are available in a variety of shapes and heights. Since there are so many unknowns associated with site-specific configuration, we assumed space would always be available at a ratio of approximately 45-60 gallons/100 sq.ft. of roof area. We applied this "liberal" assumption so that we could understand the maximum potential benefits of cisterns. 	Contributing Runoff:	<ul style="list-style-type: none"> Runoff contributing to Above-Ground Cisterns was assumed to be all rooftop areas on the parcel to maximize potential capture and reuse on-site. Multiple Cisterns or rain gutters may be necessary if not existing on a site-specific basis to accommodate this.
Sizing & Cost Calculation:	<ul style="list-style-type: none"> The volume of the Above-Ground Cisterns were set to fully capture runoff from the 85th percentile storm falling on rooftop areas as a cost-effective sizing estimate that will capture runoff from most storm events and a portion of the largest events that occur. Rainfall depths (0.75 in. Long Beach; 0.90 in. LSGR; 0.95 in. Las Virgenes) were identified from Los Angeles County isohyetal maps for the 85th percentile rainfall event depths. 	Costs Applied:	<ul style="list-style-type: none"> \$1.86/gallon storage (low end; corrected to 2022 from 2013 @ \$1.50) Additional costs are incurred for filtration, pumps, distribution systems, excavation (if cisterns are placed underground), distribution plumbing and drainage connections, installation, and other components which can add an additional \$2-5/gallon not included in this analysis. (USEPA Rainwater Harvesting Manual, 2013). \$78/year O&M (CLASIC, 2022) includes 3x annual inlet screen cleaning, 1x annual tank interior cleanout, and small pump maintenance every 5 years Does not include costs for treating to Title 22 standards (only necessary if using spray irrigation).
Water Supply Benefits Derived:	<ul style="list-style-type: none"> Water Supply Benefits for Above-Ground Cisterns were assumed to derive from the use of captured water to offset on-site irrigation demands. To account for the differential between seasonal irrigation demand and rainfall/runoff patterns, runoff capture estimates were downscaled based on monthly differentials between irrigation demand and rainfall on record. Benefit value was applied based on the resultant volume used to offset irrigation demand at a rate of \$755/ac-ft as defined for the ARLA SCWP Working Group. 	Water Supply Quantification:	<ul style="list-style-type: none"> Water Supply estimates were developed with continuous modeling of runoff directed to the Above-Ground Cistern. Captured runoff was assumed to be utilized over a 7-day period following rainfall of greater than 0.1 in. (typical regional designation for wet-weather events). Average annual capture numbers were then downscaled based on the monthly differential between irrigation demand and rainfall records for final water supply volume estimates (in other words, water supply benefit is tied to the irrigation demand of the landscape).
Water Quality Benefits Derived:	<ul style="list-style-type: none"> Water Quality Benefits for Above-Ground Cisterns are derived from capturing stormwater runoff and sequestering it on-site, thus removing it from contributing to downstream aggregation of pollutants in storm drains and receiving waters. This Benefit was valued at \$3,173 per pound Zinc removed as previously defined for the ARLA SCWP Working Group. Zinc was chosen to quantify this benefit as it is the limiting pollutant of analysis in many local Watershed Management Plans. 	Water Quality Quantification:	<ul style="list-style-type: none"> Continuous modeling results from the L.A. County Department of Public Works' LSPC model were used for runoff capture estimates and are paired with pollutant timeseries'. Zinc loads carried by runoff captured in the modeling were summed to quantify this benefit for the Above-Ground Cisterns.
Community Benefits Derived:	<ul style="list-style-type: none"> None 	Community Benefits Quantification:	<ul style="list-style-type: none"> None

RED FLAG HYDRATION STORAGE		Land Uses & Spatial Considerations:	All Land Uses Considered Only Las Virgenes Considered
<ul style="list-style-type: none"> Additional "static" storage for cisterns Stored water for site vegetation hydration Fire risk reduction prior to Red Flag conditions 			
Opportunity Identification:	<ul style="list-style-type: none"> Previous analysis has shown that using LIDAR can be problematic for cistern opportunity identification because it screens out things like trees which you can actually locate a cistern below. Because cisterns in the analysis were sized to capture the 85th percentile storm from rooftops, recommended sizes tend to have a relatively small footprint compared to the rooftop and total parcel area. Additionally, Above-Ground Cisterns are available in a variety of shapes and heights. Since there are so many unknowns associated with site-specific configuration, we assumed space would always be available at a ratio of approximately 45-60 gallons/100 sq.ft. of roof area. The additional Cistern space here would be in addition to the Cistern volume intended for irrigation uses and would be accommodated either by additional cistern height or slightly larger footprint, depending on the overall volume and site configuration. 	Contributing Runoff:	<ul style="list-style-type: none"> Runoff for the Red-Flag Hydration Storage Cistern would be the same source as Above-Ground Cisterns detailed above. It was assumed that runoff for these purposes is captured initially upon installation and held for use during Red Flag conditions, with replenishment occurring in the event of use as needed.
Sizing & Cost Calculation:	<ul style="list-style-type: none"> To size these Cisterns, vegetation was measured between 5' and 30' from the building footprint according to currently defined Red Flag hydration requirements to diminish the risk of ember ignition surrounding buildings. Storage volumes were set equivalent to 1-week of irrigation demand (as defined by the SLIDE rule) to adequately hydrate this vegetation. 	Costs Applied:	<ul style="list-style-type: none"> Costs applied for these Cistern volumes are the same as Above-Ground Cistern costs commensurate to the additional storage volume required.
Water Supply Benefits Derived:	<ul style="list-style-type: none"> Water Supply Benefits for this additional Cistern storage were not added as the Benefits from the Storage of this runoff are accounted for as Community Benefits detailed below. 	Water Supply Quantification:	<ul style="list-style-type: none"> Not applicable.
Water Quality Benefits Derived:	<ul style="list-style-type: none"> Water Quality Benefits for this additional Cistern storage were not added as the Benefits from the Storage of this runoff are accounted for as Community Benefits detailed below. 	Water Quality Quantification:	<ul style="list-style-type: none"> Not applicable.
Community Benefits Derived:	<ul style="list-style-type: none"> Water stored in cisterns can be used to increase soil moisture during Red Flag warnings to reduce the risk of homes igniting during a wildfire. We assumed that the additional "static" storage for Above-Ground Cisterns would generate community benefits through the value of property protected. 	Community Benefits Quantification:	<p>Fire risk reduction valuation equation:</p> <p>Median home value (per square foot) * square footage of home * % Fire Risk * % damage reduction from cistern * % building value damage avoided</p> <p>Where:</p> <ul style="list-style-type: none"> Median home value = 2020 ACS 5-year estimates by Census Tract % Fire Risk = FEMA National Risk Index Fire Frequency by Census Tract % damage reduction attributed to cisterns/tanks = 10%, per FEMA standards % of building value damage avoided = 90%, estimate

INFILTRATIVE BIORETENTION <ul style="list-style-type: none"> Engineered, vegetated runoff capture Infiltration to native soils/aquifers 	Land Uses & Spatial Considerations:	All Land Uses Considered All Regions Considered	
Opportunity Identification:	<ul style="list-style-type: none"> Bioretention opportunities on Residential parcels were identified using LARIAC land cover data to identify Bare Soil, Grass, or Tall Shrub Areas that could be converted without removing any functional impervious areas. Setbacks of 10 feet from property lines and 15 feet from building footprints were used to limit the potential areas in accordance with local guidance to avoid local drainage conflicts. Similar considerations were applied for Commercial and Institutional parcels but an additional allowance was provided for these parcel types to account for the potential conversion of some existing impervious areas to Biofiltration areas due to the high prevalence of parking areas that could be partially repurposed to accommodate these installations. This additional accommodation was restricted to no more than 10% of the parcel's non-rooftop impervious area. 	Contributing Runoff:	<ul style="list-style-type: none"> All parcel impervious areas were considered to contribute runoff to Bioretention installations to maximize on-site capture.
Sizing & Cost Calculation:	<ul style="list-style-type: none"> A standard design for bioretention installations was used based on L.A. County Design Guidance. This configuration features an engineered "cell" with 1' of ponding depth and 4' of engineered soil media/gravel with 0.4 porosity for an effective storage depth of 2.6'. This storage depth was used in conjunction with Bioretention footprint area to provide adequate storage volume to capture runoff up to the 85th percentile of runoff given available space. An infiltration rate of 0.57 in/hr was used as an average soil condition for these types of installations. 	Costs Applied:	Capital Costs (residential from EPA, others from City of San Diego) <ul style="list-style-type: none"> Residential: average of typical (\$1.91*footprint + \$4,496.43) and complex (\$5.64*sq.ft + \$12,228.93) costs; typical installations are more simple vegetated depressional storage while complex represent more highly engineered installations Institutional and private commercial: (\$33.5 *sq.ft) Public commercial: (\$33.50*1.4*sq.ft) O&M (ASCE EWRI Survey of BMP O&M Costs) <ul style="list-style-type: none"> Residential: capital costs * 0.01 * years Institutional and private commercial: capital costs * 0.015 * years Public commercial: footprint (sqft) * 0.98 * years
Water Supply Benefits Derived:	<ul style="list-style-type: none"> Water Supply Benefits for Bioretention derive from captured runoff infiltrating and contributing to recoverable water supplies in underlying groundwater aquifers. Given the limited access to usable aquifers in the study area, these benefits were only counted for Bioretention projects located in the forebay area of Los Angeles. These benefits were valued at \$966/ac-ft for Groundwater Recharge as used in the ARLA SCWP Working Group. We did not assume any irrigation demand offset benefits from bioretention. 	Water Supply Quantification:	<ul style="list-style-type: none"> Water Supply estimates were developed with continuous modeling of runoff directed to the Bioretention installations. Captured runoff was assumed to be infiltrated to the aquifer below for projects over the forebay region.
Water Quality Benefits Derived:	<ul style="list-style-type: none"> Infiltrative bioretention removes pollutants from captured stormwater, generating water quality benefits. Pollutant removal was valued at \$3,173 per pound of Zinc removed based on Earth Economics' monetization prepared for the ARLA SCWP Working Group. 	Water Quality Quantification:	<ul style="list-style-type: none"> Continuous modeling results from the L.A. County Department of Public Works' LSPC model were used for runoff capture estimates and are paired with pollutant timeseries'. Zinc loads carried by runoff captured in the modeling were summed to quantify this benefit for the Bioretention projects.
Community Benefits Derived:	<ul style="list-style-type: none"> Bioretention projects were assumed to accommodate plantings of additional trees depending on the overall footprint which add canopy and associated benefits where these projects are installed. Different tree types and typical canopy spread were evaluated and analyzed to accommodate as many tree plantings as possible over the 	Community Benefits Quantification:	The number of trees and area of canopy added for each Bioretention installation were quantified based on the following: <ul style="list-style-type: none"> Aesthetic Value: \$120/tree Removal of Air Pollutants: \$9/tree Carbon Sequestration: \$18/tree