



Bacteria Source Identification and Implementation Study

Scientific Studies Program

Fiscal Year 2025-2026

Watershed Areas: North Santa Monica Bay

Project Lead: Malibu Creek Watershed Management Group

Lead Agency: City of Agoura Hills

Presenter: Larry Walker Associates (LWA)



Study Overview

The Bacteria Source Identification and Implementation Study will collect data to support targeted actions to address human fecal contamination and protect public health in the Malibu Creek Watershed.

- 1) Evaluate where illness risk may be elevated
- 2) Identify potential high-risk sources of human fecal contamination
- 3) Support targeted BMP implementation





Problem Statement

- Fecal indicator bacteria (FIB) are a major challenge in the MCW
- Question from WASC: Does CIMP tell us where to target projects?
- Answer: CIMP provides FIB data, but doesn't tell us about risk
 - Previous studies tell us that FIB mischaracterize risk
 - Human sources of fecal contamination typically drive risk
- Watershed-specific data on human sources and pathogens are needed to understand risk and where to build projects



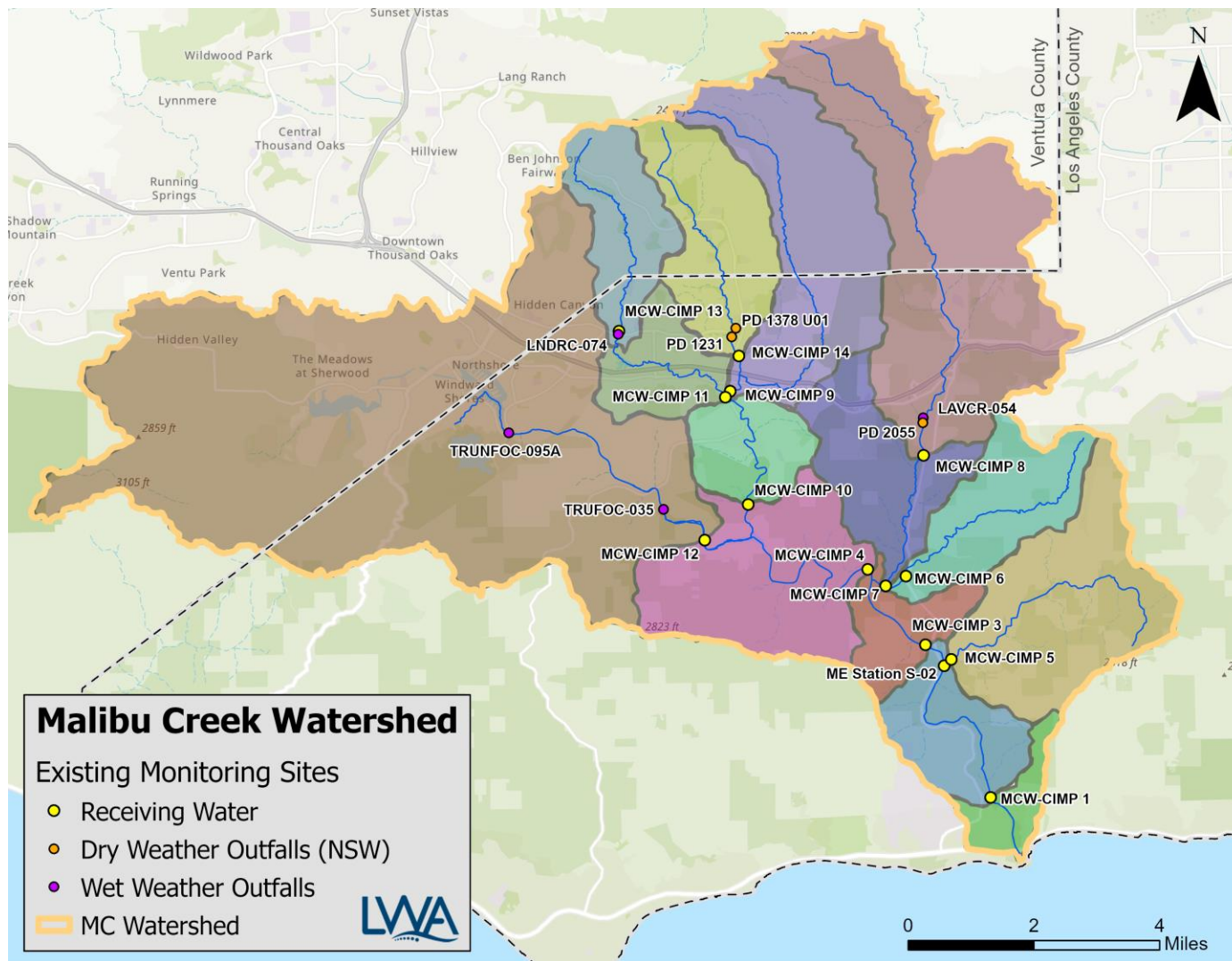
Study Team

- Study Sponsor: Malibu Creek Watershed Management Group
 - City of Agoura Hills
 - City of Calabasas
 - City of Hidden Hills
 - City of Westlake Village
 - County of Los Angeles
- Lead Agency: City of Agoura Hills
 - Kelly Fisher, Public Works Project Manager
- Study Support: LWA
 - Leads monitoring in the watershed
 - Experienced in collection and interpretation of bacteria and pathogen data





Study Location



- North Santa Monica Bay WASC
- Malibu Creek Watershed
- Leverage ongoing monitoring
 - Coordinated Integrated Monitoring Program (CIMP)
 - 21 Receiving Water & Outfall Sites



Methodology

Task 1: Work Plan Development

Study Design

Stakeholder Engagement



Task 2: Receiving Water and MS4 Data Collection

Is risk elevated? If so, where?

Are MS4 outfalls contributing? If so, where?



Task 3: Reporting and Application of Study Findings

Evaluation of Risk

Priorities for Management Actions



Comparison to Regional Study

Study Objectives	Study	
	Regional Pathogen	Bacteria Source Identification and Implementation
Risk Assessment	Evaluate risk <i>regionally</i>	Evaluate risk in <i>specific MCW waterbodies</i>
Source Investigation	Identify sources that are most important <i>regionally</i>	Identify <i>specific MS4 outfalls in the MCW</i> that potentially contribute to risk
Implementation	Identify types of projects and approaches that would be effective <i>regionally</i>	Identify where actions should be taken in <i>in the MCW</i>
Number of Sites	Broad; 1-2 per watershed	Focused; multiple per waterbody



Cost, Schedule, & Funding Request

Cost & Schedule

Phase	Description	Cost	Completion Date
1	Work Plan Development	\$25,000	5/15/2026
2	Receiving Water and MS4 Data Collection	\$350,000	10/1/2028
3	Reporting and Application of Study Findings	\$75,000	12/1/2028
TOTAL		\$450,000	12/1/2028

Funding Request

Year 1	Year 2	Year 3
\$135,000	\$165,000	\$150,000



Summary of Benefits

- Inform siting and prioritization of BMPs to effectively reduce risk
 - Maximize public benefit and ROI of BMPs
- Support recreation in the MCW and protect public health





Questions?