Advancing Effective Ocean Litter Solutions for California

Photo Credit: Friends of the Los Angeles River

FINAL REPORT

September 19, 2025

Submitted to:
NOAA National Sea Grant
Award no. NA23OAR4170154

Submitted by:
California Sea Grant &
University of Southern California Sea Grant

RECOMMENDED CITATION

Torres, T., S. Rilum, G. Young, A. Aruda Almada and T.S. Talley. 2025. Advancing effective ocean litter solutions for California. Final Report Submitted by California Sea Grant and USC Sea Grant to NOAA-National Sea Grant, Award no. NA23OAR4170154. Publication no: CASG-2025-001. Available from: https://caseagrant.ucsd.edu/our-work/research-projects/advancing-effective-coastal-litter-solutions-through-californias-ocean

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Background. Litter and plastic pollution remain persistent challenges in California's coastal regions. The most severe impacts often fall on urban areas like Los Angeles where high population density, impaired waterways, and infrastructure limitations intersect. In 2008, California was first in the nation to develop and adopt an ocean litter reduction and prevention strategy. In 2018, the plan, jointly led by the NOAA Marine Debris Program and the California Ocean Protection Council and retitled as the "Ocean Litter Prevention Strategy" (OLS) was updated by over 50 organizations, laying out goals and actionable objectives for addressing litter between 2018–2024. Although overall engagement was relatively high, a preliminary 2022 review of the OLS community found that many pollution-affected groups and regions were not well represented in the Strategy's implementation. It also highlighted a few key hurdles to participation, including financial constraints, limited staffing, and a lack of social capacity, factors that hindered involvement in OLS activities and broader efforts to address ocean litter.

Goal and Objectives. This project, therefore, sought to advance more widespread and effective ocean litter prevention by fulfilling three objectives.

1. Identify geographic and social gaps in participation in the planning and implementation of the statewide Ocean Litter Strategy, including who has been involved and in what ways, and who has been missing
2. Assess the current situation and needs of a densely urban, litter-impacted region through a case study of the city of Los Angeles
3. Explore ways to inform more coordinated investments in community-based marine debris solutions in California

Objective 1. The gap analysis revealed that sectors with the highest participation in the OLS, meaning most groups per sector and most interactions per group, were non-profits, government, and industry, in particular those directly involved in addressing trash issues. Notably, the least participation was from tribal organizations, socio-environmental non-profits, and place-based (or community-based) non-profits—all groups potentially representing the neighborhoods most vulnerable to trash pollution. Despite high overall engagement, most OLS actions and implementation were spearheaded by environmental non-profits. In terms of engagement format, webinars were the most highly attended form of participation and provided low-effort opportunities for people and groups to participate.

Objective 2. The Los Angeles community needs assessment, informed by the gap analysis results and facilitated by a Community Advisory Group, used a combination of individual interviews, written surveys, and virtual focus groups to collect and analyze input from Los Angeles organizations and communities. The assessment revealed local perspectives on litter pollution that had been missing from the OLS, including the priority issues and current initiatives, and revealed how the OLS could better support litter-impacted communities.

Local Perspectives. Community members described litter as a persistent and deeply felt issue, with particular concern around single-use food and beverage packaging, cigarette butts, and illegally dumped bulky items. Hotspots included beaches, waterways, urban centers, and areas with dense populations or inadequate services, where fast food culture, houselessness, and waste management inefficiencies were seen as key drivers. Beyond its visibility, litter was tied to public health risks and financial burdens for local governments and taxpayers, fueling frustration and emotional distress among residents who feel strongly connected to their neighborhoods and environments. Importantly, respondents noted that the way litter is discussed—whether through specific terms like single-use plastics and illegally dumped items or broader terms like trash and pollution—influences how responsibility is assigned and what solutions are pursued. Language that captures the complexity of litter is critical for fostering understanding and addressing both environmental and systemic dimensions of the problem.

Priority Issues. Litter was viewed as a symptom of much larger issues by some with the focus on litter itself almost detracting from addressing the issue. Litter reflects deeper social, economic and structural issues including failures in public policy. Litter and waste impact some communities more than others due to unequal infrastructure investment and long-standing neglect by government agencies and corporations. Cultural and educational gaps are also contributing factors, such as misunderstandings about proper waste disposal and broader societal expectations around who is responsible for the impacts of consumption and waste.

Current Initiatives. A variety of programs addressing different aspects of litter pollution, from policy change to community clean-up initiatives, are underway in Los Angeles. However, a disconnect exists between community concerns and government priorities. While residents see mitigating litter pollution as a high priority, they perceive local governments and elected officials as placing less urgency on the issue, often emphasizing cleanup rather than prevention or systemic solutions. The assessment highlights the

trade-offs between different strategies and underscores the need for an integrated, multi-strategy approach. In Los Angeles, better coordination across programs and stronger community engagement—supported by financial incentives, education, and opportunities for co-production—are key to maximizing impact and ensuring meaningful participation in statewide efforts like the OLS.

OLS Challenges and Opportunities. Respondents identified time constraints, misalignment of priorities, and limited familiarity with the OLS as major hurdles to participation, alongside logistical, financial, and employer support challenges. While some saw overlap with OLS goals, many noted its focus on oceans did not align with their own priorities on neighborhoods, waterways, and root causes like plastic production and consumption. Preferences for engagement formats varied, with some favoring virtual webinars for convenience and others preferring in-person workshops for deeper community involvement. To improve participation, respondents recommended early outreach, partnerships with community-based and socio-environmental organizations, consistent and easy-to-attend events, and stronger support such as honoraria, travel reimbursement, and project funding. Formal invitations, certificates, and translation services were also seen as useful for engagement and professional recognition. Respondents emphasized that resources for public and staff education, funding opportunities, technical assistance (including grant writing), and stronger connections among communities, experts, and agencies would provide significant benefits, particularly in fostering stewardship and long-term capacity to address litter pollution.

Objective 3. The needs assessment explored funding challenges and opportunities related to addressing litter pollution, with input gathered through targeted questions and a dedicated session with the Community Advisory Group. Drawing on both local insights and existing fair funding frameworks, the project identified common funding challenges and developed tangible tools, including a funding opportunities repository and a funding best practices guide, to improve availability of resources for communities. A key finding was that inadequate and misallocated funding remains a major limitation to addressing trash pollution, with city budgets often stretched thin and waste management deprioritized, especially in low-income areas. While philanthropic funding can be less restrictive, it remains difficult to obtain due to political and bureaucratic challenges. Conversely, state and local funds tied to policy mandates tend to be more attainable. Increasing both awareness of and ease of applying to funding opportunities is essential, as many residents are motivated to take action but lack the time and resources without financial support. Sustained community action requires meaningful investment, and

without it, grassroots efforts are at risk of burnout and may struggle to maintain engagement or create long-term change. Although applicants, grantees, and funders face a range of challenges, there are also clear opportunities for funders to reduce those burdens and advance more widespread and effective solutions.

Conclusion. This project highlights the need for more widespread engagement, coordinated strategies, and sustained investment in California's coastal litter efforts to better reflect the priorities, needs, and strengths of impacted regions. Throughout the project, several best practices emerged—spanning initial outreach, planning, and implementation—that can help guide and strengthen future coastal litter reduction initiatives.

Best practices include:

- Building connections across sectors and locations among agencies, decision makers, funders, industry, on-the-ground practitioners, and communities most impacted by pollution.
- Starting engagement early and maintaining consistent, frequent communication and opportunities for involvement.
- Developing a shared understanding of current conditions, priorities, challenges, and opportunities (financial, technical, social, health-related, etc.).
- Reducing challenges and promoting widespread participation through incentives, compensation, resources, local collaboration, and support services.
- Ensuring adaptability by regularly assessing progress, integrating new knowledge, and adjusting strategies as needed.
- Supporting community-led initiatives, especially from under-resourced groups, by sharing funding opportunities, providing technical assistance, and offering additional forms of support.

Best practices for strengthening the OLS thematically align with this list but point to more specific actions. These include broadening and deepening engagement by expanding connections to the under-engaged sectors and communities, providing on-going opportunities for participation, and addressing funding and capacity limitations. The OLS could also benefit from collaboratively revisiting and modifying goals to better address local needs, establishing a process for adaptive evaluation of progress and adjustment of strategies, as well as stronger support for community-led efforts through training, resources, and coalition networks.

INTRODUCTION

Under-resourced communities are often disproportionately impacted by the effects of litter pollution (Calil et al., 2021; Finewood et al., 2023; Morello-Frosch et al., 2002), especially in coastal regions where watershed flows converge, and population density (and therefore waste) tend to be highest (Heard 2024; Crossett et al., 2013). There is an incredible need and opportunity to allow these communities to lead and inform management and policy, ensuring solutions to address trash and plastic pollution are community-informed and driven.

This project aimed to address California's coastal litter pollution through leveraging the California Ocean Litter Prevention Strategy and its associated community. The California Ocean Litter Strategy (or OLS, also referred to as "the Strategy" in this report) was a statewide action plan jointly led by the NOAA Marine Debris Program and the California Ocean Protection Council. The six-year plan (2018-2024) was voluntarily co-developed by over 50 California-based organizations, to implement six stakeholder goals supported by 64 specific actions outlining key priorities and tasks to prevent and reduce ocean litter. As of May 2024, the end of the last progress reporting period, ~75% of actions were in progress, ~12.5% had been completed, ~3% were on hold, and only ~9.4% had not been reported on.

Preliminary assessments from 2022 indicated that the OLS community was primarily composed of non-profit and government groups with existing mandates or missions related to mitigating trash issues. Groups representing neighborhoods and people potentially most vulnerable to trash pollution were largely missing. The reasons for their absence were uncertain but may have included lack of awareness of the OLS or, as revealed by past OLS feedback, financial burden and lack of staff and social capacity to engage in the OLS's activities and address ocean litter solutions more generally.

Despite many efforts, land-based trash and plastic pollution continue to plague California communities, waterways, beaches, and the ocean, particularly in vulnerable, under-resourced and economically depressed neighborhoods. The city of Los Angeles (referred to as Los Angeles or LA in this report) contains the majority of the state's water bodies that are impaired by trash, which also run through low-income and severely disadvantaged communities as defined by the state of California. At the same time, Los Angeles has some of the most progressive efforts in the state to address litter pollution. The metropolitan Los Angeles area is the most populous region in the state and country,

and can provide a case study for better understanding the pollution issues, current efforts underway and the challenges to achieving solutions.

As the OLS community continues to address marine debris issues statewide, the Strategy's federal and state leads recognized that sustained, statewide solutions could not be achieved without including and acting on the priorities of those who may be most vulnerable to and/or impacted by trash pollution and who have thus far not been part of relevant decision-making processes. A better understanding of the gaps in participation, as well as the needs, priorities, and opportunities of those not at the table, was needed for the OLS and its community to more effectively and comprehensively address trash pollution across coastal California.

GOAL AND OBJECTIVES

Goal: To strengthen and broaden the reach and effectiveness of the Ocean Litter Strategy (OLS) and, more generally, coastal and ocean pollution strategies across California.

This goal was met by fulfilling three **objectives:**

1. Identify geographic and social gaps in participation in the planning and implementation of the statewide Ocean Litter Strategy, including who has been involved and in what ways, and who has been missing
2. Assess the current situation and needs of a densely urban, litter-impacted region through a case study of the city of Los Angeles
3. Explore ways to inform more coordinated investments in community-based marine debris solutions in California

This information will inform sustained solutions and engagement in future state-level efforts, such as the second update of the OLS.

Objective 1: Identify the geographic and social gaps in participation in the planning and implementation of the statewide Ocean Litter Strategy, including who has been involved and in what ways, and who has been missing

Approach

A stakeholder gap analysis was conducted to identify sectors, groups and regions that have not been well represented or involved in the planning and implementation processes of the current OLS.

Engagement data were compiled from various OLS touchpoints such as OLS planning workshop attendance, public comment submissions, Strategy action lead sign-ups, progress report submissions, webinar attendance, and workgroup participation from 2017 - 2022. Engagement types (e.g., planning, webinar attendance), numbers (e.g., number of individuals or groups), and frequencies (e.g., number of participation events) were calculated. Data were analyzed using graphical visualizations by sector and group, engagement method, and geographic location.

Participation

From the inception of the OLS in 2017 to its implementation through 2022, 331 organizations from different sectors have been involved (Figure 1). The majority were socio-environmental, environmental, and place-based **non-profit organizations** (n=94), followed by federal, state and local **government** (n=85), **industry** (n=68), **community members** (i.e., no other affiliation, n=41), and **academia** (n= 30), with smaller representation from **research institutes** (n=6), **media** (n=4), **tribal related organizations** (n=2), and **faith serving institutions** (n=1) (Figure 1).

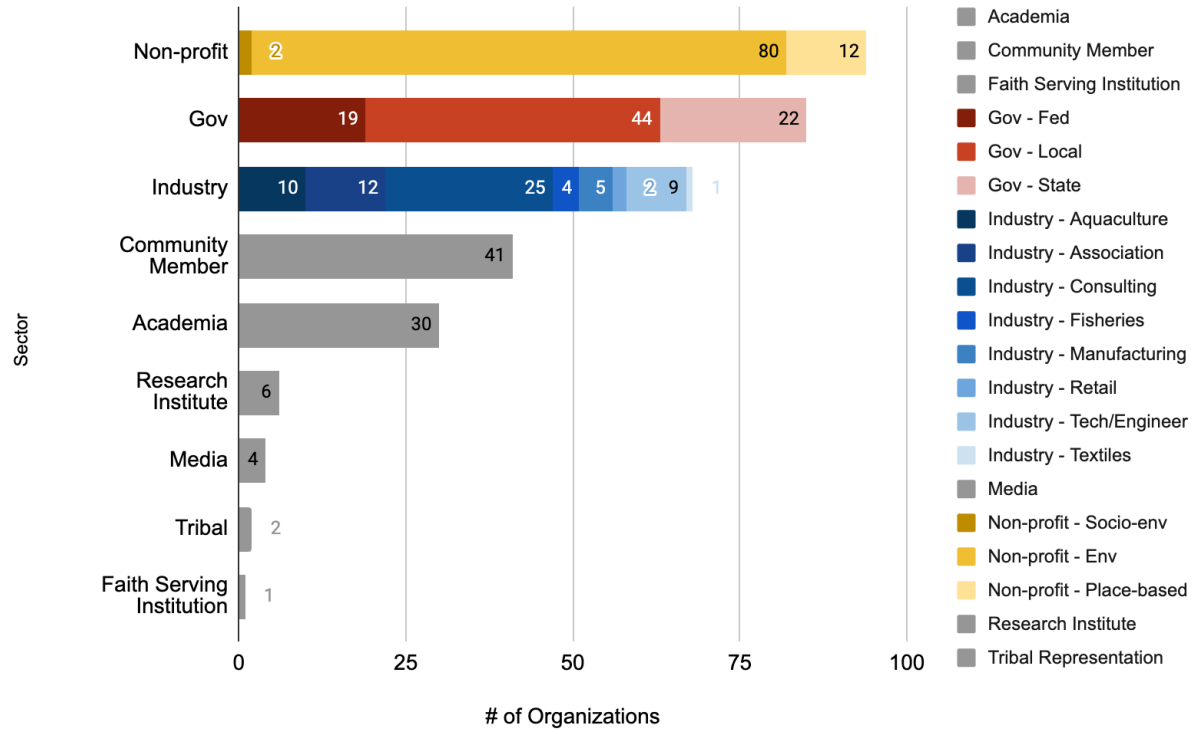


Figure 1: The number of organizations that participated in Ocean Litter Strategy (OLS) activities between 2017 and 2022, grouped by sector and sub-sector. (Gov= government, Fed= Federal, Socio-env= Socio-environmental, Env= Environmental). *See Appendix A for detailed definitions of each sector.*

The **Government** sector included local, state, and federal government, with the majority of representation coming from local governments (n=44). The **Industry** sector included a variety of for-profit entities such as aquaculture businesses, industry associations, consulting firms, fisheries, plastics manufacturing, retail businesses, technology and engineering firms, and textile operations. Consulting firms had the highest representation in the industry sector (n=25), followed by industry associations (n=12), and aquaculture businesses (n=10). Notably, there was relatively little representation from the textile industry, manufacturers, and retailers, all of which are known to be prominent stakeholders associated with products that become litter. The **Non-profit** sector included environmentally focused non-governmental organizations (NGOs), socio-environmental organizations, and place-based (or community-based) NGOs. The majority of non-profits involved with the OLS were environmental NGOs (n=80). 12 non-profits were considered place-based, and 2 identified as socio-environmental organizations.

Greatest participation came from non-profits, government, and industry sectors, while

there was notably limited representation from other groups including tribal organizations, socio-environmental non-profits, and place-based non-profits (Figure 1). Most participants appear to be from sectors with direct involvement in addressing trash issues (e.g., waste management in city governments, pollution focused environmental nonprofits and consulting firms), with low representation and involvement from sectors intended to be directly served by the Strategy (i.e., tribal and place-based communities).

Engagement

Between 2017 and 2022, there were 1,158 participation events (i.e., individual occurrences of participation) with the OLS from a total of 542 individuals representing 331 organizations across California, other locations in the U.S., and a few other countries (Figure 2). There were four general types of activities that people could participate in:

- **Development:** Participation in the OLS development (e.g., attending the 2017 planning workshops, assisting in strategy drafting, providing public comment)
- **Implementation:** Participation in OLS implementation (e.g., identified as Action Lead or Partner in the published Strategy, submitted or contributed to bi-annual progress reports)
- **Webinars:** Attendance at bi-annual OLS Update Webinars
- **Workgroups:** Attendance at bi-annual OLS Goal-specific Workgroup Meetings (began in Fall 2020)

The OLS **Webinars** were the most highly attended in terms of individuals and organizations with a total of 348 participants from 235 unique organizations throughout 2017 to 2022. Webinars were the easiest way to engage with the OLS with low effort and resource investment for attendees. The Webinars, therefore, provided easy engagement opportunities for more people and groups, including the more resource limited groups. Namely, individual community members who were not affiliated with a sector or organization predominantly engaged with the OLS through the public Webinars, as well as the **Workgroup** meetings (as opposed to the development or implementation of the Strategy). Similarly, the few Socio-environmental Non-profits (n=1) and Tribal Organizations (n=1) who engaged with the OLS predominantly did so through the Webinars (noting participation of 1 Socio-environmental non-profit group in Strategy Development).

While most sectors participated in the **Development** of the OLS (Figure 2), **Implementation** was primarily carried out by Non-profits (Figure 2), with Environmental Non-profits comprising ~42% of the organizations participating in

implementation. The number of participation events by Non-profits during the implementation phase was the highest of all groups (n=174 events), but activities were conducted by only 37 individuals from 23 organizations. This emphasizes that a bulk of the OLS implementation work was conducted by non-profits. There were similar numbers of Industry organizations as non-profit and government groups during OLS planning, however much fewer were involved in implementation (Figure 2). This could be a function of the targeted, personalized, cross-sector recruitment effort that was conducted for the OLS planning workshop, and the more passive recruitment approaches during implementation.

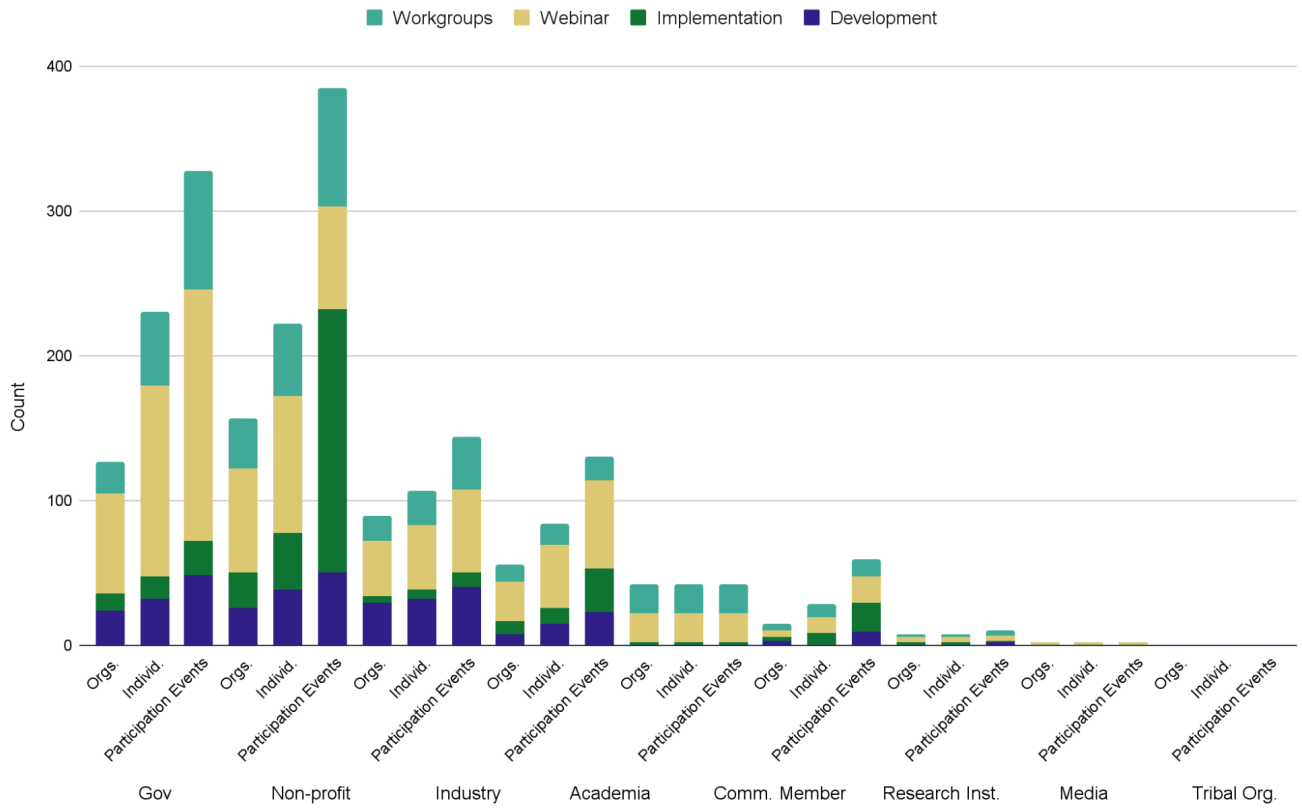


Figure 2: The number of organizations and individuals engaged in the OLS as well as the total number of participation events by sector and OLS activity (workgroups, webinars, implementation and development).

Geographic Scope

The cities with the greatest OLS engagement (highest numbers of organizations per city and highest participation events per city) came from the most populous cities in California: Sacramento, San Francisco, Los Angeles, and San Diego (Figure 3). High engagement in large cities may in part be due to higher overall numbers of government offices, non-profits and other organizations than in smaller cities and towns, and more of

a focus on addressing the issues associated with densely populated areas, such as pollution. Sacramento, California's capital and headquarters of many state agencies, had the largest representation with a total of 220 participation events conducted by 42 organizations, followed by San Diego (121 participation events from 18 organizations), San Francisco (94 participation events from 21 organizations), and Los Angeles (45 participation events from 22 organizations). Most of the cities with smaller numbers of engaged organizations were adjacent to or near large cities further indicating the metropolitan areas were well represented (Figure 3). Regions with low representation included inland counties, where there may not be awareness of or interest in an ocean focused strategy, and remote coastal areas, where there may not be interest in or capacity to engage in a litter strategy.

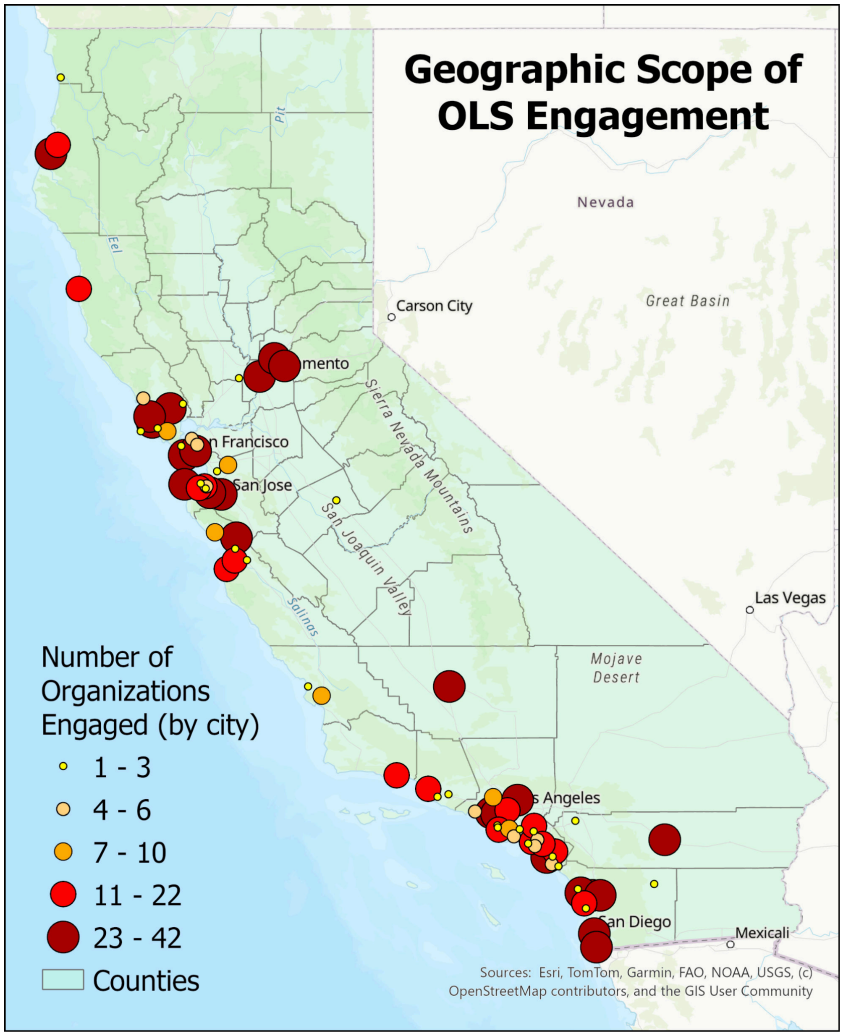


Figure 3: Map of California depicting the number of organizations by city that participated in the Ocean Litter Strategy (OLS) activities between 2017 and 2022.

Objective 2: Assess the current situation and needs of a densely urban, litter-impacted region through a case study of the city of Los Angeles

Approach

A community needs assessment was conducted in the city of Los Angeles to provide key information on priority trash pollution issues from missing local perspectives and sectors, learn how those issues are being addressed, understand what challenges (or opportunities) exist in addressing the issues, identify potential avenues of support, and explore how the OLS can better assist. The project was reviewed by the UCSD Human Research Protections Program IRB Office and was certified on 08/27/2023 as non-human subject research according to the Code of Federal Regulations, Title 45, part 46 and UCSD Standard Operating Policies and Procedures; and therefore, did not require IRB review.

The Gap Analysis confirmed that there have been relatively few groups engaged in the OLS that represent those most vulnerable to trash pollution, including socio-environmental organizations (n=2), place-based/community-based organizations (n=12), and California Tribes (n=2). These results and others from the Gap Analysis (e.g., specific entities present and missing from OLS activities to date) informed the structure of the Los Angeles Community Needs Assessment and the types of information collected.

A Community Advisory Group (CAG) was established to guide the needs assessment and help explore ways to bridge local and state-level efforts through gathering a variety of perspectives in regards to litter pollution in Los Angeles. Each CAG member served as a key informant and/or facilitator who reached out to community members to gather information for the needs assessment, including:

- Communities associated with litter pollution
- Defining and describing the term “litter”
- Priority trash pollution issues
- Current efforts to address these issues
- Challenges and opportunities in addressing litter pollution
- Potential avenues of support, specifically through the OLS

A questionnaire was developed to carry out the needs assessment, which gathered input on the above topics (Appendix B). The various roles and affiliations of the CAG members, their perspectives, their associated needs assessment participants, and the methods used for data collection capture the range of efforts underway in Los Angeles (Table 1). For

example, the needs assessment was conducted using a variety of methods, including written surveys, interviews, and focus groups, held both in-person and virtually. Each CAG member leveraged the format that best suited their communities. All responses were recorded and analyzed by question. The frequency of responses to multiple choice questions were calculated. Ordinally ranked responses were averaged and/or the frequency of responses for each rank calculated. All data were visualized graphically. Qualitative responses were thematically coded, combined or synthesized into common themes, and presented as a narrative and/or visualized with an infographic.

Community Needs Assessment - The Litter Issue

Communities associated with litter pollution

The CAG members identified and invited members of their communities in the Los Angeles region to respond to our needs assessment. Some communities were represented by a single key individual (e.g., socio-environmental and tribal perspectives; Table 1). Other communities were represented by additional organizational staff or network members who were invited to participate in and complete the needs assessment questionnaire (e.g., city government, environmental nonprofit, and place-based communities; Table 1).

Table 1: Project Participants and Perspectives. Community Advisory Group members, associated needs assessment participants ("respondents"), the intended and their self-identified perspectives from which they responded to survey questions (i.e., their responses either reflected their own perspectives, their and their community's perspectives or just their communities perspectives), and the method of data collection used to conduct the Los Angeles-focused needs assessment. Respondents recruited by each CAG member are listed below each CAG name. *member of the houseless community; **facilitated focus group

Intended Perspective	Respondents [**Bold** = Community Advisory Group Member]	Self-identified perspective	Method
Disproportionate Environmental Impacts	**Asma Mahdi,** *Managing Principal,* *Better World Group Consulting*	*"The Community of groups that have worked upstream on pollution issues that affect broader public health in LA County"*	Online Survey
Place-based Environmental Non-profit	**Emily Parker,** *Coastal and Marine Scientist, Heal the Bay*	*"Myself and my community of the Reusable LA Coalition"*	Virtual focus group

	Alison Young, *Director of Regional Policy and Program Development, 5Gyres; Co-chair of Reusable LA; Co-chair of Surfrider Committee*	*"Myself and my community of Reusable LA eNGOs"*	
	Craig Cadwallader, *Policy Coordinator, Surfrider South Bay Chapter*	*"Myself and my community of the Reusable LA Coalition"*	
Community-based Organization	**Daniela Martinez,** *Community Member of Huntington Park/Southeast LA*	*"Myself only"*	Individual in-person interviews
	Anais Orozco, *Southeast LA (Walnut Park) community member*	*"Myself only"*	
	Emmanuel, *Southgate community member*	*"Myself only"*	
	Kent Zapata, *Southgate community member*	*"Myself only"*	
	*Nino Ornelas, *Bell community member*	*"Myself only"*	
Socio-environmental Non-profit	****Maro Kakoussian,** *Physicians for Social Responsibility LA (PSR-LA)*	Myself and my PSR-LA community	Virtual focus group + online survey
	Christopher Nyambura, *Pacoima Beautiful*	*"Myself and my community of Pacoima Beautiful"*	
	Michael Rincon, *PSR-LA*	*"Myself and my community of Ventura County, but specifically my work with PSR-LA which focuses on LA county"*	
	Tianna Shaw-Wakeman, *Black Women for Wellness*	*"Myself and my community of Black Women for Wellness (Lamart Park) in LA*	
	Zoe Cunliffe, *Black Women for Wellness*	*"The community of Black households in South LA"*	
Local Government (city of Los Angeles)	**Paul Cobian,** *Environmental Affairs Officer/ Assistant Division Manager Solid Resources Citywide Recycling Division (SRCRD) city of Los Angeles, LA Sanitation & Environment (LASAN)*	*"Myself and my community of city of Los Angeles staff LASAN- Watershed Protection Division (WPD): Marsa Chan, Civil Engineer Associate city of Los Angeles, LASAN; Jon Ball Environmental Affairs Officer/ Assistant Division Manager city of Los Angeles, LASAN; Abraham*	Written survey

		Abrahamian, Chief Environmental Compliance Inspector I city of Los Angeles, LASAN; Department of Recreation and Parks (RAP) Mariana Valdivia Chief Management Analyst city of Los Angeles; Priya Macwan, Management Analyst city of Los Angeles, RAP"	
Tribal	**Tina Calderon,** *Culture Bearer for the Gabrielino Tongva / Chumash / Yoeme / Chicana*	*"Myself and my community of the Gabrielino Tongva"*	Virtual interview

Defining and describing the term "litter"

Understanding how litter is defined and perceived is a crucial first step in addressing its widespread impacts and deriving effective solutions. There can be a disconnect between the terms "ocean litter" and "marine debris" in non-marine environments even though the definition and often subsequent solution efforts tend to encompass litter from various sources including inland and areas not near waterways. Litter often flows into storm drains and waterways, carrying litter from inland areas to coastal regions and eventually to the ocean. Anything mismanaged or leaked into the environment has the potential to end up in waterways or in the ocean. Therefore, connecting different contexts is essential for finding a shared understanding and implementing effective solutions.

Recognizing that the OLS is ocean focused, for this assessment, the word "litter" was used and defined by Sea Grant as "any solid material made and/or used by humans that is intentionally or unintentionally released into the environment, including household and food-related waste, plastic pollution, illegally dumped items and any other related items." Respondents were asked to share terminology that resonated with them in their specific contexts. The most common terms from respondents echoed this definition, including "litter," "waste," "pollution," "trash," and "plastics" (see word cloud, Figure 4). Other words referred to specific litter items (e.g., "cigarettes," "bottles," "appliances"), material (e.g., "plastic"), size (e.g., "microplastic"), sources or vectors (e.g., "stormwater," "industrial," "illegal dumping"), effects (e.g., "toxic," "harm") and descriptors (e.g., "urban," "problem") (Figure 4).

Most respondents mentioned how what is viewed as "litter" can vary depending on the environment and the type of waste. Two respondents mentioned how using specific language (e.g., plastic pollution, stormwater debris, illegal dumping) can help clarify conversations and pinpoint solutions around specific efforts. Conversely, one respondent preferred using a more neutral term (i.e., "trash" as opposed to "litter") because they felt it reduced blame on individuals being the sole cause of litter and also placed blame on product producers. Three respondents highlighted the symbolic disconnect between the litter itself and the people or systems responsible for it. They noted that the word "litter" holds a connotation of an individual "intentionally throwing something to the ground," but in reality, larger systemic factors such as overproduction, food deserts, social norms, lack of resources and/or education often are major drivers of littered communities. One person said,

"These other bigger problems don't seem to be captured by just the word litter."

Figure 4: Word cloud of the 66 most common words describing the definition of "litter" derived from participants' open-ended responses to the survey question about other related terminology for the word "litter." Litter was defined as "any solid material made and/or used by humans that is intentionally or unintentionally released into the environment." n= 8 respondents.

Priority litter pollution issues

Nearly three quarters of respondents (73%) said litter in their community is a big issue, whereas only 9% of respondents described litter as a small issue (Figure 5). When asked to describe what the litter problem looked like in their community, respondents included details on the most common litter types and where they were found. Over 47% of respondents stated that single-use plastics related to **foodware** and packaging were the most commonly seen, followed by **bulky items** and **cigarette butts** (Figure 6).

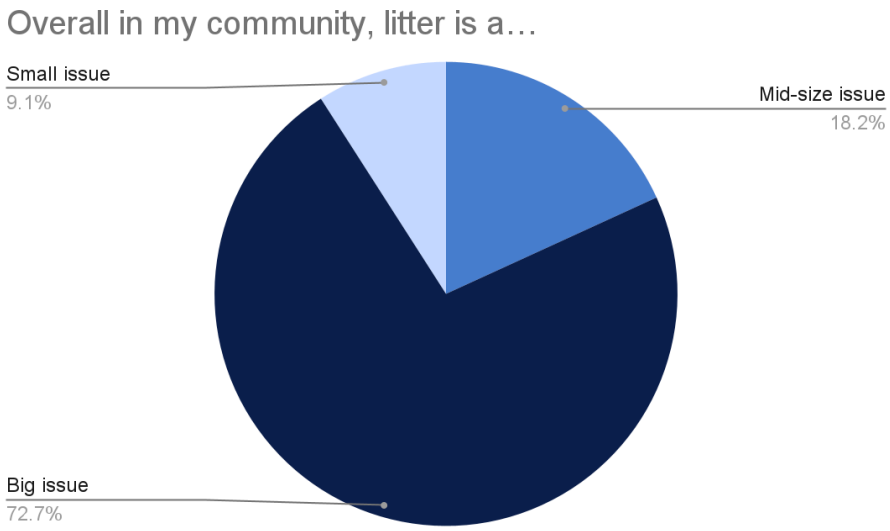


Figure 5: Proportion of responses to the multiple choice question **"Overall in my community, litter is a … Big issue, Mid–sized issue, Small issue, Not an issue."** n = 11 responses.

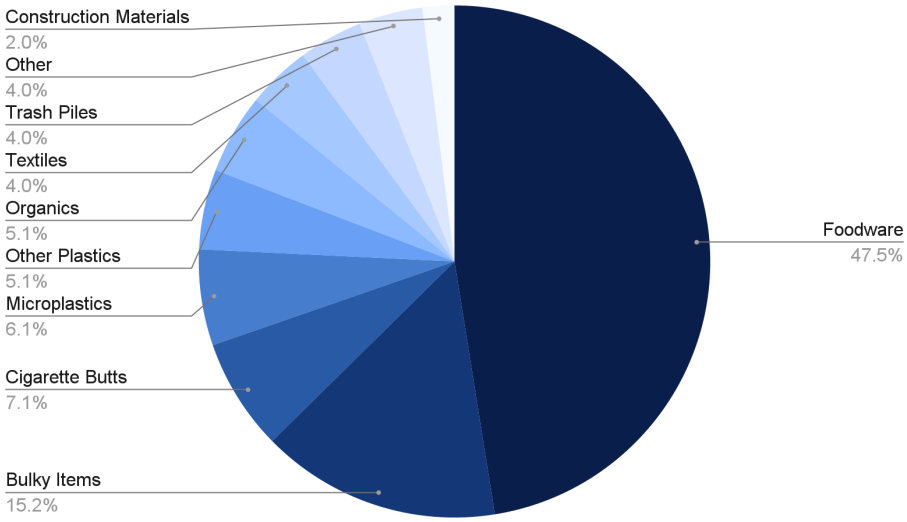


Figure 6: Percentage of mentions for each type of litter in response to the question asking to list the most common types of litter found in respondents' communities. n= 99 responses from 15 respondents. "Other" included metal, paper, e-waste, and paraphernalia. "Other Plastics" included polystyrene, toys, mylar balloons, and tarps. "Bulky items" included furniture, mattresses, cars, shopping carts, and appliances. "Foodware" included food and beverage single use packaging items.

Respondents stated that **foodware** waste including single-use plastic items, plastic bags, bottles, and food packaging were often found in parks, beaches, streets, creeks, storm drains, and parking lots. Of note were single use plastics linked to the city's fast food culture and lack of alternatives in low-income areas or food deserts. The fast food & takeout waste, consisting of wrappers, clamshell containers, soda cups, napkins, and

plastic beverage containers and caps were typically seen near storefronts, boulevards, sidewalks, car-heavy areas, or floating in waterways.

Bulky items, including mattresses, couches, furniture, appliances, electronics, and tires, were commonly found in alleys, near train tracks, riverbeds, multifamily housing areas, and industrial zones. **Cigarette butts** were common in urban centers, beaches, sidewalks, and were noted as a top item in beach cleanups hosted by Heal the Bay.

High concentrations of litter were mentioned to be most commonly found in beaches and coastal areas with heavy tourist traffic, such as Venice and Santa Monica, particularly following holidays. Storm drains and nearby waterways, including the Los Angeles River and Ballona Creek, also accumulate significant litter, especially during the rainy season's "first flush," when debris is washed from inland areas. In suburban residential zones, litter problems stem from overflowing bins, discarded bulky items, and "city neglect" in multi-family housing areas. Downtown Los Angeles, especially in places like Skid Row, faces severe littering due to high population density, limited sanitation services, and issues related to homelessness. Respondents stated that train tracks and riverbeds are also frequent sites of illegal dumping and encampment-related waste, partly because of their low visibility. Encampment sweeps and inclement weather were mentioned to worsen the problem by displacing individuals and not their belongings which are left behind. Also mentioned were highways and roadways which often see litter accumulations from both intentional discards and debris falling from vehicles.

Sources of litter pollution

The five most common sources, or causes, of litter in respondents' communities included "eating and drinking" (82% of responses), "waste management inefficiencies" (73% of respondents), and "smoking" (55%; Figure 7), aligning with their descriptions of the types of litter found in their community (Figure 6). Respondents repeated that items like plastic bags, cups, straws, and utensils were persistently common, and the absence of trash bins, poor design of catch basins, and inadequate service coverage were common frustrations. Other activities such as "houseless encampments" (45%), and "illegal dumping" (27%) were also mentioned by respondents as being the cause of some of the top 5 most prevalent items (Figure 7). "Other" activities mentioned included "storm water" (3 respondents) and "the full life cycle of plastic" (1 respondent; Figure 7) explaining that litter is generated at each step along the plastics production, use, and disposal pathway.

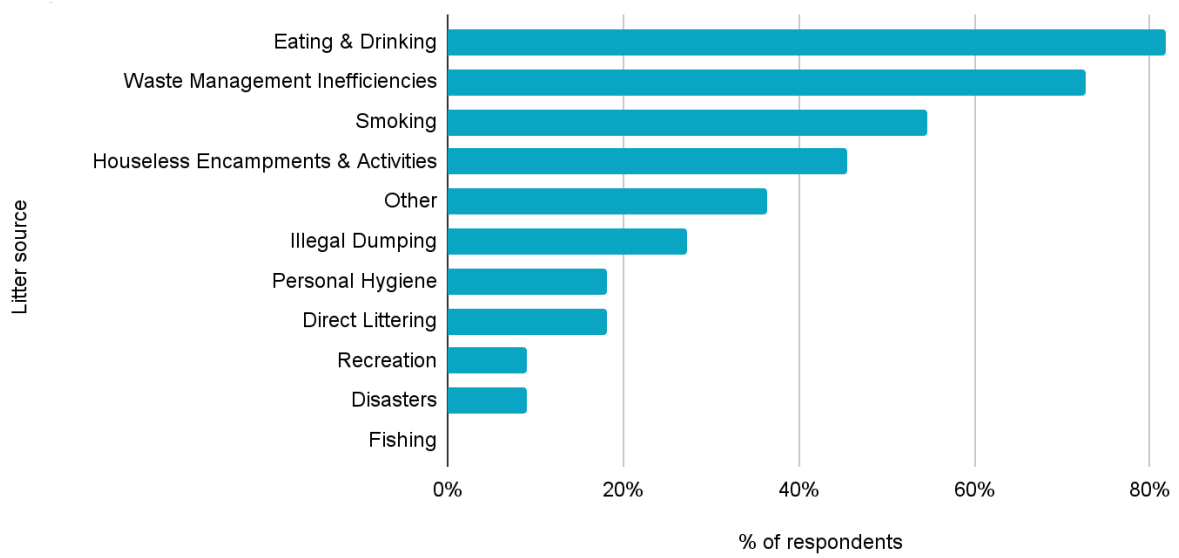


Figure 7: Percentage of respondents choosing each litter source as one of the top five most prevalent sources in their community. n=11 respondents who provided a total of 41 responses. "Other" includes "storm water" (n=3 respondents) and "the full life cycle of plastic" (n=1 respondent).

Community Needs Assessment - Litter Impacts and Outcomes

Litter pollution impacts on communities

Respondents stated that litter pollution created a wide range of interconnected impacts that affect public health, community well-being, the environment, and economy (Figure 8). The most common concern was the **public health** risks associated with litter pollution, with 87.5% of respondents ranking it among the five biggest impacts of litter in their community (Figure 8). Respondent comments indicated that public health risks threaten the well being of communities through the creation of unsanitary conditions and hazardous waste exposure. Others noted the social and emotional strain that can result from living amongst litter. The persistent presence of litter generates a sense of frustration, anger, and emotional distress, particularly among residents who feel deeply connected to their communities and the natural environment. There is also a strong feeling of unfairness when certain areas, often low-income or neglected communities, experience disproportionate levels and impacts of litter pollution.

Public safety issues, along with water and air quality impacts, were also of highest concern among 38% of respondents (Figure 8). Examples of public safety impacts mentioned included obstructed roadways, clogged storm drains, and microplastic exposure. One respondent explained that improper litter disposal also increased health

risks for community cleanup crews, such as accidental contact with harmful substances like needles and other drug paraphernalia. Examples of drinking water and air quality impacts included breakdown of plastics and contamination from hazardous waste.

The **economic burden** on local governments and taxpayers of removing and cleaning up litter was also one of the top five impacts, chosen by half of respondents (Figure 8). Respondents commented that cleanup costs burden city budgets and limit the resources available for other public services. Despite litter undermining the vibrancy and cleanliness of public spaces which in turn can affect tourism, business, and a place's reputation, no respondents ranked "community investment in clean-us" and "lower economic growth and development" as a top five impact from litter (Figure 8).

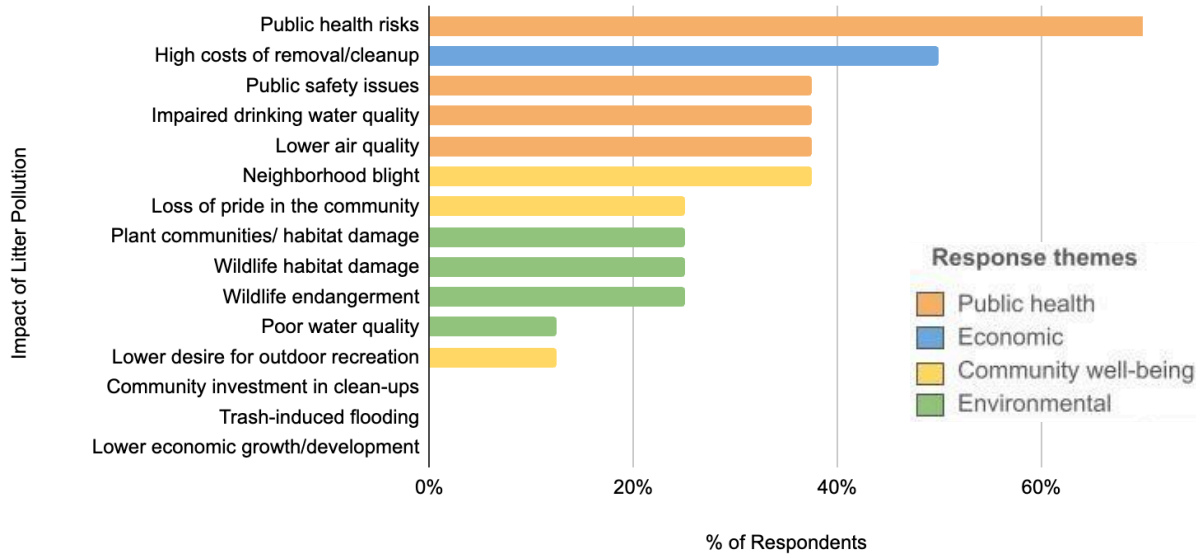


Figure 8: Top Impacts of Litter Pollution. Percent of respondents choosing each litter impact as one of the top five most prevalent in their community. n=8 respondents who provided a total of 33 responses. Impacts are color-coded based on their theme.

Community well-being impacts, including "neighborhood degradation/blight" and "loss of pride in the community," were cited by 37.5% and 25% of respondents, respectively, as major litter pollution impacts (Figure 8). Similar proportions of respondents also highlighted **environmental damage** as a major impact of litter, including "plant community and habitat damage," "wildlife habitat damage," and "wildlife endangerment," such as from ingestion or entanglement (25% of respondents each, Figure 8). Comments highlighted that these impacts are especially significant for Indigenous communities who view land, plants and animals as interconnected, living relatives.

LA litter efforts: success & challenges

Respondents highlighted existing programs underway in their communities to address litter pollution sources and impacts. These were classified into six categories: Public Cleanup Programs; Laws, Policies, and Enforcement; Municipal Waste Management; Recycling and Waste Reduction Programs; Public Education Programs; and Industry Initiatives (Table 2). Respondents discussed both the successes and challenges associated with their programs (Table 2). In general, programs that engaged the public through clean-ups and education efforts worked well for targeted or localized improvements, however positive effects were noted as temporary and/or were slow to or did not address the root causes of litter pollution (Table 2). Top down policies and waste management strategies provide required or incentivized frameworks for litter reduction behaviors over larger areas and more people, but the positive effects tended to be inconsistent due to lack of public awareness or interest and resource limitations to sustain or enforce programs. For example, two respondents mentioned that trash and recycling services are often designed for property owners, thereby leaving renters, unhoused residents, and often undocumented individuals without essential resources like bins, programs, or informational materials. Industry initiatives that utilize alternative materials and packaging can provide sustainable options to consumers; however, their impact is limited by inconsistent implementation, lack of public awareness or interest and not addressing the root issue of excessive resource consumption (Table 2).

The trade-offs among strategies suggest that an integrated, multi-strategy approach may be needed. While all of these programs are underway in the city of LA (i.e., there is a multi-strategy approach across LA), more coordination between the different types of programs in the same areas, such as LA's most impacted areas, may be needed to maximize benefits that each type of program offers and minimize the challenges (i.e., reduction policies and an interested and well-informed public). Such an orchestrated effort would require a coordinated coalition and more financial and other resources to plan and implement.

Table 2: Summary of current efforts to address litter pollution mentioned by respondents. Efforts are grouped by category, along with successes and challenges with each shared by participants. Note this list is not exhaustive of all efforts in Los Angeles. *See Appendix C for the full list of responses.*

Categories	Example of Existing Programs	Focus	Successes	Challenges
Public Clean-up Programs	LASAN cleanup program; CARE+ Program; Friends of LA River (FOLAR); Latino Equality Alliance; Heal the Bay's Nothin' But Sand program	Organized community cleanups in neighborhoods, parks, rivers, and beaches to reduce litter	Focusing on high litter areas, improving public and natural spaces; educational/ inspirational tool	Small scale; temporary fix; inconsistent; underfunded; doesn't address the root cause of pollution
Laws, Policies, and Enforcement Programs	Plastics reduction laws (SB54) and ordinances; Illegal Dumping Enforcement Program; Watershed Protection Division Enforcement; Reporting Apps (MyLA311)	Policies, regulations, and enforcement efforts to prevent waste creation and curb illegal dumping	Provides strategic monitoring & accountability; shifts industry & consumer behavior from the top-down; creates broad city-wide commitments	Inconsistent effectiveness; gaps in public awareness & participation; budget & resource limitations; policy loopholes & non-compliance
Municipal Waste Management	Waste Mgmt. Services (incl. curbside pickup, dump drop off, etc.); Public Bins; Bulky Pickup Services; Stormwater Capture Infrastructure	To capture waste generated by human activities to protect public health, the environment, and quality of life	Free disposal options; well-maintained public spaces; long-term investments in sustainable systems; upriver interventions	Inconsistent or unavailable services; overflowing & lack of public bins; financial & infrastructure gaps
Recycling and Waste Reduction Programs	California Redemption Value Deposit Program; Compost Programs; E-waste drop-off sites; "Plastic Free Parks" Program	To promote resource recovery to reduce dependency on landfills and raw materials	Incentives & rewards becoming increasingly more prevalent	Lack of public enthusiasm and interest; ineffective collection; some programs are limited in scope; some have high cost and resource demands
Public Education Programs	Clean Streets LA Program; Youth Education Programs; LA Dept. of Sanitation Outreach Programs; Clean LA Campaign	Raise awareness about littering; encourage proper waste disposal through outreach to schools, businesses, and community	Improve understanding in both youth and adults and influence their ability to take actions related to reducing litter	Need for early and comprehensive education about waste life cycle and management; lack of public motivation and interest; public behavior change is

		organizations		slow; cultural disconnects
Industry Initiatives	Amazon; Wholesalers; Grocery Stores	Voluntary efforts to provide alternative materials and packaging	Consumers now have sustainable alternative options to choose from or as the default choice	Doesn't reduce overall consumerism; can be burdensome and expensive for small businesses; consumers still prioritize convenience; some alternatives may be ineffective (e.g., thicker plastic bags)

Community priority on solving litter pollution

There was widespread agreement among respondents that litter solutions are important, with 70% stating that finding lasting and sustainable solutions to litter pollution is a high or very high priority within their community, while 30% considered it a small priority (Figure 9). Comments highlighted that those who consider it a small priority did so in comparison to other larger scale social and environmental issues (e.g., the unhoused crisis, public health challenges, air and water pollution) or feel that litter is a symptom of a the larger societal problem of over-consumption of resources that needs to be addressed first or simultaneously.

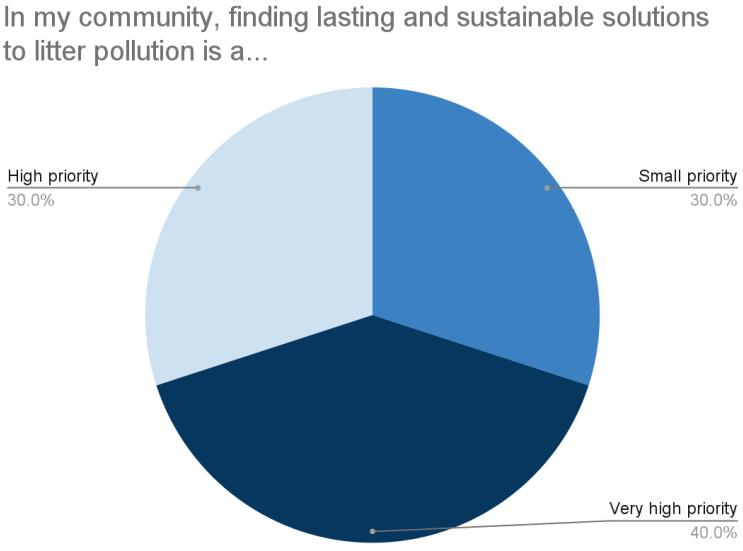


Figure 9: Proportion of responses to the multiple choice question, "In my community, finding lasting and sustainable solutions to litter pollution is a ... Very high priority, High priority, Moderate priority, Small priority, or Not a priority." n= 10 responses.

Within their responses, 60% of respondents (n=6 of 10 respondents) commented on a disconnect between community concerns and government response. While residents view mitigating litter pollution as a high priority, they perceive local governments and elected officials as lacking a similar urgency. Several respondents noted that city and county agencies tend to address litter reactively, emphasizing cleanup over litter prevention or systemic solutions.

One respondent explained how litter is not a major issue in most suburban neighborhoods of Ventura County for example, likely due to strict local ordinances in these higher property value areas. However, litter can become more of a problem in high-density, industrial areas and multifamily housing, where overflowing bins and improper disposal of large items are common. Respondents cited that this is often due to insufficient bin capacity, cost-related challenges to proper disposal, and lack of involvement from lower-income or undocumented residents. Respondents felt that the true extent of litter pollution in LA may be underestimated because it is more efficiently managed in wealthier areas.

Challenges to litter solutions

Respondents were asked to describe issues in their community that could be linked to the ability to find and/or implement lasting litter solutions. In other words, are there conditions or practices that need to be addressed first or simultaneously to tackle the trash pollution problem in their communities?

Respondents identified a range of interconnected challenges that must be addressed to develop effective and well-supported litter solutions. Several stated that litter is not merely about waste but reflects deeper social, economic and structural issues and failures in public policy. They stated that litter pollution disproportionately impacts some groups due to long-term unequal infrastructure investment and long-standing neglect by government agencies and corporations. Some also mentioned cultural and educational gaps as contributing factors, such as misunderstandings about proper waste disposal and broader societal expectations around who is responsible for the impacts of consumption and waste.

Fighting for clean air, water, soil, and food were listed as higher priorities than litter for some communities (8 of 11 respondents). These issues make it difficult to engage residents in litter efforts when basic safety and sanitation are not ensured. One respondent noted the added challenges of engaging undocumented individuals in

trash-related issues, given the long and difficult journey it took to empower these communities to speak up for their basic rights to clean air and water. Two additional respondents mentioned how food insecurity takes precedence for some communities but acknowledged that increasing availability of affordable and healthy foods, such as fruits and vegetables, can inadvertently reduce litter from processed and fast foods.

Nearly half of respondents stated that addressing homelessness would be a foundational step toward solving broader litter issues. They touched on the lack of affordable housing and inadequate social infrastructure for unhoused populations that leads to the creation of encampments in locations where regular waste collection services are not provided. Respondents noted that while unhoused individuals are often blamed for litter, the core issue is a lack of sanitation services, and that being unhoused is symptomatic of broader structural failures rather than a root cause. Additionally, drug use and mental illness were also mentioned as a tangential issue to be addressed in this regard.

Two respondents highlighted that changes in attitudes, public behavior, and instilling a sense of individual responsibility are needed to find lasting solutions to litter. Without a cultural shift that encourages people to take ownership of their impact on public spaces, even well-designed policies and infrastructure may fall short. This includes the effects of tourism on litter pollution, where visitors may not feel the same sense of accountability to local environments. Lastly, one respondent mentioned the challenges of funding and political will due to the political complexities and lobbying power that stall progress.

Community Needs Assessment - Ocean Litter Strategy Challenges and Opportunities

Ocean Litter Strategy participation challenges

Time constraints were identified as the primary challenge limiting respondents' participation in the OLS (Figure 10), likely a reflection of the increasingly demanding schedules faced by many individuals today. Respondents also indicated that the priorities of the OLS did not align with those of their organizations or positions (Figure 10), making it hard to justify a commitment. Lack of familiarity with the OLS and uncertainty about the benefits of participation were moderate to large challenges for the respondents (Figure 10). Logistical constraints, lack of financial support and lack of employer support for participation were also viewed as moderate challenges (Figure 10) indicating that, in addition to the other challenges stated so far, some jobs in the field may not include participation in working groups as a job duty.

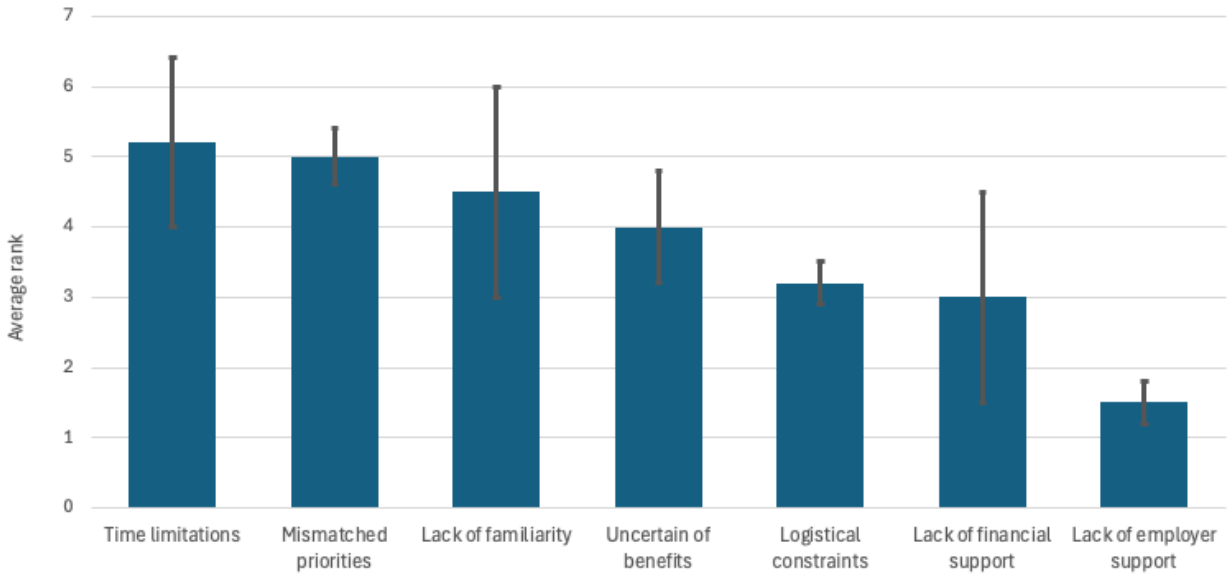


Figure 10: Challenges to participation in the OLS in order of average ranked score (±1SE), with a rank of 1 indicating the smallest challenge and 8 indicating the largest challenge**.** n= 4 respondents.

Two respondents noted thematic areas of overlap and, therefore, potential collaboration between the OLS and their organizations. For example, they found alignment with OLS Goals 2, 3, and 5 pertaining to source reduction stemming from product redesign, waste management, and behavior change education. However, many of the topical priorities of the OLS were not directly in line with respondent priorities because of the OLS's priority focus on the ocean and coast, as compared to neighborhoods and urban waterways, and on litter, instead of addressing the root issues, such as the plastics life cycle and over-consumption.

Views on the formats for participation varied among respondents reflecting their various types of communities and challenges to participation. For example, one respondent praised virtual webinars, which require relatively few resources and little time to attend. Another preferred in-person meetings and community workshops which attract greater participation from community-based organizations and create an environment and time to identify specific issues within those communities.
Recommendations for how to better engage communities in the upcoming process to update the OLS, included starting outreach early and prioritizing those most impacted by litter pollution, including forming partnerships with more community-based organizations, and socio-environmental organizations, and their respective communities. Respondents also recommended consistency throughout the planning

process, including hosting multiple and regular, easy-to-attend events to ensure meaningful, ongoing participation.

Overcoming challenges to participation in the OLS

Respondents identified financial support for OLS participation (i.e., honoraria, travel reimbursement) and funding for implementation of resulting community projects as the most helpful incentives to overcome current challenges to OLS participation (Figure 11). Involvement with strategy development and opportunities for broader community engagement in planning and implementation were also considered to be at least somewhat helpful by all (Figure 11). One respondent emphasized the need to be selective about which projects to participate in, especially as a tribal representative, highlighting the importance of being able to represent their community effectively and make a meaningful impact.

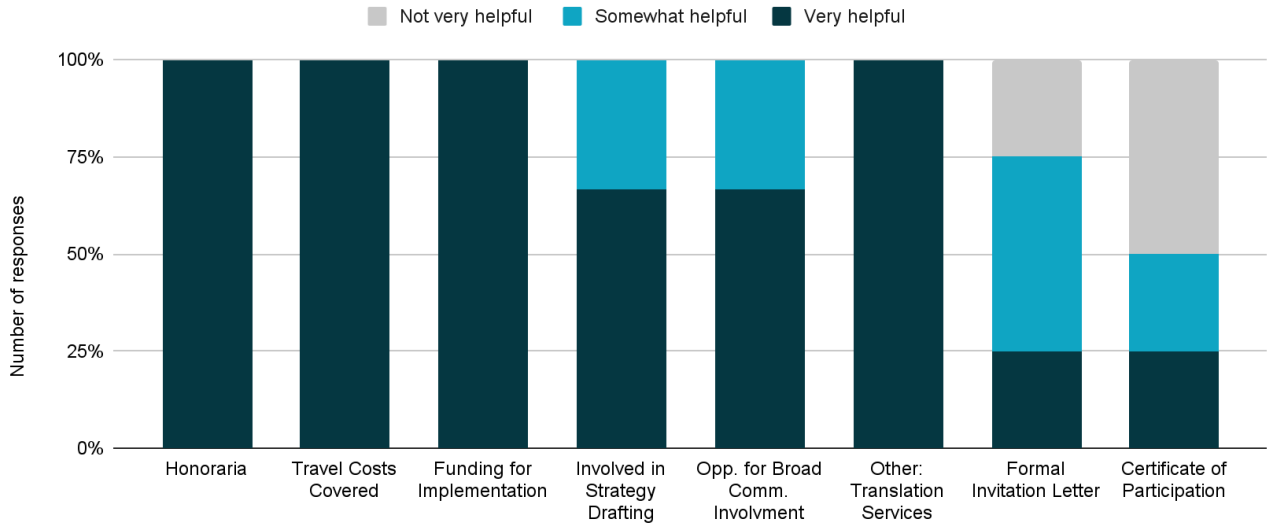


Figure 11: Top strategies for improved participation in the OLS. Participants indicated how helpful each strategy could be in enhancing their participation in the OLS. n= 30 responses from 5 respondents.

A formal invitation and certificate of participation were considered at least "somewhat helpful" by 50-75% of respondents (Figure 11), most of whom held government and NGO staff positions. Formal documentation of participation may help participants justify their time spent on the OLS and allow for workplace credit. One participant noted that translation services would be "very helpful" in engaging a broader audience within the community.

Community support

Respondents indicated that all of the support offered by OLS and its broader network would have high or some benefit to their communities (Figure 12). Resources for public education (87% of respondents), staff education (62%), increased awareness of funding opportunities (80%), and local agency contacts (50%) were identified as potentially having the highest benefit for the most communities (Figure 12). Support for public educational programs focused on outreach of existing services including promoting composting practices, guidance for bulky item pickup, and education about the life cycle impacts of litter pollution. One respondent stated that education fosters environmental stewardship and responsibility, particularly when taught from a young age. Respondents mentioned how resources and funding are connected. Awareness of funding opportunities is perceived as a high benefit to the majority of respondents. They noted that existing grant funding often operates in silos, and that without adequate financial support and engagement, many residents, despite their willingness, lack the time and resources to take action due to work and other responsibilities.

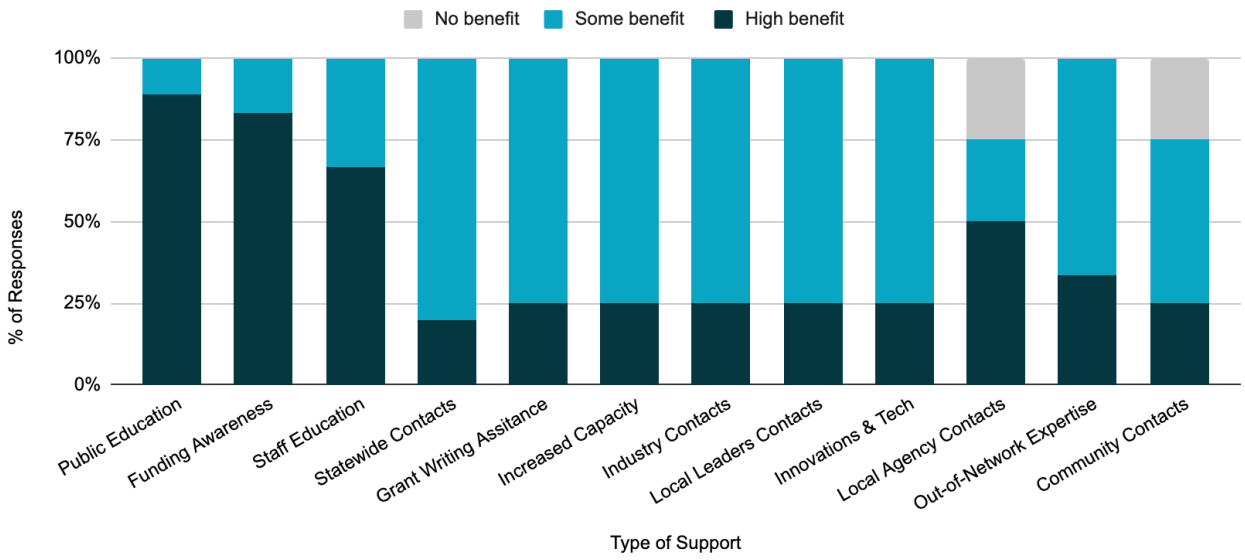


Figure 12: Percentage of responses indicating the level of perceived benefit of each type of support that the OLS network could offer to increase participation. n= 59 responses from 9 respondents.

Respondents generally thought that connections with others, including experts, community members, industry, local leaders and others across the state—in addition to local agencies—would provide benefit to their communities (Figure 10). Finally, technical assistance including help with innovations and technology, and grant writing,

were viewed by everyone as at least somewhat beneficial (Figure 10). One respondent explained the importance of grant writing support, stating:

> *"If you want to do a project, you have to have a grant. A lot of people don't know how to write grants. It's mostly the young folks in my community who went to college and learned how to grant write, have non-profit jobs, who are holding it down, but I wish I knew how to grant write, but I don't. So I think grant writing workshops and assistance would be tremendously helpful."*

Objective 3: Explore ways to inform more coordinated investments in community-based marine debris solutions in California

Approach

Three questions were included in the needs assessment (Questions 18-20, Appendix B) to gather information on understanding funding challenges and the need for support (e.g., expertise, resources, tools, techniques or training) to address litter pollution. A funding-focused meeting of the Community Advisory Group was also conducted to discuss common challenges to funding and brainstorm ways funders could implement more effective practices into their funding opportunities (Appendix E). Existing challenges to funding and suggested solutions for funders were adapted from Sea Grant's Grant-Making Working Group which held network-wide workshops to develop strategies for improving the reach and ease of the grantmaking process. Challenges were grouped into three categories: "Applicant Challenges," "Grantee Challenges," and "Funder Challenges." Using an online Easyretro board, CAG members were able to review known challenges to funding, provide comments, add additional challenges, and upvote any that resonated with them in order to provide their insights (Table 3).

In response to these conversations, tangible tools were developed. The California Ocean Litter Solutions Funding Opportunities Repository—a living spreadsheet database for use by organizations seeking funding—aims to alleviate the stress of finding available opportunities and provide prospective applicants with the information needed (e.g., match requirements, technical assistance) to make decisions on which opportunities to spend their limited time and resources applying to (Appendix D). Additionally, a Best Practices Guide for Funders was created to assist funding entities with tips on how to reduce challenges faced by communities applying to their opportunities (Appendix E).

Community Needs Assessment - Litter Solutions Funding

Respondents identified several funding-related challenges that hinder their communities' ability to address trash pollution. A common theme was inadequate city budgets, leading to staff cuts and reduced capacity for tasks like enforcing permits and investigating illegal dumping. Several respondents explained that even when funds exist, they seem to be often directed towards other municipal priorities, leaving waste management underfunded, especially in low-income areas. Philanthropic funding has less restrictions to obtain but was also seen as hard to secure, often diverted by broader political processes such as lobbying and bureaucratic resistance. One respondent noted, however, that state and local funding tied to legislative mandates, policies and ordinances had been more available. They noted that greater awareness and availability of funding opportunities is crucial, as many residents are willing to help but lack the time and means without adequate financial support.

Respondents emphasized the need for greater investment in community-led efforts to mitigate litter pollution. Chronic underfunding weakens grassroots efforts and community engagement. Many groups experience burnout from doing the work without support, and the lack of both resources and visible progress in litter mitigation make it difficult to sustain momentum or shift public behavior. Respondents emphasized the strong link between resources, funding, and community action.

Challenges to Funding

The CAG agreed that the greatest challenges to receiving funds for their work is that applying for grants requires existing capacity and time, which is not always practical for small scale or community based organizations with limited staff, expertise and/or resource capacity (Table 3). Available funding is often restrictive (e.g., what funds can be spent on, match requirements) and limits eligibility (e.g., who can apply or be listed as Project Lead) (Table 3). Unclear or limited communication between funders and potential applicants also created challenges. Respondents mentioned misalignments between funder/funding priorities and community priorities, unclear or unfamiliar language used in grant announcements and instructions, and lack of transparency or (unintended) bias in the review process that could potentially disadvantage certain applicants (Table 3). Challenges also exist once a grant is awarded and the applicant becomes a grantee. For instance, many have short timelines (e.g., 1 year) to implement the proposed projects as well as high reporting burdens (Table 3).

Opportunities for Funders to Reduce Challenges

The suggested solutions to these challenges in turn largely focused on funding entities during their award planning phase. Solutions were rooted in engagement with key stakeholders and communities to understand the issues and better align the evolving funding priorities with needs on the ground. Engagement may also inform the planning of award conditions (terms), structure, and processes to ensure that funding opportunities are meaningful and clear, and that grants can be reasonably managed and projects successfully implemented given the capacities of relevant communities (Table 3). Suggestions for guidance and technical assistance throughout all phases of the funding and grant receiving process were common, including supplemental guides or templates for completing applications and reports, and provision of interactive training and assistance, such as grant writing workshops and office hours to clarify processes and expectation and reduce the burden. In general, clear, consistent guidance and communication was also highlighted as a solution to ensure transparency throughout the funding process (Table 3).

Table 3: Common challenges to applying for and managing funding faced by applicants, grantees, and funders, along with opportunities for funders to address challenges. CAG members upvoted challenges and opportunities that resonated with them (indicated by +X). Bolded bullets indicate similar challenges faced between groups (e.g., "short timelines" are faced by both funders and grantees).

Barriers to Applicants	Barriers to Grantees
• Limited staff capacity, expertise and time needed to apply (+5) • **Restrictions on what funding can be spent on (e.g. food, salaries, etc.)** (+3) • **Match requirement** (+2) • Lack of incentives for community-driven work (+2) • Overly complicated budget forms (+1) • Restrictions on who can be a PI/Lead (+1) • Funding amount being too small (i.e. not worth the effort) or too large (i.e. overwhelming for small organization) (+1) • Funding priority misalignment • Significant number of required application components • Unclear or unfamiliar language used in funding announcements • Restrictions on eligibility	• **Short timelines** (+5) • High reporting burdens (+3) • Complicated, time consuming processes for receiving payment (+3) • **Restrictions on what funding can be spent on (e.g. food, salaries, etc.)** (+2) • **Meeting terms and conditions of award (e.g. match, data sharing, reporting, spending requirements, etc.)** (+1) • **Data sovereignty** (+1) • Length of awards (+1) • Staff capacity, expertise and time needed to manage funds
Barriers to Funders	**Opportunities for Funders to Reduce Barriers**
• Bias in the review process (+1) • Western conceptions of Conflict of Interest (e.g., geographic restrictions for reviewer pool limiting place-based or Indigenous expertise) (+1) • Limited capacity for administration • Restrictions on eligibility • Restrictions on who can be a reviewer (e.g. required qualifications, no conflict of interest, etc.) • Limited review pools can place heavy burdens on a select few people • **Short timelines** • Lack of training	• Provide technical assistance to applicants (e.g. application workshops, grant writing workshops, office hours, etc.) (+6) • Align the funding priorities and parameters (duration and amount) with those of the communities (+4) • Plain language in funding announcements (+4) • Provide multi-year funding (+4) • Supplemental material/guides for filling out certain application components (e.g. budget forms) (+3) • Minimize reporting burdens where possible (+3) • Consider rolling application deadlines for recurring funding opportunities (+3) • Be mindful and cognizant of data rights, have conversations early about the fate of any data produced from the project (+2) • Provide clear, consistent transparency throughout all processes of the award (+2) • Providing applications in multiple languages (ex. Spanish, Tagalog, etc.) (+2) • Reduce or remove match requirement, or provide detailed information on what qualifies as match (+1) • Consider lengthening timelines where possible (+1) • Streamlined funding announcements • Broaden and diversify the distribution of funding announcements

CONCLUSIONS

This study fulfilled three objectives. First, it identified key geographic and sector gaps in the planning and implementation of the California Ocean Litter Strategy (OLS). Second, it revealed major litter pollution challenges, current initiatives, and the challenges faced by communities in Los Angeles addressing pollution. Third, it identified funding obstacles and strategies to support litter reduction projects across the state. Based on these findings, best practices were developed to better align regional and state plans, including the OLS, and funding opportunities with local and community needs.

We found that OLS engagement was spearheaded by non-profits, followed by government and industry groups, suggesting that high capacity sectors directly involved in addressing trash issues were more likely to participate in the statewide effort. In contrast, lower capacity groups, such as tribal and socio-environmental groups, were less involved, despite having much to gain from litter prevention efforts. The community needs assessment revealed that many of these smaller community-based and socio-environmental organizations either were not aware of the OLS or did not have the time or capacity to attend webinars and workshops. Additionally, though priorities were similar, these groups may be tackling other issues in their communities that are prioritized over litter. Success depends on addressing the needs of those most burdened by pollution, who are often neglected from decision-making. Engaging smaller, more local and/or community groups can be more challenging, however essential for understanding the causes and effects of the issue and to efficiently address them.

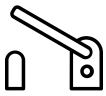
Through the community needs assessment, we heard that what is considered “litter” greatly depends on local context. Different litter experiences influence how litter is perceived, who is seen as responsible, and which solutions are prioritized. These varying perceptions and priorities can lead to fragmented or overlapping efforts, making it challenging to address litter comprehensively. Additionally, each litter solution and effort has trade-offs, and thus an integrated, multi-strategy approach is needed. While a variety of programs are underway in Los Angeles, more coordination between the different types of programs in the same areas, such as LA’s most impacted areas, may be needed to maximize benefits that each type of program offers and minimize the challenges.

Litter can be a visible marker of deeper social, economic and structural issues and policy failures that have long disadvantaged some communities. Solutions must go beyond

clean-up efforts to confront the root causes (e.g., long-term underinvestment in infrastructure, neglect by institutions and corporations, and cultural or educational gaps around waste responsibility), ensuring that those most affected are centered in decision-making and benefit from lasting change.

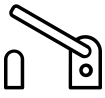
Results of this study revealed considerations for convening and activating coalitions to more effectively address coastal pollution (Table 4). Efforts must include building broad and sustained connections with a variety of community sectors and decision-makers, starting engagement early, and maintaining it throughout the process (Table 4). Efforts must also be based on shared understanding of priorities and challenges, with meaningful effort to remove challenges and support community-led efforts, as well as use of adaptive strategies so that new knowledge can be incorporated into solutions.

Table 4: Considerations for convening and activating coalitions to address coastal pollution that resulted from the Los Angeles community needs assessment.

	**Identification and building of connections** with communities should span sectors and locations across the area of interest, including key agencies and other formal decision makers, those whose decisions or activities have potentially significant influence on the problem (e.g., funders, industry, and business), those engaged in on-the-ground work, and those most impacted by pollution.
	**Engagement and outreach with communities** should start early and be consistent throughout the process, with regular and frequent communications and opportunities for involvement.
	**Build a shared understanding** of the current situation and priorities for addressing pollution in impacted areas, including identification of challenges and opportunities for financial, technical, social, physical, and/or mental health support.
	**Reduce challenges and promote widespread participation** including providing incentives, compensation or other resources or services, emphasizing coordination and collaboration at the local level.
	**Ensure an adaptive process** by creating and implementing a strategy that includes regular assessments of the extent to which implementation approaches and outputs are addressing identified priorities and new knowledge and conditions are being integrated into the process.
	**Support implementation of community-led program activities,** especially those led by under-resourced groups, by sharing relevant funding opportunities and providing technical assistance for obtaining funding and completing tasks.

Best practices for strengthening the OLS thematically tracked this list but included more specific practices such as broadening and deepening engagement by expanding connections to the sectors and communities that have been under-engaged so far, providing on-going opportunities for participation, and addressing challenges such as funding and capacity (Table 5). The OLS could also benefit from collaboratively revisiting and modifying goals to address local needs, establishing a process for adaptive evaluation of progress and adjustment of strategies, and stronger support for community-led efforts through training, resources, and coalition networks.

Table 5: Specific considerations for strengthening the effectiveness of the OLS.

	**Identification and building of connections** ○ Expand connections with non-profits which have led most of on-the-ground work ○ Target under-engaged sectors including manufacturers, retailers, and textilers, as well as socio-environmental groups, community based groups, and California tribes
	**Engagement and outreach with communities** ○ Continue to provide consistent, frequent opportunities for engagement throughout the planning and implementation process, such as the virtual bi-annual coalition and goal-specific workgroup meetings ○ Plan for more experiential, collaborative opportunities to strengthen engagement and sense of belonging at the local level, including partnering with or supporting community-based organizations to host regular, easy-to-attend events that ensure meaningful, ongoing participation (and to help achieve local goals)
	**Build a shared understanding** with communities to understand the current situations, priorities, and challenges to participation and implementation of solutions ○ Collaboratively re-define OLS priorities to encompass the broader materials life cycle, from production to disposal, and prioritize public health in addition to environmental health and ocean litter ○ Conduct listening sessions with communities across the state to build a shared understanding and inform the goals and format of an in-person planning workshop (and the development of the updated plan)
	**Reduce challenges and promote widespread participation** ○ Provide financial support to encourage participation of time- and capacity-limited people, especially those from disproportionately litter-impacted groups ○ Maintain and encourage use of the funding repository to improve awareness of litter solutions funding ○ Continue offering coalition members co-leadership of biannual meetings to build belonging, efficacy, and knowledge sharing

	○ Encourage members to designate alternates (e.g., junior staff) for continuity and mentorship ○ Dedicate meeting time for new members to engage and share ○ Expand workgroups to include location-based groups where desired to help achieve local goals
	**Ensure an adaptive process** ○ Establish an evaluation and adjustment procedure during the planning of the next OLS update to ensure new knowledge (e.g., (in)effectiveness of activities, remaining gaps) and changing conditions are adaptively incorporated into OLS activities ○ Reimagine ways to solicit progress updates from a wider swath of coalition members throughout the Strategy's timeframe vs relying on those who initially signed up ○ Host a mid-term workshop to collaboratively review and discuss progress in meeting Strategy goals and adjust priorities or approaches, if needed
	**Support implementation of community-led program activities** ○ Provide or support professional development, technical assistance, and training opportunities for communities (e.g., grant writing workshops) ○ Leverage OLS coalition member networks to promote community activities and recruit participation ○ Help identify financial and in-kind support for coalition activities, especially litter-impacted groups

In closing, many communities are eager to take action against urban litter, but lack the time and resources (e.g., financial, technical support) to do so. Greater awareness of funding opportunities are critical. While funding challenges exist for both applicants and grantees, there are significant opportunities for funders to reduce these burdens and strengthen community-led solutions. Providing solutions to reduce and remove challenges to addressing litter are crucial in ensuring that all sectors are able to participate and engage in not only future iterations of the OLS, but in addressing ocean litter prevention in general.

ACKNOWLEDGEMENTS

We are incredibly appreciative of Christy Kehoe, NOAA Marine Debris Program, and Kaitlyn Kalua, Ocean Protection Council, for their expert guidance and valuable assistance in securing funding and then helping to implement this project. We also thank Christine Sur and Kyla Kelly, Ocean Protection Council, for their enthusiastic support of this project. Several California Sea Grant State Fellows dedicated time and insights during their fellowships to advance this project, including Tarynn Kimmick, Sydney Rilum (co-author), Brandon Quintana (2024), Kaira Wallace (2023 fellows), and Grace Young (2025). Lian Guo, CA Sea Grant Research Coordinator, shared her wisdom and guidance on the development of the best practices guide for funders. Finally, we are extremely grateful to our Community Advisory Group and their partners and networks for their generous contributions to this project that provided a better understanding of litter pollution in Los Angeles and beyond.

Support for this project was provided by BIL-IIJA funds through NOAA-National Sea Grant Award No. NA23OAR4170154 and California Sea Grant Award No. NA22OAR4170106.

REFERENCES

Calil, J., Guitiérrez-Graudins, M., Munguía, S., Chin, C. (2021). United Nations Environment Programme Report. https://wedocs.unep.org/bitstream/handle/20.500.11822/35417/EJIPP.pdf

Crossett, K., Ache, B., Pacheco, P., and Haber, K. (2013). NOAA's State of the Coast. National Oceanic and Atmospheric Administration, Department of Commerce, developed in partnership with the U.S. Census Bureau. https://cdn.oceanservice.noaa.gov/oceanserviceprod/facts/coastal-population-report.pdf

Finewood, M.H., Holloman, D.E., Luebke, M.A., & Leach, S. (2023). Case Studies in the Environment. 23 January 2023; 7 (1): 1824941. doi: https://doi.org/10.1525/cse.2023.1824941

Heard, M.J. (2024). Regional Studies in Marine Science, Volume 76, 103603, ISSN 2352-4855, https://doi.org/10.1016/j.rsma.2024.103603 https://www.sciencedirect.com/science/article/pii/S2352485524002366

Morello-Frosch, R., Pastor, M., Jr., Porras, C., & Sadd, J. (2002). Environmental Health Perspectives, 110(Suppl 2), 149. https://doi.org/10.1289/ehp.02110s2149

APPENDIX

Appendix A: OLS Gap Analysis Sector Definitions

- **Government**
    - **Federal (Gov - Fed):** Government positions at the national level (Example: U.S. Environmental Protection Agency)
    - **State (Gov - State):** Government positions at the state level (Example: California Coastal Commission)
    - **Local (Gov - Local):** Government positions at the local/municipal level (Example: city of Oakland)
- **Industry**
    - **Industry - Association**: Organized groups of entities with similar interests/purposes and self-declared as an association (Example: Plastics Industry Association)
    - **Industry - Aquaculture**: Businesses that cultivate aquatic organisms in controlled water environments for commercial use (Example: Hog Island Oyster Company)
    - **Industry - Consulting**: Entities that provide expertise and specialised labor (Example: Sea & Shore Solutions, LLC)
    - **Industry - Fisheries**: People affiliated with commercial fishing (Example: Commercial Dungeness Crab Fisherman)
    - **Industry - Manufacturing**: Companies that create plastic products by transforming raw plastic materials into finished products (Example: Procter & Gamble)
    - **Industry - Retail**: Businesses selling goods to consumers (Example: Target Corp.)
    - **Industry - Tech/Enginee**r: Entities focused on innovative technology and engineering (Example: Seabin Project). Could also be consulting firms focused on tech and engineering (Example: Quest GeoSystems Management)
    - **Industry - Textiles**: Entities focused on selling or reimagining fiber-based materials (Example: Materevolve, LLC)

- **Non-profit**
    - **Socio-environmental (Non-profit - Socio-env)**: Groups whose primary work focuses on socio-environmental issues exploring the complex dynamics of factors like culture, economics, and human activities interacting with natural elements such as air, water, and ecosystems. These organizations more or less self identify with this focus. (Example: Home Front, Morro Bay)
    - **Environmental (Non-profit - Env)**: Groups whose primary work focuses on environmental conservation, preservation, or education broadly (Example: Ocean Conservancy)
    - **Place-based (Non-profit - Place-based)**: Groups whose primary work focuses on a specific place or community (Example: Friends of the Petaluma River)
- **Other**
    - **Academia:** Institutions affiliated with higher education such as universities (Example: California State University Los Angeles)
    - **Community Member:** Individuals whose affiliations with an organization were undeclared
    - **Faith Serving Institution:** Organizations with religion or sect beliefs as the foundation of its mission, values, and vision (Example: Clean Seas Coalition)
    - **Media:** Entities working in communications (Example: KCRW Public Radio)
    - **Research Institute**: Organizations with research as the foundation of its mission, values, and vision (Example: Southern California Coastal Water Research Project (SCCWRP))
    - **Tribal Representation**: People who self identified as members of a California Tribe (recognized or unrecognized) (Example: Wishtoyo Foundation)

Appendix B: Needs Assessment Survey Questionnaire

Responses were entered into Qualtrics for data collection and exported for analysis.

Los Angeles Ocean Litter Strategy Needs Assessment

Start of Block: Intro

Thank you for participating in this needs assessment. You have been chosen to provide your perspective on the issues, activities and priorities of your community regarding litter pollution and solutions in Los Angeles. Your answers will inform the California Ocean Litter Prevention Strategy (OLS), a California Ocean Protection Council (OPC) and National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program (MDP)-led initiative that brings stakeholders together to collaboratively and comprehensively address litter pollution.

This 25-question assessment may take from one to several hours to complete depending upon the level of detail of answers and the number of colleagues and partners brought in to help answer questions.

For information on the background of this effort, you can visit the following.
The project profile page
The OLS webpage

If you have questions or concerns, please contact Tanya Torres, Research Associate, California Sea Grant at tatorres@ucsd.edu.

End of Block: Intro
Start of Block: Question Block

Q1 Name

_____

Q2 Affiliation and Position/Title

_____

Q3 Email

_____

Q4 The responses to the following questions will reflect the perspectives of...

- ○ Myself only
- ○ Myself and my community of (please describe your community): _____
- ○ The community of (please describe the community): _____

Page Break

The following questions are related to the litter problems in your community - the types, sources and impacts. Answer these questions based on your community specifically (rather than the world/country/state at large).

Q5 "Litter" is generally considered to be any solid material made and/or used by humans that is intentionally or unintentionally released into the environment. In this assessment, the term 'litter' includes household and food-related waste, plastic pollution, illegally dumped items and any other related items. Please describe any other related terminology that may be more resonant in your specific contexts (for example, marine debris, trash pollution, etc.). (Open Answer)

_____

Q6 Please complete the sentence (choose one). Overall in my community, litter is a…

- ○ Big issue (1)
- ○ Mid-size issue (2)
- ○ Small issue (3)
- ○ Not an issue (4)

Q7 Please describe what the litter problem looks like in your community. If possible, please provide specific examples, such as the most common types of litter, areas with the highest concentrations, or frequency of litter cleanups in your community. (Open Answer)

Q8 What do you see as the biggest sources of litter in your community? (arrange the following by dragging each into ranked order, with 1 being the biggest source of litter and 11 being the smallest. You can use the next question to elaborate on any of your answers).

_____ Direct littering (whether intentional or accidental) (1)

_____ Eating and Drinking: Trash resulting from snacks, picnics, beach cookouts, parties, and carry-out food and include items such as utensils and plates, take-out food containers, bottles, straws, and wrappers. (2)

_____ Smoking: Trash left behind from smoking cigarettes, cigars, and vaping included butts, packaging, containers, and other smoking items. (3)

_____ Illegal Dumping: Industrial or household waste items such as appliances, furniture, tires, or construction materials in unauthorized areas. (4)

_____ Houseless Encampments and Activities: Trash left behind from unconventional living situations. Items include tents, bedding, and other household waste. (5)

_____ Disasters: Items resulting from storm damage, coastal erosion, or degrading harbors. (6)

_____ Fishing: Including both recreational and commercial abandoned, derelict or otherwise lost fishing gear or equipment such as buoys, fishing line, traps, or net material. (7)

_____ Personal Hygiene: Include any personal protective or sanitary products used to keep safe and clean such as masks, gloves, condoms, and diapers. (8)

_____ Recreation: Items associated with recreation (other than sport fishing) including balloons, toys, clothing, and dog waste bags. (9)

_____ Waste management inefficiencies: Trash resulting from broken, overflowing or too few waste bins; inefficient or no street sweeping (10)

_____ Other (please specify) (11)

Q9 If you would like to elaborate on your answers regarding the biggest sources of litter in your community, please do so here. (Open Answer)

Q10 What are the biggest impacts of litter pollution that your community faces? (arrange the following by dragging each into ranked order, with 1 being the biggest impact of litter and 16 being the smallest. You can use the next question to elaborate on any of your answers).

_____ Neighborhood blight (e.g., lower property values, attracts crime) (1)

_____ Unsanitary conditions, hazardous waste, and/or other public health risks (2)
_____ Public safety issues (e.g., navigational hazards, trashed areas attract crime) (3)
_____ Poor water quality impacting recreational activities (4)
_____ Lower desire for outdoor recreation in the community (5)
_____ Loss of pride in the community (6)
_____ High monetary costs of removal/cleanup (7)
_____ Large time investment by community members dedicated to clean-ups (8)
_____ Trash-induced flooding (9)
_____ Lower economic growth/development (10)
_____ Impaired drinking water quality (11)
_____ Lower air quality (12)
_____ Damage to plant communities and/or habitat (13)
_____ Wildlife habitat damage (14)
_____ Wildlife endangerment (entanglement, ingestion, etc.) (15)
_____ Other (please specify) (16)

Q11 If you would like to elaborate on your answers regarding the biggest impacts of litter pollution in your community, please do so here. (Open Answer)

_____

Page Break

The following questions are related to efforts trying to address litter in your community. These may be local, regional, or at the state level but have a specific impact on your community.

Q12 Please complete the sentence (choose one). In my community, finding lasting and sustainable solutions to litter pollution is a...

- ○ Very high priority (1)
- ○ High priority (2)
- ○ Moderate priority (3)

○ Small priority (4)

○ Not a priority (5)

Q13 Please elaborate on/explain your answer regarding the priority level of finding lasting litter solutions in your community. Why or why isn't it a high priority? (Open Answer)

_____

Q14 What other issues does your community face that are linked to the ability to find and/or implement lasting litter solutions? In other words, are there conditions or practices that need to be addressed first or simultaneously to tackle the trash pollution problem? (for example: addressing the housing crisis first/simultaneously could lead to less encampments which could lead to less litter in some areas). (Open Answer)

_____

Q15 What efforts are you aware of that are underway in your community to address the litter pollution sources and impacts you mentioned earlier in Questions #8 & #10? (Open Answer)

_____

Q16 Please provide examples or cases where you thought solutions were successfully carried out to reduce litter in your community. What happened in this project/example to make it a success in your opinion? (Open Answer)

_____

Q17 What hasn't worked well? What do you think are some of the challenges that prevent the success of these efforts? (Open Answer)

_____

Page Break

The following questions regard the types of support needed for your community to better address litter issues, with specific interest on challenges to funding opportunities.

Q18 Please rate each type of support (expertise, resources, tools, techniques or training) according to the benefit it would have for your community. Rate each from 'High benefit' to 'No benefit'. (You may need to click on each in order for the rating to show).

	High benefit (1)	Some benefit (2)	No benefit (3)	N/A (4)
Awareness of relevant funding opportunities (1)	○	○	○	○
Grant writing workshops or assistance (2)	○	○	○	○
More staff or volunteers (3)	○	○	○	○
Connections to someone with expertise missing from my network (please explain if applicable) (4)	○	○	○	○
Connections/contacts to other groups in our area doing similar work (5)	○	○	○	○
Connections/contacts to other groups doing similar work elsewhere in the state or beyond (6)	○	○	○	○
Connections/contacts to local agencies (please explain if applicable) (7)	○	○	○	○

Connections/contacts to particular businesses or industries (please explain if applicable) (8)	○	○	○	○
Connections/contacts to local leaders or community groups (please explain if applicable) (9)	○	○	○	○
Educational materials for your staff or your community (please explain if applicable) (10)	○	○	○	○
Educational materials/campaigns to reach people in your community and region (please explain if applicable) (11)	○	○	○	○
New innovations/technologies (please explain if applicable) (12)	○	○	○	○
Not sure, open to suggestions of useful tools and resources (13)	○	○	○	○
Other (Please Specify) (14)	○	○	○	○

Q19 What are your biggest challenges (if any) in obtaining funding to address trash pollution in your community? (If you don't have experience with this you may skip this question).

_____

Q20 Which funding sources (federal, state, local, philanthropic, etc.) do you have the most success in addressing litter in your community? Why or why not? (If you don't have experience with this you may skip this question).

_____

Page Break

The following questions regard the California Ocean Litter Prevention Strategy (OLS), led by the California Ocean Protection Council and the National Oceanic and Atmospheric Administration's Marine Debris Program, and aim to understand your interest and ability to participate in its statewide efforts, specifically as this current plan comes to a close and planning for the next iteration begins.

You will need to review the OLS website to answer the following questions.

Q21 Please arrange these factors from those that most to those that least affect your ability to participate in, or utilize the resources and social capital of the Ocean Litter Strategy and its community. Arrange the following by dragging each into ranked order, with 1 being the biggest factor and 8 being the smallest. You can use the next question to elaborate on any of your answers.

_____ Lack of familiarity with or awareness of the OLS or other similar state trash pollution resources (1)
_____ Mismatch in priority alignment (2)
_____ Uncertainty about what I, my organization or my community will get out of participation (3)
_____ Logistical or scheduling constraints (4)
_____ Time limitations (i.e., no time to participate) (5)
_____ It is difficult for my job to support my participation in the OLS or other similar statewide efforts (6)
_____ Lack of financial or resource support to participate (7)
_____ Other (please specify) (8)

Q22 How do the current Ocean Litter Strategy priorities compare to your/your community's priorities regarding litter pollution and solutions? For example, are there

consistencies or mis-alignments between your and the OLS's goals, objectives or actions? Please provide specific examples or experiences. (Open Answer)

_____

Q23 Please review the priorities and engagement opportunities such as webinars/workgroups established for the OLS community and provide us some ideas (if any) of what could be done to better engage you and your community throughout the life of the next strategy? (You can review the OLS website here) (Open Answer)

_____

Q24 Please explain how we can help to remove challenges and/or add incentives so that you or others from your community could participate in the next Ocean Litter Strategy planning process and eventual implementation. Rate each from 'Very helpful' to 'Not very helpful'.

	Very helpful (1)	Somewhat helpful (2)	Not very helpful (3)	N/A (4)
The ability to iterate on the updated plan as it is developed (vs. a single session of input) (1)	○	○	○	○
A formal invitation letter (e.g., to get approval from my job) (2)	○	○	○	○
Evidence of participation such as a certificate or letter (3)	○	○	○	○
Coverage of any travel costs (4)	○	○	○	○
Honoraria or other compensation (5)	○	○	○	○

Financial support for subsequent actions/community projects (6)	○	○	○	○
One or more opportunities for my community to introduce and provide updates on the OLS (7)	○	○	○	○
Other (please specify) (8)	○	○	○	○

Q25 If you would like to elaborate on your answers regarding the challenges and/or incentives to participating in the next OLS planning and implementation process, please do so here. (Open Answer)

_____

End of Block: Question Block

Appendix C: Los Angeles Litter Efforts Successes and Challenges

Full list of current efforts to address litter pollution mentioned by respondents, generated based on responses to Needs Assessment Questions #15-17. Note: Empty cells do not indicate lack of success or challenge, rather there was no specific success or challenge mentioned by respondents.

Efforts	Successes	Challenges
Bans on Single-Use Plastics	• Consumers change what they purchase and in the manner they purchase their goods	• Reusable plastic bags are used only once or disposed • Doesn't address overall consumption habits • Plastic utensils are still given out
Black Women for Wellness Grant Canvassing Effort	• Increased awareness to small businesses of a grant to apply for reusable foodware for dine in and few businesses were able to apply	
Bulky Item Pickup Service	• Free disposal options • Community newsletter detailing the information	• Lack of public awareness • Inconsistent service • Inconvenient process
Community Cleanups	• Focusing on high litter areas • Improving public and natural spaces • Educational/ inspirational tool	• Small scale • Temporary fix • Inconsistent • Underfunded • Doesn't address the root cause of pollution
Compost programs		• Food waste separation is seen as tedious and not appealing • Often excludes multifamily units

		• Requires citywide efforts and major investment
Education Campaigns	• Increasing understanding of the importance of reducing plastic use and litter • Ability to educate a variety of different audiences and cater messaging to them	• Not always taught early in schools • Doesn't often include topics outside of litter (e.g., impacts from plastic exposure, waste management systems) • People still litter - behavior change takes time • Cultural differences with expectations for responsibility to fall on the city • Lack of incentives for short term residents or visitors to engage with local environmental efforts
Electronic Waste Drop off Sites	• Becoming more common in communities • Increasing availability	
General City Efforts	• City does everything possible to keep public spaces such as parks clean • City puts a lot of effort into graffiti removal	• Lack of public awareness • Cities need more support and resources • Some programs can exclude or overlook certain groups • City prioritizes revenue-generating businesses (e.g., fast food) over sustainability efforts
Grassroots Efforts	• So many grassroots efforts exist	• Lack of funding and resources limit effectiveness

		• Community initiatives can be fragmented/siloed
Illegal Dumping Enforcement Programs	• Accurately record chronic locations where illegal dumping occurred. Then with the captured video footage, the division can use the evidence to prosecute the responsible party	• People not reporting • Budget and staffing constraints • Minimal penalties leading to repeat offenders
Incentive and Disincentive Programs	• Charging a fee for plastic bags or offering discounts for using reusable containers	• Limited success in changing behavior at scale
LA Parks Foundation, LASAN, and RAP Plastic Free Parks Program		• Bins were poorly sorted leaving LASAN with little to collect despite daily pick-ups
LASAN CARE+ Program	• Trash from large encampment areas are cleared and cleaned	• Some are too large to clean • Temporary fix • Trash accumulates faster than it can be removed • Encampments relocate • Doesn't address root issues of houselessness
Municipal Waste Services	• Sustainable, long-term waste management solutions such as widespread composting • Extended recycling programs, or building infrastructure for plastic alternatives	• Waste services in some areas are often limited or costly • High disposal fees • Lack of recycling centers or legal disposal options • Lack of funding
MyLA311 App	• Engaging residents in	• Incidents still go

	reporting illegal dumping and litter in their area	unreported due to a lack of public awareness of the app or reluctance from residents to use the app and report incidents
Personal Responsibility	• Small actions can make a big difference • Encouraging healthy personal connections fosters care and stewardship • Hands-on experiences deepen awareness of individual impacts	• Very easy to be apathetic • High consumerism is still the norm • Widespread affluenza
Recycling Programs	• Incentives/rewards such as bottle deposit	• High volume • Poor sorting • Lack of infrastructure in some areas • Lack of interest even with deposit • Inconvenient prep such as cleaning and storing • Can attract pests
Senate Bill 54	• Statewide aim to reduce the use of single-use plastic across California and therefore result in less litter	• Common single use plastics remain major sources of litter • Loopholes and non-compliance persist in many areas • Fast food outlets often ignore utensil policies giving out plastic cutlery without request
Stormwater Capture	• Capturing litter before it reaches the LA River or beaches	• Other debris besides litter can accumulate and clog system • Can perpetuate negative

		actions like littering because it will be captured
Visiting a Landfill or Waste Handling Facility	• Shifts personal awareness of individual contributions to the waste problem • Highlights how public choices impact landfill workers' safety and environmental efforts • Facility staff value visits for educating the public on responsible waste practices	
Voluntary Plastic Product Phase-outs in Procurement	• Restaurants and cafes remove plastic packaging as an option	• Doesn't curb consumerism and justifies continued consumption • Alternatives are often costly and unrealistic for small businesses • Consumers often prioritize convenience over sustainability
Waste Management in Public Areas	• Public spaces like parks are typically kept very clean	• Lack of bins in high-traffic areas • Fewer waste disposal options in lower-income neighborhoods • Infrequent collection leading to overflowed bins • Lack of proper public disposal for sharps (e.g., needles, medical waste).
Waste Management	• Events must provide	

Requirements at Events	adequate trash and recycling bins and clean-up crews to reduce litter from recreational activities • LASAN initiatives encourage vendors at events and public spaces to switch from single-use plastics to compostable or reusable alternatives	
Wholesalers/Distributors Initiatives to Reduce Waste	• Consumers are able to change amazon orders to be shipped in one box, instead of multiple reducing waste and materials	• Justifies the consumer that “buying this product is better” • Consumers aren't reducing their overall consumption habits, they are just changing what they purchase and in the manner they purchase their goods
Youth Education	• Easy lift • Disseminates information from youth to families • Starting small scale • Ability to constantly educate	
Zero Waste LA - LA’s Zero Waste Initiative	• Educate residents about proper recycling and help expand composting infrastructure to divert food waste from landfills	

Appendix D: California Ocean Litter Solutions Funding Opportunity Repository

https://docs.google.com/spreadsheets/d/1LEIItWrUkn99e-96CRl3WbKMZB_XPlhVlqsJkSAUgwA/edit?gid=69874954#gid=69874954

This Funding Opportunities Repository is dedicated to monitoring grants offered by municipalities, states, federal governments and private sources that could be used to support projects related to ocean litter prevention in California. This tracker focuses on opportunities that meet a variety of goals ranging from Source Reduction, Product Design, Waste Management, Research, Behavior Change & Education, and Ocean-debris & Cleanup. By collating these opportunities into this repository, we hope to expand opportunities to those seeking funding for efforts that directly address litter prevention.

Appendix E: Best Practices Guide for Funders

A best practices guide for funders looking to increase effectiveness of their opportunities.

Best Practices Guide for Funding Community-Based Initiatives

This guide offers suggestions for funders looking to reduce common challenges faced by communities applying for funding.

1. Broaden Participation to Strengthen Outcomes

Broaden Audience Reach

Expand the reach of announcements to a wider range of audiences. Provide applications in multiple languages when possible.

Align Priorities with Community Needs

Ensure funding priorities and parameters (e.g., eligibility, spending restrictions) align with community goals and needs to strengthen impact.

Expand Timelines & Maintain Continuity

Consider multi-year funding, rolling deadlines, and expanding timelines when possible to alleviate time constraints and allow for long-term impact and financial stability.

2. Ease the Application Process

Provide Clear & Straightforward Announcements

Streamline applications to be easy to follow. Use plain language, headings, and bullet points to improve clarity and accessibility.

Offer Application Guidance & Support

Offer resources to ease the application process, particularly for new applicants (e.g., workshops, office hours, grant-writing support, budget templates, step-by-step instructions).

Mitigate Match Requirements

High or restrictive match requirements can deter community groups. Reduce or eliminate them where possible, and clearly define what qualifies as match to make the process clearer for applicants.

3. Support Collaborative Relationships Throughout the Award

Minimize Reporting

Streamline reporting requirements and frequency to reduce administrative burden. Request only the information you will actively use.

Clarify Data Management & Sharing

Address data ownership and usage early. Establish clear agreements on how project data will be shared and safeguarded for use by the community.

Ensure Transparency & Accountability

Ensure transparency throughout the funding process to foster trust, accountability, and respect.

This guide was informed by the Sea Grant Grant-Making Workgroup and the Ocean Litter Strategy Los Angeles Needs Assessment Community Advisory Group.