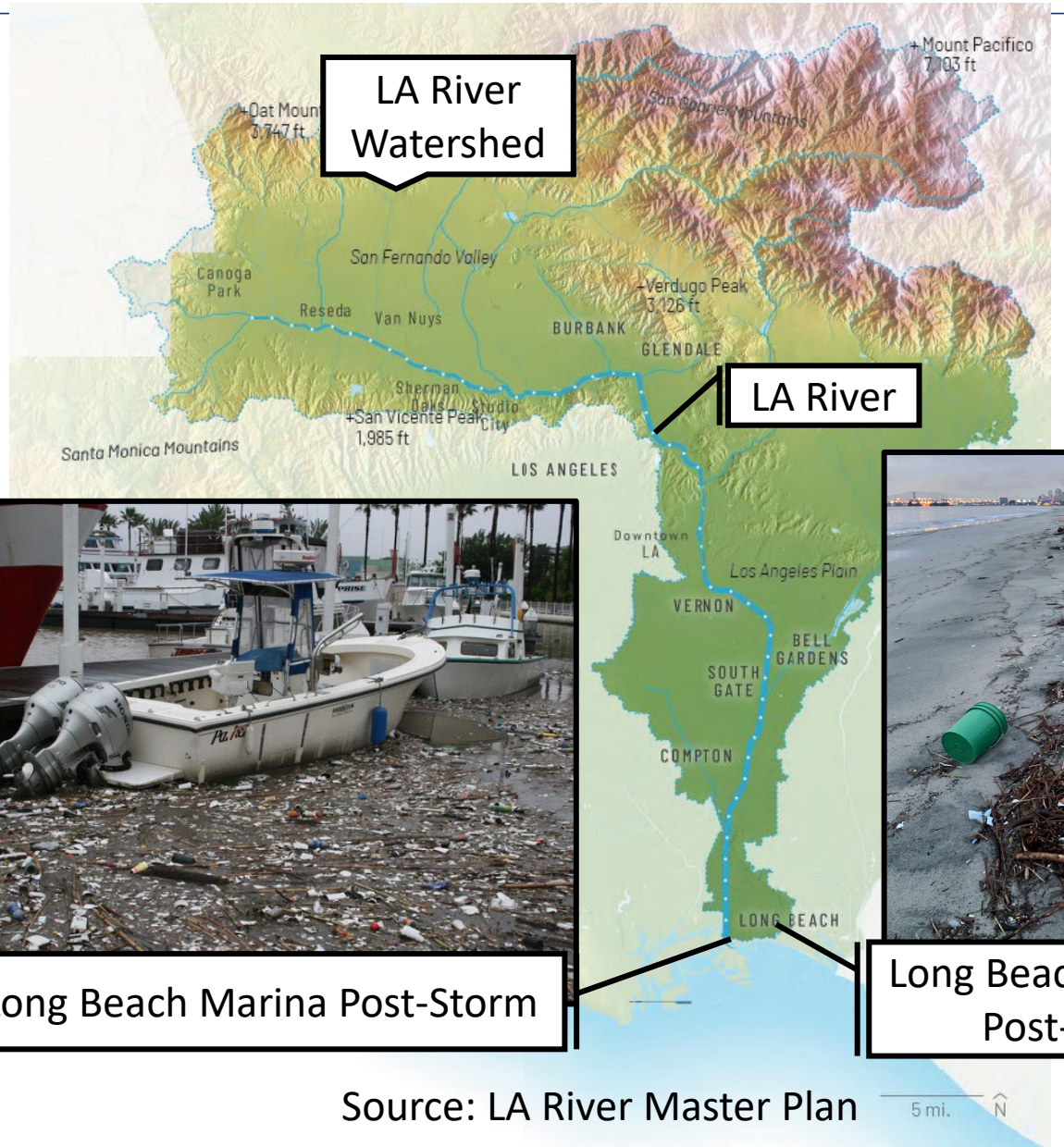
Marine Trash & Debris Capture Project

City Council Presentation
March 17, 2026

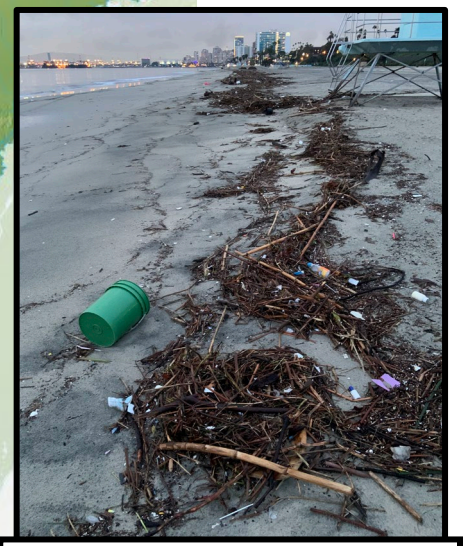


Background

- The Los Angeles River watershed is the largest source of trash & debris for City waterways and beaches
  - 834-square mile watershed
  - 44 cities, unincorporated LA County, Caltrans
  - ~ 5 million people
- Existing City practices in place to collect debris upstream in jurisdictional areas
  - Storm Drain Screens
  - Street Sweeping
  - Clean Team
  - Trash Collection



Long Beach Marina Post-Storm



Long Beach Shoreline Post-Storm

Source: LA River Master Plan

Project Need

Despite existing efforts, about 4,000 tons of trash & debris are collected and removed from waterways and beaches in Long Beach annually through clean-up efforts by the City and LA County



City crews remove about 2,000 tons of trash & debris from City waterways and beaches



County crews remove about 2,000 tons of trash & debris from a boom at the Los Angeles River Mouth

Goals

Near term pilot project to capture trash & debris that bypass current practices

- Expedite an in-river pilot project within City jurisdictional limits
- Reduce waste and pollution in local waterways, beaches, and coastal environments
- Enhance water quality, aquatic habitat, and recreational activities through trash and debris removal
- Collect data and measure pilot performance to inform future decision making



Long term collaboration with watershed partners

- Collaborate with upstream jurisdictions, regulators, Non-Governmental and Community-Based Organizations on watershed scale solutions
- Address sources of trash throughout the Los Angeles River watershed
- Continue to evaluate needs for downstream collection



Coordination, Outreach, and Engagement

Completed and ongoing engagement

- Non-government and community organizations
- Upstream jurisdictions
- Jurisdictions with similar projects
- Regulatory stakeholders
- Elected Officials
- Businesses
- Community Meeting: November 12, 2025
- Website https://www.longbeach.gov/pw/projects/marine-debris-and-trash-capture-system/

Trash Capture and Removal Technology

Reference Projects



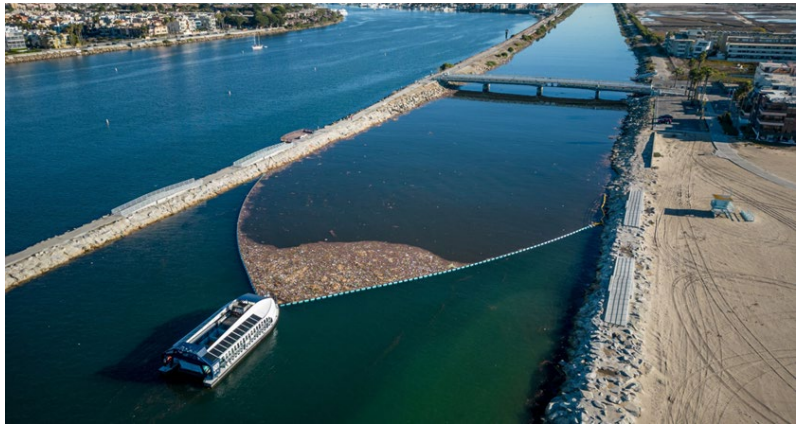
Ballona Creek Trash Interceptor
collected 156 tons since 2022



Newport Beach Trash Wheel
100-500 tons/year expected



LA County Trash Boom
2,000 tons/year collected







Trash Capture and Removal Technologies

Examples



Long Beach Trash Debris Skimming Vessel



Boom with Outrigger Arm



Crane with Clam Shell Bucket



Mechanical Bar Screen

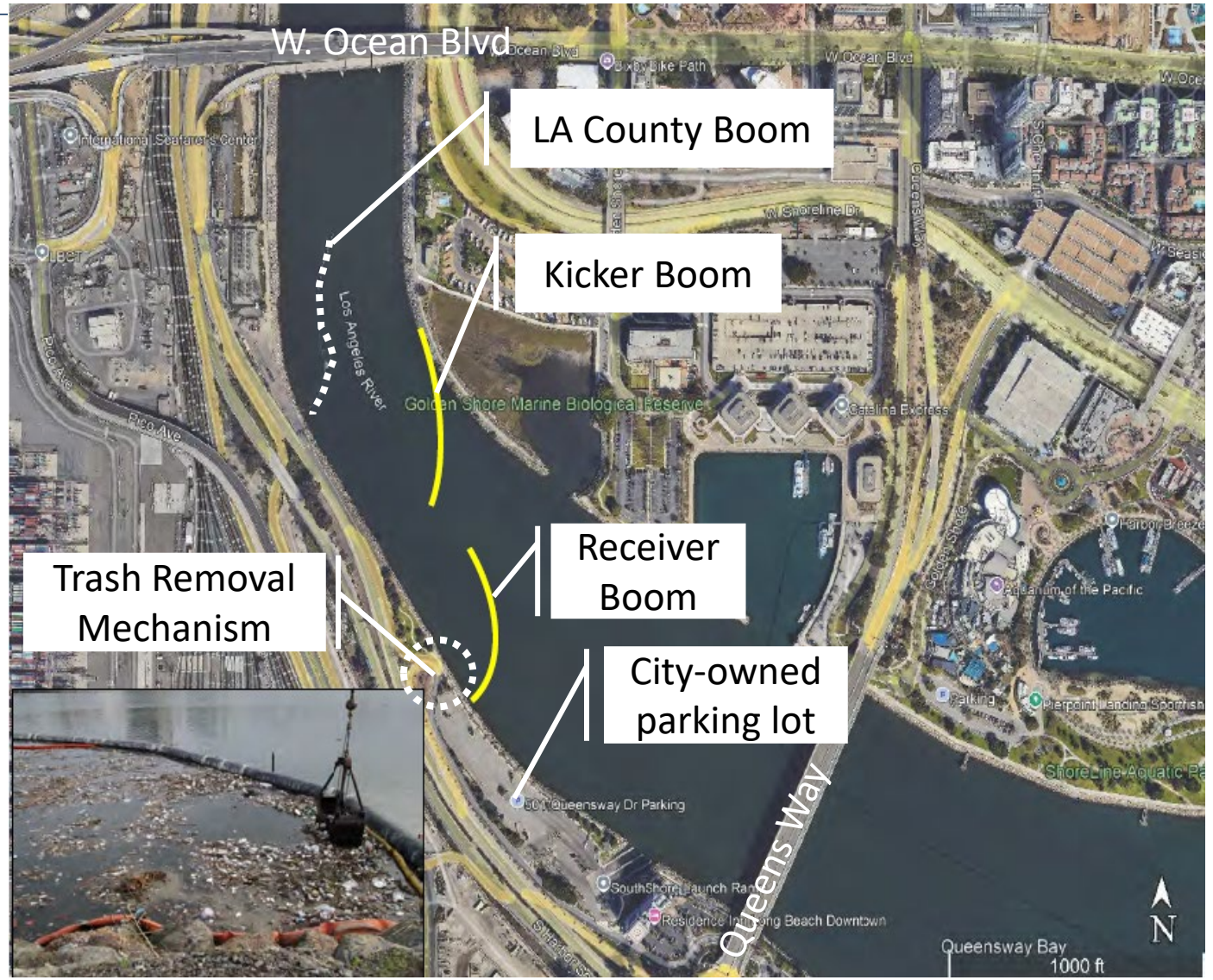


Pilot Project Concept

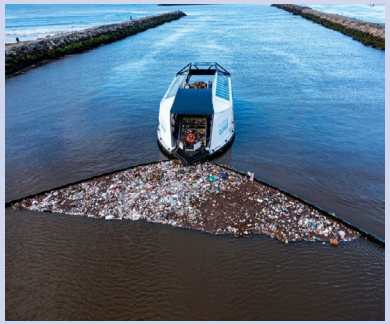
Feasibility Study Findings:

Favorable conditions between W. Ocean Blvd. and Queens Way

- **Kicker Boom:** shifts trash and debris to right bank
- **Receiving Boom:** captures trash & debris
- **Trash removal area:** City-owned parking lot
- **Mechanism:** Crane with clam shell bucket, tender, wheel/conveyor, or mechanical bar screen



Estimated Capital Costs

Interceptor Barge	Boom & Crane	Boom & Mechanical Screen	Boom & Conveyor	Boom & Skimmer
				
				
Not Feasible • **River hydraulics** • **Trash volume**	**$4,390,000**	**$7,720,000**	**$5,950,000**	**$4,890,000**

Note: Feasibility Level Estimates (-15% to +30%)

Costs & Budget

Anticipated Costs:

- $1.5M Engineering/Permitting
- $4.4M - $7.7M Capital Costs

Total $5.9M - $9.2M

+ Annual $1.9M - $3.1M Operations & Maintenance

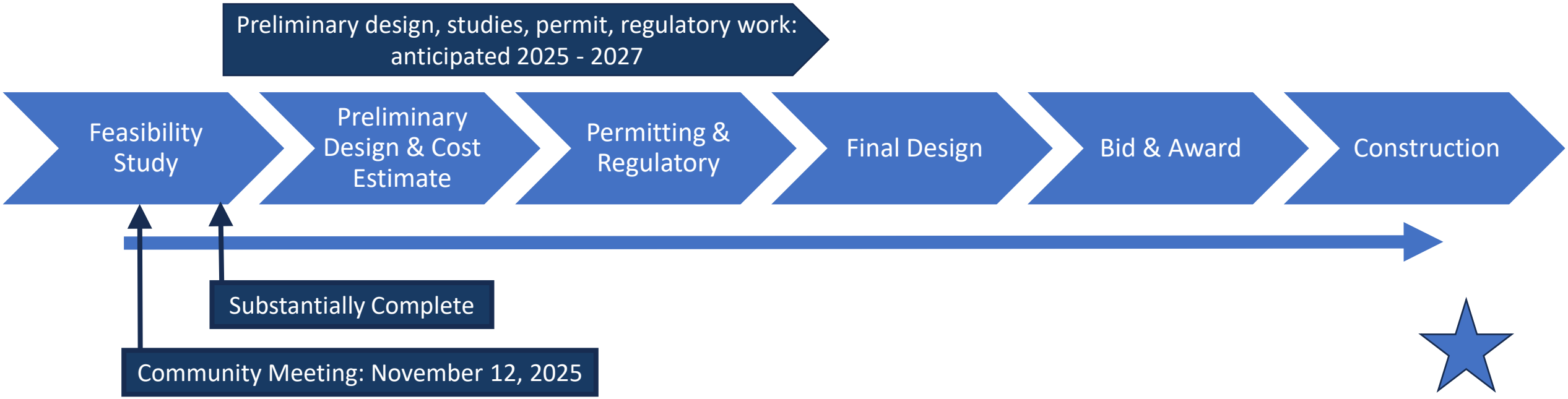
Project Budget:

- $2.5M General Fund (Monsanto settlement)
- $1.8M Construction & Demolition Fund

Total $4.3M

Note: Feasibility Level Estimates (-15% to +30%)

Project Schedule and Key Milestones



Implementation of Solution(s)

Early 2028

Memorandum of Understanding

- Framework for the City, County, and The Ocean Cleanup to continue to participate in data sharing and coordination efforts.
- The Ocean Cleanup is a Dutch non-profit organization that develops and deploys advanced technologies to rid the world's oceans of plastic pollution through trash inception devices.
- Further develop potential trash and debris capture solutions consistent with feasibility study, with the intent of progressing the City's Marine Debris and Trash Capture Project.
- Any future agreement to design, construct, implement, operate, or maintain any trash interception system would require separate City Council authorization and identification of funding.

Marine Trash & Debris Capture Project

Next Steps

- Continue Permitting & Regulatory Tasks
- Execute MOU to further advance partnership with LA County and The Ocean Cleanup to support Design, Installation, and Operations & Maintenance
- Collaborate with upstream jurisdictions on trash capture initiatives
- Secure additional funding for the project



Current Practices

- City installed trash capture screens at storm drain inlets prevent trash from entering the Los Angeles River
- City Maintenance and Clean Team crews routinely remove trash and debris from City jurisdictional areas
- City trash bins are deployed citywide in public spaces and refuse service ensures proper disposal









Catch basin connector pipe screen (CPS)

Marine Trash & Debris Capture Project

Feasibility Study

- Collect and analyze data
  - Existing mitigation efforts
  - Identify sources
  - Estimate trash & debris volumes and types
  - Understand River characteristics
- Study range of locations and technology types
- Identify potential environmental and design constraints
- Estimate costs and evaluate funding

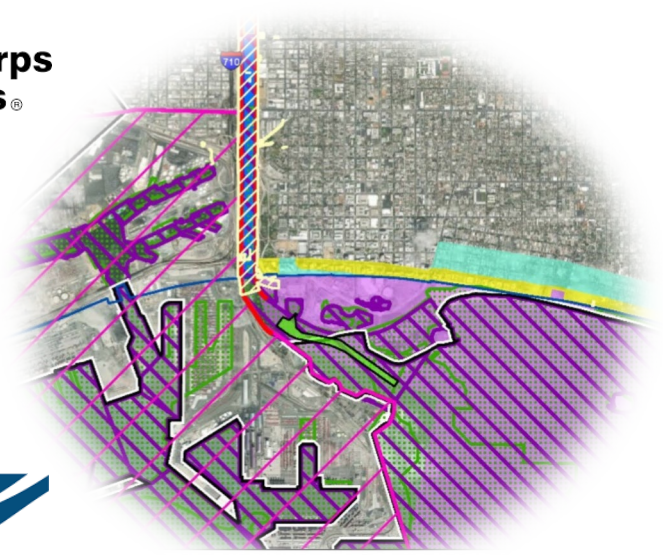


Los Angeles River at Willow Street

Marine Trash & Debris Capture Project

Permitting

- Permitting is a critical part of the project schedule
- Many Local, State, and Federal agencies are part of the permitting process
- City has met with all identified regulatory agencies
- Environmental studies are being conducted to support ongoing permitting and regulatory efforts



Thank You!

For further questions, please reach out to:

stormwater@longbeach.gov

Stormwater Division

City of Long Beach Public Works Department

For the latest Project updates, visit: https://lbcity.info/marinedebrisproject

longbeach.gov/pw