



## **Item 2: Report on the Impacts of Sewage Spills**

**Climate, Environmental, and Coastal Protection Committee**

September 26, 2023

## May 9th, 2023, City Council requested:

- Report on the impacts of sewage spills and beach closures
- Measure W funded sewage projects
- Sewage spills that violate the Clean Water Act
- Recommended action for the City to seek compensatory damages and reimbursement for sewage spill costs

# Interdepartmental Team



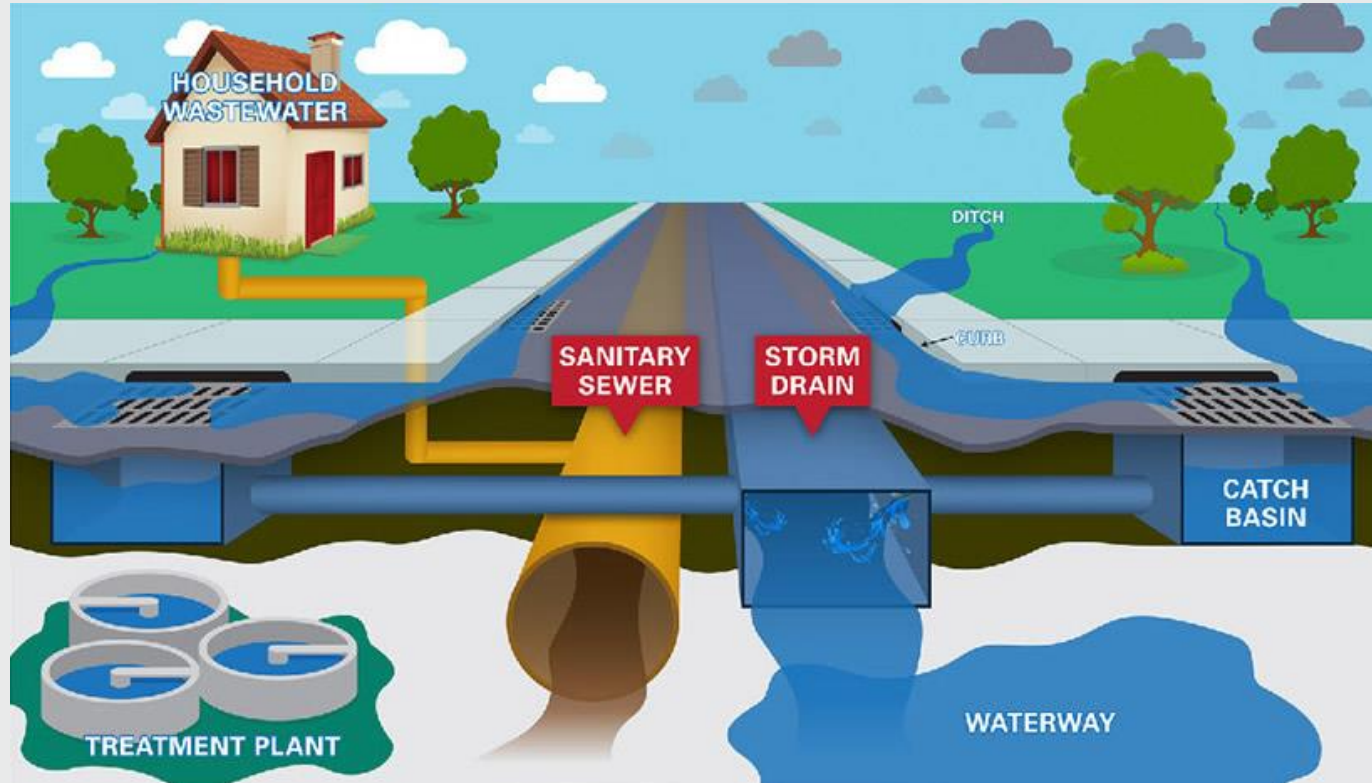
Staff met with the Los Angeles Regional Water Quality Control Board, Los Angeles County Sanitation Districts, and Los Angeles County Public Works to gather information about upstream sewage spills, regional response, and resources available when spills occur.

# Infrastructure Systems

## Sewage



- Closed System
- Collection and conveyance of wastewater only
- Water from sinks and toilets
- Directs water to a treatment plant to be filtered



## Stormwater



- Open System
- Allows outside substances (rainwater) to flow into the ocean
- Water that flows down driveways & streets into a gutter (can pick up pollutants)
- Is not treated



# What are Sanitary Sewer Overflows (SSOs)?



## What are SSOs?

- SSOs occur when untreated sewage is released into the environment and public waterways.



## Primary Causes

- Age of existing sewer collection infrastructure
- Lack of maintenance
- Poor operational procedures
- Inadequate flow capacity or blockages



## Contamination

- Sewage contains disease causing pathogens and viruses which can cause life threatening illness to those exposed.
- Exposure can occur by:
  - Swimming in open waters
  - Drinking contaminated water supplies
  - Eating contaminated seafood

# Sewage Spills

Spill Category	Description
Category 1	A spill of any volume of sewage that results in a discharge to surface water.
Category 2	A spill of 1,000 gallons or greater of sewage that does not discharge to surface water.
Category 3	A spill equal to or greater than 50 gallons but less than 1,000 gallons of sewage that does not discharge to surface water.
Category 4*	A spill of less than 50 gallons of sewage that does not discharge to surface water.

\*New category as of June 5, 2023

# Long Beach Sewer System

## Long Beach Utilities Department

- Oversees the operation and maintenance of the City's Sanitary Sewer System
- Responsible for reporting and mitigating any spills that originate from its system
- Has enforcement powers and may take action to prevent the occurrence of discharges
- Wastewater is moved through sewer lines to Los Angeles County Sanitation District wastewater treatment facilities where it is treated for safe disposal or disinfected for use as tertiary recycled water

**712**  
miles of  
gravity  
mains

**7.6**  
miles of  
force  
mains

**28**  
sewer lift  
stations

**115,000**  
lateral  
connections

**16,000**  
sewer  
manholes

**40**  
million  
gallons of  
wastewater  
a day

# Long Beach Sewer System (cont.)

The infrastructure shown in Green is the extent of the Sanitary Sewer System infrastructure that the City is responsible for.





# Successful SSO Prevention in Long Beach



## Routine and Preventative Maintenance Activities

- Hydro-jet cleaning of all sewer main lines
- Regular sewer inspections via closed-circuit television
- Sewer point repairs
- Capital Improvement Plans (Engineering Bureau)
- Limit the discharge of fats, oils, and grease



## SmartCover® Technology

- A sensor alerts personnel when water levels have exceeded a predetermined threshold
- Early alerts come as text messages or emails
- SmartCover® has prevented hundreds of sewer spills



## Sewage Spill Procedure and Protocols

- Containing the spill area
- Setting up barriers so spills do not reach catch basins
- Temporarily plugging the downstream storm drain
- Hazardous waste contractor to recover spilled sewage
- Sanitizing the spill area

# Spill Comparison 2021 and 2022

## 2021 Spill Comparison by Category for Long Beach, Region, and State

Spill Rate Indice (spills/100mi/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Long Beach Water Dept. CS (SSO program)	0.0	0.22	0.0	0.14	0.0	0.0	2.95	0.65	0.0
State Municipal (Public) Average	<a href="#">4.76</a>	<a href="#">1.51</a>	<a href="#">4.41</a>	<a href="#">3.17</a>	<a href="#">0.26</a>	<a href="#">4.24</a>	<a href="#">6.14</a>	<a href="#">36.73</a>	<a href="#">1.46</a>
Region Municipal Average	<a href="#">1.88</a>	<a href="#">0.22</a>	<a href="#">2.82</a>	<a href="#">0.88</a>	<a href="#">0.0</a>	<a href="#">0.84</a>	<a href="#">4.28</a>	<a href="#">0.65</a>	<a href="#">0.43</a>

## 2022 Spill Comparison by Category for Long Beach, Region, and State

Spill Rate Indice (spills/100mi/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Long Beach Water Dept. CS (SSO program)	0.0	0.0	0.0	0.14	0.0	0.0	3.38	1.53	0.0
State Municipal (Public) Average	<a href="#">3.71</a>	<a href="#">1.13</a>	<a href="#">3.82</a>	<a href="#">1.71</a>	<a href="#">0.72</a>	<a href="#">8.95</a>	<a href="#">5.6</a>	<a href="#">41.69</a>	<a href="#">1.92</a>
Region Municipal Average	<a href="#">2.42</a>	<a href="#">0.0</a>	<a href="#">0.84</a>	<a href="#">0.6</a>	<a href="#">0.0</a>	<a href="#">0.38</a>	<a href="#">2.35</a>	<a href="#">1.53</a>	<a href="#">0.53</a>

# Spill Comparison 2023

## 2023 (Jan. – Jun.) Spill Comparison by Category for Long Beach, Region, and State

Spill Rate Indices (spills/100mi/yr)									
	Category 1			Category 2			Category 3		
	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified	Mainlines	Laterals	Not Specified
Long Beach Water Dept. CS (SSO program)	0.0	0.0	0.0	0.57	0.0	0.0	1.71	0.88	0.0
State Municipal (Public) Average	<a href="#">7.53</a>	<a href="#">4.2</a>	<a href="#">12.99</a>	<a href="#">6.07</a>	<a href="#">0.0</a>	<a href="#">30.02</a>	<a href="#">7.61</a>	<a href="#">20.5</a>	<a href="#">9.16</a>
Region Municipal Average	<a href="#">3.16</a>	<a href="#">0.0</a>	<a href="#">0.0</a>	<a href="#">1.52</a>	<a href="#">0.0</a>	<a href="#">3.28</a>	<a href="#">4.32</a>	<a href="#">0.88</a>	<a href="#">3.28</a>

# Regional Spill Coordination

- Long Beach is overwhelmingly impacted by upstream spills, not spills that originate in the Long Beach sewage system
- The Los Angeles Regional Water Quality Control Board responds to spills throughout the region, conducts investigations, and develops enforcement actions against the responsible parties
- The Los Angeles County Sanitation Districts (LACSD) owns and operates sanitary sewer systems and pumping plants, monitors spills, and conducts water sampling
- The City's Health and Human Services Department is responsible for collecting water samples from the beaches, bays, marinas and the Harbor area.
  - If there is a spill and water quality sample results exceeds State standards, the City is responsible for closing impacted beaches and conducting water quality tests

# Assessing Economic and Fiscal Impacts of Beach Closures

## 63 days of total beach closures over the past five years

- All beach closure days in the last five years are due to upstream sewage spills
- It is difficult to assess economic impacts of past beach closures, since the City has no methodology to track beach attendance throughout the year
- Furthermore, it is very unlikely that the City could prove and recover indirect damages which may result from a beach closure, such as a reduction in sales tax or transient occupancy tax revenue
- Parking revenue data show a decline in average daily revenue, but no clear pattern related to the rate of decline
- Moving forward, direct costs of personnel could be used as a basis for legal action against the party responsible for the spill



# Measure W Projects

## MEASURE W-FUNDED LONG BEACH PROJECTS

Program	Fiscal Year	Status	Project Name	Funding Amount	Watershed(s)
Infrastructure Project	FY23-24	Under Consideration	Long Beach Municipal Urban Stormwater Treatment (LB MUST) - Phase 2	\$10.4M	Lower Los Angeles River
Infrastructure Project	FY23-24	Under Consideration	Heartwell Park at Palo Verde Channel Stormwater Capture Project	\$3.3M	Lower San Gabriel River
Infrastructure Project	FY22-23	Funded	Willow Springs Park Wetland Restoration and Expansion Project	\$1.2M	Lower Los Angeles River
Infrastructure Project	FY20-21	Funded	Long Beach Municipal Urban Stormwater Treatment (LB MUST) - Phase 1	\$10.8M	Lower Los Angeles River
Infrastructure Project	FY20-21	Funded	El Dorado Regional Project	\$3M	Lower San Gabriel River
Infrastructure Project	FY20-21	Funded	Skylinks Golf Course at Wardlow Stormwater Capture Project	\$10.5M	Lower San Gabriel River
Technical Resource	FY20-21	Funded	Willow Springs Park: Wetland Restoration Expansion	\$300k	Lower Los Angeles River

Municipal Infrastructure Project	N/A	Funded	El Dorado Regional Park Duck Pond Rehabilitation	\$9M	Lower San Gabriel River
Municipal Infrastructure Project	N/A	Funded	Trash Capture Device Installations	\$240k	Lower Los Angeles River +1
Municipal Infrastructure Project	N/A	Funded	City Facilities BMPs	\$N/A	Lower Los Angeles River +1
Municipal Infrastructure Project	N/A	Funded	City Facilities BMPs	\$N/A	Lower Los Angeles River +1
Municipal Infrastructure Project	N/A	Funded	Green Streets Master Plan Development and Implementation of Green Streets Projects	\$1M	Lower Los Angeles River +1
Municipal Infrastructure Project	N/A	Funded	Stormwater Projects Master Plan Development and Implementation of Stormwater Projects	\$1M	Lower Los Angeles River +1

# Seeking Recovery Options

## Recovery Costs from Regulatory Agencies

- The State's Cleanup and Abatement Account (CAA) provides grants of up to \$500,000 for cleanup or abatement projects statewide
- In a settlement it is possible for the penalty amount to be re-invested directly into the community impacted by the violations through supplemental environmental projects

## Recovery of Damages through Legal Action

- The City could take legal action against polluters under the Clean Water Act, the Porter-Cologne Water Quality Control Act, or under California tort law
- Some damages may be difficult to calculate but others can be easily measured

# Staff Recommendations

- Estimate fiscal impact and consider legal action in future instances
- Leverage regional partnerships
- Advocate for regional infrastructure improvements
- Advocate for changes to State funding through the Cleanup and Abatement Account



**Thank you**

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