

REGIONAL SEWER MODEL

May 27, 2026



LANGUAGE INTERPRETATION INSTRUCTIONS

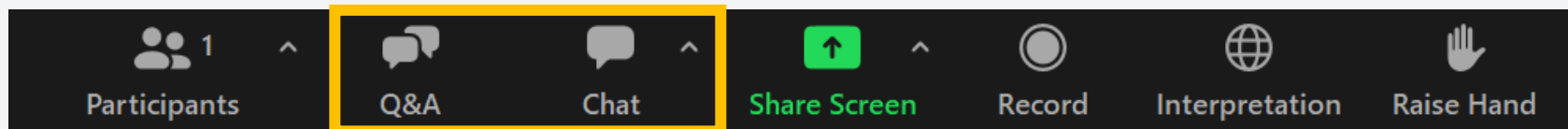
1. In your meeting/webinar controls, click **Interpretation**.
 - If you are on your phone, tap on the ellipses first.
2. Choose your preferred language.
3. (Optional) Click on **Mute Original Audio** to listen to the interpreted language only.
4. If you need help, raise your hand.



MEETING ATTENDEE GUIDE

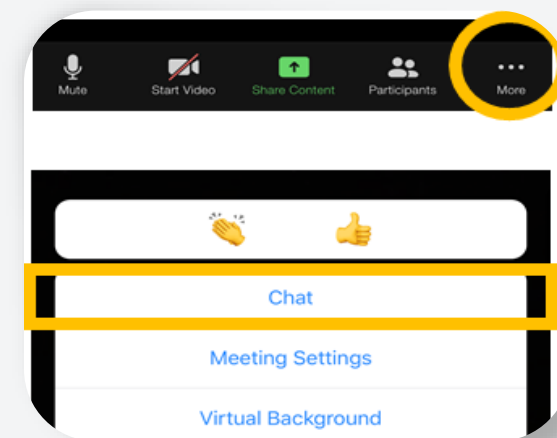
On a Computer:

- To submit a written comment, at the bottom of your screen, select the Chat icon to type a comment or choose Q&A to ask the moderator a question



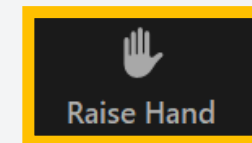
On a Mobile Device:

- At the bottom of your screen, select the More (...) icon, and the Chat option will appear



All meeting attendees will be muted

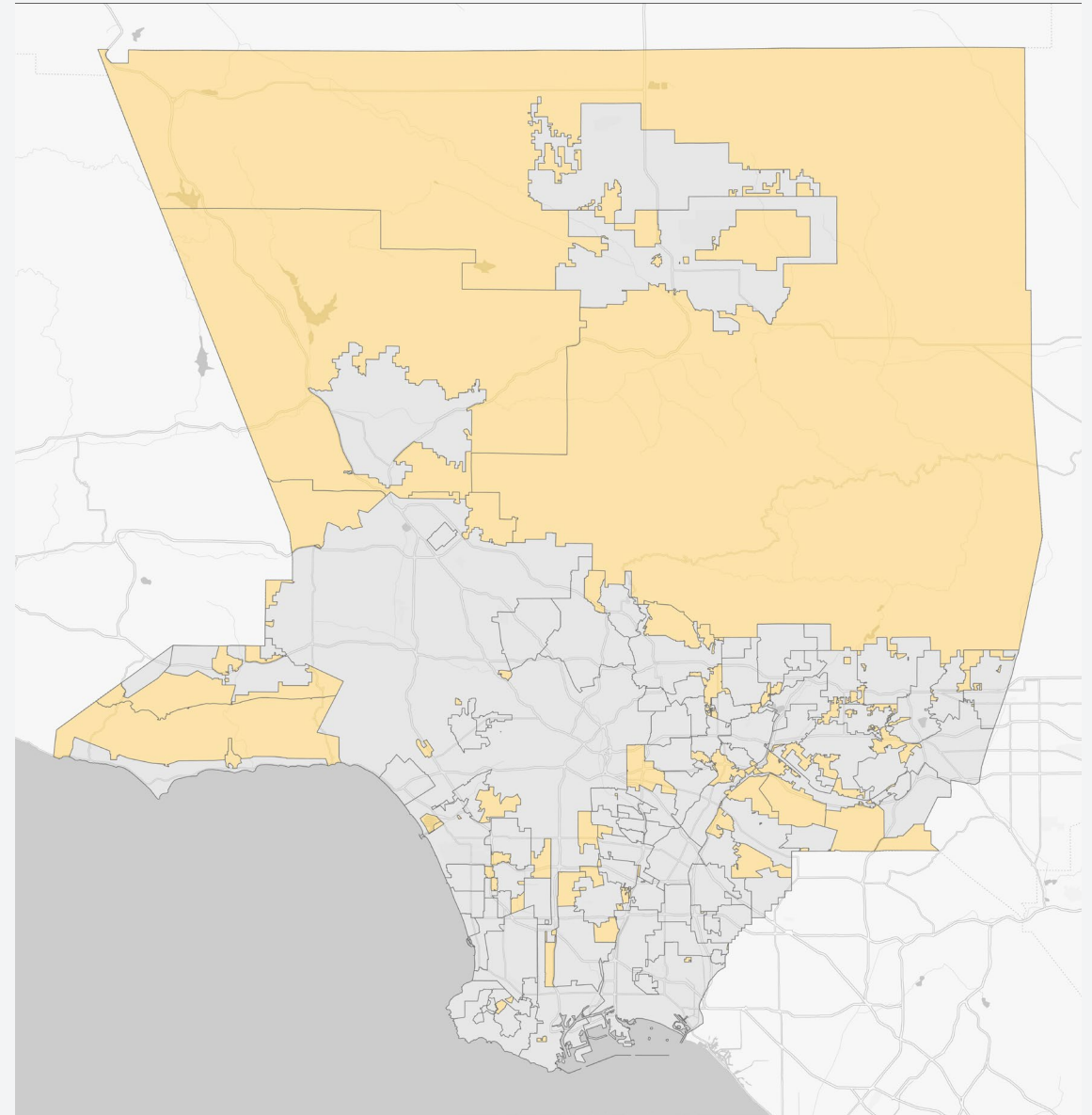
- To submit a verbal comment, click “Raise Hand.” The host will unmute you, and you have two minutes to make your comment.
- If joining on the telephone, you can submit a verbal comment by dialing *9 to Raise Hand, then dial *6 to Unmute, and you have two minutes for your comment.



LA COUNTY PLANNING

- Land Use + Zoning
- Unincorporated Los Angeles County
- Long range plans, review development projects, and respond to zoning complaints

**What, Where, and How
to help shape smart growth**



LA COUNTY PUBLIC WORKS (PW)

- Plan, design, build, and maintain infrastructure
- Unincorporated Los Angeles County + Contract Cities

Core Service Areas

- Water Resources
- Transportation
- Environmental Services
- Municipal Services
- Construction Management



SEWER SYSTEM



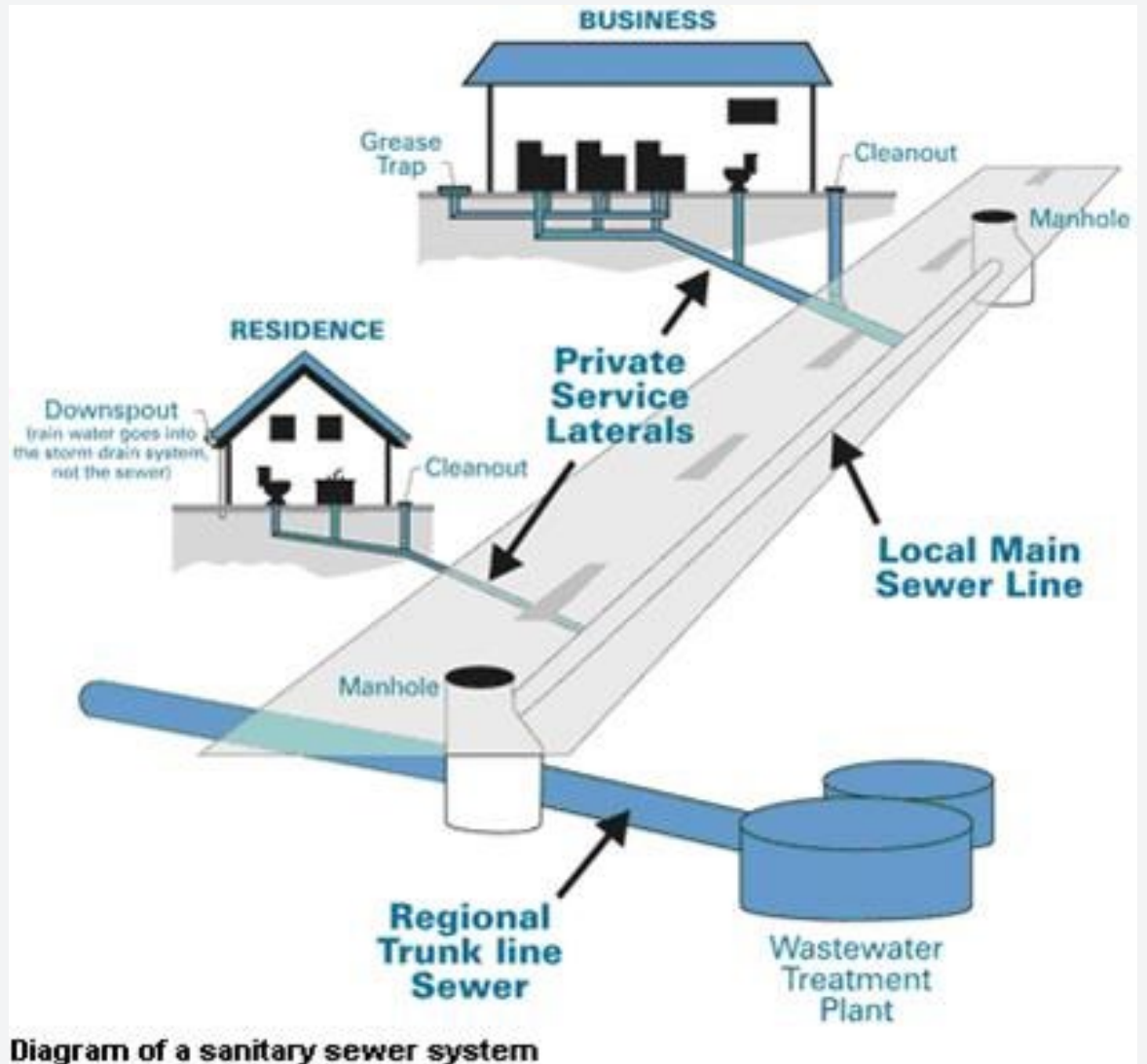
Cloaca Maxima – 600BC



Aztec waste management

WHAT IS THE SEWER SYSTEM?

- Network of underground pipes that carries sewage/wastewater from homes and businesses
- Water from sinks, showers, toilets, dishwashers, and washing machines
- Wastewater Treatment Plant



SEWER MAINTENANCE

- Cleaning and inspecting sewer lines regularly
- Repairing damaged or blocked pipes
- Responding to sewer overflows or emergency backups
- Planning long-term upgrades to prevent failures
- **Ensuring that the system can support community growth**

LA County Public Works Consolidated Sewer Maintenance District (CSMD)

Los Angeles County Sanitation Districts (LACSD)



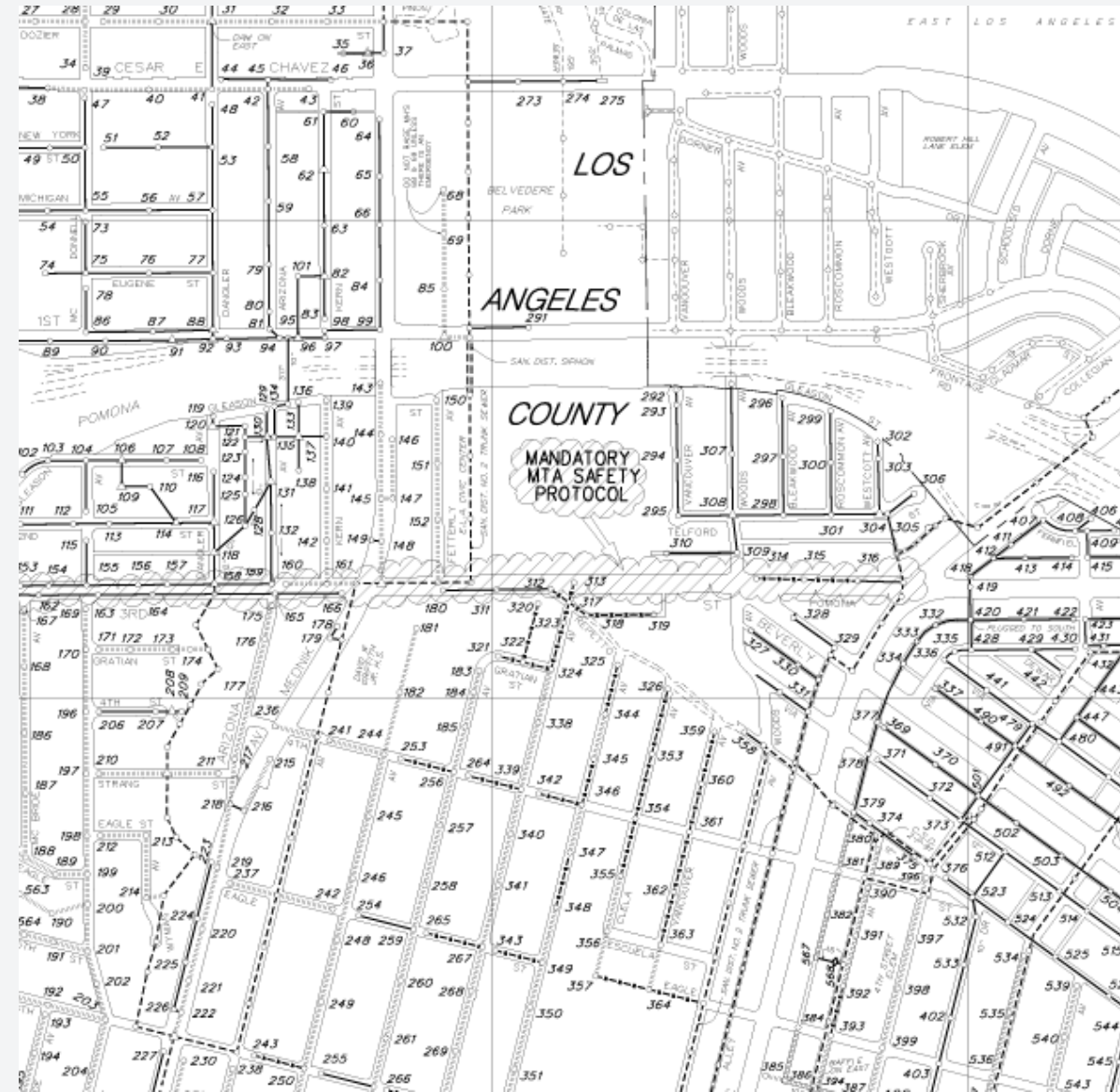
WHY SEWER MAINTENANCE MATTERS?

- Prevents backups into homes and streets
- Protects public health from exposure to untreated sewage
- Reduces pollution to rivers, beaches, and groundwater
- Helps keep service costs stable over time
- **Supports safe, sustainable development**



LA COUNTY SEWER FACTS

- Over **4,600** miles of sanitary sewers in unincorporated areas
- **88** pump stations and **four** wastewater treatment plants, **71** pump stations outside of District system
- Service for over **500,000** parcels and a population of **2 million** residents
- **37** member cities, **three** contract cities



SEWER AREA STUDY

- Evaluation of the **existing public sewer system's** capacity to handle wastewater from a proposed development project
- Analysis of sewage **flow** generated by the project and comparison with existing sewer **infrastructure capacity**

Sewer Area Study Table

* Calculated using Kutter's Formula with n=0.013
** Design capacity keeps three decimal places at least
*** Based on current land use and coefficients per LA County, (Attach supporting calculations)
**** For pipes < 15", design capacity of the sewer mainline is defined as 1/2 full = 100% capacity (d/D)
***** For pipes ≥ 15", design capacity of the sewer mainline is defined as 3/4 full = 100% capacity (d/D)

Kutter's Formula

$$C = \frac{41.65 + \frac{0.00281}{s} + \frac{1.811}{n}}{1 + \frac{n}{\sqrt{R}} \left(41.65 + \frac{0.00281}{s} \right)}$$
$$V = C\sqrt{RS}$$
$$Q = CA\sqrt{RS}$$

Street Name	Segment		Pipe		* Design capacity		Area (Acres)	Zoning Coeff.	Calculated Flow (cfs)	***Cumulative Calculated Flow (cfs)	PC orCI Construction Plan #	%Full	Comment	Jurisdiction
	M.H. #	M.H. #	Size (in.)	Slope (%)	1/2 Full(<15")	3/4 Full(≥15")						Cumulative Flow / Capacity		
Sample A	1	2	8	0.4	0.349		3	0.004	0.012	0.012	PC 123456	3.44%	OK	LA County
Sample B	3	4	15	1.4		6.891	3	0.004	0.012	0.024	PC 456789	0.35%	OK	LA County

SEWER AREA STUDY

- Triggered when the proposed sewage discharge exceeds what current zoning/permitted load allows
- **Subdivisions, new developments, other projects** (single lots, conditional use permits, etc.)
- Prepared by a registered California Civil Engineer
- Valid for **two years**

Estimated Average Daily Sewage Flows for Various Occupancies

Occupancy	Abbreviation	*Average daily flow
Apartment Buildings:		
Bachelor or Single dwelling units	Apt	150 gal/D.U.
1 bedroom dwelling units	Apt	200 gal/D.U.
2 bedroom dwelling units	Apt	250 gal/D.U.
3 bedroom or more dwelling units	Apt	300 gal/D.U.
Auditoriums, churches, etc.	Aud	5 gal/seat
Automobile parking	P	25 gal/1000 sq ft gross floor area
Bars, cocktails lounges, etc.	Bar	20 gal/seat
Commercial Shops & Stores	CS	100 gal/1000 sq ft gross floor area
Hospitals (surgical)	HS	500 gal/bed
Hospitals (convalescent)	HC	85 gal/bed
Hotels	H	150 gal/room
Medical Buildings	MB	300 gal/1000 sq ft gross floor area
Motels	MB	150 gal/unit
Office Buildings	Off	200 gal/1000 sq ft gross floor area
Restaurants, cafeterias, etc.	R	50 gal/seat
Schools:		
Elementary or Jr. High	S	10 gal/student
High Schools	HS	15 gal/student
Universities or Colleges	U	20 gal/student
College Dormitories	CD	85 gal/student

*Multiply the average daily flow by 2.5 to obtain the peak flow

SEWER AREA STUDY

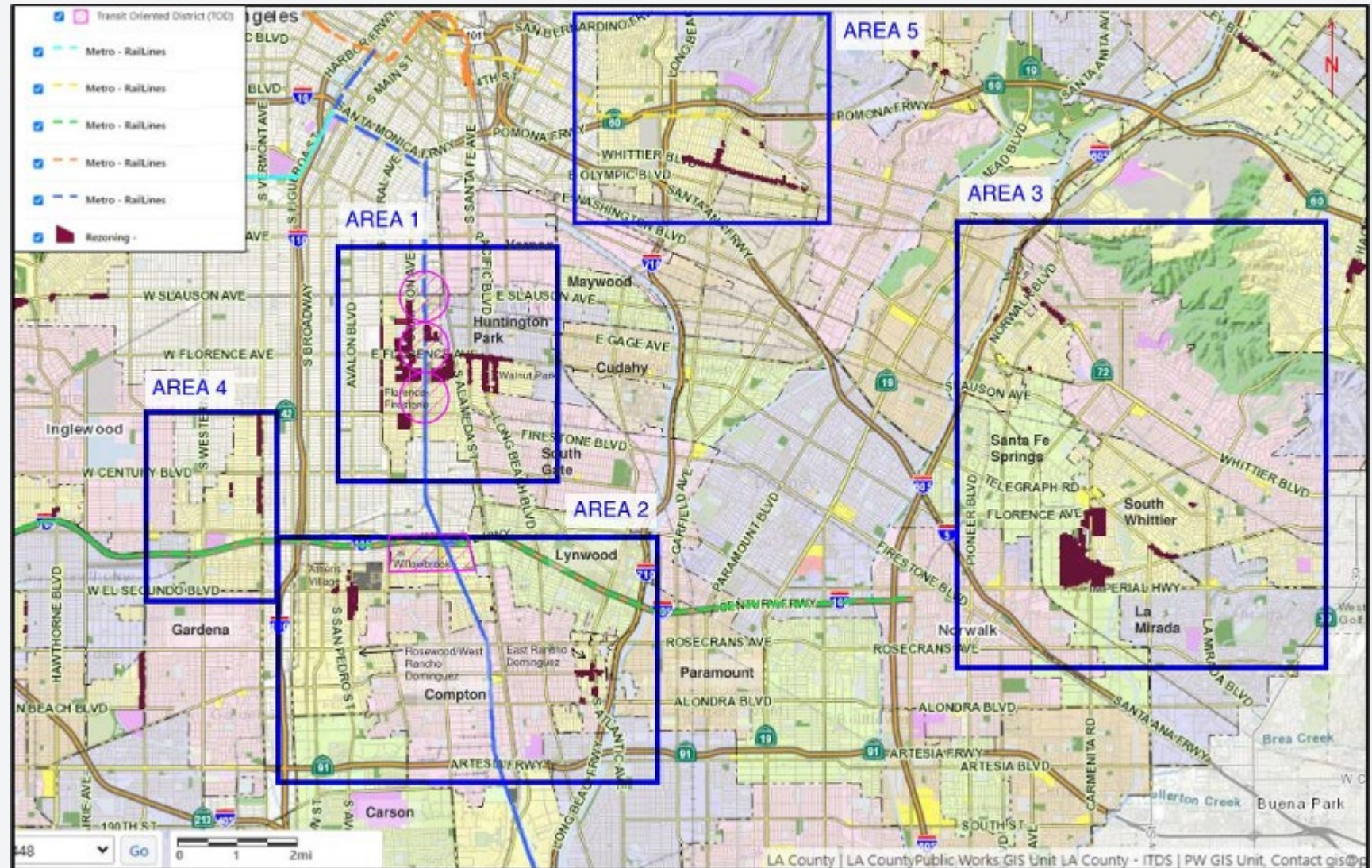
- **Preparation** – existing sewer network maps, as-built plans, zoning/land-use data, estimated sewage flow, other reference information
- **Submittal** – study is submitted to PW for review
- **Review** – if parts are missing or analysis insufficient, returned with comments and corrections
- **Approval/Outcome** – mitigation measures may be required



3-6 months

\$3,000 - \$10,000

Area 5 – East Los Angeles



REGIONAL SEWER MODEL

- **Planning-level study**
- Computer-based sewer model
- Review of existing records and parcel information
- Better understand how our existing sewer systems can support future housing and community growth
- Identify improvements
- Allow for additional housing



REGIONAL SEWER MODEL OUTCOMES

- Improve planning process speed, efficiency, and affordability
- Eliminates the need for a sewer area study from each developer
- Improve coordination between developers and the County
- Supports affordable housing, smart growth, and environmental protection
- Identify sensitive areas



PROJECT TIMELINE

WE ARE
HERE

2025-2026

Regional Sewer
Model



2026 - 2029

Capital Improvement Plan (CIP)



LA COUNTY

PLANNING

SHAPING TOMORROW

CAPITAL IMPROVEMENT PLAN (CIP)

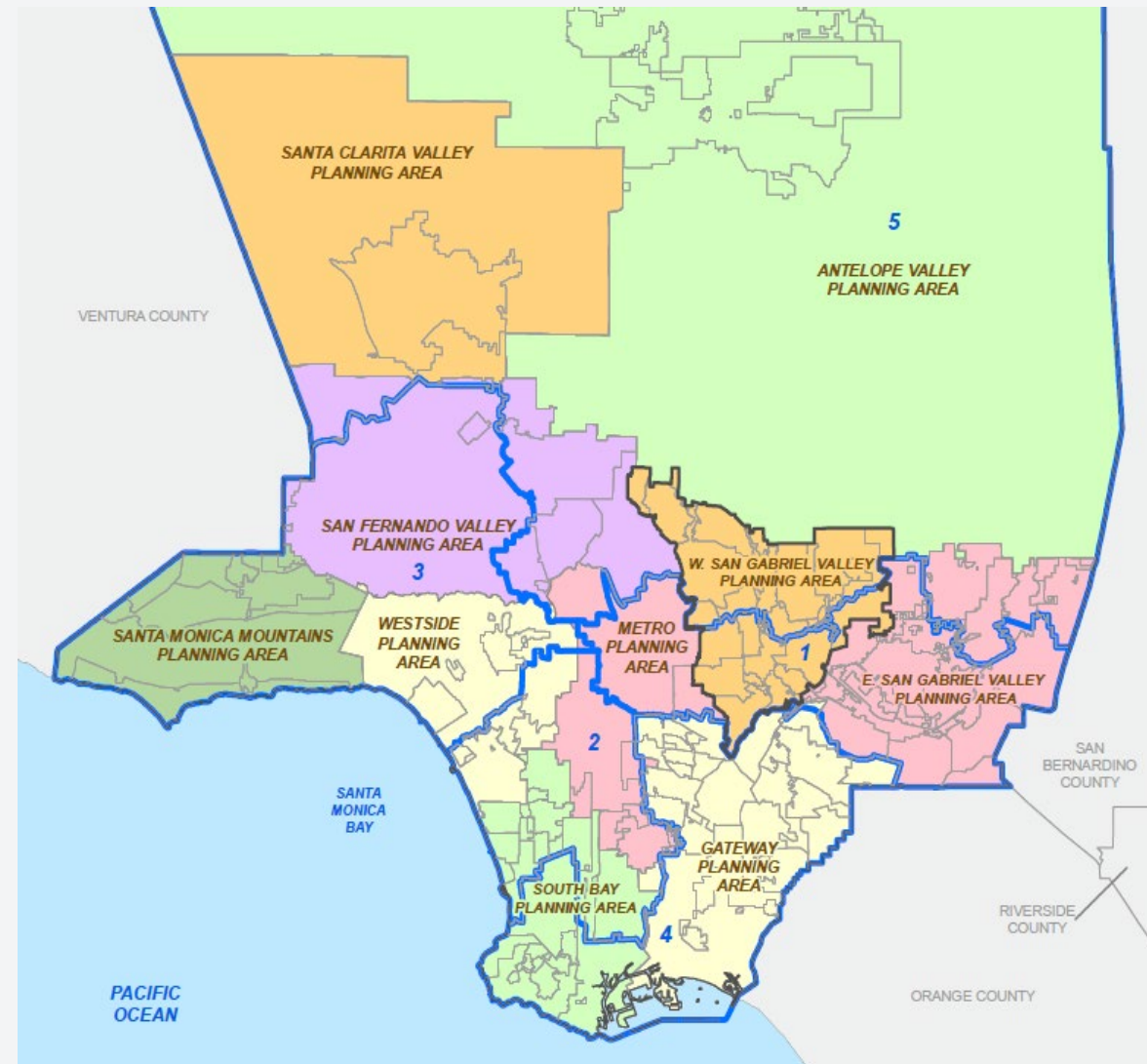
BACKGROUND

LA County General Plan

- Lays out values and vision countywide
- Fosters healthy, livable, and sustainable communities
- Establishes the Planning Areas Framework

Implementation Program: Planning Areas Framework

- Area Plan for each planning area
- Capital Improvement Plans (CIPs) in partnership with PW



PARTNER AGENCIES

Los Angeles County:

- Public Works
- Department of Economic Opportunity
- Chief Executive Office
- Chief Sustainability Office



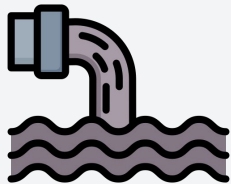
CAPITAL IMPROVEMENT PLAN (CIP)

- Long-term strategic plan that guides how the County prioritizes, plans, and funds infrastructure projects over the next 5-10 years
- Maintaining, improving, and expanding essential public infrastructure
- Prioritization, Funding, Estimated Project Timelines



INFRASTRUCTURE CATEGORIES

Sewer	Stormwater Management	Transportation and Mobility
• Systems that collect and treat wastewater	• Systems that manage rainfall and runoff	• Systems that move people and goods



COMPONENTS

Infrastructure Analysis



Community Engagement



Cost Analysis



Capital Improvement Plan



Environmental Analysis



PROJECT TIMELINE

2025-2026

Regional Sewer
Model



2026 - 2029

Capital Improvement Plan (CIP)



WE ARE
HERE

LA COUNTY

PLANNING

SHAPING TOMORROW



thank you!

Arturo Jacobo, Planner

genplan@planning.lacounty.gov



@LACDRP

@LACDRP_Espanol

@LACDRP_Chinese

Project Website

bit.ly/LACCIP



Metro CIP Newsletter

bit.ly/MetroSignup

