Over 500 Meetings
Sanitation Districts of Los Angeles County

GOVERNANCE
24 special districts with one staff

SERVICE AREA
78 cities & unincorporated county
824 square miles

INFRASTRUCTURE
1,400 miles of sewers
11 wastewater treatment plants
Ocean outfall system

Collect and treat sewage from 5.6 million people
Joint Outfall System

Main sewer system serving over 5 million people.
Existing Tunnels & Outfalls

- Joint Water Pollution Control Plant (Carson)
- Royal Palms Beach
- Palos Verdes Peninsula
- San Pedro

12-ft Tunnel (1937)
8-ft Tunnel (1958)
Outfalls Royal Palms Beach

8-ft Tunnel
12-ft Tunnel
Consequences of Tunnel Failure

- Dominguez Channel
- Los Angeles Harbor
- Machado Lake
- Joint Water Pollution Control Plant (Carson)
- Wilmington Drain
- Treated or Partially Treated Effluent
Consequences of Tunnel Failure

- Dominguez Channel
- Los Angeles Harbor
- Machado Lake
- Joint Water Pollution Control Plant (Carson)
- Wilmington Drain
- Upstream Sewage Diverted To Channel
NEW TUNNEL
Essential for System Reliability

- $700 million
- 18-feet diameter
- 7 miles long
- Depths of 30 to 450 feet below surface to top of tunnel
- Mostly under public roadways
- 7 years to construct (2018-2025)
Construction at JWPCP (2018-2025)

ENTRY SHAFT

Joint Water Pollution Control Plant

Sepulveda Ave

Figueroa St

Lomita Blvd
Tunnel Depth Profile

Carson White
Point
Palos Verdes Peninsula
70 FT Deep
65 FT
50 FT
460 FT
30 FT
Work at Royal Palms Beach
(2023-2025)

WORK ON NEW TUNNEL
About 2 Years
Tunnel Boring Machine (TBM)
Sophisticated Controls
Tunneling in Soil

VIBRATION

- Noticeable
- Just Perceptible
- Barely Perceptible
- Threshold of Perception
- Not Felt

(TRUCK DRIVING ON STREET)

50 feet away

NEAREST HOMES/BUSINESSES

Not Felt

Threshold of Perception

Barely Perceptible

Just Perceptible

Noticeable
# Monitoring Program

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MONITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Monitoring Points</td>
<td>Settlement near surface</td>
</tr>
<tr>
<td>Inclinometers</td>
<td>Lateral ground movement</td>
</tr>
<tr>
<td>Vibration Monitors</td>
<td>Vibration</td>
</tr>
<tr>
<td>Displacement Monitoring Points</td>
<td>Movement</td>
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</tbody>
</table>

### AT OR NEAR SURFACE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MONITORS</th>
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<tbody>
<tr>
<td>Utility Monitoring Points</td>
<td>Any movement of utility lines</td>
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### UTILITY LINES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MONITORS</th>
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<tbody>
<tr>
<td>Multiple Position Extensometers</td>
<td>Settlement at different depths</td>
</tr>
<tr>
<td>Vibrating Wire Piezometers</td>
<td>Changes in groundwater levels</td>
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### UNDERGROUND

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MONITORS</th>
</tr>
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<tbody>
<tr>
<td>TUNNELING MACHINE</td>
<td></td>
</tr>
</tbody>
</table>
Project Timeline

CEQA/NEPA Completed

Final Design Completed & Permits Obtained

WORK STARTS AT JWPCP

TUNNELING

WORK ENDS AT JWPCP

2012


WORK AT ROYAL PALMS BEACH