

Lead Levels in Los Angeles Parks Compared to Malibu Parks

USC Children's Environmental Health Center, EJ Youth Fellowship

1. Introduction:

Los Angeles is an impacted city where communities are surrounded by industries and traffic congestion. With toxic chemicals for human health leaching out of gas vehicle cars, many of the contaminants remain in the soil, such as lead. Lead is toxic for children since it can cause cancer, memory loss, organ damage and death. Lead poisoning occurs when children make direct contact with contaminated soil and insert the toxin in their mouths.

2. Objective:

The objective is to analyze the soil of two parks in an impacted community and a non-impacted community to compare the difference in lead of each park's soil.

3. Methodology:

- Extract soil sample from two parks in Los Angeles and two parks in Malibu
- Extract soil sample near the parking lot to measure the safety levels of the entrance of the park and the play area to measure how safe the soil is while being active
- Wait for soil to dry to test the lead in each sample in the XRF machine
- Test soil sample three times and take the average

4. Results/Findings:

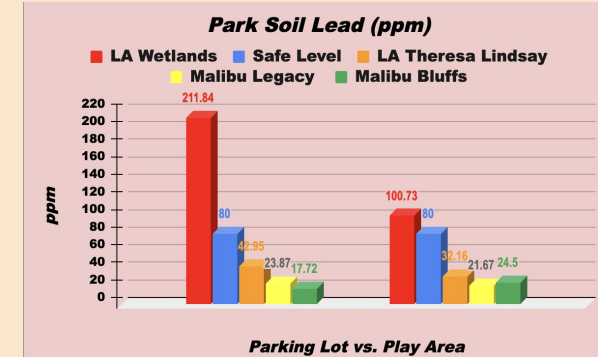
- South Los Angeles Wetlands Park's lead levels was at an astonishing 211.84 parts per million (ppm) by the parking lot and 100.73 ppm by the play area
- Los Angeles Theresa Lindsay Park's lead levels remained at 42.95 ppm by the parking lot and 32.16 ppm by the play area
- Malibu Legacy Park's lead levels stood at 23.87 ppm by the parking lot and 17.72 ppm by the play area
- Malibu Bluffs Park's lead levels were recorded at 17.72 ppm by the parking lot and 24.5 ppm by the play area.

6. Conclusion:

Parks in urbanized, crowded communities have a higher concentration of lead, unlike parks that are isolated and free from traffic congestion and industries. Families in impacted communities are advised to wash hands and ensure children do not consume soil.

5. Analysis:

Los Angeles Parks have a higher chance of having higher lead levels due to the surroundings of traffic congestion with trucks and automobiles and nearby industries emitting pollutants. South Los Angeles Wetlands Park is the most concerning due to its lead levels being above 100 times more than California Environmental Protection Agency's recommended lead levels in parks, which is at 80 ppm. Malibu Parks, on the other hand, had safe amount of lead levels, well under 80 ppm for the reason being that Malibu is surrounded by the ocean and less traffic congestion. The ocean acts as a sink, meaning it absorbs carbon emissions and other pollutions, while Los Angeles is surrounded by asphalt that attract more heat and pollution in its area.



References: Venezia Ramirez, Research Coordinator, USC Environmental Health
[Social and Spatial Distribution of Soil Lead Concentrations in the City of Santa Ana, California: Implications for Health Inequities.](#)

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