

# Working Towards 100% Trash Reduction: Protecting Surface Water Quality in City of San José

Rajani Nair, P.E., Watershed Protection Deputy Director

San José Environmental Services Department

State of the Estuary Conference, Oakland CA

May 20, 2024

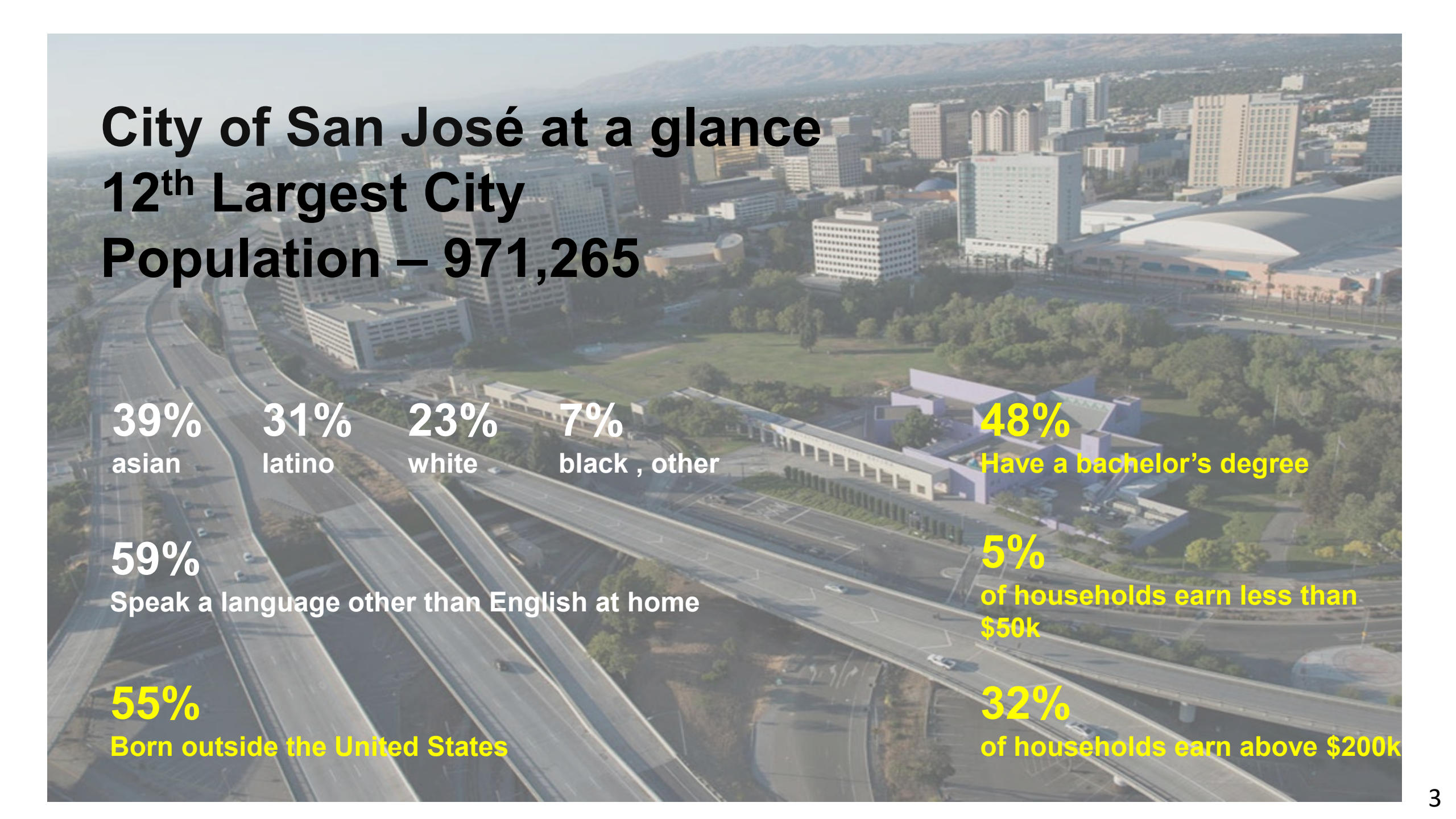


*Environmental Services*

*Delivering world class utility services and programs  
to improve our health, environment and economy*

# Overview

- Background of City of San José
- Progress towards trash load reduction requirements
- Current trash load reduction status
- Next Steps to achieve 100% compliance



# City of San José at a glance

## 12<sup>th</sup> Largest City

### Population – 971,265

**39%**  
asian

**31%**  
latino

**23%**  
white

**7%**  
black , other

**48%**  
Have a bachelor's degree

**59%**  
Speak a language other than English at home

**5%**  
of households earn less than \$50k

**55%**  
Born outside the United States

**32%**  
of households earn above \$200k

# A staggering range of local government services...

11.5 million airport passengers per year

9.2 million library items checked out

565K police emergency calls per year

1,100 miles of storm sewers

3,500 acres of parkland

2,200 miles of sewers

2,400 miles of streets

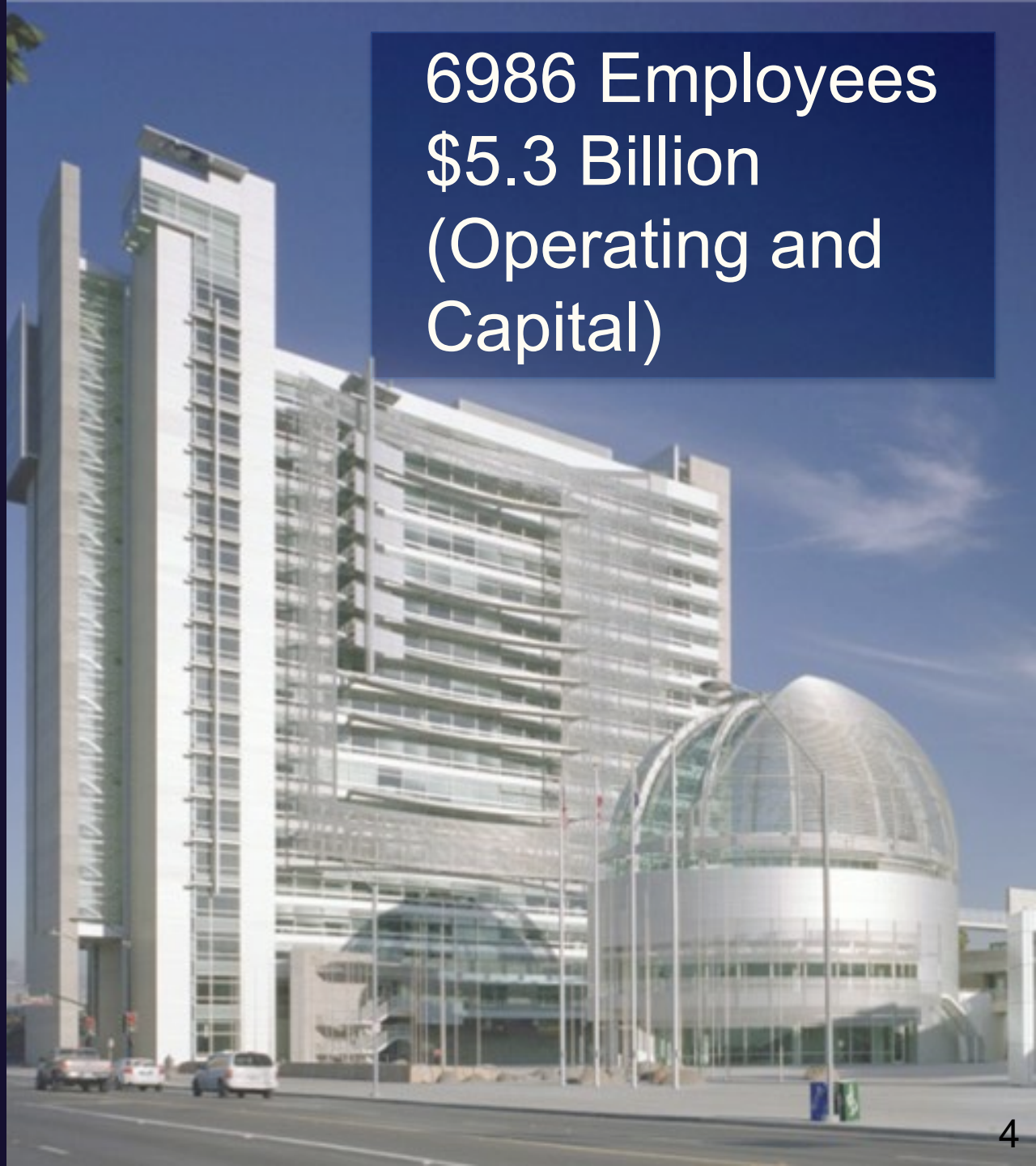
38K building permits

69K streetlights

3K fires per year

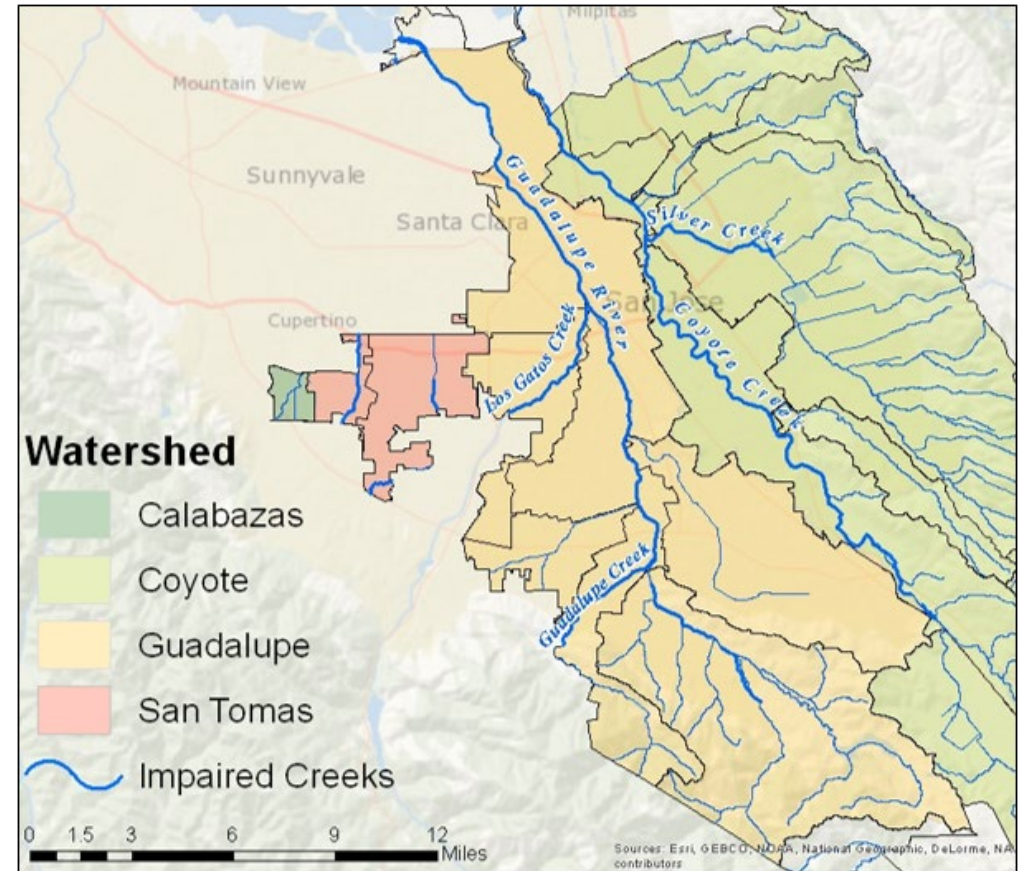
178 zoo animals

6986 Employees  
\$5.3 Billion  
(Operating and  
Capital)

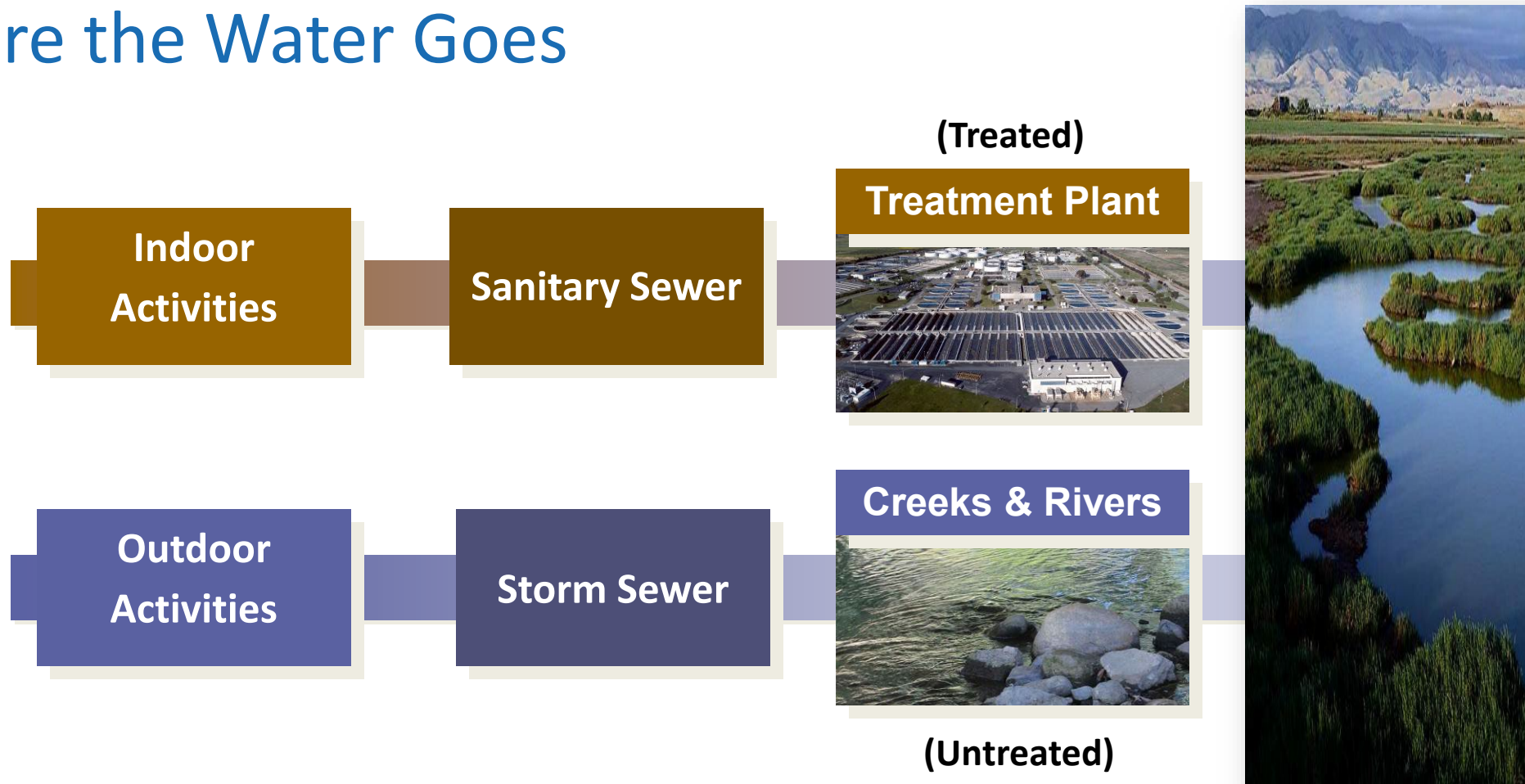


# San Jose Watersheds and Waterways

- 26 distinct creeks and streams
- 136 miles of creeks and streams
- Support native flora, fauna and wildlife















# Where the Water Goes

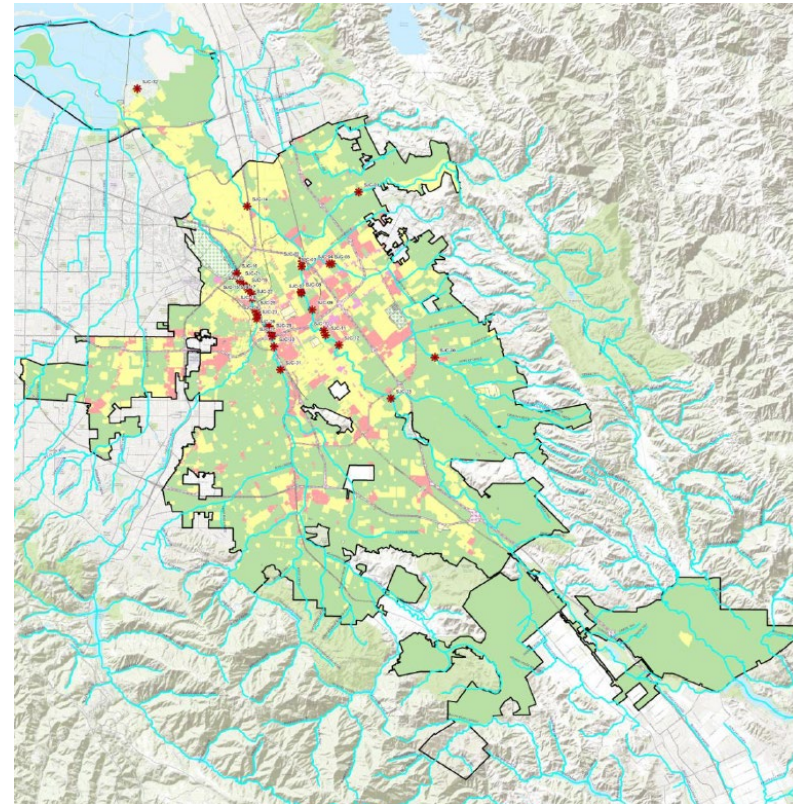


# Why we do what we do...

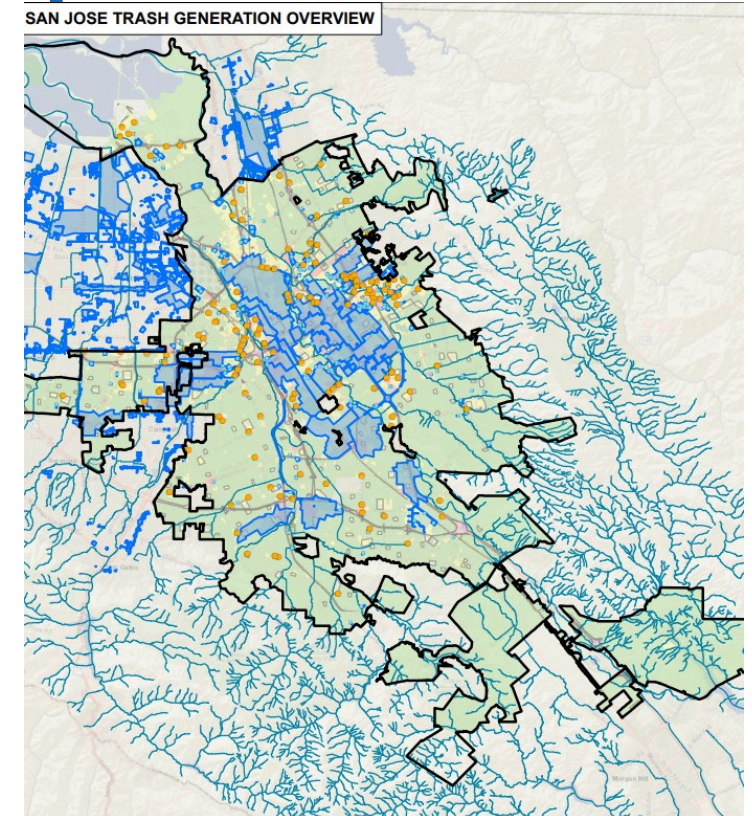


# 2009 Baseline Trash Generation Map

-  AGENCY BOUNDARY
  -  ON-LAND VISUAL TRASH ASSESSMENT SITE
  -  FULL TRASH CAPTURE DEVICE
  -  FULL TRASH CAPTURE DRAINAGE AREA
  -  CREEK
- 
- BASELINE TRASH GENERATION**
-  LOW
  -  MODERATE
  -  HIGH
  -  VERY HIGH
  -  NON-JURISDICTIONAL (DOT COLOR = TRASH)
- 
-  Creek/Shoreline Hotspot
  -  Non-Jurisdictional (Dot color = Generation Category)



Long-term **Trash** Load Reduction Plan and Assessment Strategy, 2014



SCVURPPP Trash Generation and Drainage Area Map, 2023



# City of San José Progress towards 100% Trash Load Reduction

| Trash Control Measure                        | FY 13-14 | FY 14-15 | FY 15-16 | FY 16-17 | FY 17-18 | FY 18-19 | FY 19-20 | FY 20-21 | FY 21-22 | FY 22-23 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Full Trash Capture Systems</b>            | 7.0%     | 8.0%     | 16.5%    | 36.0%    | 38.9%    | 46.2%    | 49.6%    | 49.6%    | 51.7%    | 54.1%    |
| <b>On-land Trash Control Measures (OVTA)</b> | 7.0%     | 2.0%     | 1.8%     | 8.2%     | 14.4%    | 15.6%    | 14.8%    | 15.6%    | 16.7%    | 16.5%    |
| <b>Subtotal</b>                              | 14.0%    | 10.0%    | 18.3%    | 44.2%    | 53.3%    | 61.8%    | 64.4%    | 65.2%    | 68.4%    | 70.6%    |
| <b>Jurisdictional Source Controls</b>        | 10.0%    | 16.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 0.0%     |
| <b>Creek and Shoreline Cleanups</b>          | 37.0%    | 51.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    | 10.0%    |
| <b>Direct Discharge Trash Control</b>        | N/A      | N/A      | 15.0%    | 15.0%    | 15.0%    | 15.0%    | 15.0%    | 15.0%    | 15.0%    | 15.0%    |
| <b>Total</b>                                 | 62.0%*   | 77.0%    | 53.3%    | 79.2%    | 88.3%    | 96.8%    | 99.4%    | 100.2%   | 103.4%   | 95.6%    |
| <b>Claimed</b>                               | 40.0%    | 77.0%    | 53.3%    | 79.2%    | 88.3%    | 96.8%    | 99.4%    | 100.2%   | 103.4%   | 95.6%    |
| <b>Target</b>                                | 40.0%    |          | 60.0%**  | 70.0%    |          | 80.0%    |          |          |          | 90.0%    |

35% Offsets and Credits phase out between 2022 and 2025

City's current Trash Load Reduction without offsets → Need to Revise Long Term Trash Plan

### Current Requirements (as of July 1, 2022)

Achieve Trash Load Reduction compared to 2009 baseline:

- 90% by June 30, 2023
- 100% by June 30, 2025

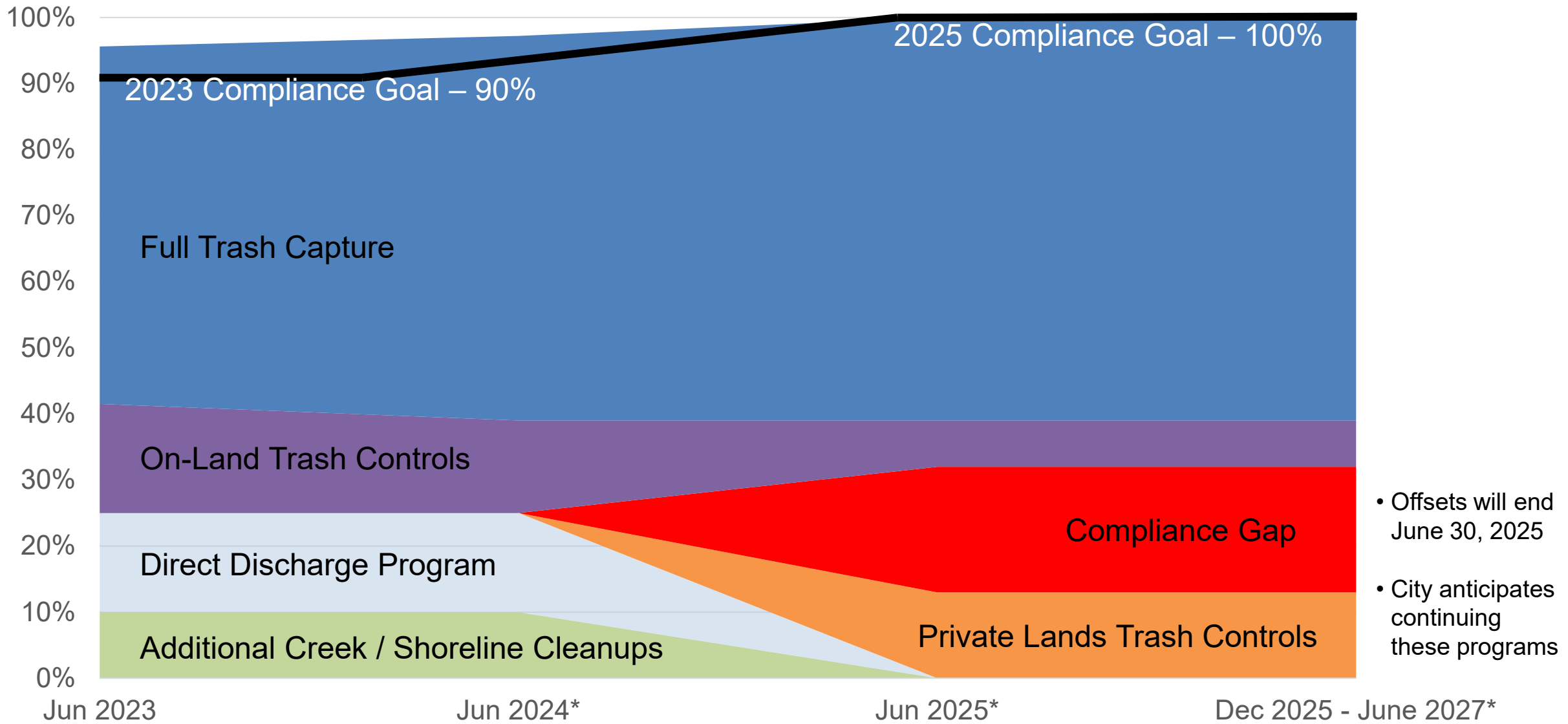
\*Includes 1% towards Public Outreach.

\*\*FY 15-16's 60% target was not mandatory. Permittees unable to achieve it were required to submit a detailed plan and schedule of implementation of additional trash load reduction control actions that will attain the 2017 mandatory deadline.



*Delivering world class utility services and programs to improve our health, environment and economy*

# Trash Load Reduction Percentage



- Offsets will end June 30, 2025
- City anticipates continuing these programs

\* Estimated trash load reduction percentage

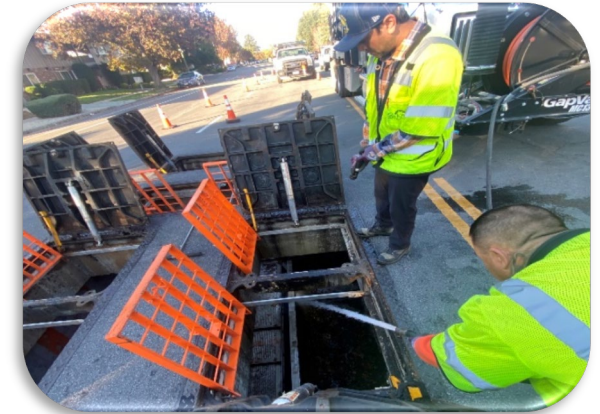
# To Date: Treatment Control Measures – Full Trash Capture

## ■ Full Trash Capture (FTC) Devices installed

- ❑ 34 Large Full Trash Capture Devices
- ❑ 106 Connector Pipe Screens
- ❑ 88 Bioretention Systems

## ■ FTC O&M

- ❑ Record Keeping



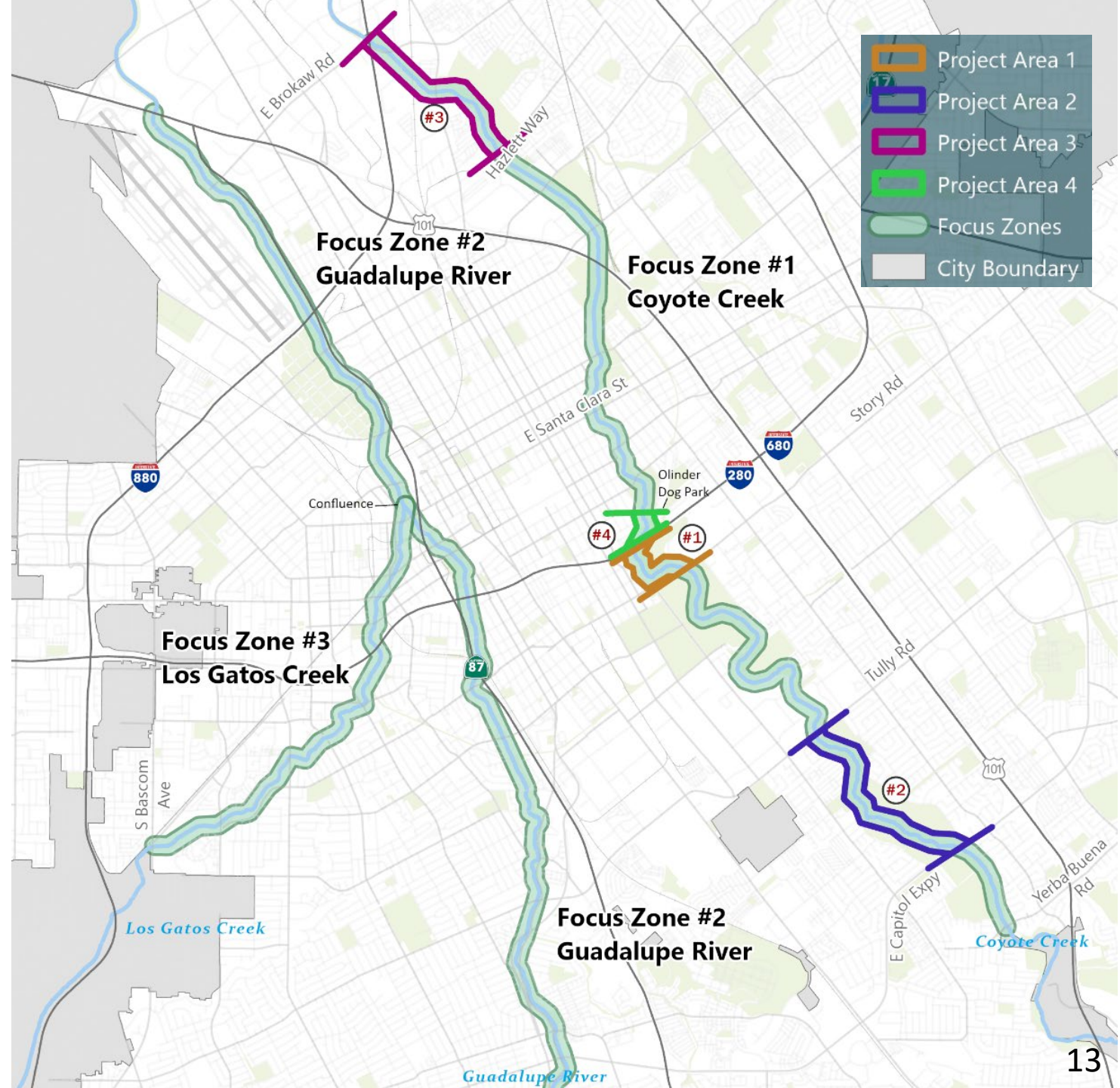
# To Date: On-land (Institutional) Trash Control Measures

- Creek and Shoreline Cleanups
- Free Residential Junk Pickup
- Special Events Waste Management
- Outreach and Community Engagement
- Jurisdictional Source Controls
- Commercial and Solid Waste Inspection and Enforcement Programs
- Public Litter Cans
- Encampment Management Program
- Downtown PBID
- Adopt-a-Park
- Neighborhood Litter Program
- InforBI Data Management
- RAPID
- Neighborhood Beautification Programs
- Street Sweeping
- Litter Enforcement



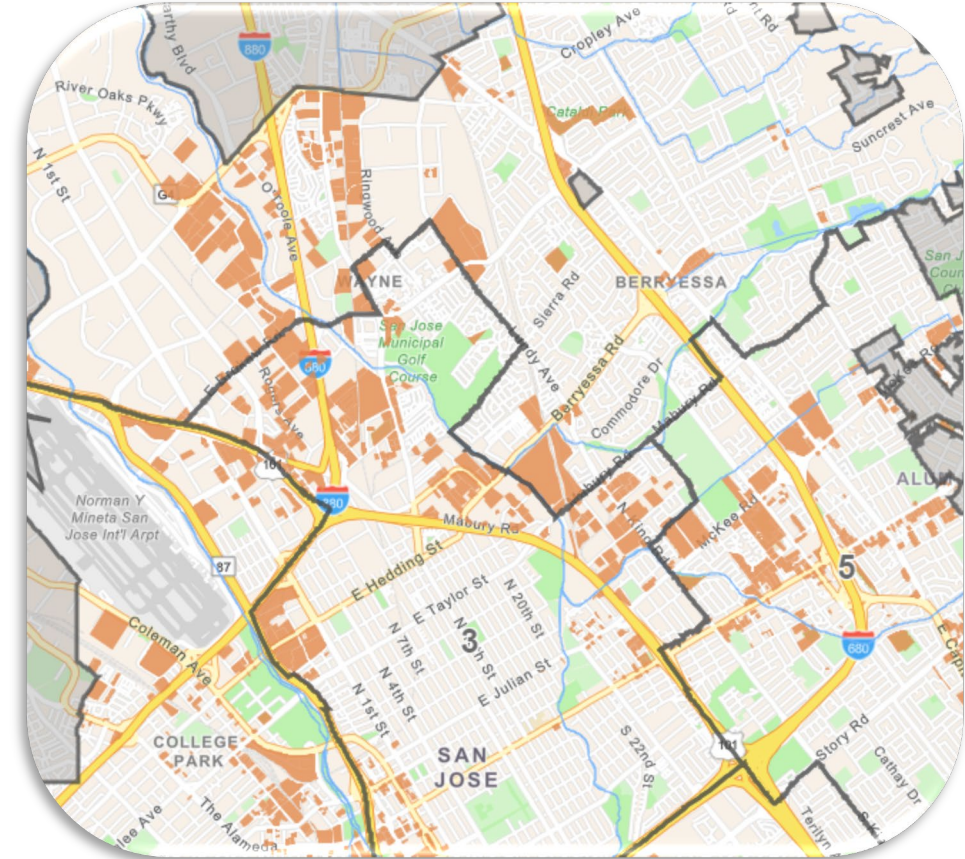
# To Date: San José Direct Discharge Trash Control Program

- ❑ Human Centered programs to provide housing and outreach services for unsheltered populations;
- ❑ Enhanced Encampment Management Strategy to address trash and sanitary services for unsheltered populations in waterways and lived-in vehicles;
- ❑ Leveraging visual assessments and data collected through Geographic Information Systems (GIS) to ensure progress
- ❑ (NEW) Creation of an Enhanced Neighborhoods and Waterways Approach program to address homelessness issues, to meet Stormwater Permit compliance while maintaining acceptable levels of service in our neighborhoods.



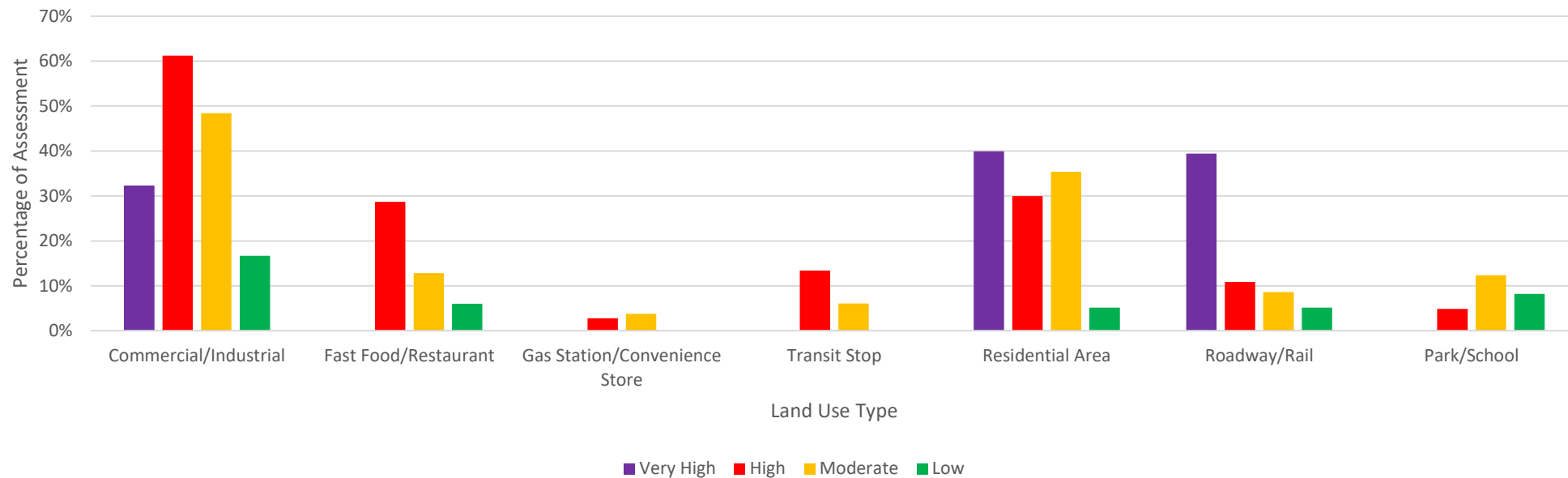
# Next Steps - Future Treatment Control Measures

- ❑ Future Large/Small Trash Capture Device projects
  - ❑ 4 Hydrodynamic Separators (Phase VII)
  - ❑ 4 Hydrodynamic Separators, (Phase VIII)
  - ❑ Installation of 531 small trash capture devices
  - ❑ Bioretention Systems
- ❑ Future Large Trash Capture Device projects
  - ❑ Evaluating 530 locations
- ❑ New requirement - Private Land Drainage Areas (PLDAs) Trash Inspection program
  - ❑ 2400 Parcels potentially connected to MS4
  - ❑ Moderate, High or Very High (approx. 300 parcels)



# Next Steps - Leveraging On-land Visual Trash Assessment (OVTA) Scores for Potential Trash Sources

Potential Land Uses Along OVTA Street-Miles

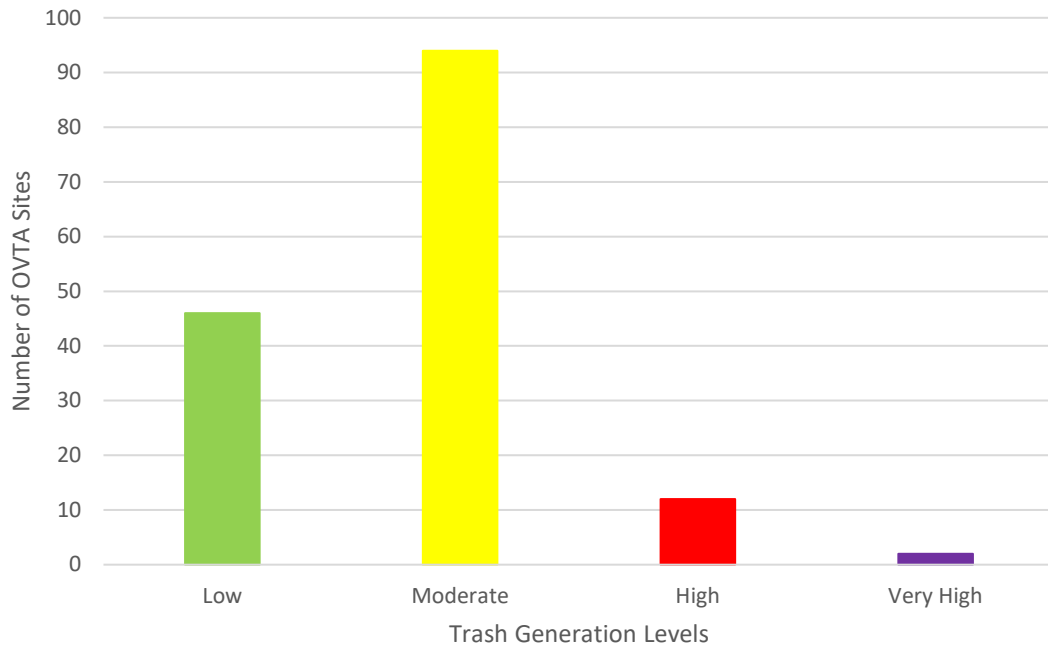


Percentages determined by dividing length of OVTA with known land use types against total OVTA lengths in each trash generation category for FY 22-23 data.

\*Error is potentially large due to multiple overlapping land uses.

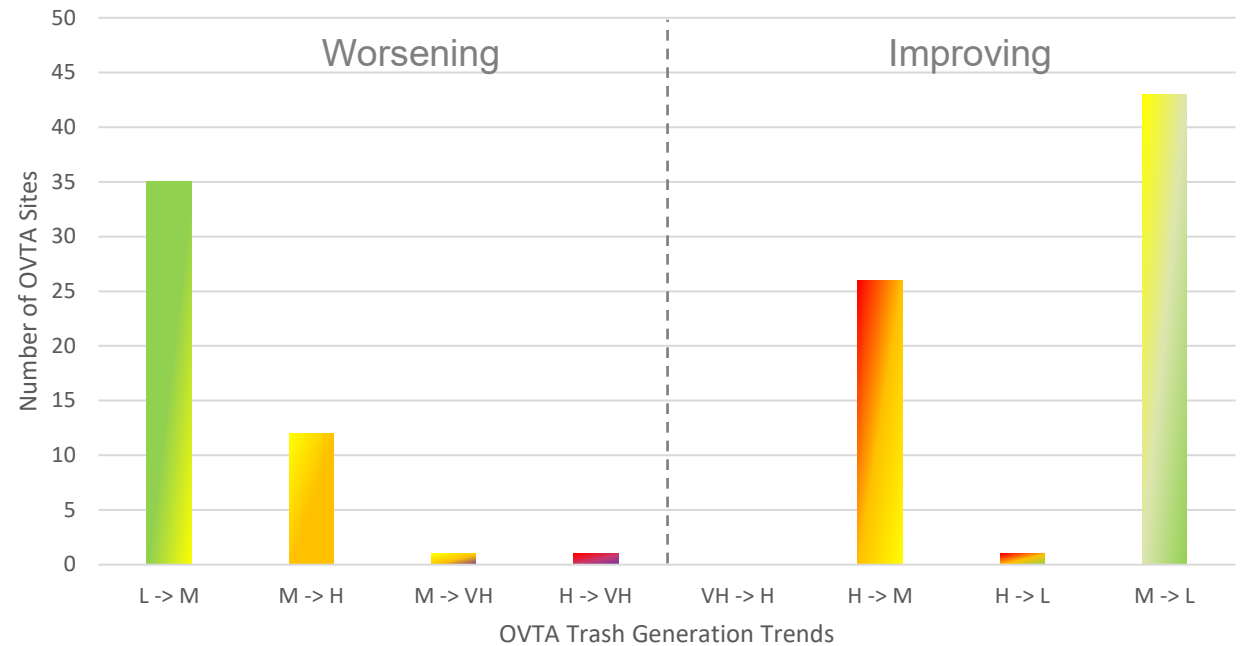
# Next Steps - Leveraging OVTA Scores on Trash Control Programs Trends

2023 OVTA Scores



Analyzed using OVTA data from FY 22-23 data

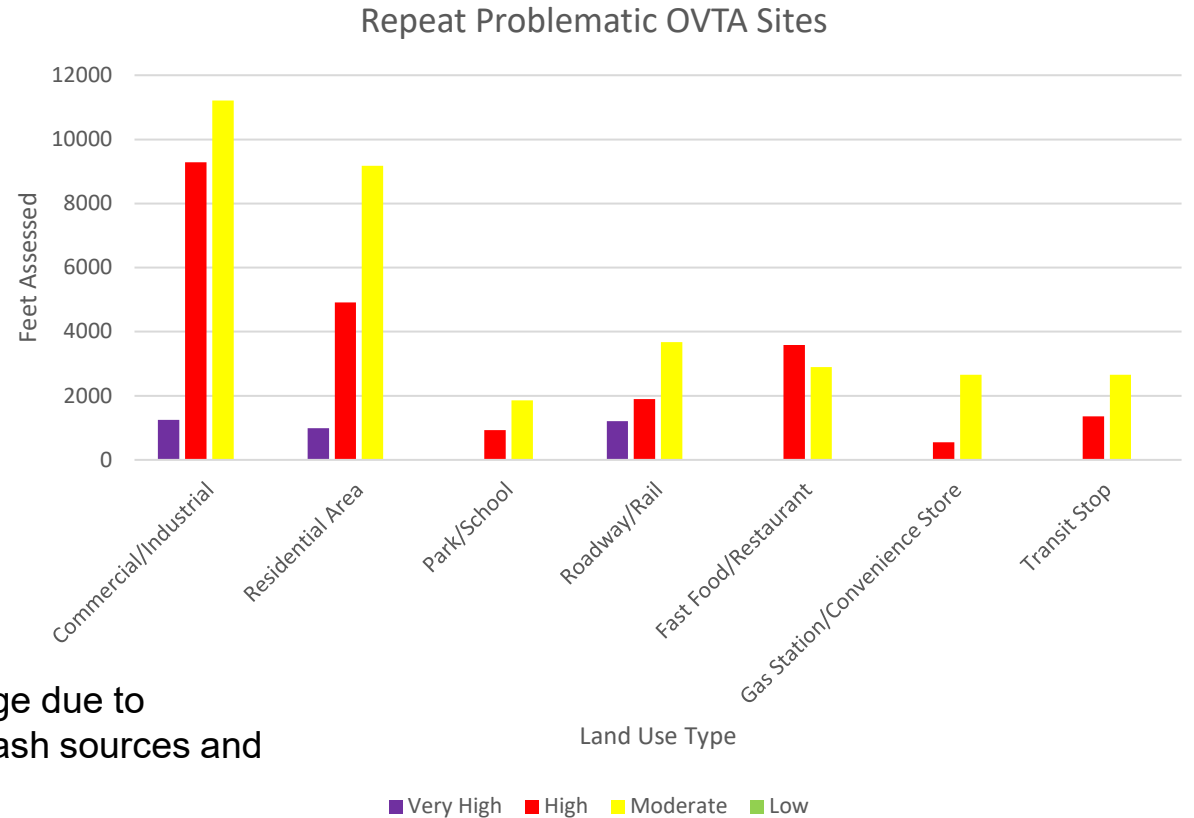
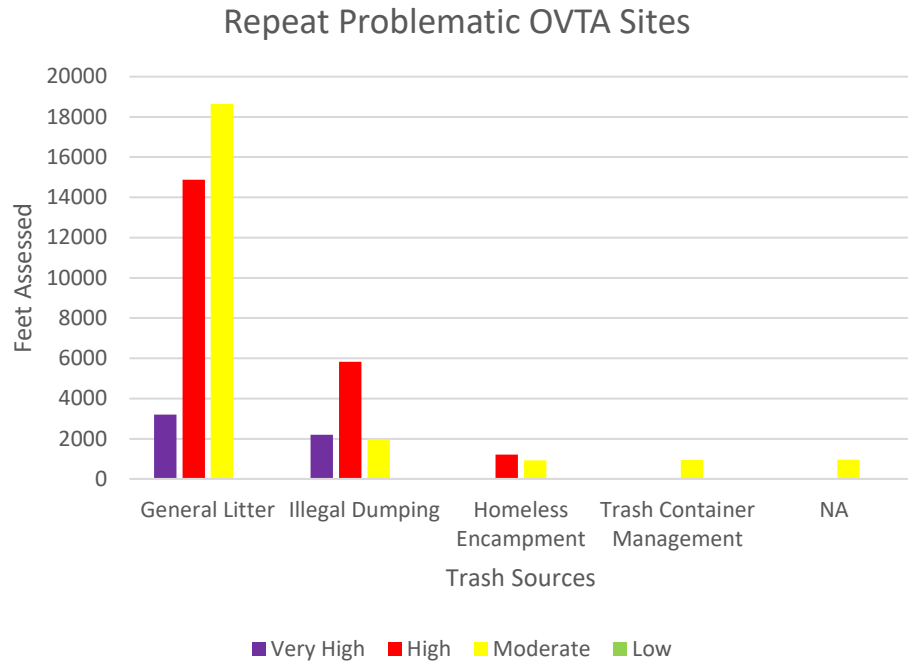
OVTA Site Scoring Trends: 2021 - 2023



Analyzed using OVTA data from 2/24/2021 through 5/3/2023



# Next Steps – Leveraging OVTA Scores On Trash Impacts Trends



Repeat problem OVTA sites:  
 Rated High/Very High from 2021 - 2023  
 14/154 sites = 9%

\*Error is potentially large due to  
 multiple overlapping trash sources and  
 land uses.



*Courtesy Photo from Keep  
Coyote Creek Beautiful*

# Working Towards 100% Trash Reduction: Protecting Surface Water Quality in City of San José

Rajani Nair, P.E., Watershed Protection Deputy Director

San José Environmental Services Department

State of the Estuary Conference, Oakland CA

May 29, 2024



*Environmental Services*

*Delivering world class utility services and programs  
to improve our health, environment and economy*