

Metal Finishing Model Shop Program Pollution Prevention and Compliance Assistance Pretreatment and Storm water Compliance



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Source Control
Environmental Services
Department
City of San Jose



Agenda

- Describe the City of San Jose Environmental Enforcement Program
- Describe Source Control Program and Pollution Prevention
 - Metal Finishing Regulation
 - Source Control Program Description
 - Common Compliance Issues and Suggested Remedies

Agenda

- Describe Watershed Enforcement and Storm water Pollution Prevention
- Describe Fats Oil and Grease and Pollution Prevention

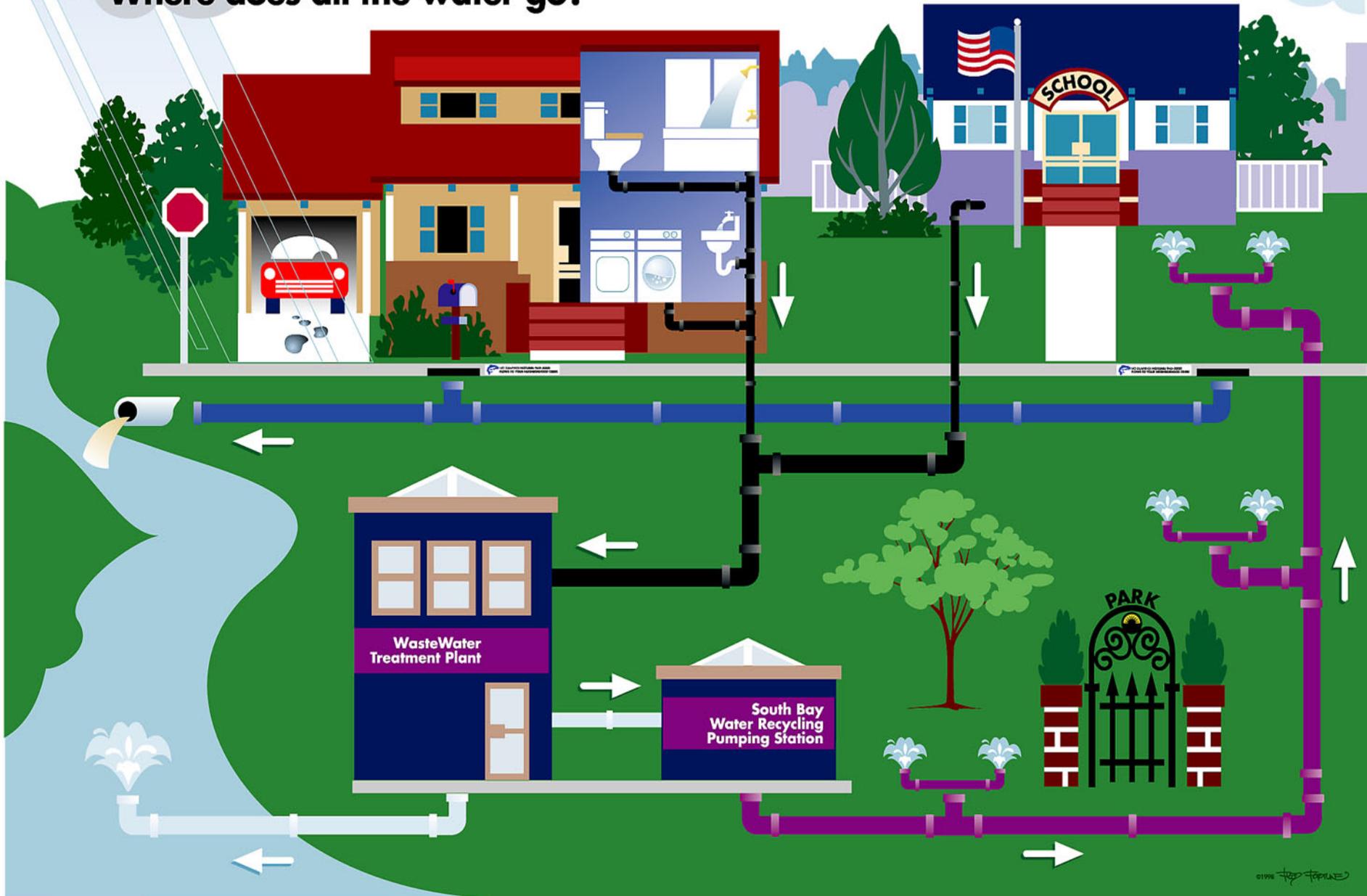


Environmental Enforcement Program Description

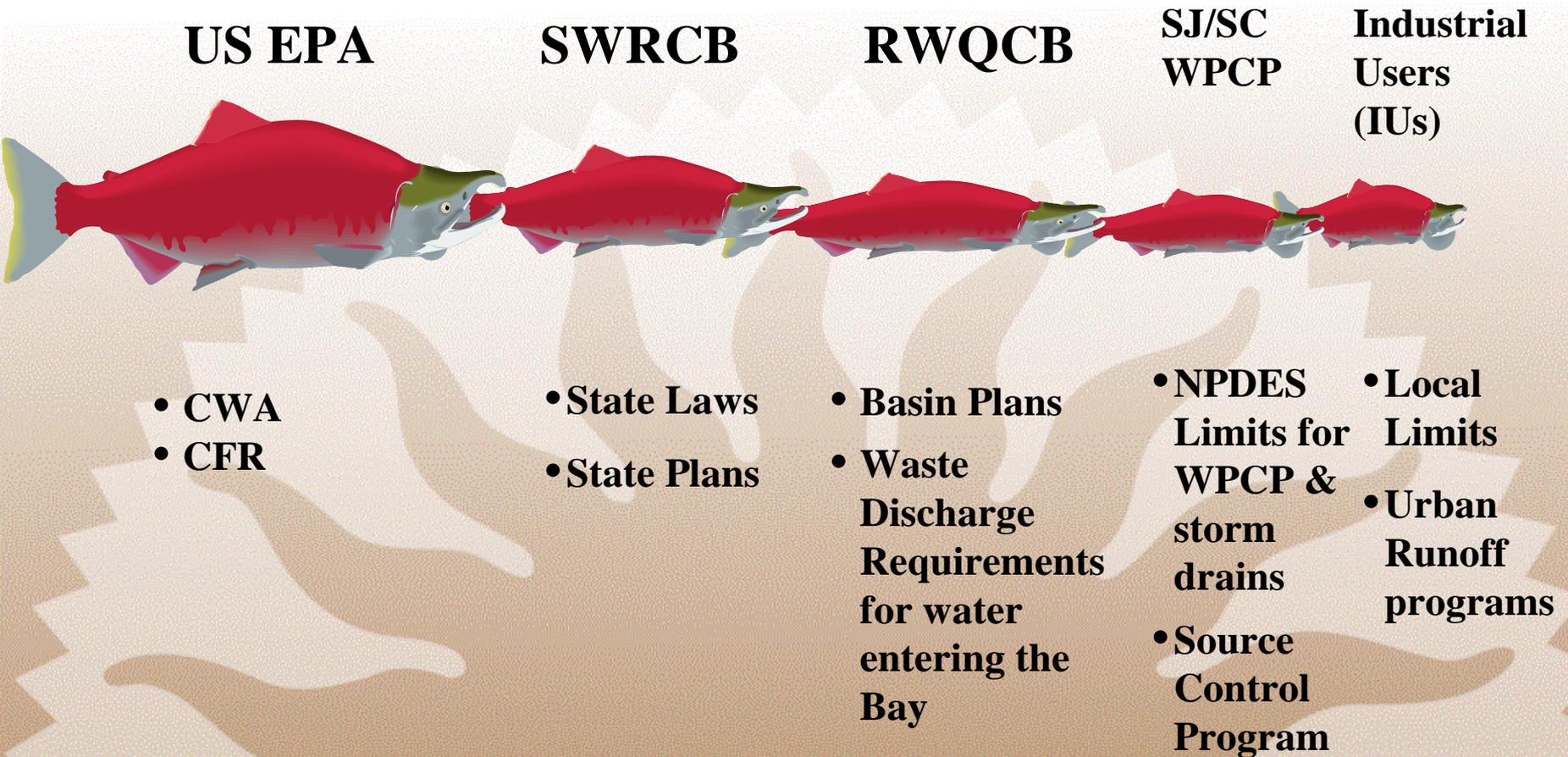


Wastewater Paths: Where does all the water go?

- Untreated Wastewater
- Treated Wastewater
- Reclaimed Water
- Stormwater

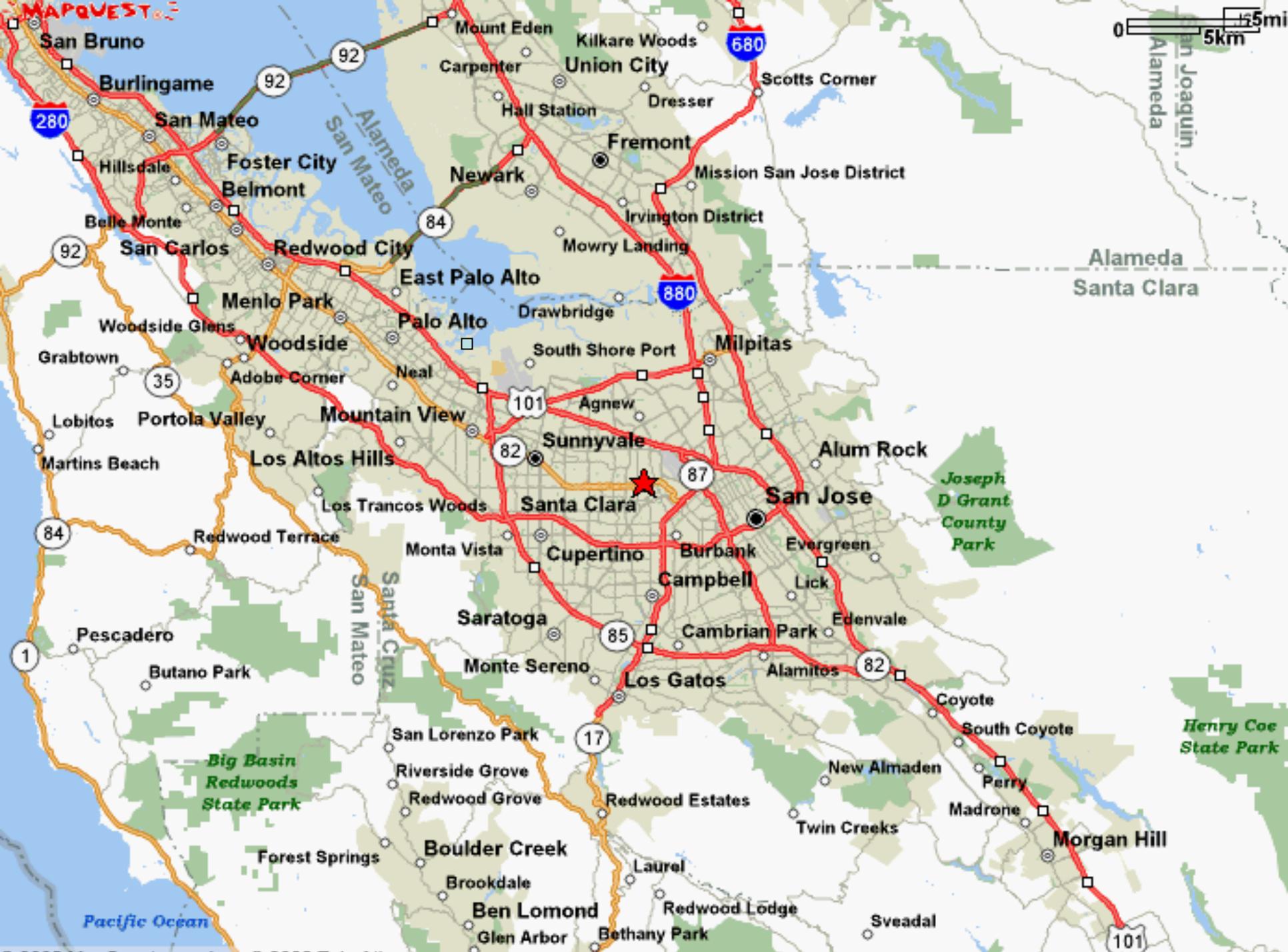


Regulatory Structure



San Jose/Santa Clara Water Pollution Control Plant

Serving the cities of San Jose, Santa Clara, Milpitas, Cupertino, Saratoga, Campbell, Los Gatos



The "Other" Sewer System

Indoor
Activities

Sanitary
Sewer

Treatment Plant



Outdoor
Activities

Storm
Sewer

No
Treatment!



2 Permits 3 Programs

- Source Control – Industrial Wastewater
- Watershed Enforcement – Storm water
- Fats Oil and Grease – Restaurants and Food Service Facility



Source Control Program

- Industrial Waste Discharge Permitting
- Inspections and Enforcement
- Industrial Compliance and Revenue Sampling Program
- Surveillance and Trunkline Monitoring



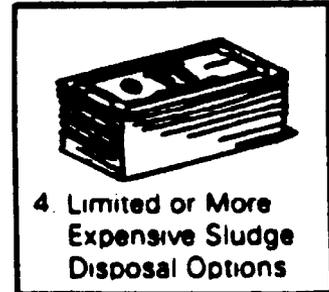
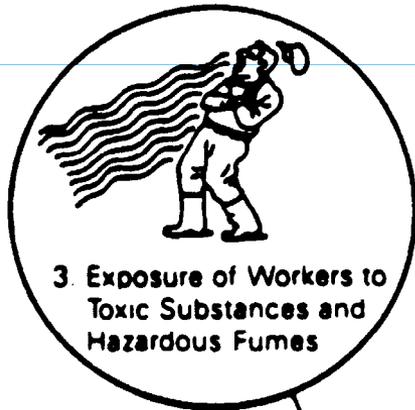
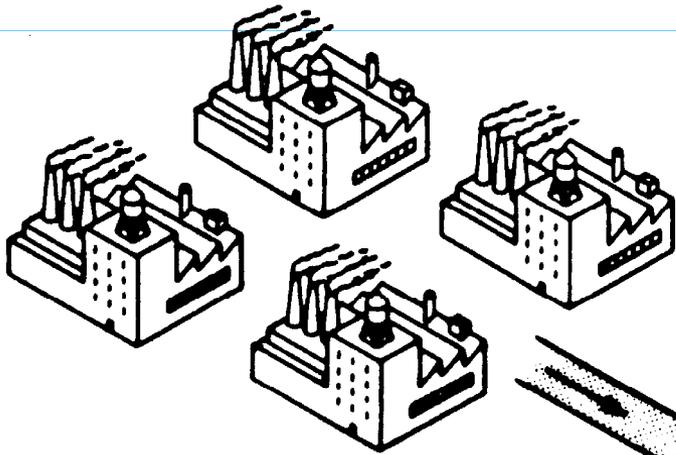
Source Control and Pollution Prevention





Source Control Program

- Source Control's regulates industrial discharges to the sanitary sewer to provide protection for the following:
 - Health, Safety and Well being of the Public and the South San Francisco Bay and
 - Safe and Effective Operation City of San Jose Water Pollution Control Infrastructure

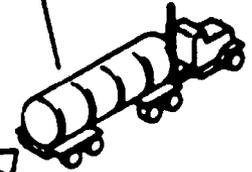
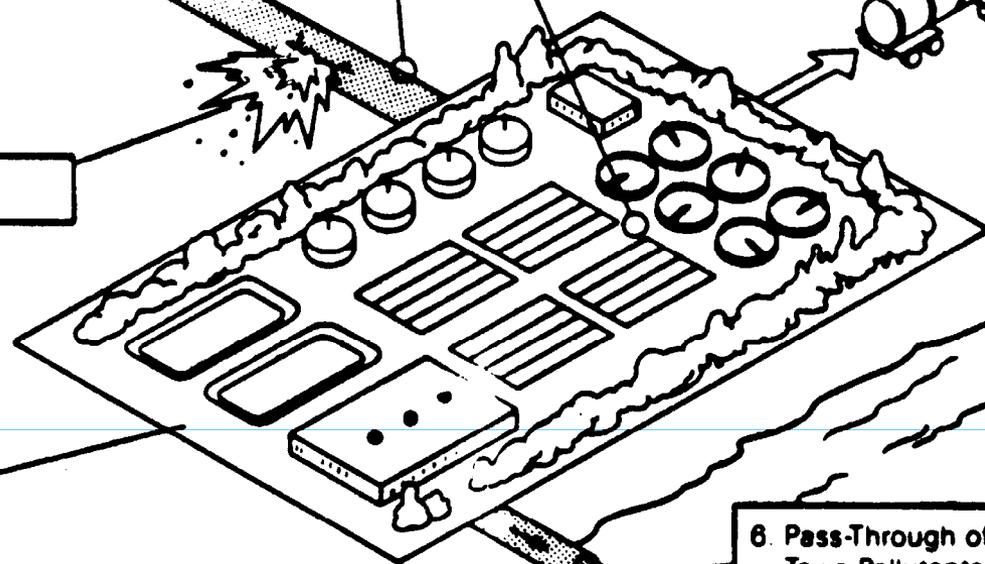


1. Corrosion of Collection System or of the Sewage Treatment Plant

2 Explosions



6. Pass-Through of Toxic Pollutants into Surface Waters



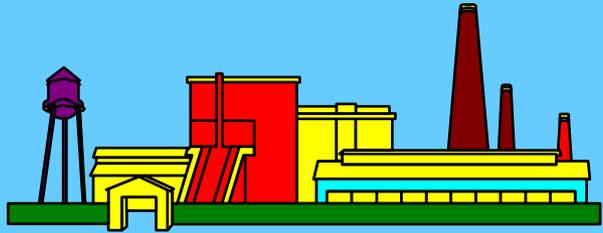
3. Exposure of Workers to Toxic Substances and Hazardous Fumes

4. Limited or More Expensive Sludge Disposal Options

5. Interference with Plant Treatment System

SIGNIFICANT INDUSTRIAL USER CLASSIFICATION

CATEGORICAL INDUSTRIES IDENTIFIED BY THE U.S.EPA



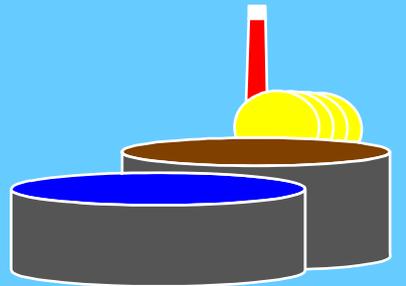
EPA DEVELOPS LIMITS
(40CFR 405 - 471)

SIGNIFICANT NONCATEGORICAL INDUSTRIES IDENTIFIED BY THE POTW



CRITERIA

25,000 GPD PROCESS WASTEWATER
5% ORGANIC CAPACITY OF
POTW POTENTIAL TO POLLUTE



POTW



EPA DEVELOPS NATIONAL
PRETREATMENT STANDARDS

POTW DEVELOPS
"LOCAL LIMITS"

METAL WORKING REGULATIONS (40 CFR Parts)

- 413 Electroplating
- 420 Iron and Steel Manufacturing
- 421 Nonferrous Metals Manufacturing
- 424 Ferroalloy Manufacturing
- 433 Metal Finishing
- 438 Metal Products & Machinery
- 440 Ore Mining and Dressing
- 464 Metal Molding and Casting
- 465 Coil Coating
- 466 Porcelain Enameling
- 467 Aluminum Forming
- 468 Copper Forming
- 471 Nonferrous Metals Forming and Metal Powders



THE CORE PROCESSES



ELECTROPLATING



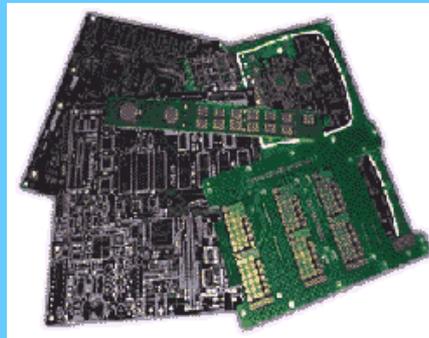
ELECTROLESS PLATING



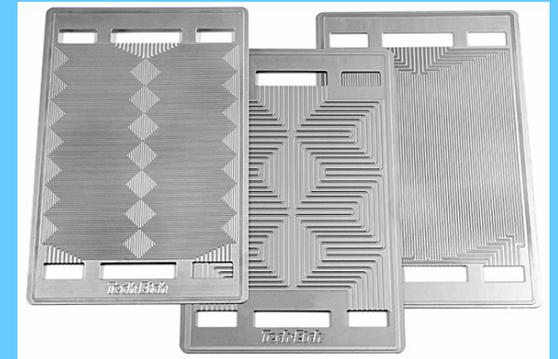
COATINGS



ANODIZING



PRINTED CIRCUIT BOARDS



CHEMICAL ETCHING

Which Category?

Electroplating
40 CFR Part 413

Metal Finishing
40 CFR Part 433

Existing
Job Shops or PCB
Manufacturers before
August 31, 1982

Captive Shops
+ Job Shops or PCB
Manufacturers after
August 31, 1982



New Source Versus Existing Source

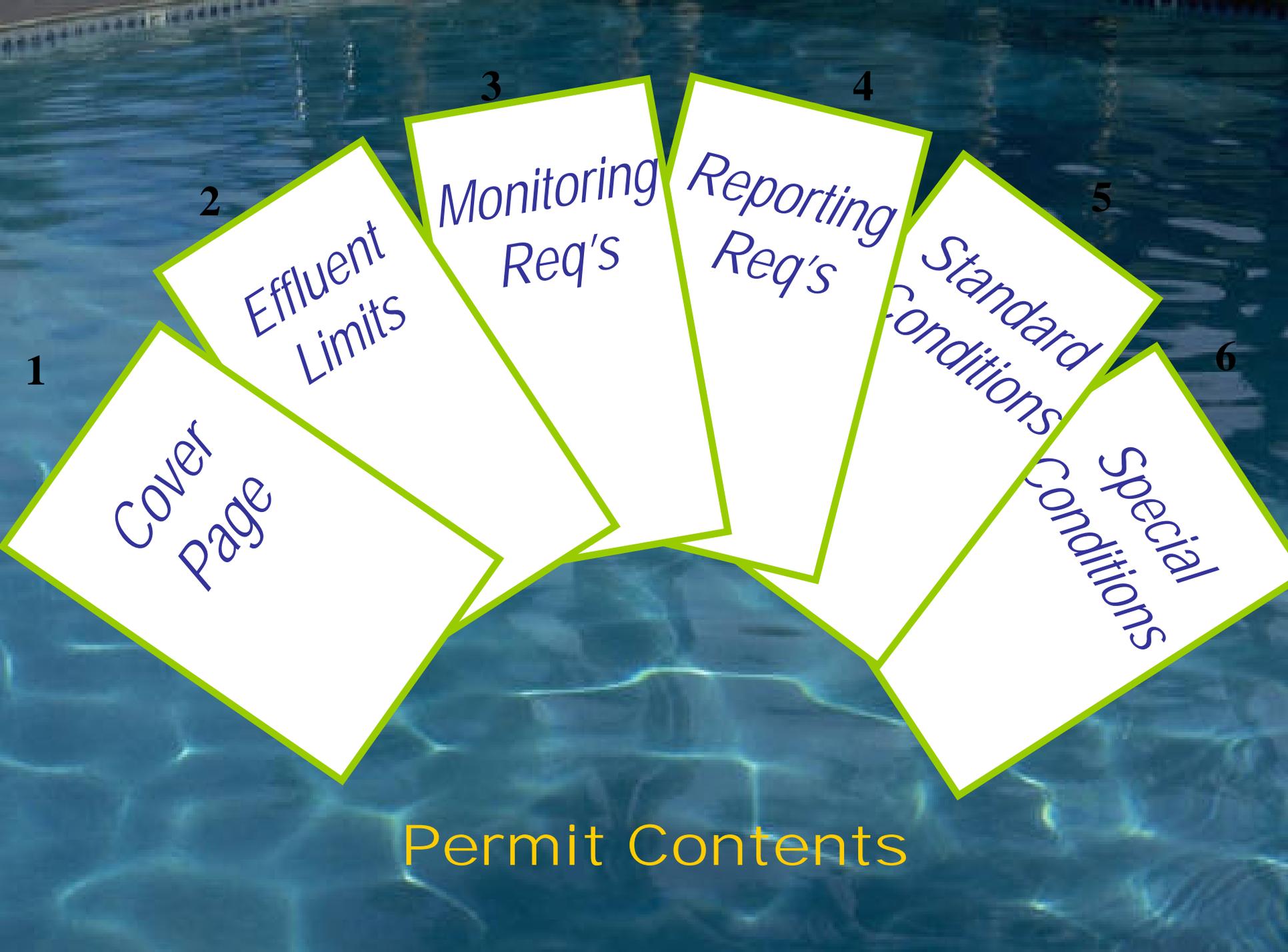
- 40 CFR §403.3(m)(3)
- Definition of “Construction of a New Source” has commenced if the owner or operator has:
 - Begun continuous onsite construction:
 - Any placement has occurred,
 - Significant site preparation work occurred;
 - Entered into a BINDING contractual obligation.

Operations Similar Yet Excluded from 40 CFR Part 413 and 433

- Finishing operations as covered by:
 - 40 CFR Parts 420, 421, 464, 465, 466, 467, 468, and 471
- Electrodeposition, electroimpregnation, and electroforming
- Coating of plastic onto a metal substrate
- Metallic platemaking and gravure cylinder preparation

Industrial Waste Discharge Permits

- Contains Federal and Local Limits
- Sampling and Monitoring Requirements
- Any special discharge conditions or Compliance Schedules
- Most permits are five years in duration



1

Cover
Page

2

Effluent
Limits

3

Monitoring
Req's

4

Reporting
Req's

5

Standard
Conditions

6

Special
Conditions

Permit Contents

Limits: 413 vs 433 PSES – (mg/l)

Federal Pollutant	413 <10k		413 >10k		433 All	
	Daily Max	4 day Avg	Daily Max	4 day Avg	Daily Max	Mon Avg
Cd	1.2	0.7	1.2	0.7	0.69	0.26
Cr			7.0	4.0	2.77	1.71
Cu			4.5	2.7	3.38	2.07
Pb	0.6	0.4	0.6	0.4	0.69	0.43
Ni			4.1	2.6	3.98	2.38
Ag			1.2*	0.7*	0.43	0.24
Zn			4.2	2.6	2.61	1.48
CN T	5.0**	2.7**	1.9	1.0	1.20	0.65
TTO	4.57		2.13		2.13	

SOME SHOPS ARE CLEAN



OTHERS NOT SO CLEAN!

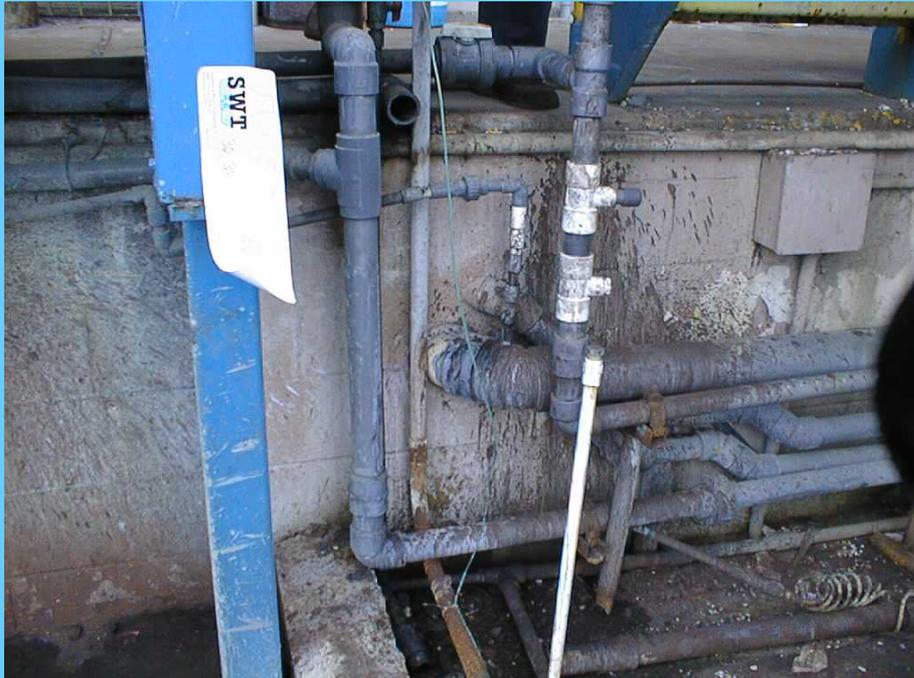


Surveillance and Sampling



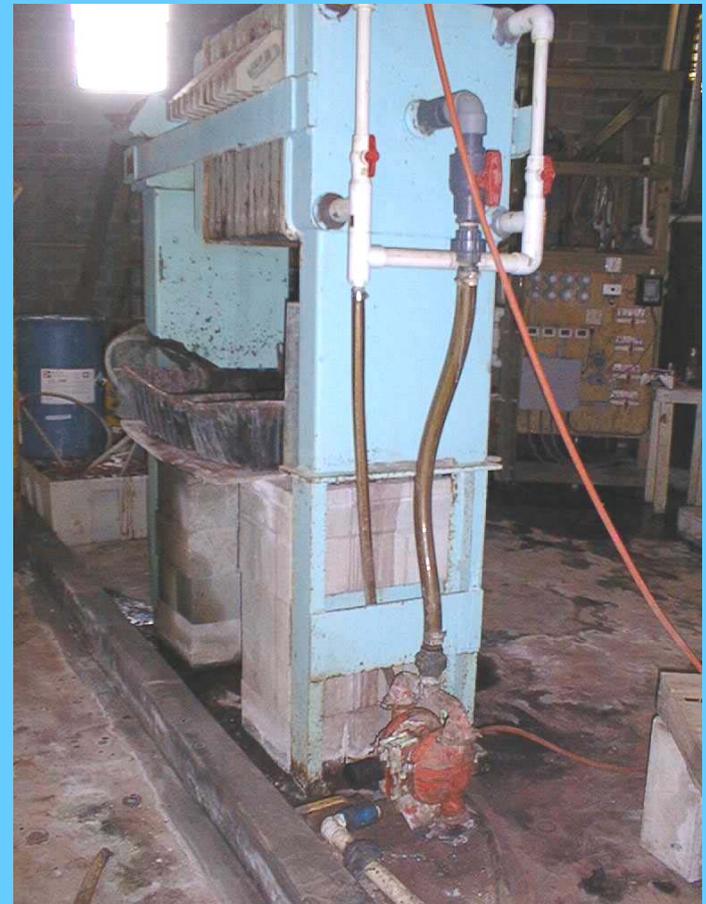
Metal Finisher Compliance Issues

Bypass??



Metal Finisher Compliance Issues

Look at storage areas, containment systems



Metal Finisher Compliance Issues

Secondary containment



Metal Finisher Compliance Issues

Look at spill risks



Metal Finisher Compliance Issues

More spill risks



Metal Finisher Compliance Issues

Maintain sample points



Metal Finisher Compliance Issues

Laboratory Maintenance

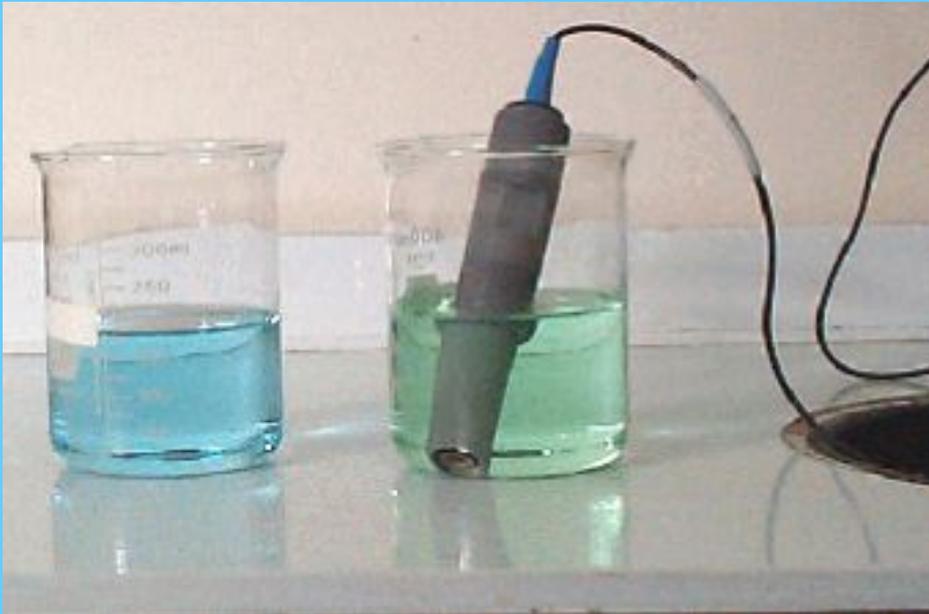


Common Source Control Compliance Issues

- Submitting accurate and timely Self Monitoring Reports
 - Read and Check Industrial Waste Discharge Permit!!!!
 - Check lab reports from contract labs thoroughly and fill out any Self Monitoring Form
 - Sign the form
- Failure to report a violation
 - Immediately notify POTW of any known violation

Common Source Control Compliance Issues

- pH violations including failing to maintaining proper equipment



pH Probe Return on Investment

- Handheld pH Probe (purchase new probe \$80-\$100)
 - Small wastewater treatment system approx. 2 month return on investment
 - Large wastewater treatment system was approx. 1 week return on investment
- System pH Probe (replace probe after 6 months \$180-\$300)
 - Small wastewater treatment system return on investment (approx. 4 Months)
 - Large wastewater treatment system return on investment (approx. 2 Weeks)

Source Control Pollution Prevention Publications – Flow Reduction

- Guidelines for Efficient Water Use
 - Implementing Water and Wastewater Reduction Projects
- Guidelines for Managing Waters in Cooling Systems
 - For Owners, Operators, and Environmental Managers
- Planning and Implementing an Onsite Wastewater Reuse System in City of San Jose

Source Control Pollution Prevention Publications – Pollutant Reduction

- Tributary Tribune – Tri-annual Source Control Newsletter
- pH Fact Sheet
- Cyanide Fact Sheet
- Switching to Water Based Solutions for Parts Cleaning

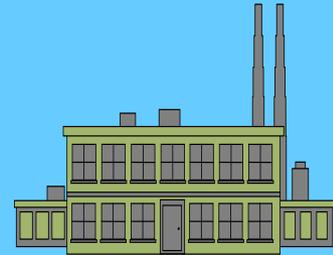
Watershed and FOG Compliance for Business Owners



Storm water and Watershed Enforcement Program Elements



- Illicit Connection & Illegal Dumping (ICID)
- Industrial & Commercial Dischargers (IND)
- Construction Inspection (CON)
- New & Redevelopment (NRD)
- Public Information & Participation (PIP)
- Public Agency Activities (PAA)



Watershed Enforcement Program

Watershed Enforcement Program Goals – Protecting the City of San Jose Watershed

- Industrial Storm Water Inspection Program
- Construction Inspection Program
- Illicit Connection/Illegal Discharge Response Program



FOG Program

Fats-Oils-Grease Program Goal:
Protecting the watershed from sanitary
sewer overflows and implementation of
best management practices.

- Inspect restaurants and food service businesses to ensure proper practices are followed in San Jose.
- Investigates reoccurring grease blockages referred by the Department of Transportation

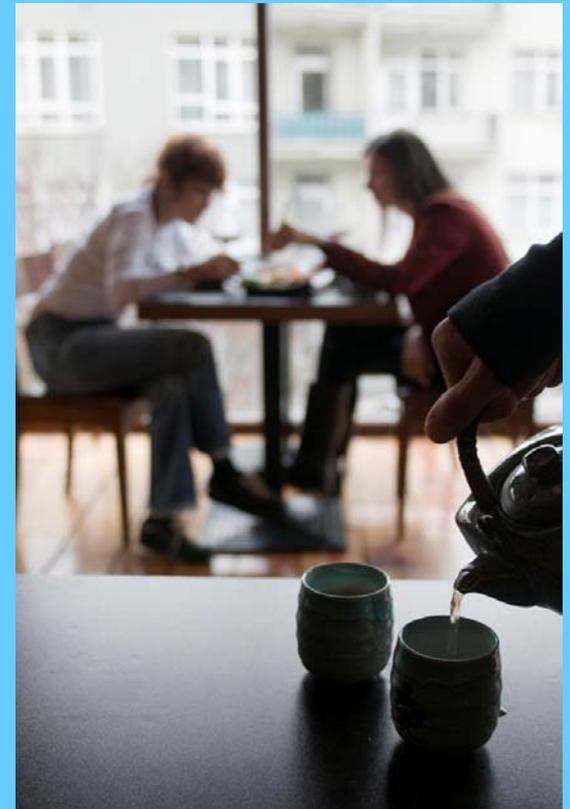
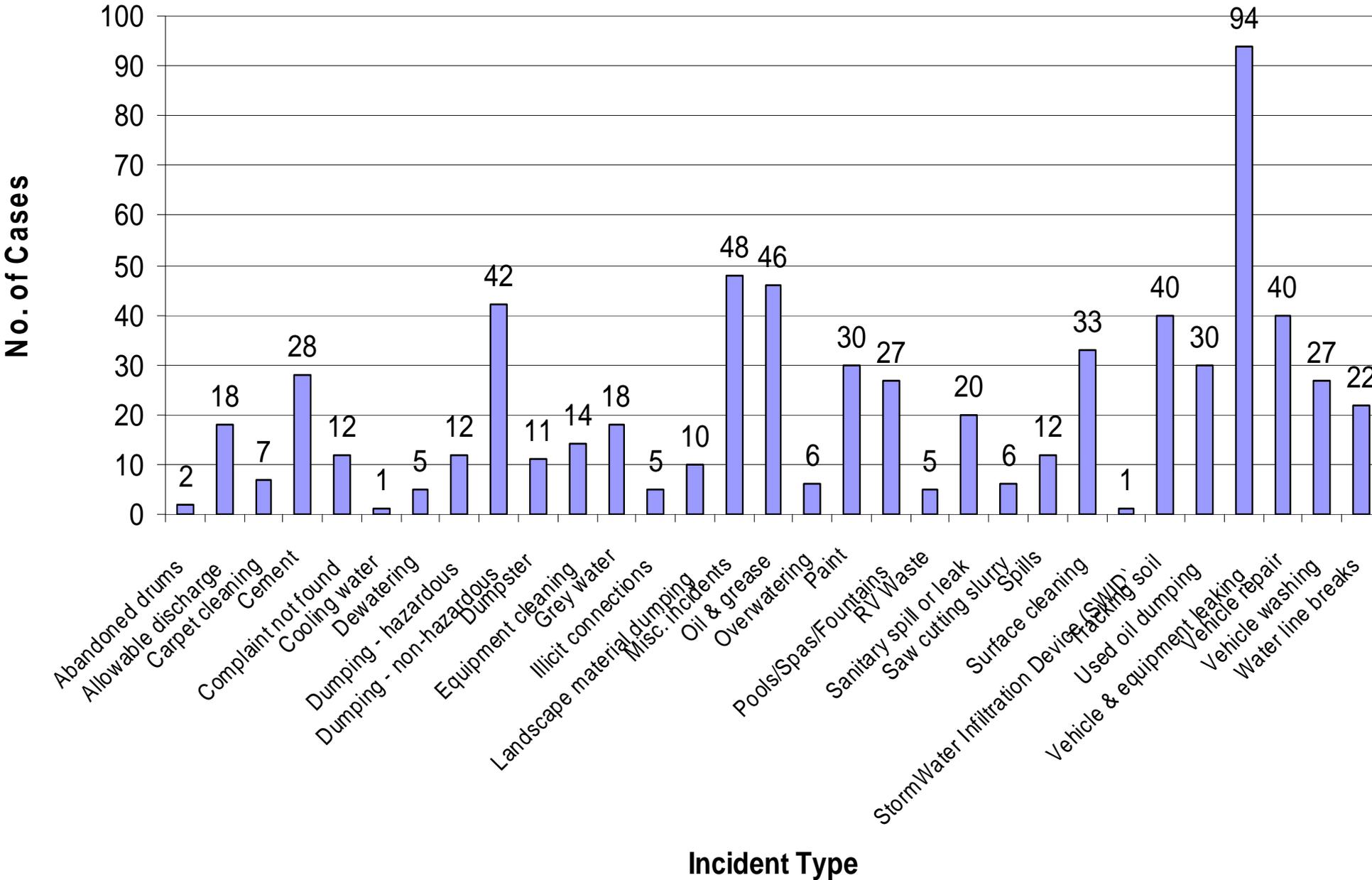


Figure 1. Number of Incidents by Type



Storm Water Enforcement Issues for Business Owners & Managers

- Trash Enclosures
- Restaurants/Cafeterias
- Vehicles
- Landscape Activities
- Surface Cleaning
- Storm Drains
- Cooling Towers

Building Maintenance



- Keep loading docks clean of food waste, garbage and debris.
- Seal pipe chases and other penetrations.
- Keep shrubs, grass and mulches at least one foot away from buildings.
- Prune shrubs and remove leaves from around buildings on a regular basis.

Report all building maintenance problems to your Facilities Manager

Building Maintenance

- Fix leaking pipes, faucets, and other plumbing fixtures.
- Clean grease traps and floor drains routinely.
- Install weather-stripping and door sweeps.
- Caulk wall and floor cracks and crevices.
- Install and maintain screens in doors, windows, vents and floor drains.



Report all building maintenance problems to your Facilities Manager

Stencil Your Storm Drains

- Free “No Dumping! Flows to Bay” storm drain stencils Santa Clara Valley Urban Runoff Pollution Prevention Program at (800) 794-2482.





Environmental Services

Tuesday, January 30, 2007

Environmental Services Home
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Jump to Resident Links
Jump to School Links
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Garbage & Recycling
Energy
Green Building
Drinking Water
Recycled Water
Stormwater
Wastewater
Water Conservation
Department Links
About Us
Contact Us
Employment

Welcome to Environmental Services



Mission: Work with our community to conserve resources and safeguard the environment for future generations.

Sustainability
San José strives to become an environmentally and economically sustainable city – designed, constructed and operated to minimize waste and efficiently use its natural resources.
[Green Building](#), [Green Business](#), [Environmental Management System \(EMS\)](#), [Energy Resources](#), [Environmentally Preferable Purchasing](#), [UN Urban Environmental Accords](#)

What's New

The San Jose/Santa Clara Water Pollution Control Plant is recommending changes to the **Industrial Local Limits and Sewer Use Ordinance** that may affect San José businesses or organizations.

Events Calendar

Wonders of our Water Works

Sign up for a free tour!

2007 Earth Summit
Fri.-Sat. • Nov. 2-3 • 9 am - 5 pm

Coastal

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Garbage & Recycling

In 2000, San José diverted 64% of its total waste stream from landfills, surpassing the State requirement to reduce disposal by half. As a result, San José is the nation's recycling leader among cities of its size.

[Business](#), [Residents](#), [Civic Recycling](#), [Construction & Demolition](#), [Garbage Rates](#)

Wastewater

The City of San José is the lead agency for implementing pretreatment programs on behalf of the 8 tributary jurisdictions whose sanitary sewer systems discharge to the San Jose/Santa Clara Water Pollution Control Plant.

[Watershed Protection Forms](#), [Water Pollution & Residents](#), [San José/Santa Clara Water Pollution Control Plant](#), [Plant Master Plan](#), [Water Efficient Technologies](#), [Prevent Sewer Backups & Backflows](#), [Annual Sanitary Sewer Service and Use Charges](#), [One-time Sewer Connection Fees](#)

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Coastal Cleanup Day
Saturday
Sept. 15, 2007
FIND A CLEANUP SITE NEAR YOU!

west coast green
home building conference + expo
september 20-22
san francisco, ca
register

Website Redesign

As you browse our department's website, you may notice we are

Businesses Save Water @ Home ULFT Programs Why Slow the Flow

Saving Water Helps Slow the Flow

Every Californian knows that water is a precious resource. None should be wasted. Surprisingly, the South Bay has a problem with too much water!

Water from inside most Silicon Valley homes and businesses goes through the sanitary sewer system to the San Jose/Santa Clara Water Pollution Control Plant.

The Plant does an excellent job of cleaning wastewater. But the sheer volume of freshwater discharged from the Plant can alter South Bay salt marshes during the drier months. The result may be less habitat available for the endangered species that live there.

Everyone can help Slow the Flow. Whether you're a business using Water Efficient Technologies, or a resident fixing that nagging leak, we all have responsibility for protecting our water supply and the health of the South Bay.

-  Success Stories
-  Are you water aware? Drop in and find out!
-  Commercial Washer Rebate Program

An aerial photograph of a wetland area at sunset. The sun is low on the horizon, casting a bright orange glow across the sky and reflecting on the water. The wetland is divided into a grid of rectangular plots by a network of canals. The water in the plots is a deep orange color, while the surrounding land is dark. The overall scene is a dramatic and colorful landscape.

Any Questions?

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