



San Francisco
Water Power Sewer

Services of the San Francisco Public Utilities Commission



Southeast Treatment Plant Projects Air Emissions and Mitigation

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Presentation for: Citizen Advisory Committee (CAC)

01.21.20

Agenda

- Introductions and overview
- Existing air quality and regulatory setting
- Air quality analysis and emissions
- Mitigation measures and compliance

Southeast Treatment Plant Projects

- Extensive Bayview community and CAC input
- Rigorous environmental review
- Environmental Justice policy



Goals and Active Projects

- Reduce odor, improve aesthetics, operate more efficiently, protect the City's critical facilities in an earthquake

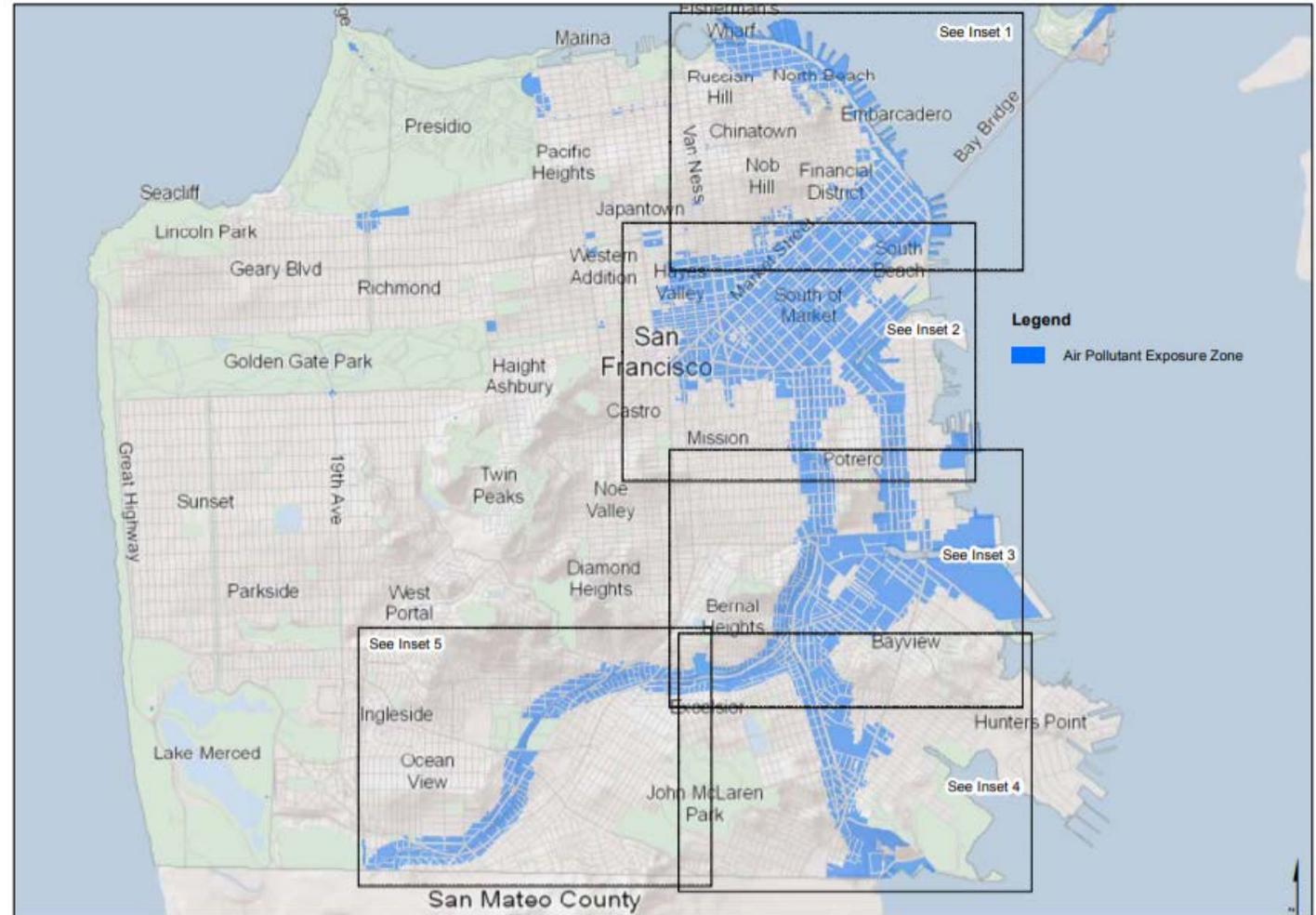


- Biosolids Digester Facilities Project (BDFP)
- New Headworks Facility Project
- Oxygen Generation Plant (LOX)
- Primary and Secondary Clarifier Upgrades
- 521/522 and Disinfection Upgrades
- Existing Digester Gas Handling Improvements
- Power Feed and Primary Switchgear Upgrades
- SEP Facility-wide

Air Pollutant Exposure Zone (APEZ)

- Areas with greater pollution
 - Traffic (freeways)
 - Maritime activities
 - Caltrain
 - Industrial uses
- Cleaner construction equipment required

Air Pollutant Exposure Zone Map - Citywide



Note: This map does not identify all city lots that overlap with the criteria identified in Article 38 of the Health Code because certain lots are substantially large (e.g., Golden Gate Park, Lake Merced, Presidio, Balboa Park, City College of San Francisco, Yerba Buena Island) and identifying the entire lot, although only one or a few receptor points within the large parcel exceed the criteria, could be misleading. In these instances, only the receptor point(s) is shown.

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Path: I:\MEA\Air Quality\CRPP\Maps\Air Pollutant Exposure Zone Map - citywide.mxd

Air Quality Regulations

- U.S. Environmental Protection Agency (EPA)
- California Air Resources Board (CARB)
- Bay Area Air Quality Management District
- City and County of San Francisco
 - Most stringent requirements
 - APEZ includes even more stringent
- SFPUC Environmental Justice Policy



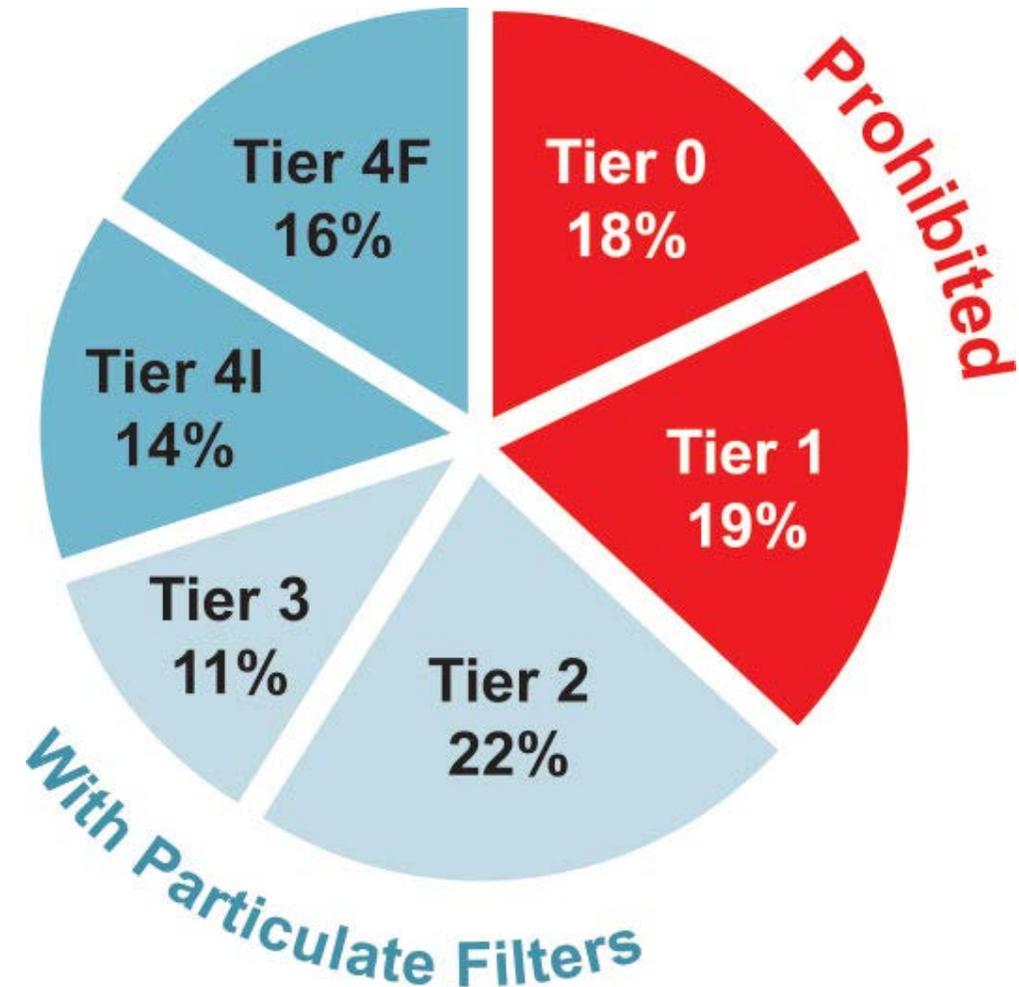
APEZ Clean Construction Requirements

- Tier = engine rating by USEPA

• Tier 4  Tier 0
cleanest/newest oldest/dirtiest

- In APEZ must use:

- Tier 4
- Tier 2 + particulate filters or
- Tier 3 + particulate filters



SF Air Basin All fleet Sizes Pieces of Equipment, 2017

California Environmental Quality Act (CEQA) Air Quality Analysis

- Criteria Air Pollutants
 - ROG, NO_x, PM₁₀, PM_{2.5}
- Health risk
- Fugitive dust
- Greenhouse gas emissions

Emissions Sources

- Construction
 - Building demolition
 - Grading and excavation
 - Equipment such as excavators
 - Trucks
 - Generators
 - Off-gassing
- Operations
 - Facilities
 - Trucks
 - Emergency generators and pumps



CEQA Air Quality Analysis for Biosolids Digester Facilities Project (BDFP)



Freeways, Industrial Sources, etc



Construction and Operation



Cleaner Fuel, Equipment, etc



Nearby Cumulative Projects



Criteria Air Pollutant Emissions- Construction

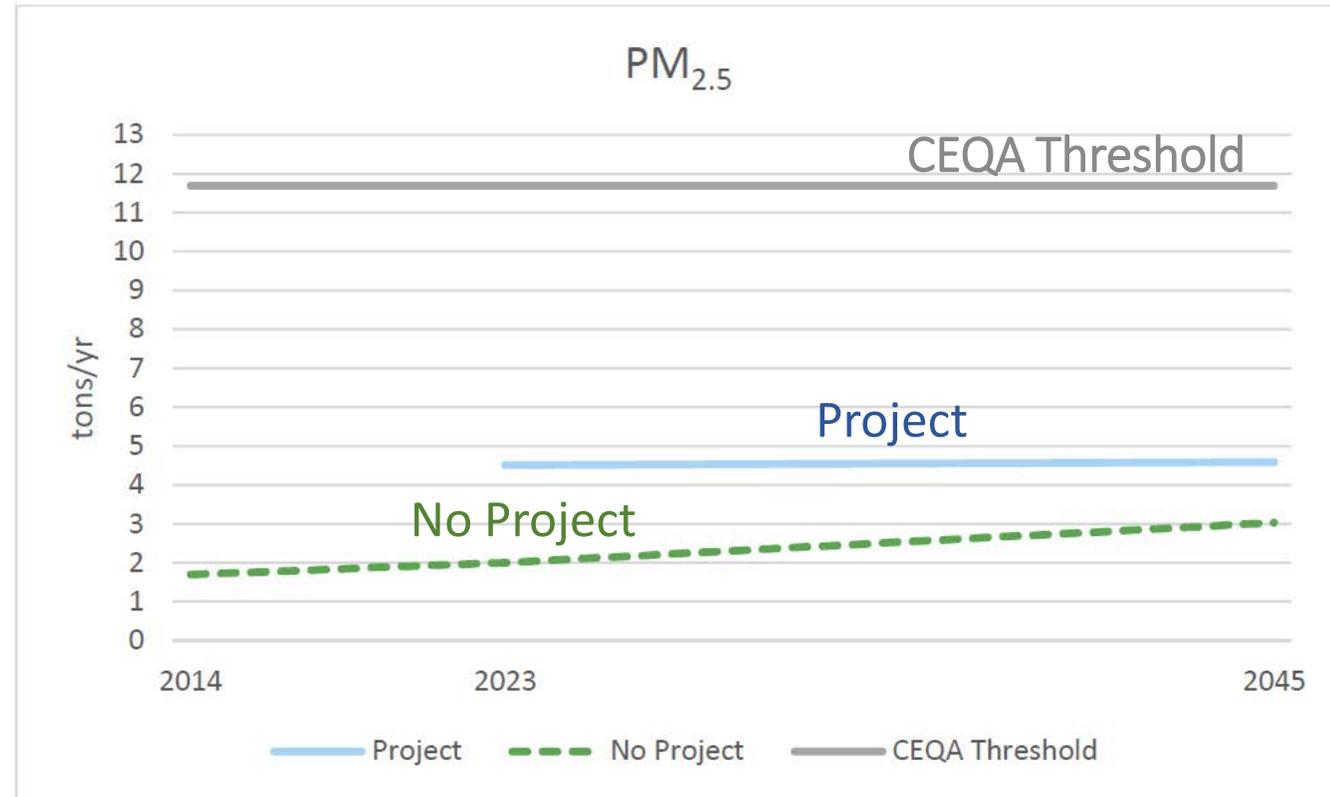
- Emissions reduced substantially with cleaner equipment
- All below CEQA thresholds for all SEP projects
- Except BDFP NO_x in years 1 and 3
 - NO_x offsets to mitigate excess emissions

Source: BDFP EIR Table 4.8-9



Criteria Air Pollutant Emissions - Operations

- BDFP future operation:
 - ROG and NOx decrease
 - PM 2.5 slight increase
 - Below CEQA threshold
 - Monitor PM and offsets to ensure no increase over baseline (EJ recommendation)
- All other SEP projects – no increase in emissions

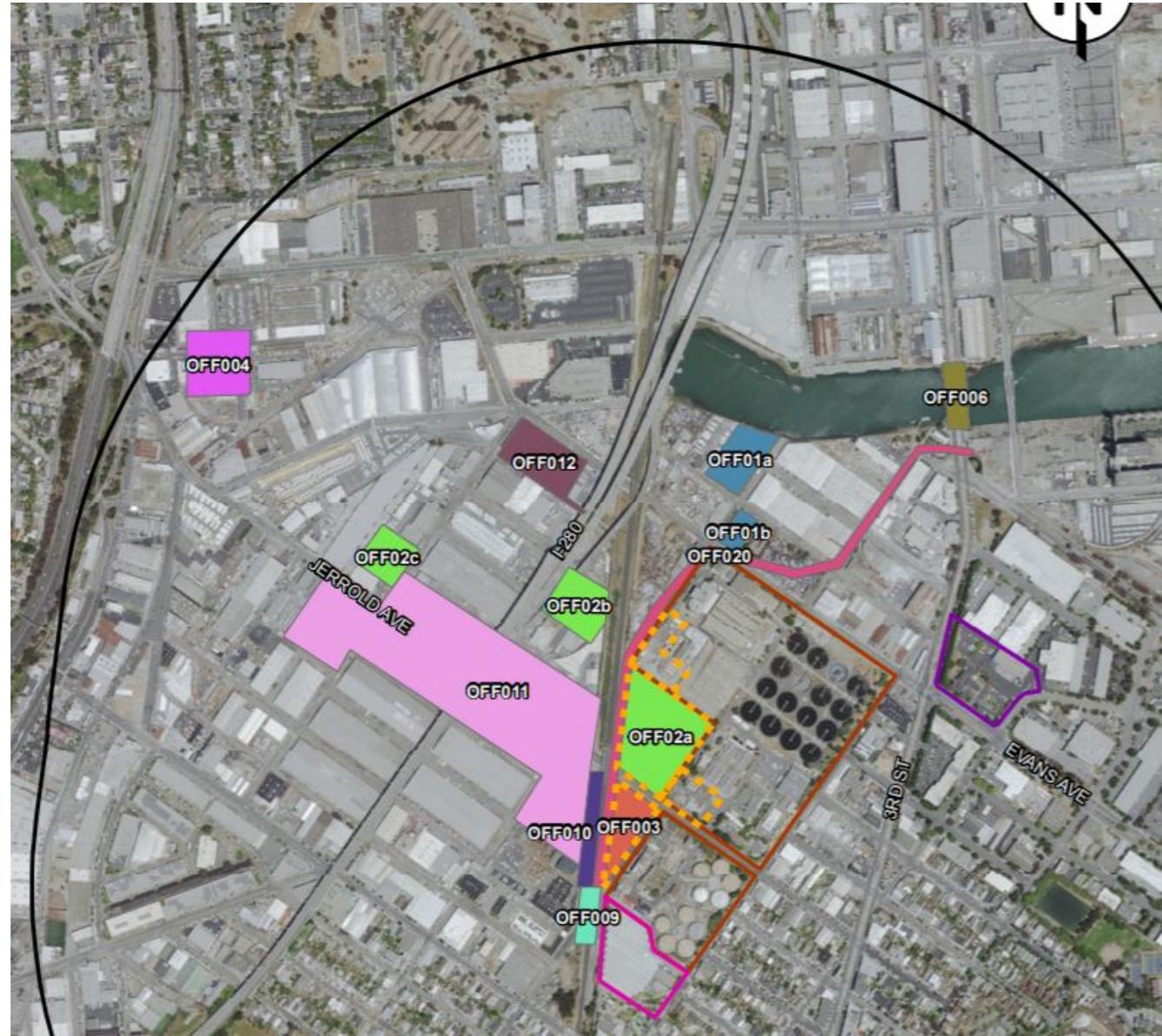


Source: BDFP EIR Table 4.8-10 and Response to Comments Table 10.6-2

Cumulative Health Risk – PM 2.5

- Background levels are high
- BDFP PM2.5 concentrations are below CEQA APEZ threshold
- BDFP plus cumulative projects are still below CEQA APEZ threshold
- Per EJ recommendation, committed to no net increase for BDFP

Source: BDFP EIR Table 4.8-15 and AQTR Figure 5b



Environmental Construction Compliance

- Proactive
- Systematic
- Boots on the ground
- Open communication
- Solutions oriented
- Integrated with Construction Management Team
- Close coordination with EJ and Communications Team



Construction Air Quality Mitigation

Pollutant Reduced

	Criteria Air Pollutants	Fugitive Dust	Health Risk
Dust control (watering, covering stockpiles, track-out prevention, covering haul loads)	X	X	
Equipment and vehicle maintenance	X		X
Idling limited to 2 minutes	X		X
No parking of equipment/trucks in front of daycare facility (EJ requirement)	X	X	X
Tier 2/Tier 3 + VDCS	X		X
Tier 4 Final for equipment 140 and greater	X		X
2010 or newer haul trucks	X		X
Renewable diesel	X		X
NOx offsets	X		
Contractor assistance to upgrade equipment	X		X

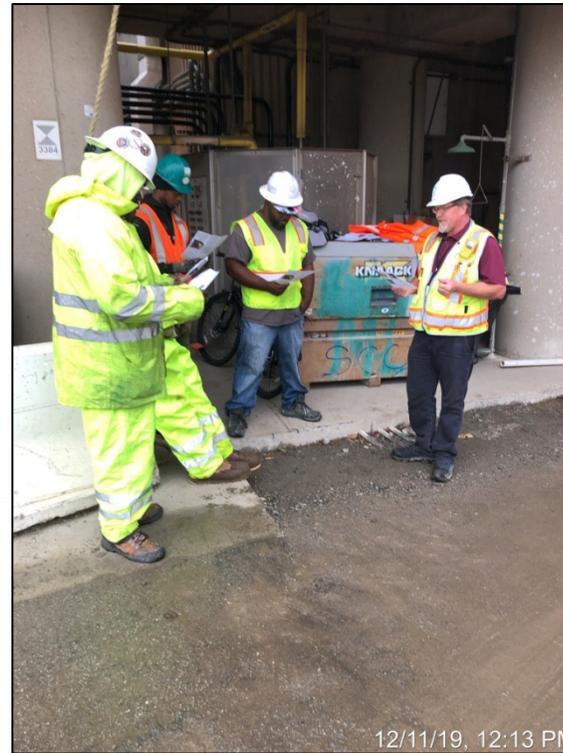
Construction Compliance Methods

- Daily SEP-wide site inspections
- Perimeter air quality monitoring
- Review of Contractor submittals and reports
- Tracking and documentation
- Other agency inspections (i.e., BAAQMD)
- SFPUC construction hotline (415-551-4SEP)
- Bayview Hunters Point Environmental Justice Response Task Force's IVAN Network (Identifying Violations Affecting Neighborhoods)



Environmental Training

- **ALL** personnel trained to ensure mitigations are implemented



San Francisco
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Training**

ALERT !

This is to notify you that this project site may be located in an archaeological area. If you notice anything that indicates the presence of an archaeological site, the San Francisco Environmental Review Office should be notified immediately. Call the project area.

- Environmental Inspection
- Regional Environmental
- Regional Environmental
- Environmental Construction

All work within the vicinity of the project has evaluated the discovery. You should be aware of archaeological sites. It is not always obvious when they are encountered. Below are some things to watch for:

- PREHISTORIC ARCHAEOLOGICAL SITES**
- Concentrations of shellfish remains
 - Evidence of fire (ashes, charcoal)
 - Concentrations of bones
 - Recognizable Native American artifacts (e.g., humanly shaped rock)



ENVIRONMENTAL AWARENESS TRAINING
Peninsula Pipeline Seismic Upgrade Project

This Environmental Awareness Training brochure was prepared as a general overview of the environmental requirements for the construction project. It is intended neither as a complete list of environmental requirements, nor as a substitute for Contract Documents or permits.

General Environmental Requirements

- All project personnel must attend Environmental Awareness Training prior to beginning work on the project site.
- Only work in designated project work areas and access roads.
- Do not enter restricted areas that contain sensitive or protected resources, observe all flagging, fencing, and field signs.
- Limit speeds to 15 mph on unimproved roads and staging/parking areas.
- Do not litter with food or waste. Place all trash in containers with lids or covers to avoid attracting wildlife.
- Pets and firearms are not allowed on the project.
- Maintain all traffic control barriers and signs.
- Be courteous to residents and the general public. Direct questions to the designated public information liaison.

Hazardous Materials Management

- Maintain emergency spill response supplies on-site.
- Clean-up and contain all leaks and spills immediately, if safe to do so, and dispose of materials properly. Immediately report spills to your supervisor and the Environmental Inspector (EI), and to your supervisor daily at start-up for leaks and repair immediately.
- Conduct all refueling and vehicle/equipment servicing in designated areas at least 100 ft. from surface waters.
- Place a drip pan or absorbent material under vehicle/equipment until leaks are repaired and during refueling/servicing.
- Store hazardous materials and other wastes at least 100 ft. from surface waters unless otherwise approved by the EI.
- Store hazardous materials in a designated storage area in a watertight labeled container with secondary containment or enclosed storage shed.
- Use designated concrete washout areas. Contain concrete and other washout areas to avoid discharge of pollutants to soil or watercourses.

Thank You

Questions?