Unit 9
Oil/Water Separators
What is an OWS?
Making It Work

- Reduce your disposal costs
- Reducing your permit and regulatory requirements
- Reducing your service intervals
P2 Alternative: OWS BMPs

MINIMIZE

• Solids: sediments, trash, sand
• Contaminants: antifreeze, fuel, solvents, paint
• Wastewater, storm water, wash water

INSPECT

Bioresmediate
Minimize Solids: Grates and Screens
Minimize Contaminants

- Eliminate or minimize floor drains
- Use “dry” cleanup techniques
- Be aware of potential contaminant sources:
  - antifreeze
  - paints
  - oils
  - solvents
  - fuels
- Heavy vs. light contaminants
- Avoid emulsifying detergents
Minimize Wastewater

- Mitigate introduction of storm water with berms and washrack covers.
- Reroute roof drains and condensate from air conditioning and air compressors
- Use high-pressure, low-volume sprays for vehicle washing
Inspection and Clean Out

• Implement regular inspection
  – Sludge depth
  – Floating oil
  – Contaminants (odors, sheens)
  – Solids on grates

• Perform regular cleanout
  ➢ Determine need for cleanout based on inspection, not calendar
  ➢ Remove oil from collection trough or from surface using reusable absorbent pads
  ➢ Refill OWS with water before returning to service
Making Bioremediation Work

- Periodic “microbe dosing” of OWS replenishes microbe population
- Keep pH level < 8.5
- Harsh chemicals can kill microbes
- Vendors can provide equipment, microbes, and labor as part of service agreement ($75 to $130 per month)
Case Study 1: Salem Boys

Challenge: Reduce $1,000 cost of OWS cleanout incurred every 3 months

Approach:
• Install screens and 1/4” expanded steel mesh to existing OWS grates
• Use pigs and sloping pavement to settle out sediment
• Use “oil-only” absorbent pads to collect floating oil from OWS water surface
Case Study 1: Salem Boys

- Dose OWS with microbes every 4 hours (service costs $75 per month)
- Use removable screens in vehicle bay to remove debris
Case Study 1: Salem Boys

Results:

- Reduced cleanout frequency by 75% - from once every 3 months to once/year
- Saved approximately $3,000/year in sludge cleanout and disposal
- Microbe dosing costs $900/year
- Debris grates and absorbents cost $250/year
Case Study 2: USPS

Huntington Beach, CA

• Discharge violations

• 80% reduction of effluent hydrocarbons with bioremediation
Take Home Messages

• Understand how your OWS works
• Source reduction and segregation
• Bioremediation works
• Save $$ by reducing clean-out frequency and violations