



P2 Primer

Pollution Prevention Act of 1990



During 1990, the United States Environmental Protection Agency (USEPA) proclaimed a bold national objective that:

“Pollution should be prevented or reduced at the source whenever possible.”



Pollution Prevention for Municipalities



Quiz

- True or false:
- Pollution Prevention and recycling are the same.
- Answer



Pollution Prevention (P2) Defined

P2 is prevention or reduction at the *source* therefore, it is different than recycling or treatment which happen *after* a waste has been generated.



P2 is Green

- Question: Would you rather do business with a known polluter or a “Green” company?
- Most people prefer companies and organizations that have a good environmental track record.



Pollution Prevention Saves \$

Preventing pollution (P2) offers important economic benefits, since if there is no pollution or waste being generated, there is no need for expensive investments in waste management or cleanup.



How2 P2



How2 P2

- Three rules to remember
 - Communication
 - Communication
 - Communication



How2 P2: In depth

- Purchasing
- Property management
- Pest management
- Public safety
- Solid waste
- Wastewater
- Stormwater
- Vehicle maintenance
- Administration
- Public outreach
- Zoning/planning



How2 P2

- Product substitution
- Waste minimization
- Good house-keeping (preventative maintenance)
- Process modifications (BMPs)
- Training
- Inventory control



How2 P2

Environmentally Preferable Purchasing

- EPP is the purchasing of products or services that have a lesser or reduced effect on the environment compared to products or services that serve the same purpose
- EPA web site
 - Resources including contract language and other tools
 - <http://www.epa.gov/opptintr/epp/>



EPP Case Study

- Onondaga County implemented a mercury policy including EPP provisions to:
- Purchase low-mercury fluorescent lamps
- Purchase non-mercury thermometers
- Substitute other non-mercury alternatives whenever practical and feasible



Is This P2?

- The Smallville DOT has a 55 gallon drum of striping paint left over at the end of the season. The Superintendent contacts the neighboring town of Metropolis and arranges to give the left-over paint to them rather than spending over \$200 to dispose of the paint as a waste.



Benefits of Mercury Policy

- Reduced health and safety concerns due to a mercury spill
- Reduced disposal costs



Is this P2?

- The Smallville DOT sets up a standing PO so that they can order striping paint on an as-needed basis, reducing the amount of paint that they have in inventory.

How2 P2



Property Management

- Energy efficient equipment
- Recycled building and fill materials (asphalt, crushed glass)
- Environmentally friendly cleaners and solvents
- Low VOC paints
- Non-chlorine alternatives
- Fertilizer/herbicide application

Case Study



- The NYS DOT is using crushed glass instead of other fill materials when possible:
 - Saves money: mixed crushed glass that is not recyclable is very inexpensive
 - Crushed glass can be used as fill material in roadbeds, culverts, and French drains instead of stone
 - Crushed glass has been used as a filter media to treat hydro-demolition wastewater

How2 P2



Property Management

- Know where your storm drains are
 - Don't store materials near or upgradient from storm drains.
 - Cover and/or provide containment for any materials that can spill or be carried to the storm drains by precipitation.
 - Construct berms to contain spills of materials that could be discharged to storm drains
 - Cover storm drains when there is a risk of something being discharged to them

Case Study



- When the Rosamond Gifford Zoo in Syracuse expanded a few years ago, they used many "green" construction materials and techniques:
 - Carpet made from recycled plastics
 - Counters made from straw, rice, and wheat
 - Shingles made from recycled vinyl and cellulose
 - Natural lighting from windows and light tubes
 - Highly insulated walls and roof for energy efficiency



Pest Management

- Integrated Pest Management (IPM) systems
 - Mechanical, physical, and biological pest control options
 - Least hazardous chemical options
- Inventory control:
 - Don't buy more than you need !
 - Know your expiration dates



Public Safety

- Mercury-free and rechargeable batteries
- Mercury-free thermometers
- Photo-processing: use silver recovery systems or digital photography
- Spill-response coordination with other agencies such as sewer and environment



Internet Resources for IPM

NYS Integrated Pest Management
Program at Cornell University

<http://www.nysipm.cornell.edu/>



Internet Resource for Mercury and Silver P2

OCDWEP Pollution
Prevention Web Site

www.ongov.net/WEP/



Solid Waste Management

- Recycling
- Compost
- Household Hazardous Waste
- Used oil and battery recycling
- Universal waste: Fluorescent lamps, batteries, pesticides, thermostats



Wastewater

- Restaurant grease management
 - Grease interceptor requirements
 - Best Management Practices (BMPs)
- Proper grease management saves communities money and prevents regulatory violations



Internet Resources for Waste Management

Onondaga County Resource Recovery Agency

www.ocrra.org

New York State Department of Environmental Conservation

www.dec.state.ny.us



Case Study: Restaurant Grease

- OCDWEP Restaurant Grease Brochure and Poster





Internet Resources for Grease Reduction

Onondaga County

<http://www.ongov.net/WEP/we1704.html>

City and County of Honolulu

<http://www.co.honolulu.hi.us/env/rc/>



Is this P2?

- Recognizing that the Smallville Wastewater Treatment Plant uses a lot of batteries in flashlights and instrumentation, the Plant Superintendent purchases rechargeable batteries and charging stations. Although the batteries initially cost 4x more than disposable batteries, they can be reused hundreds of times.



Is this P2?

- The Smallville Wastewater Treatment Plant uses a lot of batteries in flashlights and instrumentation. The plant Superintendent sets up a collection boxes at the storeroom and other locations in the plant to keep the batteries out of the trash.

How2 P2



Stormwater

- Street sweeping
- Storm drain stenciling
- Public outreach and education
- Construction run-off
- Cover salt piles or prevent run-off from going to storm sewers



Storm Drain Stencils



How2 P2

Vehicle Maintenance

- Aqueous-based cleaners
- Citrus-based solvents
- Vehicle washing
- Storage tanks
- Spill prevention
- Good housekeeping: Keep it clean, fix leaks !



How2 P2

Case Study: Storm Water P2

- Onondaga County funded a street sweeper for the City of Syracuse to use to prevent wastes from entering storm drains
- Public outreach materials developed for students and adults alike:
 - brochures
 - coloring book
 - poster



Regulatory Requirements for Vehicle Maintenance

- Solid waste: all of the following must be treated as hazardous waste unless proven otherwise
 - “Speedi-dri”
 - Fuel filters
 - Fuel tanks
 - Disposable rags (use washable rags)
 - Contaminated fuel



Regulatory Requirements for Vehicle Maintenance

- These need to be recycled:
 - Used oils
 - Antifreeze
 - Batteries
 - Crushed oil filters
 - Solvents
 - Refrigerants
 - Scrap metal



Regulatory Requirements for Vehicle Maintenance

- Air:
 - Refrigerant required to be captured and recycled
 - Paint booths



Regulatory Requirements for Vehicle Maintenance

- Wastewater:
 - Floor drains need to be connected to the sanitary sewer, NOT the storm sewer
 - Floor drains must be equipped with oil-water separators
 - Wash bays must also have sand traps
 - NEVER wash vehicles outside or near storm drains
 - NEVER dump automotive fluids or solvents in the sewer



Regulatory Requirements for Vehicle Maintenance

- Underground or above-ground storage tanks required to be permitted and monitored:
 - Fuel and oil tanks
 - Bulk storage tanks (e.g., oil, antifreeze)



Internet Resources for Vehicle Maintenance P2

CCAR-GreenLink, the National
Automotive Environmental Compliance
Assistance Center

www.ccar-greenlink.org

How2 P2



Administration

- Vegetable-based printing inks
- Recycled printer cartridges
- Energy Star certified equipment
- Recycled paper



How2 P2

Case Study: Used Tires

- Nucor (Auburn) Steel accepts used tires at low disposal costs for recycling in their steel mill
- In addition to using the steel from the tires, they are also used as a source of carbon for making steel
- Nucor has recycled well over 6,000 tons of tires since March 2002

How2 P2



Public Outreach and Education

- Most people will do what's best for the environment *IF* they know what to do *AND* it's not too inconvenient
- Workshops, brochures, posters
- Radio/TV spots
- Lead by example



Planning and Zoning

- Green space and buffer zones
- Mass-transportation
- Pedestrian and bicycle transportation
- Sprawl control
 - reduced infrastructure
 - reduce vehicle miles traveled
- Brownfield redevelopment



Resources

- Onondaga County Department of Water Environment Protection: www.ongov.net/WEP/
- Onondaga County Resource Recovery Agency: www.ocrra.org
- EPA Web Site: www.epa.gov
- Local Organizations
 - NY Water Environment Association
 - CNY Air & Waste Management Assoc.



Internet Resources for Planning and Zoning

Smart Growth Network

www.smartgrowth.org



www.ongov.net/WEP





Need More Information?

Contact:

David Colbert

315-435-2260

davidcolbert@ongov.net