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# Minnesota's Healthcare Hazardous Waste Initiative

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# The Problem:

Mismanagement of Hazardous waste in the  
Healthcare Industry.

Hazardous waste disposed of in red bag waste,  
solid waste, and into the sewer.



# The Plan of Action:

- Devise Committee
- Meet with Stakeholders
- Training
- Compliance and Enforcement



## Results:

- Hurdles
- Successes / Pollution Prevention
- Lessons Learned

# USGS Water Quality Study, 2000-2002

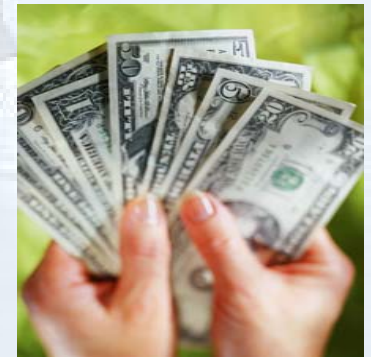
- First Minnesota water study of organic wastewater contaminants (OWCs), including:
  - pharmaceuticals,
  - disinfectants
- 65 sites in Minnesota: 91 target OWCs
- $\geq 1$  OWCs found in 90% of water samples
- Up to 8 OWCs found in treated drinking water

# Regulations: Noncompliance

## ■ Enforcement Actions

### □ Financial Penalties

- ☒ Nassau University Medical Center \$279,900 (2003)
- ☒ Memorial Sloan-Kettering \$214,420 (2004)
  
- ☒ Up to \$32,500 per day per violation



# Evaluate Waste:

- List all wastes generated by each department
  - ☒ Solid wastes
  - ☒ Wastes disposed of into the sewer



- Examples of waste:
  - ☒ Discarded pharmaceuticals
  - ☒ Discarded laboratory reagents
  - ☒ Used Surgical Preparation Materials
  - ☒ Spill residues and absorbents
  - ☒ Non-empty containers



# Evaluate Waste:

## ■ Determine waste streams

- Hazardous waste may be generated by every department in a facility

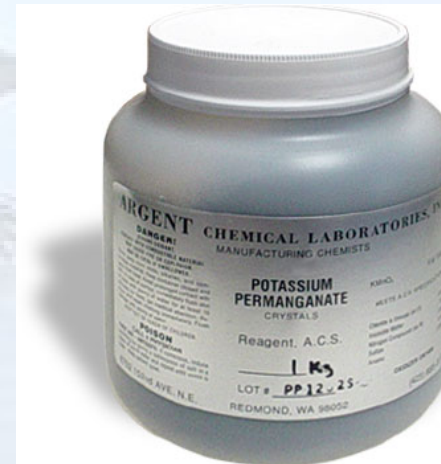
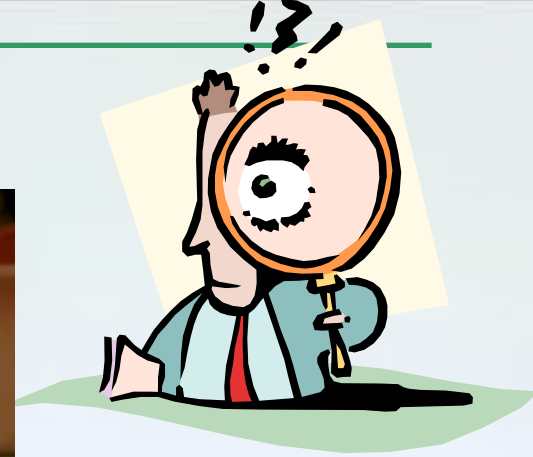
- Pharmacy
- Laboratory
- Radiology
- Oncology
- Surgery
- Dental

- Pathology
- Sterile Processing
- Plant Engineering
- Emergency
- Ophthalmology
- Morgue



# Training:

- In fiscal year 2006 The MCPA and Metro Counties presented 12 healthcare hazardous waste workshops resulting in over 500 professionals receiving training.



# Hurdles:

- Acutely Toxic Waste -P- Listed Waste
- Dual Waste
- Lab Machines
- MN Lethality Characteristic



# Compliance and Enforcement

- Grand Rapids Medical Center, \$10,000 (2005)
- Virginia Medical Center, \$10,000 (2005)
- VA Medical Center, MN \$45,650 (2006)



Common Violations :



# Improper disposal / Failure to close



# Mislabeled containers



# Mislabeled container



# Quantitative Results

- 28 metro area hospitals first to come into compliance.
- 75 tons of pharmaceuticals, 30 tons of laboratory waste now being properly managed
- Chemotherapy management and reporting increased by over 400%
- Over 1,000 pounds of mercury eliminated
- Hospitals saving over \$250,000 annually with P2.



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# Success and Pollution Prevention

- Hospital received Governor's Award
- Environmental Initiative Recognition for the partnership.
- MN Tap - Intern Program
- Website Materials
- Teaching other states



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# Lessons Learned

- Invaluable Relationships built between State agencies, County agencies, MN Tap, Wastewater Treatment and The Healthcare Sector.
- Respect, Negotiation skills, Creativity and Gratitude.



# Get Started

- Healthcare Hazardous Waste Website :  
<http://www.pca.state.mn.us/industry/healthcare.html>
- Hospitals for a Healthy Environment <http://www.h2e-online.org/>
- Minnesota Technical Assistance Program Catherine Zimmer [Zimmer053@umn.edu](mailto:Zimmer053@umn.edu)  
<http://mntap.umn.edu/health/index.htm>
- MN HEARRT  
<http://www.mntap.umn.edu/health/heartt.htm>
- Pharmwaste listserve  
<http://lists.dep.state.fl.us/cgi-bin/mailman/listinfo/pharmwaste>

