

**Solid Waste and Air Quality Committee**

**Addressing Pharmaceutical Waste  
in Jefferson County – Planned Response**

**Proceedings Report of Educational Programs  
and Workshop Results**

**Participants**

**Jefferson County Solid Waste and Air Quality Committee:**

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**Event Planning Workshop Participants:**

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Paul Milbrath - Jefferson County Sheriff  
Gail Scott - Director - Jefferson County Health Departments  
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February 28, 2007

*"Enriching people with knowledge, perspective, skills and aspirations."*

# Addressing Pharmaceutical Waste in Jefferson County – Planned Response

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**AGENDA**  
**December 15, 2006**

- Purpose of Educational Program
- Presentation by UW-Extension Specialist Steve Brachman
- Question and Answer and Discussion
- Adjourn

**AGENDA**  
**January 19, 2007**

- Key findings from education workshop
- Assessment of possible options
  - Pros
  - Cons
- Implications for follow-up seminar. If “seminar”, then:
  - Purpose of Seminar
  - Who to invite
  - Logistics (Timing, Location, Sponsorship, etc.)
  - Other process steps
- Adjourn

**AGENDA**  
**February 16, 2007**

- Introductions
- Review “Proceedings” from last workshop
- Workshop Components:
  - Purpose of Event
  - People Involvement and Roles/Responsibilities
  - Ideal “System” (See Prompts for Components)
  - Limitations
  - Agreed Upon General Approach
- Follow-Up
- Adjourn

**Section 1**  
**PHARMACEUTICAL WASTE:**  
**CURRENT ISSUES AND OPPORTUNITIES**

**Pharmaceutical Waste**  
**Current Issues and Opportunities**

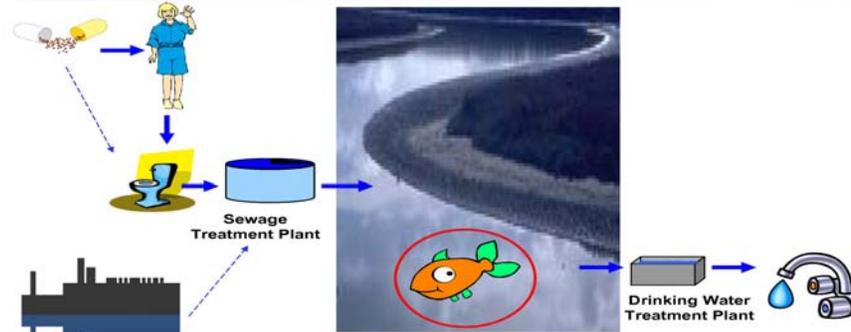
Steve Brachman  
Waste Reduction Specialist  
UW-Extension Solid & Hazardous  
Waste Education Center



**Key Issues**

- Environmental impacts of waste medicines
- Regulatory concerns
- Collection Models
- Next Steps

## Pharmaceuticals in the Environment



Patient Use is the Primary Pathway by which Human Pharmaceutical Compounds Enter the Environment

Source: Theodore J. Roumel, Phrma

## Environmental Concerns

- Pharmaceuticals are showing up in tests conducted on various bodies of water around the globe
- US Geologic Survey downstream of waste water treatment plants – Kolpin 1999 & 2000
- Compounds not destroyed by sewerage treatment – Antibiotic, antidepressants, tranquilizers, blood lipid regulators, anticancer drugs. – Daughton 1999
- Estrogen disposal – can interfere with fish reproduction – Raloff 2004



## Regulatory Issues

- Household pharmaceutical waste is exempt from laws governing hazardous waste disposal.
- Prescription drugs separated from household waste and accumulated from more than one household must then be disposed of under federal regulations.
- Schedule II-V – witnessed burn
- OTC pharmaceuticals – non-witnessed burn.

## Drug Enforcement Agency Policies

- Out of the DEA registrant loop but cannot be in the possession of an unauthorized person
- Law enforcement officers only exception
- MUST involve law enforcement in any comprehensive program or screen out controlled substances
- <http://www.deadiversion.usdoj.gov/schedules/index.html>

# Resource Conservation & Recovery Act (RCRA) Concerns

- Federal law exempts household waste
- Once collected, RCRA categories include:
  - P-listed chemicals
    - Sole active ingredient
  - U-listed chemicals
    - Sole active ingredient
  - Characteristic of hazardous waste
    - Ignitability
    - Toxicity
    - Corrosivity
    - Reactivity



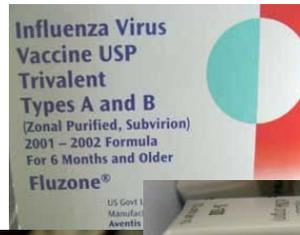
## Examples of U-Listed Pharmaceuticals



## Examples of Pharmaceuticals Exhibiting the Characteristic of Toxicity



**Heavy Metals: Selenium, Chromium and Silver**



**Preservatives: thimerosal & m-cresol**

## Collection Models

- One day “clean sweep”
- Pharmacy/sheriff drop off
- Mail back

## One Day Events

Wood County	418 lbs.	114 participants
Brown County	300 lbs.	175 participants
Milwaukee MMSSD	824 lbs.	128 participants
Winnebago Co.	184 lbs.	114 participants
Manitowoc Co.	190 gal.	95 participants
Rock County		200 participants

# Clark Co. WA HHW/pharmacy + police drop off program

## Non-controlled meds

- Residents drop off at HHW facility or pharmacies
- HHW vendor disposes
- Pharmacies FedEx to HHW vendor

## Controlled substances

- Heat sealed envelopes deposited in locked boxes
- Sheriff disposes



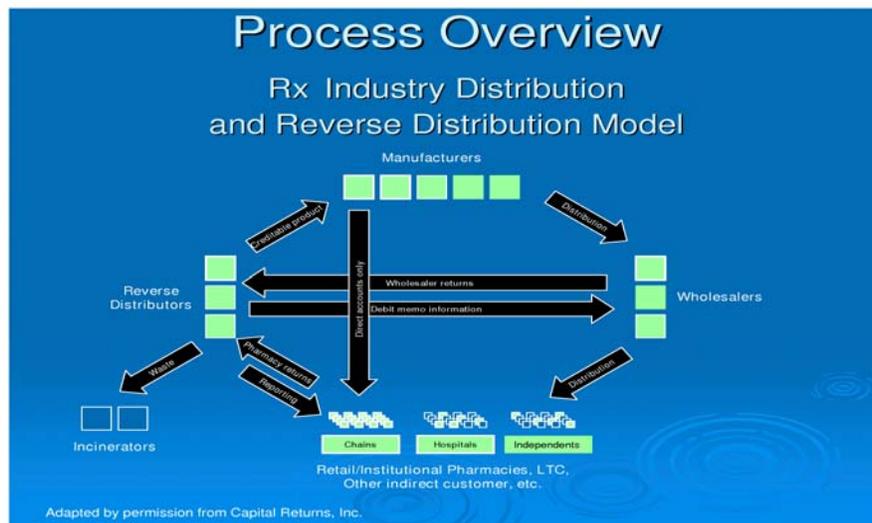
## Maine legislation

- Consumer mail-back program
  - USPS involvement
  - Maine DEA as recipient
  - Maine DEP considers all household waste hazardous if not sorted based on RCRA
- U.S. National Registry for Unused and Expired Medications (USNRUEM)
  - <http://www.communityofcompetence.com/sections/Registry.htm>
- Dr. Steve Gressitt, MD, (207) 441-0291, gressitt@uninets.net

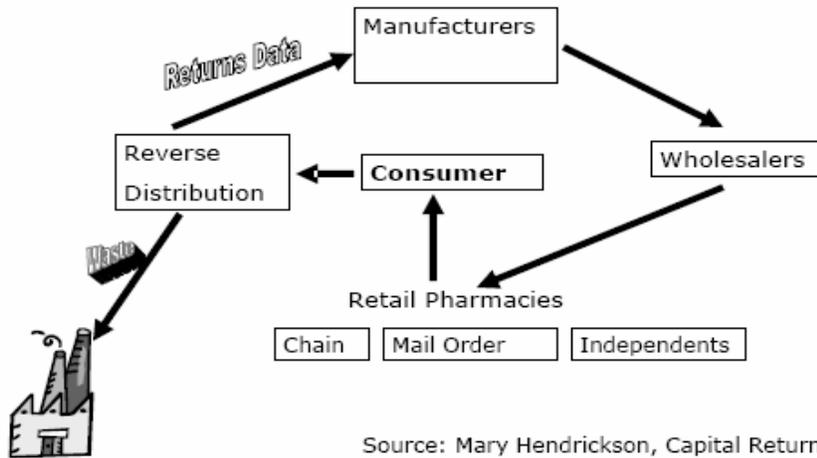
## Aspects of Pilot Consumer Drug Mail Back Program

- Utilize existing reverse distribution network and providers
- Convenient and accessible for all consumers
- Track data
- Funded by manufacturers based upon product returns

## Existing reverse distribution system



## Model “mail back” program



## Win-win Scenario

- ☺ Convenient for consumer
- ☺ Utilizes existing infrastructure
- ☺ Provides valuable data on drug compliance and usage
- ☺ Local governments could focus on education
- ☹ Need to overcome DEA regulations
- ☹ Manufacturers \$\$\$ important

Next Steps???

**Section 2**  
**PHARMACEUTICAL FOLLOW-UP:**  
**A WORKSHOP OF THE JEFFERSON COUNTY**  
**SOLID WASTE AND AIR QUALITY COMMITTEE**

**Overall Concerns/Observations Identified by Committee, Staff and Advisors**

*After reviewing the content from the Educational Program, the group identified overall concerns and observations about pharmaceutical waste.*

- Watertown Hospital takes some drugs, but don't have resources and capacity to meet needs
- Prevention strategies are important: just starting Statewide education initiatives
- Need some guidance to consumers
- Needs research:
  - What are hospitals doing in Jefferson County?
  - What are pharmacies doing?
  - What are the impacts on landfills, treatment plants, septics?
- Initial inquiries by Staff:
  - Ten pharmacies. Can't bring drugs back to them.
  - Some advise flush, some crush and trash (along with dissolving in water); variable
- Could have an educational program with:
  - Pharmacies
  - Health Care Professionals
- Trashing drugs can be a safety problem with kids.

## **Options Assessment**

*The group came up with three options for dealing with pharmaceutical waste and assessed the pros and cons of each option.*

### **Option A – Clean Sweep Event Approach**

#### ***Pros:***

- Could help awareness
- Could include questionnaire for finding out how people are disposing (have done these before for other clean sweeps)
- Relatively modest cost for disposal (and there are opportunities for sponsorship)
- Could be tied into current clean sweep marketing (brochures, etc.)
- Good media opportunity (paper coverage/photos/publicity)
- Pharmacists very interested
- Watertown Health Department interested

#### ***Cons:***

- Only a one-shot deal/periodic
- Might only be able to afford occasionally (although could do at clean sweep)
- Impact overall is quite low (only a couple hundred)
- Need to coordinate with the Sheriff (two officers), pharmacists and more volunteers
- Have always said “don’t bring medicine waste” at other clean sweeps

### **Option B – Drop-Box**

#### ***Pros:***

- Good option
- Low-cost impact
- Could start slow (i.e. try one at the Sheriff’s Department)
- Could work out relationship with Sheriff/Pharmacists
- Could be done concurrently with clean sweep
- Could also start-up with local police departments early, too (i.e. Fort and Watertown)
- Very anonymous
- Convenient hours (anytime)
- Could be a pilot

#### ***Cons:***

- May not be read yet
- Requires consumer to “segment” drugs between controlled/not controlled
- Less convenient: requires two stops
- Would require extensive start-up marketing
- Might require DNR/DOE approval
- Liquids could break or leak
- Don’t have questionnaire opportunity
- Still requires driving

## **Option C – Mail Back**

### ***Pros:***

- Could pilot somewhere
- The most convenient for the consumer
- Would be the fairest: uses “markets”
- “Capital Returns” is in Milwaukee and is interested in trying this.
- Relatively low cost if manufacturers embrace this
- Wouldn’t invade “clean sweep “budget
- Could be “targeted” to meet particular needs

### ***Cons:***

- Never been tried
- Is a challenging matter politically
- Considerable “start-up” effort
- Could require State involvement
- “Best” procedure not yet developed
- Many unknowns on which chemicals could be handled

## **Key Players for Research**

*The group listed a few key stakeholders to consider in any pharmaceutical waste program. They also mentioned a few possible techniques for getting initial input.*

- Pharmacists
- Medical Providers
- Clinics/Hospitals – Their pharmacy people (to find out from them)
- Rock County/Milwaukee County (who’ve done the event or are planning one): Marshfield Clinic, Brown County, Manitowoc County, Wood County, Winnebago County, Madison
- Wastewater treatment plant operators
- Hospice Care`
- Health Department (Jefferson County and Watertown)

### **Possible Techniques for Input:**

- Phone interview
- Individual interview
- Site visit
- Focus group (i.e. pharmacists)
- Workshop discussion
- Letters/e-mail

### **Possible Option: 2007 Pilot**

*The Committee agreed to a Clean/Sweep/Pharmaceutical Waste collection program with these ideas.*

- Couple with Clean Sweep in late 2007 or for all 2007
- Gives time for involving (in some way). Key partners as members of sub-planning group.
- Sponsorships
  - Jefferson County Health Department (article in newsletter, network with healthcare providers) – partner in educational information
  - Watertown Health Department – could mobilize community, pharmacists; has a volunteer organization that would help

### **Follow-Up for a Detailed Event Planning Workshop**

*The group determined that a sub-planning group should be convened to detail the key components of a Clean Sweep/Pharmaceutical Waste Program for 2007.*

- Sub-Planning group could:
  - Assemble realist/doable approach/Health Depts./Zoning/Sheriff's Dept./Pharmacist
  - This workshop was scheduled for February 16, 2007

**Section 3**  
**CLEAN SWEEP/PHARMACEUTICAL EVENT**  
**DETAIL EVENT PLAN WORKSHOP**  
**A WORKSHOP OF THE JEFFERSON COUNTY**  
**SOLID WASTE AND AIR QUALITY COMMITTEE AND PARTNERS**

**Prompt of “System” Components**

*The group worked through a systems planning protocol for detailing this event. The group was prompted by these guiding “prompts” for planning.*

- Stakeholders/People to Involve
- Volunteers/Training”
- Outreach and Marketing
- Logistical Matters (Including Vendor)
- Cost Implications
- Timeline
- Steps

**Purpose of Today’s Meeting**

**To design the event to collect household waste and pharmaceutical waste at four 2007 events (beginning on April 14<sup>th</sup> ).**

**People Involvement and Roles**

*The group identified key stakeholders for the event and their potential roles and responsibilities.*

- Zoning Staff
  - ❖ Ideally two or three
  - Role:** Overall coordination, surveys, site management, event planning, preregistration and scheduling (including if pharmaceuticals)
- Nursing Staff/Health Department
  - ❖ Ideally of two or three people
  - Role:** Removal/transfer of material to pharmacists
    - Help identify medicine; hand out brochures as people exit; deal with “sharps”; pre-mailing/outreach

- Pharmacists
  - ❖ Ideally three or four people at any time
    - Role:** Separate Controlled and Uncontrolled pharmaceuticals (Inventory the controlled pharmaceuticals.)
  
- Sheriff/Law Enforcement
  - ❖ Ideally two officers
    - Role:** Monitor controlled substances; involved with storage of controlled substances (which is expected to be a five-gallon drum of substance 5% to 15% of all pharmaceuticals) – 37 lbs of 200 lbs.
  
- Vendor
  - ❖ Ideally one person (plus four for the Clean Sweep)
    - Role:** Answers questions related to sorting
  
- People for Traffic Control
  - ❖ Ideally two to four people
    - Role:** Direct people keep things moving in an organized way (has been County staff)
  
- Greeters team/Survey Team (Volunteer/Staff)
  - ❖ Ideally two teams of two people
    - Role:** Initial contact with customer; may include Health Department staff
  
- Training Leaders
  - ❖ Ideally one or two (Project Manager vendor and Zoning)
    - Role:** Train staff, volunteer, pharmacist, etc. on procedures (emphasizes safety)
  
- Other Volunteers
  - ❖ Ideally two or three people
  - ❖ Back-up volunteer
    - Role:** Youth? – probably not for event, but in general education/outreach
    - Role:** Adult Volunteers – probably not for event since training would be required (This can be a “management” challenge.)
  
- Wastewater Treatment Plant Operators
  - Role:** Involved in monitoring, research, education of public officials and citizens
  
- State Pharmacist Society
  - Role:** Conduit to inform pharmacists of the program

## **Public Relations and Outreach**

- Health Departments and hospitals to distribute brochures/etc. to doctors, hospitals, pharmacies through health nurses, veterinarians
- Zoning to develop special flyer (adapt Rock County's)
- Watertown Scout troop to develop poster
- Longer term include sponsors as practical
- Partners (Hospitals, Health Departments to consider cost sharing)
- Flyer: Basic flyer/poster template by Zoning
- In newspapers
- Sent to cable companies
- Is on the web site
- Zoning to handle normal outreach/marketing
- Locations for Flyers (Rock County did no mailing)
  - ❖ Pharmacies (11 x 17 posters)
  - ❖ Retail stores – stuff flyers
  - ❖ Elderly events
  - ❖ Senior Centers
  - ❖ Libraries
  - ❖ Churches

## **Logistical Considerations (Special Emphasis for Pharmaceuticals)**

- Locational Considerations
  - ❖ Two at Fair – very nice!; one at Watertown Recycling center; out in “elements and is not ideal; on Fort Transfer Station – in poor facility designed/used as a MRF)
- Option in Watertown (find new location)
  - ❖ Wastewater Treatment or Street Maintenance Facility – Carol to lead the search for next year.
  - ❖ Adapt Existing site for this year. – YES
- Option in Fort Atkinson (find new location)
  - ❖ May need significant lead time
  - ❖ If this year a possible scenario would be:
    - Creative solution – Mark to consider site considerations with existing MRF to try to make workable
    - May be “rough” in 2007
  - ❖ Long-Term in Fort Atkinson
    - Judy to contact the Wastewater treatment Facility in Fort Atkinson

- Special notices/considerations on materials
  - ❖ Not inviting “sharps”
  - ❖ Not inviting “business” pharmaceuticals (including nursing homes, hospitals, etc.)
    - Will research nursing homes for possibly inclusion in future years
  - ❖ Silent in brochure on chemo (but will take if questioned)
  - ❖ Keep original labels
- Special Pre-Screening Questions
  - ❖ No sharps
  - ❖ Will allow chemo if asked
- Vendor needs
  - ❖ Nothing in particular
- Pharmacist Recruitment
  - ❖ John to lead search and coordinate for Watertown area
  - ❖ Gail to lead in Jefferson/Fort Atkinson area (Adam to brief Gail)
  - ❖ Expect John and Gail to work together on finalizing a list for each event
  - ❖ List should include four pharmacists per event
  - ❖ Copy Bob Mueller on final list
- Nurse Recruitment
  - ❖ Carol (Watertown) and Gail (Jefferson/Fort Atkinson) to lead search
  - ❖ List should include two nurses per event
  - ❖ Copy Bob Mueller on final list
- Site Set-Up
  - ❖ Mark and Bob to determine location for pharmacists
  - ❖ Will not have I.T. hook-up (pharmacists could go to Activity Center at Fair Park if necessary)
- Identification of Team/Staff
  - ❖ Colored vests
    - Health Departments would provide these vests to all (pharmacists, nurses, staff, greeters, etc.)
    - Clean Sweep/Vendor will be in Tyvek whites

### **Cost Considerations**

- Most costs come from County Solid Waste Program
- Overtime: Will come up with strategy for donations/financial contributions from sponsors (not this year)

## Timeline and Critical Path Considerations

