

Reducing Pharmaceuticals in Water:
***DEC's Proactive Approach to
Household, Institutional, and
Manufacturing Discharges***

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Pharmaceuticals in Water: *Why is DEC Concerned?*

- **Designed to have biological effects**
- **Resistant to degradation**
- **Widespread and increasing use**
- **Many sources to our waters**
- **Discharged from wastewater plants**
- **Effects on aquatic life**



Reducing Pharmaceuticals in Water: *A Complex Challenge*

- Few if any water quality standards
- Waste water plants were *designed to treat sewage – not pharmaceuticals – and are only partially effective at removing drugs*
- *We can reduce some sources of drugs*



How do Drugs Get Into our Waters?

Widespread and Diverse Sources

- Households – Flushing of meds
- Health care institutions – Flushing of meds
- Pharmaceutical manufacturing facilities (PMF)
- Animal feedlots
- Aquaculture
- Land application of organic materials
- *All of us !* (drugs pass through our bodies and through wastewater treatment plants)



DEC Pharmaceuticals Work Group

- **Formed winter 2008**
- **Division of Water (Lead)**
- **Materials Management**
- **Commissioner's Policy Office**
- **Public Affairs and Education**
- **Pollution Prevention**
- **Office of General Counsel**
- *Dept. of Health*
- *Attorney General's Office*



DEC Actions to Reduce Drugs in Waters: *Six Key Elements*

- 1) Reduce flushing of unused household drugs**
- 2) Reduce flushing in health care facilities**
- 3) Change national and state approaches to unused drug management**
- 4) Foster research in New York State**
- 5) Reduce discharges from PMFs**
- 6) Collaboration**



Don't Flush Your (Household) Drugs!

Major Outreach

- Press releases
- Website: www.dontflushyourdrugs.net
- Posters and Flyers
- Articles
- Presentations
- Radio and TV interviews
- Pharmacies, other retailers, veterinarians
(Implement NY's Drug Management and Disposal Act)



NYS Department of Environmental Conservation



Reduce Household Flushing: *Household Drug Collection Events*

- **Procedures for conducting events**
- **Hurdles: costs, disposal, controlled substances (DEA regulations)**
- **More than 100 conducted in 2010**
- **Pharmacies, HHW days, stand-alones**
- **Permanent collection points (drop-boxes in police stations)**
- **Promoted DEA's Sept. 25 collection event (5,000 people, 200 sites, 12,000 lbs of drugs)**



Reduce Flushing - Health Care Facilities

- **DEC letter of June 4, 2010 to NYS “3a” Facilities (no in-house pharmacy; reverse distribution not an option) recommends disposal options for pharmaceutical wastes that are these types:**
 - **controlled substances**
 - **hazardous waste**
 - **non-hazardous waste**
 - **regulated medical waste**
- **NYSDOH letter on controlled substances**



Health Care Facilities – NYC Watershed

- **“3a” Facilities (e.g., nursing homes, assisted living facilities)**
- **Approval by NYS DOH Bur. of Narcotic Enforcement**
- **Law enforcement conducts “milk run” : picks up drugs at various facilities, brings to incinerator for destruction**
- **Certificate of destruction issued**
- **3-4 collections per year**



Unused Drug Management: *Change National and State Approaches*

- **Continuing to foster individual collection events**
- **Supported legislation to amend Controlled Substances Act**
- **Advocate for manufacturer-funded product stewardship**
- **Working with the Product Stewardship Institute to advance national returns system**



Unused Drug Management: *National Legislation*

- **S 3397 – Secure and Responsible Drug Disposal Act of 2010**
 - **Amended Controlled Substances Act**
 - **DEA working toward new regulations to facilitate take back of controlled substances**
 - **DEC providing input**



Foster Research in NYS:

Ongoing Work – USGS, DEC, and NYSDOH

- **Reduction of pharm. discharges from PMF**
- **Presence of pharmaceuticals in surface waters**
- **Presence of endocrine disruptors**
- **Impacts to aquatic environment**
- **Piloting treatment technologies**



Reduce Discharges from PMFs *Experience with One Manufacturer*

- **Large manufacturer discharges into small community's WWTP**
- **USGS found pharmaceuticals 10 to 1,000 times higher than typically found in U.S. WWTP effluent samples**
- **PMF working with DEC to reduce amount of active pharmaceutical ingredients in the process wastewater**



Collaboration: *Regional PPCP Work Group*

- **New England Interstate Water Pollution Control Commission (NY and NE States)**
- **PPCP Work Group:**
<http://www.neiwpcc.org/ppcp/>
- **Water Science Forum in Maine 2007:**
PPCPs: State of the Science
- **2011 Water Science forum on PPCPs will be April 27-29 in Portland, ME**



Ongoing/Plans for 2011

- **Expand Public Outreach, including Colleges & Universities**
- **Promote DEA April 30 national household drug collection event**
- **Work with other manufacturers**
- **Expand monitoring & research**
- **Address other Institutional dischargers**



Questions and Contact Information

- *Any Questions?*
- For further information, see DEC website: www.dontflushyourdrugs.net

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