

Reducing Pharmaceuticals in Our Waters:

Issues and Initial DEC Actions

Federation of NY Solid Waste Associations
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**With special thanks to Scott Stoner, Division of Water
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Pharmaceuticals Among Many “Contaminants of Emerging Concern”

- Newly present or *newly found*, likely not commonly monitored, unregulated in water, poorly studied/poorly understood, may be concerns re human health or aquatic life
- Includes **Pharmaceuticals**, Personal Care Products (PPCPs), PBDEs, PFOA, perchlorates, and many others



Pharmaceuticals in the News

- **Study Finds Traces of Drugs in Drinking Water in 24 Major U.S. Regions** [AP/FOXnews.com; 3-10-08]
- **Associated Press Examines Drug Disposal Practices Of Hospitals, Long-Term Care Facilities** [Medical News Today; 9-23-08]
- **Human Drugs Found in Fish Near Treatment Plants** [AP/Discovery Channel; 3-25-09]
- **Companies Leak Drugs Into US Drinking Water** [AP/Newser.com; 4-19-09]
- **AP: Tons Of Drugs Taint U.S. Water** [Manufacturing.net; 4-20-09]



Pharmaceuticals in Water: Why DEC is Concerned

- Designed to have biological effects
- 225 Million prescriptions per year in NYS
- Effects of intended uses are well known; concern is exposure at lower levels (aquatic life, human health, drug resistant bacteria)
- Sufficient evidence to warrant action
- *DEC is taking steps to reduce the input of pharmaceuticals to our waters*



Sources of Pharmaceuticals

Diverse and Widespread

- **Flushing of leftover medicines**
 - residential
 - institutional
- **Manufacturing plants**
- **All of us: pass-through of unused medicines**



Reducing Pharmaceuticals in Water: Complex Problem – No Simple Solution

- **Widespread and diverse sources; few if any water quality standards**
- **Waste water treatment only partly effective; not designed to remove pharmaceuticals**
- **Solutions include:**
 - **Source control: unused medications**
 - **Source control: drug manufacturers**
 - **Improved wastewater treatment (\$\$)**
 - **Greener drugs (faster breakdown)**
 - **Collaboration**



Reducing Pharmaceuticals in Waters: Initial DEC Actions

- **Pharmaceuticals Work Group**
- **Roundtable on Managing Unused Pharmaceuticals in NYS**
- **Press Release: Don't Flush Your Drugs Campaign**
- **Website: www.dontflushyourdrugs.net**
- **Presentations and Outreach**
- **Work Group - Pharmaceuticals in Institutions**
- **Encouraging Collection Events**
- **Implementing NY's Drug Management and Disposal Act**



Initial DEC Actions:

Pharmaceuticals Work Group

- **Since early 2008; led by Division of Water**
- **Chair: Scott Stoner; Co-Chair: Ken Kosinski**
- **Multi-program: Water, Solid and Hazardous Materials, Public Affairs and Education, Communications, Pollution Prevention, Policy Office, and NYS Dept. of Health**
- **Initially focusing on source control – reduce flushing of unused medications**



Initial DEC Actions: Press Release and Website

- Press Release August 8, 2008
- Don't Flush Your Drugs Campaign
- Website: www.dontflushyourdrugs.net
- Technical background on the issue
- Guidance for proper household disposal



Initial DEC Actions:

Roundtable Discussion on Managing Unused Pharmaceuticals in NYS

Key Messages: Households

- **Pilot programs proving the feasibility of different models of collection of residential pharmaceuticals**
- **Management of controlled substances creates a significant barrier to efficient, cost-effective programs**
- **Cost is significant; sustainable funding is an issue**



Initial DEC Actions:

Roundtable Discussion on Managing Unused Pharmaceuticals in NYS

Key Messages: Hospitals and Other Institutions

- **Flushing common and widespread**
- **Pharmaceutical waste volume differs by
type of institution**
- **BMPs developed and tested but some are
complicated and costly**

Proceedings: www.dontflushyourdrugs.net



Initial DEC Actions:

Inter-Agency Work Group on Pharmaceutical Disposal in Institutions

Objective: Develop new guidance on pharmaceuticals disposal in institutions

- **NYSDEC, NYSDOH, and NYS Dept of Education**
- **Eliminate regulatory barriers**
- **Work with regulated community – ensure guidance is workable**
- **Educate regulated community on new protocols**



Initial DEC Actions: Encouraging Collection Events

- **NYS Collections to date:**
 - **Pharmacies: Kinney Drug, Price Chopper**
 - **Household Haz Waste Days: Westchester County, Monroe County**
 - **Stand-Alone Pharmaceutical Collection Days: Niagara County, Endicott (Feb), DEC Central Office, Suffolk County**



Initial DEC Actions:

Protocols for Collection Events

- **Will be posted on website soon**
- **Must include:**
 - **law enforcement official (to accept controlled substances)**
 - **pharmacist (to ID controlled substances and track returned drugs)**
 - **approved disposal plan (including witnessed destruction of controlled substances)**



NYS Legislation

- **S7560A: Drug Management and Disposal Act**
- **Effective March 24, 2009**
- **Amends Env. Cons. Law**
- **Public information program (DEC and DOH)**
- **Notice on proper disposal posted in stores that sell drugs (DEC and State Ed. Dept.)**
- **Authorizes (but no \$) demonstration program**
- **Outreach underway**





Comments to DEA

- **In response to DEA Federal Register Notice**
- **From DEC Commissioner**
- **DEA requirement for law enforcement to accept returned controlled substances hinders collection programs**
- **Regs should allow returns to DEA Registrants (pharmacists, reverse distributors) or secure site**
- **New DEA protocols needed to prevent diversion but facilitate collection**



Reducing Pharmaceuticals in Water:

Status Check and Next Steps

- **Complex and challenging issue**
- **Initial DEC focus on source control: reduced household flushing of unused medications**
- **Next steps:**
 - **continue education campaign – do not flush**
 - **drug management by institutions**
 - **research – occurrence, toxicity, treatment**
 - **collaboration**
 - **push for product stewardship**
 - **investigate green chemistry options**



Contacts and Acknowledgements

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