

Extended Producer Responsibility: An Emerging Strategy for Managing Pharmaceuticals in the Environment

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Pharmaceuticals in Potable Water

- Found in drinking water and wastewater effluent
- Parts per billion / trillion
- No known human health effects...yet
- Difficult to study – individual compounds and mixtures

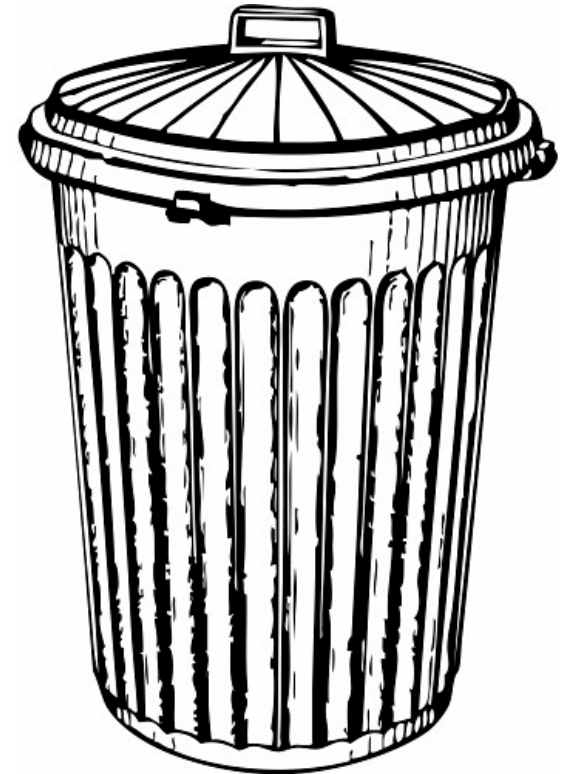
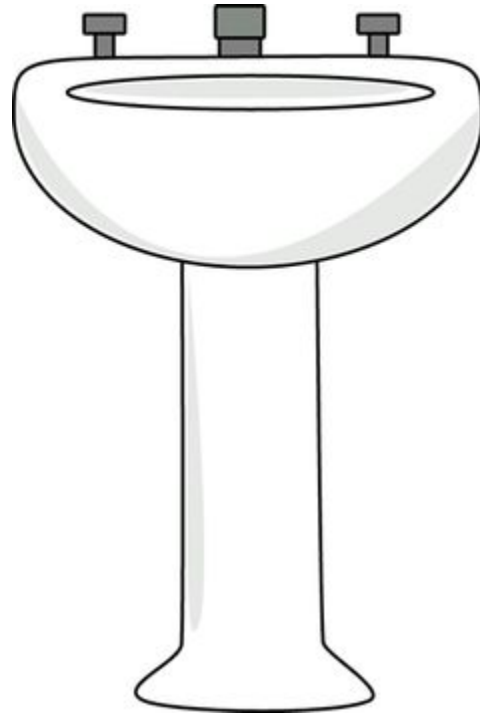
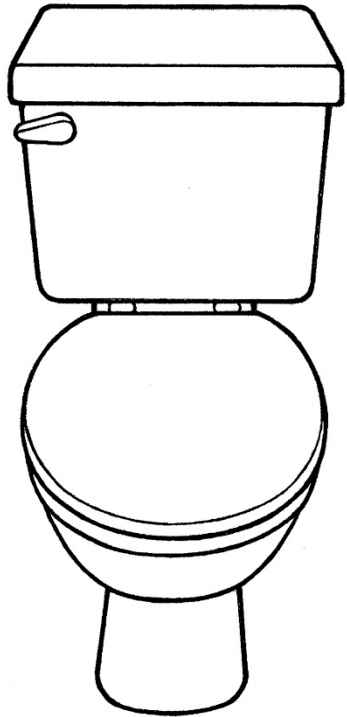


Pharmaceuticals in the Aquatic Environment

- Marine and freshwater fish, frogs, oysters, mussels, turtles, crayfish, squid, sharks, phytoplankton
- Intersex
- Altered sensory perception
- Less aggressive behavior
- Diminished predator avoidance



How Pharmaceuticals Enter Water: Excretion & Disposal



Pharmaceuticals in Our Communities

- Medicine cabinets are the “drug dealers in our homes”
- Gateway drugs
- Most homes with multiple pharmaceuticals
- Stockpile, flush, or throw in trash
- Prescribing, marketing, lifestyle



Extended Producer Responsibility



Pharmaceutical EPR Legislation

- Ordinances passed in Alameda County (CA) and King County (WA)
- Drug producers organize and pay for public disposal program
- Increased number of safe disposal opportunities
- Public education and promotion
- Ordinance developed and passed in Cook County (IL) in 2016



Cook County Ordinance Overview

- Program operated by Cook County Sheriff's Office (not producers)
- Minimum of five collection sites per Commissioner district (85 total)
- Establishes Advisory Committee
- Mail-back services
- Promotion → fee reduction for producers
- No initial producer fee; revisit fee by July 1, 2018
- No mechanism for enforcing producer registration

Progress in Cook County

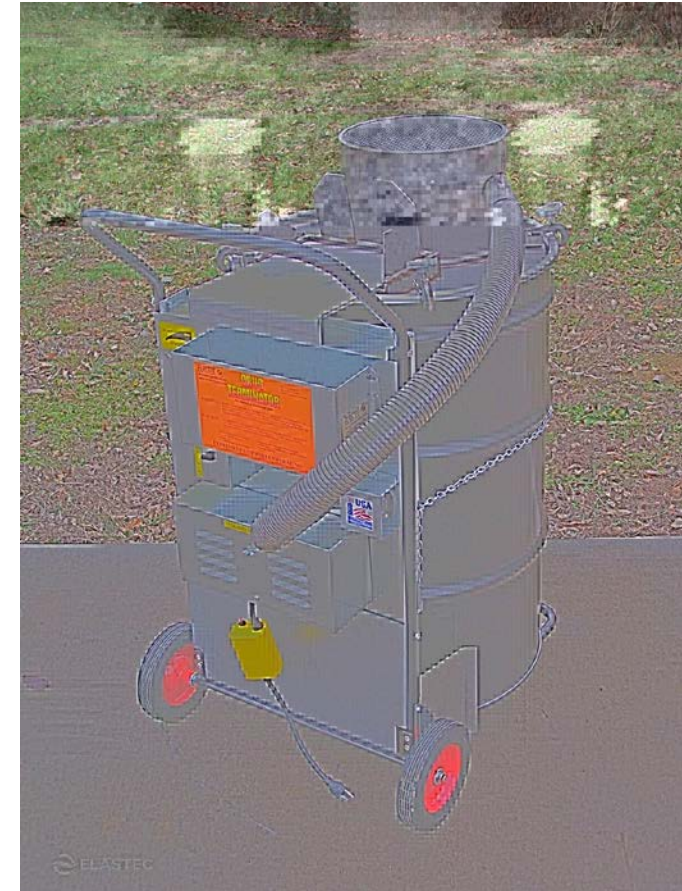
- 104 locations throughout Cook County
- 50 lbs collected / site / month
- Goal: Manage 200 sites and collect 10,000 pounds / year
- www.cookcountysheriff.org/SupportServices_PrescriptionDrugTakeBack
- www.CookCountyMeds.org



Ongoing Challenges & Projects

- Producer registration fee
- Services to elderly/homebound
- Drug destruction
- DEA rules for disposal
- Police stations vs. Pharmacies

- Larger environmental and public health problems remain
- Research and monitoring
- Drug design



Takeaways

- (1) Pharmaceuticals are impacting our environment and communities
- (2) EPR policies address these problems – in part – by focusing on proper drug disposal
- (3) Widespread public support for drug disposal opportunities
- (4) EPR ordinances may face intense industry opposition
- (5) Fine-tuning and additional research is necessary

Thank You!

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