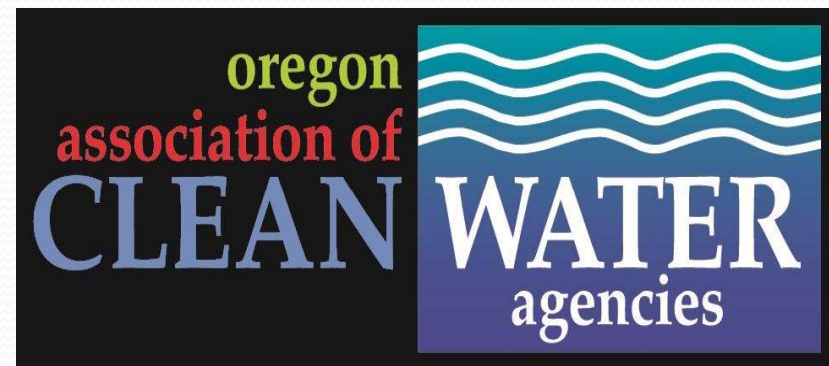


# What is the Cure for Pharmaceuticals in Wastewater?

NACWA National Pretreatment & Pollution  
Prevention Workshop  
May, 2013

# Oregon ACWA

- Oregon Association of Clean Water Agencies
  - Private not-for-profit
  - Wastewater Treatment & Stormwater Management Utilities
    - Associated Professionals
  - 126+ members statewide
  - Focused on protecting and enhancing Oregon's water quality





# What is the Problem?

- March 2008 Investigation by the Associated Press
  - Traces of pharmaceuticals — including antibiotics, anti-convulsants, mood stabilizers and hormones
- 2002 Report from the U.S. Geological Survey
  - 80% of the waterways sampled included common medications
- Many additional studies





# Impacts of Drugs

- Ecological impacts
  - Likely
- Human health impacts
  - Unclear
- Public concern
  - Should prompt wastewater utility actions
  - Focus on pollution prevention
  - Precautionary principle



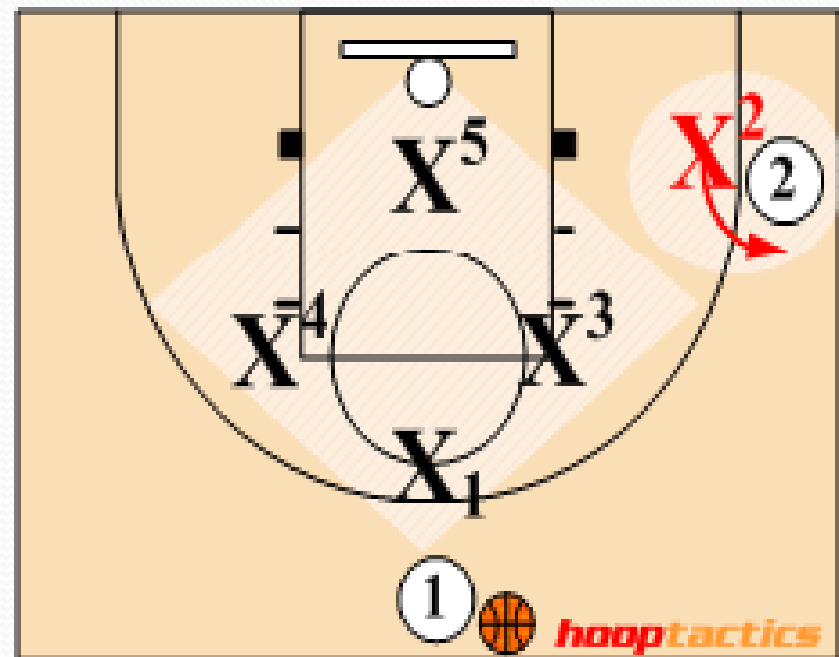
# Why Drug Take Back?

1. Prevent prescription drug abuse, especially by teens
2. Reduce accidental poisonings, especially by children
3. Protect water quality



# Action for Wastewater Utilities

- Focus on pollution prevention
- Find partners





# Wastewater Utility Strategy

- Pollution Prevention
  - 52% OTC unused
  - 45% Prescription unused
- Law enforcement partners
  - Collection boxes
- Advocate for mail back programs
- Product Stewardship Model



# Wastewater Utilities Strategy

- Long term care
  - Improve medicine dispensing practices
- Hospice & palliative care
  - Provide providers & family with alternatives
- Prescribing practices
  - Limit dispensing
- Promote medications with lower environmental risk





# Wastewater Utility Strategy



- Treatment Options
  - Support research and technology development to improve removal efficiencies
    - WERF
    - Extended SRT and natural treatment systems
  - Pollution Prevention always more effective/more cost effective



# Actions in Oregon

- Oregon Pharmaceutical Take Back Stakeholder Group
  - Many seats at table
    - Included drug manufacturers (PhRMA)
- Funded, in part, by DEQ
- Recommended product stewardship type system
  - Return program financed by manufacturers
    - Similar to British Columbia System
    - Similar to E-Waste program
- Legislation did not pass in 2009 Oregon Legislature

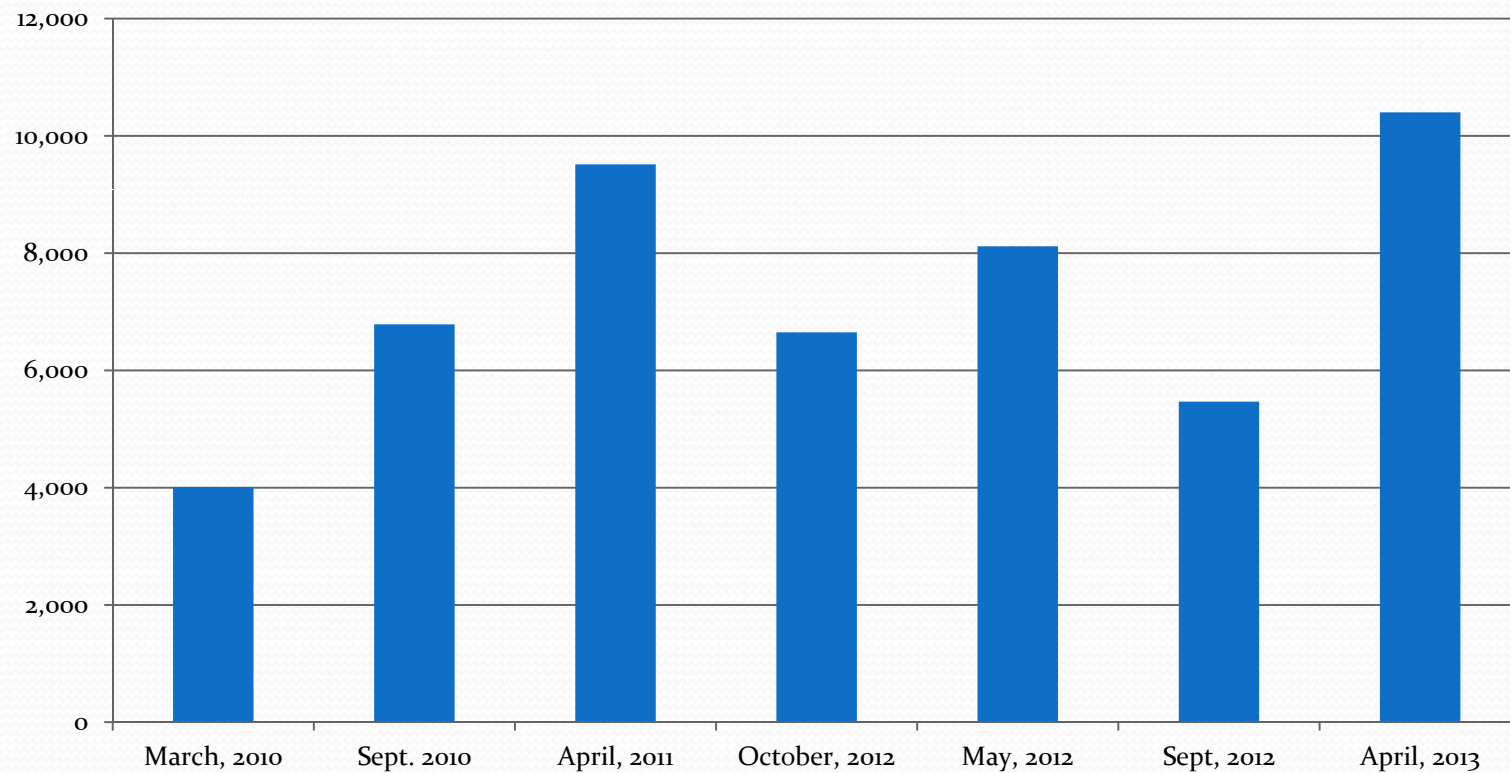


# Oregon Participation in Take Back Events

- Clatsop County
  - April, 2011
  - Seaside & Warrenton
  - Collected 203.8 pounds of unwanted medicines
  - One Saturday
    - 10 am – 2 pm



# Oregon Drug Take Back Events





# Law Enforcement Collection Boxes



- Increasing interest by law enforcement agencies
- Fairview Police Chief
  - *I knew there was a need for this type of program, especially since there are very few departments in our state offering such a program. But, this has far exceeded our expectations...*
  - *Over 56 pounds in 15 days is remarkable. That is 56.4 pounds of prescription drugs that will not get into the hands of our young people or pollute our waterways.*

# Utility Partners with Law Enforcement

- Courier style boxes appropriate
  - Cost about \$600 - \$900 each + shipping
  - Some communities using donated discarded mail boxes from US Postal Service





The Oregonian, May 8, 2007

