

# No Drugs Down the Drain



Statewide Campaign  
October 4-11, 2008

# Presentation Overview

- Background
- Campaign what-who-how-when
  - Goals
  - Levels of Participation
  - What does the campaign look like?
  - Timeline
- How to hold a safe, legal take-back
- Q&A

# Background

- U.S. Geological Survey (2002): 80% of U.S. waterways tested contained one or more pharmaceutical compound.
  - 17alpha Ethynyl Estradiol
    - Synthetic estrogen present in 16% of rivers in USGS study
    - Effect: feminization of male fish
  - Acetaminophen (24%)
  - Steroids and hormones (16%)
  - Diltiazem (blood pressure medication) (13%)
  - Codeine (11%)
  - Antibiotics and antimicrobials (10%)
  - Ibuprofen (10%)
- Associated Press study (2008) indicates drinking water supplies in some areas contain pharmaceutical compounds.

**NO DRUGS  
DOWN THE DRAIN**



Unused drugs that are put in drains or flushed down the toilet can pollute the environment, so please dispose of them properly.

# Background (continued)

- Why are pharmaceuticals showing up all of a sudden?
  - Pharmaceuticals probably have been in waterways for a long time; analytical chemistry has improved so much that now we can detect them in trace amounts.
  - Population is growing and aging → more pharmaceuticals in use
  - Increased pharmaceutical advertising → more drug sales (Kaiser Family Foundation)



# Background (continued)

- Primary sources of pharmaceuticals in the environment
  - Direct to surface and ground water
    - Agriculture (animal feedlots)
  - Indirect through wastewater treatment plants
    - Human and animal use and excretion
    - Improper disposal down the drain



# Campaign Genesis

- TriTAC initiative
- Campaign “sponsors”
  - U.S. EPA Region 9
  - State Water Resources Control Board
  - Wastewater associations
    - California Association of Sanitation Agencies (CASA)
    - California Water Environment Association (CWEA)
    - Bay Area Clean Water Agencies (BACWA)
    - Southern California Association of Publicly Owned Treatment Works (SCAP)
    - Central Valley Clean Water Associations (CVCWA)
  - Local wastewater agencies
    - Orange County Sanitation District
    - City of Riverside
    - City of Palo Alto
    - Los Angeles County Sanitation Districts
    - East Bay Municipal Utility District

# Campaign Goals

- Raise awareness about the issue of pharmaceuticals in the environment to all Californians including decision makers
- Educate residents about proper disposal
- Offer interim solution until a long-term solution is in place



# Levels of Participation

- Sponsors – organizations and agencies that provide monetary and in-kind support and organizing for the campaign
- Partners – organizations and agencies that promote the campaign locally and/or organize local take-back events or programs
- Supporters – organizations and agencies that endorse the campaign

# What will the campaign look like?

- Statewide steering committee will provide local agencies
  - Educational materials (template graphics for postcards, posters, etc.)
  - Training on local take-back events or programs
  - Central website statewide where residents can find local disposal recommendations
    - Concept is a pull-down menu or map of counties – click to find your local recommendations
  - Coordination statewide for major media markets to spread the word about the campaign and drive residents to the NDDD website
- Local agencies and organizations can
  - Use templates for local advertising and outreach
  - Host events or start take-back programs
  - Promote the campaign
  - Provide statewide campaign information for local disposal options to be available on statewide campaign website

# Campaign Timeline

- End of May – Information sharing, training and support
- End of June - Graphics and templates for outreach
- Summer - Agencies and organizations develop their outreach plans and, where applicable, take-back options
- Early-September – Agencies and organizations provide event information for NDDD website
- Mid-September – Proclamations, resolutions, press pitching and media outreach
- Oct 4-11 – Campaign education and take-back events occur

# How to Conduct a Safe, Legal Pharmaceutical Take-Back



# Why organize a take-back?

- Modern wastewater treatment plants remove some pharmaceuticals, but not all. Providing residents alternatives to drain disposal is something we can do immediately to reduce pharmaceuticals entering the environment.
- Pharmaceuticals impact aquatic life
  - Certain antidepressants induce spawning in shellfish
  - Calcium channel blockers (blood pressure drugs) dramatically inhibit sperm activity in Atlantic croaker
  - Clofibrate (cholesterol drug) induced high production of estrogen in juvenile zebra fish
- Pharmaceuticals have been found in some drinking water supplies.
- Take-back events educate participants more generally that toilets and drains are not appropriate for the disposal of toxics.

# Challenges

## Controlled Substances Act

- Does not allow patients to transfer certain addictive pharmaceuticals to anyone other than law enforcement
- Examples: Codeine, Vicodin, Ritalin, Oxycodone, Hydrocodone

## Medical Waste Management Act

- Requires medical waste hauler to haul non-controlled meds for incineration

# Guidelines

- All events encourage keeping meds in original containers; in case of accidental ingestion, Poison Control can be contacted with necessary information.
  - “Keep medication in original containers with your name and medical information marked out.”
- All collected meds should be incinerated either by law enforcement (controlled substances) or through a medical waste hauler (non-controlled substances).
- Several approaches
  - #1 – All meds accepted, controlled meds segregated out
  - #2 – All meds accepted and treated as controlled
  - #3 – No controlled substances accepted
  - #4 – Ongoing Programs

# Approach #1: All Meds Accepted, Segregate Controlled Meds

- Need law enforcement and pharmacist
- All flyers, outreach, media and signs should include:
  - “Keep medication in original containers with your name and medical information marked out.” (In case of accidental ingestion before event and ease of segregation.)
- All unwanted meds screened by pharmacist to determine whether controlled or non-controlled.
- Pharmacist places controlled meds in a container for law enforcement and inventories controlled medication if local law enforcement requires.
- Pharmacist places non-controlled meds in container to be hauled by medical waste hauler. Non-controlled meds can be handled by event staff, excess packaging can be removed for recycling.
- Law enforcement handles all collected meds as they would seized evidence: witnessed incineration.
- Pro: all medication is accepted.
- Con: law enforcement and pharmacist help may be difficult to obtain. 15

# Approach #2: All Meds Accepted and Treated as Controlled

- Need law enforcement participation
- All flyers, outreach, media and signs should include:
  - “Keep medication in original containers with your name and medical information marked out.” (In case of accidental ingestion before event.)
- All unwanted prescription drugs placed in one container that will be taken by law enforcement.
- Law enforcement handles all collected meds as they would seized evidence: witnessed incineration.
- Pro: all medication is accepted.
- Con: law enforcement may balk at storing and disposing of large quantities. Some law enforcement may want inventory; if so, you will need a pharmacist, too.

# Approach #3:

## No Controlled Substances Accepted

- Approach used if no law enforcement or pharmacist help available.
- ~90% of unwanted medication is not controlled and is acceptable
- All flyers, outreach, media and signs advise residents as follows:
  - “No Controlled Substances (e.g. narcotics, vicodin, ritalin, codeine, oxycodone, valium, etc.)”
  - “Keep medication in original containers with your name and medical information marked out.” (In case of accidental ingestion before event.)
- Make list of DEA controlled substances available at event if resident asks what a controlled substance is. If resident advises event staff that (s)he has a controlled substance, event staff may not accept it.
- Resident places unwanted prescription meds in a container him/herself. Event staff do not handle prescription meds.
- Over-the-counter meds may be removed from packaging by staff to reduce bulk and to recycle packaging.
- Do not sort any collected prescription meds and incinerate all prescription and over-the-counter meds through a medical waste hauler.
- Pro: does not require law enforcement or pharmacist help.
- Con: ~10% of drugs may not be collected.

# Approach #4: Permanent Sites



Permanent collection bin  
used at San Mateo  
County police stations

- Some local household hazardous waste facilities accept medication and dispose of as poison solids. Outreach states, “No controlled substances accepted.”
- San Mateo County: permanent one-way bins at 13 police stations; material consolidated in three locations; medical waste hauler removes collected medication periodically. All medication accepted.
- Teleosis Institute: permanent collection sites at pharmacies and medical offices; incoming medication screened for acceptability – no controlled substances accepted; medical waste hauler removes collected medication.

[www.teleosis.org](http://www.teleosis.org)

# One-Way Bins

- Work well for events where all meds are treated as controlled or where segregation will take place.
- Various “models” can be made using a garbage can, drum or tote.



Want to participate as a sponsor,  
partner or supporter in the  
statewide No Drugs Down the  
Drain campaign?

Contact  
[statewidecampaign@nodrugsdownthedrain.org](mailto:statewidecampaign@nodrugsdownthedrain.org)

# References

- Kolpin, D. W. 2002. Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in U.S. streams, 1999-2000: A National Reconnaissance. *Environ. Sci. Technol.*, 2002, 36, 1202-1211.
- Kaiser Family Foundation. 2003. Impact of Direct to Consumer Advertising on Prescription Drug Spending. Available at <http://www.kff.org/rxdrugs/upload/Impact-of-Direct-to-Consumer-Advertising-on-Prescription-Drug-Spending-Summary-of-Findings.pdf>