



**Achieving Success in
Public / Private Partnerships
Mercury Thermometer Exchange**



Presented By

Sacramento Regional County Sanitation District

Terry D. Musil

Supervisor, Technical Services

In collaboration with Leader Pharmacies, Inc., Sacramento Stormwater Quality Partnership, and the Household Hazardous Waste facilities located in Sacramento County



Purpose

- Share our experiences and successes in public/private partnerships
- Provide simple tools, insights and lessons learned
- Showcase our mercury fever thermometer collection



Ice Breaker

- Part per thousand
- Part per million
- Part per billion
- Part per trillion
- Part per quadrillion
- Milligram per kilogram



Ice Breaker

- What is the significance of:
 - ❖ 6 –12 parts per trillion?
 - ❖ 8 parts per trillion?
 - ❖ Drinking water treatment plant & 1,500 ppt?
 - ❖ 3.5 micrograms



Presentation Overview

- Players
- Program
- Road map for success
- Partnerships & challenges
- Case study – mercury fever thermometer collection



Players

- SRCSD, Industrial Waste Section
- Sacramento Stormwater Quality Partnership
- Leader Pharmacies, Inc.
- Household Hazardous Waste Facilities
 - ❖ County of Sacramento
 - ❖ City of Sacramento
 - ❖ City of Folsom



SRCSD

- Plant
- Permit
- Programs
 - ❖ Source reduction



The Plant - SRWTP

- Inland discharger to the Sacramento River
- Average dry weather Flow: 155 MGD
- Portions of collection system are a combined system
- Interim mercury effluent limit of 5.1 pounds per year (equivalent to 0.014 pounds per day)



Permit

- NPDES
- Issued August 4, 2000 - currently being revised
- Mandated development of a source control (reduction) program
- Work plan for reducing pollutant loads
 - ❖ Submitted October 1, 2001
 - ❖ Approved May 30, 2002



Programs for Source Reduction

- Lindane
- OP Pesticides
- Mercury

 - ❖ Hospitals (11%)
 - ❖ Residential (32%)
 - ❖ Dental (19%)
 - ❖ Schools (7%)

Lindane... ...is used in prescription shampoo to treat head lice and in prescription cream to treat scabies.

Check to see if any of your products contain Lindane. Lindane may appear on the product label as Lindane, benzhexachlorane, HCH, gamma-HCH, or hexachlorocyclohexane (BHC). Please do not dispose of these products by pouring them down the drain. These lindane-containing products should be disposed of safely through your local household hazardous waste disposal site.

Household Hazardous Waste Information

Sacramento County 875-9555 4450 Roseville Road www.sacramentoam.com	City of Sacramento 315-2500 3401 Fruitridge Road www.cityofsacramento.com	Folsom 355-8307 Call for Information www.folsomhazmat.com
---	---	---

Did you know...
garden pesticides that run off into storm drains or are poured into sinks and drains to the sewer could eventually flow into local waterways?

There are many ways to control pests in your yard, garden, lawn and home without polluting our water.

- Protect beneficial insects
- Determine your pest problem
- Use non-chemical alternatives
- Read product labels
- Dispose of pesticides properly (not down the drain)

For more information on reducing pesticides the hard way, visit us on the web at www.waterwise.org. For more information on the Water Wise City Campaign, please call (916) 433-6360.

Controlling Fleas Good Dogs	Get Rid of Fleas & Ticks on Your Dog	Snails and Slugs
Termites	Fleas	Aphids
Ants	Leafhoppers	Earwigs
Tree Beavers	Spiders	Cockroaches

Control pests with less toxic products.

To order these FREE information cards, send a number 10, self-addressed, stamped envelope with \$36 postage to:

800 Orange Grove Extension
4700 20th St. Room 200 Corbin Court
4140 Brand Center Blvd.
Sacramento, CA 95821

For hazardous disposal information call (916) 433-6360 or contact the Sacramento County Department of Waste Management and Recycling self service information or the collection site for household hazardous materials, including pesticides, oil, paint, batteries, and other parts. For information on the City of Sacramento collection site call (916) 276-0388.



Initial Approach-Mercury

- Hired expertise
- Conducted telephone polls
- Held focus groups
- Determined extent of knowledge, demographics, size of the “animal”
- Evaluated other similar programs



Initial Approach

- Developed program identity
- Initiated program hotline and Web site
(916) 875-nohg • www.bemercuryfree.net
- Mapped out course of action



Roadmap to Success

- Motivations
- Expectations
- Decision making
- Identifying strengths and weaknesses
- Document and share



Roadmap to Success

- Motivations
 - ❖ Public Agency
 - SRCSD, IWS, SSQP
 - ❖ Private Enterprise
 - Leader Pharmacies, Inc.
 - ❖ Others
 - HHW
 - Non-Profits



Roadmap to Success

- Expectations
 - ❖ Up-front and frank
 - ❖ Play the devil's advocate
 - ❖ Cost sharing and services in kind
 - ❖ Cooperation, collaboration and coordination
 - ❖ Schedules
 - ❖ "It never hurts to ask"



Roadmap to Success

- Decision making
 - ❖ Final decisions
 - ❖ “Buck stops here”
 - ❖ Who can spend the \$
 - ❖ The project triangle:
 - Time, money/resources, quality



Roadmap to Success

- Identifying strengths and weaknesses
 - ❖ “Re-invent the wheel” or “create a better mouse trap”
 - ❖ Utilize assets
 - ❖ Plan and evaluate needs
 - ❖ Develop and execute strategy



Roadmap to Success

- Document and share
 - ❖ Public agency
 - ❖ Private enterprise
 - ❖ Non-profits



Partnership with Leader Pharmacies, Inc.

- On-going program in place
 - ❖ Road to Wellness
- Small medical type fair, free blood pressure, blood mobile, some giveaways
- One Leader store per month
- Willing to participate with us in a pilot test
- 22 Sacramento area based stores

5
LEADER
HAIR CARE CREAMS/LOTIONS

be
mercury free





Collection Events

- October 22, 2003:
Leader – 675
- November 26, 2003:
Leader – 930
- May 1-31, 2004:
CHW / Mercy – 7,000
- March 1-31, 2005:
Leader – 7,000+









Challenges

- Use of logos
- Out of service-area facilities
- Media messages
- Number of thermometers that would be exchanged
- Expect the unexpected and roll with it



be mercury free

A Regional Partnership for Mercury Pollution Reduction



So, How Did We Do?

- Over 16,000 collected
- 0.6 grams each
- 21.1 pounds of liquid Hg
- 12 = 1
- 1,513 // 4.14
- MFM 05 1.9 thermos per hour



NO SMOKING
OR
OPEN FLAME

Mercury
Thermometers

40 30 7

Document with text and lines, likely a manifest or inventory form.





And The Trend Is?

- Influent
 - ❖ 108 pounds per year to less than 95
- Effluent
 - ❖ Down from 8 ppt to roughly 4 ppt
 - ❖ (5.1 pounds down to 3.2 pounds)
- Biosolids
 - ❖ 2 ppm (dry weight) to currently 1.4 ppm



Success in Public / Private Partnerships

- Right players and partners
- Program goals and objectives
- Planning
- Execution
- Adaptability



Is there mercury in your home?

If you have liquid mercury, fluorescent light bulbs, thermostats, thermometers, switches and relays, jewelry, or novelty items, you can help by properly disposing of these mercury containing items at your local Household Hazardous Waste Facility. Your actions can help protect and preserve our waterways and watershed now and for generations to come.



Dispose your mercury containing items at these Household Hazardous Waste Facilities:

Sacramento County
875-5555
4450 Roseville Road
www.sacgreenteam.com

City of Sacramento
379-0500
8491 Fruitridge Road
www.pwsacramento.com

Folsom
355-8397
Pick up service is available
www.folsomhazmat.com

For more information, visit www.bemercuryfree.net

A message from the Sacramento Regional County Sanitation District and the Sacramento Stormwater Quality Partnership

Storing leftover pesticides?

Clean out leftover pesticides such as those containing Chlorpyrifos, Diazinon or Lindane or other chemicals by properly and safely disposing of these products through your local Household Hazardous Waste Facility. Appropriately disposing these items can help protect and preserve our waterways and watershed now and for generations to come.

Dispose of pesticides and other chemicals at these Household Hazardous Waste Facilities:

Sacramento County
875-5555
4450 Roseville Road
www.sacgreenteam.com

City of Sacramento
379-0500
8491 Fruitridge Road
www.pwsacramento.com

City of Folsom
355-8397
Pick-up service is available
www.folsomhazmat.com

For more information about water quality, visit www.sacramentostormwater.org.

A message from the Sacramento Regional County Sanitation District and the Sacramento Stormwater Quality Partnership





Contact

Terry D. Musil, Supervisor, Technical Services
Sacramento Regional County Sanitation District,
Industrial Waste Section

musilt@saccounty.net

Office: (916) 875-6533

Cell: (916) 709-3910

9660 Ecology lane

Sacramento, CA 95827



Questions and Comments



Abbreviations & Acronyms

CSD-1 - County Sanitation District – 1

CUPA - Consolidated Unified Program Agency (CA)

DLD - Dedicated Land Disposal units

DWQ - Department of Water Quality – Sacramento County

DWR - Department of Water Resources – Sacramento
County

EMD - Environmental Management Department –
Sacramento County

EPA - Environmental Protection Agency

HHW – Household Hazardous Waste



Abbreviations & Acronyms

IWS - Industrial Waste Section – Sacramento County

kscf/day - 1,000 standard cubic feet per day

kwh/day - kilo watt hours per day

lb VS/cu ft - Pound volatile solid per cubic foot

MGD - Million Gallons per Day

mmBtu - Million British Thermal Units

MOU - Memorandum of Understanding

NPDES - National Pollutant Discharge Elimination System

OP - Organophosphate Pesticides



Abbreviations & Acronyms

ppm – parts per million

ppt – parts per trillion

SRCSD – Sacramento Regional County Sanitation District

SRWTP – Sacramento Regional Wastewater Treatment Plant

SSQP – Sacramento Stormwater Quality Partnership