

# Arizona Healthcare P2 Workshop

April 28, 2004  
St. Joseph's Hospital, Phoenix

Sponsored by:

EPA Region 9  
Hospitals for a Healthy Environment  
Arizona Dept. of Environmental Quality

Workshop presentation and materials will be available at:  
[www.wrppn.org/hospital/hospitalp2.htm](http://www.wrppn.org/hospital/hospitalp2.htm)

# H2E: Programs and Tools



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# H2E Sponsors

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- American Hospital Association
- American Nurses Association
- Health Care Without Harm
- U.S. Environmental Protection Agency





# Different Focuses Bring Strength

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- The fiscally and health-conscious AHA
- The regulatory and pollution prevention focus of the EPA
- The worker health and safety-conscious and patient-centric view of the ANA
- The visionary HCWH

# H2E Goals

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Virtually eliminate mercury use in healthcare  
(by year 2005)



Reduce total waste volume produced by the  
healthcare industry (50% by 2010)



Identify and minimize PBT chemicals and other  
hazardous products and processes in health care  
through the implementation of innovative  
environmental programs



# H2E hopes to help hospitals...

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- Reduce Waste and Inefficiency
- Raise the bar by finding 'healthier' ways to provide healthcare
- Reduce Liability
- Increase Compliance
- SAVE \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$



# 4 Key Programs

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- Partners Program
- Champions Program
- State Programs
- Awards and Recognition Program

# H2E Partners

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As of April 21, 2005, the Hospitals for a Healthy Environment program has 995 partners representing 4,021 facilities: 1,077 hospitals, 1,957 clinics, 538 nursing homes and 449 other types of facilities.







## Current Partners Hospitals in Arizona

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- **Carl T. Hayden VA Medical Center**  
Phoenix, Arizona
- **Hu Hu Kam Memorial Hospital**  
Sacaton, Arizona
- **John C. Lincoln Health Network**  
Phoenix, Arizona
- **St. Joseph's Hospital and Medical Center, CHW**  
Phoenix, Arizona
- **University Medical Center**  
Tucson, Arizona
- **Veterans Administration - Southern Arizona Health Care System**  
Tucson, Arizona

# What does it mean to be a Partner?

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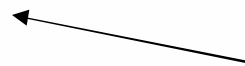


**Your healthcare facility is committing to working toward the goals of H2E**

**'Salad bar' option— you choose your priorities**

**Ongoing progress!!!**

**No financial requirements.**





## Through Partners Program we work to help healthcare facilities:

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- Assess where they are currently (develop baseline)
- Meet at LEAST compliance obligations
- Set goals and develop priorities for action
- Reach goals through training, technical assistance, resources and peer-to-peer networking
- Collect data and benchmark/report progress
- Be recognized for their successes

# Sample Environmental Programs

- Energy Efficiency
- Environmentally Preferable Purchasing
- Glutaraldehyde/ EtO Elimination
- Green Construction, Renovation & Design
- HIPAA/Confidential Paper mgmt
- Integrated Pest Management
- Mercury elimination
- Pharmaceutical mgmt
- Red bag waste minimization
- Recycling programs
- Single-Use Device Reprocessing
- Solvent Recovery
- Universal waste recycling
- Water Conservation





# H2E Champions Program

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Organizations that work *with* healthcare facilities to help them achieve the goals of H2E



# H2E Champions

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As of April 1, 2005 H2E has 95 Champions.

- State Hospital Associations
- State Pollution Prevention Agencies
- State Nurses Associations
- Group Purchasing Organizations (GPOs)
- Healthcare Professional Organizations such as ASHE, AHRMM and ASHES
- USEPA Regions 1, 3, 9 and 10
- Vendors\*\*\*

# State H2E Programs

## Virginia Hospitals for a Healthy Environment [www.deq.state.va.us/p2/vh2e](http://www.deq.state.va.us/p2/vh2e)



- [Purpose, Summary & VHCE Goals](#)

- [Commitment Pledge to:](#)
  - [Reduce Mercury](#)
  - [Reduce Waste](#)
  - [Reduce Toxicity](#)

- [VHCE Charter Members](#)

- [VHCE Partners](#)

- [National H2E Program](#)

- [List of Resources](#)

• VHCE is Virginia's voluntary partnership to minimize the environmental impacts of the healthcare industry. VHCE was developed in support of the national *Hospitals for a Healthy Environment* program.

The healthcare industry is a significant waste generator of both solid and toxic wastes. Unbornounced to most of us, the equipment, procedures, and medicines used in healthcare facilities can result in environmental releases of mercury, dioxins, and a wide range of other toxic materials. Patients and hospital workers run the greatest risk of exposure to these elements. The good news is that reducing these risks is relatively easy - there are alternatives that work just as well, if not better, than their toxic predecessors!

VHCE is a voluntary partnership for all Virginia healthcare facilities. VHCE partners have made a voluntary commitment to begin the process of reducing their environmental impacts. To join, facilities simply fill out and sign the VHCE [Commitment Pledge](#). For more information about VHCE, see the program [Summary](#) and supporting documents of contact The Virginia CPO's Tom Gallo at 804-696-4645.

More than 30 different  
State H2E programs underway...



# Goals for State H2E Programs

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- Peer-to-peer networking
- State-specific goals
- Priorities for action
- Identify common obstacles to the implementation of environmental programs
- Develop assistance and resources based on those obstacles
- Set up pilot projects
- Joint contracting opportunities
- Share success stories and case studies
- Showcase tools and resources
- Same regulations, vendors, geography, barriers to implementation...
- Benchmark progress



# Sample stakeholders

- HOSPITALS
- State hospital association
- State P2 agency
- State Nurses Association
- Environmental organizations working on healthcare-related toxics
- Healthcare professional organizations (engineering, purchasing, environmental services)
- Recycling organizations and technical support
- Consultants
- Vendors

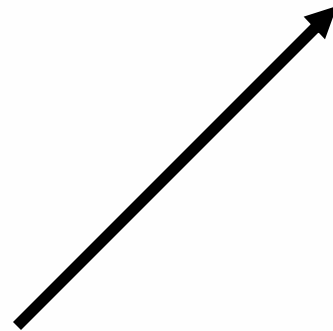




P2 Agencies: Technical Assistance and Support



By healthcare,  
for healthcare.



State Hospital Associations- Compliance and Mission Integration

# H2E & the Healthcare Environmental Resource Center (HERC)

<http://www.hercenter.org/hazmat/pharma.html>

The screenshot shows the website interface for the Healthcare Environmental Resource Center (HERC). At the top, there is a navigation bar with the following items: Home, Hazardous Materials, Regulated Medical Waste, Waste Reduction, Facilities & Equipment, and Regulations & Standards. The main header features the logo for 'HOSPITALS for a HEALTHY ENVIRONMENT™' on the left, the slogan 'Working Together to Create Healthy Communities!' in the center, and the 'Healthcare Environmental Resource Center' logo on the right. Below the header is a search bar with a 'Keyword' input field, 'Go' and 'Advanced' buttons, and a 'We recommend:' section. The main content area is titled 'Pharmaceutical Wastes in Healthcare Facilities' and includes an introductory paragraph and a list of links: Properties, Risks, Compliance requirements (with sub-links for Listed wastes, Selected chemotherapy agents by brand name, and Characteristic wastes), Disposal of pharmaceutical wastes, and More resources. A 'Properties' section follows, explaining that pharmaceutical properties make them both useful and hazardous. The left sidebar contains a menu with links to About H2E, Partners Program, Champions Program, State Programs, Awards, Teleconferences, Listserv, Technical Resources, H2E News & Events, Library, and Contact H2E. At the bottom of the sidebar, it states 'Website operated by: NCMHS' with the NCMHS logo.

Home

HOSPITALS for a HEALTHY ENVIRONMENT™

Working Together to Create Healthy Communities!

Healthcare Environmental Resource Center

Hazardous Materials Regulated Medical Waste Waste Reduction Facilities & Equipment Regulations & Standards

**About H2E**  
**Partners Program**  
**Champions Program**  
**State Programs**  
**Awards**  
**Teleconferences**  
**Listserv**  
**Technical Resources**  
**H2E News & Events**  
**Library**  
**Contact H2E**

Website operated by:  
**NCMHS**

## Pharmaceutical Wastes in Healthcare Facilities

A hospital pharmacy can easily have several thousand distinct pharmaceutical materials in inventory. Any of these materials can enter the waste stream, and some must be managed as hazardous wastes. This page will help you determine which rules apply.

- ◆ [Properties](#)
- ◆ [Risks](#)
- ◆ [Compliance requirements](#)
  - ◇ [Listed wastes](#)
  - ◇ [Selected chemotherapy agents by brand name](#)
  - ◇ [Characteristic wastes](#)
- ◆ [Disposal of pharmaceutical wastes](#)
- ◆ [More resources](#)

### Properties

The properties that make pharmaceuticals useful are the same properties that make them hazardous. Pharmaceutical companies invest billions of dollars every year to develop substances able to affect human metabolism at very low concentrations. This potency does not change when a material enters the waste stream.

Some pharmaceuticals must be extremely toxic in order to function. Antineoplastic agents (the type of drug most often used in chemotherapy), for example, are designed to

**SEARCH**  
Keyword  
  
 [Advanced](#)  
**We recommend:**

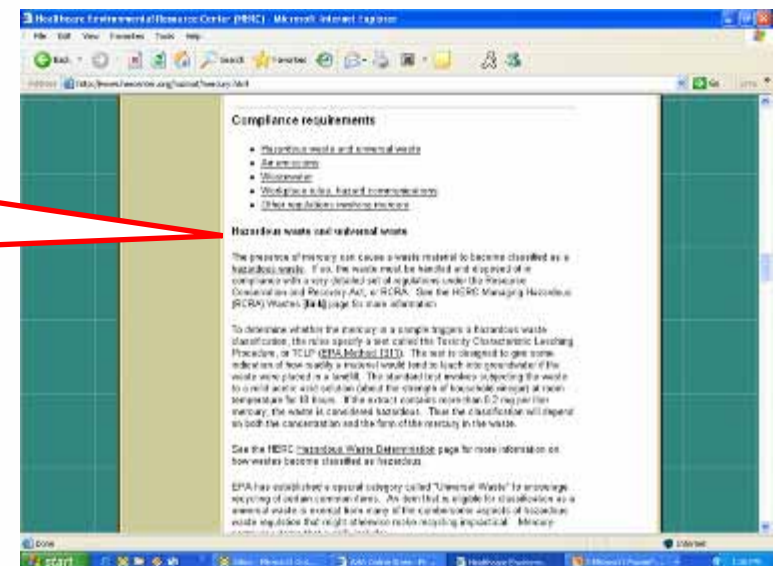
# One Stop Shopping: Regulatory and Pollution Prevention Information



## Compliance requirements

- Hazardous & universal waste
- Air emissions
- Wastewater
- Workplace rules, hazard comm.
- Other regulations involving Hg

## Replacing Mercury in Healthcare Facilities— A Step-by-Step Approach



# Ten Step Guides



## Regulated Medical Waste Reduction

### 10 Steps to Implementing a Regulated Medical Waste Reduction Plan

Hospitals are saving hundreds of thousands of dollars by improving their waste segregation and implementing Regulated Medical Waste (RMW) reduction programs. RMW is often the most expensive waste stream to manage. While the primary objective of RMW management is to minimize the risk of disease transmission from handling RMW, every facility has an opportunity to reduce its RMW thereby reducing risk and cost.


Many hospitals routinely throw from 58-70% of their waste into the biohazardous waste stream, although a large portion of hospital waste is very similar to that of a hotel or office building—mostly paper, cardboard and food waste. Hospitals often pay up to 10 times as much to dispose of infectious waste as solid waste. Case studies prove that with comprehensive education, hospitals can realistically aim to decrease red bag waste to around 6-10% of their waste stream. In fact, the Centers for Disease Control (CDC) suggests that only 2-3% of hospital waste truly needs to be disposed of as infectious waste.

The tremendous opportunities for cost and volume reductions do not come from the “gray areas” where it is difficult to determine whether the item is “significantly contaminated” or not. Staff should ask the question whether the waste is potentially infectious (see definition below) and should know which container to throw the waste in: a red bag, clear bag or in a recycling container. If staff is not clear on where to throw the item, then they should err on the conservative side and dispose of it in a red bag. The significant opportunities for RMW reduction come from eliminating the coffee cups, packaging, paper towel waste, clean blue wrap and pizza boxes that get tossed in. To help you get started in implementing a Regulated Medical Waste (RMW) Reduction Plan, IHE recommends the following ten-step process.

**Step 1: Understand Regulated Medical Waste Definitions**  
Review your facility's policies, procedures and definitions for RMW handling and disposal. Check with your state regulatory authority to make sure you understand state specific regulations. Meet with your Infection Control Staff to refine and clarify your facility's guidelines. A strong partnership with Infection Control will help ensure a successful program. Include RMW reduction information and goals in your Healthcare Pathogen Exposure Control Manual.

Proper waste segregation is critical. RMW, sharps, recyclables and solid waste should each have separate containers that are clearly labeled and easily accessible. Hazardous chemicals must be stored and managed according to policies that conform to RCRA regulations. It sounds simple, but staff must be properly trained to understand which waste is placed in which container.

Liquid wastes present yet another unique disposal question. Are you pouring your liquid waste down the drain? Are you containerizing it or adding gelling agents, then disposing of it in red bags? Removing liquids can often cut your infectious waste stream in half, but must be done carefully. There are now several products available to mechanically manage liquid waste disposal. Review your facility's protocols and OSHA guidelines for managing liquid infectious waste and work with your local POTW and state regulatory officials to determine your best disposal option.





## Sample Mercury Tools

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- **Making Medicine Mercury Free Checklist**
- Inventories of Mercury-Containing Products
- Mercury Manager Tool
- Sample Policies
- Lists of Product Alternatives
- Case Studies
- Lab Protocols
- GPO Assistance

The H2E Listserv has over 1200 participants from the health care sector, technical assistance providers and clinicians

**From:** Anderson, Jeannette **To:** H2E -- Hospitals for a Healthy Environment listserv  
**Subject:** [h2e] disposable thermometers for VRE & isolation patients? **Cc:**

H2E -- Hospitals for a Healthy Environment listserv  
(h2e@h2e.talklist.com)  
Hi,

I am looking for information on an economical, accurate, disposable thermometer that could be used in place of mercury devices for VRE & isolation patients.....anyone have this info??

Thanks!  
Jeannette

**From:** Meister, Martha **To:** h2e  
**Subject:** [h2e] Solid Waste Compactors **Cc:**

H2E -- Hospitals for a Healthy Environment Listserv  
(h2e@email.sparklist.com)

I have 2 questions I would like input on.

- 1) How many tons, of what is considered "Dry Weight," have others consistently pulled out of their 30 yd compactors.
- 2) If you could purchase any compactor out on the market, which one would it be? This compactor would have to be hauled from a "tight" loading area.

Thanks for any input I can receive on both of the above questions  
Martha Meister

**From:** Charles A. Kulp **To:** h2e  
**Subject:** [h2e] Reuseable Sharps Systems **Cc:**

H2E -- Hospitals for A Healthy Environment listserv  
(h2e@email.sparklist.com)

I'm looking for feedback on Reuseable Sharps Systems. Looking for possible vendor choices.

Specifically, the Daniels system from Australia.

Pros, Cons, Satisfaction, Dissatisfaction,  
Price, Performance, Value,  
Etc.

Other Systems?

Off list:  
[kulp@med-dispose.com](mailto:kulp@med-dispose.com)  
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<http://www.h2e-online.org/programs/list.htm#HowTo>

## H2E holds FREE monthly teleconferences on different pollution prevention topics...

2003/4 Teleconference Calendar*	
Jan 10	<a href="#">Mercury - meeting the MOU Challenge</a>
Feb 14	<a href="#">Waste Management Cost Reductions - RMW Reduction</a>
Mar 14	<a href="#">Recycling and Management of Universal Wastes</a>
Apr 11	<a href="#">HIPAA - Paper Destruction, Recycling and HIPAA</a>
May 09	<a href="#">Practical Tips to Starting or Enhancing your Recycling Programs</a>
Jun 13	<a href="#">JCAHO - Using Environmental Programs as Performance Improvement Initiatives</a>
Jul 11	<a href="#">EPP - Low Hanging Fruit and other EPP Success Stories</a>
Aug 08	<a href="#">Green Buildings: Materials and Maintenance</a>
Sep 12	<a href="#">Identifying and Managing Hazardous Pharmaceutical Waste</a>
Oct 10	<a href="#">Greener Cleaners/Disinfectants</a>
Nov 14	<a href="#">Nurses - the Role of Nurses in Implementing Environmental Improvements</a>
Dec 12	<a href="#">H2E Awards - How and Why to Apply</a>
Jan 16	 <a href="#">Recycling -- Tips and Tricks to a Comprehensive Recycling Program</a>
Feb 13	<a href="#">Waste Minimization - C&amp;D Recycling and Composting</a>

\* Click on the title for details about the call.

Check out upcoming calendar at:

<http://www.h2e-online.org/events/teleconf/index.cfm>



# JCAHO Guide



JCAHO Environmental Guidance - Contents - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Stop

Address http://www.hercenter.org/regsandstandards/jcahotoc.html

Home

**HOSPITALS for a HEALTHY ENVIRONMENT™** Working Together to Create Healthy Communities!

**Healthcare Environmental Resource Center**

Hazardous Materials Regulated Medical Waste Waste Reduction Facilities & Equipment Regulations & Standards

## ENVIRONMENTAL COMPLIANCE AND IMPROVEMENT GUIDE

*To improve compliance with JCAHO Environment of Care Standards*

© 2005 Joint Commission on Accreditation of Healthcare Organizations. Any use of any or all of the Joint Commission standards and elements of performance beyond this particular tool is strictly forbidden without the written permission of the Joint Commission.

**Please note: this page is under development. Contact [Laura Brannen](#), (603) 795-9966, if you have questions or suggestions.**

[Introduction](#)   [Topic Locator](#)

### Table of Contents

- [Environment of Care Standards](#)
- [Human Resources Standards](#)
- [Leadership Standards](#)

JCAHO Standards	Elements of performance	JCAHO Full Text	
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Inbox - Microsoft Out... | 4 Microsoft Word | 2 Microsoft PowerP... | 4 Windows Explorer

# Data is a Powerful Tool...

Microsoft Excel - H2E-WMS version2.01

III. REGULATED MEDICAL WASTE WORKSHEET A - For Calculating Monthly Cost and Volume Weight

Year: ENTER YEAR

Month	Select mtth	Total RMW	Price / pound OR Price / Container	Pick-Up Hauling costs or Other Surcharges	Total Wgt of Pick-up if HOT calc (lbs)	Total Wgt of Pick-up TOHS	Processing cost by Container (C X E)	OR Processing cost by the Pound (C X D X E)	Total Cost per Pick-up (F + H or I)	Cost per Pound	Cost per Ton
Jan	8		\$550.00		2500	1.25		\$750.00	\$0.30	\$600.00	
Feb	15		\$270.00		5100	2.55		\$470.00	\$0.09	\$184.21	
Mar	3		\$50.00		125	0.06		\$125.00	\$1.00	\$2,000.00	
Apr	10				80	0.04		\$150.00	\$1.88	\$2,750.00	
May											
Jun											
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
<b>Total YTD</b>	<b>34</b>		<b>\$870.00</b>		<b>7805</b>	<b>3.90</b>		<b>\$1,495.00</b>	<b>\$0.19</b>	<b>\$383.09</b>	

Data Entry As Appropriate

Total Weight

cost

Date of pick-up	Waste Type	# of Containers / Boxes Picked-Up	Weight per Container (LBS)	Price / pound OR Price / Container	Pick-Up Hauling costs or Other Surcharges	Total Wgt of Pick-up if HOT calc (lbs)	Total Wgt of Pick-up TOHS	Processing cost by Container (C X E)	OR Processing cost by the Pound (C X D X E)	Total Cost per Pick-up (F + H or I)	Cost per Pound	Cost per Ton
Jan 5	Pathological	4	500	\$0.05	\$250.00		2000		\$100.00	\$350.00	\$0.18	\$350.00
Jan 6	Pathological	2	250	\$50.00	\$300.00		500	\$100.00		\$400.00	\$0.80	\$1,600.00
Feb 2	Pathological	10	500	\$0.03	\$250.00		5000		\$150.00	\$400.00	\$0.08	\$160.00
Feb 2	Sharps	5	20	\$10.00	\$20.00		100	\$50.00		\$70.00	\$0.70	\$1,400.00
Mar 6	Chemo	3		\$25.00	\$50.00	125	125	\$75.00		\$125.00	\$1.00	\$2,000.00
Apr 7	Sharps	10		\$15.00		80	80	\$150.00		\$150.00	\$1.88	\$2,750.00

Ready

start | Microsoft ... | Internet Ex... | H2E\_DB 11-01... | H2E Database | mercury works... | H2E-WMS versi... | 1:29 PM

H2E has created a waste management tool to assist in capturing and tracking data for different waste streams:

<http://www.hercenter.org/wms.html>



# H2E and GPOs

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- Premier
- Consorta
- Novation
- Amerinet
- MedAssets
- Broadlane

H2E is working with GPOs to make environmentally preferable products available ON CONTRACT.

# Recognition and Award Categories



## H2E Partner Recognition

is given annually to Partner facilities that have met their self-identified H2E goals for the previous year.

## Making Medicine Mercury-Free Award

is a one-time award given to facilities that have met the challenge of becoming virtually "mercury free."

## H2E Partners for Change Award

is given annually to facilities that have made significant progress toward reducing waste, preventing pollution, and eliminating mercury.

## H2E Environmental Leadership Award

is the premier H2E award given annually to facilities that are setting the "industry standard" for environmental programs and policies. These facilities have active, ongoing waste and mercury-use elimination programs that will serve as models for other hospitals across the country.




John Leigh of Dartmouth-Hitchcock receiving award from Mac Robinson at AHA's Annual Meeting

# Celebrating your Achievements



Contact: Kelly Heekin,  
Media Coordinator  
202-234-0091, ext. 11



## Tips On Getting Press

Congratulations! You've just taken an important step toward improving the environment and public health through your involvement in HZE. It is time to tell your story to your staff and broader community. Following are some tips on getting the media to cover your story.

### Write a Press Release

The reverse side has a sample press release that you can use as a template to customize your press release. Add details about your program and accomplishments, along with quotes from your spokespersons about how and why you are involved in this important HZE initiative.

**Tip:** The more of a "news hook" you can provide, the better chance your story will be published. Some examples of news hooks include: a prominent community member praises your efforts, your staff works with local students to educate the community about mercury fever themselves, or you reach a landmark environmental goal such as a significant reduction in waste.

### Identify and Pitch to Reporters

If your organization has a public affairs department, give them a copy of the press release and background information on the HZE Program, and they can take it from there.


If you are posting the release yourself, first identify reporters who are likely to cover the story (your organization might have a press list already compiled) and fax or e-mail the press release to them. It is a good idea to make follow-up calls to reporters to ensure they received the information and talk to them about why it is important to inform the community about your organization's environmental achievements.

### Have Resources Handy

The following resources will be useful in making your efforts to promote your facility a success:

- **Fact sheets.** Have on hand a list of facts and additional resources, for instance, a fact sheet that provides the basic information about why mercury is an environmental and public health threat.
- **Public Affairs.** Designate someone from your facility to speak to the press and make sure they have all the necessary information. You might also want to identify some other spokespersons, such as a doctor to provide quotes about the health effects of mercury or a local politician who can discuss your positive impact on the community.
- **Images.** Some publications might request visual images, such as photographs of your project or a person at your facility. Colorful charts depicting your progress are also helpful.
- **Talking points.** Have three to four points in mind that you most want to publicize, and stick to those points when speaking to reporters. You might want to emphasize the achievements your facility has made and why a commitment to the environment is important to you.
- **Other Media.** Send your press release through other information channels. Post it to your website, e-mail it through listservs, put it out on your intranet, print it in your newsletters, and post it around your facility so employees can feel proud of their accomplishments.

—essential mercury info—





# H2E Program Contacts

Toll Free Hotline: 800-727-4179

E-mail: [h2e@h2e-online.org](mailto:h2e@h2e-online.org)

[www.h2e-online.org](http://www.h2e-online.org)

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– 603-795-9966
- **Chen Wen**, Director  
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– 202-564-8849
- **Cecilia DeLoach**,  
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