



# SWANCC's Mercury Thermometer Exchange Program

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Mary S. Allen  
Recycling and Education Director  
Solid Waste Agency of Northern Cook County

## Abstract

Mercury poses health risks to humans (especially young children) and animals, depending on how much has entered your body, how it entered your body, how long you have been exposed to it, and how your body responds to the mercury. Mercury exposure can occur by breathing vapors, by direct skin contact or by eating food or drinking water contaminated with mercury. Mercury-containing products should be replaced with safer alternatives, whenever possible, to cut down on potential health risks.

## Agency Background

The Solid Waste Agency of Northern Cook County (SWANCC) is a non-profit unit of local government that was established in 1988. There are 23 north and northwest Cook County communities that are members of SWANCC, with an aggregate population of over 750,000 residents. The Agency is dedicated to providing cost-effective and environmentally-sound solid waste management services, emphasizing source reduction and recycling.

### SWANCC-Member Communities

- |                            |                           |
|----------------------------|---------------------------|
| <b>Arlington Heights</b>   | <b>Mount Prospect</b>     |
| <b>Barrington</b>          | <b>Niles</b>              |
| * <b>Buffalo Grove</b>     | * <b>Palatine</b>         |
| * <b>Elk Grove Village</b> | * <b>Park Ridge</b>       |
| * <b>Evanston</b>          | * <b>Prospect Heights</b> |
| * <b>Glencoe</b>           | <b>Rolling Meadows</b>    |
| * <b>Glenview</b>          | * <b>Skokie</b>           |
| * <b>Hoffman Estates</b>   | South Barrington          |
| Kenilworth                 | Wheeling                  |
| Inverness                  | * <b>Wilmette</b>         |
| <b>Lincolnwood</b>         | * <b>Winnetka</b>         |
| <b>Morton Grove</b>        |                           |

**Bold** - Participating Communities from March to May, 2005

\*Continuing Communities



## **Introduction**

The Agency's goals for sponsoring a *Mercury Thermometer Exchange* program were to educate residents about the potential harm in mercury-containing thermometers, wall switches and thermostats; to provide a convenient means to collect and recycle the waste; and to sponsor an environmentally-friendly replacement thermometer. Even though mercury-containing materials can be taken to IEPA-sponsored *Household Chemical Waste* collections or permanent drop-off sites, participation times are limited and lines tend to be long.

## **Participation**

In January 2005, SWANCC staff held a meeting for its health directors and recycling coordinators to review program details and to field questions. From March 1 to May 31, 2005, nineteen of SWANCC's communities agreed to participate (highlighted in **bold** on page one). Each community was given a lined 14-gallon plastic pail with a screw top lid and a box of 100 mercury-free thermometers. Additional thermometers were available on an "as needed" basis.

## **Promotion**

To promote SWANCC's new program initiative, staff designed a flyer to highlight each community's drop-off details. Comprehensive program information was posted on SWANCC's website with a link to each participating community's website. Program details were also included in SWANCC's *Recycling Etc.*, the Agency's community newsletter that is distributed to approximately 270,000 households each spring and fall.

## **Contractor**

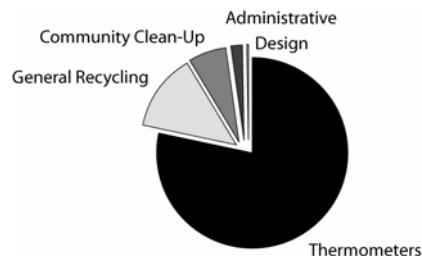
SWANCC contracted with R3 Environmental Management, Inc., which offers a full complement of field services and waste removal with environmentally-sound methods of recycling and disposal. The company supplied each participating community with a lined collection pail. As the pail filled up, the community's coordinator called the contractor for a pick-up. A full pail was exchanged for an empty one. On average, each pail contained 13.33 pounds of materials.

Prior to starting the program, the contractor went over steps for emergency response with the program coordinators. If a breakage or spill occurred, R3 Environmental's 800 number was to be called and the contaminated area was to be isolated immediately. There was one instance where a thermometer was placed on a desk rather than in the designated pail, later falling off the desk and breaking on the floor. R3 environmental representatives were sent to clean up the spill that day.

## Program Costs

The cost to implement this program for six months is \$37,457, or \$0.175 per qualifying household. Itemized costs include:

Thermometers: (108 cases)	\$30,024
General Recycling:	\$ 5,018
Community Clean-Up:	\$ 2,415
Administrative	\$ 675
Design	\$ 100



## Program Tips

Overall, the program ran without problems and with very little monitoring from Agency staff. As mentioned, there was one instance of a thermometer breaking prior to being placed in the pail. A few of the participating communities stated on their flyer that mercury-containing items should be placed in a container or a sealed plastic bag prior to being brought to the drop-off location. Never assume residents know this. It is a safety precaution that each community should have promoted on their flyer. Breakage could have been greater than it was.

It was discovered late in the program that a non-SWANCC community that neighbored a SWANCC community was promoting the program to their residents. Because of the cost of program, each participating community should be diligent in checking ID's for residency.

To reduce costs, limit the number of thermometers given out to residents. For instance, give one thermometer to each participating household rather than exchanging a thermometer for a thermometer. This may be somewhat hard to monitor due to the fact that some residents bring in multiple thermometers for family members or neighbors.

## Conclusion

Since March 1, 2005, eighty-three percent of SWANCC's communities participated in the *Mercury Thermometer Exchange* program, resulting in the collection of 440 pounds of mercury-containing thermometers, thermostats and wall switches for recycling. Although SWANCC is no longer providing thermometers for exchange, twelve communities requested that SWANCC extend the program for a period of time (highlighted on page one with an “\*”). SWANCC will continue to provide funds for recycling mercury-containing items until a participating community decides to terminate the program.

This program has provided an opportunity to educate residents about the potential dangers of mercury exposure, purge homes of mercury-containing items and has been a relatively cost-effective solution to waste that should not be put in the garbage.

## References

### **Illinois Environmental Protection Agency**

Office of Pollution Prevention

“Mercury Fever Thermometers: What You Need to Know”

(217) 782-8700

[www.epa.state.il.us/P2](http://www.epa.state.il.us/P2)

### **Illinois Department of Public Health**

(217) 782-4977

[www.idph.state.il.us](http://www.idph.state.il.us)

### **RG Medical Diagnostics**

Thermometers – *Geratherm* Non-Mercury

Item #20010, \$2.95 per unit

(888) 596-9498, extension 203

[www.rgmd.com](http://www.rgmd.com)

### **R3 Environmental Management, Inc.**

Alan Kalmar, Operations Manager

1050 E. Chicago Street

Elgin, IL 60120

(847) 488-1492

E-Mail: [AEKR3@aol.com](mailto:AEKR3@aol.com)

### **Mary S. Allen**

Solid Waste Agency of Northern Cook County

2700 Patriot Blvd.

Suite 110

Glenview, IL 60026

(847) 724-9205, extension 204

E-Mail: [mary@swancc.org](mailto:mary@swancc.org)

Website: [www.swancc.org](http://www.swancc.org)