

MAINE STATE LEGISLATURE

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Mercury Products Advisory Committee 2002 Report to the Legislature

1.0 Introduction and Background

In the spring of 2000, the 119th Legislature passed "An Act to Reduce the Release of Mercury into the Environment from Consumer Products", (P.L.1999, c.779). The law seeks to reduce the amount of mercury released to Maine's environment. It defines mercury-added products to include thermostats, thermometers, electrical switches, relays or other electrical devices, scientific and medical devices, and lamps if mercury is added during manufacture of the product.

The law also establishes a Mercury Products Advisory Committee (Committee) to advise the Department of Environmental Protection (DEP), the State Planning Office (SPO) and the Legislature on actions needed to prevent and reduce the environmental releases of mercury from consumer products. It requires the Committee, starting in 2002, to report annually to the joint standing committee of the Legislature having jurisdiction over natural resources. The report is on the progress made to collect, transport and recycle mercury-added products, and the effectiveness of the established programs. The Committee is also to include an assessment of whether and how mercury switches and other electrical devices, other than those in automobiles, should be added to the Universal Waste (UW) rules adopted by the Board of Environmental Protection.

The law contains several key provisions intended to increase the amount of mercury-added products collected for recycling. These provisions include:

- As of July 15th, 2002, businesses and public entities may not knowingly place a mercury-added product in the solid waste stream sent for disposal. (Since most of these wastes are either universal wastes or hazardous waste, it is presently illegal for businesses or public entities to place them in the solid waste stream destined for disposal.)
- As of January 1, 2005 this disposal ban is extended to all Maine residents.
- The development and implementation of an aggressive education and outreach campaign by DEP to inform Maine citizens and businesses about the disposal bans and proper waste management techniques.
- State assistance to municipalities and regional associations in developing collection programs.
- It commits the State, within available resources, to develop and implement a capital investment grant program for public infrastructure development and improvements to enable municipalities to collect and recycle mercury-added products and universal wastes.

This report delineates the State's progress to date in fulfilling the mandates of P.L. 1999, c. 779, including the development of: public and private infrastructure, product

specific collection systems, Maine's Clean State Initiative, information on mercury-added product recycling, and data collection. It also contains information on future actions planned by the DEP and SPO, and other recommendations to help achieve the legislative goals.

Since the passage of P.L. 1999, c. 779, the Legislature also passed "An Act to Further Reduce Mercury Emissions from Consumer Products", P.L. 2000, c 373 and "An Act to Address the Health Effects of Mercury Fillings", P.L. 2001, c. 385. P.L. 2000, c 373 contains four key provisions. It:

- Requires manufacturers to provide written notice to the DEP before offering a mercury-added product for sale in Maine;
- Prohibits the sale of mercury fever thermometers without a prescription and mercury dairy manometers;
- Prohibits the sale of mercury or mercury compounds for use in schools; and
- Requires manufacturers who sell products to hospitals to provide a certificate of mercury content upon request.

P.L. 2001, c. 385 requires dentists to display and hand out information concerning the potential advantages and disadvantages of mercury amalgam in dental procedures.

2.0 Infrastructure Development

Public Infrastructure Development: An important directive within P.L. 1999, c. 779 is for DEP and SPO to help municipalities develop the infrastructure needed to recycle mercury-added products. The DEP's legislative implementation plan included the development of the UW rules to facilitate the handling of mercury, lead, and PCB containing products, and a multifaceted education and outreach program. SPO's role was to develop a grant program to rapidly put into place a voluntary management and collection infrastructure within the existing municipal and regional solid waste and recycling framework.

Regulation of mercury-added products as universal waste: The Maine Hazardous Waste Management Regulations establish management standards for "universal wastes" which include, among other items, mercury-added lamps, and mercury thermostats. More recently mercury thermometers were added by policy. The rules, adopted by the Board of Environmental Protection in January, 2001, require that all generators of universal wastes send these wastes to appropriate recycling facilities, and include provisions that allow licensed solid waste facilities and recycling centers to collect UW. These provisions encourage municipalities to adopt the same management standards for universal wastes from households.

Grant Program for Publicly Funded Infrastructure Development: In 2000, the Legislature allocated \$438,000 from surplus revenues in the Solid Waste Management Fund to jump start the activities mandated by the legislation. Of these monies,

approximately \$300,000 has been dedicated to public infrastructure development. In March, 2001 the SPO, in partnership with the DEP, offered a new municipal grant program to enable municipalities to collect and recycle mercury-added products and universal wastes. The program provided funds to construct storage sheds or modify existing structures, thereby providing new permanent collection and storage capacity. Limited funds were also available to support one-time collection events that included UW and other mercury-added products. No funds are otherwise available from the State for operating costs, which remain an impediment for some communities.

Seventy-four grant applications were received and fifty-five were funded, forty-nine of which were for storage sheds and six of which were for one time collection events. The sheds, once in place, will service approximately 223 communities with a collective population of sixty-six percent (66%) of the State's population. With the sheds, towns will be able to collect lamps, mercury thermometers, rechargeable batteries, and mercury containing thermostats for recycling, as well as non-leaking PCB light ballasts for disposal. Twenty-four of the sheds will be large enough to also allow for the collection of cathode ray tubes (CRT's) from computers, TV's and other electronic devices. These sheds will serve approximately 48% of the State's citizenry. The timetable for placement of all sheds is by the end of 2002, but over half should be operating by the late fall of 2001.

Maine has 493 municipalities, so clearly there will be many towns without access to mercury collection and storage facilities. Since participation in the separate collection of mercury-added products from households is voluntary until the residential disposal ban goes into effect on January 1, 2005, some towns are waiting and anticipating that more grant money will become available. There are also concerns about a lack of state support for the operating costs of the collection programs. As the January 2005 deadline approaches, this lack of coverage will become a larger problem. Areas that will be without access to public infrastructure include Downeast Maine, the Greenville area, parts of western Maine, and many towns in Penobscot County.

Service Contract: SPO has issued a Request for Proposals (RFP) to collect and recycle mercury and UW collected by municipalities. The contracts will provide a statewide price per waste stream for pickup of mercury-added products and UW, regardless of location. Any municipality may participate in the contracts, which will be put out to bid on an annual basis. Because these contracts can achieve some economies of scale, they will offer statewide coverage at competitive prices.

The Office received five proposals in response to the RFP. Upon review, the program staff selected one vendor for computers and televisions, and another for the mercury added products and PCB lighting ballasts. The two vendors were notified of their selection and the intent was to finalize needed services with a contract. The successful vendor for computers and TVs is moving ahead with the contract process, but the vendor for providing services for mercury-added products withdrew its bid.

Given the nature of the RFP and the quality of the other submittals, SPO determined it would be in the best interest of municipalities to repeat the RFP process, but this time, for only the mercury added products and non-leaking PCB containing lighting ballasts.

Once the contract has been signed by the vendor selected to provide for the removal and recycling services for computers and televisions, and approved by the State Bureau of Purchases, program staff will notify communities and regions who the vendor is and what the process is for making arrangements for the removal of their CRTs and the related costs. When the other RFP process is completed and a successful vendor contracted to provide removal and recycling services for mercury added products, program staff will again notify communities and regions.

Future Public Infrastructure Activities

Infrastructure Study: SPO has contracted with the University of Maine at Orono (UMO), Department of Resource Economics and Policy to collect data and build spreadsheet models that will help determine future infrastructure development needs. The study is designed to look at five collection strategies for household hazardous wastes, including mercury-added products. The study also looks at the potential operating costs under each of the possible collection strategies.

Bond Request: The Governor's office has approved a \$1.5 million bond request, of which \$900,000 is slated to fund completion of the shed deployment statewide, the infrastructure/collection needs identified by the UMO study, and thermometer exchange programs. The proposed bond issue also includes \$600,000 for increasing municipal infrastructure for recycling solid wastes. None of the bond funds are targeted for ongoing municipal operational costs.

Universal Waste Rules: In future rulemaking (Spring/Summer, 2002) DEP will propose to expand the UW rules to include mercury medical/scientific instruments, and mercury devices (e.g., switches and relays). This will enable all the mercury-added products defined in P.L.1999, c.779 to be handled as UW.

Private Infrastructure Development

The number of private sector consolidators and recyclers is rapidly growing to meet the increasing recycling demand. There are approximately 58,000 potential generators in Maine, as most businesses generate mercury-added wastes such as fluorescent lamps. At present there are approximately a dozen companies (consolidators) listed on the DEP web page that will transport UW and mercury-added products to the recycling companies. The consolidators have a statewide reach although most are based in southern and central Maine. The ten recyclers also listed on the DEP web page are all out-of-state companies. As the demand for recycling grows, it is anticipated that the number of consolidators and recyclers will also expand. The DEP is presently helping several companies in Maine to become licensed to consolidate or recycle mercury-added products and universal wastes.

Product Specific Collection Systems and Recycling Data

Mercury thermostats: The Thermostat Recycling Corporation (TRC), founded by a consortium of thermostat manufacturers (Honeywell, White-Rodgers and General Electric), utilizes the existing Heating, Ventilation and Air Conditioning (HVAC) wholesaler network to collect unwanted mercury thermostats for recycling. TRC provides a collection container to participating locations in which contractors (and, depending on location, homeowners) may deposit out-of-service mercury thermostats. The containers, when full or within a year, are shipped to TRC for recycling, free-of charge. Any name-brand mercury switch thermostat is accepted.

Presently there are approximately 38 HVAC locations in Maine, six of which are participating in the program. This has left the majority of plumbing and heating contractors in the State without easy access to the TRC program. In addition, the program has not been well advertised by TRC. Maine also has a significant number of 'do-it-yourselfers' who do not utilize HVAC wholesalers and therefore would not participate in the program. The TRC program has collected and recycled 120 thermostats with .81 pounds of mercury since the program started in Maine more than a year ago. This represents less than 1% of the estimated Maine thermostats that are removed in any given year. (See Thermostat chart.)

Batteries: Batteries are being recycled through two systems in Maine, the Rechargeable Battery Recycling Corporation (RBRC) program and the hazardous waste/universal waste system. Maine consumers can recycle rechargeable batteries through a reverse distribution program operated by RBRC program, which began in Maine in 1997. The program is similar in framework to the TRC thermostat program. Unlike the TRC program, RBRC has placed collection containers at approximately 157 retail stores throughout the State and made the collection containers available free of charge at municipal solid waste facilities. Participating stores are listed on the DEP mercury web page. Consumers can drop off nickel cadmium, nickel metal hydride, lithium ion and small sealed lead acid batteries for recycling at no cost.

Approximately 1,973 pounds of batteries were recycled in Maine during 1999. Of these 700 pounds of Ni-Cad batteries were recycled through the RBRC program with the remaining 1,273 pounds recycled through the hazardous waste system. The total number of batteries recycled increased to about 4,417 pounds in 2000. Of the total, 3,280 pounds of NiCd batteries were recycled through the RBRC program with the remaining 1,137 pounds coming through the hazardous waste system. While the RBRC numbers are not available for 2001, 1,122 pounds were collected through the hazardous waste system through the first six months in 2001. (See Battery Recycling chart.)

In 2001 the RBRC program increased the number of battery chemistries that it accepts to include small sealed lead acid, lithium, metal hydride as well as the NiCds. RBRC also prepared television Public Service Announcements (PSA's) which continue to air throughout the State and advertise the expanded scope of the program. It is expected

that the recycling rate will continue to grow due to the additional number of chemistries accepted and the placement of battery collection bins at municipal transfer stations and recycling centers. It is unclear if the RBRC program is recycling a significant portion of the batteries in Maine since it is not currently possible to determine the number of the batteries sold in the State.

It would be helpful to obtain from the RBRC program a semi-annual report of the number and type of batteries recovered from Maine through their program, along with an updated electronic listing of all of the RBRC collection locations in Maine. In order to establish a recycling rate for batteries the battery manufacturers would also need to provide estimates on the number of batteries discarded for a state of Maine's size. This data, as noted above, is not currently available.

Lastly, at present there is no formal recycling program for button cell batteries that contain a small amount of mercury. This has been identified as an issue that needs the attention of the Committee in 2002.

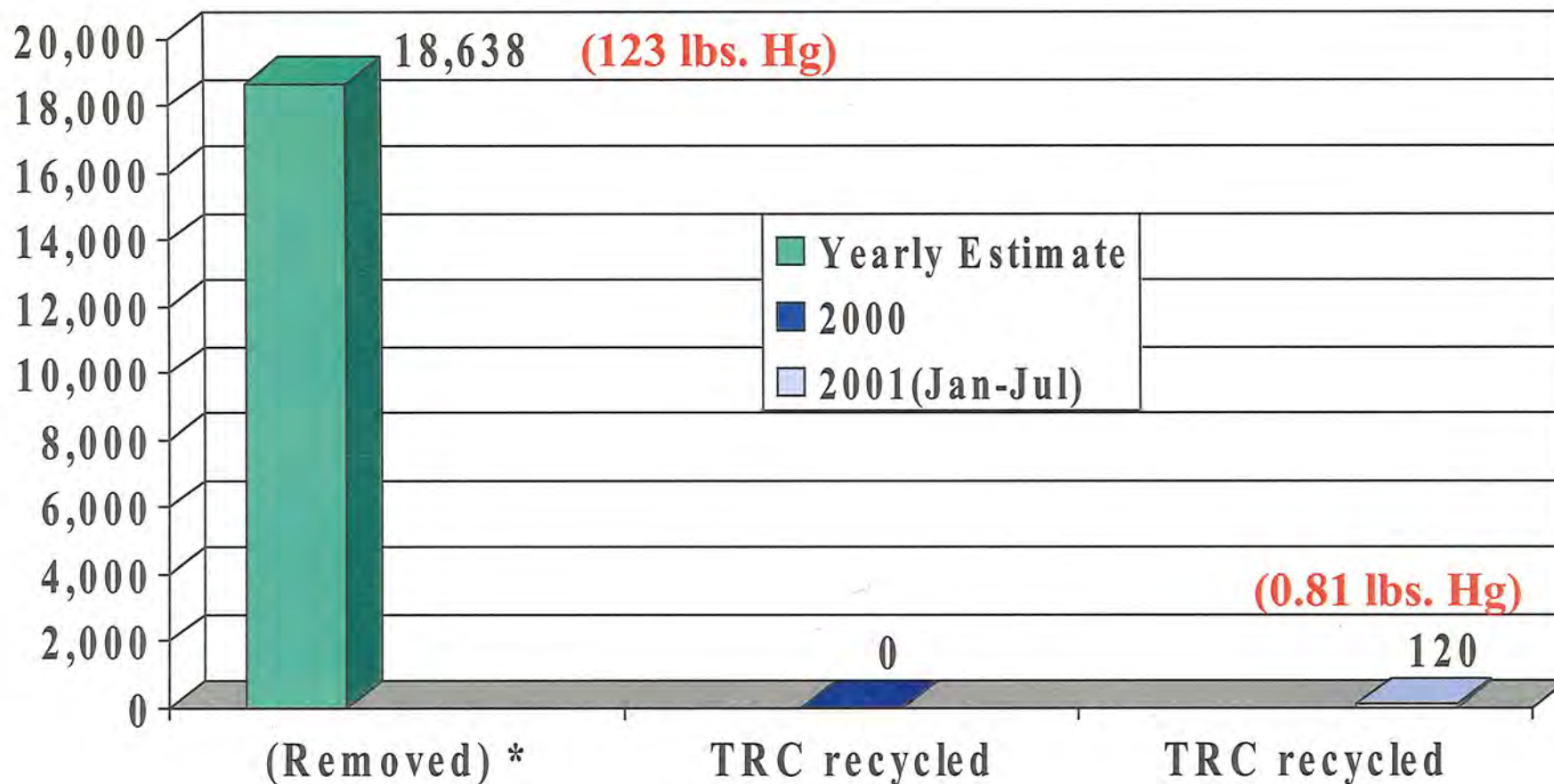
Mercury thermometers: With the heightened awareness about mercury, several communities have organized mercury thermometer exchange events. Among the communities almost 4000 fever thermometers have been collected. For some of the collections, grant money awarded by SPO has covered the cost of publicity and disposal for the thermometers collected. DEP has provided technical assistance.

Two larger collection events are planned for early 2002; one sponsored by the 39 Maine hospitals in the Maine Hospital Association (MHA) for their employees, and the second by the State of Maine for state employees. The MHA and Maine DEP are working together to coordinate the collection events, which are scheduled for Earth Week in April, 2002. Both MHA and the State will track employee participation as part of an effort to develop a model that could be used by other employers in the State in the future.

Dairy manometers: The Department of Agriculture (DOA), the DEP, and SPO have located 26 mercury manometers from both operating and former dairy farms. Manometers were located as DOA inspectors conducted their routine inspections of active dairy farms or through a notice sent to farms statewide. Each manometer has approximately one pound of mercury. The State of Maine, through this voluntary program, will pay for the removal and replacement, if necessary, of the manometers. The project should be finished by early 2002.

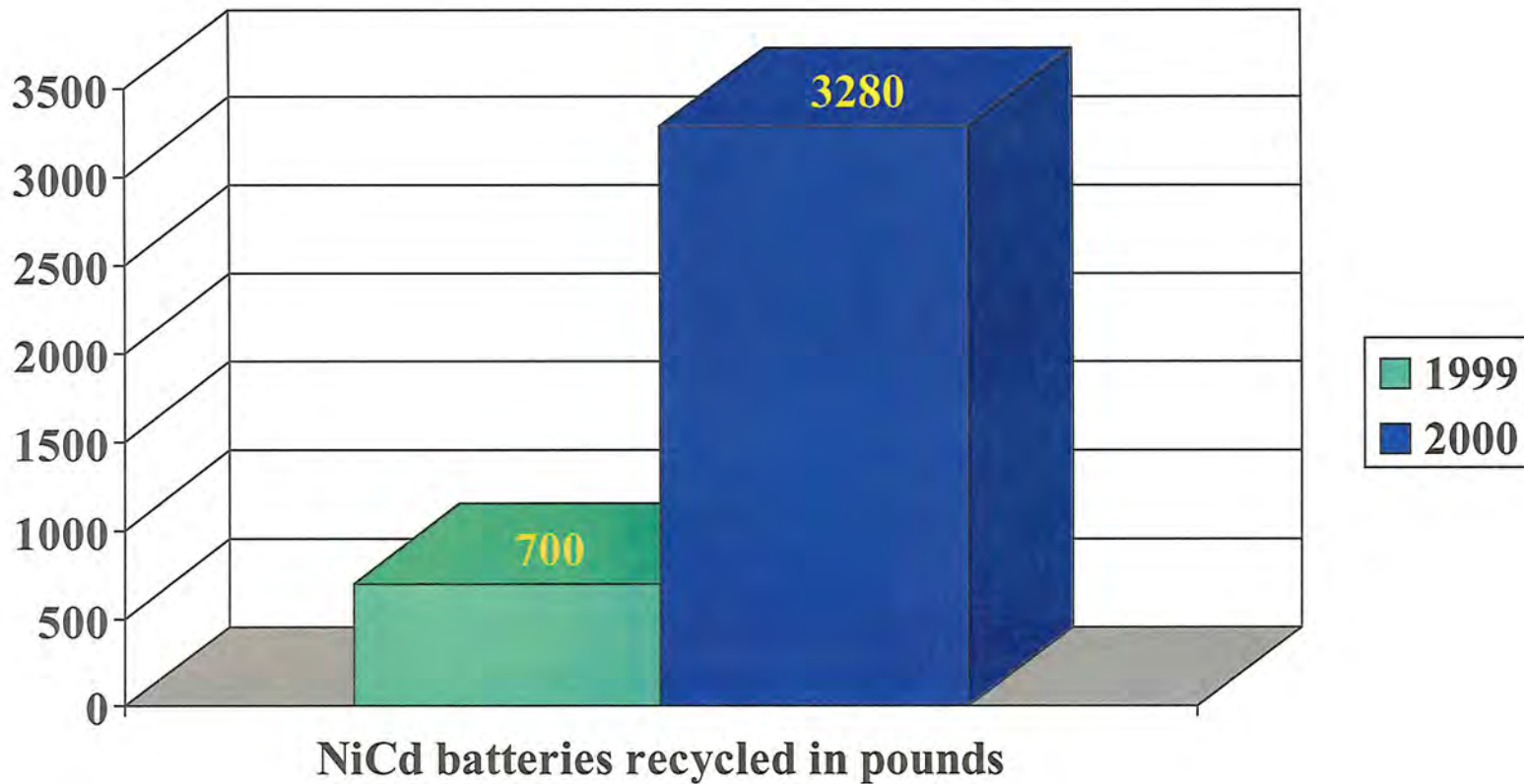
Lamps: The DEP is in the early stages of collecting recycling data for lamps, due to the requirement for businesses to recycle all lamps containing mercury. At present, recycling estimates are derived from national data supplied by the National Electronic Manufacturers Association (NEMA). From NEMA data it is estimated that 2.5 million lamps are sold in Maine each year and approximately 10% of the bulbs being replaced are recycled. Using these numbers as a baseline, DEP is beginning to track recycling rates.

Thermostats Recycled in Maine



* Mercury-Added Products in Maine's Solid Waste
John Bastey, December 1998

Rechargeable Battery Recycling Corporation, Maine Data



Lamps, like most mercury-added products, have traditionally been co-mingled in the solid or hazardous waste streams. It is assumed that there has been minimal recycling due to a lack of infrastructure and legal or regulatory requirements. The Universal Waste rules adopted in January, 2001 require that mercury-added lamps exhibiting the hazardous waste toxicity characteristic (and mercury-added thermostats) generated by businesses be recycled. Starting in July, 2002 all lamps are subject to the universal waste provisions, not just those exhibiting hazardous waste toxicity characteristics. (In other words, lamps containing mercury but passing the Toxicity Characteristic Leaching Procedure [TCLP] test may legally be disposed of until July 15, 2002; as of this date, all mercury-containing lamps must be recycled, regardless of TCLP test results). Shipping documentation is submitted to the DEP either with each shipment of lamps or on a quarterly basis. This will allow the DEP to collect recycling data. The DEP will be able to also track the recycling of other mercury-added products as they are added to the list of universal wastes.

The DEP recently conducted a lamp study. The focus of the study was to determine total mercury content of certain common fluorescent lamps and whether lamps that pass the TCLP contain sufficiently lower amounts of mercury to warrant an exclusion from the enacted 2002 solid waste disposal ban. New and used lamps from ten popular lamp models were collected and tested for total mercury and TCLP mercury by specialized testing procedures. The results of the study will be provided by the Department in its report "Mercury In Maine A Status Report" due January 15, 2002 to the Legislature.

3.0 Education and Outreach

The DEP has initiated an aggressive education and outreach (E&O) program to aid the development of public infrastructure and inform the general public about new collection and recycling options for UW. The E&O program, based on the DEP E&O Plan of January, 2001, includes educational training for municipal personnel, and the development and distribution of educational materials for both the general public and municipal officials.

- ▶ Educational training: To educate municipal officials in how to best manage mercury-added products and UW, the DEP conducted 16 half-day training sessions for municipal solid waste personnel and municipal officials in September and October 2001. Two hundred and ten people attended the training, many of whom represent municipalities that are receiving an infrastructure development grant from SPO. DEP staff continue to offer these training sessions upon request.
- ▶ Educational brochures: The Department has developed and distributed brochures on mercury and Universal Waste. (See Appendix A). Over 40,000 of the general mercury brochure have been mailed to Maine towns for distribution to the public. A separate UW brochure was also developed and mailed to every municipal office to answer questions about municipal responsibilities under the UW rules.

- ▶ Department web site: The Department established a web site for mercury and UW, which includes general information and reports on mercury in the environment, links to the Bureau of Health fish consumption advisories, and the following DEP information:
 - Universal Waste and Mercury Management and Recycling Companies. This list includes contact names, addresses, phone numbers, web site address, wastes handled and types of services provided;
 - Mercury-added lamp information including a notice to lighting vendors and contractors and a mercury containing lamp fact sheet;
 - Mercury Management in the Health Care Environment Fact Sheet including alternatives to mercury products;
 - Maine's Voluntary Mercury Manometer Replacement Program;
 - Mercury Thermostat Recycling Program including a list of participating wholesalers in Maine;
 - Rechargeable Battery Recycling Program, including a list of participating drop off locations;
 - Computer Recycling in Maine fact sheet;
 - A copy of the Universal Waste rules; and
 - An electronic submittal form to receive various educational materials and to be placed on the mailing list for Universal Waste training seminars. (Educational reference materials have been mailed to over 300 people through the electronic submittal request form on the web site.)

- ▶ Electric bill inserts: Notices encouraging consumers to recycle mercury-added products have or will appear in inserts to electric bills sent by the various power companies. CMP was the first to include the notice about recycling mercury-added products and UW in its September, 2001 bills to residential and business customers. Other electric companies will soon be joining CMP and DEP in providing customer information. (Thanks to all for their assistance in helping to inform the residents and businesses of Maine!)

- ▶ Other educational initiatives: In addition to the above publications, information about managing mercury-added products and UW has appeared in *'The Maine Townsman'* (Maine Municipal Association newsletter, August 2001).

Although it is the generator's responsibility to handle and store the waste properly, DEP has a responsibility to provide information, guidance and training. To meet this responsibility, DEP has conducted some of the same types of E&O activities for the business community as it has for the public sector. In 2001 DEP completed the following to help the private sector with infrastructure development:

- ▶ Placed generator information on the DEP mercury web page and Northeast Waste Management Officials Association (NEWMOA) web page.

- ▶ Created a Universal Waste Handbook and a summary of the Small Universal Waste Generator requirements.

- ▶ Mailed a UW brochure to every business in the State in December, 2001 with an annual report form from the Maine Revenue Services. This brochure informs businesses about the disposal ban and their obligation to recycle. The Department would like to credit the Mercury Products Advisory Committee for their suggestion to use the Revenue Services annual mailing as a vehicle to send information to businesses.
- ▶ Conducted twenty training sessions on managing mercury-added products and UW, which were attended by 609 people. Many of these people have in turn gone back to their respective organizations and have educated additional people at their workplace or organization.

Future Education and Outreach: The DEP will be initiating additional education and outreach activities in 2002. For the general public some of the activities are:

- Develop a handout on mercury-added products and UW management for municipalities to give to the public. This will stress the importance of recycling rather than disposal.
- Expand the DEP mercury web site significantly.
- Develop a school program to clean out mercury wastes and help them to manage mercury-added products properly.
- Work with Maine Hospital Association and the Bureau of Health to hold a thermometer collection for all State employees and hospital employees.
- Support other mercury collections and thermometer exchange programs through funding and education and outreach assistance activities.
- Conduct additional training sessions for schools and municipalities.

The DEP will also continue to help generators, consolidators and recyclers in 2002 through the following activities:

- Provide additional universal waste training upon request.
- Target specific sectors for universal waste training. Two examples of specific sector training is the work the DEP is doing with the Maine School Management Association on providing universal waste training to schools throughout the state and a mailing to the over 400 tanning salons that utilize mercury-added lamps on the requirements for UW and the importance of removing mercury from our environment.

4.0 Clean Government Initiative

The Clean Government Initiative statute was enacted to ensure compliance with existing state and federal environmental laws and to introduce environmental sustainability into the functions of Maine state government. The Initiative has a number of elements, including compliance with state and federal environmental requirements, but most applicable to this report are those elements regarding procurement and disposal of mercury-added products.

It is expressly stated in the statute which created the Initiative that continuous improvement in environmental compliance and performance be sought through, in part, procurement of commodities assessed on a life cycle basis, including technically comparable, cost effective, and reasonably available alternatives to products which may release mercury to the environment. The Department Environmental Protection and the Department of Administrative and Financial Services are working jointly to develop procurement and disposal policies to implement this requirement.

In the interim, efforts within State government to reduce the opportunity for mercury releases into the environment will be undertaken shortly.

- Any mercury-containing switches for convenience lighting are removed from state vehicles prior to auction of the vehicles. These auctions take place four to six times annually.
- The Department of Environmental Protection is planning a mercury fever thermometer collection program for all state employees and legislators in April, 2002.

5.0 Advisory Committee Findings, Recommendations, and Future Actions

Universal Waste: The DEP is proposing to add mercury-added devices and mercury thermometers to the list of Universal Wastes. The Committee supports these additions.

Infrastructure:

- **Public Infrastructure Development:** The first step in the development of public infrastructure to recycle mercury-added products has been a success. The response to the grant program was very positive. Unfortunately there was not enough grant money to fund all requests and there are no State funds available to help municipalities with ongoing operational costs for the proper management of mercury-added products. For these reasons and others there are some areas of the State that chose not to participate in the grant program. This leaves approximately one-third of the population without access to services.

The Committee recommends that the Legislature support the proposed bond bill that would fund additional public infrastructure development. The Committee also recommends that the Legislature take action to support the ongoing operational costs of handling mercury-added products. Finally, the Committee recommends an expansion of the public education and outreach activities proposed by the DEP.

- **Private Infrastructure Development:** The private sector is responding appropriately to the new demand for services and the developing markets for materials. The DEP has taken effective steps to work with the private sector through rulemaking activities, licensing activities and education and outreach.

The Committee recommends that DEP continue to work in a targeted manner with the private sector, with special focus on continued education and outreach.

- Schools: Children are most at risk when it comes to mercury exposure. Although Maine schools can no longer purchase elemental mercury or mercury compounds, they still may have significant quantities on hand as well as mercury-containing scientific devices. DEP should work with schools to facilitate the removal of existing mercury stockpiles.

Effectiveness of Established Programs

- Mercury Thermostats: The TRC program has been in operation in Maine for a little over a year. The DEP expects that the number of thermostats collected through the program will increase as more collection locations are developed and there is greater awareness of the program. However, it appears that the collection rate at this time is quite low, less than 1%. To improve the success of the program, the Committee recommends the following program improvements and will communicate the recommendations to TRC and its member companies:

Increase wholesaler participation: Honeywell, the major mercury thermostat manufacturer, has agreed to send a letter to all Maine thermostat wholesalers to explain the TRC program. To encourage their participation, they also will offer sales incentives for joining TRC. Incentives will be discounts on the purchase of Honeywell thermostats if they join the TRC program. While the incentive program would not be limited to non-mercury thermostats, Honeywell has agreed to include in the cover letter information on non-mercury alternatives.

Increase contractor participation:

- A mailing to contractors that remove thermostats explaining the TRC program and encouraging their participation in the program is needed. Ideally the mailing should be eye catching enough to increase the number of contractors who actually read the information. TRC has agreed to do a mailing to some contractors regarding the TRC program. The size and content of the mailing remain to be resolved.
- Advertisement of the program beyond the contractor mailing. This could include advertisements in trade journals, appropriate industry newsletters, and on radio and TV. Honeywell has agreed to advertise the program in either a national trade journal or in an appropriate Maine industry newsletter, whichever would reach the most Maine contractors. They have also agreed to write and produce a PSA script describing the TRC program.
- Develop in-store advertising to promote the TRC program. Signage or posters reminding the contractors to bring their thermostats in could increase the amount recovered through the program. TRC has agreed to print signs

and distribute to all Maine wholesalers in the program. In addition the signs would be sent out to all new wholesalers that sign up for the program.

Increase do-it-yourself, homeowner participation in the TRC program:

- A method for increasing homeowner participation would be to place collection bins in places that homeowners are likely to visit. Two such places are local transfer stations and local hardware stores. TRC has not agreed to include either type of location in the TRC program, however they have committed to evaluate during 2002 the transfer station option to determine if they wish to include selected facilities in the program.
- The TRC program needs to be explained to homeowners to obtain their participation in the program. Brochures or flyers explaining the TRC program and how to access it at the point of sale would help accomplish this task. To date, TRC has not agreed to prepare or distribute these brochures.
- Batteries: The quantity of batteries collected through both the universal waste system and the RBRC program are increasing each year. In addition RBRC expanded their program in 2001 to include three additional battery types. This provides a ready outlet for the most common batteries, with the exception of alkaline and button cell batteries. There are, however, some additional actions that could improve the effectiveness of the RBRC program. Some recommendations are:
 - Continually update the list of retail stores in the program and provide this list semi-annually in electronic format to the DEP for posting on their website.
 - Provide to the DEP the pounds per battery type of batteries collected from the state on a semi-annual basis.
 - Provide an estimated quantity of batteries likely to be discarded by Maine residents annually to help establish a baseline and ongoing recycling rate.
 - Provide continual advertising for the program to reach Maine consumers.

In 2002 the Committee will investigate the potential framework for infrastructure needed to recycle button cell batteries and mercury oxide batteries that are not presently captured in the existing recycling system.

- Mercury Thermometers: One day collection and exchange events need significant advertising in order to be successful. It is expected that the two large collection events scheduled around Earth Day for state employees and Maine hospital employees will have a high participation rate. Most Maine citizens will also be able to recycle their mercury thermometers at the local transfer station in the near future. It is anticipated that the availability of recycling opportunities, in conjunction with the sales ban without a prescription, will significantly reduce the overall stock of mercury fever thermometers in the State.

- Dairy Manometers: This program is voluntary and is generally thought to have identified the majority of manometers existing on Maine dairy farms or former dairy farms. Replacement will occur early in 2002. No further action is needed.
- Lamps: The infrastructure is in place for businesses to recycle lamps, but there is still a lack of understanding by many in the business community about their responsibilities. Awareness of the need to recycle lamps is expected to increase as more education and outreach is conducted by both the DEP and the local waste facilities. More education and outreach is needed with the business community, the haulers, and the waste facilities in order to reach the State lamp recycling goals.

Mercury Source Reduction Legislation

LD 2004 (An Act to Phase Out the Availability of Mercury-added Products) will be considered in the Second Session of the 120th Legislature. It is based on the Northeast Waste Management Officials' Association (NEWMOA) model and would gradually phase-out mercury-added products, starting with those products that contain more than one gram of mercury, down to those that contain 10 milligrams. This legislation would not affect in-use mercury-added products, which would be allowed to remain in use. Exemptions would be allowed for products that meet one or more of the following criteria:

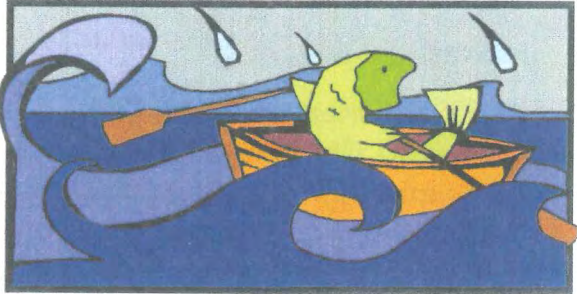
- Mercury in the product is required to meet federal or state health and safety rules;
- Use of the product is beneficial to the environment or protective of public health and safety;
- There are no feasible alternatives to the use of mercury in the product; or
- There is no comparable non-mercury-added product available at a reasonable cost.

Applications for exemptions would have to justify the exemption request and include a plan to collect and manage used mercury-added products through manufacturer take-back or by funding other private or public collection systems. Manufacturers of fluorescent lamps with greater than 10 milligrams of mercury would have a longer period of time to apply for an exemption.

This would substantially move toward the elimination of mercury from products where feasible. It would also establish a collection system for those products that receive an exemption so that they do not end up in the solid waste stream. Since several states in New England have already adopted or are considering these provisions, there will likely be regional coordination among the states on exemption requests.

The Advisory Committee supports the introduction and consideration of legislation to further the goal of source reduction of mercury through regulation of the sale and/or use of mercury-added products, without endorsing the specific details of LD 2004.

LET'S GET
MERCURY
OUT OF
MAINE'S
ENVIRONMENT



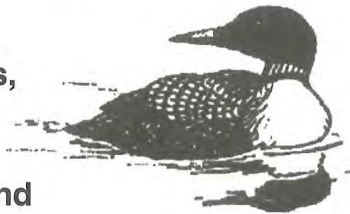
**YOU
CAN HELP!**

What is mercury?

Mercury is a naturally occurring metal. It is liquid at room temperature, binds easily with other metals and conducts electricity well. Because of these properties, mercury has been used in many household, medical and industrial products.

Why is mercury of concern?

When mercury gets into our waterways, it changes. Through a natural chemical process it becomes methyl mercury, which is much more toxic. Methyl mercury in the food chain builds up in the tissue of fish and animals. It can cause weight loss, reproductive problems and early death. In humans, mercury is a neurotoxin. This means it slows fetal and child development and impairs brain function. High exposure can cause tremors, numbness of fingers and toes, loss of muscle control, memory loss, and kidney disease.



How does mercury get into Maine's environment?

Most mercury in the environment comes from human activities. Mercury enters the air in the emissions from coal burning power plants and waste incinerators. It enters our lakes, streams and rivers through rain and snow, through improper disposal of household products, and through wastewater discharges.



How much is too much?

Mercury is toxic in very small quantities. Because mercury builds up in the food chain, even very small amounts of mercury in the water can make fish unsafe to eat and cause reproductive problems for wildlife such as loons. Also, mercury volatilizes at room temperature; this means that a small spill (1/2 teaspoon) indoors can create mercury levels in the air that are unsafe to breathe. One Maine school recently spent more than \$20,000 to clean up a spill from a single broken barometer so that students and staff would not breathe toxic mercury fumes!

Is mercury a problem in Maine?



Yes. Mercury has been found in bass, perch, pickerel, trout, salmon and eels as well as in our eagle and loon populations. Other fish eating animals are also at risk.



Maine, like many other states, has fish consumption advisories that establish limits on the number of fish meals women and children can safely eat.

Where is mercury in my home?

Do a mercury search! Most commonly mercury is found in:

- Thermometers (fever, candy, fry, indoor/outdoor, oven).
- Thermostats (nonelectronic)
- Older paints
- Fluorescent lights
- Pilot light sensors in gas stoves, water heaters and dryers
- Barometers
- Button cell batteries
- Clothes irons with automatic or tilt shutoff



- Blood pressure cuffs
- Switches and relays in some chest freezers, older washing machines, sump and bilge pumps, and electric space heaters.
- Silent light switches.
- Topical disinfectants with Mercurochrome or Tincture of Merthiolate
- Antibacterial products with thimerosal or merbromin
- Vintage toys
- Chemistry sets
- Dental fillings
- LA Gear® athletic shoes made before 1997 with flashing lights
- Grandfather clock weights
- Antique mirrors



This list is not complete! Check with the DEP Household Hazardous Waste Program if you have any questions.

How can I prevent mercury pollution?

State and local governments are working together to develop a collection system for mercury containing products. Here's what you can do:

- ✓ Do a home audit and label mercury containing products.
- ✓ READ LABELS! Avoid buying products with mercury when substitutes are available.
- ✓ Ask your dentist for fillings that don't contain mercury amalgam.
- ✓ Use fluorescent lights. Although they have a little mercury they save a lot of electricity, reducing reliance on coal burning power plants - a major source of mercury pollution.
- ✓ RECYCLE mercury containing products. Call your town office or the Maine DEP at 800-452-1942 for information about local collection events or the nearest household hazardous waste collection center.

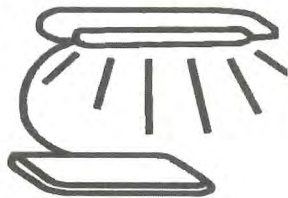


What do I do if I break a mercury containing item?

Thermometers: Never use a vacuum to clean up a mercury spill! First, open windows to air out the room. If the thermometer breaks on a smooth surface, you can use two pieces of stiff paper to scoop all the beads into a sealable plastic container. If necessary, or on a carpet, use an eye dropper to capture the beads of mercury. Pick up any remaining beads of mercury with sticky tape. Put any contaminated portion of carpet and all cleanup materials in a plastic container. Take all materials to a household hazardous waste collection center or call Maine DEP at 1-800-452-1942.

For larger spills, call the Maine DEP Response at 800-452-4664 immediately!

Fluorescent bulbs: If a bulb breaks accidentally, scoop the pieces and powder into a sealable, plastic container. Air out the room. Wipe the area with a damp sponge and take all cleanup materials to a household hazardous waste collection center or call Maine DEP at 1-800-452-1942.



For more information or assistance call:

- **Your local Town Office or Solid Waste Facility.**
- **The Maine Department of Environmental Protection (DEP) at (800) 452-1942 and ask for the Household Hazardous Waste Program.**
- **Spills: Call the DEP at (800) 452-4664.**
- **The Maine Bureau of Health toll free at (866) 292-3474 for information on fish consumption advisories.**
- **If human contact with mercury occurs, call the Maine Poison Control Center at (800) 442-6305.**

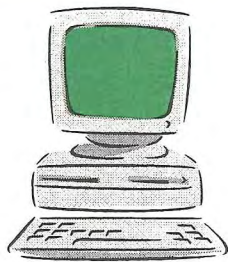
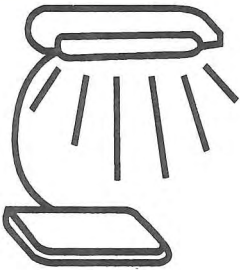
To find out more, visit the DEP web site at <http://www.MaineDEP.com>



**This brochure was produced by the
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Household Hazardous Waste Program
17 State House Station
Augusta, ME 04333**

Information for
municipalities on
Universal
Wastes

What are they?
How can they
be safely
managed?



What are Universal Wastes?

Universal Wastes are wastes that may contain hazardous amounts of toxic materials such as mercury, lead, and PCBs. They include:

- ✓ CRTs - Cathode Ray Tubes (computer monitors, TVs)
- ✓ Fluorescent light bulbs (a.k.a. "lamps")
- ✓ Mercury-containing thermostats
- ✓ Non-leaking PCB lighting ballasts
- ✓ Certain batteries
- ✓ Mercury thermometers



Universal wastes can be easily recycled to reclaim and reuse the hazardous materials.

Within the next year the Maine DEP will propose that mercury switches, and medical or scientific instruments containing mercury be added to the list of Universal Wastes. Check with the DEP to get the most up-to-date information on these wastes.

Who generates Universal Wastes?

Everyone! Businesses, municipalities, schools, and households.

Is a municipal solid waste facility required to accept Universal Wastes from households?

Yes. Municipalities must provide for the management of Universal Wastes from households. In the past, these wastes have been co-mingled with other solid wastes. While this is still legal, it can cause hazardous chemicals to be released to the environment. By separating Universal Wastes from the rest of the residential solid waste, storing them in a secure area, and sending them for recycling instead of disposal, your town will be doing its part to help protect the environment and community health.

Is a municipal solid waste facility required to accept Universal Wastes from businesses?

No. Municipalities are required to provide for disposal of domestic and commercial solid wastes generated within the municipality. CRTs, lamps, mercury-containing thermostats, PCB ballasts and certain batteries generated by commercial entities are hazardous wastes (when generated by households, these wastes are not regulated as hazardous). Therefore, a municipality has no legal obligation to provide for recycling or disposal of these wastes from commercial entities. Just like every other business, municipalities are responsible for managing hazardous wastes, including universal wastes, from their own municipal properties.

Is there increased liability if a municipality collects Universal Wastes?

No. Any municipality that operates a solid waste facility is already handling these wastes. By choosing to follow the regulatory requirements for handling Universal Wastes, these same facilities will implement better management practices. Better management practices will decrease the risk of exposing municipal employees or the public to the hazardous materials in these wastes.

How can a municipality pay for the recycling of Universal Wastes?

There are potentially two costs that a municipality will need to consider when handling Universal Wastes. The first is the cost of any infrastructure improvements that might be needed. Contact the State Planning Office (SPO) at (207)287-8050 to find out about potential grant opportunities.



The second cost is that of on-going operations, including the cost of having these wastes picked up and recycled. To keep costs as low as possible, SPO is negotiating a set contract price for recycling that municipalities may use. Municipalities may also choose to support the cost of managing Universal Wastes by charging a fee for service to businesses and/or households.

Are there future waste management responsibilities municipalities should know about now?

Yes. There is a new Maine law that prohibits the disposal of mercury-added products. After January 1, 2005 this disposal ban will apply to households that generate lamps, and mercury containing thermostats, thermometers, switches, relays, and medical or scientific instruments. This means that by January 1, 2005 municipalities must provide a system for residents to recycle these mercury-added products.

Presently businesses must recycle mercury-containing lamps, thermostats and thermometers as Universal Wastes. As of July 15, 2002 businesses also will be required to recycle mercury switches and relays, and mercury medical or scientific instruments, following the provisions in the Maine Hazardous Waste rules.

Within the next year the DEP will propose that mercury containing switches, relays, medical and scientific instruments be added to the list of Universal Wastes. If these additions are approved, municipalities that accept Universal Wastes from businesses can add these wastes to the list of Universal Wastes they collect.

To find out more about the regulations that apply to municipalities collecting Universal Wastes from businesses, contact Ann Pistell of the Maine DEP at (207)287-7703.

For more information on handling Universal Wastes, contact your DEP Solid Waste Project Manager at your local office of the Maine Department of Environmental Protection.

- ⇒ Portland (207)822-6300
- ⇒ Augusta (207)287-2651
- ⇒ Bangor (207)941-4570
- ⇒ Presque Isle (207)764-0477

For more information on potential grants for Universal and Household Hazardous Waste management, call the State Planning Office at (207)287-8050 or check out SPO's Waste Management and Recycling Program's web page at:

www.state.me.us/spo/wm&r/wmhome.htm

For a listing of companies that recycle Universal Wastes, check www.state.me.us/dep/rwm/uwmgtrecy.htm



Maine DEP
17 State House Station
Augusta, Maine 04333
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