

Several Great Lakes States are implementing programs to address potential endocrine disrupting substances. Ohio, for example, has several Lake Erie related projects underway for measuring chemicals that have been associated with endocrine disruption. Great Lakes States are presently coordinating fish contaminant monitoring programs through the Council of Great Lakes Governors and EPA. Additional parameters are routinely added to the monitoring regime as needed.

Improved Protection for Drinking Water and Groundwater

The water resources of a watershed are a combination of surface and groundwater; groundwater provides the base flow to many watercourses and wetlands in the Great Lakes watershed. The current and projected population of the Great Lakes region places high demands on groundwater for potable water supplies. Increasing groundwater demands linked to population growth and anticipated reductions in supplies combine to make groundwater protection a significant emerging issue. By setting stringent water quality standards for contaminants in drinking water, EPA and its state partners are hard at work to provide a safe and plentiful supply of drinking water to basin residents.

To insure that this is indeed the case, the U.S. Geological Survey (USGS) has implemented the National Water Quality Assessment (NAWQA) program to address the need for consistent and scientifically sound information for managing the nation's water resources. The objectives of the program are to (1) describe current water quality conditions for a large part of the nation's freshwater streams, rivers, and aquifers; (2) describe trends in water quality over time; and (3) improve the understanding of the primary natural and human factors that affect water quality conditions. Two of these studies are located in the Great Lakes region: the Lake Erie-Lake St. Clair Basin and the Western Lake Michigan Basin.

As a key component of EPA's 1991 Pesticides and Groundwater Strategy, EPA is proposing to restrict the use of certain pesticides through the

development and use of Tribal and State Management Plans. Because of their potential to contaminate groundwater and their classification as "probable" or "possible" human carcinogens, EPA has determined that these pesticides may cause unreasonable adverse effects on the environment and humans in the absence of effective management measures provided by these management plans.

A 1999 USGS-EPA report (USGS Water Resources Investigation Report 98-4245) provides an overview of data on detection of pesticides of concern in groundwater, primarily on the basis of the results from two recent multi-state studies by the NAWQA program (including the western drainage of Lake Michigan) and the Midwest Pesticide Study, which includes areas within the Great Lakes Basin. Consistent with the results from previous large-scale studies of pesticide occurrence in groundwater, more than 98 percent of the pesticide detections during these USGS studies were at concentrations less than 1 microgram per liter ($\mu\text{g/L}$). Consequently, criteria for the protection of drinking-water quality were rarely exceeded. However, these guidelines may underestimate overall health risks because they (1) have been established for only a relatively small number of pesticides; (2) do not account for additive or synergistic effects among combinations of pesticides; (3) neglect the potential toxicity of pesticide degradates; and (4) do not consider effects on aquatic ecosystems included by groundwater discharge.

To help identify health risks from waterborne disease, new monitoring methods for microbial pathogens and indicators are continuously being developed, and these new methods need to be validated (field tested) as part of the EPA approval process. The USGS is coordinating sampling and testing for total coliforms, *E. coli*, enteric viruses, and *Cryptosporidium* in six NAWQA study units across the nation (including the Lake Erie-Lake St. Clair drainage) and two other areas, to field test new microbiological methods in surface waters. The results of the study will help determine whether traditional methods such as *E. coli* testing are a good indicator of the presence of viruses in water.



Beaches and Recreational Waters

Past monitoring studies have shown that beach pollution is usually infrequent or confined to local areas. Problems can develop in areas near pollution sources after a heavy rainfall or when a sewage treatment plant (STP) malfunctions. Pollution can also occur from disruption or damage to wastewater collection and treatment infrastructure due to severe natural events like hurricanes or flooding. Beach advisories and closings in the U.S. are generally due to elevated levels of indicator organisms that may indicate the presence of disease-causing micro-organisms. Recreational water users are at risk of infection from water-borne pathogens through ingestion or inhalation of contaminated water or through contact with the water. Most of these enter the local waterways when flows exceed the capacity of STPs, usually due to heavy rainfall, causing sewer overflows and/or requiring the discharge of untreated sewage from pump stations. Untreated stormwater runoff from cities and rural areas can be another significant source of beach water pollution.

EPA recognizes the need for stronger beach monitoring programs, improved water quality standards, and broader public guidance relating to the use of recreational waters. In response to national directives such as the Beaches Environmental Assessment, Closure, and Health Program, EPA has prepared an Action Plan for Beaches and Recreational Waters (the "Beach Action Plan"), a multi-year strategy for reducing risks of infection to recreational water users through improved recreational water quality programs, risk communication, and scientific advances. The Beach Action Plan describes EPA's actions to improve and assist in State, Tribal, and local implementation of recreational water monitoring and public notification programs.

EPA's GLNPO has been conducting annual surveys of beach closings for the 582 recognized beaches along the U.S. coast of the Great Lakes. This information is now available in a document entitled, *A Summary of U.S. Great Lakes Beach Closings 1981-1994*, which is available online at:

www.epa.gov/glnpolbeach/index.html

The report finds that for the reporting years, on average, approximately 20 percent of the beaches experienced a period of closure. In addition, there are AOCs in 11 of the 19 counties having beaches considered poor or deteriorating. The information contained in this report is helping county health departments concentrate their monitoring efforts and remedial activities on those beaches that experience periodic closings. GLNPO is preparing data for the years 1995 to 1997 for posting on the Internet.

The U.S. Army Corps of Engineers (Corps) Waterways Experiment Station is funding research focused on the shoreline area located between the mouth of the Clinton River and the Clinton River Cutoff Channel in Michigan's Lake St. Clair to examine the effects of submersed aquatic vegetation on hydraulic exchanges and water quality for the western shoreline of Lake St. Clair. The lake has experienced beach closings due to poor water quality. Specifically, the investigation was designed to examine water movement and the dispersion of fecal coliform bacteria and nutrients during low, mid, and peak aquatic plant biomass periods.

In another development, the Environmental Monitoring for Public Access and Community Tracking Program awarded a 1998 Metro Grant to Milwaukee, Wisconsin to implement a Community Recreational Water Risk Assessment and Public Outreach project that will focus on collecting and disseminating recreational water quality data to a diverse public, particularly focusing on *E. coli* levels and the associated health risks of beach water at 10 beaches in Milwaukee and Racine. Beaches will be posted based on results, and information will be placed daily on a hotline and a website and on a noon news broadcast.

Of course, the most desirable solution to protect public health is to eliminate the need for beach closings through the effective control of pollution sources. But until that time, the U.S. program will continue to increase and improve the means for monitoring water quality and informing the public regarding any potential attendant health risks.



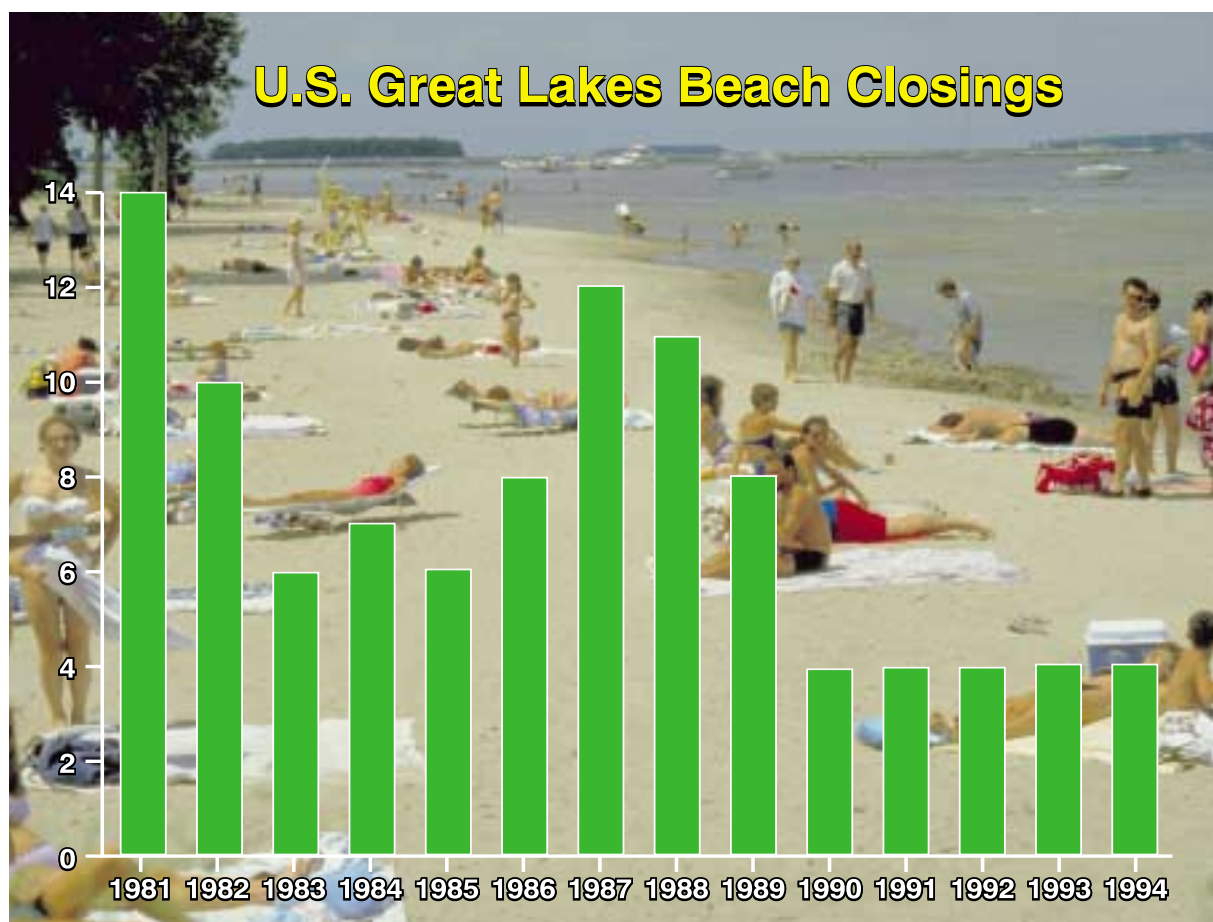


Figure 6. Number of U.S. Great Lakes beaches reported permanently closed (Source: EPA-GLNPO, Summary of U.S. Great Lakes Beach Closings, 1981-1994; revised, April 1998).

TOXIC CONTAMINANTS

Many of North America's estuaries, rivers, streams, lakes and groundwater reserves are being impacted by a variety of point and nonpoint sources of toxic contaminants. Much progress is being made to address these substances. Mercury emissions alone declined from 202 tons per year in 1990 to 152 tons in 1995. Concentrations of DDT and PCBs have generally been declining in the North American environment. Nationally, the number and magnitude of PCB sources have decreased 20 fold in the past 20 years.

The most notable decrease came in the 1970s with the introduction of strict regulatory controls on persistent organic pollutants (POPs). There have been fluctuations in the 1990s for a variety of reasons, but measurements in the Great Lakes show that levels of DDT and PCBs (see Figure 7

on page 14), as well as a number of other POPs, have been at or near their lowest levels in most lakes since monitoring began. These reductions have resulted in improvements in the number and health of Great Lakes birds and fish.

A number of domestic, binational, and international programs are being established to address these contaminants.

Implementation of the Great Lakes Binational Toxics Reduction Strategy

On March 23, 1998, EPA and Environment Canada officially began the implementation of the Strategy. A variety of actions are currently taking place at the Federal, State, Provincial and local levels to achieve the Strategy's reduction goals within the 10-year timeframe of 1997-2006, for the following Level 1 substances targeted by the Strategy: dioxins/furans, mercury, PCBs,



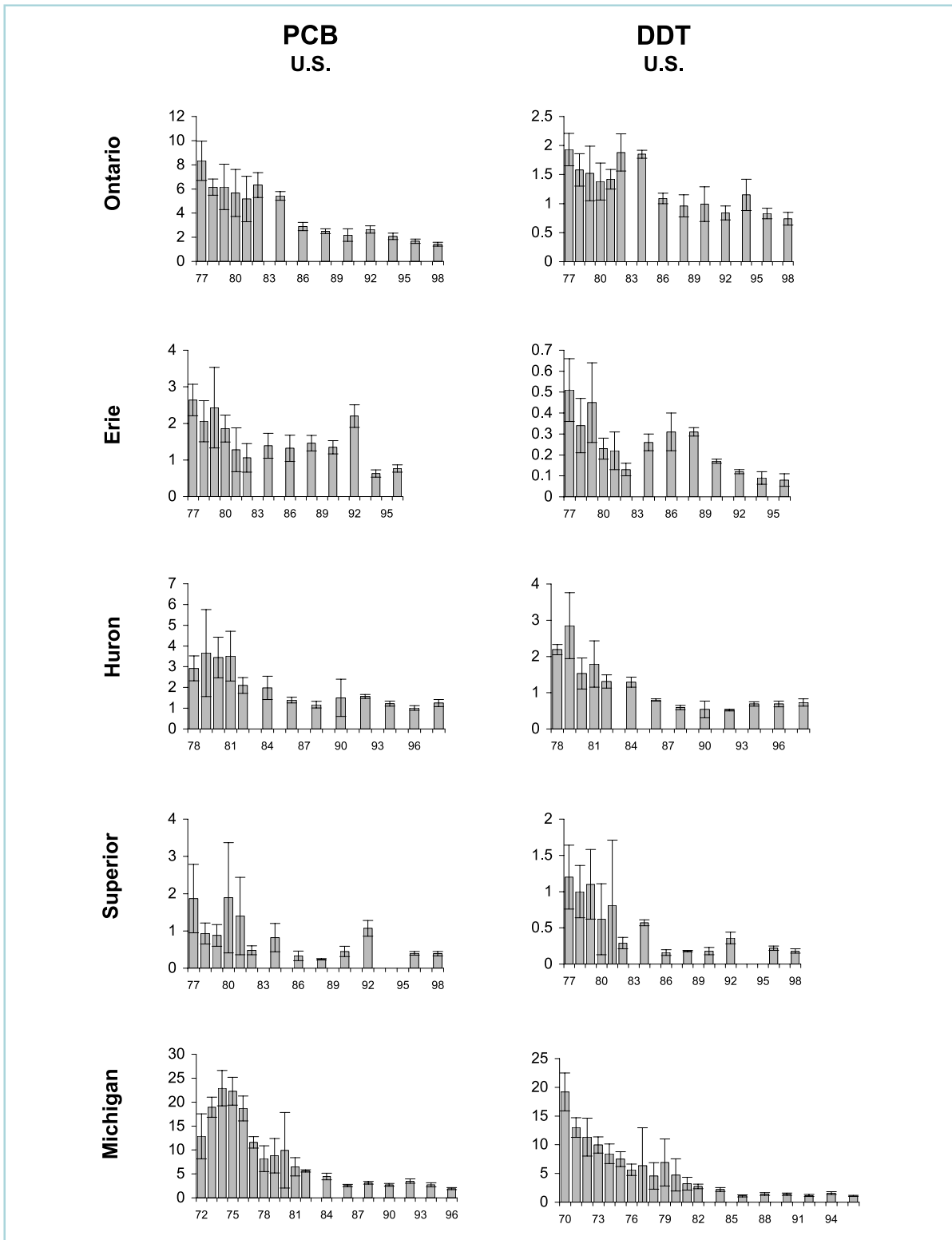


Figure 7. PCB and DDT levels found in whole lake trout (1977 - 1997). Amounts are in ug/g wet weight +/- 95% C.I., whole fish, composite samples, 600 - 700 mm size range (Lake Erie data are from walleye in the 400 - 500 mm size range). PCB level declines are evident from the levels found in whole fish in the Great Lakes. Fluctuations are due to a number of reasons, including abnormal rain and runoff and changes in the availability of contaminants, rather than to direct loadings (Source: EPA-GLNPO, 1998).



hexachloro-benzene, benzo(a)pyrene, alkyl lead, octachloro-styrene, and a number of canceled or restricted pesticides (aldrin/dieldrin, chlordane, DDT, mirex and toxaphene).

Persistent Bioaccumulative Toxics Strategy

The U.S. Persistent Bioaccumulative Toxics (PBT) Strategy targets those PBT substances included in the Strategy's Level 1 list for immediate focus. EPA is in the process of developing national action plans to reduce emissions of and exposure to these substances. A number of near-term regulatory and programmatic actions are aimed at PBT reductions. For example, EPA's New Chemicals Program aims to prevent the introduction of harmful new PBTs in commerce by prohibiting companies from using a substance in the U.S. until the risks associated with the substance are known. And EPA is taking actions aimed at reducing certain PBTs in hazardous waste by targeting certain additional PBT chemicals found in hazardous waste for voluntary waste minimization activities. The PBT Strategy also calls for developing a process to select additional pollutants of concern that are not Level 1 substances and developing action plans for them.

Multilateral International Cooperation

The U.S. is also cooperating in the following multilateral international and global efforts to address toxic contaminants:

- > The North American Agreement on Environmental Cooperation and its Secretariat, the CEC, were established to address transboundary and regional environmental concerns in North America. The CEC has facilitated the development of regional action plans for the phaseout or management of PCBs, DDT, chlordane, and mercury pursuant to a resolution on the Sound Management of Chemicals adopted by the U.S., Canada, and Mexico in October 1995.

- > POPs, which are a subset of PBTs, have been the focus of treaty negotiations sponsored by the U.N. Negotiations have been ongoing since June 1998, and a final negotiating session is scheduled for December 4 - 9, 2000, in Johannesburg, South Africa. The POPs treaty will immediately address 12 chemicals: pesticides (mirex, chlordane, heptachlor, dieldrin, aldrin, endrin, toxaphene, hexachlorobenzene, and DDT); industrial chemicals (PCBs); and by-products (dioxins and furans). It will also include a procedure and criteria for adding new POPs to the treaty. The POPs treaty will seek to immediately ban use and production of eight of the internationally-produced pesticides, and will seek to phase out the use and production of DDT as viable alternatives for vector control become available. The treaty will also seek to ban new production of PCBs and to reduce releases of dioxins and furans.
- > EPA played a key role in successfully concluding negotiations on two legally binding protocols on POPs and heavy metals to the UN Economic Commission for Europe's (ECE) Convention on Long-Range Transboundary Air Pollution. The protocols commit over 50 member countries to reducing the transboundary air movement and deposition of certain POPs (industrial chemicals, pesticides, and unintentional combustion byproducts, as well as cadmium, lead, and mercury). The protocols include provisions to ban or phase out the production and use of certain substances, employ process controls to restrict the unintentional creation or release of dioxins and furans, reduce the content of mercury in products (e.g., medical instruments), and develop and exchange emission and source inventories. The POPs protocol served as a basis for the December 2000 agreement on the POPs Treaty which will reduce and eliminate ten substances.

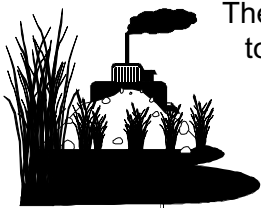


Listed below are specific actions undertaken by these programs, and others, to address these contaminants in the Great Lakes Basin. For each compound, the Strategy reduction target provides a goal to guide these activities.

Mercury

Mercury contamination is a potential threat to wildlife and human health. It is a potent neurotoxin that can produce irreversible brain damage if ingested at high enough levels. The fetal nervous system is particularly vulnerable. Mercury contamination of aquatic ecosystems has become a problem of national and international concern. Currently, consumption advisories for human health have been issued in at least 38 states.

The Strategy Challenge: By 2006 seek a 50 percent reduction nationally in the deliberate use of mercury and a 50 percent reduction in the release of mercury from sources resulting from human activity.



The release challenge will apply to the aggregate of releases to the air nationwide and to releases to the water within the Great Lakes Basin. A Strategy mercury workgroup has been

formed to help identify reduction opportunities in the use and release of mercury. It has spurred States to develop projects for removal of mercury devices in autos prior to scrappage. For example, New York is piloting such a program currently under an EPA grant, and Wisconsin is exploring the development of such a project. The workgroup has also raised awareness of the use of mercury in devices and chemicals at gas and electric utilities. Workshops on this issue are being planned in order to encourage utilities to adopt reduction projects. It is also providing a forum for coordination among states and industry in efforts to expand used thermostat collection programs.

Federal Actions

EPA has promulgated standards for municipal waste combustors and hazardous waste incinerators and cement kilns. Implementation of these rules should significantly reduce mercury emissions from these sectors.

EPA's Office of Solid Waste (OSW) is concerned that the combustion of some mercury-bearing organic wastes is adding to the overall mercury contamination problem, given that mercury capture and removal devices are not installed on incinerators or other commercial waste combustors. As a result, OSW has instituted a broad-ranging inquiry into technical and policy alternatives to the current land disposal restrictions (LDR) treatment standards. This effort began with the publication of an Advance Notice of Proposed Rulemaking (ANPRM) on May 28, 1999. In particular, the ANPRM focused attention on the current treatment standard of incineration for wastes that have both organics and high mercury levels.

With our current effort, EPA is seeking, among other things, to narrow the mercury waste types going to combustion facilities so that the overall mercury emissions will be reduced. A key issue with this effort is developing the research and demonstration data that show there are technologically-sound and lower risk alternatives to thermal treatment for wastes that contain both mercury and organics. This research is ongoing and will yield final results in mid-2001.

To protect public health and the environment, EPA announced on December 14, 2000 that the Agency will require reductions, for the first time ever, of harmful mercury emissions from coal-fired power plants — the largest source of such emissions in America. After extensive study, EPA determined mercury emissions from power plants pose significant hazards to public health and must be reduced. The agency will propose regulations by 2003 and issue final rules by 2004. On the same day, EPA began posting, on its website, mercury emissions from every coal-fired power plant in the country. This is consistent with EPA's strong commitment to provide citizens with information about pollution in their communities.



CHLOR-ALKALI INDUSTRY MERCURY REDUCTION INITIATIVE

The chlor-alkali industry, the largest mercury user in the U.S., is committed to a 50 percent reduction in mercury use by 2005, which is expected to cause an equivalent reduction in emissions. Since 1998, the chlor-alkali industry's mercury use is down 35 percent from the average annual levels of the first half of the 1990s – a reduction of 56 tons. The industry is now cooperating with EPA and academic researchers (under a GLNPO grant) on the development of a project to measure fugitive mercury emissions. This cooperation would likely not be possible without the trust and credibility built through cooperation on the voluntary initiative. The U.S. chlor-alkali sector can and plans to do more. One world-class factory has mercury consumption at about 50 fold under the U.S. average, showing the potential. One U.S. factory consumes under 5 percent of the mercury consumed by the higher consuming U.S. factories, again illustrating the potential for better performance.

The chairman of one chlor-alkali producer, Olin Corporation, has announced a goal of zero discharge of mercury because this “not only makes good ethical and moral sense, but responds to what (our) customers demand and our communities expect: that we operate in a safe and environmentally-sound manner.” In addition, Olin Corporation has agreed to volunteer one of its factories to support an emissions study by EPA grantees so that there can be better scientific understanding of how factories consume mercury. The actual amount of substances reduced can be estimated. For instance, the following reduction from average consumption figures related to the chlor-alkali agreement for the U.S. sources can be described as follows: during 1996, there was a reduction of 23 tons of mercury from average annual use; in 1997, a reduction of 42 tons; and in 1998, a reduction of 56 tons. These figures and statements should be used with caution because they represent reduced mercury use as opposed to mercury emissions per se and that the annual usage of mercury for the chlor-alkali industry fluctuates with market conditions.

In addition to these efforts, other EPA research activities concerning mercury include those that will improve our understanding of mercury transport and fate in the environment.

The USGS Wisconsin District Office has a state-of-the-art mercury research laboratory that helps facilitate cooperative projects across the nation dealing with mercury in the environment. Mercury Studies program leaders are currently drafting work plans to initiate a national-scale effort to examine mercury contamination across a wide variety of ecosystems that receive mercury loads from multiple sources.

In November 1999, EPA announced a new step to further expand the public's right to know. This new EPA rule lowered the reporting thresholds for 18 persistent, bioaccumulative toxicants including mercury, dioxin, and PCBs. These toxic chemicals have the potential to pose significant exposures because they do not easily break down. Instead, they build up in the environment and may be passed up the food chain, just as the pesticide DDT threatened bald eagles and other birds by accumulating in their eggs. As of January 1, 2000:

- > Six persistent bioaccumulative chemicals, one persistent chemical, and two categories

of persistent bioaccumulation toxic chemical compounds, including dioxin, are subject to reporting requirements for the first time.

- > Covered companies are required to report releases of certain persistent bioaccumulative chemicals if they manufacture, process, or otherwise use as little as 100 pounds per year or, for those that are highly persistent and bioaccumulative, 10 pounds per year. Prior to this rule, covered companies needed to report releases only if they manufactured or processed more than 25,000 pounds or used more than 10,000 pounds in a year.
- > In the case of dioxin, an industrial byproduct that is toxic in very low doses, companies are required to report if, for example, they generate a tenth of a gram.

State and Local Actions

Faced with the impacts of new air pollution control requirements for incinerators and rising disposal costs, many hospitals are re-examining their waste management practices. The Illinois EPA, with financial support from GLNPO, has created a pilot program that helps hospitals assess current practices and identify additional opportunities for segregating, reducing, and recycling materials found in hospital wastes, with special emphasis



placed on promoting alternatives to mercury-containing devices and equipment.

The Wisconsin Department of Natural Resources (DNR) is taking action to reduce mercury emissions. This includes a mercury emission cap, trade, and bank program aimed at reducing emissions by 50 percent by 2010. A guiding principle is that emission reductions should be accomplished in the most cost effective way. One Wisconsin chlor-alkali factory has recently purchased and installed a newer generation cell that offers the promise of longer life and reduced frequency of cell-openings that result in mercury emissions.

The Minnesota Pollution Control Agency (MPCA) assembled a group of Minnesota stakeholders, including representatives from industry and environmental groups, to develop a strategy to reduce mercury release. The advisory council agreed on a statewide goal of 60 percent reduction of mercury release by 2000, and 70 percent by 2005, compared to 1990 levels. These goals were formalized by the Minnesota legislature in 1999. To reach these goals, the advisory council recommended using an assortment of reduction activities, some of which are already being implemented. These recommended activities include reducing the intentional use of mercury in products, improved national and international coordination, research, and pursuing voluntary agreements with major mercury sources to reduce their releases.

In September through November 1999, the MPCA's Lake Superior Initiative (LSI) and the Western Lake Superior Sanitary District (WLSSD) combined efforts to exchange old mercury thermometers for new, nonmercury ones. The LSI purchased nonmercury thermometers and blood pressure cuffs and placed advertisements for a thermometer exchange. The WLSSD household hazardous waste program collected 487 mercury thermometers, which were exchanged for 438 nonmercury Geratherm® thermometers. Five hospitals along the shore of Lake Superior as well as a college and Head Start program collected a total of 908 mercury thermometers and 771 Geratherm®

thermometers were distributed. Each participating hospital received three nonmercury blood pressure cuffs. Some additional mercury-bearing equipment was also turned in, including five blood pressure cuffs. These exchanges were promoted using newspaper, television, and radio advertisements. The opportunity was taken to educate the public about the dangers of mercury both in the home after a spill or from improper disposal resulting in fish consumption and advisories. This effort was made in conjunction with similar exchanges in Michigan and Wisconsin, which were coordinated by Health Care Without Harm.

In March 2000, the Duluth City Council passed an ordinance that prohibits the sale of mercury fever or basal thermometers in the city. The Council passed the resolution after considering information on the toxicity of mercury, the existing Minnesota mercury laws and the availability of alternatives.

Five EPA Region 5 states (Illinois, Indiana, Michigan, Ohio, and Wisconsin) have formed State/U.S. Department of Defense (DoD) Pollution Prevention (P2) Partnerships. The Partnerships are a collaborative effort designed to improve environmental performance at DoD facilities. Information exchange among the partners is one of the most common benefits. The partnership in Illinois was the first to kick-off in July 1997, and the Illinois EPA has conducted mercury reduction audits at two Great Lakes facilities under a GLNPO grant.



The Monroe County, New York Health Department (MCHD), working with its partners, has developed a P2 strategy aimed at hospitals and dental clinics. The program had a number of successes including:

- > The largest hospital in the Rochester metropolitan area replaced all mercury blood pressure meters, reduced mercury thermometer use by 90 percent, and developed an annual mercury thermometer disposal training program.



- > The MCHD (1) developed a mercury pollution prevention manual and distributed it to 19 hospitals; (2) developed a dental mercury amalgam best management practice (BMP) manual and distributed it to 571 dentists; (3) recruited 45 dentists to participate in an amalgam recycling program; and (4) collected 8,000 mercury thermometers plus an additional 1,000 pounds of mercury from other sources.
- > The Eastman Dental Center replaced mercury contaminated sink traps; adopted the amalgam recycling program; and developed a wastewater self-monitoring program.

The MCHD was awarded an EPA Region 2 Environmental Quality Award (April 1999) for their outstanding work on this project.



Great Lakes industries are leading the way towards reductions in mercury emissions.

Industry Actions

Three Northwest Indiana steel mills signed a mercury reduction agreement in September 1998 with EPA, the Indiana Department of Environmental Management (IDEM) and the Lake Michigan Forum. The mills agreed to inventory all mercury on the premises and to develop facility-specific reduction plans. The partners have held several meetings focusing on inventory development and collected substantial information on the mercury content of various materials.

In 1998, EPA and the American Hospital Association (AHA) negotiated a voluntary agreement designed to eliminate mercury-containing waste by 2005, and reduce overall volume of waste by 50 percent by 2010. The AHA adopted the MCHD's mercury prevention manual (see above) as their national standard for developing hospital mercury P2 strategies. This could reduce mercury emissions by 16 tons a year. In 1999, the partnership received the Vice President's Hammer Award, which recognizes innovative approaches to improving governmental effectiveness.

PCBs

The Strategy Challenge: Seek by 2006 a 90 percent reduction nationally of high-level PCBs (greater than 500 ppm) used in electrical equipment. Ensure that all PCBs retired from use are properly managed and disposed of to prevent accidental releases within or to the Great Lakes Basin.

PCBs, although banned or tightly restricted in almost all industrial and commercial uses because of their persistence and high toxicity, remain a major cause of contamination in the Great Lakes. All five of the lakes, as well as numerous inland lakes, have fish consumption advisories as a result of PCB contamination. A number of activities are addressing the removal of PCBs from the environment.

A PCB: Sources and Regulations report and a Draft Options Paper: Virtual Elimination of PCBs have been prepared. These reports provide a framework toward meeting the PCB challenge. The Strategy PCB Workgroup drafted a letter for signature by senior Environment Canada and EPA officials seeking an organization's commitments to reduce their remaining PCBs. In July, letters were sent to the U.S. automobile manufacturers General Motors, Ford, and DaimlerChrysler, by EPA Region 5's Regional Administrator. DaimlerChrysler responded that they established a voluntary program in 1989 to



eliminate all PCB electrical equipment from its facilities. They reported that they have removed 100 percent of their PCB-containing transformers and 99 percent of their PCB-containing capacitors, and that they will complete the removal of their remaining PCB capacitors. Responses from General Motors and Ford also have been received. General Motors responded that they began a formal program in 1996 to eliminate all high-level PCB transformers from their facilities in the U.S. and Canada. They reported that they have removed 298 PCB transformers, or more than 3 million pounds of PCBs, and that they plan to eliminate their remaining PCB-containing transformers by the end of the year 2000. Ford responded that they formalized a PCB phase-out program in 1995 to eliminate all PCB equipment at their facilities globally. They projected that by 2006, 95 percent of all PCB equipment will have been removed and properly disposed of from their facilities worldwide. Additional letters were sent to businesses in the steel industry in September 1999.

EPA is attempting to adjust a 1994 estimate that 200,000 PCB transformers (those containing liquids with PCB concentrations greater than 500 ppm) existed in order to develop a Strategy PCB baseline. PCB-containing capacitors are also considered in baseline calculations. The 1998 Amendments to the Federal PCB regulations that required owners to register their PCB transformers with EPA by December, 1998 should make this task easier. The initial registration database (which needs to be quality assured) has been updated and the new information indicates that there are about 20,500 PCB transformers in service nationally, with 5,800 of those transformers located in the Great Lakes States.

EPA Region 5 and the Office of Enforcement and Compliance Assurance (OECA) drafted a proposal to promote the early voluntary phasedown of PCB electrical equipment. As part of the proposal, a company would commit to voluntarily remove and dispose its PCB equipment and self-disclose violations detected during a phasedown period. After the company completes phasing down its PCB equipment, if a

company disclosed violations, Region 5 could use a specific policy to provide penalty relief. The program will be implemented as a pilot project with utilities in Region 5. If successful, it will include other industries and maybe other EPA regions. In August 1999, Region 5 and OECA met with nine major utilities that service the Great Lakes Basin. EPA is currently evaluating comments on the proposal. In the meantime, many utilities continue to phasedown PCB transformers and capacitors.

In 1998 and 1999 Region 5 EPA continued to develop the Clean Sweep Program in Cook County, Illinois. The program educates small business, local government, and local nonprofit organizations so they can identify PCB and mercury containing materials they own. It also provides financial incentives and organized collection for the disposal of those materials. EPA Region 5 also funded a feasibility study of a PCB Used Oil Clean Sweep project. The project consists of the identification of potential PCB generators through a computer database; development and mailing of an information package; telephone follow-up; and analysis of findings.

Dioxin/Furans

The Strategy Challenge: By 2006 seek a 75 percent reduction in total releases of dioxins and furans from sources resulting from human activities. This challenge will apply to the aggregate of releases to the air nationwide and of releases to the water within the Great Lakes Basin.

EPA has announced standards for major source municipal waste combustors for dioxins/furans and will finalize standards for medical waste incinerators and for minor source municipal waste combustors. Implementation of these standards is expected to reduce releases of dioxin from these sectors by more than 75 percent by 2006 (these are discussed more fully in the Addressing Atmospheric Deposition section on page 26).

