

A Summary of
New Brunswick's
MERCURY
Action Plan



New  Brunswick
Environment and Local Government

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The Action Plan is also available on the Department's
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<http://www.gnb.ca/elg-egl>



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INTRODUCTION

As with citizens in other jurisdictions, New Brunswickers are interested in understanding more about the existence and impacts of mercury (the chemical symbol for mercury is Hg), as well as what is being done to minimize the effects of mercury on our health and the environment. This document provides:

- a description of mercury and its occurrence in New Brunswick,
- an outline of our efforts with other provinces and states on regional mercury issues
- a summary of New Brunswick's commitments toward the reduction and management of mercury within our province.

The effective management of mercury requires effort by regulatory agencies as well as other mercury users. The New Brunswick Department of Environment and Local Government will continue its

work with sectors including other provincial government agencies, the industrial and business communities, as well as institutions and professional associations to achieve the commitments in the Action Plan. The Department will also work to ensure that individuals can make informed choices in their consumer and household waste management activities.

MERCURY AND ITS PRESENCE IN NEW BRUNSWICK

Naturally Occurring Sources

Mercury is a naturally occurring metal that can be found in New Brunswick's soil and bedrock. It can be introduced into the environment by the natural weathering of rocks and soils and by volcanic activity. Mercury can also enter streams, rivers and oceans indirectly as a result of run-off.

Human-made Sources

Human activities can also introduce mercury into the environment through such activities as burning coal and other fossil fuels, certain industrial processes, mining activities, and miscellaneous waste management activities.

In New Brunswick the main sources of mercury include coal-fired generating plants, chemical plants, and medical waste incinerators. Mercury can also be found in some hospital medical equipment, dental fillings, and in household products such as fluorescent lights, batteries, electrical switches, and thermostats and thermometers.

Transboundary Sources of Mercury

Borders don't have much meaning when it comes to airborne pollutants, including mercury. New Brunswick is a contributor, but also a recipient of mercury deposition from other states and provinces. Air masses can cross

the heavily populated and industrialized areas of central Canada and the United States before they reach us, picking up pollutants, including mercury, along the way. Mercury can then be deposited directly on land or water through rain, wind, snow or dry particles.

Mercury is "persistent" - that means it does not biodegrade or break down over time. It can accumulate in the tissue of living things and move through the food chain. As we've learned more about mercury and its potential effects, we've become more concerned about its accumulation in the environment because it can be harmful to the central nervous systems of humans and other living things such as fish and wildlife. That is why mercury is considered a "neurotoxin".

REGIONAL EFFORTS

The issue of health and environmental impacts associated with the accumulation of mercury has received considerable public attention over the last several years. Although sources of mercury emissions within the North-eastern United States and Eastern Canada contribute to mercury accumulation within the region, their contribution is far less than that coming from transboundary sources in the mid-western United States.

In order to provide for controls on mercury emissions within the region and to promote leadership among the mid-western United States, the Conference of the New England Governors and Eastern Canadian Premiers (NEG/ECP) directed its Committee on the Environment to advance the understanding of mercury impacts within the region and to begin to address the reduction of mercury releases into the environment.

This initiative was formalized in June of 1998, when the Governors and Premiers endorsed a regional Mercury Action Plan during their annual meeting. It identifies steps to be taken by a Mercury Task Force on the mercury issue across the North-east region, including an overall emissions reduction target and regionally based monitoring activity.

For more information about the NEG/ECP Mercury Action Plan, please contact the New England Governors' Conference, Inc., 76 Summer Street, 2nd Floor, Boston, MA 02110; call 617-423-6900; or visit their web site at: http://www.tiac.net/users/negc/neg_ecp.html.

NATIONAL EFFORTS

In Canada, the federal government is involved in a number of initiatives aimed at reducing mercury emissions and preventing mercury pollution. For more information on Environment Canada's activities, visit their web site at: <http://www.ec.gc.ca/mercury/>. The Canadian Council of Ministers of the Environment (CCME) is leading the development of Canada-Wide Standards that will reduce or eliminate mercury emissions from industrial and municipal sources, and will reduce or prevent the release of mercury from other products. New Brunswick will continue to participate on the standard development committee for mercury. For more information on Canada-Wide Standards, visit the CCME web site at: <http://www.ccme.ca/index.html>, and select CCME Priorities, then Canada-Wide Standards.

PROVINCIAL RESPONSIBILITY: NEW BRUNSWICK'S MERCURY ACTION PLAN

Each of the eleven jurisdictions affiliated with the Conference of the New England Governors/Eastern Canadian Premiers has the responsibility for managing mercury in their respective provinces or states. And so, while continuing to participate on regional and national levels, the New Brunswick Department of the Environment and Local Government has also developed this plan that specifically addresses the mercury issues in our Province.

A Summary of New Brunswick's Action Plan:

1. **Mercury Emissions Reduction** - In New Brunswick, mercury is released to the air when fossil fuels such as coal are burned, during certain industrial processes, and when medical waste is incinerated. For these reasons, the Department's

efforts will focus on coal-fired utility boilers, industrial processes, and medical waste incinerators. The Province will take action to achieve the regional objective of a **50 percent mercury emissions reduction (from the 1995 regional emissions inventory) by 2003.**

- 2. Source Reduction Programs** - The disposal of products that contain mercury can create a waste management challenge. These items can include mercury thermometers and manometers, fluorescent lights, some hospital medical equipment, dental waste, and household products such as batteries. Accordingly, New Brunswick will direct its efforts, where feasible and practical, toward reducing the use of products containing mercury, identifying alternatives, segregating and separating waste, as well as recycling. The overall objective is to **eliminate or reduce non-**

essential uses of mercury in household, institutional and industrial products and processes, and to segregate waste and recycle to the maximum extent possible, where feasible. Audiences to be targeted include the provincial government, hospitals, schools, dental practices, and hydrometric (water flow measurement) stations.

- 3. Public Education** - By knowing more about mercury, citizens can reduce the likelihood of their exposure to it, as well as take steps to minimize their contribution to its accumulation. Our objective here is to **educate the public about the adverse environmental effects of mercury and ways to reduce the risk of exposure.** This will be accomplished primarily through the development of mercury awareness information for the general public and for dental practices.

4. **Research, Analysis and Strategic Monitoring** - As part of its commitment on a regional scale, New Brunswick will work to develop meaningful environmental indicators to measure and track progress in reducing mercury emissions. Specifically, the New Brunswick Department of the Environment and Local Government will **carry out a fish tissue sampling program in Summer 2002, collect emissions data, and publish an annual status report on mercury indicators, using the protocols and indicators as determined by the NEG/ECP Mercury Task Force.**

ADDITIONAL INFORMATION

New Brunswick's Mercury Action Plan - Progress Report

In addition to this summary, details on specific activities and progress made in support of the New Brunswick Mercury Action Plan can be found in the Mercury Action Plan Progress Report, which will be updated periodically and made available publicly.

Current copies of the Progress Report are available from any of the Regional Environment offices of the Department of the Environment and Local Government, and on our web site at: <http://www.gnb.ca/elg-egl/0010-e.html>.

For more information on mercury and related subjects, please contact the following:

New Brunswick Department of Health and Wellness:

Health effects of mercury -
Public Health and Medical
Services Division -
(506) 453-2638

New Brunswick Department of the Environment and Local Government:

Management of industrial
sources of mercury - Approv-
als Branch - (506) 444-4599.

Monitoring and effects of
mercury in the environment -
Sciences and Reporting
Branch - (506) 457-4844.

Air-quality related and other
environmental public
information - Educational
Services Branch -
(506) 453-3700, or visit our
web site at: [http://
www.gnb.ca/elg-egl](http://www.gnb.ca/elg-egl).