

at the source



published by the Canadian Centre for Pollution Prevention

Spring 2001

The Focus of this Issue

To reach and stay at the forefront of efforts to achieve sustainability, municipalities, must show leadership with environmentally responsible operations and public education on environmental issues. Whether dealing with water and sewage treatment, solid waste management, land use, transportation, pest management, smog or climate change, the most effective way to deal with environmental issues is to anticipate and prevent them. This issue of *at the source* looks at the scope of municipal influence and the challenges it faces.

The Road Salt P2 Challenge: Clear Roads or Clean Rivers

by Kevin Mercer, RiverSides Stewardship Alliance

Since Environment Canada/Health Canada released for public comments the CEPA Priority Substances List (PSL) Assessment Report on Road Salts on August 12, 2000, representatives of the salt industry and several municipal and provincial transportation agencies have made submissions to Environment Canada. These organizations are concerned about the potential impact this exhaustive five-year study, in particular its findings on the toxic properties of the four most commonly used road salts in Canada and the associated anti-clumping agent ferrocyanide salt, would have on their operations.

The consultation report concluded that:

Based on the available data, it is considered that road salts are entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, and that constitute or may constitute a danger to the environment on which life depends. Therefore, it is proposed that road salts be considered "toxic" under Section 64 of the Canadian Environmental Protection Act, 1999¹.

Many respondents were concerned about the proposed recommendation to add road salts to the list of toxic substances on CEPA's Schedule 1, thus requiring Environment Canada to develop control instruments for the substance.

Supporting the Ministers' proposed designation of road salts as toxic are non-profit organizations such as RiverSides Stewardship Alliance, watershed protection groups, and legal defence organizations. Together we are encouraging Environment Minister David Anderson to support the scientific findings of the Environment Canada assessment and place road salts on Schedule 1. The RiverSides campaign to ensure the Minister adds road salts to Schedule 1 is outlined at <http://www.riversides.org/newwin/win.html>.

Foremost, we are requesting municipalities, P2 groups, watershed protection groups and individuals to endorse the PSL Report and support David Anderson's move to place road salts on the CEPA Schedule 1 list. Listing on Schedule 1 requires that control instruments be developed to deal with the substance.

CEPA instruments must be developed within two years of the final Ministerial

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View the
Transportation
Association of
Canada's
**Road Salt
Management
Guide** at:

<http://www.captus.com/information/tac.htm>



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¹ Priority Substances List Assessment Report - Road Salts, *Canadian Environmental Protection Act, 1999*, Environment Canada/Health Canada, August 2000.

Recommendation to add a substance to Schedule 1. They can include actions such as assuring that users are compelled to implement best management practices for salt storage (coverings), handling (spills prevention), and distribution. Transportation Association of Canada (TAC), is a leading proponent of municipal salt management plans.

Salt management plans usually consist of new equipment purchases for computerized spreaders, road temperature sensors, road weather information systems, and improved training for operators. It is predicted these best management practices will reduce salt use on a tonnage per kilometre of 2-lane highway.

What salt management plans cannot account for is the weather and climate change. More municipalities are experiencing freeze-thaw temperatures than ever before, thereby resulting in the possibility of increased road salt use where not currently required.

What is missing in the proposed TAC sponsored salt management plans is any plan for the phase out of salt where it is found to have a significant impact on ecosystem health. While road salts do not immediately kill an ecosystem, over time it could reduce biodiversity, limit reproductive capacity of both flora and fauna, and percolates into ground waters with the attendant impact that a nonbiodegradable solution has, i.e. once salt is in a groundwater table it doesn't come out and can't be treated except at great cost.

Riversides is encouraging municipalities and other major salt users to use calcium magnesium acetate for roadways discharging directly to water bodies, to establish mandatory monitoring of surface waters exposed to salt use, and to establish public education campaigns to highlight chloride poisoning of rivers and groundwaters from salt use as well as to temper public expectations for black pavement within hours of a snowfall.

Now is the time to begin the long march toward its limited and controlled use where we still have need for its properties. For further information on 'The Municipal Low-Salt Diet' contact: Kevin Mercer, Executive Director (Riversides Stewardship Alliance) at: 416-392-1983.

Canadian Municipal Salt Reduction Activities

- City of Kamloops: uses a Road Weather Information System (RWIS)
- City of Edmonton: uses a RWIS as well as grit alternatives
- Parliament Hill (Ottawa): uses calcium magnesium acetate

For more information on Road Weather Information Systems visit:
<http://www.msc-smc.ec.gc.ca/cd/zephyr/spring2000/pg12.html>

Towards a Sustainable Winnipeg

-A Challenge from the Mayor-

Mayor Glen Murray wants to see Winnipeg become more sustainable. In December 2000, Mayor Murray released a discussion paper aimed at making Winnipeg a more environmentally conscious and sustainable city over the next five years. *Towards a Sustainable Winnipeg - An Environmental Agenda* offers specific actions including:

- ▶ development of Winnipeg as a clean fuels "centre of excellence"
- ▶ reduction of pesticide use and increased use of non-toxic herbicides
- ▶ enhanced bicycle paths and access to waterways
- ▶ conservation of energy and water within civic buildings
- ▶ review of financial tools, including taxation systems, to encourage sustainable development, resource conservation and pollution prevention

Some initiatives taken to date include:

- ▶ A Civic Environmental Advisory Committee to be created and adopted by Council in May.
- ▶ A Special Committee to investigate new preventative pesticide control measures using landscaping and land drainage measures and develop a new Mosquito Control By-law.
- ▶ A partnership with the Centre for Indigenous Environmental Resources to investigate the feasibility of green rooftops in Winnipeg.
- ▶ The development of a pilot project to look at environmental opportunities for Winnipeg golf courses.
- ▶ A feasibility study on UV disinfection techniques for a proposed drinking water treatment plant
- ▶ The approval by City Council of a new city-wide apartment recycling program and a 10,000 home pilot yard and leaf pick-up and composting program

If you have any questions please do not hesitate to call Andrew Cowan, Environmental Co-ordinator: 204-986-6357 or acowan@city.winnipeg.mb.ca or visit: www.city.winnipeg.mb.ca and click on 'Green Agenda'.

**Merc-Divert
Partners:**

- ▶ Honeywell Inc.
- ▶ Westburne Supply
- ▶ Nesco
- ▶ Westburne Refrigeration
- ▶ Western Supplies
- ▶ Canadian Tire
- ▶ Home Hardware
- ▶ Pro Hardware
- ▶ Zero Waste Action Team
(www.zwat.org)

Lessons Learned from the North Shore Experience

by Jim Bailey, EcoSuperior

Merc-Divert Superior is a mercury reduction initiative based in Thunder Bay, Ontario on Lake Superior's North Shore. The program aims to reduce mercury input to the environment within the Lake Superior Basin. The program is managed by EcoSuperior of Thunder Bay, a non-profit community organization for environmental action, awareness and participation. Program funding is provided by the Great Lakes Sustainability Fund and the Ministry of Natural Resources. The Ontario Ministry of the Environment provides logistical support.

Thermostats

The Merc-Divert Superior initiative includes a thermostat recycling program targeting conventional wall-mounted thermostats found in homes and buildings. A large proportion of these thermostats contain mercury and are termed "mercury switch" thermostats. These instruments work extremely well and are completely safe while in use. They become a concern however during renovations or changes to home heating systems when they are removed and discarded, often ending up in landfill sites.

Under the program, heating contractors and homeowners deposit thermostats which have been removed from use at depots set up at wholesale heating supply outlets and hardware stores. Collected thermostats, including all brands, are sent to Honeywell Inc. for recycling. All mercury switch thermostats currently produced by Honeywell contain only recycled mercury.

Fluorescent Lights

The Merc-Divert Superior project also includes a program to recycle standard fluorescent lights. Many organizations now recycle their fluorescent lights as part of the program including Bombardier Transportation, Bowater Pulp and Paper, Abitibi-Consolidated, Thunder Bay Packaging, Lakehead University, The City of Thunder Bay, Confederation College and Ontario Power Generation.

The typical four foot fluorescent light tube contains only a tiny quantity of mercury, but hundreds of millions of fluorescent light tubes are disposed of annually. This makes fluorescent lamps one of the largest sources of mercury entering the environment from consumer products.

Fluorescent light tubes are delivered to a facility specifically designed to recycle these items. All useable parts, including glass and end caps, are recycled. Most importantly, the mercury contained in the lamps is recovered. This is accomplished with a thermal recovery unit, after which the mercury is triple distilled for resale and reuse.

Lessons Learned

- ▶ Focused efforts are more efficient. Start small and expand gradually.
- ▶ Make sure you know where mercury is going. Be totally sure mercury is actually being recycled. A visit to the actual recycling site is advised.
- ▶ Education and public awareness is vital to a successful mercury reduction program.
- ▶ Work hard to publicize the program to the right people (i.e. heating contractors for thermostats, maintenance management and personnel for fluorescent lights).
- ▶ Take the time to get to know people. Solid contacts within business, industry and government can make, break, or grow a program.
- ▶ Tie mercury recycling projects at the local level to larger, international efforts. The Lake Superior Binational Program brings industries, communities and governments around Lake Superior together to reduce the input of toxic substances to the environment.

For more information about the Merc-Divert Superior program visit: www.ecosuperior.com, or contact Jim Bailey: mercdivertsuperior@yahoo.com or 807-624-2140

**Did you know
that...**

Mercury is extremely toxic, and one gram, when deposited on a 20-acre lake, is enough to raise the levels of mercury in fish high enough to trigger consumption advisories.

at the source, a newsletter produced by the Canadian Centre for Pollution Prevention, highlights pollution prevention programs and provides up-to-date information on Canada-wide activities

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C2P2 Member Spotlight



The Toronto Region Sustainability Program

-Helping Industry with Pollution Prevention Planning and Action-
by Viive Wark and Fred Granek, OCETA

Small to medium sized manufacturing companies within the City of Toronto are now eligible for financial assistance to implement pollution prevention (P2) planning and action through the Toronto Region Sustainability Program. This Program is being delivered through the Ontario Centre for Environmental Technology Advancement (OCETA), a private, not-for-profit organization, and addresses the environmental priorities of three levels of government, including, Environment Canada, the Ontario Ministry of the Environment and the City of Toronto.

The Program provides opportunities for collaborative effort on community-based sustainability, pollution prevention and eco-efficiency. Manufacturing companies with fewer than 500 employees are eligible to have a P2 assessment conducted by pre-qualified consultants that will identify the root causes of priority pollutants and wastes and recommend technology, process and operating practice improvements for their facility. The Program assists companies in meeting the P2 planning requirements of the Toronto Sewer Use By-law and the Canadian Environmental Protection Act (CEPA), and leads to real environmental reductions in toxics, smog precursors and hazardous wastes. Implementation of P2 measures may also lead to opportunities for cost avoidance, reduced liability, preservation of capital asset value, improved environmental and operational performance, and demonstrate due diligence.

As an incentive for industry to participate in the Program, the Toronto Sustainability Fund has been created to support companies by paying 50% of the P2 assessment cost, up to a maximum of \$4,000. OCETA can work with participating companies to arrange financial assistance, to pay for capital equipment and process changes, through a dedicated credit facility and assist in negotiating repayment of the loan based on actual cost savings achieved through equipment and process changes. In addition, OCETA will work with these companies to access P2 training that will build their internal capacity to carry out P2 planning independently in the future.

On behalf of the Industrial Research Assistance Program and Natural Resources Canada's Office of Energy Efficiency, OCETA is also managing the Energy Efficiency Innovation Program (EEI) aimed at assisting small to medium sized manufacturers to reduce high process energy and/or water and wastewater costs. EEI provides manufacturers with a customized energy audit and evaluation of their facility to identify opportunities to optimize energy, water and materials usage and subsequently achieve greenhouse gas reductions. Qualified engineering consultants will conduct the audits and 50% of the cost will be covered up to a maximum of \$5,000. EEI is a low-risk, low-cost process improvement approach with several benefits. Experience to-date has shown that energy costs can be reduced by an estimated 10% to 15%, resulting in high return investment opportunities. Facilities typically can achieve on average, potential greenhouse gas reductions of 1,250 tonnes per annum if audit recommendations are implemented, and in addition, audit results provide benchmarking data that can be used in developing an Environmental Management System (EMS) and registration to ISO 14001.

In summary, the Toronto Region Sustainability Program helps industry, government and industrial associations to meet their respective bottom lines, to reduce priority pollutants and wastes, to reduce costs, and improve overall performance.

For further information on how to become involved in the Toronto Region Sustainability Program, contact:

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Waterloo Launches Urban Water Protection Program

by Tammy Middleton, Regional Municipality of Waterloo

The Regional Municipality of Waterloo has initiated the Business Water Quality Program (BWQP), to help local businesses prevent water pollution. The goal of the BWQP is to prevent spills to groundwater, surface water and sewers. The program begins with a confidential audit of each facility, funded 50% by the BWQP. The audit identifies and prioritizes the water pollution prevention "best management practices" best suited to each workplace. The BWQP then provides financial assistance through grants or loans to pay for a portion of the implemented best practices.

Various projects or initiatives are eligible for funding, including spill prevention assessments, capital improvement projects, training to meet a company's pollution prevention goals, and development and implementation of an environmental management system. To ensure that incentives are made available as widely as possible, a cost share factor and an upper limit apply to individual projects and to the entire site/business.

The BWQP is linked with other local pollution prevention programs for energy efficiency and toxics reduction, presenting a "one-window" approach to businesses in the Region. All programs are managed by the Ontario Centre for Environmental Technology Advancement, to preserve confidentiality and maximize links between the programs. The majority of the funding for the BWQP is provided by the Region, with contributions from Environment Canada and the Ontario Ministry of the Environment. A Steering Committee comprised of local business people and agency and government representatives is playing a key role in development and marketing of the BWQP. The program will be officially launched on June 14, 2001. The Region has targeted thirty to forty facilities for participation in the initial year of this program and the program is expected to continue for five years.

For further information on how to become involved in the Business Water Quality Program, contact: Arnold Silver, (Ontario Centre for Environmental Technology Advancement) at: 519-575-4009 or via e-mail at: asilver@oceta.on.ca.

P2 in the Limestone City

Kingston City Council is committed to addressing environmental issues here in the Limestone City. Under the City's P2 Programme Policy Statement, the City identifies pollution prevention as the preferred alternative and pledges to eliminate or reduce the use of toxic substances and to minimize the use of energy and the generation of all wastes whenever possible. Below is a summary of the City's actions across various Divisions.

Environment Division: is working closely with the City's purchasing department to include cost effective environmentally friendly products and services wherever possible in the procurement process. The Eco-Buyer catalogue remains a valuable resource when specifying criteria for products and services.

The Environment Division, has generated great interest from Kingston area young people in regard to the *Fish & Frogs Forever* project. Local students delivered hundreds of pamphlets to subdivision residences this spring – the pamphlets outlined the unique project and explained how storm water is not treated. In addition to *door to door public education*, the young people painted symbols of fish & frogs adjacent to catch basins as a means of reminding everyone about the importance of keeping storm water clean.

Engineering Division: is investigating specifications for the use of low Volatile Organic Compounds (VOC) paint for road marking work and anticipate being able to retain contractors who have vehicles specifically dedicated to low-VOC paint in 2002.

Properties Division: has used nearly 50 gallons of no-VOC paint during renovations at City Hall and are committed to

the use of no-VOC paint, as renovations continue in municipally owned buildings. The Properties Division has also continued to reduce electricity costs at City Hall by converting the older fluorescent lighting to high efficiency lighting. Noteworthy is the cost of installing the upgraded lighting is paid back in just three years.

Fleet Division (transit garage) : has undertaken an inventory of products and revised the number of potentially hazardous products requiring Material Safety Data Sheets from 132 products two years ago - to just 102 products today. The biggest P2 improvement in the transit garage has been the replacement of four varsol parts washers with three aqueous based cleaners, thus reducing the amount of VOC gasses released during parts cleaning. The City's two other garages have also acquired aqueous based parts cleaners, as replacements. In implementing P2 projects in the Fleet Division's transit garages, it became obvious that significant savings can be made by large scale purchasing of several products. Fleet will be implementing a *'management control system'* in August 2001 to help facilitate these cost savings.

Airport Division: has issued a contract for the expansion and re-surfacing of the airport aprons. This contract includes construction of a storm water collection system that will minimize sediment and contaminant discharge to Lake Ontario and also allows for the interception of fuel spills before they get to Lake Ontario. The airport expansion also includes plans to recycle asphalt from the existing runways and apron and to use this material as granular base for the apron upgrade and expansion.

Parks Division: has been reducing the use of pesticides over the past few years. The present pesticide use policy is to 'virtually eliminate the use of all pesticides in park maintenance, by closely monitoring the health of green areas and dealing with potential problems using preventative maintenance techniques before herbicides, fungicides, and pesticides.

For further information: concerning the opportunities for pollution prevention initiatives with the City of Kingston, please contact Paul MacLachy or James English of the Environment Division at: 613-384-1770 extension #134 and 138.



Changing to Cleaner and Safer Woodburning

Over 1000 people were reached through the Great Woodstove Change-out and Education Program. The Program's goal was to improve air quality by encouraging greater public awareness of cleaner and safer wood burning practices. Around Georgian Bay, from Sault Ste. Marie to Owen Sound, a series of twelve public workshops were conducted and more than a hundred woodstove appliances were replaced between February and April of this year. Retailers in these locations provided a financial incentive to encourage trade-in of old wood stoves and fireplace inserts for a new efficient United States Environmental Protection Agency certified one.

Residential wood burning accounted for 25 per cent of all fine particulate emissions in Canada in 1995 (not including open sources such as forest fires and road dust). Fine particulate matter is listed as a Toxic Substance under the Canadian Environmental Protection Act (1999).

The Program was a project of the Hearth Products Association of Canada, working in partnership with Environment Canada, Natural Resources Canada, the Ontario Ministry of the Environment, Wood Energy Technology Transfer Inc., the Wood Heat Organization, the Ontario Lung Association and woodstove manufacturers and retailers.

New C2P2 Executive Director

The Board of Directors of the Canadian Centre for Pollution Prevention (C2P2) is pleased to announce the appointment of Chris Wolnik to serve as the Executive Director of the C2P2, effective July 2, 2001.

As a Senior Advisor, Chris has led the C2P2's pollution prevention implementation assistance program in showing clients how to develop successful pollution prevention programs. In his past year with the C2P2 he has developed and delivered pollution prevention planning training courses at University of Toronto and Royal Roads University as well as P2 training for the Ontario Health care sector.

With close to 10 years experience in pollution prevention, Chris has worked in a variety of capacities including as a regulator, advisor to industry, a hospital's environmental coordinator and corporate Environmental Health & Safety Advisor for a large Canadian-based chemical company.

Chris and the C2P2 team will continue to build on the momentum generated by the C2P2's achievements and welcomes future opportunities.



Across Canada

Pollution Prevention Activities and Events



FCM Launches Pest Management Website

Municipal officials from across Canada celebrated the launch of the Responsible Pest Management website at the Annual Conference and Municipal Expo hosted by the Federation of Canadian Municipalities (FCM) in Banff, Alberta, May 25th-28th. The website, www.pestinfo.ca, provides municipal governments and communities with access to information, tools and networks that maximize opportunities for pesticide reduction. Features of the website include:

- ▶ Municipal pesticide reduction case studies
- ▶ Tools for improving pest management performance
- ▶ Access to expertise on municipal pest management

FCM is an association representing over 700 municipalities and 75 per cent of Canadians from every province and territory, rural and urban, in Canada.



The website has been established with support from Environment Canada - National Office of Pollution Prevention and is developed and maintained by the Canadian Centre for Pollution Prevention (C2P2) in consultation with the FCM Pesticide Steering Committee. For more information please contact Tania Del Matto at: 519-337-3480 or via e-mail at: Tania@c2p2online.com.

New Municipal Workgroup at Canadian P2 Roundtable

This year's Canadian Pollution Prevention Roundtable in St. John's, Newfoundland will see the launch of the Municipal Government Workgroup on June 8, 2001. The new workgroup will serve as a vehicle for municipal governments to have their voices heard on issues related to pollution prevention, as well as providing a forum, where municipalities can work collaboratively with one another and with other partners to prevent pollution locally, regionally, and nationally. The Workgroup will correspond predominately by e-mail and quarterly conference calls. The Canadian Centre for Pollution Prevention (C2P2) will serve as the secretariat of the Workgroup. For those municipalities interested in learning more about the workgroup and how to become involved contact the C2P2 at: info@c2p2online.com.

New Network for Canadian Hospitals

With renewed interest in greening health care and new environmental challenges faced by health care institutions, a new website has been developed to show health care staff how to take action to reduce the environmental impact of their facilities. The Canadian Centre for Pollution Prevention launched *Healthcare EnviroNet* at a series of training workshops in Ontario this past winter. The website delivers a unique collection of Canadian-based information including:

- ▶ Green alternatives for health care facilities
- ▶ Regulatory updates and government initiatives
- ▶ Canadian case studies

The website has received strong support from The Canadian Coalition for Green Health Care, a recently constituted coalition of major national health care and environmental organizations. The mission of the Coalition is to minimize the adverse environmental and human health impact of Canada's health care system.

Healthcare EnviroNet has been established with support from Environment Canada - Ontario Region and is developed and maintained by the Canadian Centre for Pollution Prevention in consultation and partnership with health care and non-government organizations. Visit www.c2p2online.com and click on the Healthcare EnviroNet logo.

Commuter Challenge 2001

The Commuter Challenge is a week-long, friendly competition among Canadian cities to see which one can cut its air pollution the most by using active and sustainable transportation. This year, the New City of Hamilton has challenged the Region of Waterloo to a friendly "duel". The Waterloo event will be held for three days on June 5-7.

Last year, over the two Waterloo challenge days, approximately 4,000 kilometres were travelled in greener, more environmentally-friendly ways. The reduced air pollution for Waterloo Region totaled 7,500 kg (carbon dioxide, hydrocarbons, carbon monoxide and nitrous oxides). For information about the Waterloo Commuter Challenge, visit: www.greencommutecanada.org.

Parting Words of Praise and Best Wishes

-Marianne Lines Leaves a Legacy of Bringing People Together-

In an effort to extend our gratitude and best wishes for our parting Executive Director, Marianne Lines, the Canadian Centre for Pollution Prevention solicited the thoughts and feelings of those who worked closely with her over the years. Here is a collection of their sentiments:

Her Ability to Bring People Together...

"Marianne has shown over the years that pollution prevention is not just technical information, it is about PEOPLE! She didn't just establish C2P2 as a Clearinghouse, she ensured that it was a vehicle for getting pollution prevention practitioners together."

"The International Pollution Prevention Summit, held in October 2000 in Montreal, was a heroic undertaking. With her customary aplomb, Marianne led the Summit process from conception through to delivery of the final report to funders. While preparations for the Summit were sometimes gruelling, Marianne's quiet determination, keen intellect, sense of humour, and unquestionable integrity were instrumental to the success of the event. Above all, Marianne is the embodiment of grace under pressure. She is a true inspiration to any of us fortunate enough to have worked with her. "

"Marianne has helped Environment Canada communicate the messages of the Great Lakes Binational Toxics Strategy to a larger stakeholder forum through C2P2's network."

As a Colleague and Friend...

"She is a wonderful person with whom to work. Always considerate of others and appreciative of their work and advice. Organized and clear in her instructions. Courteous and fair in dealing with others. Not rushed, but with a quiet, positive persistence. A person of integrity. I count myself very lucky to have known and worked with her."

"Marianne is a very gifted person with whom I am glad to have had the chance to work, get to know and be inspired by. I extend to Marianne best wishes from friends and colleagues at Environment Canada."

Extending Best Wishes...

"The U.S. National Pollution Prevention Roundtable extends its best wishes to Marianne as she makes the transition from Canada to the Lone Star State. We look forward to working with her in the future as she takes on the role of global P2 information network guru!"

"As Executive Director of the Canadian Centre for Pollution Prevention, she created and nurtured her team so that it could fly. Her legacy lives on and will continue to thrive."



Marianne Lines will join her husband who has been working for a Houston-based company since 1999. We wish Marianne every success in her new endeavours and are pleased she will maintain an advisory role and is available to support C2P2's project delivery on a contract-basis.

Article contributors:

Fred Granek, James Riordan, Peter Fischer, Mary MacDonald, Natalie Roy, and Alan Waffle.

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