



**Hamilton
Industrial
Environmental
Association**

**Report to the Community
2013**

We are HIEA... a non-profit association of local industries. HIEA provides an open forum for community members and local associations to discuss their environmental concerns through our Community Advisory Panel (CAP). HIEA has a strong history of connecting with local neighbourhood associations and working with the community to fulfill HIEA's mandate:

“to improve the local environment – air, land and water – through joint and individual activities, and by partnering with the community to enhance future understanding of environmental issues and help establish priorities for action.”



2013 was another successful year for the Hamilton Industrial Environmental Association (HIEA), and I'm pleased to have continued in my role as chair of the Board of Directors. Our 12 member companies are proud of the impact they have made in the Hamilton community.

Our Commitment...

HIEA member companies are committed to the conservation and protection of our natural environment and commit to...

- operating our facilities in a safe, responsible and environmentally responsible manner;

- monitoring our environmental performance, meeting key performance metric targets;
- transparent and open communications regarding environmental performance;
- responsiveness to community enquires, and;
- working in partnership with community stakeholders to promote environmental awareness

Our Environmental Performance...

Each year, HIEA reports on the aggregated environmental performance of its member companies. The Board of Directors are pleased to share the highlights of our 2012 environmental performance both in this annual report and on our website – www.hiea.org

Our Community Support...

By working in partnership with residents and community associations, HIEA continues to provide financial support to initiatives that enhance and protect our local environment. In 2013, HIEA continued its support of local environmental activities by sponsoring various programs including the Bay Area Restoration

Council, the Hamilton Children's Water Festival, the Hamilton-Burlington Earth Day Eco-Festival, the Hamilton Conservation Authority and the Hamilton Naturalist Club. Many of these programs are highlighted later in this report.

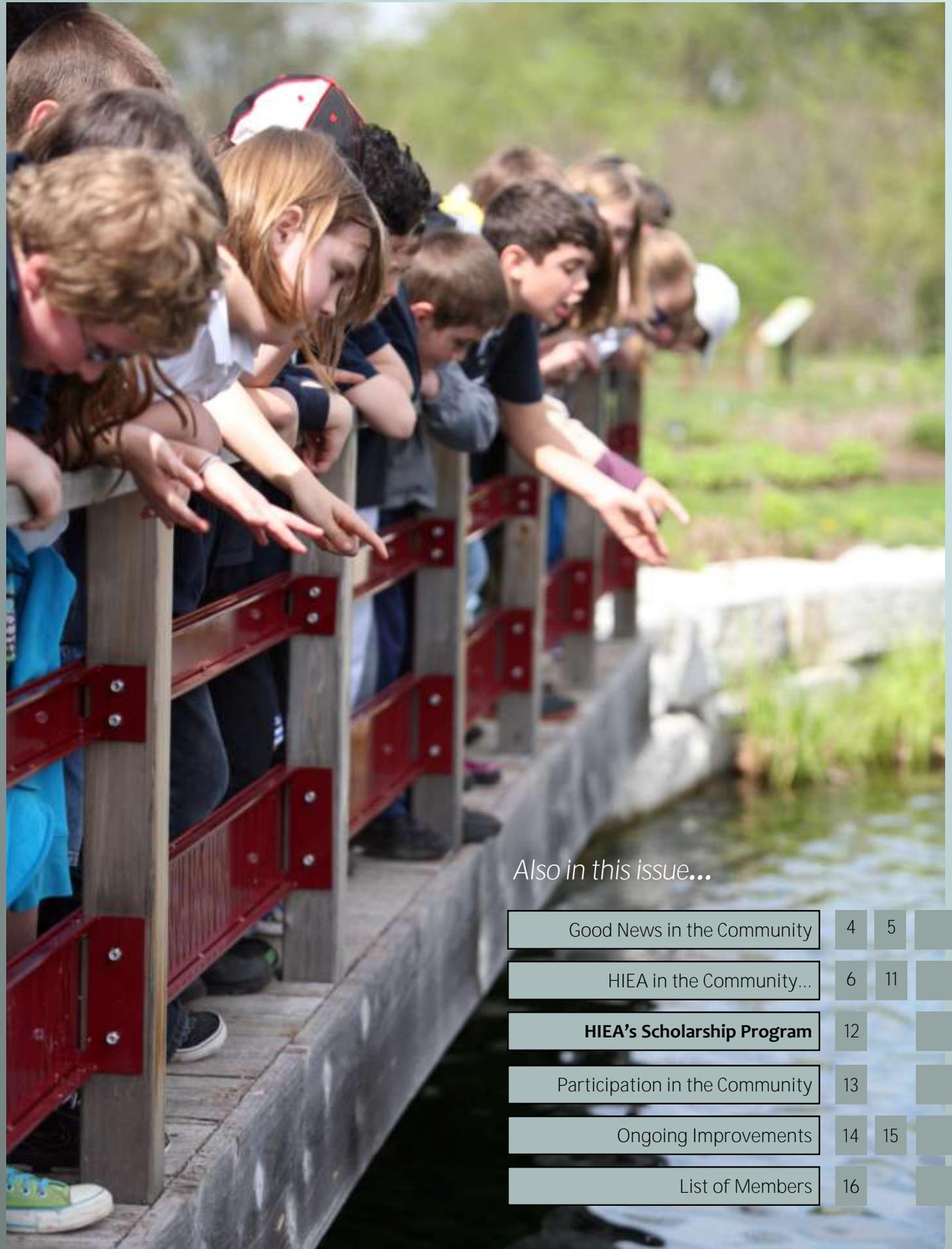
Through HIEA's post-secondary scholarship program at Mohawk College, we were again pleased to award bursaries to 3 students studying in various Environmental Studies Programs in 2013. *Congratulations Jocelyne Aichwalder, Stephanie Sta. Maria and Gregory Kaneva!*

You're invited to Join Us ...

As a neighbour to our industrial operations, we welcome your involvement. For more information about HIEA's Community Advisory Panel (CAP) and other initiatives, visit www.hiea.org or contact us at 905-662-2131 or communications@hiea.org.

A handwritten signature in black ink that reads "Jim Stirling".

Jim Stirling
Chair of the Board - Hamilton Industrial Environmental Association



Also in this issue...

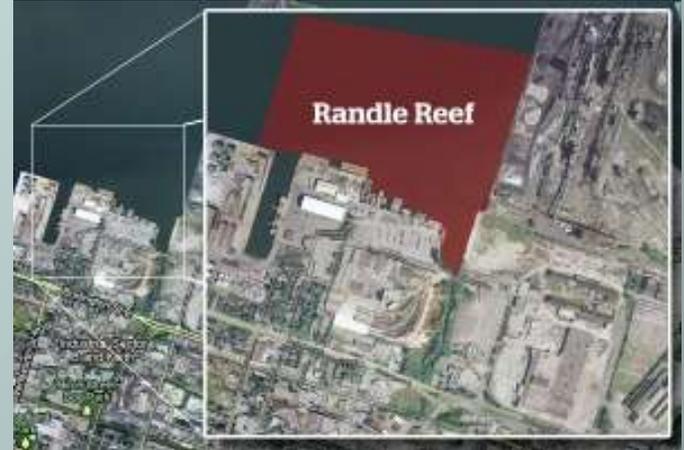
Good News in the Community	4	5	
HIEA in the Community...	6	11	
HIEA's Scholarship Program	12		
Participation in the Community	13		
Ongoing Improvements	14	15	
List of Members	16		

Good News for the Hamilton Community



Photo by Simon Wilson/Canadian Press Images © Her Majesty The Queen in Right of Canada, Environment Canada, December 18, 2012. Reproduced with the permission of the Minister of Public Works and Government Services Canada.

(from left to right): Frank Harrison, U. S. Steel Canada, David Sweet, MP for Ancaster—Dundas—Flamborough—Westdale, Rick Goldring, Burlington Mayor, Bob Bratina, Hamilton Mayor, Lisa Raitt, Minister of Transport/MP for Halton, Peter Kent, then Federal Minister of the Environment, Jim Bradley, Ontario's Environment Minister, Mike Wallace, MP for Burlington, and Mel Hawkrigg, Hamilton Port Authority's Board of



Source: <http://www.cbc.ca/news/canada/hamilton/news/hamilton-harbour-randle-reef-cleanup-gets-final-go-ahead-1.1873366>

Significant Step towards Randle Reef Remediation

In September of 2013, an important milestone for the Randle Reef sediment remediation project was reached with the signing of all required agreements to fund and implement the project. The partners working together on the \$138.9 million clean-up project are the Governments of Canada and Ontario, the City of Hamilton, the Hamilton Port Authority, U. S. Steel Canada, the City of Burlington, and Halton Region.

Located in the southwest corner of Hamilton Harbour, the 60-hectare Randle Reef site contains sediment contaminated with PAHs (Polycyclic aromatic hydrocarbons) and other toxic chemicals, a legacy of a number of past industrial processes dating back to the 1800s.

In 1985, Hamilton Harbour was identified as an Area of Concern under the Canada–United States Great Lakes Water Quality Agreement due to significant

water quality impairments. While many improvements have been made to reduce pollution in the harbour, the contaminated sediment at Randle Reef remained a principal environmental challenge. Despite all the other initiatives to restore water quality and aquatic ecosystem health in Hamilton Harbour, it cannot be delisted as an Area of Concern until the Randle Reef site has been successfully cleaned up.

The remediation project will involve the construction of an engineered containment facility made of double sheet steel pile walls, which will be driven to depths of up to 24 metres into the portion of the most contaminated sediment. Contaminated sediment from outside the facility will then be dredged and placed within the facility. The new area will then be developed into new port facilities. Environment Canada will act as project lead, engaging Public Works and Government Services Canada as the procurement

authority and project manager. Construction is expected to begin in 2014 and take up to 9 years to complete.

Cleaning up Randle Reef will improve water quality. It will also remove current restrictions on navigation and generate economic returns through the creation of valuable new port lands.

HIEA member companies continue to make major financial contributions to the economic well being and environmental protection of Hamilton.

Collectively, HIEA member companies have invested over \$76 million on environmental capital expenses in the last 5 years — an average \$15.2 million per year in environmental capital projects.

In 2012 HIEA member companies employed almost 7,000 people and paid over \$24 million in municipal taxes.

Triple M Invests \$25m in new plant

November 16, 2013 - 'Reprinted with permission' - The Hamilton Spectator



The work inside Triple M Metal's new seven-storey, \$25-million sorting facility is like panning for gold — a search for valuable metal buried in the heaps of material left over from shredding cars, appliances and other items for steel.

"There's the money," said Tom Anderson, holding out a handful of scrap (non-steel) metal fresh from the sorting process.

Triple M is a Canadian-owned private company that has several facilities in Canada, including three in Hamilton, the U.S. and Mexico and has been named one of Canada's 50 best managed companies for eight years in a row. It has about 600 employees, with about a third in Hamilton.

One of the company's activities is recycling vehicles and appliances into scrap steel which it resells on the global market. When those items are shredded, other material is a byproduct of that process, such as rubber, dirt, plastic and non-ferrous (non-steel) metals such as aluminum, copper and brass.

Triple M had been sending that material to a third party recycling company in the U.S. for processing but realized that most of the material was ending up in landfill, including the valuable non-ferrous metals. Plus it was expensive to ship.

"We knew we could find a way to divert some of that from landfill," said Anderson.

Construction started on the Brampton Street building in February with the commissioning of the plant this month.

The new plant — which specifically sorts the non-ferrous metals after shredding — is believed to have the largest capacity of any facility of its kind in North America with the ability to process about 900 kilograms an hour. It created five new jobs, a sign of the significant amount of automation in the plant.

Its scrap steel is resold to steel mills, such as Dofasco and U. S. Steel Canada's operations at Lake Erie Works in Nanticoke as well as other steel handling companies such as smelters.

The new plant includes leading-edge technology that detects the non-ferrous metals, including plastic coated copper wire, sorting them out into heaps ready for shipping anywhere in the world while diverting the waste stream to a pile outside that is then shipped to landfill.

Anderson said about 90 per cent of the material still goes to landfill but the 10 per cent that is now diverted is completely recyclable. And worth money with copper alone going for about \$3 a pound, he said.

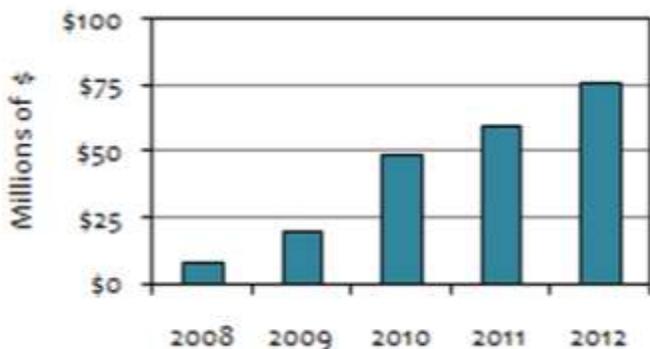


BY THE NUMBERS

- 40 key pieces of equipment in the new building
- 60 tonnes an hour—the capacity of the new plant
- 5 new positions
- \$25 million value
- 3,112 square metres
- \$1b + Triple M Metal annual consolidated revenue



5 Year Cumulative Environmental Capital Spending



HIEA in the Hamilton Community...

Bay Area Restoration Council—Yellow Fish Road Program



adult volunteers. After learning about the program these individuals painted a total of 280 storm drains with bright yellow fish and attached an adhesive disk with the message “Only Rain Down the Drain!” and delivered flyers to 920 nearby

residents with the tools and information they need to make more conscientious decisions. BARC has been using this program since 2005 to encourage members of the community to make behavioral changes to protect Hamilton Harbour and its watershed.

BARC’s Yellow Fish Road™ program helps to increase youth understanding and appreciation of Hamilton Harbour, its watershed, and the negative impacts of runoff pollution through storm drains.

In 2013 BARC staff delivered 7 presentations to 138 youth and 26

households.

These flyers provide information about the Yellow Fish Road™ program, ways to properly dispose of hazardous materials, and BARC contact information. This material provides



Waterfront Trust—Hamilton Harbour Fishing Derby



their families to learn about the waterfront, wildlife and improvements to the harbour.

This family event, offered free of charge, includes fishing competitions and fun for all ages. In 2013 the Derby attracted over

The Hamilton Harbour Fishing Derby provides an educational opportunity for area children and

5,000 people to the waterfront and awarded trophies, prizes and 1,000 fishing rods.



City of Hamilton—Children’s Water Festival



The Children’s Water Festival has activities geared to water conservation, water science and technology, water awareness and water protection. City of Hamilton Water and Wastewater division staff view this as an amazing opportunity to not only educate, but provide our youth with the knowledge to educate others.

The 2013 event marked the 6th year of this fabulous community festival!

A reworked schedule allowed organizers to maximize the total attendance increasing registrations by 14% to 100 classes with over 2,800 students and their teachers attending over the three day event. Students were able to participate in 30 hands on, interactive

water activities, on several different topics, that were led by community partners who are experts in the field.

Participation in these activities helped to provide the students with knowledge and a new respect and passion for water. 66% of students surveyed indicated that they learned a lot of new things about water while 33% indicated that they had learned a few new things.



HIEA continues to support local community programs...

“HIEA has developed strong relationships with many community groups and we are proud to lend our support to these worthwhile projects.” - Jim Stirling, Chair of the HIEA Board of Directors

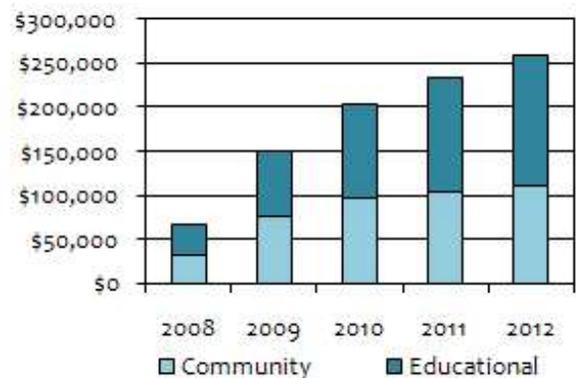
Through direct financial sponsorship and volunteer efforts of its member companies, HIEA continues to provide support to environmental and education programs within the Hamilton community.

The annual submission deadline for applications is September 30th and will be reviewed by committee following this date. Funding decisions are released by January 31st and funds distributed before the HIEA annual meeting in March.

For information about eligibility for funding, our application forms,

and the process, please check our website www.hiea.org for more details.

5 Year Cumulative Support



HIEA in the Hamilton Community...

HIEA's chair helps open first Environmental Summit



Jim Stirling provided opening remarks at Hamilton's first Environmental Summit on Thursday, April 25, 2013. This sold-out event featured sixteen speakers from government, academia, non-profit organizations, businesses and industry that came together to both discuss and celebrate environmental initiatives underway in, or affecting, the City of Hamilton. Ninety-five people from forty-six different organizations participated in the day's events which included an interactive workshop to discuss

current and future environmental issues affecting the Hamilton area, possible solutions, required resources and opportunities for collaboration.

Participants selected one of the following ten theme areas: agriculture and food, air quality, climate change, consumption, energy, land use, natural areas, corridors and biodiversity, transportation, waste management, and water for discussion. Through the topic facilitator, participants were asked to identify the three most prominent issues that arose across the discussions of their topic. These three key issues for each topic were then presented to the larger group.

All participants were then invited to vote on these thirty issues, selecting what they felt were the ten topics most pressing for

Hamilton at this time. The top 10 issues identified as a result of this exercise were: brownfields, loss of urban natural areas, open space, and parkland, complete streets and complete communities, rapid transit and funding, wise water use, energy conservation, lack of climate change education, vehicle emissions, an unwillingness to change lifestyles on a daily basis, and a consumption-dependent economy.

Participants also discussed what steps they believed would be necessary to improve collaboration and foster partnerships ensuring continued environmental action in the city.

City staff reviewed and reported on the Summit outputs making recommendations to council. They continue to work on the various theme areas that were identified including planning a 2014 summit.



Sustainable Hamilton

HIEA has supported Sustainable Hamilton since 2012 and became a reporting partner in their first report in 2013. Lori Small accepted HIEA's certificate at the evening of recognition on June 24.



Total Off-Site Disposal

Hamilton is an important recycling centre and HIEA companies are major participants. This category is comprised of waste streams sent to landfill and/or off-site for treatment/destruction and includes

subject waste, commercial/domestic waste and non-hazardous industrial waste. Total off-site disposal levels fluctuate as a result of changes in year to year production.

HIEA member companies purchase **each others' by-products** and waste providing each other with raw materials and feed stock to be recycled or manufactured into other usable products.

Hamilton Conservation Authority—Migratory Bird Lookout Platform

The West End of Lake Ontario is one of 11,000 sites that have been designated as Important Bird Areas (IBAs) worldwide. The Important Bird Areas Program is a global initiative to identify, monitor, and **conserve the world's most important sites for birds and biodiversity.** Canada's national IBA Program is managed jointly by Bird Studies Canada and Nature Canada. The global IBA Program is coordinated by BirdLife International.

The West End of Lake Ontario was designated an IBA because it regularly supports globally significant numbers of several duck species from fall through spring. These include Greater Scaup, Long-tailed Ducks, Common Goldeneyes, and Red-breasted Mergansers. White-winged Scoters and Red-necked Grebes regularly occur in continentally significant numbers and in some years at globally significant levels.



Looking west at Fifty Point Conservation Area

At Fifty Point Conservation Area, you are in the heart of the West End of Lake Ontario IBA. With a combination of several habitats – lake, pond, field, and forest – this small area is one of the premier spots in Ontario to see an amazing array of birds. The shore of Lake Ontario also helps concentrate many migrating birds here. Fifty Point juts out almost 1.5 km beyond



the adjacent shoreline. Birds following the shoreline are pushed out along the point, while those flying offshore often come quite **close.** **The point's elevation helps** observers get great views of ducks, gulls, shorebirds, and other birds flying by on the lake. The best time to watch for migrating waterbirds is in the fall. When north winds are blowing, birds are pushed close to shore, flying around the point at very close range.

From a bird's perspective, Fifty Point is an island of natural habitat surrounded by urban development and water. Many migrating birds take a break from their long journeys to stop and refuel at this oasis. During spring and fall migration, the wooded areas of Fifty Point can be flooded with small songbirds. The Fifty Point Marina also provides a sheltered area favoured by many birds during foul weather. Ducks, gulls, terns, and many other species can often be found taking refuge here, resting or foraging. During the spring and summer, the marina is an important feeding and loafing area for Common and Caspian **terns.** **Fifty Point's shoreline is as varied as the birds that stop here.** The rocky shore is a favourite stop for rare species like Purple Sandpipers. The sandy beach attracts several other migrating shorebird species.

The IBA designation is scientific, not legal. Unlike some IBAs, very little of the west end of Lake Ontario falls within formally protected areas. While much of the shoreline has been developed, several parks and conservation areas provide important protection for the shoreline, and places where people can connect with nature.

In 2013, HIEA partnered with the Hamilton Conservation Foundation to provide the funding needed to help recognize this unique feature in the Hamilton area and provide easy access for the community. The funding will allow the Conservation Authority to build a migratory bird lookout platform at Fifty Point Conservation Area and develop and install interpretative signage at this new platform, as well as install



Lakeland Lookout platform at Confederation Park

panels that will be situated at the existing Lakeland Lookout platform at Confederation Park.

It is expected that over 400,000 people per year will become more aware of this globally significant ecological highlight as a result of the signage and platform.

Currently there are over 300,000 visitors annually at Confederation Park and an additional 100,000 visitors per year in Fifty Point Conservation Area.

HIEA in the Hamilton Community...

Hamilton Naturalist Club—Students at Lands Inlet Project



The Hamilton Naturalist Club (HNC) “Students at Land’s Inlet Nature Project” provided hands on learning experiences for 63 grade 3 and 4 students from Cathy Wever Elementary School.

These students grew 72 native plants from seed in their classrooms. They cared for the plants and monitored plant growth. 55 students visited the HNC’s Cartwright Nature Sanctuary

where they completed a Scavenger Hunt, learned to identify trees and searched for wildlife homes, and 58 students visited the HNC’s Amaolo Nature Sanctuary where they planted their plants, caught insects, learned to identify new trees and vegetation, and studied pond life.

Through this project, the HNC was able to engage, educate and inspire students to discover the wonders of our local natural world and to then play an active role in one of the HNC’s restoration projects. As well as learning

about and experiencing nature during both field trips the students and the 8 volunteers had a tremendous amount of fun. The teachers passed on very beneficial comments and have asked HNC to come back next year.



Earth Day Hamilton—Burlington—EcoFestival



Earth Day Hamilton-Burlington EcoFestival offers various nature experiences and hands-on learning in an amazing setting to almost 3,000 local middle school students. This free multi-day event has been designed to educate and empower

participants to make environmental change.

The workshops provide education, environmental awareness, tools for change and inspiration which will translate into action and improve the local environment.

The responses from students, teachers, workshop leaders and hike guides continues to indicate the value of this event. Hike Leader Chris Hamilton, Community Relations, Hamilton Conservation Authority says, “ I have to tell you,

the three days I spent at Eco Fest were three of the most valuable days out of all the outreach I do.

There was a boy who had never seen a frog. There were kids who knew next to nothing about nature or the natural world they live in. The impact we had on their futures and development is profound. No matter what I might come up with by way of workshops or programs, there is nothing I could develop which would compare to the impact and value of guiding these children first-hand through nature.

I will be back next year for all three days as a hike leader because it had an impact on me as well”.

Our Industrial Eco-system

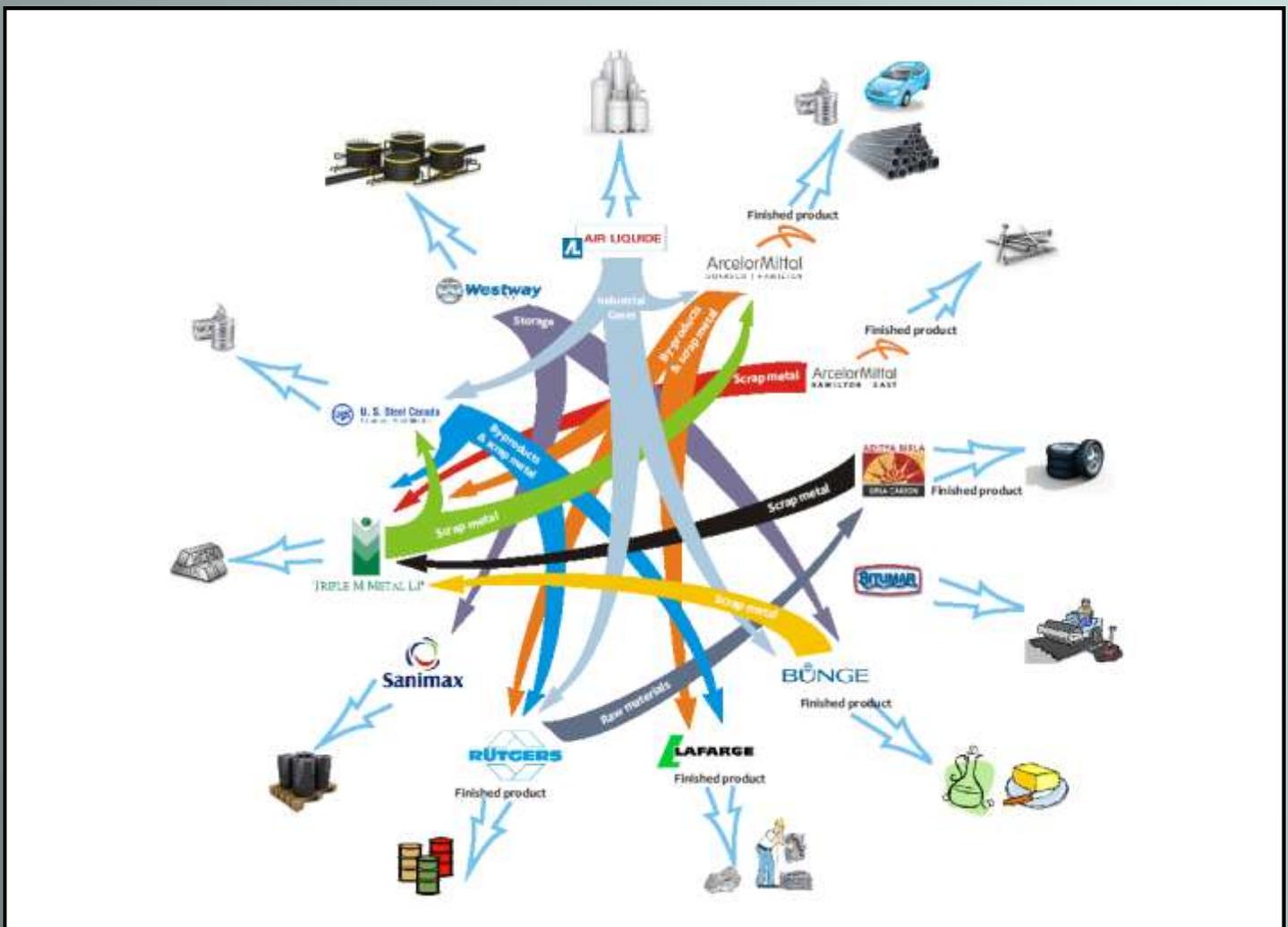
HIEA member companies have been following sustainable practices together as HIEA since 1995 but their history goes back much farther. Interdependence between members is critical for individual success, from providing each other with raw materials and **feed stock to using each others' end products and services.** What was once considered waste and was sent to landfill is now sold to other members as their raw material. Working within their own **“industrial eco-system”** the members continue to strive for environmental improvements. **HIEA’s aggregated environmental performance** continues to show

reductions and improvements over the 1997 base year. Members meet regularly and discuss challenges and issues to help each other find solutions.

HIEA members have made many investments in the past few years that have had a significant positive impact in the community. Some examples include: the installation or upgrades to individual wastewater treatment facilities at a capital cost of over \$36 million; consolidation of two local slag operations to a tract of reclaimed land at a cost of \$20 million taking as many as 15,000 trucks/year off the roads and enabling direct

shipment off pier 22; and building the Strathearne Avenue pipe bridge from pier 23 to support marine transfer operations allowing direct offloading from vessels to onsite storage tanks – a process that involved the use of a fleet of trucks around-the-clock and six to seven days to complete. Now a vessel offloading **takes one to two days and doesn’t** require any trucks.

HIEA members not only work together to support each other but also provide both financial support and volunteer assistance to support the work of local environmental not for profits in their efforts to provide information and education about good practices within the community.



HIEA's Scholarship Program

Preparing today's students for tomorrow's world...

HIEA initially established its bursary fund at Mohawk College in 2006 with matching funds from the Ontario Trust for Student Support (OTSS) program. In 2009 HIEA provided additional money and doubled the fund.

These funds provide financial support to students who are currently enrolled in the Energy

Systems Technology – Clean & Renewable Energy, Chemical Engineering Technology – Environment or the Environmental Technician with or without Co-Op Internship programs at Mohawk College. Each year the interest earned within the fund is distributed to students who meet the listed criteria. HIEA is pleased to provide support for Mohawk

College students. Please check our website www.hiea.org to learn about our past winners.

For more information and/or to apply for this bursary please check the Mohawk College website: www.mohawkcollege.ca or contact: Mohawk Student Awards at The Square - Student Services Room C102 905-575-2066.

Congratulations to HIEA's 2013 Scholarship Winners



Jocelyne Aichwalder is an Energy Systems – Clean and Renewable Technology student at Mohawk College. She is currently finishing

her 2nd year and will be applying to university for a bachelor of engineering program once she graduates from Mohawk. She is an environmentalist at heart and spent many months rehabilitating native Canadian wildlife on her summers off from school. She hopes to one day work in the clean and renewable energy field, helping reduce greenhouse gases and make the world a better, healthier place to live.

Jocelyne attended the HIEA annual meeting where members were able to meet her and discuss her goals for the future.



Greg Kaneva graduated from the Chemical Engineering Technology program in 2013 with honours. His goals for the future are to obtain

employment in the environmental or renewable energy fields. He worked for Environment Canada as a co-op student, providing chemical testing on the waters of the Great Lakes and various streams located throughout Canada. Through this data, the monitoring of various elements appearing, or changing in our lakes, were able to be analyzed. His interests are hockey and music which he actively participates in.



Stephanie Sta. Maria is a recent graduate with Honours of the Chemical Engineering Technology program at Mohawk College. In 2012 she completed a one year co-op with Imperial Oil as a part of the Sarnia Research team and began her career with them as a Research Technologist in June 2013. She is proud that she was able to uphold Mohawk College's reputation of producing professional, mature and employable graduates. As a part of the Imperial Oil Research team she will be participating in many of the fundraising and community outreach programs Imperial Oil supports in Sarnia, Ontario.

Participation in the Community

HIEA Member companies remain dedicated to reducing their environmental footprint and have made a commitment to protect **Hamilton's air, water, and land by:**

- Operating their facilities in a safe and responsible manner and in a way which does not adversely impact neighbouring communities;
- Monitoring environmental performance and adhering to key performance metrics;
- Conserving and protecting the natural environment;
- Being responsive to community enquiries and concerns;
- Working in partnership with residents and community associations to promote environmental awareness;
- Communicating their environmental performance and improvements in a transparent and open manner.

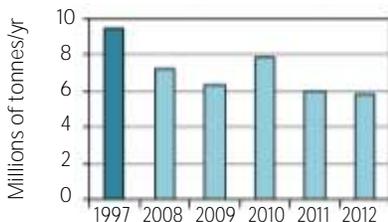
HIEA members not only work together to support each other but also work with other local environmental groups to encourage improvement in the Hamilton community.

As stated on their website - "**Clean Air Hamilton (CAH)** is a multi-stakeholder group dedicated to improving air quality in Hamilton's community. This group is committed to improving citizens' health and quality of life through communication and promotion of realistic, science-based decision-making and sustainable practices. Formed in 1998, Clean Air Hamilton works to improve air quality in Hamilton by: Initiating research on air quality; Providing policy advice to all levels of government; Encouraging emission reductions amongst companies operating in Hamilton; and Promoting

behavioural changes amongst individuals living and working in **Hamilton.**"

HIEA and its members are active members of Clean Air Hamilton, participating in several committees in 2013 including: the Air Quality Task Force, established as a result of the motion passed by the Board of Health to "*investigate and make recommendations to the City on actions that can be taken to reduce air pollution in Hamilton*"; the CAH Structure and Planning Committee established to review the **organization's terms of reference** and policies; and the Search Committee established to look for a new chair following the sudden **passing of CAH's long standing** and well respected chair Brian McCarry.

Greenhouse Gases



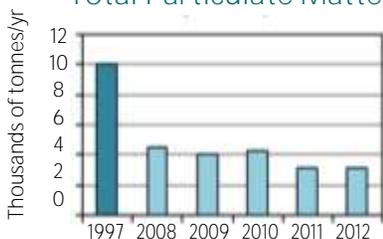
Greenhouse Gases (GHG)

Greenhouse gases emitted by HIEA member companies are primarily carbon dioxide, with small quantities of methane and nitrous oxide. 2012 emissions were 38% lower than 1997 levels

and were 19% lower than 2008 levels.

GHG emission reductions are the result of energy conservation, increased waste energy recovery, increased process yields and efficiencies and operational changes.

Total Particulate Matter



Total Particulate Matter (TPM)

Total Particulate Matter emissions are 69% below those reported in

1997, and are 31% lower than those in 2008. Although there are improved testing methods and better information for PM10 and PM2.5 which results in higher reported numbers of those parameters in 2008 versus 1997 TPM emissions continue to show a reducing trend.

Particulate emissions control is a priority for HIEA member

companies. Numerous programs are in place to reduce particulate emissions, including point source controls, improved operating practices, paving of roads and yards, greenbelting, and shutdown of obsolete equipment. HIEA has also contributed almost \$134,000 to local tree planting programs since 1999 to assist in managing particulate emissions.

HIEA's Ongoing Improvements...

Water Treatment

Many HIEA members operate their own waste water treatment

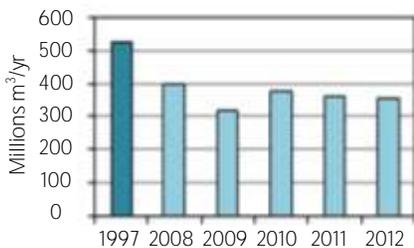


facilities. Ongoing updates and improvements to these have helped members ensure that their discharges are in compliance with the current requirements of the City of Hamilton's Sanitary Sewer By-Law. Some HIEA members discharge treated water to the municipal sanitary sewer system while others discharge treated water to Hamilton

Harbour. Some sites also discharge untreated rain water into the system. Water entering the sewer system is directed to a Hamilton Wastewater Treatment Plant where it undergoes further treatment before being discharged to the Harbour.

The data provided below represents the total water discharges of all member companies to both the municipal sanitary sewer system and the harbour.

Hamilton Harbour Water Use



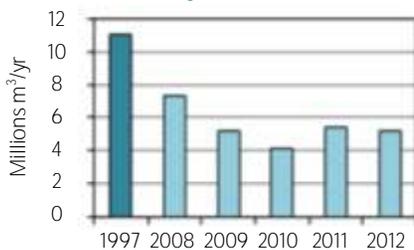
Hamilton Harbour Water Use

Hamilton Harbour water use has decreased by 33% since 1997 and shows a declining trend over the past five years apart from the effect of unusually low operating levels in 2009.

A large portion of this water is used for non-contact cooling. This water circulates within equipment without contacting a process and does not pick up contaminants.

Hamilton Harbour water is also used for dust control.

City Water Use

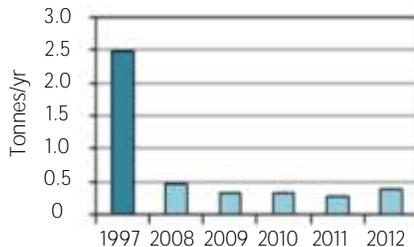


City Water Use

HIEA companies have reduced their city water use by 53% since 1997. Although city water use has

fluctuated over the past five years it continues to show a declining trend.

Total Suspended Solids



Total Suspended Solids

Total Suspended Solids discharges have been reduced by 85% since 1997, with 58% of these discharges going to a city wastewater treatment plant for further treatment. Over the past five years discharges continue to show an overall reducing trend

through the implementation of improved water recycle systems and shutdown of obsolete facilities. New water treatment capabilities added in 2011 and commissioned in 2012 by HIEA member companies continue to reduce these discharges significantly.

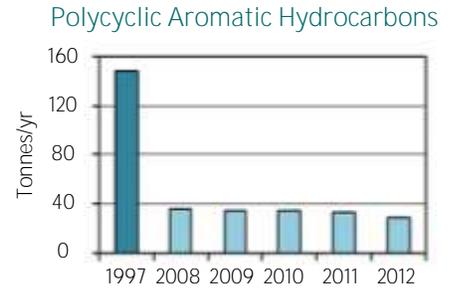
HIEA's Ongoing Improvements...

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons are a group of chemicals that are formed during incomplete burning of coal, oil, gas, garbage or other organic substances. PAHs are usually found as a mixture containing two or more of these compounds.

PAH emissions have been reduced by 81% since 1997, are now 20% lower than 2008 levels and continue to show a downward improvement.

These reductions have been achieved primarily by improving coke oven operations.



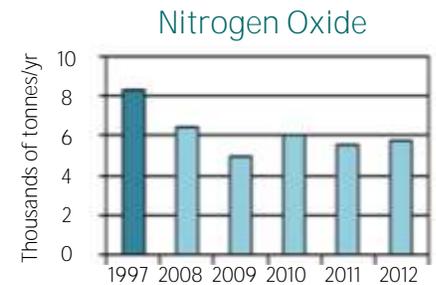
Nitrogen Oxide (NO_x)

Nitrogen oxides are precursors to ground level ozone. The main source of NO_x is the combustion of fuels.

HIEA member companies have reduced their NO_x emissions by 31% since 1997. Over the last 5

years these emissions have fluctuated but continue to show a reducing trend.

Improvements have primarily been achieved by the installation of advanced combustion technology (low-NO_x burners) and shutdown of obsolete equipment.

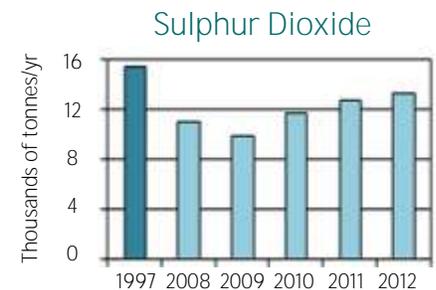


Sulphur Dioxide (SO₂)

Although SO₂ emissions have fluctuated over the past five years and show an increasing trend, the total emissions remain 14% lower than 1997 levels.

Changes or slowdowns in production requiring different

fuel sources results in higher sulphur oxides emissions. Several options are being implemented to reduce these emissions including switching to lower sulphur fuels and feedstocks and shutting down obsolete equipment.



HIEA member companies are committed to improving their environmental performance and the maintenance of their facilities. Many member companies are ISO 14001 certified and all members follow a prepared environmental management improvement program. These programs have been developed to assist their

organization to: (a) minimize how their operations (processes etc.) affect the environment; (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and (c) continually improve. These management programs pertain to the process of how a product is produced, rather than to the product itself.

Companies regularly perform audits using third-party organizations to ensure they are meeting the requirements set out in their improvement programs. HIEA members work closely with provincial and city regulators to ensure all reasonable steps are taken to improve their processes and remain in compliance.

We are HIEA...

... a non-profit association of local industries. HIEA provides an open forum for community members and local associations to discuss their environmental concerns through our Community Advisory Panel (CAP).

HIEA has a strong history of connecting with local neighbourhood associations and working with the

community to fulfill HIEA's mandate:

"to improve the local environment – air, land and water – through joint and individual activities, and by partnering with the community to enhance future understanding of environmental issues

and help establish priorities for action."

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Member Companies

