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# 2016 Environmental Survey

# Reduced reporting – detailed

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**December 2017**

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# Executive Summary

This report summarizes the results of the environmental survey of HIEA companies for the years 2012 through 2016. The data in this report represents information provided by 9 of the 12 HIEA member companies who responded to the electronic survey. The data was compiled by Karen Logan. This report was written based on the compiled data and uses 1997 as a base year to evaluate environmental trends. Data from new members is only collected and included in the survey from the date they joined. Information was collected in the following areas:

* Facility Contacts and Information: includes members of the Board of Directors, Technical Committee and company representatives that attend Community Advisory Panel meetings. Also included is a revised Emergency Contact list and a listing of land area.
* Fiscal Data: includes number of employees and municipal taxes used to calculate dues, and environmental spending.
* Air Emissions, Water Discharges, and Waste Management: Only aggregate emission, discharge or waste quantity data are reported. Each parameter is charted to show trends. No individual company emission, discharge or waste quantities are reported. An accompanying table is included to show which facility reported for each parameter.

Fiscal data indicates that HIEA companies have spent $318.9 million on environmental capital expenses from 2012 to 2016. In 2016, HIEA companies employed 7,119 people and paid over $21.4 million in municipal taxes while occupying almost 740 hectares of land.

As a result of improving production levels some parameters have shown an increase over the 2014 levels. In most cases, however, the 5-year trend for releases to air and water discharges continue to represent an improvement when compared to the 1997 base year.

2016 Air emission highlights relative to 1997 include:

* 43% reduction in Greenhouse Gases.
* 78% reduction in Total Particulate Matter.
* 42% reduction in Nitrogen Oxides.
* 86% reduction in Polycyclic Aromatic Hydrocarbons (PAHs).

2016 Water discharge highlights relative to 1997 include:

* 45% reduction in Bay water use.
* 54% reduction in City water use.
* 95% reduction in Suspended Solids discharged to the Harbour and over 83% reduction in Suspended Solids discharged to sanitary sewer for an overall 93% reduction.

The decline in Harbour discharges outweighed the increase in sanitary discharges resulting in a net decline. In addition, sanitary sewer discharges are treated at the Hamilton Sewage Treatment Plant, which further reduces the impact on Hamilton Harbour. All calculations are based on reported figures. The assumed control efficiency rate at the treatment plant has not been confirmed and therefore has not been considered in this report.

Waste management results require careful interpretation to discern whether trends are positive (environmentally beneficial) or negative. For example, HIEA companies reported a total offsite disposal of 498,747 metric tonnes in 2016 which is 52,931 metric tonnes more that that reported in 2015. This increase in waste disposal could be in part due to changes in waste management practices and reporting by HIEA members or the difference in annual production and business.

# Facility Contacts and Information

## CONTACT LIST – BOARD OF DIRECTORS (current - 2017)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Facility** | **First**  **Name** | **Last**  **Name** | **Title** | **Address** | **City** | **Prov.** | **Postal Code** | **Telephone-**  **Business** | **Fax** | **E-mail** |
| Air Liquide | Jim | Kruchka | HSEQ Coordinator | 95 Birmingham St. | Hamilton | ON | L8L 6W6 | 905-547-9522 | 905-547-2733 | Jim.Kruchka@AirLiquide.com |
| ArcelorMittal Dofasco Inc. | John | Lundrigan | Manager - Environment | 1330 Burlington St. E.  P.0. Box 2460 | Hamilton | ON | L8N 3J5 | 905-548-7200  x 6100 | 905-548-7000 | john.lundrigan@arcelormittal.com |
| ArcelorMittal Long Products Canada - Hamilton East | Irene | Boutilier | Environmental Health and Safety Specialist | 690 Strathearne Ave. N. | Hamilton | ON | L8H 7N8 | 905-528-9473  x 6865 | 905-577-4481 | Irene.boutilier@arcelormittal.com |
| Canadian Asphalt Industries Inc, | Guy | Bélanger | Plant Manager | 400 Eastport Blvd. | Hamilton | ON | L8H 7S4 | 905-549-4561 | 905-549-0866 | Guy.Belanger@canadianasphalt.com |
| Bunge Canada | René | Lemay | Plant Manager | 515 Victoria Ave. N.,  PO Box 618, Stn. A | Hamilton | ON | L8N 3K7 | 905-577-8055 | 905-527-3306 | Rene.lemay@bunge.com |
| Birla Carbon | George | Zolis | General Manager | 755 Parkdale Ave. N,  PO Box 3398, Stn. C | Hamilton | ON | L8H 7M5 | 905-544-3345 | 905-544-8641 | George.Zolis@adityabirla.com |
| Lafarge NA | Jack | Dugas | Operations Manager | 139 Windermere Rd. | Hamilton | ON | L8H 3Y2 | 905-547-2133  x 236 | 905-545-3308 | jack.dugas@ lafargeholcim.com |
| Ruetgers Canada Inc. | Gord | Gilmet | Technical Manager | 725 Strathearne Ave. N. | Hamilton | ON | L8H 5L3 | 905-548-5532 | 905-544-4942 | gord.gilmet@ruetgers-group.com |
| Sanimax | Mark | Lynch | Operations Manager | 800 Parkdale Ave. N. | Hamilton | ON | L8H 7J3 | 905-312-6992  x 33 | 905-312-6994 | mark.lynch@sanimax.com |
| Triple M Metal LP | Sandra | Walsh | Director, Quality, Environment & Safety | 471 Intermodal Drive | Brampton | ON | L6T 5G4 | 905-793-7083  X290 | 905-793-7305 | swalsh@triplemmetal.com |
| Stelco | Andrew | Sebestyen | Manager, Environment | 386 Wilcox St.,  P.O. Box 2030 | Hamilton | ON | L8N 3T1 | 905-527-8335 x2547 | 905-587-7707 | Andrew.Sebestyen@stelco.com |
| Contanda Terminals LLC | Graeme | Clark | Regional Manager – Canadian Operations | 726 Strathearne Ave. N. | Hamilton | ON | L8H 7N8 | 905-547-7081  x 223 | 905-549-3663 | gclark@contanda.com |

## CONTACT LIST – TECHNICAL COMMITTEE (current - 2017)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Facility** | **First**  **Name** | **Last**  **Name** | Title | **Address** | **City** | **Prov.** | **Postal**  **Code** | **Telephone** | **Fax** | **E-mail** |
| Air Liquide | Jim | Kruchka | HSEQ Coordinator | 95 Birmingham St. | Hamilton | ON | L8L 6W6 | 905-547-9522 | 905-547-2733 | Jim.Kruchka@airliquide.com |
| ArcelorMittal Dofasco Inc. | Mike | Brown | Senior Environmental Specialist | 1330 Burlington St. E.  P.0. Box 2460 | Hamilton | ON | L8N 3J5 | 905-548-7200  X 4193 | 905-548-4574 | michael.brown@arcelormittal.com |
| ArcelorMittal Long Products Canada - Hamilton East | Guillermo | Jorquera | Manager - Environment and Continuous Improvement | 690 Strathearne Ave. N | Hamilton | ON | L8H 7N8 | 905-528-9473  x 6831 |  | guillermo.jorquera@arcelormittal.com |
| ArcelorMittal Long Products Canada - Hamilton East | Irene | Boutilier | Environmental Health and Safety Specialist | 690 Strathearne Ave. N | Hamilton | ON | L8H 7N8 | 905-528-9473  x 6831 |  | Irene.boutilier@arcelormittal.com |
| Canadian Asphalt Industries Inc. | Albert | Chang | Plant Engineer | 400 Eastport Blvd. | Hamilton | ON | L8H 7S4 | 905 549-4561 | 905-549-0866 | albert.chang@bitumar.com |
| Bunge Canada | Eric | Sauve | Health and Safety Manager | 515 Victoria Ave. N.,  PO Box 618, Stn. A | Hamilton | ON | L8N 3K7 | 905-527-8052 | 905-527-3306 | Eric.Sauve@bunge.com |
| Birla Carbon | Lori | Small | Health, Safety & Environment Manager | 755 Parkdale Ave. N  PO Box 3398, Stn. C | Hamilton | ON | L8H 7M5 | 905-544-3776 | 905-544-8641 | Lori.Small@adityabirla.com |
| Lafarge | Matthew | Donn | Production Supervisor | 139 Windermere Rd. | Hamilton | ON | L8H 3Y2 | 905-547-2133 | 905-545-3308 | matthew.don@lafargeholcim.com |
| Sanimax | Julianne | Timms |  | 800 Parkdale Ave. N. | Hamilton | ON | L8H 7J3 | 905-312-6992 x 33 | 905-312-6994 | Julianne.Timms@sanimax.com |
| Triple M Metals LP | Mike | Fancy |  | 670 Strathearne Ave. N. | Hamilton | ON | L8H 7N8 | 905-536-4287 | 905-547-9994 | mfancy@triplemmetal.com |
| Stelco | Andrew | Sebestyen | Manager, Environment | 386 Wilcox St.,  P.O. Box 2030 | Hamilton | ON | L8N 3T1 | 905-577-4445 | 905-587-7707 | Andrew.Sebestyen@stelco.com |
| Stelco | Emelita | Simbahon | Environmental Engineer | 386 Wilcox St.,  P.O. Box 2030 | Hamilton | ON | L8N 3T1 | 905-525-2511 | 905-777-7614 | Emelita.Simbahon@stelco.com |
| Ruetgers Canada Inc. | Gord | Gilmet | Technical Manager | 725 Strathearne Ave. N. | Hamilton | ON | L8H 5L3 | 905-548-5532 | 905-544-4942 | gord.gilmet@ruetgers-group.com |
| Contanda Terminals LLC | Graeme | Clark | Regional Manager  – Canadian Operations | 726 Strathearne Ave. N. | Hamilton | ON | L8H 7N8 | 905-547-7081  x 223 | 905-549-3663 | gclark@contanda.com |

## CONTACT LIST – COMMUNITY ADVISORY PANEL (current - 2017)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Facility** | **First Name** | **Last Name** | **Title** | **Address**  **Primary** | **City** | **Prov.** | **Postal Code** | **Telephone**  **Business** | **Fax** | **E-mail** |
| Birla Carbon | Lori | Small | Health, Safety & Environment Manager | 755 Parkdale Ave. N  PO Box 3398, Stn. C | Hamilton | ON | L8H 7M5 | 905-544-3776 | 905-544-8641 | Lori.Small@adityabirla.com |
| ArcelorMittal Dofasco Inc. | Mike | Brown | Senior Environmental Specialist | 1330 Burlington St. E.  P.0. Box 2460 | Hamilton | ON | L8N 3J5 | 905-548-7200  X 4193 | 905-548-4574 | michael.brown@arcelormittal.com |
| ArcelorMittal Dofasco Inc. | John | Lundrigan | Manager - Environment | 1330 Burlington St. E.  P.0. Box 2460 | Hamilton | ON | L8N 3J5 | 905-548-7200  x 6100 | 905-548-7000 | john.lundrigan@arcelormittal.com |
| Stelco | Andrew | Sebestyen | Manager - Environment | 386 Wilcox St.,  PO Box 2030 | Hamilton | ON | L8N 3T1 | 905-527-8335  x 2547 | 905-777-7614 | Andrew.Sebestyen@stelco.com |
| Ruetgers Canada Inc. | Gord | Gilmet | Technical Manager | 725 Strathearne Ave. N. | Hamilton | ON | L8H 5L3 | 905-548-5532 | 905-544-4942 | gord.gilmet@ruetgers-group.com |

## EMERGENCY CONTACT LIST (current - 2017)

**Normal Business Hours After Business Hours**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Facility** | **Contact** | **Phone** | **Notes/Alternate Phone** | **Contact** | **Phone** | **Notes/Alternate Phone** |
| Air Liquide | Lead Hand Operator | 905-547-1605 |  | Lead Hand Operator | 905-547-1605 |  |
| ArcelorMittal Dofasco Inc. | Main Office Security Console | 905-544-3761 | Has call lists for emergencies | Main Office Security Console | 905-544-3761 | Has call lists for emergencies |
| ArcelorMittal Long Products Canada - Hamilton East | Irene Boutillier | 905-528-9473 x 6865 | 905-929-8719 | Shift Supervisor | 905-528-9473  x 6938 | 905-528-9473 x 6951 (radio interlink) |
| Bunge Canada | Receptionist | 905-527-9121 | Ask for Plant Manager or Production Superintendent | Boiler Room Operator | 905-577-8089 | 24 hour service. Has call list for emergencies |
| Canadian Asphalt Industries Inc. | Albert Chang | 905-549-4561 |  | Albert Chang | 905-961-1415 |  |
| Birla Carbon | Operations Foreman | 905-544-6749 | Lori Small  905-544-3776 | Operations Foreman | 905-544-6749 | QA Lab 905-544-3343 x 2206 |
| Lafarge NA (Hamilton Slag) | Jack Dugas | 905-928-2021 | 24 hour service |  |  |  |
| Sanimax |  |  |  |  |  |  |
| Triple M Metals LP | Mike Fancy | 905-536-4287 |  | Mike Fancy | 905-536-4287 |  |
| Triple M Metals LP | Sandra Walsh | 416-990-4833 |  | Sandra Walsh | 416-990-4833 |  |
| Stelco | Plant Protection Emergency Response Line | 905-528-2511  x 2111 | 24 hour service | Environmental Response Line | 1-877-688-8772 | 24 hour service |
| Ruetgers Canada Inc. | Gord Gilmet | 905-548-5532 | 905-544-2891 or  905-978-2188 | Shift Supervisor | 905-544-2891 | 905-978-2188 |
| Contanda Terminals Inc. | Mira Medeiros | 905-547-7081 |  |  |  |  |

## HIEA Total Land Area (2017)

|  |  |
| --- | --- |
| ***Facility*** | ***Land Area***  ***(Hectares)*** |
| Air Liquide | 6.6 |
| ArcelorMittal Dofasco | 293.0 |
| ArcelorMittal Long Products Canada - Hamilton East | 16.2 |
| Birla Carbon | 11.3 |
| Bunge Canada | 29.8 |
| Canadian Asphalt Industries Inc. | 12.0 |
| Contanda Terminals LLC | 9.0 |
| Lafarge Slag Ltd. | 4.5 |
| Ruetgers Canada Inc. | 5.3 |
| Sanimax | 20.0 |
| Triple M Metal LP | 11.0 |
| Stelco | 320.0 |
| ***Total*** | ***738.7*** |

# Fiscal Data

## Total Employees and Municipal Taxes (2016)

|  |  |  |
| --- | --- | --- |
| ***Facility*** | ***Permanent Employees*** | ***Municipal Property Taxes*** |
| Air Liquide | 36 | $354,546 |
| ArcelorMittal Dofasco | 5,352 | $12,930,619 |
| ArcelorMittal Long Products - Hamilton East | 220 | $615,356 |
| Birla Carbon | 97 | $274,947 |
| Bunge Canada | 122 | $420,849 |
| Canadian Asphalt Industries Inc. | 30 | $95,000 |
| Lafarge | 25 | $83,271 |
| Ruetgers Canada Inc. | 73 | $173,482 |
| Sanimax | 58 | $143,000 |
| Triple M Metals LP | 235 | $444,763 |
| Stelco | 863 | $5,827,024 |
| Contanda Terminals Inc. | 8 | $68,000 |
| **Total** | **7,119** | **$21,430,874** |

NOTE: these parameters were not tracked prior to 2000 and there were eight reporting companies that year. In comparison there have been 12 reporting members since 2008.

## Environmental Spending

Collectively, HIEA member companies have invested almost $319 million on environmental capital expenses in the last 5 years — an average of almost $64 million per year in environmental capital projects

### *Capital Spending*

HIEA members have spent between $16,533,000 and $86,356,000 on capital environmental projects each year since 2011.

***5 Year Cumulative***

***Environmental Capital Spending***

# 

# Air Emissions

## Greenhouse Gases

Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride. Carbon dioxide is the most significant greenhouse gas reported by HIEA member companies. Although there has been an increase in production in the last few years, the total Greenhouse Gas emissions in 2016 are 43% below the 1997 levels with almost a 9% decrease since 2012.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Legend: | **X** | - reporting company |
|  | **“blank”** | - no data available or zero reported |

## Total Particulate Matter (PM44)

Total Particulate Matter (TPM) emissions are 78% below those reported in 1997, and are almost 29% lower than those in 2012. Although there are improved testing methods and better information for PM10 and PM2.5 which results in higher reported numbers of those parameters in 2009 versus 1997 TPM emissions continue to show a reducing trend. Much of this drop can be attributed to a number of initiatives implemented in the last few years. Total Particulate Matter includes particles smaller than 44 microns-the size limit of particles that can be suspended in air.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  | **X** | **X** | **X** | **X** | **X** |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Legend: | **X** | - reporting company |
|  | **“blank”** | - no data available or zero reported |

## Nitrogen Oxides (NOx) Emissions

Nitrogen oxides are precursors to ground level ozone. The main source of NOx is the combustion of fuels. HIEA member companies have reduced their NOx emissions by almost 43% since 1997. Although production levels have generally increased over the last 4 years these emissions continue to show a reducing trend.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  | **X** | **X** | **X** | **X** | **X** |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Legend: | X | - reporting company |
|  | **“blank”** | - no data available or zero reported |

## Sulphur Dioxides (SO2) Emissions

Sulphur dioxides are a precursor to acid rain. Although SO2 emissions have fluctuated over the past five years they are 24% lower that those reported in 2012 while the total emissions remain 35% lower than 1997 levels.

Changes or slowdowns in production that required different fuel sources do result in higher sulphur dioxide emissions. Several options are being implemented to reduce these emissions including switching to lower sulphur fuels and feedstocks and shutting down obsolete equipment.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  |  |  |  |  |  |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** |  | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  |  |  |  |  |  |
| **Triple M Metals LP** |  | **X** | **X** | **X** | **X** | **X** |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Legend: | **X** | - reporting company |
|  | **“blank”** | - no data available or zero reported |

## Polycyclic Aromatic Hydrocarbon (PAH) Emissions

PAHs are a group of over 100 chemicals that are formed during incomplete burning of coal, oil and gas and are usually found as a mixture containing two or more of these compounds. PAH emissions have been reduced by almost 86% since 1997 and are almost 25% lower than 2012 levels. These reductions have been achieved primarily by improving coke oven operations. The increase shown in 2014 is a result of updated source testing that was conducted this year.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **Air Liquide** |  |  |  |  |  |  |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** |  |  |  |  |  |  |
| **Birla Carbon** |  | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** |  |  |  |  |  |  |
| **Canadian Asphalt Industries Inc.** |  |  |  |  |  |  |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** |  | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Legend: | **X** | - reporting company |
|  | **“blank”** | - no data available or zero reported |

# Water Use and Discharges

## Hamilton Harbour Water Use

Hamilton Harbour water use has decreased by 45% since 1997 and shows a declining trend over the past five years. 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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  |  |  |  |  |  |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  |  |  |  |  |  |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** |  |  |  |  |  |  |
| **Sanimax** |  |  |  |  |  |  |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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## City Water Use

HIEA companies have reduced their city water use by 54% since 1997. Although city water use has fluctuated over the past five years it continues to remain at these lower levels.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  | **X** | **X** | **X** | **X** | **X** |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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## Total Suspended Solids (TSS)

Overall Total Suspended Solids discharges have been reduced by 93% since 1997, with 50% of these reduced 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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** |  | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  |  |  |  |  |  |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** |  |  |  |  |  |  |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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### *Total Suspended Solids in Process Water Discharged to Harbour or Storm Sewer*

In 2016, 50% of the Total Suspended Solids in process water discharged by HIEA member companies were discharged directly to the harbour or to storm sewers which represents a 95% decrease since 1997.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  |  |  |  |  |  |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** |  |  |  |  |  |  |
| **Birla Carbon** |  | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** |  |  |  |  |  |  |
| **Canadian Asphalt Industries Inc.** |  |  |  |  |  |  |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** |  |  |  |  |  |  |
| **Sanimax** |  |  |  |  |  |  |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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| Legend: | **X** | - reporting company |
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### *Total Suspended Solids in Process Water Discharged to Sanitary Sewer*

In 2016, 50% of the Total Suspended Solids in process water discharged by HIEA member companies were discharged to the Hamilton sanitary sewer system which represents more than an 83% decrease since 1997. Discharges to the sanitary sewer system are treated at the Hamilton Sewage Treatment Plant before discharge to Hamilton Harbour and therefore the values below do not represent an actual discharge to the environment.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2012** | **2013** | **2014** | **2015** | **2016** |
| **Air Liquide** |  | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** |  |  |
| **Birla Carbon** |  | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  |  |  |  |  |  |
| **Lafarge** |  |  |  |  |  |  |
| **Ruetgers Canada Inc.** |  |  |  |  |  |  |
| **Sanimax** |  | **X** | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  |  |  |  |  |  |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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| Legend: | **X** | - reporting company |
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# Waste Management

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 and/or destruction and includes subject waste, commercial/domestic waste and non-hazardous industrial waste. 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.

## Total Offsite Disposal

Total off-site disposal levels fluctuate as a result of changes in year to year production and show an increasing trend overall. Total off-site disposal levels in 2016 show a 131% increase over 1997. This increase is also due in part to the change in membership since 1997.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Facility*** | **1997** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **Air Liquide** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Dofasco** | **X** | **X** | **X** | **X** | **X** | **X** |
| **ArcelorMittal Long Products Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Birla Carbon** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Bunge Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Canadian Asphalt Industries Inc.** |  | **X** | **X** | **X** | **X** | **X** |
| **Lafarge** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Ruetgers Canada Inc.** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Sanimax** |  |  | **X** | **X** | **X** | **X** |
| **Triple M Metals LP** |  |  | **X** | **X** | **X** | **X** |
| **Stelco Canada** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Contanda Terminals Inc.** |  |  |  |  |  |  |

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| Legend: | **X** | - reporting company |
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