

Chapter 2. Lake Ontario

2.1. Oswego River AOC, Oswego County, NY1

The Oswego River Area of Concern (AOC) is in Oswego County, NY, on the southeastern shore of Lake Ontario. The AOC includes the harbor areas and lower segment of the Oswego River from the harbor up to the Varick power dam and is centered in the city of Oswego. On June 19, 2006, the USEPA delisted Oswego River AOC as an AOC (USEPA 2006). See AOC map at end of chapter and in Appendix 1.

2.1.1. Hazardous Waste Sites Relevant to the Oswego River AOC

ATSDR identified three hazardous waste sites in Oswego County, which it determined posed either an urgent public health hazard, a public health hazard, or an indeterminate public health hazard. Information on these three sites is summarized in Table 2.1-A, along with information regarding the date and type of assessment, and the type and location of the site:

Table 2.1-A. Hazardous Waste Sites in Oswego County, NY

<i>Site Name, City, and CERCLIS ID</i>	<i>ATSDR Document Type</i>	<i>Year of Document</i>	<i>ATSDR Hazard Category</i>	<i>Site Type</i>	<i>Remedial Status</i>
Fulton Terminals, Fulton NYD980593099	PHA	1988	3	NPL	Completed
Pollution Abatement Services, Oswego NYD000511659	PHA PHA	1988 1997	2 4	NPL	Completed
Volney Landfill, Volney NYD980509376	PHA SRU	1987 1993	3 3	NPL	Completed

2 = Public Health Hazard, 3=Indeterminate Public Health Hazard, 4=No Apparent Public Health Hazard, PHA=Public Health Assessment, SRU=Site Review and Update

ATSDR conducted further evaluation of the data for these sites, which is summarized in the following section.

2.1.1.1 Fulton Terminals Site

This site covers less than 1 acre near the northern corporate limits of Fulton, Oswego County, NY. From 1936 to 1960, the preliminary activity on the site was the manufacture of roofing materials, including the storage of asphalt in aboveground tanks and the storage of fuel oil in underground tanks. From 1972 to 1977, the site was used for the staging and storage of materials scheduled for incineration at the Pollution Abatement Services Site, Oswego, NY. Information on this site is taken from the 1988 ATSDR public health assessment.

ATSDR Conclusions: Because of possible exposures to site-related arsenic, benzene, lead, PCBs, and because of xylene in soil, sediments, and groundwater, in 1988 ATSDR concluded

that this site presented an *Indeterminate Public Health Hazard* (Category 3). At that time no completed exposure pathways were known, the site was nonetheless fenced and drinking water to nearby residents was provided by a municipal drinking water system. Potential future pathways for exposure, however, were present through direct contact with contaminated soils, groundwater, and sediments. Other identified potential exposures included the inhalation of site-related VOCs and the ingestion of plants, game animals, and fish which could bioaccumulate site contaminants.

In 1997, USEPA reported that this site had been successfully remediated through the joint efforts of local, county, and state government.

IJC Critical Pollutants Identified within ATSDR Documents: During ATSDR's assessment of exposure related issues the IJC-critical pollutants B[a]P, B[b]F, lead, and PCBs were identified at this site, as well as other contaminants previously discussed. For a more complete listing of hazardous substances found at this site, please refer to www.epa.gov/superfund/sites/npl/npl.htm.

2.1.1.2 Pollution Abatement Services

This site covers 15.6 acres in an industrial and commercial area near the northeastern edge of Oswego, Oswego County, NY. During the late 1950s, demolition debris was disposed of at the site. Later, from 1970 to 1977, the site served as the location of a chemical waste incineration facility, and liquid wastes were stored in onsite drums, in three waste lagoons containing over a million gallons of wastes, and in aboveground tanks. From 1973 to 1976, lagoon overflows and releases of liquid wastes into White and Wine Creeks prompted several clean-up actions. Before these actions, the site posed a public health threat because of onsite wastes and contamination of groundwater, surface water, soil, sediment, and air.

Multiple remedial activities were conducted to address waste materials stored onsite and to address onsite and offsite contamination of groundwater, surface water, soil, and sediment. Contaminants in groundwater, soil, sediments included arsenic, benzene, cyanide, 1, 2-dichloroethane, ethylbenzene, lead, methylene chloride, nickel, phenol, selenium, toluene, trichloroethylene, xylene, and PCBs. Information on this site is taken from the 1988 and 1997 ATSDR Public Health Public Health Assessments.

Public Health Outcome Data: Findings of the NYSDOH 1986 cancer incidence investigation did not detect a statistically significant excess in cancer incidence among workers at the Eastside Sewage Treatment Plant when compared with either Westside Sewage Treatment Plant Workers or with the general population. Four different types of cancer were observed, two of which are quite common among men in the age group examined. The remaining two types of cancer have no known risk factors in common. Furthermore, the occurrence of all four cancers arose in relatively short intervals—all less than 10 years from the beginning of employment at the Eastside Sewage Treatment Plant to the time of cancer diagnosis. This is shorter than what would be expected given the long (10–20 year) latency period for most adult cancers.

ATSDR Conclusions: In 1988 ATSDR concluded that this site posed a *Public Health Hazard* (Category 2) because of onsite wastes and contamination of groundwater, surface water, soil, sediment, and air with arsenic, benzene, cyanide, 1,2-dichloroethane, ethylbenzene, lead, methylene chloride, nickel, phenol, selenium, toluene, trichloroethylene, xylene, and PCBs. A subsequent evaluation of the site in 1997 determined that the site posed *No Apparent Public*

Health Hazard (Category 4); remedial activities completed in that same year eliminated the potential for current and future exposures to site contaminants in onsite soils, soil-gas, air, surface water, and groundwater. Moreover, past exposures to residents near the site may have occurred, but the data to assess these exposures were insufficient. In 1997, USEPA reported that through the joint efforts of local, county, and state government, this site had been successfully remediated.

IJC Critical Pollutants Identified within ATSDR Documents: The IJC-critical pollutants lead, dieldrin, B[a]A, B[b]F, B[k]F, B[a]P, and chrysene, as well as other contaminants previously discussed, were identified at this site during ATSDR's assessment of exposure-related issues. For a more complete listing of hazardous substances that were found at this site, please refer to www.epa.gov/superfund/sites/npl/npl.htm.

2.1.1.3 Volney Municipal Landfill

This site covers about 85 acres, including a former sand and gravel pit in a rural section of Volney, Oswego County, NY. From 1969 to 1983, the unlined landfill operated primarily as a municipal waste disposal facility for residential, commercial, and light industrial operations. In the mid to late 1970s the landfill accepted wastes from several companies, some of which were designated as hazardous. About this same time the landfill was expanded in size and included the installation of a leachate collection and drainage system in its central and northern portions. In the fall of 1985 the landfill was closed and systems put in place to control surface water drainage, landfill gas, and leachate.

ATSDR Conclusions: In 1987, ATSDR concluded that this site presented an *Indeterminate Public Health Hazard* (Category 3) because of the undetermined nature and extent of buried waste in the landfill and because of the lack of sufficient environmental monitoring data to rule out exposures to contaminated groundwater, surface water, and creek sediments. A 1993 reevaluation of site issues supported ATSDR's earlier conclusions that onsite groundwater contamination of arsenic, selenium, and vinyl chloride could affect nearby drinking water wells, posing an *Indeterminate Public Health Hazard* (Category 3). In 2001, USEPA reported that through the joint efforts of local, county, and state government, this site had been successfully remediated.

IJC Critical Pollutants Identified within ATSDR Documents: The IJC-critical pollutant lead was identified at this site during ATSDR's assessment of exposure related issues. For a more complete listing of hazardous substances that were found at this site, please refer to www.epa.gov/superfund/sites/npl/npl.htm.

2.1.2. TRI Data for the Oswego River AOC

The TRI onsite chemical releases for Oswego County, NY are summarized in Table 2.1-B. Total onsite releases in 2001 were 204,417 pounds, primarily to air. Very little was released to surface water, and even less to land.

Only 171.3 pounds (0.08%) of the total onsite releases were IJC critical pollutants. The IJC critical pollutants released were PCDDs and PCDFs (primarily to air), lead and lead compounds (to air), and mercury (to land).

No releases occurred of non-IJC chemicals $\geq 100,000$ pounds. Releases in the range of 50,000 - 99,999 pounds were ozone (to air) and n-butyl alcohol (primarily to air.)

2.1.3. NPDES Data for the Oswego River AOC

The NPDES permitted discharges for Oswego County, NY are summarized in Table 2.1-D. The total average annual permitted discharges in 2004 were 147,377 pounds, primarily ammonia nitrogen, and aluminum. No IJC-critical pollutants were the subject of permitted (quantity average limit) discharge amounts.

2.1.4. Summary and Conclusions for the Oswego River AOC

2.1.4.1 Hazardous Waste Sites

The three sites in Oswego County, NY, at some time in their assessment history have been categorized by ATSDR in health hazard categories 1-3. Based on the documents for these sites, there is no clear evidence that human exposure to waste site related IJC critical pollutants is currently occurring. Remediation has been completed at all three sites and they are no longer expected to contribute to human or environmental exposure.

2.1.4.2 TRI Data

The TRI onsite chemical releases for Oswego County, NY in 2001 totaled 204,417 pounds, primarily to air, as listed in Table 2.1-B.

Only 171.3 pounds (0.08%) of the total onsite releases were IJC critical pollutants. The IJC critical pollutants released were PCDDs and PCDFs (primarily to air), lead and lead compounds (to air), and mercury (to land). The facilities that released these pollutants are listed in Table 2.1-C. No releases occurred of non-IJC chemicals $\geq 100,000$ pounds.

2.1.4.3 NPDES Data

The NPDES permitted discharges for Oswego County, NY are summarized in Table 2.1-D. The total average annual permitted discharges in 2004 were 147,377 pounds, primarily consisting of ammonia nitrogen, and also aluminum. No IJC critical pollutants were the subject of permitted (quantity average limit) discharge amounts.

Table 2.1-B TRI Releases (in pounds, 2001) for the Oswego River AOC

<i>Chemical</i>	<i>IJC Tracking number</i>	<i>Total Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Under-ground Injection</i>	<i>Releases to Land</i>	<i>Total Onsite Releases</i>	<i>Total Offsite Releases</i>	<i>Total On and Offsite Releases</i>
DIOXIN AND DIOXIN-LIKE COMPOUNDS	2	0.00624015	4.41E-06	0	0	0.00624456	1.30095E-04	0.006374655
<i>(PCDDs and PCDFs)</i>	3							
LEAD	8	14	No data	0	0	14	586.3	600.3
LEAD COMPOUNDS	8	132.3	No data	0	0	132.3	5507.8	5640.1
MERCURY	9	0	No data	0	25	25	0	25
	Total IJC	146.3062402	4.41E-06	0	25	171.3062446	6094.10013	6265.406375
ALUMINUM (FUME OR DUST)		1654	No data	0	0	1654	41805	43459
AMMONIA		8898	No data	0	0	8898	0	8898
BARIUM COMPOUNDS		10	11	0	0	21	216	237
BENZO(G,H,I) PERYLENE		0.09	No data	0	0	0.09	0	0.09
CHLORINE		1651	72	0	0	1723	0	1723
CHROMIUM		152	No data	0	0	152	105	257
COPPER		74	No data	0	0	74	70215	70289
COPPER COMPOUNDS		250	No data	0	0	250	755	1005
HYDROCHLORIC ACID (1995 AND AFTER 'ACID AEROSOLS' ONLY)		36691	No data	0	0	36691	0	36691
MANGANESE		96	No data	0	0	96	967	1063
N-BUTYL ALCOHOL		42288	2527	0	0	44815	0	44815
N-HEXANE		341	No data	0	0	341	7619	7960

OZONE		89900	No data	0	0	89900	0	89900
POLYCYCLIC AROMATIC COMPOUNDS		0.64	No data	0	0	0.64	0	0.64
SULFURIC ACID (1994 AND AFTER 'ACID AEROSOLS' ONLY)		19000	No data	0	0	19000	0	19000
TOLUENE		170	No data	0	0	170	4685	4855
ZINC COMPOUNDS		0	460	0	0	460	2440	2900
	Total Non-IJC	201175.73	3070	0	0	204245.73	128807	333052.73
	Total	201322.0362	3070.000004	0	25	204417.0362	134901.1001	339318.1364

Table 2.1-C TRI Facilities Releasing IJC Critical Pollutants Onsite for the Oswego River AOC

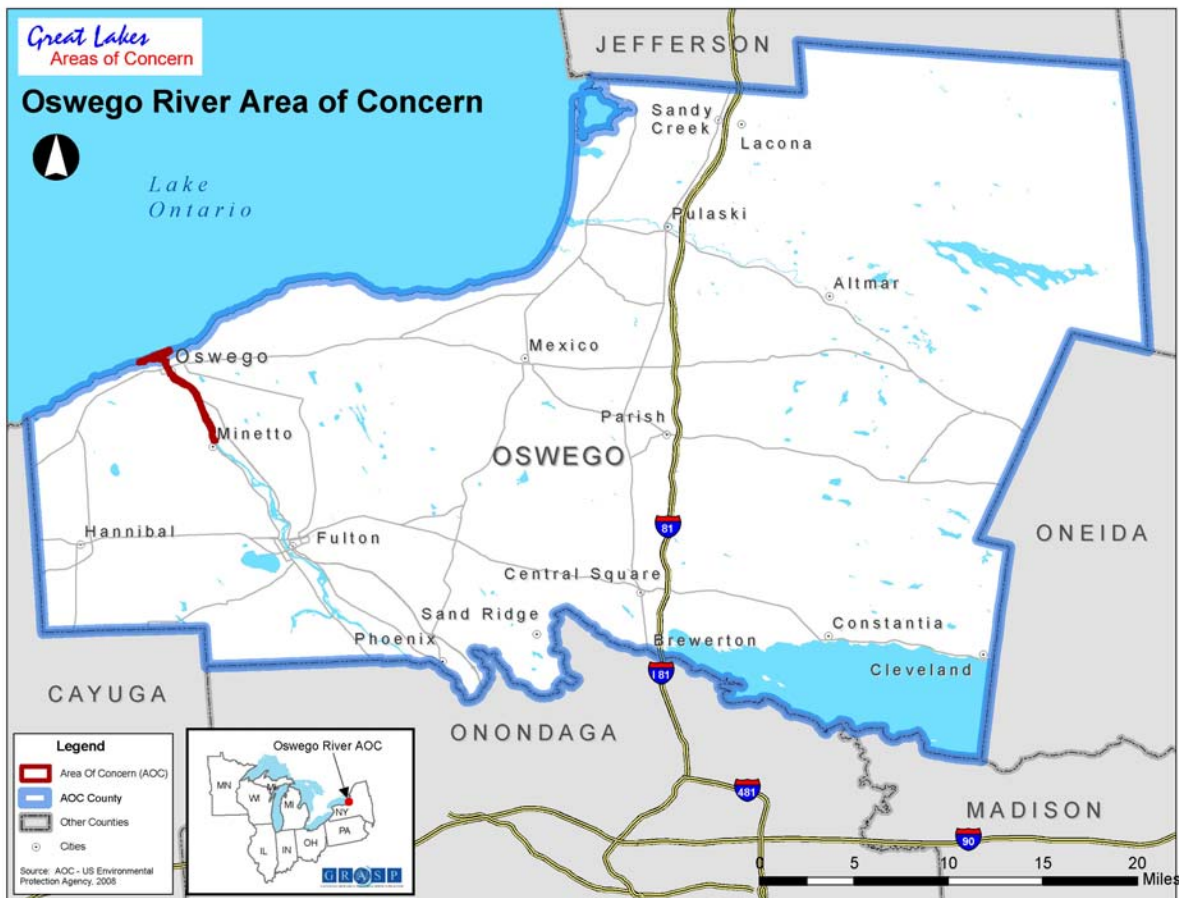
<i>IJC Critical Pollutant</i>	<i>Number of Facilities</i>	<i>Facility Name</i>	<i>TRIF ID</i>	<i>City</i>
Dioxin and dioxin-like compounds (PCDDs and PCDFs)	2			
Oswego County, NY	2	ALCAN ALUMINUM CORP.	13126LCNRLLAKER	OSWEGO
		OSWEGO HARBOR POWER	13126NGRMH261WA	OSWEGO
Lead and lead compounds	3			
Oswego County, NY	3	ALCAN ALUMINUM CORP.	13126LCNRLLAKER	OSWEGO
		OSWEGO HARBOR POWER	13126NGRMH261WA	OSWEGO
		OWENS-BROCKWAY GLASS CONTAINER INC. PLANT 25	13069WNSLLRD5GR	FULTON
Mercury and mercury compounds	1			
Oswego County, NY	1	NESTLE CONFECTIONS & SNACKS	13069NSTLF555SO	FULTON

Table 2.1-D NPDES Permitted Average Annual Discharges (in pounds, 2004) to Surface Water, Oswego River AOC

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Discharge</i>
	Total IJC	0
ALUMINUM, TOTAL (AS AL)		13310.33
CHROMIUM, TOTAL (AS CR)		192.36
CYANIDE, TOTAL (AS CN)		19.71
NITROGEN, AMMONIA, TOTAL (AS NH3)		131400
PHENOLS		268.28
ZINC, TOTAL (AS ZN)		2186.35
	Total Non-IJC	147377.03
	Total	147377.03

2.1.5. Beneficial Use Impairments (BUIs)

Delisting of this site resolved the BUIs specific to AOC site. A fish consumption advisory within the AOC has been addressed by improving water quality. Current restrictions relating to fish consumption are addressed by Lake Ontario-wide fish consumption advisories. Further information is available at the USEPA Web site (<http://www.epa.gov/glnpo/aoc/>).



2.2. Rochester Embayment AOC, Monroe County, NY

The Rochester Embayment AOC includes the Rochester Embayment; an area of Lake Ontario formed by the indentation of the shoreline of Monroe County, NY and includes approximately 6 miles of the Genesee River that is influenced by lake levels, from the river's mouth to the Lower Falls. The drainage area consists of the entire Genesee River Basin and parts of two other drainage basins (see AOC map at end of chapter and in Appendix 1)..

2.2.1. Hazardous Waste Sites Relevant to the Rochester Embayment AOC

ATSDR has identified one hazardous waste site in Monroe County, which was determined to pose a public health hazard. Information on this site, including the public health threat posed by this site at this time of ATSDR activities, is summarized in Table 2.2-A, along with information regarding the date and type of assessment, and the type and location of the site:

Table 2.2-A Hazardous Waste Sites in Monroe County, NY

<i>Site Name, Cit, and CERCLIS ID</i>	<i>ATSDR Document Type</i>	<i>Year of Document</i>	<i>ATSDR Hazard Category</i>	<i>Site Type</i>	<i>Remedial Status</i>
Rochester City of APCO, Rochester NYXCRZ#NY00	HC	2000	2	Non- NPL	Completed

2 = Public Health Hazard

HC = Health Consultation

Further evaluation of the data for this site was conducted by ATSDR, and is summarized in the following section.

2.2.1.1 Rochester City of APCO Site (Former APCO Property Brownfield Site)

This site covers about 5 acres in the City of Rochester, Monroe County, NY. General contracting firms used it since at least the 1930s until 1996 when the city foreclosed on the property. The site includes a construction and demolition debris disposal area and underground storage tank areas with VOC-contaminated soil and groundwater. The tanks were used for gasoline and diesel fuel and some of them leaked. Stained surface soils with elevated PAHs were thought to be associated with dumping/spillage of used motor oil. Information on this site is taken from the 2000 ATSDR health consultation, although since that time the site has been remediated.

Demographic Data: NYSDOH's estimate from the 1990 U.S. Census data was that 24,060 persons live within 1 mile of this site and subpopulations considered sensitive include

Children 6 years and younger	2,334
Females aged 15–44	6,229
Adults 65 and older	Not Reported

ATSDR Conclusions: Because of potential for future exposures to site-related PAHs, lead, mercury, and VOCs in soil and groundwater, in 2000 ATSDR concluded that this site presented a *Public Health Hazard* (Category 2). At that time no completed exposure pathways were known, the site was fenced, and groundwater was not used for water supply wells. Still, potential future pathways for exposure through direct contact with contaminated soils remained a possibility if the site were developed. Migration of soil gas vapors from contaminated groundwater or contaminated groundwater itself to migrate into the basements of adjacent residences, causing inhalation exposure was also of concern. That said, through the joint efforts of local, county, and state governments, In 2004 USEPA reported the successful remediation of the APCO site.

IJC Critical Pollutants Identified within ATSDR Documents: The IJC-critical pollutants B[a]P, lead, and mercury, as well as other contaminants previously discussed, were identified at this site during ATSDR's assessment of exposure-related issues.

2.2.2. TRI Data for the Rochester Embayment AOC

The TRI onsite chemical releases for Monroe County, NY are summarized in Table 2.2-B. Total onsite releases in 2001 were 6,967,728 pounds, the majority of which were released to air, followed by releases to surface water. Only small amounts were released to land.

Only 2,017 pounds (0.03%) of the total onsite releases were IJC-critical pollutants. The IJC critical pollutants that were released included PCDDs and PCDFs (primarily to air and surface water), lead and lead compounds (primarily to surface water and less to air), and mercury and mercury compounds (primarily to air). The facilities that released these pollutants are listed in Table 2.2-C.

The major releases ($\geq 500,000$ pounds) of non-IJC chemicals were of hydrochloric acid aerosol, dichloromethane, and sulfuric acid aerosols (solely or primarily to air), and nitrate compounds (primarily to surface water).

2.2.3. NPDES Data for the Rochester Embayment AOC

The NPDES permitted discharges for Monroe County, NY are summarized in Table 2.2-D. The total average annual permitted discharges in 2004 were 3,597,331 pounds, primarily consisting of nitrogen (as ammonia or nitrogen, each $>1,000,000$ pounds), ethylene glycol (474,500 pounds), and manganese (113,150 pounds). No IJC-critical pollutants were the subject of permitted (quantity average limit) discharge amounts.

2.2.4. Summary and Conclusions for the Rochester Embayment AOC

2.2.4.1 Hazardous Waste Sites

In 2000 ATSDR concluded that the Rochester City APCO site presented a *Public Health Hazard* (Category 2) due to the potential for future exposures to site-related PAHs, lead, mercury, and VOCs in soil and groundwater. Remediation at this site was completed in 2004 and this site is no longer expected to contribute to human or environmental exposure.

1.2.2.4.1. **TRI Data**

The TRI onsite chemical releases for Monroe County, NY in 2001 were 6,967,728 pounds, the majority of which were released to air, followed by releases to surface water.

Only 2,017 pounds (0.03%) of the total onsite releases were IJC critical pollutants. The IJC critical pollutants released were PCDDs and PCDFs (primarily to air and surface water), lead and lead compounds (primarily to surface water and less to air), and mercury and mercury compounds (primarily to air).

The major releases ($\geq 500,000$ pounds) of non-IJC chemicals were of hydrochloric acid aerosol, dichloromethane, and sulfuric acid aerosols (solely or primarily to air), and nitrate compounds (primarily to surface water). The facilities that released these pollutants are listed in Table 2.2-C

2.2.2.4.1. **NPDES Data**

The NPDES permitted discharges for Monroe County, NY are summarized in Table 2.2-D. The total average annual permitted discharges in 2004 were 3,597,331 pounds, primarily consisting of nitrogen (as ammonia or nitrogen, each $>1,000,000$ pounds), and also ethylene glycol (474,500 pounds) and manganese (113,150 pounds). No IJC critical pollutants were the subject of permitted (quantity average limit) discharge amounts.

3.2.2.4.1. **Beneficial Use Impairments (BUIs)**

USEPA lists both restrictions on fish and wildlife consumption and restriction on drinking water consumption, or taste and odor as impaired at this AOC.

Consumption restrictions for Lake Ontario fish are reportedly due to chemical contaminants including PCBs, mirex, and dioxin. This advisory seems to reflect a lake-wide restriction. Wild waterfowl consumption restrictions also exist based on chemical contamination. It is not clear if this restriction is limited to the AOC or a region-wide restriction.

No restrictions exist of consumption of treated drinking water. However, occasional taste and odor problems with treated drinking water are reported. Taste and odor problems are reported that relate to water that is drawn from Lake Ontario (in the embayment) and treated.

Further information is available at the USEPA Web site (<http://www.epa.gov/glnpo/aoc/>).

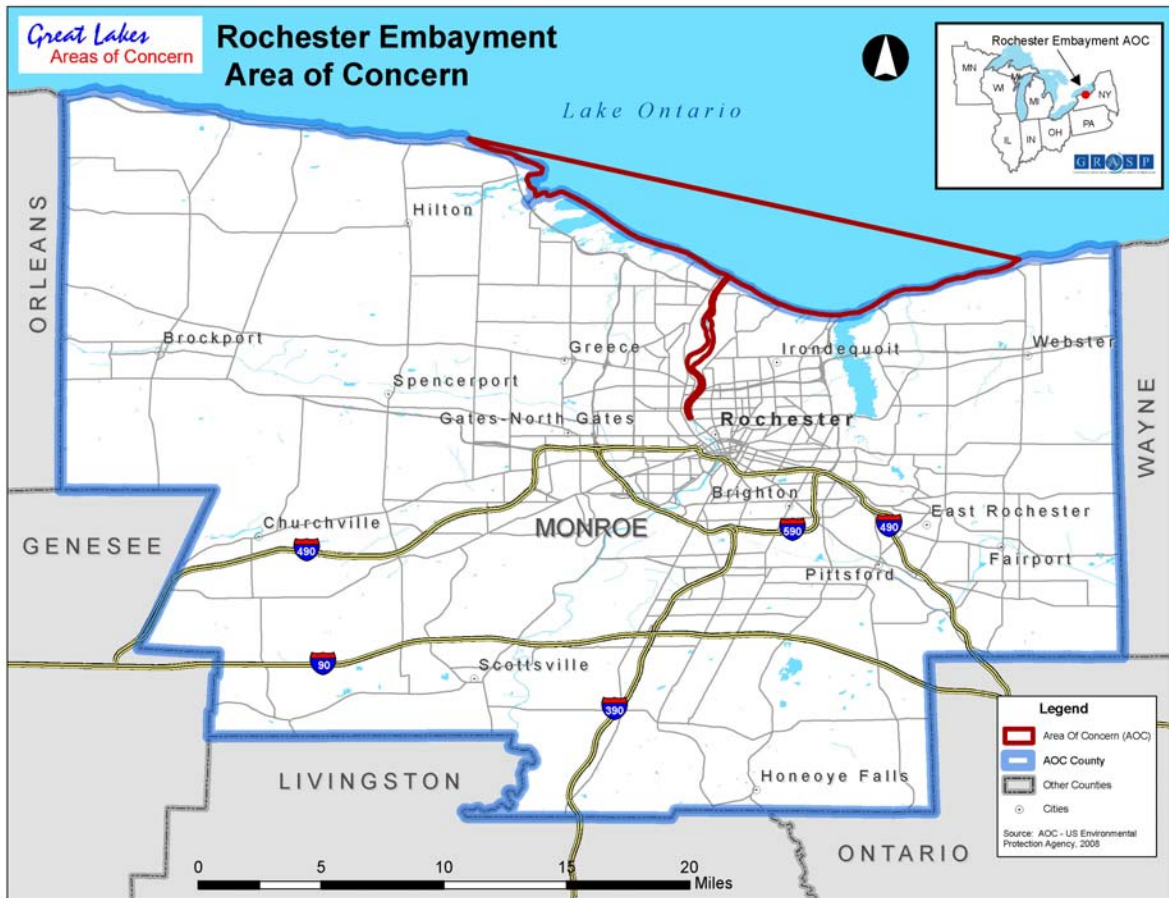


Table 2.2-B TRI Releases (in pounds, 2001) for the Rochester Embayment AOC

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Total Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Under-ground Injection</i>	<i>Releases to Land</i>	<i>Total Onsite Releases</i>	<i>Total Offsite Releases</i>	<i>Total On and Offsite Releases</i>
DIOXIN AND DIOXIN-LIKE COMPOUNDS	2	0.0078057	0.007056	0	3.31E-06	0.01486508	0.004313004	0.019178012
<i>(PCDDs and PCDFs)</i>	3							
LEAD	8	108.34	18	0	218	344.34	2572.44	2916.78
LEAD COMPOUNDS	8	477.04	1032	0	8	1517.04	6278.48	7795.52
MERCURY	9	0.9	0	0	0	0.9	0	0.9
MERCURY COMPOUNDS	9	151	4	0	0.049	155.049	23.27	178.319
Total IJC		737.2878057	1054.007056	0	226.0490033	2017.343865	8874.194313	10891.53818
1,1,1-TRICHLOROETHANE		0	No data	0	0	0	5	5
1,2,4-TRIMETHYLBENZENE		725	0	0	0	725	254	979
1,2-DICHLOROPROpane		16350	82	0	0	16432	0	16432
1,4-DIOXANE		1194	1800	0	0	2994	2	2996
2-METHOXYETHANOL		969	0	0	0	969	0	969
4,4'-ISOPROPYLIDENE-DIPHENOL		0	0	0	0	0	1	1
ACETALDEHYDE		9520	0	0	0	9520	2	9522
ACETONITRILE		9381	1800	0	0	11181	47	11228
ACRYLAMIDE		0	4	0	0	4	0	4
AMMONIA		24905	20680	0	0	45585	0	45585
ANILINE		172	4	0	0	176	46	222
ANTIMONY COMPOUNDS		390	5200	0	4	5594	343	5937

BARIUM	10	No data	0	0	10	22005	22015
BARIUM COMPOUNDS	1635	5046	0	120	6801	67863	74664
BENZENE	1834	0	0	0	1834	253	2087
BENZO(G,H,I)P ERYLENE	0.183	0	0	0	0.183	0	0.183
BUTYL ACRYLATE	195	37	0	0	232	350	582
CARBON TETRACHLORI DE	1928	No data	0	0	1928	0	1928
CERTAIN GLYCOL ETHERS	31329	3300	0	0	34629	1110	35739
CHLORINE	42223	1	0	0	42224	0	42224
CHLORODIFLUORO- METHANE	11000	0	0	0	11000	0	11000
CHLOROFORM	280	No data	0	0	280	0	280
CHLOROMETH ANE	480	0	0	0	480	0	480
CHLOROPHEN OLS	87	1	0	0	88	28	116
CHROMIUM	765	No data	0	0	765	264	1029
CHROMIUM COMPOUNDS (EXCEPT CHROMITE ORE MINED IN THE TRANSVAAL REGION)	370	625	0	13	1008	16371	17379
COPPER	2031	40	0	0	2071	2306	4377
COPPER COMPOUNDS	0	No data	0	0	0	250	250
CRESOL (MIXED ISOMERS)	150	150	0	0	300	69	369
CUMENE	500	No data	0	0	500	250	750
CYCLOHEXAN E	37000	0	0	0	37000	270	37270
DIBUTYL PHTHALATE	12	43	0	0	55	19	74
DICHLOROME THANE	900112	3010	0	0	903122	920	904042

DIETHANOLAMINE	3	2	0	0	5	0	5
ETHYLBENZENE	731	0	0	0	731	253	984
ETHYLENE GLYCOL	3927	9600	0	6800	20327	46	20373
FORMALDEHYDE	1240	0	0	0	1240	3	1243
FORMIC ACID	0	0	0	0	0	16	16
HYDROCHLORIC ACID (1995 AND AFTER 'ACID AEROSOLS' ONLY)	3104151	No data	0	0	3104151	0	3104151
HYDROGEN FLUORIDE	244013	0	0	0	244013	0	244013
HYDROQUINONE	451	290	0	0	741	0	741
MANGANESE	253	No data	0	0	253	16024	16277
METHANOL	406619	15000	0	0	421619	367	421986
METHYL ACRYLATE	63	0	0	0	63	0	63
METHYL ETHYL KETONE	48154	6210	0	0	54364	291	54655
METHYL ISOBUTYL KETONE	7515	1610	0	0	9125	420	9545
METHYL METHACRYLATE	81	4	0	0	85	0	85
METHYL TERT-BUTYL ETHER	3725	No data	0	0	3725	250	3975
M-XYLENE	820	No data	0	0	820	0	820
N,N-DIMETHYLFORMAMIDE	2009	82	0	0	2091	15	2106
NAPHTHALENE	500	No data	0	0	500	250	750
N-BUTYL ALCOHOL	17310	130	0	0	17440	11	17451
N-HEXANE	4482	0	0	0	4482	255	4737

NICKEL	783	No data	0	0	783	476	1259
NITRATE COMPOUNDS	27	980000	0	0	980027	76913	1056940
NITRIC ACID	3992	0	0	0	3992	0	3992
N-METHYL-2- PYRROLIDONE	75000	880	0	0	75880	0	75880
O-XYLENE	900	No data	0	0	900	0	900
OZONE	31031	0	0	0	31031	0	31031
PERCHLOROMETHYL MERCAPTAN	5	No data	0	0	5	0	5
PHENOL	51	0	0	0	51	6	57
POLYCYCLIC AROMATIC COMPOUNDS	2.961	2	0	0	4.961	7.81	12.771
PROPYLENE OXIDE	2032	0	0	0	2032	0	2032
PYRIDINE	12672	160	0	0	12832	79	12911
SILVER COMPOUNDS	781	3919	0	0	4700	96	4796
SODIUM NITRITE	0	0	0	0	0	11240	11240
STYRENE	224	9	0	0	233	110	343
SULFURIC ACID (1994 AND AFTER 'ACID AEROSOLS' ONLY)	740050	No data	0	0	740050	0	740050
TERT-BUTYL ALCOHOL	1550	No data	0	0	1550	250	1800
TOLUENE	60653	58	0	0	60711	352	61063
TOLUENE DIISOCYANATE (MIXED ISOMERS)	500	No data	0	0	500	0	500
TRICHLOROET HYLENE	3074	No data	0	0	3074	0	3074
TRIETHYLAMIN E	1514	0	0	0	1514	0	1514
VANADIUM COMPOUNDS	195	No data	0	0	195	170	365
VINYLDENE CHLORIDE	94	0	0	0	94	18	112
XYLENE (MIXED	9414	56	0	0	9470	310	9780

ISOMERS)								
ZINC COMPOUNDS		2670	10110	0	20	12800	300003	312803
	Total Non-IJC	5888809.144	1069945	0	6957	6965711.144	521259.81	7486970.954
	Total	5889546.432	1070999.007	0	7183.049003	6967728.488	530134.0043	7497862.492

Table 2.2-C TRI Facilities Releasing IJC Critical Pollutants Onsite for the Rochester Embayment AOC

<i>IJC Critical Pollutant</i>	<i>Number of Facilities</i>	<i>Facility Name</i>	<i>TRIF ID</i>	<i>City</i>
Dioxin and dioxin-like compounds (PCDDs and PCDFs)	2			
Monroe County, NY	2	EASTMAN KODAK CO. KODAK PARK	14652STMNK1669L	ROCHESTER
		RUSSELL STATION	14612RSSLL1101B	ROCHESTER
Lead and lead compounds	8			
Monroe County, NY	8	AMETEK POWER INSTRUMENTS	14605MTKPW255NU	ROCHESTER
		EASTMAN KODAK CO. KODAK PARK	14652STMNK1669L	ROCHESTER
		FISHER SCIENTIFIC CO. L.L.C. PFEIFFER GLASS CO.	14616FSHRS140BE	ROCHESTER
		HARRIS CORP. RF COMMUNICATIONS DIV.	14609RFCMM570CU	ROCHESTER
		PJC TECHS. INC. METRO CIRCUITS DIV.	14613PJCTC205LA	ROCHESTER
		RUSSELL STATION	14612RSSLL1101B	ROCHESTER
		SABIN METAL CORP.	14546SBNMT1647W	SCOTTSVILLE
		SEN DEC CORP.	14450SNDCC151PE	FAIRPORT
Mercury and mercury compounds	3			
Monroe County, NY	3	EASTMAN KODAK CO. KODAK PARK	14652STMNK1669L	ROCHESTER
		FISHER SCIENTIFIC CO. L.L.C. PFEIFFER GLASS CO.	14616FSHRS140BE	ROCHESTER
		RUSSELL STATION	14612RSSLL1101B	ROCHESTER

Table 2.2-D NPDES Permitted Average Annual Discharges (in pounds, 2004) to Surface Water, Rochester Embayment AOC

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Discharge</i>
	Total IJC	0
1,1,1-TRICHLOROETHANE		1825
1,1,2-TRICHLOROETHANE		2299.50
1,2-DICHLOROETHANE		5840
1,2-DICHLOROPROPANE		4745
1,4-DIOXANE		74460
2,6-DINITROTOLUENE		693.50
2-METHYL-1,3-DIOXOLANE		21535
2-PHENOXYETHANOL		31755
ALUMINUM, TOTAL (AS AL)		51100
ANTIMONY, TOTAL (AS SB)		18615
ARSENIC, TOTAL (AS AS)		3650
BARIUM, TOTAL (AS BA)		20075
BIS (2-CHLOROETHYL) ETHER		292
CHLOROFORM		1971
CHROMIUM, TOTAL (AS CR)		4380
COPPER, TOTAL (AS CU)		6570
CYANIDE, TOTAL (AS CN)		6935
DICHLOROMETHANE		9855
ETHYLENE GLYCOL		474500
MANGANESE, TOTAL (AS MN)		113150
N,N-DIMETHYLANILINE		9855
NICKEL, TOTAL (AS NI)		6205
NITROGEN, AMMONIA, TOTAL (AS NH3)		1460000
NITROGEN, KJELDAHL TOTAL (AS N)		1131500
PHENOLS		4745
PHENOLS, CHLORINATED		985.50
SILVER, TOTAL (AS AG)		12775

TETRAHYDROFURAN		36865
TIN, TOTAL (AS SN)		40150
VANADIUM, TOTAL (AS V)		3504
ZINC, TOTAL (AS ZN)		36500
	Total Non-IJC	3597330.50
	Total	3597330.50

2.3. Eighteen Mile Creek AOC, Niagara County, NY

The Eighteen Mile Creek AOC is located in the town of Newfane, Niagara County, NY. The creek flows from south to north. It discharges into Lake Ontario through Olcott Harbor, approximately 18 miles east of the mouth of the Niagara River. The AOC includes Olcott Harbor and extends almost two miles upstream, to just below the Burt Dam, which is the farthest point at which backwater conditions exist during Lake Ontario's highest monthly average lake level.

2.3.1. Hazardous Waste Sites Relevant to the Eighteen Mile Creek AOC

Two AOCs are located in Niagara County: The Niagara River AOC (located in Niagara and Erie Counties, NY) and the Eighteen Mile Creek AOC. The Niagara River AOC is a binational (U.S.-Canada) AOC not included in this document (see AOC map at end of chapter and in Appendix 1).

ATSDR has prepared health assessment documents for seven hazardous waste sites in Niagara County. Six of these are located on or very close to the Niagara River, mostly in the City of Niagara Falls, and are relevant to the Niagara River AOC. These six sites include Forest Glen Mobile Home Subdivision, Hooker (102nd Street), Hooker (Hyde Park), Hooker (S Area), Love Canal, and Niagara County Refuse sites. Five have been classified as Indeterminate Public Health Hazards (Category 3) at some point in their assessment, and one, Love Canal, was classified as an Urgent Public Health Hazard in 1985. The six sites that are located close to the Niagara River will not be discussed further here. The Barker Chemical site is relevant to the Eighteen Mile Creek AOC and is discussed below.

Table 2.3-A Hazardous Waste Site in Niagara County, NY

<i>Site Name, Cit, and CERCLIS ID</i>	<i>ATSDR Document Type</i>	<i>Year of Document</i>	<i>ATSDR Hazard Category</i>	<i>Site Type</i>	<i>Remedial Status</i>
Barker Chemical, Somerset, NYN000204285	HC	2000	3	Non-NPL	Ongoing

2 = Public Health Hazard

HC = Health Consultation

ATSDR provides further evaluation of the data in the health consultation listed in Table 2.3-A in the following subsection.

2.3.1.1 Barker Chemical

Barker Chemical is a former agricultural chemical manufacturer that produced fungicides and herbicides from the 1930s through the 1960s in Somerset, NY. Waste sludges were produced and discharged into the onsite settling lagoons. Barker Chemical has been inactive since the early 1970s. In 2000, the 10-acre site consisted of several abandoned building, three lagoons, an above ground tank, and an area of shallow, standing water near the buildings. There were homes approximately 500 feet from the site boundary. The site was partially fenced and had been used extensively for recreational activities, such as ice hockey and skating, and driving ATVs, on the waste lagoons by trespassers. The site was being considered a Brownfields site for remediation

for potential use for other purposes. Monitoring of the site revealed pH readings as low as 1.71 and levels of arsenic and lead above typical New York State background levels in the surface soil, waste lagoon sediments and waste composites. In 2000, the Niagara County Health Department notified the Town of Somerset of the health hazards from contact with acidic surface water and asked the NYS Department of Environmental Conservation (DEC) for assistance to provide remedial measures such as fencing, posting hazard signs, and neutralizing acid conditions. NYS Department of Health also requested the NYSDEC to discourage public access to the site. Information on this site is taken from the 2000 ATSDR health consultation.

ATSDR Conclusions: In 2000, ATSDR concluded that a *Public Health Hazard* (Category 2) existed for children and adults accessing this site, based on the low pH levels of water in the waste lagoons and tributaries and the levels of arsenic and lead detected in soil and sediment throughout the site. In addition, as no pesticides had been known to have been analyzed at this site, other possible hazards could be onsite.

USEPA performed an emergency remediation at the site in 2001 that included building demolition, offsite disposal of contaminated soil from selected areas, in-situ stabilization of lagoon sludges, and site restoration. DEC has conducted follow-up investigations since completion of the remediation and determined that low pH conditions have returned to areas of previous remediation, with potential offsite impacts. DEC will conduct additional groundwater sampling to use in determining whether to list the site on the NPL.

2.3.2. IJC Critical Pollutants Identified within ATSDR Documents

The IJC critical pollutant lead, as well as other contaminants previously discussed was identified at this site during ATSDR's assessment of exposure related issues.

2.3.3. Summary and Conclusions for the Niagara River AOC

2.3.3.1 Hazardous Waste Sites

The Environmental Protection Agency (USEPA) Region II requested ATSDR to determine whether a public health threat existed at a former agricultural chemical manufacturing facility, Barker Chemical, and if remedial activities were necessary. The NYSDEC provided ATSDR with preliminary onsite environmental sampling results to review. After assessing the samples, ATSDR concluded that a potential public health risk existed from children and adults accessing this site because of the low pH levels in the waste lagoons and possible exposure to arsenic and lead throughout the site.

USEPA performed an emergency remediation at the site in 2001 that included building demolition, offsite disposal of contaminated soil from selected areas, in-situ stabilization of lagoon sludges, and site restoration. A follow-up investigation by State authorities determined that low pH conditions had returned to areas of previous remediation, with potential offsite impacts. NYS DEC will conduct further ground water sampling.

2.3.3.2 TRI Data for the Eighteen Mile Creek AOC

The TRI onsite chemical releases for Niagara County are summarized in Table 2.3-B. Because they are for the entire county, and because industrial activity is concentrated in or near the Niagara River AOC, these data are more relevant to the binational Niagara River AOC than to

the Eighteen Mile Creek AOC. Total onsite releases in 2001 were 3,174,559 pounds, the majority of which were released to air, followed by releases to soil, and then surface water.

Of the total onsite releases, 63,282 pounds were IJC critical pollutants. The IJC critical pollutants released were PCBs (to air), PCDDs and PCDFs (primarily to air), lead compounds and mercury compounds (primarily to land), and hexachlorobenzene (to surface water). The facilities that released these pollutants are listed in Table 2.3-C. Most of these facilities are located in the City of Niagara Falls, and thus, are relevant to the binational Niagara River AOC rather than to the Eighteen Mile Creek AOC.

Releases of IJC critical pollutants relevant to the Eighteen Mile Creek AOC are of PCDDs and PCDFs from a facility in Barker, of lead compounds from a facility in Barker and one in Lockport, and of mercury compounds from a facility in Barker.

The major releases ($\geq 500,000$ pounds) of non-IJC chemicals were of manganese compounds and barium compounds (primarily to land).

2.3.3.3 NPDES Data for the Eighteen Mile Creek AOC

The NPDES permitted discharges for Niagara County, NY are summarized in Table 2.3-D. The total average annual permitted discharges in 2004 were 211,184 pounds. The only chemical accounting for $>100,000$ pounds was fluoride, at 136,875 pounds.

The IJC critical pollutants DDT and metabolites, mirex, lead, and mercury accounted for a total of 867 pounds (primarily lead). The facilities permitted to discharge these pollutants are listed in Table 2.3-E. All are located in the City of Niagara Falls, and are therefore not relevant to the Eighteen Mile Creek AOC, but rather to the Binational Niagara River AOC. As explained in Chapter 1 of this document, the binational AOCs are not included in this document.

2.3.4. Summary and Conclusions for the Eighteen Mile Creek AOC

2.3.4.1 Hazardous Waste Sites

Most of the waste sites in Niagara County that have been evaluated by ATSDR are located on the Niagara River and are relevant to the binational Niagara River AOC (not included in this document). The Barker Chemical Site, located near the Eighteen Mile Creek AOC, was evaluated by ATSDR in 2000 and was determined to pose an *Indeterminate Public Health Hazard* (Category 3).

2.3.4.2 TRI Data

Many of the reported releases in Niagara County may not be relevant to the Eighteen Mile Creek AOC because of the heavy concentration of industry in the vicinity of the Niagara River, which is a separate AOC. Releases of IJC critical pollutants that are more relevant to the Eighteen Mile Creek AOC are of PCDDs and PCDFs from a facility in Barker, of lead compounds from a facility in Barker and one in Lockport, and of mercury compounds from a facility in Barker.

2.3.4.3 NPDES Data

The NPDES permitted discharges for Niagara County, NY are summarized in Table 2.3-D. The total average annual permitted discharges in 2004 were 211,184 pounds. The only chemical accounting for $>100,000$ pounds was fluoride, at 136,875 pounds.

The IJC critical pollutants DDT and metabolites, mirex, lead, and mercury accounted for a total of 867 pounds (primarily lead). The facilities permitted to discharge these pollutants are listed in Table 2.3-D. All are located in the City of Niagara Falls, and are therefore not relevant to the Eighteen Mile Creek AOC, but rather to the Binational Niagara River AOC. As explained in Chapter 1 of this document, the binational AOCs are not included in this document.

2.3.4.4 Beneficial Use Impairments (BUIs)

Restrictions on fish and wildlife consumption are reported for this AOC.

Fish consumption restrictions specific to Eighteen Mile Creek are due to PCB contamination. No human consumption of any fish species or American eel of any size is recommended. No consumption of snapping turtle meat is recommended for women of childbearing age and children less than 15 years of age.

Restrictions on consumption also exist for Lake Ontario fish. No consumption advisory exists for American eel, channel catfish, carp, lake trout over 25 inches long. For more information go to: <http://www.epa.gov/glnpo/aoc/>.

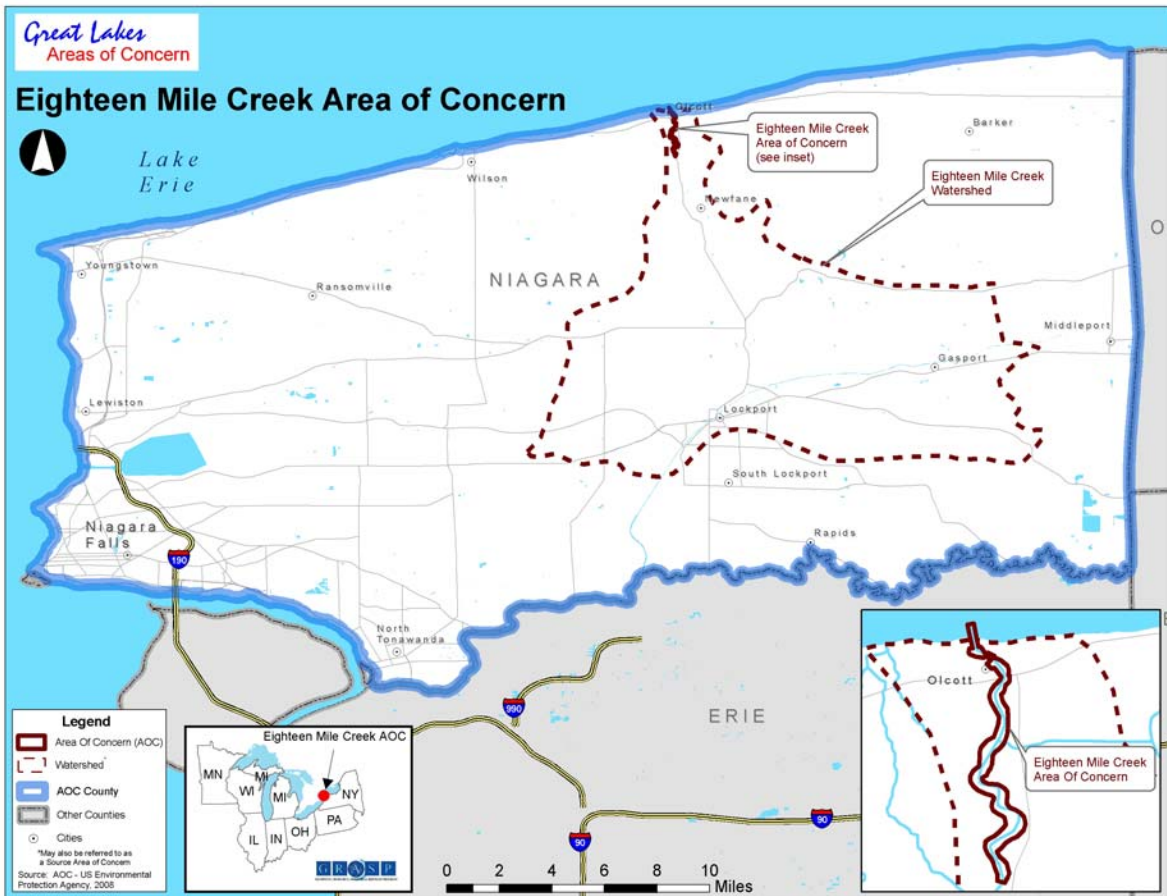


Table 2.3-B TRI Releases (in pounds, 2001) for the Eighteen Mile Creek AOC

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Total Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Under-ground Injection</i>	<i>Releases to Land</i>	<i>Total Onsite Releases</i>	<i>Total Offsite Releases</i>	<i>Total On and Offsite Releases</i>
POLYCHLORINATED BIPHENYLS	1	226	0	0	0	226	0.82632	226.82632
DIOXIN AND DIOXIN-LIKE COMPOUNDS (PCDDs and PCDFs)	2 3	0.007063938	0.00024255	0	0	0.007306488	9.50796E-04	0.008257284
LEAD	8	26	190	0	7366	7582	8276.681	15858.681
LEAD COMPOUNDS	8	1547.9	0.8	0	53356	54904.7	13332.3	68237
MERCURY COMPOUNDS	9	77.1	0.04	0	492	569.14	61.8	630.94
HEXACHLOROBENZENE	11	0	0.3	0	0	0.3	0.1	0.4
	Total IJC	1877.007064	191.1402426	0	61214	63282.14731	21671.70827	84953.85558
4,4'-ISOPROPYLIDENE-DIPHENOL		500	No data	0	0	500	0	500
ALLYL CHLORIDE		35	No data	0	0	35	0	35
ALUMINUM OXIDE (FIBROUS FORMS)		0	No data	0	0	0	250	250
AMMONIA		3289	878	0	533	4700	0	4700
ANILINE		5388	No data	0	0	5388	0	5388
ARSENIC COMPOUNDS		23	10	0	37921	37954	0	37954
BARIUM COMPOUNDS		4720	1768	0	619346	625834	271022	896856
BENZO(G,H,I)PERYLENE		114	No data	0	0	114	0.1	114.1
BENZOIC TRICHLORIDE		541	0	0	0	541	371	912
BENZOYL CHLORIDE		4520	0	0	0	4520	0	4520
BENZOYL PEROXIDE		1453	0	0	0	1453	0	1453
BIFENTHRIN		500	No data	0	0	500	0	500
CARBOFURAN		500	No data	0	0	500	0	500
CERTAIN GLYCOL ETHERS		44952	2600	0	0	47552	3800	51352
CHLORINE		16044	0	0	0	16044	0	16044
CHLOROACETIC ACID		1500	No data	0	0	1500	0	1500
CHLOROBENZENE		631	No data	0	0	631	0	631
CHROMIUM		1	No data	0	0	1	1058	1059

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Total Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Under-ground Injection</i>	<i>Releases to Land</i>	<i>Total Onsite Releases</i>	<i>Total Offsite Releases</i>	<i>Total On and Offsite Releases</i>
CHROMIUM COMPOUNDS (EXCEPT CHROMITE ORE MINED IN THE TRANSSVAAL REGION)		217	110	0	50553	50880	11155	62035
COPPER		1010	35	0	0	1045	60	1105
COPPER COMPOUNDS		69	10	0	50367	50446	333	50779
CRESOL (MIXED ISOMERS)		405	No data	0	0	405	0	405
DIPHENYLAMINE		1434	No data	0	0	1434	0	1434
ETHYLBENZENE		46	No data	0	0	46	0	46
FORMALDEHYDE		3911	2	0	0	3913	0	3913
HEXACHLOROCYCLO-PENTADIENE		584	0	0	0	584	29	613
HYDROCHLORIC ACID (1995 AND AFTER 'ACID AEROSOLS' ONLY)		154675	No data	0	0	154675	0	154675
HYDROGEN FLUORIDE		20795	0	0	0	20795	0	20795
HYDROQUINONE		75	No data	0	0	75	0	75
LITHIUM CARBONATE		0	No data	0	0	0	250	250
MANGANESE		5	70	0	0	75	400	475
MANGANESE COMPOUNDS		6953	1169	0	1000441	1008563	44376	1052939
METHANOL		18797	No data	0	0	18797	0	18797
METHYL ETHYL KETONE		22735	0	0	0	22735	0	22735
METHYL ISOBUTYL KETONE		500	No data	0	0	500	0	500
N,N-DIMETHYLFORMAMIDE		1198	No data	0	0	1198	0	1198
N-BUTYL ALCOHOL		478	No data	0	0	478	0	478
N-HEXANE		14199	No data	0	0	14199	0	14199
NICKEL		255	3	0	0	258	721	979
NICKEL COMPOUNDS		227	10	0	90480	90717	78	90795
NITRATE COMPOUNDS		0	163100	0	315710	478810	135	478945
NITRIC ACID		54765	0	0	0	54765	4813	59578
O-CRESOL		500	No data	0	0	500	0	500
O-TOLUIDINE		2987	No data	0	0	2987	0	2987

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Total Air Emissions</i>	<i>Surface Water Discharges</i>	<i>Under-ground Injection</i>	<i>Releases to Land</i>	<i>Total Onsite Releases</i>	<i>Total Offsite Releases</i>	<i>Total On and Offsite Releases</i>
O-XYLENE		38134	No data	0	0	38134	0	38134
PHENOL		7501	9	0	0	7510	45158	52668
PHOSGENE		78	No data	0	0	78	0	78
PHOSPHORUS (YELLOW OR WHITE)		46	No data	0	0	46	0	46
POLYCYCLIC AROMATIC COMPOUNDS		1003.809325	No data	0	0	1003.809325	900.52	1904.329325
PROPARGYL ALCOHOL		79	No data	0	0	79	0	79
SEC-BUTYL ALCOHOL		56100	3100	0	0	59200	5200	64400
SILVER		5	No data	0	0	5	0	5
STYRENE		12680	No data	0	0	12680	0	12680
SULFURIC ACID (1994 AND AFTER 'ACID AEROSOLS' ONLY)		76429	No data	0	0	76429	0	76429
TETRACHLORO-ETHYLENE		11200	180	0	0	11380	649	12029
TOLUENE		3778	No data	0	0	3778	0	3778
TRIETHYLAMINE		10	No data	0	0	10	0	10
VANADIUM COMPOUNDS		4263	No data	0	84318	88581	45010	133591
XYLENE (MIXED ISOMERS)		5117	No data	0	0	5117	0	5117
ZINC (FUME OR DUST)		250	No data	0	0	250	No data	250
ZINC COMPOUNDS		1405	1015	0	77929	80349	29906	110255
	Total Non-IJC	609609.8093	174069	0	2327598	3111276.809	465674.62	3576951.429
	Total	611486.8164	174260.1402	0	2388812	3174558.957	487346.3283	3661905.285

Table 2.3-C TRI Facilities Releasing IJC Critical Pollutants Onsite for the Eighteen Mile Creek AOC

<i>IJC Critical Pollutant</i>	<i>Number of Facilities</i>	<i>Facility Name</i>	<i>TRIF ID</i>	<i>City</i>
Polychlorinated biphenyls	1			
Niagara County, NY	1	SAINT-GOBAIN ABRASIVES INC.	14304CRBRN6600W	NIAGARA FALLS
Dioxin and dioxin-like compounds (PCDDs and PCDFs)				
Niagara County, NY		AES SOMERSET L.L.C.	14012SSMRS7725L	BARKER
		NIAGARA FALLS GENERATING STATION	14304CHRSR5300F	NIAGARA FALLS
		OCCIDENTAL CHEMICAL CORP. NIAGARA PLANT	14302CCDNT4700B	NIAGARA FALLS
Lead and lead compounds	10			
Niagara County, NY	10	AES SOMERSET L.L.C.	14012SSMRS7725L	BARKER
		DELPHI HARRISON THERMAL SYS. LOCKPORT	14094GNRLM200UP	LOCKPORT
		DU PONT NIAGARA FALLS PLANT	14302DPNTNBUFFA	NIAGARA FALLS
		FERRO ELECTRONIC MATERIAL SYS.	14305TMCRM4511H	NIAGARA FALLS
		NIAGARA FALLS GENERATING STATION	14304CHRSR5300F	NIAGARA FALLS
		NORTH AMERICAN HOGANAS	14304PYRNC5950P	NIAGARA FALLS
		OCCIDENTAL CHEMICAL CORP. NIAGARA PLANT	14302CCDNT4700B	NIAGARA FALLS
		PRECIOUS PLATE INC.	14304PRCSP2124L	NIAGARA FALLS
		TULIP CORP. NIAGARA FALLS PLANT	14305TLPCR3125H	NIAGARA FALLS
		U.S. VANADIUM CORP.	14303SVNDM13747	NIAGARA FALLS
Mercury and mercury compounds	2			
Niagara County, NY	2	AES SOMERSET L.L.C.	14012SSMRS7725L	BARKER
		NIAGARA FALLS GENERATING STATION	14304CHRSR5300F	NIAGARA FALLS
Hexachlorobenzene	1			

Niagara County, NY

1

OCCIDENTAL CHEMICAL CORP.
NIAGARA PLANT

14302CCDNT4700B

NIAGARA FALLS

Table 2.3-D NPDES Permitted Average Annual Discharges (in pounds, 2004) to Surface Water, Eighteen Mile Creek AOC

<i>Chemical</i>	<i>IJC Tracking Number</i>	<i>Discharge</i>
DDT/DDD/DDE, SUM OF P,P' & O,P' ISOMERS	5	7.3
MIREX	7	58.4
LEAD, TOTAL (AS PB)	8	790.83
MERCURY, TOTAL (AS HG)	9	10.95
	Total IJC	867.48
ALUMINUM, TOTAL (AS AL)		1297.58
ARSENIC, TOTAL (AS AS)		1460
BARIUM, TOTAL (AS BA)		18250
BORON, TOTAL (AS B)		1332.25
CARBON TETRACHLORIDE		73
CHLOROFORM		3525.90
CHROMIUM, TOTAL (AS CR)		584
COPPER, TOTAL (AS CU)		1228.83
FLUORIDE, TOTAL (AS F)		136875
METHYLENE CHLORIDE		18.25
NICKEL, TOTAL (AS NI)		912.50
PHENOLICS, TOTAL RECOVERABLE		39675.50
PHENOLS		91.25
SELENIUM, TOTAL (AS SE)		2555
TETRACHLOROETHYLENE		65.70
ZINC, TOTAL (AS ZN)		2372.50
	Total Non-IJC	210317.26
	Total	211184.74

Table 2.3-E NPDES Facilities Permitted to Discharge IJC Critical Pollutants, Eighteen Mile Creek AOC

<i>IJC Critical Pollutant</i>	<i>Number of Facilities</i>	<i>Facility Name</i>	<i>NPDES</i>	<i>City</i>
DDT and Metabolites	1			
Niagara County, NY	1	NIAGARA FALLS (C) WWTP	NY0026336	NIAGARA FALLS
Mirex	1			
Niagara County, NY	1	NIAGARA FALLS (C) WWTP	NY0026336	NIAGARA FALLS
Lead	1			
Niagara County, NY	1	OCCIDENTAL CHEMICAL CORP	NY0003336	NIAGARA FALLS
Mercury	1			
Niagara County, NY	1	OLIN CORP - NIAGARA FALLS PLT	NY0001635	NIAGARA FALLS