ATMOSPHERIC DEPOSITION OF TOXIC SUBSTANCES TO THE GREAT LAKES: IADN RESULTS THROUGH 2005

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Executive Summary

The Integrated Atmospheric Deposition Network was initiated in 1990 to measure atmospheric concentrations of persistent toxic pollutants in the Great Lakes basin. These measurements have been conducted at 5 master stations, one on each of the Great Lakes, as well as 10 satellites stations. The measured concentrations combined with physical parameters have formed the basis of deposition estimates produced by IADN every two years. This report presents the results of the deposition estimates for the years 2001-2005.

In the IADN calculations, processes of wet deposition via precipitation, dry deposition of particles and gas absorption at the water interface are taken into account. Volatilization from the Lakes is also important, and this is estimated using water concentrations from other monitoring or research projects for some compounds. The calculations in this report build on previous reports although some modifications have been made. A different treatment of the Canadian precipitation data varied the monthly values by 20% or less. New water concentration data have been used in this report resulting in updated volatilization figures. Given these upgrades, loading estimates from previous years were re-calculated using the updated parameters.

For all Lakes, loading estimates of banned organochlorine (OC) pesticides continue to decline. For several OC pesticides, including chlordanes and p'p'-DDT, loading estimates are relatively small, with fluxes often less than 2 ng/m^2/day. α-HCH absorption has continued to decline and for some Lakes, volatilization is now more significant. HCB is now volatilizing out of Lake Superior. γ-HCH absorption is showing signs of decline likely associated with reduced use of lindane as a seed treatment in Canada. Variable endosulfan deposition, a current-use pesticide, has been observed over the years with relatively larger absorption fluxes over 4 of the 5 Great Lakes in 2005.

Wet deposition fluxes of PCBs are very small, in fact, PCB concentrations in precipitation are approaching blank levels. PCB gas absorption continues to decline at all IADN master stations while urban areas are important sources of atmospheric PCBs to the Lakes. PAHs such as phenanthrene and pyrene absorption fluxes are largest for Lake Erie, a slight decrease in absorption is seen between the 1990s and the early 2000s however a small increase is observed for 2005. Particulate-bound PAHs such as benzo[*a*]pyrene are equally deposited via wet and dry deposition to the Lakes with yearly variability being observed for most lakes.

Trace metal deposition is reported for Lakes Ontario and Huron. In this report, wet deposition is not reported for arsenic, cadmium and selenium pre-2001 because sample concentrations were too close to detection limits to yield meaningful results. Wet deposition for lead has decreased in the last four years while selenium dry deposition has increased potentially due to increases in use. The choice of a uniform dry

deposition velocity for all metals is questioned but further work is needed to determine better values.

The influence of urban sources on the lakewide loading estimates was evaluated using the satellite sites of Chicago and Cleveland. Total downward fluxes were compared between the master stations at Sleeping Bear Dunes and Sturgeon Point, and the urban sites at Chicago and Cleveland. Urban effects for pesticides were generally low, between 2 and 20%. For PCBs, Chicago increased the loading to Lake Michigan by about 5-10% for wet deposition and about 30% for absorption (Suite PCBs). These values are larger than previously reported likely due to a wider range of wind angle affecting the Lake and larger decreased over time at master sations than at the urban satellite sites. Cleveland increased Lake Erie's loading by less than 10% for wet deposition and 5-10% for absorption. Urban effects for the PAHs for Chicago were about 10-60% for dry deposition, 10-70% for wet deposition and 80-200% for absorption for the lighter PAHs. Urban effects for Cleveland were 5-20% for dry deposition, 10-15% for wet deposition, and 20-40% for absorption. These urban impacts emphazise the critical importance of including urban data in the loading estimates.

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1. Introduction

In 1987, a revision of the Great Lakes Water Quality Agreement of 1978 included a separate Annex (Annex 15) which called for the determination of atmospheric loadings of toxic substances to the Great Lakes as well as continuing study of temporal and spatial trends of these substances, both to be reported to the International Joint Commission (IJC) on a biennial basis. Most importantly, the Annex called for the creation of the Integrated Atmospheric Deposition Network (IADN) to carry out surveillance and monitoring of the toxic contaminants. In 1990, the first Implementation Plan was signed. It laid out the chemicals to be measured, site selection specifications and sampling methods, and the quality assurance/quality control program that would ensure that data was consistent over time and between sampling agencies.

In accordance with Annex 15, IADN has produced biennial loadings estimates on data from 1992 through 2000 (Hoff, 1996; Hillery et al., 1998; Galarneau et al., 2000; Buehler et al., 2001; Blanchard et al., 2004). This report details the 2001 to 2005 atmospheric loadings to the Great Lakes. The report consists of a description of the network and methods, a section detailing improvements in the last two years followed by a short summary of results along with tables and graphs of loading estimates.

2. Status of IADN

2.1. Sampling Sites

IADN collects gas, particle, and precipitation phase samples at each of its master stations, one on each of the Great Lakes (see Figure 1). Sampling details can be found elsewhere (Environment Canada, 2002; Harrison, 2005; Basu and Bays, 2005). Master stations on Lakes Erie (Sturgeon Point, STP), Michigan (Sleeping Bear Dunes, SBD) and Superior (Eagle Harbour, EGH) are operated by the United States (Indiana University, IU, via a cooperative agreement with US EPA) while Canada (Environment Canada, EC) operates the master stations on Lakes Huron (Burnt Island, BNT) and Ontario (Point Petre, PPT). On the US side, two satellite urban stations are in operation in Chicago and Cleveland. Both air and precipitation samples are collected at these sites. On the Canadian side, air samples are collected at EC's satellite site of Egbert (EGB) while precipitation samples are collected at the other seven Canadian satellite stations.

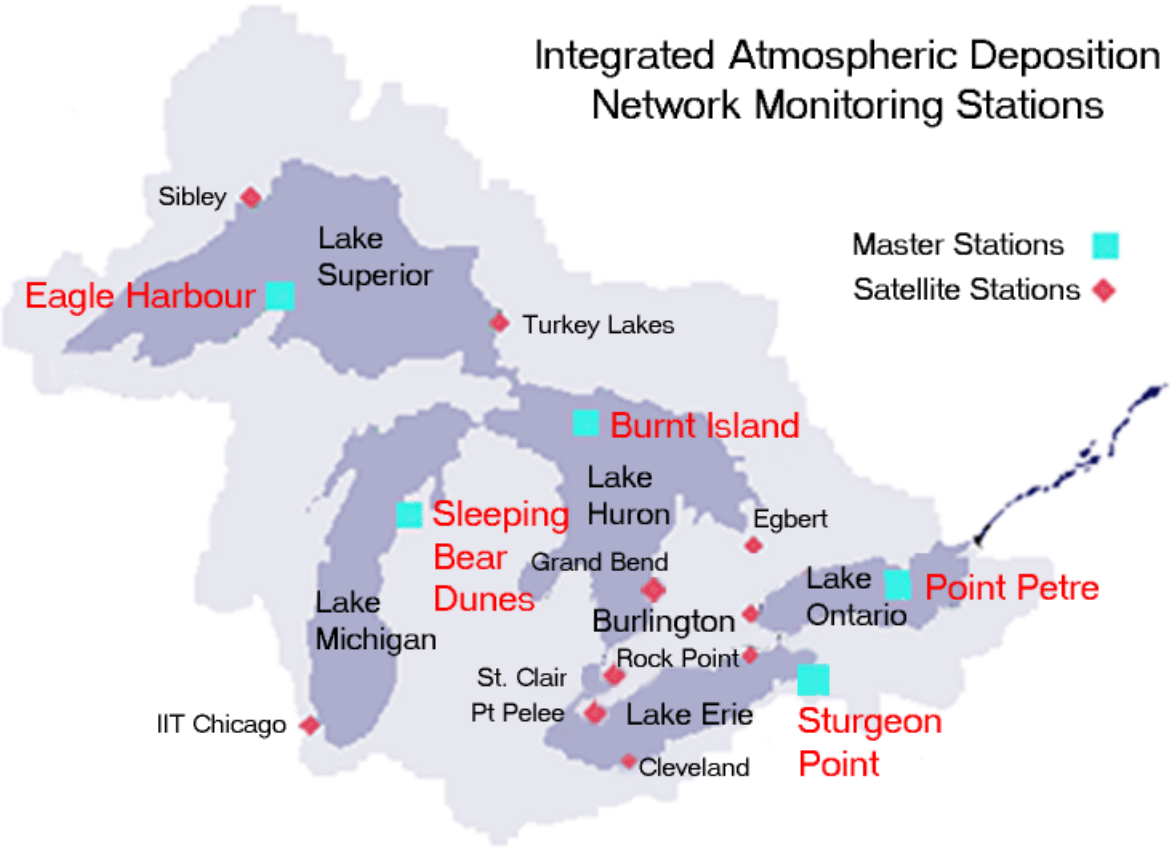


Figure 1. IADN master and satellite sampling stations

2.2. Measured Substances

IADN has been measuring several chemicals as well as meteorological parameters at all master stations (Table 1). IADN has determined loadings estimates for 26 of these (bold in Table), for which necessary supplementary information (such as Henry's Law constants and open lake water concentration data) is available. This list is the same as reported in the last Loadings Report, with the deletion of PCB 44 for reasons outlined in Section 3.2.

Table 1. IADN chemical list, revised June 2004

Chemicals measured at Master and satellite stations in air and precipitation
Bold: Chemicals for which loadings estimates are available

Organochlorine pesticides (OCPs):
Aldrin
***trans*-Chlordane (γ)**
***cis*-Chlordane (α)**
***p,p'*-DDD**
***p,p'*-DDT**
***p,p'*-DDE**
o,p'-DDT
Dieldrin
α-Endosulfan
β-Endosulfan
Endosulfan Sulfate
Endrin
Heptachlor epoxide
Hexachlorobenzene (HCB)
α-HCH
β-HCH
γ-HCH (lindane)
Methoxychlor
***trans*-Nonachlor**

Polychlorinated biphenyls (PCBs):
IADN Suite PCBs (see Table 2)
PCB congeners 18, 52, 101

Polycyclic aromatic hydrocarbon (PAH) compounds:
Anthracene
Benz[*a*]anthracene
Benzo[*b*]fluoranthene + Benzo[*k*]fluoranthene
Benzo[*g,h,i*]perylene
Benzo[*a*]pyrene
Chrysene + Triphenylene
Dibenz[*a,h*]anthracene
Fluoranthene
Indeno[*1,2,3-cd*]pyrene
Phenanthrene
Pyrene

Trace Elements (Canada):
Arsenic
Cadmium
Lead
Selenium

A standardized suite of PCB congeners that make up the majority of PCB mass in air, the IADN PCB Suite, has been developed for the purpose of estimating total PCBs in air and precipitation.

Table 2. IADN Suite PCB congeners.

4+10	28	70+76	100	156+171+202
5+8	31	74	101	169
6	33+53	77+110	105+132+153	170+190
7+9	37+42	83	114+131	172
12+13	41+64+71	85	118	174
15+17	45	87+81	119	180
16+32	47+48	89	123+149	194+205
18	49	91	126	199
19	52	95+66	128+167	201
22	56+60+84+92	97	135+144	206
26		99	138+163	207

2.3. Sampling Protocols

2.3.1. Precipitation

The details of all sampling protocols are given in the Standard Operating Procedure (SOP) manuals for each agency (Harrison, 2005; Basu and Bays, 2005). These details will be reviewed briefly here and are shown in Figures 2-4. All stations (including all satellite site facilities except Egbert) have samplers to measure wet deposition of organic contaminants using an MIC-B collector with a stainless steel funnel. IU uses XAD-2 resin column cartridges for accumulating the organics. EC uses a dichloromethane solvent extraction system in which the rainwater is stabilized with 250 mL of dichloromethane at time of collection and then liquid/liquid extracted using fresh dichloromethane. IU samples precipitation on a 28-day cumulative basis. Prior to 2000, EC sampled 14-day cumulative samples, this was modified to 28-day composited samples. Since January of 2004 both agencies collected samples on a monthly basis. For trace elements, EC uses an MIC-B precipitation sampler. The precipitation samples are collected in pre-cleaned polyethylene buckets. IU does not measure trace elements in precipitation or air.

2.3.2. Air

Air sampling for organic chemicals uses modified high volume samplers with filter and absorbent combinations (Environment Canada , 2002; Basu and Bays, 2005). IU uses a high volume sampler (modified Anderson Hi-vol sampler, General Works, model GS2310, Cleveland, OH), which has a quartz fibre filter and an XAD-2 absorbent cartridge. This allows for a >800 m^3 sample volume. EC uses a General Metal Works high volume PS-1 sampler with a glass fibre filter and polyurethane foam as the absorbent for organics. In this case, sample volumes are kept below 400 m^3 to minimize breakthrough of volatile species during warm summer months. The trace elements are collected on a cellulose filter (Whatman 41) at the sites of Point Petre and Burnt Island using a dedicated PM10 high volume sampler for a total air volume of 1625 m^3. All agencies have now adopted a sampling frequency of a 24-hour sample every 12 days.

Early results showed that little organochlorine mass was found on the filter. For example, at the Point Petre station in 1992, the particulate/gaseous mass ratio was 2.3% for total PCBs and < 1% for the HCHs, *p,p'*-DDE, and HCB. Due to the low analyte masses on the filters, agency protocols have changed over the course of IADN. The general absence of most organochlorine pesticides and PCBs on the filters led Environment Canada to terminate the measurements of these compounds on filters in 1993. Indiana University stopped PCB analysis on filters in 1996 and OCP analysis on filters as of January 2004, with the exception of the urban sites at Cleveland and Chicago.

2.4. Chemical Analyses

Laboratory analysis protocols generally call for solvent extraction of the organic sampling media with addition of surrogate recovery standards. Extracts are then concentrated followed by column chromatographic cleanup, fractionation, nitrogen blow-down to small volume and injection into GC-ECD, HPLC or GC-MS instruments (Figures 2-4). Details of these analyses can be found in the chemical analysis SOPs (IU SOP 2007; EC air toxics, 2006; Sverko et al., 2006; EC NLET 2003). Trace elements analyses for Canadian samples are conducted using inductively coupled plasma emission for particulate and precipitation samples via a contracted laboratory.

Figure 2. Schematic of analyses of Canadian precipitation samples

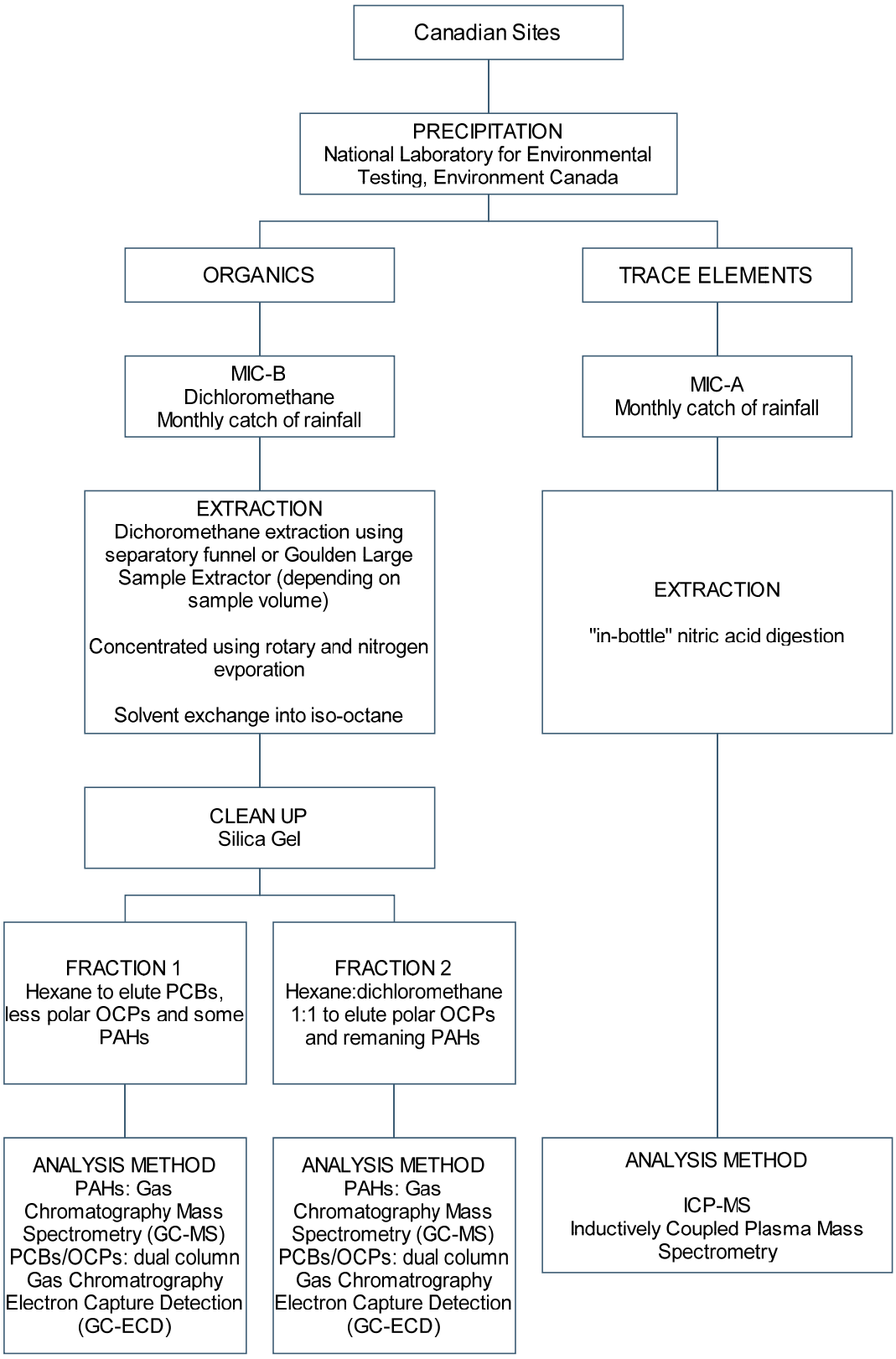


Figure 3. Schematic of analyses for Canadian air samples.

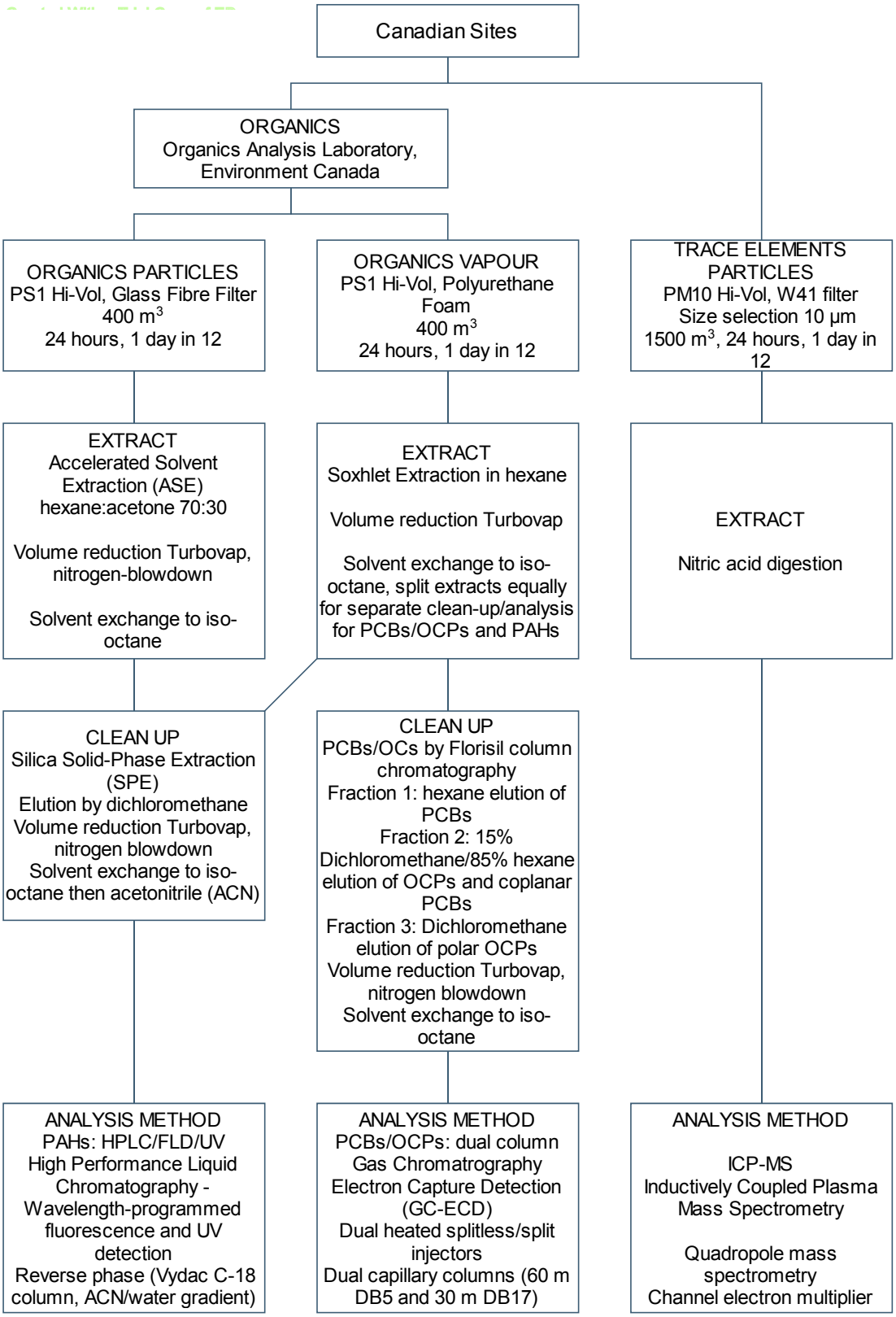
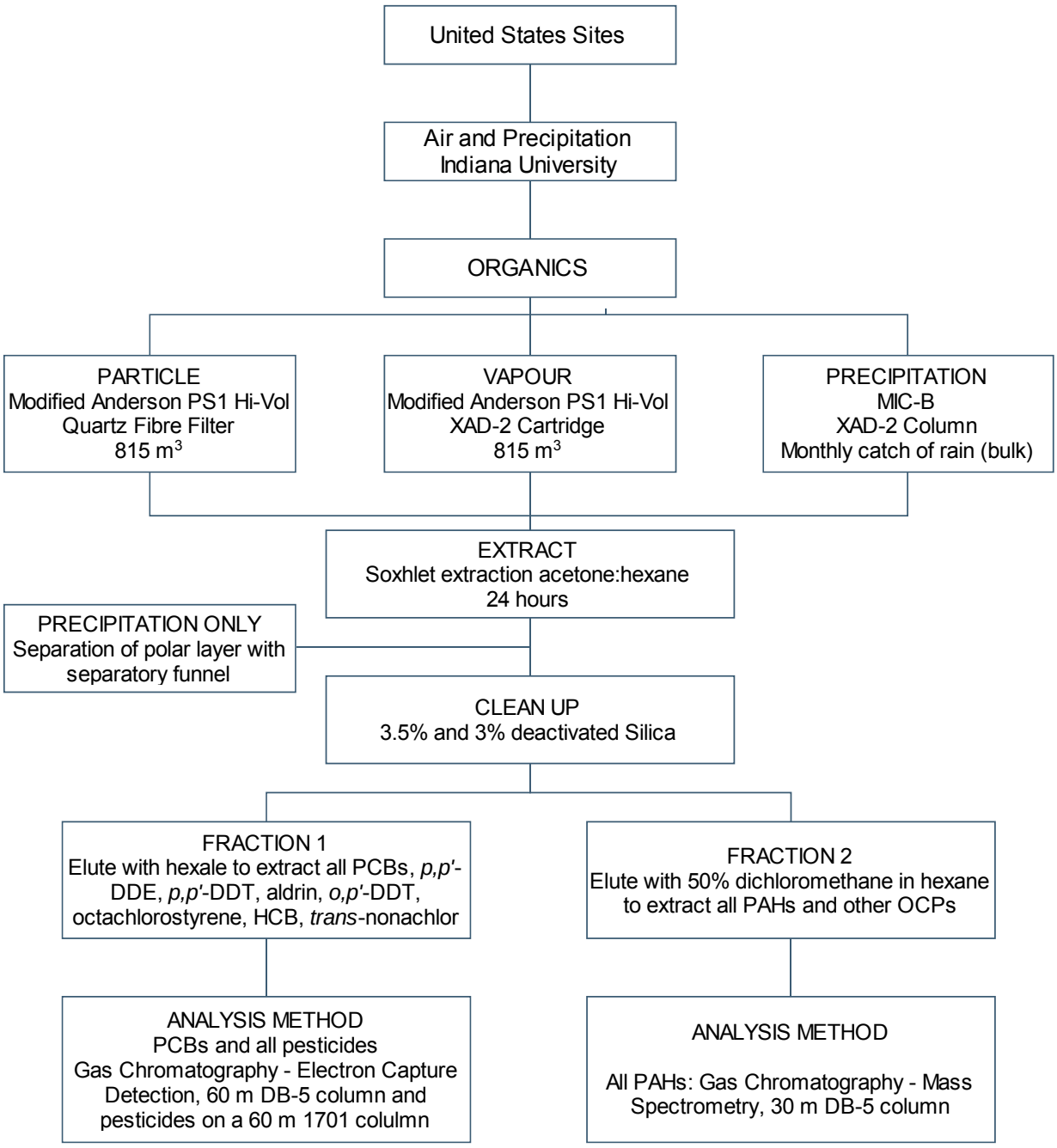


Figure 4. Schematic of analyses for US air and precipitations samples.



IADN follows a strong quality assurance (QA) program. The Quality Assurance Program Plan (QAPP) was documented jointly by Environment Canada and the United States Environmental Protection Agency (June 2001). All air and precipitation chemical data and all meteorological data measured by IADN go through a quality control process via the Research Data Management and Quality Control System™ (Sukloff et al., 1995). Data is available online via the Canadian National Atmospheric Chemistry (NAtChem) Database (http://www.msc-smc.ec.gc.ca/natchem/).

Differences in loading estimates among sites/lakes need to be viewed in consideration of the identified measurement differences among agencies involved in IADN from the IADN Quality Assurance (QA) studies. A series of QA activities are routinely carried out among the participating laboratories to ensure data comparability. Detailed results from the QA activity can be found in Wu et al. (in prep). These include exchange of round robin samples, analysis of a common reference standard (CRS), and results of a long-term co-location sampling period. All laboratories agree very well when analyzing clean standards. For the PAHs and OCPs, all laboratories are within 90-95% of the standard amount. There is some more variation in the PCB CRS, but all three laboratories are within 80% of the standard amount.

Round robin sample exchange consists of exchanging real field samples between laboratories to locate differences due to sample extraction, clean-up procedures and analytical methods. The round robin results indicate that different laboratory analytical methods may have differing abilities to deal with matrix interferents, which were not present in the CRS analyses. This was particularly evident in the precipitation samples, where the EC values are higher than those of IU.

Finally, the Lake Ontario Point Petre master station is the site of a long-term co-location study, in place since 1998. The co-location study is designed to show differences accrued over the entire sampling, extraction and analysis process, especially analyte sample collection efficiencies. Air and precipitation samples are collected simultaneously for all labs every 24 days. For the gas-phase, IU values average slightly higher than EC while the opposite is observed for the particle-phase compounds. In the precipitation data, EC is consistently higher than IU. Part of this difference was already seen in the round robin sampling, but this difference was enhanced by the dissimilar sample collection methods.

Other than these three major ongoing activities, other special QA studies are carried out intermittently, including PUF breakthrough studies and laboratory and field blank analyses. Again, results from these are available in Wu et al. (in prep.).

3. Loadings Calculations

3.1. Loadings Equation

Detailed descriptions of the loadings calculations can be found elsewhere (Hoff et al., 1996; Hillery et al., 1998). A brief summary will be presented here. Net atmospheric flows (L, in kg/yr) are based on three processes: wet deposition, dry deposition, and net gas exchange. They are represented by the equation:

$$L = C_p R_p A + C_a \phi_a v_d A + [k_{ol}(1-\phi_a)C_a(RT/H)A - k_{ol}(1-\phi_w)C_w A] \quad (1)$$

Wet deposition is the product of the volume-weighted mean precipitation concentration, C_p (kg/m^3), the rate of precipitation, R_p (m/yr), and the area of the lake, A (m^2). Dry deposition is the product of the total atmospheric concentration of the pollutant, C_a (kg/m^3), the fraction of the compound in the particle phase, ϕ_a, the deposition velocity of the particles, v_d (m/yr), which is taken as 0.2 cm/s for all chemicals, and the area of the lake, A (m^2). The product of C_a and ϕ_a is operationally defined as the concentration obtained on the filter samples. Atmospheric concentrations are obtained from the measurements at master stations.

Net gas exchange is divided into two components: absorption and volatilization. The variable, k_{ol} (m/yr), is the overall air-water mass transfer coefficient, R (atm m^3/K/mol) is the ideal gas constant, T (K) is the temperature at the air-water interface, H (mol/atm/m^3) is the Henry's Law constant, and C_w (kg/m^3) is the concentration of the compound in water. For absorption, $(1 - \phi_a)C_a$ is the air concentration of the compound in the gas phase as obtained operationally on the PUF or XAD media. Absorption is the transfer of the compound in the gas phase from air to water. In the volatilization term, ϕ_w is the fraction of the compound on the particle phase in the water, thus making $(1 - \phi_w)C_w$ the dissolved phase concentration of the compound of interest. Volatilization is then the transfer of the compound from water to air. Net gas exchange is the sum of the absorption and volatilization estimates. The convention in this report is that positive net gas exchange indicates absorption, while negative net gas exchange indicates volatilization.

The loadings estimates are presented in this report as both flows and fluxes. Fluxes (ng/m^2/day) are the flows (kg/month) converted to ng/day and divided by the appropriate lake area. These areas are 82,100 km^2 for Lake Superior, 57,800 km^2 for Lake Michigan, 59,600 km^2 for Lake Huron, 25,700 km^2 for Lake Erie, and 18,960 km^2 for Lake Ontario. Fluxes allow for comparisons between the lakes by removing the variation due to differing lake areas.

In this report, errors are presented for each term as a coefficient of variation (COV). These COVs were calculated in accordance with the error propagation analysis by Hoff (1994) and adapted by Galarneau et al. (2000). For wet deposition, two terms contributed to the calculated error: an error on the volume-weighted mean (25%) and an error on the precipitation rates (10%), this resulted in an overall error of 27% for all wet fluxes. For dry particulate deposition, two terms contributed: the error on the concentration in particles was obtained from the limit of detection of the measurements (lod) divided by the monthly mean (lod/monthly mean). Lod was calculated using field blanks and is defined as the mean of field blanks multiplied by 3 times the standard

deviation of the blanks (QAPP,2001). The monthly mean was the arithmetic mean used to calculate the monthly loadings. The error on the deposition velocity was set to 100% because there is a large amount of uncertainty in the adopted value of 0.2 cm/s (Hoff, 1994). This results in an overall error of greater than 100% for all dry particulate fluxes. Three terms contributed to the error for absorption: the error on the gaseous concentration which was similar to the particulate concentration's error (lod/monthly mean) described above as well as the errors on the overall air-water mass transfer coefficient (k_{ol}) and on the Henry's law constant (H), which were set to 50% and 30%, respectively (Hoff., 1994). Calculated errors for absorption are listed in Appendix D.

3.2. Data Improvements

Building upon the improvements of the last loadings report (Blanchard et al., 2004), data were further modified in several areas: overlake wind speeds, the proper assignment of the precipitation sampling, and new water concentration data. Further, data quality assurance is always on-going and may affect loadings retrospectively for specific chemicals at certain lakes. It is important to note that the loadings estimates have been recalculated for all previous years using these improved data and thus results may be different than presented in previous reports as outlined below.

Overlake wind speeds are used in the calculation of the overall air-water mass transfer coefficient. In the previous report monthly averaged lakewide wind speeds were based on hourly data obtained from the National Oceanic and Atmospheric Administration (NOAA, 2000). In this report, wind speeds measured by the Great Lakes over-water buoy network compiled by the Meteorological Service of Canada (MSC) and the Canadian Department of Fisheries and Oceans (DFO) were used except for Lake Huron where the buoy data were incomplete and thus NOAA values were used. The MSC and DFO monthly averages were found to be within 10% of the NOAA averages and thus loadings estimates differences due to this change of data source for wind speeds are expected to be minimal.

At Canadian master stations, precipitation samples were collected over 28 days up to 2004. This resulted in some samples being collected over two different calendar months. Previously, the volume weighted mean (C_p) was assigned to a given month based on the start date of the sampling period which did not rigorously represent the actual period of sampling in the case when a sample straddled two months. A new method was developed where fractions of samples within each calendar month were used to obtain the proper C_p. The overall difference between the old and the new volume-weighted means is less than 20%, though the change in an individual month can be much greater.

Recent and improved water concentration data, for all Lakes except Lake Michigan, were obtained from the Environment Canada Great Lakes Surveillance Program (http://www.on.ec.gc.ca/monitoring/water-quality/greatlakes-e.html). Since 2004, samples were collected in open water aboard the ship Limnos from the Lake near-

surface using a PoPCart sampler. The PoPCart (developed by R. McCrea of Environment Canada) is a specialized, clean sampler consisting of a stainless steel groundwater pump fitted with Teflon-lined flexible hosing attached to a filter system and bottle-filling station. All components are contained within a stainless steel cart to mitigate contamination. The samples were filtered and therefore represent the dissolved fraction only. Sample volumes from Lakes Erie and Ontario were 16 L while 24 L samples were collected from Lakes Huron and Superior. In the field, the samples were stabilized with DCM then extracted in the laboratory using a Goulden Extractor. Analysis for polychlorinated biphenyls and organochlorine pesticides was conducted by gas chromatography with micro-electron capture detection. Analysis of polycyclic aromatic hydrocarbons was by gas chromatography with mass selective detection (Dove, personal communication). PCBs are blank-corrected on a congener basis while organochlorines and PAHs are not. The total PCB concentration for the water program does not include congeners 37, 77, 89, 123, 126, and 169, which are included in the IADN PCB Suite, but includes 20, 24, 98, 134, which are not targeted in the IADN program. This is expected to have a small overall effect given that these congeners are not present in large concentrations in ambient air. In cases when all data was not detected, volatilization was not estimated. The 2001-2005 volatilization calculations were based on the water concentration data in Table 3.

Table 3. Lake water concentrations for IADN 2001-2005 loadings calculations[a].

Chemical	Lake Superior			Lake Michigan			Lake Huron			Lake Erie			Lake Ontario		
	Conc. (ng/L)	n	SD	Conc. (ng/L)	N	SD	Conc. (ng/L)	N	SD	Conc. (ng/L)	N	SD	Conc. (ng/L)	n	SD
α-HCH	1.5	3	0.1	0.40[b]	5		0.17	5	0.04	0.14	7	0.03	0.19	5	0.40
γ-HCH	0.31	3	0.02	0.12[b]	5		0.13	5	0.01	0.17	7	MLE	0.18	5	0.04
Dieldrin	0.11	3	0.01	-			0.083	5	0.003	0.12	7	0.02	0.15	5	0.01
cis-Chlordane	0.006	3	0.001	0.0071[b]	5		0.003	5	0.001	0.006	4	MLE	ND	5	
trans-Chlordane	0.007	3	0.002	0.0047[b]	5		0.002	5	0.000	0.005	4	MLE	ND	5	
α-Endosulfan	ND	3		-			ND	5		0.013	7	MLE	ND	5	
p,p'-DDE	0.002	3	0.0001	0.010[b]	5		0.006	5	0.001	0.007	7	0.001	0.014	5	0.002
p,p'-DDT	ND	3		0.0036[b]	5		ND	5		0.004	4	0.002	ND	5	
p,p'-DDD	0.005	3	0.001	-			0.005	5	MLE	0.021	7	0.006	0.021	5	0.008
HCB	0.013	3	0.001	0.010[b]	5		0.011	5	0.001	0.010	7	0.001	0.017	5	0.001
PCB-18	0.0016	3	0.0002	0.0027[c]	4	0.0012	0.0014	5	0.0018	0.0035	7	0.0007	0.0033	4	0.0009
PCB-44	0.0088	3	0.0010	0.0026[c]	4	0.0006	0.0026	5	0.0004	0.005	7	0.003	0.005	4	0.002
PCB-52	0.0037	3	0.0027	0.0093[c]	4	0.0064	0.0058	5	0.0012	0.011	7	0.007	0.013	4	0.006
PCB-101	0.0014	3	0.0012	0.0040[c]	4	0.0013	0.0045	5	0.0010	0.013	7	0.006	0.014	4	0.005
Suite PCB	0.035	3	0.019	0.088[c]	4	0.022	0.063	5	0.014	0.13	7	0.10	0.13	4	0.05
Phenanthrene	0.030	2	0.005	-			0.076	5	0.044	0.55	7	0.26	0.13	5	0.03
Pyrene	0.020	3	0.004	-			0.017	5	0.004	0.093	7	MLE	0.091	5	0.024

ND = not detected, MLE = Maximum Likelihood Estimation

[a] Alice Dove, personal communication, Great Lakes Surveillance program, unpublished data, Water Quality Monitoring and Surveillance, Ontario, Environment Canada. Please note, only open-lake data is used.
[b] values used in the 97-98 and 99-00 loadings report (Buehler et al., 2001).
[c] values obtained from Melissa Hulting, EPA-GLNPO(personal communication).

There are a number of improvements that were made in laboratory and data analysis procedures that have affected the concentration data used in the loadings calculations. Since 2005, a common calibration standard (CCS), custom made with individual PCB congener, is now being used by all laboratories for analysis to allow for more consistency between laboratory analyses from different agencies. This has resulted in a change for all agencies, but in particular for the American PCB values, where the lab was previously using a mixed Aroclor standard. An extensive analysis of samples using both the original standards and the common calibration standard was performed in order to determine the difference between the two analyses, resulting in calculation of correction factors that were applied to data pre-2004.

A similar exercise was performed with the Canadian metals data in air, since samples before 1995 were analyzed using ICP-ES and samples from 1995 were analyzed by ICP-MS. 1995 samples were analyzed using both methods, and a correction factor applied to pre-1995 data. The use of these correction factors has resulted in a more consistent database from which to calculate the loadings estimates and determine trends.

A further change in the Suite PCBs was made by removing PCB 44 which was found to have problems in the earlier US data. The presence of an interference with congener 44 has been confirmed to affect some gas chromatograms, especially those for gas phase samples from the urban sites. In these cases, the values were more than 20% of the total PCBs. According to our QA requirement, any congener above 20% of total PCB should be rejected. Starting in January of 2005, IU analyzes PCB 44 on a 1701 column which has greatly improved these data; thus future loadings estimates will include PCB 44.

4. Results

The atmospheric fluxes and loadings of reported PCBs, OCPs, PAHs and trace elements are outlined in the Appendices. Appendices A and B report the annual flux and loadings, Appendix C provides a graphical presentation of the values in Appendix A, Appendix D reports the monthly fluxes and Appendices E and F report urban results.

In general, atmospheric deposition of PCBs and banned OCPs via absorption and wet deposition continued to decline with most chemicals heading towards air-water equilibrium. Atmospheric deposition of particulate PAHs remained mostly constant over time while absorption of gas-phase PAHs (e.g. pyrene) was showing a slight decrease. Dry deposition of metals such as cadmium and lead was slightly decreasing. Atmospheric deposition of lindane has decreased, likely in response to the Canadian ban. The new annual water concentration data have resulted in significant volatilization flux changes for certain chemicals and lakes (Appendix C) (e.g. a factor of 2 decrease for α-HCH from Lake Ontario), whereas other volatilization fluxes were less affected (e.g. about a 25% decrease in Suite PCBs from Lake Superior).

4.1 Organochlorine Pesticides

4.1.1 α-HCH

The decline in wet deposition fluxes of α-HCH has continued with overall values less than 2 ng/m^2/day for most Lakes. The magnitude of both absorption and volatilization has decreased over time for all Lakes. For Lakes Huron, Ontario and Erie, air-water exchange for α-HCH is approaching equilibrium while for Lakes Superior and Michigan, the Lake is now a source of α-HCH to the atmosphere.

4.1.2 γ-HCH (Lindane)

Wet deposition and absorption fluxes of γ-HCH have gradually decreased between 2000 and 2005, following relatively level fluxes throughout the 1990s. A strong seasonality is still observed with peaks in May-July corresponding to usage and tillage patterns. Lindane had been used in the U.S. and Canadian prairies and southern Ontario as a seed treatment for canola and corn. It was banned for sale in Canada in 2002 (use was banned at the end of 2004) and this has led to an observable decrease of lindane deposition in the Great Lakes region. Lindane manufacturers in the United States voluntarily agreed to withdraw registration of the pesticide in mid-2006.

4.1.3 Dieldrin

For lakes where dieldrin water concentrations were available, dieldrin has been predominantly volatilizing from the Lakes since the early 1990s with ratios of volatilization to absorption of the order of 6 to 10. This trend continues with the fluxes calculated using the latest water concentrations. Note that dieldrin water concentrations were not available for Lake Michigan. Absorption fluxes have slowly decreased over time, particularly for Lakes Erie and Michigan, while wet deposition has remained small and relatively constant over the last 5 to 7 years.

4.1.4 HCB

HCB absorption was not reported in previous reports for Canadian sites since the use of a single PUF at Canadian master stations resulted in breakthrough of HCB during warmer sampling periods. In this report, we stratified gas phase HCB concentrations, retaining samples when the average daily temperature did not exceed 10°C. This value was chosen based on previously published breakthrough related information (Bidleman et al.,1984; Senum, 1981) and a study conducted by Environment Canada (Fowlie, 2004). Absorption are reported for Lakes Ontario and Huron in Appendices A, B and only for months meeting the criteria in Appendix D.

For data obtained at the US sites of Lakes Superior, Michigan and Erie, a decrease in absorption over time, particularly since 1999, is observed. While most OC pesticides usually peak in summer, HCB has a relatively large Henry's law constant (H) yielding mass transfer coefficients with winter maxima. This being the case, the annually

averaged absorption fluxes reported here for Lakes Ontario and Huron may be biased high since lower summer values were not included in the annual average due to temperature segregation. At all sites HCB is tending towards equilibrium and fluxes across the basin are similar.

4.1.5 Chlordanes

cis-Chlordane, trans-Chlordane, trans-Nonachlor

Atmospheric fluxes of chlordanes continue to be small, often less than 1-2 ng/m^2/day. Volatilization fluxes, included for *cis*- and *trans*-chlordanes, are relatively large. It is important to note that urban centres are potential sources of chlordanes to the Lakes (since they were used in buildings for termite control) and thus the fluxes obtained here may be underestimated (see section 4.5.1.5. on urban inputs for the contribution to chlordanes).

4.1.6 DDT and Metabolites

p,p'-DDT; p,p'-DDD; p,p'-DDE

DDT has been banned in Canada and the United States since the early 1970s, while Mexico banned its use in 2000. The last five years seem to indicate a modest decrease in absorption. Fluxes are generally smaller for Lakes Huron and Superior, particularly for *p,p'*-DDE. All are tending towards equilibrium within uncertainy of the flux estimates.

4.1.7 α-Endosulfan

α-Endosulfan is a current-use pesticide used on fruit and vegetable crops with heavy uses in New York, Michigan, and some use in Ontario. Strong seasonal patterns are seen for wet and absorption fluxes with maxima in spring-summer. Absorption fluxes dominate deposition to the Lakes with larger fluxes for Lakes Michigan, Erie and Ontario. Relatively larger absorption fluxes were observed in 2005, particularly in Lakes Erie and Ontario.

4.2 Polychlorinated Biphenyl, PCBs

Fluxes for the individual PCB congeners (18, 52 and 101) generally reflect patterns of the suite. Wet deposition constitutes a small portion of the atmospheric deposition of PCBs, with levels in precipitation starting to approach blank levels. There is no discernable trend over time for wet deposition. Wet fluxes are similar among the Lakes, although estimates for Lakes Ontario and Huron available for the last three years are slightly higher. Gas exchange is the dominant process for PCBs. Overall deposition of PCBs continues to decrease, with air-water exchange dominated by volatilization out of the Lakes. Some increases in absorption were seen in the late 1990s for Lakes Superior, Michigan, and Erie. Absorption decreased again by 2000, although Lake Superior only showed a decrease after 2002. Somewhat higher absorption fluxes are

seen for Lake Erie. Urban areas are important sources of PCBs to the Lakes; see section 4.5.1.8 for urban contributions.

4.3 Polycyclic Aromatic Hydrocarbons, PAHs

Phenanthrene, Pyrene, Benzo[a]Pyrene, Indeno[1,2,3-cd]Pyrene, Benzo[b]Fluoranthene, Benzo[k]Fluoranthene

PAHs are combustion by-products and are therefore currently emitted into the atmosphere. This is reflected in the loadings whereby absorption and wet and dry deposition are dominant relative to volatilization. Phenanthrene and pyrene absorption fluxes are largest for Lake Erie, a slight decrease in absorption is seen between the 1990s and the early 2000s. Phenanthrene absorption fluxes are much more important than wet or dry fluxes while pyrene's fluxes to the Lakes occur via gas absorption, precipitation and particle deposition in similar magnitude. Decreases between the 1990s and recent years are seen for absorption and dry deposition of pyrene. The heavier PAHs, benzo[*a*]pyrene, indeno[*1,2,3-cd*]pyrene, benzo[*b*]fluoranthene and benzo[*k*]fluoranthene, are equally deposited via wet and dry deposition to the Lakes. Lakes Erie and Ontario have the largest fluxes of these 4 compounds and there is some evidence of a recent decrease in dry deposition of these chemicals.

4.4 Trace Metals

Lead, Cadmium, Arsenic, Selenium

Pre-2001 wet deposition of cadmium, arsenic and selenium reported previously (Blanchard et al., 2004) for the Canadian sites are not published here because it was determined that sample concentrations were too close to detection limits to yield meaningful fluxes. Arsenic dry fluxes have remained constant over the last 8 years while cadmium and lead show a slight decrease from the mid-nineties. Selenium on the other hand has shown an increase in dry deposition over the course of the IADN measurements. Selenium is used in glass production and in electronics due to its properties as a semiconductor, and is also emitted from coal combustion. It is also used in plumbing brasses to meet no-lead requirements (USGS, 2006).

Lead wet deposition is several times larger than dry deposition. Similar to past reports, the deposition velocity used to calculate dry fluxes was 0.2 cm/s for all metals. This assumption is unlikely since the deposition velocity depends on the atmospheric particle size distribution and this in turn will be different for various metals. To address this issue, five samples were collected at the Canadian master station of Point Petre where impactors were set up to collect atmospheric aerosols. Metals were then analyzed on each impactor stages using PIXE (Wong et al., 2005). These size distributions were then used in a size-segregated resistance-analogy model (Zhang et al., 2001) to estimate new deposition velocities. For lead, the modeled deposition velocities were about 4 times that of 0.2 cm/s for the years 2002-2003. This would result in some cases in dry fluxes of similar magnitude to wet deposition. Further work is needed to better approximate the appropriate deposition velocity to be used in the calculation of IADN loadings.

4.5 Urban Influence

Previous IADN loadings reports have acknowledged that urban areas can provide significant inputs of Persistent Bioaccumulative Toxics chemicals to the Great Lakes and have presented fluxes and loadings calculated using data from the satellite station in Chicago to estimate the influence of that urban area on atmospheric deposition to Lake Michigan (Galarneau et al., 2000; Buehler et al., 2001; Blanchard et al., 2004). In late December of 2002, a new satellite station was established in Cleveland, Ohio. In this report, we also calculate inputs to Lake Erie using Cleveland data.

Flux and loadings estimates were made on a monthly basis using the same input parameters as were used for loadings calculated using data from the master stations. Data from the urban sites was applied to a surface area of the appropriate Lake in order to represent the "urban plume" impacting deposition to the Lake. As in the past (Galarneau et al., 2000), the "urban plume" surface area used for Chicago was 100 km of shoreline multiplied by 10 km offshore for wet and dry deposition (1,000 km^2, or 1.7% of the total lake area) and 100 km by 20 km offshore for gas exchange (2,000 km^2, or 3.5% of the total lake area. It is assumed that pollutants in the vapor phase have a more extensive spatial influence out over the lake, since particles and affected precipitation deposit closer to the city and/or sources. The Cleveland urban plume area was calculated using 80 km as the shoreline length, resulting in "impact areas" of 800 km^2 for wet and dry deposition (3.12% of the Lake Erie surface area) and 1600 km^2 (6.24%) for gas exchange.

To determine when urban concentrations should be applied to the affected area of the Lake, the percentage of the time that winds are blowing from a city onto the appropriate Lake was calculated using hourly meteorological data collected at the station. For past reports, wind directions from the southwest quadrant (180º to 270º) were used for the Chicago site. For this report, the wind direction range was expanded to include wind directions between 170º and 330º (Figure 5). The wind direction range used for Cleveland was 70º to 230º.

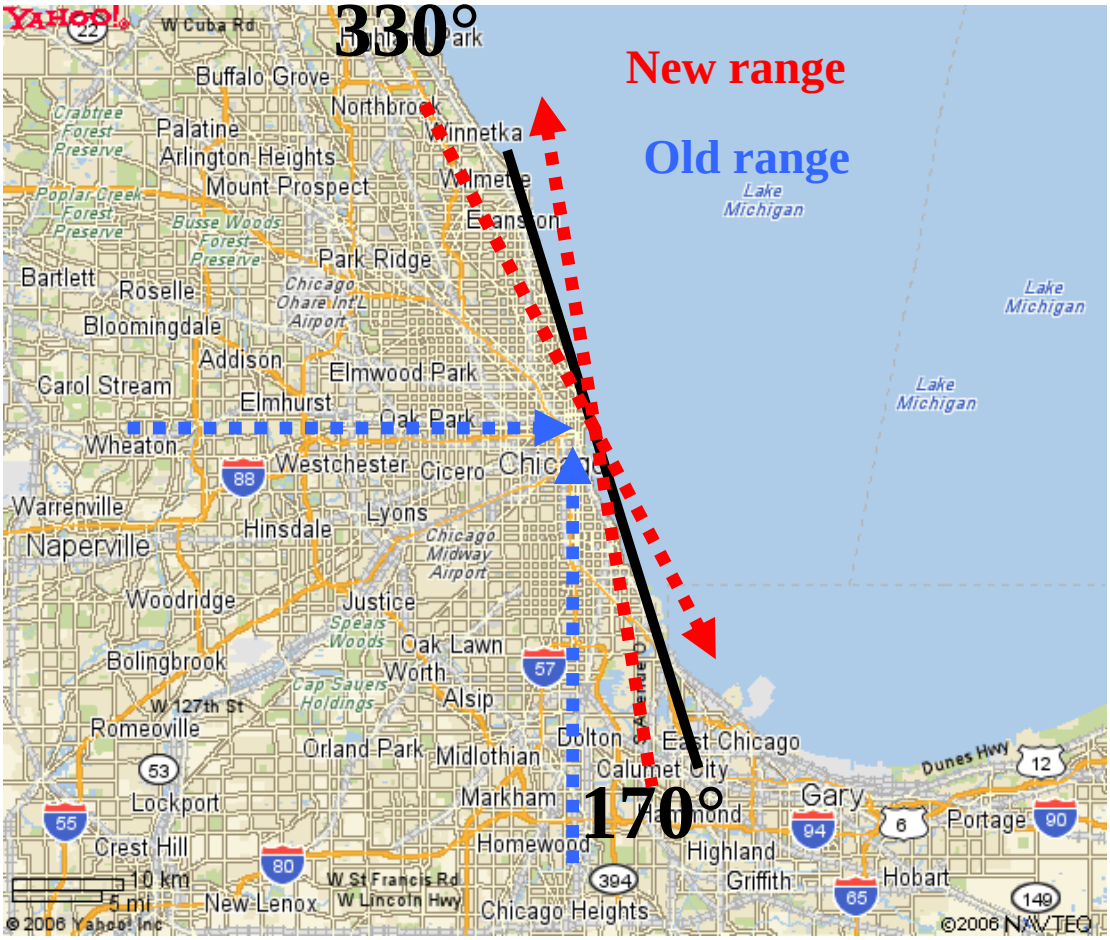


Figure 5: Wind direction range used for urban influence of Chicago on Lake Michigan from previous report (Blanchard et al., 2004, blue, Old range) and current report (red, New range).

The new percentages for the expanding wind direction range for Chicago were about 50-60% for 2001 to 2005 compared to 32.8% and 35.2% for 1999 and 2000 using the southwest quadrant only. For Cleveland, the percentages were around 40-45% for 2003 to 2005.

4.5.1 Fluxes

Volatilization is not discussed below since water data is missing for Lake Michigan for some parameters, or volatilization fluxes are the same for urban and rural stations since the same water data is used. Dry deposition is also not calculated for some of the organochlorine pesticides and PCBs because of low detection levels. In fact, organochlorine pesticides and PCBs in filters were no longer analyzed as of 2003.

4.5.1.1 α-HCH

All fluxes (dry deposition, wet deposition, absorption, volatilization) of α-HCH were lower at the urban sites of Cleveland and Chicago than the corresponding master stations at Sturgeon Point and Sleeping Bear Dunes. Urban contribution to dry and wet deposition were small for both urban sites (approximately 1%), and only slightly higher for absorption (approximately 2-4%).

4.5.1.2 Lindane

Dry deposition fluxes were about twice as high at Chicago and Cleveland as at their rural master station counterparts, though only limited data was available. Wet deposition was comparable to somewhat higher at the rural stations.

Absorption fluxes were comparable between the urban and rural sites, although the background site values generally tend to be higher, with only a few exceptions. The highest absorption values were recorded at Sturgeon Point, in the summer months, which may be due to proximity to agricultural regions, where lindane was used. Lindane fluxes on average are comparable between Chicago and Cleveland, with neither site consistently higher.

4.5.1.3 Dieldrin

Dry, wet, and absorption fluxes were higher in Chicago than at Sleeping Bear Dunes, particularly for absorption, for which Chicago fluxes were up to approximately 6 times higher. Fluxes were comparable between Cleveland and Sturgeon Point, although Cleveland values were usually slightly higher.

4.5.1.4 HCB

The wet and absorption fluxes were slightly lower at the urban sites of Cleveland and Chicago than their master station counterparts. Absorption is the dominant flux for HCB, and comparable values between sites are excepted given that HCB has a significant long-range transport potential. As at the master stations, absorption fluxes of HCB in Chicago and Cleveland peak in the winter (Figure 6), while the long-term plot also shows a gradual decrease in flux values for all four stations. Absorption fluxes are comparable between Chicago and Cleveland.

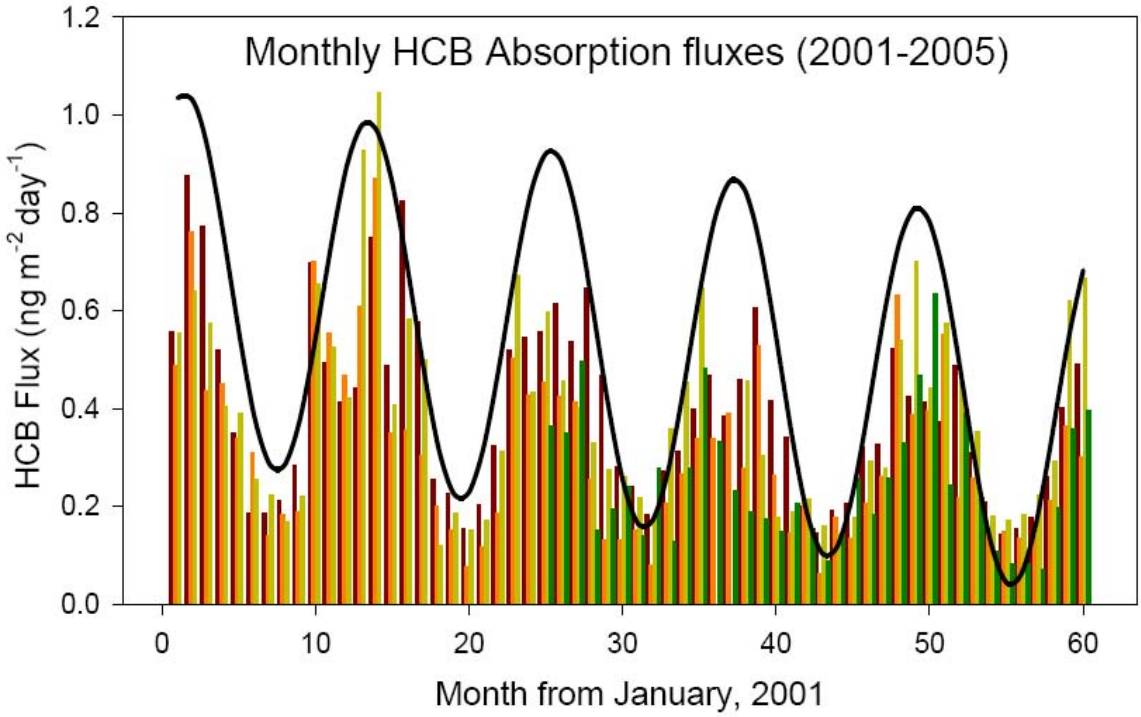


Figure 6: Monthly HCB Absorption Fluxes from 2001-2005 at urban (Chicago and Cleveland) and Master (Sleeping Bear Dunes and Stugeon Point) stations show seasonal trend, as well as a gradual decrease in the fluxes. The black line represents a sine function fitted using the natural logarithm of the monthly average of available data.

4.5.1.5 Chlordanes

Overall, fluxes of the chlordanes were about 2 to 6 times higher at Chicago than at Sleeping Bear Dunes. However, for wet and dry deposition fluxes, the values between the two sites gradually become more comparable. By 2005 the values were very similar, and Sleeping Bear Dunes has a slightly higher wet flux value than Chicago for *trans*-nonachlor. For absorption, the Chicago values continue to be 2-5 times higher than Sleeping Bear Dunes for all study years. In Cleveland, the wet fluxes were very close to, although generally lower than, the Sturgeon Point wet flux values. The Cleveland dry and absorption fluxes were 2-5 times higher than at Sturgeon Point. Volatilization fluxes were approximately 2 times higher at the rural site than the corresponding urban site. The Chicago fluxes were generally about 2 times higher than the Cleveland fluxes.

4.5.1.6 DDT and Metabolites

For dry deposition, wet deposition and absorption, fluxes of DDT, DDD and DDE were 2-6 times higher at Chicago than Sleeping Bear Dunes. For Cleveland, on the other hand, these flux values were comparable to and occasionally lower than those at Sturgeon Point. The volatilization values at both urban sites were lower than the corresponding master station, averaging 2-3 times lower.

4.5.1.7 α-Endosulfan

Similarly to the master stations, α-endosulfan fluxes peak in the late summer in Chicago and Cleveland, most likely due to the proximity of these cities to agricultural areas. Fluxes at the urban sites are lower than their rural counterparts, up to almost 5 times. The Chicago and Cleveland fluxes were comparable.

4.5.1.8 PCBs

Fluxes of Suite-PCBs were about 5 to 15 times higher at Chicago than at Sleeping Bear Dunes, with generally a more pronounced urban effect for absorption. For some of individual congeners however, the values were often comparable. Especially for wet deposition, the Sturgeon Point flux values were up to 10 times higher than at Cleveland, which were up to half of those found in Chicago (Figure 7).

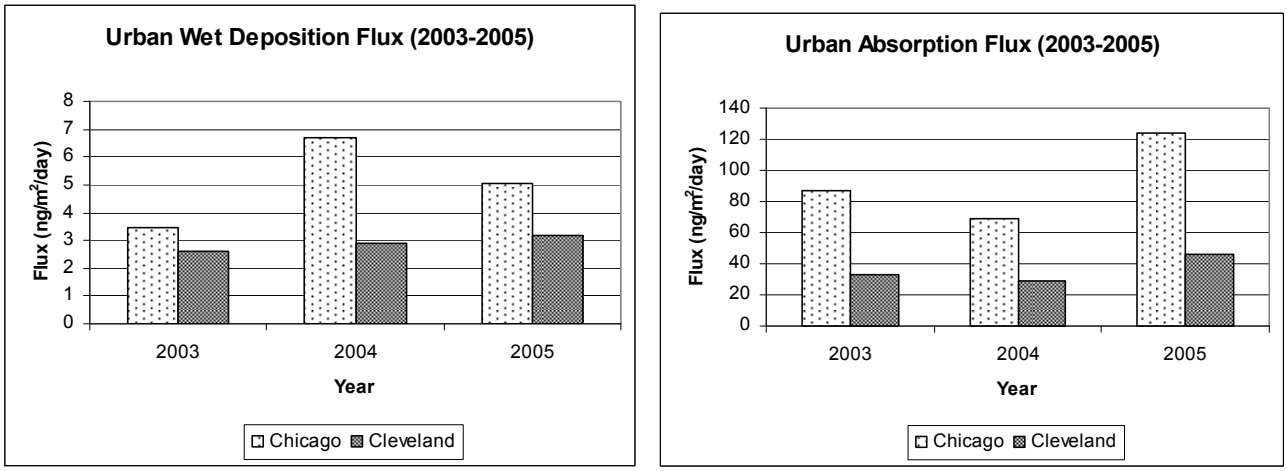


Figure 7. Wet and absorption fluxes of Suite PCBs at urban sites

4.5.1.9 Phenanthrene

Chicago phenanthrene fluxes were on average 5 to 20 times higher than Sleeping Bear Dunes for wet and dry deposition. Cleveland input fluxes were generally 5 to 10 times higher than at Sturgeon Point. Chicago and Cleveland fluxes were comparable, with Chicago being somewhat higher, on occasion up to 3 times higher, especially for dry

deposition flux. Urban absorption fluxes were very high, in the thousands of ng/m^2/day compared to hundreds of ng/m^2/day at Sleeping Bear Dunes and Sturgeon Point.

4.5.1.10 Pyrene

Chicago fluxes were on average 5 to 50 times higher than at Sleeping Bear Dunes, with the difference in dry flux on the lower end and the effect a bit more pronounced for absorption. Fluxes of pyrene at Cleveland were on average approximately 5 times higher than at Sturgeon Point. Chicago and Cleveland fluxes were comparable, with Chicago slightly higher.

4.5.1.11 Benzo*[a]*pyrene

Wet and dry deposition fluxes of benzo*[a]*pyrene in Chicago were 10 to 30 times higher than at Sleeping Bear Dunes. Cleveland fluxes were on average about 5 times higher than at Sturgeon Point. Fluxes in Chicago and Cleveland were comparable, again with Chicago values being higher.

4.5.1.12 Benzo*[b]*fluoranthene and Benzo*[k]*fluoranthene

Fluxes of these two PAHs were about 10 to 20 times higher in Chicago than at Sleeping Bear Dunes. Cleveland fluxes were about 5 times higher than at Sturgeon Point. Chicago and Cleveland fluxes were comparable, with Chicago a bit higher.

4.5.1.13 Indeno*[1,2,3-cd]*pyrene

Dry and wet deposition fluxes of this PAH were on average about 5 to 15 times higher in Chicago than at Sleeping Bear Dunes. Cleveland fluxes were about 5 times higher than at Sturgeon Point. Chicago and Cleveland fluxes were comparable, with Chicago flux values being generally higher.

4.5.1.14 Fluxes: Overall Conclusions

In general, pesticide downward fluxes (total net input values, less volatilization) were higher at Chicago than at Sleeping Bear Dunes, with the exception of the HCHs and α-endosulfan. This was the same pattern observed in the previous loading report for data from 1999 and 2000. For the other chemicals, the urban values averaged 2-3 times higher than the rural values. For Cleveland and Sturgeon Point, the values were comparable, with Sturgeon Point downward flux values being higher for α-HCH, γ-HCH, α-endosulfan and p,p'-DDE. The relative comparability of the pesticide fluxes may be due to the fact that both the master and urban stations on Lake Michigan and Lake Erie are close to agricultural areas and the fact that most of the pesticides monitored by IADN are no longer in use. In addition, chlordane and DDT were used heavily in urban areas.

Fluxes of PCBs were 5 to 10 times higher in Chicago than at Sleeping Bear Dunes, with Cleveland fluxes about ¼ to ½ of that in Chicago. Cleveland PCB downward fluxes were very similar to the Sturgeon Point values. Downward fluxes of PAHs were generally about 10 to 40 times higher at Chicago than at Sleeping Bear Dunes. Downward fluxes at Cleveland were about 3 to 5 times higher than at Sturgeon Point. Chicago and Cleveland values were comparable, with higher Chicago values.

Examination of volatilization was limited due to availability of water data. For PCBs, inclusion of the higher concentrations at Chicago switched the direction of net gas exchange from volatilization (using Sleeping Bear Dunes data for Lake Michigan) to net deposition. This did not occur with the inclusion of Cleveland data for Lake Erie, most likely because PCB concentrations at Sturgeon Point are higher than at the other rural master stations, and Cleveland PCB concentrations are not as high as in Chicago.

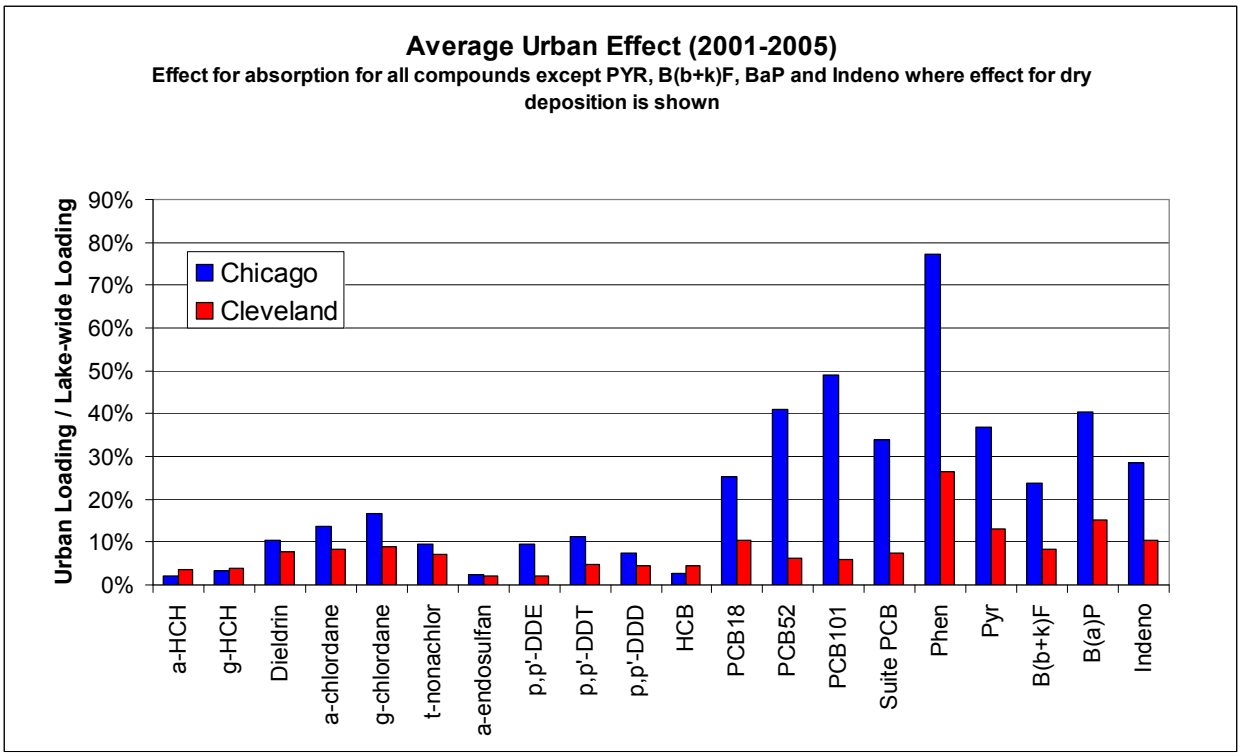
4.5.2 Urban Effect on Lake-wide Loadings

Appendix E shows annual loadings for the portion of each Lake presumed to be impacted by Chicago and Cleveland in our model, as well as a percentage urban effect (the ratio of the extra loading provided by the urban area to the lakewide loading calculated using master station data).

Figure 8 shows the average urban effects for Chicago and Cleveland for the 5 years covered by this report. Urban effects for absorption are shown for all substances except the PAHs (with the exception of phenanthrene) for which the effect on dry deposition is displayed. The effect of Chicago on loadings to Lake Michigan was generally greater than the contribution of Cleveland to Lake Erie. This result is mainly due to lower levels of measured substances in Cleveland than in Chicago and elevated levels at Sturgeon Point relative to Sleeping Bear Dunes, and despite the fact that the Chicago concentrations were applied to 3.46% of Lake Michigan's surface area versus 6.24% of Lake Erie's surface area for Cleveland. The HCHs and HCB are an exception to this because Cleveland had a higher impact on the lake-wide loading to Lake Erie than Chicago had on Lake Michigan.

Urban effects for pesticides were generally low, between 2 and 20%. Urban effects were higher for dieldrin, chlordanes, and DDT and its degradation products than for the HCHs, α-endosulfan, and HCB.

Urban effects were more comparable between Chicago and Cleveland for pesticides than for the PCBs and PAHs. This may be explained by the proximity of both Cleveland and Chicago to agricultural areas and the smaller difference between concentrations at Sturgeon Point and Cleveland versus concentrations at Sleeping Bear Dunes and Chicago.



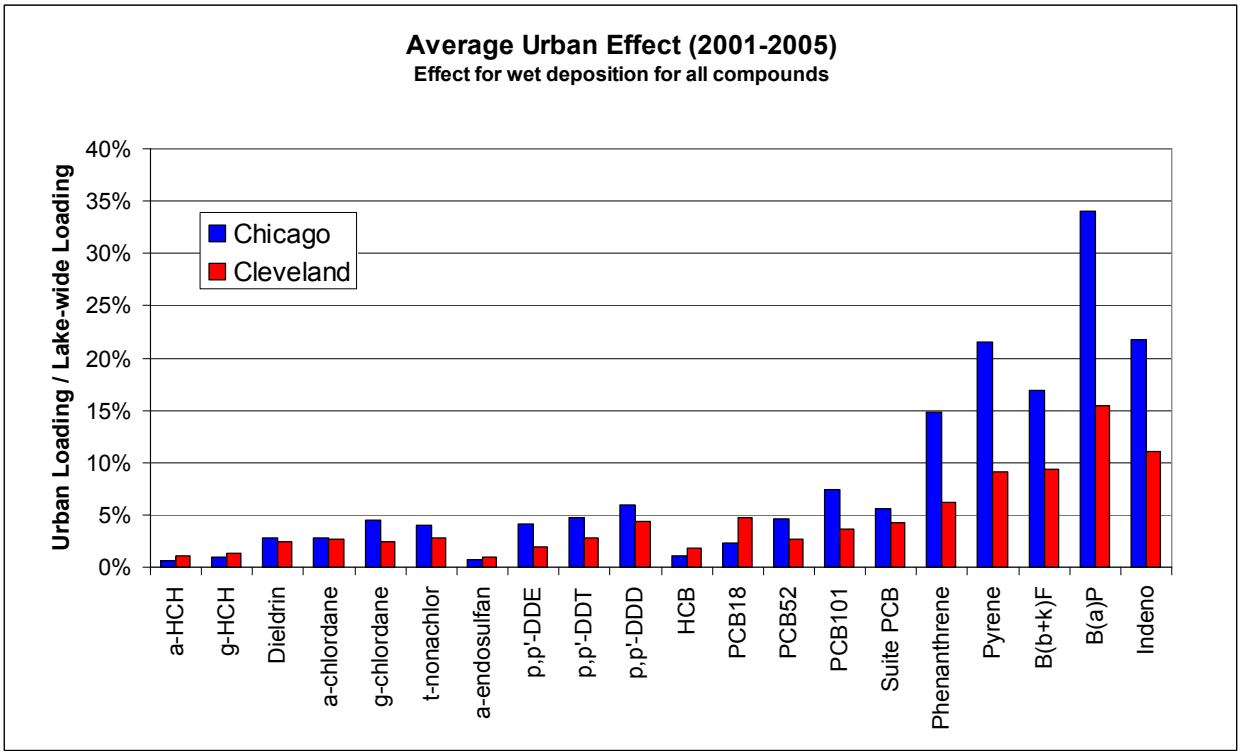


Figure 8. Urban effect on loadings calculations.

For PCBs, Chicago increased the loading to Lake Michigan by about 5-10% for wet deposition and about 30% for absorption (Suite PCBs); Cleveland increased Lake Erie's loading by less than 10% for wet deposition and 5-10% for absorption.

This urban effect for PCBs from Chicago has increased from that estimated in the last loadings report, which covered the years 1999-2000. For example, the urban effects for absorption for Suite PCBs in 1999 and 2000 were 14% and 11%, respectively, compared to about 25-50% for the years covered in this report. This is also the case for other monitored chemicals. This most likely has two major causes: first, the increased percentages of the time that Chicago data was applied to the loading calculation due to the wider range of wind angles being considered as "Chicago impacting Lake Michigan", and greater decreases in concentrations and fluxes at the master stations than at Chicago. As global background levels of these chemicals decrease, urban centers will gain importance as source areas. Studies have shown urban centres to be important point sources of PCBs to the urban atmosphere and to the entire Great Lakes basin (Harner et al., 2004; Hafner and Hites, 2003; Halsall et al., 1995).

Urban effects for the PAHs for Chicago were about 10-60% for dry deposition, 10-70% for wet deposition and 80-200% for absorption for the lighter PAHs. Urban effects for Cleveland were 5-20% for dry deposition, 10-15% for wet deposition, and 20-40% for absorption. Studies have shown that both PCB and PAH levels correlate with population (Hafner et al., 2005). At a population of 3 million people living within the city of Chicago, compared to 0.5 million in Cleveland, the Chicago area is many times more populated than the Cleveland area (U.S. Census Bureau, 2006).

Fluxes and loadings calculated using data from Chicago and Cleveland show that both cities have an impact on deposition to their nearby Lakes. In the future, additional sampling in other cities and using population and development indices to estimate levels of contaminants, particularly PCBs and PAHs, could provide a more complete picture of atmospheric deposition from urban areas to the Great Lakes.

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Appendix A: Annual Atmospheric Fluxes (ng/m^2/day) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
α-HCH																				
1992	.	2.3	100	-30	.	2.8	93	-60	.	7.1	.	.	.	4.8	94	-50	.	5.8	23	-32
1993	.	0.82	54	-31	.	1.2	62	-59	.	4.0	19	-51	.	2.6	77	-51	.	5.0	21	-32
1994	.	2.2	77	-38	.	4.0	67	-66	.	3.6	19	-54	.	2.9	81	-49	.	3.7	25	-38
1995	.	1.0	50	-64	.	2.2	37	-10	.	9.1	17	-22	.	1.7	47	-27	.	10	21	-23
1996	.	1.8	37	-55	.	0.83	30	-8.9	.	6.5	13	-17	.	1.1	31	-26	.	5.3	14	-20
1997	.	1.1	33	-63	.	1.3	37	-16	.	3.3	12	-17	.	0.63	28	-16	.	4.3	14	-21
1998	.	0.38	40	-83	.	0.72	36	-19	.	1.6	10	-19	.	0.33	31	-16	.	2.8	11	-24
1999	.	1.5	30	-74	.	0.72	23	-19	.	1.4	6.7	-19	.	0.75	21	-17	.	1.6	9.2	-24
2000	.	2	27	-73	.	1.7	24	-19	.	1.3	6.5	-18	.	2.0	19	-16	.	1.4	7.3	-22
2001	.	1.6	23	-50	.	1.5	12	-17	.	1.4	5.7	-7.1	.	1.0	18	-7.0	.	0.79	6.3	-9.3
2002	.	2.4	24	-52	.	1.5	18	-19	.	1.1	5.6	-7.4	.	1.5	19	-7.2	.	0.47	5.1	-10
2003	.	1.8	16	-49	.	1.1	14	-17	.	0.60	4.2	-6.4	.	1.5	13	-6.7	.	0.91	4.6	-8.6
2004	.	0.70	9.3	-50	.	0.71	5.0	-18	.	0.49	3.7	-6.8	.	0.47	4.6	-7.0	.	0.43	3.7	-9.0
2005	.	0.46	8.8	-58	.	0.29	4.5	-19	.	0.62	3.5	-7.7	.	0.28	5.1	-8.6	.	0.67	3.3	-10
γ-HCH																				
1992	.	1.7	15	-5.9	.	3.8	75	-6.7	.	4.0	.	.	.	3.8	24	-11	.	4.2	6.5	-7.5
1993	.	0.46	7.8	-6.1	.	4.2	20	-6.6	.	4.0	4.3	-6.8	.	1.8	20	-12	.	3.5	6.6	-7.6
1994	.	1.3	11	-7.4	.	2.1	37	-7.3	.	4.3	6.0	-7.2	.	2.0	22	-11	.	3.1	8.8	-8.8
1995	.	0.60	7.4	-6.0	.	0.96	15	-1.5	.	6.9	4.2	-2.4	.	1.6	12	-4.5	.	4.3	6.2	-4.2
1996	.	0.96	7	-5.1	.	0.32	9.7	-1.4	.	5.3	3.6	-2.0	.	0.16	12	-4.3	.	4.3	5.9	-3.7
1997	.	1.1	9.2	-7.3	.	1.5	19	-2.5	.	4.6	4.9	-1.7	.	0.67	13	-6.4	.	7.4	6.2	-5.7
1998	.	0.33	7.2	-9.4	.	0.50	16	-3.0	.	5.8	3.8	-1.9	.	0.18	12	-6.5	.	5.2	6.8	-6.2
1999	.	2.4	11	-8.5	.	1.1	24	-2.9	.	2.5	4.9	-1.9	.	1.1	12	-6.7	.	3.1	7.4	-6.5
2000	.	2.9	9.2	-8.4	.	3.5	11	-2.9	.	2.8	3.3	-1.9	.	2.8	13	-6.5	.	3.5	5.6	-5.9
2001	.	2.5	7.5	-5.7	.	2.4	6.1	-2.7	.	2.0	3.5	-2.8	.	1.6	9.3	-4.3	.	2.0	4.5	-4.4
2002	.	1.5	5.4	-5.8	.	2.1	6.2	-2.9	.	2.7	3.0	-2.9	.	2.1	5.9	-4.4	.	1.9	3.5	-4.8
2003	.	0.92	2.7	-5.6	.	0.95	5.6	-2.6	.	1.2	2.1	-2.5	.	1.6	6.7	-4.0	.	1.5	3.4	-4.1
2004	.	0.75	2.4	-5.6	.	1.1	2.6	-2.7	.	0.75	1.6	-2.7	.	1.0	2.8	-4.2	.	1.1	2.0	-4.3
2005	.	0.44	2.4	-6.4	.	0.38	2.5	-3.0	.	0.87	1.4	-3.0	.	0.61	2.8	-5.1	.	0.94	2.9	-4.8
dieldrin																				
1992	.	0.63	5.7	-34	.	2.2	9.4	0	.	0.96	.	.	.	2.7	9.3	-77	.	1.2	4.4	-59
1993	.	1.2	3.6	-35	.	2.1	10	0	.	0.98	4.0	-54	.	2.3	12	-77	.	0.95	7.4	-59
1994	.	0.69	4.9	-44	.	1.8	9.5	0	.	0.67	3.4	-58	.	0.95	9.4	-73	.	0.58	6.7	-69
1995	.	0.86	3.2	-19	.	1.8	6.6	-29	.	1.2	2.1	0	.	1.6	6.5	-33	.	0.68	4.5	-54
1996	.	0.65	3.1	-17	.	1.3	4.5	-27	.	2.3	2.1	0	.	1.2	4.7	-32	.	2.0	3.1	-47
1997	.	0.54	2.8	-22	.	0.98	7.0	0	.	1.4	3.0	0	.	0.99	7.6	-32	.	0.63	4.6	-31
1998	.	0.50	2.2	-28	.	1.2	4.1	0	.	0.79	2.3	0	.	0.68	7.0	-31	.	0.82	3.9	-34
1999	.	0.74	3.4	-25	.	0.96	13	0	.	0.56	3.6	0	.	0.57	4.7	-32	.	0.73	5.2	-35
2000	.	0.42	1.8	-25	.	1.0	4.6	0	.	0.76	2.2	0	.	0.93	5.5	-32	.	0.68	2.8	-32
2001	.	0.58	3.3	-19	.	0.91	3.7	0	.	0.63	2.2	-16	.	0.77	3.7	-27	.	0.44	2.7	-33
2002	.	0.52	2.7	-19	.	0.99	6.6	0	.	0.65	2.1	-17	.	0.82	3.3	-27	.	0.61	2.9	-36
2003	.	0.32	1.4	-18	.	0.65	4.1	0	.	0.45	1.4	-15	.	0.70	3.7	-25	.	0.59	2.6	-31
2004	.	0.36	1.2	-19	.	1.0	3.4	0	.	0.30	2.0	-16	.	0.59	2.6	-27	.	0.35	2.6	-32
2005	.	0.32	2.1	-21	.	0.50	3.7	0	.	0.45	1.7	-17	.	0.36	3.3	-33	.	0.41	2.8	-36

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	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
hexachlorobenzene																				
1992	.	0.080	13	.	.	0.061	11	.	.	0	.	.	.	0.12	9.7	.	.	0	4.3	.
1993	.	0.20	9.5	-8.4	.	0.24	10	-11	.	0.28	3.8	-5.1	.	0.07	10	-12	.	0.16	4.7	-39
1994	.	0.059	12	-9.6	.	0.043	7.9	-11	.	0.057	3.1	-5.1	.	0.039	8.4	-11	.	0.019	5.5	-44
1995	.	0.046	8.0	-6.4	.	0.050	5.8	-5.6	.	0.21	5.3	-8.3	.	0.071	6.9	-9.1	.	0.30	7.5	-14
1996	.	0.041	7.8	-6.0	.	0.038	6.6	-5.8	.	0.063	4.6	-6.6	.	0.049	5.4	-8.7	.	0.24	6.7	-12
1997	.	0.032	8.2	-8.0	.	0.029	7.9	-8.1	.	0.26	4.7	-6.0	.	0.034	7.7	-11	.	0.12	7.1	-13
1998	.	0.032	9.1	-8.4	.	0.032	8.8	-8.5	.	0.086	5.0	-5.9	.	0.062	6.2	-9.1	.	0.11	6.2	-12
1999	.	0.040	9.9	-8.8	.	0.034	7.9	-9.0	.	0.19	5.4	-6.3	.	0.040	6.5	-10	.	0.089	8.1	-14
2000	.	0.042	8.6	-8.5	.	0.051	7.3	-9.4	.	0.097	4.7	-6.3	.	0.055	6.0	-9.7	.	0.13	6.9	-12
2001	.	0.049	8.3	-12	.	0.040	5.5	0	.	0.14	4.4	-9.8	.	0.042	5.0	-8.0	.	0.10	5.9	-17
2002	.	0.037	7.1	-13	.	0.032	5.3	0	.	0.11	4.8	-9.9	.	0.042	5.5	-8.7	.	0.087	5.9	-19
2003	.	0.030	6.4	-13	.	0.028	5.0	0	.	0.046	3.4	-9.1	.	0.040	5.7	-8.3	.	0.063	5.3	-17
2004	.	0.031	5.7	-12	.	0.044	4.1	0	.	0.049	4.1	-9.3	.	0.040	3.2	-8.1	.	0.16	4.7	-17
2005	.	0.040	5.5	-12	.	0.048	3.8	0	.	0.052	4.2	-9.6	.	0.11	4.9	-10	.	0.085	4.7	-17
cis-chlordane																				
1992	.	0.11	.	.	.	0.10	.	.	.	0	.	.	.	0.067	.	.	.	0.019	0.55	.
1993	.	0.17	.	0	.	0.11	.	0	.	0.0045	0.36	0	.	0.15	.	0	.	0.024	0.62	0
1994	.	0.15	0.87	0	.	0.80	1.2	0	.	0	0.30	0	.	0.40	1.5	0	.	0	0.73	0
1995	.	0.089	0.61	-4.7	.	0.36	0.69	-3.7	.	0.077	0.21	-1.9	.	1.1	1.4	-3.1	.	0.93	0.55	-3.7
1996	.	0.094	0.49	-4.4	.	0.15	0.62	-3.7	.	0.046	0.23	-1.5	.	0.21	0.80	-3.0	.	1.5	0.47	-3.3
1997	.	0.13	0.48	-7.2	.	0.38	0.85	-4.3	.	0.16	0.23	-1.7	.	1.3	1.3	-6.1	.	0.030	0.50	-3.9
1998	.	0.14	0.39	-7.6	.	0.43	0.58	-4.5	.	0.034	0.22	-1.7	.	0.67	1.0	-5.2	.	0.059	0.43	-3.7
1999	.	0.16	0.58	-7.9	.	0.32	1.2	-4.8	.	0.023	0.34	-1.8	.	1.0	1.0	-5.7	.	0.057	0.77	-4.2
2000	.	0.14	0.45	-7.7	.	0.39	0.70	-4.9	.	0.018	0.19	-1.8	.	1.7	1.0	-5.5	.	1.5	0.36	-3.8
2001	.	0.28	0.55	-4.2	.	0.39	0.55	-4.6	.	0.077	0.29	-2.0	.	0.65	0.84	-3.7	.	0.032	0.39	0
2002	.	0.18	0.37	-4.3	.	0.48	0.59	-4.9	.	0.11	0.25	-2.0	.	0.70	0.81	-3.9	.	0.077	0.41	0
2003	.	0.11	0.33	-4.4	.	0.36	0.53	-4.6	.	0.022	0.21	-1.9	.	1.0	0.86	-3.7	.	0.099	0.40	0
2004	.	0.054	0.23	-4.2	.	0.061	0.35	-4.7	.	0.020	0.23	-1.9	.	0.078	0.44	-3.7	.	0.2	0.41	0
2005	.	0.044	0.38	-4.2	.	0.17	0.53	-4.6	.	0.030	0.22	-2.0	.	0.14	0.80	-4.6	.	0.048	0.41	0
trans-chlordane																				
1992	.	0.076	.	.	.	0.20	.	0	.	0.081	.	.	.	1.3	.	.	.	0.087	0.47	.
1993	.	1.7	.	0	.	2.5	.	0	.	0	0.30	0	.	6.4	.	0	.	0.028	0.59	0
1994	.	0.58	0.55	0	.	2.0	1.1	0	.	0.082	0.25	0	.	2.6	1.3	0	.	0.084	0.63	0
1995	.	0.15	0.63	-2.9	.	0.21	0.48	-2.6	.	0	0.16	-1.3	.	2.0	0.97	-2.0	.	0	0.48	-3.9
1996	.	0.36	0.34	-2.7	.	0.46	0.47	-2.6	.	0.097	0.19	-1.1	.	1.6	0.62	-1.9	.	0.056	0.38	-3.5
1997	.	0.024	0.51	-14	.	0.044	0.69	-3.2	.	0.21	0.18	-0.60	.	0.075	1.2	-8.6	.	0.088	0.45	-2.5
1998	.	0.034	0.26	-15	.	0.045	0.39	-3.4	.	0.084	0.15	-0.59	.	0.039	0.85	-7.3	.	0.035	0.33	-2.4
1999	.	0.027	0.33	-15	.	0.037	0.97	-3.6	.	0.072	0.24	-0.62	.	0.059	0.80	-8.1	.	0.010	0.57	-2.7
2000	.	0.034	0.19	-15	.	0.054	0.40	-3.7	.	0.62	0.15	-0.63	.	0.085	0.66	-7.8	.	0.084	0.28	-2.5
2001	.	0.048	0.43	-5.3	.	0.045	0.36	-3.5	.	0.27	0.20	-1.4	.	0.068	0.59	-3.2	.	0.032	0.31	0
2002	.	0.043	0.48	-5.4	.	0.051	0.79	-3.8	.	0.020	0.18	-1.4	.	0.069	0.66	-3.5	.	0.028	0.34	0
2003	.	0.019	0.16	-5.5	.	0.033	0.31	-3.5	.	0.036	0.13	-1.3	.	0.070	0.59	-3.3	.	0.091	0.30	0
2004	.	0.029	0.10	-5.3	.	0.047	0.23	-3.6	.	0.064	0.16	-1.3	.	0.049	0.38	-3.2	.	0.17	0.28	0
2005	.	0.033	0.19	-5.2	.	0.038	0.30	-3.4	.	0.013	0.15	-1.4	.	0.033	0.51	-4.0	.	0.024	0.30	0

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	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
trans-nonachlor																				
1992	.	0.021	0.34	.	.	0.064	0.50	.	.	.	.	.	.	0.082	1.1	.	.	.	0.54	.
1993	.	0.086	0.28	.	.	0.33	0.79	.	.	.	0.37	.	.	0.030	1.4	.	.	.	0.70	.
1994	.	0.067	0.43	.	.	0.021	0.67	.	.	.	0.35	.	.	0.19	0.91	.	.	.	0.77	.
1995	.	0.050	0.31	.	.	0.030	0.37	.	.	.	0.19	.	.	0.068	0.65	.	.	.	0.54	.
1996	.	0.055	0.30	.	.	0.046	0.37	.	.	.	0.21	.	.	0.046	0.50	.	.	.	0.38	.
1997	.	0.030	0.27	.	.	0.027	0.52	.	.	.	0.23	.	.	0.047	0.70	.	.	.	0.49	.
1998	.	0.025	0.34	.	.	0.036	0.47	.	.	0.020	0.20	.	.	0.035	0.61	.	.	0.059	0.36	.
1999	.	0.024	0.45	.	.	0.039	1.1	.	.	0.054	0.28	.	.	0.027	0.71	.	.	0.073	0.64	.
2000	.	0.025	0.25	.	.	0.042	0.50	.	.	0.018	0.18	.	.	0.066	0.67	.	.	0.065	0.25	.
2001	.	0.031	0.43	.	.	0.037	0.44	.	.	0.13	0.22	.	.	0.054	0.51	.	.	0.025	0.28	.
2002	.	0.025	0.31	.	.	0.036	0.54	.	.	0.075	0.23	.	.	0.052	0.54	.	.	0.11	0.36	.
2003	.	0.016	0.18	.	.	0.035	0.39	.	.	0.059	0.17	.	.	0.055	0.43	.	.	0.10	0.36	.
2004	.	0.017	0.16	.	.	0.036	0.33	.	.	0.041	0.17	.	.	0.039	0.38	.	.	0.049	0.27	.
2005	.	0.026	0.30	.	.	0.036	0.44	.	.	0.033	0.19	.	.	0.027	0.52	.	.	0.048	0.32	.
p'p'-DDD																				
1992	.	0.017	0.46	.	.	0.071	1.2	.	.	0	.	.	.	0.22	2.8	.	.	0.039	0.18	.
1993	.	0.22	0.15	0	.	0.058	0.95	0	.	0.039	0.064	0	.	0.031	1.7	0	.	0.088	0.21	0
1994	.	0.53	0.47	0	.	1.9	0.47	0	.	0	0.099	0	.	0.12	2.2	0	.	0	0.27	0
1995	.	0.026	0.28	-0.20	.	0.048	0.21	-0.27	.	0	0.059	0	.	0.27	0.49	0	.	0.061	0.12	0
1996	.	0.015	0.36	-0.17	.	0.046	0.52	-0.24	.	0.061	0.044	0	.	0.15	0.73	0	.	0.024	0.13	0
1997	.	0.0018	0.38	0	.	0.030	0.45	0	.	1.2	0.068	0	.	0.086	0.58	0	.	0.038	0.16	0
1998	.	0.032	0.32	0	.	0.089	0.58	0	.	0.043	0.073	0	.	0.16	1.2	0	.	0.13	0.13	0
1999	.	0.0030	0.55	0	.	0.043	1.2	0	.	0.031	0.024	0	.	.	2.1	0	.	0.066	0.17	0
2000	.	0	0.36	0	.	0.016	0.28	0	.	0.022	0.040	0	.	0.010	0.41	0	.	0.038	0.099	0
2001	.	0.0077	0.33	-0.13	.	0.016	0.45	0	.	0.041	0.047	-0.16	.	0.037	0.46	-0.86	.	0.070	0.097	-0.81
2002	.	0.0068	0.30	-0.13	.	0.017	0.16	0	.	0.024	0.021	-0.17	.	0.041	0.38	-0.89	.	0.020	0.10	-0.90
2003	.	0.032	0.23	-0.12	.	0.0085	0.28	0	.	0.0012	0.019	-0.15	.	0.059	0.32	-0.81	.	0.029	0.089	-0.74
2004	.	0.010	0.12	-0.13	.	0.017	0.16	0	.	0.0060	0.023	-0.16	.	0.036	0.26	-0.85	.	0.075	0.11	-0.79
2005	.	0.0064	0.11	-0.15	.	0.011	0.088	0	.	0.0088	0.033	-0.18	.	0.0087	0.21	-1.1	.	0.20	0.086	-0.92
p'p'-DDE																				
1992	.	0.082	0.48	.	.	0.18	1.3	.	.	0.13	.	.	.	0.45	2.1	.	.	0.51	1.4	.
1993	.	0.14	0.43	0	.	0.38	1.9	0	.	0.24	0.40	0	.	0.32	3.0	0	.	1.1	1.8	-41
1994	.	0.13	0.35	0	.	0.16	0.75	0	.	0.097	0.34	0	.	0.33	1.6	0	.	0.29	2.4	-46
1995	.	0.12	0.29	-4.2	.	0.26	0.71	-3.8	.	0.50	0.29	0	.	0.69	1.6	0	.	1.0	1.6	0
1996	.	0.051	0.24	-3.9	.	0.20	0.74	-3.9	.	0.36	0.24	0	.	0.36	1.4	0	.	1.3	1.2	0
1997	.	0.065	0.42	-2.0	.	0.11	0.97	-6.4	.	1.1	0.18	-1.8	.	0.21	1.7	-24	.	1.4	1.4	-18
1998	.	0.050	0.22	-2.2	.	0.11	0.68	-6.7	.	0.20	0.21	-1.8	.	0.14	1.3	-21	.	0.58	1.2	-17
1999	.	0.083	0.32	-2.2	.	0.23	1.3	-7.1	.	0.19	0.23	-1.8	.	0.27	1.4	-23	.	0.26	1.6	-19
2000	.	0.024	0.16	-2.2	.	0.059	0.65	-7.4	.	0.12	0.18	-1.9	.	0.16	1.5	-22	.	0.43	0.92	-18
2001	.	0.034	0.28	-1.5	.	0.049	0.51	-6.9	.	0.19	0.28	-4.2	.	0.073	0.98	-4.5	.	0.33	0.95	-11
2002	.	0.037	0.17	-1.5	.	0.065	0.52	-7.4	.	0.12	0.21	-4.2	.	0.15	1.1	-4.8	.	0.23	1.0	-12
2003	.	0.052	0.11	-1.5	.	0.055	0.59	-6.9	.	0.089	0.17	-3.9	.	0.12	1.0	-4.6	.	0.21	0.89	-11
2004	.	0.051	0.12	-1.5	.	0.061	0.38	-7.1	.	0.059	0.19	-4.0	.	0.069	0.90	-4.5	.	0.30	1.0	-11
2005	.	0.037	0.13	-1.4	.	0.049	0.40	-6.8	.	0.079	0.15	-4.1	.	0.063	0.98	-5.6	.	0.19	0.73	-11

Appendix A: Annual Atmospheric Fluxes (ng/m^2/day) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
p'p'-DDT																				
1992	.	0.53	1.3	-0.33	.	1.2	3.3	-0.34	.	0.70	.	.	.	3.9	4.4	-0.16	.	0.8	1.1	-0.29
1993	.	0.95	0.85	-0.34	.	2.1	3.5	-0.33	.	0	0.35	-0.12	.	5.8	5.2	-0.17	.	0.29	1.3	-0.29
1994	.	1.9	0.42	-0.43	.	2.1	0.62	-0.37	.	0	0.35	-0.13	.	1.4	3.2	-0.16	.	0.096	2.0	-0.34
1995	.	0.086	0.70	-0.60	.	0.30	0.83	-0.77	.	1.1	0.29	0	.	1.8	2.1	0	.	1.7	1.1	0
1996	.	0.082	0.88	-0.50	.	0.39	1.2	-0.68	.	0.47	0.21	0	.	0.61	4.3	0	.	0.75	1.6	0
1997	.	0.075	0.48	-0.48	.	0.20	1.2	-0.28	.	2.0	0.21	-0.13	.	0.25	2.5	-6.0	.	1.5	1.0	-0.43
1998	.	0.035	0.55	-0.66	.	0.12	1.6	-0.35	.	0.0005	0.13	-0.15	.	0.14	2.5	-6.1	.	0.089	0.85	-0.48
1999	.	0.056	1.1	-0.58	.	0.17	2.8	-0.34	.	0.13	0.28	-0.14	.	0.24	3.0	-6.3	.	0.20	1.2	-0.49
2000	.	0.064	0.65	-0.57	.	0.21	1.0	-0.35	.	0.16	0.18	-0.14	.	0.38	2.4	-6.1	.	0.54	0.57	-0.44
2001	.	0.058	0.89	0	.	0.11	0.89	-0.32	.	0.17	0.17	0	.	0.22	1.7	-0.36	.	0.52	0.75	0
2002	.	0.076	0.86	0	.	0.27	1.3	-0.34	.	0.21	0.16	0	.	0.33	1.7	-0.37	.	0.33	0.52	0
2003	.	0.098	0.88	0	.	0.12	1.3	-0.30	.	0.067	0.11	0	.	0.35	2.3	-0.34	.	0.20	0.53	0
2004	.	0.19	0.33	0	.	0.19	0.52	-0.32	.	0.047	0.14	0	.	0.22	1.3	-0.36	.	0.12	0.59	0
2005	.	0.12	0.54	0	.	0.14	0.70	-0.35	.	0.12	0.13	0	.	0.19	1.5	-0.45	.	0.18	0.59	0
α-endosulfan																				
1992	.	.	.	.	.	.	.	.	.	1.9	.	.	.	.	.	.	.	12	24	.
1993	.	.	.	0	.	.	.	0	.	2.4	3.1	0	.	.	.	0	.	5.6	19	0
1994	.	0.75	0.34	0	.	4.1	0.91	0	.	3.2	6.3	0	.	1.0	2.0	0	.	7.1	61	0
1995	.	1.2	5.7	-7.2	.	0.54	15	-61	.	3.3	2.5	0	.	1.2	17	-62	.	3.6	10	-14
1996	.	1.0	4.5	-6.8	.	0.54	11	-62	.	1.4	1.3	0	.	1.1	11	-60	.	3.4	8.3	-13
1997	.	0.64	5.0	-3.0	.	0.65	25	0	.	1.3	3.4	0	.	0.59	21	-9.7	.	1.8	15	-16
1998	.	0.23	4.5	-3.1	.	0.40	26	0	.	1.6	2.8	0	.	0.17	18	-8.4	.	4.9	16	-15
1999	.	1.1	7.5	-3.3	.	0.72	23	0	.	1.1	5.5	0	.	1.1	16	-9.2	.	4.9	33	-17
2000	.	0.65	2.0	-3.2	.	1.8	8.8	0	.	1.3	1.6	0	.	2.3	14	-8.9	.	3.9	12	-16
2001	.	0.93	6.3	0	.	2.0	5.5	0	.	1.2	3.1	0	.	1.4	14	-9.3	.	1.8	7.0	0
2002	.	0.96	3.2	0	.	1.5	9.8	0	.	1.3	2.2	0	.	1.7	10	-10	.	2.1	6.4	0
2003	.	0.74	1.7	0	.	0.96	6.6	0	.	0.70	2.6	0	.	2.3	20	-9.5	.	1.9	7.1	0
2004	.	0.61	1.2	0	.	1.4	3.5	0	.	0.66	1.9	0	.	1.3	5.3	-9.4	.	2.1	5.8	0
2005	.	0.55	3.3	0	.	0.85	7.2	0	.	0.95	2.6	0	.	2.8	17	-11	.	1.9	28	0
PCB 018																				
1992	.	0.083	1.9	-6.2	.	0.079	4.0	-10	.	.	.	.	.	0.077	5.2	-6.1	.	.	1.9	-4.2
1993	.	0.11	2.6	-6.4	.	0.057	2.5	-10	.	.	1.4	-2.7	.	0.062	6.3	-6.3	.	.	2.3	-4.5
1994	.	0.14	1.6	-7.5	.	0.20	2.3	-10	.	.	1.1	-2.8	.	0.097	3.7	-5.8	.	.	2.5	-5.1
1995	.	0.11	1.2	-2.0	.	0.17	1.2	-3.7	.	.	1.8	-2.5	.	0.24	2.6	-7.7	.	.	2.2	-5.2
1996	.	0.23	1.1	-1.8	.	0.11	1.3	-3.7	.	.	1.3	-2.0	.	0.13	1.5	-7.4	.	.	2.0	-4.6
1997	.	0.17	1.0	-1.2	.	0.069	1.6	-1.8	.	.	1.4	-1.1	.	0.063	3.5	-5.5	.	.	2.5	-3.9
1998	.	0.13	0.97	-1.4	.	0.11	2.4	-2.0	.	.	1.0	-1.1	.	0.059	3.1	-4.8	.	.	1.8	-3.8
1999	.	0.19	2.5	-1.4	.	0.15	3.1	-2.1	.	.	1.2	-1.2	.	0.087	3.1	-5.2	.	.	2.4	-4.2
2000	.	0.21	2.3	-1.4	.	0.17	1.5	-2.2	.	.	0.82	-1.2	.	0.11	2.1	-5.1	.	.	1.3	-3.9
2001	.	0.15	2.1	-1.1	.	0.091	0.97	-1.8	.	.	0.90	-0.94	.	0.072	2.2	-4.0	.	.	1.3	-2.5
2002	.	0.074	1.3	-1.1	.	0.077	0.93	-1.9	.	0.27	0.79	-0.94	.	0.11	1.9	-4.2	.	0.32	1.1	-2.7
2003	.	0.047	0.81	-1.1	.	0.061	0.90	-1.8	.	0.30	0.72	-0.86	.	0.059	2.6	-4.0	.	0.55	0.97	-2.4
2004	.	0.036	0.45	-1.1	.	0.061	0.40	-1.9	.	0.30	0.62	-0.89	.	0.091	0.94	-4.0	.	0.44	0.98	-2.5
2005	.	0.055	0.64	-1.1	.	0.055	0.46	-1.8	.	.	0.65	-0.94	.	0.049	2.1	-5.0	.	.	0.99	-2.5

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dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
PCB 052																				
1992	.	0.034	1.5	-1.9	.	0.046	4.5	-9.5	.	.	.	.	.	0.071	4.5	-4.3	.	.	1.3	-4.7
1993	.	0.0087	2.9	-2.0	.	0.037	1.8	-9.4	.	.	0.51	-0.94	.	0.049	5.1	-4.4	.	.	1.4	-5.0
1994	.	0.10	2.6	-2.3	.	0.16	1.5	-9.5	.	.	0.40	-0.97	.	0.16	3.1	-4.1	.	.	1.3	-5.7
1995	.	0.096	1.9	-2.8	.	0.14	1.0	-0.54	.	.	0.31	-1.1	.	0.23	2.7	-5.1	.	.	0.99	-3.9
1996	.	0.14	0.91	-2.6	.	0.096	1.0	-0.53	.	.	0.37	-0.86	.	0.14	1.7	-4.9	.	.	0.93	-3.5
1997	.	0.11	0.86	-0.53	.	0.090	1.1	-0.54	.	.	0.46	-0.49	.	0.082	2.9	-5.5	.	.	1.3	-2.0
1998	.	0.12	0.83	-0.60	.	0.099	1.5	-0.58	.	.	0.38	-0.50	.	0.090	2.6	-4.8	.	.	0.95	-2.0
1999	.	0.15	1.6	-0.60	.	0.14	2.1	-0.61	.	.	0.51	-0.52	.	0.16	3.2	-5.2	.	.	1.3	-2.2
2000	.	0.22	1.5	-0.59	.	0.23	1.2	-0.63	.	.	0.35	-0.52	.	0.18	2.4	-5.1	.	.	0.75	-2.0
2001	.	0.16	2.1	-2.1	.	0.12	0.78	-5.4	.	.	0.47	-3.4	.	0.14	2.2	-7.8	.	.	0.87	-8.6
2002	.	0.088	1.2	-2.2	.	0.10	0.86	-5.8	.	0.47	0.41	-3.4	.	0.13	1.8	-8.1	.	0.36	0.72	-9.2
2003	.	0.059	0.65	-2.2	.	0.076	0.71	-5.3	.	0.16	0.36	-3.1	.	0.094	2.9	-7.7	.	0.18	0.66	-8.3
2004	.	0.068	0.47	-2.2	.	0.095	0.42	-5.6	.	0.15	0.38	-3.2	.	0.19	1.3	-7.6	.	0.55	0.73	-8.5
2005	.	0.12	0.68	-2.2	.	0.12	0.45	-5.5	.	.	0.37	-3.4	.	0.12	2.6	-9.5	.	.	0.73	-8.6
PCB 101																				
1992	.	0.064	1.0	-3.7	.	0.048	3.5	-4.2	.	.	.	.	.	0.079	6.0	-1.9	.	.	0.67	-0.93
1993	.	0.030	1.9	-3.8	.	0.031	2.1	-4.1	.	.	0.27	0	.	0.074	4.0	-2.0	.	.	0.80	-0.98
1994	.	0.11	2.8	-4.5	.	0.12	1.1	-4.2	.	.	0.28	0	.	0.16	1.9	-1.8	.	.	1.0	-1.1
1995	.	0.14	1.8	-1.5	.	0.11	0.68	-1.4	.	.	0.15	-0.96	.	0.19	1.8	-2.5	.	.	0.45	-1.7
1996	.	0.13	0.84	-1.3	.	0.069	0.72	-1.4	.	.	0.16	-0.75	.	0.14	1.1	-2.4	.	.	0.49	-1.5
1997	.	0.14	0.65	-0.12	.	0.072	0.60	-1.4	.	.	0.21	-0.43	.	0.10	1.7	-1.6	.	.	0.58	-1.2
1998	.	0.27	0.64	-0.14	.	0.099	0.89	-1.6	.	.	0.17	-0.45	.	0.11	1.7	-1.5	.	.	0.44	-1.2
1999	.	0.20	0.96	-0.13	.	0.12	1.3	-1.6	.	.	0.17	-0.46	.	0.15	2.1	-1.6	.	.	0.51	-1.3
2000	.	0.23	0.82	-0.13	.	0.19	0.75	-1.7	.	.	0.10	-0.46	.	0.17	1.6	-1.5	.	.	0.30	-1.2
2001	.	0.16	1.2	-0.68	.	0.11	0.53	-2.1	.	.	0.15	-2.3	.	0.13	1.4	-6.0	.	.	0.33	-8.4
2002	.	0.10	0.71	-0.70	.	0.098	0.65	-2.2	.	0.28	0.14	-2.3	.	0.13	1.3	-6.1	.	0.28	0.30	-9.0
2003	.	0.082	0.45	-0.69	.	0.083	0.57	-2.0	.	0.10	0.20	-2.1	.	0.10	1.8	-5.9	.	0.15	0.49	-8.1
2004	.	0.097	0.34	-0.69	.	0.079	0.27	-2.1	.	0.063	0.21	-2.2	.	0.17	0.75	-5.8	.	0.16	0.47	-8.3
2005	.	0.13	0.45	-0.71	.	0.11	0.36	-2.1	.	.	0.18	-2.4	.	0.11	1.7	-7.3	.	.	0.43	-8.5
Suite PCB																				
1992	.	3.3	29	-87	.	2.0	100	-190	.	.	.	.	.	2.2	100	-92	.	.	26	-95
1993	.	4.9	62	-91	.	3.4	45	-190	.	.	16	-43	.	1.9	100	-94	.	.	31	-100
1994	.	2.2	43	-110	.	3.9	28	-190	.	.	16	-44	.	3.4	46	-88	.	.	39	-120
1995	.	2.2	28	-40	.	2.6	15	-53	.	.	13	-27	.	4.7	36	-95	.	.	20	-64
1996	.	3.3	16	-37	.	1.9	17	-52	.	.	10	-22	.	3.4	23	-91	.	.	20	-57
1997	.	3.3	15	-25	.	1.4	21	-26	.	.	13	-26	.	2.2	46	-81	.	.	25	-53
1998	.	4.8	13	-29	.	1.9	27	-28	.	.	9.7	-27	.	1.9	40	-71	.	.	18	-53
1999	.	4.0	27	-28	.	2.7	39	-29	.	.	12	-28	.	2.2	45	-77	.	.	23	-57
2000	.	3.7	26	-28	.	3.0	19	-30	.	.	7.4	-28	.	2.4	32	-76	.	.	13	-53
2001	.	2.3	31	-20	.	1.5	11	-52	.	.	8.7	-37	.	1.7	28	-100	.	.	13	-89
2002	.	1.6	18	-21	.	1.7	13	-56	.	5.2	8.7	-37	.	2.4	26	-110	.	8.2	13	-95
2003	.	1.2	11	-21	.	1.6	11	-51	.	2.7	9.2	-34	.	1.6	37	-100	.	5.2	15	-86
2004	.	1.7	9.6	-20	.	2.3	8.0	-54	.	2.1	7.6	-35	.	3.6	22	-100	.	5.4	13	-87
2005	.	2.4	12	-21	.	2.3	8.6	-53	.	.	8.0	-37	.	2.1	45	-130	.	.	13	-89

Appendix A: Annual Atmospheric Fluxes (ng/m^2/day) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
benzo*[a]* pyrene																				
1992	1.2	5.6	0	-2.6	3.5	8.1	0.59	0	4.5	0	.	.	7.0	16	1.9	0	12	0	.	.
1993	0.81	0.97	0	-2.7	1.4	4.4	0	0	5.0	4.7	.	.	6.3	11	0	0	9.8	2.2	.	.
1994	1.1	0.80	0	-3.4	2.9	3.2	0	0	2.4	0	.	.	14	9.0	1.3	0	8.2	0.29	.	.
1995	0.42	3.0	1.8	-0.30	1.8	5.7	0.16	-3.2	2.0	2.7	.	.	11	15	0.91	-3.9	4.7	4.0	.	.
1996	1.1	1.4	0.023	-0.25	1.9	3.6	0.69	-2.7	4.4	0.93	.	.	13	6.7	0.19	-3.6	11	7.4	.	.
1997	1.2	2.2	0.058	-0.25	2.4	5.1	0.74	0	3.9	7.6	.	.	11	13	0.10	-2.0	7.4	6.6	.	.
1998	0.98	3.2	0.020	-0.36	2.5	4.1	0.42	0	2.8	3.0	.	.	11	9.0	0.36	-2.1	8.3	5.1	.	.
1999	1.3	1.8	0	-0.31	3.7	4.2	0	0	3.0	3.1	.	.	13	7.0	3.1	-2.2	8.4	2.7	.	.
2000	0.54	1.7	0	-0.30	2.6	4.0	0.013	0	2.8	2.4	.	.	6.0	11	3.7	-2.1	5.4	6.9	.	.
2001	0.80	2.3	0	0	2.6	3.6	0	0	3.0	2.9	.	.	9.8	8.4	1.8	0	5.6	5.0	.	.
2002	0.40	1.5	0	0	2.6	4.0	0.18	0	2.5	3.3	.	.	5.2	12	1.4	0	5.7	8.1	.	.
2003	0.61	1.9	0	0	1.6	3.4	0	0	2.5	3.3	.	.	4.1	11	0.73	0	6.2	6.8	.	.
2004	0.48	2.2	0	0	1.6	6.1	0.17	0	2.6	2.1	.	.	4.4	7.2	0.46	0	4.9	3.6	.	.
2005	0.66	2.3	0.041	0	4.4	6.9	0.042	0	3.4	3.2	.	.	8.7	8.5	0.76	0	6.6	6.0	.	.
benzo*[b]* fluoranthene																				
1992	4.8	6.3	3.5	-1.1	9.0	12	2.9	0	8.5	0	.	.	39	31	13	0	43	1.8	.	.
1993	2.5	2.1	0	-1.1	6.1	9.1	0	0	8.9	6.9	.	.	31	23	1.6	0	38	25	.	.
1994	4.4	1.9	0	-1.4	9.1	9.4	0.42	0	5.3	0	.	.	45	19	6.8	0	22	6.2	.	.
1995	4.1	8.6	3.6	0	7.7	13	0.69	0	3.6	6.6	.	.	47	34	3.1	0	12	14	.	.
1996	3.2	4.6	0.13	0	5.8	8.0	1.5	0	7.8	3.4	.	.	33	16	0.51	0	36	8.7	.	.
1997	4.3	4.9	0.20	0	7.5	10	2.1	0	6.7	9.8	.	.	30	24	1.1	0	18	18	.	.
1998	4.1	7.4	0.59	0	8.3	10	3.0	0	6.0	5.3	.	.	40	22	3.9	0	29	20	.	.
1999	5.3	5.3	0.21	0	11	9.1	0.25	0	5.2	14	.	.	42	15	11	0	27	5.2	.	.
2000	3.7	5.8	0	0	10	10	0.11	0	4.4	3.0	.	.	23	25	11	0	17	29	.	.
2001	3.6	5.7	0	-0.062	9.1	7.9	0.19	0	4.5	11	.	.	33	18	4.8	-0.30	14	8.9	.	.
2002	2.7	4.4	0.45	-0.064	8.4	9.4	0.35	0	4.3	8.8	.	.	21	29	4.7	-0.32	8.5	21	.	.
2003	3.1	4.9	0	-0.06	5.9	7.7	0	0	4.2	8.9	.	.	20	24	3.8	-0.29	11	18	.	.
2004	2.4	5.9	0	-0.061	6.3	15	0.64	0	4.3	7.4	.	.	22	18	2.9	-0.30	13	10	.	.
2005	3.0	7.1	0.013	-0.074	16	15	0.19	0	5.6	11	.	.	35	19	2.7	-0.38	15	18	.	.
benzo*[k]* fluoranthene																				
1992	0.76	4.6	0.53	-0.11	2.6	5.7	1.3	0	3.5	0	.	.	6.5	12	4.3	0	11	0	.	.
1993	0.94	0.63	0	-0.11	1.6	3.1	0	0	4.0	2.7	.	.	9.5	8.2	0	0	10	0	.	.
1994	1.8	0.80	0	-0.14	3.2	4.5	0	0	2.1	0	.	.	15	7.5	1.8	0	6.5	0	.	.
1995	1.2	2.0	1.1	-0.59	2.4	4.2	0.12	-6.1	1.7	5.3	.	.	14	9.4	0.90	-7.5	4.2	9.6	.	.
1996	1.4	1.7	0.049	-0.49	2.1	3.1	0.41	-5.2	3.2	2.7	.	.	13	6.3	0.18	-6.9	11	6.9	.	.
1997	1.3	1.8	0.047	-0.19	2.1	3.9	0.59	0	3.0	9.1	.	.	8.3	9.1	0.12	-1.8	6.1	9.8	.	.
1998	0.93	2.3	0.14	-0.27	1.9	3.0	0.41	0	2.5	3.1	.	.	9.0	6.4	0.34	-1.9	9.1	10	.	.
1999	1.8	1.9	0.10	-0.23	4.1	3.6	0	0	2.4	7.0	.	.	14	6.9	3.9	-2.0	8.0	3.2	.	.
2000	0.99	1.1	0	-0.23	2.7	2.9	0.0032	0	1.9	3.1	.	.	6.9	7.8	3.0	-1.9	5.0	16	.	.
2001	0.72	1.4	0	-0.12	2.4	2.3	0	0	2.1	8.4	.	.	8.4	5.3	0.85	-0.57	4.4	6.7	.	.
2002	0.45	1.3	0	-0.12	2.5	2.8	0	0	1.7	5.0	.	.	5.5	8.7	0.68	-0.59	4.0	8.8	.	.
2003	0.54	1.3	0	-0.11	1.6	2.6	0	0	1.8	6.7	.	.	4.5	7.8	0.45	-0.54	4.5	10	.	.
2004	0.81	1.6	0	-0.12	2.0	4.0	0.15	0	1.9	5.2	.	.	6.6	5.4	0.62	-0.56	4.2	7.6	.	.
2005	0.91	2.4	0.0078	-0.14	4.9	5.3	0.013	0	2.4	7.2	.	.	8.9	5.7	0.97	-0.71	5.4	12	.	.

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	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
indeno*[1,2,3,c,d]* pyrene																				
1992	2.2	5.9	0	.	5.4	9.1	0	.	8.8	2.1	.	.	17	19	1.3	.	19	0	.	.
1993	1.5	0.31	0	.	3.5	5.6	0	.	8.7	5.2	.	.	15	13	0	.	22	17	.	.
1994	2.4	0.84	0	.	5.4	5.1	0	.	5.4	0	.	.	23	8.8	1.5	.	18	0.50	.	.
1995	1.1	4.8	0	.	3.7	8.7	0.036	.	3.1	7.1	.	.	24	22	0.28	.	11	5.5	.	.
1996	2.4	3.5	0.0016	.	4.4	6.2	0.29	.	8.6	2.1	.	.	25	10	0.10	.	22	3.0	.	.
1997	2.5	3.7	0.081	.	4.4	7.8	0.76	.	6.4	10	.	.	17	15	0.082	.	16	10	.	.
1998	2.2	5.1	0.020	.	5.7	6.3	1.1	.	4.8	7.7	.	.	22	11	0.21	.	18	10	.	.
1999	2.9	3.6	0	.	6.0	6.4	0	.	4.2	6.8	.	.	22	10	2.5	.	14	5.5	.	.
2000	1.6	3.6	0	.	5.2	5.9	0.0064	.	3.5	2.8	.	.	12	15	3.5	.	13	15	.	.
2001	2.1	4.3	0	.	5.1	5.2	0	.	4.3	5.8	.	.	20	12	1.4	.	7.8	5.5	.	.
2002	1.5	3.5	0	.	5.7	6.6	0.22	.	4.1	5.8	.	.	12	21	0.79	.	8.2	12	.	.
2003	1.9	3.9	0	.	3.9	5.7	0	.	3.3	6.1	.	.	12	18	0.83	.	8.5	11	.	.
2004	1.5	4.4	0	.	3.8	12	0.34	.	3.2	4.6	.	.	14	13	0.32	.	8.5	7.1	.	.
2005	1.9	6.7	0.11	.	9.9	12	0.094	.	4.2	6.2	.	.	25	14	0.56	.	10	9.5	.	.
phenanthrene																				
1992	2.3	6.1	350	-640	4.2	13	280	0	4.6	35	.	.	11	39	1500	0	5.5	51	200	-270
1993	2.1	1.8	260	-670	3.5	4.9	550	0	4.8	37	.	.	11	27	1900	0	6.4	81	.	.
1994	8.4	7.3	240	-790	6.7	8.9	420	0	3.5	31	.	.	21	24	1500	0	8.2	48	.	.
1995	1.9	9.3	480	-120	4.0	14	270	-1100	2.7	18	.	.	18	32	1400	-1200	4.5	49	.	.
1996	3.1	6.8	230	-110	4.5	8.2	320	-1000	4.6	14	.	.	19	14	980	-1200	10	30	.	.
1997	3.1	7.5	220	-120	4.7	11	340	0	6.8	43	100	0	17	31	1000	-370	6.9	62	230	-390
1998	2.6	7.9	200	-140	4.6	8.2	240	0	2.9	27	78	0	15	24	1100	-350	6.7	44	280	-410
1999	3.8	7.3	300	-130	8.9	10	410	0	1.6	32	110	0	20	21	1100	-360	6.4	26	270	-430
2000	2.9	11	210	-130	6.6	15	310	0	2.8	45	80	0	11	42	1200	-360	4.0	72	260	-400
2001	3.3	11	250	-6.7	6.5	14	240	0	2.7	26	94	-19	16	26	910	-150	4.2	24	270	-36
2002	2.4	8.0	190	-6.9	4.8	13	260	0	2.2	16	110	-19	8.3	37	730	-150	4.5	29	250	-38
2003	2.4	5.5	170	-6.7	3.7	9.0	190	0	3.5	25	100	-17	6.5	25	710	-140	5.6	33	260	-34
2004	1.1	6.8	140	-6.7	2.5	17	210	0	2.5	18	110	-18	5.6	25	810	-150	4.2	26	310	-35
2005	1.5	7.5	240	-7.2	5.4	16	330	0	3.0	17	140	-19	14	23	1200	-180	7.3	28	350	-37
pyrene																				
1992	3.9	4.8	84	-19	5.3	11	35	0	5.7	0	.	.	13	30	280	0	10	0	40	-40
1993	2.1	1.4	24	-20	4.8	5.1	65	0	6.3	5.2	.	.	14	22	230	0	9.0	4.8	.	.
1994	6.4	4.5	17	-24	7.6	6.7	33	0	3.5	1.6	.	.	29	18	140	0	8.3	3.6	.	.
1995	1.8	7.0	140	-11	4.7	12	18	-110	2.6	18	.	.	24	26	170	-130	7.0	24	.	.
1996	2.8	4.2	22	-9.5	4.5	5.4	25	-110	5.5	15	.	.	26	8.7	120	-120	14	25	.	.
1997	2.5	4.7	15	-13	5.1	8.5	27	0	7.2	32	16	0	20	22	86	-40	9.6	46	35	-58
1998	2.7	5.9	19	-16	5.4	6.2	27	0	4.9	17	16	0	19	15	100	-39	13	25	55	-62
1999	3.4	4.8	33	-15	9.4	8.2	30	0	3.3	17	19	0	27	14	90	-40	14	16	54	-64
2000	1.5	5.7	12	-15	5.7	8.9	20	0	3.7	14	14	0	12	26	120	-39	7.1	30	46	-59
2001	2.2	5.6	19	-1.7	6.3	8.6	16	0	3.6	15	14	-1.6	19	19	84	-9.5	6.7	16	34	-9.6
2002	1.9	4.7	17	-1.7	5.1	9.2	23	0	2.8	10	14	-1.6	9.9	29	67	-9.7	6.9	20	36	-10
2003	2.1	4.3	11	-1.7	4.2	6.6	14	0	3.6	13	8.8	-1.5	7.8	20	72	-9.1	7.0	21	30	-9.1
2004	0.49	3.6	3.3	-1.7	2.9	11	12	0	2.9	8	10	-1.5	7.1	12	78	-9.5	5.3	14	33	-9.5
2005	1.2	4.2	17	-1.8	7.7	15	26	0	3.6	10	14	-1.7	23	15	110	-11	8.9	19	41	-10

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	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
arsenic																				
1992	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1995	.	.	.	.	.	.	.	.	49	.	.	.	.	.	.	.	49	.	.	.
1996	.	.	.	.	.	.	.	.	170	.	.	.	.	.	.	.	100	.	.	.
1997	.	.	.	.	.	.	.	.	79	.	.	.	.	.	.	.	160	.	.	.
1998	.	.	.	.	.	.	.	.	59	.	.	.	.	.	.	.	110	.	.	.
1999	.	.	.	.	.	.	.	.	73	.	.	.	.	.	.	.	120	.	.	.
2000	.	.	.	.	.	.	.	.	82	.	.	.	.	.	.	.	110	.	.	.
2001	.	.	.	.	.	.	.	.	170	610	.	.	.	.	.	.	130	350	.	.
2002	.	.	.	.	.	.	.	.	85	170	.	.	.	.	.	.	130	260	.	.
2003	.	.	.	.	.	.	.	.	130	320	.	.	.	.	.	.	99	250	.	.
2004	.	.	.	.	.	.	.	.	86	260	.	.	.	.	.	.	130	290	.	.
2005	.	.	.	.	.	.	.	.	210	170	.	.	.	.	.	.	110	210	.	.
cadmium																				
1992	.	.	.	.	.	.	.	.	31	.	.	.	.	.	.	.	24	.	.	.
1993	.	.	.	.	.	.	.	.	23	.	.	.	.	.	.	.	22	.	.	.
1994	.	.	.	.	.	.	.	.	30	.	.	.	.	.	.	.	36	.	.	.
1995	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	10	.	.	.
1996	.	.	.	.	.	.	.	.	22	.	.	.	.	.	.	.	23	.	.	.
1997	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.	28	.	.	.
1998	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	23	.	.	.
1999	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	29	.	.	.
2000	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	25	.	.	.
2001	.	.	.	.	.	.	.	.	16	160	.	.	.	.	.	.	20	96	.	.
2002	.	.	.	.	.	.	.	.	12	23	.	.	.	.	.	.	18	76	.	.
2003	.	.	.	.	.	.	.	.	20	110	.	.	.	.	.	.	17	75	.	.
2004	.	.	.	.	.	.	.	.	17	77	.	.	.	.	.	.	23	71	.	.
2005	.	.	.	.	.	.	.	.	21	64	.	.	.	.	.	.	28	64	.	.
lead																				
1992	.	.	.	.	.	.	.	.	430	.	.	.	.	.	.	.	600	.	.	.
1993	.	.	.	.	.	.	.	.	420	.	.	.	.	.	.	.	660	.	.	.
1994	.	.	.	.	.	.	.	.	730	1500	.	.	.	.	.	.	870	2700	.	.
1995	.	.	.	.	.	.	.	.	460	3200	.	.	.	.	.	.	570	4800	.	.
1996	.	.	.	.	.	.	.	.	760	2900	.	.	.	.	.	.	850	4500	.	.
1997	.	.	.	.	.	.	.	.	600	4100	.	.	.	.	.	.	890	4400	.	.
1998	.	.	.	.	.	.	.	.	330	1900	.	.	.	.	.	.	670	4100	.	.
1999	.	.	.	.	.	.	.	.	450	1900	.	.	.	.	.	.	850	2300	.	.
2000	.	.	.	.	.	.	.	.	300	3600	.	.	.	.	.	.	500	4500	.	.
2001	.	.	.	.	.	.	.	.	510	1300	.	.	.	.	.	.	550	5100	.	.
2002	.	.	.	.	.	.	.	.	330	1300	.	.	.	.	.	.	520	3800	.	.
2003	.	.	.	.	.	.	.	.	490	1100	.	.	.	.	.	.	460	3700	.	.
2004	.	.	.	.	.	.	.	.	330	1300	.	.	.	.	.	.	510	2800	.	.
2005	.	.	.	.	.	.	.	.	570	1100	.	.	.	.	.	.	520	1700	.	.

Appendix A: Annual Atmospheric Fluxes (ng/m^2/day) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (ng/m^2/day)				Lake Michigan (ng/m^2/day)				Lake Huron (ng/m^2/day)				Lake Erie (ng/m^2/day)				Lake Ontario (ng/m^2/day)			
	dry	**wet**	**abs**	**vol**	**dry**	**wet**	**abs**	**vol**	**dry**	**wet**	**abs**	**vol**	**dry**	**wet**	**abs**	**vol**	**dry**	**wet**	**abs**	**vol**
selenium																				
1992	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1993	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1994	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1995	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	31	.	.	.
1996	.	.	.	.	.	.	.	.	67	.	.	.	.	.	.	.	85	.	.	.
1997	.	.	.	.	.	.	.	.	38	.	.	.	.	.	.	.	120	.	.	.
1998	.	.	.	.	.	.	.	.	35	.	.	.	.	.	.	.	78	.	.	.
1999	.	.	.	.	.	.	.	.	82	.	.	.	.	.	.	.	100	.	.	.
2000	.	.	.	.	.	.	.	.	80	.	.	.	.	.	.	.	120	.	.	.
2001	.	.	.	.	.	.	.	.	120	600	.	.	.	.	.	.	140	730	.	.
2002	.	.	.	.	.	.	.	.	110	370	.	.	.	.	.	.	160	500	.	.
2003	.	.	.	.	.	.	.	.	94	630	.	.	.	.	.	.	160	630	.	.
2004	.	.	.	.	.	.	.	.	120	360	.	.	.	.	.	.	170	490	.	.
2005	.	.	.	.	.	.	.	.	180	430	.	.	.	.	.	.	190	450	.	.

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
α-HCH																				
1992	.	70	2800	-810	.	59	1600	-1200	.	.	.	.	.	48	810	-430	.	40	130	-180
1993	.	23	1500	-920	.	21	1300	-1300	.	87	410	-1100	.	24	720	-480	.	29	140	-220
1994	.	50	2100	-1100	.	71	1400	-1400	.	72	410	-1200	.	27	760	-460	.	24	180	-260
1995	.	29	1500	-1900	.	46	780	-210	.	150	350	-480	.	16	440	-260	.	48	150	-160
1996	.	53	1100	-1600	.	16	640	-190	.	130	270	-380	.	9.7	290	-240	.	34	98	-140
1997	.	33	980	-1900	.	28	770	-330	.	61	240	-360	.	5.9	270	-150	.	27	95	-150
1998	.	9.4	1200	-2500	.	15	750	-410	.	35	220	-410	.	2.6	290	-150	.	18	76	-160
1999	.	41	890	-2200	.	15	480	-400	.	27	150	-400	.	5.8	190	-160	.	9.4	63	-170
2000	.	44	810	-2200	.	30	500	-400	.	21	140	-390	.	18	180	-150	.	4.8	50	-150
2001	.	48	680	-1500	.	29	250	-370	.	27	120	-150	.	9.5	170	-66	.	5.0	44	-64
2002	.	60	720	-1600	.	29	380	-400	.	18	120	-160	.	14	180	-68	.	3.3	36	-70
2003	.	53	470	-1500	.	22	290	-350	.	12	91	-140	.	14	120	-62	.	6.3	32	-59
2004	.	21	280	-1500	.	15	100	-370	.	11	82	-150	.	4.4	43	-65	.	3.0	26	-63
2005	.	14	260	-1700	.	6.1	95	-410	.	11	77	-170	.	2.6	48	-80	.	3.8	23	-71
γ-HCH																				
1992	.	50	420	-160	.	81	1300	-130	.	.	.	.	.	38	200	-98	.	29	38	-43
1993	.	13	220	-180	.	74	420	-140	.	87	94	-150	.	17	190	-110	.	20	46	-53
1994	.	29	310	-220	.	37	780	-150	.	87	130	-160	.	19	210	-110	.	19	61	-61
1995	.	16	220	-180	.	20	310	-32	.	110	85	-53	.	15	110	-42	.	22	43	-29
1996	.	29	210	-150	.	6.1	200	-29	.	110	78	-42	.	1.4	110	-40	.	27	41	-25
1997	.	33	280	-220	.	31	400	-52	.	84	97	-37	.	6.3	130	-60	.	47	43	-39
1998	.	8.1	220	-280	.	11	350	-62	.	130	83	-42	.	1.4	110	-61	.	33	47	-43
1999	.	66	340	-260	.	23	500	-61	.	50	110	-42	.	8.7	110	-63	.	18	51	-45
2000	.	66	280	-250	.	61	240	-62	.	45	71	-40	.	27	120	-61	.	14	39	-41
2001	.	75	230	-170	.	47	130	-57	.	40	76	-60	.	15	88	-40	.	13	31	-31
2002	.	37	160	-170	.	41	130	-62	.	44	65	-62	.	19	55	-41	.	13	24	-33
2003	.	28	81	-170	.	18	120	-55	.	24	46	-54	.	15	63	-38	.	11	24	-28
2004	.	23	72	-170	.	23	55	-58	.	16	34	-58	.	9.6	27	-40	.	7.7	14	-30
2005	.	13	72	-190	.	8.0	53	-63	.	16	30	-65	.	5.7	27	-48	.	5.4	20	-33
dieldrin																				
1992	.	19	160	-940	.	46	170	0	.	.	.	.	.	28	80	-660	.	8.4	26	-340
1993	.	34	99	-1100	.	37	210	0	.	21	87	-1200	.	22	120	-720	.	5.5	51	-410
1994	.	15	120	-1300	.	32	200	0	.	13	74	-1300	.	8.9	88	-690	.	3.7	46	-480
1995	.	24	97	-580	.	38	140	-620	.	20	43	0	.	15	61	-310	.	3.6	31	-370
1996	.	19	93	-500	.	25	96	-560	.	45	47	0	.	11	44	-300	.	12	22	-330
1997	.	16	84	-650	.	21	150	0	.	26	60	0	.	9.3	71	-300	.	4.0	32	-220
1998	.	12	65	-840	.	26	86	0	.	16	50	0	.	5.3	65	-290	.	5.2	27	-230
1999	.	20	100	-760	.	20	280	0	.	11	78	0	.	4.5	44	-300	.	4.2	36	-240
2000	.	9.5	53	-750	.	18	97	0	.	12	48	0	.	8.7	52	-300	.	2.7	20	-220
2001	.	17	99	-550	.	18	79	0	.	13	47	-350	.	7.3	34	-250	.	2.8	19	-230
2002	.	13	80	-570	.	19	140	0	.	11	46	-360	.	7.7	31	-250	.	4.2	20	-250
2003	.	9.7	41	-550	.	13	87	0	.	9.0	43	-320	.	6.6	35	-240	.	4.1	25	-210
2004	.	11	35	-560	.	22	72	0	.	6.6	52	-340	.	5.5	25	-250	.	2.5	23	-220
2005	.	9.4	63	-630	.	11	78	0	.	8.1	53	-370	.	3.4	31	-310	.	2.4	23	-250

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
hexachlorobenzene																				
1992	.	2.4	330	.	.	1.3	190	.	.	.	.	.	.	1.3	75	.	.	0	20	.
1993	.	4.9	260	-250	.	4.3	220	-240	.	6.0	82	-110	.	0.66	97	-110	.	0.94	32	-270
1994	.	1.3	320	-290	.	0.76	170	-230	.	1.1	67	-110	.	0.36	78	-99	.	0.12	38	-300
1995	.	1.3	240	-190	.	1.1	120	-120	.	3.4	67	-180	.	0.67	65	-85	.	1.4	35	-97
1996	.	1.2	230	-180	.	0.74	140	-120	.	1.3	58	-140	.	0.42	51	-82	.	1.5	27	-86
1997	.	0.95	250	-240	.	0.62	170	-170	.	4.7	42	-130	.	0.32	72	-100	.	0.74	29	-88
1998	.	0.79	270	-250	.	0.68	190	-180	.	1.7	63	-130	.	0.49	58	-85	.	0.73	25	-83
1999	.	1.1	300	-260	.	0.71	170	-190	.	3.8	58	-140	.	0.31	61	-94	.	0.51	28	-94
2000	.	0.94	260	-260	.	0.89	150	-200	.	1.6	60	-140	.	0.51	57	-91	.	0.52	24	-86
2001	.	1.5	250	-370	.	0.78	120	0	.	2.7	56	-210	.	0.39	47	-75	.	0.66	24	-120
2002	.	0.93	210	-380	.	0.62	110	0	.	1.9	70	-220	.	0.40	52	-82	.	0.60	27	-130
2003	.	0.91	190	-390	.	0.55	100	0	.	0.92	3.4	-200	.	0.37	53	-77	.	0.44	5.3	-120
2004	.	0.94	170	-370	.	0.92	87	0	.	1.1	4.1	-200	.	0.38	27	-76	.	1.1	4.7	-120
2005	.	1.2	160	-360	.	1.0	81	0	.	0.95	4.2	-210	.	0.99	46	-96	.	0.49	4.7	-120
cis-chlordane																				
1992	.	1.6	.	.	.	0.9	.	-80	.	.	.	.	.	0.32	.	-25	.	0.13	3.2	.
1993	.	4.8	.	0	.	1.9	.	0	.	0.098	7.8	0	.	1.4	.	0	.	0.14	4.3	0
1994	.	3.3	17	0	.	14	18	0	.	0	6.5	0	.	3.7	10	0	.	0	5	0
1995	.	2.4	18	-140	.	7.6	14	-77	.	1.3	4.3	-40	.	9.9	13	-29	.	4.8	3.8	-26
1996	.	2.8	15	-130	.	3.0	13	-78	.	0.91	5.0	-33	.	1.8	7.5	-28	.	9.7	3.2	-23
1997	.	3.8	14	-210	.	8.0	18	-90	.	2.9	4.6	-37	.	11	12	-57	.	0.19	3.5	-27
1998	.	3.6	12	-230	.	9.2	12	-95	.	0.55	4.9	-36	.	4.2	9.4	-49	.	0.34	3.0	-26
1999	.	4.5	18	-240	.	6.7	25	-100	.	0.46	7.4	-38	.	8.0	9.8	-54	.	0.33	5.3	-29
2000	.	3.1	13	-230	.	6.8	15	-100	.	0.30	4.1	-39	.	14	9.4	-52	.	6.1	2.5	-27
2001	.	8.4	17	-130	.	6.1	12	-97	.	1.5	6.4	-44	.	3.6	7.8	-34	.	0.20	2.7	0
2002	.	4.5	11	-130	.	9.2	12	-100	.	1.7	5.4	-44	.	4.9	7.6	-37	.	0.53	2.8	0
2003	.	3.3	9.8	-130	.	6.2	11	-97	.	0.44	4.6	-41	.	4.0	8.0	-35	.	0.68	2.8	0
2004	.	1.6	7.0	-130	.	1.3	7.3	-100	.	0.44	5.0	-41	.	0.73	4.1	-35	.	1.4	2.8	0
2005	.	1.3	11	-120	.	3.5	11	-96	.	0.54	4.8	-43	.	1.3	7.5	-43	.	0.28	2.8	0
trans-chlordane																				
1992	.	1.1	.	.	.	1.8	.	0	.	.	.	.	.	6.1	.	.	.	0.60	2.7	.
1993	.	47	.	0	.	43	.	0	.	0	6.6	0	.	60	.	0	.	0.16	4.1	0
1994	.	13	11	0	.	35	17	0	.	1.6	5.4	0	.	24	8.8	0	.	0.53	4.4	0
1995	.	4.0	19	-87	.	4.5	10	-54	.	0	3.2	-29	.	19	9.1	-19	.	0	3.3	-27
1996	.	11	10	-82	.	8.8	9.8	-56	.	1.9	4.1	-23	.	14	5.8	-18	.	0.36	2.6	-25
1997	.	0.73	15	-420	.	0.92	14	-68	.	3.8	3.7	-13	.	0.70	11	-81	.	0.56	3.1	-17
1998	.	0.86	7.8	-440	.	0.96	8.3	-71	.	1.7	3.4	-13	.	0.31	7.9	-68	.	0.18	2.3	-16
1999	.	0.73	9.8	-460	.	0.79	20	-76	.	1.4	5.1	-14	.	0.46	7.5	-76	.	0.059	3.9	-18
2000	.	0.76	5.8	-450	.	0.95	8.5	-78	.	10	3.3	-14	.	0.80	6.2	-73	.	0.34	1.9	-17
2001	.	1.4	13	-160	.	0.88	7.7	-74	.	5.4	4.4	-31	.	0.64	5.5	-30	.	0.20	2.1	0
2002	.	1.1	14	-160	.	0.98	17	-79	.	0.33	4.0	-31	.	0.65	6.2	-33	.	0.19	2.4	0
2003	.	0.58	4.9	-160	.	0.65	6.4	-74	.	0.73	2.9	-29	.	0.66	5.6	-31	.	0.63	2.1	0
2004	.	0.88	3.0	-160	.	1.0	4.9	-76	.	1.4	3.4	-29	.	0.46	3.6	-30	.	1.2	2.0	0
2005	.	0.99	5.8	-160	.	0.79	6.3	-72	.	0.24	3.3	-30	.	0.31	4.7	-38	.	0.14	2.1	0

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
trans-nonachlor																				
1992	.	0.32	3.4	.	.	0.56	4.4	.	.	.	.	.	.	0.38	4.1	.	.	.	3.1	.
1993	.	2.4	7.8	.	.	5.8	17	.	.	.	8.1	.	.	0.28	13	.	.	.	4.8	.
1994	.	1.5	12	.	.	0.38	14	.	.	.	7.6	.	.	1.8	8.6	.	.	.	5.3	.
1995	.	1.4	9.3	.	.	0.64	7.8	.	.	.	3.8	.	.	0.64	6.1	.	.	.	3.7	.
1996	.	1.6	9.0	.	.	0.90	7.9	.	.	.	4.5	.	.	0.40	4.7	.	.	.	2.6	.
1997	.	0.89	8.0	.	.	0.57	11	.	.	.	4.5	.	.	0.45	6.6	.	.	.	3.4	.
1998	.	0.63	10	.	.	0.77	9.9	.	.	0.29	4.5	.	.	0.28	5.7	.	.	0.31	2.5	.
1999	.	0.65	13	.	.	0.82	24	.	.	1.1	6.0	.	.	0.21	6.7	.	.	0.42	4.4	.
2000	.	0.57	7.4	.	.	0.74	11	.	.	0.29	3.9	.	.	0.62	6.3	.	.	0.26	1.7	.
2001	.	0.94	13	.	.	0.71	9.2	.	.	2.6	4.8	.	.	0.51	4.8	.	.	0.16	1.9	.
2002	.	0.62	9.4	.	.	0.70	11	.	.	1.2	5.1	.	.	0.49	5.1	.	.	0.75	2.5	.
2003	.	0.49	5.4	.	.	0.67	8.3	.	.	1.2	3.6	.	.	0.52	4.0	.	.	0.72	2.5	.
2004	.	0.51	4.7	.	.	0.77	7.0	.	.	0.89	3.8	.	.	0.37	3.5	.	.	0.34	1.9	.
2005	.	0.76	8.9	.	.	0.77	9.3	.	.	0.60	4.2	.	.	0.26	4.9	.	.	0.22	2.2	.
p'p'-DDD																				
1992	.	0.50	13	.	.	1.5	21	.	.	.	.	.	.	2.2	24	.	.	0.27	1.0	.
1993	.	6.1	4.1	0	.	1.0	20	0	.	0.86	1.4	0	.	0.29	16	0	.	0.51	1.5	0
1994	.	12	8.2	0	.	34	5.8	0	.	0	2.2	0	.	1.1	14	0	.	0	1.8	0
1995	.	0.72	8.3	-6.1	.	1.0	4.3	-5.8	.	0	0.96	0	.	2.3	4.6	0	.	0.32	0.86	0
1996	.	0.44	11	-5.1	.	0.88	11	-5.0	.	1.2	0.95	0	.	1.3	6.8	0	.	0.15	0.82	0
1997	.	0.053	11	0	.	0.63	9.5	0	.	21	1.3	0	.	0.81	5.5	0	.	0.24	1.1	0
1998	.	0.81	9.5	0	.	1.9	12	0	.	0.70	1.6	0	.	1.2	11	0	.	0.74	0.85	0
1999	.	0.083	17	0	.	0.90	26	0	.	0.63	0.48	0	.	.	20	0	.	0.38	1.1	0
2000	.	0	11	0	.	0.29	6.0	0	.	0.35	0.88	0	.	0.096	3.8	0	.	0.15	0.68	0
2001	.	0.23	10	-3.8	.	0.31	9.4	0	.	0.82	1.0	-3.6	.	0.34	4.4	-8.1	.	0.44	0.67	-5.6
2002	.	0.17	9.1	-3.9	.	0.32	3.3	0	.	0.40	0.42	-3.8	.	0.39	3.6	-8.3	.	0.14	0.69	-6.2
2003	.	0.95	6.8	-3.7	.	0.17	5.8	0	.	0.024	0.42	-3.2	.	0.56	3.0	-7.6	.	0.2	0.62	-5.1
2004	.	0.31	3.5	-3.8	.	0.36	3.3	0	.	0.13	0.5	-3.4	.	0.34	2.4	-8.0	.	0.52	0.73	-5.5
2005	.	0.19	3.4	-4.5	.	0.23	1.8	0	.	0.16	0.71	-3.9	.	0.082	1.9	-9.9	.	1.2	0.6	-6.4
p'p'-DDE																				
1992	.	2.5	12	.	.	3.9	23	.	.	.	.	.	.	4.6	16	.	.	3.5	8.1	.
1993	.	3.6	12	0	.	6.8	40	0	.	5.2	8.7	0	.	3.0	29	0	.	6.1	12	-280
1994	.	3.0	7.1	0	.	2.8	11	0	.	1.9	7.5	0	.	3.1	9.8	0	.	1.9	16	-320
1995	.	3.3	8.5	-130	.	5.5	15	-81	.	9.0	5.8	0	.	6.5	15	0	.	4.7	11	0
1996	.	1.5	7.1	-120	.	3.9	16	-81	.	7.2	5.1	0	.	3.1	13	0	.	8.0	8.2	0
1997	.	2.0	12	-61	.	2.4	20	-130	.	19	3.6	-38	.	1.9	16	-230	.	8.7	9.8	-130
1998	.	1.3	6.7	-65	.	2.3	14	-140	.	4.3	4.5	-38	.	1.1	12	-190	.	3.7	8.2	-120
1999	.	2.3	9.5	-67	.	4.9	28	-150	.	3.8	5.1	-40	.	2.1	13	-210	.	1.5	11	-130
2000	.	0.55	4.9	-65	.	1.0	14	-160	.	2.0	4.0	-40	.	1.5	14	-210	.	1.8	6.3	-120
2001	.	1.0	8.2	-44	.	0.95	11	-150	.	3.9	6.0	-91	.	0.68	9.2	-42	.	2.1	6.6	-77
2002	.	0.92	5.1	-45	.	1.3	11	-160	.	2.0	4.6	-92	.	1.4	10	-45	.	1.6	6.9	-82
2003	.	1.5	3.2	-45	.	1.1	12	-150	.	1.8	3.7	-85	.	1.1	9.7	-43	.	1.5	6.1	-76
2004	.	1.5	3.5	-44	.	1.3	8.0	-150	.	1.3	4.2	-87	.	0.65	8.4	-42	.	2.1	7.1	-75
2005	.	1.1	3.9	-43	.	1.0	8.3	-140	.	1.4	3.3	-90	.	0.54	9.2	-53	.	1.1	5.1	-75

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
p'p'-DDT																				
1992	.	16	36	-9.0	.	25	58	-6.5	.	.	.	.	.	39	37	-1.4	.	5.5	6.4	-1.7
1993	.	24	23	-10	.	37	75	-7.0	.	0	7.5	-2.6	.	54	48	-1.6	.	1.7	8.7	-2.0
1994	.	42	7.4	-13	.	38	7.6	-7.8	.	0	7.5	-2.8	.	13	20	-1.5	.	0.61	14	-2.4
1995	.	2.4	21	-18	.	6.3	17	-16	.	18	5.8	0	.	17	19	0	.	8.6	7.7	0
1996	.	2.4	26	-15	.	7.5	25	-14	.	9.4	4.7	0	.	5.3	40	0	.	4.8	11	0
1997	.	2.2	14	-15	.	4.3	26	-6.0	.	36	4.2	-2.8	.	2.3	24	-56	.	9.6	7	-3.0
1998	.	0.86	16	-20	.	2.6	34	-7.4	.	0.0081	2.8	-3.2	.	1.1	24	-58	.	0.51	5.9	-3.3
1999	.	1.7	34	-17	.	3.6	59	-7.2	.	2.5	6.0	-3.1	.	1.9	28	-60	.	1.2	8.2	-3.4
2000	.	1.4	19	-17	.	3.8	22	-7.3	.	2.6	3.9	-3.0	.	3.5	23	-58	.	2.2	3.9	-3.1
2001	.	1.7	27	0	.	2.1	19	-6.7	.	3.5	3.8	0	.	2.0	16	-3.4	.	3.3	5.2	0
2002	.	1.9	26	0	.	5.3	27	-7.3	.	3.3	3.5	0	.	3.1	16	-3.5	.	2.3	3.6	0
2003	.	2.7	27	0	.	2.2	27	-6.3	.	1.3	2.3	0	.	3.3	22	-3.2	.	1.4	3.7	0
2004	.	5.7	9.9	0	.	4.0	11	-6.7	.	1.0	3.0	0	.	2.0	12	-3.4	.	0.84	4.1	0
2005	.	3.7	16	0	.	2.9	15	-7.5	.	2.2	2.5	0	.	1.8	14	-4.2	.	1.1	4.1	0
α-endosulfan																				
1992	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	83	140	.
1993	.	.	.	0	.	.	.	0	.	52	68	0	.	.	.	0	.	32	130	0
1994	.	9.4	1.7	0	.	36	1.6	0	.	64	140	0	.	3.9	3.1	0	.	45	420	0
1995	.	34	170	-210	.	11	310	-1300	.	53	50	0	.	12	160	-580	.	19	72	-100
1996	.	30	140	-200	.	11	240	-1300	.	28	27	0	.	9.2	100	-560	.	22	57	-91
1997	.	19	150	-90	.	14	520	0	.	23	67	0	.	5.5	200	-91	.	11	100	-110
1998	.	5.6	130	-94	.	8.5	560	0	.	32	60	0	.	1.3	160	-79	.	31	110	-100
1999	.	29	230	-97	.	15	480	0	.	22	120	0	.	8.2	150	-86	.	28	230	-110
2000	.	15	61	-95	.	31	190	0	.	20	35	0	.	21	130	-83	.	16	86	-110
2001	.	28	190	0	.	38	120	0	.	23	67	0	.	13	140	-87	.	11	48	0
2002	.	24	96	0	.	30	210	0	.	21	48	0	.	16	96	-94	.	14	44	0
2003	.	22	52	0	.	19	140	0	.	14	56	0	.	22	190	-89	.	13	49	0
2004	.	18	37	0	.	30	73	0	.	14	42	0	.	12	49	-88	.	14	40	0
2005	.	16	99	0	.	18	150	0	.	17	58	0	.	26	160	-110	.	11	200	0
PCB 018																				
1992	.	2.5	48	-170	.	1.7	70	-200	.	.	.	.	.	0.78	41	-52	.	.	11	-24
1993	.	2.6	71	-190	.	0.90	52	-220	.	.	30	-59	.	0.58	59	-59	.	.	16	-31
1994	.	2.9	44	-230	.	2.8	49	-220	.	.	24	-60	.	0.91	35	-55	.	.	17	-35
1995	.	3.1	35	-59	.	3.5	26	-78	.	.	40	-54	.	2.2	24	-72	.	.	15	-36
1996	.	6.9	34	-54	.	2.2	28	-77	.	.	29	-43	.	1.1	14	-69	.	.	14	-32
1997	.	5.0	30	-37	.	1.4	23	-39	.	.	28	-25	.	0.59	33	-52	.	.	17	-27
1998	.	3.3	29	-42	.	2.3	51	-42	.	.	23	-25	.	0.46	29	-45	.	.	12	-26
1999	.	5.3	76	-42	.	3.1	66	-44	.	.	27	-26	.	0.68	29	-49	.	.	16	-29
2000	.	4.8	69	-41	.	3.1	31	-46	.	.	18	-26	.	1.1	20	-48	.	.	8.8	-27
2001	.	4.4	64	-32	.	1.8	20	-38	.	.	20	-20	.	0.67	20	-38	.	.	8.9	-17
2002	.	1.8	39	-33	.	1.5	20	-41	.	4.3	17	-21	.	1.0	17	-40	.	1.9	7.5	-19
2003	.	1.4	24	-33	.	1.2	19	-37	.	6.6	16	-19	.	0.56	24	-38	.	3.8	6.7	-17
2004	.	1.1	14	-33	.	1.3	8.5	-39	.	6.5	13	-19	.	0.85	7.3	-31	.	2.8	6.8	-17
2005	.	1.7	19	-33	.	1.2	9.7	-38	.	.	14	-20	.	0.42	20	-47	.	.	6.8	-17

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
PCB 052																				
1992	.	1.0	37	-53	.	0.98	79	-180	.	.	.	.	.	0.72	35	-37	.	.	7.6	-27
1993	.	0.22	79	-60	.	0.59	38	-200	.	.	11	-21	.	0.46	47	-41	.	.	9.5	-35
1994	.	2.1	72	-70	.	2.2	32	-200	.	.	8.8	-21	.	1.5	29	-39	.	.	8.9	-40
1995	.	2.6	57	-84	.	3.0	21	-11	.	.	6.7	-24	.	2.2	25	-48	.	.	6.8	-27
1996	.	4.1	27	-77	.	1.8	21	-11	.	.	8.0	-19	.	1.2	16	-46	.	.	6.5	-24
1997	.	3.2	26	-16	.	1.9	16	-11	.	.	9.2	-11	.	0.77	27	-51	.	.	8.8	-14
1998	.	2.9	25	-18	.	2.1	32	-12	.	.	8.3	-11	.	0.7	25	-45	.	.	6.6	-14
1999	.	4.2	49	-18	.	2.9	45	-13	.	.	11	-11	.	1.3	30	-49	.	.	8.9	-15
2000	.	5.0	45	-18	.	4.0	25	-13	.	.	7.6	-11	.	1.7	22	-48	.	.	5.2	-14
2001	.	4.9	64	-64	.	2.4	16	-110	.	.	10	-73	.	1.3	20	-73	.	.	6.0	-59
2002	.	2.2	35	-65	.	2.0	18	-120	.	7.7	9.0	-74	.	1.2	17	-76	.	2.1	5.0	-64
2003	.	1.8	20	-65	.	1.5	15	-110	.	3.4	7.7	-67	.	0.88	27	-72	.	1.3	4.6	-58
2004	.	2.0	14	-65	.	2.0	8.9	-120	.	3.2	8.2	-70	.	1.8	9.8	-60	.	3.5	5.1	-58
2005	.	3.6	20	-66	.	2.5	9.6	-120	.	.	8.1	-74	.	1.0	25	-90	.	.	5.1	-60
PCB 101																				
1992	.	1.9	26	-100	.	1.0	62	-81	.	.	.	.	.	0.8	47	-17	.	.	3.9	-5.4
1993	.	0.74	51	-120	.	0.49	44	-87	.	.	5.9	0	.	0.69	37	-18	.	.	5.6	-6.8
1994	.	2.2	78	-140	.	1.7	22	-89	.	.	6.0	0	.	1.5	18	-17	.	.	7.3	-7.8
1995	.	3.9	54	-44	.	2.4	14	-30	.	.	3.4	-21	.	1.8	17	-24	.	.	3.1	-12
1996	.	3.9	25	-40	.	1.3	15	-30	.	.	3.6	-16	.	1.2	10	-23	.	.	3.4	-11
1997	.	4.3	19	-3.6	.	1.5	8.4	-30	.	.	4.2	-9.5	.	0.95	16	-15	.	.	4.0	-8.2
1998	.	6.8	19	-4.1	.	2.1	19	-33	.	.	3.8	-9.8	.	0.87	16	-14	.	.	3.0	-8.3
1999	.	5.5	29	-4.0	.	2.4	28	-34	.	.	3.7	-10	.	1.2	19	-15	.	.	3.5	-8.9
2000	.	5.1	25	-4.0	.	3.4	16	-36	.	.	2.3	-10	.	1.6	15	-15	.	.	2.1	-8.3
2001	.	4.7	36	-20	.	2.1	11	-44	.	.	3.3	-51	.	1.2	13	-56	.	.	2.3	-58
2002	.	2.5	21	-21	.	1.9	14	-47	.	4.6	3.0	-51	.	1.2	12	-58	.	1.6	2.1	-62
2003	.	2.5	13	-21	.	1.6	12	-43	.	2.3	4.3	-46	.	0.95	17	-55	.	1.1	3.4	-56
2004	.	2.9	10	-21	.	1.7	5.8	-45	.	1.4	4.5	-48	.	1.6	5.9	-45	.	1.0	3.3	-57
2005	.	3.9	14	-21	.	2.3	7.7	-45	.	.	3.8	-51	.	0.91	16	-69	.	.	3.0	-59
Suite PCB																				
1992	.	98	720	-2400	.	41	1800	-3700	.	.	.	.	.	23	790	-790	.	.	150	-550
1993	.	120	1700	-2700	.	54	940	-4000	.	.	340	-930	.	18	980	-880	.	.	210	-700
1994	.	43	1200	-3200	.	54	590	-4000	.	.	360	-960	.	32	430	-830	.	.	270	-800
1995	.	60	850	-1200	.	54	320	-1100	.	.	290	-600	.	44	340	-890	.	.	140	-440
1996	.	99	490	-1100	.	36	370	-1100	.	.	220	-470	.	29	220	-850	.	.	140	-390
1997	.	100	450	-760	.	29	290	-540	.	.	260	-570	.	20	430	-760	.	.	170	-370
1998	.	120	400	-850	.	41	570	-580	.	.	210	-580	.	15	380	-670	.	.	130	-370
1999	.	110	810	-850	.	58	810	-610	.	.	260	-600	.	18	420	-720	.	.	160	-400
2000	.	82	770	-830	.	53	400	-630	.	.	160	-600	.	23	300	-710	.	.	89	-370
2001	.	70	930	-600	.	29	240	-1100	.	.	190	-810	.	16	260	-980	.	.	93	-610
2002	.	40	550	-620	.	33	270	-1200	.	86	190	-810	.	23	240	-1000	.	47	91	-660
2003	.	35	320	-620	.	30	240	-1100	.	58	200	-740	.	15	350	-980	.	36	110	-590
2004	.	52	290	-610	.	48	170	-1100	.	45	170	-770	.	34	170	-810	.	34	90	-600
2005	.	71	360	-620	.	48	180	-1100	.	.	170	-810	.	18	420	-1200	.	.	93	-610

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
benzo*(a)* pyrene																				
1992	24	150	0	-71	50	170	10	0	99	0	.	.	55	170	17	0	81	0	.	.
1993	6.1	24	0	-81	24	77	0	0	110	100	.	.	54	87	0	0	68	13	.	.
1994	31	18	0	-100	56	40	0	0	53	0	.	.	130	85	11	0	57	1.9	.	.
1995	12	83	54	-9.0	34	120	3.4	-67	40	44	.	.	100	140	8.5	-36	32	23	.	.
1996	34	43	0.67	-7.5	40	64	13	-57	95	18	.	.	120	58	1.8	-34	76	47	.	.
1997	36	65	1.7	-7.6	51	110	16	0	85	140	.	.	100	120	0.96	-19	51	46	.	.
1998	29	65	0.59	-11	52	72	8.9	0	61	54	.	.	99	56	3.4	-20	57	26	.	.
1999	39	49	0	-9.3	78	89	0	0	64	61	.	.	120	54	29	-21	58	16	.	.
2000	16	39	0	-9.1	54	70	0.28	0	61	39	.	.	56	100	35	-20	37	28	.	.
2001	24	70	0	0	55	70	0	0	64	58	.	.	92	79	17	0	39	32	.	.
2002	12	38	0	0	55	78	3.7	0	54	59	.	.	48	110	13	0	39	56	.	.
2003	18	58	0	0	34	65	0	0	55	65	.	.	39	99	6.9	0	43	47	.	.
2004	14	66	0	0	34	130	3.6	0	57	45	.	.	38	67	4.3	0	34	25	.	.
2005	20	68	1.2	0	93	140	0.89	0	74	58	.	.	81	80	7.1	0	46	34	.	.
benzo*(b)* fluoranthene																				
1992	96	170	96	-30	130	250	52	0	180	0	.	.	300	320	110	0	300	12	.	.
1993	44	53	0	-34	110	160	0	0	190	150	.	.	270	180	15	0	260	140	.	.
1994	130	42	0	-43	180	120	8.1	0	110	0	.	.	420	180	59	0	150	39	.	.
1995	110	240	110	0	150	270	14	0	72	110	.	.	440	320	29	0	84	81	.	.
1996	96	140	3.8	0	120	140	29	0	170	69	.	.	310	140	4.8	0	250	55	.	.
1997	130	150	5.9	0	160	220	44	0	150	180	.	.	280	230	10	0	120	120	.	.
1998	120	150	18	0	180	180	63	0	130	110	.	.	370	140	36	0	200	100	.	.
1999	160	150	6.4	0	240	190	5.3	0	110	290	.	.	400	120	110	0	190	30	.	.
2000	110	130	0	0	210	180	2.4	0	95	49	.	.	220	240	100	0	120	120	.	.
2001	110	170	0	-1.9	190	150	4.1	0	99	220	.	.	310	170	45	-2.8	100	56	.	.
2002	80	110	13	-1.9	180	180	7.3	0	93	160	.	.	190	270	44	-3.0	59	140	.	.
2003	94	150	0	-1.8	130	150	0	0	91	180	.	.	190	220	36	-2.7	77	130	.	.
2004	71	180	0	-1.8	130	320	13	0	93	160	.	.	190	170	27	-2.8	87	70	.	.
2005	90	210	0.40	-2.2	340	330	4.0	0	120	210	.	.	330	180	25	-3.5	100	110	.	.
benzo*(k)* fluoranthene																				
1992	15	130	15	-2.9	37	120	23	0	77	0	.	.	51	120	37	0	78	0	.	.
1993	9.4	16	0	-3.3	29	54	0	0	87	58	.	.	82	64	0	0	69	0	.	.
1994	49	18	0	-4.2	63	56	0	0	45	0	.	.	140	71	15	0	45	0	.	.
1995	34	55	32	-18	47	90	2.6	-130	33	86	.	.	140	88	8.4	-70	29	55	.	.
1996	42	50	1.5	-15	44	55	8.0	-110	70	54	.	.	120	55	1.7	-65	79	44	.	.
1997	38	54	1.4	-5.7	45	82	12	0	66	160	.	.	78	86	1.1	-17	42	68	.	.
1998	28	47	4.3	-8.0	41	53	8.7	0	54	63	.	.	84	40	3.2	-18	63	53	.	.
1999	53	51	3.1	-6.9	86	76	0	0	53	140	.	.	130	54	37	-18	55	18	.	.
2000	30	25	0	-6.8	56	50	0.067	0	40	50	.	.	64	73	28	-17	34	65	.	.
2001	21	43	0	-3.5	51	45	0	0	46	170	.	.	78	49	8.0	-5.3	30	42	.	.
2002	14	33	0	-3.6	52	55	0	0	38	91	.	.	52	82	6.4	-5.5	28	61	.	.
2003	16	39	0	-3.4	33	49	0	0	38	130	.	.	43	73	4.2	-5.0	31	72	.	.
2004	24	48	0	-3.5	41	84	3.3	0	40	110	.	.	57	50	5.8	-5.3	29	52	.	.
2005	27	71	0.23	-4.2	100	110	0.27	0	53	130	.	.	83	54	9.1	-6.6	37	71	.	.

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
indeno*[1,2,3-cd]* pyrene																				
1992	45	160	0	.	76	190	0	.	190	19	.	.	130	190	11	.	130	0	.	.
1993	7.5	7.6	0	.	61	98	0	.	190	110	.	.	130	100	0	.	160	95	.	.
1994	67	19	0	.	100	62	0	.	120	0	.	.	220	83	13	.	130	3.2	.	.
1995	30	130	0	.	72	180	0.76	.	62	120	.	.	230	200	2.6	.	77	32	.	.
1996	72	100	0.048	.	92	110	5.5	.	190	42	.	.	240	90	0.97	.	160	19	.	.
1997	74	110	2.4	.	92	160	16	.	140	180	.	.	160	150	0.77	.	110	69	.	.
1998	66	100	0.61	.	120	110	23	.	100	150	.	.	210	69	2.0	.	120	66	.	.
1999	87	100	0	.	130	140	0	.	92	140	.	.	210	79	24	.	100	32	.	.
2000	47	81	0	.	110	100	0.14	.	77	46	.	.	110	140	33	.	91	62	.	.
2001	62	130	0	.	110	100	0	.	93	110	.	.	190	110	13	.	54	35	.	.
2002	44	87	0	.	120	130	4.6	.	90	110	.	.	120	200	7.4	.	56	83	.	.
2003	56	120	0	.	83	110	0	.	73	120	.	.	110	160	7.8	.	59	74	.	.
2004	45	130	0	.	80	240	7.1	.	69	100	.	.	120	120	3.0	.	59	49	.	.
2005	56	200	3.3	.	210	250	2.0	.	91	110	.	.	230	130	5.3	.	69	55	.	.
phenanthrene																				
1992	47	170	9600	-18000	59	280	5000	0	100	320	.	.	84	400	13000	0	38	350	1100	-1600
1993	32	46	7900	-20000	62	86	11000	0	100	810	.	.	94	210	18000	0	44	460	.	.
1994	250	160	6500	-24000	130	110	8900	0	76	620	.	.	200	230	14000	0	57	310	.	.
1995	53	250	14000	-3600	77	290	5700	-23000	54	290	.	.	170	300	13000	-11000	31	280	.	.
1996	93	200	7000	-3200	95	140	6700	-22000	100	280	.	.	170	120	9200	-11000	73	190	.	.
1997	92	220	6600	-3500	100	240	7200	0	150	780	1900	0	160	290	9700	-3400	47	430	1600	-2700
1998	79	160	6000	-4200	96	140	5100	0	64	590	1700	0	140	150	10000	-3200	47	280	1900	-2800
1999	120	200	9000	-4000	190	210	8700	0	35	630	2300	0	190	170	10000	-3400	44	150	1800	-3000
2000	86	240	6400	-3900	140	260	6500	0	61	570	1800	0	100	390	11000	-3400	28	290	1800	-2700
2001	98	330	7400	-200	140	270	5000	0	59	520	2000	-410	150	250	8600	-1400	29	150	1900	-250
2002	71	200	5600	-210	100	250	5500	0	48	300	2700	-490	78	350	6800	-1400	31	200	1800	-270
2003	73	160	5100	-200	79	170	4000	0	76	490	2300	-370	61	230	6700	-1300	39	230	1800	-230
2004	32	200	4100	-200	52	350	4400	0	55	380	2400	-390	48	240	7600	-1400	29	180	2100	-240
2005	46	220	7200	-220	110	340	7000	0	65	300	3000	-420	130	210	11000	-1700	50	160	2400	-260
pyrene																				
1992	79	130	2300	-530	74	230	620	0	120	0	.	.	100	300	2400	0	71	0	230	-230
1993	42	35	720	-600	84	90	1300	0	140	110	.	.	120	170	2200	0	62	28	.	.
1994	190	100	420	-710	150	82	630	0	76	32	.	.	270	160	1300	0	58	23	.	.
1995	51	190	4300	-320	91	250	370	-2400	53	290	.	.	230	240	1600	-1200	49	140	.	.
1996	84	120	660	-290	96	95	530	-2300	120	310	.	.	250	74	1100	-1100	97	160	.	.
1997	75	140	450	-400	110	180	570	0	160	580	300	0	180	210	810	-370	66	320	240	-400
1998	80	120	570	-490	110	110	580	0	110	380	340	0	180	94	980	-360	90	160	380	-430
1999	100	130	990	-460	200	170	640	0	71	340	420	0	260	110	850	-380	97	92	380	-450
2000	46	130	350	-450	120	160	430	0	80	210	310	0	120	240	1100	-370	49	120	320	-410
2001	65	170	560	-50	130	170	340	0	78	290	300	-35	180	180	790	-89	46	99	240	-67
2002	57	120	500	-51	110	180	480	0	62	180	350	-42	93	270	630	-91	48	140	250	-72
2003	63	130	330	-50	88	130	290	0	78	260	190	-32	73	190	670	-86	48	150	210	-63
2004	15	110	99	-50	62	230	250	0	64	180	230	-33	61	110	730	-89	37	98	230	-65
2005	36	120	520	-54	160	310	540	0	79	180	310	-36	220	140	1000	-110	62	110	280	-70

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
arsenic																				
1992	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1995	.	.	.	.	.	.	.	.	1100	.	.	.	.	.	.	.	340	.	.	.
1996	.	.	.	.	.	.	.	.	3700	.	.	.	.	.	.	.	710	.	.	.
1997	.	.	.	.	.	.	.	.	1700	.	.	.	.	.	.	.	1100	.	.	.
1998	.	.	.	.	.	.	.	.	1300	.	.	.	.	.	.	.	740	.	.	.
1999	.	.	.	.	.	.	.	.	1600	.	.	.	.	.	.	.	850	.	.	.
2000	.	.	.	.	.	.	.	.	1800	.	.	.	.	.	.	.	750	.	.	.
2001	.	.	.	.	.	.	.	.	3600	5500	.	.	.	.	.	.	890	1200	.	.
2002	.	.	.	.	.	.	.	.	1800	2100	.	.	.	.	.	.	890	1200	.	.
2003	.	.	.	.	.	.	.	.	2900	5900	.	.	.	.	.	.	690	1500	.	.
2004	.	.	.	.	.	.	.	.	1900	5100	.	.	.	.	.	.	900	1800	.	.
2005	.	.	.	.	.	.	.	.	4600	3500	.	.	.	.	.	.	750	1200	.	.
cadmium																				
1992	.	.	.	.	.	.	.	.	620	.	.	.	.	.	.	.	170	.	.	.
1993	.	.	.	.	.	.	.	.	490	.	.	.	.	.	.	.	160	.	.	.
1994	.	.	.	.	.	.	.	.	660	.	.	.	.	.	.	.	250	.	.	.
1995	.	.	.	.	.	.	.	.	260	.	.	.	.	.	.	.	69	.	.	.
1996	.	.	.	.	.	.	.	.	480	.	.	.	.	.	.	.	160	.	.	.
1997	.	.	.	.	.	.	.	.	530	.	.	.	.	.	.	.	190	.	.	.
1998	.	.	.	.	.	.	.	.	310	.	.	.	.	.	.	.	160	.	.	.
1999	.	.	.	.	.	.	.	.	360	.	.	.	.	.	.	.	200	.	.	.
2000	.	.	.	.	.	.	.	.	300	.	.	.	.	.	.	.	170	.	.	.
2001	.	.	.	.	.	.	.	.	350	2300	.	.	.	.	.	.	140	900	.	.
2002	.	.	.	.	.	.	.	.	270	410	.	.	.	.	.	.	120	750	.	.
2003	.	.	.	.	.	.	.	.	430	2000	.	.	.	.	.	.	120	990	.	.
2004	.	.	.	.	.	.	.	.	370	1500	.	.	.	.	.	.	160	710	.	.
2005	.	.	.	.	.	.	.	.	450	1300	.	.	.	.	.	.	200	800	.	.
lead																				
1992	.	.	.	.	.	.	.	.	8600	.	.	.	.	.	.	.	4100	.	.	.
1993	.	.	.	.	.	.	.	.	9200	.	.	.	.	.	.	.	4600	.	.	.
1994	.	.	.	.	.	.	.	.	16000	22000	.	.	.	.	.	.	6000	12000	.	.
1995	.	.	.	.	.	.	.	.	10000	70000	.	.	.	.	.	.	3900	27000	.	.
1996	.	.	.	.	.	.	.	.	17000	63000	.	.	.	.	.	.	5900	31000	.	.
1997	.	.	.	.	.	.	.	.	13000	90000	.	.	.	.	.	.	6100	31000	.	.
1998	.	.	.	.	.	.	.	.	7200	38000	.	.	.	.	.	.	4600	29000	.	.
1999	.	.	.	.	.	.	.	.	9900	31000	.	.	.	.	.	.	5900	13000	.	.
2000	.	.	.	.	.	.	.	.	6500	59000	.	.	.	.	.	.	3500	28000	.	.
2001	.	.	.	.	.	.	.	.	11000	19000	.	.	.	.	.	.	3800	24000	.	.
2002	.	.	.	.	.	.	.	.	7200	24000	.	.	.	.	.	.	3600	24000	.	.
2003	.	.	.	.	.	.	.	.	11000	21000	.	.	.	.	.	.	3200	25000	.	.
2004	.	.	.	.	.	.	.	.	7200	26000	.	.	.	.	.	.	3500	18000	.	.
2005	.	.	.	.	.	.	.	.	12000	23000	.	.	.	.	.	.	3600	9500	.	.

Appendix B: Annual Atmospheric Loads (kg/yr) for 1992-2005.

dry = dry deposition; wet = wet deposition; abs = absorption; vol = volatlization. Positive values = input to lake; Negative values = output from lake

	Lake Superior (kg/yr)				Lake Michigan (kg/yr)				Lake Huron (kg/yr)				Lake Erie (kg/yr)				Lake Ontario (kg/yr)			
	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol	dry	wet	abs	vol
selenium																				
1992	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1995	.	.	.	.	.	.	.	.	230	.	.	.	.	.	.	.	220	.	.	.
1996	.	.	.	.	.	.	.	.	1500	.	.	.	.	.	.	.	580	.	.	.
1997	.	.	.	.	.	.	.	.	830	.	.	.	.	.	.	.	800	.	.	.
1998	.	.	.	.	.	.	.	.	760	.	.	.	.	.	.	.	540	.	.	.
1999	.	.	.	.	.	.	.	.	1800	.	.	.	.	.	.	.	710	.	.	.
2000	.	.	.	.	.	.	.	.	1700	.	.	.	.	.	.	.	850	.	.	.
2001	.	.	.	.	.	.	.	.	2600	4400	.	.	.	.	.	.	960	2500	.	.
2002	.	.	.	.	.	.	.	.	2400	4700	.	.	.	.	.	.	1100	2300	.	.
2003	.	.	.	.	.	.	.	.	2100	11000	.	.	.	.	.	.	1100	3600	.	.
2004	.	.	.	.	.	.	.	.	2600	7200	.	.	.	.	.	.	1200	3100	.	.
2005	.	.	.	.	.	.	.	.	3900	8500	.	.	.	.	.	.	1300	2600	.	.

Appendix C.

Graphs of annual fluxes for 1992-2005

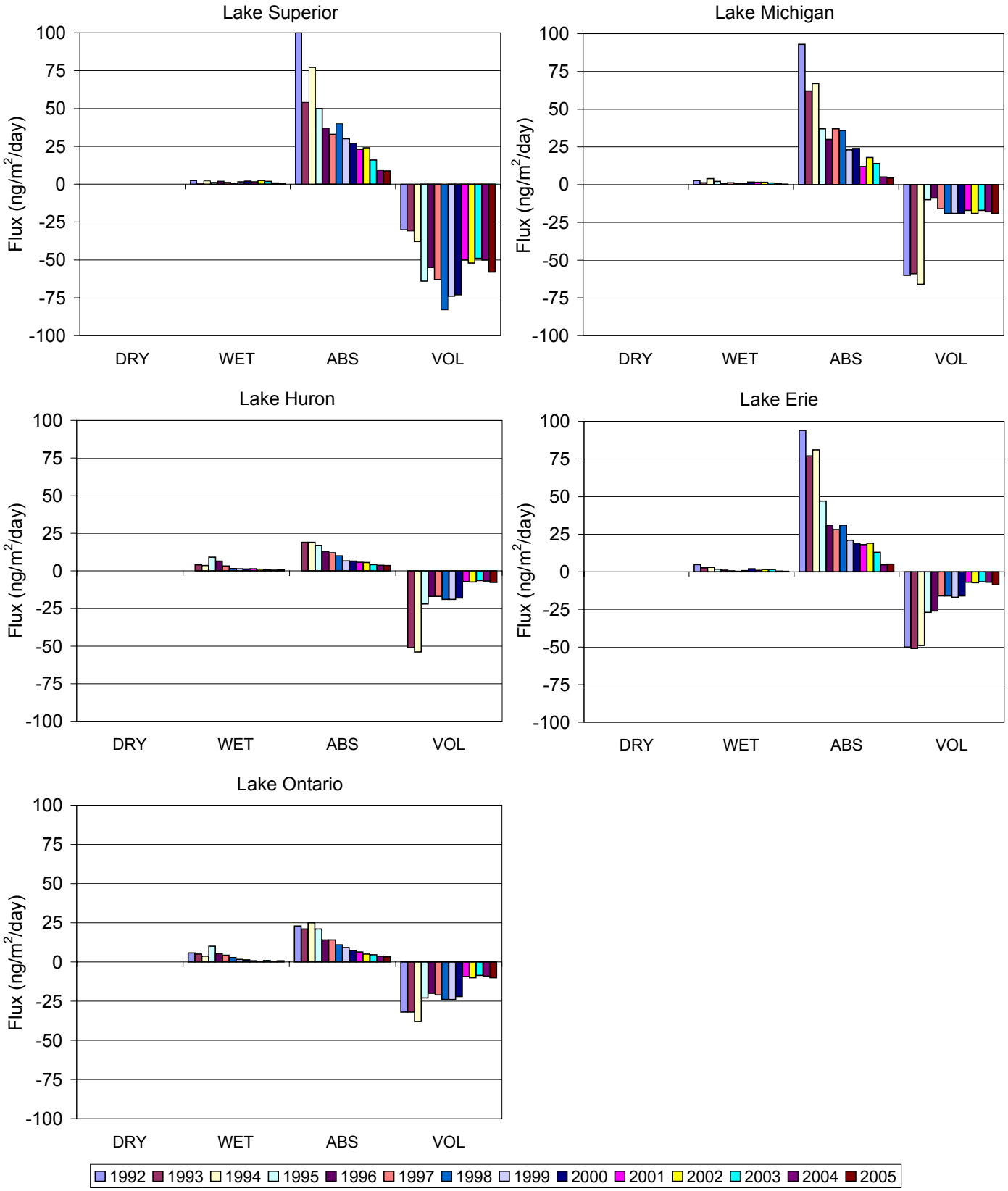

Figure C1: Annual average flux (ng/m^2/day) of α-hexachlorocyclohexane.
DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

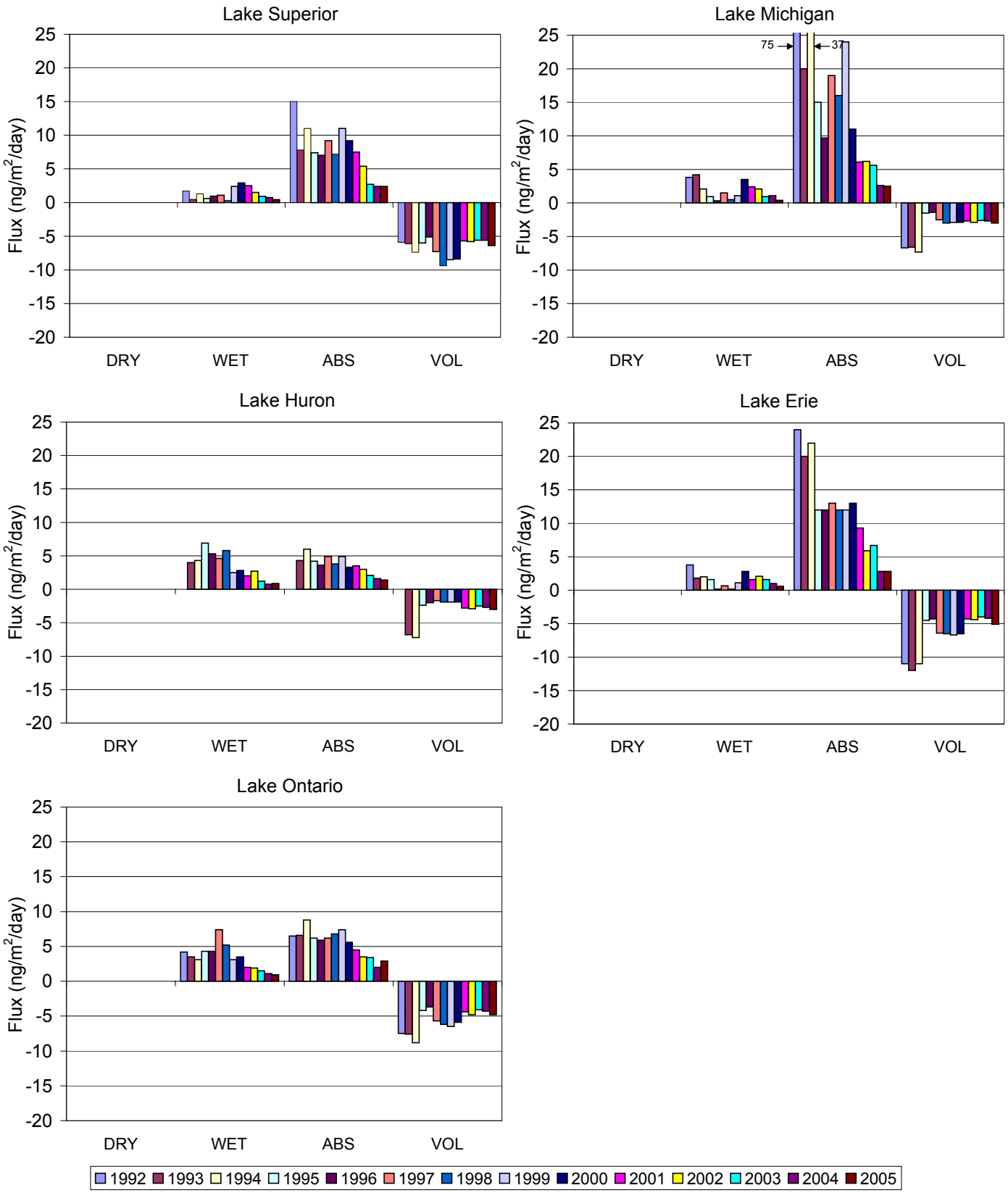

Figure C2: Annual average flux (ng/m^2/day) of γ-hexachlorocyclohexane.
DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

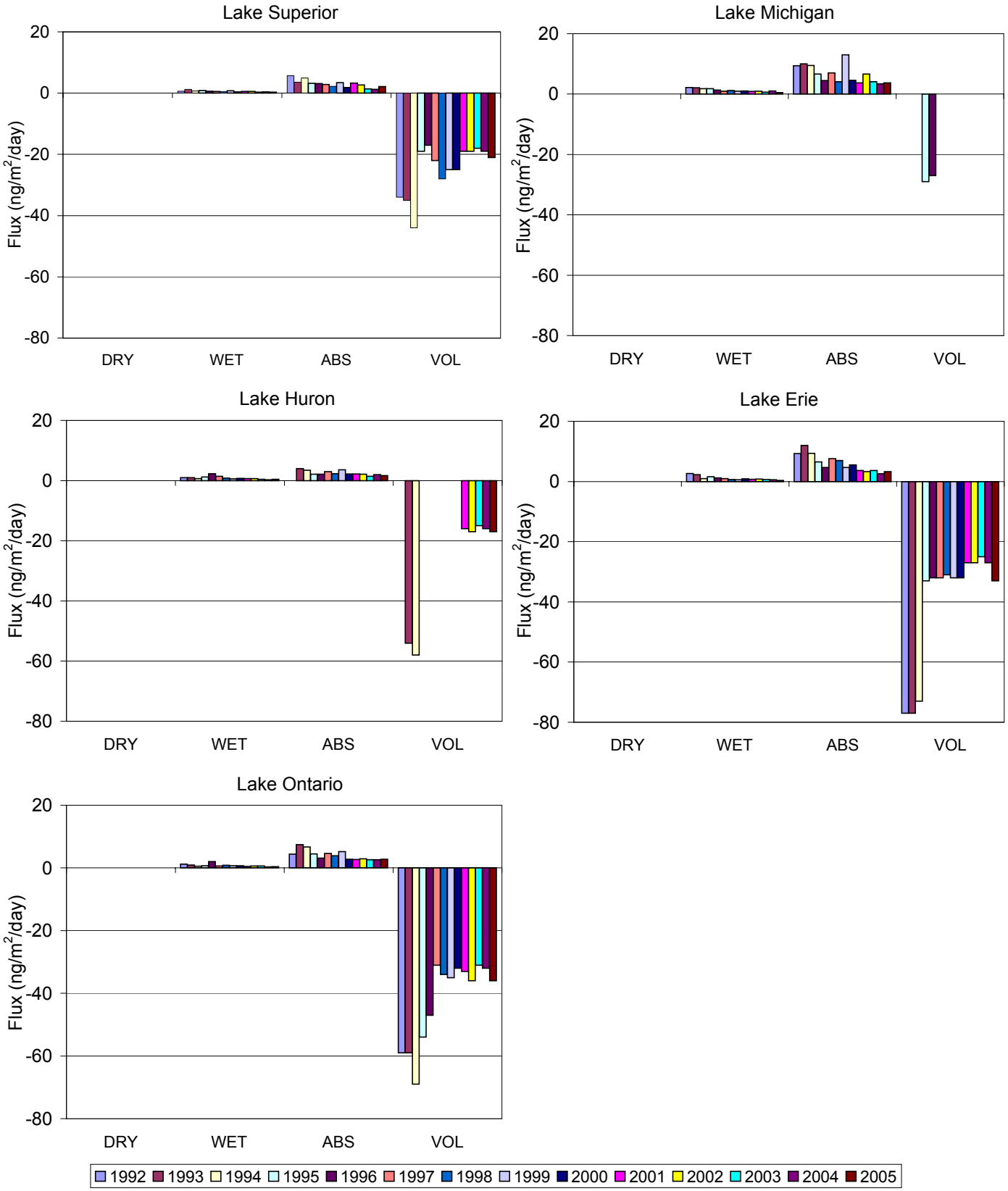

Figure C3: Annual Average Flux (ng/m^2/day) of dieldrin.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

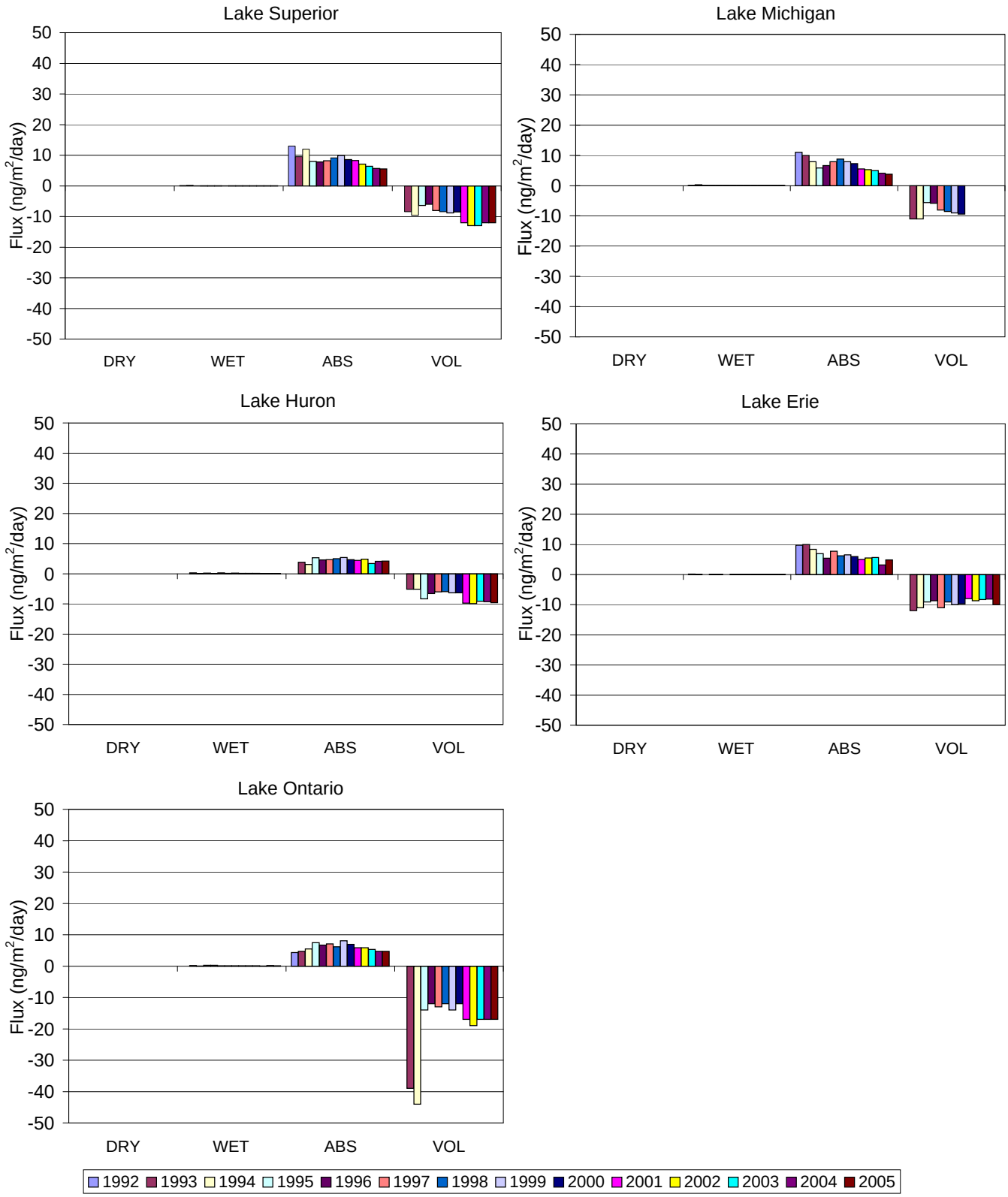

Figure C4: Annual Average Flux (ng/m^2/day) of hexachlorobenzene.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

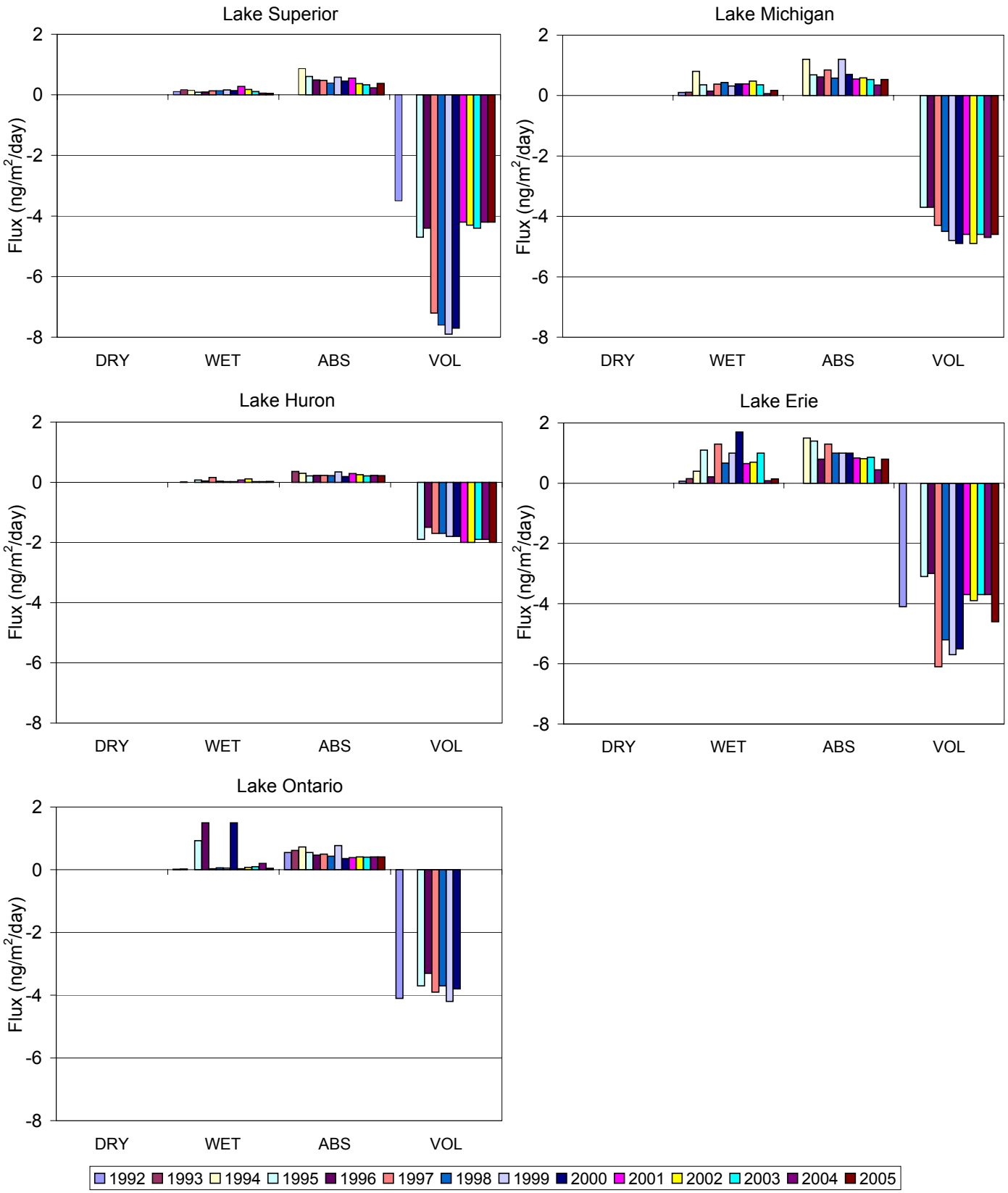

Figure C5: Annual Average Flux (ng/m^2/day) of *cis*-chlordane.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

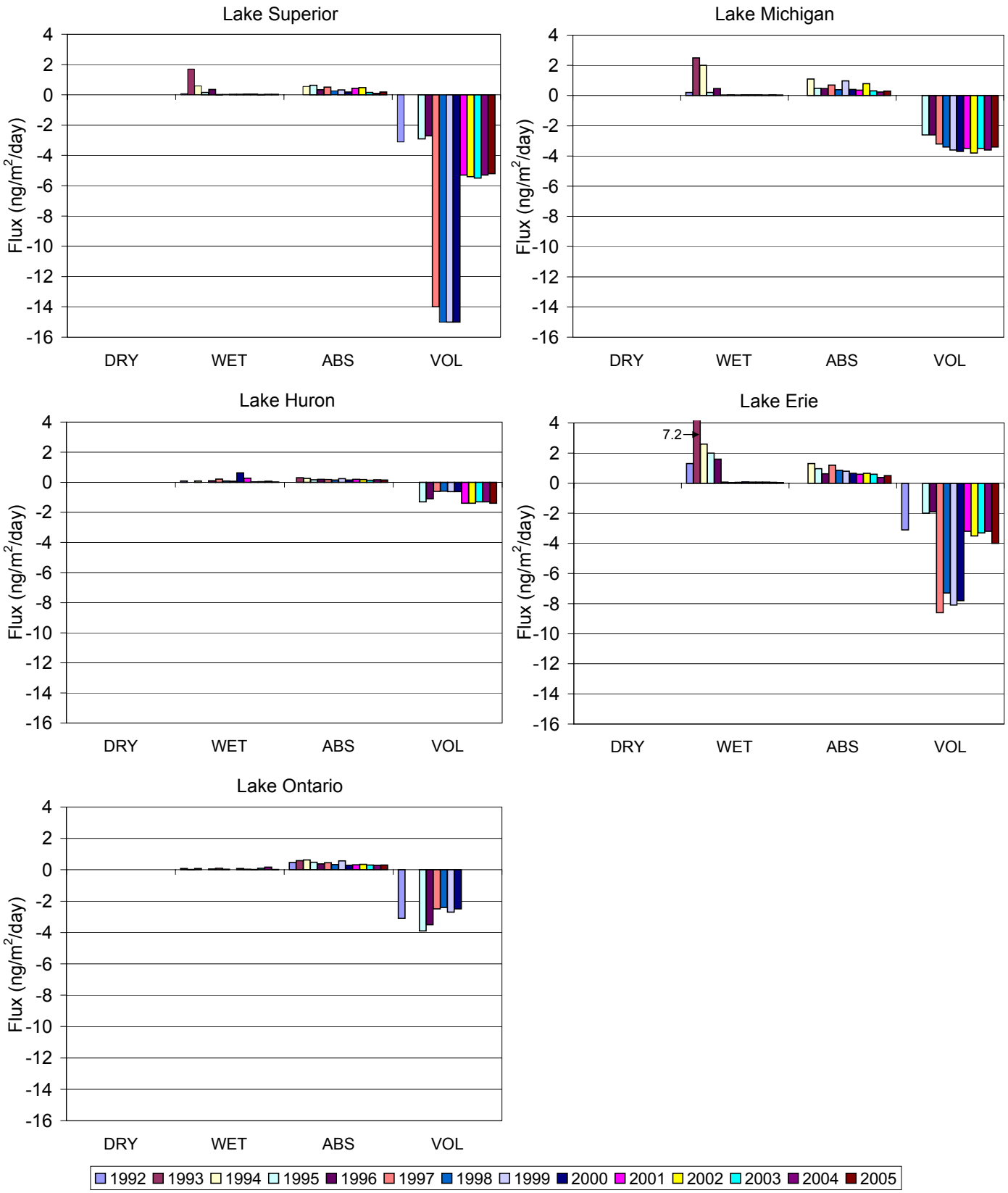

Figure C6: Annual Average Flux (ng/m^2/day) of *trans*-chlordane.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

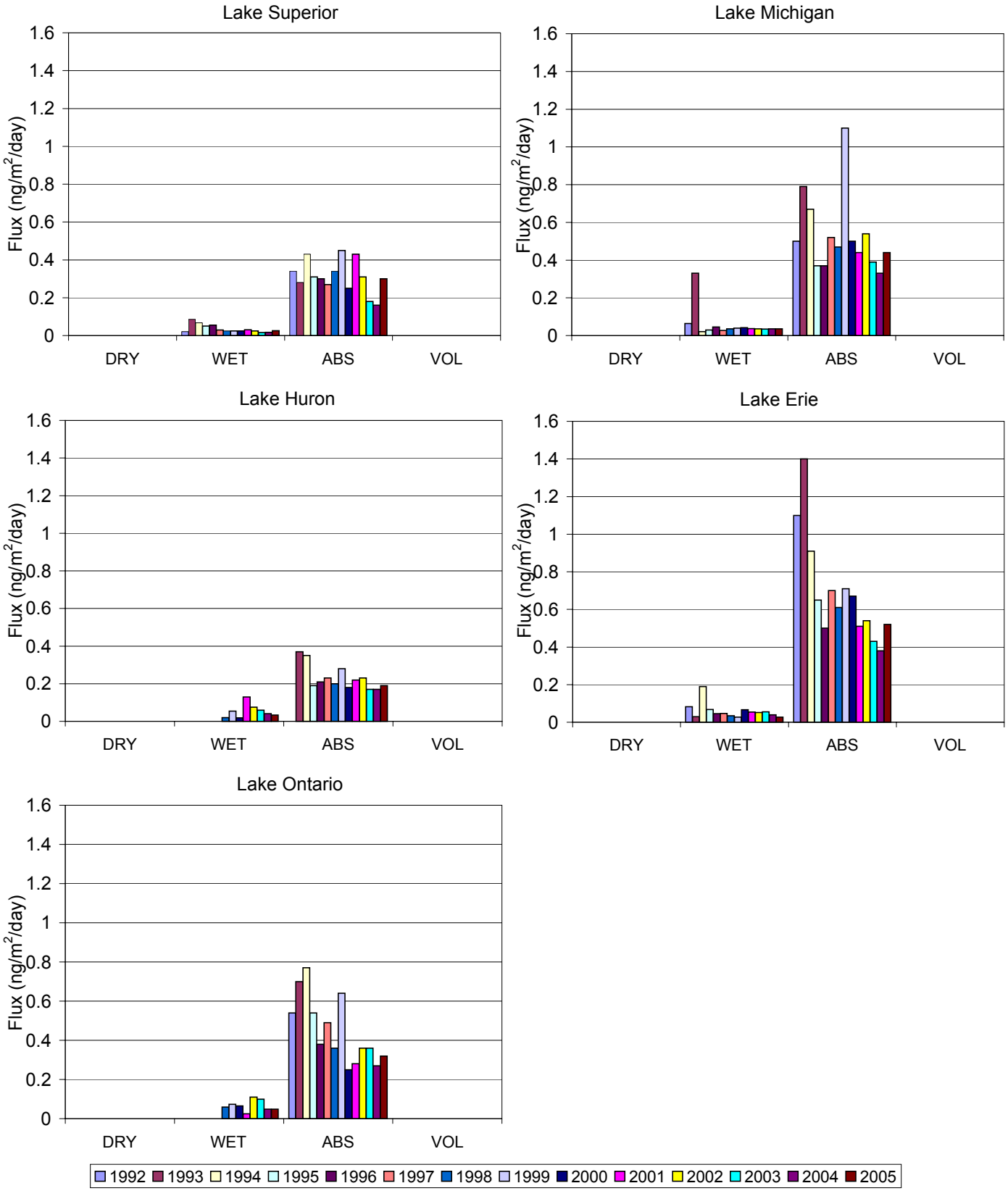

Figure C7: Annual average flux (ng/m^2/day) of *trans*-nonachlor.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

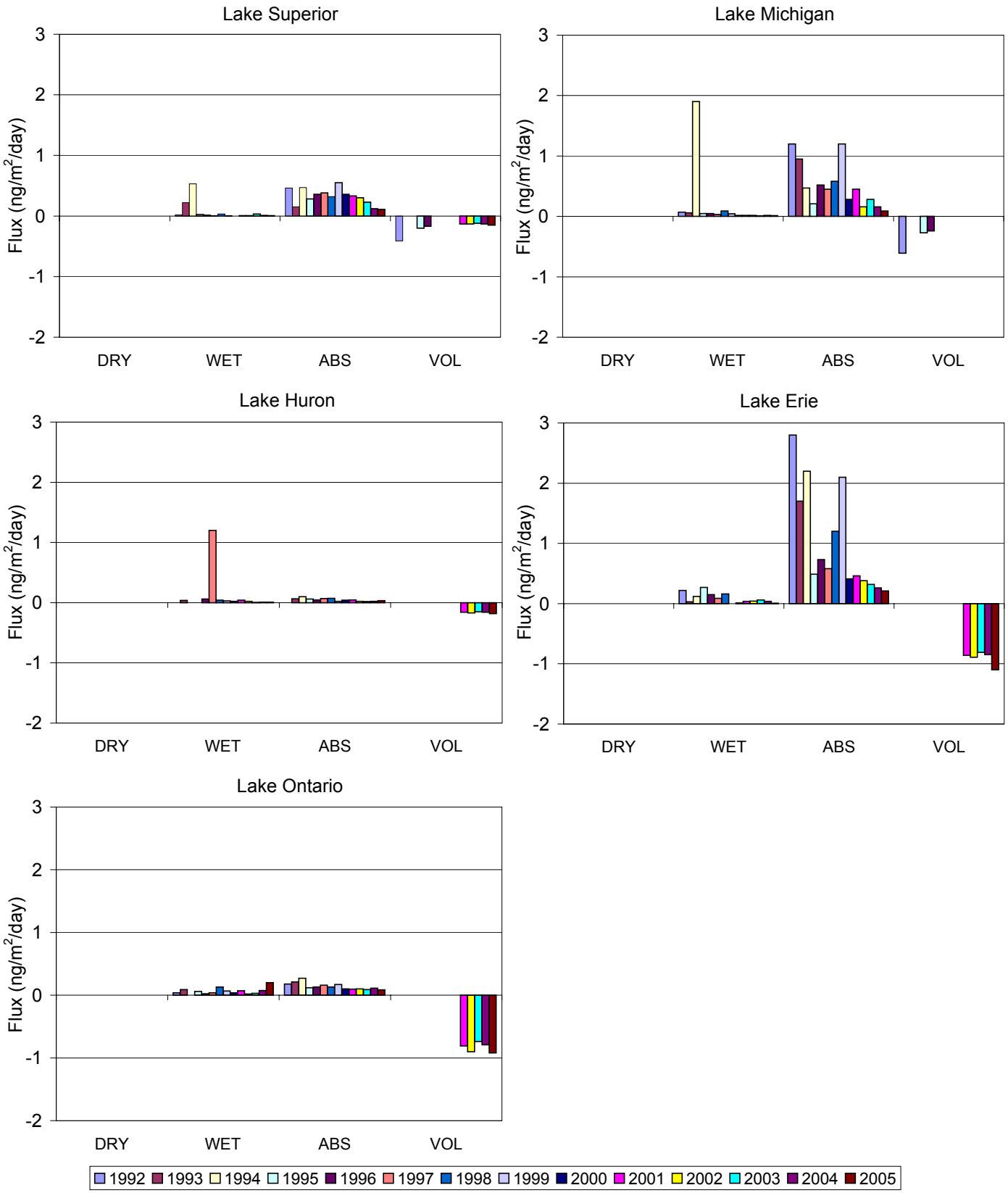

Figure C8: Annual average flux (ng/m^2/day) of *p'p'*-DDD.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

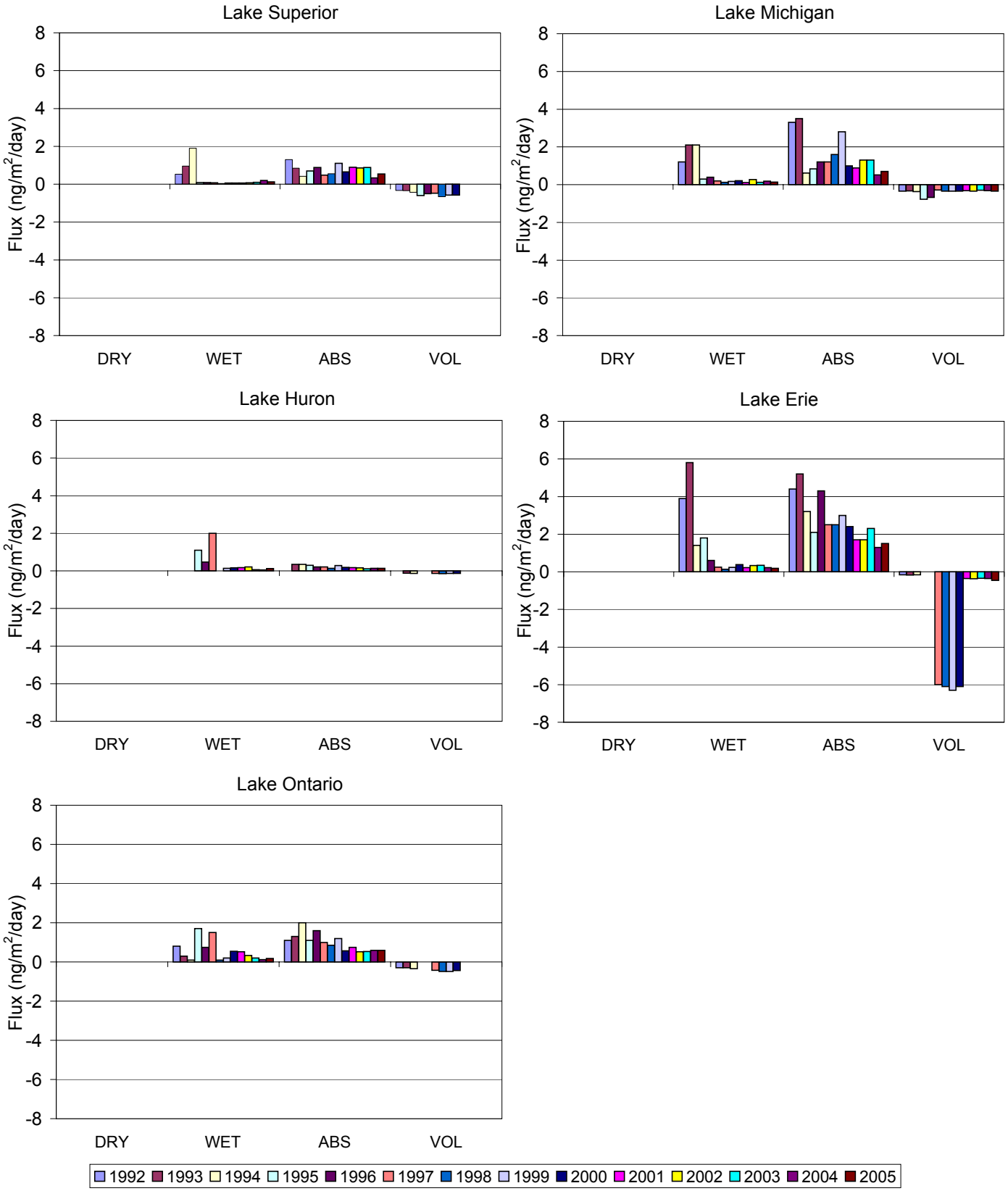

Figure C9: Annual average flux (ng/m^2/day) of *p'p'*-DDT.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

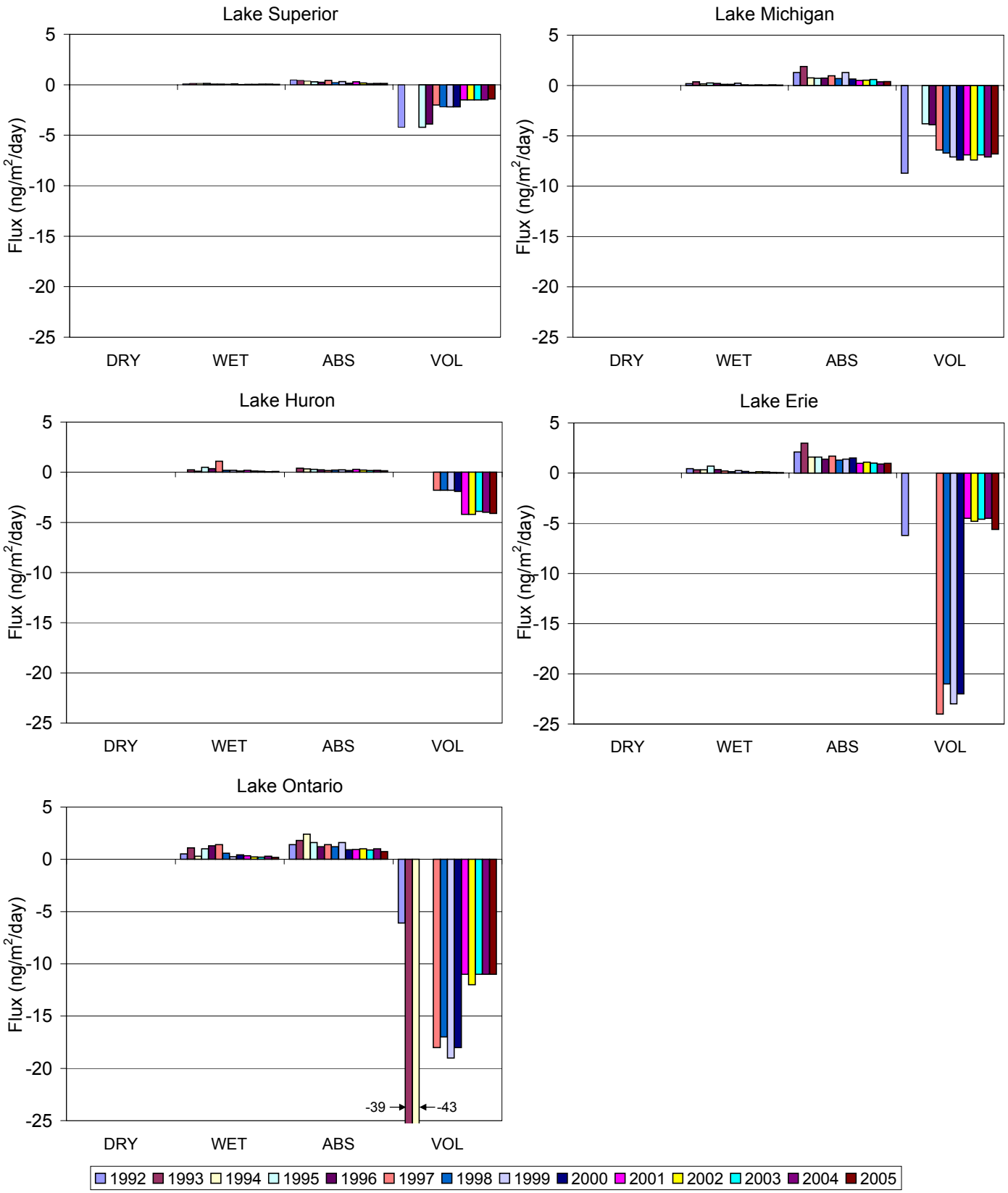

Figure C10: Annual average flux (ng/m^2/day) of *p'p'*-DDE.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

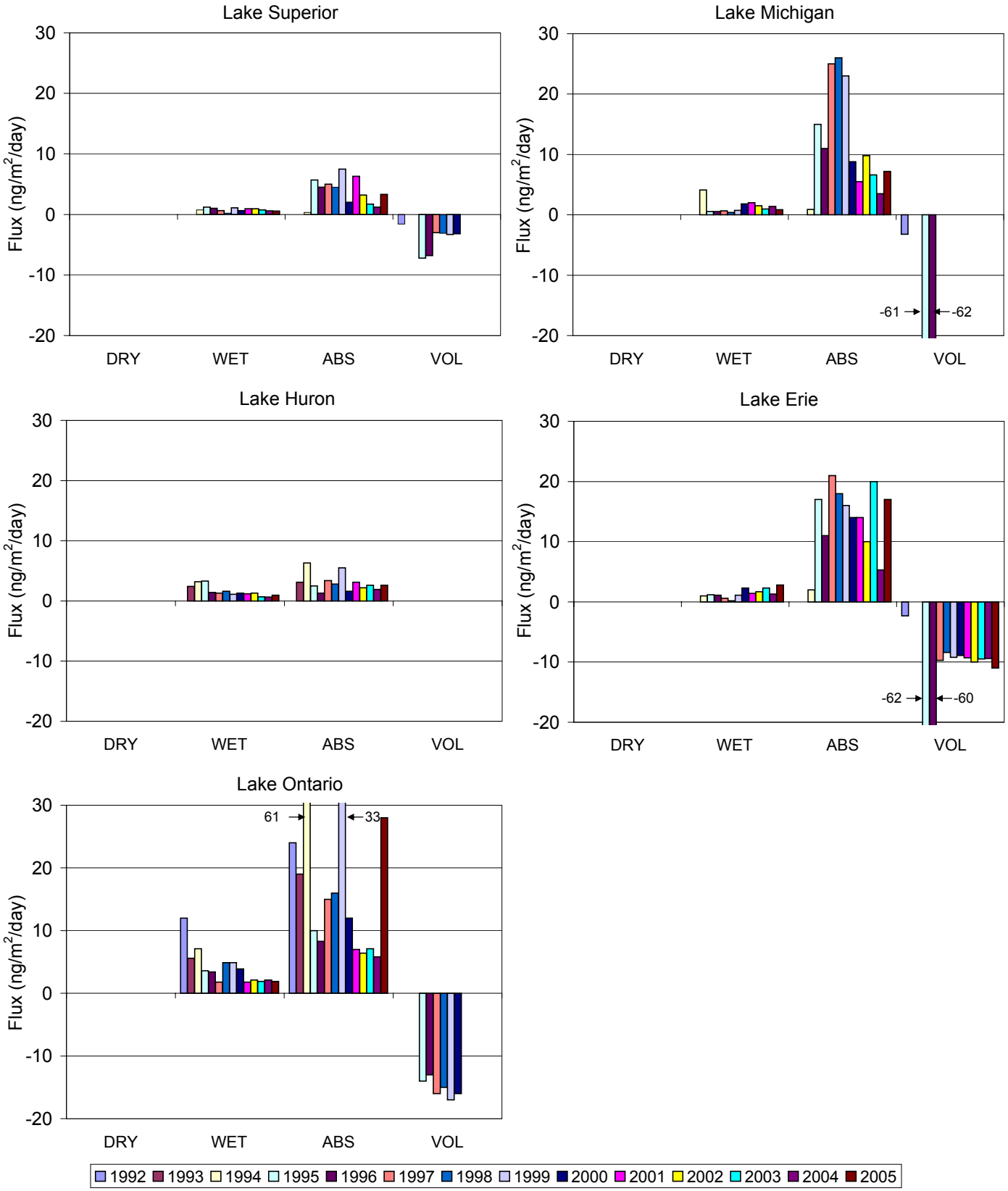

Figure C11: Annual average flux (ng/m^2/day) of α-endosulfan.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

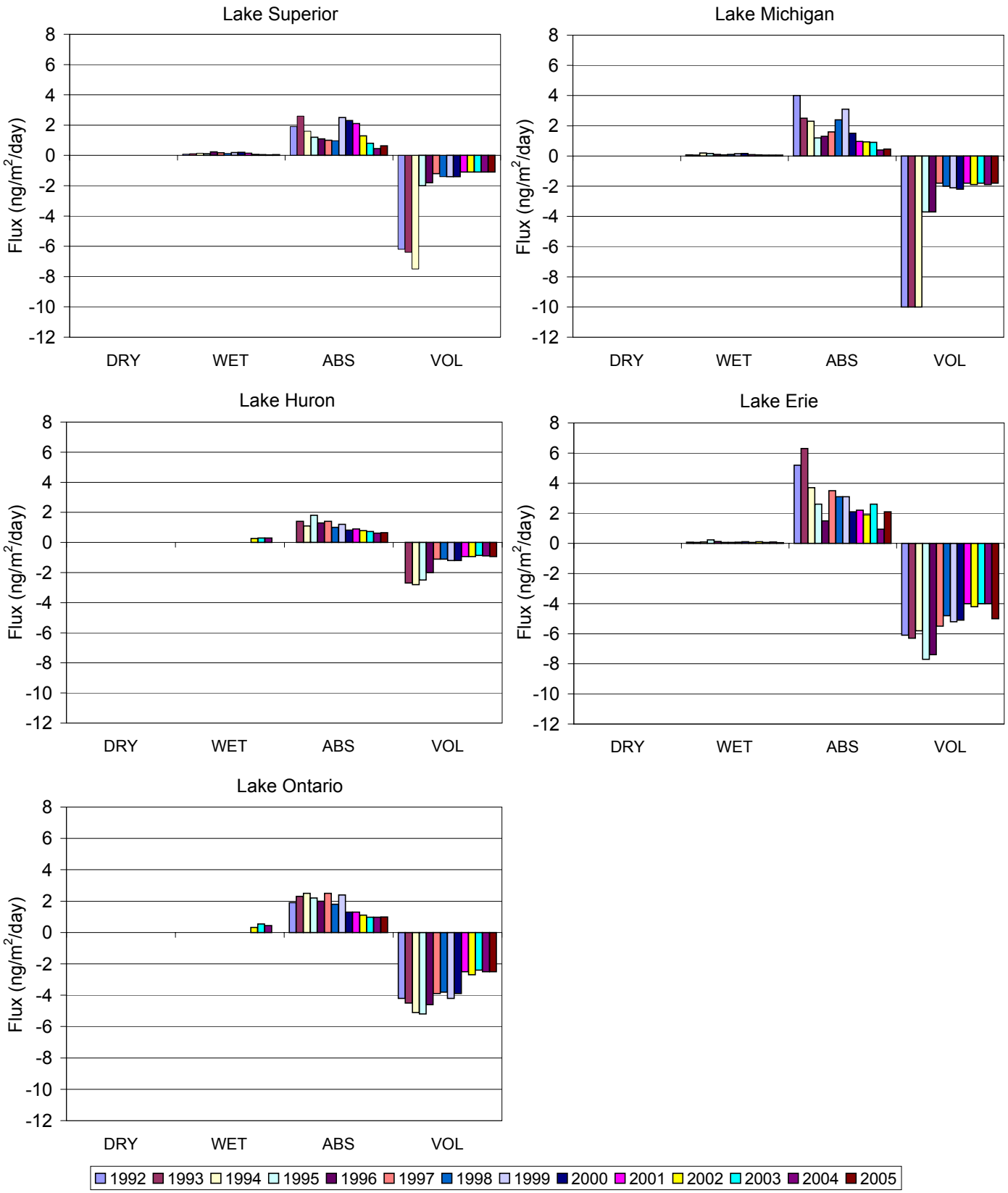

Figure C12: Annual average flux (ng/m^2/day) of PCB18.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

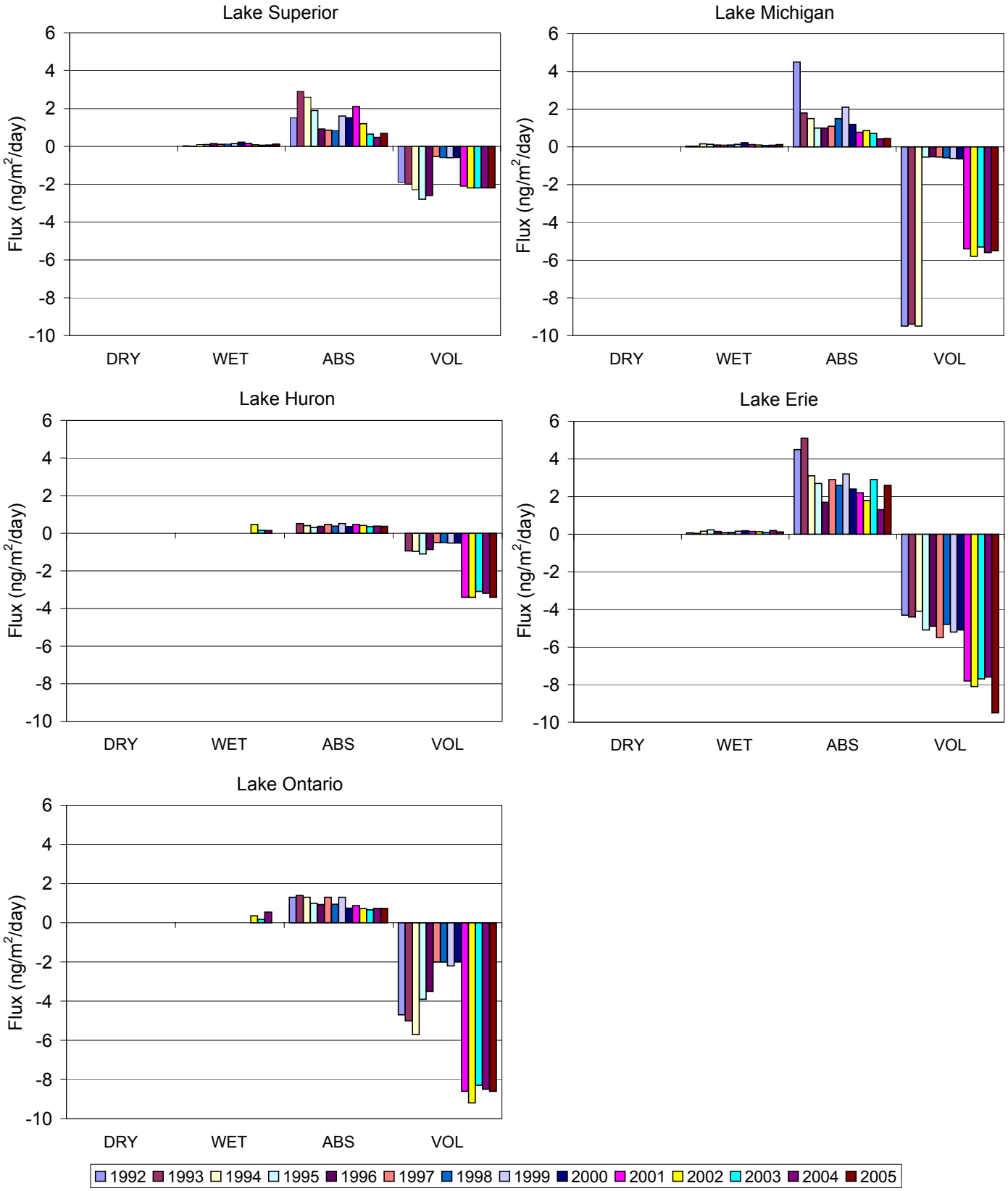

Figure C13: Annual average flux (ng/m^2/day) of PCB52.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

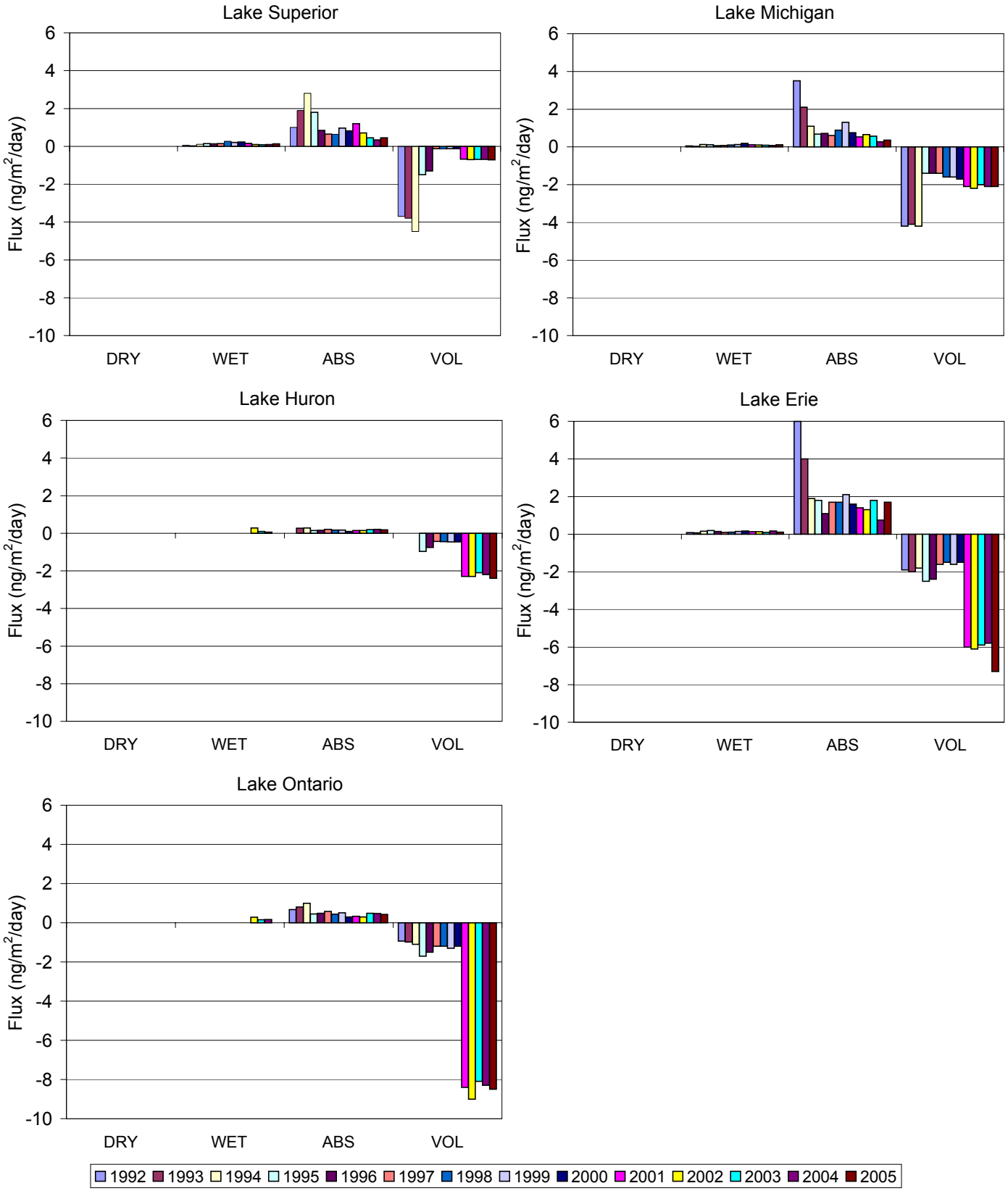

Figure C14: Annual average flux (ng/m^2/day) of PCB101.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

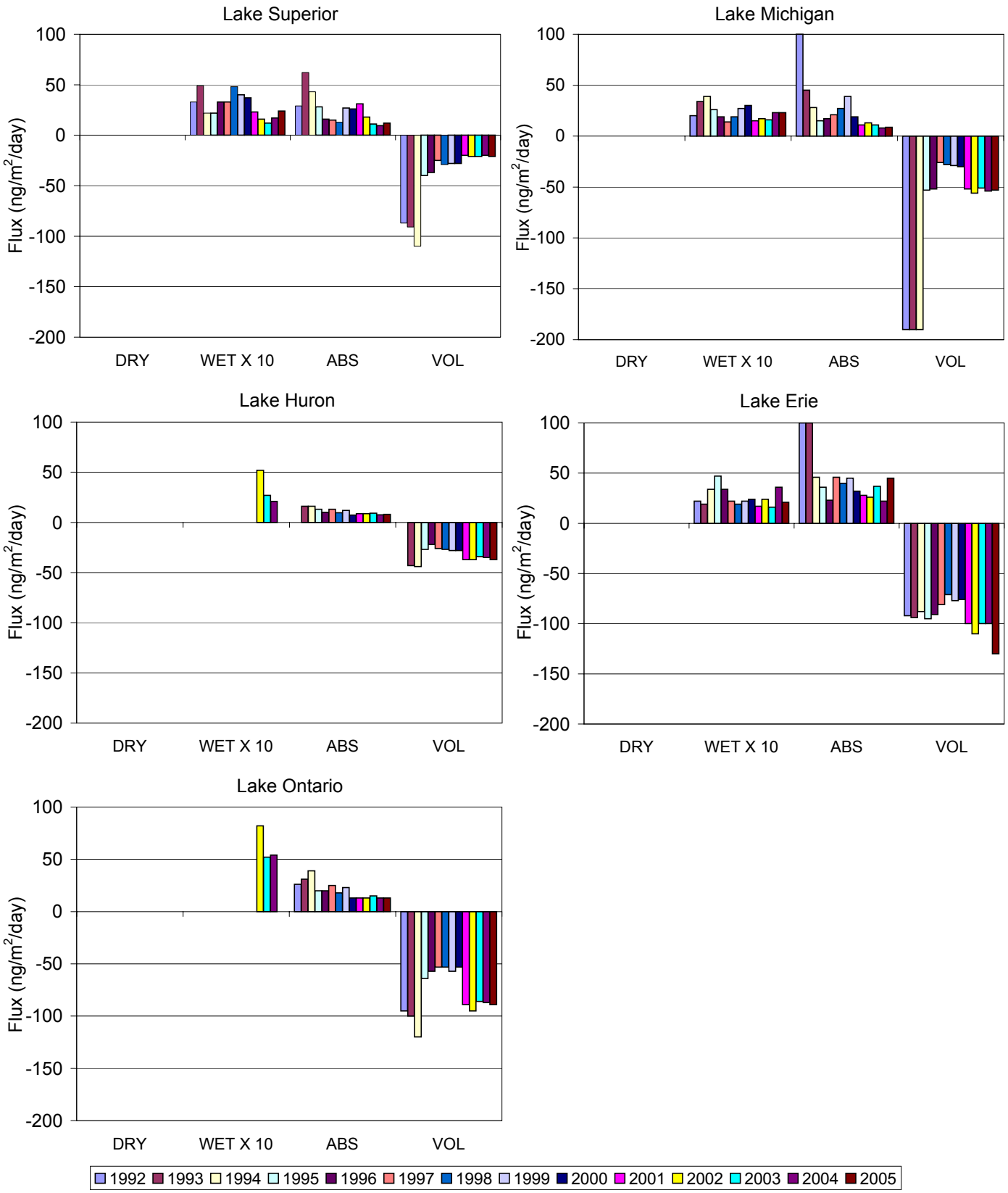

Figure C15: Annual average flux (ng/m^2/day) of PCB Suite.

DRY = dry deposition, WET X 10 = wet deposition multiplied by 10, ABS = absorption, VOL = volatilization.

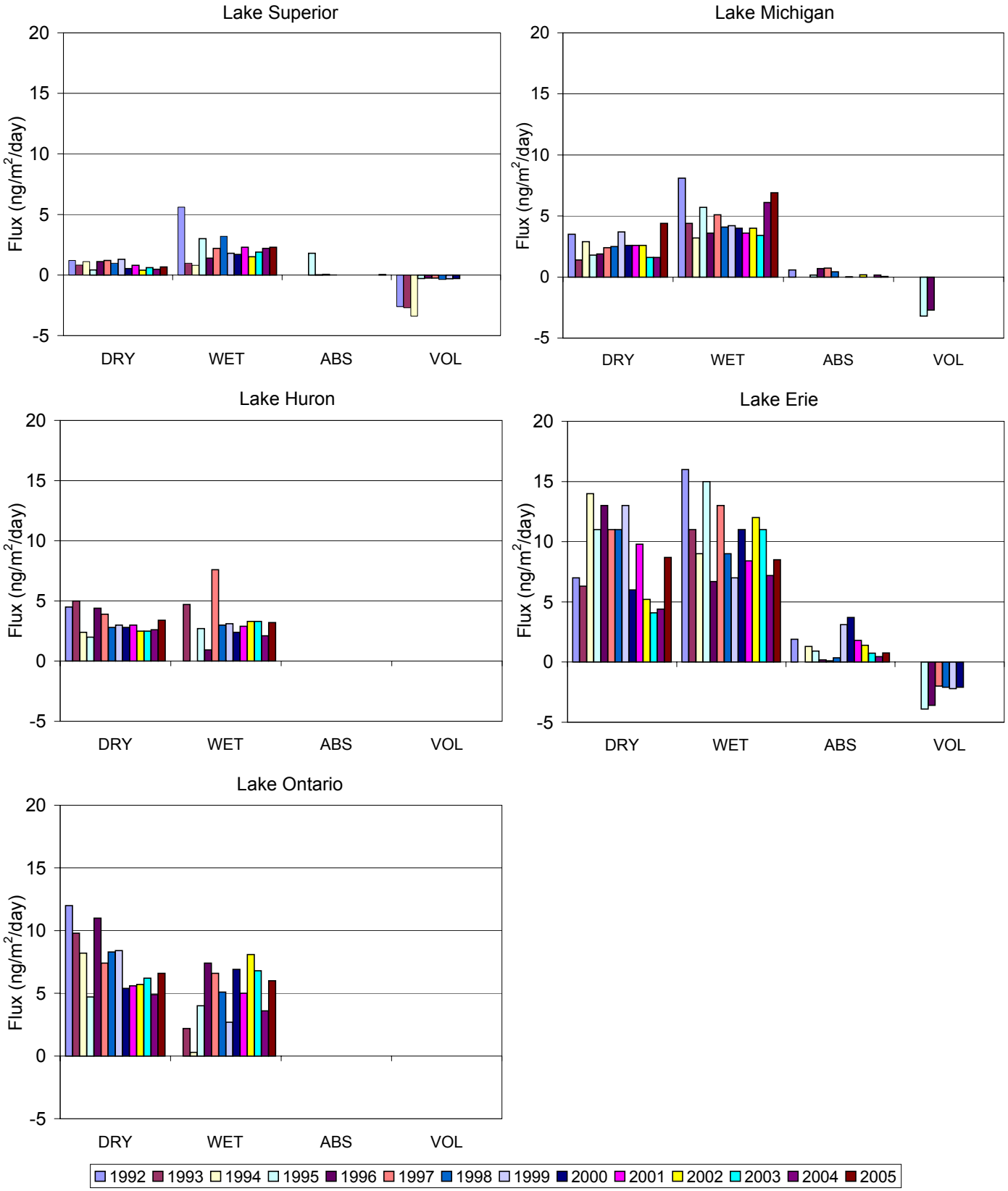

Figure C16: Annual average flux (ng/m^2/day) of benzo*(a)* pyrene.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

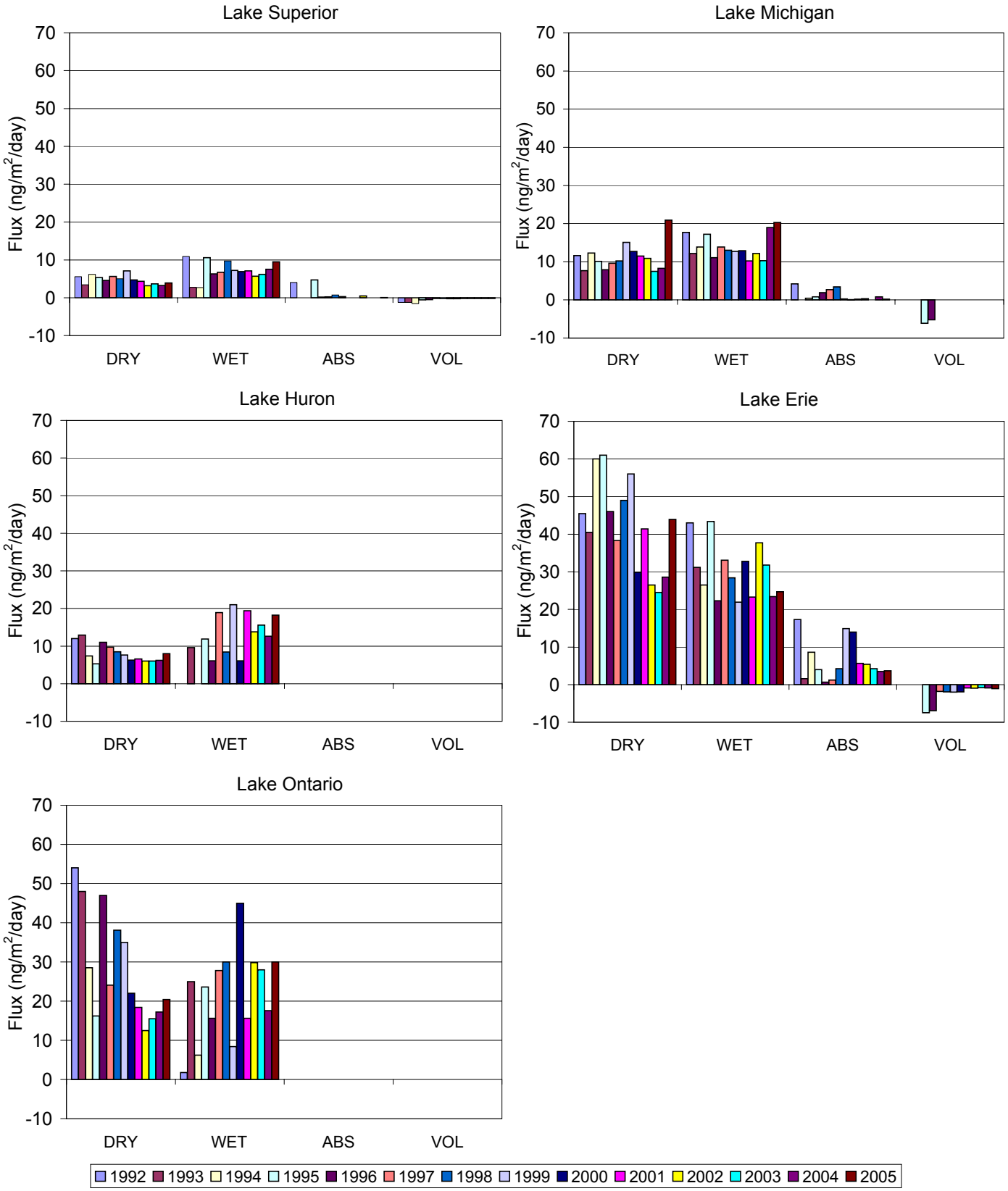

Figure C17: Annual average flux (ng/m^2/day) of benzo*(k)* fluoranthene + benzo*(b)* fluoranthene.
DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

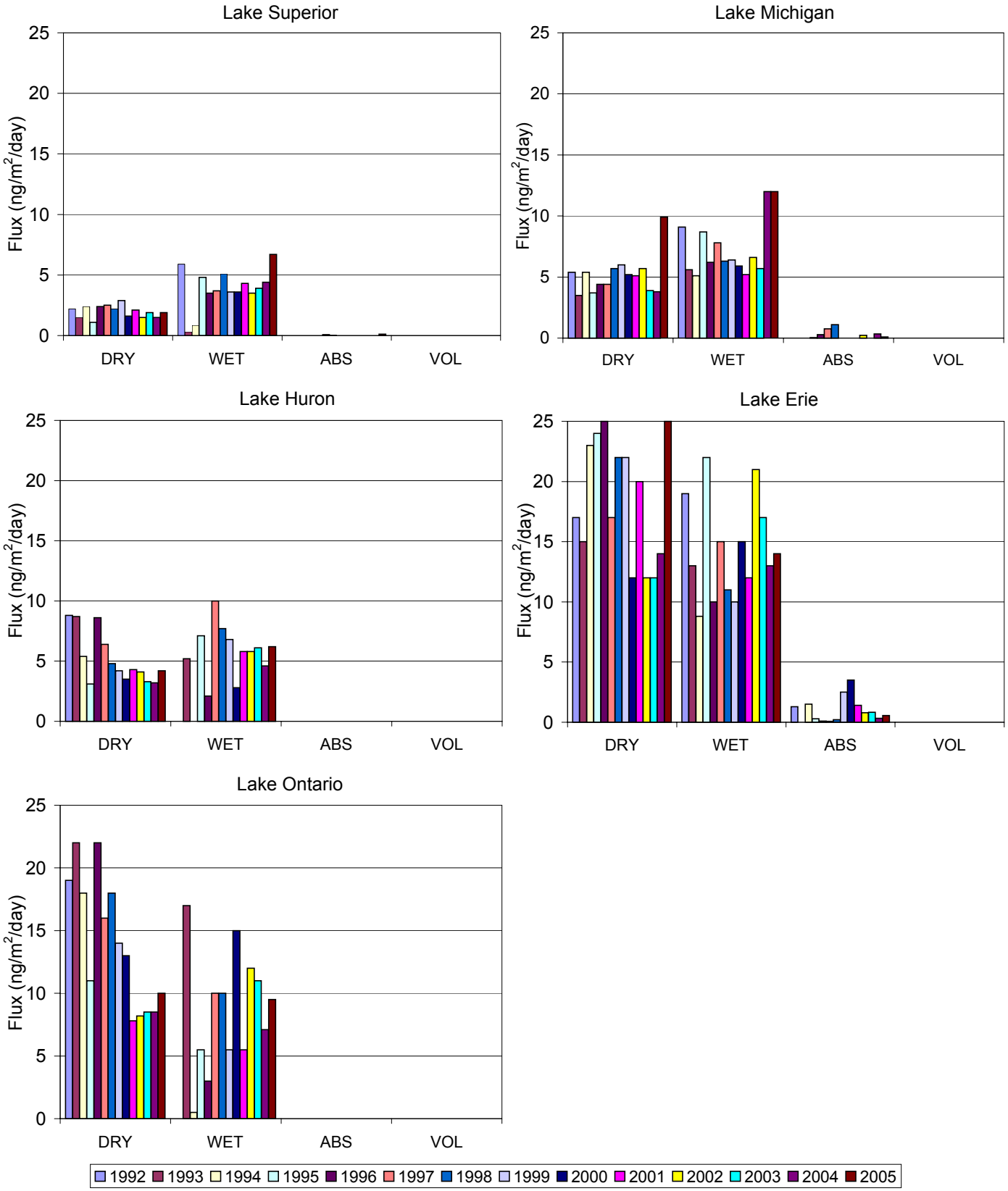

Figure C18: Annual average flux (ng/m^2/day) of indeno*(1,2,3-cd)*pyrene.
DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

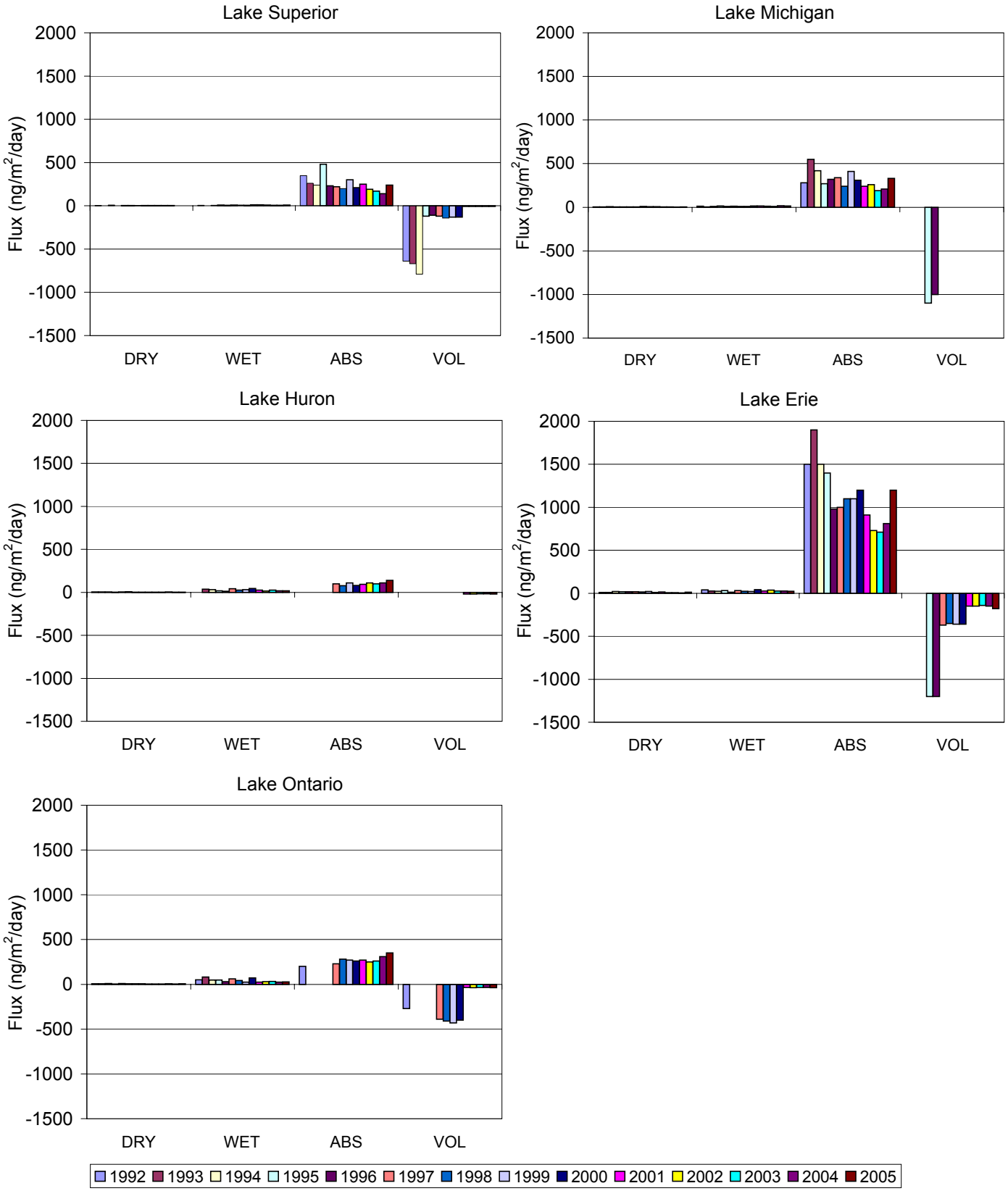

Figure C19: Annual average flux (ng/m^2/day) of phenanthrene.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

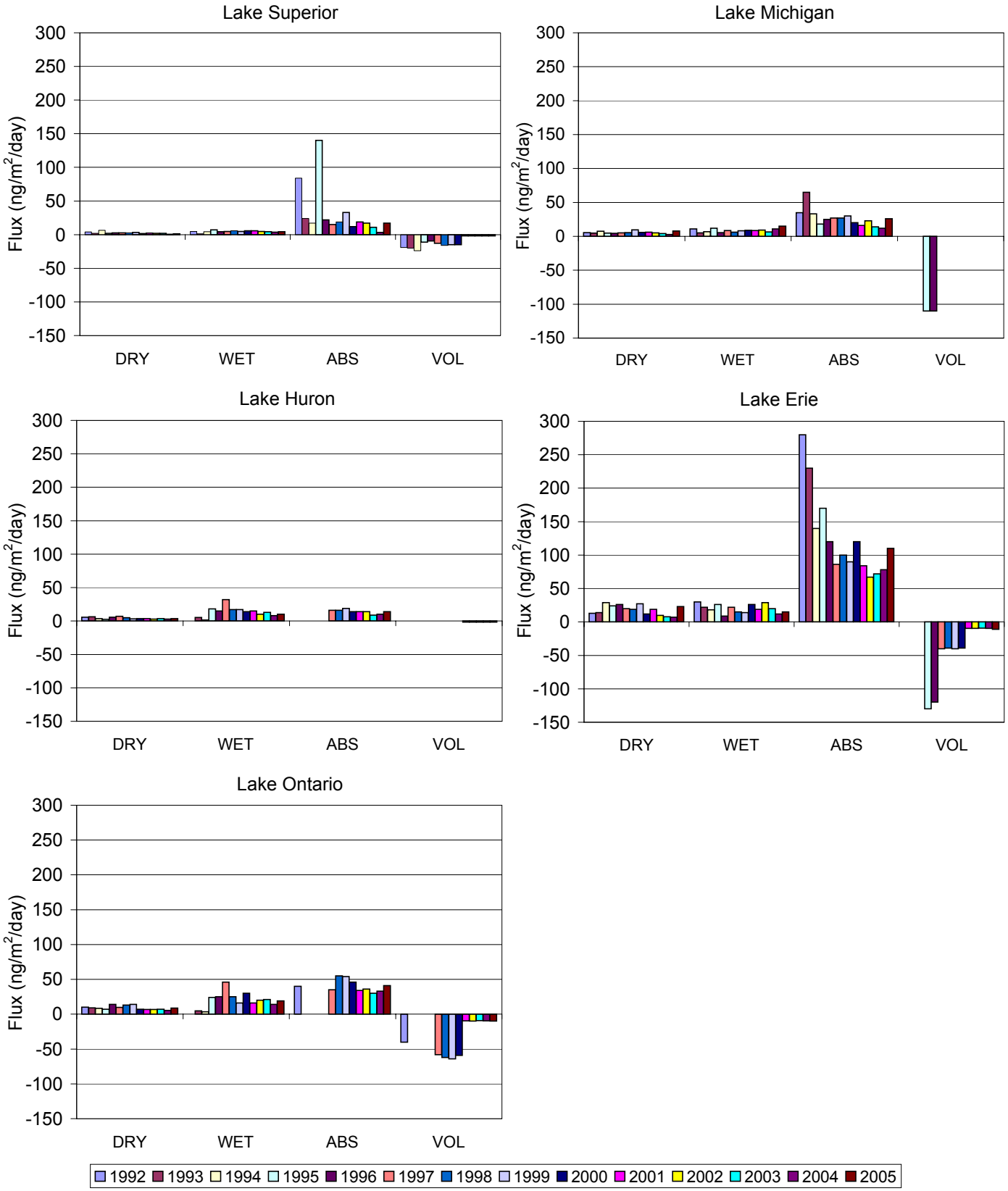

Figure C20: Annual average flux (ng/m^2/day) of pyrene.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

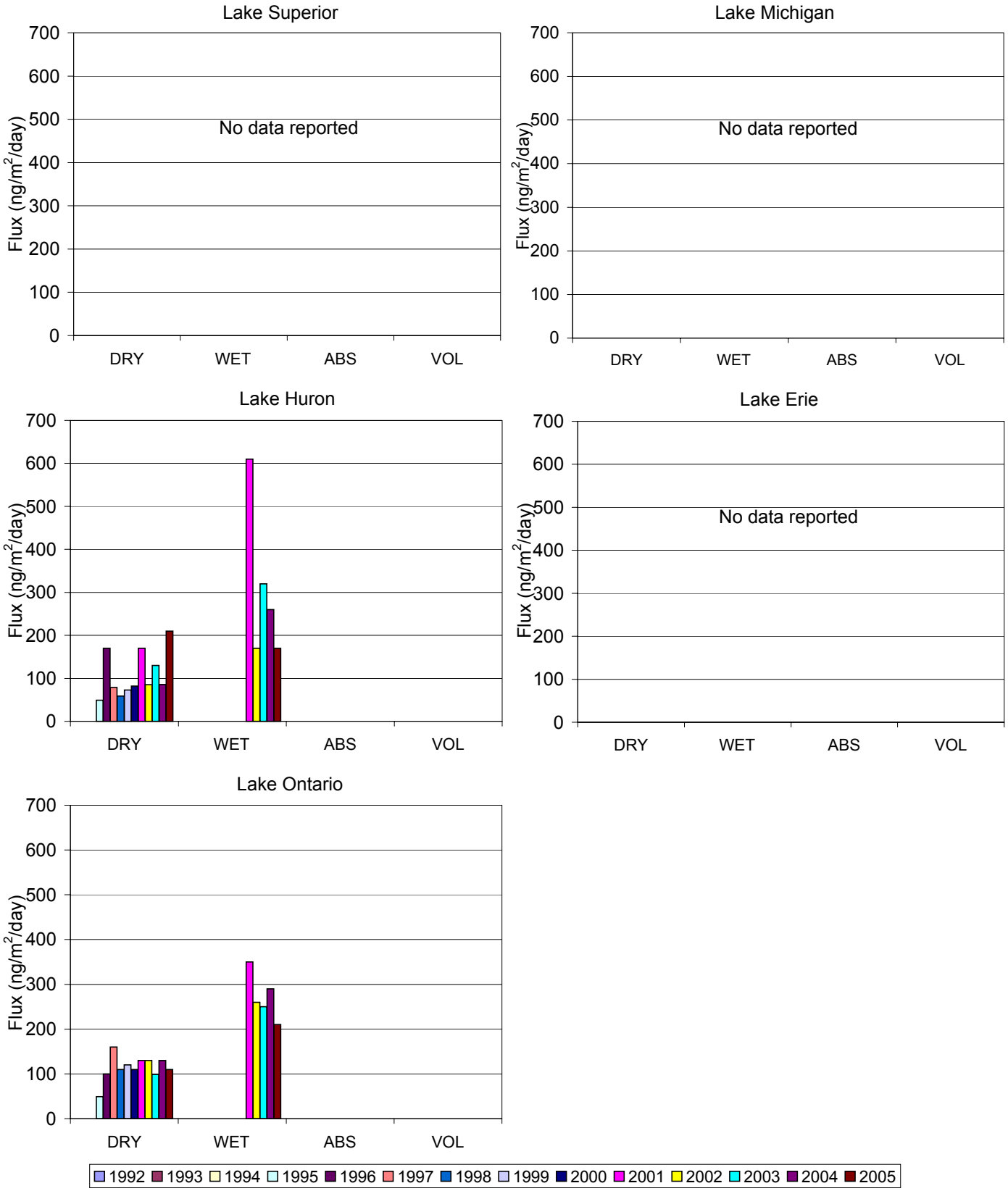

Figure C21: Annual average flux (ng/m^2/day) of arsenic.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

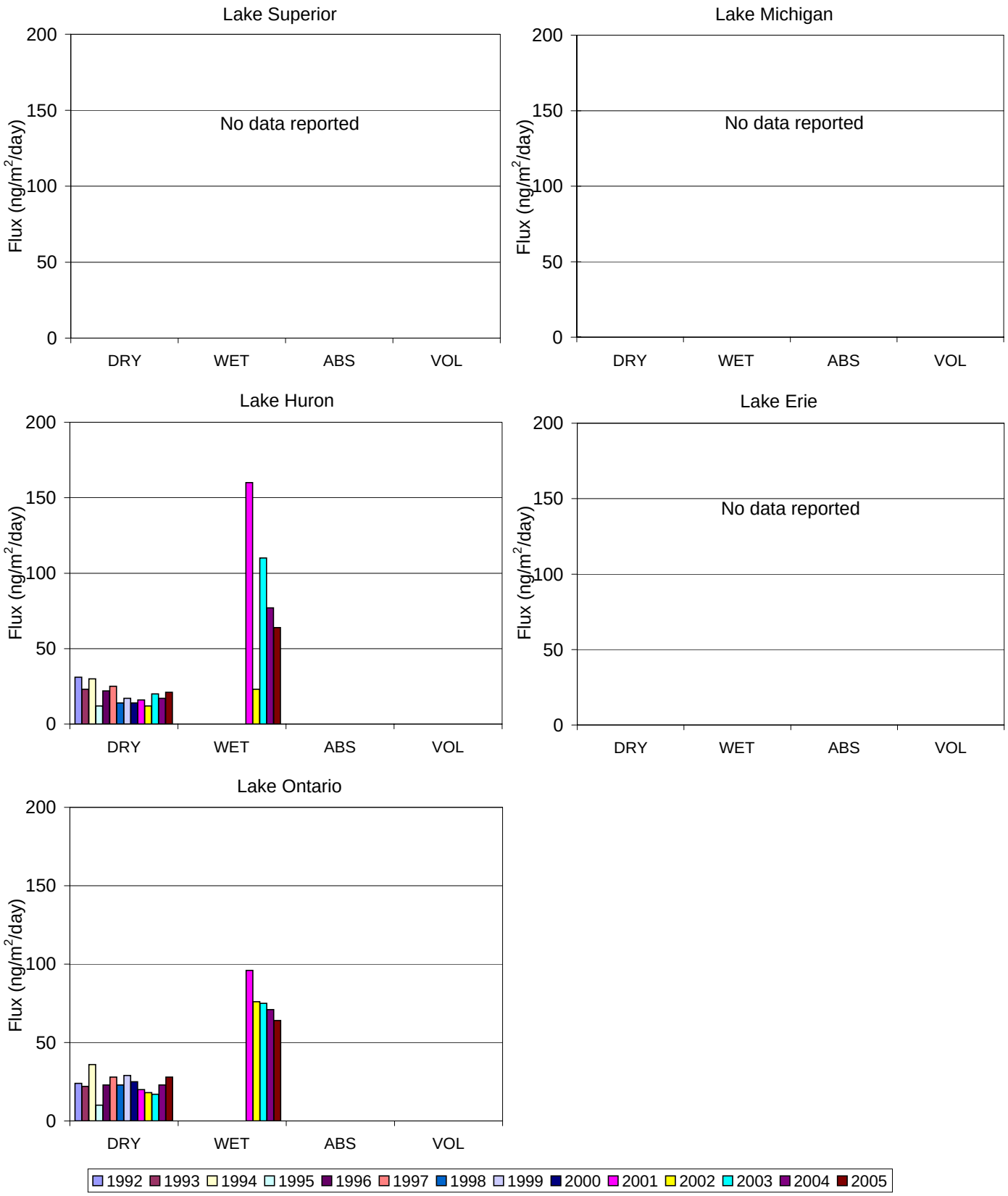

Figure C22: Annual Average Flux (ng/m^2/day) of cadmium.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

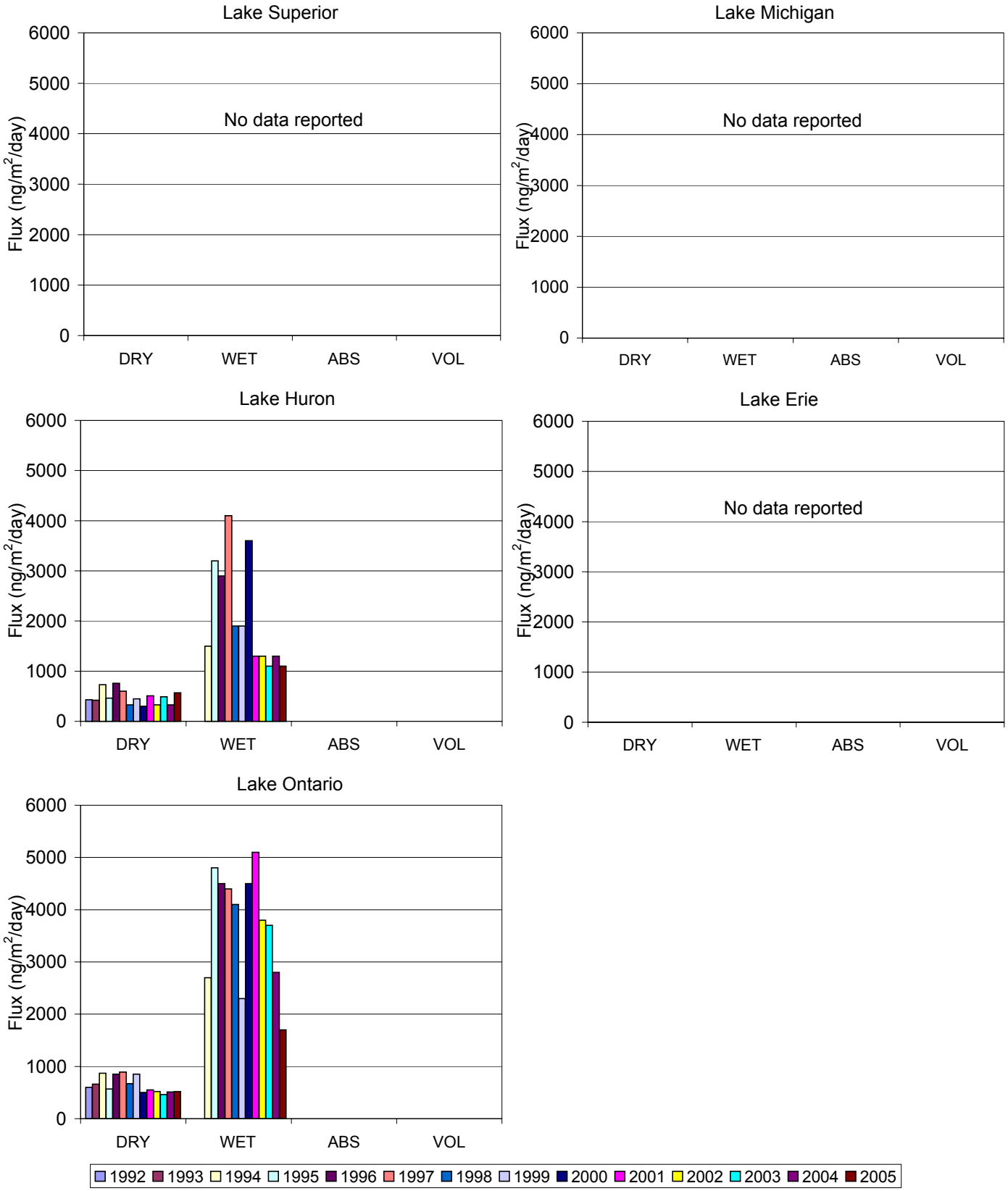

Figure C23: Annual average flux (ng/m^2/day) of lead.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

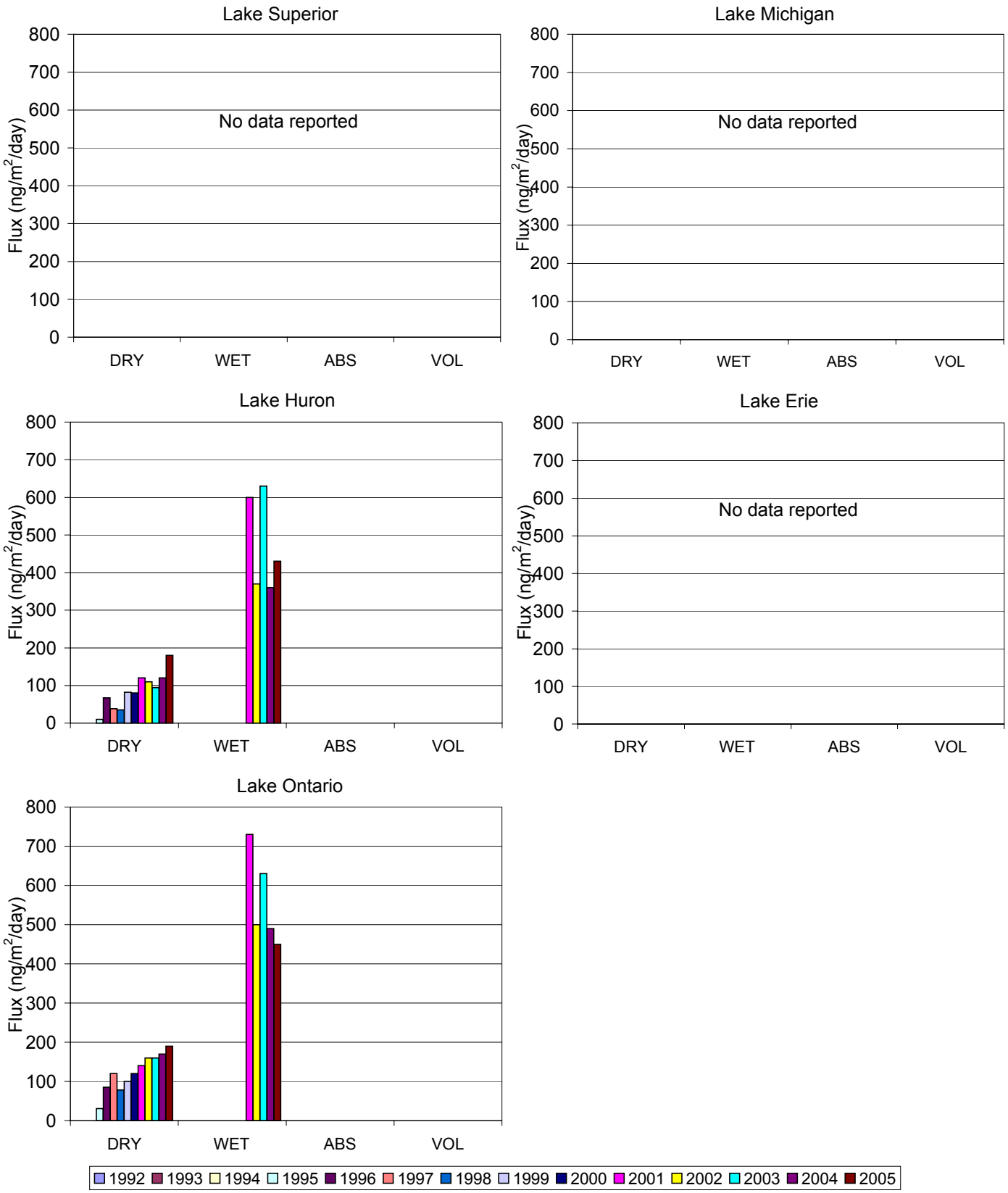

Figure C24: Annual average flux (ng/m^2/day) of selenium.

DRY = dry deposition, WET = wet deposition, ABS = absorption, VOL = volatilization.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption+A1; ABS_e = error of absorption (%)

α-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	2.3	.	.	.	2.5	.	.	.	.	.	.	.	5.7	.	.	.	7.4	.	.
1992	FEB	.	2.5	.	.	.	5.2	.	.	.	.	.	.	.	13	.	.	.	5.9	.	.
1992	MAR	.	1.4	140	58	.	5.9	64	58	.	.	.	.	.	12	55	58	.	7.3	20	58
1992	APR	.	1.6	140	58	.	3.2	76	58	.	.	.	.	.	6.6	180	58	.	8.9	18	58
1992	MAY	.	1.0	170	58	.	1.4	170	58	.	.	.	.	.	1.9	150	58	.	5.7	18	58
1992	JUN	.	7.8	29	59	.	2.4	42	58	.	.	.	.	.	0.66	31	59	.	2.0	18	58
1992	JUL	.	5.6	110	58	.	2.3	160	58	.	5.3	.	.	.	11	150	58	.	6.3	23	58
1992	AUG	.	0.53	93	58	.	0.53	84	58	.	.	.	.	.	3.7	58	59	.	3.1	22	58
1992	SEP	.	0.73	120	58	.	3.1	120	58	.	4.9	.	.	.	1.7	120	58	.	3.5	26	58
1992	OCT	.	3.2	91	58	.	0.64	95	58	.	5.5	.	.	.	2.1	92	59	.	3.8	28	58
1992	NOV	.	0.40	78	58	.	5.1	49	59	.	15	.	.	.	0	66	59	.	11	32	58
1992	DEC	.	.	85	58	.	.	81	58	.	4.9	.	.	.	2.0	89	59	.	4.7	25	58
1993	JAN	.	.	68	58	.	.	55	58	.	3.5	26	59	.	5.5	78	58	.	11	16	59
1993	FEB	.	0	54	58	.	0	63	58	.	0.41	14	60	.	3.3	120	58	.	2.1	13	59
1993	MAR	.	0.21	33	58	.	0	120	58	.	0.94	16	59	.	3.8	82	58	.	4.8	21	58
1993	APR	.	0.20	34	58	.	0.67	84	58	.	8.5	16	59	.	1.6	53	58	.	8.9	21	58
1993	MAY	.	0.44	23	58	.	3.0	49	58	.	4.7	15	59	.	0.67	83	58	.	2.1	19	58
1993	JUN	.	1.7	.	.	.	3.4	50	58	.	3.5	17	59	.	4.6	49	58	.	3.2	25	58
1993	JUL	.	1.2	78	58	.	1.2	48	58	.	1.8	18	59	.	1.3	86	58	.	1.5	22	58
1993	AUG	.	0	59	58	.	0.067	33	58	.	1.9	14	59	.	0.12	51	58	.	1.5	19	58
1993	SEP	.	0.51	79	58	.	.	65	58	.	5.0	30	59	.	2.9	90	58	.	.	21	58
1993	OCT	.	4.7	52	58	.	0.96	45	58	.	8.0	25	59	.	3.9	94	58	.	5.0	23	59
1993	NOV	.	0	67	58	.	0.88	91	58	.	5.7	23	59	.	1.9	79	58	.	9.6	33	58
1993	DEC	.	0	51	58	.	1.9	44	58	.	4.0	15	60	.	1.6	65	58	.	.	15	59
1994	JAN	.	.	30	65	.	.	40	58	.	3.2	8.4	60	.	1.7	95	58	.	6.8	20	58
1994	FEB	.	.	84	59	.	.	97	58	.	2.8	17	59	.	4.4	91	58	.	1.6	19	58
1994	MAR	.	.	92	59	.	2.1	120	58	.	4.6	26	58	.	6.1	260	58	.	1.9	26	58
1994	APR	.	2.1	77	59	.	5.0	84	58	.	5.4	24	58	.	7.3	120	58	.	8.2	31	58
1994	MAY	.	1.6	80	59	.	2.1	58	58	.	8.2	18	58	.	1.2	49	58	.	.	25	58
1994	JUN	.	1.3	.	.	.	2.3	45	58	.	2.2	17	58	.	0	54	58	.	1.7	26	58
1994	JUL	.	0.30	58	59	.	1.4	33	58	.	2.1	19	58	.	0	48	58	.	1.1	21	58
1994	AUG	.	1.4	150	58	.	0.54	58	58	.	3.8	25	58	.	1.3	66	58	.	1.5	22	58
1994	SEP	.	7.1	63	59	.	1.5	32	58	.	2.5	17	58	.	4.2	39	58	.	1.8	24	58
1994	OCT	.	2.9	98	59	.	1.3	90	58	.	2.7	17	59	.	3.7	52	58	.	0.71	27	58
1994	NOV	.	2.8	80	59	.	23	100	58	.	.	22	59	.	4.4	79	58	.	12	43	58
1994	DEC	.	0.77	35	60	.	1.4	45	58	.	2.0	18	59	.	0.11	25	58	.	3.4	19	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption+A1; ABS_e = error of absorption (%)

α-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	2.4	60	58	.	4.7	46	58	.	.	.	.	.	0.95	50	58	.	.	28	58
1995	FEB	.	1.4	65	58	.	0.79	48	58	.	.	21	59	.	2.9	52	58	.	2.5	23	58
1995	MAR	.	0.15	35	58	.	3.9	54	58	.	.	16	59	.	4.1	42	58	.	.	12	58
1995	APR	.	0.082	30	58	.	2.2	30	58	.	13	22	59	.	0.11	35	58	.	.	21	58
1995	MAY	.	0.088	46	58	.	0.40	39	58	.	6.6	14	59	.	5.7	38	58	.	5.5	17	58
1995	JUN	.	0.072	15	58	.	0.47	13	58	.	4.8	11	59	.	1.3	22	58	.	.	16	58
1995	JUL	.	3.0	51	58	.	0.12	36	58	.	18	21	58	.	0.61	54	58	.	2.1	19	58
1995	AUG	.	0.52	66	58	.	0.12	22	58	.	4.0	20	58	.	0.19	45	58	.	1.7	16	58
1995	SEP	.	1.1	76	58	.	0.61	31	58	.	3.8	15	59	.	0.37	41	58	.	2.6	15	58
1995	OCT	.	1.2	54	58	.	5.8	31	58	.	13	20	59	.	0.57	85	58	.	26	28	58
1995	NOV	.	.	43	58	.	4.1	54	58	.	11	17	59	.	1.7	66	58	.	34	33	58
1995	DEC	.	1.4	57	58	.	3.2	39	58	.	8.9	14	59	.	2.4	35	58	.	8.8	25	58
1996	JAN	.	1.3	38	58	.	2.1	35	58	.	17	11	58	.	1.7	72	58	.	.	18	58
1996	FEB	.	1.1	33	58	.	0.79	41	58	.	8.3	13	58	.	0.50	23	58	.	14	15	58
1996	MAR	.	0.56	47	58	.	0	36	58	.	4.4	23	58	.	0	24	58	.	8.6	15	58
1996	APR	.	2.8	32	58	.	1.5	42	58	.	20	14	58	.	2.1	32	58	.	4.0	14	58
1996	MAY	.	2.5	22	58	.	.	26	58	.	4.2	15	58	.	0.40	33	58	.	4.1	14	58
1996	JUN	.	2.5	42	58	.	0	19	58	.	2.1	9.1	58	.	0.017	39	58	.	3.3	14	58
1996	JUL	.	1.5	45	58	.	0.033	39	58	.	4.6	9.9	58	.	.	33	58	.	3.1	9.0	58
1996	AUG	.	2.3	36	58	.	0.93	33	58	.	.	12	58	.	0.096	19	58	.	1.2	14	58
1996	SEP	.	0.58	31	58	.	1.0	22	58	.	0.80	12	58	.	3.9	18	58	.	3.7	14	58
1996	OCT	.	1.8	53	58	.	0.49	26	58	.	3.2	12	58	.	2.4	26	58	.	5.9	16	58
1996	NOV	.	1.4	39	58	.	0	26	58	.	3.6	12	58	.	0.25	26	58	.	5.7	16	58
1996	DEC	.	3.0	28	58	.	2.3	17	58	.	3.3	7.1	59	.	1.0	24	58	.	4.6	9.6	58
1997	JAN	.	2.9	19	59	.	4.1	18	58	.	.	6.3	58	.	0.33	16	59	.	.	12	58
1997	FEB	.	0.41	34	58	.	4.1	22	58	.	10	11	58	.	0.44	38	58	.	15	16	58
1997	MAR	.	1.3	23	58	.	2.5	20	58	.	1.3	.	.	.	2.2	23	58	.	6.4	16	58
1997	APR	.	0.21	26	58	.	0.20	37	58	.	0.60	14	58	.	0.54	25	58	.	2.2	12	58
1997	MAY	.	3.2	29	58	.	2.2	27	58	.	.	13	58	.	0.065	34	58	.	1.9	10	58
1997	JUN	.	2.0	40	58	.	0.74	100	58	.	0.68	14	58	.	0.54	40	58	.	0.34	16	58
1997	JUL	.	1.1	40	58	.	0.028	41	58	.	2.1	12	58	.	0.50	30	58	.	1.1	18	58
1997	AUG	.	0.14	51	58	.	0.24	42	58	.	4.4	15	58	.	0.25	39	58	.	2.9	13	58
1997	SEP	.	0.28	53	58	.	0.18	48	58	.	5.2	13	58	.	0.054	41	58	.	3.5	16	58
1997	OCT	.	0.54	26	58	.	0.45	23	58	.	4.9	14	58	.	0.13	18	58	.	2.7	14	58
1997	NOV	.	0.62	35	58	.	0.55	41	58	.	2.6	12	58	.	1.1	21	58	.	7.9	12	58
1997	DEC	.	0.54	17	58	.	0.92	18	58	.	1.2	9.4	58	.	1.4	14	59	.	3.7	11	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption+A1; ABS_e = error of absorption (%)

α-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.096	17	58	.	1.3	11	58	.	2.9	10	58	.	1.0	10	58	.	9.3	8.5	59
1998	FEB	.	.	17	58	.	0.13	13	58	.	0.93	8.1	58	.	0.061	16	58	.	.	6.6	59
1998	MAR	.	.	27	58	.	0.92	39	58	.	2.6	10	58	.	0	22	58	.	3.0	8.3	59
1998	APR	.	0.021	33	58	.	1.1	40	58	.	1.1	7.5	59	.	0.57	30	58	.	1.4	8.2	59
1998	MAY	.	0.33	41	58	.	0.36	45	58	.	2.9	9.7	58	.	0.21	30	58	.	1.7	16	58
1998	JUN	.	0.24	20	58	.	0.21	19	58	.	1.1	9.8	58	.	0.16	23	58	.	3.3	12	58
1998	JUL	.	0.46	57	58	.	0.78	61	58	.	1.2	13	58	.	0.12	66	58	.	2.6	13	58
1998	AUG	.	0.78	83	58	.	1.9	87	58	.	1.6	11	58	.	0.57	64	58	.	2.9	11	58
1998	SEP	.	0.41	41	58	.	0.82	36	58	.	1.3	13	58	.	0.39	34	58	.	1.9	12	58
1998	OCT	.	0.39	47	58	.	0.30	28	58	.	0.87	9.1	59	.	0.17	21	58	.	1.5	12	59
1998	NOV	.	0.40	46	58	.	0.42	31	58	.	1.4	9.8	59	.	.	38	58	.	2.2	12	59
1998	DEC	.	0.65	52	58	.	0.38	15	58	.	1.6	8.4	59	.	.	21	58	.	1.4	11	59
1999	JAN	.	0.71	24	58	.	0.89	13	58	.	1.2	6.1	58	.	.	15	58	.	3.2	9.4	58
1999	FEB	.	0.14	22	58	.	0.12	13	58	.	0.53	3.7	58	.	.	13	58	.	0.87	5.3	59
1999	MAR	.	0	23	58	.	0	13	58	.	0.35	4.4	58	.	0	13	58	.	1.5	6.4	58
1999	APR	.	.	19	58	.	0.12	13	58	.	1.4	5.1	58	.	0.16	9.1	58	.	.	7.9	58
1999	MAY	.	3.3	19	58	.	0.0039	31	58	.	1.5	5.8	58	.	0.58	27	58	.	1.3	9.1	58
1999	JUN	.	1.1	24	58	.	0.86	36	58	.	.	7.2	58	.	0.027	33	58	.	1.2	15	58
1999	JUL	.	1.7	25	58	.	0.96	24	58	.	1.5	9.2	58	.	0.083	24	58	.	1.7	9.7	58
1999	AUG	.	1.4	38	58	.	0.79	23	58	.	1.4	7.4	58	.	0.76	26	58	.	1.1	9.9	58
1999	SEP	.	1.8	47	58	.	1.3	33	58	.	2.4	8.7	58	.	1.1	31	58	.	2.0	8.7	58
1999	OCT	.	2.8	50	58	.	0.80	29	58	.	1.4	9.3	58	.	1.7	20	58	.	1.4	12	58
1999	NOV	.	1.8	38	58	.	0.81	28	58	.	1.2	9.1	58	.	2.0	22	58	.	2.0	10	58
1999	DEC	.	1.7	26	58	.	2.0	16	58	.	1.9	4.3	59	.	1.1	14	58	.	.	6.5	58
2000	JAN	.	.	17	58	.	.	15	58	.	0.45	5.5	58	.	0.67	12	58	.	.	5.8	58
2000	FEB	.	.	20	58	.	.	13	58	.	0.51	4.1	58	.	1.7	10	58	.	.	6.2	58
2000	MAR	.	1.5	22	58	.	1.2	19	58	.	.	5.1	58	.	1.1	10	58	.	0.45	4.7	58
2000	APR	.	0.76	27	58	.	3.0	22	58	.	.	5.2	58	.	6.2	13	58	.	1.2	4.3	58
2000	MAY	.	0.81	26	58	.	1.6	22	58	.	3.0	6.8	58	.	0.82	24	58	.	.	7.7	58
2000	JUN	.	5.6	37	58	.	1.9	36	58	.	1.4	6.4	58	.	4.1	30	58	.	2.2	8.5	58
2000	JUL	.	1.5	31	58	.	2.2	17	58	.	0.95	6.2	58	.	2.1	15	58	.	0.67	6.5	58
2000	AUG	.	.	31	58	.	0.84	26	58	.	1.5	8.7	58	.	1.7	29	58	.	2.4	9.8	58
2000	SEP	.	1.6	55	58	.	1.9	61	58	.	1.8	11	58	.	1.2	43	58	.	.	10	58
2000	OCT	.	2.0	23	58	.	1.6	19	58	.	0.73	7.2	58	.	1.7	9.3	58	.	.	9.0	58
2000	NOV	.	2.5	16	58	.	2.3	17	58	.	1.3	5.9	58	.	1.8	18	58	.	.	7.3	58
2000	DEC	.	1.3	16	58	.	0.78	16	58	.	.	5.0	58	.	0.58	15	58	.	1.6	7.1	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption+A1; ABS_e = error of absorption (%)

α-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	1.0	15	58	.	0.41	9.1	58	.	0.45	2.7	62	.	0.41	7.3	58	.	.	4.8	60
2001	FEB	.	1.4	14	58	.	0.66	7.4	59	.	1.3	4.1	60	.	0.20	7.2	58	.	0	4.8	60
2001	MAR	.	0.27	8.6	58	.	0.16	9.8	58	.	.	3.7	60	.	0.46	13	58	.	0.85	4.8	60
2001	APR	.	3.7	6.8	58	.	.	7.7	58	.	0.80	3.6	60	.	0.20	8.2	58	.	0.47	4.8	59
2001	MAY	.	1.8	16	58	.	2.3	8.6	58	.	1.4	4.7	59	.	1.2	19	58	.	0.79	5.7	59
2001	JUN	.	2.2	35	58	.	1.2	17	58	.	1.7	5.9	59	.	0.73	33	58	.	0.46	6.8	59
2001	JUL	.	0.73	42	58	.	0.46	17	58	.	0.29	6.5	59	.	0.27	35	58	.	0.42	6.4	59
2001	AUG	.	0.92	29	58	.	1.1	16	58	.	0.72	7.9	59	.	0.85	31	58	.	0.68	7.6	59
2001	SEP	.	1.1	42	58	.	3.1	16	58	.	3.1	8.1	59	.	2.3	21	58	.	1.2	9.0	59
2001	OCT	.	3.1	35	58	.	6.0	15	58	.	3.4	9.6	59	.	3.7	20	58	.	1.4	9.9	59
2001	NOV	.	1.9	18	58	.	0.86	8.4	58	.	0.77	7.4	59	.	1.1	9.2	58	.	1.4	6.2	59
2001	DEC	.	0.96	12	58	.	0.52	7.2	59	.	1.2	4.7	59	.	0.81	8.8	58	.	1.1	5.3	60
2002	JAN	.	0.62	18	58	.	0.47	11	58	.	0.53	5.1	58	.	0.80	10	58	.	0.58	5.2	59
2002	FEB	.	0.44	30	58	.	0.79	19	58	.	1.1	5.2	58	.	0.69	8.6	58	.	0.55	4.7	59
2002	MAR	.	1.2	15	58	.	.	8.1	58	.	.	4.3	59	.	1.8	7.6	58	.	0.32	4.5	59
2002	APR	.	1.8	7.3	58	.	2.4	16	58	.	1.7	5.0	58	.	2.3	17	58	.	0.65	4.2	59
2002	MAY	.	1.4	13	58	.	1.3	12	58	.	2.1	5.8	58	.	1.1	12	58	.	0.99	5.0	59
2002	JUN	.	1.2	36	58	.	1.4	26	58	.	1.8	4.7	58	.	0.43	17	58	.	0.37	5.2	59
2002	JUL	.	.	37	58	.	1.4	49	58	.	0.65	5.9	58	.	0.72	55	58	.	0.30	5.6	59
2002	AUG	.	2.4	34	58	.	2.9	18	58	.	0.63	6.3	58	.	0.49	25	58	.	0.20	5.5	59
2002	SEP	.	3.4	35	58	.	1.1	17	58	.	.	7.7	58	.	1.3	12	58	.	0.25	4.7	59
2002	OCT	.	7.7	34	58	.	3.0	22	58	.	.	7.3	58	.	3.0	29	58	.	0.42	6.6	59
2002	NOV	.	3.8	18	58	.	1.3	12	58	.	1.2	6.0	58	.	3.9	31	58	.	0.59	5.4	59
2002	DEC	.	.	14	58	.	0.13	7.8	58	.	0.49	3.9	59	.	0.95	6.0	58	.	0.47	4.9	59
2003	JAN	.	2.3	17	58	.	0.78	11	59	.	0.24	2.1	60	.	1.6	9.2	59	.	0.37	3.4	58
2003	FEB	.	2.6	14	58	.	0.82	11	59	.	0.16	3.0	59	.	3.6	11	58	.	0.60	3.8	58
2003	MAR	.	3.0	9.9	58	.	1.5	18	59	.	0.32	2.8	59	.	1.1	8.5	59	.	0.66	2.9	58
2003	APR	.	3.2	19	58	.	1.9	13	59	.	0.47	3.6	59	.	2.5	9.7	58	.	0.30	3.4	58
2003	MAY	.	2.5	12	58	.	.	7.3	59	.	0.47	3.4	59	.	2.0	14	58	.	2.0	3.7	58
2003	JUN	.	0.83	11	58	.	0.55	17	58	.	.	4.1	58	.	0.65	18	58	.	0.33	4.5	58
2003	JUL	.	0.93	14	58	.	0.88	25	58	.	0.24	5.2	58	.	0.51	19	58	.	0.71	5.5	58
2003	AUG	.	0.59	28	58	.	0.48	17	58	.	0.20	5.7	58	.	0.31	13	58	.	0.51	5.3	58
2003	SEP	.	1.3	17	58	.	0.78	12	59	.	0.48	5.5	58	.	2.3	13	58	.	0.31	6.3	58
2003	OCT	.	1.4	18	58	.	1.4	13	59	.	0.68	5.2	58	.	1.1	15	58	.	0.25	6.5	58
2003	NOV	.	1.9	16	58	.	2.8	13	59	.	2.6	5.8	58	.	1.4	15	58	.	2.5	5.4	58
2003	DEC	.	0.47	11	58	.	0.52	7.8	60	.	0.68	3.5	59	.	0.75	8.3	59	.	2.4	4.5	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption+A1; ABS_e = error of absorption (%)

α-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.60	7.6	58	.	0.28	3.6	58	.	0.76	2.7	59	.	0.52	5.7	58	.	0.034	4.7	58
2004	FEB	.	0.36	9.4	58	.	0.31	4.7	58	.	0.20	3.3	59	.	0.16	5.7	58	.	0.18	3.3	58
2004	MAR	.	0.39	6.4	58	.	0.70	5.0	58	.	0.15	2.9	59	.	0.60	3.2	58	.	0.26	2.9	58
2004	APR	.	0.60	4.6	58	.	0.41	3.8	58	.	0.32	3.3	59	.	0.40	1.7	58	.	0.56	3.3	58
2004	MAY	.	0.92	5.5	58	.	1.3	4.6	58	.	0.47	2.9	59	.	0.81	2.3	58	.	0.97	3.0	58
2004	JUN	.	0.42	10	58	.	0.48	3.8	58	.	0.42	3.4	58	.	0.10	5.4	58	.	0.76	3.3	58
2004	JUL	.	0.84	14	58	.	0.37	6.4	58	.	0.43	3.9	58	.	0.050	6.3	58	.	0.49	4.7	58
2004	AUG	.	0.89	11	58	.	0.62	5.9	58	.	0.36	5.0	58	.	0.33	5.6	58	.	0.14	4.1	58
2004	SEP	.	0.36	14	58	.	0.11	5.9	58	.	0.053	4.8	58	.	1.2	5.5	58	.	0.25	4.1	58
2004	OCT	.	1.7	12	58	.	0.86	6.4	58	.	0.69	4.4	58	.	0.56	5.8	58	.	0.22	5.5	58
2004	NOV	.	0.53	10	58	.	2.7	4.5	58	.	0.55	4.8	58	.	0.35	3.3	58	.	0.51	2.0	59
2004	DEC	.	0.79	5.9	58	.	0.42	4.9	58	.	1.5	3.7	59	.	0.59	4.1	58	.	0.81	3.7	58
2005	JAN	.	0.34	5.4	58	.	0.25	2.5	58	.	0.53	2.8	59	.	0.44	3.1	58	.	0.84	2.9	59
2005	FEB	.	0.18	4.8	58	.	0.11	2.5	58	.	0.47	2.4	59	.	0.14	2.6	58	.	0.62	2.4	59
2005	MAR	.	0.20	4.1	58	.	0.16	3.3	58	.	0.14	2.8	59	.	0.084	2.4	58	.	1.2	2.9	59
2005	APR	.	0.32	5.4	58	.	0.099	4.0	58	.	1.2	2.7	59	.	0.44	2.7	58	.	1.1	2.6	59
2005	MAY	.	0.48	6.8	58	.	0.26	3.0	58	.	0.39	3.0	59	.	0.21	4.1	58	.	0.19	3.0	59
2005	JUN	.	0.56	10	58	.	0.14	5.1	58	.	0.78	3.4	59	.	0.12	4.0	58	.	0.49	3.4	59
2005	JUL	.	0.34	13	58	.	0.20	5.9	58	.	.	3.5	58	.	0.29	7.4	58	.	0.31	4.1	58
2005	AUG	.	0.52	16	58	.	0.33	5.7	58	.	0.85	4.1	58	.	0.38	7.5	58	.	0.57	3.5	59
2005	SEP	.	0.55	12	58	.	0.36	8.0	58	.	.	5.5	58	.	0.26	8.9	58	.	.	4.4	59
2005	OCT	.	0.91	14	58	.	0.45	5.7	58	.	0.89	4.0	59	.	0.62	8.8	58	.	.	4.4	59
2005	NOV	.	0.60	8.5	58	.	0.74	4.8	58	.	0.81	4.2	59	.	0.017	6.1	58	.	0.96	3.6	59
2005	DEC	.	0.49	5.4	58	.	0.38	3.9	58	.	0.14	4.0	59	.	0.31	3.4	58	.	0.41	2.8	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

γ-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.74	.	.	.	0.73	.	.	.	.	.	.	.	1.4	.	.	.	2.9	.	.
1992	FEB	.	0.68	.	.	.	1.2	.	.	.	.	.	.	.	3.2	.	.	.	1.7	.	.
1992	MAR	.	0.29	17	58	.	1.9	16	58	.	.	.	.	.	3.5	12	62	.	2.7	3.9	59
1992	APR	.	0.99	16	58	.	7.9	39	58	.	.	.	.	.	11	45	58	.	8.5	6.0	59
1992	MAY	.	0.90	67	58	.	6.2	340	58	.	.	.	.	.	4.2	87	58	.	12	13	58
1992	JUN	.	8.4	4.0	64	.	8.7	11	58	.	.	.	.	.	1.7	16	58	.	3.7	9.9	58
1992	JUL	.	5.9	15	59	.	7.9	270	58	.	6.1	.	.	.	13	38	58	.	7.3	9.2	58
1992	AUG	.	0.40	9.8	60	.	1.1	18	58	.	.	.	.	.	4.1	9.4	58	.	2.1	5.0	59
1992	SEP	.	0.057	11	60	.	2.2	37	58	.	3.7	.	.	.	2.0	13	58	.	3.0	6.2	59
1992	OCT	.	0.54	7.1	62	.	0.17	12	58	.	3.7	.	.	.	0	16	58	.	1.8	4.0	59
1992	NOV	.	0.34	6.1	64	.	1.9	4.8	59	.	5.2	.	.	.	0	6.0	59	.	3.4	4.3	60
1992	DEC	.	.	6.7	65	.	.	9.8	58	.	1.4	.	.	.	0.47	7.6	59	.	1.6	3.5	61
1993	JAN	.	.	5.2	60	.	.	4.9	66	.	0.61	3.8	59	.	1.3	8.0	61	.	0.35	2.4	61
1993	FEB	.	0	4.1	60	.	0.12	7.0	62	.	0	2.0	60	.	0.40	16	59	.	1.3	2.0	61
1993	MAR	.	0	3.6	59	.	0	11	60	.	1.2	2.1	60	.	0	9.4	59	.	1.5	3.3	59
1993	APR	.	0.29	6.9	59	.	1.4	16	59	.	11	2.9	59	.	0	9.9	59	.	5.5	3.9	59
1993	MAY	.	0.17	12	58	.	20	66	58	.	17	8.1	58	.	0	47	58	.	8.3	16	58
1993	JUN	.	1.9	.	.	.	17	61	58	.	9.1	4.7	58	.	7.4	46	58	.	11	18	58
1993	JUL	.	1.5	16	58	.	2.1	23	59	.	2.4	6.2	58	.	1.5	33	58	.	1.1	11	58
1993	AUG	.	0.16	7.4	59	.	0	7.9	60	.	1.4	3.8	59	.	4.3	12	59	.	1.2	5.7	58
1993	SEP	.	0.20	10	59	.	.	21	59	.	2.9	7.6	58	.	2.6	31	58	.	.	7.0	59
1993	OCT	.	0.94	13	58	.	0.57	9.0	61	.	1.9	5.2	59	.	2.0	17	59	.	2.5	3.7	59
1993	NOV	.	0	5.1	59	.	0	8.2	62	.	0.88	3.4	59	.	1.6	7.1	61	.	2.0	4.2	59
1993	DEC	.	0	4.0	60	.	0.067	2.0	94	.	0.011	2.1	60	.	0.98	5.0	62	.	.	2.5	61
1994	JAN	.	.	2.7	110	.	.	3.8	70	.	0.32	1.4	140	.	0.16	17	58	.	2.2	4.2	62
1994	FEB	.	.	8.1	65	.	.	14	59	.	1.3	2.5	93	.	0	11	58	.	0.69	2.8	65
1994	MAR	.	.	9.9	62	.	0.67	9.0	60	.	1.3	3.3	73	.	1.8	21	58	.	2.4	3.3	62
1994	APR	.	2.7	9.5	63	.	7.7	9.8	60	.	3.4	7.3	62	.	13	43	58	.	9.3	12	59
1994	MAY	.	1.7	25	59	.	4.4	230	58	.	15	9.0	60	.	2.7	51	58	.	.	15	59
1994	JUN	.	1.6	.	.	.	1.3	57	58	.	11	16	59	.	0	46	58	.	4.3	21	58
1994	JUL	.	0.35	16	59	.	0.17	29	58	.	7.8	9.6	59	.	0	28	58	.	1.7	15	58
1994	AUG	.	0.074	32	59	.	0.23	48	58	.	4.1	9.0	60	.	0.23	25	58	.	2.6	8.1	59
1994	SEP	.	3.3	8.9	61	.	1.1	18	59	.	2.2	3.6	69	.	2.9	6.4	58	.	5.3	7.1	59
1994	OCT	.	1.2	6.8	67	.	0.32	11	60	.	1.8	3.9	71	.	1.6	6.3	58	.	0.65	6.1	59
1994	NOV	.	0.55	4.4	80	.	5.3	7.7	62	.	.	3.6	81	.	1.6	6.7	58	.	3.7	7.2	60
1994	DEC	.	0.12	2.7	84	.	0.18	4.1	65	.	0	2.4	86	.	0	2.3	58	.	0.74	3.1	63

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

γ-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	0.55	4.5	63	.	1.1	3.8	58	.	.	.	.	.	0.13	6.4	59	.	.	4.1	61
1995	FEB	.	0.29	4.6	63	.	0.17	3.3	58	.	.	3.2	70	.	0.77	4.6	60	.	0.25	3.1	63
1995	MAR	.	0	1.9	73	.	1.4	1.7	58	.	.	2.1	73	.	1.1	1.0	72	.	.	2.4	62
1995	APR	.	0	4.3	60	.	0.76	6.6	58	.	6.9	4.0	64	.	0.080	8.4	59	.	5.2	8.2	59
1995	MAY	.	0.063	13	59	.	1.2	61	58	.	15	5.4	60	.	12	35	58	.	8.0	11	58
1995	JUN	.	0.035	3.8	60	.	1.4	23	58	.	7.1	4.9	60	.	2.7	10	58	.	.	9.5	58
1995	JUL	.	4.0	14	58	.	0.29	24	58	.	4.2	9.6	59	.	0.56	22	58	.	9.9	9.3	59
1995	AUG	.	0.33	16	58	.	0.15	28	58	.	2.2	6.2	60	.	0.13	15	58	.	1.0	5.6	59
1995	SEP	.	0.49	9.4	59	.	0.26	7.8	58	.	2.0	4.2	63	.	0.23	11	59	.	1.0	5.5	59
1995	OCT	.	0.45	7.0	60	.	2.4	5.3	58	.	2.6	3.7	67	.	0.19	14	59	.	6.9	6.6	59
1995	NOV	.	.	4.7	61	.	1.6	8.0	58	.	21	1.5	110	.	0.42	8.8	59	.	6.0	5.1	60
1995	DEC	.	0.35	5.4	61	.	0.86	3.4	58	.	0.89	2.1	82	.	0.77	3.1	62	.	0.70	3.7	62
1996	JAN	.	0.49	3.5	58	.	0.65	2.8	58	.	2.0	1.6	65	.	0.69	5.8	58	.	.	3.0	61
1996	FEB	.	0.35	1.7	58	.	0.35	4.4	58	.	1.6	1.8	63	.	0.15	2.5	59	.	0.32	2.0	62
1996	MAR	.	0.15	5.8	58	.	0.091	4.6	58	.	1.6	2.9	60	.	0	2.9	59	.	0.018	2.1	60
1996	APR	.	0.042	4.5	58	.	0.014	8.7	58	.	9.6	2.9	60	.	0.47	8.4	58	.	6.9	4.1	59
1996	MAY	.	3.0	5.9	58	.	.	14	58	.	12	7.3	58	.	0.21	20	58	.	8.6	11	58
1996	JUN	.	3.5	22	58	.	0.53	30	58	.	6.2	8.5	58	.	0.13	52	58	.	7.8	24	58
1996	JUL	.	1.3	11	58	.	0.048	14	58	.	7.5	4.4	59	.	.	22	58	.	3.6	5.8	59
1996	AUG	.	1.6	7.1	58	.	0.79	16	58	.	.	3.6	59	.	0	9.9	58	.	0.61	6.9	58
1996	SEP	.	0.017	5.6	58	.	0	6.7	58	.	5.3	2.6	60	.	0	6.3	58	.	3.4	3.6	59
1996	OCT	.	0.10	7.8	58	.	0.0058	8.3	58	.	4.5	3.7	60	.	0	7.6	58	.	3.9	3.3	60
1996	NOV	.	0.36	6.0	58	.	0.014	3.8	58	.	2.0	2.5	61	.	0.024	3.7	59	.	6.9	3.2	60
1996	DEC	.	0.59	3.6	58	.	0.99	2.9	58	.	5.5	1.2	68	.	0.098	3.4	59	.	5.5	2.1	62
1997	JAN	.	0.71	1.3	61	.	1.6	2.5	58	.	.	0.93	78	.	0.14	2.0	59	.	.	2.1	59
1997	FEB	.	0.10	3.8	58	.	1.4	2.7	58	.	15	1.7	64	.	0.21	8.3	58	.	25	3.0	58
1997	MAR	.	1.3	2.7	59	.	1.2	2.9	58	.	4.9	.	.	.	1.6	4.2	58	.	5.3	3.4	58
1997	APR	.	0.40	6.9	58	.	0.35	13	58	.	3.8	5.8	59	.	0.69	7.8	58	.	5.3	3.8	58
1997	MAY	.	4.4	19	58	.	8.3	85	58	.	.	9.2	58	.	0.78	38	58	.	18	9.2	58
1997	JUN	.	3.4	20	58	.	3.2	42	58	.	4.6	11	58	.	2.0	36	58	.	12	18	58
1997	JUL	.	1.6	23	58	.	0.088	25	58	.	4.0	6.9	59	.	0.96	21	58	.	0.59	14	58
1997	AUG	.	0.085	7.8	58	.	0.30	17	58	.	3.9	6.1	59	.	0.21	11	58	.	4.1	4.9	58
1997	SEP	.	0.15	9.5	58	.	0.25	20	58	.	5.6	4.0	59	.	0.28	13	58	.	3.3	6.1	58
1997	OCT	.	0.38	7.6	58	.	0.35	8.4	58	.	2.5	3.8	60	.	0.17	8.7	58	.	1.9	4.4	58
1997	NOV	.	0.42	5.9	58	.	0.33	6.4	58	.	1.1	2.7	61	.	0.50	6.2	58	.	4.6	2.6	58
1997	DEC	.	0.24	3.3	58	.	0.37	3.5	58	.	1.4	1.7	65	.	0.43	3.6	58	.	2.4	2.0	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

γ-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.25	3.1	59	.	0.67	4.4	58	.	4.3	1.7	64	.	0.13	1.9	59	.	11	1.8	59
1998	FEB	.	.	2.6	59	.	0.32	2.2	58	.	28	1.7	62	.	0.070	2.3	59	.	.	1.4	59
1998	MAR	.	.	4.2	59	.	0.80	7.8	58	.	4.1	2.9	60	.	0.036	5.1	58	.	3.8	2.9	59
1998	APR	.	0.019	7.7	58	.	1.9	39	58	.	2.9	6.5	59	.	0.30	13	58	.	2.8	6.7	58
1998	MAY	.	1.3	13	58	.	0.48	70	58	.	16	8.2	58	.	0.14	34	58	.	8.6	28	58
1998	JUN	.	0.61	13	58	.	0.94	16	58	.	3.6	7.2	58	.	0.55	22	58	.	11	12	58
1998	JUL	.	0.027	9.9	58	.	0.015	23	58	.	2.5	4.5	59	.	0.20	22	58	.	5.9	8.0	58
1998	AUG	.	0.030	11	58	.	0.10	12	58	.	2.1	3.7	59	.	0.11	15	58	.	3.9	5.5	58
1998	SEP	.	0.24	6.8	58	.	0.12	12	58	.	1.2	3.3	59	.	0.082	14	58	.	2.9	5.5	58
1998	OCT	.	0.41	5.9	59	.	0.24	4.8	58	.	1.2	2.2	62	.	0.15	6.9	58	.	2.5	3.4	59
1998	NOV	.	0.15	4.4	59	.	0.25	3.6	58	.	1.5	2.2	62	.	.	6.8	58	.	2.4	3.4	59
1998	DEC	.	0.19	5.5	59	.	0.18	2.2	58	.	1.3	2.0	63	.	.	3.8	58	.	1.8	2.6	59
1999	JAN	.	0.25	2.6	59	.	0.19	2.4	59	.	1.5	1.4	61	.	.	4.5	58	.	3.7	2.6	59
1999	FEB	.	0.072	4.0	59	.	0.076	3.5	58	.	0.96	1.4	60	.	.	4.4	58	.	1.3	2.3	59
1999	MAR	.	0.0043	3.3	59	.	0.033	9.3	58	.	0.78	1.1	62	.	0.13	2.7	58	.	3.2	1.7	59
1999	APR	.	.	3.5	58	.	0.036	6.2	58	.	3.5	2.0	59	.	0.063	4.5	58	.	.	4.5	58
1999	MAY	.	13	35	58	.	0.21	120	58	.	8.6	19	58	.	4.7	51	58	.	5.5	27	58
1999	JUN	.	4.0	30	58	.	6.2	69	58	.	.	12	58	.	0.35	21	58	.	3.6	18	58
1999	JUL	.	3.1	23	58	.	2.6	28	58	.	3.6	7.0	58	.	0.40	14	58	.	4.3	11	58
1999	AUG	.	1.5	8.2	58	.	1.2	12	58	.	1.8	3.5	58	.	1.2	8.8	58	.	2.1	3.9	58
1999	SEP	.	1.3	6.9	58	.	0.98	17	58	.	1.7	3.5	59	.	1.3	14	58	.	2.6	5.1	58
1999	OCT	.	1.7	8.5	58	.	0.56	14	58	.	1.8	4.3	59	.	1.4	9.3	58	.	1.7	6.3	58
1999	NOV	.	0.63	6.4	58	.	0.41	3.2	58	.	1.3	2.2	60	.	1.3	4.3	58	.	3.1	4.1	59
1999	DEC	.	0.43	3.9	59	.	0.79	2.6	59	.	1.9	1.7	61	.	0.44	2.3	59	.	.	1.8	59
2000	JAN	.	.	2.3	58	.	.	2.8	58	.	0.47	1.8	65	.	0.21	3.0	64	.	.	1.9	73
2000	FEB	.	.	3.4	58	.	.	5.5	58	.	0.66	1.5	67	.	0.71	2.3	65	.	2.6	2.0	70
2000	MAR	.	0.73	3.8	58	.	1.0	4.1	58	.	.	2.0	61	.	1.4	4.1	60	.	1.6	2.5	64
2000	APR	.	1.6	27	58	.	6.3	13	58	.	.	2.4	60	.	9.4	5.4	59	.	3.3	2.6	62
2000	MAY	.	4.2	24	58	.	16	58	58	.	8.7	11	58	.	2.8	62	58	.	.	19	58
2000	JUN	.	15	23	58	.	4.4	17	58	.	6.2	4.7	59	.	10	43	58	.	9.4	16	58
2000	JUL	.	1.9	7.3	58	.	1.9	8.8	58	.	2.2	2.5	59	.	3.4	7.7	59	.	2.0	5.2	59
2000	AUG	.	.	4.0	58	.	0.88	6.6	58	.	2.4	3.3	59	.	1.9	6.4	59	.	3.7	5.1	59
2000	SEP	.	0.77	5.4	58	.	2.3	6.5	58	.	2.6	4.4	59	.	1.4	8.9	59	.	.	4.5	60
2000	OCT	.	0.74	4.3	58	.	0.66	6.1	58	.	0.60	2.1	61	.	1.3	5.4	59	.	.	3.7	61
2000	NOV	.	0.79	3.2	58	.	0.87	3.5	58	.	0.91	2.5	61	.	0.90	6.0	60	.	.	2.9	63
2000	DEC	.	0.77	2.4	58	.	0.47	2.2	58	.	.	1.3	68	.	0.50	2.9	63	.	1.8	1.9	73

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

γ-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	0.47	1.6	61	.	0.28	1.7	60	.	0.27	0.94	120	.	0.31	2.1	59	.	.	2.1	68
2001	FEB	.	0.78	3.0	59	.	0.60	2.5	59	.	1.2	1.4	97	.	0.19	2.1	59	.	0	1.6	77
2001	MAR	.	0.18	1.9	59	.	0.16	2.1	59	.	.	1.2	98	.	0.38	2.3	59	.	0.70	1.7	72
2001	APR	.	7.0	2.0	59	.	.	5.5	58	.	3.4	1.6	81	.	0.27	2.8	58	.	1.6	2.4	63
2001	MAY	.	7.2	14	58	.	11	18	58	.	6.1	9.6	59	.	7.6	31	58	.	7.5	13	58
2001	JUN	.	8.9	29	58	.	5.9	15	58	.	4.2	8.3	59	.	4.2	28	58	.	4.7	11	58
2001	JUL	.	1.1	13	58	.	1.0	7.8	58	.	0.64	4.6	61	.	0.54	12	58	.	0.63	4.9	59
2001	AUG	.	0.87	6.2	58	.	1.3	6.5	58	.	0.97	3.4	63	.	1.1	9.0	58	.	1.1	5.1	59
2001	SEP	.	0.60	4.6	58	.	1.9	3.2	59	.	2.0	2.5	70	.	1.3	3.7	58	.	1.9	3.1	62
2001	OCT	.	1.4	8.6	58	.	2.9	6.8	58	.	1.6	4.1	64	.	1.8	12	58	.	2.0	4.3	61
2001	NOV	.	1.1	4.6	59	.	0.75	2.7	59	.	0.84	2.7	70	.	1.0	5.4	58	.	0.97	2.7	63
2001	DEC	.	0.50	2.1	60	.	0.42	1.3	61	.	0.95	1.5	91	.	0.67	1.8	59	.	0.95	1.7	75
2002	JAN	.	0.19	2.6	59	.	0.17	1.9	61	.	0.27	1.4	71	.	0.61	1.8	58	.	0.39	1.8	70
2002	FEB	.	0.14	5.2	58	.	0.40	5.6	59	.	0.20	1.9	66	.	0.50	2.7	58	.	0.65	1.8	70
2002	MAR	.	0.39	3.0	59	.	.	1.8	61	.	.	1.4	71	.	1.4	2.8	58	.	1.1	1.9	69
2002	APR	.	2.5	2.3	58	.	7.6	12	58	.	3.9	2.7	61	.	3.3	8.2	58	.	4.6	3.0	61
2002	MAY	.	3.2	10	58	.	7.9	13	58	.	8.9	4.6	59	.	11	19	58	.	7.0	9.5	59
2002	JUN	.	4.1	19	58	.	4.3	20	58	.	7.0	8.6	58	.	3.0	12	58	.	4.7	5.9	59
2002	JUL	.	.	5.0	58	.	0.65	8.8	58	.	1.4	4.6	59	.	1.2	9.7	58	.	0.88	6.0	59
2002	AUG	.	0.87	4.5	58	.	0.99	4.2	59	.	1.2	2.9	60	.	0.45	4.5	58	.	0.45	3.4	60
2002	SEP	.	1.5	5.4	58	.	0.46	3.0	59	.	.	2.7	61	.	0.81	2.6	58	.	0.60	1.9	64
2002	OCT	.	1.4	3.0	58	.	0.80	1.6	62	.	.	2.1	63	.	0.72	2.5	58	.	0.71	2.1	65
2002	NOV	.	0.35	2.6	59	.	0.23	2.0	61	.	0.63	1.8	66	.	1.0	3.9	58	.	0.92	2.5	64
2002	DEC	.	.	2.2	59	.	0.13	1.4	64	.	0.73	1.1	79	.	0.59	1.2	58	.	0.79	1.6	73
2003	JAN	.	0.19	1.5	81	.	0.086	1.2	140	.	0.33	0.55	120	.	0.36	1.2	130	.	0.83	0.89	80
2003	FEB	.	0.25	2.4	66	.	0.061	2.0	94	.	0.32	0.89	84	.	0.48	2.7	70	.	1.1	1.2	70
2003	MAR	.	0.32	1.4	75	.	0.98	1.5	110	.	1.7	0.86	80	.	0.81	1.9	76	.	0.96	1.2	66
2003	APR	.	1.4	4.0	61	.	3.3	11	60	.	1.5	3.1	60	.	2.1	6.5	60	.	0.83	2.8	60
2003	MAY	.	4.1	4.1	60	.	.	22	59	.	4.7	4.9	59	.	6.3	17	59	.	6.5	7.8	58
2003	JUN	.	1.4	2.5	60	.	1.9	7.4	60	.	.	3.1	59	.	3.5	18	58	.	1.3	8.6	58
2003	JUL	.	1.1	2.2	61	.	1.2	6.3	61	.	0.52	2.9	60	.	1.3	10	59	.	1.6	5.9	59
2003	AUG	.	0.50	4.6	59	.	0.48	7.0	60	.	0.29	2.9	60	.	0.44	9.1	59	.	1.4	4.1	59
2003	SEP	.	0.71	3.1	61	.	0.52	3.7	69	.	0.57	1.7	64	.	1.9	4.1	64	.	0.51	2.5	60
2003	OCT	.	0.49	2.8	62	.	0.53	2.5	78	.	0.49	1.7	65	.	0.84	3.4	67	.	0.38	2.3	61
2003	NOV	.	0.47	2.6	65	.	1.1	1.5	120	.	2.1	1.7	67	.	0.72	4.4	64	.	1.3	1.9	63
2003	DEC	.	0.15	1.3	78	.	0.32	1.0	170	.	0.71	1.0	77	.	0.42	1.2	120	.	1.7	1.6	65

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

γ-hexachlorocyclohexane

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.15	1.0	64	.	0.13	0.61	59	.	0.65	0.41	82	.	0.27	1.6	59	.	0.023	1.2	82
2004	FEB	.	0.18	1.5	60	.	0.20	0.99	58	.	0.23	0.83	63	.	0.10	1.2	59	.	0.27	1.1	79
2004	MAR	.	0.49	1.6	59	.	1.0	2.1	58	.	0.40	0.97	62	.	0.88	0.94	59	.	1.1	1.2	74
2004	APR	.	1.6	0.93	60	.	1.7	3.0	58	.	1.6	2.1	59	.	1.2	0.93	59	.	1.5	2.8	61
2004	MAY	.	3.0	2.4	59	.	5.0	4.5	58	.	1.5	1.5	59	.	6.1	4.7	58	.	4.1	3.1	60
2004	JUN	.	0.77	7.2	58	.	1.6	6.9	58	.	1.7	4.5	58	.	0.55	9.5	58	.	2.1	4.4	59
2004	JUL	.	0.74	3.0	58	.	0.74	3.1	58	.	0.68	1.7	59	.	0.16	5.5	58	.	1.2	3.3	60
2004	AUG	.	0.48	1.5	59	.	0.016	2.5	58	.	0.34	1.4	60	.	0.51	2.6	58	.	0.63	1.5	65
2004	SEP	.	0.28	3.7	59	.	0.13	3.9	58	.	0.20	2.0	59	.	1.3	2.7	58	.	0.29	2.2	62
2004	OCT	.	0.83	3.6	59	.	0.62	1.8	58	.	0.46	1.5	60	.	0.45	2.5	59	.	0.54	2.0	64
2004	NOV	.	0.17	1.6	60	.	1.9	1.1	58	.	0.59	1.2	61	.	0.36	1.1	59	.	1.1	0.94	83
2004	DEC	.	0.33	0.98	64	.	0.25	1.0	58	.	0.60	0.89	65	.	0.43	0.95	60	.	0.62	0.85	96
2005	JAN	.	0.18	0.73	58	.	0.22	0.45	60	.	0.62	0.48	69	.	0.34	0.65	61	.	0.24	0.97	59
2005	FEB	.	0.062	0.75	58	.	0.15	0.61	59	.	0.25	0.65	63	.	0.15	0.7	60	.	0.078	0.87	59
2005	MAR	.	0.12	0.49	58	.	0.16	0.42	60	.	0.17	0.64	63	.	0.16	0.42	63	.	1.4	0.84	59
2005	APR	.	0.33	2.5	58	.	0.72	4.6	58	.	1.8	1.0	60	.	3.0	1.5	59	.	2.3	1.4	59
2005	MAY	.	2.1	4.6	58	.	1.1	6.8	58	.	1.6	3.8	58	.	1.2	13	58	.	1.8	11	58
2005	JUN	.	0.85	4.7	58	.	0.34	5.6	58	.	2.1	2.5	59	.	0.52	4.3	58	.	0.56	6.0	58
2005	JUL	.	0.29	3.7	58	.	0.29	3.1	58	.	.	1.5	59	.	0.55	4.3	58	.	0.67	3.2	58
2005	AUG	.	0.30	4.1	58	.	0.38	2.7	58	.	0.64	1.6	59	.	0.51	3.0	58	.	0.78	2.3	58
2005	SEP	.	0.29	2.3	58	.	0.28	2.4	58	.	.	1.5	59	.	0.32	2.3	58	.	.	2.1	58
2005	OCT	.	0.34	2.8	58	.	0.32	1.7	58	.	0.53	1.2	60	.	0.32	1.3	59	.	.	1.0	59
2005	NOV	.	0.28	1.2	58	.	0.41	0.99	59	.	0.49	0.85	63	.	0.016	1.4	59	.	0.80	1.0	59
2005	DEC	.	0.15	1.0	58	.	0.18	0.83	59	.	0.50	0.74	64	.	0.19	1.5	59	.	0.69	0.70	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

dieldrin

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.71	.	.	.	3.2	.	.	.	.	.	.	.	1.5	.	.	.	1.0	.	.
1992	FEB	.	0.37	.	.	.	1.5	.	.	.	.	.	.	.	3.1	.	.	.	1.0	.	.
1992	MAR	.	0.31	5.3	58	.	2.1	8.3	58	.	.	.	.	.	3.3	2.7	59	.	1.2	3.0	59
1992	APR	.	0.69	3.2	58	.	3.3	16	58	.	.	.	.	.	4.0	12	58	.	1.7	2.9	59
1992	MAY	.	0.46	8.3	58	.	2.2	9.0	58	.	.	.	.	.	1.7	9.8	58	.	2.1	2.5	59
1992	JUN	.	0.48	1.3	740	.	2.1	3.4	300	.	.	.	.	.	2.5	3.5	65	.	0.58	4.4	58
1992	JUL	.	0.34	2.7	320	.	2.5	13	95	.	0.93	.	.	.	4.2	23	59	.	2.7	8.1	58
1992	AUG	.	0.58	8.9	110	.	0.94	8.5	140	.	.	.	.	.	1.7	8.7	59	.	1.4	6.1	58
1992	SEP	.	1.5	17	97	.	3.1	20	89	.	1.2	.	.	.	1.4	10	60	.	0.38	5.7	58
1992	OCT	.	1.0	3.9	330	.	0.20	6.3	260	.	0.32	.	.	.	3.4	4.9	67	.	0.51	2.7	59
1992	NOV	.	0.55	4.5	330	.	2.4	3.5	520	.	1.6	.	.	.	5.0	13	60	.	0.97	5.9	58
1992	DEC	.	.	7.3	250	.	.	6.4	280	.	0.74	.	.	.	1.9	7.9	63	.	0.91	3.1	59
1993	JAN	.	.	2.3	89	.	.	3.9	68	.	0.67	2.4	77	.	1.4	9.9	61	.	1.2	4.4	60
1993	FEB	.	0	2.6	79	.	0	4.5	65	.	0.062	1.2	110	.	1.9	5.2	64	.	0.90	0.90	77
1993	MAR	.	0.92	1.5	81	.	0	5.9	62	.	0.47	0.90	120	.	2.1	4.2	66	.	0.75	0.96	70
1993	APR	.	1.7	1.3	93	.	3.4	3.6	69	.	1.1	1.1	100	.	1.3	6.0	62	.	0.82	2.4	60
1993	MAY	.	3.1	2.0	72	.	3.2	8.7	59	.	1.5	3.5	62	.	1.4	9.6	59	.	1.2	6.1	59
1993	JUN	.	4.2	.	.	.	8.0	29	58	.	2.3	12	59	.	7.7	52	58	.	1.8	37	58
1993	JUL	.	2.7	8.4	59	.	1.7	11	59	.	0.86	4.2	60	.	0.62	16	58	.	0.45	9.0	58
1993	AUG	.	0	4.5	60	.	1.2	3.7	60	.	0.45	1.8	63	.	2.4	7.5	59	.	0.43	4.3	58
1993	SEP	.	0.045	6.4	60	.	.	20	58	.	1.3	7.7	59	.	2.0	11	59	.	.	6.0	58
1993	OCT	.	0.51	5.2	63	.	0.92	12	59	.	0.82	5.7	61	.	1.5	11	59	.	0.85	2.9	60
1993	NOV	.	0.42	2.3	79	.	0.70	7.4	61	.	1.1	4.1	65	.	3.5	5.2	65	.	1.1	7.3	59
1993	DEC	.	0	3.4	71	.	1.7	11	59	.	1.0	3.4	66	.	2.3	11	59	.	.	7.3	59
1994	JAN	.	.	1.1	2200	.	.	1.2	70	.	1.3	0.34	180	.	1.9	8.6	59	.	0.45	1.0	66
1994	FEB	.	.	0.58	3700	.	.	11	58	.	0.98	1.7	67	.	0.27	2.9	61	.	0.33	0.52	80
1994	MAR	.	.	.	.	.	2.7	0.96	69	.	0.76	0.92	76	.	1.2	10	58	.	1.3	1.8	60
1994	APR	.	0.57	0.98	2200	.	1.3	16	58	.	0.59	6.1	59	.	3.1	14	58	.	1.5	18	58
1994	MAY	.	0.19	3.3	470	.	1.0	7.6	58	.	0.52	1.5	64	.	0.44	16	58	.	.	6.1	58
1994	JUN	.	1.4	.	.	.	1.1	12	58	.	0.25	4.6	59	.	0	18	58	.	0.65	15	58
1994	JUL	.	1.1	11	120	.	0.15	18	58	.	1.1	8.0	58	.	0.10	14	58	.	0.34	11	58
1994	AUG	.	0.81	18	88	.	4.1	20	58	.	1.1	6.9	58	.	1.3	13	58	.	0.68	5.8	58
1994	SEP	.	0.70	5.4	220	.	0.72	2.3	59	.	0.44	1.8	61	.	0.53	4.1	59	.	0	4.4	58
1994	OCT	.	0.35	7.2	270	.	0.50	8.0	59	.	0.26	2.3	61	.	0.82	5.4	58	.	0.23	4.5	58
1994	NOV	.	0.57	0.81	2700	.	6.3	13	58	.	.	4.9	60	.	0.90	4.0	59	.	0.52	9.9	58
1994	DEC	.	0.49	0.44	3200	.	0.51	4.4	59	.	0	1.7	64	.	0.75	2.3	61	.	0.41	2.7	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

dieldrin

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	0.79	1.2	60	.	1.3	0.60	61	.	.	.	.	.	2.9	2.5	68	.	.	3.0	60
1995	FEB	.	0.34	0.16	110	.	0.50	0.53	62	.	.	1.5	100	.	0.57	1.9	74	.	0.26	1.9	64
1995	MAR	.	0.31	0.18	86	.	1.5	0.32	67	.	.	0.88	120	.	1.5	2.7	61	.	.	1.7	61
1995	APR	.	0.49	0.76	59	.	3.8	2.0	59	.	3.0	1.1	110	.	3.0	5.6	59	.	0.73	11	58
1995	MAY	.	1.1	5.0	58	.	3.5	41	58	.	1.1	1.3	82	.	2.7	9.5	59	.	0.26	3.4	59
1995	JUN	.	0.46	1.4	59	.	1.3	1.7	58	.	0.70	1.2	76	.	0.87	2.5	59	.	.	2.6	59
1995	JUL	.	1.3	9.7	58	.	1.9	17	58	.	0.93	5.1	59	.	1.3	19	58	.	0.14	8.8	58
1995	AUG	.	0.58	12	58	.	0.87	5.1	58	.	1.2	3.8	60	.	0.78	6.0	58	.	1.3	4.2	58
1995	SEP	.	0.90	4.2	58	.	0.55	6.9	58	.	0	4.2	61	.	0.37	10	58	.	0.015	4.4	59
1995	OCT	.	0.95	3.4	58	.	1.8	2.9	58	.	0.14	2.1	78	.	1.4	16	58	.	2.8	6.2	59
1995	NOV	.	.	0.13	110	.	2.6	0.39	66	.	3.1	0.78	170	.	1.8	0.81	110	.	0.24	4.0	60
1995	DEC	.	2.2	0.49	63	.	2.1	0.87	60	.	0.84	1.4	100	.	2.1	1.6	75	.	0.46	2.0	64
1996	JAN	.	1.4	1.1	59	.	2.6	0.73	59	.	0.87	1.4	58	.	2.1	1.8	59	.	.	4.0	59
1996	FEB	.	0.20	0.054	140	.	1.2	0.96	59	.	1.0	0.44	60	.	0.64	0.51	60	.	1.1	0.72	67
1996	MAR	.	0.14	0.32	61	.	0.82	0.62	59	.	0.73	2.0	58	.	0.46	0.078	93	.	1.1	0.49	68
1996	APR	.	0.55	0.42	59	.	3.1	0.55	59	.	1.2	0.68	59	.	3.6	2.1	58	.	1.0	2.2	59
1996	MAY	.	0.65	0.67	59	.	.	2.8	58	.	0.93	1.6	58	.	1.3	17	58	.	3.2	5.9	58
1996	JUN	.	0.77	8.9	58	.	2.5	8.5	58	.	2.1	2.6	58	.	2.0	7.4	58	.	1.6	4.8	58
1996	JUL	.	0.71	6.1	58	.	1.1	7.6	58	.	5.4	1.4	58	.	.	6.5	58	.	1.5	3.2	58
1996	AUG	.	0.45	4.0	58	.	0.57	9.9	58	.	.	2.7	58	.	0.27	5.7	58	.	0.76	4.7	58
1996	SEP	.	0.34	5.0	58	.	0.41	4.9	58	.	7.7	1.6	58	.	0.78	3.8	58	.	3.1	1.9	59
1996	OCT	.	0.92	6.5	58	.	0.17	10	58	.	1.5	6.2	58	.	0.13	7.5	58	.	2.4	5.9	58
1996	NOV	.	0.59	3.8	58	.	0.20	6.8	58	.	1.2	3.9	58	.	0.54	2.7	58	.	2.8	1.8	59
1996	DEC	.	1.0	0.28	63	.	1.4	1.0	59	.	2.3	1.3	58	.	1.7	1.5	59	.	2.8	1.9	59
1997	JAN	.	1.3	0.17	80	.	1.8	2.9	60	.	.	0.37	81	.	0.30	2.2	59	.	.	2.3	61
1997	FEB	.	0.31	0.15	78	.	1.6	0.78	73	.	5.7	0.82	63	.	1.0	3.9	59	.	3.2	2.5	60
1997	MAR	.	0.95	0.037	200	.	0.97	0.75	75	.	0.17	.	.	.	1.6	7.4	58	.	1.1	3.4	59
1997	APR	.	0.13	0.88	59	.	0.54	1.4	63	.	0.12	1.1	60	.	1.2	2.0	59	.	0.21	1.5	61
1997	MAY	.	0.38	0.81	59	.	1.2	1.8	60	.	.	1.4	60	.	2.4	6.2	58	.	0.52	2.9	59
1997	JUN	.	0.48	4.2	58	.	1.6	15	58	.	0.94	9.6	58	.	1.4	20	58	.	0.46	11	58
1997	JUL	.	0.97	4.9	58	.	0.68	13	58	.	2.6	3.6	58	.	0.51	19	58	.	0.15	14	58
1997	AUG	.	0.20	6.6	58	.	0.45	11	58	.	2.9	3.4	58	.	0.42	9.8	58	.	0.41	3.7	58
1997	SEP	.	0.13	6.6	58	.	0.69	14	58	.	0.76	3.8	58	.	0.61	8.9	58	.	0.27	5.4	58
1997	OCT	.	0.73	8.7	58	.	0.71	19	58	.	0.29	5.4	58	.	0.50	8.1	58	.	0	4.8	59
1997	NOV	.	0.66	0.24	65	.	0.87	0.22	160	.	0.27	1.1	61	.	0.93	0.60	66	.	0.23	1.1	64
1997	DEC	.	0.29	0.51	60	.	0.64	4.5	59	.	0.40	2.5	59	.	0.90	2.6	59	.	0.47	2.7	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

dieldrin

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.50	0.16	260	.	1.7	0.92	60	.	1.5	0.86	61	.	1.1	0.99	62	.	1.8	1.7	60
1998	FEB	.	.	2.7	60	.	0.52	4.1	58	.	1.2	1.5	59	.	0.31	2.2	59	.	.	1.0	62
1998	MAR	.	.	0.29	130	.	1.8	1.3	60	.	.	0.96	60	.	0.58	0.65	67	.	0.70	0.86	66
1998	APR	.	0.12	0.75	72	.	1.4	3.8	58	.	0.25	1.5	59	.	1.0	2.9	59	.	0.38	2.9	59
1998	MAY	.	0.31	1.5	62	.	1.7	5.2	58	.	2.5	2.1	58	.	0.99	3.6	58	.	0.78	4.5	58
1998	JUN	.	0.91	3.5	59	.	2.2	12	58	.	0.80	4.0	58	.	1.0	17	58	.	1.4	9.1	58
1998	JUL	.	0.22	2.4	59	.	0.55	8.0	58	.	0.27	2.0	58	.	0.67	23	58	.	0.85	4.6	58
1998	AUG	.	0.51	6.4	58	.	0.89	7.8	58	.	0.49	2.2	58	.	0.64	7.1	58	.	1.0	4.0	58
1998	SEP	.	0.45	2.4	59	.	0.52	2.6	58	.	0.14	4.0	58	.	0.24	7.9	58	.	0.35	4.5	58
1998	OCT	.	0.68	3.3	60	.	0.88	1.7	59	.	0.26	1.7	59	.	0.25	9.3	58	.	0.35	3.3	59
1998	NOV	.	0.69	0.75	82	.	1.4	0.92	60	.	0.46	3.0	58	.	.	5.6	58	.	0.42	5.4	59
1998	DEC	.	0.58	1.9	64	.	0.99	0.40	67	.	0.74	3.8	58	.	.	3.5	59	.	0.95	5.1	59
1999	JAN	.	1.0	0.52	91	.	1.7	0.47	120	.	0.57	1.3	58	.	.	1.8	60	.	1.6	3.0	60
1999	FEB	.	1.3	1.5	62	.	0.79	15	58	.	0.25	3.2	58	.	.	1.5	59	.	0.57	2.0	61
1999	MAR	.	0.44	0.66	74	.	0.35	3.4	60	.	0.29	0.39	59	.	0.84	0.78	61	.	0.66	1.7	62
1999	APR	.	.	0.14	160	.	2.0	0.77	81	.	0.55	1.1	58	.	1.1	1.7	59	.	.	1.9	61
1999	MAY	.	1.6	6.9	58	.	1.5	19	58	.	0.43	6.2	58	.	0.58	6.8	58	.	0.46	7.2	58
1999	JUN	.	0.95	7.9	58	.	1.2	53	58	.	.	5.0	58	.	0.38	4.1	58	.	1.1	9.2	58
1999	JUL	.	0.94	5.7	58	.	0.64	22	58	.	0.49	6.7	58	.	0.63	15	58	.	0.63	13	58
1999	AUG	.	0.23	6.1	58	.	0.47	11	58	.	0.51	3.1	58	.	0.51	6.1	58	.	0.28	3.3	59
1999	SEP	.	0.33	2.5	59	.	0.41	9.8	58	.	0.27	2.6	58	.	0.26	6.1	58	.	0.59	4.5	58
1999	OCT	.	0.70	3.0	59	.	0.32	14	58	.	0.48	5.2	58	.	0.42	8.0	58	.	0.55	7.6	58
1999	NOV	.	0.32	2.5	60	.	0.60	2.2	62	.	0.70	2.0	58	.	0.54	2.8	59	.	0.93	5.7	59
1999	DEC	.	0.32	3.5	59	.	1.6	7.1	59	.	1.6	6.4	58	.	0.44	2.0	59	.	.	3.2	60
2000	JAN	.	.	0.90	58	.	.	0.10	170	.	0.47	1.1	59	.	0.42	0	.	.	.	1.8	59
2000	FEB	.	.	0.22	60	.	.	0.95	61	.	0.51	0.90	59	.	0.59	0	.	.	0.54	1.1	59
2000	MAR	.	0.25	0.38	59	.	0.67	2.5	59	.	.	2.0	58	.	0.71	6.2	59	.	0.41	3.7	58
2000	APR	.	0.19	2.9	58	.	0.76	2.4	59	.	.	1.4	58	.	1.9	0.95	64	.	0.48	1.4	59
2000	MAY	.	0.48	5.6	58	.	2.4	17	58	.	2.4	4.4	58	.	0.71	22	58	.	.	5.8	58
2000	JUN	.	1.1	1.7	58	.	1.7	3.8	58	.	0.71	1.6	58	.	1.8	8.6	58	.	1.0	3.8	58
2000	JUL	.	0.21	2.2	58	.	0.67	3.1	58	.	0.37	1.2	58	.	0.97	2.8	59	.	0.53	2.5	58
2000	AUG	.	.	1.9	58	.	0.42	4.6	58	.	0.67	2.0	58	.	0.62	4.1	58	.	0.78	2.7	58
2000	SEP	.	0.20	3.8	58	.	1.1	9.2	58	.	0.76	4.1	58	.	0.44	7.7	58	.	.	3.6	58
2000	OCT	.	0.26	0.98	58	.	0.50	5.8	58	.	0.27	1.6	58	.	0.40	5.7	59	.	.	3.3	58
2000	NOV	.	0.62	0.42	59	.	1.2	4.8	58	.	0.68	5.5	58	.	1.6	5.1	59	.	.	2.9	58
2000	DEC	.	0.49	0.22	60	.	0.63	0.39	71	.	.	0.48	59	.	1.0	2.6	60	.	0.99	1.3	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

dieldrin

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	0.43	0.062	240	.	0.28	0.18	130	.	0.48	0.18	63	.	0.39	3.6	58	.	.	1.4	59
2001	FEB	.	0.84	0.30	75	.	1.0	0	.	.	1.2	1.1	58	.	0.21	0.86	61	.	0	0.86	60
2001	MAR	.	0.42	2.2	59	.	0.33	0.13	190	.	.	0.35	60	.	0.46	0.23	79	.	0.20	1.9	59
2001	APR	.	1.6	0.25	70	.	.	1.4	61	.	0.68	0.99	58	.	0.19	1.1	59	.	0.29	1.6	59
2001	MAY	.	0.65	0.95	59	.	2.3	5.7	58	.	0.59	1.9	58	.	1.1	2.9	58	.	1.1	2.9	58
2001	JUN	.	0.36	12	58	.	1.0	5.8	58	.	0.44	4.3	58	.	0.82	10	58	.	0.30	5.6	58
2001	JUL	.	0.25	7.3	58	.	0.30	5.5	58	.	0.14	2.6	58	.	0.29	3.6	58	.	0.25	3.3	58
2001	AUG	.	0.28	2.5	58	.	0.71	4.8	58	.	0.31	2.2	58	.	0.90	4.2	58	.	0.33	3.0	58
2001	SEP	.	0.22	2.8	58	.	0.84	2.4	59	.	0.55	1.2	58	.	1.1	1.6	59	.	0.37	1.7	58
2001	OCT	.	0.53	7.8	58	.	1.2	14	58	.	0.45	4.4	58	.	1.7	4.5	58	.	0.48	3.7	58
2001	NOV	.	0.72	2.7	59	.	1.2	3.3	59	.	0.96	5.4	58	.	1.1	9.9	58	.	0.51	5.5	58
2001	DEC	.	0.64	0.68	62	.	0.88	1.3	61	.	1.2	1.6	58	.	1.1	1.2	59	.	1.0	1.1	59
2002	JAN	.	0.25	0.51	62	.	0.30	1.5	59	.	0.21	0.98	59	.	0.86	2.1	58	.	1.5	3.9	58
2002	FEB	.	0.17	3.6	58	.	0.74	4.7	58	.	0.31	2.3	58	.	1.2	3.4	58	.	0.48	3.0	58
2002	MAR	.	0.52	0.19	84	.	.	0.23	67	.	.	0.68	59	.	1.1	4.6	58	.	0.86	2.7	58
2002	APR	.	1.4	0.15	75	.	2.2	14	58	.	1.4	2.0	58	.	0.93	3.0	58	.	0.71	2.4	58
2002	MAY	.	0.44	1.3	59	.	2.7	17	58	.	1.5	2.2	58	.	1.3	4.5	58	.	0.93	2.8	58
2002	JUN	.	0.70	17	58	.	1.6	24	58	.	1.1	2.8	58	.	0.55	2.8	58	.	0.52	2.5	58
2002	JUL	.	.	3.5	58	.	0.85	11	58	.	0.27	5.2	58	.	0.62	8.1	58	.	0.44	5.1	58
2002	AUG	.	0.32	2.1	58	.	0.77	2.1	58	.	0.28	1.7	58	.	0.29	2.6	58	.	0.19	3.3	58
2002	SEP	.	0.47	1.7	58	.	0.38	1.8	58	.	.	1.5	58	.	0.39	1.1	58	.	0.22	1.7	58
2002	OCT	.	0.60	0.95	59	.	0.72	1.0	59	.	.	2.1	58	.	0.40	1.9	58	.	0.24	1.6	58
2002	NOV	.	0.29	0.74	60	.	0.27	0.55	60	.	0.47	3.1	58	.	0.91	5.1	58	.	0.33	4.3	58
2002	DEC	.	.	0.088	140	.	0.32	0.81	59	.	0.23	0.61	59	.	1.2	0.79	59	.	0.94	1.4	59
2003	JAN	.	0.37	0.061	250	.	0.17	0.40	280	.	0.099	0.030	150	.	0.56	0.49	130	.	0.90	0.12	78
2003	FEB	.	0.31	0.27	76	.	0.14	0.81	150	.	0.24	0.35	59	.	0.36	0.48	110	.	0.65	0.50	60
2003	MAR	.	0.17	0.48	63	.	0.89	1.4	96	.	0.73	0.87	58	.	0.60	3.0	60	.	0.14	2.6	58
2003	APR	.	0.38	0.75	60	.	0.93	6.3	61	.	0.54	2.0	58	.	0.64	1.2	64	.	0.23	2.2	58
2003	MAY	.	0.62	1.1	59	.	.	14	59	.	0.29	1.0	58	.	1.2	2.0	61	.	1.4	1.2	58
2003	JUN	.	0.18	0.91	59	.	0.59	3.0	62	.	.	2.2	58	.	0.52	5.8	58	.	0.27	4.6	58
2003	JUL	.	0.33	1.9	58	.	0.53	5.9	59	.	0.24	1.7	58	.	0.66	11	58	.	0.59	6.1	58
2003	AUG	.	0.17	2.1	58	.	0.38	6.1	59	.	0.14	2.2	58	.	0.21	5.4	58	.	0.60	3.5	58
2003	SEP	.	0.29	2.9	58	.	0.34	4.0	61	.	0.19	2.2	58	.	1.1	2.9	59	.	0.29	2.4	58
2003	OCT	.	0.27	1.1	59	.	0.42	2.9	65	.	0.24	1.5	58	.	0.57	2.9	60	.	0.20	2.6	58
2003	NOV	.	0.53	4.7	58	.	2.1	4.4	63	.	1.6	2.6	58	.	1.0	7.0	59	.	0.97	3.1	58
2003	DEC	.	0.28	0.15	91	.	0.73	0.29	400	.	0.65	0.55	59	.	0.90	1.9	65	.	0.85	2.7	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

dieldrin

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.35	0.096	160	.	0.43	0.098	130	.	0.80	0.18	420	.	0.71	0.87	62	.	0.18	0.58	180
2004	FEB	.	0.31	0.11	120	.	0.36	0.29	67	.	0.19	0.78	100	.	0.20	0.46	65	.	0.18	1.5	81
2004	MAR	.	0.43	2.0	59	.	1.9	4.7	58	.	0.039	1.5	73	.	1.0	2.6	58	.	0.65	2.0	70
2004	APR	.	0.46	0.28	65	.	0.95	3.8	58	.	0.25	3.0	62	.	0.39	0.59	61	.	0.18	3.0	63
2004	MAY	.	0.70	0.59	60	.	2.3	8.0	58	.	0.52	1.6	67	.	1.6	5.1	58	.	0.72	3.5	61
2004	JUN	.	0.18	2.2	58	.	0.68	11	58	.	0.49	4.3	59	.	0.23	5.0	58	.	0.54	4.2	59
2004	JUL	.	0.17	1.7	58	.	0.24	1.3	58	.	0.15	1.3	63	.	0.063	3.0	58	.	0.43	4.3	59
2004	AUG	.	0.19	1.0	59	.	0.51	3.7	58	.	0.22	1.5	64	.	0.41	2.9	58	.	0.30	1.5	64
2004	SEP	.	0.27	2.8	58	.	0.14	4.7	58	.	0.096	2.9	60	.	0.73	3.8	58	.	0.15	4.2	59
2004	OCT	.	0.57	3.0	58	.	0.63	2.5	58	.	0.23	4.1	60	.	0.61	4.6	58	.	0.29	4.3	60
2004	NOV	.	0.24	0.10	140	.	3.7	0.41	63	.	0.38	1.7	70	.	0.35	2.2	59	.	0.28	1.8	72
2004	DEC	.	0.44	0.21	89	.	0.65	0.44	64	.	0.29	0.73	120	.	0.76	0.64	63	.	0.36	0.83	120
2005	JAN	.	0.42	0.11	72	.	0.80	0.65	58	.	0.62	0.23	60	.	0.44	0.81	59	.	0.58	0.98	58
2005	FEB	.	0.33	0.57	59	.	0.54	0.61	58	.	0.26	0.74	58	.	0.21	1.8	58	.	0.27	2.2	58
2005	MAR	.	0.20	0.0065	610	.	0.49	0.13	59	.	0.19	0.33	59	.	0.22	0.27	62	.	0.31	0.59	59
2005	APR	.	0.37	0.93	58	.	0.35	2.1	58	.	0.38	1.1	58	.	0.49	0.69	59	.	0.51	1.4	58
2005	MAY	.	0.58	4.6	58	.	0.47	9.2	58	.	0.52	2.4	58	.	0.74	3.6	58	.	0.18	2.5	58
2005	JUN	.	0.50	3.8	58	.	0.34	9.4	58	.	1.2	1.9	58	.	0.13	7.4	58	.	0.57	4.9	58
2005	JUL	.	0.15	5.3	58	.	0.37	3.8	58	.	.	1.7	58	.	0.34	8.4	58	.	0.32	5.2	58
2005	AUG	.	0.16	4.3	58	.	0.29	5.5	58	.	0.24	2.2	58	.	0.32	5.4	58	.	0.27	3.7	58
2005	SEP	.	0.19	1.2	58	.	0.36	4.8	58	.	.	4.1	58	.	0.24	5.2	58	.	.	4.6	58
2005	OCT	.	0.17	3.5	58	.	0.45	4.7	58	.	0.39	2.9	58	.	0.38	2.1	58	.	.	2.4	58
2005	NOV	.	0.43	0.67	59	.	0.89	1.5	58	.	0.34	1.8	58	.	0.092	3.2	58	.	0.67	3.6	58
2005	DEC	.	0.29	0.16	64	.	0.71	1.8	58	.	0.36	1.3	58	.	0.72	1.4	59	.	0.47	1.4	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

hexachlorobenzene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.25	.	.	.	0.049	.	.	.	.	.	.	.	0.071	.	.	.	0	.	.
1992	FEB	.	0.050	.	.	.	0.015	.	.	.	.	.	.	.	0.066	.	.	.	0	.	.
1992	MAR	.	0.052	22	58	.	0.021	9.9	58	.	.	.	.	.	0.057	15	58	.	0	7.0	59
1992	APR	.	0.037	10	58	.	0.033	13	58	.	.	.	.	.	0.079	9.0	58	.	0	4.9	59
1992	MAY	.	0.032	15	58	.	0.036	14	58	.	.	.	.	.	0.046	9.7	58	.	0	1.5	59
1992	JUN	.	0.11	7.6	58	.	0.038	6.2	58	.	.	.	.	.	0.037	.	.	.	0	.	.
1992	JUL	.	0.19	7.0	58	.	0.071	5.8	58	.	0	.	.	.	0.17	7.3	58	.	0	.	.
1992	AUG	.	0.064	8.5	58	.	0.067	6.5	58	.	.	.	.	.	0.041	4.9	58	.	0	0.99	60
1992	SEP	.	0.011	12	58	.	0.015	11	58	.	0	.	.	.	0.012	8.1	58	.	0	2.0	59
1992	OCT	.	0.099	15	58	.	0.20	13	58	.	0	.	.	.	0.23	7.2	58	.	0	3.1	59
1992	NOV	.	0.033	16	58	.	0.15	13	58	.	0	.	.	.	0.41	16	58	.	0	6.1	59
1992	DEC	.	.	20	58	.	.	14	58	.	0	.	.	.	0.35	14	58	.	0	8.7	59
1993	JAN	.	.	16	58	.	.	13	58	.	0	8.2	59	.	0.14	18	58	.	0	11	59
1993	FEB	.	0.041	18	58	.	0.17	17	58	.	0.39	7.0	59	.	0.089	16	58	.	0.13	7.6	59
1993	MAR	.	0.055	7.3	58	.	0.23	19	58	.	0.052	5.2	59	.	0.10	20	58	.	0.13	6.6	59
1993	APR	.	0.067	8.8	58	.	0.27	22	58	.	0.15	4.2	59	.	0.086	17	58	.	0.13	6.2	59
1993	MAY	.	0.057	7.0	58	.	0.072	11	58	.	0.24	2.9	59	.	0.024	8.4	58	.	0.13	4.0	60
1993	JUN	.	0.013	.	.	.	0.074	5.9	58	.	1.3	.	.	.	0.068	5.1	58	.	0.53	.	.
1993	JUL	.	0.028	6.0	58	.	0.051	3.6	58	.	1.1	.	.	.	0.046	4.3	58	.	0.18	.	.
1993	AUG	.	.	3.3	58	.	0.11	1.8	58	.	0.028	.	.	.	0.017	2.1	58	.	0	.	.
1993	SEP	.	0.0032	6.7	58	.	.	5.1	58	.	0	.	.	.	0.041	5.0	58	.	.	.	.
1993	OCT	.	0.17	14	58	.	0.31	8.8	58	.	0.047	4.5	59	.	0.080	9.0	58	.	0.39	4.4	60
1993	NOV	.	0.90	8.8	59	.	1.1	10	58	.	0.043	5.1	59	.	0.11	10	58	.	0	6.6	59
1993	DEC	.	0.64	9.0	59	.	0.047	8.1	59	.	0	4.7	59	.	0.038	8.2	58	.	.	6.4	60
1994	JAN	.	.	10	64	.	.	8.2	59	.	0.0076	4.4	59	.	0.067	18	59	.	0	10	58
1994	FEB	.	.	14	61	.	.	11	59	.	0.084	5.9	58	.	0.040	13	59	.	0	8.7	58
1994	MAR	.	.	35	59	.	0.0059	14	58	.	0.063	4.1	58	.	0.049	24	59	.	0.073	8.4	58
1994	APR	.	0.044	10	64	.	0.050	11	59	.	0.096	5.8	58	.	0.079	10	60	.	0.044	8.8	58
1994	MAY	.	0.023	8.1	61	.	0.045	7.0	59	.	0.025	2.3	59	.	0.012	4.1	61	.	.	5.6	58
1994	JUN	.	0.28	.	.	.	0.058	3.9	59	.	0	.	.	.	0.0039	3.9	59	.	0	.	.
1994	JUL	.	0.043	5.4	60	.	0.018	3.6	58	.	0.048	.	.	.	0.028	3.4	59	.	0	.	.
1994	AUG	.	0.037	8.8	59	.	0.045	3.8	58	.	0.26	.	.	.	0.0044	3.8	59	.	0.055	.	.
1994	SEP	.	0.054	6.1	59	.	0.026	3.2	59	.	0	.	.	.	0.028	2.6	59	.	0	.	.
1994	OCT	.	0.018	11	60	.	0.030	7.3	59	.	0	.	.	.	0.033	3.4	59	.	0	.	.
1994	NOV	.	0.011	12	61	.	0.13	11	58	.	.	.	.	.	0.052	6.1	59	.	0.034	7.4	58
1994	DEC	.	0.020	6.8	61	.	0.029	9.5	58	.	0.035	4.3	58	.	0.071	7.6	60	.	0.0069	8.1	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

hexachlorobenzene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	0.037	15	58	.	0.070	9.4	58	.	.	.	.	.	0.16	16	59	.	.	9.7	59
1995	FEB	.	0.045	15	58	.	0.026	11	58	.	.	8.4	62	.	0.052	14	59	.	0.020	9.8	59
1995	MAR	.	0.044	10	58	.	0.061	11	58	.	.	5.2	61	.	0.084	6.3	59	.	0.047	5.2	59
1995	APR	.	0.048	6.3	58	.	0.094	7.2	58	.	0.25	6.0	61	.	0.16	6.8	59	.	0.055	6.7	59
1995	MAY	.	0.044	8.9	58	.	0.075	7.7	58	.	0.12	2.5	64	.	0.087	6.4	59	.	0.14	5.5	59
1995	JUN	.	0.014	4.0	58	.	0.027	2.0	58	.	0.022	.	.	.	0.037	1.9	59	.	.	.	.
1995	JUL	.	0.060	4.7	58	.	0.028	3.1	58	.	0.22	.	.	.	0.045	3.4	58	.	0.11	.	.
1995	AUG	.	0.043	4.3	58	.	0.039	1.2	58	.	1.1	.	.	.	0.030	2.0	59	.	.	.	.
1995	SEP	.	0.032	4.3	58	.	0.021	2.7	58	.	0.029	.	.	.	0.018	3.0	59	.	.	.	.
1995	OCT	.	0.063	6.9	58	.	0.063	3.4	58	.	0.013	4.0	63	.	0.045	7.0	59	.	0.17	5.1	59
1995	NOV	.	.	5.7	58	.	0.055	7.0	58	.	0.14	5.1	63	.	0.070	7.7	59	.	1.5	7.7	59
1995	DEC	.	0.081	11	58	.	0.047	4.8	58	.	0	5.9	63	.	0.059	8.0	59	.	0.32	10	59
1996	JAN	.	0.099	11	59	.	0.054	10	58	.	0.62	5.8	59	.	0.057	13	58	.	.	13	60
1996	FEB	.	0.012	8.9	59	.	0.022	8.7	58	.	0.078	5.4	59	.	0.023	7.0	58	.	0	7.9	61
1996	MAR	.	0.0054	8.2	59	.	0.019	7.5	58	.	0	7.7	59	.	0.078	4.5	58	.	0	5.6	60
1996	APR	.	0.028	5.5	59	.	0.060	9.6	58	.	0	5.1	59	.	0.13	6.2	58	.	0	6.7	60
1996	MAY	.	0.029	5.0	59	.	.	7.7	58	.	0	.	.	.	0.050	5.9	58	.	0.20	5.1	60
1996	JUN	.	0.034	5.2	59	.	0.11	3.1	58	.	0	1.7	59	.	0.056	3.2	58	.	0	.	.
1996	JUL	.	0.065	7.4	58	.	0.039	4.9	58	.	0	.	.	.	.	3.2	58	.	0	.	.
1996	AUG	.	0.032	4.6	59	.	0.017	3.9	58	.	.	.	.	.	0.0070	1.6	58	.	0	.	.
1996	SEP	.	0.033	4.7	59	.	0.013	4.0	58	.	0	.	.	.	0.029	2.6	58	.	1.2	.	.
1996	OCT	.	0.048	10	59	.	0.036	5.8	58	.	0	.	.	.	0.030	4.0	58	.	1.3	.	.
1996	NOV	.	0.039	13	59	.	0.013	7.2	58	.	0	3.6	59	.	0.035	5.7	58	.	0	4.1	62
1996	DEC	.	0.066	9.9	59	.	0.039	6.5	58	.	0	2.8	59	.	0.043	8.1	58	.	0	4.8	62
1997	JAN	.	0.086	13	58	.	0.053	9.8	58	.	.	4.7	59	.	0.018	10	58	.	.	9.2	58
1997	FEB	.	0.015	12	58	.	0.058	7.5	58	.	0.19	5.0	59	.	0.039	11	58	.	0.72	8.4	58
1997	MAR	.	0.064	7.8	58	.	0.034	8.1	58	.	0.074	.	.	.	0.059	11	58	.	0.36	8.2	58
1997	APR	.	0.010	8.3	58	.	0.015	11	58	.	0	.	.	.	0.028	7.1	58	.	0.023	5.2	58
1997	MAY	.	0.037	6.7	58	.	0.048	6.7	58	.	.	4.2	59	.	0.045	9.6	58	.	0.023	5.2	58
1997	JUN	.	0.024	7.0	58	.	0.034	5.7	58	.	0.078	.	.	.	0.043	3.9	58	.	0.022	.	.
1997	JUL	.	0.037	4.9	58	.	0.031	4.2	58	.	0.78	.	.	.	0.029	3.2	58	.	0.034	.	.
1997	AUG	.	0.011	4.4	58	.	0.016	4.9	58	.	1.3	.	.	.	0.026	3.5	58	.	0.036	.	.
1997	SEP	.	0.0080	6.0	58	.	0.0079	7.1	58	.	0.15	.	.	.	0.031	5.5	58	.	0.019	.	.
1997	OCT	.	0.035	10	58	.	0.021	9.2	58	.	0.013	.	.	.	0.022	5.9	58	.	0	.	.
1997	NOV	.	0.033	9.6	58	.	0.019	10	58	.	0	4.5	59	.	0.037	8.9	58	.	0	6.0	58
1997	DEC	.	0.020	9.1	58	.	0.015	10	58	.	0	4.9	59	.	0.031	12	58	.	0.045	7.4	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

hexachlorobenzene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.037	11	58	.	0.035	12	58	.	0	6.7	59	.	0.053	8.1	58	.	0.073	8.0	58
1998	FEB	.	.	12	58	.	0.012	13	58	.	0	5.5	59	.	0.022	12	58	.	.	6.2	58
1998	MAR	.	.	11	58	.	0.040	24	58	.	.	7.6	59	.	0.042	13	58	.	0.18	8.1	58
1998	APR	.	0.0044	10	58	.	0.042	14	58	.	0.034	4.1	60	.	0.054	7.5	58	.	0.097	4.9	58
1998	MAY	.	0.014	8.6	58	.	0.021	7.9	58	.	0	.	.	.	0.29	3.1	58	.	0.10	.	.
1998	JUN	.	0.024	5.5	58	.	0.022	5.7	58	.	0.089	.	.	.	0.037	2.3	58	.	0.17	.	.
1998	JUL	.	0.021	4.6	58	.	0.031	5.2	58	.	0.17	.	.	.	0.031	4.0	58	.	0.073	.	.
1998	AUG	.	0.021	4.2	58	.	0.032	4.3	58	.	0.076	.	.	.	0.042	2.4	58	.	0.13	.	.
1998	SEP	.	0.045	4.2	58	.	0.029	3.2	58	.	0.11	.	.	.	0.026	3.8	58	.	0.13	.	.
1998	OCT	.	0.056	9.8	58	.	0.045	5.3	58	.	0.12	2.4	62	.	0.025	5.1	58	.	0.11	2.4	59
1998	NOV	.	0.045	12	58	.	0.043	6.9	58	.	0.20	3.8	61	.	.	6.3	58	.	0.073	5.6	58
1998	DEC	.	0.049	15	58	.	0.035	4.7	58	.	0.14	4.7	61	.	.	7.4	58	.	0.12	8.3	58
1999	JAN	.	0.073	16	58	.	0.068	9.0	58	.	0.15	5.7	59	.	.	13	58	.	0.26	12	58
1999	FEB	.	0.045	17	58	.	0.026	11	58	.	0.19	5.5	59	.	.	10	58	.	0.052	7.5	59
1999	MAR	.	0.025	14	58	.	0.015	13	58	.	0.22	5.2	59	.	0.053	9.8	58	.	0.22	8.0	58
1999	APR	.	.	7.3	58	.	0.075	9.5	58	.	0.59	4.7	58	.	0.095	7.0	58	.	.	7.3	58
1999	MAY	.	0.054	7.7	58	.	0.036	8.1	58	.	0.17	.	.	.	0.065	4.7	58	.	0.077	.	.
1999	JUN	.	0.030	5.6	58	.	0.029	4.9	58	.	.	.	.	.	0.025	2.5	58	.	0.024	.	.
1999	JUL	.	0.036	3.7	58	.	0.032	4.3	58	.	0.22	.	.	.	0.017	3.5	58	.	0.024	.	.
1999	AUG	.	0.017	3.5	58	.	0.028	3.8	58	.	0	.	.	.	0.025	3.3	58	.	0	.	.
1999	SEP	.	0.027	6.2	58	.	0.026	5.8	58	.	0	.	.	.	0.022	3.5	58	.	0	.	.
1999	OCT	.	0.073	12	58	.	0.015	9.2	58	.	0.037	.	.	.	0.032	6.0	58	.	0.084	.	.
1999	NOV	.	0.030	14	58	.	0.014	8.3	58	.	0.16	5.2	59	.	0.036	5.1	58	.	0.15	6.7	59
1999	DEC	.	0.025	12	58	.	0.039	8.1	58	.	0.33	5.9	59	.	0.026	9.3	58	.	.	6.9	59
2000	JAN	.	.	14	58	.	.	12	58	.	0.12	7.2	58	.	0.033	13	58	.	.	8.6	58
2000	FEB	.	.	14	58	.	.	12	58	.	0.14	7.3	58	.	0.048	8.2	58	.	0.11	8.9	58
2000	MAR	.	0.024	12	58	.	0.060	8.9	58	.	.	5.3	58	.	0.034	4.3	58	.	0.10	7.2	58
2000	APR	.	0.038	8.8	58	.	0.079	9.5	58	.	.	3.5	58	.	0.14	7.3	58	.	0.22	4.4	58
2000	MAY	.	0.028	8.0	58	.	0.074	6.9	58	.	0.23	.	.	.	0.033	6.9	58	.	.	.	.
2000	JUN	.	0.083	8.7	58	.	0.038	5.1	58	.	0.064	.	.	.	0.077	4.4	58	.	0.14	.	.
2000	JUL	.	0.024	5.6	58	.	0.045	3.6	58	.	0	.	.	.	0.034	2.7	58	.	0.092	.	.
2000	AUG	.	.	3.1	58	.	0.016	3.3	58	.	0.027	.	.	.	0.026	2.9	58	.	0.10	.	.
2000	SEP	.	0.032	5.9	58	.	0.044	5.5	58	.	0.11	.	.	.	0.039	4.6	58	.	.	.	.
2000	OCT	.	0.033	5.9	58	.	0.025	6.1	58	.	0.14	2.2	58	.	0.039	4.5	58	.	.	.	.
2000	NOV	.	0.056	6.7	58	.	0.060	7.0	58	.	0.046	3.2	58	.	0.072	7.3	58	.	.	4.3	58
2000	DEC	.	0.056	9.7	58	.	0.065	8.5	58	.	.	4.4	58	.	0.081	6.2	58	.	0.13	7.8	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

hexachlorobenzene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	0.048	9.2	58	.	0.030	6.7	58	.	0.11	3.8	59	.	0.039	6.6	58	.	.	6.9	58
2001	FEB	.	0.12	12	58	.	0.041	11	58	.	0.045	6.5	59	.	0.030	7.7	58	.	0	8.7	58
2001	MAR	.	0.047	9.5	58	.	0.019	9.3	58	.	.	4.8	59	.	0.064	6.9	58	.	0.11	8.0	58
2001	APR	.	0.094	5.6	58	.	.	6.2	58	.	0.15	4.2	59	.	0.036	4.8	58	.	0.055	5.1	58
2001	MAY	.	0.054	6.3	58	.	0.084	4.2	58	.	0.12	2.7	59	.	0.038	4.7	58	.	0.087	3.3	58
2001	JUN	.	0.034	7.8	58	.	0.044	2.2	58	.	0.46	.	.	.	0.028	3.1	58	.	0.023	.	.
2001	JUL	.	0.016	5.3	58	.	0.027	2.2	58	.	0.022	.	.	.	0.025	2.7	58	.	0.099	.	.
2001	AUG	.	0.0052	3.7	58	.	0.030	2.5	58	.	0.11	.	.	.	0.034	2.0	58	.	0.18	.	.
2001	SEP	.	0.024	5.1	58	.	0.046	3.4	58	.	0.12	.	.	.	0.045	2.6	58	.	0.15	.	.
2001	OCT	.	0.061	13	58	.	0.075	8.4	58	.	0.17	.	.	.	0.073	7.8	58	.	0.15	.	.
2001	NOV	.	0.047	12	58	.	0.028	5.9	58	.	0.13	4.1	59	.	0.036	6.3	58	.	0.12	3.4	58
2001	DEC	.	0.039	11	58	.	0.021	5.0	58	.	0.072	5.0	59	.	0.051	5.1	58	.	0.18	6.2	58
2002	JAN	.	0.023	9.9	58	.	0.019	5.3	58	.	0.044	5.5	58	.	0.039	11	58	.	0.085	8.2	58
2002	FEB	.	0.027	15	58	.	0.043	9.0	58	.	0.044	6.9	58	.	0.057	13	58	.	0.075	8.1	58
2002	MAR	.	0.052	9.9	58	.	.	5.9	58	.	.	6.5	58	.	0.052	4.9	58	.	0.21	8.5	58
2002	APR	.	0.049	4.6	58	.	0.051	9.9	58	.	0.43	4.9	58	.	0.054	7.0	58	.	0.16	5.0	58
2002	MAY	.	0.043	6.1	58	.	0.062	6.9	58	.	0.15	4.1	58	.	0.056	6.0	58	.	0.16	4.2	58
2002	JUN	.	0.043	6.3	58	.	0.035	3.1	58	.	0.11	.	.	.	0.023	1.4	58	.	0.17	.	.
2002	JUL	.	.	2.9	58	.	0.024	2.7	58	.	0.096	.	.	.	0.039	2.2	58	.	0.057	.	.
2002	AUG	.	0.028	3.5	58	.	0.033	1.9	58	.	0.070	.	.	.	0.017	1.8	58	.	0.018	.	.
2002	SEP	.	0.040	4.4	58	.	0.016	2.4	58	.	.	.	.	.	0.030	2.1	58	.	0	.	.
2002	OCT	.	0.043	6.7	58	.	0.034	3.9	58	.	.	2.7	58	.	0.026	3.8	58	.	0.028	2.9	58
2002	NOV	.	0.023	7.1	58	.	0.017	6.2	58	.	0.032	3.5	58	.	0.059	8.0	58	.	0.029	4.1	59
2002	DEC	.	.	9.2	58	.	0.018	6.5	58	.	0.065	4.4	58	.	0.055	5.2	58	.	0.053	6.0	58
2003	JAN	.	0.037	10	58	.	0.013	6.7	58	.	0.038	3.0	59	.	0.038	7.2	58	.	0.011	5.6	58
2003	FEB	.	0.040	8.8	58	.	0.016	7.4	58	.	0.058	4.9	58	.	0.045	5.5	58	.	0	6.4	58
2003	MAR	.	0.023	11	58	.	0.056	6.4	58	.	0.061	4.2	58	.	0.033	4.8	58	.	0.16	5.5	58
2003	APR	.	0.042	8.6	58	.	0.048	7.7	58	.	0.0014	3.8	58	.	0.062	4.0	58	.	0.039	4.6	58
2003	MAY	.	0.039	5.0	58	.	.	5.6	58	.	0.016	2.4	58	.	0.052	3.3	58	.	0.12	.	.
2003	JUN	.	0.021	2.9	58	.	0.016	3.4	58	.	.	.	.	.	0.033	3.1	58	.	0.057	.	.
2003	JUL	.	0.023	3.0	58	.	0.023	2.9	58	.	0.0075	.	.	.	0.026	2.6	58	.	0.14	.	.
2003	AUG	.	0.019	2.7	58	.	0.014	2.2	58	.	0.012	.	.	.	0.012	2.1	58	.	0.061	.	.
2003	SEP	.	0.032	4.1	58	.	0.020	3.3	58	.	0.026	.	.	.	0.074	4.3	58	.	0.070	.	.
2003	OCT	.	0.029	6.1	58	.	0.022	3.8	58	.	0.025	1.9	58	.	0.028	5.4	58	.	0.034	.	.
2003	NOV	.	0.042	8.0	58	.	0.056	4.8	58	.	0.12	4.0	58	.	0.031	7.7	58	.	0.022	4.0	58
2003	DEC	.	0.020	6.6	58	.	0.024	5.6	58	.	0.15	3.3	58	.	0.045	18	58	.	0.055	5.7	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

hexachlorobenzene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.036	8.5	58	.	0.030	4.6	58	.	0.14	4.0	58	.	0.069	.	.	.	0.77	7.1	58
2004	FEB	.	0.031	9.3	58	.	0.023	5.5	58	.	0.026	5.1	58	.	0.016	5.5	58	.	0.057	6.0	58
2004	MAR	.	0.029	6.2	58	.	0.042	7.3	58	.	0.033	4.6	58	.	0.057	3.6	58	.	0.12	5.2	58
2004	APR	.	0.038	2.9	58	.	0.032	5.0	58	.	0.068	3.5	58	.	0.029	2.1	59	.	0.091	4.6	58
2004	MAY	.	0.038	4.2	58	.	0.078	4.1	58	.	0.075	2.3	58	.	0.067	2.3	58	.	0.16	2.1	58
2004	JUN	.	0.021	5.2	58	.	0.039	2.4	58	.	0.0015	.	.	.	0.011	2.6	58	.	0.083	.	.
2004	JUL	.	0.025	2.8	58	.	0.026	1.8	58	.	0.051	.	.	.	0.0045	1.9	58	.	0.15	.	.
2004	AUG	.	0.025	2.7	58	.	0.021	2.3	58	.	0	.	.	.	0.028	1.7	58	.	0.086	.	.
2004	SEP	.	0.020	3.9	58	.	0.014	2.5	58	.	0.0004	.	.	.	0.053	2.1	58	.	0.096	.	.
2004	OCT	.	0.045	6.8	58	.	0.034	3.8	58	.	0.052	.	.	.	0.037	3.5	58	.	0.035	.	.
2004	NOV	.	0.024	7.6	58	.	0.15	3.9	58	.	0.055	3.6	58	.	0.045	3.3	58	.	0.059	2.3	58
2004	DEC	.	0.044	8.5	58	.	0.040	6.3	58	.	0.081	5.3	58	.	0.069	6.5	58	.	0.15	5.9	58
2005	JAN	.	0.064	8.4	58	.	0.040	5.1	58	.	0.080	4.0	58	.	0.12	8.4	58	.	0.23	5.4	58
2005	FEB	.	0.036	6.9	58	.	0.034	5.0	58	.	0.081	3.8	58	.	0.076	5.3	58	.	0.085	4.8	58
2005	MAR	.	0.026	6.9	58	.	0.033	4.5	58	.	0.031	4.0	58	.	0.056	6.9	58	.	0.051	5.1	58
2005	APR	.	0.045	6.1	58	.	0.025	5.8	58	.	0.058	3.1	58	.	0.24	5.4	58	.	0.13	3.9	58
2005	MAY	.	0.037	5.5	58	.	0.040	3.7	58	.	0.043	.	.	.	0.081	4.2	58	.	0.016	.	.
2005	JUN	.	0.033	5.1	58	.	0.032	2.5	58	.	0.032	.	.	.	0.090	2.1	58	.	0.034	.	.
2005	JUL	.	0.038	3.6	58	.	0.043	1.7	58	.	.	.	.	.	0.20	2.1	58	.	0.044	.	.
2005	AUG	.	0.032	3.0	58	.	0.16	1.8	58	.	0.011	.	.	.	0.16	2.2	58	.	0.046	.	.
2005	SEP	.	0.032	2.3	58	.	0.045	2.1	58	.	.	.	.	.	0.071	2.7	58	.	.	.	.
2005	OCT	.	0.032	4.9	58	.	0.040	3.1	58	.	0.021	.	.	.	0.059	3.5	58	.	.	.	.
2005	NOV	.	0.049	7.0	58	.	0.040	4.8	58	.	0.024	4.3	58	.	.	7.4	58	.	0.040	3.9	58
2005	DEC	.	0.052	5.9	58	.	0.046	5.9	58	.	0.14	5.8	58	.	0.11	8.0	58	.	0.17	5.1	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***cis* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.051	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.12	0.45	59
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.49	58
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.43	58
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.40	58
1992	JUL	.	0.39	.	.	.	0.095	.	.	.	0	.	.	.	0.16	.	.	.	0	0.69	58
1992	AUG	.	0.083	.	.	.	0.065	.	.	.	.	.	.	.	0.098	.	.	.	0	0.72	58
1992	SEP	.	0.072	.	.	.	0.30	.	.	.	0	.	.	.	0.11	.	.	.	0	0.78	58
1992	OCT	.	0.0018	.	.	.	0.0035	.	.	.	0	.	.	.	0	.	.	.	0	0.28	59
1992	NOV	.	0.038	.	.	.	0.051	.	.	.	0	.	.	.	0	.	.	.	0	0.59	59
1992	DEC	.	.	.	.	.	.	.	.	.	0	.	.	.	0.033	.	.	.	0.10	0.62	59
1993	JAN	.	.	.	.	.	.	.	.	.	0	0.44	59	.	0.069	.	.	.	0	0.77	58
1993	FEB	.	0.11	.	.	.	0.13	.	.	.	0	0.20	62	.	0.11	.	.	.	0	0.21	59
1993	MAR	.	0.25	.	.	.	0.33	.	.	.	0	0.16	62	.	0.20	.	.	.	0	0.27	59
1993	APR	.	0.20	.	.	.	0.27	.	.	.	0	0.18	61	.	0	.	.	.	0	0.36	58
1993	MAY	.	0.10	.	.	.	0.025	.	.	.	0	0.40	59	.	0.076	.	.	.	0	0.73	58
1993	JUN	.	0.69	.	.	.	0.068	.	.	.	0	0.50	58	.	1.2	.	.	.	0	1.5	58
1993	JUL	.	0.52	.	.	.	0.014	.	.	.	0	0.30	58	.	0.11	.	.	.	0	0.74	58
1993	AUG	.	0	.	.	.	0.22	.	.	.	0	0.15	59	.	0	.	.	.	0	0.39	58
1993	SEP	.	0.0018	.	.	.	.	.	.	.	0	0.72	58	.	0	.	.	.	.	0.65	58
1993	OCT	.	0.017	.	.	.	0	.	.	.	0	0.60	59	.	0.0083	.	.	.	0.24	0.28	59
1993	NOV	.	0.0037	.	.	.	0.018	.	.	.	0.054	0.37	59	.	0.035	.	.	.	0	0.78	58
1993	DEC	.	0.0080	.	.	.	0.037	.	.	.	0	0.31	59	.	0	.	.	.	.	0.75	58
1994	JAN	.	.	.	.	.	.	.	.	.	0	0.074	79	.	0.043	.	.	.	0	0.28	59
1994	FEB	.	.	.	.	.	.	.	.	.	0	0.29	60	.	0.035	.	.	.	0	0.17	59
1994	MAR	.	.	.	.	.	0	.	.	.	0	0.15	61	.	0	.	.	.	0	0.33	58
1994	APR	.	0	0.36	470	.	0.078	1.2	130	.	0	0.63	59	.	0.21	2.9	69	.	0	1.7	58
1994	MAY	.	0.020	0.52	210	.	0.036	1.1	100	.	0	0.19	59	.	0.049	1.0	87	.	.	0.71	58
1994	JUN	.	0.0070	.	.	.	0	0.69	99	.	0	0.20	59	.	0	1.2	67	.	0	1.2	58
1994	JUL	.	0	0.75	100	.	0.42	1.1	72	.	0	0.57	58	.	0	1.7	61	.	0	0.98	58
1994	AUG	.	0.23	1.5	71	.	0.14	1.8	64	.	0	0.55	58	.	0.34	2.1	61	.	0	0.63	58
1994	SEP	.	0.23	0.68	100	.	0.63	0.38	140	.	0	0.13	59	.	0.28	0.62	77	.	0	0.52	58
1994	OCT	.	0.36	1.5	100	.	1.2	1.3	100	.	0	0.20	59	.	1.0	0.86	72	.	0	0.48	58
1994	NOV	.	0.37	1.2	140	.	4.9	1.9	89	.	.	0.42	59	.	0.84	2.0	67	.	0	1.4	58
1994	DEC	.	0.10	0.44	210	.	0.57	0.87	130	.	0	0.16	61	.	1.9	0.69	120	.	0	0.43	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***cis* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	0.096	1.5	63	.	1.0	0.60	85	.	.	.	.	.	3.6	2.2	62	.	.	0.66	58
1995	FEB	.	0.21	0.52	92	.	0.15	0.55	97	.	.	0.28	99	.	0.75	2.2	62	.	0	0.41	59
1995	MAR	.	0.19	0.34	92	.	1.2	0.60	85	.	.	0.15	110	.	1.4	0.65	66	.	.	0.27	59
1995	APR	.	0.0063	0.24	85	.	0.58	0.38	100	.	0.049	0.14	130	.	2.5	1.3	62	.	0	1.2	58
1995	MAY	.	0.010	0.62	64	.	0.057	2.0	60	.	0.093	0.13	94	.	0.34	1.3	60	.	8.1	0.39	58
1995	JUN	.	0.0011	0.23	76	.	0.0077	0.19	85	.	0	0.10	82	.	0.11	0.35	61	.	.	0.16	58
1995	JUL	.	0.091	0.68	60	.	0.17	1.1	60	.	0	0.35	61	.	0.94	1.9	59	.	0.24	0.66	58
1995	AUG	.	0.075	1.3	59	.	0.088	0.61	61	.	0	0.30	61	.	0.41	1.5	59	.	0.0087	0.47	58
1995	SEP	.	0.077	0.51	65	.	0.054	0.84	63	.	0	0.35	63	.	0.098	1.5	59	.	0	0.59	58
1995	OCT	.	0.18	0.64	70	.	0.55	0.58	81	.	0	0.28	80	.	1.0	2.5	60	.	0.018	0.78	58
1995	NOV	.	.	0.17	140	.	0.40	0.45	110	.	0.55	0.13	150	.	1.4	0.72	77	.	0	0.62	58
1995	DEC	.	0.038	0.54	76	.	0.10	0.40	110	.	0	0.15	140	.	0.13	0.44	100	.	0	0.35	59
1996	JAN	.	0.26	0.37	61	.	0.35	0.30	59	.	0	0.16	63	.	0.66	1.1	59	.	.	0.65	66
1996	FEB	.	0.016	0.079	92	.	0.13	0.25	60	.	0.12	0.062	80	.	0.19	0.21	65	.	0.038	0.17	110
1996	MAR	.	0.0011	0.35	60	.	0.0091	0.43	59	.	0	0.22	61	.	0.0046	0.24	61	.	0.032	0.16	89
1996	APR	.	0.0016	0.15	61	.	0.0044	0.37	59	.	0.14	0.14	62	.	0.30	0.50	59	.	0.28	0.45	64
1996	MAY	.	0.0098	0.21	59	.	.	0.63	58	.	0	0.24	59	.	0.14	1.4	58	.	0.0058	0.79	59
1996	JUN	.	0.0018	0.76	58	.	0.11	0.54	58	.	0	0.22	58	.	0.025	0.94	58	.	17	0.70	59
1996	JUL	.	0.15	0.60	58	.	0.0064	0.83	58	.	0	0.13	59	.	.	0.72	58	.	0	0.24	62
1996	AUG	.	0.037	0.44	58	.	0.096	0.87	58	.	.	0.15	59	.	0.0037	0.73	58	.	0	0.54	59
1996	SEP	.	0.11	0.65	58	.	0.12	0.67	58	.	0.13	0.16	59	.	0.19	0.85	58	.	0	0.34	61
1996	OCT	.	0.37	0.92	59	.	0.26	1.2	58	.	0.11	0.65	58	.	0.23	1.2	58	.	0	0.68	60
1996	NOV	.	0.086	0.79	59	.	0.062	0.80	58	.	0	0.46	59	.	0.22	0.61	59	.	0	0.43	64
1996	DEC	.	0.086	0.57	59	.	0.55	0.56	58	.	0	0.15	61	.	0.35	1.1	59	.	0	0.43	65
1997	JAN	.	0.24	0.27	71	.	0.69	0.45	59	.	.	0.060	70	.	0.28	0.82	62	.	.	0.48	58
1997	FEB	.	0.026	0.19	73	.	0.51	0.18	60	.	0	0.14	60	.	0.86	1.5	59	.	0.15	0.50	58
1997	MAR	.	0.097	0.083	110	.	0.39	0.30	59	.	0	.	.	.	1.7	1.3	59	.	0.10	0.59	58
1997	APR	.	0.011	0.21	64	.	0.16	0.56	58	.	0	0.19	59	.	0.95	0.62	59	.	0	0.24	58
1997	MAY	.	0.10	0.43	59	.	0.38	0.57	58	.	.	0.22	59	.	2.3	1.3	59	.	0	0.42	58
1997	JUN	.	0.044	0.73	58	.	0.26	1.3	58	.	0	0.55	58	.	1.3	1.5	58	.	0	0.80	58
1997	JUL	.	0.049	0.53	59	.	0.33	1.1	58	.	0.068	0.20	58	.	0.73	1.5	58	.	0	1.1	58
1997	AUG	.	0.0031	0.62	58	.	0.22	1.0	58	.	1.5	0.24	58	.	1.2	1.5	58	.	0	0.38	58
1997	SEP	.	0.025	0.74	59	.	0.17	1.6	58	.	0	0.30	58	.	1.1	1.5	58	.	0	0.58	58
1997	OCT	.	0.36	1.4	58	.	0.45	2.0	58	.	0	0.37	58	.	0.86	2.0	58	.	0	0.48	58
1997	NOV	.	0.45	0.29	62	.	0.74	0.41	59	.	0	0.11	61	.	3.0	0.97	59	.	0	0.13	59
1997	DEC	.	0.12	0.21	65	.	0.22	0.72	58	.	0.048	0.16	60	.	.	1.2	59	.	0.081	0.34	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***cis* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.12	0.36	66	.	1.0	0.67	68	.	0.017	0.15	60	.	.	0.99	61	.	0.065	0.33	58
1998	FEB	.	.	0.64	60	.	0.34	0.78	64	.	0	0.20	59	.	0.24	0.82	60	.	.	0.20	58
1998	MAR	.	.	0.20	72	.	0.22	0.67	75	.	.	0.19	60	.	0.79	0.10	170	.	0	0.15	59
1998	APR	.	0.022	0.23	67	.	0.13	0.69	64	.	0	0.20	59	.	.	0.63	60	.	0	0.32	58
1998	MAY	.	0.051	0.38	61	.	0.18	0.68	61	.	0	0.22	59	.	0.82	0.59	59	.	0	0.55	58
1998	JUN	.	0.0040	0.36	60	.	0.20	0.95	59	.	0.0050	0.30	58	.	0.32	1.5	58	.	0.023	0.67	58
1998	JUL	.	0.030	0.24	60	.	0.15	0.48	61	.	.	0.14	59	.	0.47	1.8	58	.	.	0.37	58
1998	AUG	.	0.087	0.49	59	.	0.76	0.67	60	.	.	0.16	58	.	1.6	1.1	58	.	0.24	0.37	58
1998	SEP	.	0.097	0.25	62	.	0.22	0.26	69	.	0.012	0.34	58	.	0.63	1.4	58	.	0.11	0.68	58
1998	OCT	.	0.31	0.46	62	.	0.43	0.28	85	.	0.028	0.20	59	.	0.52	0.92	59	.	0	0.32	58
1998	NOV	.	0.43	0.38	65	.	1.2	0.50	76	.	0.11	0.28	59	.	.	1.2	59	.	0.065	0.65	58
1998	DEC	.	0.28	0.68	62	.	0.42	0.37	83	.	0.13	0.31	59	.	.	0.79	60	.	0.089	0.56	58
1999	JAN	.	0.39	0.53	130	.	0.57	0.51	150	.	0.047	0.20	59	.	.	0.40	260	.	0.25	0.64	58
1999	FEB	.	0.25	0.59	110	.	0.24	1.4	78	.	0.016	0.41	58	.	.	0.98	99	.	0.046	0.50	58
1999	MAR	.	0.038	0.44	120	.	0.14	1.1	89	.	0	0.11	59	.	1.6	0.66	100	.	0.092	0.43	58
1999	APR	.	.	0.22	140	.	0.83	0.53	120	.	0.039	0.15	59	.	1.6	0.49	120	.	.	0.28	58
1999	MAY	.	0.28	1.0	67	.	0.22	1.9	62	.	0.037	0.46	58	.	0.79	1.4	63	.	0	1.2	58
1999	JUN	.	0.046	0.69	66	.	0.22	2.7	59	.	.	0.41	58	.	0.65	1.1	61	.	0.14	1.3	58
1999	JUL	.	0.0048	0.41	71	.	0.071	1.2	62	.	0	0.45	58	.	0.19	1.7	60	.	0	1.2	58
1999	AUG	.	0.026	0.44	69	.	0.14	0.72	68	.	0	0.27	58	.	0.41	1.2	62	.	0	0.37	58
1999	SEP	.	0.16	0.33	97	.	0.19	1.1	65	.	0	0.31	58	.	1.3	1.4	62	.	0.043	0.72	58
1999	OCT	.	0.38	0.61	88	.	0.15	1.4	69	.	0	0.44	58	.	1.5	1.5	67	.	0	0.94	58
1999	NOV	.	0.10	0.69	94	.	0.34	0.64	100	.	0	0.22	59	.	1.3	0.90	89	.	0	1.2	58
1999	DEC	.	0.12	1.0	76	.	0.67	0.90	82	.	0.12	0.65	58	.	0.93	0.77	110	.	.	0.59	58
2000	JAN	.	.	0.86	91	.	.	1.1	71	.	0	0.13	63	.	1.1	0.68	70	.	.	0.25	59
2000	FEB	.	.	0.45	140	.	.	0.59	98	.	0	0.13	62	.	2.0	0.50	73	.	0.035	0.29	58
2000	MAR	.	0.030	0.35	160	.	0.43	0.81	75	.	.	0.22	59	.	0.90	1.0	60	.	0.013	0.57	58
2000	APR	.	0.071	0.45	96	.	0.34	0.62	91	.	.	0.18	59	.	6.7	0.56	61	.	0.074	0.30	58
2000	MAY	.	0.062	0.56	81	.	0.38	0.99	64	.	0.074	0.30	58	.	0.79	2.4	59	.	.	0.69	58
2000	JUN	.	0.19	0.33	110	.	0.19	0.35	88	.	0	0.14	59	.	2.8	1.4	59	.	10	0.42	58
2000	JUL	.	0.040	0.38	79	.	0.14	0.42	70	.	0	0.11	59	.	0.40	0.55	59	.	0	0.20	58
2000	AUG	.	.	0.27	90	.	0.19	0.55	66	.	0	0.17	58	.	0.22	0.82	59	.	0	0.31	58
2000	SEP	.	0.023	0.78	72	.	0.24	1.5	62	.	0.014	0.35	58	.	0.19	1.5	59	.	.	0.37	58
2000	OCT	.	0.066	0.24	160	.	0.24	0.52	81	.	0.0015	0.16	59	.	0.73	0.78	60	.	.	0.42	58
2000	NOV	.	0.43	0.28	180	.	0.92	0.52	94	.	0.075	0.29	59	.	2.7	1.2	60	.	.	0.33	58
2000	DEC	.	0.33	0.44	140	.	0.81	0.44	110	.	.	0.095	62	.	.	0.63	67	.	0.062	0.19	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***cis* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	0.41	0.40	99	.	0.16	0.38	66	.	0.61	0.032	87	.	.	1.0	65	.	.	0.24	59
2001	FEB	.	0.56	0.91	68	.	0.25	1.0	60	.	0.18	0.24	59	.	0.14	0.90	67	.	0	0.29	59
2001	MAR	.	0.14	0.39	80	.	0.042	0.26	77	.	.	0.21	59	.	0.11	0.50	75	.	0.015	0.35	59
2001	APR	.	0.083	0.16	130	.	.	0.47	65	.	0.0071	0.15	59	.	0.38	0.35	74	.	0.034	0.26	59
2001	MAY	.	0.11	0.23	80	.	0.25	0.47	61	.	0.021	0.26	59	.	0.50	0.66	61	.	0.058	0.41	58
2001	JUN	.	0.082	1.0	60	.	0.69	0.46	60	.	0	0.33	58	.	1.0	1.3	59	.	0.018	0.30	58
2001	JUL	.	0.046	0.85	59	.	0.13	0.49	59	.	0	0.41	58	.	0.88	0.78	60	.	0.029	0.66	58
2001	AUG	.	0.092	0.30	66	.	0.44	0.42	60	.	0	0.24	58	.	1.5	0.97	59	.	0	0.47	58
2001	SEP	.	0.12	0.35	70	.	0.59	0.32	63	.	0.010	0.20	59	.	.	0.42	66	.	0	0.19	59
2001	OCT	.	0.30	1.1	62	.	0.94	1.6	59	.	0.010	0.76	58	.	.	1.5	61	.	0.031	0.64	58
2001	NOV	.	0.57	0.51	78	.	.	0.50	63	.	0	0.51	58	.	.	1.3	61	.	0.075	0.62	58
2001	DEC	.	0.84	0.43	95	.	.	0.28	72	.	0.020	0.18	59	.	.	0.27	110	.	0.094	0.23	59
2002	JAN	.	0.36	0.34	66	.	0.44	0.44	60	.	0.0039	0.16	59	.	0.62	1.0	65	.	0.084	0.56	58
2002	FEB	.	0.11	0.66	61	.	0.77	1.0	59	.	0.057	0.37	58	.	0.74	1.0	66	.	0.011	0.43	59
2002	MAR	.	0.11	0.30	68	.	.	0.22	65	.	.	0.12	60	.	0.74	0.66	63	.	0.36	0.40	59
2002	APR	.	0.19	0.052	120	.	0.83	1.1	59	.	0.56	0.28	58	.	1.0	1.2	60	.	0.045	0.42	58
2002	MAY	.	0.085	0.25	64	.	0.17	0.91	59	.	0.072	0.24	58	.	0.61	0.73	62	.	0.051	0.41	58
2002	JUN	.	0.10	1.1	58	.	0.13	1.4	58	.	0.076	0.24	58	.	0.24	0.62	59	.	0.0055	0.27	58
2002	JUL	.	.	0.33	59	.	0.31	0.73	58	.	0.072	0.45	58	.	0.97	1.2	59	.	0.052	0.52	58
2002	AUG	.	0.085	0.27	60	.	0.48	0.25	59	.	0.064	0.17	58	.	0.23	0.60	59	.	0.031	0.33	58
2002	SEP	.	0.14	0.28	61	.	0.21	0.22	60	.	.	0.18	58	.	1.1	0.28	65	.	0.070	0.17	58
2002	OCT	.	0.36	0.30	63	.	0.80	0.26	61	.	.	0.25	58	.	.	0.47	65	.	0.058	0.20	59
2002	NOV	.	0.28	0.32	64	.	0.31	0.31	61	.	0.023	0.36	58	.	.	1.7	60	.	0.077	0.87	58
2002	DEC	.	.	0.20	76	.	0.79	0.26	63	.	0.034	0.13	59	.	.	0.36	88	.	0.074	0.29	59
2003	JAN	.	0.25	0.26	170	.	0.56	0.23	300	.	0.066	0.031	110	.	2.0	0.36	140	.	0.083	0.068	75
2003	FEB	.	0.26	0.27	140	.	0.34	0.38	190	.	0.040	0.12	63	.	1.7	0.63	79	.	0.22	0.16	61
2003	MAR	.	0.072	0.45	89	.	.	0.59	120	.	0.0067	0.18	60	.	.	0.60	74	.	0.0086	0.46	59
2003	APR	.	0.077	0.33	110	.	0.36	0.80	97	.	0.0093	0.32	59	.	0.58	0.47	71	.	0.027	0.46	59
2003	MAY	.	0.066	0.27	88	.	.	1.3	65	.	0.019	0.19	59	.	0.73	0.72	64	.	0.055	0.22	59
2003	JUN	.	0	0.11	120	.	0.088	0.30	100	.	.	0.23	59	.	.	1.1	60	.	0.051	0.68	58
2003	JUL	.	0	0.32	69	.	0.027	0.46	79	.	0.0069	0.21	58	.	0.045	1.5	59	.	0.11	0.60	58
2003	AUG	.	0.046	0.22	73	.	0.091	0.47	73	.	0.0072	0.32	58	.	.	0.89	59	.	0.056	0.43	58
2003	SEP	.	0.15	0.51	68	.	0.32	0.54	85	.	0.0088	0.26	58	.	.	0.85	62	.	0.057	0.34	58
2003	OCT	.	0.14	0.27	98	.	0.44	0.37	120	.	0.0066	0.22	59	.	.	0.89	64	.	0.032	0.32	59
2003	NOV	.	0.19	0.68	75	.	1.1	0.65	110	.	0.043	0.34	59	.	.	1.5	62	.	0.024	0.52	58
2003	DEC	.	0.063	0.21	140	.	0.20	0.26	270	.	0.030	0.12	61	.	.	0.85	75	.	0.46	0.53	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***cis* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.22	0.30	170	.	0.043	0.17	59	.	0.036	0.055	72	.	0.11	0.42	58	.	1.5	0.15	63
2004	FEB	.	0.048	0.14	270	.	0.024	0.060	60	.	0.015	0.18	59	.	0.014	0.23	58	.	0.049	0.32	59
2004	MAR	.	0.026	0.34	110	.	0.060	0.53	58	.	0.022	0.24	59	.	0.073	0.21	58	.	0.60	0.33	59
2004	APR	.	0.052	0.21	110	.	0.049	0.53	58	.	0.0059	0.29	59	.	0.040	0	.	.	0.0089	0.75	58
2004	MAY	.	0.036	0.20	120	.	0.073	0.51	58	.	0.016	0.15	59	.	0.11	0.50	58	.	0.023	0.39	58
2004	JUN	.	0	0.30	88	.	0.031	0.69	58	.	0.014	0.49	58	.	0.012	0.77	58	.	0.021	0.64	58
2004	JUL	.	0	0.19	87	.	0.033	0.17	58	.	0.019	0.13	59	.	0.014	0.60	58	.	0.030	0.46	58
2004	AUG	.	0	0.29	80	.	0.012	0.37	58	.	0.010	0.13	59	.	0.0055	0.37	58	.	0.017	0.20	58
2004	SEP	.	0.060	0.13	170	.	0.032	0.66	58	.	0.0057	0.33	58	.	0.19	0.78	58	.	0.047	0.64	58
2004	OCT	.	0.068	0.45	91	.	0.057	0.25	58	.	0.038	0.43	58	.	0.055	0.66	58	.	0.025	0.60	58
2004	NOV	.	0.063	0.15	260	.	0.24	0.13	59	.	0.029	0.19	59	.	0.14	0.42	58	.	0.019	0.23	59
2004	DEC	.	0.077	0.10	450	.	0.072	0.11	59	.	0.034	0.13	61	.	0.18	0.29	58	.	0.072	0.18	61
2005	JAN	.	0.073	0.11	680	.	0.081	0.28	140	.	0.074	0.065	62	.	0.0056	0.44	170	.	0.069	0.11	59
2005	FEB	.	0.0015	0.27	260	.	0.078	0.26	130	.	0.0003	0.13	59	.	0.11	0.55	120	.	0.045	0.29	58
2005	MAR	.	0.049	0.12	510	.	0.073	0.25	140	.	0.012	0.092	60	.	0.056	0.54	120	.	0.032	0.17	59
2005	APR	.	0.078	0.35	150	.	0.0016	0.60	75	.	0.031	0.16	59	.	0.10	0.65	100	.	0.036	0.23	58
2005	MAY	.	0.074	0.45	110	.	0.12	0.60	69	.	0.055	0.32	58	.	0.088	0.76	72	.	0.018	0.51	58
2005	JUN	.	0.088	0.65	82	.	0.044	1.1	60	.	0.037	0.27	58	.	0.034	0.90	62	.	0.0002	0.52	58
2005	JUL	.	0.046	0.55	75	.	0.26	0.46	64	.	.	0.21	58	.	0.48	0.86	62	.	0.12	0.58	58
2005	AUG	.	0.048	0.59	73	.	0.048	0.73	61	.	0.016	0.25	58	.	0.048	1.0	62	.	0.071	0.42	58
2005	SEP	.	0.0003	0.39	110	.	0.13	0.57	64	.	.	0.37	58	.	0.21	1.3	62	.	.	0.71	58
2005	OCT	.	0.036	0.39	120	.	0.53	0.67	66	.	0.021	0.34	58	.	0.20	0.88	72	.	.	0.42	58
2005	NOV	.	0.027	0.39	180	.	0.076	0.45	97	.	0.023	0.21	59	.	0.018	0.93	96	.	0.056	0.38	58
2005	DEC	.	0.0006	0.26	250	.	0.55	0.40	100	.	0.029	0.20	59	.	0.34	0.73	120	.	0.038	0.32	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.31	59
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.49	59
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.34	59
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	0.28	59
1992	JUL	.	0.033	.	.	.	0.59	.	.	.	0	.	.	.	0.040	.	.	.	0	0.58	58
1992	AUG	.	0.040	.	.	.	0.19	.	.	.	.	.	.	.	0.082	.	.	.	0	0.55	58
1992	SEP	.	0.10	.	.	.	0.0003	.	.	.	0.41	.	.	.	0.13	.	.	.	0.85	0.63	58
1992	OCT	.	0.019	.	.	.	0.016	.	.	.	0	.	.	.	0.67	.	.	.	0.20	0.23	60
1992	NOV	.	0.13	.	.	.	0.21	.	.	.	0	.	.	.	6.8	.	.	.	0	0.63	59
1992	DEC	.	.	.	.	.	.	.	.	.	0	.	.	.	0.079	.	.	.	0	0.66	59
1993	JAN	.	.	.	.	.	.	.	.	.	0	0.40	60	.	0.31	.	.	.	0	0.89	61
1993	FEB	.	0.17	.	.	.	0.30	.	.	.	0	0.15	66	.	2.5	.	.	.	0	0.22	76
1993	MAR	.	0.83	.	.	.	0.95	.	.	.	0	0.13	65	.	10	.	.	.	0	0.27	65
1993	APR	.	2.0	.	.	.	7.6	.	.	.	0	0.14	64	.	21	.	.	.	0.068	0.33	62
1993	MAY	.	3.4	.	.	.	2.1	.	.	.	0	0.33	59	.	6.4	.	.	.	0	0.64	59
1993	JUN	.	3.0	.	.	.	2.3	.	.	.	0	0.43	58	.	4.2	.	.	.	0	1.4	58
1993	JUL	.	7.6	.	.	.	5.0	.	.	.	0	0.19	59	.	7.7	.	.	.	0.11	0.56	59
1993	AUG	.	0.12	.	.	.	1.2	.	.	.	0	0.097	60	.	6.0	.	.	.	0	0.28	59
1993	SEP	.	0.045	.	.	.	.	.	.	.	0	0.60	58	.	0.20	.	.	.	.	0.56	59
1993	OCT	.	0.15	.	.	.	0.61	.	.	.	0	0.51	59	.	1.3	.	.	.	0.11	0.21	72
1993	NOV	.	0.47	.	.	.	2.7	.	.	.	0	0.37	60	.	10	.	.	.	0	0.89	59
1993	DEC	.	1.1	.	.	.	1.8	.	.	.	0	0.31	60	.	6.3	.	.	.	.	0.86	60
1994	JAN	.	.	.	.	.	.	.	.	.	0	0.051	88	.	2.4	.	.	.	0	0.25	61
1994	FEB	.	.	.	.	.	.	.	.	.	0.099	0.31	59	.	9.4	.	.	.	0.49	0.13	66
1994	MAR	.	.	.	.	.	3.0	.	.	.	0.23	0.14	61	.	12	.	.	.	0.43	0.30	59
1994	APR	.	1.5	0.50	250	.	2.1	1.7	58	.	0.30	0.59	58	.	3.8	3.4	60	.	0	1.7	58
1994	MAY	.	0.0055	0.38	200	.	0.12	1.5	58	.	0.022	0.14	60	.	0.51	0.96	65	.	.	0.62	58
1994	JUN	.	0.95	.	.	.	0.87	0.70	58	.	0.0088	0.19	59	.	0.21	1.1	60	.	0	1.0	58
1994	JUL	.	0.55	0.71	85	.	1.1	0.91	58	.	0.12	0.41	58	.	0.23	1.3	59	.	0	0.65	58
1994	AUG	.	1.3	1.0	74	.	2.6	1.4	58	.	0.12	0.42	58	.	0.36	1.6	59	.	0	0.43	58
1994	SEP	.	0.17	0.43	120	.	1.4	0.18	59	.	0	0.077	60	.	0.024	0.34	71	.	0	0.40	58
1994	OCT	.	0.58	0.47	200	.	8.2	0.72	59	.	0	0.13	60	.	0.082	0.57	64	.	0	0.35	59
1994	NOV	.	0.018	0.60	200	.	0.19	1.7	58	.	.	0.40	59	.	0.12	1.5	61	.	0	1.3	58
1994	DEC	.	0.089	0.30	220	.	0	0.81	58	.	0	0.13	61	.	1.7	0.45	90	.	0	0.43	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	0.13	3.7	58	.	0.018	0.41	69	.	.	.	.	.	9.1	1.1	58	.	.	0.65	59
1995	FEB	.	0.11	0.079	130	.	0.41	0.22	100	.	.	0.24	84	.	1.6	0.82	58	.	0	0.39	59
1995	MAR	.	0.22	0.11	77	.	0.63	0.27	80	.	.	0.11	100	.	2.1	0.40	58	.	.	0.24	59
1995	APR	.	0.15	0.17	62	.	0.28	0.24	80	.	0	0.13	100	.	4.8	1.1	58	.	0	1.0	58
1995	MAY	.	0.14	0.38	59	.	0.35	1.5	59	.	0	0.098	88	.	0.44	1.2	58	.	0	0.29	59
1995	JUN	.	0.10	0.14	61	.	0.18	0.17	65	.	0	0.082	77	.	0.17	0.28	58	.	.	0.12	59
1995	JUL	.	0.13	0.43	59	.	0.068	0.82	59	.	0	0.24	61	.	2.2	1.3	58	.	0	0.53	58
1995	AUG	.	0.0055	1.1	58	.	0.30	0.53	59	.	0	0.20	62	.	0.22	1.2	58	.	0	0.32	58
1995	SEP	.	0.052	0.22	61	.	0.030	0.64	60	.	0	0.26	62	.	0.058	1.3	58	.	0	0.49	58
1995	OCT	.	0.30	0.35	61	.	0.12	0.43	66	.	0	0.19	81	.	0.26	2.2	58	.	0	0.74	58
1995	NOV	.	.	0	.	.	0.046	0.23	93	.	0	0.081	170	.	0.76	0.43	58	.	0	0.62	59
1995	DEC	.	0.25	0.89	59	.	0.13	0.36	74	.	0	0.13	120	.	2.3	0.41	58	.	0	0.33	59
1996	JAN	.	0.21	0.78	.	.	0.20	0.14	62	.	0.0086	0.17	61	.	3.4	0.78	59	.	.	0.74	59
1996	FEB	.	0.0076	0	.	.	0.041	0.058	75	.	0.17	0.056	77	.	0.99	0.057	73	.	0.055	0.17	65
1996	MAR	.	0	0.26	.	.	0.50	0.30	59	.	0.047	0.20	60	.	1.4	0.13	60	.	0.049	0.12	65
1996	APR	.	0.064	0.089	.	.	1.9	0.22	59	.	0.13	0.099	63	.	5.1	0.36	59	.	0.15	0.35	59
1996	MAY	.	0.028	0.10	.	.	.	0.36	59	.	0.51	0.14	59	.	0.87	1.3	58	.	0.021	0.69	58
1996	JUN	.	0.0029	0.39	.	.	0.63	0.41	58	.	0.21	0.16	59	.	2.0	0.74	58	.	0	0.54	58
1996	JUL	.	1.3	0.28	.	.	1.2	0.62	58	.	0	0.077	59	.	.	0.50	58	.	0	0.15	60
1996	AUG	.	0.0031	0.21	.	.	0.045	0.61	58	.	.	0.089	59	.	0.44	0.51	58	.	0	0.37	58
1996	SEP	.	0.38	0.28	.	.	0.22	0.48	58	.	0	0.082	59	.	3.4	0.56	58	.	0.095	0.18	59
1996	OCT	.	1.5	0.71	.	.	0.11	1.3	58	.	0	0.61	58	.	0.19	1.0	58	.	0	0.52	59
1996	NOV	.	0.73	0.68	.	.	0.13	0.74	58	.	0	0.43	59	.	0.096	0.51	59	.	0	0.31	59
1996	DEC	.	0.067	0.25	.	.	0.039	0.39	59	.	0	0.15	60	.	0.0097	1.0	58	.	0.25	0.46	59
1997	JAN	.	0.11	0.078	140	.	0.049	0.50	68	.	.	0.059	82	.	0.040	0.68	60	.	.	0.53	58
1997	FEB	.	0.018	0.069	130	.	0.077	0.11	150	.	0	0.12	63	.	0.097	1.4	58	.	0.65	0.56	58
1997	MAR	.	0.024	0.057	140	.	0.028	0.19	100	.	0	.	.	.	0.14	1.1	59	.	0.18	0.75	58
1997	APR	.	0	0.13	70	.	0	0.29	75	.	0	0.12	62	.	0.11	0.46	59	.	0	0.18	59
1997	MAY	.	0	1.5	58	.	0.069	0.39	65	.	.	0.13	61	.	0.17	0.91	59	.	0	0.33	58
1997	JUN	.	0	0.42	59	.	0.051	0.93	59	.	0	0.42	58	.	0.015	1.1	58	.	0	0.62	58
1997	JUL	.	0.020	0.38	59	.	0.022	0.92	59	.	0.65	0.14	59	.	0.074	1.0	58	.	0	0.85	58
1997	AUG	.	0.015	0.49	59	.	0.074	0.89	59	.	1.1	0.13	59	.	0.052	1.6	58	.	0.072	0.29	58
1997	SEP	.	0.0086	0.55	59	.	0.064	1.1	59	.	0.31	0.21	59	.	0.057	1.1	58	.	0	0.42	58
1997	OCT	.	0.074	2.1	58	.	0.056	1.9	59	.	0.0086	0.40	59	.	0.053	1.8	58	.	0	0.42	58
1997	NOV	.	0.0038	0.18	67	.	0.020	0.34	70	.	0	0.078	70	.	0.057	0.80	59	.	0.060	0.093	60
1997	DEC	.	0.013	0.19	65	.	0.015	0.67	62	.	0	0.21	60	.	0.038	2.1	58	.	0.0038	0.32	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	0.045	0.047	140	.	0.029	0.26	74	.	0.21	0.12	61	.	0.043	0.61	59	.	0	0.30	58
1998	FEB	.	.	0.70	59	.	0	0.67	60	.	0.51	0.17	59	.	0.0033	0.71	58	.	.	0.19	58
1998	MAR	.	.	0.13	68	.	0.072	0.20	99	.	.	0.14	60	.	0	0.23	60	.	0.11	0.12	59
1998	APR	.	0.0051	0.13	67	.	0.054	0.45	62	.	0	0.13	59	.	0.12	0.62	58	.	0	0.26	58
1998	MAY	.	0.011	0.18	62	.	0.039	0.59	59	.	0	0.14	59	.	0.039	0.40	58	.	0.12	0.36	58
1998	JUN	.	0.079	0.21	60	.	0.096	0.70	59	.	0.091	0.18	58	.	0.073	1.2	58	.	0.088	0.44	58
1998	JUL	.	0.019	0.086	63	.	0.026	0.37	59	.	0.022	0.073	59	.	0.039	1.2	58	.	.	0.24	58
1998	AUG	.	0.022	0.42	59	.	0.033	0.54	59	.	0.011	0.094	59	.	0.042	0.80	58	.	.	0.24	58
1998	SEP	.	0.019	0.17	61	.	0.026	0.18	65	.	0	0.19	58	.	0.013	0.97	58	.	0	0.49	58
1998	OCT	.	0.061	0.40	60	.	0.048	0.20	73	.	0.0009	0.14	59	.	0.024	1.3	58	.	0	0.25	58
1998	NOV	.	0.053	0.22	65	.	0.071	0.16	97	.	0.036	0.23	59	.	.	1.4	58	.	0	0.59	58
1998	DEC	.	0.029	0.43	61	.	0.051	0.42	64	.	0.041	0.25	59	.	.	0.77	58	.	0	0.50	58
1999	JAN	.	0.046	0.17	73	.	0.066	0.23	60	.	0.027	0.17	59	.	.	0.51	60	.	0	0.61	58
1999	FEB	.	0.036	0.53	60	.	0.025	1.4	58	.	0.022	0.40	58	.	.	0.85	59	.	0	0.42	58
1999	MAR	.	0.029	0.18	66	.	0.020	0.97	58	.	0.027	0.063	60	.	0.049	0.55	59	.	0.048	0.28	59
1999	APR	.	.	0.096	68	.	0.12	0.20	60	.	0.12	0.088	59	.	0.15	0.30	60	.	.	0.18	59
1999	MAY	.	0.036	0.66	59	.	0.10	1.4	58	.	0.049	0.31	58	.	0.13	1.0	58	.	0.0028	0.85	58
1999	JUN	.	0.0057	0.45	59	.	0.0044	2.4	58	.	.	0.23	58	.	0.065	0.86	58	.	0.051	0.89	58
1999	JUL	.	0.013	0.24	59	.	0.0015	1.1	58	.	0.087	0.28	58	.	0.026	1.2	58	.	0	0.80	58
1999	AUG	.	0.010	0.22	59	.	0.016	0.62	58	.	0.069	0.16	58	.	0.037	0.90	58	.	0	0.17	58
1999	SEP	.	0.030	0.14	63	.	0.028	0.73	58	.	0.028	0.16	58	.	0.030	1.1	58	.	0	0.50	58
1999	OCT	.	0.048	0.48	59	.	0.019	1.8	58	.	0.0099	0.30	58	.	0.028	1.1	58	.	0	0.66	58
1999	NOV	.	0.018	0.29	62	.	0.016	0.23	59	.	0	0.13	59	.	0.050	0.74	59	.	0	0.99	58
1999	DEC	.	0.024	0.49	60	.	0.036	0.54	58	.	0.35	0.54	58	.	0.026	0.48	59	.	.	0.47	58
2000	JAN	.	.	0.031	3000	.	.	0.23	72	.	0.25	0.12	62	.	0.020	0.32	66	.	.	0.27	58
2000	FEB	.	.	0.24	380	.	.	0.14	91	.	0.15	0.12	62	.	0.0076	0.31	64	.	0	0.26	58
2000	MAR	.	0	0.21	390	.	0.072	0.35	63	.	.	0.20	59	.	0.087	0.69	59	.	0.087	0.46	58
2000	APR	.	0	0.32	170	.	0.022	0.38	63	.	.	0.12	59	.	0.22	0.35	59	.	0.36	0.22	58
2000	MAY	.	0.021	0.42	130	.	0.094	0.87	59	.	0	0.24	58	.	0.085	1.8	58	.	.	0.51	58
2000	JUN	.	0.061	0.14	350	.	0.042	0.20	64	.	0	0.066	59	.	0.14	0.87	58	.	0.043	0.24	58
2000	JUL	.	0	0.19	180	.	0	0.23	60	.	0.066	0.058	59	.	0.035	0.41	59	.	0.074	0.12	58
2000	AUG	.	.	0.13	230	.	0.014	0.31	60	.	0.071	0.10	59	.	0.015	0.45	59	.	0	0.21	58
2000	SEP	.	0.039	0.29	190	.	0.055	1.1	59	.	0	0.29	58	.	0.080	1.0	58	.	.	0.25	58
2000	OCT	.	0.018	0.088	640	.	0.042	0.34	61	.	0.023	0.12	59	.	0.054	0.63	59	.	.	0.32	58
2000	NOV	.	0.081	0.10	710	.	0.096	0.46	61	.	5.0	0.32	58	.	0.11	0.78	59	.	.	0.28	58
2000	DEC	.	0.083	0.18	500	.	0.10	0.16	82	.	.	0.053	66	.	0.16	0.32	63	.	0.017	0.16	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	0.038	0.11	81	.	0.062	0.16	72	.	0.91	0.034	110	.	0.062	0.70	59	.	.	0.27	59
2001	FEB	.	0.10	0.84	59	.	0.044	0.44	62	.	0.42	0.17	63	.	0.011	0.80	59	.	0	0.24	60
2001	MAR	.	0.058	0.26	60	.	0.0083	0.068	130	.	.	0.10	67	.	0.043	0.23	60	.	0.013	0.28	59
2001	APR	.	0.044	0.093	69	.	.	0.36	62	.	0.0089	0.13	63	.	0.092	0.18	59	.	0.047	0.20	59
2001	MAY	.	0.045	0.15	60	.	0.060	0.35	60	.	0.65	0.18	60	.	0.068	0.38	58	.	0.083	0.32	58
2001	JUN	.	0.025	0.92	58	.	0.042	0.30	59	.	0.62	0.18	59	.	0.048	0.81	58	.	0.10	0.29	58
2001	JUL	.	0.0098	0.55	58	.	0.032	0.28	59	.	0.12	0.25	59	.	0.035	0.49	58	.	0	0.24	58
2001	AUG	.	0.024	0.19	59	.	0.040	0.25	60	.	0	0.13	59	.	0.060	0.56	58	.	0	0.36	58
2001	SEP	.	0.026	0.18	60	.	0.043	0.17	66	.	0	0.093	62	.	0.072	0.22	59	.	0.0022	0.14	59
2001	OCT	.	0.073	0.84	59	.	0.071	1.3	59	.	0	0.59	59	.	0.11	1.1	58	.	0.0052	0.51	58
2001	NOV	.	0.073	0.32	60	.	0.052	0.34	63	.	0.14	0.43	59	.	0.081	1.1	58	.	0.037	0.66	58
2001	DEC	.	0.060	0.68	59	.	0.046	0.30	63	.	0.12	0.15	62	.	0.13	0.58	59	.	0.060	0.20	60
2002	JAN	.	0.026	0.86	58	.	0.031	1.1	58	.	0	0.14	59	.	0.081	0.74	60	.	0.047	0.55	58
2002	FEB	.	0.021	2.5	58	.	0.044	4.1	58	.	0.035	0.31	59	.	0.069	1.0	59	.	0.022	0.41	58
2002	MAR	.	0.057	0.62	59	.	.	0.36	59	.	.	0.093	60	.	0.032	1.1	59	.	0.074	0.41	58
2002	APR	.	0.047	0.17	59	.	0.082	1.3	58	.	0.098	0.30	58	.	0.080	0.98	59	.	0.0052	0.40	58
2002	MAY	.	0.039	0.15	60	.	0.10	0.63	58	.	0.0049	0.20	58	.	0.11	0.47	59	.	0.10	0.32	58
2002	JUN	.	0.053	0.68	58	.	0.047	0.79	58	.	0	0.19	58	.	0.043	0.36	59	.	0.028	0.19	58
2002	JUL	.	.	0.20	59	.	0.029	0.49	58	.	0	0.26	58	.	0.055	0.73	58	.	0	0.41	58
2002	AUG	.	0.023	0.15	59	.	0.048	0.12	59	.	0.0016	0.089	59	.	0.027	0.35	59	.	0	0.21	58
2002	SEP	.	0.070	0.096	61	.	0.032	0.091	59	.	.	0.095	59	.	0.086	0.18	60	.	0.0013	0.086	59
2002	OCT	.	0.077	0.090	64	.	0.083	0.11	60	.	.	0.15	59	.	0.073	0.30	61	.	0.0011	0.12	59
2002	NOV	.	0.022	0.12	64	.	0.028	0.15	60	.	0.041	0.30	58	.	0.090	1.3	59	.	0.013	0.79	58
2002	DEC	.	.	0.092	68	.	0.030	0.20	59	.	0.0036	0.074	61	.	0.088	0.37	62	.	0.042	0.24	59
2003	JAN	.	0.033	0.043	280	.	0.026	0.062	120	.	0.011	0.016	95	.	0.11	0.24	70	.	0.0066	0.047	69
2003	FEB	.	0.0054	0.10	110	.	0.0043	0.13	76	.	0.024	0.093	60	.	0.10	0.25	64	.	0.085	0.12	60
2003	MAR	.	0.024	0.093	100	.	0.077	0.20	65	.	0.042	0.12	59	.	0.063	0.44	60	.	0.83	0.27	58
2003	APR	.	0.050	0.13	89	.	0.12	0.52	59	.	0.088	0.21	58	.	0.10	0.31	60	.	0.036	0.46	58
2003	MAY	.	0.10	0.092	78	.	.	0.89	58	.	0	0.091	59	.	0.14	0.50	59	.	0	0.13	59
2003	JUN	.	0	0.050	84	.	0.023	0.16	60	.	.	0.15	58	.	0.081	0.65	58	.	0.012	0.45	58
2003	JUL	.	0	0.15	62	.	0	0.23	59	.	0	0.12	58	.	0.020	1.1	58	.	0.039	0.44	58
2003	AUG	.	0	0.14	61	.	0.0095	0.30	59	.	0.017	0.19	58	.	0.0069	0.71	58	.	0	0.29	58
2003	SEP	.	0.0083	0.27	61	.	0.024	0.33	59	.	0.025	0.10	59	.	0.055	0.50	59	.	0.0092	0.19	58
2003	OCT	.	0.0045	0.10	82	.	0.017	0.23	60	.	0.0014	0.12	59	.	0.056	0.49	59	.	0.0045	0.21	58
2003	NOV	.	0	0.50	61	.	0.046	0.54	59	.	0.040	0.30	58	.	0.069	1.3	58	.	0.031	0.47	58
2003	DEC	.	0.0027	0.27	64	.	0.025	0.070	110	.	0.15	0.096	59	.	0.036	0.68	60	.	0.035	0.54	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -chlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	0.023	0.027	160	.	0.034	0.0044	1800	.	0.22	0.042	65	.	0.090	0.24	62	.	2.0	0.12	60
2004	FEB	.	0.042	0.081	70	.	0.022	0.096	87	.	0.025	0.13	59	.	0.018	0.18	61	.	0.011	0.28	59
2004	MAR	.	0.025	0.24	59	.	0.056	0.48	61	.	0.23	0.17	59	.	0.074	0.35	59	.	0.033	0.28	58
2004	APR	.	0.061	0.038	73	.	0.079	0.27	63	.	0	0.25	58	.	0.012	0.11	62	.	0.023	0.51	58
2004	MAY	.	0.068	0.057	66	.	0.11	0.43	59	.	0	0.097	59	.	0.11	0.42	58	.	0	0.23	58
2004	JUN	.	0.0075	0.23	59	.	0.021	0.55	59	.	0.0003	0.32	58	.	0.013	0.60	58	.	0	0.36	58
2004	JUL	.	0	0.13	59	.	0.0070	0.084	65	.	0.012	0.064	59	.	0.014	0.60	58	.	0	0.30	58
2004	AUG	.	0.028	0	.	.	0.020	0.23	60	.	0.095	0.068	59	.	0.024	0.22	59	.	0	0.13	58
2004	SEP	.	0.021	0.18	59	.	0.013	0.41	59	.	0	0.23	58	.	0.076	0.79	58	.	0	0.41	58
2004	OCT	.	0.034	0.19	60	.	0.040	0.12	76	.	0	0.30	58	.	0.027	0.48	59	.	0	0.48	58
2004	NOV	.	0.014	0.023	160	.	0.13	0.065	110	.	0.0022	0.12	59	.	0.079	0.35	59	.	0.0033	0.18	59
2004	DEC	.	0.030	0.015	270	.	0.035	0.073	120	.	0.18	0.087	60	.	0.048	0.27	60	.	0.051	0.12	60
2005	JAN	.	0.067	0.038	91	.	0.066	0.15	58	.	0.034	0.040	77	.	0.026	0.23	59	.	0.068	0.093	59
2005	FEB	.	0.042	0.11	62	.	0.033	0.15	58	.	0.039	0.098	61	.	0.029	0.38	58	.	0.023	0.27	58
2005	MAR	.	0.015	0.011	210	.	0.037	0.012	60	.	0.0028	0.050	68	.	0.022	0.17	59	.	0.037	0.14	59
2005	APR	.	0.048	0.084	62	.	0.050	0.33	58	.	0	0.11	60	.	0.057	0.25	58	.	0.024	0.16	58
2005	MAY	.	0.045	0.23	59	.	0.044	0.34	58	.	0	0.23	59	.	0.051	0.49	58	.	0.038	0.35	58
2005	JUN	.	0.026	0.35	58	.	0.023	0.64	58	.	0	0.16	58	.	0.0094	0.49	58	.	0.0005	0.30	58
2005	JUL	.	0.029	0.23	58	.	0.015	0.25	58	.	.	0.12	59	.	0.017	0.57	58	.	0	0.33	58
2005	AUG	.	0.038	0.33	58	.	0.011	0.40	58	.	0.011	0.14	59	.	0.026	0.55	58	.	0	0.29	58
2005	SEP	.	0.011	0.11	60	.	0.021	0.36	58	.	.	0.24	58	.	0.021	0.84	58	.	.	0.46	58
2005	OCT	.	0.0001	0.26	59	.	0.043	0.46	58	.	0.012	0.25	59	.	0.036	0.46	58	.	.	0.32	58
2005	NOV	.	0.042	0.18	60	.	0.034	0.14	58	.	0.019	0.18	60	.	0.0058	0.94	58	.	0.035	0.35	58
2005	DEC	.	0.032	0.40	59	.	0.074	0.35	58	.	0.014	0.20	59	.	0.093	0.68	58	.	0.012	0.37	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -nonachlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.053	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.50	61
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.54	60
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.47	59
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.37	59
1992	JUL	.	0.013	.	.	.	0.15	.	.	.	.	.	.	.	0.017	.	.	.	.	0.60	59
1992	AUG	.	0.023	0.34	59	.	0.090	0.23	59	.	.	.	.	.	0.056	0.39	59	.	.	0.59	59
1992	SEP	.	0.018	.	.	.	0.013	0.86	58	.	.	.	.	.	0.059	0.86	58	.	.	0.68	59
1992	OCT	.	0.0006	0.36	62	.	0.022	0.58	59	.	.	.	.	.	0.032	0.79	58	.	.	0.30	63
1992	NOV	.	0.019	0.30	67	.	0.047	0.40	60	.	.	.	.	.	0.32	2.3	58	.	.	0.74	60
1992	DEC	.	.	0.36	68	.	.	0.43	60	.	.	.	.	.	0.0061	0.94	59	.	.	0.62	62
1993	JAN	.	.	0.21	81	.	.	0.31	90	.	.	0.45	91	.	0.013	1.7	60	.	.	0.82	67
1993	FEB	.	0.068	0.25	72	.	0	0.57	68	.	.	0.21	150	.	0	1.1	61	.	.	0.20	110
1993	MAR	.	0.061	0.16	66	.	0.034	0.89	62	.	.	0.17	140	.	0	1.4	60	.	.	0.36	71
1993	APR	.	0.041	0.082	92	.	0.035	0.67	66	.	.	0.19	120	.	0	1.1	60	.	.	0.41	68
1993	MAY	.	0.17	0.20	64	.	0.013	0.97	59	.	.	0.50	65	.	0	1.8	59	.	.	0.89	60
1993	JUN	.	0.060	.	.	.	0.0059	1.4	59	.	.	0.61	60	.	0.030	2.8	58	.	.	1.6	58
1993	JUL	.	0	0.61	59	.	0	0.78	59	.	.	0.32	63	.	0.14	1.1	59	.	.	0.78	59
1993	AUG	.	0.089	0.28	59	.	0.080	0.13	69	.	.	0.16	68	.	0.090	0.54	59	.	.	0.37	59
1993	SEP	.	0.0029	0.44	60	.	.	1.5	59	.	.	0.68	60	.	0.0050	1.5	59	.	.	0.65	59
1993	OCT	.	0.027	0.42	61	.	0.36	0.96	60	.	.	0.56	70	.	0.066	1.6	59	.	.	0.34	74
1993	NOV	.	0	0.16	76	.	1.7	0.69	64	.	.	0.32	97	.	0	0.63	66	.	.	1.1	60
1993	DEC	.	0.42	0.29	67	.	1.1	0.65	64	.	.	0.32	94	.	0.022	0.94	60	.	.	0.89	63
1994	JAN	.	.	0.12	230	.	.	0.13	59	.	.	0.081	210	.	0.072	1.0	68	.	.	0.37	63
1994	FEB	.	.	0.20	130	.	.	1.3	58	.	.	0.35	74	.	0	0.45	84	.	.	0.25	67
1994	MAR	.	.	0.42	77	.	0	0.22	58	.	.	0.18	86	.	0	1.8	60	.	.	0.38	60
1994	APR	.	0.021	0.23	120	.	0.044	1.1	58	.	.	0.85	60	.	0.18	1.7	60	.	.	2.0	58
1994	MAY	.	0.0070	0.47	66	.	0.075	0.84	58	.	.	0.28	66	.	0.043	0.59	64	.	.	0.89	59
1994	JUN	.	0	.	.	.	0.018	0.59	58	.	.	0.27	61	.	0	0.92	59	.	.	1.2	58
1994	JUL	.	0.070	0.54	60	.	0	0.79	58	.	.	0.57	59	.	0	1.1	59	.	.	0.86	58
1994	AUG	.	0.0049	1.4	59	.	0.0019	0.89	58	.	.	0.54	59	.	1.8	1.2	59	.	.	0.48	58
1994	SEP	.	0.064	0.26	65	.	0.017	0.17	58	.	.	0.14	68	.	0.011	0.27	63	.	.	0.43	59
1994	OCT	.	0.27	0.66	64	.	0.044	0.56	58	.	.	0.24	69	.	0.050	0.44	61	.	.	0.44	59
1994	NOV	.	0	0.21	120	.	0	1.0	58	.	.	0.47	66	.	0.041	1.1	60	.	.	1.4	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -nonachlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.17	0.21	83	.	0.014	0.44	58	.	.	0.19	80	.	0.11	0.42	72	.	.	0.47	60
1995	JAN	.	0.29	0.68	59	.	0.061	0.20	70	.	.	.	.	.	0	0.58	59	.	.	0.66	59
1995	FEB	.	0	0.056	130	.	0	0.18	77	.	.	0.20	100	.	0.030	0.66	59	.	.	0.40	59
1995	MAR	.	0.024	0.063	90	.	0.020	0.18	74	.	.	0.16	89	.	0.15	0.25	59	.	.	0.28	59
1995	APR	.	0.014	0.12	62	.	0.045	0.30	63	.	.	0.14	100	.	0.19	0.82	58	.	.	1.2	58
1995	MAY	.	0.0050	0.32	59	.	0.052	1.2	58	.	.	0.13	80	.	0.056	0.71	58	.	.	0.41	58
1995	JUN	.	0.0006	0.17	59	.	0.022	0.12	61	.	.	0.11	71	.	0.025	0.12	59	.	.	0.19	58
1995	JUL	.	0.033	0.49	58	.	0.012	0.66	58	.	.	0.34	59	.	0.14	0.83	58	.	.	0.66	58
1995	AUG	.	0.044	0.94	58	.	0.021	0.37	59	.	.	0.26	60	.	0.043	0.71	58	.	.	0.41	58
1995	SEP	.	0.0076	0.15	61	.	0.0070	0.41	59	.	.	0.30	61	.	0.015	0.94	58	.	.	0.48	58
1995	OCT	.	0.0090	0.33	60	.	0.055	0.31	62	.	.	0.21	78	.	0.077	1.6	58	.	.	0.80	58
1995	NOV	.	.	0.094	71	.	0.065	0.29	65	.	.	0.11	140	.	0.073	0.40	59	.	.	0.56	59
1995	DEC	.	0.12	0.31	60	.	0.0022	0.23	69	.	.	0.13	120	.	0.027	0.24	62	.	.	0.34	59
1996	JAN	.	0.29	0.23	63	.	0.016	0.20	63	.	.	0.092	62	.	0.015	0.65	61	.	.	0.75	58
1996	FEB	.	0.013	0	.	.	0.0071	0.070	85	.	.	0.052	69	.	0.024	0.071	130	.	.	0.18	59
1996	MAR	.	0.0058	0.25	60	.	0.032	0.31	60	.	.	0.21	59	.	0.059	0.14	70	.	.	0.11	59
1996	APR	.	0.029	0.11	63	.	0.13	0.27	60	.	.	0.15	59	.	0.18	0.33	61	.	.	0.34	58
1996	MAY	.	0.011	0.069	65	.	.	0.29	59	.	.	0.23	58	.	0.062	1.3	58	.	.	0.74	58
1996	JUN	.	0.011	0.71	58	.	0.046	0.52	58	.	.	0.23	58	.	0.065	0.78	58	.	.	0.59	58
1996	JUL	.	0.052	0.30	59	.	0.021	0.42	58	.	.	0.11	58	.	.	0.46	59	.	.	0.18	58
1996	AUG	.	0.050	0.27	59	.	0.047	0.54	58	.	.	0.14	58	.	0.0073	0.33	59	.	.	0.43	58
1996	SEP	.	0.016	0.40	58	.	0.15	0.36	59	.	.	0.12	58	.	0.024	0.47	59	.	.	0.22	58
1996	OCT	.	0.038	0.48	59	.	0.0067	0.73	58	.	.	0.58	58	.	0.016	0.61	59	.	.	0.50	58
1996	NOV	.	0.039	0.47	59	.	0.011	0.40	59	.	.	0.42	58	.	0.035	0.28	64	.	.	0.24	58
1996	DEC	.	0.10	0.33	60	.	0.050	0.37	59	.	.	0.14	59	.	0.024	0.57	60	.	.	0.30	58
1997	JAN	.	0.17	0.12	110	.	0.054	0.39	91	.	.	0.035	67	.	0.020	0.43	80	.	.	0.42	58
1997	FEB	.	0.018	0.066	140	.	0.034	0.071	350	.	.	0.14	59	.	0.11	0.91	61	.	.	0.51	58
1997	MAR	.	0.040	0.030	260	.	0.037	0.30	100	.	.	.	.	.	0.11	1.0	60	.	.	0.59	58
1997	APR	.	0.0074	0.17	67	.	0.023	0.33	87	.	.	0.19	58	.	0.039	0.57	61	.	.	0.26	58
1997	MAY	.	0.024	0.25	61	.	0.044	0.36	76	.	.	0.23	58	.	0.083	0.57	62	.	.	0.42	58
1997	JUN	.	0.013	0.30	59	.	0.051	0.52	61	.	.	0.49	58	.	0.050	0.93	59	.	.	0.83	58
1997	JUL	.	0.0002	0.33	59	.	0.0087	0.85	59	.	.	0.21	58	.	0.013	0.85	59	.	.	1.1	58
1997	AUG	.	0	0.35	59	.	0.0064	0.50	61	.	.	0.22	58	.	0.054	0.64	59	.	.	0.28	58
1997	SEP	.	0.0014	0.53	59	.	0.0079	0.84	60	.	.	0.26	58	.	0.013	0.75	59	.	.	0.48	58
1997	OCT	.	0.026	0.77	59	.	0.023	1.4	60	.	.	0.47	58	.	0.023	0.80	59	.	.	0.44	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -nonachlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.035	0.079	97	.	0.022	0.19	120	.	.	0.10	59	.	0.032	0.47	66	.	.	0.16	59
1997	DEC	.	0.021	0.22	64	.	0.012	0.45	74	.	.	0.15	59	.	0.024	0.48	67	.	.	0.35	58
1998	JAN	.	0.043	0.21	98	.	0.027	0.44	66	.	.	0.11	60	.	0.031	0.56	62	.	.	0.30	59
1998	FEB	.	.	0.56	64	.	0.0081	0.67	61	.	.	0.19	59	.	0.015	0.45	61	.	.	0.18	59
1998	MAR	.	.	0.24	78	.	0.033	0.39	76	.	.	0.18	59	.	0.014	0.43	64	.	.	0.15	60
1998	APR	.	0.014	0.26	72	.	0.030	0.66	61	.	0	0.19	59	.	0.063	0.44	60	.	0	0.33	58
1998	MAY	.	0.016	0.58	61	.	0.056	0.66	59	.	0	0.23	58	.	0.040	0.32	59	.	0	0.39	58
1998	JUN	.	0.053	0.34	61	.	0.052	0.78	59	.	0.028	0.25	58	.	0.049	0.94	58	.	0.15	0.56	58
1998	JUL	.	0.0031	0.14	68	.	0.021	0.46	59	.	.	0.11	58	.	0.021	0.98	58	.	0.046	0.30	58
1998	AUG	.	0.019	0.39	60	.	0.031	0.49	59	.	0.021	0.13	58	.	0.050	0.45	58	.	0.033	0.27	58
1998	SEP	.	0.015	0.18	70	.	0.016	0.20	63	.	0	0.28	58	.	0.027	0.85	58	.	0.10	0.52	58
1998	OCT	.	0.032	0.43	66	.	0.024	0.24	71	.	0.016	0.17	59	.	0.044	0.62	59	.	0.070	0.30	58
1998	NOV	.	0.027	0.33	74	.	0.049	0.37	69	.	0.042	0.27	58	.	.	0.75	59	.	0.088	0.44	58
1998	DEC	.	0.031	0.47	72	.	0.089	0.30	72	.	0.051	0.35	58	.	.	0.51	60	.	0.049	0.58	58
1999	JAN	.	0.057	0.58	60	.	0.093	0.35	70	.	0.095	0.16	59	.	.	0.38	86	.	0.21	0.47	58
1999	FEB	.	0.020	0.64	60	.	0.034	1.7	59	.	0.043	0.46	58	.	.	0.83	63	.	0.078	0.39	58
1999	MAR	.	0.0092	0.30	62	.	0.017	0.98	61	.	0.0092	0.046	61	.	0.043	0.77	61	.	0.19	0.45	58
1999	APR	.	.	0.17	63	.	0.10	0.51	62	.	0.044	0.14	59	.	0.037	0.38	67	.	.	0.21	59
1999	MAY	.	0.023	1.1	58	.	0.037	1.8	58	.	0.067	0.36	58	.	0.035	1.0	59	.	0.041	1.0	58
1999	JUN	.	0.019	0.70	58	.	0.019	2.6	58	.	.	0.40	58	.	0.041	0.58	59	.	0.072	1.1	58
1999	JUL	.	0.013	0.39	59	.	0.012	1.3	58	.	0	0.39	58	.	0.022	1.2	58	.	0.022	1.1	58
1999	AUG	.	0.012	0.32	59	.	0.010	0.57	59	.	0	0.12	58	.	0.014	0.57	59	.	0.0012	0.26	58
1999	SEP	.	0.023	0.21	61	.	0.017	0.92	59	.	0	0.17	58	.	0.011	0.84	59	.	0.041	0.54	58
1999	OCT	.	0.041	0.45	60	.	0.013	1.3	59	.	0.033	0.35	58	.	0.0086	0.80	60	.	0.013	0.70	58
1999	NOV	.	0.023	0.41	61	.	0.028	0.39	65	.	0.064	0.14	59	.	0.035	0.62	62	.	0.062	0.87	58
1999	DEC	.	0.019	0.074	120	.	0.081	1.1	59	.	0.24	0.59	58	.	0.029	0.51	68	.	.	0.49	58
2000	JAN	.	.	0.074	170	.	.	0.15	100	.	0.036	0.14	60	.	0.036	0.32	64	.	.	0.27	310
2000	FEB	.	.	0.19	83	.	.	0.21	86	.	0.058	0.13	60	.	0.068	0.20	68	.	0.080	0.19	440
2000	MAR	.	0.012	0.25	72	.	0.034	0.54	62	.	.	0.21	59	.	0.068	0.75	59	.	0.015	0.29	240
2000	APR	.	0.016	0.33	62	.	0.050	0.67	61	.	.	0.17	59	.	0.17	0.39	59	.	0	0.22	220
2000	MAY	.	0.0040	0.57	59	.	0.063	1.1	59	.	0	0.33	58	.	0.013	2.3	58	.	.	0.54	95
2000	JUN	.	0.10	0.22	64	.	0.048	0.33	61	.	0	0.11	58	.	0.13	0.82	58	.	0.20	0.34	110
2000	JUL	.	0	0.24	60	.	0	0.30	60	.	0	0.080	58	.	0.012	0.30	59	.	0.018	0.14	140
2000	AUG	.	.	0.17	61	.	0.0094	0.40	59	.	0.018	0.13	58	.	0.033	0.47	58	.	0.087	0.18	120
2000	SEP	.	0.0058	0.41	60	.	0.033	1.1	59	.	0.015	0.43	58	.	0.037	1.0	58	.	.	0.18	170

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -nonachlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.012	0.13	77	.	0.015	0.43	61	.	0.018	0.15	58	.	0.036	0.61	59	.	.	0.31	120
2000	NOV	.	0.022	0.17	78	.	0.063	0.43	63	.	0.015	0.17	59	.	0.076	0.59	59	.	.	0.23	220
2000	DEC	.	0.054	0.20	81	.	0.10	0.29	71	.	.	0.078	60	.	0.11	0.21	66	.	0.058	0.063	1300
2001	JAN	.	0.031	0.20	68	.	0.040	0.24	60	.	0.70	0.024	85	.	0.077	1.2	58	.	.	0.068	61
2001	FEB	.	0.042	0.53	60	.	0.0057	0.77	59	.	0.20	0.18	59	.	0.027	0.45	59	.	0	0.18	59
2001	MAR	.	0.014	0.43	59	.	0.0093	0.17	62	.	.	0.074	62	.	0.059	0.25	59	.	0.038	0.17	59
2001	APR	.	0.093	0.13	66	.	.	0.44	59	.	0.044	0.13	59	.	0.030	0.22	59	.	0.046	0.22	58
2001	MAY	.	0.039	0.18	60	.	0.092	0.51	58	.	0.078	0.25	58	.	0.028	0.34	58	.	0.058	0.34	58
2001	JUN	.	0.016	1.1	58	.	0.090	0.42	58	.	0.027	0.31	58	.	0.036	0.81	58	.	0.018	0.29	58
2001	JUL	.	0.0080	0.71	58	.	0.0041	0.36	58	.	0.0026	0.25	58	.	0.030	0.36	58	.	0.029	0.32	58
2001	AUG	.	0.013	0.18	59	.	0.019	0.33	58	.	0.016	0.15	58	.	0.069	0.36	58	.	0	0.29	58
2001	SEP	.	0.017	0.20	60	.	0.023	0.20	59	.	0.057	0.12	59	.	0.061	0.18	59	.	0	0.13	58
2001	OCT	.	0.034	0.86	59	.	0.044	1.3	58	.	0.049	0.58	58	.	0.079	0.78	58	.	0	0.52	58
2001	NOV	.	0.035	0.37	60	.	0.037	0.31	59	.	0.12	0.46	58	.	0.057	1.1	58	.	0.029	0.63	58
2001	DEC	.	0.036	0.28	64	.	0.039	0.15	62	.	0.13	0.11	60	.	0.10	0.16	60	.	0.057	0.19	59
2002	JAN	.	0.0089	0.23	59	.	0.014	0.38	58	.	0.030	0.14	59	.	0.067	0.67	58	.	0.052	0.55	58
2002	FEB	.	0.0099	0.65	58	.	0.041	0.95	58	.	0.040	0.33	58	.	0.077	0.92	58	.	0.044	0.47	58
2002	MAR	.	0.014	0.20	59	.	.	0.16	58	.	.	0.11	59	.	0.040	0.59	58	.	0.087	0.47	58
2002	APR	.	0.039	0.17	59	.	0.071	1.2	58	.	0.14	0.33	58	.	0.058	0.78	58	.	0.052	0.43	58
2002	MAY	.	0.023	0.20	59	.	0.054	0.95	58	.	0.056	0.26	58	.	0.060	0.55	58	.	0.20	0.38	58
2002	JUN	.	0.050	1.3	58	.	0.042	1.3	58	.	0.036	0.29	58	.	0.026	0.30	58	.	0.052	0.20	58
2002	JUL	.	.	0.29	58	.	0.026	0.74	58	.	0.16	0.39	58	.	0.043	0.75	58	.	0.098	0.42	58
2002	AUG	.	0.024	0.18	58	.	0.039	0.15	58	.	0.11	0.13	58	.	0.022	0.30	58	.	0.084	0.24	58
2002	SEP	.	0.025	0.15	59	.	0.026	0.14	58	.	.	0.13	58	.	0.068	0.13	58	.	0.094	0.13	58
2002	OCT	.	0.033	0.13	59	.	0.052	0.12	58	.	.	0.20	58	.	0.041	0.21	58	.	0.096	0.14	59
2002	NOV	.	0.020	0.15	60	.	0.017	0.16	58	.	0.040	0.38	58	.	0.045	1.1	58	.	0.18	0.64	58
2002	DEC	.	.	0.12	61	.	0.016	0.17	58	.	0.070	0.092	60	.	0.078	0.23	58	.	0.25	0.25	59
2003	JAN	.	0.028	0.097	85	.	0.034	0.089	100	.	0.029	0.023	110	.	0.072	0.10	87	.	0.23	0.036	90
2003	FEB	.	0.030	0.084	85	.	0.015	0.14	83	.	0.13	0.081	64	.	0.086	0.22	62	.	0.17	0.10	63
2003	MAR	.	0.0089	0.11	71	.	0.054	0.22	67	.	0.20	0.19	59	.	0.046	0.34	59	.	0.39	0.36	59
2003	APR	.	0.013	0.20	63	.	0.059	0.78	59	.	0.0090	0.25	59	.	0.033	0.31	59	.	0.028	0.46	58
2003	MAY	.	0.014	0.19	60	.	.	1.1	58	.	0.0082	0.14	59	.	0.076	0.28	59	.	0.047	0.22	59
2003	JUN	.	0.010	0.10	60	.	0.019	0.30	59	.	.	0.15	59	.	0.10	0.46	58	.	0.021	0.64	58
2003	JUL	.	0.012	0.10	60	.	0.0085	0.33	59	.	0.0032	0.15	58	.	0.039	0.68	58	.	0.064	0.49	58
2003	AUG	.	0.015	0.17	59	.	0.023	0.45	58	.	0.010	0.21	58	.	0.015	0.55	58	.	0.052	0.34	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***trans* -nonachlordane**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.021	0.35	59	.	0.057	0.39	59	.	0.011	0.22	58	.	0.055	0.33	59	.	0.016	0.25	58
2003	OCT	.	0.013	0.14	62	.	0.032	0.26	61	.	0.012	0.18	59	.	0.027	0.39	59	.	0.0079	0.32	58
2003	NOV	.	0.018	0.55	59	.	0.047	0.51	60	.	0.088	0.31	59	.	0.046	0.96	58	.	0.014	0.50	58
2003	DEC	.	0.015	0.072	79	.	0.035	0.11	89	.	0.14	0.11	60	.	0.061	0.57	59	.	0.19	0.60	58
2004	JAN	.	0.026	0.042	71	.	0.034	0.038	84	.	0.10	0.031	65	.	0.13	0.28	58	.	0.19	0.085	66
2004	FEB	.	0.026	0.11	59	.	0.022	0.13	60	.	0.0082	0.16	59	.	0.021	0.18	58	.	0.0011	0.23	59
2004	MAR	.	0.019	0.31	58	.	0.031	0.57	58	.	0.24	0.24	58	.	0.045	0.34	58	.	0.086	0.27	59
2004	APR	.	0.020	0.054	60	.	0.045	0.39	59	.	0.0020	0.33	58	.	0.044	0.15	58	.	0.0041	0.57	58
2004	MAY	.	0.016	0.092	59	.	0.049	0.56	58	.	0.0058	0.15	58	.	0.10	0.55	58	.	0.081	0.30	58
2004	JUN	.	0.0090	0.27	58	.	0.0022	0.87	58	.	0.030	0.27	58	.	0.0082	0.64	58	.	0.022	0.28	58
2004	JUL	.	0.016	0.13	58	.	0.0046	0.11	59	.	0.024	0.086	58	.	0.0045	0.40	58	.	0.062	0.35	58
2004	AUG	.	0.0065	0.060	59	.	0.012	0.30	58	.	0.014	0.075	58	.	0.028	0.22	58	.	0.046	0.15	58
2004	SEP	.	0.022	0.12	59	.	0.011	0.46	58	.	0.0048	0.23	58	.	0.030	0.62	58	.	0.0010	0.35	58
2004	OCT	.	0.0077	0.43	58	.	0.027	0.22	59	.	0.0006	0.27	58	.	0.012	0.47	58	.	0.0099	0.35	58
2004	NOV	.	0.0070	0.13	59	.	0.16	0.14	59	.	0.031	0.15	58	.	0.030	0.36	58	.	0.017	0.12	60
2004	DEC	.	0.029	0.12	60	.	0.040	0.20	59	.	0.036	0.096	59	.	0.018	0.30	58	.	0.075	0.14	60
2005	JAN	.	0.037	0.070	200	.	0.052	0.19	72	.	0.041	0.056	60	.	0.025	0.31	72	.	0.076	0.077	59
2005	FEB	.	0.023	0.20	84	.	0.031	0.16	74	.	0.019	0.12	59	.	0.013	0.30	69	.	0.023	0.29	58
2005	MAR	.	0.010	0.029	390	.	0.050	0.057	150	.	0.028	0.060	59	.	0.022	0.15	97	.	0.049	0.14	59
2005	APR	.	0.035	0.22	71	.	0.024	0.52	60	.	0.043	0.16	58	.	0.036	0.30	67	.	.	0.19	58
2005	MAY	.	0.040	0.48	60	.	0.054	0.75	59	.	0.036	0.32	58	.	0.048	0.64	59	.	0.026	0.389	58
2005	JUN	.	0.029	0.63	59	.	0.029	1.0	58	.	0.066	0.22	58	.	0.018	0.74	58	.	0.0003	0.38	58
2005	JUL	.	0.042	0.49	59	.	0.024	0.41	59	.	.	0.18	58	.	0.041	0.70	58	.	.	0.42	58
2005	AUG	.	0.0003	0.50	59	.	0.011	0.58	58	.	0.019	0.22	58	.	0.019	0.63	59	.	0.12	0.32	58
2005	SEP	.	0.013	0.13	72	.	0.025	0.44	59	.	.	0.28	58	.	0.020	0.85	59	.	.	0.52	58
2005	OCT	.	0.0044	0.47	60	.	0.028	0.61	59	.	0.023	0.30	58	.	0.018	0.49	60	.	.	0.30	58
2005	NOV	.	0.034	0.19	86	.	0.046	0.22	68	.	0.027	0.19	58	.	0.0001	0.70	61	.	0.048	0.35	58
2005	DEC	.	0.037	0.17	88	.	0.064	0.31	63	.	0.029	0.24	58	.	0.068	0.40	68	.	0.043	0.30	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDD**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0	.	.	.	0	.	.	.	.	.	.	.	0.18	.	.	.	0	.	.
1992	FEB	.	0	.	.	.	0	.	.	.	.	.	.	.	0.22	.	.	.	0	.	.
1992	MAR	.	0	0.80	59	.	0	0.39	59	.	.	.	.	.	0.18	0.90	61	.	0	0.34	68
1992	APR	.	0	0.30	61	.	0.072	0.65	59	.	.	.	.	.	0.11	4.7	58	.	0	0.15	92
1992	MAY	.	0	0.24	100	.	0.025	1.1	60	.	.	.	.	.	0.039	3.1	59	.	0	0.21	72
1992	JUN	.	0	0	.	.	0.045	0.21	65	.	.	.	.	.	0.54	0.64	59	.	0.039	0.15	82
1992	JUL	.	0.18	0.52	150	.	0.54	2.9	58	.	0	.	.	.	1.2	7.9	58	.	0.037	0.27	69
1992	AUG	.	0.021	0.82	110	.	0.12	1.4	59	.	.	.	.	.	0.28	6.1	58	.	0.15	0.23	75
1992	SEP	.	0	1.4	96	.	0	2.2	58	.	0	.	.	.	0.015	1.9	58	.	0.0070	0.33	69
1992	OCT	.	0	0.59	180	.	0.0013	2.6	58	.	0	.	.	.	0	2.6	58	.	0	0.053	250
1992	NOV	.	0	0.20	570	.	0.031	0.39	63	.	0	.	.	.	0	1.7	58	.	0.10	0	.
1992	DEC	.	.	0	.	.	.	0.088	110	.	0	.	.	.	0	0.26	64	.	0.12	0.079	200
1993	JAN	.	.	0.14	520	.	.	0.067	2400	.	0	0.045	140	.	0	0.62	60	.	0	0.20	71
1993	FEB	.	0	0.080	840	.	0	0.10	1600	.	0	0	.	.	0	0.30	63	.	0.12	0.052	140
1993	MAR	.	0	0.054	780	.	0	5.2	65	.	0	0.015	310	.	0	1.6	58	.	0	0.041	150
1993	APR	.	0.031	0	.	.	0	1.2	140	.	0.16	0.023	190	.	0	0	.	.	0	0.095	82
1993	MAY	.	0.34	0.031	1400	.	0	0.57	210	.	0	0.054	92	.	0	1.4	58	.	0	0.14	68
1993	JUN	.	1.2	.	.	.	0.47	1.0	130	.	0.17	0.13	64	.	0	4.2	58	.	0	0.48	59
1993	JUL	.	0.88	0.15	290	.	0.11	0.99	130	.	0.14	0.093	70	.	0.34	4.0	58	.	0.75	0.41	59
1993	AUG	.	0	0.14	280	.	0	0.30	350	.	0	0	.	.	0.024	2.4	58	.	0.018	0.12	67
1993	SEP	.	0	0.23	260	.	.	1.1	140	.	0	0.14	67	.	0	3.8	58	.	.	0.46	60
1993	OCT	.	0	0.74	100	.	0	0.65	270	.	0	0.20	65	.	0	1.1	59	.	0	0.14	78
1993	NOV	.	0	0.083	770	.	0	0.064	2700	.	0	0.048	130	.	0	0.48	60	.	0	0.24	65
1993	DEC	.	0	0	.	.	0	0.10	1500	.	0	0.027	200	.	0	0.36	61	.	.	0.16	74
1994	JAN	.	.	0.076	1700	.	.	0	.	.	0	0.051	580	.	0	0	.	.	0	0.22	80
1994	FEB	.	.	0	.	.	.	0.24	270	.	0	0.056	510	.	0.061	0	.	.	0	0.054	210
1994	MAR	.	.	.	.	.	0	.	.	.	0	0.033	670	.	0.069	0.78	170	.	0	0.10	110
1994	APR	.	0.88	.	.	.	0.052	.	.	.	0	0.20	140	.	0.16	.	.	.	0	0.50	62
1994	MAY	.	0	.	.	.	0.024	.	.	.	0	0.17	130	.	0.039	.	.	.	.	0.41	63
1994	JUN	.	0	.	.	.	0	.	.	.	0	0.051	350	.	0	.	.	.	0	0.65	60
1994	JUL	.	0	.	.	.	0	.	.	.	0	0.098	180	.	0	.	.	.	0	0.34	62
1994	AUG	.	3.1	1.9	74	.	18	1.1	72	.	0	0.13	160	.	0.98	1.2	100	.	0	0.38	62
1994	SEP	.	0.10	0.43	190	.	0.20	0.82	81	.	0	0.070	290	.	0	0.39	230	.	0	0.20	74
1994	OCT	.	0.46	0	.	.	1.2	0.41	170	.	0	0.14	190	.	0.012	0.94	110	.	0	0.071	140
1994	NOV	.	0.18	0.64	200	.	0.053	0.45	160	.	.	0.17	200	.	0.044	0.95	140	.	0	0.20	85

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDD**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.031	0.27	310	.	0	0.22	250	.	0	0.027	860	.	0.070	14	59	.	0	0.056	190
1995	JAN	.	0.055	0.089	150	.	0.022	0.12	350	.	.	.	.	.	0.40	0.81	64	.	.	0.16	200
1995	FEB	.	0.049	0	.	.	0.035	0.089	500	.	.	0	.	.	0.12	0.71	65	.	0	0.026	1200
1995	MAR	.	0.058	0.15	87	.	0.032	0.054	750	.	.	0	.	.	0.28	0.15	100	.	.	0.033	590
1995	APR	.	0.046	0.16	74	.	0.054	0.093	410	.	0	0	.	.	0.46	0.049	320	.	0.055	0.13	190
1995	MAY	.	0.012	0.22	68	.	0.013	0.22	160	.	0	0.11	270	.	0.056	0.45	66	.	0.50	0	.
1995	JUN	.	0.019	0.26	64	.	0.16	0.11	240	.	0	.	.	.	0.0060	0.24	71	.	.	0.066	250
1995	JUL	.	0.028	0.13	79	.	0.076	0.17	190	.	0	0.12	230	.	0.13	0.51	64	.	0	0.23	98
1995	AUG	.	0.0002	0.88	59	.	0.0009	0.12	250	.	0	.	.	.	0.20	0.22	82	.	0	0.25	93
1995	SEP	.	0.0032	0.058	160	.	0.011	0.33	130	.	0	0.058	550	.	.	0.46	67	.	0	0.25	110
1995	OCT	.	0.018	0.088	140	.	0.057	0.061	750	.	0	0.049	860	.	0.040	0.26	100	.	0	0.26	130
1995	NOV	.	.	0.60	61	.	0.056	0	.	.	0	0.060	740	.	0.23	0.015	1400	.	0	0.098	340
1995	DEC	.	0	0.70	60	.	0.053	1.1	70	.	0	0.13	330	.	1.0	2.0	59	.	0	0	.
1996	JAN	.	0	0.68	89	.	0.042	1.1	240	.	0	0	.	.	1.3	1.4	460	.	.	0	.
1996	FEB	.	0	0	.	.	0.037	0.22	1000	.	0.018	0.018	460	.	0.0053	2.5	210	.	0.046	0	.
1996	MAR	.	0	0	.	.	0.021	0	.	.	0	0.044	190	.	0.089	0	.	.	0	.	.
1996	APR	.	0	0	.	.	0	0	.	.	0	0.045	170	.	0.021	0	.	.	0	0.10	100
1996	MAY	.	0	0	.	.	.	0	.	.	0.055	0.039	160	.	0.028	0	.	.	0.21	0.23	67
1996	JUN	.	0	0	.	.	0	0.058	2800	.	0	0.064	97	.	0.0081	0	.	.	0	0.24	65
1996	JUL	.	0.0011	0.46	83	.	0.16	0.23	660	.	0	0.050	120	.	.	0.36	1200	.	0	0.16	74
1996	AUG	.	0.012	0.78	67	.	0.022	0.77	210	.	.	0.0090	550	.	0	0.59	590	.	0	0.26	63
1996	SEP	.	0	1.8	61	.	0.029	2.9	90	.	0	0.048	130	.	0.060	2	260	.	0	0.11	95
1996	OCT	.	0.063	0.54	96	.	0.13	0.98	250	.	0.60	0.14	81	.	0.082	0.63	910	.	0	0.16	82
1996	NOV	.	0.098	0	.	.	0.026	0	.	.	0	0.050	160	.	0.0020	0	.	.	0	0.13	92
1996	DEC	.	0	0.069	630	.	0.036	0	.	.	0	0.025	300	.	0.0084	1.2	490	.	0	0.048	210
1997	JAN	.	0	0	.	.	0.016	0.27	300	.	.	0.015	450	.	0.0084	0.39	180	.	.	0.073	120
1997	FEB	.	0	0.099	530	.	0.047	0.63	130	.	0	0.066	110	.	0.044	0.96	79	.	0.25	0.13	78
1997	MAR	.	0	0.12	390	.	0.017	0	.	.	0	.	.	.	0.13	0.072	650	.	0.17	0.14	75
1997	APR	.	0	0.24	170	.	0	0	.	.	0	0.046	130	.	0.092	0.066	580	.	0	0.094	83
1997	MAY	.	0	0.32	120	.	0	0	.	.	.	0.13	73	.	0.068	0	.	.	0	0.14	73
1997	JUN	.	0	0.78	70	.	0	0	.	.	0	0.11	69	.	0.0045	0	.	.	0	0.29	60
1997	JUL	.	0.010	0.39	97	.	0	0.13	420	.	2.5	0.077	82	.	0.031	0.21	180	.	0	0.45	59
1997	AUG	.	0.011	0.78	71	.	0	0.78	95	.	3.4	0.077	86	.	0.082	1.4	64	.	0	0.23	61
1997	SEP	.	0	0.090	470	.	0	0.14	510	.	5.9	0.067	100	.	0.081	0.17	260	.	0	0.18	67
1997	OCT	.	0	0.52	110	.	0	1.1	92	.	0	0.098	88	.	0.15	1.7	64	.	0	0.14	72

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDD**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0	0.65	93	.	0	1.3	82	.	0	0.037	200	.	0.18	0.95	81	.	0	0	.
1997	DEC	.	0	0.56	97	.	0.28	1.1	85	.	0	0.023	300	.	0.16	1.0	76	.	0	0.050	150
1998	JAN	.	0	0.16	650	.	0.53	0.15	350	.	0	0	.	.	0.63	0.49	120	.	0	0.050	160
1998	FEB	.	.	0.17	520	.	0	0.31	160	.	0	0.027	240	.	0.24	0.60	90	.	.	0.042	150
1998	MAR	.	.	0.73	130	.	0.11	1.7	68	.	.	0.048	160	.	0.12	3.1	61	.	0	.	.
1998	APR	.	0.0089	0.54	160	.	0.14	0.47	110	.	0	0.047	140	.	0.24	1.0	69	.	0	0.078	93
1998	MAY	.	0.0027	0	.	.	0.084	0.87	74	.	0.24	0.089	83	.	0.059	0.19	170	.	0.16	0.13	71
1998	JUN	.	0.063	0	.	.	0.038	0	.	.	0.15	0.10	76	.	0.10	0.46	97	.	0.59	0.20	64
1998	JUL	.	0.020	0.018	3900	.	0.049	0	.	.	.	0.027	200	.	0.050	0.058	600	.	.	0.087	82
1998	AUG	.	0.015	0	.	.	0.022	0.21	190	.	.	0.12	72	.	0.020	0.51	81	.	0.45	0.26	61
1998	SEP	.	0	0	.	.	0.016	0	.	.	0	0.059	110	.	0.039	0.039	1000	.	0	0.28	62
1998	OCT	.	0.082	0.41	270	.	0.034	0.20	270	.	0	0.10	92	.	0.073	0.20	240	.	0	0.097	93
1998	NOV	.	0.12	0.71	170	.	0.050	0.69	100	.	0	0.046	180	.	.	2.3	62	.	0.077	0.13	81
1998	DEC	.	0.013	1.1	130	.	0	2.4	62	.	0	0.21	70	.	.	5.3	59	.	0.0020	0.11	92
1999	JAN	.	0	1.3	59	.	0.081	0.77	60	.	0	0.0087	540	.	.	7.3	59	.	0	0.048	160
1999	FEB	.	0.026	0.55	60	.	0.025	1.0	59	.	0	0	.	.	.	8.6	59	.	0	0	.
1999	MAR	.	0.0038	1.5	59	.	0.0027	2.1	58	.	0	0	.	.	.	5.2	59	.	0	0	.
1999	APR	.	.	0.37	60	.	0.21	0.39	62	.	0	0.024	170	.	.	0.64	110	.	.	0.021	240
1999	MAY	.	0	0.61	59	.	0.015	2.2	58	.	0.087	0.086	70	.	.	0.47	130	.	0.12	0.23	61
1999	JUN	.	0	0.047	130	.	0.035	1.8	58	.	.	0.035	97	.	.	0.74	85	.	0.20	0.40	59
1999	JUL	.	0.0007	0.044	130	.	0.0021	0.11	84	.	0	0.019	170	.	.	0.25	220	.	0.18	0.50	59
1999	AUG	.	0.0024	0	.	.	0.018	0.60	60	.	0.20	0	.	.	.	1.6	68	.	0.030	.	.
1999	SEP	.	0	0.18	70	.	0	0.89	59	.	0	0.026	150	.	.	0.37	160	.	0.059	0.19	63
1999	OCT	.	0	1.2	59	.	0.0016	3.3	58	.	0	.	.	.	.	0.14	530	.	0.0058	0.15	71
1999	NOV	.	0	0.12	92	.	0.021	0.20	74	.	0.038	0.020	270	.	.	0	.	.	0.075	0.17	73
1999	DEC	.	0	0.64	60	.	0.11	1.3	59	.	0.020	0.044	140	.	.	0.079	980	.	.	0.12	79
2000	JAN	.	.	0.24	160	.	.	0.54	83	.	0.014	0.018	480	.	0.025	0.83	69	.	.	0.050	220
2000	FEB	.	.	0.62	80	.	.	0.92	68	.	0	0.040	210	.	0	0	.	.	0	0.011	880
2000	MAR	.	0	0.059	550	.	0.12	0.29	110	.	.	0.038	180	.	0	0.27	95	.	0	0.098	110
2000	APR	.	0	0.85	65	.	0.034	0.19	170	.	.	0.027	230	.	0	0.092	200	.	0	0.033	220
2000	MAY	.	0	0.37	87	.	0	0.32	97	.	0	0.027	190	.	0	0.13	180	.	.	0.14	78
2000	JUN	.	0	0	.	.	0	0.13	200	.	0	0.037	140	.	0	0.86	63	.	0.14	0.073	110
2000	JUL	.	0	0.25	110	.	0	0	.	.	0.055	0.040	120	.	0	0.65	64	.	0	0.14	72
2000	AUG	.	.	0	.	.	0.0031	0.026	940	.	0.052	0.093	77	.	0	0.057	350	.	0.036	0.16	71
2000	SEP	.	0	0	.	.	0.0088	0	.	.	0.0092	0.080	97	.	0.013	0	.	.	.	0.20	70

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDD**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0	0.18	180	.	0	0.28	120	.	0	0.037	160	.	0.018	0.19	140	.	.	0.12	86
2000	NOV	.	0	0.028	1200	.	0	0.090	390	.	0.066	0.047	150	.	0.045	0.61	75	.	.	0.054	180
2000	DEC	.	0	1.7	62	.	0	0.62	79	.	.	0	.	.	0.022	1.2	63	.	0.090	0.11	110
2001	JAN	.	0	0.34	240	.	0	0.21	59	.	0.097	0	.	.	0	0.87	58	.	.	0.039	290
2001	FEB	.	0	1.6	75	.	0	2.6	58	.	0.093	0	.	.	0	1.5	58	.	0	0.0088	1400
2001	MAR	.	0	0.15	390	.	0.016	0.73	58	.	.	0.050	140	.	0.084	1.1	58	.	0	0.016	680
2001	APR	.	0.037	0.51	120	.	.	0.55	58	.	0.020	0.035	170	.	0.011	0.28	59	.	0.046	0.036	260
2001	MAY	.	0.038	0.024	1800	.	0.047	0	.	.	0.075	0.031	180	.	0.029	0.013	120	.	0.14	0.26	67
2001	JUN	.	0.017	0.18	280	.	0.022	0.84	58	.	0.085	0.055	99	.	0.027	0.26	59	.	0.032	0.16	75
2001	JUL	.	0	0.072	620	.	0.0070	0.017	99	.	0.0098	0.076	87	.	0.025	0.17	59	.	0.11	0.11	94
2001	AUG	.	0	0	.	.	0.022	0	.	.	0.011	0.096	80	.	0.013	0.29	59	.	0	0.13	84
2001	SEP	.	0	0	.	.	0.011	0	.	.	0.025	0.045	150	.	0.021	0	.	.	0.11	0.065	150
2001	OCT	.	0	0	.	.	0.012	0.010	220	.	0.014	0.11	90	.	0.083	0.13	61	.	0.15	0.20	81
2001	NOV	.	0	0.33	230	.	0.024	0.13	60	.	0.0059	0.075	110	.	0.058	0.22	59	.	0.13	0.14	95
2001	DEC	.	0	0.81	120	.	0.015	0.23	59	.	0.016	0	.	.	0.086	0.73	58	.	0.065	0	.
2002	JAN	.	0	0.44	60	.	0	0.25	62	.	0.014	0.013	510	.	0.070	0.23	61	.	0.0057	0.085	140
2002	FEB	.	0	1.6	58	.	0.021	1.2	59	.	0.020	0.019	360	.	0.071	1.5	58	.	0.0005	0.045	240
2002	MAR	.	0	0.28	62	.	.	0.14	71	.	.	0.018	360	.	0.027	1.5	58	.	0.029	0.11	110
2002	APR	.	0.021	0.37	59	.	0.037	0.061	100	.	0.080	0.020	300	.	0.033	0.23	60	.	0.0054	0.10	96
2002	MAY	.	0.0038	0.13	67	.	0.044	0	.	.	0.015	0.014	400	.	0.056	0.069	73	.	0.042	0.078	120
2002	JUN	.	0.031	0.27	60	.	0.0091	0.020	200	.	0.0007	0	.	.	0.013	0.052	73	.	0.047	0.10	85
2002	JUL	.	.	0.043	93	.	0.012	0.14	64	.	0.012	.	.	.	0.048	0.19	60	.	0.027	0.27	63
2002	AUG	.	0.011	0	.	.	0.029	0	.	.	0.0057	0.044	120	.	0.011	0.34	59	.	0.016	0.12	79
2002	SEP	.	0	0.015	300	.	0.0084	0	.	.	.	0.029	190	.	0.0073	0.017	160	.	0.018	0.092	96
2002	OCT	.	0	0.068	94	.	0.017	0	.	.	.	0.037	170	.	0.044	0.084	70	.	0.013	0.024	380
2002	NOV	.	0	0.40	60	.	0.0047	0	.	.	0.058	0.038	180	.	0.085	0.13	67	.	0.016	0.13	95
2002	DEC	.	.	0.046	130	.	0	0.070	100	.	0.016	0	.	.	0.032	0.28	60	.	0.024	0.038	280
2003	JAN	.	0	0.54	91	.	0	0.19	61	.	0.0039	0.020	310	.	0.033	0.52	62	.	0.0033	0	.
2003	FEB	.	0	1.1	66	.	0	1.9	58	.	0.0040	0	.	.	0.092	0	.	.	0.037	0.0086	940
2003	MAR	.	0	0.15	200	.	0.067	0	.	.	0.0002	0.0058	880	.	0.14	0.12	90	.	0.0016	0.041	170
2003	APR	.	0.14	0.11	290	.	0.014	0	.	.	0	0.014	370	.	0.049	0.014	480	.	0.0027	0.085	100
2003	MAY	.	0.060	0.095	240	.	.	0.40	59	.	0	0	.	.	0.069	0.12	85	.	0.033	0.039	150
2003	JUN	.	0.18	0.12	160	.	0.012	0.16	60	.	.	0.023	180	.	0.0091	0.31	62	.	0.033	0.18	65
2003	JUL	.	0	0	.	.	0	0.17	60	.	0	0.024	180	.	0	1.2	59	.	0.11	0.21	63
2003	AUG	.	0	0.080	250	.	0	0.11	61	.	0.0021	0.043	110	.	0	0.12	76	.	0.016	0.17	64

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDD**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0	0	.	.	0	0.084	66	.	0.0031	0.042	130	.	0.13	0.19	74	.	0.0046	0.081	95
2003	OCT	.	0	0.044	630	.	0	0	.	.	0	0.014	370	.	0.043	0	.	.	0.033	0.073	110
2003	NOV	.	0	0.33	120	.	0	0.15	62	.	0	0.024	250	.	0.072	0.97	59	.	0.045	0.098	97
2003	DEC	.	0	0.16	200	.	0	0.20	60	.	0	0.021	270	.	0.075	0.25	73	.	0.029	0.084	110
2004	JAN	.	0	0.39	77	.	0.023	0.26	71	.	0	0.11	75	.	0.26	1.4	58	.	0.48	0	.
2004	FEB	.	0	0.082	200	.	0.023	0.18	76	.	0	0	.	.	0.064	0.068	61	.	0	0.043	130
2004	MAR	.	0.0056	0.39	69	.	0.056	0.22	75	.	0.016	0.0067	620	.	0.10	0.19	58	.	0.0033	0.037	140
2004	APR	.	0.085	0.029	390	.	0.042	0.14	88	.	0.0026	0.034	130	.	0	0.045	62	.	0.070	0.071	86
2004	MAY	.	0.020	0.057	220	.	0.060	0.26	66	.	0.011	0.0066	550	.	0.0031	0.15	59	.	0.11	0.11	67
2004	JUN	.	0.0028	0.12	110	.	0	0.27	64	.	0.018	0.015	230	.	0.0034	0.30	58	.	0.050	0.22	61
2004	JUL	.	0.011	0.13	99	.	0	0.15	73	.	0.0001	0.018	180	.	0	0.43	58	.	0.094	0.16	62
2004	AUG	.	0.0002	0.046	270	.	0	0.16	78	.	0.0084	0.011	320	.	0	0.18	59	.	0.046	0.098	69
2004	SEP	.	0	0.059	250	.	0	0.066	130	.	0.0091	0.027	150	.	0	0.29	58	.	0.0065	0.21	61
2004	OCT	.	0	0	.	.	0	0.013	770	.	0.0070	0.022	220	.	0	0	.	.	0.010	0.21	62
2004	NOV	.	0	0.0003	61000	.	0	0.034	290	.	0	0.027	180	.	0	0.049	63	.	0.0084	0.10	76
2004	DEC	.	0	0.094	220	.	0	0.12	110	.	0	0.0059	870	.	0	0.046	66	.	0.021	0	.
2005	JAN	.	0.0065	0.016	6400	.	0	0.10	64	.	0	0	.	.	0	0.092	650	.	0.0008	0	.
2005	FEB	.	0.0001	0.11	850	.	0.0043	0.12	62	.	0	0	.	.	0	0.25	220	.	0.0075	0.031	150
2005	MAR	.	0.014	0.017	5100	.	0.017	0.21	60	.	0	0	.	.	0.0002	0.16	330	.	0.0002	0	.
2005	APR	.	0.026	0.26	300	.	0.041	0.021	130	.	0	0	.	.	0.0071	0.22	240	.	0.051	0.027	160
2005	MAY	.	0.0002	0	.	.	0.021	0	.	.	0	0.045	97	.	0.012	0.16	270	.	0.0011	0.072	65
2005	JUN	.	0.0032	0	.	.	0.0071	0.13	60	.	0	0.066	76	.	0.0068	0.12	330	.	0.073	0.20	60
2005	JUL	.	0.0004	0.28	230	.	0.0001	0.082	63	.	.	0.062	78	.	0.0069	0.27	160	.	0.058	0.20	61
2005	AUG	.	0	0.098	710	.	0.018	0.12	61	.	0	0.068	77	.	0.015	0.24	180	.	1.6	0.13	64
2005	SEP	.	0	0.093	880	.	0.012	0.071	67	.	.	0.084	76	.	0.0061	0.59	98	.	.	0.14	65
2005	OCT	.	0	0.19	450	.	0.0007	0.20	60	.	0.011	0.053	100	.	0.015	0.16	340	.	.	0.084	78
2005	NOV	.	0.010	0.31	350	.	0.010	0	.	.	0.0005	0.014	410	.	0.0001	0.20	360	.	0.045	0.053	110
2005	DEC	.	0.017	0	.	.	0.0006	0	.	.	0.077	0	.	.	0.035	0.037	1700	.	0.16	0.056	110

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDT**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.23	.	.	.	1.1	.	.	.	.	.	.	.	1.2	.	.	.	0	.	.
1992	FEB	.	0.53	.	.	.	1.4	.	.	.	.	.	.	.	3.8	.	.	.	0	.	.
1992	MAR	.	0.34	0.63	91	.	1.3	0.30	110	.	.	.	.	.	2.9	0.54	110	.	0.44	0.72	80
1992	APR	.	0.17	0.43	100	.	2.3	1.4	62	.	.	.	.	.	2.7	8.1	58	.	0.10	1.1	66
1992	MAY	.	0.021	1.4	60	.	1.6	2.4	59	.	.	.	.	.	1.3	6.5	58	.	1.4	1.0	64
1992	JUN	.	0.16	0.88	330	.	0.58	0.73	77	.	.	.	.	.	5.0	1.1	100	.	0	1.1	63
1992	JUL	.	3.8	1.1	260	.	2.6	4.5	59	.	0	.	.	.	22	13	59	.	0.57	2.1	60
1992	AUG	.	0.54	4.7	84	.	0.73	3.6	60	.	.	.	.	.	4.0	6.1	61	.	0	2.0	61
1992	SEP	.	0.18	0.19	2100	.	0.0007	2.3	62	.	1.7	.	.	.	0.48	5.2	62	.	0	1.6	63
1992	OCT	.	0.034	3.5	120	.	0.071	14	58	.	1.8	.	.	.	0.44	2.2	85	.	1.6	0.33	140
1992	NOV	.	0.38	0.88	490	.	0.89	2.5	63	.	0	.	.	.	4.4	1.3	140	.	4.4	0.55	110
1992	DEC	.	.	0.29	1700	.	.	1.4	71	.	0	.	.	.	1.2	2.4	85	.	1.0	0.43	130
1993	JAN	.	.	0.44	1100	.	.	3.1	180	.	0	0.32	100	.	4.4	6.7	63	.	1.9	0.34	73
1993	FEB	.	0.82	0	.	.	1.1	0.58	920	.	0	0.036	690	.	2.5	3.1	72	.	0.072	0.25	76
1993	MAR	.	2.0	0.16	1800	.	0.73	17	65	.	0	0.075	280	.	4.5	6.0	62	.	0	0.32	67
1993	APR	.	0.87	0.20	1500	.	6.7	5.4	120	.	0	0.089	230	.	24	2.1	82	.	0	0.55	61
1993	MAY	.	0	0.68	450	.	2.9	2.3	180	.	0	0.47	69	.	7.3	6.6	61	.	0	1.3	59
1993	JUN	.	0	.	.	.	1.6	3.6	120	.	0	0.70	62	.	4.3	9.6	59	.	0	4.3	58
1993	JUL	.	.	2.0	150	.	3.1	2.4	160	.	0	0.44	68	.	14	4.8	61	.	0	2.6	58
1993	AUG	.	0.75	0.67	370	.	1.6	0.88	350	.	0	0.30	73	.	1.0	4.8	60	.	0.70	1.0	59
1993	SEP	.	2.7	1.4	280	.	.	3.3	150	.	0	0.94	62	.	0.80	9.5	59	.	.	2.2	58
1993	OCT	.	0.58	3.3	140	.	0.086	1.9	290	.	0	0.42	85	.	1.1	4.6	65	.	0.23	0.42	66
1993	NOV	.	1.8	0.11	4000	.	0.98	1.4	420	.	0	0.22	130	.	3.7	1.8	100	.	0	0.96	60
1993	DEC	.	0	0.40	1100	.	2.4	0.48	1100	.	0	0.15	170	.	2.1	2.4	76	.	.	0.83	61
1994	JAN	.	.	0	.	.	.	0.042	1400	.	0	0.29	150	.	2.3	1.3	72	.	0	0.44	88
1994	FEB	.	.	0.034	3400	.	.	0.33	170	.	0	0.34	130	.	2.4	0.12	380	.	0	0.19	160
1994	MAR	.	.	.	.	.	1.3	.	.	.	0	0.20	170	.	2.9	2.2	61	.	0	0.36	84
1994	APR	.	1.9	.	.	.	0.66	.	.	.	0	0.54	87	.	2.2	.	.	.	0	4.3	59
1994	MAY	.	0.48	.	.	.	1.4	.	.	.	0	0.26	120	.	0.30	.	.	.	.	1.7	60
1994	JUN	.	4.5	.	.	.	2.7	.	.	.	0	0.27	100	.	0.55	.	.	.	0	4.8	58
1994	JUL	.	2.0	.	.	.	5.8	.	.	.	0	0.78	65	.	0.19	.	.	.	1.1	4.0	58
1994	AUG	.	0.10	0.82	110	.	7.0	2.5	60	.	0	0.67	69	.	4.3	8.0	58	.	0	2.9	59
1994	SEP	.	1.5	0.15	480	.	0.21	0.082	440	.	0	0.22	130	.	0.072	0.64	71	.	0	1.4	60
1994	OCT	.	6.2	0.74	160	.	1.2	0.99	80	.	0	0.28	130	.	0.048	1.9	60	.	0	0.96	62
1994	NOV	.	0	0	.	.	0.76	0	.	.	.	0.20	220	.	0.16	1.2	67	.	0	2.3	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDT**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.074	1.2	88	.	0.36	0.33	150	.	0	0.11	290	.	1.7	10	58	.	0	0.70	68
1995	JAN	.	0.13	0	.	.	0.038	0.42	940	.	.	.	.	.	5.1	0.16	1900	.	.	1.6	60
1995	FEB	.	0	1.6	350	.	0.080	1.8	240	.	.	0.23	220	.	0.42	2.9	120	.	0.18	0.30	100
1995	MAR	.	0.076	2.9	150	.	0.17	1.2	310	.	.	0.15	240	.	0.48	1.2	150	.	.	0.24	89
1995	APR	.	0.043	0.64	450	.	0.12	0	.	.	0	0.18	220	.	0.54	0.78	280	.	0	0.97	62
1995	MAY	.	0.025	0.26	1200	.	1.3	1.6	200	.	0	0.088	350	.	0.78	1.9	120	.	1.7	0.75	63
1995	JUN	.	0.011	0.12	2200	.	0.34	0.32	730	.	0	0.25	120	.	0.22	1.2	120	.	.	0.68	61
1995	JUL	.	0.30	0.50	550	.	0.16	1.9	150	.	0	0.66	71	.	0.80	4.0	71	.	0	2.7	59
1995	AUG	.	0.013	1.6	190	.	0.020	0.93	270	.	4.7	0.66	71	.	0.19	3.1	76	.	0.21	1.8	59
1995	SEP	.	0.087	0.13	2700	.	0.14	0.52	660	.	0	0.50	87	.	0.42	3.7	79	.	3.2	1.7	59
1995	OCT	.	0.26	0.57	810	.	0.98	0.62	680	.	0	0.26	180	.	1.2	4.4	88	.	9.6	1.6	60
1995	NOV	.	.	0.037	11000	.	0.23	0.42	1100	.	0	0.046	1000	.	4.3	0.96	320	.	0	0.70	70
1995	DEC	.	0	0	.	.	0	0.087	4700	.	5.0	0.16	290	.	7.6	0.70	390	.	0	0.36	92
1996	JAN	.	0	0	.	.	0.064	0.22	110	.	4.8	0.079	220	.	0.45	2.7	59	.	.	0.51	150
1996	FEB	.	0	0	.	.	0.035	0	.	.	0	0.052	320	.	0.23	0	.	.	0	0.40	160
1996	MAR	.	0	0.85	62	.	0.20	0	.	.	0	0.11	170	.	1.0	0.29	76	.	0	0.088	520
1996	APR	.	0	0	.	.	0.93	0.10	190	.	0.43	0.14	120	.	1.1	2.4	59	.	0.50	0.82	86
1996	MAY	.	0.14	0	.	.	.	0.51	66	.	0	0.34	67	.	1.2	3.8	58	.	6.4	3.3	60
1996	JUN	.	0.063	3.9	58	.	0.42	2.8	59	.	0	0.33	65	.	0.58	18	58	.	0	4.2	59
1996	JUL	.	0.039	2.2	59	.	0.10	2.6	58	.	0	0.14	90	.	.	14	58	.	0	1.1	68
1996	AUG	.	0.42	1.2	59	.	1.1	2.8	58	.	.	0.16	80	.	0.41	5.0	58	.	0	3.8	59
1996	SEP	.	0.10	0.58	63	.	0.20	2.9	59	.	0	0.23	73	.	1.3	1.5	59	.	0	1.4	65
1996	OCT	.	0.0010	0.68	66	.	0.60	0.88	62	.	0	0.58	64	.	0.42	2.5	59	.	1.4	1.9	64
1996	NOV	.	0.023	0.88	64	.	0.19	0.85	63	.	0	0.27	81	.	0.083	0.65	66	.	0	0.76	91
1996	DEC	.	0.18	0.27	100	.	0.40	0.67	64	.	0	0.14	120	.	0.045	1.2	61	.	0	0.69	100
1997	JAN	.	0.44	0.054	510	.	0.061	0.54	69	.	.	0.13	160	.	0.0036	0.77	69	.	.	0.17	79
1997	FEB	.	0.099	0.11	220	.	0.16	0.20	110	.	0	0.14	130	.	0.13	1.9	59	.	5.9	0.77	59
1997	MAR	.	0.19	0.068	310	.	0.91	0	.	.	0	.	.	.	0.65	0.79	64	.	4.0	0.71	59
1997	APR	.	0.050	0.62	64	.	0.14	0	.	.	0	0.16	110	.	0.35	1.7	59	.	0	0.22	65
1997	MAY	.	0.018	0.76	61	.	0.43	0.93	61	.	.	0.14	120	.	0.47	3.2	59	.	1.9	0.49	60
1997	JUN	.	0	1.0	60	.	0.50	2.8	58	.	0	0.35	66	.	0.25	4.2	58	.	4.9	2.5	58
1997	JUL	.	0	0.27	75	.	0.012	2.2	59	.	2.6	0.23	76	.	0.089	3.8	58	.	0	3.7	58
1997	AUG	.	0.0046	1.3	59	.	0	2.8	58	.	3.7	0.28	72	.	0.019	3.8	58	.	0	1.0	58
1997	SEP	.	0.011	1.0	61	.	0.041	4.2	58	.	13	0.31	76	.	0.39	5.1	58	.	0	1.4	58
1997	OCT	.	0.018	0.16	140	.	0.080	0.78	63	.	0	0.44	70	.	0.46	3.8	59	.	0	0.74	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDT**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.030	0.28	93	.	0.050	0	.	.	0	0.080	240	.	0.15	0.90	63	.	0	0.10	93
1997	DEC	.	0.027	0.19	120	.	0.067	0.39	74	.	0	0.085	220	.	0.040	0.38	81	.	0	0.25	66
1998	JAN	.	0.091	0.0089	3100	.	0.079	0	.	.	0	0.0077	700	.	0.024	0.0048	4400	.	0.12	0.23	65
1998	FEB	.	.	0.12	210	.	0.014	0.079	360	.	0	0.054	100	.	0.044	0.26	88	.	.	0.21	64
1998	MAR	.	.	0.095	240	.	0.32	0.12	310	.	.	0.030	180	.	0.083	0.24	110	.	0.027	0.094	90
1998	APR	.	0.038	0.18	130	.	0.36	0.52	79	.	0	0.097	73	.	0.20	1.0	60	.	0	0.48	59
1998	MAY	.	0.045	0.79	64	.	0.24	3.8	59	.	0	0.13	65	.	0.26	2.3	59	.	0	1.1	58
1998	JUN	.	0.038	0.50	68	.	0.070	1.6	60	.	0	0.23	60	.	0.26	4.6	58	.	0	1.8	58
1998	JUL	.	0.024	2.0	59	.	0.074	5.9	58	.	.	0.086	70	.	0.16	11	58	.	.	1.3	58
1998	AUG	.	0.023	1.5	59	.	0.075	6.1	58	.	.	0.19	60	.	0.20	2.8	58	.	0.35	1.3	58
1998	SEP	.	0.0081	0.41	79	.	0.048	0.74	66	.	0	0.34	59	.	0.13	3.7	58	.	0	2.2	58
1998	OCT	.	0.019	0.85	68	.	0.040	0.42	94	.	0.0045	0.13	71	.	0.078	2.2	59	.	0	0.45	60
1998	NOV	.	0.026	0.11	280	.	0.074	0	.	.	0	0.076	93	.	.	1.1	61	.	0.33	0.62	59
1998	DEC	.	0.035	0.048	700	.	0.080	0.0048	6600	.	0	0.18	67	.	.	1.4	60	.	0.053	0.50	60
1999	JAN	.	0.12	0.41	490	.	0.26	0.65	660	.	0.093	0.095	100	.	.	1.8	85	.	0	0.21	160
1999	FEB	.	0.10	1.8	120	.	0.16	2.6	170	.	0	0.43	61	.	.	2.7	67	.	0.012	0.36	89
1999	MAR	.	0.036	2.5	88	.	0.058	3.8	130	.	0	0.062	130	.	0.28	1.4	79	.	0.026	0.27	110
1999	APR	.	0.042	1.2	110	.	0.46	0.40	910	.	0	0.16	70	.	0.11	0.74	120	.	.	0.25	100
1999	MAY	.	0.085	2.6	79	.	0.22	6.1	80	.	0.35	0.54	59	.	0.18	6.3	59	.	0	2.4	59
1999	JUN	.	0.037	1.5	96	.	0.10	8.6	66	.	.	0.57	59	.	0.061	5.1	59	.	0	3.1	59
1999	JUL	.	0.062	1.6	89	.	0.16	4.7	83	.	0	0.48	59	.	0.25	6.3	59	.	0.99	3.4	58
1999	AUG	.	0.010	0.98	130	.	0.25	1.8	170	.	0.085	0.32	60	.	1.0	3.2	61	.	0.18	0.50	66
1999	SEP	.	0.061	0.48	300	.	0.12	2.0	180	.	0.062	0.26	62	.	0.062	3.7	61	.	0.28	1.3	60
1999	OCT	.	0.069	0.46	380	.	0.084	1.7	250	.	0.080	0.24	66	.	0.15	3.0	65	.	0.32	1.1	63
1999	NOV	.	0.015	0.092	2100	.	0.045	0.63	660	.	0.26	0.054	170	.	0.20	1.7	78	.	0.19	0.93	66
1999	DEC	.	0.030	0.045	4200	.	0.11	0.69	560	.	0.45	0.11	100	.	0.090	0.17	580	.	.	0.58	75
2000	JAN	.	.	0.14	520	.	.	0.21	280	.	0.094	0.061	500	.	0.094	0.52	640	.	.	0.26	72
2000	FEB	.	.	1.1	86	.	.	0.16	380	.	0.075	0.065	460	.	0.099	1.6	190	.	0.38	0.14	94
2000	MAR	.	0.062	0.015	4300	.	0.22	0.37	150	.	.	0.13	180	.	0.69	0.56	410	.	0.52	0.63	60
2000	APR	.	0.071	0.37	150	.	0.16	0.37	160	.	.	0.10	220	.	1.1	1.1	180	.	0.44	0.26	65
2000	MAY	.	0.075	0.54	100	.	0.32	1.7	64	.	0.41	0.33	78	.	0.24	5.8	71	.	.	2.0	58
2000	JUN	.	0.10	0.50	110	.	0.12	0.82	80	.	0.23	0.13	140	.	0.44	3.9	82	.	0.89	0.84	59
2000	JUL	.	0.14	1.0	71	.	0.16	1.4	65	.	0	0.12	130	.	0.17	1.6	120	.	0.30	0.32	61
2000	AUG	.	.	0.66	86	.	0.15	1.6	63	.	0	0.31	75	.	0.16	3.3	83	.	0.54	0.68	59
2000	SEP	.	0.10	2.1	65	.	0.60	2.8	62	.	0.50	0.39	79	.	0.37	4.0	86	.	.	0.57	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDT**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.021	1.1	80	.	0.27	1.9	65	.	0.067	0.16	130	.	0.31	5.8	72	.	.	0.72	59
2000	NOV	.	0	0.13	520	.	0.11	0.54	130	.	0.062	0.27	100	.	0.52	0.86	360	.	.	0.30	66
2000	DEC	.	0	0.18	400	.	0.045	0.50	130	.	.	0.094	270	.	0.28	0.22	1400	.	0.69	0.13	110
2001	JAN	.	0.035	1.3	62	.	0.089	0.75	62	.	1.1	0.0073	820	.	0.086	1.4	59	.	.	0.10	120
2001	FEB	.	0.024	1.3	62	.	0.11	0	.	.	0.36	0	.	.	0.18	0.56	60	.	0	0.080	160
2001	MAR	.	0.029	0.68	65	.	0.028	0.91	61	.	.	0.039	160	.	0.17	0.73	59	.	0.14	0.084	140
2001	APR	.	0.13	0.42	73	.	.	0.20	98	.	0.43	0.097	80	.	0.060	0.24	62	.	0.36	0.18	76
2001	MAY	.	0.23	0.14	120	.	0.27	0.52	63	.	0.0079	0.16	65	.	0.22	1.6	58	.	1.3	1.5	59
2001	JUN	.	0.041	1.4	59	.	0.12	1.3	59	.	0	0.26	60	.	0.17	3.0	58	.	0.23	1.9	58
2001	JUL	.	0.065	1.5	59	.	0.11	1.2	59	.	0	0.35	60	.	0.17	2.6	58	.	0.095	0.97	59
2001	AUG	.	0.11	0.69	62	.	0.12	0.92	60	.	0	0.21	62	.	0.29	1.2	58	.	0.28	1.1	59
2001	SEP	.	0.031	0.85	62	.	0.079	0.81	61	.	0.023	0.20	64	.	0.38	1.6	58	.	0.92	0.33	63
2001	OCT	.	0	1.6	60	.	0.061	2.3	59	.	0.023	0.41	60	.	0.46	3.4	58	.	1.0	1.3	59
2001	NOV	.	0.0057	0.45	81	.	0.10	1.2	60	.	0	0.24	64	.	0.14	2.8	58	.	0.85	1.2	59
2001	DEC	.	0.0034	0.44	86	.	0.12	0.54	65	.	0	0.099	85	.	0.26	0.70	59	.	0.60	0.18	87
2002	JAN	.	0.083	0.62	210	.	0.031	0.84	82	.	0	0.044	160	.	0.21	0.65	87	.	0.14	0.30	70
2002	FEB	.	0.027	1.4	120	.	0.083	1.9	66	.	0	0.29	63	.	0.38	1.5	65	.	0.22	0.25	73
2002	MAR	.	0.032	0.68	200	.	.	0.36	150	.	.	0.11	84	.	0.36	1.5	61	.	0.43	0.23	75
2002	APR	.	0.069	0.67	130	.	0.78	1.4	68	.	1.5	0.11	80	.	0.21	2.8	59	.	0.48	0.62	60
2002	MAY	.	0.12	0.65	160	.	0.88	1.2	70	.	0.16	0.14	69	.	0.52	1.7	61	.	0.62	0.44	61
2002	JUN	.	0.22	1.5	78	.	0.17	2.7	60	.	0.066	0.22	61	.	0.58	1.9	59	.	0.37	0.53	59
2002	JUL	.	.	0.87	96	.	0.22	2.8	59	.	0.077	0.38	59	.	0.21	2.5	59	.	0.11	1.8	58
2002	AUG	.	0.030	0.87	110	.	0.46	1.1	65	.	0.071	0.15	64	.	0.090	1.6	60	.	0.15	0.77	59
2002	SEP	.	0.027	0.85	120	.	0.15	1.0	70	.	.	0.098	75	.	0.28	1.1	63	.	0.56	0.22	66
2002	OCT	.	0.034	0.89	140	.	0.17	0.59	100	.	.	0.11	78	.	0.17	1.4	63	.	0.27	0.15	84
2002	NOV	.	0.12	0.19	650	.	0.043	0.23	230	.	0.015	0.25	64	.	0.46	2.0	62	.	0.35	0.94	59
2002	DEC	.	.	1.1	130	.	0.035	1.2	74	.	0	0.042	170	.	0.48	2.3	61	.	0.31	0.048	240
2003	JAN	.	0.13	0.50	200	.	0.035	0.43	450	.	0.020	0.0076	940	.	0.48	1.9	71	.	0.21	0.053	140
2003	FEB	.	0.32	0.77	120	.	0.024	0.35	530	.	0.060	0.019	360	.	0.45	1.2	78	.	0.27	0.036	190
2003	MAR	.	0.098	0.51	150	.	0.25	0.37	480	.	0.019	0.030	210	.	0.32	0.63	100	.	0.073	0.27	62
2003	APR	.	0.10	0.76	110	.	0.30	1.0	190	.	0.16	0.093	88	.	0.27	0.94	75	.	0.083	0.59	59
2003	MAY	.	0.040	0.57	110	.	.	3.5	70	.	0.033	0.12	71	.	0.37	3.3	60	.	0.75	0.20	62
2003	JUN	.	.	0.47	110	.	0.063	1.2	120	.	.	0.16	64	.	0.22	3.4	60	.	0.075	1.2	58
2003	JUL	.	0.12	2.1	62	.	0.051	1.6	97	.	0.0032	0.17	64	.	0.11	5.6	59	.	0.32	1.5	58
2003	AUG	.	0.054	1.7	64	.	0.086	2.2	79	.	0.088	0.29	60	.	0.14	2.9	59	.	0.31	0.75	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDT**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.071	1.8	68	.	0.16	3.2	76	.	0.14	0.16	66	.	0.69	2.7	62	.	0.14	0.39	59
2003	OCT	.	0.031	0.48	150	.	0.073	0.50	320	.	0.011	0.081	92	.	0.21	1.6	69	.	0.087	0.53	59
2003	NOV	.	0.057	0.60	150	.	0.090	0.47	410	.	0.076	0.12	80	.	0.37	2.2	66	.	0.039	0.50	60
2003	DEC	.	0.055	0.35	210	.	0.14	0.30	650	.	0.13	0.028	230	.	0.59	1.5	76	.	0.064	0.32	62
2004	JAN	.	0.055	0.69	65	.	0.077	0.52	120	.	0.094	0.15	130	.	0.56	0.82	58	.	0.0098	0.052	190
2004	FEB	.	0.23	0.10	160	.	0.038	0.18	260	.	0.012	0.027	590	.	0.12	0.25	59	.	0.11	0.10	96
2004	MAR	.	0.076	0.34	71	.	0.088	0.63	100	.	0.0054	0.13	130	.	0.33	1.0	58	.	0.14	0.21	67
2004	APR	.	0.87	0.14	97	.	0.098	0.28	180	.	0.014	0.14	130	.	0.14	0.37	59	.	0.17	0.89	59
2004	MAY	.	0.16	0.22	79	.	0.48	0.46	110	.	0.023	0.072	190	.	0.43	1.6	58	.	0.32	0.64	59
2004	JUN	.	0.12	0.48	63	.	0.045	1.1	67	.	0.14	0.27	72	.	0.058	1.8	58	.	0.24	1.4	58
2004	JUL	.	0.27	0.32	65	.	0.030	0.46	89	.	0.040	0.10	120	.	0.014	2.1	58	.	0.14	1.1	58
2004	AUG	.	0.098	0.084	150	.	0.062	0.51	96	.	0.063	0.080	160	.	0.11	1.3	58	.	0.071	0.45	59
2004	SEP	.	0.099	0.33	70	.	0.11	0.92	72	.	0.015	0.37	67	.	0.35	3.1	58	.	0.0015	1.3	58
2004	OCT	.	0.19	0.35	74	.	0.25	0.36	150	.	0.029	0.25	89	.	0.29	1.5	58	.	0.051	0.84	59
2004	NOV	.	0.036	0.33	79	.	0.85	0.49	120	.	0.073	0.031	550	.	0.014	1.0	58	.	0.066	0.036	210
2004	DEC	.	0.10	0.59	67	.	0.12	0.39	150	.	0.062	0.022	860	.	0.20	0.42	59	.	0.12	0.076	130
2005	JAN	.	0.11	0.13	230	.	0.096	0.17	150	.	0.034	0	.	.	0.060	0.50	130	.	0.18	0.027	170
2005	FEB	.	0.23	0.62	73	.	0.094	0.38	84	.	0.052	0.029	150	.	0.21	1.1	73	.	0.068	0.12	66
2005	MAR	.	0.057	0	.	.	0.17	0	.	.	0.058	.	.	.	0.073	0.39	140	.	0.12	0.041	120
2005	APR	.	0.27	0.40	80	.	0.26	0.58	69	.	0.061	0.060	85	.	0.28	0.84	82	.	0.35	0.31	59
2005	MAY	.	0.22	0.48	72	.	0.16	0.60	67	.	0.28	0.18	61	.	0.76	1.6	63	.	0.12	0.81	58
2005	JUN	.	0.089	0.99	62	.	0.20	1.6	59	.	0.53	0.20	60	.	0.17	2.0	61	.	0.21	1.5	58
2005	JUL	.	0.084	1.2	60	.	0.12	0.98	61	.	.	0.18	60	.	0.18	3.7	59	.	0.20	1.1	58
2005	AUG	.	0.077	1.2	60	.	0.074	1.3	60	.	0.066	0.18	60	.	0.17	3.0	59	.	0.18	0.73	58
2005	SEP	.	0.074	0.41	79	.	0.10	0.90	62	.	.	0.27	60	.	0.081	2.5	61	.	.	1.2	58
2005	OCT	.	0.031	0.38	84	.	0.11	1.1	62	.	0.049	0.19	62	.	0.10	1.6	66	.	.	0.38	59
2005	NOV	.	0.10	0.45	88	.	0.065	0.54	77	.	0.041	0.054	110	.	0.017	1.2	82	.	0.33	0.23	62
2005	DEC	.	0.14	0.24	130	.	0.20	0.22	120	.	0.018	0.031	170	.	0.23	0.20	310	.	0.075	0.073	86

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDE**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.095	.	.	.	0.094	.	.	.	.	.	.	.	0.19	.	.	.	0.63	.	.
1992	FEB	.	0.038	.	.	.	0.031	.	.	.	.	.	.	.	0.21	.	.	.	0	.	.
1992	MAR	.	0.058	0.65	69	.	0.072	1.1	59	.	.	.	.	.	0.33	1.5	78	.	0.12	0.77	87
1992	APR	.	0.050	0.49	68	.	0.15	1.4	59	.	.	.	.	.	0.60	3.6	60	.	0.071	1.9	62
1992	MAY	.	0.074	0.64	60	.	0.19	1.3	58	.	.	.	.	.	0.41	2.8	58	.	2.4	1.3	62
1992	JUN	.	0.10	0.21	110	.	0.51	0.55	60	.	.	.	.	.	1.1	.	.	.	0.59	1.2	60
1992	JUL	.	0.060	0.25	86	.	0.36	1.6	58	.	0.15	.	.	.	0.72	4.1	58	.	0.81	1.7	59
1992	AUG	.	0.071	0.71	62	.	0.15	1.1	59	.	.	.	.	.	0.17	1.1	58	.	0.83	1.7	60
1992	SEP	.	0.23	0.76	68	.	0.26	1.5	59	.	0.13	.	.	.	0.27	1.5	58	.	0.27	1.5	61
1992	OCT	.	0.093	0.22	140	.	0.016	1.3	59	.	0.23	.	.	.	0.43	1.5	58	.	0.10	0.94	71
1992	NOV	.	0.037	0.25	160	.	0.18	1.3	60	.	0	.	.	.	0.67	1.5	59	.	0.12	1.7	68
1992	DEC	.	.	0.64	96	.	.	1.7	59	.	0.13	.	.	.	0.28	1.4	59	.	0.13	1.4	78
1993	JAN	.	.	0.67	71	.	.	1.3	200	.	0.077	0.38	160	.	0.28	4.7	58	.	0.51	2.3	74
1993	FEB	.	0.0077	0.48	77	.	0	1.6	160	.	0	0.35	150	.	0.22	1.8	59	.	1.9	0.38	210
1993	MAR	.	0	0.43	64	.	0	7.0	66	.	0.053	0.26	160	.	0.22	3.8	58	.	0.96	0.62	110
1993	APR	.	0.044	0.49	64	.	2.0	2.7	110	.	0.36	0.17	220	.	0.51	2.7	59	.	0.58	1.1	78
1993	MAY	.	0.11	0.45	64	.	0.70	1.9	90	.	0.81	0.79	67	.	0.27	4.8	58	.	0.78	2.6	61
1993	JUN	.	0.087	.	.	.	0.66	2.1	76	.	0.58	0.47	69	.	0.87	5.5	58	.	0.57	4.5	59
1993	JUL	.	0.15	0.44	62	.	0.34	1.6	74	.	0.37	0.23	82	.	0.24	2.8	58	.	2.8	2.1	59
1993	AUG	.	.	0.20	65	.	0.019	0.25	230	.	0.045	0.13	95	.	0.12	1.5	58	.	0.85	0.73	62
1993	SEP	.	0.0027	0.56	62	.	.	1.8	82	.	0	0.56	68	.	0.23	3.3	58	.	.	1.8	61
1993	OCT	.	0.038	0.57	65	.	0.079	1.1	170	.	0.24	0.60	87	.	0.31	2.6	58	.	1.0	1.1	83
1993	NOV	.	0.35	0.25	92	.	0.013	0.86	270	.	0.32	0.43	120	.	0.37	1.4	59	.	0.55	2.5	64
1993	DEC	.	0.66	0.23	110	.	0.042	0.66	320	.	0	0.44	110	.	0.15	1.7	59	.	.	1.8	74
1994	JAN	.	.	0.14	61	.	.	0.19	140	.	0	0.21	140	.	0.25	1.6	58	.	0.78	0.88	66
1994	FEB	.	.	0.23	59	.	.	0.79	65	.	0	0.39	91	.	0.072	0.55	58	.	0	0.42	84
1994	MAR	.	.	0.78	58	.	0	0.43	70	.	0	0.19	120	.	0.15	3.5	58	.	0.023	0.75	63
1994	APR	.	0.094	.	.	.	0.068	.	.	.	0	0.95	63	.	0.51	.	.	.	0.65	6.8	58
1994	MAY	.	0.054	.	.	.	0.16	.	.	.	0.34	0.28	77	.	0.46	.	.	.	.	2.8	59
1994	JUN	.	0.32	.	.	.	0.20	.	.	.	0	0.22	68	.	0.79	.	.	.	0.33	4.3	58
1994	JUL	.	0.044	.	.	.	0.19	.	.	.	0	0.29	62	.	0.26	.	.	.	0.27	2.7	58
1994	AUG	.	0.15	0.47	58	.	0.21	1.3	59	.	0.33	0.34	62	.	0.82	2.9	58	.	0.29	2.0	58
1994	SEP	.	0.086	0.24	58	.	0.096	0.23	66	.	0.16	0.13	85	.	0.12	0.77	58	.	0.37	1.5	59
1994	OCT	.	0.37	0.39	58	.	0.087	1.1	60	.	0.13	0.30	77	.	0.15	0.60	58	.	0	1.3	59
1994	NOV	.	0.031	0.42	59	.	0.48	1.4	60	.	.	0.43	82	.	0.17	1.5	58	.	0.39	3.6	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDE**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.046	0.16	59	.	0.12	0.64	63	.	0.11	0.41	72	.	0.17	1.2	58	.	0.10	1.4	60
1995	JAN	.	0.049	0.26	59	.	0.16	0.25	58	.	.	.	.	.	1.4	1.6	62	.	.	2.2	60
1995	FEB	.	0.21	0.22	59	.	0.074	0.47	58	.	0.42	0.51	140	.	0.60	1.6	62	.	0.82	0.82	72
1995	MAR	.	0.19	0.12	59	.	0.13	0.60	58	.	.	0.32	140	.	0.43	0.86	61	.	0.057	0.65	64
1995	APR	.	0.098	0.080	59	.	0.53	0.44	58	.	1.4	0.35	150	.	2.3	1.2	60	.	0.79	3.6	59
1995	MAY	.	0.068	0.32	58	.	1.1	1.7	58	.	0.58	0.25	130	.	0.78	2.0	59	.	3.5	1.1	60
1995	JUN	.	0.023	0.19	58	.	0.19	0.79	58	.	0	0.16	120	.	0.15	0.78	59	.	.	0.52	60
1995	JUL	.	0.17	0.24	58	.	0.096	1.2	58	.	0.11	0.26	83	.	0.29	2.6	58	.	0.63	2.0	58
1995	AUG	.	0.041	0.65	58	.	0.046	0.53	58	.	2.1	0.25	82	.	0.40	1.4	58	.	.	0.97	59
1995	SEP	.	0.084	0.44	58	.	0.10	0.99	58	.	0	0.32	89	.	0.19	2.2	58	.	.	1.5	59
1995	OCT	.	0.19	0.53	58	.	0.44	0.82	58	.	0	0.35	140	.	0.52	3.4	59	.	0.75	3.1	59
1995	NOV	.	.	0.11	59	.	0.14	0.57	58	.	0.34	0.20	280	.	0.59	1.4	61	.	0.37	1.6	62
1995	DEC	.	0.23	0.27	58	.	0.10	0.18	59	.	0	0.27	210	.	0.62	0.63	72	.	1.1	0.75	73
1996	JAN	.	0.14	0.20	59	.	0.11	0.28	59	.	2.3	0.27	60	.	0.30	1.2	58	.	.	2.3	59
1996	FEB	.	0.049	0.022	86	.	0.053	0.12	59	.	0.45	0.25	60	.	0.18	0.18	59	.	0.27	0.55	61
1996	MAR	.	0.016	0.11	59	.	0.15	0.26	58	.	0.0056	0.31	59	.	0.62	0.28	58	.	1.0	0.29	63
1996	APR	.	0.028	0.072	59	.	0.90	0.56	58	.	0.19	0.26	59	.	1.3	1.3	58	.	0.44	1.0	59
1996	MAY	.	0.048	0.16	58	.	.	1.2	58	.	0.012	0.23	59	.	0.43	4.0	58	.	0.98	2.6	58
1996	JUN	.	0.041	0.22	58	.	0.23	0.62	58	.	0.036	0.18	59	.	0.24	2.0	58	.	1.9	1.9	58
1996	JUL	.	0.036	0.34	58	.	0.074	0.73	58	.	0.067	0.061	60	.	.	1.7	58	.	0.45	0.84	58
1996	AUG	.	0.036	0.25	58	.	0.088	0.93	58	.	.	0.084	59	.	0.058	0.86	58	.	1.3	1.7	58
1996	SEP	.	0.037	0.11	58	.	0.12	1.8	58	.	0.49	0.086	59	.	0.44	1.6	58	.	1.4	0.54	59
1996	OCT	.	0.071	0.50	58	.	0.28	0.91	58	.	0.33	0.49	58	.	0.14	1.3	58	.	2.7	1.3	58
1996	NOV	.	0.043	0.58	58	.	0.079	0.93	58	.	0.044	0.48	58	.	0.13	1.2	58	.	2.6	0.55	60
1996	DEC	.	0.069	0.26	59	.	0.15	0.55	58	.	0	0.12	62	.	0.12	1.1	58	.	0.96	0.71	59
1997	JAN	.	0.099	0.15	61	.	0.12	0.44	59	.	.	0.063	78	.	0.040	0.80	61	.	.	0.73	59
1997	FEB	.	0.066	0.071	65	.	0.14	0.17	63	.	0.65	0.12	63	.	0.11	2.6	58	.	8.1	1.5	58
1997	MAR	.	0.20	0.040	73	.	0.12	0.28	60	.	0.40	.	.	.	0.38	1.8	59	.	3.5	1.8	58
1997	APR	.	0.030	2.7	58	.	0.077	0.88	58	.	0.14	0.096	63	.	0.27	1.3	58	.	0.24	0.53	59
1997	MAY	.	0.065	0.16	59	.	0.21	0.62	58	.	.	0.15	61	.	0.53	2.4	58	.	0.31	1.1	58
1997	JUN	.	0.060	0.34	58	.	0.30	2.0	58	.	0.092	0.38	58	.	0.28	2.2	58	.	0.63	2.6	58
1997	JUL	.	0.054	0.30	58	.	0.13	1.4	58	.	2.2	0.15	59	.	0.10	2.2	58	.	0.33	4.4	58
1997	AUG	.	0.022	0.23	58	.	0.042	0.97	58	.	2.2	0.14	59	.	0.10	1.5	58	.	0.57	0.77	58
1997	SEP	.	0.0066	0.19	58	.	0.086	2.4	58	.	4.7	0.12	60	.	0.24	2.5	58	.	0.73	1.6	58
1997	OCT	.	0.082	0.61	58	.	0.065	1.8	58	.	0.15	0.52	58	.	0.24	1.5	58	.	0.18	1.0	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDE**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.058	0.092	60	.	0.031	0.27	60	.	0	0.097	65	.	0.11	0.71	59	.	0.20	0.31	60
1997	DEC	.	0.043	0.13	59	.	0.021	0.40	59	.	0.15	0.17	61	.	0.067	0.76	60	.	0.21	0.75	59
1998	JAN	.	0.097	0.088	66	.	0.043	0.33	58	.	0.054	0.14	62	.	0.11	0.53	59	.	0.33	0.58	59
1998	FEB	.	.	0.35	59	.	0.022	0.75	58	.	0	0.20	60	.	0.054	1.4	58	.	.	0.44	60
1998	MAR	.	.	0.11	61	.	0.28	0.52	58	.	0.84	0.23	60	.	0.18	0.28	60	.	0.27	0.29	62
1998	APR	.	0.029	0.15	60	.	0.16	0.99	58	.	0.20	0.19	59	.	0.23	1.2	58	.	0.29	1.2	58
1998	MAY	.	0.076	0.45	58	.	0.22	1.1	58	.	0.31	0.19	59	.	0.051	0.98	58	.	0.45	1.4	58
1998	JUN	.	0.073	0.18	59	.	0.12	1.2	58	.	0.16	0.23	58	.	0.25	1.6	58	.	1.9	1.9	58
1998	JUL	.	0.040	0.12	59	.	0.046	0.95	58	.	0.14	0.084	59	.	0.12	2.7	58	.	0.73	1.1	58
1998	AUG	.	0.020	0.19	58	.	0.12	0.78	58	.	0.14	0.11	59	.	0.23	0.84	58	.	0.67	0.94	58
1998	SEP	.	0.049	0.20	59	.	0.056	0.60	58	.	0.084	0.28	58	.	0.11	2.9	58	.	0.67	2.0	58
1998	OCT	.	0.047	0.32	59	.	0.097	0.32	58	.	0.083	0.19	59	.	0.059	0.87	58	.	0.47	0.79	59
1998	NOV	.	0.038	0.14	61	.	0.089	0.43	58	.	0.15	0.27	59	.	.	0.99	58	.	0.34	1.7	58
1998	DEC	.	0.033	0.39	59	.	0.045	0.23	58	.	0.18	0.41	59	.	.	1.1	58	.	0.30	1.8	58
1999	JAN	.	0.056	0.28	59	.	0.13	0.34	59	.	0.27	0.18	59	.	.	0.58	60	.	0.26	0.61	59
1999	FEB	.	0.079	0.46	59	.	0.059	2.1	58	.	0.064	0.54	58	.	.	1.2	59	.	0.043	0.98	58
1999	MAR	.	0.12	0.18	59	.	0.040	1.1	58	.	0.013	0.065	61	.	0.15	1.3	58	.	0	0.96	58
1999	APR	.	.	0.096	60	.	1.6	0.74	58	.	0.13	0.15	59	.	0.70	1.0	58	.	.	0.58	59
1999	MAY	.	0.23	0.62	58	.	0.44	1.6	58	.	0.71	0.25	58	.	0.28	2.0	58	.	0.53	2.8	58
1999	JUN	.	0.072	0.47	58	.	0.14	3.1	58	.	.	0.25	58	.	0.25	1.2	58	.	0.083	2.6	58
1999	JUL	.	0.054	0.33	58	.	0.047	2.0	58	.	0	0.24	58	.	0.22	1.7	58	.	0.75	3.5	58
1999	AUG	.	0.017	0.27	58	.	0.075	0.98	58	.	0.050	0.11	58	.	0.84	1.8	58	.	0.24	0.41	58
1999	SEP	.	0.043	0.18	59	.	0.079	1.1	58	.	0.086	0.13	58	.	0.062	1.6	58	.	0.23	1.0	58
1999	OCT	.	0.18	0.37	58	.	0.037	1.7	58	.	0.079	0.28	58	.	0.078	1.9	58	.	0.19	1.9	58
1999	NOV	.	0.046	0.25	59	.	0.039	0.42	59	.	0.19	0.17	59	.	0.080	1.4	58	.	0.30	2.0	58
1999	DEC	.	0.023	0.30	59	.	0.093	1.0	58	.	0.49	0.45	58	.	0.052	0.84	59	.	.	1.4	58
2000	JAN	.	.	0.12	60	.	.	0.29	60	.	0.13	0.14	82	.	0.066	0.53	61	.	.	0.62	58
2000	FEB	.	.	0.18	59	.	.	0.34	60	.	0.097	0.15	80	.	0.10	0.25	65	.	0.27	0.33	59
2000	MAR	.	0.055	0.23	59	.	0.16	0.58	59	.	.	0.25	62	.	0.45	0.73	59	.	0.38	1.5	58
2000	APR	.	0.042	0.21	59	.	0.092	0.82	59	.	.	0.15	67	.	0.52	1.4	58	.	0.64	0.71	58
2000	MAY	.	0.028	0.30	58	.	0.10	1.5	58	.	0.26	0.38	59	.	0.13	5.8	58	.	.	2.7	58
2000	JUN	.	0.050	0.23	58	.	0.066	0.60	58	.	0.16	0.086	64	.	0.20	2.3	58	.	0.75	1.4	58
2000	JUL	.	0	0.12	59	.	0	0.61	58	.	0.054	0.061	63	.	0.050	0.89	58	.	0.44	0.48	58
2000	AUG	.	.	0.10	59	.	0.017	0.38	58	.	0.12	0.19	59	.	0.042	1.3	58	.	0.33	0.65	58
2000	SEP	.	0.016	0.22	58	.	0.063	1.8	58	.	0.15	0.32	59	.	0.087	2.2	58	.	.	0.73	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDE**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.0080	0.049	63	.	0.031	0.38	59	.	0.054	0.12	63	.	0.10	1.7	58	.	.	1.1	58
2000	NOV	.	0	0.13	59	.	0.041	0.35	59	.	0.075	0.27	60	.	0.14	1.0	59	.	.	0.53	58
2000	DEC	.	0.019	0.054	68	.	0.023	0.14	65	.	.	0.075	92	.	0.084	0.22	66	.	0.22	0.23	60
2001	JAN	.	0.020	0.057	63	.	0.013	0.11	59	.	0.65	0.065	150	.	0.027	0.34	59	.	.	0.27	66
2001	FEB	.	0.0098	0.19	59	.	0.029	0.30	58	.	0.30	0.22	76	.	0.0060	0.46	58	.	0	0.33	66
2001	MAR	.	0.0098	0.10	59	.	0.010	0.13	59	.	.	0.14	86	.	0.051	0.18	59	.	0.10	0.38	63
2001	APR	.	0.079	0.11	59	.	.	0.53	58	.	0.37	0.17	74	.	0.051	0.51	58	.	0.56	0.48	60
2001	MAY	.	0.058	0.17	58	.	0.18	0.52	58	.	0.21	0.24	63	.	0.090	0.98	58	.	0.55	1.0	58
2001	JUN	.	0.044	0.52	58	.	0.070	0.67	58	.	0.12	0.22	60	.	0.097	1.8	58	.	0.14	1.6	58
2001	JUL	.	0.032	0.54	58	.	0.040	0.59	58	.	0.047	0.29	59	.	0.10	1.1	58	.	0.60	0.70	58
2001	AUG	.	0.045	0.16	58	.	0.055	0.52	58	.	0.074	0.081	70	.	0.13	0.71	58	.	0.33	1.1	58
2001	SEP	.	0.015	0.11	58	.	0.039	0.35	58	.	0.10	0.13	68	.	0.072	0.67	58	.	0.38	0.34	59
2001	OCT	.	0.036	0.75	58	.	0.056	1.7	58	.	0.099	0.80	59	.	0.11	2.0	58	.	0.39	2.1	58
2001	NOV	.	0.031	0.38	58	.	0.031	0.46	58	.	0.082	0.72	59	.	0.052	2.4	58	.	0.34	2.4	58
2001	DEC	.	0.025	0.22	59	.	0.021	0.25	58	.	0.083	0.23	68	.	0.080	0.46	58	.	0.27	0.68	60
2002	JAN	.	0.016	0.12	59	.	0.010	0.50	58	.	0.060	0.13	60	.	0.047	0.58	58	.	0.15	1.1	58
2002	FEB	.	0.012	0.28	58	.	0.041	0.66	58	.	0.076	0.35	59	.	0.094	1.2	58	.	0.12	0.92	58
2002	MAR	.	0.033	0.10	59	.	.	0.11	59	.	.	0.12	61	.	0.14	0.75	58	.	0.40	1.1	58
2002	APR	.	0.12	0.043	59	.	0.26	0.93	58	.	0.38	0.26	59	.	0.58	2.3	58	.	0.29	1.4	58
2002	MAY	.	0.032	0.13	58	.	0.15	0.77	58	.	0.18	0.24	59	.	0.12	1.9	58	.	0.46	1.2	58
2002	JUN	.	0.084	0.51	58	.	0.038	1.0	58	.	0.10	0.24	58	.	0.14	0.54	58	.	0.24	0.65	58
2002	JUL	.	.	0.22	58	.	0.041	1.3	58	.	0.081	0.25	58	.	0.11	1.1	58	.	0.15	1.7	58
2002	AUG	.	0.022	0.16	58	.	0.075	0.31	58	.	0.063	0.093	59	.	0.042	0.73	58	.	0.10	0.74	58
2002	SEP	.	0.021	0.18	58	.	0.022	0.18	58	.	.	0.10	59	.	0.11	0.57	58	.	0.24	0.38	58
2002	OCT	.	0.018	0.12	58	.	0.036	0.18	58	.	.	0.17	59	.	0.062	0.95	58	.	0.15	0.45	58
2002	NOV	.	0.011	0.084	59	.	0.013	0.13	59	.	0.082	0.44	58	.	0.16	2.1	58	.	0.20	2.0	58
2002	DEC	.	.	0.075	59	.	0.026	0.20	58	.	0.091	0.12	61	.	0.13	0.22	58	.	0.28	0.33	59
2003	JAN	.	0.049	0.053	64	.	0.019	0.11	59	.	0.042	0.024	180	.	0.18	0.20	59	.	0.27	0.094	63
2003	FEB	.	0.13	0.073	61	.	0.014	0.13	59	.	0.066	0.082	77	.	0.14	0.19	59	.	0.29	0.13	61
2003	MAR	.	0.046	0.10	59	.	0.058	0.32	58	.	0.098	0.16	62	.	0.10	0.39	58	.	0.0089	0.86	58
2003	APR	.	0.057	0.11	59	.	0.15	0.82	58	.	0.027	0.21	61	.	0.14	0.71	58	.	0.094	1.3	58
2003	MAY	.	0.067	0.11	59	.	.	1.7	58	.	0.054	0.20	59	.	0.16	1.1	58	.	0.45	0.41	58
2003	JUN	.	0.13	0.078	59	.	0.021	0.75	58	.	.	0.20	59	.	0.10	1.8	58	.	0.15	1.7	58
2003	JUL	.	0.027	0.11	58	.	0.036	0.83	58	.	0.013	0.14	59	.	0.056	1.5	58	.	0.46	1.7	58
2003	AUG	.	0.022	0.096	58	.	0.029	0.79	58	.	0.039	0.15	59	.	0.024	0.92	58	.	0.36	0.62	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

***p'p'*-DDE**

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.025	0.15	58	.	0.043	0.71	58	.	0.061	0.20	59	.	0.21	1.0	58	.	0.13	0.38	58
2003	OCT	.	0.015	0.11	59	.	0.033	0.37	58	.	0.024	0.20	60	.	0.086	0.95	58	.	0.091	1.1	58
2003	NOV	.	0.028	0.25	58	.	0.097	0.42	58	.	0.18	0.39	59	.	0.094	2.3	58	.	0.11	1.2	58
2003	DEC	.	0.021	0.057	61	.	0.11	0.099	59	.	0.37	0.11	66	.	0.12	1.3	58	.	0.12	1.0	58
2004	JAN	.	0.024	0.055	67	.	0.056	0.035	70	.	0.30	0.039	88	.	0.32	1.2	58	.	1.5	0.20	59
2004	FEB	.	0.089	0.075	61	.	0.066	0.11	59	.	0.042	0.10	62	.	0.061	0.16	59	.	0.050	0.32	58
2004	MAR	.	0.038	0.26	58	.	0.10	0.49	58	.	0.0054	0.37	59	.	0.12	0.61	58	.	0.19	0.73	58
2004	APR	.	0.25	0.032	63	.	0.057	0.40	58	.	0.035	0.39	59	.	0.038	0.36	58	.	0.53	2.2	58
2004	MAY	.	0.058	0.056	60	.	0.14	0.52	58	.	0.054	0.15	59	.	0.14	1.8	58	.	0.45	1.2	58
2004	JUN	.	0.024	0.20	58	.	0.050	1.1	58	.	0.044	0.31	58	.	0.012	1.5	58	.	0.14	2.6	58
2004	JUL	.	0.030	0.093	59	.	0.030	0.30	58	.	0.038	0.054	60	.	0.0045	1.1	58	.	0.33	0.96	58
2004	AUG	.	0.013	0.040	60	.	0.033	0.36	58	.	0.042	0.083	59	.	0.028	1.1	58	.	0.13	0.61	58
2004	SEP	.	0.018	0.16	59	.	0.052	0.62	58	.	0.014	0.17	59	.	0.022	1.0	58	.	0.0027	1.3	58
2004	OCT	.	0.030	0.24	59	.	0.037	0.30	58	.	0.021	0.38	58	.	0.037	0.92	58	.	0.058	1.4	58
2004	NOV	.	0.010	0.11	60	.	0.087	0.14	59	.	0.031	0.14	60	.	0.018	0.64	58	.	0.046	0.58	58
2004	DEC	.	0.022	0.090	61	.	0.023	0.17	59	.	0.075	0.12	62	.	0.025	0.42	58	.	0.17	0.28	58
2005	JAN	.	0.059	0.13	58	.	0.035	0.21	58	.	0.053	0.042	64	.	0.017	0.33	58	.	0.15	0.12	59
2005	FEB	.	0.023	0.14	58	.	0.015	0.12	59	.	0.026	0.088	59	.	0.0003	0.13	58	.	0.035	0.36	58
2005	MAR	.	0.051	0.025	60	.	0.072	0.044	62	.	0.026	0.040	63	.	0.023	0.29	58	.	0.21	0.20	59
2005	APR	.	0.11	0.12	58	.	0.11	0.68	58	.	0.14	0.19	58	.	0.096	0.73	58	.	0.26	0.83	58
2005	MAY	.	0.065	0.21	58	.	0.11	0.68	58	.	0.13	0.28	58	.	0.34	1.6	58	.	0.14	0.91	58
2005	JUN	.	0.020	0.24	58	.	0.059	0.82	58	.	0.21	0.16	58	.	0.021	1.2	58	.	0.41	1.2	58
2005	JUL	.	0.021	0.14	58	.	0.028	0.36	58	.	.	0.097	58	.	0.051	2.1	58	.	0.27	1.2	58
2005	AUG	.	0.013	0.16	58	.	0.026	0.44	58	.	0.041	0.13	58	.	0.045	1.4	58	.	0.16	0.67	58
2005	SEP	.	0.011	0.062	58	.	0.039	0.40	58	.	.	0.20	58	.	0.032	1.7	58	.	.	1.5	58
2005	OCT	.	0.0065	0.22	58	.	0.035	0.68	58	.	0.046	0.26	58	.	0.030	1.2	58	.	.	0.58	58
2005	NOV	.	0.052	0.071	59	.	0.038	0.13	59	.	0.062	0.16	59	.	.	0.67	58	.	0.15	0.66	58
2005	DEC	.	0.018	0.056	59	.	0.019	0.16	59	.	0.059	0.14	59	.	0.043	0.38	58	.	0.081	0.36	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

α-endosulfan

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.1	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.87	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.65	1.2	100
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.2	1.9	74
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	28	58
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.3	18	58
1992	JUL	.	.	.	.	.	.	.	.	.	5.3	.	.	.	.	.	.	.	97	150	58
1992	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12	30	58
1992	SEP	.	.	.	.	.	.	.	.	.	1.9	.	.	.	.	.	.	.	11	8.2	59
1992	OCT	.	.	.	.	.	.	.	.	.	0.60	.	.	.	.	.	.	.	0.57	1.9	81
1992	NOV	.	.	.	.	.	.	.	.	.	1.2	.	.	.	.	.	.	.	1.2	3.0	74
1992	DEC	.	.	.	.	.	.	.	.	.	0.55	.	.	.	.	.	.	.	0.90	1.9	97
1993	JAN	.	.	.	.	.	.	.	.	.	0.61	1.7	62	.	.	.	.	.	2.0	3.0	170
1993	FEB	.	.	.	.	.	.	.	.	.	0.31	0.81	72	.	.	.	.	.	0.99	1.8	210
1993	MAR	.	.	.	.	.	.	.	.	.	0.10	0.76	68	.	.	.	.	.	0.53	1.2	230
1993	APR	.	.	.	.	.	.	.	.	.	1.4	0.69	69	.	.	.	.	.	2.1	1.6	180
1993	MAY	.	.	.	.	.	.	.	.	.	4.2	2.4	59	.	.	.	.	.	14	58	58
1993	JUN	.	.	.	.	.	.	.	.	.	5.6	3.2	59	.	.	.	.	.	18	27	59
1993	JUL	.	.	.	.	.	.	.	.	.	11	8.2	58	.	.	.	.	.	7.6	81	58
1993	AUG	.	.	.	.	.	.	.	.	.	2.7	7.9	58	.	.	.	.	.	8.0	37	58
1993	SEP	.	.	.	.	.	.	.	.	.	1.7	7.3	58	.	.	.	.	.	.	15	61
1993	OCT	.	.	.	.	.	.	.	.	.	1.0	2.7	60	.	.	.	.	.	1.9	2.3	170
1993	NOV	.	.	.	.	.	.	.	.	.	0.62	1.1	67	.	.	.	.	.	0.94	2.3	170
1993	DEC	.	.	.	.	.	.	.	.	.	0.019	0.92	68	.	.	.	.	.	.	2.0	220
1994	JAN	.	.	.	.	.	.	.	.	.	1.2	0.47	290	.	.	.	.	.	1.1	1.5	130
1994	FEB	.	.	.	.	.	.	.	.	.	1.0	0.90	160	.	.	.	.	.	0.96	1.5	120
1994	MAR	.	.	.	.	.	.	.	.	.	0.90	1.1	100	.	.	.	.	.	1.0	1.6	97
1994	APR	.	.	.	.	.	.	.	.	.	1.7	2.1	79	.	.	.	.	.	3.2	8.1	61
1994	MAY	.	.	.	.	.	.	.	.	.	4.4	1.7	74	.	.	.	.	.	.	72	58
1994	JUN	.	.	.	.	.	.	.	.	.	4.8	2.7	62	.	.	.	.	.	5.2	38	58
1994	JUL	.	.	.	.	.	.	.	.	.	8.8	41	58	.	.	.	.	.	50	450	58
1994	AUG	.	1.1	.	.	.	0.25	.	.	.	11	20	58	.	1.3	.	.	.	12	130	58
1994	SEP	.	1.2	.	.	.	3.6	.	.	.	1.4	1.7	72	.	2.1	.	.	.	3.1	7.7	60
1994	OCT	.	0.53	.	.	.	14	.	.	.	0.40	1.1	110	.	0.79	.	.	.	0.13	3.7	66
1994	NOV	.	0.32	0.49	71	.	2.0	.	.	.	.	1.5	110	.	0.70	1.5	59	.	1.1	5.1	69

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

α-endosulfan

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.57	0.20	82	.	0.12	0.91	.	.	0.17	1.1	110	.	0.054	2.4	58	.	0.59	1.7	100
1995	JAN	.	1.4	0.34	73	.	0.84	0.19	130	.	.	.	.	.	0.28	2.1	240	.	.	2.6	59
1995	FEB	.	3.6	0.14	130	.	0.34	0.32	100	.	.	1.2	78	.	0.45	0.76	630	.	0.19	1.5	62
1995	MAR	.	2.8	0.037	300	.	0.70	0.15	160	.	.	0.71	80	.	0.74	1.5	150	.	.	1.2	60
1995	APR	.	0.0037	0.36	61	.	0.32	1.1	61	.	1.2	0.86	78	.	3.9	3.4	110	.	0.85	4.4	59
1995	MAY	.	0.023	2.3	58	.	0.75	36	58	.	14	1.2	64	.	3.4	12	62	.	8.8	44	58
1995	JUN	.	0.088	1.4	58	.	0.94	10	58	.	3.8	1.4	61	.	3.6	53	58	.	.	4.3	58
1995	JUL	.	4.0	23	58	.	0.31	100	58	.	4.2	8.5	58	.	1.3	66	58	.	17	37	58
1995	AUG	.	0.28	31	58	.	0.26	16	58	.	4.6	7.3	58	.	0.20	39	59	.	2.3	16	58
1995	SEP	.	0.42	5.5	58	.	0.14	5.0	58	.	0	2.2	60	.	0.12	13	61	.	0.29	5.4	58
1995	OCT	.	0.25	2.6	59	.	1.2	2.6	59	.	0.088	1.6	67	.	0.067	8.0	79	.	2.2	4.3	59
1995	NOV	.	.	0.39	65	.	0.66	0.33	100	.	1.4	1.8	67	.	0.29	1.5	310	.	0.56	2.6	60
1995	DEC	.	0.84	0.48	64	.	0.073	0.61	71	.	0	1.1	79	.	0.58	0.25	1600	.	0	1.5	62
1996	JAN	.	0.43	1.1	59	.	0.43	0.64	71	.	0.41	0.55	79	.	0.43	1.2	60	.	.	1.9	62
1996	FEB	.	0.11	0.036	190	.	0.17	0.99	63	.	0.92	0.73	69	.	0.077	0.44	66	.	0.72	0.74	72
1996	MAR	.	0.062	0.34	60	.	0.091	0.38	78	.	0.51	0.88	67	.	0	0.035	260	.	0.73	0.96	62
1996	APR	.	0.58	0.37	59	.	0.040	0.52	71	.	1.1	0.46	79	.	2.9	0.95	59	.	1.3	1.3	62
1996	MAY	.	0.87	0.31	59	.	.	2.3	59	.	1.1	1.2	60	.	0.56	16	58	.	5.8	18	58
1996	JUN	.	2.6	5.6	58	.	0.32	13	58	.	1.5	1.7	59	.	0.93	27	58	.	8.1	15	58
1996	JUL	.	2.4	25	58	.	0.31	43	58	.	4.6	1.3	59	.	.	45	58	.	6.3	18	58
1996	AUG	.	3.5	7.7	58	.	2.3	39	58	.	.	3.4	58	.	0.049	27	58	.	2.9	33	58
1996	SEP	.	0	8.8	58	.	1.6	27	58	.	2.7	2.2	59	.	0.54	9.1	58	.	7.8	6.6	58
1996	OCT	.	0.23	3.4	58	.	0	4.8	58	.	0.73	1.2	61	.	1.0	5.1	58	.	1.5	1.7	60
1996	NOV	.	0.58	1.7	58	.	0.11	1.8	60	.	0.77	1.1	62	.	2.6	1.0	60	.	1.8	1.3	61
1996	DEC	.	0.68	0.30	62	.	0.70	0.43	75	.	1.2	0.52	73	.	2.7	0.88	61	.	0.94	0.97	65
1997	JAN	.	0.92	0.13	330	.	0.92	0.89	61	.	.	0.33	59	.	0.13	0.69	60	.	.	1.2	70
1997	FEB	.	0.13	0.054	610	.	1.2	0.82	61	.	2.5	0.78	58	.	0.092	6.6	58	.	3.0	1.8	61
1997	MAR	.	0.60	0.043	690	.	0.72	0.23	87	.	0.29	.	.	.	0.56	2.0	58	.	0.055	2.6	60
1997	APR	.	0.081	0.31	92	.	0.087	0.84	60	.	0.16	1.6	58	.	0.22	2.6	58	.	0.71	1.9	60
1997	MAY	.	1.5	1.1	60	.	1.8	14	58	.	.	2.3	58	.	0.31	44	58	.	1.9	8.3	58
1997	JUN	.	0.72	5.5	58	.	0.58	61	58	.	1.0	6.8	58	.	0.88	39	58	.	5.7	26	58
1997	JUL	.	2.0	20	58	.	0.14	110	58	.	2.1	4.0	58	.	2.6	54	58	.	2.8	83	58
1997	AUG	.	0.39	18	58	.	0.57	59	58	.	2.4	11	58	.	0.54	69	58	.	2.2	29	58
1997	SEP	.	0.18	8.3	58	.	0.50	40	58	.	1.4	5.0	58	.	0.42	23	58	.	1.4	16	58
1997	OCT	.	0.31	5.7	58	.	0.56	7.9	58	.	2.3	2.5	58	.	0.36	8.4	58	.	0.33	4.6	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

α-endosulfan

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.37	0.32	100	.	0.39	0.073	200	.	0.34	1.5	58	.	0.61	0.78	59	.	0.70	2.0	61
1997	DEC	.	0.33	0.39	87	.	0.32	1.3	59	.	0.35	1.0	58	.	0.35	1.7	58	.	0.76	1.5	63
1998	JAN	.	0.59	0.88	61	.	0.71	1.3	63	.	0.92	1.5	64	.	0.28	1.0	67	.	2.8	1.7	61
1998	FEB	.	.	1.2	60	.	0.52	1.9	60	.	0.32	1.3	63	.	0.22	2.1	60	.	.	1.2	62
1998	MAR	.	.	0.25	78	.	0.80	1.1	68	.	.	1.9	62	.	0.12	0.35	110	.	0.99	1.4	62
1998	APR	.	0.057	0.65	61	.	0.95	8.3	58	.	0.50	3.1	59	.	0.22	7.7	58	.	5.2	55	58
1998	MAY	.	0.23	2.2	59	.	0.34	150	58	.	3.8	2.6	59	.	0.085	14	58	.	7.2	11	58
1998	JUN	.	0.33	6.1	58	.	0.72	42	58	.	1.9	5.1	58	.	0.43	23	58	.	17	77	58
1998	JUL	.	0.19	13	58	.	0.11	51	58	.	6.1	3.6	59	.	0.16	95	58	.	9.9	14	58
1998	AUG	.	0.18	22	58	.	0.053	55	58	.	2.2	6.5	58	.	0.021	35	58	.	7.1	18	58
1998	SEP	.	0.15	3.9	58	.	0.12	5.2	58	.	0.54	3.3	59	.	0.058	24	58	.	1.8	8.6	58
1998	OCT	.	0.23	1.9	59	.	0.18	1.7	61	.	0.31	1.5	63	.	0.067	4.3	59	.	0.61	2.8	59
1998	NOV	.	0.083	0.46	71	.	0.15	0.57	83	.	0.45	1.5	65	.	.	2.3	60	.	0.43	2.7	59
1998	DEC	.	0.21	1.4	60	.	0.19	0.13	240	.	0.49	1.4	66	.	.	0.42	89	.	0.62	2.1	61
1999	JAN	.	0.32	0.22	200	.	0.20	0.33	91	.	0.77	0.95	59	.	.	0.43	94	.	2.4	2.0	62
1999	FEB	.	0.091	0	.	.	0.018	2.6	59	.	0.26	1.1	59	.	.	1.6	60	.	0.49	1.4	62
1999	MAR	.	0.026	0.26	130	.	0.048	2.8	59	.	0.12	0.66	59	.	0.084	1.1	61	.	1.0	1.8	61
1999	APR	.	.	0.10	200	.	0.18	0.62	65	.	0.58	1.2	59	.	0.11	1.4	60	.	.	2.6	59
1999	MAY	.	1.6	13	58	.	0.11	44	58	.	1.2	22	58	.	1.3	28	58	.	23	97	58
1999	JUN	.	1.5	9.1	58	.	1.7	100	58	.	.	12	58	.	0.20	19	58	.	5.5	190	58
1999	JUL	.	4.2	25	58	.	2.8	45	58	.	2.6	14	58	.	1.4	53	58	.	8.8	65	58
1999	AUG	.	1.7	32	58	.	1.9	45	58	.	3.0	4.8	58	.	3.0	62	58	.	3.0	13	58
1999	SEP	.	0.69	3.1	59	.	0.66	22	58	.	0.92	3.9	58	.	1.8	14	58	.	3.0	12	58
1999	OCT	.	0.79	5.2	59	.	0.35	8.7	58	.	0.80	3.3	58	.	1.4	8.4	58	.	1.2	8.7	58
1999	NOV	.	0.34	1.5	63	.	0.20	1.1	61	.	0.51	1.2	59	.	0.83	2.4	59	.	1.1	4.7	59
1999	DEC	.	0.30	1.2	65	.	0.39	1.5	60	.	1.2	0.87	60	.	0.37	1.2	62	.	.	1.2	65
2000	JAN	.	.	0.52	110	.	.	1.0	62	.	0.33	0.59	62	.	0.21	1.2	75	.	.	0.84	59
2000	FEB	.	.	0.57	100	.	.	1.8	60	.	0.40	0.79	60	.	0.47	1.2	70	.	0.43	1.1	59
2000	MAR	.	0.36	0.60	94	.	0.65	1.7	59	.	.	0.97	59	.	0.80	2.2	60	.	0.44	1.8	58
2000	APR	.	0.38	1.9	60	.	1.3	4.8	58	.	.	0.96	59	.	5.1	1.6	61	.	1.8	3.2	58
2000	MAY	.	0.45	3.6	59	.	4.6	12	58	.	2.6	3.1	58	.	1.4	60	58	.	.	97	58
2000	JUN	.	1.5	2.9	59	.	2.4	7.7	58	.	1.2	1.3	58	.	5.5	32	58	.	11	15	58
2000	JUL	.	0.93	5.2	58	.	2.3	14	58	.	1.8	0.96	58	.	5.4	19	58	.	5.4	6.3	58
2000	AUG	.	.	3.9	59	.	1.3	37	58	.	2.3	3.5	58	.	4.1	24	58	.	7.3	9.6	58
2000	SEP	.	0.35	4.3	59	.	2.4	21	58	.	1.7	4.6	58	.	1.9	18	58	.	.	5.4	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

α-endosulfan

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.31	0.78	75	.	0.43	3.2	59	.	0.35	1.1	59	.	0.97	5.2	59	.	.	5.6	58
2000	NOV	.	0.81	0.10	450	.	0.86	1.0	62	.	0.63	0.93	59	.	0.94	5.9	59	.	.	1.6	58
2000	DEC	.	0.72	0.054	920	.	1.4	0.12	200	.	.	0.75	60	.	0.72	1.2	72	.	1.0	0.98	59
2001	JAN	.	0.57	0.23	160	.	0.64	0.26	85	.	0.63	0.37	83	.	0.46	4.0	59	.	.	1.4	63
2001	FEB	.	1.2	0.50	86	.	0.76	1.1	61	.	1.1	1.1	63	.	0.26	1.2	67	.	0	1.0	68
2001	MAR	.	0.30	0.44	77	.	0.20	0.36	77	.	.	0.44	76	.	0.55	0.69	74	.	0.54	1.0	66
2001	APR	.	1.5	0.15	140	.	.	1.0	61	.	0.70	0.64	65	.	0.27	0.67	67	.	0.34	0.91	64
2001	MAY	.	1.4	0.88	60	.	3.4	6.6	58	.	1.2	2.8	59	.	3.0	13	58	.	9.0	13	58
2001	JUN	.	1.1	21	58	.	2.4	6.0	58	.	1.8	5.5	58	.	2.1	24	58	.	2.0	10	58
2001	JUL	.	1.7	32	58	.	2.4	21	58	.	0.75	12	58	.	1.5	74	58	.	1.9	20	58
2001	AUG	.	0.87	7.3	58	.	6.3	16	58	.	1.7	5.4	58	.	3.0	33	58	.	2.3	22	58
2001	SEP	.	0.51	3.1	59	.	2.6	3.7	58	.	1.5	2.4	59	.	1.9	8.8	58	.	1.2	5.9	58
2001	OCT	.	0.78	7.2	58	.	2.2	8.9	58	.	0.90	3.8	59	.	1.6	7.1	59	.	1.1	4.8	59
2001	NOV	.	0.76	2.0	60	.	0.58	1.7	60	.	1.3	1.8	60	.	1.1	5.7	59	.	0.63	2.0	60
2001	DEC	.	0.48	0.80	73	.	0.39	0.36	77	.	1.2	0.84	64	.	0.93	0.71	78	.	0.69	0.86	71
2002	JAN	.	0.29	0.76	64	.	0.27	0.46	65	.	0.25	0.77	61	.	0.65	1.2	71	.	0.50	1.1	67
2002	FEB	.	0.30	1.7	60	.	0.55	2.3	59	.	0.42	1.8	59	.	0.71	2.3	63	.	0.32	1.7	62
2002	MAR	.	0.79	0.27	94	.	.	0.14	110	.	.	0.96	60	.	0.88	1.5	61	.	0.88	1.4	63
2002	APR	.	1.4	0.18	82	.	2.4	3.8	58	.	1.9	1.2	59	.	3.3	7.5	58	.	0.77	2.2	59
2002	MAY	.	0.61	0.90	60	.	3.4	3.2	58	.	2.7	2.9	58	.	3.7	21	58	.	8.9	9.8	58
2002	JUN	.	1.1	13	58	.	1.9	75	58	.	2.3	4.0	58	.	1.5	18	58	.	7.3	7.0	58
2002	JUL	.	.	9.1	58	.	2.0	21	58	.	1.5	6.1	58	.	2.9	42	58	.	2.0	26	58
2002	AUG	.	1.7	4.2	58	.	4.1	6.8	58	.	1.4	2.1	58	.	1.4	14	58	.	1.5	14	58
2002	SEP	.	1.7	4.3	58	.	1.1	2.7	58	.	.	2.2	58	.	2.7	3.0	59	.	1.2	3.1	59
2002	OCT	.	1.2	1.7	59	.	0.84	1.7	59	.	.	2.0	59	.	0.78	2.5	60	.	0.48	2.2	59
2002	NOV	.	0.46	1.7	59	.	0.26	0.86	61	.	0.69	1.6	59	.	1.1	9.2	59	.	0.62	6.8	58
2002	DEC	.	.	0.24	100	.	0.23	0.48	66	.	0.45	0.74	61	.	1.1	0.87	75	.	0.56	1.1	66
2003	JAN	.	0.59	0.32	130	.	0.19	0.38	100	.	0.23	0.20	84	.	0.61	0.64	82	.	0.94	0.58	60
2003	FEB	.	0.67	0.59	79	.	0.27	0.61	77	.	0.43	0.57	61	.	0.91	0.55	77	.	1.0	0.90	59
2003	MAR	.	0.42	1.0	64	.	0.95	0.91	66	.	0.66	0.93	59	.	0.80	1.0	62	.	0.049	1.3	59
2003	APR	.	0.83	0.97	65	.	1.8	3.3	59	.	0.70	2.6	58	.	1.7	1.2	60	.	0.65	2.4	58
2003	MAY	.	2.4	1.4	60	.	.	21	58	.	1.1	1.6	58	.	8.8	96	58	.	5.8	1.5	58
2003	JUN	.	0.39	1.0	59	.	1.1	4.3	58	.	.	2.0	58	.	2.7	30	58	.	1.6	21	58
2003	JUL	.	0.75	1.5	59	.	1.9	19	58	.	0.93	4.5	58	.	3.6	48	58	.	4.5	23	58
2003	AUG	.	0.53	4.4	58	.	1.0	17	58	.	0.65	4.6	58	.	1.8	34	58	.	4.8	21	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

α-endosulfan

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.82	4.7	58	.	0.78	6.3	58	.	0.67	10	58	.	3.7	17	58	.	0.88	4.7	58
2003	OCT	.	0.53	2.3	59	.	0.62	3.7	59	.	0.39	1.6	59	.	1.1	5.5	58	.	0.42	4.8	58
2003	NOV	.	0.68	2.5	60	.	1.5	1.9	61	.	1.4	1.5	59	.	1.2	6.9	58	.	0.97	2.5	58
2003	DEC	.	0.33	0.17	160	.	0.51	0.24	150	.	0.50	0.56	61	.	1.1	1.7	62	.	1.2	1.7	58
2004	JAN	.	0.60	0.13	430	.	0.51	0.072	260	.	1.2	0.60	61	.	0.97	0.34	240	.	1.2	0.84	79
2004	FEB	.	0.43	0.30	150	.	0.58	0.51	65	.	0.84	1.3	59	.	0.30	0.30	190	.	0.41	1.5	63
2004	MAR	.	0.69	1.5	63	.	1.3	2.9	59	.	0.11	2.8	58	.	1.3	2.0	61	.	1.3	1.5	62
2004	APR	.	0.77	0.28	110	.	0.89	1.6	59	.	0.23	1.9	58	.	0.97	0.52	99	.	0.3	3.3	59
2004	MAY	.	0.83	0.61	72	.	3.9	14	58	.	0.61	1.6	58	.	4.5	7.6	58	.	2.8	4.8	58
2004	JUN	.	0.55	2.0	60	.	2.0	3.8	58	.	0.87	3.0	58	.	0.51	10	58	.	2.7	5.4	58
2004	JUL	.	0.60	1.8	59	.	1.2	3.1	58	.	1.3	1.8	58	.	0.27	16	58	.	5.2	29	58
2004	AUG	.	0.48	1.2	62	.	2.5	6.8	58	.	1.2	2.1	58	.	2.2	15	58	.	7.7	8.1	58
2004	SEP	.	0.60	3.3	59	.	0.35	6.5	58	.	0.29	3.6	58	.	3.2	5.7	59	.	2.2	10	58
2004	OCT	.	0.89	3.1	60	.	0.87	2.1	59	.	0.33	2.0	58	.	0.62	3.6	60	.	0.38	2.5	59
2004	NOV	.	0.22	0.14	340	.	2.3	0.16	110	.	0.34	1.1	59	.	0.40	1.6	65	.	0.36	1.0	66
2004	DEC	.	0.67	0.40	150	.	0.55	0.31	83	.	0.72	1.2	59	.	0.70	0.62	130	.	0.60	1.1	69
2005	JAN	.	0.75	0.064	560	.	1.1	0.36	110	.	0.70	0.44	63	.	0.97	0.73	66	.	1.2	0.70	64
2005	FEB	.	0.22	0.35	110	.	0.36	0.54	80	.	0.34	0.98	59	.	0.41	1.1	61	.	0.41	1.2	60
2005	MAR	.	0.31	0.031	900	.	0.40	0.0073	4100	.	0.28	1.1	59	.	0.41	0.56	67	.	0.29	1.6	59
2005	APR	.	0.51	0.79	66	.	0.29	3.1	59	.	0.52	1.2	59	.	1.1	1.1	60	.	1.7	1.7	59
2005	MAY	.	0.75	2.7	59	.	1.3	6.5	58	.	0.75	2.2	58	.	1.4	4.6	58	.	0.75	5.8	58
2005	JUN	.	0.82	6.7	58	.	0.63	18	58	.	4.1	4.8	58	.	0.90	27	58	.	2.0	40	58
2005	JUL	.	0.80	7.3	58	.	1.6	14	58	.	.	2.6	58	.	21	68	58	.	6.4	200	58
2005	AUG	.	0.66	16	58	.	1.9	27	58	.	1.6	8.4	58	.	3.9	45	58	.	4.5	17	58
2005	SEP	.	0.51	1.8	60	.	0.75	7.9	58	.	.	4.9	58	.	1.7	44	58	.	.	58	58
2005	OCT	.	0.42	3.0	59	.	0.54	7.4	58	.	0.58	2.5	58	.	0.73	6.1	58	.	.	2.5	59
2005	NOV	.	0.42	1.0	68	.	0.85	1.2	66	.	0.38	1.4	59	.	0.063	1.9	60	.	0.88	1.9	59
2005	DEC	.	0.38	0.16	210	.	0.47	0.64	77	.	0.23	1.2	59	.	0.75	1.4	61	.	0.71	0.76	63

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

PCB 18

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.13	.	.	.	0.046	.	.	.	.	.	.	.	0.020	.	.	.	.	.	.
1992	FEB	.	0.097	.	.	.	0.042	.	.	.	.	.	.	.	0.033	.	.	.	.	.	.
1992	MAR	.	0.073	1.5	61	.	0.11	2.1	59	.	.	.	.	.	0.074	5.7	59	.	.	3.7	70
1992	APR	.	0.039	1.1	61	.	0.15	2.7	59	.	.	.	.	.	0.093	3.5	59	.	.	2.3	78
1992	MAY	.	0.073	3.9	85	.	0.038	6.0	.	.	.	.	.	.	0.033	9.1	.	.	.	1.6	74
1992	JUN	.	0.095	1.3	88	.	0.12	0.50	120	.	.	.	.	.	0.063	.	.	.	.	1.3	72
1992	JUL	.	0.054	1.5	73	.	0.15	1.7	65	.	.	.	.	.	0.21	5.0	71	.	.	0.94	80
1992	AUG	.	0.058	2.7	62	.	0.068	1.7	67	.	.	.	.	.	0.10	5.0	67	.	.	0.98	84
1992	SEP	.	0.11	2.1	77	.	0.092	2.3	67	.	.	.	.	.	0.11	6.0	69	.	.	1.3	81
1992	OCT	.	0.15	1.9	82	.	0.030	1.5	92	.	.	.	.	.	0.095	9.1	68	.	.	1.2	100
1992	NOV	.	0.038	0.82	190	.	0.071	10	60	.	.	.	.	.	0.050	2.1	260	.	.	2.1	97
1992	DEC	.	.	2.6	95	.	.	11	60	.	.	.	.	.	0.079	4.1	150	.	.	3.5	81
1993	JAN	.	.	2.6	180	.	.	3.5	150	.	.	2.8	96	.	0.062	12	65	.	.	5.5	74
1993	FEB	.	0.053	8.9	72	.	0	4.4	120	.	.	2.1	110	.	0.033	7.9	68	.	.	3.2	83
1993	MAR	.	0.080	1.3	160	.	0	3.5	130	.	.	1.3	130	.	0.061	20	60	.	.	2.7	80
1993	APR	.	0.12	5.9	69	.	0.081	3.2	160	.	.	1.0	150	.	0.10	8.0	66	.	.	1.8	97
1993	MAY	.	0.15	3.2	86	.	0.086	2.3	130	.	.	0.98	120	.	0.031	8.2	61	.	.	2.4	76
1993	JUN	.	0.14	.	.	.	0.15	2.6	93	.	.	1.2	79	.	0.17	2.9	68	.	.	1.9	69
1993	JUL	.	0.21	1.8	100	.	0.090	1.5	100	.	.	0.80	85	.	0.062	3.9	61	.	.	1.2	73
1993	AUG	.	.	0.89	120	.	.	0.45	210	.	.	0.31	130	.	0.043	1.0	73	.	.	0.54	88
1993	SEP	.	0.30	1.2	170	.	.	2.2	100	.	.	1.2	81	.	0.027	3.0	66	.	.	1.2	80
1993	OCT	.	0	0.76	360	.	0.059	2.4	150	.	.	2.0	93	.	0.028	3.3	77	.	.	2.2	90
1993	NOV	.	0	0.81	360	.	0.016	2.0	210	.	.	1.7	110	.	0.073	3.2	97	.	.	2.7	85
1993	DEC	.	0	1.1	330	.	0.032	1.5	260	.	.	1.3	140	.	0.051	2.4	97	.	.	2.9	90
1994	JAN	.	.	0.81	210	.	.	0.72	170	.	.	0.78	200	.	0.042	4.2	63	.	.	2.5	96
1994	FEB	.	.	1.4	120	.	.	2.7	71	.	.	1.3	130	.	0.019	3.2	63	.	.	2.4	95
1994	MAR	.	.	1.6	100	.	.	1.4	85	.	.	1.6	88	.	0.033	9.3	59	.	.	2.4	80
1994	APR	.	0.012	0.76	200	.	.	2.8	69	.	.	1.9	87	.	0.060	9.1	59	.	.	4.4	69
1994	MAY	.	0	0.94	110	.	0.0077	2.6	64	.	.	1.6	77	.	0.11	3.2	60	.	.	3.3	69
1994	JUN	.	.	.	.	.	0.043	0.80	74	.	.	0.65	88	.	0.065	1.4	60	.	.	1.7	70
1994	JUL	.	0.086	1.4	69	.	0.0076	1.3	63	.	.	0.79	71	.	0.12	1.9	59	.	.	1.4	65
1994	AUG	.	0.15	1.4	68	.	0.40	1.8	60	.	.	0.90	71	.	0.20	2.2	59	.	.	0.94	74
1994	SEP	.	0.38	1.2	70	.	0.45	0.81	69	.	.	0.44	110	.	0.13	0.93	61	.	.	1.4	73
1994	OCT	.	0.22	4.8	62	.	0.079	2.4	65	.	.	0.96	100	.	0.10	1.4	60	.	.	1.9	74
1994	NOV	.	0.13	2.5	79	.	0.52	7.9	59	.	.	1.2	120	.	0.13	3.5	59	.	.	4.2	70

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

PCB 18

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.16	0.97	100	.	0.078	2.4	66	.	.	1.1	110	.	0.16	4.4	59	.	.	3.6	69
1995	JAN	.	0.15	1.7	79	.	0.27	1.1	73	.	.	1.6	380	.	0.22	3.7	72	.	.	3.4	140
1995	FEB	.	0.083	1.0	120	.	0.096	1.2	75	.	.	4.2	180	.	0.16	4.3	69	.	.	3.1	160
1995	MAR	.	0.071	0.93	95	.	0.23	1.3	70	.	.	2.8	180	.	0.33	2.4	66	.	.	1.8	150
1995	APR	.	0.11	0.86	78	.	0.22	0.81	79	.	.	2.7	200	.	0.42	1.9	76	.	.	1.9	180
1995	MAY	.	0.060	1.6	65	.	0.22	2.8	59	.	.	1.7	200	.	0.32	2.9	62	.	.	1.4	180
1995	JUN	.	0.048	0.91	68	.	0.12	0.73	61	.	.	1.3	150	.	0.20	1.4	60	.	.	0.84	130
1995	JUL	.	0.18	1.2	63	.	0.10	0.51	64	.	.	0.93	180	.	0.48	2.6	59	.	.	1.1	97
1995	AUG	.	0.14	1.5	61	.	0.30	0.72	60	.	.	0.65	230	.	0.20	2.6	59	.	.	0.96	100
1995	SEP	.	0.086	1.5	64	.	0.062	2.1	59	.	.	1.6	150	.	0.081	2.0	62	.	.	1.2	130
1995	OCT	.	0.077	1.2	81	.	0.11	1.3	65	.	.	1.8	250	.	0.13	4.5	62	.	.	3.1	110
1995	NOV	.	.	0.41	160	.	0.12	1.2	72	.	.	1.2	480	.	0.14	1.4	99	.	.	3.3	140
1995	DEC	.	0.26	1.3	81	.	0.17	0.86	83	.	.	1.4	450	.	0.15	1.6	98	.	.	4.4	120
1996	JAN	.	0.51	0.82	300	.	0.26	1.3	62	.	.	2.4	120	.	0.14	2.4	61	.	.	4.7	95
1996	FEB	.	0.039	0.58	370	.	0.086	0.91	64	.	.	2.2	130	.	0.079	1.0	64	.	.	3.1	110
1996	MAR	.	0.019	1.1	160	.	0.050	1.2	61	.	.	2.4	120	.	0.20	1.0	61	.	.	1.7	130
1996	APR	.	0.060	0.73	170	.	0.14	0.84	65	.	.	1.6	150	.	0.24	1.3	61	.	.	1.7	140
1996	MAY	.	0.027	0.62	160	.	.	1.2	60	.	.	0.74	190	.	0.10	2.0	59	.	.	2.8	80
1996	JUN	.	0.043	0.73	130	.	0.27	0.70	60	.	.	0.52	150	.	0.21	1.1	59	.	.	1.7	82
1996	JUL	.	0.12	0.84	120	.	0.091	1.6	58	.	.	0.35	190	.	.	0.68	60	.	.	0.49	180
1996	AUG	.	0.25	0.83	98	.	0.030	2.1	58	.	.	0.32	160	.	0.029	1.1	58	.	.	1.1	74
1996	SEP	.	0.55	0.63	130	.	0.073	1.7	59	.	.	0.28	210	.	0.091	1.4	59	.	.	1.6	79
1996	OCT	.	0.69	1.5	120	.	0.11	1.7	59	.	.	3.3	74	.	0.079	1.5	59	.	.	1.3	120
1996	NOV	.	0.27	4.0	76	.	0.045	1.4	60	.	.	1.2	150	.	0.083	2.0	60	.	.	1.5	140
1996	DEC	.	0.18	1.0	200	.	0.066	1.1	61	.	.	0.82	230	.	0.15	3.0	59	.	.	2.2	110
1997	JAN	.	0.28	0.82	130	.	0.097	1.2	61	.	.	2.8	83	.	0.065	2.4	62	.	.	1.9	69
1997	FEB	.	0.017	0.86	110	.	0.11	1.3	60	.	.	1.8	100	.	0.092	4.7	59	.	.	8.4	59
1997	MAR	.	0.19	0.57	140	.	0.047	0.84	62	.	.	.	.	.	0.085	4.0	59	.	.	2.7	62
1997	APR	.	0.064	0.95	81	.	0.023	1.5	59	.	.	1.1	130	.	0.028	3.3	59	.	.	1.8	63
1997	MAY	.	0.12	0.91	73	.	0.074	1.1	59	.	.	1.4	110	.	0.089	5.7	58	.	.	2.0	63
1997	JUN	.	0.19	2.3	60	.	0.18	.	.	.	.	1.3	72	.	0.11	3.1	58	.	.	2.0	59
1997	JUL	.	0.42	1.0	63	.	0.054	.	.	.	.	1.2	69	.	0.034	2.1	58	.	.	2.2	59
1997	AUG	.	0.12	0.84	63	.	0.034	.	.	.	.	0.85	81	.	0.022	2.8	58	.	.	1.3	59
1997	SEP	.	0.10	0.72	75	.	0.075	.	.	.	.	0.92	98	.	0.11	2.9	58	.	.	1.9	60
1997	OCT	.	0.39	1.7	65	.	0.058	4.8	58	.	.	1.6	87	.	0.056	4.8	58	.	.	2.0	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

PCB 18

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.090	0.71	99	.	0.054	1.1	59	.	.	1.2	120	.	0.042	2.9	59	.	.	1.3	68
1997	DEC	.	0.022	0.65	100	.	0.020	1.4	59	.	.	1.2	130	.	0.019	3.1	59	.	.	2.0	64
1998	JAN	.	0.051	0.62	79	.	0.034	1.5	59	.	.	1.3	220	.	0.059	2.7	60	.	.	2.1	91
1998	FEB	.	.	1.5	62	.	0.032	2.6	58	.	.	1.0	220	.	0.063	3.5	59	.	.	1.6	93
1998	MAR	.	.	0.91	65	.	0.075	3.1	59	.	.	1.3	230	.	0.13	1.8	61	.	.	1.7	99
1998	APR	.	0.024	1.0	63	.	0.076	4.3	58	.	.	1.1	190	.	0.094	4.1	58	.	.	1.7	81
1998	MAY	.	0.084	1.1	61	.	0.061	4.6	58	.	.	1.5	100	.	0.032	2.5	58	.	.	1.8	67
1998	JUN	.	0.089	0.77	61	.	0.17	2.8	58	.	.	0.69	140	.	0.044	5.8	58	.	.	1.6	68
1998	JUL	.	0.18	0.63	60	.	0.17	3.0	58	.	.	0.54	140	.	0.068	3.2	58	.	.	0.92	71
1998	AUG	.	0.38	1.2	59	.	0.17	3.3	58	.	.	0.43	150	.	0.012	3.8	58	.	.	0.76	69
1998	SEP	.	0.17	0.56	63	.	0.065	0.93	58	.	.	0.66	150	.	0.038	2.1	58	.	.	1.6	64
1998	OCT	.	0.099	1.0	64	.	0.11	0.79	59	.	.	0.95	190	.	0.046	2.4	59	.	.	2.0	72
1998	NOV	.	0.10	0.85	69	.	0.18	1.3	59	.	.	1.7	150	.	.	2.6	59	.	.	2.6	74
1998	DEC	.	0.14	1.4	64	.	0.13	0.66	61	.	.	1.5	190	.	.	2.5	59	.	.	3.2	74
1999	JAN	.	0.21	1.4	64	.	0.23	1.2	62	.	.	1.6	95	.	.	3.6	59	.	.	4.5	71
1999	FEB	.	0.24	2.6	60	.	0.088	2.9	59	.	.	1.7	90	.	.	3.3	59	.	.	3.0	75
1999	MAR	.	0.067	1.5	62	.	0.053	1.8	61	.	.	1.1	110	.	0.13	4.2	58	.	.	2.0	93
1999	APR	.	.	0.73	64	.	0.26	3.2	59	.	.	1.4	89	.	0.12	3.0	59	.	.	1.6	88
1999	MAY	.	0.072	3.5	59	.	0.18	5.7	58	.	.	1.1	80	.	0.15	3.9	58	.	.	2.6	64
1999	JUN	.	0.14	1.5	59	.	0.16	4.8	58	.	.	0.76	67	.	0.11	3.5	58	.	.	2.9	60
1999	JUL	.	0.30	1.0	59	.	0.32	3.8	58	.	.	0.62	74	.	0.043	2.3	58	.	.	1.6	62
1999	AUG	.	0.48	0.97	59	.	0.17	2.7	58	.	.	0.56	77	.	0.082	3.8	58	.	.	1.0	67
1999	SEP	.	0.16	5.5	58	.	0.13	3.6	58	.	.	1.1	68	.	0.063	1.8	58	.	.	1.2	67
1999	OCT	.	0.30	6.6	58	.	0.037	4.0	58	.	.	1.6	76	.	0.056	2.6	59	.	.	2.4	70
1999	NOV	.	0.091	2.5	60	.	0.057	1.4	60	.	.	1.5	98	.	0.066	2.3	59	.	.	2.8	77
1999	DEC	.	0.063	2.8	59	.	0.11	2.7	59	.	.	1.7	100	.	0.039	2.6	59	.	.	2.6	80
2000	JAN	.	.	2.4	59	.	.	1.5	60	.	.	1.2	94	.	0.066	2.2	62	.	.	1.4	96
2000	FEB	.	.	2.2	59	.	.	1.8	59	.	.	1.1	100	.	0.11	1.9	62	.	.	1.7	83
2000	MAR	.	0.36	1.7	60	.	0.090	1.7	59	.	.	1.1	82	.	0.065	1.8	60	.	.	1.8	74
2000	APR	.	0.18	3.6	58	.	0.19	2.2	59	.	.	0.81	91	.	0.24	2.0	59	.	.	1.1	79
2000	MAY	.	0.38	2.0	59	.	0.24	2.1	59	.	.	0.90	72	.	0.092	4.0	59	.	.	2.2	63
2000	JUN	.	0.22	5.2	58	.	0.33	1.3	59	.	.	0.43	85	.	0.15	2.3	59	.	.	1.1	67
2000	JUL	.	0.25	3.8	58	.	0.39	1.0	59	.	.	0.39	71	.	0.14	1.4	59	.	.	0.62	67
2000	AUG	.	.	2.4	58	.	0.076	0.98	59	.	.	0.42	70	.	0.11	0.94	59	.	.	0.80	64
2000	SEP	.	0.27	1.9	59	.	0.14	2.0	59	.	.	0.97	67	.	0.11	2.5	59	.	.	1.0	68

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.068	1.1	60	.	0.080	1.4	59	.	.	0.65	76	.	0.060	2.1	59	.	.	1.2	68
2000	NOV	.	0.080	0.80	63	.	0.095	1.1	60	.	.	0.80	81	.	0.10	2.1	60	.	.	1.2	77
2000	DEC	.	0.11	0.72	68	.	0.11	0.78	63	.	.	0.97	86	.	0.13	1.8	62	.	.	1.1	110
2001	JAN	.	0.048	0.91	81	.	0.074	0.61	62	.	.	0.99	170	.	0.058	1.9	61	.	.	1.7	150
2001	FEB	.	0.16	1.4	68	.	0.11	1.9	59	.	.	0.93	210	.	0.011	1.4	63	.	.	1.5	190
2001	MAR	.	0.18	1.3	64	.	0.067	0.80	61	.	.	0.78	210	.	0.15	1.9	60	.	.	1.6	160
2001	APR	.	0.51	1.0	66	.	.	1.2	60	.	.	1.0	150	.	0.14	2.1	59	.	.	1.2	160
2001	MAY	.	0.27	1.3	61	.	0.19	0.84	60	.	.	0.88	130	.	0.059	4.6	58	.	.	1.2	120
2001	JUN	.	0.073	5.6	58	.	0.094	0.88	59	.	.	0.70	99	.	0.052	2.3	58	.	.	1.0	93
2001	JUL	.	0.069	3.0	59	.	0.096	0.75	59	.	.	0.61	110	.	0.060	2.0	58	.	.	0.95	94
2001	AUG	.	0.066	2.5	59	.	0.090	0.64	59	.	.	0.40	150	.	0.078	2.0	58	.	.	0.75	92
2001	SEP	.	0.073	1.9	59	.	0.088	0.55	60	.	.	0.45	180	.	0.063	0.93	60	.	.	0.52	160
2001	OCT	.	0.12	4.3	59	.	0.10	2.0	59	.	.	1.7	96	.	0.077	2.9	59	.	.	1.4	130
2001	NOV	.	0.11	1.3	67	.	0.048	0.81	61	.	.	1.3	120	.	0.057	2.7	59	.	.	2.1	98
2001	DEC	.	0.084	1.1	74	.	0.045	0.69	61	.	.	1.0	160	.	0.051	1.1	63	.	.	1.4	170
2002	JAN	.	0.054	0.95	62	.	0.051	0.99	60	.	.	0.80	96	.	0.046	3.1	59	.	.	1.7	91
2002	FEB	.	0.052	1.9	60	.	0.062	1.9	59	.	.	1.3	78	.	0.062	3.9	59	.	.	1.7	90
2002	MAR	.	0.18	1.1	61	.	.	0.84	61	.	.	1.1	84	.	0.062	1.7	59	.	0.69	1.7	89
2002	APR	.	0.071	1.2	59	.	0.041	1.6	59	.	0.51	1.1	77	.	0.14	2.9	58	.	0.31	1.3	85
2002	MAY	.	0.12	0.63	62	.	0.069	1.1	59	.	0.33	0.87	79	.	0.13	2.0	59	.	0.23	1.0	91
2002	JUN	.	0.084	2.7	58	.	0.077	1.3	58	.	0.14	0.61	69	.	0.090	1.3	58	.	0.18	0.59	81
2002	JUL	.	.	1.9	58	.	0.14	1.2	58	.	0.49	0.42	68	.	0.11	1.4	58	.	0.23	1.0	63
2002	AUG	.	0.049	2.0	58	.	0.11	0.40	59	.	0.33	0.24	86	.	0.042	0.99	58	.	0.12	0.52	74
2002	SEP	.	0.055	0.67	59	.	0.046	0.37	60	.	0.098	0.50	71	.	0.083	0.91	59	.	0.39	0.32	110
2002	OCT	.	0.050	0.87	60	.	0.14	0.50	61	.	0.23	0.57	87	.	0.044	0.88	59	.	0.31	0.57	120
2002	NOV	.	0.024	1.1	60	.	0.060	0.47	64	.	0.22	1.0	76	.	0.31	2.0	59	.	0.37	1.6	80
2002	DEC	.	.	0.65	65	.	0.047	0.63	63	.	0.040	0.92	89	.	0.17	1.1	60	.	0.39	1.0	130
2003	JAN	.	0.047	0.63	71	.	0.028	0.50	190	.	0.076	0.79	120	.	0.051	1.1	94	.	0.38	0.43	100
2003	FEB	.	0.059	0.95	63	.	0.056	0.94	110	.	0.35	1.1	97	.	0.069	1.1	79	.	0.87	0.95	69
2003	MAR	.	0.034	0.97	62	.	0.050	0.85	110	.	0.37	0.94	94	.	0.045	1.4	69	.	0.46	1.3	62
2003	APR	.	0.047	0.94	62	.	0.077	1.6	78	.	0.017	1.1	87	.	0.067	1.5	63	.	0.21	1.2	63
2003	MAY	.	0.043	0.68	61	.	.	1.4	69	.	0.44	0.51	110	.	0.072	3.9	59	.	0.44	0.68	65
2003	JUN	.	0.028	0.86	59	.	0.038	0.77	72	.	0.32	0.60	78	.	0.060	3.3	59	.	0.48	1.3	59
2003	JUL	.	0.055	0.90	59	.	0.10	0.66	71	.	0.092	0.36	89	.	0.069	3.4	58	.	0.64	0.84	59
2003	AUG	.	0.058	0.79	59	.	0.098	0.85	63	.	0.19	0.47	71	.	0.030	3.3	58	.	0.40	0.60	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

PCB 18

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.053	0.79	60	.	0.044	0.80	74	.	0.24	0.49	84	.	0.092	2.7	59	.	0.47	0.71	60
2003	OCT	.	0.036	0.60	62	.	0.036	0.80	83	.	0.26	0.64	94	.	0.038	2.4	60	.	0.22	0.85	62
2003	NOV	.	0.066	1.1	61	.	0.088	1.1	89	.	0.89	1.1	85	.	0.059	4.0	60	.	0.78	1.2	62
2003	DEC	.	0.035	0.50	68	.	0.050	0.50	190	.	0.39	0.6	120	.	0.063	2.7	64	.	1.3	1.5	62
2004	JAN	.	0.049	0.42	89	.	0.044	0.26	97	.	0.25	0.61	130	.	0.062	1.3	59	.	0.86	0.91	83
2004	FEB	.	0.044	0.42	80	.	0.029	0.32	79	.	0.13	0.69	110	.	0.023	0.35	64	.	0.31	0.93	76
2004	MAR	.	0.030	0.46	72	.	0.061	0.69	66	.	0.20	0.83	93	.	0.061	0.66	59	.	1.0	1.4	65
2004	APR	.	0.028	0.22	83	.	0.027	0.47	69	.	0.0027	0.70	100	.	0.040	0.30	63	.	0.051	1.5	63
2004	MAY	.	0.042	0.27	77	.	0.074	0.53	63	.	0.027	0.54	96	.	0.10	2.1	58	.	0.016	0.91	64
2004	JUN	.	0.024	0.98	60	.	0.12	0.50	60	.	0.35	0.65	72	.	0.024	0.91	58	.	0.20	1.0	60
2004	JUL	.	0.027	0.43	61	.	0.070	0.16	66	.	0.32	0.23	95	.	0.014	.	.	.	0.62	0.58	62
2004	AUG	.	0.041	0.11	98	.	0.033	0.28	63	.	0.29	0.43	77	.	0.10	0.36	59	.	0.16	0.47	63
2004	SEP	.	0.053	0.41	65	.	0.036	0.45	60	.	0.0009	0.49	73	.	0.36	.	.	.	0.45	1.1	60
2004	OCT	.	0.030	0.69	64	.	0.037	0.38	67	.	0.12	0.69	85	.	0.058	0.61	59	.	0.12	1.2	62
2004	NOV	.	0.032	0.45	78	.	0.15	0.26	80	.	0.60	0.63	100	.	0.13	0.96	59	.	1.0	0.78	72
2004	DEC	.	0.027	0.56	76	.	0.040	0.53	69	.	1.3	0.90	98	.	0.11	1.9	59	.	.	0.98	75
2005	JAN	.	0.074	0.69	62	.	0.078	0.57	63	.	0.45	0.79	85	.	0.078	1.1	59	.	.	0.78	89
2005	FEB	.	0.067	0.54	63	.	0.073	0.51	64	.	.	0.91	77	.	0.079	1.2	59	.	.	1.3	68
2005	MAR	.	0.027	0.40	65	.	0.062	0.25	80	.	.	0.62	93	.	0.040	2.0	59	.	.	1.0	77
2005	APR	.	0.066	0.75	60	.	0.066	0.72	60	.	.	0.81	76	.	0.043	2.2	58	.	.	0.97	71
2005	MAY	.	0.040	1.2	59	.	0.060	0.52	61	.	.	0.72	70	.	0.060	3.0	58	.	.	0.89	63
2005	JUN	.	0.045	0.91	59	.	0.069	0.55	59	.	.	0.37	72	.	0.045	2.4	58	.	.	0.82	61
2005	JUL	.	0.16	0.69	59	.	0.039	0.32	60	.	.	0.23	78	.	0.045	2.0	58	.	.	0.73	61
2005	AUG	.	0.053	0.51	59	.	0.052	0.33	59	.	.	0.33	70	.	0.026	2.3	58	.	.	0.65	62
2005	SEP	.	0.026	0.73	59	.	0.023	0.29	61	.	.	0.49	71	.	0.026	3.3	58	.	.	1.2	60
2005	OCT	.	0.017	0.52	60	.	0.048	0.52	60	.	.	0.72	70	.	0.036	2.1	58	.	.	0.97	66
2005	NOV	.	0.033	0.46	63	.	0.023	0.38	68	.	.	0.75	91	.	.	1.4	59	.	.	1.1	73
2005	DEC	.	0.058	0.29	69	.	0.066	0.55	63	.	.	1.0	76	.	0.060	2.5	58	.	.	1.1	77

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.015	.	.	.	0.048	.	.	.	.	.	.	.	0.034	.	.	.	.	.	.
1992	FEB	.	0.057	.	.	.	0.021	.	.	.	.	.	.	.	0.026	.	.	.	.	.	.
1992	MAR	.	0.029	0.91	59	.	0.047	1.4	59	.	.	.	.	.	0.067	3.8	58	.	.	1.7	120
1992	APR	.	0.022	0.64	59	.	0.063	1.9	59	.	.	.	.	.	0.089	3.0	58	.	.	1.8	100
1992	MAY	.	0.058	2.0	140	.	0.030	3.0	.	.	.	.	.	.	0.045	5.1	.	.	.	1.1	100
1992	JUN	.	0.047	1.8	64	.	0.049	0.40	100	.	.	.	.	.	0.058	.	.	.	.	0.86	98
1992	JUL	.	0.025	0.91	72	.	0.057	1.1	64	.	.	.	.	.	0.14	3.4	70	.	.	0.88	94
1992	AUG	.	0	2.1	61	.	0.026	1.2	65	.	.	.	.	.	0.065	2.4	74	.	.	0.90	100
1992	SEP	.	0.057	1.4	73	.	0.060	1.6	65	.	.	.	.	.	0.11	4.0	68	.	.	1.0	100
1992	OCT	.	0.033	2.0	66	.	0.073	0.97	90	.	.	.	.	.	0.082	5.7	69	.	.	1.1	130
1992	NOV	.	0.0064	0.77	120	.	0.051	22	58	.	.	.	.	.	0.059	13	64	.	.	1.7	130
1992	DEC	.	.	2.1	78	.	.	11	59	.	.	.	.	.	0.11	3.4	120	.	.	2.0	130
1993	JAN	.	.	1.8	300	.	.	3.6	93	.	.	0.68	160	.	0.071	13	61	.	.	2.7	95
1993	FEB	.	0.012	8.2	81	.	0.077	2.9	100	.	.	0.57	170	.	0.030	8.4	62	.	.	1.1	160
1993	MAR	.	0.016	1.2	200	.	0.043	3.0	96	.	.	1.4	77	.	0.049	13	60	.	.	1.4	110
1993	APR	.	0	7.6	69	.	0.035	2.0	140	.	.	0.30	240	.	0.064	4.7	68	.	.	0.78	160
1993	MAY	.	0	4.9	78	.	0.029	1.7	100	.	.	0.39	140	.	0.025	5.0	62	.	.	1.6	83
1993	JUN	.	0	.	.	.	0.056	1.9	82	.	.	0.32	120	.	0.084	2.4	66	.	.	1.6	69
1993	JUL	.	0.059	2.0	110	.	0.053	1.3	80	.	.	0.26	110	.	0.049	2.9	60	.	.	0.92	75
1993	AUG	.	.	0.64	190	.	.	0.29	190	.	.	0.13	140	.	0.046	0.92	68	.	.	0.52	82
1993	SEP	.	0	1.4	180	.	.	1.3	97	.	.	0.50	92	.	0.036	3.4	61	.	.	1.1	76
1993	OCT	.	0	1.7	210	.	0.029	1.8	120	.	.	0.68	120	.	0.043	3.3	68	.	.	1.3	110
1993	NOV	.	0	1.0	360	.	0	0.79	300	.	.	0.47	180	.	0.055	2.2	99	.	.	2.1	87
1993	DEC	.	0	0.94	460	.	0.015	0.79	280	.	.	0.39	210	.	0.041	1.5	100	.	.	1.5	120
1994	JAN	.	.	0.36	820	.	.	0.32	260	.	.	0.20	140	.	0.095	2.5	130	.	.	1.3	74
1994	FEB	.	.	0.91	290	.	.	1.3	84	.	.	0.44	84	.	0.025	2.1	130	.	.	0.87	85
1994	MAR	.	.	1.1	230	.	.	0.70	110	.	.	0.46	72	.	0.026	5.4	70	.	.	1.1	69
1994	APR	.	0.027	0.51	520	.	.	1.7	74	.	.	0.68	67	.	0.062	7.0	66	.	.	2.4	62
1994	MAY	.	0.050	0.68	250	.	0.098	2.2	62	.	.	0.40	68	.	0.10	3.4	69	.	.	1.7	62
1994	JUN	.	.	.	.	.	0.065	0.81	68	.	.	0.23	67	.	0.24	1.3	81	.	.	1.1	61
1994	JUL	.	0.081	3.5	64	.	0.054	1.1	61	.	.	0.57	59	.	0.15	3.8	60	.	.	1.2	59
1994	AUG	.	0.046	1.3	90	.	0.26	1.5	60	.	.	0.42	60	.	0.63	3.2	61	.	.	0.90	60
1994	SEP	.	0.042	4.5	61	.	0.087	0.70	67	.	.	0.15	78	.	0.21	0.97	82	.	.	1.2	61
1994	OCT	.	0.19	12	61	.	0.090	1.7	66	.	.	0.42	68	.	0.11	1.3	78	.	.	0.75	69
1994	NOV	.	0.17	3.5	90	.	0.53	4.4	60	.	.	0.45	78	.	0.12	2.9	73	.	.	1.8	65

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.23	0.86	180	.	0.098	2.0	65	.	.	0.43	71	.	0.15	2.9	79	.	.	1.2	69
1995	JAN	.	0.14	1.7	330	.	0.32	0.79	92	.	.	0.27	230	.	0.31	2.7	120	.	.	1.1	76
1995	FEB	.	0.020	0.75	830	.	0.11	0.94	90	.	.	0.51	150	.	0.14	3.0	120	.	.	0.96	86
1995	MAR	.	0.063	1.9	240	.	0.22	0.98	83	.	.	0.30	170	.	0.28	2.0	93	.	.	0.76	73
1995	APR	.	0.095	1.5	190	.	0.21	0.77	88	.	.	0.36	160	.	0.49	2.0	110	.	.	1.8	63
1995	MAY	.	0.089	2.9	120	.	0.13	2.1	61	.	.	0.28	140	.	0.37	2.5	76	.	.	0.99	66
1995	JUN	.	0.044	2.1	110	.	0.074	0.53	66	.	.	0.18	120	.	0.21	1.7	62	.	.	0.47	65
1995	JUL	.	0.031	1.9	110	.	0.096	0.55	66	.	.	0.23	94	.	0.24	3.6	60	.	.	0.71	61
1995	AUG	.	0.18	3.1	77	.	0.083	0.69	62	.	.	0.22	91	.	0.22	4.7	59	.	.	0.64	61
1995	SEP	.	0.033	1.6	170	.	0.061	1.9	60	.	.	0.41	82	.	0.074	2.1	70	.	.	0.76	63
1995	OCT	.	0	3.4	130	.	0.11	1.3	68	.	.	0.31	160	.	0.14	5.0	67	.	.	1.3	65
1995	NOV	.	.	0.73	530	.	0.11	0.95	86	.	.	0.27	230	.	0.14	1.6	150	.	.	1.1	77
1995	DEC	.	0.35	1.1	400	.	0.16	0.59	120	.	.	0.34	200	.	0.16	1.6	160	.	.	1.2	76
1996	JAN	.	0.75	0.92	250	.	0.24	0.92	77	.	.	0.29	110	.	0.18	2.7	62	.	.	1.9	64
1996	FEB	.	0.025	0.51	400	.	0.069	0.72	82	.	.	0.27	120	.	0.050	0.75	78	.	.	0.58	88
1996	MAR	.	0.014	0.91	190	.	0.060	0.86	73	.	.	0.38	95	.	0.18	1.0	64	.	.	0.66	72
1996	APR	.	0.070	0.81	150	.	0.12	0.77	78	.	.	0.39	85	.	0.19	1.3	63	.	.	0.97	67
1996	MAY	.	0.011	0.70	140	.	.	0.93	66	.	.	0.39	70	.	0.095	2.3	59	.	.	1.5	60
1996	JUN	.	0.057	0.73	130	.	0.16	0.84	62	.	.	0.28	66	.	0.22	2.6	58	.	.	1.1	60
1996	JUL	.	0.012	0.79	130	.	0.063	1.1	59	.	.	0.17	73	.	.	1.0	60	.	.	0.38	67
1996	AUG	.	0.092	0.96	90	.	0.061	1.5	59	.	.	0.12	73	.	0.025	1.5	58	.	.	0.78	59
1996	SEP	.	0	0.58	140	.	0.057	1.3	60	.	.	0.19	68	.	0.12	1.7	59	.	.	0.74	61
1996	OCT	.	0.059	1.4	130	.	0.098	1.2	63	.	.	1.1	60	.	0.096	1.7	60	.	.	0.87	63
1996	NOV	.	0.14	1.9	120	.	0.052	0.98	69	.	.	0.55	68	.	0.12	1.2	65	.	.	0.76	68
1996	DEC	.	0.41	0.76	260	.	0.082	0.98	68	.	.	0.28	92	.	0.23	2.2	61	.	.	0.93	67
1997	JAN	.	0.59	0.62	100	.	0.13	0.80	69	.	.	0.43	110	.	0.047	1.7	68	.	.	1.0	62
1997	FEB	.	0.050	0.67	86	.	0.20	0.74	68	.	.	0.48	93	.	0.090	3.0	60	.	.	3.3	59
1997	MAR	.	0.083	0.40	110	.	0.12	0.65	72	.	.	.	.	.	0.11	2.6	61	.	.	1.3	60
1997	APR	.	0.015	0.69	72	.	0.039	1.1	62	.	.	0.46	86	.	0.050	2.5	59	.	.	0.87	60
1997	MAY	.	0.0064	0.68	67	.	0.16	0.86	62	.	.	0.49	84	.	0.12	3.8	59	.	.	1.3	59
1997	JUN	.	0.096	1.8	59	.	0.10	.	.	.	.	0.84	61	.	0.17	2.2	59	.	.	1.3	58
1997	JUL	.	0.20	1.2	59	.	0.067	.	.	.	.	0.41	64	.	0.087	2.0	59	.	.	1.6	58
1997	AUG	.	0.082	0.86	60	.	0.048	.	.	.	.	0.27	73	.	0.092	3.2	58	.	.	0.86	58
1997	SEP	.	0.046	0.91	62	.	0.020	.	.	.	.	0.36	76	.	0.074	4.6	58	.	.	1.1	59
1997	OCT	.	0.049	1.5	61	.	0.056	2.9	59	.	.	0.63	70	.	0.051	5.0	58	.	.	1.1	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.053	0.45	91	.	0.068	0.82	64	.	.	0.29	130	.	0.056	1.9	62	.	.	0.52	65
1997	DEC	.	0.010	0.42	93	.	0.058	1.1	62	.	.	0.39	110	.	0.047	1.9	62	.	.	0.96	61
1998	JAN	.	0.10	0.53	130	.	0.12	0.96	66	.	.	0.38	130	.	0.10	2.3	67	.	.	1.1	63
1998	FEB	.	.	1.1	77	.	0.016	1.6	61	.	.	0.39	110	.	0.062	2.9	61	.	.	0.83	63
1998	MAR	.	.	0.63	99	.	0.044	1.6	63	.	.	0.47	110	.	0.075	2.4	66	.	.	0.72	68
1998	APR	.	0.067	0.86	80	.	0.096	2.6	59	.	.	0.49	91	.	0.12	2.9	60	.	.	1.0	61
1998	MAY	.	0.13	0.86	75	.	0.091	2.7	59	.	.	0.46	75	.	0.071	2.0	59	.	.	1.1	59
1998	JUN	.	0.18	0.70	70	.	0.10	1.7	59	.	.	0.24	86	.	0.097	3.8	59	.	.	0.92	59
1998	JUL	.	0.17	0.75	64	.	0.067	1.8	58	.	.	0.29	71	.	0.087	3.0	59	.	.	0.62	59
1998	AUG	.	0.18	1.2	60	.	0.16	2.3	58	.	.	0.19	79	.	0.15	3.4	58	.	.	0.54	59
1998	SEP	.	0.039	0.66	71	.	0.075	0.68	60	.	.	0.33	75	.	0.066	2.3	59	.	.	0.99	59
1998	OCT	.	0.031	0.84	86	.	0.094	0.64	66	.	.	0.30	110	.	0.073	2.5	60	.	.	0.95	61
1998	NOV	.	0.11	0.62	110	.	0.17	0.80	68	.	.	0.51	95	.	.	2.1	62	.	.	1.2	61
1998	DEC	.	0.16	1.2	88	.	0.15	0.61	73	.	.	0.52	100	.	.	1.9	64	.	.	1.5	61
1999	JAN	.	0.24	1.1	82	.	0.21	0.96	77	.	.	0.45	75	.	.	3.8	60	.	.	1.5	63
1999	FEB	.	0.20	1.4	73	.	0.093	1.8	65	.	.	0.64	66	.	.	2.6	60	.	.	1.1	63
1999	MAR	.	0.051	1.0	77	.	0.050	1.8	66	.	.	0.35	81	.	0.15	3.2	59	.	.	1.0	64
1999	APR	.	.	0.63	78	.	0.28	2.0	62	.	.	0.86	61	.	0.16	2.8	59	.	.	0.87	63
1999	MAY	.	0.086	2.4	60	.	0.082	3.5	59	.	.	0.54	62	.	0.48	3.6	58	.	.	1.7	59
1999	JUN	.	0.13	1.3	61	.	0.12	3.2	59	.	.	0.43	59	.	0.21	2.7	58	.	.	2.0	58
1999	JUL	.	0.23	1.0	61	.	0.12	2.6	59	.	.	0.38	60	.	0.11	2.4	58	.	.	1.3	59
1999	AUG	.	0.17	0.99	61	.	0.18	1.8	59	.	.	0.23	63	.	0.13	5.2	58	.	.	0.61	59
1999	SEP	.	0.11	2.9	59	.	0.17	2.6	59	.	.	0.50	60	.	0.083	3.6	58	.	.	0.75	59
1999	OCT	.	0.29	3.7	59	.	0.11	2.5	60	.	.	0.68	62	.	0.092	2.3	59	.	.	1.5	60
1999	NOV	.	0.068	1.4	70	.	0.12	1.0	69	.	.	0.44	75	.	0.13	1.9	60	.	.	1.9	60
1999	DEC	.	0.082	1.5	69	.	0.15	1.7	63	.	.	0.66	70	.	0.094	3.8	59	.	.	1.2	62
2000	JAN	.	.	1.1	77	.	.	0.96	93	.	.	0.42	88	.	0.15	1.6	64	.	.	0.69	66
2000	FEB	.	.	1.1	78	.	.	1.3	83	.	.	0.36	99	.	0.19	1.4	64	.	.	0.79	64
2000	MAR	.	0.21	1.0	78	.	0.21	1.2	77	.	.	0.46	72	.	0.13	1.5	61	.	.	1.1	60
2000	APR	.	0.25	2.1	61	.	0.49	1.7	70	.	.	0.32	80	.	0.50	1.7	59	.	.	0.72	61
2000	MAY	.	0.22	1.3	63	.	0.25	1.6	64	.	.	0.48	63	.	0.17	4.3	58	.	.	1.3	59
2000	JUN	.	0.27	3.4	59	.	0.23	1.1	66	.	.	0.23	69	.	0.19	2.8	59	.	.	0.77	59
2000	JUL	.	0.20	2.7	59	.	0.35	0.95	63	.	.	0.19	64	.	0.13	2.8	58	.	.	0.40	59
2000	AUG	.	.	1.9	59	.	0.093	0.97	63	.	.	0.24	62	.	0.095	1.7	59	.	.	0.56	59
2000	SEP	.	0.20	1.5	62	.	0.14	1.6	63	.	.	0.54	61	.	0.12	4.1	58	.	.	0.71	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.13	0.81	72	.	0.088	1.1	70	.	.	0.28	68	.	0.096	2.5	59	.	.	0.71	60
2000	NOV	.	0.28	0.56	97	.	0.18	0.81	89	.	.	0.36	70	.	0.16	2.5	59	.	.	0.74	61
2000	DEC	.	0.24	0.56	120	.	0.25	0.63	120	.	.	0.31	84	.	0.19	1.5	62	.	.	0.55	69
2001	JAN	.	0.076	0.67	81	.	0.13	0.45	98	.	.	0.32	160	.	0.10	1.4	61	.	.	0.87	74
2001	FEB	.	0.27	0.95	70	.	0.15	1.3	67	.	.	0.51	130	.	0.12	1.1	64	.	.	0.69	90
2001	MAR	.	0.31	0.91	65	.	0.11	0.60	89	.	.	0.40	140	.	0.32	1.7	60	.	.	0.96	72
2001	APR	.	0.30	0.79	65	.	.	0.87	74	.	.	0.54	100	.	0.27	1.9	59	.	.	0.76	71
2001	MAY	.	0.23	1.2	60	.	0.16	0.67	71	.	.	0.50	89	.	0.099	4.1	58	.	.	0.94	63
2001	JUN	.	0.095	7.3	58	.	0.14	0.76	62	.	.	0.49	69	.	0.094	3.5	58	.	.	0.82	60
2001	JUL	.	0.065	3.0	58	.	0.12	0.59	61	.	.	0.45	71	.	0.11	2.3	58	.	.	0.90	60
2001	AUG	.	0.063	2.5	58	.	0.15	0.65	62	.	.	0.27	86	.	0.15	2.4	58	.	.	0.68	60
2001	SEP	.	0.1	2.0	59	.	0.11	0.57	69	.	.	0.26	110	.	0.12	1.4	59	.	.	0.38	69
2001	OCT	.	0.17	4.4	59	.	0.13	1.6	63	.	.	0.92	74	.	0.14	3.2	59	.	.	1.0	64
2001	NOV	.	0.15	1.0	66	.	0.068	0.69	79	.	.	0.60	93	.	0.097	2.3	59	.	.	1.3	63
2001	DEC	.	0.13	0.81	74	.	0.071	0.59	83	.	.	0.44	120	.	0.093	0.94	64	.	.	1.1	68
2002	JAN	.	0.082	0.76	73	.	0.090	0.72	68	.	.	0.39	81	.	0.071	1.8	62	.	.	1.1	74
2002	FEB	.	0.094	1.5	64	.	0.096	1.2	64	.	.	0.72	68	.	0.12	2.4	61	.	.	1.1	72
2002	MAR	.	0.15	0.66	79	.	.	0.57	77	.	.	0.46	77	.	0.077	1.1	61	.	0.55	1.1	74
2002	APR	.	0.087	0.98	61	.	0.082	1.4	62	.	0.69	0.63	66	.	0.18	2.1	59	.	0.55	0.85	70
2002	MAY	.	0.12	0.58	71	.	0.12	1.2	61	.	0.66	0.50	67	.	0.22	2.4	59	.	0.36	0.80	70
2002	JUN	.	0.11	2.7	59	.	0.10	1.1	59	.	0.73	0.32	64	.	0.094	1.7	59	.	0.11	0.44	67
2002	JUL	.	.	1.8	59	.	0.17	1.1	59	.	0.70	0.35	61	.	0.17	1.8	58	.	0.31	0.72	60
2002	AUG	.	0.10	2.1	59	.	0.12	0.61	60	.	0.52	0.15	70	.	0.070	2.4	58	.	0.11	0.50	62
2002	SEP	.	0.055	0.70	62	.	0.055	0.84	60	.	0.23	0.26	65	.	0.16	2.3	58	.	0.24	0.29	73
2002	OCT	.	0.040	0.85	64	.	0.15	0.69	64	.	0.37	0.29	75	.	0.068	1.5	59	.	0.25	0.33	94
2002	NOV	.	0.040	1.0	65	.	0.073	0.40	85	.	0.23	0.53	68	.	0.21	1.6	61	.	0.49	0.99	69
2002	DEC	.	.	0.47	89	.	0.082	0.54	78	.	0.096	0.37	84	.	0.15	0.82	69	.	0.60	0.49	110
2003	JAN	.	0.10	0.44	120	.	0.072	0.41	82	.	0.082	0.25	150	.	0.10	0.77	140	.	0.34	0.21	110
2003	FEB	.	0.087	0.59	90	.	0.11	0.76	67	.	0.16	0.46	95	.	0.11	0.95	97	.	0.67	0.44	73
2003	MAR	.	0.051	0.68	77	.	0.073	0.59	70	.	0.18	0.49	84	.	0.087	1.0	85	.	0.44	0.71	62
2003	APR	.	0.089	0.73	77	.	0.082	1.2	62	.	0.0055	0.57	79	.	0.12	1.8	63	.	0.029	0.86	61
2003	MAY	.	0.036	0.56	70	.	.	1.3	59	.	0.067	0.33	85	.	0.061	4.8	59	.	0.11	0.51	62
2003	JUN	.	0.044	0.89	60	.	0.062	0.83	59	.	0.050	0.34	71	.	0.10	3.3	59	.	0.12	1.0	59
2003	JUL	.	0.080	0.93	60	.	0.10	0.65	59	.	0.013	0.19	81	.	0.12	3.6	59	.	0.17	0.73	59
2003	AUG	.	0.089	0.83	60	.	0.083	0.51	59	.	0.040	0.27	67	.	0.064	4.8	58	.	0.11	0.55	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.050	0.69	64	.	0.055	0.69	60	.	0.060	0.34	70	.	0.15	4.7	59	.	0.074	0.40	60
2003	OCT	.	0.029	0.49	77	.	0.047	0.50	64	.	0.011	0.32	87	.	0.051	2.8	60	.	0.025	0.67	60
2003	NOV	.	0.036	0.68	78	.	0.095	0.70	65	.	0.048	0.42	90	.	0.072	3.7	60	.	0.058	0.86	61
2003	DEC	.	0.022	0.33	110	.	0.056	0.35	89	.	1.1	0.28	110	.	0.086	2.0	72	.	0.047	0.94	61
2004	JAN	.	0.089	0.35	110	.	0.099	0.24	170	.	0.81	0.22	200	.	0.15	2.5	60	.	0.18	0.39	170
2004	FEB	.	0.050	0.41	89	.	0.047	0.44	90	.	0.016	0.37	120	.	0.040	0.44	76	.	0.084	0.69	95
2004	MAR	.	0.056	0.48	76	.	0.092	0.59	86	.	0.0034	0.46	98	.	0.095	0.71	61	.	0.36	0.83	80
2004	APR	.	0.053	0.27	82	.	0.043	0.43	94	.	0.056	0.44	98	.	0.079	0.66	63	.	0.16	1.2	68
2004	MAY	.	0.13	0.36	74	.	0.10	0.61	69	.	0.083	0.38	88	.	0.22	1.5	59	.	0.13	0.70	71
2004	JUN	.	0.044	0.67	62	.	0.13	0.54	64	.	0.17	0.52	67	.	0.064	1.8	58	.	0.14	1.0	61
2004	JUL	.	0.057	0.95	59	.	0.086	0.19	76	.	0.14	0.21	79	.	0.041	.	.	.	0.19	0.54	64
2004	AUG	.	0.11	0.18	84	.	0.054	0.35	69	.	0.18	0.32	72	.	0.26	0.92	59	.	0.24	0.41	67
2004	SEP	.	0.12	0.38	70	.	0.069	0.51	63	.	0.0008	0.40	68	.	0.53	.	.	.	3.5	1.0	60
2004	OCT	.	0.031	0.72	66	.	0.051	0.42	81	.	0.099	0.47	80	.	0.13	1.4	59	.	0.77	1.1	64
2004	NOV	.	0.025	0.41	89	.	0.27	0.25	120	.	0.064	0.32	120	.	0.43	0.93	60	.	0.22	0.48	98
2004	DEC	.	0.049	0.44	94	.	0.090	0.48	93	.	0.12	0.40	120	.	0.29	1.6	61	.	.	0.45	130
2005	JAN	.	0.17	0.52	120	.	0.12	0.44	83	.	0.11	0.26	86	.	0.15	1.0	62	.	.	0.35	76
2005	FEB	.	0.10	0.45	120	.	0.11	0.45	79	.	.	0.43	68	.	0.18	1.2	60	.	.	0.85	61
2005	MAR	.	0.075	0.32	150	.	0.15	0.27	110	.	.	0.29	77	.	0.11	1.7	59	.	.	0.47	68
2005	APR	.	0.19	0.59	83	.	0.092	0.72	65	.	.	0.40	67	.	0.096	2.7	59	.	.	0.74	61
2005	MAY	.	0.083	0.95	67	.	0.15	0.49	68	.	.	0.46	62	.	0.16	3.8	58	.	.	0.70	59
2005	JUN	.	0.13	0.95	65	.	0.17	0.61	61	.	.	0.29	61	.	0.13	2.9	58	.	.	0.86	59
2005	JUL	.	0.35	0.88	61	.	0.080	0.39	61	.	.	0.23	61	.	0.10	2.6	58	.	.	0.70	59
2005	AUG	.	0.099	0.70	62	.	0.11	0.38	61	.	.	0.28	60	.	0.067	3.3	58	.	.	0.61	59
2005	SEP	.	0.070	1.1	62	.	0.054	0.32	65	.	.	0.40	61	.	0.071	4.6	58	.	.	0.98	59
2005	OCT	.	0.041	0.64	71	.	0.13	0.52	64	.	.	0.50	61	.	0.092	3.7	58	.	.	0.79	60
2005	NOV	.	0.031	0.72	85	.	0.043	0.39	85	.	.	0.45	70	.	.	1.4	60	.	.	0.72	62
2005	DEC	.	0.11	0.39	120	.	0.19	0.46	79	.	.	0.45	70	.	0.15	2.6	59	.	.	0.68	64

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	0.12	.	.	.	0.046	.	.	.	.	.	.	.	0.051	.	.	.	.	.	.
1992	FEB	.	0.076	.	.	.	0.021	.	.	.	.	.	.	.	0.052	.	.	.	.	.	.
1992	MAR	.	0.040	0.41	71	.	0.030	0.90	61	.	.	.	.	.	0.076	2.5	59	.	.	0.78	120
1992	APR	.	0.010	0.42	66	.	0.055	1.9	59	.	.	.	.	.	0.10	3.0	59	.	.	0.70	120
1992	MAY	.	0.069	1.6	190	.	0.054	2.2	.	.	.	.	.	.	0.055	3.5	.	.	.	0.67	89
1992	JUN	.	0.062	0.92	73	.	0.066	0.27	140	.	.	.	.	.	0.068	.	.	.	.	0.44	96
1992	JUL	.	0.031	0.71	74	.	0.061	1.0	66	.	.	.	.	.	0.15	2.9	67	.	.	0.56	80
1992	AUG	.	0.076	1.5	62	.	0.053	0.91	70	.	.	.	.	.	0.069	1.7	72	.	.	0.67	79
1992	SEP	.	0.12	1.0	76	.	0.059	1.3	69	.	.	.	.	.	0.091	3.4	65	.	.	0.68	87
1992	OCT	.	0.074	1.5	68	.	0.0061	0.72	110	.	.	.	.	.	0.070	4.0	69	.	.	0.64	110
1992	NOV	.	0.023	0.84	100	.	0.067	19	58	.	.	.	.	.	0.067	35.0	59	.	.	0.77	140
1992	DEC	.	.	1.5	84	.	.	6.6	60	.	.	.	.	.	0.11	3.0	100	.	.	0.79	150
1993	JAN	.	.	1.6	320	.	.	4.1	78	.	.	0.31	110	.	0.086	12.0	61	.	.	1.2	72
1993	FEB	.	0.027	2.7	170	.	0	8.3	63	.	.	0.31	99	.	0.057	6.6	64	.	.	0.64	85
1993	MAR	.	0.013	2.1	120	.	0	2.3	100	.	.	0.30	89	.	0.11	9.4	61	.	.	0.66	75
1993	APR	.	0.017	4.8	81	.	0.074	2.4	110	.	.	0.19	110	.	0.090	3.2	75	.	.	0.59	77
1993	MAY	.	0.089	3.0	100	.	0.038	1.6	98	.	.	0.28	78	.	0.033	3.9	64	.	.	0.98	64
1993	JUN	.	0.028	.	.	.	0.038	1.7	80	.	.	0.28	67	.	0.19	2.0	68	.	.	1.0	60
1993	JUL	.	0.080	1.9	110	.	0.038	0.84	94	.	.	0.22	66	.	0.062	2.1	62	.	.	0.65	61
1993	AUG	.	.	0.80	150	.	.	0.25	190	.	.	0.13	69	.	0.049	0.83	68	.	.	0.34	63
1993	SEP	.	0.0023	1.1	230	.	.	1.1	96	.	.	0.36	64	.	0.063	2.6	63	.	.	0.83	61
1993	OCT	.	0.036	0.60	540	.	0.036	1.1	150	.	.	0.43	74	.	0.061	2.4	74	.	.	0.56	81
1993	NOV	.	0	0.92	370	.	0.015	0.46	430	.	.	0.22	120	.	0.058	1.7	110	.	.	1.2	66
1993	DEC	.	0.0058	1.1	360	.	0.041	0.75	250	.	.	0.22	120	.	0.035	1.2	120	.	.	1.0	72
1994	JAN	.	.	0.12	2000	.	.	0.17	460	.	.	0.12	290	.	0.076	1.6	69	.	.	0.74	96
1994	FEB	.	.	1.1	190	.	.	0.89	100	.	.	0.26	140	.	0.063	1.4	67	.	.	0.49	120
1994	MAR	.	.	0.77	250	.	.	0.60	110	.	.	0.19	140	.	0.048	3.1	60	.	.	0.71	81
1994	APR	.	0.028	0.32	650	.	.	1.1	88	.	.	0.46	84	.	0.081	3.9	59	.	.	1.9	63
1994	MAY	.	0.021	0.50	280	.	0.055	1.6	66	.	.	0.28	89	.	0.20	1.8	60	.	.	1.2	65
1994	JUN	.	.	.	.	.	0.025	0.63	72	.	.	0.17	83	.	0.22	0.94	60	.	.	0.99	62
1994	JUL	.	0.073	3.3	63	.	0.0027	0.79	64	.	.	0.55	60	.	0.10	2.7	58	.	.	1.0	59
1994	AUG	.	0.11	1.2	85	.	0.21	1.2	61	.	.	0.32	64	.	0.66	2.8	58	.	.	1.1	59
1994	SEP	.	0.25	4.6	60	.	0.097	0.49	73	.	.	0.11	110	.	0.17	0.64	61	.	.	1.4	60
1994	OCT	.	0.14	15	59	.	0.085	1.5	67	.	.	0.25	96	.	0.13	0.82	61	.	.	0.67	71
1994	NOV	.	0.096	4.0	75	.	0.42	2.8	62	.	.	0.28	120	.	0.097	1.8	60	.	.	1.4	68

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	0.17	0.53	230	.	0.073	1.0	78	.	.	0.36	86	.	0.11	1.5	62	.	.	0.94	73
1995	JAN	.	0.19	1.1	740	.	0.21	0.53	100	.	.	0.13	170	.	0.30	1.7	120	.	.	0.68	65
1995	FEB	.	0.12	0.59	1500	.	0.085	0.68	96	.	.	0.26	110	.	0.15	1.7	120	.	.	0.36	82
1995	MAR	.	0.18	2.0	310	.	0.19	0.55	100	.	.	0.13	140	.	0.24	1.2	94	.	.	0.35	68
1995	APR	.	0.15	1.5	290	.	0.20	0.47	100	.	.	0.14	140	.	0.43	1.3	100	.	.	0.86	61
1995	MAY	.	0.085	3.5	140	.	0.14	1.6	61	.	.	0.11	120	.	0.31	1.6	74	.	.	0.46	63
1995	JUN	.	0.037	2.8	120	.	0.061	0.44	66	.	.	0.089	97	.	0.16	1.3	61	.	.	0.20	63
1995	JUL	.	0.16	2.4	130	.	0.085	0.43	66	.	.	0.15	71	.	0.15	2.5	60	.	.	0.34	60
1995	AUG	.	0.15	2.4	110	.	0.044	0.48	63	.	.	0.16	67	.	0.15	3.2	59	.	.	0.34	59
1995	SEP	.	0.12	1.3	290	.	0.045	1.3	61	.	.	0.21	70	.	0.067	1.4	67	.	.	0.38	61
1995	OCT	.	0.068	2.5	250	.	0.098	0.77	75	.	.	0.13	140	.	0.11	3.4	65	.	.	0.60	63
1995	NOV	.	.	0.93	600	.	0.092	0.52	110	.	.	0.15	150	.	0.12	0.96	140	.	.	0.48	71
1995	DEC	.	0.31	0.90	720	.	0.11	0.31	160	.	.	0.17	140	.	0.14	1.2	130	.	.	0.39	78
1996	JAN	.	0.54	0.95	230	.	0.15	0.47	88	.	.	0.16	110	.	0.14	1.6	67	.	.	0.77	74
1996	FEB	.	0.057	0.45	430	.	0.065	0.42	89	.	.	0.084	170	.	0.051	0.39	120	.	.	0.26	120
1996	MAR	.	0.023	0.80	200	.	0.043	0.39	89	.	.	0.17	100	.	0.17	0.59	75	.	.	0.24	100
1996	APR	.	0.067	0.84	140	.	0.098	0.57	76	.	.	0.17	93	.	0.15	0.80	69	.	.	0.53	72
1996	MAY	.	0.041	0.76	130	.	.	0.73	64	.	.	0.21	69	.	0.075	1.7	60	.	.	0.96	61
1996	JUN	.	0.039	0.69	130	.	0.11	0.75	61	.	.	0.16	65	.	0.35	1.8	59	.	.	0.62	61
1996	JUL	.	0.083	0.71	140	.	0.040	0.81	59	.	.	0.098	70	.	.	0.75	60	.	.	0.26	67
1996	AUG	.	0.087	1.1	81	.	0.042	1.1	59	.	.	0.095	65	.	0.015	1.2	59	.	.	0.45	59
1996	SEP	.	0.17	0.56	140	.	0.022	1.1	59	.	.	0.078	73	.	0.11	1.3	59	.	.	0.34	64
1996	OCT	.	0.19	1.2	140	.	0.076	0.94	62	.	.	0.34	64	.	0.094	1.2	62	.	.	0.53	64
1996	NOV	.	0.10	1.3	150	.	0.043	0.67	69	.	.	0.26	69	.	0.13	0.65	79	.	.	0.51	70
1996	DEC	.	0.18	0.70	260	.	0.078	0.67	68	.	.	0.14	92	.	0.20	1.3	66	.	.	0.41	78
1997	JAN	.	0.26	0.38	120	.	0.084	0.47	72	.	.	0.16	120	.	0.039	0.97	72	.	.	0.43	67
1997	FEB	.	0.064	0.51	86	.	0.13	0.46	71	.	.	0.17	100	.	0.075	1.8	60	.	.	0.73	60
1997	MAR	.	0.20	0.27	120	.	0.094	0.39	76	.	.	.	.	.	0.092	1.3	62	.	.	0.67	61
1997	APR	.	0.058	0.44	78	.	0.035	0.61	64	.	.	0.20	86	.	0.045	1.2	61	.	.	0.44	62
1997	MAY	.	0.16	0.45	70	.	0.12	0.52	64	.	.	0.23	80	.	0.095	2.0	59	.	.	0.66	60
1997	JUN	.	0.13	1.4	59	.	0.10	.	.	.	.	0.38	60	.	0.41	1.4	59	.	.	0.71	59
1997	JUL	.	0.19	1.1	59	.	0.061	.	.	.	.	0.19	63	.	0.12	1.4	59	.	.	1.0	58
1997	AUG	.	0.074	0.66	60	.	0.050	.	.	.	.	0.19	64	.	0.085	2.4	58	.	.	0.44	59
1997	SEP	.	0.039	1.0	60	.	0.064	.	.	.	.	0.23	67	.	0.058	3.0	58	.	.	0.59	59
1997	OCT	.	0.18	0.96	63	.	0.041	1.3	59	.	.	0.33	66	.	0.054	3.0	59	.	.	0.53	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	0.22	0.36	89	.	0.039	0.45	67	.	.	0.11	130	.	0.062	1.1	63	.	.	0.22	73
1997	DEC	.	0.15	0.27	100	.	0.040	0.56	65	.	.	0.14	120	.	0.075	1.1	64	.	.	0.50	63
1998	JAN	.	0.64	0.36	210	.	0.099	0.61	77	.	.	0.20	110	.	0.15	1.4	87	.	.	0.42	64
1998	FEB	.	.	0.63	120	.	0.052	0.81	68	.	.	0.18	110	.	0.067	1.6	72	.	.	0.40	63
1998	MAR	.	.	0.41	150	.	0.078	0.93	73	.	.	0.19	120	.	0.15	1.3	92	.	.	0.27	72
1998	APR	.	0.20	0.61	110	.	0.088	1.3	61	.	.	0.20	95	.	0.16	1.5	66	.	.	0.52	60
1998	MAY	.	0.32	0.84	82	.	0.089	1.3	60	.	.	0.24	71	.	0.089	1.2	62	.	.	0.53	59
1998	JUN	.	0.36	0.55	83	.	0.11	1.0	59	.	.	0.18	70	.	0.11	2.6	59	.	.	0.53	59
1998	JUL	.	0.26	0.51	73	.	0.097	0.97	59	.	.	0.10	76	.	0.079	2.0	59	.	.	0.33	59
1998	AUG	.	0.29	0.96	62	.	0.092	1.8	58	.	.	0.10	73	.	0.16	2.3	59	.	.	0.31	59
1998	SEP	.	0.22	0.62	77	.	0.052	0.47	62	.	.	0.16	71	.	0.067	1.9	60	.	.	0.46	59
1998	OCT	.	0.16	0.73	100	.	0.12	0.48	72	.	.	0.15	100	.	0.079	2.0	63	.	.	0.41	61
1998	NOV	.	0.13	0.55	140	.	0.20	0.66	73	.	.	0.18	110	.	.	1.3	74	.	.	0.49	61
1998	DEC	.	0.12	0.93	110	.	0.11	0.42	88	.	.	0.21	110	.	.	1.2	81	.	.	0.60	62
1999	JAN	.	0.20	0.68	95	.	0.12	0.57	83	.	.	0.14	92	.	.	2.1	61	.	.	0.45	71
1999	FEB	.	0.26	0.71	92	.	0.058	1.0	67	.	.	0.22	72	.	.	1.6	62	.	.	0.36	71
1999	MAR	.	0.093	0.57	94	.	0.045	1.0	69	.	.	0.11	100	.	0.13	2.3	59	.	.	0.42	68
1999	APR	.	.	0.40	90	.	0.27	1.0	64	.	.	0.21	69	.	0.14	1.5	60	.	.	0.29	70
1999	MAY	.	0.13	1.9	61	.	0.064	2.3	59	.	.	0.20	64	.	0.39	2.3	59	.	.	0.76	59
1999	JUN	.	0.17	1.1	61	.	0.096	2.4	59	.	.	0.20	59	.	0.21	1.8	58	.	.	0.94	59
1999	JUL	.	0.25	0.89	61	.	0.074	1.6	59	.	.	0.14	61	.	0.094	1.8	58	.	.	0.58	59
1999	AUG	.	0.20	0.84	60	.	0.13	1.0	59	.	.	0.095	64	.	0.15	3.5	58	.	.	0.27	60
1999	SEP	.	0.20	1.3	61	.	0.15	1.5	59	.	.	0.16	62	.	0.099	2.4	58	.	.	0.33	60
1999	OCT	.	0.47	1.7	62	.	0.11	1.5	60	.	.	0.21	67	.	0.085	1.8	59	.	.	0.58	61
1999	NOV	.	0.14	0.74	83	.	0.12	0.67	70	.	.	0.11	110	.	0.098	1.4	61	.	.	0.71	62
1999	DEC	.	0.097	0.74	84	.	0.15	1.0	64	.	.	0.25	75	.	0.083	2.2	60	.	.	0.42	69
2000	JAN	.	.	0.57	120	.	.	0.63	250	.	.	0.076	92	.	0.13	1.0	69	.	.	0.24	59
2000	FEB	.	.	0.60	110	.	.	0.74	230	.	.	0.088	86	.	0.20	0.84	69	.	.	0.25	59
2000	MAR	.	0.21	0.65	100	.	0.18	0.85	180	.	.	0.10	70	.	0.12	1.1	62	.	.	0.44	59
2000	APR	.	0.24	1.1	68	.	0.38	1.1	160	.	.	0.10	67	.	0.45	1.1	60	.	.	0.31	59
2000	MAY	.	0.23	0.80	72	.	0.22	0.97	110	.	.	0.17	60	.	0.16	3.1	59	.	.	0.54	58
2000	JUN	.	0.30	1.5	62	.	0.19	0.65	130	.	.	0.087	62	.	0.20	2.0	59	.	.	0.29	58
2000	JUL	.	0.18	1.6	60	.	0.29	0.79	86	.	.	0.054	61	.	0.11	1.9	58	.	.	0.15	58
2000	AUG	.	.	1.0	61	.	0.080	0.60	99	.	.	0.089	60	.	0.078	1.2	59	.	.	0.23	58
2000	SEP	.	0.22	0.92	67	.	0.12	1.2	94	.	.	0.22	59	.	0.10	3.0	58	.	.	0.30	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	0.18	0.49	93	.	0.095	0.67	150	.	.	0.097	62	.	0.096	1.8	59	.	.	0.30	58
2000	NOV	.	0.28	0.34	140	.	0.17	0.46	270	.	.	0.10	64	.	0.19	1.6	60	.	.	0.29	59
2000	DEC	.	0.23	0.33	180	.	0.21	0.41	360	.	.	0.071	79	.	0.17	0.78	69	.	.	0.22	59
2001	JAN	.	0.11	0.41	110	.	0.13	0.31	140	.	.	0.044	170	.	0.12	0.93	61	.	.	0.33	61
2001	FEB	.	0.31	0.66	83	.	0.14	0.86	80	.	.	0.16	78	.	0.12	0.78	62	.	.	0.24	64
2001	MAR	.	0.28	0.59	75	.	0.097	0.43	120	.	.	0.11	88	.	0.26	1.0	60	.	.	0.39	60
2001	APR	.	0.19	0.46	79	.	.	0.59	93	.	.	0.14	73	.	0.22	1.1	59	.	.	0.29	60
2001	MAY	.	0.17	0.68	64	.	0.14	0.51	83	.	.	0.17	65	.	0.089	2.1	58	.	.	0.38	59
2001	JUN	.	0.091	4.4	58	.	0.12	0.53	67	.	.	0.17	60	.	0.079	2.2	58	.	.	0.31	59
2001	JUL	.	0.064	1.7	59	.	0.098	0.39	66	.	.	0.18	60	.	0.099	1.5	58	.	.	0.34	59
2001	AUG	.	0.11	1.2	59	.	0.13	0.39	68	.	.	0.096	63	.	0.13	1.5	58	.	.	0.33	58
2001	SEP	.	0.11	0.91	61	.	0.084	0.34	88	.	.	0.086	71	.	0.11	0.91	59	.	.	0.15	60
2001	OCT	.	0.19	2.2	60	.	0.12	1.1	68	.	.	0.34	61	.	0.13	2.2	59	.	.	0.51	59
2001	NOV	.	0.15	0.70	75	.	0.069	0.50	99	.	.	0.19	67	.	0.085	1.7	59	.	.	0.47	59
2001	DEC	.	0.12	0.52	96	.	0.068	0.40	110	.	.	0.14	74	.	0.086	0.56	63	.	.	0.25	62
2002	JAN	.	0.088	0.45	91	.	0.082	0.48	91	.	.	0.12	82	.	0.066	1.1	68	.	.	0.43	60
2002	FEB	.	0.091	0.87	72	.	0.10	0.69	84	.	.	0.22	68	.	0.13	1.6	63	.	.	0.47	60
2002	MAR	.	0.15	0.42	98	.	.	0.33	120	.	.	0.11	87	.	0.083	0.73	65	.	0.42	0.38	61
2002	APR	.	0.13	0.43	72	.	0.11	1.0	68	.	0.44	0.17	68	.	0.18	1.4	61	.	0.43	0.37	60
2002	MAY	.	0.12	0.41	80	.	0.11	0.88	67	.	0.34	0.16	67	.	0.19	1.6	60	.	0.37	0.31	60
2002	JUN	.	0.11	1.7	59	.	0.087	1.1	60	.	0.38	0.15	61	.	0.091	1.1	59	.	0.12	0.19	59
2002	JUL	.	.	1.1	59	.	0.14	0.89	59	.	0.42	0.17	59	.	0.15	1.3	59	.	0.28	0.34	58
2002	AUG	.	0.10	1.2	59	.	0.11	0.50	61	.	0.22	0.069	64	.	0.063	1.7	58	.	0.13	0.22	59
2002	SEP	.	0.085	0.49	65	.	0.051	0.71	61	.	0.13	0.079	65	.	0.16	1.7	59	.	0.27	0.12	60
2002	OCT	.	0.074	0.52	72	.	0.14	0.43	80	.	0.17	0.11	70	.	0.074	1.1	60	.	0.22	0.13	63
2002	NOV	.	0.048	0.55	76	.	0.067	0.35	110	.	0.26	0.20	65	.	0.19	1.4	62	.	0.26	0.46	59
2002	DEC	.	.	0.35	110	.	0.081	0.44	100	.	0.17	0.10	89	.	0.14	0.56	80	.	0.32	0.18	68
2003	JAN	.	0.12	0.32	160	.	0.059	0.33	86	.	0.081	0.038	190	.	0.096	0.54	120	.	0.26	0.093	74
2003	FEB	.	0.13	0.38	120	.	0.11	0.59	69	.	0.18	0.16	72	.	0.11	0.67	88	.	0.59	0.29	60
2003	MAR	.	0.057	0.42	100	.	0.078	0.40	76	.	0.095	0.23	64	.	0.095	0.57	87	.	0.17	0.43	59
2003	APR	.	0.11	0.50	97	.	0.10	0.95	62	.	0.012	0.30	62	.	0.15	1.0	64	.	0.048	0.61	59
2003	MAY	.	0.062	0.35	88	.	.	1.1	59	.	0.073	0.24	61	.	0.081	2.4	59	.	0.10	0.36	59
2003	JUN	.	0.046	0.55	64	.	0.063	0.66	60	.	0.045	0.26	59	.	0.095	2.1	59	.	0.12	0.75	58
2003	JUL	.	0.075	0.60	63	.	0.12	0.64	59	.	0.021	0.16	60	.	0.13	2.5	58	.	0.15	0.54	58
2003	AUG	.	0.093	0.59	61	.	0.11	0.46	59	.	0.035	0.22	59	.	0.083	3.0	58	.	0.10	0.38	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	0.088	0.60	67	.	0.069	0.52	61	.	0.044	0.22	60	.	0.15	3.0	59	.	0.11	0.40	58
2003	OCT	.	0.059	0.34	95	.	0.054	0.34	67	.	0.016	0.20	62	.	0.052	1.7	60	.	0.041	0.47	58
2003	NOV	.	0.10	0.49	95	.	0.099	0.48	69	.	0.065	0.24	63	.	0.078	2.4	60	.	0.085	0.66	58
2003	DEC	.	0.046	0.21	170	.	0.050	0.26	99	.	0.59	0.12	74	.	0.082	1.2	71	.	0.079	0.84	58
2004	JAN	.	0.086	0.18	170	.	0.077	0.14	170	.	0.44	0.16	370	.	0.16	1.3	63	.	0.20	0.20	310
2004	FEB	.	0.076	0.27	100	.	0.037	0.31	83	.	0.023	0.22	240	.	0.034	0.40	78	.	0.064	0.46	130
2004	MAR	.	0.053	0.38	78	.	0.081	0.42	78	.	0.021	0.26	200	.	0.091	0.57	63	.	0.26	0.56	99
2004	APR	.	0.079	0.14	120	.	0.035	0.26	94	.	0.0007	0.26	200	.	0.061	0.40	69	.	0.011	0.77	79
2004	MAY	.	0.21	0.19	95	.	0.087	0.34	71	.	0.0062	0.16	230	.	0.14	0.80	60	.	0	0.51	81
2004	JUN	.	0.077	1.1	59	.	0.10	0.40	62	.	0.054	0.28	110	.	0.043	1.2	59	.	0	0.69	65
2004	JUL	.	0.13	0.49	61	.	0.065	0.12	74	.	0.035	0.14	130	.	0.032	.	.	.	0	0.37	70
2004	AUG	.	0.12	0.13	93	.	0.042	0.23	67	.	0.057	0.17	130	.	0.21	0.57	59	.	0	0.26	77
2004	SEP	.	0.13	0.23	80	.	0.056	0.33	63	.	0.012	0.28	90	.	0.44	.	.	.	1.1	0.74	62
2004	OCT	.	0.091	0.44	72	.	0.054	0.29	75	.	0.0006	0.29	140	.	0.092	0.89	60	.	0.071	0.64	74
2004	NOV	.	0.050	0.27	110	.	0.22	0.16	110	.	0.033	0.14	310	.	0.54	0.62	62	.	0.067	0.29	140
2004	DEC	.	0.067	0.25	120	.	0.083	0.28	94	.	0.074	0.14	430	.	0.23	0.80	66	.	.	0.20	260
2005	JAN	.	0.18	0.30	240	.	0.13	0.24	150	.	0.019	0.090	96	.	0.13	0.73	71	.	.	0.17	78
2005	FEB	.	0.11	0.31	210	.	0.14	0.46	88	.	.	0.19	67	.	0.15	0.76	67	.	.	0.45	61
2005	MAR	.	0.083	0.19	300	.	0.15	0.28	130	.	.	0.095	87	.	0.094	1.0	63	.	.	0.26	67
2005	APR	.	0.22	0.38	140	.	0.091	0.55	76	.	.	0.18	66	.	0.096	1.7	60	.	.	0.44	60
2005	MAY	.	0.088	0.65	87	.	0.13	0.41	79	.	.	0.28	60	.	0.15	2.5	59	.	.	0.55	59
2005	JUN	.	0.13	0.70	78	.	0.13	0.49	64	.	.	0.16	60	.	0.10	1.9	58	.	.	0.61	58
2005	JUL	.	0.30	0.67	67	.	0.065	0.27	68	.	.	0.15	59	.	0.086	1.8	58	.	.	0.44	59
2005	AUG	.	0.14	0.51	71	.	0.093	0.31	65	.	.	0.16	59	.	0.060	2.2	58	.	.	0.35	59
2005	SEP	.	0.073	0.49	82	.	0.051	0.26	74	.	.	0.25	59	.	0.068	2.7	58	.	.	0.56	59
2005	OCT	.	0.043	0.46	97	.	0.13	0.45	69	.	.	0.22	61	.	0.086	2.3	59	.	.	0.42	59
2005	NOV	.	0.077	0.49	140	.	0.053	0.27	130	.	.	0.14	77	.	.	0.88	66	.	.	0.36	63
2005	DEC	.	0.14	0.30	200	.	0.16	0.38	100	.	.	0.20	68	.	0.14	1.3	63	.	.	0.40	63

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

Suite PCB

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	2.4	.	.	.	1.8	.	.	.	.	.	.	.	1.7	.	.	.	.	.	.
1992	FEB	.	1.9	.	.	.	0.70	.	.	.	.	.	.	.	1.4	.	.	.	.	.	.
1992	MAR	.	1.2	14	61	.	2.1	25	61	.	.	.	.	.	3.2	65	58	.	.	40	85
1992	APR	.	1.3	13	60	.	3.1	34	60	.	.	.	.	.	3.8	55	58	.	.	31	89
1992	MAY	.	2.3	44	59	.	1.4	63	.	.	.	.	.	.	1.3	93	.	.	.	23	81
1992	JUN	.	1.8	26	70	.	2.8	7.7	130	.	.	.	.	.	1.8	.	.	.	.	18	80
1992	JUL	.	17	19	72	.	2.3	26	65	.	.	.	.	.	3.8	67	71	.	.	16	82
1992	AUG	.	3.5	40	61	.	1.8	25	67	.	.	.	.	.	2.1	57	70	.	.	18	84
1992	SEP	.	3.4	29	73	.	2.0	35	67	.	.	.	.	.	2.3	79	69	.	.	20	87
1992	OCT	.	2.1	42	66	.	1.9	23	92	.	.	.	.	.	1.9	110	70	.	.	21	100
1992	NOV	.	0.67	17	120	.	2.2	530	58	.	.	.	.	.	1.9	390	61	.	.	35	100
1992	DEC	.	.	43	78	.	.	280	59	.	.	.	.	.	2.6	70	120	.	.	34	120
1993	JAN	.	.	47	210	.	.	99	80	.	.	32	96	.	2.4	320	61	.	.	46	98
1993	FEB	.	1.6	150	80	.	3.2	120	72	.	.	17	140	.	1.2	170	64	.	.	32	100
1993	MAR	.	2.5	53	98	.	6.6	60	100	.	.	14	140	.	2.4	290	60	.	.	33	87
1993	APR	.	1.8	170	65	.	6.2	48	130	.	.	11	170	.	3.0	97	72	.	.	25	100
1993	MAY	.	2.3	110	72	.	1.4	38	100	.	.	13	110	.	1.1	99	64	.	.	34	76
1993	JUN	.	2.1	.	.	.	2.1	40	82	.	.	12	91	.	5.2	46	70	.	.	29	69
1993	JUL	.	4.5	36	110	.	1.7	25	85	.	.	11	80	.	1.9	53	62	.	.	20	70
1993	AUG	.	.	16	140	.	.	6.2	190	.	.	6.5	87	.	0.93	16	76	.	.	9.7	81
1993	SEP	.	13	30	150	.	.	30	93	.	.	15	82	.	0.98	59	64	.	.	23	73
1993	OCT	.	1.7	30	210	.	2.4	34	130	.	.	27	85	.	0.89	47	85	.	.	29	95
1993	NOV	.	8.6	20	320	.	5.9	15	330	.	.	16	130	.	1.5	33	140	.	.	40	84
1993	DEC	.	11	21	370	.	0.88	17	270	.	.	15	140	.	1.0	26	140	.	.	51	81
1994	JAN	.	.	5.6	500	.	.	7.2	240	.	.	9.5	150	.	1.5	48	67	.	.	35	83
1994	FEB	.	.	22	130	.	.	30	79	.	.	15	100	.	1.1	38	67	.	.	28	90
1994	MAR	.	.	13	190	.	.	15	100	.	.	19	76	.	1.6	100	59	.	.	31	74
1994	APR	.	0.71	7.7	340	.	.	27	81	.	.	30	69	.	2.4	96	60	.	.	81	62
1994	MAY	.	0.44	10	170	.	2.1	31	66	.	.	17	71	.	4.6	38	61	.	.	52	63
1994	JUN	.	.	.	.	.	2.3	11	76	.	.	15	64	.	7.6	19	62	.	.	36	62
1994	JUL	.	1.9	39	63	.	5.6	16	65	.	.	13	62	.	4.8	36	59	.	.	32	60
1994	AUG	.	1.8	22	70	.	4.9	24	61	.	.	14	63	.	7.0	40	59	.	.	24	62
1994	SEP	.	4.0	52	60	.	4.2	11	71	.	.	7.7	75	.	2.9	13	63	.	.	26	64
1994	OCT	.	2.8	210	59	.	1.6	39	65	.	.	17	72	.	2.2	21	61	.	.	26	69
1994	NOV	.	2.6	75	66	.	8.8	92	60	.	.	23	77	.	2.4	54	60	.	.	61	65

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

Suite PCB

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1994	DEC	.	3.0	13	120	.	1.5	32	67	.	.	18	74	.	2.8	45	61	.	.	40	69
1995	JAN	.	3.1	25	420	.	4.5	14	88	.	.	14	270	.	6.4	43	80	.	.	30	97
1995	FEB	.	1.9	12	950	.	1.9	14	93	.	.	26	180	.	3.4	50	76	.	.	22	130
1995	MAR	.	2.3	31	270	.	3.9	14	90	.	.	15	200	.	7.0	26	73	.	.	13	120
1995	APR	.	1.9	21	250	.	4.1	11	94	.	.	17	210	.	11	25	82	.	.	17	120
1995	MAY	.	1.2	44	140	.	3.3	38	60	.	.	11	200	.	8.3	39	64	.	.	22	85
1995	JUN	.	0.80	34	130	.	1.6	9.1	65	.	.	9.4	140	.	3.8	23	60	.	.	11	78
1995	JUL	.	2.1	33	120	.	1.8	8.1	67	.	.	7.3	150	.	4.8	44	59	.	.	12	72
1995	AUG	.	2.2	41	93	.	2.7	4.9	74	.	.	6.3	160	.	3.2	50	59	.	.	12	69
1995	SEP	.	1.8	22	220	.	1.0	31	60	.	.	13	120	.	1.5	28	63	.	.	16	77
1995	OCT	.	1.2	43	190	.	2.2	18	70	.	.	13	230	.	2.1	65	62	.	.	29	82
1995	NOV	.	.	14	530	.	1.6	14	92	.	.	13	300	.	2.3	18	110	.	.	24	110
1995	DEC	.	5.2	18	460	.	2.3	8.7	120	.	.	14	270	.	2.5	23	100	.	.	29	100
1996	JAN	.	9.8	16	230	.	3.7	13	70	.	.	15	110	.	2.6	34	66	.	.	47	89
1996	FEB	.	0.75	9.1	370	.	1.2	9.6	74	.	.	12	130	.	1.2	10	92	.	.	24	120
1996	MAR	.	0.28	15	190	.	0.65	13	67	.	.	14	120	.	3.3	12	73	.	.	13	150
1996	APR	.	1.0	14	150	.	2.5	11	70	.	.	10	130	.	4.0	16	68	.	.	17	130
1996	MAY	.	0.58	12	130	.	.	17	61	.	.	7.8	110	.	1.9	32	60	.	.	28	77
1996	JUN	.	0.74	11	140	.	3.5	14	60	.	.	5.3	100	.	6.2	25	59	.	.	20	75
1996	JUL	.	1.7	11	150	.	0.96	18	59	.	.	3.5	120	.	.	12	61	.	.	6.7	130
1996	AUG	.	2.9	17	86	.	1.2	28	58	.	.	3.1	110	.	0.47	20	59	.	.	13	69
1996	SEP	.	5.9	8.4	160	.	2.7	22	59	.	.	3.2	120	.	4.2	23	60	.	.	18	73
1996	OCT	.	7.4	21	140	.	2.1	20	60	.	.	30	65	.	2.0	22	62	.	.	15	110
1996	NOV	.	3.4	42	95	.	0.79	23	61	.	.	12	100	.	3.5	22	65	.	.	15	130
1996	DEC	.	4.9	21	160	.	1.5	22	61	.	.	6.9	160	.	8.2	48	60	.	.	19	120
1997	JAN	.	7.6	8.6	110	.	2.4	12	62	.	.	26	73	.	1.6	25	68	.	.	18	70
1997	FEB	.	0.87	13	80	.	2.9	13	61	.	.	14	92	.	1.6	53	59	.	.	77	59
1997	MAR	.	4.4	5.7	120	.	1.4	10	63	.	.	.	.	.	1.8	48	60	.	.	28	62
1997	APR	.	1.4	11	72	.	0.63	21	59	.	.	9.9	100	.	0.78	39	59	.	.	17	64
1997	MAY	.	2.4	11	67	.	1.9	13	60	.	.	13	87	.	2.1	64	59	.	.	22	62
1997	JUN	.	2.9	34	59	.	2.1	.	.	.	.	17	63	.	9.7	38	58	.	.	21	59
1997	JUL	.	4.6	21	59	.	1.1	.	.	.	.	11	65	.	2.5	28	59	.	.	26	59
1997	AUG	.	1.4	13	60	.	0.63	.	.	.	.	8.3	72	.	1.3	43	58	.	.	15	59
1997	SEP	.	1.1	15	62	.	0.54	.	.	.	.	8.7	83	.	1.3	49	58	.	.	21	59
1997	OCT	.	5.2	31	60	.	0.86	63	58	.	.	14	78	.	1.4	77	58	.	.	21	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

Suite PCB

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1997	NOV	.	4.9	7.6	89	.	0.95	11	60	.	.	8.8	120	.	1.2	43	60	.	.	11	73
1997	DEC	.	3.1	8.5	82	.	0.67	23	59	.	.	11	110	.	0.94	44	60	.	.	20	64
1998	JAN	.	10	7.2	140	.	1.6	19	61	.	.	12	180	.	2.2	34	68	.	.	22	83
1998	FEB	.	.	19	73	.	0.72	25	60	.	.	9.5	190	.	1.2	42	62	.	.	15	89
1998	MAR	.	.	9.7	95	.	1.3	28	61	.	.	11	200	.	2.5	23	78	.	.	14	100
1998	APR	.	3.4	12	82	.	1.8	45	59	.	.	11	160	.	2.7	45	60	.	.	18	75
1998	MAY	.	5.8	14	72	.	1.3	50	58	.	.	13	96	.	1.4	28	59	.	.	19	65
1998	JUN	.	6.9	9.7	71	.	2.1	31	58	.	.	7.0	120	.	2.0	72	58	.	.	16	66
1998	JUL	.	4.8	10	65	.	2.3	34	58	.	.	5.1	120	.	1.9	46	59	.	.	10	67
1998	AUG	.	5.7	19	60	.	2.8	45	58	.	.	4.5	120	.	2.9	55	58	.	.	8.8	66
1998	SEP	.	3.3	9.6	71	.	1.2	12	59	.	.	6.5	130	.	1.2	32	59	.	.	20	62
1998	OCT	.	2.9	14	80	.	2.1	9.9	63	.	.	8.2	180	.	1.3	36	60	.	.	22	69
1998	NOV	.	2.8	11	97	.	3.5	19	61	.	.	14	140	.	.	39	61	.	.	25	72
1998	DEC	.	2.5	23	76	.	2.6	10	66	.	.	14	160	.	.	32	64	.	.	32	71
1999	JAN	.	4.3	17	80	.	3.8	15	69	.	.	15	85	.	.	46	60	.	.	39	70
1999	FEB	.	4.9	32	65	.	1.7	32	61	.	.	15	83	.	.	40	59	.	.	26	74
1999	MAR	.	1.6	18	72	.	1.0	23	64	.	.	10	110	.	3.0	56	59	.	.	21	82
1999	APR	.	.	8.8	79	.	4.7	36	60	.	.	15	78	.	2.9	38	59	.	.	16	82
1999	MAY	.	2.2	41	60	.	2.0	66	59	.	.	12	72	.	4.4	56	58	.	.	27	62
1999	JUN	.	4.4	21	61	.	2.1	63	58	.	.	8.1	64	.	3.1	52	58	.	.	29	60
1999	JUL	.	6.9	15	60	.	3.1	48	58	.	.	6.7	68	.	1.4	36	58	.	.	19	60
1999	AUG	.	6.2	15	60	.	4.1	32	59	.	.	6.6	68	.	1.8	74	58	.	.	10	64
1999	SEP	.	3.1	36	59	.	4.1	46	59	.	.	11	65	.	1.2	36	58	.	.	12	65
1999	OCT	.	6.7	69	59	.	1.8	53	59	.	.	16	72	.	1.4	41	59	.	.	25	67
1999	NOV	.	2.2	24	67	.	2.0	17	63	.	.	13	96	.	1.9	30	59	.	.	31	71
1999	DEC	.	1.4	27	65	.	2.6	31	60	.	.	15	97	.	1.2	39	59	.	.	24	77
2000	JAN	.	.	22	68	.	.	19	97	.	.	10	120	.	1.6	25	63	.	.	12	87
2000	FEB	.	.	22	67	.	.	19	99	.	.	9.4	130	.	2.0	23	62	.	.	16	76
2000	MAR	.	5.2	18	70	.	2.8	21	86	.	.	9.4	97	.	2.0	25	60	.	.	20	66
2000	APR	.	4.0	37	60	.	4.8	29	77	.	.	6.9	110	.	7.0	27	59	.	.	11	70
2000	MAY	.	5.1	22	62	.	3.9	26	67	.	.	8.7	77	.	2.1	62	58	.	.	21	61
2000	JUN	.	4.8	57	59	.	4.7	18	71	.	.	4.4	93	.	3.2	37	59	.	.	12	63
2000	JUL	.	3.4	47	59	.	5.3	17	65	.	.	3.8	77	.	2.0	28	58	.	.	6.4	64
2000	AUG	.	.	32	59	.	1.2	14	66	.	.	4.8	72	.	1.6	19	59	.	.	8.6	62
2000	SEP	.	3.7	24	60	.	2.3	27	66	.	.	10	69	.	1.7	48	58	.	.	12	63

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

Suite PCB

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2000	OCT	.	2.1	13	68	.	1.2	18	77	.	.	6.5	82	.	1.2	33	59	.	.	12	64
2000	NOV	.	2.5	8.4	88	.	1.8	12	110	.	.	7.2	93	.	2.2	30	60	.	.	12	70
2000	DEC	.	2.1	7.2	120	.	2.0	8.8	170	.	.	7.3	110	.	2.4	22	62	.	.	11	91
2001	JAN	.	1.5	9.3	82	.	1.5	6.6	87	.	.	6.6	380	.	1.4	22	60	.	.	17	89
2001	FEB	.	3.5	14	69	.	1.8	19	64	.	.	9.0	340	.	1.2	16	61	.	.	15	110
2001	MAR	.	3.5	13	65	.	1.3	8.6	81	.	.	7.0	370	.	3.7	21	60	.	.	16	94
2001	APR	.	5.0	12	65	.	.	14	68	.	.	9.0	260	.	3.0	25	59	.	.	13	90
2001	MAY	.	3.3	17	60	.	2.5	11	66	.	.	9.5	190	.	1.2	53	58	.	.	14	76
2001	JUN	.	1.3	100	58	.	1.4	12	61	.	.	8.3	130	.	0.88	37	58	.	.	10	69
2001	JUL	.	1.1	45	58	.	1.5	8.9	60	.	.	7.2	140	.	1.4	28	58	.	.	12	66
2001	AUG	.	1.3	37	58	.	1.6	8.9	61	.	.	4.8	190	.	1.8	28	58	.	.	9.5	65
2001	SEP	.	1.3	28	59	.	1.3	7.4	67	.	.	5.2	250	.	1.5	16	59	.	.	5.8	91
2001	OCT	.	2.5	66	59	.	1.6	24	61	.	.	17	140	.	1.8	43	59	.	.	15	78
2001	NOV	.	2.1	16	64	.	0.89	10	72	.	.	12	200	.	1.2	32	59	.	.	20	71
2001	DEC	.	1.6	12	73	.	0.88	7.8	79	.	.	8.2	290	.	1.3	13	62	.	.	14	99
2002	JAN	.	1.1	11	69	.	0.99	12	67	.	.	7.6	100	.	0.95	34	60	.	.	17	84
2002	FEB	.	1.3	24	62	.	1.3	20	63	.	.	14	79	.	1.8	43	60	.	.	21	76
2002	MAR	.	3.2	13	68	.	.	8.7	76	.	.	9.2	95	.	1.4	19	60	.	7.6	17	84
2002	APR	.	2.6	15	60	.	1.3	21	61	.	8.9	13	74	.	2.7	35	59	.	9.2	16	73
2002	MAY	.	2.0	8.4	68	.	1.6	15	62	.	7.1	12	72	.	2.9	31	59	.	7.3	14	76
2002	JUN	.	1.8	42	59	.	1.9	19	59	.	10	7.5	67	.	1.6	21	59	.	4.9	7.5	72
2002	JUL	.	.	28	58	.	4.1	17	59	.	7.8	6.6	64	.	2.4	23	58	.	6.9	13	61
2002	AUG	.	1.3	32	58	.	2.1	7.5	60	.	4.3	3.9	74	.	1.0	23	58	.	4.3	7.6	65
2002	SEP	.	1.2	11	61	.	0.90	9.4	61	.	1.5	5.6	70	.	2.2	22	59	.	10	4.8	82
2002	OCT	.	1.0	14	62	.	2.4	7.5	69	.	2.3	6.4	86	.	1.1	16	60	.	6.4	6.8	98
2002	NOV	.	0.62	16	63	.	1.1	6.5	82	.	3.2	12	74	.	6.7	30	60	.	13	20	70
2002	DEC	.	.	7.7	79	.	1.2	8.8	75	.	1.9	6.2	120	.	4.5	13	66	.	13	12	100
2003	JAN	.	1.6	7.2	100	.	0.83	6.5	100	.	1.2	8.5	130	.	1.7	13	100	.	9.2	5.9	150
2003	FEB	.	1.7	10	77	.	1.3	13	73	.	3.2	11	110	.	1.8	16	78	.	20	10	95
2003	MAR	.	0.93	11	70	.	1.5	10	78	.	5.1	11	98	.	1.5	17	71	.	8.5	14	73
2003	APR	.	1.2	11	71	.	2.4	20	64	.	0.34	13	89	.	2.6	22	62	.	1.2	19	67
2003	MAY	.	0.80	8.5	67	.	.	20	61	.	3.1	8.6	90	.	1.4	54	59	.	2.9	14	66
2003	JUN	.	0.71	13	60	.	1.3	11	61	.	2.6	11	69	.	1.5	46	59	.	2.7	21	60
2003	JUL	.	1.1	14	60	.	2.1	10	61	.	0.63	5.8	79	.	1.7	52	58	.	4.0	13	60
2003	AUG	.	1.3	13	59	.	1.9	8.8	60	.	1.5	6.7	69	.	0.93	55	58	.	2.4	9.4	60

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

Suite PCB

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2003	SEP	.	1.3	11	62	.	1.4	10	63	.	1.7	7.0	80	.	2.5	51	59	.	3.4	9.6	64
2003	OCT	.	0.99	8.3	69	.	1.2	8.2	69	.	0.82	7.7	95	.	0.97	35	60	.	1.5	17	63
2003	NOV	.	1.6	12	69	.	2.0	11	72	.	3.1	12	90	.	1.5	52	60	.	2.8	22	64
2003	DEC	.	0.84	6.0	87	.	1.2	5.8	110	.	8.6	8.2	110	.	1.5	32	65	.	3.8	30	62
2004	JAN	.	1.4	9.7	70	.	1.5	6.0	130	.	6.9	6.9	160	.	3.5	38	60	.	7.8	8.6	210
2004	FEB	.	1.8	9.8	66	.	1.3	7.8	93	.	0.72	7.7	130	.	0.93	9.1	71	.	1.7	13	130
2004	MAR	.	1.7	10	64	.	2.6	14	77	.	0.67	8.9	110	.	2.3	14	61	.	6.8	17	98
2004	APR	.	1.7	5.0	68	.	1.3	8.7	90	.	0.47	7.6	120	.	1.7	8	67	.	1.7	18	87
2004	MAY	.	3.1	6.3	65	.	3.4	11	71	.	0.81	6.4	110	.	2.9	41	58	.	1.6	13	85
2004	JUN	.	1.3	21	59	.	3.5	9.7	65	.	2.5	8.0	78	.	0.82	25	59	.	2.0	15	68
2004	JUL	.	2.1	13	59	.	2.2	3.5	77	.	1.9	4.1	86	.	0.50	.	.	.	4.4	9.1	74
2004	AUG	.	1.8	2.8	73	.	2.3	6.1	71	.	2.8	6.4	77	.	3.4	11	59	.	3.0	8.4	74
2004	SEP	.	2.3	6.8	63	.	1.6	8.9	64	.	0.69	7.0	75	.	14	.	.	.	24	18	63
2004	OCT	.	1.4	13	61	.	0.99	7.5	83	.	1.8	9.0	90	.	1.6	17	60	.	2.8	17	77
2004	NOV	.	0.93	8.3	69	.	4.9	4.8	120	.	2.0	7.8	110	.	7.5	19	60	.	3.8	8.8	140
2004	DEC	.	1.1	9.5	70	.	1.7	8.8	95	.	3.7	11	110	.	4.6	34	60	.	.	9.1	180
2005	JAN	.	3.5	11	93	.	3.4	8.2	83	.	2.4	8.0	110	.	3.0	21	61	.	.	7.6	96
2005	FEB	.	2.7	8.5	100	.	2.7	9.8	74	.	.	9.9	88	.	3.4	21	61	.	.	18	65
2005	MAR	.	1.2	6.1	120	.	2.5	5.1	110	.	.	6.5	110	.	1.6	35	59	.	.	12	76
2005	APR	.	4.2	12	72	.	2.5	13	66	.	.	13	74	.	2.1	43	59	.	.	13	68
2005	MAY	.	1.5	20	63	.	2.3	9.7	67	.	.	9.8	72	.	2.7	66	58	.	.	14	61
2005	JUN	.	1.9	17	63	.	2.6	11	61	.	.	4.6	78	.	1.7	53	58	.	.	12	60
2005	JUL	.	5.6	15	61	.	1.4	6.8	62	.	.	3.2	81	.	1.6	48	58	.	.	11	60
2005	AUG	.	2.3	11	62	.	1.6	6.8	62	.	.	3.8	77	.	1.1	54	58	.	.	11	60
2005	SEP	.	1.3	14	62	.	1.1	6.1	65	.	.	5.6	78	.	1.2	73	58	.	.	19	59
2005	OCT	.	0.81	11	68	.	3.2	10	63	.	.	8.2	77	.	1.8	52	58	.	.	13	64
2005	NOV	.	1.2	10	87	.	1.0	7.6	84	.	.	9.2	100	.	.	28	60	.	.	14	69
2005	DEC	.	2.3	7.0	110	.	2.9	9.0	77	.	.	14	77	.	2.4	45	59	.	.	11	79

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*a*]pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	0.94	4.7	.	.	.	4.5	.	.	7.3	.	.	.	4.3	14	.	.	53	0	.	.
1992	FEB	3.2	4.6	.	.	4.3	2.3	.	.	7.0	.	.	.	22	18	.	.	18	0	.	.
1992	MAR	.	2.8	0	.	.	2.7	0.85	750	8.8	.	.	.	.	19	0.98	1700	4.4	0	.	.
1992	APR	1.1	3.9	0	.	1.9	5.1	1.0	650	5.2	.	.	.	7.6	21	0.91	1400	5.7	0	.	.
1992	MAY	.	7.1	0	.	3.3	7.0	0	.	7.3	.	.	.	5.8	9.3	6.4	.	3.9	0	.	.
1992	JUN	0	6.2	0	.	.	14	0	.	3.3	.	.	.	4.2	15	0	.	4.2	0	.	.
1992	JUL	0	3.6	0	.	3.1	12	0	.	1.6	0	.	.	2.4	19	4.3	170	3.5	0	.	.
1992	AUG	.	8.3	0	.	.	13	0	.	4.8	.	.	.	.	11	0	.	3.5	0	.	.
1992	SEP	1.8	7.2	0	.	5.1	11	0	.	3.5	0	.	.	4.5	13	0	.	2.3	0	.	.
1992	OCT	1.8	6.3	0	.	2.8	4.6	4.0	220	0.90	0	.	.	8.3	16	6.1	140	4.2	0	.	.
1992	NOV	0.65	.	0	.	4.6	14	0	.	1.9	0	.	.	5.3	21	0	.	4.4	0	.	.
1992	DEC	.	.	0	.	.	.	0	.	3.0	0	.	.	.	25	2.4	350	34	0	.	.
1993	JAN	1.1	.	0	.	2.9	.	0	.	6.0	35	.	.	16	23	0	.	5.4	19	.	.
1993	FEB	.	3.1	0	.	3.0	2.1	0	.	3.3	0	.	.	5.2	15	0	.	51	0	.	.
1993	MAR	0.85	0	0	.	5.4	0	0	.	3.3	0	.	.	8.6	.	0	.	29	0	.	.
1993	APR	.	0.84	0	.	.	18	0	.	15	0	.	.	.	.	0	.	0	0	.	.
1993	MAY	.	2.1	0	.	0	7.7	0	.	8.0	0	.	.	0.89	5.3	0	.	2.4	0	.	.
1993	JUN	.	2.3	0	.	0.83	6.6	0	.	3.3	0.27	.	.	1.2	11	0	.	1.2	0.94	.	.
1993	JUL	.	.	0	.	0	1.3	.	.	8.3	3.8	.	.	5.9	4.9	0	.	3.9	2.0	.	.
1993	AUG	0.50	0	0	.	1.1	0	0	.	0.46	0	.	.	2.3	3.6	0	.	1.3	0	.	.
1993	SEP	.	0	0	.	0.42	.	0	.	0.65	0	.	.	3.5	11	0	.	2.7	.	.	.
1993	OCT	.	0	.	.	0	5.2	0	.	3.3	4.0	.	.	10	9.5	0	.	3.3	0	.	.
1993	NOV	.	0	0	.	.	0.55	0	.	4.1	14	.	.	4.7	18	0	.	4.8	0	.	.
1993	DEC	.	1.3	0	.	0	2.4	0	.	5.1	0	.	.	11	11	0	.	12	.	.	.
1994	JAN	.	.	0	.	4.2	.	0	.	3.7	0	.	.	8.9	16	0	.	18	0	.	.
1994	FEB	1.9	.	0	.	.	.	0	.	1.9	0	.	.	13	14	0	.	7.2	0	.	.
1994	MAR	2.2	.	.	.	4.3	0.77	.	.	1.4	0	.	.	19	18	.	.	8.4	0	.	.
1994	APR	0.63	1.9	0	.	1.9	2.4	0	.	1.0	0	.	.	4.8	22	0	.	7.2	0	.	.
1994	MAY	2.1	0.61	0	.	3.1	1.1	0	.	0.68	0	.	.	5.8	3.8	0	.	9.0	.	.	.
1994	JUN	0.72	0	.	.	1.4	.	0	.	3.2	0	.	.	2.7	0	0	.	2.9	0	.	.
1994	JUL	0.88	0	0	.	3.8	0	0	.	1.5	0	.	.	3.7	0	0	.	4.9	3.2	.	.
1994	AUG	0.37	2.6	0	.	1.6	4.2	0	.	2.5	0	.	.	9.6	1.5	0	.	3.0	0	.	.
1994	SEP	0.66	0	0	.	0.27	.	0	.	6.4	0	.	.	13	9.1	0	.	3.6	0	.	.
1994	OCT	1.2	0	0	.	2.8	.	0	.	0.74	0	.	.	14	5.3	0	.	3.0	0	.	.
1994	NOV	1.2	0.76	0	.	4.1	11	0	.	2.7	.	.	.	17	6.0	0	.	4.0	0	.	.
1994	DEC	0.64	1.4	0	.	4.4	3.0	0	.	3.6	0	.	.	53	12	14	78	27	0	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	0.44	3.1	10	75	1.8	9.7	0	.	0.63	.	.	.	8.8	33	2.4	240	3.5	.	.	.
1995	FEB	0	2.1	0	.	2.0	3.6	0	.	4.0	.	.	.	27	15	0	.	10	0	.	.
1995	MAR	0	1.4	0	.	1.7	6.2	0	.	4.7	.	.	.	12	22	5.4	86	8.2	0	.	.
1995	APR	0.42	1.7	0	.	0.91	8.2	0	.	0.64	0	.	.	11	22	0	.	1.9	0	.	.
1995	MAY	0	1.9	0	.	4.5	7.3	0	.	1.4	0	.	.	6.7	12	3.1	140	1.9	0	.	.
1995	JUN	0.6	0.52	0	.	1.3	1.8	0	.	2.0	0	.	.	9.0	3.7	0	.	1.4	.	.	.
1995	JUL	1.0	0.26	0	.	1.3	2.1	0	.	1.8	0	.	.	4.3	9.3	0	.	5.2	0	.	.
1995	AUG	0.82	0.40	0	.	1.1	0.72	0	.	1.3	0	.	.	5.4	5.7	0	.	1.6	0	.	.
1995	SEP	0.59	3.2	12	66	1.5	3.3	0	.	2.4	0	.	.	11	7.6	0	.	3.9	0	.	.
1995	OCT	0.20	6.3	0	.	1.6	14	0.44	6800	1.7	0	.	.	12	11	0	.	4.2	0	.	.
1995	NOV	0.57	.	0	.	.	5.8	0	.	1.5	11	.	.	11	20	0	.	1.2	24	.	.
1995	DEC	.	12	0	.	1.6	6.1	1.5	1900	.	13	.	.	15	17	0	.	13	16	.	.
1996	JAN	0.48	0	0	.	5.2	9.5	3.8	150	4.4	0	.	.	14	14	0	.	19	.	.	.
1996	FEB	0.98	0.34	0	.	1.3	3.7	.	.	6.7	0	.	.	15	7.5	0	.	14	5.5	.	.
1996	MAR	2.4	0.25	0	.	4.5	2.5	2.7	170	4.1	0	.	.	63	5.7	0	.	5.7	19	.	.
1996	APR	0.64	1.1	0	.	1.2	5.9	0	.	2.2	0	.	.	11	18	0	.	2.8	2.4	.	.
1996	MAY	0.69	1.3	0	.	1.7	.	0	.	4.2	0	.	.	2.6	7.5	0	.	1.9	3.5	.	.
1996	JUN	0.50	0.73	0	.	0.72	5.4	0	.	3.3	0	.	.	5.3	5.6	0	.	2.2	0.94	.	.
1996	JUL	0.81	1.7	0.27	1000	0.68	2.3	0.45	750	4.7	3.8	.	.	9.6	.	0.31	1000	1.2	2.7	.	.
1996	AUG	0.39	1.6	0	.	0.56	2.6	0	.	3.8	.	.	.	3.9	1.2	0	.	7.0	0	.	.
1996	SEP	1.3	1.6	0	.	1.1	.	0	.	0.59	0	.	.	4.2	3.7	0	.	3.0	0.73	.	.
1996	OCT	2.5	1.7	0	.	2.8	0.064	0.56	920	4.3	0	.	.	6.0	0.31	0	.	32	6.0	.	.
1996	NOV	2.1	2.3	0	.	1.7	0.32	0	.	11	0	.	.	7.2	1.6	0.69	600	11	22	.	.
1996	DEC	0.75	4.4	0	.	1.2	4.2	0	.	3.1	6.4	.	.	11	9.0	1.3	320	32	19	.	.
1997	JAN	1.4	6.7	0	.	2.0	7.6	1.7	230	4.8	3.1	.	.	5.5	6.6	0.30	1800	3.9	13	.	.
1997	FEB	0.81	1.1	0	.	0.97	8.4	2.6	140	2.0	4.3	.	.	17	12	0	.	7.7	0	.	.
1997	MAR	0.33	2.7	0	.	1.3	6.2	0	.	4.8	6.5	.	.	7.2	27	0.92	420	8.2	18	.	.
1997	APR	1.1	0.71	0	.	2.0	2.9	2.8	130	8.2	0	.	.	11	14	0	.	4.5	4.8	.	.
1997	MAY	1.7	2.4	0	.	2.6	6.8	0	.	1.7	.	.	.	14	22	0	.	3.1	0	.	.
1997	JUN	1.7	1.3	0	.	0.51	9.1	0	.	11	0	.	.	6.1	11	0	.	6.4	0	.	.
1997	JUL	0.55	2.4	0	.	0.35	3.6	0	.	1.2	22	.	.	2.8	7.2	0	.	8.9	0	.	.
1997	AUG	2.7	0.14	0	.	1.9	1.4	0	.	1.6	28	.	.	5.3	8.2	0	.	14	1.6	.	.
1997	SEP	0.68	0.54	0	.	2.8	3.4	1.2	300	1.7	10	.	.	14	15	0	.	4.5	0	.	.
1997	OCT	1.5	3.3	0.70	560	4.5	4.1	0.57	670	4.0	.	.	.	23	8.6	0	.	5.2	5.4	.	.
1997	NOV	1.6	3.0	0	.	7.2	5.4	0	.	3.2	2.6	.	.	15	12	0	.	6.3	31	.	.
1997	DEC	0.36	1.7	0	.	2.9	2.2	0	.	2.6	0.088	.	.	11	8.2	0	.	16	6.2	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*a*]pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	0.95	4.2	0	.	1.7	10	0.46	710	9.9	0.50	.	.	13	15	0	.	7.4	18	.	.
1998	FEB	3.8	.	0	.	5.3	3.4	3.9	95	5.5	5.3	.	.	31	7.4	0.66	470	20	.	.	.
1998	MAR	1.3	.	0.24	1400	2.3	4.7	0.72	540	3.8	9.4	.	.	11	17	0	.	6.1	12	.	.
1998	APR	0.51	0.19	0	.	3.4	3.5	0	.	2.3	5.7	.	.	7.8	14	0	.	8.8	4.8	.	.
1998	MAY	0	0.77	0	.	0.34	2.2	0	.	1.1	2.9	.	.	15	4.4	0	.	5.2	0.75	.	.
1998	JUN	0.38	1.9	0	.	0	3.8	0	.	2.6	0	.	.	3.5	5.0	0	.	3.4	0	.	.
1998	JUL	0	0	0	.	0	0	0	.	0	.	.	.	5.2	5.7	0	.	2.3	.	.	.
1998	AUG	3.6	.	0	.	1.5	.	0	.	0.24	.	.	.	4.7	.	0	.	3.1	.	.	.
1998	SEP	0	.	0	.	0.83	.	0	.	1.3	0	.	.	5.3	.	0	.	4.9	2.5	.	.
1998	OCT	0.47	6.6	0	.	10	3.6	0	.	0.92	0	.	.	12	3.8	1.2	310	24	0	.	.
1998	NOV	0	8.3	0	.	2.2	4.8	0	.	2.7	0	.	.	8.4	.	0	.	6.1	2.4	.	.
1998	DEC	0.87	3.9	0	.	1.7	4.7	0	.	3.4	6.2	.	.	10	.	2.5	150	7.8	5.5	.	.
1999	JAN	1.5	5.5	0	.	1.6	12	0	.	1.8	7.1	.	.	14	.	7.6	92	17	2.5	.	.
1999	FEB	1.8	3.5	0	.	4.1	4.8	0	.	4.8	3.3	.	.	21	.	5.0	110	39	1.5	.	.
1999	MAR	1.8	1.2	0	.	8.8	1.7	0	.	4.6	2.5	.	.	34	16	5.2	92	9.4	5.5	.	.
1999	APR	2.4	.	0	.	3.7	7.8	0	.	2.4	3.5	.	.	7.6	13	4.2	110	4.0	.	.	.
1999	MAY	2.2	2.9	0	.	2.3	3.7	0	.	1.1	2.5	.	.	28	6.0	0	.	2.8	4.0	.	.
1999	JUN	0	1.1	0	.	3.1	2.7	0	.	1.9	.	.	.	5.7	5.3	3.3	110	2.5	2.2	.	.
1999	JUL	0	0	0	.	0	1.2	0	.	5.8	0	.	.	3.4	2.9	0	.	6.0	0	.	.
1999	AUG	0	0	0	.	0.63	2.5	0	.	0.64	0	.	.	6.0	7.4	8.1	74	2.0	0	.	.
1999	SEP	0.95	0.81	0	.	1.7	3.2	0	.	1.8	0	.	.	4.5	4.4	0	.	1.8	1.2	.	.
1999	OCT	1.3	2.7	0	.	3.8	1.8	0	.	1.5	0	.	.	13	4.7	0	.	3.7	5.4	.	.
1999	NOV	1.3	0.57	0	.	1.1	2.3	0	.	0.51	4.5	.	.	3.3	5.3	0	.	1.4	4.7	.	.
1999	DEC	2.6	1.3	0	.	14	6.6	0	.	8.6	10	.	.	14	3.9	3.8	140	11	.	.	.
2000	JAN	0	.	0	.	1.2	.	0	.	2.2	3.0	.	.	4.4	3.8	0	.	7.4	.	.	.
2000	FEB	2.1	.	0	.	7.7	.	0	.	3.9	1.7	.	.	5.9	13	0	.	11	8.8	.	.
2000	MAR	0.45	1.4	0	.	4.4	6.3	0	.	2.6	.	.	.	6.6	13	0	.	4.0	13	.	.
2000	APR	0.78	1.6	0	.	3.2	4.1	0	.	1.9	.	.	.	8.1	31	0	.	3.8	5.7	.	.
2000	MAY	0.79	0.17	0	.	1.8	2.5	0	.	1.6	6.6	.	.	7.0	5.3	0	.	3.3	.	.	.
2000	JUN	0	2.8	0	.	0.87	2.8	0	.	5.9	3.5	.	.	5.8	15	6.3	64	1.6	3.7	.	.
2000	JUL	0	0	0	.	0.57	1.9	0	.	1.4	0	.	.	4.3	2.8	3.6	69	1.2	0	.	.
2000	AUG	0.65	.	0	.	1.2	2.9	0.16	1000	2.9	0	.	.	3.1	4.2	0	.	1.0	0	.	.
2000	SEP	0	0	0	.	4.4	4.1	0	.	2.8	0	.	.	3.2	7.3	0	.	1.1	.	.	.
2000	OCT	0	0.94	0	.	1.4	1.9	0	.	1.0	0	.	.	12	6.2	2.4	92	2.6	.	.	.
2000	NOV	0.53	4.0	0	.	1.3	6.9	0	.	2.4	6.7	.	.	8.2	15	0	.	9.3	.	.	.
2000	DEC	1.2	4.8	0	.	2.7	6.4	0	.	4.9	.	.	.	2.7	13	32	59	18	17	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*a*]pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	0.43	4.0	0	.	3.9	2.9	0	.	5.7	0	.	.	3.6	7.2	4.3	76	9.2	.	.	.
2001	FEB	2.5	5.0	0	.	12	3.3	0	.	3.6	4.0	.	.	20	1.8	0	.	12	0	.	.
2001	MAR	0.70	0.34	0	.	1.8	1.9	0	.	2.1	.	.	.	32	14	1.7	120	9.5	6.0	.	.
2001	APR	0.35	2.9	0	.	4.0	.	0	.	3.2	1.8	.	.	8.0	4.7	0	.	7.2	4.1	.	.
2001	MAY	0.59	1.6	0	.	1.4	6.5	0	.	2.6	0.032	.	.	12	5.9	1.2	140	4.4	0.091	.	.
2001	JUN	0.59	1.6	0	.	1.0	3.7	0	.	0.61	0	.	.	3.1	6.1	2.8	78	0.60	0	.	.
2001	JUL	0.80	2.3	0	.	1.7	1.8	0	.	1.4	0.41	.	.	3.3	6.3	0	.	1.7	0	.	.
2001	AUG	0	1.8	0	.	0	3.6	0	.	1.3	2.3	.	.	4.8	8.7	1.8	110	1.7	6.1	.	.
2001	SEP	0.37	0.48	0	.	0.39	3.2	0	.	0.71	5.3	.	.	7.9	9.7	7.7	63	1.6	8.7	.	.
2001	OCT	0	2.4	0	.	1.8	6.4	0	.	1.4	6.4	.	.	11	16	0	.	7.1	11	.	.
2001	NOV	0.57	2.5	0	.	0	3.5	0	.	4.6	5.0	.	.	5.2	7.4	0	.	5.7	7.8	.	.
2001	DEC	2.7	3.1	0	.	2.7	3.4	0	.	8.4	6.6	.	.	7.6	13	1.6	140	6.6	11	.	.
2002	JAN	0.45	2.2	0	.	3.8	2.9	0	.	3.4	2.9	.	.	11	10	6.4	81	9.5	9.4	.	.
2002	FEB	0	1.6	0	.	3.3	5.8	0	.	6.6	8.6	.	.	17	28	6.3	84	12	7.0	.	.
2002	MAR	0.82	2.2	0	.	2.0	.	0	.	1.7	.	.	.	2.5	21	1.8	150	6.4	16	.	.
2002	APR	0.67	2.3	0	.	2.3	7.7	0	.	1.8	4.4	.	.	5.5	9.6	0	.	4.6	13	.	.
2002	MAY	0.61	1.2	0	.	5.5	4.6	0	.	3.2	3.8	.	.	5.0	7.6	0	.	2.7	7.8	.	.
2002	JUN	1.1	1.5	0	.	7.8	1.4	0	.	2.0	1.6	.	.	3.6	3.7	0	.	1.3	3.9	.	.
2002	JUL	0.39	.	0	.	2.0	2.0	0	.	0.97	1.4	.	.	2.7	6.2	0	.	2.4	3.7	.	.
2002	AUG	0	0	0	.	0	5.3	0	.	0.71	1.3	.	.	3.5	3.5	0	.	1.8	2.7	.	.
2002	SEP	0	0.91	0	.	0	3.0	0	.	5.0	.	.	.	1.9	5.9	0	.	0.74	4.5	.	.
2002	OCT	0.44	2.5	0	.	1.0	7.3	0	.	1.1	.	.	.	3.2	9.8	1.2	260	12	4.0	.	.
2002	NOV	0	1.0	0	.	0	2.1	0	.	1.5	2.7	.	.	1.5	23	0	.	1.7	11	.	.
2002	DEC	0.39	.	0	.	3.8	2.3	2.1	170	2.2	3.3	.	.	4.2	19	1.1	290	13	13	.	.
2003	JAN	0	3.4	0	.	2.0	3.3	0	.	1.8	1.6	.	.	2.1	14	0	.	8.4	19	.	.
2003	FEB	0.37	3.1	0	.	3.6	2.4	0	.	6.8	3.0	.	.	6.9	12	0	.	15	27	.	.
2003	MAR	2.0	1.9	0	.	2.7	6.5	0	.	2.8	7.0	.	.	4.5	14	2.2	120	6.7	9.2	.	.
2003	APR	0.45	2.1	0	.	3.4	6.3	0	.	3.7	5.7	.	.	7.0	18	1.2	180	12	4.0	.	.
2003	MAY	0	2.1	0	.	2.1	.	0	.	0.80	2.4	.	.	5.3	11	0	.	2.3	6.3	.	.
2003	JUN	0.56	1.5	0	.	0.81	1.2	0	.	1.1	.	.	.	3.3	5.9	0	.	4.1	0.95	.	.
2003	JUL	0	0.45	0	.	0	2.1	0	.	1.8	0.30	.	.	2.0	5.1	0	.	1.9	0.94	.	.
2003	AUG	0	1.8	0	.	0.98	1.8	0	.	3.3	0.38	.	.	3.7	3.0	0	.	1.2	2.2	.	.
2003	SEP	1.2	1.9	0	.	1.7	2.4	0	.	2.5	1.1	.	.	2.7	19	0	.	3.9	3.9	.	.
2003	OCT	0.97	1.2	0	.	0	2.2	0	.	1.3	1.2	.	.	4.7	7.8	2.3	140	3.9	2.3	.	.
2003	NOV	1.8	1.6	0	.	1.8	6.4	0	.	2.5	7.3	.	.	4.4	7.5	3.1	110	4.6	3.0	.	.
2003	DEC	0	2.0	0	.	0	2.3	0	.	2.0	5.8	.	.	3.0	9.0	0	.	11	3.3	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*a*]pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	0	5.0	0	.	1.5	4.1	0	.	1.9	6.5	.	.	2.4	19	3.1	63	7.9	5.7	.	.
2004	FEB	0	4.4	0	.	0.75	4.4	0	.	2.0	1.9	.	.	.	4.2	0	.	4.1	2.5	.	.
2004	MAR	2.0	2.1	0	.	1.4	7.9	0	.	2.4	1.6	.	.	6.0	28	0	.	14	0.28	.	.
2004	APR	0.94	2.1	0	.	0	3.9	0	.	6.3	1.2	.	.	3.8	3.5	0	.	2.3	5.9	.	.
2004	MAY	0	1.4	0	.	2.5	6.2	0	.	1.9	1.0	.	.	2.0	9.8	0	.	1.2	5.3	.	.
2004	JUN	0	0.36	0	.	3.5	2.2	0	.	2.1	1.2	.	.	2.8	0.71	0	.	3.7	3.1	.	.
2004	JUL	0.54	1.4	0	.	0.81	2.5	0	.	0.80	0	.	.	3.6	0	0	.	0.92	4.0	.	.
2004	AUG	0	0.028	0	.	1.0	2.2	0	.	5.7	0.063	.	.	3.7	3.3	0	.	2.0	2.6	.	.
2004	SEP	0	0	0	.	2.7	3.2	0	.	1.7	0.60	.	.	6.4	0.15	0	.	3.8	3.8	.	.
2004	OCT	0.71	1.5	0	.	1.7	4.3	0	.	0.83	1.7	.	.	4.6	4.9	0	.	3.8	2.8	.	.
2004	NOV	1.1	1.9	0	.	1.9	27	0	.	2.9	3.4	.	.	5.1	0.24	0	.	7.1	0.44	.	.
2004	DEC	0.42	6.2	0	.	1.8	6.1	2.0	68	3.0	5.7	.	.	7.9	13	2.4	66	8.3	6.3	.	.
2005	JAN	1.0	5.0	0	.	3.5	4.2	0	.	1.8	2.6	.	.	4.2	3.2	0	.	14	8.3	.	.
2005	FEB	0.39	2.5	0.090	780	1.8	5.1	0.16	380	3.0	1.6	.	.	7.4	0.054	0.59	120	9.1	4.0	.	.
2005	MAR	0.59	3.8	0.13	510	5.0	21	0.20	310	4.2	1.7	.	.	9.4	8.8	1.5	73	15	9.1	.	.
2005	APR	1.7	4.7	0.28	220	18	10	0.15	380	6.2	10	.	.	26	20	1.3	75	5.3	5.3	.	.
2005	MAY	1.7	1.6	0	.	4.6	3.5	0	.	3.2	3.0	.	.	10	5.9	3.7	60	3.8	4.4	.	.
2005	JUN	0.84	0.90	0	.	8.5	2.7	0	.	2.5	4.3	.	.	1.4	2.8	0	.	1.2	4.6	.	.
2005	JUL	0	0.099	0	.	0.79	1.6	0	.	5.0	.	.	.	1.1	7.7	0	.	1.8	4.9	.	.
2005	AUG	0.63	0	0	.	2.2	2.0	0	.	1.1	1.4	.	.	3.5	3.4	0	.	1.4	4.7	.	.
2005	SEP	0	0.90	0	.	1.3	5.4	0	.	4.4	.	.	.	4.3	5.6	0	.	3.0	.	.	.
2005	OCT	0	0.012	0	.	1.6	6.2	0	.	2.1	1.3	.	.	4.7	3.5	0	.	3.2	.	.	.
2005	NOV	0.39	1.4	0	.	0.46	7.4	0	.	4.2	1.8	.	.	5.5	2.6	2.0	73	4.9	7.3	.	.
2005	DEC	0.67	6.6	0	.	5.1	13	0	.	2.9	3.8	.	.	26	39	0	.	17	7.1	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*b*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	4.8	6.8	.	.	.	9.0	.	.	21	.	.	.	30	30	.	.	230	0	.	.
1992	FEB	9.6	9.1	.	.	16	7.0	.	.	11	.	.	.	150	43	.	.	57	0	.	.
1992	MAR	.	5.2	4.0	120	.	7.1	2.4	420	12	.	.	.	.	42	5.1	310	12	0	.	.
1992	APR	2.2	4.3	3.1	130	3.6	6.0	0	.	9.6	.	.	.	34	36	3.7	330	21	0	.	.
1992	MAY	.	7.0	0	.	6.3	8.3	5.4	.	9.7	.	.	.	26	15	7.4	.	13	0	.	.
1992	JUN	2.6	5.6	8.6	69	.	15	8.5	69	4.8	.	.	.	17	21	9.3	67	8.6	0	.	.
1992	JUL	6.4	3.1	0	.	4.2	14	5.1	85	3.4	0	.	.	8.1	32	21	61	12	0	.	.
1992	AUG	.	8.1	5.7	84	.	13	4.8	97	7.4	.	.	.	.	17	6.1	81	5.6	0	.	.
1992	SEP	5.4	8.1	0	.	14	13	0	.	6.0	0	.	.	35	17	55	59	5.7	0	.	.
1992	OCT	3.5	5.2	0	.	6.8	5.4	3.3	150	1.4	0	.	.	29	28	5.1	99	8.8	5.4	.	.
1992	NOV	4.0	.	7.1	89	15	38	0	.	3.9	0	.	.	33	51	8.0	82	15	16	.	.
1992	DEC	.	.	0	.	.	.	0	.	11	0	.	.	.	57	12	68	120	0	.	.
1993	JAN	4.7	.	0	.	11	.	0	.	11	62	.	.	57	45	0	.	15	180	.	.
1993	FEB	.	3.4	0	.	11	0	0	.	9.2	0	.	.	34	25	0	.	200	3.5	.	.
1993	MAR	1.8	1.6	0	.	20	0.96	0	.	9.8	0	.	.	42	.	11	69	170	0	.	.
1993	APR	.	3.4	0	.	.	34	0	.	23	0	.	.	.	.	0	.	0	23	.	.
1993	MAY	2.1	4.1	0	.	1.5	15	0	.	8.9	0	.	.	2.2	9.7	0	.	4.1	0	.	.
1993	JUN	.	5.1	0	.	1.9	13	0	.	4.8	0.81	.	.	3.7	23	0	.	3.3	2.4	.	.
1993	JUL	.	.	0	.	0	6.0	.	.	12	7.5	.	.	19	9.5	0	.	6.0	2.6	.	.
1993	AUG	1.2	0	0	.	2.3	0.36	0	.	1.1	0	.	.	10	10	0	.	2.7	0	.	.
1993	SEP	1.6	0	0	.	2.0	.	0	.	1.5	0	.	.	21	25	0	.	5.5	.	.	.
1993	OCT	1.7	0	.	.	4.0	12	0	.	5.6	0	.	.	46	20	8.8	77	4.7	43	.	.
1993	NOV	.	0	0	.	.	4.3	0	.	7.1	13	.	.	44	35	0	.	13	0	.	.
1993	DEC	4.3	3.6	0	.	7.4	6.9	0	.	13	0	.	.	61	24	0	.	29	.	.	.
1994	JAN	6.9	.	0	.	15	.	0	.	7.9	0	.	.	38	36	0	.	40	0	.	.
1994	FEB	8.5	.	0	.	.	.	0	.	9.2	0	.	.	46	29	0	.	25	0	.	.
1994	MAR	10	.	.	.	14	4.5	.	.	3.3	0	.	.	66	39	.	.	34	4.8	.	.
1994	APR	1.4	4.0	0	.	5.4	8.3	0	.	3.1	0	.	.	17	45	0	.	17	34	.	.
1994	MAY	5.1	1.3	0	.	7.7	2.3	4.6	88	1.4	0	.	.	22	7.3	0	.	20	.	.	.
1994	JUN	1.5	0	.	.	3.3	.	0	.	5.0	0	.	.	5.4	0	0	.	4.5	0	.	.
1994	JUL	2.4	0	0	.	8.5	0	0	.	2.6	0	.	.	10	0	0	.	7.4	8.7	.	.
1994	AUG	1.6	3.4	0	.	6.5	11	0	.	5.8	0	.	.	30	2.8	0	.	6.3	0	.	.
1994	SEP	2.6	1.3	0	.	1.3	.	0	.	10	0	.	.	38	20	0	.	14	0	.	.
1994	OCT	3.2	0	0	.	8.1	.	0	.	2.0	0	.	.	44	11	0	.	5.7	1.6	.	.
1994	NOV	6.8	2.4	0	.	13	33	0	.	4.3	.	.	.	53	18	19	62	8.0	14	.	.
1994	DEC	2.1	4.4	0	.	18	6.5	0	.	8.4	0	.	.	170	23	56	59	78	5.2	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*b*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	10	10	1.6	430	12	27	0	.	2.7	.	.	.	57	70	13	79	7.8	.	.	.
1995	FEB	2.7	7.5	0	.	13	11	1.4	350	8.2	.	.	.	140	39	0	.	50	4.3	.	.
1995	MAR	0	3.6	0.66	810	4.7	17	0.56	810	7.6	.	.	.	44	54	17	64	15	1.2	.	.
1995	APR	1.2	3.3	0	.	3.0	21	0	.	1.7	2.3	.	.	31	53	0	.	4.0	5.0	.	.
1995	MAY	0	5.3	0	.	7.5	16	0.63	600	1.0	4.3	.	.	18	30	4.9	120	6.5	0	.	.
1995	JUN	1.4	1.7	0	.	6.4	4.6	0	.	2.8	0	.	.	44	11	1.5	260	5.2	.	.	.
1995	JUL	4.4	3.6	0	.	4.3	5.3	0	.	2.9	0	.	.	12	18	0	.	6.4	0	.	.
1995	AUG	3.2	2.7	0	.	3.9	2.0	0	.	3.1	0	.	.	23	14	0	.	2.8	0	.	.
1995	SEP	17	6.5	41	60	5.3	5.0	0	.	4.5	0	.	.	31	18	0	.	5.1	0.56	.	.
1995	OCT	1.4	12	0	.	6.7	13	0.81	650	2.9	2.0	.	.	46	24	0	.	8.7	1.7	.	.
1995	NOV	3.5	.	0	.	.	16	0	.	2.1	3.5	.	.	42	45	0	.	2.6	79	.	.
1995	DEC	.	38	0	.	18	15	4.8	120	.	47	.	.	81	36	0	.	32	49	.	.
1996	JAN	3.0	16	0	.	24	20	12	75	9.0	1.6	.	.	63	38	0	.	48	.	.	.
1996	FEB	6.1	2.8	0	.	6.1	9.7	.	.	11	21	.	.	38	21	0.42	1100	51	13	.	.
1996	MAR	5.7	0.75	0	.	12	5.8	0	.	7.4	10	.	.	110	15	0	.	13	47	.	.
1996	APR	1.6	1.7	0	.	3.4	11	0	.	5.2	5.0	.	.	27	30	0	.	6.2	19	.	.
1996	MAY	1.1	2.7	0	.	2.7	.	0	.	6.3	0	.	.	6.8	14	0	.	4.3	0	.	.
1996	JUN	1.4	1.6	0	.	1.8	14	0.71	540	5.2	0	.	.	17	12	0.63	590	4.0	0	.	.
1996	JUL	1.6	3.1	0.26	1500	1.3	4.6	0.51	720	6.6	0	.	.	16	.	1.3	340	1.8	0	.	.
1996	AUG	0.94	3.0	0.27	1400	1.6	4.1	0.73	520	5.6	.	.	.	6.9	2.1	0.26	1400	19	0	.	.
1996	SEP	2.5	4.1	0	.	2.2	.	0	.	1.1	0	.	.	7.9	9.3	0	.	13	0	.	.
1996	OCT	5.4	4.0	0.47	1200	5.4	0.28	1.2	480	7.9	0	.	.	19	0.55	0	.	140	0	.	.
1996	NOV	6.9	4.5	0.53	1200	5.2	0.99	0.89	640	22	0	.	.	22	5.9	0.89	650	22	12	.	.
1996	DEC	2.5	11	0	.	4.8	10	0.63	800	6.7	0	.	.	59	30	2.6	220	110	5.7	.	.
1997	JAN	7.5	17	0.33	2300	8.9	17	4.4	130	12	0	.	.	22	14	0.47	1600	11	14	.	.
1997	FEB	3.2	2.6	0.52	1200	2.9	16	6.1	98	5.0	0	.	.	48	21	1.2	480	28	0	.	.
1997	MAR	1.7	5.5	0	.	4.3	12	0	.	7.9	0	.	.	25	45	3.0	190	33	33	.	.
1997	APR	3.7	1.5	0	.	5.4	5.7	5.0	110	12	10	.	.	35	24	0	.	14	18	.	.
1997	MAY	5.1	5.0	0	.	6.3	13	0	.	2.5	.	.	.	32	36	0	.	11	15	.	.
1997	JUN	3.7	2.3	0	.	2.0	16	0	.	13	0	.	.	15	20	0	.	12	0	.	.
1997	JUL	1.7	4.3	0	.	0.69	6.7	0	.	1.6	23	.	.	6.2	15	0	.	14	0	.	.
1997	AUG	6.7	0.26	0.92	420	5.0	3.1	1.6	270	3.0	28	.	.	14	17	0.45	1100	26	4.2	.	.
1997	SEP	1.6	1.1	0	.	6.8	7.1	5.0	110	3.1	17	.	.	32	31	2.7	200	8.9	0	.	.
1997	OCT	4.8	7.4	0.60	920	9.5	8.6	3.0	190	8.3	.	.	.	52	17	2.8	200	13	19	.	.
1997	NOV	9.1	7.3	0	.	26	12	0	.	6.8	12	.	.	41	29	0	.	11	73	.	.
1997	DEC	2.4	5.3	0	.	12	6.4	0	.	5.6	7.9	.	.	37	22	2.7	230	34	34	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*b*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	6.1	13	0.94	600	14	29	5.5	100	33	2.0	.	.	85	42	3.9	150	30	92	.	.
1998	FEB	10	.	0.52	960	15	9.5	11	68	9.7	17	.	.	120	23	4.2	120	77	.	.	.
1998	MAR	4.0	.	0.61	760	9.3	11	6.3	100	5.9	20	.	.	27	43	0	.	17	40	.	.
1998	APR	3.8	0.53	0	.	14	8.6	2.9	150	4.1	7.8	.	.	29	31	0	.	18	4.2	.	.
1998	MAY	3.2	1.4	0	.	2.8	4.1	4.3	100	2.2	9.7	.	.	73	8.5	1.4	260	28	0	.	.
1998	JUN	3.2	4.1	0	.	1.0	6.8	0	.	3.1	0	.	.	9.3	8.9	2.9	150	8.6	0	.	.
1998	JUL	0.66	1.8	0	.	1.4	3.1	1.8	200	0.70	.	.	.	11	12	0	.	3.0	.	.	.
1998	AUG	8.4	.	0	.	3.7	.	3.5	120	0.66	0.90	.	.	12	.	4.5	97	5.9	.	.	.
1998	SEP	0	.	0	.	1.2	.	0	.	1.8	0	.	.	11	.	6.2	94	8.5	0	.	.
1998	OCT	1.6	12	0	.	21	7.3	0	.	2.1	0	.	.	30	8.8	3.2	170	130	24	.	.
1998	NOV	1.3	16	0	.	7.1	10	0	.	4.2	0	.	.	24	.	7.5	90	11	2.2	.	.
1998	DEC	6.6	11	5.0	150	9.2	10	0	.	4.8	1.1	.	.	47	.	13	70	11	17	.	.
1999	JAN	7.1	14	0	.	9.0	26	0	.	3.4	6.8	.	.	56	.	26	72	44	0	.	.
1999	FEB	7.3	8.1	0	.	11	9.9	0	.	11	14	.	.	94	.	15	83	200	0	.	.
1999	MAR	7.6	3.1	0	.	23	3.7	1.6	120	6.7	13	.	.	110	39	11	87	13	9.8	.	.
1999	APR	7.7	.	0	.	12	18	0	.	3.8	17	.	.	28	36	16	76	6.2	.	.	.
1999	MAY	4.8	5.9	0	.	5.3	7.3	0	.	1.8	10	.	.	65	11	1.8	400	5.1	9.0	.	.
1999	JUN	0.60	2.2	0	.	7.2	6.9	0	.	3.5	.	.	.	12	7.3	7.2	110	4.2	1.9	.	.
1999	JUL	1.5	1.8	2.6	72	1.8	2.6	0	.	7.3	2.2	.	.	12	6.0	3.3	230	8.4	1.6	.	.
1999	AUG	5.1	1.4	0	.	2.6	5.4	0	.	1.4	0	.	.	16	14	43	61	4.0	0	.	.
1999	SEP	4.1	4.3	0	.	6.4	6.4	0	.	2.5	0	.	.	16	8.5	0	.	2.9	3.1	.	.
1999	OCT	4.2	11	0	.	12	3.6	0	.	2.4	11	.	.	38	10	0	.	8.5	14	.	.
1999	NOV	5.4	2.4	0	.	5.4	4.5	1.4	120	0.31	12	.	.	10	11	0	.	3.3	12	.	.
1999	DEC	8.6	3.2	0	.	40	15	0	.	19	73	.	.	44	9.9	11	110	24	.	.	.
2000	JAN	2.0	.	0	.	9.2	.	0	.	4.6	11	.	.	20	12	1.7	130	16	.	.	.
2000	FEB	11	.	0	.	35	.	0	.	7.4	5.6	.	.	32	30	2.4	94	53	41	.	.
2000	MAR	3.6	4.7	0	.	20	17	0	.	5.1	.	.	.	25	28	2.4	83	10	43	.	.
2000	APR	2.3	4.5	0	.	8.9	11	0	.	4.9	.	.	.	29	67	1.4	110	8.2	30	.	.
2000	MAY	3.2	2.0	0	.	4.8	6.4	0	.	2.5	2.0	.	.	20	12	0	.	5.7	.	.	.
2000	JUN	1.3	8.9	0	.	3.2	6.9	0	.	6.4	4.8	.	.	19	35	18	59	2.3	32	.	.
2000	JUL	2.1	1.4	0	.	2.3	6.2	0	.	2.0	2.4	.	.	16	7.5	12	59	1.8	3.4	.	.
2000	AUG	2.2	.	0	.	4.9	5.6	0.063	2500	3.2	0	.	.	13	10	1.2	130	3.0	0	.	.
2000	SEP	2.3	2.3	0	.	11	7.8	0	.	3.5	0	.	.	10	16	5.3	67	1.8	.	.	.
2000	OCT	1.0	3.6	0	.	4.0	4.3	0	.	0.91	0	.	.	40	14	8.4	62	8.2	.	.	.
2000	NOV	2.3	11	0	.	4.1	18	0	.	3.6	0.93	.	.	32	34	2.9	90	43	.	.	.
2000	DEC	12	14	0	.	13	18	1.3	170	8.3	.	.	.	25	37	79	58	56	51	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*b*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	3.7	11	0	.	14	8.2	0	.	8.1	11	.	.	17	20	11	61	44	.	.	.
2001	FEB	12	13	0	.	46	10	0	.	8.3	22	.	.	69	6.7	0	.	24	0	.	.
2001	MAR	2.4	3.9	0	.	6.6	5.8	0	.	4.8	.	.	.	83	36	4.0	72	15	12	.	.
2001	APR	2.0	6.3	0	.	10	.	0	.	5.7	4.4	.	.	40	10	0.75	190	28	8.4	.	.
2001	MAY	1.7	3.3	0	.	4.1	11	0	.	3.5	11	.	.	41	11	4.8	66	9.6	12	.	.
2001	JUN	1.3	2.9	0	.	3.2	7.5	2.3	85	0.80	10	.	.	13	12	7.0	62	0.86	2.4	.	.
2001	JUL	2.6	3.9	0	.	3.2	3.2	0	.	2.0	2.8	.	.	10	10	1.5	130	4.7	0	.	.
2001	AUG	0.98	3.1	0	.	1.7	6.8	0	.	1.8	4.3	.	.	14	15	6.3	64	3.2	0	.	.
2001	SEP	1.1	1.9	0	.	1.7	6.5	0	.	0.93	12	.	.	29	18	13	60	3.9	0	.	.
2001	OCT	2.7	4.9	0	.	3.9	11	0	.	2.5	14	.	.	30	28	2.6	110	11	14	.	.
2001	NOV	3.6	6.7	0	.	2.0	7.6	0	.	5.4	9.6	.	.	21	14	0	.	17	20	.	.
2001	DEC	9.5	8.2	0	.	13	9.1	0	.	11	20	.	.	27	32	6.0	67	12	29	.	.
2002	JAN	3.5	5.7	1.4	170	14	8.5	0	.	6.3	9.9	.	.	36	26	17	60	17	29	.	.
2002	FEB	1.8	4.1	0	.	10	16	0	.	16	24	.	.	57	65	15	61	16	14	.	.
2002	MAR	4.7	5.6	0	.	9.9	.	0	.	3.6	.	.	.	11	49	5.9	64	10	42	.	.
2002	APR	3.7	5.3	0	.	9.8	15	0	.	3.1	8.1	.	.	19	23	4.4	70	7.0	29	.	.
2002	MAY	2.6	0.60	0	.	14	10	0	.	3.9	7.6	.	.	27	18	3.4	78	6.1	16	.	.
2002	JUN	2.0	4.9	0	.	14	5.4	0	.	3.3	4.1	.	.	9.4	11	2.3	83	2.4	9.3	.	.
2002	JUL	1.3	.	0	.	4.6	5.1	0	.	1.6	4.0	.	.	10	15	2.6	81	3.5	7.8	.	.
2002	AUG	0.87	2.0	2.3	92	1.9	10	0	.	0.93	3.5	.	.	11	7.1	2.0	97	2.5	4.9	.	.
2002	SEP	0	3.0	0	.	0.90	5.9	0	.	5.3	.	.	.	6.7	13	0	.	0.93	9.0	.	.
2002	OCT	4.3	7.5	1.7	140	5.3	16	0	.	1.8	.	.	.	15	23	2.6	97	15	10	.	.
2002	NOV	3.2	5.3	0	.	2.1	5.3	0	.	2.0	8.6	.	.	6.7	53	0	.	3.4	30	.	.
2002	DEC	4.2	.	0	.	14	6.2	4.2	78	3.8	8.0	.	.	39	41	1.8	130	18	48	.	.
2003	JAN	3.0	9.5	0	.	7.2	7.6	0	.	3.8	4.5	.	.	8.9	31	2.7	97	12	49	.	.
2003	FEB	5.8	9.2	0	.	16	6.3	0	.	11	8.2	.	.	44	27	2.6	88	20	66	.	.
2003	MAR	8.0	5.4	0	.	10	17	0	.	5.3	16	.	.	17	40	6.3	63	12	24	.	.
2003	APR	2.6	4.6	0	.	9.9	14	0	.	6.1	14	.	.	26	39	3.0	72	25	7.5	.	.
2003	MAY	1.9	5.1	0	.	6.3	.	0	.	1.2	5.0	.	.	21	28	2.0	92	7.0	15	.	.
2003	JUN	1.1	3.3	0	.	1.5	2.3	0	.	1.4	.	.	.	18	13	5.4	63	5.3	5.4	.	.
2003	JUL	0	2.3	0	.	0.79	4.1	0	.	2.2	0.80	.	.	11	11	5.1	64	2.6	12	.	.
2003	AUG	0.65	3.2	0	.	2.5	3.1	0	.	4.9	2.5	.	.	12	7.1	0	.	1.7	6.5	.	.
2003	SEP	2.8	3.4	0	.	3.7	4.4	0	.	3.0	6.0	.	.	9.1	40	3.2	79	5.0	8.1	.	.
2003	OCT	4.1	2.8	0	.	3.2	4.7	0	.	2.4	3.4	.	.	30	16	7.3	63	5.7	4.0	.	.
2003	NOV	5.9	4.0	0	.	8.7	15	0	.	4.7	20	.	.	34	16	8.0	63	15	8.2	.	.
2003	DEC	1.6	5.9	0	.	1.5	6.0	0	.	4.3	18	.	.	11	19	0	.	23	13	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*b*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	3.3	14	0	.	11	11	0	.	3.8	23	.	.	17	39	6.6	60	19	24	.	.
2004	FEB	3.1	11	0	.	5.7	11	0	.	3.9	5.9	.	.	.	9.4	0	.	7.6	6.7	.	.
2004	MAR	4.6	4.3	0	.	4.9	17	0	.	5.2	3.8	.	.	24	55	2.0	65	62	0.73	.	.
2004	APR	2.4	4.0	0	.	2.5	7.9	0	.	9.4	4.6	.	.	11	9.4	0	.	4.3	16	.	.
2004	MAY	1.2	3.8	0	.	7.8	13	2.0	67	3.3	3.3	.	.	7.8	21	1.5	71	2.4	14	.	.
2004	JUN	0	1.9	0	.	7.0	5.0	0	.	2.7	4.1	.	.	10	1.8	0	.	6.4	7.7	.	.
2004	JUL	1.9	5.2	0	.	2.2	6.2	0	.	1.1	2.9	.	.	17	0.53	1.9	67	2.7	6.0	.	.
2004	AUG	0	0.10	0	.	3.0	5.0	0	.	7.7	2.6	.	.	16	7.0	1.6	69	3.0	3.1	.	.
2004	SEP	1.4	2.8	0	.	8.6	6.6	0	.	2.7	1.3	.	.	33	6.7	8.3	59	6.5	3.2	.	.
2004	OCT	1.2	4.5	0	.	4.6	11	0	.	1.4	4.5	.	.	18	15	0	.	6.6	6.6	.	.
2004	NOV	3.6	3.9	0	.	9.0	72	0	.	4.4	14	.	.	27	6.2	4.7	60	16	8.9	.	.
2004	DEC	5.8	16	0	.	10	16	5.6	61	5.9	19	.	.	66	43	7.7	59	13	24	.	.
2005	JAN	4.6	11	0	.	21	11	0	.	4.2	14	.	.	43	12	0	.	36	40	.	.
2005	FEB	3.7	6.2	0.025	3400	12	13	0.18	410	6.0	8.0	.	.	50	7.4	1.0	95	19	17	.	.
2005	MAR	2.0	8.6	0.038	2100	14	40	0.037	2000	6.5	4.9	.	.	32	19	5.4	60	50	21	.	.
2005	APR	5.0	11	0.096	750	57	25	0.040	1800	9.9	23	.	.	75	38	3.2	63	13	8.4	.	.
2005	MAY	4.9	3.5	0	.	15	7.5	0	.	5.4	11	.	.	22	12	13	59	8.7	14	.	.
2005	JUN	2.4	1.8	0	.	20	5.1	0	.	3.7	13	.	.	4.7	6.5	0	.	2.3	7.3	.	.
2005	JUL	0	0.19	0	.	2.0	3.2	0	.	6.2	.	.	.	3.2	15	0	.	3.0	4.1	.	.
2005	AUG	2.6	1.5	0	.	7.3	3.9	0	.	1.7	4.5	.	.	11	6.9	0	.	2.1	7.9	.	.
2005	SEP	0	1.7	0	.	3.2	9.0	0	.	5.8	.	.	.	15	11	0	.	5.2	.	.	.
2005	OCT	1.3	3.4	0	.	8.6	19	0	.	4.3	5.0	.	.	27	10	0	.	6.2	.	.	.
2005	NOV	4.5	7.0	0	.	6.2	16	0	.	7.3	7.5	.	.	24	6.9	7.6	60	8.5	18	.	.
2005	DEC	5.2	30	0	.	26	33	2.0	71	6.0	22	.	.	120	85	2.3	73	28	47	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*k*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	1.3	3.6	.	.	.	4.0	.	.	7.1	.	.	.	6.3	17	.	.	58	0	.	.
1992	FEB	1.6	3.3	.	.	0	1.7	.	.	4.3	.	.	.	0	13	.	.	20	0	.	.
1992	MAR	.	2.7	0	.	.	2.5	4.0	440	5.0	.	.	.	.	16	0	.	4.1	0	.	.
1992	APR	1.2	4.1	0	.	1.6	5.1	0	.	4.3	.	.	.	9.2	15	5.4	250	5.0	0	.	.
1992	MAY	.	6.0	0	.	2.6	4.6	5.7	.	5.5	.	.	.	7.8	5.5	4.9	.	3.2	0	.	.
1992	JUN	0	4.3	0	.	.	6.1	0	.	2.6	.	.	.	5.6	8.1	9.6	75	3.0	0	.	.
1992	JUL	0	2.4	0	.	2.2	8.0	0	.	1.4	0	.	.	2.7	11	5.8	110	2.2	0	.	.
1992	AUG	.	7.6	5.8	110	.	12	0	.	3.5	.	.	.	.	7.6	0	.	1.8	0	.	.
1992	SEP	0	6.4	0	.	4.8	6.3	0	.	2.8	0	.	.	9.3	7.9	18	67	1.3	0	.	.
1992	OCT	2.0	4.2	0	.	3.0	3.6	3.4	210	0.78	0	.	.	7.9	10	0	.	2.4	0	.	.
1992	NOV	0	.	0	.	4.1	10	0	.	1.7	0	.	.	8.2	16	0	.	3.7	0	.	.
1992	DEC	.	.	0	.	.	.	0	.	3.6	0	.	.	.	19	4.2	160	31	0	.	.
1993	JAN	.	.	0	.	3.0	.	0	.	5.3	32	.	.	20	16	0	.	3.9	0	.	.
1993	FEB	.	2.4	0	.	3.2	0	0	.	3.2	0	.	.	8.1	8.8	0	.	60	0	.	.
1993	MAR	.	0	0	.	5.0	0	0	.	3.1	0	.	.	12	.	0	.	35	0	.	.
1993	APR	.	0.60	0	.	.	12	0	.	12	0	.	.	.	.	0	.	0	0	.	.
1993	MAY	1.2	0.35	0	.	0.61	5.5	0	.	4.5	0	.	.	0.90	4.1	0	.	1.9	0	.	.
1993	JUN	.	1.7	0	.	0.69	5.2	0	.	2.3	0	.	.	1.4	8.8	0	.	1.0	0	.	.
1993	JUL	.	.	0	.	0	1.0	.	.	6.5	0	.	.	7.1	3.5	0	.	2.2	0	.	.
1993	AUG	.	0	0	.	0	0	0	.	0.45	0	.	.	3.0	3.5	0	.	0.74	0	.	.
1993	SEP	0.78	0	0	.	0.61	.	0	.	0.56	0	.	.	5.8	9.3	0	.	1.5	.	.	.
1993	OCT	0.54	0	.	.	1.2	4.3	0	.	2.3	0	.	.	15	7.9	0	.	2.1	0	.	.
1993	NOV	.	0	0	.	.	0.53	0	.	2.9	0	.	.	13	12	0	.	3.7	0	.	.
1993	DEC	1.2	1.2	0	.	2.1	2.1	0	.	5.1	0	.	.	18	8.1	0	.	7.1	.	.	.
1994	JAN	2.1	.	0	.	4.7	.	0	.	3.0	0	.	.	12	13	0	.	9.3	0	.	.
1994	FEB	3.1	.	0	.	.	.	0	.	1.9	0	.	.	15	11	0	.	5.0	0	.	.
1994	MAR	3.6	.	.	.	4.0	0.92	.	.	1.4	0	.	.	23	14	.	.	10	0	.	.
1994	APR	.	1.7	0	.	1.6	3.3	0	.	1.1	0	.	.	4.8	17	0	.	5.2	0	.	.
1994	MAY	1.8	0.56	0	.	2.6	0.90	0	.	0.75	0	.	.	6.4	2.7	0	.	4.5	.	.	.
1994	JUN	0.60	0	.	.	1.1	.	0	.	2.4	0	.	.	2.0	0	0	.	1.8	0	.	.
1994	JUL	0.86	0	0	.	3.2	0	0	.	1.2	0	.	.	3.5	0	0	.	3.1	0	.	.
1994	AUG	2.0	1.4	0	.	2.1	9.3	0	.	2.6	0	.	.	8.8	1.4	0	.	2.2	0	.	.
1994	SEP	0.76	0	0	.	0.32	.	0	.	4.5	0	.	.	7.4	11	0	.	3.6	0	.	.
1994	OCT	1.4	0	0	.	2.5	.	0	.	0.88	0	.	.	11	4.7	0	.	2.4	0	.	.
1994	NOV	2.5	1.3	0	.	4.4	15	0	.	2.1	.	.	.	13	6.1	5.3	120	3.6	0	.	.
1994	DEC	0.82	2.3	0	.	9.1	2.3	0	.	3.1	0	.	.	70	9.4	14	71	27	0	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*k*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	2.8	3.0	0.33	1900	2.1	7.5	0	.	1.0	.	.	.	12	20	4.2	180	3.2	.	.	.
1995	FEB	0.66	1.3	0	.	3.2	2.0	0	.	3.3	.	.	.	43	7.8	0	.	14	5.1	.	.
1995	MAR	0	0.86	0	.	1.8	4.9	0.31	1400	3.3	.	.	.	19	13	5	100	7.1	1.7	.	.
1995	APR	0.63	1.4	0	.	1.3	8.4	0	.	1.0	1.6	.	.	12	17	0	.	1.6	7.4	.	.
1995	MAY	0	1.3	0	.	4.6	6.8	0	.	1.3	5.7	.	.	17	10	1.6	290	2.0	0	.	.
1995	JUN	0.99	0.29	0	.	2.4	1.7	0	.	1.4	0	.	.	8.7	3.7	0	.	1.5	.	.	.
1995	JUL	1.7	0.13	0	.	2.1	1.5	0	.	1.5	0	.	.	5.1	7.6	0	.	3.0	0	.	.
1995	AUG	2.2	0.23	0	.	2.7	0.52	0	.	1.3	0	.	.	6.0	4.0	0	.	1.1	0	.	.
1995	SEP	3.5	1.8	13	70	1.2	1.8	0	.	1.8	0	.	.	8.1	4.4	0	.	2.0	0.75	.	.
1995	OCT	0.15	3.5	0	.	1.7	8.3	0.27	1800	1.3	2.1	.	.	8.7	5.9	0	.	3.3	2.3	.	.
1995	NOV	0.80	.	0	.	.	4.0	0	.	1.2	2.5	.	.	9.6	10	0	.	1.0	49	.	.
1995	DEC	.	8.2	0	.	3.9	3.6	0.87	530	.	36	.	.	24	9.1	0	.	11	29	.	.
1996	JAN	0.60	0	0	.	4.2	4.3	2.7	210	3.3	1.4	.	.	13	9.1	0	.	19	.	.	.
1996	FEB	1.3	0.32	0	.	1.0	2.5	.	.	5.0	19	.	.	8.3	5.4	0.34	1300	14	6.6	.	.
1996	MAR	3.2	0.29	0	.	5.3	2.6	0	.	3.0	5.4	.	.	52	3.9	0	.	4.8	41	.	.
1996	APR	0.95	1.2	0	.	1.6	6.4	0	.	1.9	4.5	.	.	15	18	0	.	2.3	9.9	.	.
1996	MAY	0.99	1.8	0	.	2.0	.	0	.	2.9	0	.	.	3.5	9.8	0	.	1.7	0	.	.
1996	JUN	0.82	0.85	0	.	1.2	7.9	0.37	960	2.4	0	.	.	12	8.0	0	.	1.8	0	.	.
1996	JUL	1.0	1.8	0	.	0.84	2.9	0.42	830	3.1	0	.	.	11	.	0	.	0.61	0	.	.
1996	AUG	0.56	1.6	0	.	0.92	2.1	0	.	1.9	.	.	.	4.8	1.0	0	.	5.7	0	.	.
1996	SEP	1.9	1.8	0	.	1.5	.	0	.	0.46	0	.	.	5.7	4.1	0	.	3.9	0	.	.
1996	OCT	3.1	2.2	0.24	2200	3.2	0	0.65	810	2.9	0	.	.	10	0.31	0	.	40	0	.	.
1996	NOV	1.4	3.0	0.34	1700	1.1	0.23	0	.	9.3	0	.	.	5.0	1.8	0.62	890	8.4	12	.	.
1996	DEC	1.1	5.3	0	.	2.4	2.3	0.40	1200	2.1	0	.	.	19	8.3	1.3	420	35	7.5	.	.
1997	JAN	1.7	3.5	0	.	2.2	3.6	2.2	240	4.7	0	.	.	5.8	3.4	0.34	2100	4.0	20	.	.
1997	FEB	0.56	1.0	0	.	0.65	8.6	1.7	280	1.9	0	.	.	13	12	0	.	8.3	0	.	.
1997	MAR	0.33	2.0	0	.	1.0	4.9	0	.	3.6	0	.	.	6.7	16	0.67	770	9.5	33	.	.
1997	APR	1.2	0.42	0	.	1.7	1.8	1.2	370	6.2	5.5	.	.	9.8	7.5	0	.	4.4	3.3	.	.
1997	MAY	1.3	1.8	0	.	1.7	4.6	0	.	1.5	.	.	.	8.2	11	0	.	3.2	0	.	.
1997	JUN	1.4	1.7	0	.	0.45	6.6	0	.	6.5	0	.	.	3.8	7.5	0	.	4.3	0	.	.
1997	JUL	0.83	2.0	0	.	0.29	2.5	0	.	0.92	27	.	.	2.3	7.7	0	.	6.1	0	.	.
1997	AUG	2.5	0.14	0	.	1.6	1.1	0	.	1.2	35	.	.	4.3	6.0	0	.	8.5	2.9	.	.
1997	SEP	0.67	0.62	0	.	2.2	2.8	1.2	380	1.5	13	.	.	8.9	12	0	.	3.5	0	.	.
1997	OCT	1.7	3.8	0.56	930	3.4	3.7	0.75	670	3.4	.	.	.	15	7.3	0.39	1300	4.2	6.5	.	.
1997	NOV	2.7	2.9	0	.	7.0	4.5	0	.	2.7	6.7	.	.	12	11	0	.	4.4	32	.	.
1997	DEC	0.49	1.9	0	.	3.2	2.1	0	.	2.2	4.7	.	.	10	7.2	0	.	13	20	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*k*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	1.5	4.5	0	.	3.3	8.4	1.3	330	12	1.2	.	.	15	13	0	.	10	44	.	.
1998	FEB	2.7	.	0	.	3.5	2.7	2.8	150	4.5	9.6	.	.	22	6.6	0.79	520	23	.	.	.
1998	MAR	1.1	.	0.15	2900	2.5	3.2	0.86	600	3.1	15	.	.	7.7	11	0	.	5.8	17	.	.
1998	APR	0.51	0.086	0	.	3.6	2.5	0	.	2.2	2.3	.	.	8.3	9.0	0	.	6.6	2.7	.	.
1998	MAY	0	0	0	.	0.35	1.0	0	.	0.74	5.8	.	.	17	2.5	0	.	7.3	0	.	.
1998	JUN	0.58	0	0	.	0	2.3	0	.	1.7	0	.	.	2.6	2.8	0	.	3.2	0	.	.
1998	JUL	0	0	0	.	0	0	0	.	0.53	.	.	.	3.0	3.6	0	.	1.4	.	.	.
1998	AUG	2.7	.	0	.	1.4	.	0	.	0.52	0.67	.	.	3.8	.	0	.	3.1	.	.	.
1998	SEP	0	.	0	.	0	.	0	.	0.78	0	.	.	3.0	.	0	.	3.6	0	.	.
1998	OCT	0.42	4.7	0	.	5.5	2.9	0	.	0.74	0	.	.	6.7	2.6	0	.	37	14	.	.
1998	NOV	0	5.7	0	.	0.79	3.5	0	.	1.5	0	.	.	6.1	.	0	.	4.2	1.2	.	.
1998	DEC	1.6	3.7	1.6	420	2.3	3.5	0	.	1.8	0	.	.	12	.	3.3	160	4.5	13	.	.
1999	JAN	1.2	5.5	0	.	2.4	8.6	0	.	1.5	0	.	.	16	.	6.2	69	12	0	.	.
1999	FEB	2.1	2.7	0	.	3.5	2.9	0	.	4.8	7.4	.	.	27	.	4.8	70	52	0	.	.
1999	MAR	1.9	0.81	0	.	7.3	0.59	0	.	3.5	6.3	.	.	29	12	4.7	67	5.5	4.7	.	.
1999	APR	1.7	.	0	.	3.5	8.7	0	.	1.8	8.4	.	.	7.1	17	5.9	64	2.6	.	.	.
1999	MAY	1.5	2.2	0	.	2.2	2.8	0	.	1.0	5.3	.	.	22	5.4	0	.	2.2	5.0	.	.
1999	JUN	0	0.086	0	.	2.5	2.0	0	.	1.7	.	.	.	6.5	3.6	3.3	70	1.9	1.3	.	.
1999	JUL	0.39	0.88	1.2	130	0	1.8	0	.	3.8	1.5	.	.	5.5	2.9	1.6	110	3.4	1.0	.	.
1999	AUG	0	0	0	.	0.73	3.3	0	.	0.68	0	.	.	6.3	8.4	15	59	1.6	0	.	.
1999	SEP	1.1	1.1	0	.	1.9	3.1	0	.	1.4	0	.	.	7.0	4.5	0	.	1.4	1.7	.	.
1999	OCT	1.9	5.3	0	.	5.4	1.7	0	.	1.2	6.8	.	.	19	5.0	0	.	3.2	9.6	.	.
1999	NOV	4.1	1.4	0	.	2.2	1.8	0	.	0.33	7.4	.	.	5.1	6.5	0	.	1.5	8.5	.	.
1999	DEC	5.3	0.52	0	.	17	5.7	0	.	7.4	34	.	.	20	4.0	5.5	69	8.7	.	.	.
2000	JAN	0	.	0	.	2.0	.	0	.	1.7	5.3	.	.	5.0	3.6	0	.	4.6	.	.	.
2000	FEB	2.9	.	0	.	9.4	.	0	.	2.8	4.1	.	.	7.1	9.4	0	.	8.7	23	.	.
2000	MAR	0.37	0.17	0	.	6.0	6.1	0	.	1.9	.	.	.	7.8	9.1	0	.	4.4	22	.	.
2000	APR	0	1.5	0	.	2.7	3.7	0	.	1.6	.	.	.	8.5	21	0	.	3.3	15	.	.
2000	MAY	0	0.090	0	.	0	0.084	0	.	1.1	2.4	.	.	6.7	1.4	0	.	2.4	.	.	.
2000	JUN	0	0	0	.	1.0	0	0	.	3.4	5.5	.	.	6.2	13	6.6	64	1.2	15	.	.
2000	JUL	0.84	0	0	.	0.55	1.2	0	.	0.94	1.3	.	.	4.4	2.0	2.4	85	0.81	1.3	.	.
2000	AUG	0.69	.	0	.	1.2	1.7	0.038	4500	1.6	0	.	.	5.4	1.3	0	.	0.83	0	.	.
2000	SEP	0	0	0	.	3.9	2.6	0	.	1.9	0	.	.	4.0	5.5	0	.	0.87	.	.	.
2000	OCT	0	0.72	0	.	0.61	1.4	0	.	0.53	0	.	.	11	4.6	2.3	99	2.4	.	.	.
2000	NOV	0	3.3	0	.	1.4	6.2	0	.	1.6	9.0	.	.	11	12	0	.	11	.	.	.
2000	DEC	7.1	4.1	0	.	3.3	5.6	0	.	3.3	.	.	.	5.4	11	24	59	19	36	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*k*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	0.80	3.7	0	.	3.6	2.2	0	.	3.7	6.9	.	.	4.8	5.6	3.9	82	10	.	.	.
2001	FEB	3.5	1.8	0	.	14	2.0	0	.	3.0	16	.	.	19	1.3	0	.	9.1	0	.	.
2001	MAR	0.65	0.97	0	.	1.4	1.6	0	.	2.0	.	.	.	22	12	0	.	6.1	13	.	.
2001	APR	0	2.1	0	.	2.6	.	0	.	2.3	4.1	.	.	8.9	2.9	0	.	6.2	6.5	.	.
2001	MAY	0	1.2	0	.	0.95	4.0	0	.	1.7	7.2	.	.	9.7	3.9	0	.	3.3	12	.	.
2001	JUN	0	0.47	0	.	0.65	2.4	0	.	0.42	6.7	.	.	2.5	3.7	1.7	110	0.37	1.7	.	.
2001	JUL	0	1.4	0	.	1.0	0.48	0	.	0.96	1.9	.	.	2.8	3.5	0	.	1.6	0	.	.
2001	AUG	0	0	0	.	0	2.0	0	.	1.1	3.4	.	.	3.6	4.8	1.4	130	1.5	0	.	.
2001	SEP	0	0	0	.	0	2.0	0	.	0.55	9.1	.	.	6.5	5.6	3.3	84	1.3	0	.	.
2001	OCT	0.86	1.3	0	.	1.4	4.2	0	.	1.1	10	.	.	7.8	8.3	0	.	3.9	8.8	.	.
2001	NOV	0.44	2.2	0	.	0	2.3	0	.	2.9	8.9	.	.	5.2	4.0	0	.	4.8	12	.	.
2001	DEC	2.3	2.4	0	.	3.0	2.3	0	.	5.5	17	.	.	6.8	7.8	0	.	4.2	20	.	.
2002	JAN	0.47	1.7	0	.	3.5	2.1	0	.	2.6	7.1	.	.	9.2	6.4	3.7	110	7.4	20	.	.
2002	FEB	0	0.31	0	.	2.9	4.3	0	.	5.6	18	.	.	15	18	2.4	160	9.8	12	.	.
2002	MAR	1.3	0	0	.	3.4	.	0	.	1.3	.	.	.	3.2	13	0.60	390	3.8	16	.	.
2002	APR	1.4	2.2	0	.	3.5	6.0	0	.	1.2	4.2	.	.	6.1	7.7	0	.	3.2	10	.	.
2002	MAY	0.59	0.35	0	.	4.8	0.29	0	.	2.0	3.3	.	.	6.3	5.9	1.4	200	2.5	6.8	.	.
2002	JUN	0	2.9	0	.	4.3	1.9	0	.	1.3	1.5	.	.	3.3	3.8	0	.	0.91	2.5	.	.
2002	JUL	0.39	.	0	.	2.4	1.5	0	.	0.72	1.7	.	.	3.1	5.1	0	.	1.6	2.7	.	.
2002	AUG	0	0	0	.	0	3.9	0	.	0.50	1.5	.	.	3.2	2.4	0	.	1.2	1.8	.	.
2002	SEP	0	0.87	0	.	0	2.1	0	.	2.7	.	.	.	2.5	4.9	0	.	0.44	3.1	.	.
2002	OCT	0.86	2.8	0	.	1.6	5.4	0	.	0.74	.	.	.	3.8	8.0	0	.	6.8	4.2	.	.
2002	NOV	0	1.9	0	.	0	1.7	0	.	0.85	3.3	.	.	1.8	17	0	.	1.4	12	.	.
2002	DEC	0.44	.	0	.	3.6	2.0	0	.	1.4	3.0	.	.	8.6	12	0	.	9.3	15	.	.
2003	JAN	0	3.0	0	.	5.3	2.8	0	.	1.4	1.6	.	.	2.1	9.6	0	.	5.6	18	.	.
2003	FEB	1.3	2.6	0	.	3.9	1.8	0	.	4.9	2.9	.	.	8.6	8.3	0	.	9.7	23	.	.
2003	MAR	1.3	2.0	0	.	2.6	7.1	0	.	2.1	13	.	.	4.0	13	1.4	170	5.5	20	.	.
2003	APR	0	1.9	0	.	2.4	4.7	0	.	2.5	9.8	.	.	6.5	12	0.85	230	9.1	9.7	.	.
2003	MAY	0	2.6	0	.	1.7	.	0	.	0.59	5.4	.	.	6.5	14	0	.	1.8	10	.	.
2003	JUN	0	1.7	0	.	0	1.0	0	.	0.75	.	.	.	3.5	5.7	1.3	160	2.4	3.8	.	.
2003	JUL	0	0	0	.	0	0.59	0	.	1.0	0.58	.	.	2.6	3.0	0	.	1.2	8.4	.	.
2003	AUG	0	0	0	.	0	0.96	0	.	2.3	2.6	.	.	3.4	2.3	0	.	0.72	4.4	.	.
2003	SEP	0.63	0	0	.	1.1	1.4	0	.	1.5	5.9	.	.	2.5	10	0	.	2.4	8.8	.	.
2003	OCT	0.96	0	0	.	0	1.6	0	.	0.89	2.8	.	.	5.7	4.1	0	.	2.4	4.3	.	.
2003	NOV	2.3	0	0	.	1.7	4.3	0	.	1.8	17	.	.	6.4	4.4	1.8	170	3.9	6.7	.	.
2003	DEC	0	1.7	0	.	0	1.9	0	.	1.4	13	.	.	2.7	6.2	0	.	9.6	8.2	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

benzo[*k*]fluoranthene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	0	4.3	0	.	2.5	3.7	0	.	1.6	17	.	.	3.8	13	1.9	68	7.4	23	.	.
2004	FEB	0.64	3.8	0	.	1.3	3.6	0	.	1.6	4.8	.	.	.	3.3	0	.	3.4	6.2	.	.
2004	MAR	3.6	1.9	0	.	1.4	5.2	0	.	1.4	2.8	.	.	8.1	16	0	.	16	0.51	.	.
2004	APR	0.72	1.6	0	.	0	2.1	0	.	4.6	2.9	.	.	4.4	2.3	0	.	1.6	11	.	.
2004	MAY	0.25	1.3	0	.	2.0	4.1	0	.	1.5	2.2	.	.	2.4	6.7	0	.	0.88	9.5	.	.
2004	JUN	0	0	0	.	3.1	2.2	0	.	1.0	2.6	.	.	3.0	0.51	0	.	2.5	5.1	.	.
2004	JUL	0	0	0	.	1.1	2.9	0	.	0.55	1.7	.	.	6.4	0	0	.	0.90	4.3	.	.
2004	AUG	0	0	0	.	1.6	0.065	0	.	3.8	1.1	.	.	5.9	4.0	0	.	1.3	2.0	.	.
2004	SEP	0.80	0	0	.	3.2	3.0	0	.	1.2	0.72	.	.	9.0	0.18	3.2	60	2.6	3.8	.	.
2004	OCT	0.71	0	0	.	1.9	0.031	0	.	0.59	4.3	.	.	5.6	5.8	0	.	2.7	5.6	.	.
2004	NOV	1.2	1.3	0	.	2.5	16	0	.	2.0	8.1	.	.	6.9	0.28	0	.	5.6	5.9	.	.
2004	DEC	1.8	5.0	0	.	2.8	4.3	1.9	67	2.5	14	.	.	17	13	2.4	64	5.5	14	.	.
2005	JAN	1.4	5.1	0	.	7.2	4.5	0	.	1.6	8.6	.	.	11	4.2	0	.	12	23	.	.
2005	FEB	1.1	2.8	0.014	4300	3.2	4.9	0.10	480	2.4	5.0	.	.	11	2.3	0.61	110	7.3	8.3	.	.
2005	MAR	0.58	2.7	0.022	2400	4.5	10	0.024	2100	3.1	5.0	.	.	9.0	4.6	3.1	61	14	17	.	.
2005	APR	1.1	4.3	0.057	860	17	8.9	0.025	1900	4.5	17	.	.	18	12	1.9	65	4.8	9.9	.	.
2005	MAY	1.8	2.4	0	.	5.1	2.9	0	.	2.3	5.8	.	.	8.4	3.7	3.8	59	3.6	8.3	.	.
2005	JUN	1.3	1.7	0	.	6.2	2.4	0	.	1.8	7.0	.	.	0.92	2.2	0	.	1.0	7.9	.	.
2005	JUL	0	0.19	0	.	1.0	1.3	0	.	3.4	.	.	.	1.1	4.5	0	.	1.3	5.8	.	.
2005	AUG	0.90	0	0	.	2.0	1.4	0	.	0.76	2.4	.	.	2.5	2.5	0	.	0.85	4.2	.	.
2005	SEP	0	0	0	.	1.7	3.3	0	.	2.6	.	.	.	4.5	2.9	0	.	2.2	.	.	.
2005	OCT	0.49	0	0	.	3.1	7.8	0	.	1.5	3.0	.	.	8.4	4.4	0	.	2.5	.	.	.
2005	NOV	0.94	2.3	0	.	1.1	6.2	0	.	3.1	5.1	.	.	5.7	2.7	2.2	67	3.5	13	.	.
2005	DEC	1.3	7.0	0	.	6.7	9.7	0	.	2.4	13	.	.	26	23	0	.	11	26	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

indeno*[1,2,3-cd]* pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	1.6	6.1	.	.	.	7.4	.	.	38	.	.	.	11	20	.	.	71	0	.	.
1992	FEB	6.8	6.2	.	.	7.9	2.6	.	.	10	.	.	.	61	19	.	.	24	0	.	.
1992	MAR	.	4.0	0	.	.	3.3	0	.	9.2	.	.	.	.	22	0	.	8.8	0	.	.
1992	APR	1.6	4.8	0	.	2.1	6.2	0	.	7.0	.	.	.	15	25	1.4	350	12	0	.	.
1992	MAY	.	6.5	0	.	4.7	6.1	0	.	9.0	.	.	.	9.7	9.9	6.0	.	7.3	0	.	.
1992	JUN	0	5.4	0	.	.	14	0	.	4.2	.	.	.	10	19	0	.	7.4	0	.	.
1992	JUL	0	3.2	0	.	3.3	13	0	.	1.3	0	.	.	4.8	23	4.3	140	4.2	0	.	.
1992	AUG	.	9.2	0	.	.	14	0	.	7.0	.	.	.	.	13	0	.	4.7	0	.	.
1992	SEP	3.2	7.5	0	.	8.7	12	0	.	3.5	0	.	.	15	13	0	.	4.4	0	.	.
1992	OCT	2.8	5.5	0	.	4.4	4.9	0	.	2.0	0	.	.	19	18	0	.	7.2	0	.	.
1992	NOV	2.0	.	0	.	7.4	19	0	.	5.0	0	.	.	14	26	0	.	12	0	.	.
1992	DEC	.	.	0	.	.	.	0	.	9.6	11	.	.	.	28	2.8	220	70	0	.	.
1993	JAN	2.5	.	0	.	6.1	.	0	.	11	60	.	.	28	27	0	.	14	130	.	.
1993	FEB	.	3.1	0	.	6.8	0	0	.	9.5	0	.	.	15	18	0	.	93	2.7	.	.
1993	MAR	.	0	0	.	9.4	0	0	.	6.3	0	.	.	16	.	0	.	80	0	.	.
1993	APR	.	0	0	.	.	24	0	.	19	0	.	.	.	.	0	.	0	20	.	.
1993	MAY	.	0	0	.	1.5	10	0	.	7.9	0	.	.	2.4	5.3	0	.	3.6	0	.	.
1993	JUN	0.51	0	0	.	1.3	7.6	0	.	4.2	0	.	.	2.4	11	0	.	0	2.8	.	.
1993	JUL	.	.	0	.	0	1.5	.	.	13	2.7	.	.	12	6.3	0	.	7.7	1.1	.	.
1993	AUG	.	0	0	.	2.3	0	0	.	1.1	0	.	.	5.7	0.70	0	.	2.0	0	.	.
1993	SEP	.	0	0	.	1.1	.	0	.	1.5	0	.	.	9.4	15	0	.	4.9	.	.	.
1993	OCT	.	0	.	.	2.2	6.1	0	.	6.8	0	.	.	25	12	0	.	3.6	6.2	.	.
1993	NOV	.	0	0	.	.	1.4	0	.	7.5	0	.	.	21	19	0	.	13	0	.	.
1993	DEC	.	0	0	.	4.2	5.1	0	.	17	0	.	.	32	14	0	.	47	.	.	.
1994	JAN	3.2	.	0	.	8.1	.	0	.	9.1	0	.	.	19	20	0	.	35	0	.	.
1994	FEB	4.3	.	0	.	.	.	0	.	5.5	0	.	.	25	15	0	.	18	0	.	.
1994	MAR	5.3	.	.	.	9.7	3.0	.	.	4.6	0	.	.	35	20	.	.	24	0	.	.
1994	APR	1.1	2.5	0	.	3.6	5.6	0	.	3.3	0	.	.	9.7	27	0	.	15	0	.	.
1994	MAY	3.3	0.82	0	.	5.0	1.5	0	.	1.4	0	.	.	11	4.4	0	.	22	.	.	.
1994	JUN	1.2	0	.	.	2.5	.	0	.	5.1	0	.	.	4.3	0	0	.	11	0	.	.
1994	JUL	1.5	0	0	.	5.7	0	0	.	2.9	0	.	.	6.5	0	0	.	8.5	5.5	.	.
1994	AUG	.	2.2	0	.	3.3	5.4	0	.	5.2	0	.	.	19	0	0	.	7.2	0	.	.
1994	SEP	0.55	0	0	.	0.82	.	0	.	9.8	0	.	.	21	0	0	.	7.3	0	.	.
1994	OCT	1.8	0	0	.	4.3	.	0	.	1.6	0	.	.	26	0.93	0	.	6.4	0	.	.
1994	NOV	3.5	0.95	0	.	8.6	16	0	.	5.4	.	.	.	31	6.1	0	.	7.5	0	.	.
1994	DEC	1.0	1.1	0	.	7.4	3.9	0	.	11	0	.	.	72	12	16	67	58	0	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

indeno*[1,2,3-cd]* pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	2.6	5.9	0	.	5.7	19	0	.	1.5	.	.	.	23	51	3.3	110	9.3	.	.	.
1995	FEB	0	5.0	0	.	7.8	6.5	0	.	6.7	.	.	.	76	30	0	.	28	0	.	.
1995	MAR	0	0.78	0	.	2.3	9.9	0	.	5.5	.	.	.	18	36	0	.	20	0	.	.
1995	APR	0.79	1.7	0	.	1.2	10	0	.	0	0	.	.	14	29	0	.	5.7	0	.	.
1995	MAY	0	3.4	0	.	3.8	10	0	.	0	0	.	.	7.4	18	0	.	5.8	0	.	.
1995	JUN	0.67	0.58	0	.	1.7	2.3	0	.	4.7	0	.	.	15	5.3	0	.	4.9	.	.	.
1995	JUL	2.1	0.19	0	.	0.99	3.5	0	.	2.4	0	.	.	7.3	11	0	.	7.4	0	.	.
1995	AUG	2.0	0.60	0	.	2.7	0.20	0	.	2.9	0	.	.	8.1	1.8	0	.	2.8	0	.	.
1995	SEP	3.3	4.6	0	.	2.9	4.6	0	.	4.6	0	.	.	22	7.5	0	.	5.5	0	.	.
1995	OCT	0.76	8.8	0	.	4.0	19	0.43	540	2.5	0	.	.	30	14	0	.	10	0	.	.
1995	NOV	0	.	0	.	.	10	0	.	3.4	23	.	.	25	31	0	.	4.2	28	.	.
1995	DEC	.	21	0	.	8.1	8.5	0	.	.	41	.	.	46	25	0	.	29	27	.	.
1996	JAN	1.7	10	0	.	12	14	0	.	10	0.072	.	.	34	20	0	.	37	.	.	.
1996	FEB	3.0	1.7	0	.	3.0	6.4	.	.	14	12	.	.	20	11	0	.	26	4.2	.	.
1996	MAR	5.4	0.45	0	.	13	4.1	2.9	94	7.3	5.2	.	.	120	9.4	0	.	8.8	21	.	.
1996	APR	1.1	2.0	0	.	3.3	11	0	.	4.3	0	.	.	31	30	0	.	6.5	5.7	.	.
1996	MAY	1.1	1.9	0	.	2.8	.	0	.	5.3	0	.	.	5.5	11	0	.	4.9	0	.	.
1996	JUN	0.96	0.81	0	.	1.1	7.9	0	.	5.5	0	.	.	10	6.6	0	.	2.2	0	.	.
1996	JUL	1.3	2.9	0.019	8700	1.1	4.5	0.26	620	6.8	6.0	.	.	15	.	0.023	8400	0.47	0	.	.
1996	AUG	0.98	3.0	0	.	1.8	4.6	0	.	5.0	.	.	.	6.7	2.2	0	.	9.5	0	.	.
1996	SEP	2.1	2.7	0	.	2.0	.	0	.	1.5	0	.	.	6.7	7.6	0	.	15	2.1	.	.
1996	OCT	5.0	2.7	0	.	5.0	0.11	0	.	8.4	0	.	.	15	0.38	0	.	84	0	.	.
1996	NOV	5.1	3.8	0	.	3.0	0.69	0	.	26	0	.	.	13	2.7	0.45	570	27	0	.	.
1996	DEC	1.2	9.2	0	.	3.7	8.9	0	.	8.2	0	.	.	34	15	0.76	330	49	0	.	.
1997	JAN	3.9	17	0	.	4.7	16	2.1	130	10	3.1	.	.	11	11	0	.	14	12	.	.
1997	FEB	1.8	2.3	0	.	1.5	15	2.4	110	5.2	4.4	.	.	24	19	0	.	21	0	.	.
1997	MAR	0.85	4.2	0	.	2.4	8.9	0	.	6.8	12	.	.	11	34	0.98	250	25	26	.	.
1997	APR	1.9	0.95	0	.	2.7	4.0	2.2	110	11	0	.	.	17	16	0	.	8.8	9.5	.	.
1997	MAY	3.1	3.3	0	.	4.3	9.6	0	.	4.8	.	.	.	22	23	0	.	6.3	6.4	.	.
1997	JUN	3.3	1.7	0	.	1.0	13	0	.	11	0	.	.	11	14	0	.	7.3	14	.	.
1997	JUL	1.3	3.1	0	.	0.51	5.1	0	.	1.5	29	.	.	4.4	9.6	0	.	13	0	.	.
1997	AUG	3.4	0.13	0	.	2.7	2.0	0	.	2.6	38	.	.	7.3	11	0	.	22	1.9	.	.
1997	SEP	1.1	0.62	0	.	4.0	4.1	1.6	150	2.2	8.6	.	.	24	16	0	.	9.3	3.7	.	.
1997	OCT	2.6	4.6	0.98	250	6.9	5.4	0.85	280	7.0	.	.	.	35	9.9	0	.	12	7.3	.	.
1997	NOV	5.3	4.3	0	.	15	7.6	0	.	6.7	3.9	.	.	24	15	0	.	14	25	.	.
1997	DEC	1.1	2.8	0	.	7.2	3.5	0	.	7.0	2.9	.	.	19	5.7	0	.	35	15	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

indeno*[1,2,3-cd]* pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	3.4	6.7	0	.	7.5	15	2.0	120	26	25	.	.	42	11	0	.	27	35	.	.
1998	FEB	7.1	.	0	.	11	4.9	7.2	63	9.8	9.0	.	.	62	9.9	0.99	200	47	.	.	.
1998	MAR	2.6	.	0.25	820	6.2	7.9	1.8	150	5.9	14	.	.	18	23	0	.	14	16	.	.
1998	APR	1.2	0.21	0	.	6.1	5.4	1.3	150	1.9	2.8	.	.	12	20	0	.	14	9.2	.	.
1998	MAY	1.7	1.2	0	.	1.4	3.4	0.74	230	0	8.7	.	.	37	6.7	0	.	20	5.0	.	.
1998	JUN	0.94	2.1	0	.	0.38	4.0	0	.	5.2	0	.	.	5.9	4.7	0	.	7.1	6.8	.	.
1998	JUL	0	0	0	.	0.66	0	0	.	0	.	.	.	8.5	6.2	0	.	3.5	4.1	.	.
1998	AUG	4.6	.	0	.	2.5	.	0	.	0	0.38	.	.	6.8	.	0	.	4.7	9.2	.	.
1998	SEP	0	.	0	.	0.80	.	0	.	1.3	0	.	.	7.8	.	0	.	7.8	5.1	.	.
1998	OCT	1.2	8.8	0	.	21	6.3	0	.	0	0.13	.	.	25	7.0	0	.	44	9.8	.	.
1998	NOV	0.72	12	0	.	5.2	8.0	0	.	3.7	9.3	.	.	17	.	0	.	11	5.7	.	.
1998	DEC	3.2	10	0	.	5.1	7.7	0	.	3.9	15	.	.	24	.	1.6	150	11	9.4	.	.
1999	JAN	2.8	12	0	.	4.7	19	0	.	3.5	12	.	.	32	.	0	.	23	9.7	.	.
1999	FEB	4.4	6.1	0	.	6.3	7.8	0	.	8.4	8.6	.	.	46	.	6.8	67	76	3.9	.	.
1999	MAR	4.1	2.0	0	.	12	2.5	0	.	5.8	5.3	.	.	53	21	4.1	74	10	10	.	.
1999	APR	4.2	.	0	.	6.2	10	0	.	3.0	8.3	.	.	12	21	7.0	64	5.2	.	.	.
1999	MAY	2.8	4.9	0	.	3.9	6.5	0	.	1.6	6.2	.	.	46	9.2	0	.	6.2	4.8	.	.
1999	JUN	0	2.2	0	.	3.5	3.8	0	.	3.1	.	.	.	6.1	7.9	0	.	4.8	3.6	.	.
1999	JUL	1.1	1.1	0	.	0.84	2.2	0	.	5.3	1.4	.	.	7.2	4.5	0	.	7.9	4.5	.	.
1999	AUG	2.2	0.75	0	.	1.1	4.4	0	.	0.44	0.28	.	.	8.6	10	8.2	63	4.8	1.0	.	.
1999	SEP	2.0	1.9	0	.	3.2	5.4	0	.	2.2	0.50	.	.	8.5	6.7	0	.	3.5	5.6	.	.
1999	OCT	2.6	6.2	0	.	5.7	3.1	0	.	3.2	5.1	.	.	16	7.7	0	.	7.9	6.5	.	.
1999	NOV	2.5	0.94	0	.	2.2	3.1	0	.	0.80	5.9	.	.	5.0	7.9	0	.	3.0	5.6	.	.
1999	DEC	6.1	1.9	0	.	22	8.5	0	.	13	22	.	.	26	5.2	4.5	79	22	.	.	.
2000	JAN	0	.	0	.	4.1	.	0	.	5.2	6.9	.	.	8.8	5.0	0	.	13	.	.	.
2000	FEB	4.8	.	0	.	15	.	0	.	6.7	2.7	.	.	13	15	0	.	23	12	.	.
2000	MAR	1.0	2.7	0	.	9.4	7.7	0	.	4.9	.	.	.	12	16	0.84	290	12	20	.	.
2000	APR	1.2	2.8	0	.	4.5	5.7	0	.	3.9	.	.	.	14	38	0	.	10	19	.	.
2000	MAY	1.2	1.2	0	.	3.4	3.7	0	.	0.83	1.4	.	.	11	6.7	0	.	7.2	.	.	.
2000	JUN	0.80	4.2	0	.	2.1	4.5	0	.	5.8	4.4	.	.	12	22	4.9	80	4.8	13	.	.
2000	JUL	0.73	0	0	.	1.3	2.1	0	.	1.2	2.8	.	.	9.4	4.4	5	74	4.2	0	.	.
2000	AUG	1.1	.	0	.	2.9	3.3	0.077	3500	2.4	2.4	.	.	6.3	6.2	0	.	2.8	0	.	.
2000	SEP	1.4	0.63	0	.	7.3	5.5	0	.	2.9	0	.	.	6.3	9.4	0	.	1.4	.	.	.
2000	OCT	0.58	1.9	0	.	2.7	2.7	0	.	0	0	.	.	26	7.7	2.1	150	5.5	.	.	.
2000	NOV	1.4	6.8	0	.	2.6	13	0	.	2.4	5.0	.	.	15	22	0	.	33	.	.	.
2000	DEC	4.6	12	0	.	7.1	11	0	.	6.0	.	.	.	10	22	29	59	40	45	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

indeno*[1,2,3-cd]* pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	1.6	8.8	0	.	7.0	4.1	0	.	5.9	5.5	.	.	9.3	11	4.5	96	14	.	.	.
2001	FEB	6.9	10	0	.	25	5.0	0	.	6.7	15	.	.	36	3.7	0	.	14	0	.	.
2001	MAR	1.3	2.8	0	.	3.5	2.8	0	.	5.2	.	.	.	55	19	1.9	160	11	8.2	.	.
2001	APR	0.77	4.7	0	.	5.9	.	0	.	5.0	2.7	.	.	19	6.3	0	.	9.3	5.4	.	.
2001	MAY	1.3	1.9	0	.	2.2	6.8	0	.	3.8	5.3	.	.	25	6.5	0	.	8.3	6.4	.	.
2001	JUN	0.87	2.0	0	.	1.7	4.5	0	.	0.80	5.4	.	.	9.1	7.9	3.5	89	0	0	.	.
2001	JUL	1.3	3.0	0	.	2.7	2.1	0	.	1.8	1.0	.	.	8.4	7.2	0	.	2.7	0	.	.
2001	AUG	0.84	2.7	0	.	1.2	4.9	0	.	1.6	1.1	.	.	12	11	1.9	160	2.4	0	.	.
2001	SEP	0.65	1.5	0	.	0.80	5.6	0	.	1.5	5.7	.	.	18	15	5.0	85	3.2	5.1	.	.
2001	OCT	1.7	3.5	0	.	3.1	9.0	0	.	2.6	6.7	.	.	20	22	0	.	9.6	11	.	.
2001	NOV	2.2	4.0	0	.	0.95	5.2	0	.	5.3	5.0	.	.	13	8.3	0	.	10	8.9	.	.
2001	DEC	5.4	5.8	0	.	7.1	6.7	0	.	11	10	.	.	18	23	0	.	9.2	16	.	.
2002	JAN	1.6	4.7	0	.	8.1	5.9	0	.	7.3	4.7	.	.	21	19	6.4	75	13	15	.	.
2002	FEB	0.85	3.2	0	.	6.5	11	0	.	15	11	.	.	28	49	0	.	17	8.6	.	.
2002	MAR	2.3	3.6	0	.	5.4	.	0	.	3.8	.	.	.	5.9	34	1.9	120	7.0	24	.	.
2002	APR	1.8	3.3	0	.	5.7	11	0	.	2.4	8.0	.	.	9.9	16	0	.	9.2	17	.	.
2002	MAY	1.8	1.8	0	.	11	7.2	0	.	3.4	7.1	.	.	22	12	0	.	7.9	10	.	.
2002	JUN	1.5	3.4	0	.	12	3.3	0	.	2.2	3.7	.	.	7.8	7.7	0	.	3.1	5.2	.	.
2002	JUL	0.43	.	0	.	3.6	2.7	0	.	1.3	3.3	.	.	7.6	9.5	0	.	2.9	4.8	.	.
2002	AUG	0.41	1.5	0	.	1.4	7.2	0	.	0.89	2.8	.	.	7.7	5.0	0	.	3.2	3.2	.	.
2002	SEP	0	2.5	0	.	0.56	4.1	0	.	4.4	.	.	.	5.5	8.8	0	.	0.44	5.5	.	.
2002	OCT	2.6	6.5	0	.	3.5	12	0	.	2.2	.	.	.	9.7	18	1.2	230	15	7.0	.	.
2002	NOV	1.9	4.2	0	.	1.5	4.4	0	.	2.3	6.4	.	.	4.6	40	0	.	3.9	19	.	.
2002	DEC	2.3	.	0	.	8.6	4.5	2.6	120	3.6	6.1	.	.	19	34	0	.	15	25	.	.
2003	JAN	1.4	8.8	0	.	5.1	6.3	0	.	2.3	3.1	.	.	5.0	24	0	.	12	27	.	.
2003	FEB	3.1	7.7	0	.	9.1	4.8	0	.	9.2	6.7	.	.	21	18	0	.	21	38	.	.
2003	MAR	4.6	5.1	0	.	6.5	11	0	.	4.2	11	.	.	8.9	22	3.1	86	13	15	.	.
2003	APR	1.0	3.2	0	.	5.5	10	0	.	4.8	8.5	.	.	12	26	1.2	150	14	4.8	.	.
2003	MAY	0.81	3.0	0	.	3.7	.	0	.	1.2	3.8	.	.	11	17	0	.	3.1	8.9	.	.
2003	JUN	0.94	2.9	0	.	1.3	1.9	0	.	1.4	.	.	.	14	12	0	.	4.9	2.6	.	.
2003	JUL	0	1.6	0	.	1.3	2.7	0	.	1.6	0.97	.	.	7.5	7.7	0	.	2.0	6.3	.	.
2003	AUG	0	2.0	0	.	1.5	2.2	0	.	3.7	2.1	.	.	7.2	5.1	0	.	1.5	3.9	.	.
2003	SEP	2.0	2.8	0	.	3.2	3.7	0	.	2.6	4.0	.	.	6.6	33	0	.	4.4	5.5	.	.
2003	OCT	2.7	2.1	0	.	2.5	3.6	0	.	2.7	2.3	.	.	19	14	2.1	130	4.8	3.2	.	.
2003	NOV	5.0	3.2	0	.	6.4	12	0	.	5.0	14	.	.	21	13	3.6	90	7.1	5.6	.	.
2003	DEC	0.68	4.9	0	.	0.92	4.3	0	.	1.5	11	.	.	4.9	15	0	.	16	7.4	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

indeno*[1,2,3-cd]* pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	1.4	10	0	.	4.6	8.3	0	.	3.5	14	.	.	7.8	30	0	.	17	15	.	.
2004	FEB	1.5	6.5	0	.	2.3	7.1	0	.	4.0	3.9	.	.	.	6.2	0	.	9.2	4.3	.	.
2004	MAR	4.3	3.9	0	.	3.5	15	0	.	3.5	2.5	.	.	14	43	0	.	29	18	.	.
2004	APR	1.2	3.5	0	.	0.69	6.8	0	.	6.4	2.7	.	.	6.7	6.7	0	.	2.9	9.1	.	.
2004	MAY	0.94	2.0	0	.	5.2	8.2	0	.	2.0	2.1	.	.	6.4	14	0	.	1.7	8.6	.	.
2004	JUN	0	0.78	0	.	6.3	3.1	0	.	2.0	2.6	.	.	8.3	0.85	0	.	3.8	5.2	.	.
2004	JUL	0.91	3.1	0	.	1.5	4.1	0	.	1.2	1.7	.	.	14	0	0	.	2.2	3.7	.	.
2004	AUG	0	0.060	0	.	2.2	3.0	0	.	5.1	1.4	.	.	11	3.7	0	.	3.3	2.0	.	.
2004	SEP	0.68	0	0	.	4.0	3.0	0	.	1.6	0.90	.	.	18	0.16	0	.	4.2	2.6	.	.
2004	OCT	1.2	2.4	0	.	3.7	5.2	0	.	1.1	2.9	.	.	14	7.2	0	.	5.9	4.3	.	.
2004	NOV	1.9	3.2	0	.	5.8	59	0	.	3.4	7.7	.	.	19	0.35	0	.	12	0.83	.	.
2004	DEC	3.8	18	0	.	5.9	17	4.1	73	4.3	13	.	.	38	40	3.8	74	11	12	.	.
2005	JAN	1.9	11	0	.	11	10	0	.	2.5	8.0	.	.	25	9.1	0	.	23	21	.	.
2005	FEB	2.4	4.4	0.29	590	6.7	7.5	0.13	1100	4.2	4.8	.	.	35	3.8	0.44	350	18	9.7	.	.
2005	MAR	0.95	8.7	0.27	580	8.3	35	0.48	310	4.3	3.3	.	.	21	15	2.0	96	19	15	.	.
2005	APR	2.7	5.7	0.75	190	31	16	0.52	270	8.1	13	.	.	50	30	1.5	110	10	8.3	.	.
2005	MAY	2.6	3.6	0	.	10	7.7	0	.	4.8	0.13	.	.	16	11	2.8	74	8.1	0.17	.	.
2005	JUN	1.8	1.7	0	.	16	4.0	0	.	3.8	7.9	.	.	4.0	4.2	0	.	2.2	0	.	.
2005	JUL	0	0.18	0	.	1.9	2.9	0	.	5.7	.	.	.	3.1	13	0	.	2.2	0	.	.
2005	AUG	2.4	0	0	.	6.6	2.4	0	.	1.0	2.9	.	.	11	4.7	0	.	2.3	5.1	.	.
2005	SEP	0	1.7	0	.	2.5	7.8	0	.	4.1	.	.	.	11	9.1	0	.	4.0	.	.	.
2005	OCT	1.2	0.022	0	.	5.4	11	0	.	2.3	3.0	.	.	21	6.7	0	.	5.3	.	.	.
2005	NOV	3.9	7.8	0	.	4.9	13	0	.	5.3	5.3	.	.	19	5.9	0	.	6.4	13	.	.
2005	DEC	2.8	35	0	.	15	23	0	.	4.3	14	.	.	82	59	0	.	20	23	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

phenanthrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	4.6	6.7	.	.	.	25	.	.	11	.	.	.	8.4	69	.	.	15	120	.	.
1992	FEB	3.3	8.9	.	.	6.1	8.1	.	.	10	.	.	.	28	72	.	.	5.4	150	.	.
1992	MAR	.	5.6	480	58	.	9.2	440	58	5.8	.	.	.	.	65	2400	58	7.0	82	140	60
1992	APR	1.3	3.9	110	59	2.2	7.8	220	58	4.8	.	.	.	13	41	1600	58	7.4	29	180	59
1992	MAY	.	8.5	240	.	1.8	7.4	280	58	7.9	.	.	.	12	19	1200	58	4.3	36	90	60
1992	JUN	0	6.2	160	61	.	10	94	66	3.6	.	.	.	2.9	17	360	59	4.1	8.4	85	60
1992	JUL	0	3.1	680	58	2.6	8.3	250	59	2.0	3.3	.	.	2.8	21	1900	58	3.0	35	120	59
1992	AUG	.	7.8	570	58	.	11	290	59	1.5	.	.	.	.	18	880	59	3.3	26	74	61
1992	SEP	6.0	5.4	550	59	6.6	9.7	170	63	1.7	21	.	.	7.0	24	2600	58	2.6	19	94	61
1992	OCT	1.2	2.4	180	62	2.3	4.8	190	64	2.0	43	.	.	9.7	24	1400	58	3.6	12	80	63
1992	NOV	2.3	.	230	61	9.9	52	380	60	2.2	65	.	.	10	71	2100	58	4.2	55	340	59
1992	DEC	.	.	420	60	.	.	530	59	2.0	42	.	.	.	45	1600	59	6.2	46	760	58
1993	JAN	4.8	.	240	86	7.7	.	470	70	4.2	110	.	.	23	69	1400	59	6.6	200	.	.
1993	FEB	.	2.7	430	66	5.7	1.3	1300	60	7.8	0	.	.	16	25	4700	58	18	50	.	.
1993	MAR	.	0.64	130	85	5.8	0	1200	60	4.8	0	.	.	9.0	.	3500	58	13	21	.	.
1993	APR	.	1.8	120	96	.	15	380	76	16	8	.	.	.	.	950	59	1.9	51	.	.
1993	MAY	1.5	3.6	190	73	3.0	8.9	270	74	2.8	21	.	.	8.7	9.0	560	59	5.2	14	.	.
1993	JUN	1.3	3.0	370	62	0	7.6	440	63	4.1	17	.	.	2.7	17	750	59	4.2	16	.	.
1993	JUL	.	.	640	59	4.2	2.5	.	.	3.2	18	.	.	9.5	5.4	1300	58	3.3	28	.	.
1993	AUG	0.80	0	290	62	1.3	0.11	96	100	1.4	34	.	.	5.2	3.2	620	59	2.2	28	.	.
1993	SEP	.	0.39	260	71	1.9	.	490	64	1.0	29	.	.	8.3	18	1600	58	3.8	.	.	.
1993	OCT	0.89	6.2	200	85	3.6	10	340	78	3.3	56	.	.	13	31	3400	58	3.9	270	.	.
1993	NOV	.	0	100	130	.	0	430	73	4.3	42	.	.	9.3	52	2400	58	4.0	130	.	.
1993	DEC	3.3	0	210	85	2.0	3.1	660	64	4.4	110	.	.	15	45	2200	58	9.4	.	.	.
1994	JAN	8.8	.	110	130	12	.	500	58	13	160	.	.	22	59	2800	58	35	180	.	.
1994	FEB	18	.	280	71	.	.	770	58	9.4	20	.	.	32	8.4	1500	58	15	23	.	.
1994	MAR	25	.	110	110	16	0.56	180	58	3.3	33	.	.	38	17	1200	58	4.5	76	.	.
1994	APR	6.1	4.6	70	180	5.7	9.4	460	58	1.9	21	.	.	13	57	980	58	7.5	71	.	.
1994	MAY	8.0	6.5	290	65	10	8.4	720	58	1.5	5.8	.	.	20	11	280	58	5.8	.	.	.
1994	JUN	3.6	14	.	.	4.2	.	180	58	2.4	29	.	.	6.2	0	860	58	2.7	14	.	.
1994	JUL	19	3.8	480	60	5.6	0	340	58	1.4	15	.	.	18	0	1000	58	4.5	18	.	.
1994	AUG	1.7	3.8	290	63	3.0	12	350	58	1.3	22	.	.	9.5	3.7	1600	58	3.8	31	.	.
1994	SEP	2.0	16	220	65	1.1	.	98	58	2.1	7.9	.	.	11	39	960	58	3.2	21	.	.
1994	OCT	2.0	7.2	380	64	3.6	.	240	58	1.4	15	.	.	14	24	890	58	3.9	15	.	.
1994	NOV	3.7	4.8	160	95	4.4	25	580	58	2.5	.	.	.	36	26	1700	58	3.5	33	.	.
1994	DEC	2.7	5.3	210	69	7.2	7.4	630	58	2.1	19	.	.	33	43	3900	58	9.0	49	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

phenanthrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	3.6	11	210	59	4.3	30	550	58	1.6	.	.	.	26	86	2300	58	5.2	.	.	.
1995	FEB	3.0	6.6	230	59	6.9	8.9	360	58	5.9	.	.	.	46	50	1900	58	9.8	16	.	.
1995	MAR	1.3	2.2	43	63	2.9	16	420	58	7.6	.	.	.	22	48	1200	58	6.0	9.1	.	.
1995	APR	1.1	3.9	96	59	1.3	18	84	59	2.0	15	.	.	9.3	13	720	58	2.4	16	.	.
1995	MAY	1.8	4.0	260	58	4.6	13	160	58	1.6	9.9	.	.	6.0	27	590	58	2.2	13	.	.
1995	JUN	1.4	1.1	250	58	4.5	3.7	120	58	2.2	3.2	.	.	8.9	13	1900	58	1.9	.	.	.
1995	JUL	1.8	8.6	280	58	2.2	5.2	220	58	1.4	2.2	.	.	3.9	11	2300	58	2.2	13	.	.
1995	AUG	2.0	8.2	230	58	2.5	4.4	150	58	1.4	3.4	.	.	6.9	14	1200	58	1.7	6.5	.	.
1995	SEP	1.4	8.0	3400	58	3.1	5.6	220	58	2.1	4.7	.	.	12	13	850	58	3.3	6.5	.	.
1995	OCT	1.1	6.7	120	59	4.2	20	130	59	2.3	9.8	.	.	16	20	2300	58	4.0	16	.	.
1995	NOV	3.0	.	140	59	.	16	440	58	1.7	56	.	.	21	42	950	58	1.6	300	.	.
1995	DEC	.	42	550	58	7.4	21	380	58	.	58	.	.	36	48	1000	58	14	94	.	.
1996	JAN	2.5	32	390	58	16	31	630	58	6.1	2.8	.	.	24	42	2900	58	36	.	.	.
1996	FEB	12	3.2	220	58	7.7	14	380	58	10	31	.	.	54	31	700	59	19	40	.	.
1996	MAR	5.3	1.2	69	59	8.5	6.0	240	59	4.9	18	.	.	67	22	460	59	11	56	.	.
1996	APR	1.5	2.4	97	59	2.9	2.6	110	60	1.7	17	.	.	15	19	760	59	3.2	20	.	.
1996	MAY	1.7	3.0	100	58	3.5	.	100	59	2.7	12	.	.	4.3	6.9	620	59	2.1	25	.	.
1996	JUN	1.4	2.7	230	58	2.5	4.9	720	58	3.5	9.2	.	.	7.0	11	990	58	2.8	26	.	.
1996	JUL	1.3	2.9	240	58	1.3	0.96	160	58	4.0	23	.	.	9.0	.	840	58	1.4	13	.	.
1996	AUG	0.76	2.9	350	58	1.4	5.4	220	58	1.3	.	.	.	5.4	0.78	780	58	5.6	10	.	.
1996	SEP	2.0	3.9	410	58	1.3	.	300	58	1.3	8.9	.	.	6.4	3.6	770	58	2.2	21	.	.
1996	OCT	3.7	3.5	230	58	4.2	0.62	130	59	5.9	10	.	.	8.1	1.1	470	59	12	21	.	.
1996	NOV	2.1	6.4	400	58	2.5	0.47	280	59	11	21	.	.	5.1	1.7	650	59	12	43	.	.
1996	DEC	3.0	18	85	59	2.8	16	520	58	2.5	3.7	.	.	18	12	1800	58	18	55	.	.
1997	JAN	8.2	29	110	61	8.1	30	450	59	29	47	150	67	16	17	940	58	11	75	510	59
1997	FEB	3.3	4.7	140	59	2.7	27	160	60	7.1	58	89	77	37	39	1200	58	10	140	330	59
1997	MAR	2.8	9.4	49	64	4.3	14	83	64	4.4	43	98	75	17	59	840	58	9.0	100	330	59
1997	APR	3.1	1.9	230	58	5.9	6.1	290	59	13	19	100	70	21	35	940	58	7.6	27	100	64
1997	MAY	2.4	7.4	140	59	3.6	13	120	60	2.5	.	57	93	15	54	790	58	3.9	39	130	63
1997	JUN	2.0	5.3	310	58	1.8	13	440	58	6.9	22	54	76	8.2	31	880	58	4.0	31	160	59
1997	JUL	1.3	6.4	330	58	1.6	6.7	400	58	1.5	48	97	64	5.7	24	600	58	4.7	12	190	59
1997	AUG	2.9	2.5	270	58	3.3	4.3	300	58	2.4	44	140	62	8.7	15	1100	58	7.6	57	74	62
1997	SEP	1.5	1.9	270	58	3.4	6.3	330	59	2.2	68	82	74	10	26	1200	58	4.1	79	280	59
1997	OCT	2.4	7.9	250	59	5.7	5.6	490	58	5.5	.	150	65	30	17	1700	58	4.0	23	120	62
1997	NOV	4.3	7.6	450	58	12	7.6	670	58	3.6	23	.	.	22	22	1100	58	4.2	99	180	61
1997	DEC	2.6	4.9	91	60	4.7	3.7	400	59	3.2	59	.	.	19	30	1200	58	12	62	380	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

phenanthrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	3.0	12	190	59	5.3	18	450	95	11	86	180	65	29	59	2300	58	5.2	220	840	58
1998	FEB	6.4	.	160	59	9.9	6.7	360	100	6.7	63	91	75	38	21	2400	58	30	.	460	59
1998	MAR	4.0	.	100	59	7.4	8.4	200	220	3.1	40	85	84	20	41	290	59	9.3	63	110	63
1998	APR	2.1	0.89	130	59	7.1	7.5	200	160	3.6	10	42	110	14	28	460	58	8.1	20	110	61
1998	MAY	1.8	2.6	200	58	1.5	4.1	160	160	0.88	19	66	76	11	11	1000	58	3.2	21	210	59
1998	JUN	1.7	5.9	230	58	1.5	5.4	200	120	0.89	3.3	51	80	4.3	7.8	1100	58	1.8	20	150	59
1998	JUL	1.3	4.1	170	58	1.5	3.9	200	110	0.54	8.6	45	82	6.8	16	670	58	1.4	15	140	59
1998	AUG	3.1	.	500	58	3.0	.	250	95	0.44	9.0	37	89	7.1	.	1100	58	3.3	24	110	59
1998	SEP	0.87	.	110	59	0.62	.	120	190	1.2	7.2	38	100	4.1	.	1200	58	2.3	14	240	59
1998	OCT	1.5	11	170	59	6.5	7.8	210	160	2.1	6.5	56	99	8.7	6.8	650	58	5.6	25	220	59
1998	NOV	2.0	14	170	59	5.1	11	340	120	1.8	29	140	69	13	.	1000	58	3.6	26	410	59
1998	DEC	3.9	14	270	59	5.2	9.3	200	180	2.4	41	100	79	19	.	960	58	7.2	29	300	59
1999	JAN	3.9	18	190	59	9.7	30	420	58	1.1	44	150	64	24	.	1800	58	7.9	78	670	59
1999	FEB	4.9	7.7	260	59	8.2	11	850	58	5.0	29	110	67	51	.	1400	58	41	16	580	59
1999	MAR	5.5	3.0	260	59	16	4.1	490	58	2.3	23	70	76	56	35	820	58	9.0	55	230	60
1999	APR	4.8	.	190	58	6.2	24	140	59	1.5	61	64	76	11	59	610	58	2.5	.	110	63
1999	MAY	8.2	6.1	340	58	3.9	5.3	300	58	0.93	27	53	74	33	13	980	58	1.9	16	110	61
1999	JUN	1.4	3.6	170	58	5.5	5.5	270	58	0.82	.	38	71	9.0	9.3	910	58	1.2	9.7	79	63
1999	JUL	1.6	4.7	350	58	2.8	4.0	350	58	1.5	16	77	63	5.1	10	970	58	1.6	17	130	60
1999	AUG	1.5	6.8	460	58	2.7	6.6	240	58	0.97	9.0	48	70	7.4	19	1300	58	1.3	11	72	62
1999	SEP	3.3	6.5	440	58	4.9	6.1	290	58	0.66	11	61	69	8.4	13	1100	58	1.4	16	170	59
1999	OCT	2.4	14	260	59	8.0	3.1	540	58	0.56	15	110	66	13	13	1400	58	2.5	17	160	61
1999	NOV	2.6	4.2	280	59	4.6	5.0	190	59	0.34	41	100	71	6.2	20	670	58	0.93	22	400	59
1999	DEC	5.9	5.0	420	58	34	18	870	58	3.5	73	420	59	21	20	1200	58	5.5	.	480	59
2000	JAN	3.9	.	91	58	12	.	410	58	4.1	24	87	66	15	17	1100	58	7.0	.	320	59
2000	FEB	6.4	.	290	58	22	.	600	58	4.6	18	110	63	14	30	1700	58	15	51	560	58
2000	MAR	3.4	5.4	120	58	11	11	260	58	2.1	.	95	62	13	27	350	59	3.4	57	190	59
2000	APR	2.8	7.9	160	58	8.0	17	190	58	2.2	.	59	66	15	120	630	58	3.6	140	92	60
2000	MAY	1.7	8.8	130	58	3.3	14	190	58	1.4	160	66	62	11	21	1500	58	2.1	.	160	59
2000	JUN	2.0	14	220	58	1.3	11	210	58	3.1	.	65	61	6.1	69	1400	58	1.4	85	130	59
2000	JUL	0	6.4	270	58	0	10	250	58	1.1	.	44	63	7.7	17	1100	58	1.8	53	130	59
2000	AUG	2.3	.	280	58	2.9	5.0	210	58	1.3	75	57	61	7.5	17	1000	58	1.1	23	100	59
2000	SEP	2.1	8.0	220	58	4.0	12	420	58	2.0	20	90	61	5.7	28	1600	58	2.0	.	160	59
2000	OCT	2.2	6.6	110	58	4.1	8.1	190	58	0.99	7.3	57	64	13	27	1700	58	1.4	.	120	59
2000	NOV	3.3	16	210	58	3.7	26	270	58	3.2	11	110	61	16	59	1200	58	2.6	.	390	58
2000	DEC	4.3	23	450	58	7.8	33	480	58	7.8	.	130	61	6.1	67	1300	58	6.9	97	770	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

phenanthrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	3.7	17	190	58	9.1	21	290	58	6.2	37	120	70	15	35	1100	58	5.4	.	790	58
2001	FEB	11	25	360	58	35	22	670	58	5.8	61	190	64	41	18	1000	58	15	0	500	59
2001	MAR	3.9	9.8	130	58	6.1	8.8	150	59	1.6	.	91	76	59	51	1800	58	6.4	35	250	60
2001	APR	4.8	14	63	58	6.4	.	220	58	2.3	11	64	86	13	24	530	58	5.1	18	240	59
2001	MAY	2.0	8.1	230	58	3.0	17	140	59	1.4	21	50	90	12	21	800	58	3.5	24	150	60
2001	JUN	1.9	6	690	58	3.2	12	170	58	1.0	24	55	75	6.4	21	1300	58	0.95	5.1	110	60
2001	JUL	1.9	5.5	260	58	1.9	7.6	130	58	1.4	11	46	84	5.3	14	940	58	1.5	11	140	60
2001	AUG	1.1	6.5	180	58	1.9	30	150	58	1.3	13	57	77	5.3	19	1200	58	1.6	15	130	60
2001	SEP	1.6	5.0	160	58	1.8	31	100	59	0.89	24	65	81	4.7	20	660	58	1.1	29	120	61
2001	OCT	1.9	13	260	58	2.8	0.55	380	58	1.5	24	110	73	12	34	670	58	4.3	42	180	61
2001	NOV	1.5	12	240	58	1.9	0.59	180	59	2.1	20	110	72	7.1	22	650	58	2.5	33	380	59
2001	DEC	4.5	9.2	200	58	5.4	6.1	270	58	7.2	42	170	64	8.3	37	400	59	2.8	56	300	59
2002	JAN	3.5	10	110	59	7.3	11	260	58	2.6	20	130	62	15	36	770	58	9.6	46	310	60
2002	FEB	2.9	7.2	180	59	6.2	24	530	58	4.7	48	240	60	29	65	1100	58	16	30	350	60
2002	MAR	5.2	11	100	59	8.0	.	230	58	3.0	.	100	64	6.6	60	410	58	5.5	55	280	60
2002	APR	2.7	9.2	52	60	4.8	21	410	58	1.8	14	120	62	8.6	47	860	58	4.3	39	200	61
2002	MAY	1.8	5.5	120	59	6.1	18	170	58	1.5	14	110	62	4.5	33	540	58	1.9	26	160	62
2002	JUN	2.5	9.5	210	58	7.2	8.3	180	58	1.8	7.9	33	74	7.1	13	680	58	1.7	12	110	61
2002	JUL	2.0	.	200	58	4.0	10	360	58	1.1	7.5	57	63	6.1	19	860	58	2.0	12	110	61
2002	AUG	1.3	8.1	370	58	2.1	14	170	58	0.91	5.1	38	70	5.0	9.7	570	58	1.5	6.6	140	60
2002	SEP	1.1	8.7	150	59	1.3	7.4	130	58	3.4	.	100	61	2.9	28	330	58	1.0	12	46	76
2002	OCT	1.5	7.2	390	58	1.8	16	290	58	1.2	.	73	67	3.8	26	540	58	2.8	16	310	59
2002	NOV	1.0	3.8	220	58	1.3	5.0	84	59	1.7	14	160	60	2.4	51	1000	58	0.96	39	390	59
2002	DEC	2.8	.	160	59	7.2	7.1	350	58	2.5	13	130	63	8.2	56	1000	58	7.0	55	650	59
2003	JAN	3.6	8.6	140	59	6.1	10	180	59	7.8	9.7	59	79	7.5	43	430	58	22	81	300	59
2003	FEB	5.5	12	210	59	9.6	8.0	440	58	14	15	230	60	15	41	810	58	16	130	650	58
2003	MAR	7.1	4.8	180	59	7.0	13	200	58	5.6	21	130	61	8.7	30	360	58	5.8	43	310	58
2003	APR	2.0	5.9	82	60	5.8	15	210	58	4.3	19	90	65	11	32	460	58	6.7	14	210	59
2003	MAY	1.4	5.8	120	59	4.4	.	140	58	1.5	7.7	37	80	8.2	35	840	58	1.3	23	110	59
2003	JUN	0.99	3.9	250	58	1.5	2.3	95	59	1.0	.	55	66	3.1	14	480	58	3.3	8.8	180	58
2003	JUL	0.92	3.3	330	58	1.4	5.1	160	58	0.93	1.8	74	62	2.9	20	1100	58	1.6	19	210	58
2003	AUG	1.3	4.1	210	58	1.7	3.2	190	58	1.5	5.5	54	65	5.6	12	920	58	1.0	10	150	58
2003	SEP	1.7	3.9	150	59	1.9	2.3	120	59	1.1	9.4	79	63	2.4	29	1100	58	2.0	15	110	59
2003	OCT	1.4	4.1	160	59	1.4	4.5	160	58	1.1	5.1	120	62	4.2	11	620	58	1.9	8.1	180	59
2003	NOV	1.5	5.7	200	59	2.3	22	270	58	1.4	30	200	60	5.2	12	880	58	2.9	19	350	58
2003	DEC	1.9	3.5	29	66	1.6	13	76	60	2.0	150	130	62	3.7	19	540	58	3.0	23	390	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

phenanthrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	2.1	13	120	58	4.5	11	270	58	3.1	120	98	66	4.3	24	1200	58	9.2	78	610	58
2004	FEB	1.5	6.1	130	58	2.0	7.1	120	58	2.7	9.9	190	60	.	6.3	190	58	4.4	17	350	59
2004	MAR	1.5	6.5	91	58	2.8	19	240	58	2.3	6.6	91	65	8.3	66	550	58	8.5	49	420	59
2004	APR	1.4	5.9	26	58	5.5	10	110	58	4.3	7.1	200	60	5.6	17	150	58	2.4	24	210	59
2004	MAY	0.33	6.0	75	58	2.7	18	160	58	2.6	5.0	62	68	4.0	37	430	58	1.5	19	180	59
2004	JUN	0.99	2.9	120	58	6.8	8.3	150	58	2.1	4.2	59	66	4.4	2.5	820	58	3.6	11	230	59
2004	JUL	0.42	6.3	220	58	0	7.5	150	58	1.0	3.8	50	65	2.3	0	1200	58	1.2	15	160	59
2004	AUG	0	0.12	67	58	0	6.9	140	58	3.1	6.1	92	61	1.1	15	640	58	2.0	13	180	59
2004	SEP	0	0	100	58	0	0.13	160	58	1.9	2.4	48	69	9.0	42	1300	58	3.2	11	460	58
2004	OCT	1.5	10	140	58	1.5	17	220	58	1.5	8.9	98	64	5.9	23	870	58	3.2	14	240	59
2004	NOV	1.6	6.3	110	58	1.0	72	180	58	2.9	12	120	63	6.8	16	960	58	4.0	18	230	59
2004	DEC	1.6	18	450	58	2.6	24	610	58	3.1	29	230	60	10	53	1400	58	6.7	45	460	59
2005	JAN	3.4	16	200	58	8.2	21	800	59	3.7	28	95	71	10	39	960	58	28	67	540	59
2005	FEB	2.7	6.8	180	58	6.2	15	390	60	2.7	14	170	62	24	11	1600	58	5.6	29	440	59
2005	MAR	1.5	4.4	35	62	3.8	26	250	63	5.2	9.7	130	64	19	13	780	58	12	30	370	59
2005	APR	2.3	12	150	58	17	21	220	63	5.2	25	110	65	23	56	940	58	7.3	27	130	62
2005	MAY	1.8	3.6	110	59	3.6	8.2	98	76	1.9	13	110	63	14	10	1600	58	5.7	11	230	59
2005	JUN	1.4	4.3	230	58	5.3	4.2	190	62	2.1	12	77	65	6.5	7.8	1000	58	2.1	9.9	300	59
2005	JUL	0	4.6	480	58	0	3.8	170	62	2.4	.	85	63	4.5	17	890	58	2.2	9.7	180	59
2005	AUG	1.8	7.0	300	58	3.7	6.4	200	61	2.5	5.7	74	65	5.3	15	1300	58	1.8	12	200	59
2005	SEP	0.36	3.0	430	58	2.0	7.8	170	63	3.0	.	71	70	7.2	13	1200	58	3.0	.	280	59
2005	OCT	0	2.8	300	58	2.5	21	200	63	1.9	7.5	120	64	6.9	16	1000	58	3.4	.	390	59
2005	NOV	0.47	8.5	290	58	1.2	21	390	61	2.6	14	280	61	10	4.4	840	58	5.6	29	450	59
2005	DEC	2.6	17	170	58	11	37	880	59	2.5	40	350	60	38	67	2200	58	11	54	650	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	3.5	6.2	.	.	.	12	.	.	11	.	.	.	13	41	.	.	55	0	.	.
1992	FEB	4.1	6.8	.	.	7.0	4.2	.	.	9.5	.	.	.	33	51	.	.	10	0	.	.
1992	MAR	.	4.8	250	58	.	5.3	46	59	11	.	.	.	.	48	290	59	7.4	0	22	62
1992	APR	1.3	3.8	19	61	3.1	5.7	24	60	6.0	.	.	.	16	37	130	61	10	0	17	63
1992	MAY	.	4.1	40	.	2.5	7.2	32	59	10	.	.	.	14	16	120	58	5.2	0	20	61
1992	JUN	2.2	4.7	35	59	.	11	16	110	3.7	.	.	.	3.6	18	80	60	5.6	0	21	60
1992	JUL	6.7	2.8	110	58	3.5	9.4	40	69	2.3	0	.	.	4.7	16	460	58	3.9	0	19	61
1992	AUG	.	6.6	200	58	.	11	48	68	3.5	.	.	.	.	12	150	59	3.7	0	11	68
1992	SEP	9.8	6.3	110	58	10	10	22	110	3.3	0	.	.	8.7	16	470	58	2.2	0	13	68
1992	OCT	1.7	3.0	26	61	2.8	4.4	24	110	1.8	0	.	.	11	24	420	58	4.0	0	13	68
1992	NOV	2.3	.	27	61	10	40	31	95	2.4	0	.	.	10	56	490	58	4.2	0	59	59
1992	DEC	.	.	51	59	.	.	71	66	3.1	0	.	.	.	39	350	59	11	0	200	58
1993	JAN	6.0	.	22	64	11	.	39	59	4.9	0	.	.	35	49	220	58	6.5	0	.	.
1993	FEB	.	2.5	38	60	7.5	1.2	120	58	6.8	0	.	.	17	20	320	58	40	0	.	.
1993	MAR	2.2	0.52	8.6	69	7.3	0	170	58	6.2	0	.	.	16	.	310	58	29	0	.	.
1993	APR	.	0.50	4.0	110	.	17	43	59	24	0	.	.	.	.	210	58	0.84	0	.	.
1993	MAY	2.0	1.6	20	61	2.7	8.9	21	60	4.4	0	.	.	6.3	7.5	43	59	3.2	0	.	.
1993	JUN	1.1	1.7	18	61	3.9	6.8	52	59	3.6	0	.	.	3.6	14	83	58	2.4	0	.	.
1993	JUL	0.72	.	57	59	2.3	1.2	.	.	6.8	0	.	.	11	4.9	220	58	3.8	0	.	.
1993	AUG	1.0	0	27	59	1.9	0	13	62	2.1	0	.	.	5.9	2.8	91	58	1.6	0	.	.
1993	SEP	.	0.28	35	60	4.6	.	67	59	1.4	0	.	.	13	15	170	58	3.9	.	.	.
1993	OCT	1.1	4.4	21	63	3.8	12	59	59	5.2	0	.	.	18	30	530	58	3.3	0	.	.
1993	NOV	.	0	9.5	78	.	0.53	53	59	6.2	0	.	.	13	45	360	58	3.8	48	.	.
1993	DEC	2.7	2.8	28	61	2.4	3.6	84	59	4.1	63	.	.	17	35	200	58	10	.	.	.
1994	JAN	8.1	.	7.1	320	12	.	49	59	7.7	0	.	.	30	48	260	58	27	0	.	.
1994	FEB	11	.	25	100	.	.	40	59	5.1	0	.	.	33	8.3	120	58	14	0	.	.
1994	MAR	20	.	.	.	14	0.39	.	.	3.7	0	.	.	50	14	150	58	4.7	0	.	.
1994	APR	2.2	3.7	0	.	5.8	6.1	24	60	2.1	0	.	.	14	45	77	59	8.0	0	.	.
1994	MAY	5.9	5.5	8.8	180	9.8	2.8	34	59	1.0	0	.	.	15	9.1	14	64	7.7	.	.	.
1994	JUN	1.7	5.3	.	.	2.8	.	14	61	3.2	0	.	.	6.4	0	58	59	1.9	0	.	.
1994	JUL	17	1.7	32	71	6.2	0	32	59	2.4	0	.	.	11	0	68	58	4.8	0	.	.
1994	AUG	1.3	2.9	25	82	3.9	10	20	60	3.3	0	.	.	21	2.2	120	58	3.8	0	.	.
1994	SEP	1.6	7.8	25	79	0.69	.	16	61	5.0	0	.	.	24	19	98	58	3.8	0	.	.
1994	OCT	2.8	7.8	26	93	6.9	.	21	61	1.1	0	.	.	30	15	95	58	4.3	0	.	.
1994	NOV	4.0	2.3	8.8	250	8.7	22	64	59	3.2	.	.	.	49	18	170	58	3.9	7.8	.	.
1994	DEC	1.5	3.9	11	140	12	4.8	43	59	4.2	17	.	.	60	32	410	58	17	32	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	2.9	8.1	9.7	140	5.5	19	29	59	0.84	.	.	.	24	56	310	58	5.9	.	.	.
1995	FEB	1.8	5.3	5.7	250	6.9	8.0	13	63	5.2	.	.	.	59	31	100	59	24	14	.	.
1995	MAR	0	1.6	1.6	640	3.9	13	32	59	7.0	.	.	.	33	35	110	58	13	7.9	.	.
1995	APR	0.96	2.7	5.5	150	1.9	20	4.6	82	1.2	12	.	.	18	16	60	59	2.5	17	.	.
1995	MAY	2.6	2.3	6.7	130	7.6	17	7.5	66	0.81	8.8	.	.	11	31	41	59	2.7	7.9	.	.
1995	JUN	0.97	0.59	9.3	94	2.7	2.7	4.5	71	2.5	3.2	.	.	11	9.8	240	58	1.7	.	.	.
1995	JUL	2.9	2.9	330	58	2.8	4.0	18	59	1.8	2.7	.	.	7.6	7.8	280	58	4.9	5.7	.	.
1995	AUG	2.8	2.7	21	68	3.9	1.6	16	60	1.4	2.5	.	.	12	11	220	58	1.6	4.1	.	.
1995	SEP	0.88	5.7	1300	58	4.0	6.0	22	60	4.3	5.0	.	.	18	13	82	58	3.9	4.0	.	.
1995	OCT	0.96	7.5	12	120	4.2	22	15	62	2.6	13	.	.	22	17	380	58	6.0	9.6	.	.
1995	NOV	3.5	.	3.8	280	.	13	27	60	1.4	57	.	.	29	39	85	59	1.8	120	.	.
1995	DEC	.	38	30	69	8.3	16	24	60	.	58	.	.	47	42	110	58	17	54	.	.
1996	JAN	2.2	16	25	61	15	19	28	59	5.8	2.9	.	.	40	27	320	58	41	.	.	.
1996	FEB	5.5	1.8	3.6	130	5.9	9.0	18	60	8.0	40	.	.	62	18	83	59	29	43	.	.
1996	MAR	6.3	0.70	2.6	140	11	4.3	16	61	5.5	21	.	.	100	13	30	59	8.8	83	.	.
1996	APR	1.5	2.1	9.1	65	2.7	3.4	7.8	68	3.2	18	.	.	22	12	53	59	3.7	21	.	.
1996	MAY	2.2	2.5	9.4	63	3.9	.	4.7	76	4.0	11	.	.	6.4	4.5	95	58	2.4	22	.	.
1996	JUN	1.1	1.2	18	60	2.1	3.6	60	58	4.9	2.7	.	.	8.7	4.6	100	58	3.6	7.7	.	.
1996	JUL	1.5	6.4	27	59	1.5	0.74	18	59	5.5	13	.	.	17	.	82	58	1.1	6.8	.	.
1996	AUG	0.67	1.7	46	59	0.97	2.4	38	58	4.3	.	.	.	6.8	0.53	76	58	7.3	6.5	.	.
1996	SEP	2.6	2.0	37	59	1.1	.	23	59	1.1	14	.	.	7.9	2.6	160	58	2.9	3.5	.	.
1996	OCT	5.6	2.2	32	60	5.5	0.42	11	64	7.5	7.8	.	.	11	1.1	58	59	23	17	.	.
1996	NOV	2.7	3.3	49	59	2.5	0.33	22	60	14	9.1	.	.	7.1	1.1	72	59	17	34	.	.
1996	DEC	2.0	10	4.3	110	2.0	10	56	59	3.2	31	.	.	23	10	280	58	29	26	.	.
1997	JAN	3.7	19	3.2	150	7.2	19	45	59	18	29	11	73	12	14	77	59	9.2	54	70	59
1997	FEB	2.6	2.9	7.3	77	2.2	16	11	67	4.7	27	8.3	78	42	24	62	59	10	150	40	61
1997	MAR	1.4	6.4	1.9	190	3.9	11	2.7	150	6.7	17	9.5	75	18	51	68	59	12	110	51	60
1997	APR	2.5	1.4	24	59	4.9	5.3	17	61	17	14	7.0	80	23	28	110	58	8.8	19	13	72
1997	MAY	2.7	5.7	6.7	68	4.7	11	6.0	77	2.1	.	6.8	84	20	41	73	59	4.7	21	14	73
1997	JUN	2.7	2.5	14	60	1.3	13	33	59	15	5.5	7.6	70	9.1	20	67	58	6.9	24	24	61
1997	JUL	1.1	3.2	38	59	0.89	5.9	40	59	1.6	24	34	59	5.7	12	58	58	8.3	8.5	30	61
1997	AUG	4.6	0.72	34	59	4.6	2.6	34	59	3.1	17	36	59	11	11	110	58	19	15	26	60
1997	SEP	1.1	0.69	17	61	4.4	4.6	43	59	3.1	170	20	62	17	23	120	58	4.3	26	34	61
1997	OCT	2.6	4.8	13	63	7.4	4.7	34	59	7.9	.	23	62	35	12	140	58	7.8	23	22	64
1997	NOV	3.6	5.7	20	61	13	6.6	22	61	3.8	8.4	.	.	23	14	73	59	6.6	58	30	63
1997	DEC	1.4	3.3	2.9	120	6.3	2.4	34	59	3.0	14	.	.	21	15	78	59	17	50	61	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	2.0	8.0	3.7	110	4.4	14	16	190	18	53	45	59	27	30	200	59	7.4	79	150	59
1998	FEB	6.8	.	12	63	9.7	5.3	31	100	11	29	19	62	50	13	290	58	52	.	110	59
1998	MAR	3.3	.	2.6	120	7.9	6.2	12	300	5.2	25	20	63	20	29	15	89	12	35	17	72
1998	APR	2.2	0.39	7.2	68	11	6.2	16	170	5.6	10	7.9	77	18	19	24	65	14	19	18	66
1998	MAY	2.2	1.4	17	60	1.5	3.4	23	110	2.2	18	11	65	21	6.4	97	59	6.5	22	54	59
1998	JUN	1.8	3.9	24	59	1.2	4.3	29	90	2.6	5.3	14	62	5.5	6.2	98	59	4.5	15	22	63
1998	JUL	1.2	2.0	18	60	1.3	2.4	46	73	0.71	5.3	14	63	17	11	67	59	1.4	12	28	61
1998	AUG	6.7	.	80	58	3.6	.	52	71	0.84	5.1	11	65	8.8	.	120	58	5.3	19	22	62
1998	SEP	0.43	.	8.2	67	0.83	.	16	150	2.1	2.9	7.7	75	6.4	.	94	59	5.3	12	32	61
1998	OCT	1.1	9.7	21	61	13	5.8	57	78	3.2	3.9	8.7	79	14	5.2	70	60	28	25	100	59
1998	NOV	1.2	13	13	65	4.1	8.1	26	140	3.1	22	19	64	15	.	83	59	7.2	22	53	60
1998	DEC	3.2	9.5	22	61	5.7	6.4	8.1	360	4.6	29	11	75	27	.	92	59	13	20	51	61
1999	JAN	3.4	13	7.3	66	4.0	21	17	59	2.3	32	17	62	27	.	130	59	21	41	66	59
1999	FEB	5.0	5.6	10	62	8.4	8.6	48	58	6.5	18	22	60	68	.	63	61	91	14	220	58
1999	MAR	5.3	2.1	15	60	22	3.1	8.7	62	4.6	13	15	62	71	29	55	61	15	30	41	60
1999	APR	5.8	.	2.7	75	6.4	19	6.5	62	2.9	15	12	63	15	37	49	61	4.7	.	16	67
1999	MAY	4.7	4.9	16	59	4.8	4.8	25	59	1.4	8.1	9.7	64	58	8.9	67	60	3.6	9.2	14	66
1999	JUN	0.56	2.2	12	59	6.1	4.8	32	58	2.4	.	8.8	62	13	5.7	95	59	3.4	6.6	12	69
1999	JUL	1.1	1.5	59	58	2.0	2.1	45	58	3.4	3.2	21	59	4.8	5.4	100	59	4.6	8.6	26	60
1999	AUG	1.5	1.6	160	58	2.4	5.7	28	58	1.3	4.4	18	60	12	13	120	59	2.2	4.8	39	59
1999	SEP	3.3	4.8	28	59	8.0	6.0	25	59	1.8	5.0	14	61	11	8.8	79	59	2.3	13	41	59
1999	OCT	2.7	11	24	59	10	3.2	36	59	1.3	13	23	60	20	11	120	59	5.8	17	28	62
1999	NOV	2.6	2.8	23	59	4.8	4.5	14	60	0.36	18	17	63	6.3	14	91	60	1.2	16	73	59
1999	DEC	5.0	3.1	40	59	35	15	78	58	11	56	55	59	24	12	120	59	14	.	75	59
2000	JAN	2.2	.	6.4	64	8.0	.	31	59	4.3	18	13	69	16	10	65	58	11	.	56	59
2000	FEB	7.0	.	27	59	25	.	27	59	6.4	10	11	72	14	22	130	58	26	28	89	58
2000	MAR	1.6	0.54	6.4	63	14	9.0	11	60	2.5	.	19	61	18	22	23	58	6.2	28	35	59
2000	APR	1.7	3.8	0	.	8.8	2.5	0	.	2.7	.	13	63	18	62	51	58	5.9	31	17	60
2000	MAY	1.7	0.49	0	.	2.5	7.2	18	59	1.6	47	12	62	12	13	110	58	3.5	.	20	60
2000	JUN	0	8.6	4.3	64	0	7.2	13	59	5.8	.	16	60	6.5	37	150	58	1.3	24	27	59
2000	JUL	0	0	26	58	0	2.0	32	58	1.5	7.2	12	61	7.0	7.7	100	58	2.9	19	40	59
2000	AUG	1.7	.	16	59	0.63	4.5	19	59	1.6	15	15	60	7.0	9.1	91	58	1.3	15	22	59
2000	SEP	0	3.1	19	59	0	9.9	36	58	2.4	8.7	18	61	6.7	18	140	58	3.0	.	34	59
2000	OCT	0.90	4.5	6.5	62	3.1	5.1	19	59	1.1	3.6	10	65	18	17	300	58	2.8	.	27	59
2000	NOV	0	13	14	59	1.2	20	23	59	4.8	5.6	15	63	20	41	120	58	5.4	.	77	58
2000	DEC	1.9	18	12	60	5.2	22	16	59	9.2	.	15	64	6.5	51	180	58	16	67	110	58

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	1	14	0	.	9.1	13	11	59	6.9	20	13	72	13	24	85	58	9.7	.	100	58
2001	FEB	6.9	5.9	23	59	35	10	27	59	6.1	42	23	64	45	7.3	76	58	17	0	50	59
2001	MAR	2.5	3.0	21	59	6.0	5.8	4.2	67	2.5	.	21	63	78	39	69	58	12	19	31	59
2001	APR	6.9	6.6	2.9	72	8.9	.	16	59	3.3	6.3	9.0	80	18	12	41	58	11	12	41	59
2001	MAY	0	3.6	5.1	61	2.6	13	12	59	2.3	12	7.3	83	18	14	79	58	6.0	15	22	59
2001	JUN	0	3.4	38	58	0	10	12	59	0.98	12	12	66	5.6	14	100	58	0.95	2.2	11	61
2001	JUL	0	4.5	35	58	3.0	4.0	11	59	1.9	3.0	7.8	78	1.9	12	97	58	2.0	4.6	15	60
2001	AUG	1.1	3.4	19	59	0	6.2	16	59	1.7	4.7	9.8	73	7.1	15	140	58	2.3	7.5	18	59
2001	SEP	0.96	1.1	17	59	1.0	5.3	9.4	60	0.85	12	14	69	10	17	120	58	1.6	17	21	59
2001	OCT	0	7.7	24	59	3.1	12	32	59	2.1	15	12	77	16	31	69	58	7.7	32	26	59
2001	NOV	1.1	7.4	30	59	1.1	7.4	22	59	3.7	10	13	72	9.0	18	76	58	4.6	24	44	59
2001	DEC	5.3	7.1	9.8	62	6.2	7.9	21	59	11	22	24	63	12	31	51	58	5.6	39	35	59
2002	JAN	1.9	6.9	7.0	65	8.0	7.7	22	59	3.7	9.6	17	59	23	29	80	58	15	34	49	59
2002	FEB	0	4.3	19	59	2.8	15	61	58	8.0	27	40	59	36	62	110	58	26	24	47	59
2002	MAR	3.2	5.7	0	.	5.9	.	17	59	2.6	.	9.7	62	6.2	49	37	58	8.0	39	35	59
2002	APR	2.5	6.8	0	.	5.1	17	29	59	2.1	11	10	61	10	24	52	58	6.5	23	24	59
2002	MAY	1.0	3.2	5.2	65	10	11	14	59	1.7	9.7	7.2	63	5.4	18	46	58	2.2	15	21	60
2002	JUN	2.0	5.0	13	59	11	4.0	13	59	2.8	4.7	4.5	64	8.0	8.1	45	58	1.4	7.5	14	60
2002	JUL	6.5	.	15	59	4.1	5.7	30	58	1.3	3.3	11	59	5.5	11	79	58	2.9	7.1	19	59
2002	AUG	0.76	3.1	40	58	1.5	11	19	59	0.80	3.6	7.6	61	5.4	6.5	51	58	2.0	4.1	28	59
2002	SEP	0.50	3.5	8.5	61	1.4	6.0	11	60	5.5	.	24	59	2.8	13	29	58	1.0	7.5	8.6	63
2002	OCT	1.5	5.4	73	58	2.1	15	30	59	1.5	.	7.4	63	4.5	24	64	58	5.9	8.1	70	58
2002	NOV	0.55	3.5	17	59	1.3	3.9	5.2	67	1.3	11	18	59	2.5	53	99	58	1.0	29	49	59
2002	DEC	2.6	.	3.9	76	7.7	4.8	24	59	2.6	11	13	60	8.6	47	110	58	11	39	66	59
2003	JAN	2.0	7.0	4.6	77	7.9	6.9	7.2	63	5.6	6.2	2.6	100	6.1	34	29	59	19	58	26	60
2003	FEB	4.8	8.6	5.2	70	11	5.3	24	59	13	10	11	61	18	24	47	58	21	74	63	59
2003	MAR	5.3	4.1	4.1	72	6.3	13	13	60	4.2	18	9.4	62	9.0	32	32	58	7.2	25	36	59
2003	APR	2.0	5.3	3.2	81	7.5	14	13	60	5.7	18	7.0	64	14	38	33	58	12	11	28	59
2003	MAY	1.4	5.6	1.9	88	4.7	.	9.8	60	1.4	7.2	3.6	72	11	29	48	58	1.7	16	13	60
2003	JUN	0.87	4.2	20	59	1.3	1.7	8.1	60	1.5	.	5.4	63	4.2	9.6	59	58	4.9	5.9	21	59
2003	JUL	0	2.6	27	58	1.4	4.1	17	59	1.2	1.5	8.7	60	3.9	8.3	140	58	2.1	15	23	59
2003	AUG	1.0	3.1	14	59	2.0	2.7	18	59	3.5	4.5	8.5	61	7.0	4.2	90	58	1.2	8.7	21	59
2003	SEP	1.8	2.7	15	59	2.1	2.1	9.1	60	1.6	8.3	9.1	61	3.4	29	110	58	3.5	15	13	61
2003	OCT	2.2	2.5	21	59	1.7	2.8	15	59	1.1	4.5	10	61	6.7	10	68	58	3.6	7.9	22	59
2003	NOV	2.3	3.3	17	60	3.5	14	27	59	1.9	25	18	60	6.4	7.7	140	58	4.2	9.3	48	59
2003	DEC	1.6	2.9	0	.	1.0	6.5	4.9	69	2.5	39	12	61	4.3	12	61	58	4.2	11	46	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

pyrene

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	1.4	10	2.3	100	4.3	6.6	13	60	2.7	36	11	62	4.3	19	100	58	8.8	29	63	58
2004	FEB	1.6	5.3	4.1	69	2.1	5.4	0	.	2.8	5.5	12	61	.	4.6	0	.	5.0	9.4	29	59
2004	MAR	0.27	4.6	11	60	3.0	14	17	59	2.6	4.2	6.6	66	12	58	54	58	13	28	53	58
2004	APR	0.25	5.0	0	.	0	8.8	7.6	61	5.7	5.1	24	59	9.3	10	14	59	2.4	18	21	59
2004	MAY	0.51	3.5	1.8	86	6.5	14	17	59	2.6	3.8	6.9	63	3.8	22	39	58	1.1	15	15	59
2004	JUN	0	0	4.2	64	8.0	2.4	14	59	2.2	3.1	4.6	67	6.3	1.3	55	58	5.5	6.3	13	59
2004	JUL	0	0	16	59	0	0	5.7	61	0.79	2.1	6.1	63	3.2	0	120	58	0.97	8.4	26	59
2004	AUG	0	0	0	.	0	0	0	.	5.8	1.5	13	60	1.8	0	86	58	1.8	4.1	34	58
2004	SEP	0	0	0	.	7.7	0	0	.	2.3	1.5	6.2	64	4.9	0	100	58	4.9	5.0	38	58
2004	OCT	0	0	0	.	1.8	11	19	59	1.3	4.6	10	62	7.6	0	83	58	4.3	9.6	24	59
2004	NOV	2.0	0	0	.	1.8	56	0	.	3.3	11	11	62	8.5	0	110	58	6.2	8.9	26	59
2004	DEC	0	14	0	.	0	14	47	58	3.3	18	15	60	17	29	170	58	9.8	27	51	58
2005	JAN	0	11	0	.	4.7	12	49	58	2.4	7.2	5.1	88	13	12	61	58	25	39	59	59
2005	FEB	0	0.21	9.2	61	6.1	9.3	31	58	2.0	7.4	9.7	66	25	0.22	150	58	8.1	9.5	48	59
2005	MAR	0	4.9	0.56	270	0	31	26	59	3.8	5.2	7.3	71	22	11	42	58	15	28	36	59
2005	APR	2.8	0.21	12	59	35	27	8.6	60	8.0	18	12	63	42	43	90	58	9.8	14	18	61
2005	MAY	3.7	2.7	6.6	61	9.7	6.5	7.4	60	2.4	8.6	13	61	23	8.6	160	58	6.2	10	23	60
2005	JUN	2.1	2.0	15	59	14	3.9	12	59	3.1	10	14	60	10	4.7	88	58	1.9	8.3	50	59
2005	JUL	0	2.0	43	58	0	3.4	11	59	5.0	.	15	60	8.5	12	86	58	2.6	6.6	38	59
2005	AUG	2.4	2.4	26	58	4.9	4.2	15	59	2.8	3.8	19	59	8.3	6.5	140	58	1.6	9.5	33	59
2005	SEP	0.26	3.3	26	59	1.2	9.9	15	59	5.2	.	13	62	11	8.9	100	58	3.9	.	36	59
2005	OCT	0	1.2	22	59	4.0	21	19	59	2.6	5.0	16	61	11	7.9	140	58	4.8	.	48	59
2005	NOV	0.60	5.7	31	59	1.2	16	42	58	3.6	5.9	26	60	12	5.7	73	58	7.3	18	39	59
2005	DEC	2.7	15	14	59	12	31	72	58	2.8	30	18	62	88	61	170	58	21	44	59	59

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

arsenic

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	.	17	.	.	.
1995	FEB	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.	87	.	.	.
1995	MAR	.	.	.	.	.	.	.	.	100	.	.	.	.	.	.	.	58	.	.	.
1995	APR	.	.	.	.	.	.	.	.	35	.	.	.	.	.	.	.	45	.	.	.
1995	MAY	.	.	.	.	.	.	.	.	32	.	.	.	.	.	.	.	39	.	.	.
1995	JUN	.	.	.	.	.	.	.	.	51	.	.	.	.	.	.	.	0	.	.	.
1995	JUL	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	41	.	.	.
1995	AUG	.	.	.	.	.	.	.	.	30	.	.	.	.	.	.	.	37	.	.	.
1995	SEP	.	.	.	.	.	.	.	.	35	.	.	.	.	.	.	.	62	.	.	.
1995	OCT	.	.	.	.	.	.	.	.	92	.	.	.	.	.	.	.	35	.	.	.
1995	NOV	.	.	.	.	.	.	.	.	27	.	.	.	.	.	.	.	39	.	.	.
1995	DEC	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	130	.	.	.
1996	JAN	.	.	.	.	.	.	.	.	56	.	.	.	.	.	.	.	170	.	.	.
1996	FEB	.	.	.	.	.	.	.	.	310	.	.	.	.	.	.	.	190	.	.	.
1996	MAR	.	.	.	.	.	.	.	.	60	.	.	.	.	.	.	.	110	.	.	.
1996	APR	.	.	.	.	.	.	.	.	800	.	.	.	.	.	.	.	42	.	.	.
1996	MAY	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	26	.	.	.
1996	JUN	.	.	.	.	.	.	.	.	37	.	.	.	.	.	.	.	120	.	.	.
1996	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	49	.	.	.
1996	AUG	.	.	.	.	.	.	.	.	34	.	.	.	.	.	.	.	97	.	.	.
1996	SEP	.	.	.	.	.	.	.	.	83	.	.	.	.	.	.	.	61	.	.	.
1996	OCT	.	.	.	.	.	.	.	.	51	.	.	.	.	.	.	.	72	.	.	.
1996	NOV	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	130	.	.	.
1996	DEC	.	.	.	.	.	.	.	.	470	.	.	.	.	.	.	.	160	.	.	.
1997	JAN	.	.	.	.	.	.	.	.	270	.	.	.	.	.	.	.	100	.	.	.
1997	FEB	.	.	.	.	.	.	.	.	53	.	.	.	.	.	.	.	86	.	.	.
1997	MAR	.	.	.	.	.	.	.	.	72	.	.	.	.	.	.	.	110	.	.	.
1997	APR	.	.	.	.	.	.	.	.	64	.	.	.	.	.	.	.	110	.	.	.
1997	MAY	.	.	.	.	.	.	.	.	34	.	.	.	.	.	.	.	82	.	.	.
1997	JUN	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	120	.	.	.
1997	JUL	.	.	.	.	.	.	.	.	22	.	.	.	.	.	.	.	150	.	.	.
1997	AUG	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	97	.	.	.
1997	SEP	.	.	.	.	.	.	.	.	69	.	.	.	.	.	.	.	140	.	.	.
1997	OCT	.	.	.	.	.	.	.	.	130	.	.	.	.	.	.	.	120	.	.	.
1997	NOV	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	51	.	.	.
1997	DEC	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	700	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	.	.	.	.	.	.	.	84	.	.	.	.	.	.	.	58	.	.	.
1998	FEB	.	.	.	.	.	.	.	.	54	.	.	.	.	.	.	.	64	.	.	.
1998	MAR	.	.	.	.	.	.	.	.	52	.	.	.	.	.	.	.	81	.	.	.
1998	APR	.	.	.	.	.	.	.	.	42	.	.	.	.	.	.	.	94	.	.	.
1998	MAY	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	130	.	.	.
1998	JUN	.	.	.	.	.	.	.	.	130	.	.	.	.	.	.	.	98	.	.	.
1998	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	120	.	.	.
1998	AUG	.	.	.	.	.	.	.	.	48	.	.	.	.	.	.	.	170	.	.	.
1998	SEP	.	.	.	.	.	.	.	.	100	.	.	.	.	.	.	.	150	.	.	.
1998	OCT	.	.	.	.	.	.	.	.	91	.	.	.	.	.	.	.	40	.	.	.
1998	NOV	.	.	.	.	.	.	.	.	23	.	.	.	.	.	.	.	210	.	.	.
1998	DEC	.	.	.	.	.	.	.	.	18	.	.	.	.	.	.	.	73	.	.	.
1999	JAN	.	.	.	.	.	.	.	.	130	.	.	.	.	.	.	.	91	.	.	.
1999	FEB	.	.	.	.	.	.	.	.	72	.	.	.	.	.	.	.	72	.	.	.
1999	MAR	.	.	.	.	.	.	.	.	40	.	.	.	.	.	.	.	230	.	.	.
1999	APR	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.	230	.	.	.
1999	MAY	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	170	.	.	.
1999	JUN	.	.	.	.	.	.	.	.	150	.	.	.	.	.	.	.	100	.	.	.
1999	JUL	.	.	.	.	.	.	.	.	69	.	.	.	.	.	.	.	53	.	.	.
1999	AUG	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	100	.	.	.
1999	SEP	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	130	.	.	.
1999	OCT	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.	96	.	.	.
1999	NOV	.	.	.	.	.	.	.	.	59	.	.	.	.	.	.	.	42	.	.	.
1999	DEC	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	150	.	.	.
2000	JAN	.	.	.	.	.	.	.	.	34	.	.	.	.	.	.	.	140	.	.	.
2000	FEB	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	140	.	.	.
2000	MAR	.	.	.	.	.	.	.	.	44	.	.	.	.	.	.	.	150	.	.	.
2000	APR	.	.	.	.	.	.	.	.	140	.	.	.	.	.	.	.	140	.	.	.
2000	MAY	.	.	.	.	.	.	.	.	54	.	.	.	.	.	.	.	87	.	.	.
2000	JUN	.	.	.	.	.	.	.	.	94	.	.	.	.	.	.	.	63	.	.	.
2000	JUL	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	92	.	.	.
2000	AUG	.	.	.	.	.	.	.	.	40	.	.	.	.	.	.	.	120	.	.	.
2000	SEP	.	.	.	.	.	.	.	.	93	.	.	.	.	.	.	.	86	.	.	.
2000	OCT	.	.	.	.	.	.	.	.	340	.	.	.	.	.	.	.	89	.	.	.
2000	NOV	.	.	.	.	.	.	.	.	69	.	.	.	.	.	.	.	89	.	.	.
2000	DEC	.	.	.	.	.	.	.	.	34	.	.	.	.	.	.	.	110	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	.	.	.	.	.	.	.	420	.	.	.	.	.	.	.	160	.	.	.
2001	FEB	.	.	.	.	.	.	.	.	100	.	.	.	.	.	.	.	220	.	.	.
2001	MAR	.	.	.	.	.	.	.	.	62	.	.	.	.	.	.	.	97	.	.	.
2001	APR	.	.	.	.	.	.	.	.	99	.	.	.	.	.	.	.	75	.	.	.
2001	MAY	.	.	.	.	.	.	.	.	530	550	.	.	.	.	.	.	220	530	.	.
2001	JUN	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	210	180	.	.
2001	JUL	.	.	.	.	.	.	.	.	75	.	.	.	.	.	.	.	92	.	.	.
2001	AUG	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	86	.	.	.
2001	SEP	.	.	.	.	.	.	.	.	49	1100	.	.	.	.	.	.	42	280	.	.
2001	OCT	.	.	.	.	.	.	.	.	110	840	.	.	.	.	.	.	160	600	.	.
2001	NOV	.	.	.	.	.	.	.	.	270	360	.	.	.	.	.	.	120	250	.	.
2001	DEC	.	.	.	.	.	.	.	.	42	220	.	.	.	.	.	.	71	260	.	.
2002	JAN	.	.	.	.	.	.	.	.	59	.	.	.	.	.	.	.	96	.	.	.
2002	FEB	.	.	.	.	.	.	.	.	150	230	.	.	.	.	.	.	140	300	.	.
2002	MAR	.	.	.	.	.	.	.	.	140	.	.	.	.	.	.	.	300	260	.	.
2002	APR	.	.	.	.	.	.	.	.	66	300	.	.	.	.	.	.	140	360	.	.
2002	MAY	.	.	.	.	.	.	.	.	51	300	.	.	.	.	.	.	100	400	.	.
2002	JUN	.	.	.	.	.	.	.	.	140	0	.	.	.	.	.	.	90	0	.	.
2002	JUL	.	.	.	.	.	.	.	.	95	.	.	.	.	.	.	.	250	.	.	.
2002	AUG	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	99	.	.	.
2002	SEP	.	.	.	.	.	.	.	.	15	130	.	.	.	.	.	.	100	480	.	.
2002	OCT	.	.	.	.	.	.	.	.	190	200	.	.	.	.	.	.	75	290	.	.
2002	NOV	.	.	.	.	.	.	.	.	34	.	.	.	.	.	.	.	110	.	.	.
2002	DEC	.	.	.	.	.	.	.	.	42	0	.	.	.	.	.	.	54	0	.	.
2003	JAN	.	.	.	.	.	.	.	.	180	.	.	.	.	.	.	.	120	.	.	.
2003	FEB	.	.	.	.	.	.	.	.	190	.	.	.	.	.	.	.	85	.	.	.
2003	MAR	.	.	.	.	.	.	.	.	68	170	.	.	.	.	.	.	84	270	.	.
2003	APR	.	.	.	.	.	.	.	.	730	890	.	.	.	.	.	.	100	330	.	.
2003	MAY	.	.	.	.	.	.	.	.	18	330	.	.	.	.	.	.	17	400	.	.
2003	JUN	.	.	.	.	.	.	.	.	46	180	.	.	.	.	.	.	120	150	.	.
2003	JUL	.	.	.	.	.	.	.	.	63	220	.	.	.	.	.	.	160	220	.	.
2003	AUG	.	.	.	.	.	.	.	.	99	130	.	.	.	.	.	.	110	100	.	.
2003	SEP	.	.	.	.	.	.	.	.	48	160	.	.	.	.	.	.	57	180	.	.
2003	OCT	.	.	.	.	.	.	.	.	60	250	.	.	.	.	.	.	84	250	.	.
2003	NOV	.	.	.	.	.	.	.	.	40	520	.	.	.	.	.	.	100	410	.	.
2003	DEC	.	.	.	.	.	.	.	.	67	380	.	.	.	.	.	.	150	220	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

arsenic

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	.	.	.	.	.	.	.	310	370	.	.	.	.	.	.	87	750	.	.
2004	FEB	.	.	.	.	.	.	.	.	44	120	.	.	.	.	.	.	180	88	.	.
2004	MAR	.	.	.	.	.	.	.	.	150	180	.	.	.	.	.	.	93	.	.	.
2004	APR	.	.	.	.	.	.	.	.	65	260	.	.	.	.	.	.	96	380	.	.
2004	MAY	.	.	.	.	.	.	.	.	14	750	.	.	.	.	.	.	140	500	.	.
2004	JUN	.	.	.	.	.	.	.	.	80	260	.	.	.	.	.	.	150	230	.	.
2004	JUL	.	.	.	.	.	.	.	.	28	160	.	.	.	.	.	.	93	180	.	.
2004	AUG	.	.	.	.	.	.	.	.	0	150	.	.	.	.	.	.	84	200	.	.
2004	SEP	.	.	.	.	.	.	.	.	130	.	.	.	.	.	.	.	360	57	.	.
2004	OCT	.	.	.	.	.	.	.	.	72	190	.	.	.	.	.	.	74	180	.	.
2004	NOV	.	.	.	.	.	.	.	.	19	150	.	.	.	.	.	.	140	260	.	.
2004	DEC	.	.	.	.	.	.	.	.	130	240	.	.	.	.	.	.	75	380	.	.
2005	JAN	.	.	.	.	.	.	.	.	120	190	.	.	.	.	.	.	69	390	.	.
2005	FEB	.	.	.	.	.	.	.	.	87	140	.	.	.	.	.	.	92	170	.	.
2005	MAR	.	.	.	.	.	.	.	.	1700	.	.	.	.	.	.	.	84	.	.	.
2005	APR	.	.	.	.	.	.	.	.	70	210	.	.	.	.	.	.	130	200	.	.
2005	MAY	.	.	.	.	.	.	.	.	81	200	.	.	.	.	.	.	130	.	.	.
2005	JUN	.	.	.	.	.	.	.	.	93	170	.	.	.	.	.	.	120	150	.	.
2005	JUL	.	.	.	.	.	.	.	.	46	140	.	.	.	.	.	.	96	120	.	.
2005	AUG	.	.	.	.	.	.	.	.	94	160	.	.	.	.	.	.	99	190	.	.
2005	SEP	.	.	.	.	.	.	.	.	75	67	.	.	.	.	.	.	210	140	.	.
2005	OCT	.	.	.	.	.	.	.	.	96	160	.	.	.	.	.	.	92	190	.	.
2005	NOV	.	.	.	.	.	.	.	.	16	190	.	.	.	.	.	.	89	270	.	.
2005	DEC	.	.	.	.	.	.	.	.	60	290	.	.	.	.	.	.	92	270	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

cadmium

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	84	.	.	.
1992	FEB	.	.	.	.	.	.	.	.	75	.	.	.	.	.	.	.	46	.	.	.
1992	MAR	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	30	.	.	.
1992	APR	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.	0	.	.	.
1992	MAY	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	27	.	.	.
1992	JUN	.	.	.	.	.	.	.	.	27	.	.	.	.	.	.	.	16	.	.	.
1992	JUL	.	.	.	.	.	.	.	.	7.7	.	.	.	.	.	.	.	24	.	.	.
1992	AUG	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	25	.	.	.
1992	SEP	.	.	.	.	.	.	.	.	46	.	.	.	.	.	.	.	9.3	.	.	.
1992	OCT	.	.	.	.	.	.	.	.	8.8	.	.	.	.	.	.	.	0	.	.	.
1992	NOV	.	.	.	.	.	.	.	.	60	.	.	.	.	.	.	.	8.4	.	.	.
1992	DEC	.	.	.	.	.	.	.	.	24	.	.	.	.	.	.	.	23	.	.	.
1993	JAN	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	89	.	.	.
1993	FEB	.	.	.	.	.	.	.	.	78	.	.	.	.	.	.	.	34	.	.	.
1993	MAR	.	.	.	.	.	.	.	.	46	.	.	.	.	.	.	.	44	.	.	.
1993	APR	.	.	.	.	.	.	.	.	26	.	.	.	.	.	.	.	0	.	.	.
1993	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	14	.	.	.
1993	JUN	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1993	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1993	AUG	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1993	SEP	.	.	.	.	.	.	.	.	50	.	.	.	.	.	.	.	38	.	.	.
1993	OCT	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1993	NOV	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	15	.	.	.
1993	DEC	.	.	.	.	.	.	.	.	37	.	.	.	.	.	.	.	35	.	.	.
1994	JAN	.	.	.	.	.	.	.	.	45	.	.	.	.	.	.	.	17	.	.	.
1994	FEB	.	.	.	.	.	.	.	.	49	.	.	.	.	.	.	.	17	.	.	.
1994	MAR	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	23	.	.	.
1994	APR	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	28	.	.	.
1994	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	56	.	.	.
1994	JUN	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	32	.	.	.
1994	JUL	.	.	.	.	.	.	.	.	38	.	.	.	.	.	.	.	53	.	.	.
1994	AUG	.	.	.	.	.	.	.	.	90	.	.	.	.	.	.	.	61	.	.	.
1994	SEP	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	26	.	.	.
1994	OCT	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1994	NOV	.	.	.	.	.	.	.	.	45	.	.	.	.	.	.	.	40	.	.	.
1994	DEC	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	85	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

cadmium

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	6.7	.	.	.
1995	FEB	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	38	.	.	.
1995	MAR	.	.	.	.	.	.	.	.	39	.	.	.	.	.	.	.	23	.	.	.
1995	APR	.	.	.	.	.	.	.	.	8.6	.	.	.	.	.	.	.	10	.	.	.
1995	MAY	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	8.4	.	.	.
1995	JUN	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	0	.	.	.
1995	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	14	.	.	.
1995	AUG	.	.	.	.	.	.	.	.	7.7	.	.	.	.	.	.	.	4.1	.	.	.
1995	SEP	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	0	.	.	.
1995	OCT	.	.	.	.	.	.	.	.	16	.	.	.	.	.	.	.	0	.	.	.
1995	NOV	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1995	DEC	.	.	.	.	.	.	.	.	9.2	.	.	.	.	.	.	.	15	.	.	.
1996	JAN	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	17	.	.	.
1996	FEB	.	.	.	.	.	.	.	.	33	.	.	.	.	.	.	.	31	.	.	.
1996	MAR	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	24	.	.	.
1996	APR	.	.	.	.	.	.	.	.	37	.	.	.	.	.	.	.	5.7	.	.	.
1996	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	18	.	.	.
1996	JUN	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	23	.	.	.
1996	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	5.7	.	.	.
1996	AUG	.	.	.	.	.	.	.	.	16	.	.	.	.	.	.	.	17	.	.	.
1996	SEP	.	.	.	.	.	.	.	.	7.3	.	.	.	.	.	.	.	15	.	.	.
1996	OCT	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	19	.	.	.
1996	NOV	.	.	.	.	.	.	.	.	63	.	.	.	.	.	.	.	58	.	.	.
1996	DEC	.	.	.	.	.	.	.	.	64	.	.	.	.	.	.	.	40	.	.	.
1997	JAN	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	36	.	.	.
1997	FEB	.	.	.	.	.	.	.	.	6.5	.	.	.	.	.	.	.	20	.	.	.
1997	MAR	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	41	.	.	.
1997	APR	.	.	.	.	.	.	.	.	4.3	.	.	.	.	.	.	.	16	.	.	.
1997	MAY	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	17	.	.	.
1997	JUN	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	36	.	.	.
1997	JUL	.	.	.	.	.	.	.	.	6.7	.	.	.	.	.	.	.	22	.	.	.
1997	AUG	.	.	.	.	.	.	.	.	29	.	.	.	.	.	.	.	19	.	.	.
1997	SEP	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	33	.	.	.
1997	OCT	.	.	.	.	.	.	.	.	47	.	.	.	.	.	.	.	28	.	.	.
1997	NOV	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	17	.	.	.
1997	DEC	.	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	47	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

cadmium

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	.	.	.	.	.	.	.	9.6	.	.	.	.	.	.	.	19	.	.	.
1998	FEB	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	53	.	.	.
1998	MAR	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	15	.	.	.
1998	APR	.	.	.	.	.	.	.	.	9.8	.	.	.	.	.	.	.	19	.	.	.
1998	MAY	.	.	.	.	.	.	.	.	35	.	.	.	.	.	.	.	29	.	.	.
1998	JUN	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	25	.	.	.
1998	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	10	.	.	.
1998	AUG	.	.	.	.	.	.	.	.	8.4	.	.	.	.	.	.	.	23	.	.	.
1998	SEP	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	28	.	.	.
1998	OCT	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	20	.	.	.
1998	NOV	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	23	.	.	.
1998	DEC	.	.	.	.	.	.	.	.	7.9	.	.	.	.	.	.	.	17	.	.	.
1999	JAN	.	.	.	.	.	.	.	.	29	.	.	.	.	.	.	.	27	.	.	.
1999	FEB	.	.	.	.	.	.	.	.	32	.	.	.	.	.	.	.	28	.	.	.
1999	MAR	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	26	.	.	.
1999	APR	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	72	.	.	.
1999	MAY	.	.	.	.	.	.	.	.	16	.	.	.	.	.	.	.	26	.	.	.
1999	JUN	.	.	.	.	.	.	.	.	31	.	.	.	.	.	.	.	30	.	.	.
1999	JUL	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	22	.	.	.
1999	AUG	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	15	.	.	.
1999	SEP	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	18	.	.	.
1999	OCT	.	.	.	.	.	.	.	.	4.7	.	.	.	.	.	.	.	22	.	.	.
1999	NOV	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	13	.	.	.
1999	DEC	.	.	.	.	.	.	.	.	36	.	.	.	.	.	.	.	44	.	.	.
2000	JAN	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	23	.	.	.
2000	FEB	.	.	.	.	.	.	.	.	16	.	.	.	.	.	.	.	64	.	.	.
2000	MAR	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	24	.	.	.
2000	APR	.	.	.	.	.	.	.	.	16	.	.	.	.	.	.	.	21	.	.	.
2000	MAY	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	21	.	.	.
2000	JUN	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	.	16	.	.	.
2000	JUL	.	.	.	.	.	.	.	.	8.6	.	.	.	.	.	.	.	15	.	.	.
2000	AUG	.	.	.	.	.	.	.	.	5.8	.	.	.	.	.	.	.	14	.	.	.
2000	SEP	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	11	.	.	.
2000	OCT	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.	31	.	.	.
2000	NOV	.	.	.	.	.	.	.	.	9.2	.	.	.	.	.	.	.	37	.	.	.
2000	DEC	.	.	.	.	.	.	.	.	8.5	.	.	.	.	.	.	.	21	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

cadmium

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	.	.	.	.	.	.	.	25	.	.	.	.	.	.	.	24	.	.	.
2001	FEB	.	.	.	.	.	.	.	.	17	0	.	.	.	.	.	.	21	230	.	.
2001	MAR	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	15	0	.	.
2001	APR	.	.	.	.	.	.	.	.	22	0	.	.	.	.	.	.	33	.	.	.
2001	MAY	.	.	.	.	.	.	.	.	38	0	.	.	.	.	.	.	18	0	.	.
2001	JUN	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	17	0	.	.
2001	JUL	.	.	.	.	.	.	.	.	7.4	.	.	.	.	.	.	.	13	.	.	.
2001	AUG	.	.	.	.	.	.	.	.	4.5	18	.	.	.	.	.	.	20	.	.	.
2001	SEP	.	.	.	.	.	.	.	.	8.8	1000	.	.	.	.	.	.	7.3	1100	.	.
2001	OCT	.	.	.	.	.	.	.	.	17	0	.	.	.	.	.	.	19	4.2	.	.
2001	NOV	.	.	.	.	.	.	.	.	13	5.2	.	.	.	.	.	.	37	250	.	.
2001	DEC	.	.	.	.	.	.	.	.	11	220	.	.	.	.	.	.	13	3.0	.	.
2002	JAN	.	.	.	.	.	.	.	.	17	.	.	.	.	.	.	.	25	190	.	.
2002	FEB	.	.	.	.	.	.	.	.	24	230	.	.	.	.	.	.	27	5.9	.	.
2002	MAR	.	.	.	.	.	.	.	.	14	0	.	.	.	.	.	.	22	510	.	.
2002	APR	.	.	.	.	.	.	.	.	9.4	0	.	.	.	.	.	.	24	350	.	.
2002	MAY	.	.	.	.	.	.	.	.	6.2	0	.	.	.	.	.	.	6.9	0	.	.
2002	JUN	.	.	.	.	.	.	.	.	17	0	.	.	.	.	.	.	13	0	.	.
2002	JUL	.	.	.	.	.	.	.	.	11	0	.	.	.	.	.	.	29	0	.	.
2002	AUG	.	.	.	.	.	.	.	.	6.0	.	.	.	.	.	.	.	14	.	.	.
2002	SEP	.	.	.	.	.	.	.	.	4.4	0	.	.	.	.	.	.	8.5	0	.	.
2002	OCT	.	.	.	.	.	.	.	.	12	0	.	.	.	.	.	.	20	0	.	.
2002	NOV	.	.	.	.	.	.	.	.	8.5	0	.	.	.	.	.	.	12	2.2	.	.
2002	DEC	.	.	.	.	.	.	.	.	20	0	.	.	.	.	.	.	13	250	.	.
2003	JAN	.	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	10	230	.	.
2003	FEB	.	.	.	.	.	.	.	.	64	.	.	.	.	.	.	.	17	220	.	.
2003	MAR	.	.	.	.	.	.	.	.	18	84	.	.	.	.	.	.	19	150	.	.
2003	APR	.	.	.	.	.	.	.	.	44	260	.	.	.	.	.	.	24	210	.	.
2003	MAY	.	.	.	.	.	.	.	.	6.1	140	.	.	.	.	.	.	19	270	.	.
2003	JUN	.	.	.	.	.	.	.	.	13	120	.	.	.	.	.	.	19	110	.	.
2003	JUL	.	.	.	.	.	.	.	.	8.5	87	.	.	.	.	.	.	17	130	.	.
2003	AUG	.	.	.	.	.	.	.	.	16	36	.	.	.	.	.	.	14	51	.	.
2003	SEP	.	.	.	.	.	.	.	.	12	72	.	.	.	.	.	.	12	68	.	.
2003	OCT	.	.	.	.	.	.	.	.	11	72	.	.	.	.	.	.	13	98	.	.
2003	NOV	.	.	.	.	.	.	.	.	11	150	.	.	.	.	.	.	20	110	.	.
2003	DEC	.	.	.	.	.	.	.	.	13	97	.	.	.	.	.	.	16	49	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

cadmium

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	.	.	.	.	.	.	.	43	130	.	.	.	.	.	.	17	200	.	.
2004	FEB	.	.	.	.	.	.	.	.	11	56	.	.	.	.	.	.	20	52	.	.
2004	MAR	.	.	.	.	.	.	.	.	41	82	.	.	.	.	.	.	43	.	.	.
2004	APR	.	.	.	.	.	.	.	.	12	82	.	.	.	.	.	.	19	190	.	.
2004	MAY	.	.	.	.	.	.	.	.	5.7	180	.	.	.	.	.	.	19	150	.	.
2004	JUN	.	.	.	.	.	.	.	.	15	51	.	.	.	.	.	.	25	100	.	.
2004	JUL	.	.	.	.	.	.	.	.	7.3	64	.	.	.	.	.	.	10	120	.	.
2004	AUG	.	.	.	.	.	.	.	.	4.4	29	.	.	.	.	.	.	14	91	.	.
2004	SEP	.	.	.	.	.	.	.	.	24	.	.	.	.	.	.	.	52	31	.	.
2004	OCT	.	.	.	.	.	.	.	.	13	45	.	.	.	.	.	.	19	49	.	.
2004	NOV	.	.	.	.	.	.	.	.	6.5	40	.	.	.	.	.	.	28	95	.	.
2004	DEC	.	.	.	.	.	.	.	.	22	86	.	.	.	.	.	.	11	150	.	.
2005	JAN	.	.	.	.	.	.	.	.	27	39	.	.	.	.	.	.	21	110	.	.
2005	FEB	.	.	.	.	.	.	.	.	19	43	.	.	.	.	.	.	18	150	.	.
2005	MAR	.	.	.	.	.	.	.	.	67	.	.	.	.	.	.	.	41	.	.	.
2005	APR	.	.	.	.	.	.	.	.	13	57	.	.	.	.	.	.	28	110	.	.
2005	MAY	.	.	.	.	.	.	.	.	8.5	100	.	.	.	.	.	.	34	.	.	.
2005	JUN	.	.	.	.	.	.	.	.	20	94	.	.	.	.	.	.	13	57	.	.
2005	JUL	.	.	.	.	.	.	.	.	10	78	.	.	.	.	.	.	13	99	.	.
2005	AUG	.	.	.	.	.	.	.	.	21	41	.	.	.	.	.	.	73	440	.	.
2005	SEP	.	.	.	.	.	.	.	.	13	40	.	.	.	.	.	.	34	110	.	.
2005	OCT	.	.	.	.	.	.	.	.	18	51	.	.	.	.	.	.	11	79	.	.
2005	NOV	.	.	.	.	.	.	.	.	6.7	40	.	.	.	.	.	.	15	72	.	.
2005	DEC	.	.	.	.	.	.	.	.	22	110	.	.	.	.	.	.	37	170	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

lead

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1400	.	.	.
1992	FEB	.	.	.	.	.	.	.	.	610	.	.	.	.	.	.	.	610	.	.	.
1992	MAR	.	.	.	.	.	.	.	.	330	.	.	.	.	.	.	.	740	.	.	.
1992	APR	.	.	.	.	.	.	.	.	400	.	.	.	.	.	.	.	340	.	.	.
1992	MAY	.	.	.	.	.	.	.	.	490	.	.	.	.	.	.	.	570	.	.	.
1992	JUN	.	.	.	.	.	.	.	.	200	.	.	.	.	.	.	.	570	.	.	.
1992	JUL	.	.	.	.	.	.	.	.	320	.	.	.	.	.	.	.	450	.	.	.
1992	AUG	.	.	.	.	.	.	.	.	450	.	.	.	.	.	.	.	440	.	.	.
1992	SEP	.	.	.	.	.	.	.	.	420	.	.	.	.	.	.	.	370	.	.	.
1992	OCT	.	.	.	.	.	.	.	.	260	.	.	.	.	.	.	.	270	.	.	.
1992	NOV	.	.	.	.	.	.	.	.	730	.	.	.	.	.	.	.	690	.	.	.
1992	DEC	.	.	.	.	.	.	.	.	520	.	.	.	.	.	.	.	740	.	.	.
1993	JAN	.	.	.	.	.	.	.	.	370	.	.	.	.	.	.	.	1000	.	.	.
1993	FEB	.	.	.	.	.	.	.	.	770	.	.	.	.	.	.	.	740	.	.	.
1993	MAR	.	.	.	.	.	.	.	.	580	.	.	.	.	.	.	.	1000	.	.	.
1993	APR	.	.	.	.	.	.	.	.	240	.	.	.	.	.	.	.	280	.	.	.
1993	MAY	.	.	.	.	.	.	.	.	280	.	.	.	.	.	.	.	670	.	.	.
1993	JUN	.	.	.	.	.	.	.	.	190	.	.	.	.	.	.	.	820	.	.	.
1993	JUL	.	.	.	.	.	.	.	.	460	.	.	.	.	.	.	.	460	.	.	.
1993	AUG	.	.	.	.	.	.	.	.	150	.	.	.	.	.	.	.	510	.	.	.
1993	SEP	.	.	.	.	.	.	.	.	600	.	.	.	.	.	.	.	680	.	.	.
1993	OCT	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	420	.	.	.
1993	NOV	.	.	.	.	.	.	.	.	560	.	.	.	.	.	.	.	450	.	.	.
1993	DEC	.	.	.	.	.	.	.	.	840	.	.	.	.	.	.	.	910	.	.	.
1994	JAN	.	.	.	.	.	.	.	.	930	.	.	.	.	.	.	.	860	.	.	.
1994	FEB	.	.	.	.	.	.	.	.	970	.	.	.	.	.	.	.	840	.	.	.
1994	MAR	.	.	.	.	.	.	.	.	790	.	.	.	.	.	.	.	740	.	.	.
1994	APR	.	.	.	.	.	.	.	.	910	.	.	.	.	.	.	.	750	.	.	.
1994	MAY	.	.	.	.	.	.	.	.	580	1300	.	.	.	.	.	.	1100	4400	.	.
1994	JUN	.	.	.	.	.	.	.	.	640	1000	.	.	.	.	.	.	740	3700	.	.
1994	JUL	.	.	.	.	.	.	.	.	990	2400	.	.	.	.	.	.	1200	3000	.	.
1994	AUG	.	.	.	.	.	.	.	.	690	2800	.	.	.	.	.	.	990	2500	.	.
1994	SEP	.	.	.	.	.	.	.	.	250	2400	.	.	.	.	.	.	590	480	.	.
1994	OCT	.	.	.	.	.	.	.	.	350	11	.	.	.	.	.	.	480	1.8	.	.
1994	NOV	.	.	.	.	.	.	.	.	720	600	.	.	.	.	.	.	670	3400	.	.
1994	DEC	.	.	.	.	.	.	.	.	950	1500	.	.	.	.	.	.	1500	4000	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

lead

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	.	.	.	.	.	.	.	720	5600	.	.	.	.	.	.	450	6000	.	.
1995	FEB	.	.	.	.	.	.	.	.	740	1800	.	.	.	.	.	.	1100	150	.	.
1995	MAR	.	.	.	.	.	.	.	.	990	2500	.	.	.	.	.	.	990	6200	.	.
1995	APR	.	.	.	.	.	.	.	.	230	4400	.	.	.	.	.	.	690	5700	.	.
1995	MAY	.	.	.	.	.	.	.	.	360	2400	.	.	.	.	.	.	510	1700	.	.
1995	JUN	.	.	.	.	.	.	.	.	390	1800	.	.	.	.	.	.	240	.	.	.
1995	JUL	.	.	.	.	.	.	.	.	180	1800	.	.	.	.	.	.	610	4600	.	.
1995	AUG	.	.	.	.	.	.	.	.	330	2300	.	.	.	.	.	.	480	4800	.	.
1995	SEP	.	.	.	.	.	.	.	.	670	430	.	.	.	.	.	.	470	5100	.	.
1995	OCT	.	.	.	.	.	.	.	.	280	2000	.	.	.	.	.	.	280	2900	.	.
1995	NOV	.	.	.	.	.	.	.	.	130	8000	.	.	.	.	.	.	380	11000	.	.
1995	DEC	.	.	.	.	.	.	.	.	520	5500	.	.	.	.	.	.	580	.	.	.
1996	JAN	.	.	.	.	.	.	.	.	500	3400	.	.	.	.	.	.	750	5300	.	.
1996	FEB	.	.	.	.	.	.	.	.	1100	1900	.	.	.	.	.	.	1200	1900	.	.
1996	MAR	.	.	.	.	.	.	.	.	690	68	.	.	.	.	.	.	730	12	.	.
1996	APR	.	.	.	.	.	.	.	.	1200	0	.	.	.	.	.	.	450	7200	.	.
1996	MAY	.	.	.	.	.	.	.	.	340	3000	.	.	.	.	.	.	560	3600	.	.
1996	JUN	.	.	.	.	.	.	.	.	370	920	.	.	.	.	.	.	1100	9700	.	.
1996	JUL	.	.	.	.	.	.	.	.	130	3600	.	.	.	.	.	.	490	4500	.	.
1996	AUG	.	.	.	.	.	.	.	.	370	5300	.	.	.	.	.	.	870	5300	.	.
1996	SEP	.	.	.	.	.	.	.	.	500	5200	.	.	.	.	.	.	530	5700	.	.
1996	OCT	.	.	.	.	.	.	.	.	700	3600	.	.	.	.	.	.	690	2100	.	.
1996	NOV	.	.	.	.	.	.	.	.	1300	4200	.	.	.	.	.	.	1500	3000	.	.
1996	DEC	.	.	.	.	.	.	.	.	1900	3700	.	.	.	.	.	.	1300	6300	.	.
1997	JAN	.	.	.	.	.	.	.	.	2700	5600	.	.	.	.	.	.	710	6400	.	.
1997	FEB	.	.	.	.	.	.	.	.	300	10000	.	.	.	.	.	.	690	5200	.	.
1997	MAR	.	.	.	.	.	.	.	.	420	5400	.	.	.	.	.	.	920	9900	.	.
1997	APR	.	.	.	.	.	.	.	.	480	6600	.	.	.	.	.	.	690	2800	.	.
1997	MAY	.	.	.	.	.	.	.	.	290	4600	.	.	.	.	.	.	510	5300	.	.
1997	JUN	.	.	.	.	.	.	.	.	380	1300	.	.	.	.	.	.	930	3900	.	.
1997	JUL	.	.	.	.	.	.	.	.	160	5500	.	.	.	.	.	.	800	220	.	.
1997	AUG	.	.	.	.	.	.	.	.	720	2600	.	.	.	.	.	.	800	2400	.	.
1997	SEP	.	.	.	.	.	.	.	.	430	2700	.	.	.	.	.	.	940	3100	.	.
1997	OCT	.	.	.	.	.	.	.	.	830	3800	.	.	.	.	.	.	790	2100	.	.
1997	NOV	.	.	.	.	.	.	.	.	200	1700	.	.	.	.	.	.	320	5800	.	.
1997	DEC	.	.	.	.	.	.	.	.	300	52	.	.	.	.	.	.	2500	5800	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

lead

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	.	.	.	.	.	.	.	640	5500	.	.	.	.	.	.	510	4100	.	.
1998	FEB	.	.	.	.	.	.	.	.	390	160	.	.	.	.	.	.	930	1900	.	.
1998	MAR	.	.	.	.	.	.	.	.	370	850	.	.	.	.	.	.	500	4800	.	.
1998	APR	.	.	.	.	.	.	.	.	270	3100	.	.	.	.	.	.	750	6100	.	.
1998	MAY	.	.	.	.	.	.	.	.	240	2100	.	.	.	.	.	.	990	3800	.	.
1998	JUN	.	.	.	.	.	.	.	.	440	1600	.	.	.	.	.	.	730	6100	.	.
1998	JUL	.	.	.	.	.	.	.	.	58	.	.	.	.	.	.	.	380	3900	.	.
1998	AUG	.	.	.	.	.	.	.	.	250	1900	.	.	.	.	.	.	740	4800	.	.
1998	SEP	.	.	.	.	.	.	.	.	450	450	.	.	.	.	.	.	730	3200	.	.
1998	OCT	.	.	.	.	.	.	.	.	450	670	.	.	.	.	.	.	410	1800	.	.
1998	NOV	.	.	.	.	.	.	.	.	210	3100	.	.	.	.	.	.	840	5000	.	.
1998	DEC	.	.	.	.	.	.	.	.	220	1500	.	.	.	.	.	.	510	3900	.	.
1999	JAN	.	.	.	.	.	.	.	.	460	.	.	.	.	.	.	.	530	.	.	.
1999	FEB	.	.	.	.	.	.	.	.	610	.	.	.	.	.	.	.	720	.	.	.
1999	MAR	.	.	.	.	.	.	.	.	360	.	.	.	.	.	.	.	1100	2800	.	.
1999	APR	.	.	.	.	.	.	.	.	320	2000	.	.	.	.	.	.	1600	2000	.	.
1999	MAY	.	.	.	.	.	.	.	.	430	6.5	.	.	.	.	.	.	980	710	.	.
1999	JUN	.	.	.	.	.	.	.	.	860	3100	.	.	.	.	.	.	1100	1500	.	.
1999	JUL	.	.	.	.	.	.	.	.	380	1900	.	.	.	.	.	.	1000	2600	.	.
1999	AUG	.	.	.	.	.	.	.	.	350	1800	.	.	.	.	.	.	500	4200	.	.
1999	SEP	.	.	.	.	.	.	.	.	270	2400	.	.	.	.	.	.	600	2800	.	.
1999	OCT	.	.	.	.	.	.	.	.	370	2200	.	.	.	.	.	.	600	3600	.	.
1999	NOV	.	.	.	.	.	.	.	.	140	1400	.	.	.	.	.	.	310	1000	.	.
1999	DEC	.	.	.	.	.	.	.	.	880	2100	.	.	.	.	.	.	1200	1600	.	.
2000	JAN	.	.	.	.	.	.	.	.	310	1500	.	.	.	.	.	.	750	.	.	.
2000	FEB	.	.	.	.	.	.	.	.	270	1500	.	.	.	.	.	.	860	4200	.	.
2000	MAR	.	.	.	.	.	.	.	.	290	.	.	.	.	.	.	.	670	5000	.	.
2000	APR	.	.	.	.	.	.	.	.	360	.	.	.	.	.	.	.	660	2800	.	.
2000	MAY	.	.	.	.	.	.	.	.	330	6700	.	.	.	.	.	.	620	9800	.	.
2000	JUN	.	.	.	.	.	.	.	.	270	690	.	.	.	.	.	.	290	2800	.	.
2000	JUL	.	.	.	.	.	.	.	.	110	530	.	.	.	.	.	.	300	3800	.	.
2000	AUG	.	.	.	.	.	.	.	.	160	1300	.	.	.	.	.	.	320	2400	.	.
2000	SEP	.	.	.	.	.	.	.	.	340	1400	.	.	.	.	.	.	320	3300	.	.
2000	OCT	.	.	.	.	.	.	.	.	600	.	.	.	.	.	.	.	360	1800	.	.
2000	NOV	.	.	.	.	.	.	.	.	270	1400	.	.	.	.	.	.	530	6700	.	.
2000	DEC	.	.	.	.	.	.	.	.	270	18000	.	.	.	.	.	.	340	6700	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

lead

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	.	.	.	.	.	.	.	790	.	.	.	.	.	.	.	630	.	.	.
2001	FEB	.	.	.	.	.	.	.	.	440	2100	.	.	.	.	.	.	610	12000	.	.
2001	MAR	.	.	.	.	.	.	.	.	380	.	.	.	.	.	.	.	650	4000	.	.
2001	APR	.	.	.	.	.	.	.	.	630	0	.	.	.	.	.	.	540	.	.	.
2001	MAY	.	.	.	.	.	.	.	.	810	0	.	.	.	.	.	.	730	5100	.	.
2001	JUN	.	.	.	.	.	.	.	.	370	.	.	.	.	.	.	.	530	5800	.	.
2001	JUL	.	.	.	.	.	.	.	.	270	.	.	.	.	.	.	.	340	.	.	.
2001	AUG	.	.	.	.	.	.	.	.	160	2100	.	.	.	.	.	.	460	.	.	.
2001	SEP	.	.	.	.	.	.	.	.	1300	100	.	.	.	.	.	.	280	1700	.	.
2001	OCT	.	.	.	.	.	.	.	.	480	5900	.	.	.	.	.	.	770	3700	.	.
2001	NOV	.	.	.	.	.	.	.	.	260	540	.	.	.	.	.	.	730	4000	.	.
2001	DEC	.	.	.	.	.	.	.	.	160	0	.	.	.	.	.	.	330	4800	.	.
2002	JAN	.	.	.	.	.	.	.	.	230	.	.	.	.	.	.	.	580	7700	.	.
2002	FEB	.	.	.	.	.	.	.	.	720	6400	.	.	.	.	.	.	870	810	.	.
2002	MAR	.	.	.	.	.	.	.	.	470	0	.	.	.	.	.	.	540	5400	.	.
2002	APR	.	.	.	.	.	.	.	.	270	16	.	.	.	.	.	.	640	4600	.	.
2002	MAY	.	.	.	.	.	.	.	.	210	670	.	.	.	.	.	.	310	4100	.	.
2002	JUN	.	.	.	.	.	.	.	.	480	1200	.	.	.	.	.	.	290	3600	.	.
2002	JUL	.	.	.	.	.	.	.	.	400	1500	.	.	.	.	.	.	830	2700	.	.
2002	AUG	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	470	.	.	.
2002	SEP	.	.	.	.	.	.	.	.	93	650	.	.	.	.	.	.	320	950	.	.
2002	OCT	.	.	.	.	.	.	.	.	360	830	.	.	.	.	.	.	320	3600	.	.
2002	NOV	.	.	.	.	.	.	.	.	180	1600	.	.	.	.	.	.	690	640	.	.
2002	DEC	.	.	.	.	.	.	.	.	430	680	.	.	.	.	.	.	360	7200	.	.
2003	JAN	.	.	.	.	.	.	.	.	510	.	.	.	.	.	.	.	280	8300	.	.
2003	FEB	.	.	.	.	.	.	.	.	1300	.	.	.	.	.	.	.	460	4100	.	.
2003	MAR	.	.	.	.	.	.	.	.	410	1200	.	.	.	.	.	.	660	7400	.	.
2003	APR	.	.	.	.	.	.	.	.	1600	2200	.	.	.	.	.	.	650	4700	.	.
2003	MAY	.	.	.	.	.	.	.	.	140	1900	.	.	.	.	.	.	220	6400	.	.
2003	JUN	.	.	.	.	.	.	.	.	230	900	.	.	.	.	.	.	600	200	.	.
2003	JUL	.	.	.	.	.	.	.	.	220	1200	.	.	.	.	.	.	600	2700	.	.
2003	AUG	.	.	.	.	.	.	.	.	410	800	.	.	.	.	.	.	440	1500	.	.
2003	SEP	.	.	.	.	.	.	.	.	320	790	.	.	.	.	.	.	310	1500	.	.
2003	OCT	.	.	.	.	.	.	.	.	210	700	.	.	.	.	.	.	370	2900	.	.
2003	NOV	.	.	.	.	.	.	.	.	240	1200	.	.	.	.	.	.	530	2700	.	.
2003	DEC	.	.	.	.	.	.	.	.	260	410	.	.	.	.	.	.	430	1600	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

lead

		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	.	.	.	.	.	.	.	420	1400	.	.	.	.	.	.	320	6200	.	.
2004	FEB	.	.	.	.	.	.	.	.	230	910	.	.	.	.	.	.	530	1500	.	.
2004	MAR	.	.	.	.	.	.	.	.	790	1100	.	.	.	.	.	.	610	.	.	.
2004	APR	.	.	.	.	.	.	.	.	310	1200	.	.	.	.	.	.	580	3000	.	.
2004	MAY	.	.	.	.	.	.	.	.	150	2500	.	.	.	.	.	.	310	3900	.	.
2004	JUN	.	.	.	.	.	.	.	.	390	1100	.	.	.	.	.	.	620	3200	.	.
2004	JUL	.	.	.	.	.	.	.	.	99	1100	.	.	.	.	.	.	340	2400	.	.
2004	AUG	.	.	.	.	.	.	.	.	130	870	.	.	.	.	.	.	230	3100	.	.
2004	SEP	.	.	.	.	.	.	.	.	650	.	.	.	.	.	.	.	1300	1100	.	.
2004	OCT	.	.	.	.	.	.	.	.	310	960	.	.	.	.	.	.	450	1000	.	.
2004	NOV	.	.	.	.	.	.	.	.	180	720	.	.	.	.	.	.	540	2300	.	.
2004	DEC	.	.	.	.	.	.	.	.	330	2200	.	.	.	.	.	.	320	2700	.	.
2005	JAN	.	.	.	.	.	.	.	.	660	980	.	.	.	.	.	.	420	2300	.	.
2005	FEB	.	.	.	.	.	.	.	.	530	770	.	.	.	.	.	.	640	1500	.	.
2005	MAR	.	.	.	.	.	.	.	.	2200	.	.	.	.	.	.	.	640	.	.	.
2005	APR	.	.	.	.	.	.	.	.	420	1400	.	.	.	.	.	.	740	1400	.	.
2005	MAY	.	.	.	.	.	.	.	.	200	1500	.	.	.	.	.	.	600	.	.	.
2005	JUN	.	.	.	.	.	.	.	.	420	1400	.	.	.	.	.	.	540	240	.	.
2005	JUL	.	.	.	.	.	.	.	.	350	960	.	.	.	.	.	.	410	1000	.	.
2005	AUG	.	.	.	.	.	.	.	.	540	940	.	.	.	.	.	.	430	1200	.	.
2005	SEP	.	.	.	.	.	.	.	.	340	1300	.	.	.	.	.	.	740	1200	.	.
2005	OCT	.	.	.	.	.	.	.	.	350	700	.	.	.	.	.	.	330	1300	.	.
2005	NOV	.	.	.	.	.	.	.	.	190	740	.	.	.	.	.	.	340	2200	.	.
2005	DEC	.	.	.	.	.	.	.	.	580	1800	.	.	.	.	.	.	470	4000	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1992	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1992	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1993	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JAN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	FEB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	MAR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	APR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	MAY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JUN	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	JUL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	AUG	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	SEP	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	OCT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	NOV	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1994	DEC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1995	JAN	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1995	FEB	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	80	.	.	.
1995	MAR	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	27	.	.	.
1995	APR	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	20	.	.	.
1995	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1995	JUN	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	0	.	.	.
1995	JUL	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	96	.	.	.
1995	AUG	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	28	.	.	.
1995	SEP	.	.	.	.	.	.	.	.	61	.	.	.	.	.	.	.	61	.	.	.
1995	OCT	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	27	.	.	.
1995	NOV	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	21	.	.	.
1995	DEC	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	14	.	.	.
1996	JAN	.	.	.	.	.	.	.	.	40	.	.	.	.	.	.	.	130	.	.	.
1996	FEB	.	.	.	.	.	.	.	.	28	.	.	.	.	.	.	.	14	.	.	.
1996	MAR	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	66	.	.	.
1996	APR	.	.	.	.	.	.	.	.	250	.	.	.	.	.	.	.	0	.	.	.
1996	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	41	.	.	.
1996	JUN	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	110	.	.	.
1996	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	38	.	.	.
1996	AUG	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	140	.	.	.
1996	SEP	.	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	27	.	.	.
1996	OCT	.	.	.	.	.	.	.	.	62	.	.	.	.	.	.	.	83	.	.	.
1996	NOV	.	.	.	.	.	.	.	.	260	.	.	.	.	.	.	.	160	.	.	.
1996	DEC	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	210	.	.	.
1997	JAN	.	.	.	.	.	.	.	.	77	.	.	.	.	.	.	.	69	.	.	.
1997	FEB	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	120	.	.	.
1997	MAR	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	110	.	.	.
1997	APR	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	60	.	.	.
1997	MAY	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	42	.	.	.
1997	JUN	.	.	.	.	.	.	.	.	42	.	.	.	.	.	.	.	200	.	.	.
1997	JUL	.	.	.	.	.	.	.	.	22	.	.	.	.	.	.	.	210	.	.	.
1997	AUG	.	.	.	.	.	.	.	.	82	.	.	.	.	.	.	.	120	.	.	.
1997	SEP	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	120	.	.	.
1997	OCT	.	.	.	.	.	.	.	.	160	.	.	.	.	.	.	.	150	.	.	.
1997	NOV	.	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	22	.	.	.
1997	DEC	.	.	.	.	.	.	.	.	27	.	.	.	.	.	.	.	170	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
1998	JAN	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	62	.	.	.
1998	FEB	.	.	.	.	.	.	.	.	42	.	.	.	.	.	.	.	53	.	.	.
1998	MAR	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	42	.	.	.
1998	APR	.	.	.	.	.	.	.	.	29	.	.	.	.	.	.	.	67	.	.	.
1998	MAY	.	.	.	.	.	.	.	.	19	.	.	.	.	.	.	.	21	.	.	.
1998	JUN	.	.	.	.	.	.	.	.	68	.	.	.	.	.	.	.	110	.	.	.
1998	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	61	.	.	.
1998	AUG	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	150	.	.	.
1998	SEP	.	.	.	.	.	.	.	.	100	.	.	.	.	.	.	.	180	.	.	.
1998	OCT	.	.	.	.	.	.	.	.	42	.	.	.	.	.	.	.	14	.	.	.
1998	NOV	.	.	.	.	.	.	.	.	42	.	.	.	.	.	.	.	81	.	.	.
1998	DEC	.	.	.	.	.	.	.	.	13	.	.	.	.	.	.	.	97	.	.	.
1999	JAN	.	.	.	.	.	.	.	.	43	.	.	.	.	.	.	.	130	.	.	.
1999	FEB	.	.	.	.	.	.	.	.	170	.	.	.	.	.	.	.	110	.	.	.
1999	MAR	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	8.8	.	.	.
1999	APR	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	0	.	.	.
1999	MAY	.	.	.	.	.	.	.	.	87	.	.	.	.	.	.	.	87	.	.	.
1999	JUN	.	.	.	.	.	.	.	.	260	.	.	.	.	.	.	.	87	.	.	.
1999	JUL	.	.	.	.	.	.	.	.	98	.	.	.	.	.	.	.	130	.	.	.
1999	AUG	.	.	.	.	.	.	.	.	21	.	.	.	.	.	.	.	22	.	.	.
1999	SEP	.	.	.	.	.	.	.	.	57	.	.	.	.	.	.	.	99	.	.	.
1999	OCT	.	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	110	.	.	.
1999	NOV	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	43	.	.	.
1999	DEC	.	.	.	.	.	.	.	.	170	.	.	.	.	.	.	.	390	.	.	.
2000	JAN	.	.	.	.	.	.	.	.	30	.	.	.	.	.	.	.	220	.	.	.
2000	FEB	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	150	.	.	.
2000	MAR	.	.	.	.	.	.	.	.	96	.	.	.	.	.	.	.	210	.	.	.
2000	APR	.	.	.	.	.	.	.	.	67	.	.	.	.	.	.	.	100	.	.	.
2000	MAY	.	.	.	.	.	.	.	.	110	.	.	.	.	.	.	.	120	.	.	.
2000	JUN	.	.	.	.	.	.	.	.	44	.	.	.	.	.	.	.	70	.	.	.
2000	JUL	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	58	.	.	.
2000	AUG	.	.	.	.	.	.	.	.	72	.	.	.	.	.	.	.	100	.	.	.
2000	SEP	.	.	.	.	.	.	.	.	170	.	.	.	.	.	.	.	83	.	.	.
2000	OCT	.	.	.	.	.	.	.	.	300	.	.	.	.	.	.	.	190	.	.	.
2000	NOV	.	.	.	.	.	.	.	.	65	.	.	.	.	.	.	.	130	.	.	.
2000	DEC	.	.	.	.	.	.	.	.	14	.	.	.	.	.	.	.	40	.	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2001	JAN	.	.	.	.	.	.	.	.	150	.	.	.	.	.	.	.	120	.	.	.
2001	FEB	.	.	.	.	.	.	.	.	190	.	.	.	.	.	.	.	110	.	.	.
2001	MAR	.	.	.	.	.	.	.	.	63	.	.	.	.	.	.	.	150	.	.	.
2001	APR	.	.	.	.	.	.	.	.	190	.	.	.	.	.	.	.	79	.	.	.
2001	MAY	.	.	.	.	.	.	.	.	220	.	.	.	.	.	.	.	85	540	.	.
2001	JUN	.	.	.	.	.	.	.	.	120	.	.	.	.	.	.	.	170	530	.	.
2001	JUL	.	.	.	.	.	.	.	.	91	.	.	.	.	.	.	.	120	.	.	.
2001	AUG	.	.	.	.	.	.	.	.	30	.	.	.	.	.	.	.	150	.	.	.
2001	SEP	.	.	.	.	.	.	.	.	24	540	.	.	.	.	.	.	44	290	.	.
2001	OCT	.	.	.	.	.	.	.	.	250	840	.	.	.	.	.	.	270	1200	.	.
2001	NOV	.	.	.	.	.	.	.	.	43	370	.	.	.	.	.	.	300	750	.	.
2001	DEC	.	.	.	.	.	.	.	.	44	660	.	.	.	.	.	.	62	1000	.	.
2002	JAN	.	.	.	.	.	.	.	.	52	.	.	.	.	.	.	.	230	.	.	.
2002	FEB	.	.	.	.	.	.	.	.	550	470	.	.	.	.	.	.	340	610	.	.
2002	MAR	.	.	.	.	.	.	.	.	46	.	.	.	.	.	.	.	140	780	.	.
2002	APR	.	.	.	.	.	.	.	.	120	600	.	.	.	.	.	.	280	1100	.	.
2002	MAY	.	.	.	.	.	.	.	.	43	630	.	.	.	.	.	.	35	810	.	.
2002	JUN	.	.	.	.	.	.	.	.	180	580	.	.	.	.	.	.	28	280	.	.
2002	JUL	.	.	.	.	.	.	.	.	180	.	.	.	.	.	.	.	380	.	.	.
2002	AUG	.	.	.	.	.	.	.	.	22	.	.	.	.	.	.	.	110	.	.	.
2002	SEP	.	.	.	.	.	.	.	.	0	130	.	.	.	.	.	.	40	240	.	.
2002	OCT	.	.	.	.	.	.	.	.	15	200	.	.	.	.	.	.	32	250	.	.
2002	NOV	.	.	.	.	.	.	.	.	77	.	.	.	.	.	.	.	160	.	.	.
2002	DEC	.	.	.	.	.	.	.	.	14	0	.	.	.	.	.	.	130	0	.	.
2003	JAN	.	.	.	.	.	.	.	.	78	.	.	.	.	.	.	.	82	.	.	.
2003	FEB	.	.	.	.	.	.	.	.	160	.	.	.	.	.	.	.	110	.	.	.
2003	MAR	.	.	.	.	.	.	.	.	0	390	.	.	.	.	.	.	140	750	.	.
2003	APR	.	.	.	.	.	.	.	.	390	1000	.	.	.	.	.	.	130	690	.	.
2003	MAY	.	.	.	.	.	.	.	.	0	720	.	.	.	.	.	.	0	590	.	.
2003	JUN	.	.	.	.	.	.	.	.	47	330	.	.	.	.	.	.	240	1100	.	.
2003	JUL	.	.	.	.	.	.	.	.	38	290	.	.	.	.	.	.	300	550	.	.
2003	AUG	.	.	.	.	.	.	.	.	170	280	.	.	.	.	.	.	150	460	.	.
2003	SEP	.	.	.	.	.	.	.	.	78	430	.	.	.	.	.	.	93	460	.	.
2003	OCT	.	.	.	.	.	.	.	.	58	610	.	.	.	.	.	.	140	160	.	.
2003	NOV	.	.	.	.	.	.	.	.	74	1200	.	.	.	.	.	.	170	860	.	.
2003	DEC	.	.	.	.	.	.	.	.	42	1000	.	.	.	.	.	.	420	650	.	.

Appendix D: Monthly fluxes

Fluxes in ng/m^2/day; dry = flux due to dry deposition; wet = flux due to wet deposition; abs = flux due to absorption; ABS_e = error of absorption (%)

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		SUPERIOR				MICHIGAN				HURON				ERIE				ONTARIO			
YEAR	MONTH	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e	DRY	WET	ABS	ABS_e
2004	JAN	.	.	.	.	.	.	.	.	200	510	.	.	.	.	.	.	33	1100	.	.
2004	FEB	.	.	.	.	.	.	.	.	46	360	.	.	.	.	.	.	220	240	.	.
2004	MAR	.	.	.	.	.	.	.	.	130	100	.	.	.	.	.	.	110	.	.	.
2004	APR	.	.	.	.	.	.	.	.	100	310	.	.	.	.	.	.	120	550	.	.
2004	MAY	.	.	.	.	.	.	.	.	45	700	.	.	.	.	.	.	110	550	.	.
2004	JUN	.	.	.	.	.	.	.	.	200	310	.	.	.	.	.	.	360	470	.	.
2004	JUL	.	.	.	.	.	.	.	.	48	370	.	.	.	.	.	.	71	530	.	.
2004	AUG	.	.	.	.	.	.	.	.	68	230	.	.	.	.	.	.	72	480	.	.
2004	SEP	.	.	.	.	.	.	.	.	300	.	.	.	.	.	.	.	410	140	.	.
2004	OCT	.	.	.	.	.	.	.	.	110	310	.	.	.	.	.	.	190	380	.	.
2004	NOV	.	.	.	.	.	.	.	.	32	330	.	.	.	.	.	.	260	440	.	.
2004	DEC	.	.	.	.	.	.	.	.	170	450	.	.	.	.	.	.	75	550	.	.
2005	JAN	.	.	.	.	.	.	.	.	20	340	.	.	.	.	.	.	63	400	.	.
2005	FEB	.	.	.	.	.	.	.	.	100	390	.	.	.	.	.	.	240	360	.	.
2005	MAR	.	.	.	.	.	.	.	.	1000	.	.	.	.	.	.	.	190	.	.	.
2005	APR	.	.	.	.	.	.	.	.	88	350	.	.	.	.	.	.	140	320	.	.
2005	MAY	.	.	.	.	.	.	.	.	0	360	.	.	.	.	.	.	170	.	.	.
2005	JUN	.	.	.	.	.	.	.	.	160	640	.	.	.	.	.	.	230	160	.	.
2005	JUL	.	.	.	.	.	.	.	.	100	340	.	.	.	.	.	.	260	290	.	.
2005	AUG	.	.	.	.	.	.	.	.	180	300	.	.	.	.	.	.	160	690	.	.
2005	SEP	.	.	.	.	.	.	.	.	180	310	.	.	.	.	.	.	450	570	.	.
2005	OCT	.	.	.	.	.	.	.	.	160	320	.	.	.	.	.	.	120	300	.	.
2005	NOV	.	.	.	.	.	.	.	.	27	420	.	.	.	.	.	.	110	640	.	.
2005	DEC	.	.	.	.	.	.	.	.	65	920	.	.	.	.	.	.	150	750	.	.

Appendix E.

Urban Effect on Lake Michigan and Lake Erie Atmopsheric Loadings

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Wet Deposition						Dry Deposition					
		Lake Michigan			Lake Erie			Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect	SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
α-HCH	2001	29	0.21	0.72%	9.6			0.49	0.0023	0.47%	0.18		
	2002	29	0.21	0.72%	14			0.45	0.0040	0.89%	0.11		
	2003	22	0.12	0.55%	14	0.15	1.1%	0.15	0.011	7.3%	0.066	0.0038	5.8%
	2004	15	0.072	0.48%	4.4	0.050	1.1%		0.0023			0.0027	
	2005	6.1	0.046	0.75%	2.6	0.030	1.2%		0.0051			0.0012	
γ-HCH	2001	47	0.32	0.68%	15			0.85	0.025	2.9%	0.46		
	2002	41	0.31	0.76%	19			0.65	0.023	3.5%	0.29		
	2003	18	0.19	1.1%	15	0.23	1.5%	0.26	0.016	6.2%	0.15	0.0088	5.9%
	2004	23	0.18	0.78%	9.6	0.15	1.6%		0.0078			0.011	
	2005	8.0	0.12	1.5%	5.7	0.053	0.93%		0.0060			0.0024	
dieldrin	2001	18	0.51	2.8%	7.3			15	0.77	5.1%	4.7		
	2002	19	0.75	3.9%	7.7			11	0.72	6.5%	4.0		
	2003	13	0.39	3.0%	6.6	0.15	2.3%	3.8	0.43	11%	1.4	0.17	12%
	2004	22	0.41	1.9%	5.5	0.13	2.4%		0.43			0.11	
	2005	11	0.26	2.4%	3.4	0.088	2.6%		0.38			0.11	
cis-chlordane	2001	6.1	0.26	4.3%	3.6			1.9	0.11	5.8%	3.4		
	2002	9.2	0.24	2.6%	4.9			2.0	0.29	15%	1.4		
	2003	6.3			4.0	0.11	2.8%	0.83	0.18	22%	0.67	0.11	16%
	2004	1.3	0.037	2.8%	0.73	0.019	2.6%		0.045			0.023	
	2005	3.5	0.055	1.6%	1.3	0.037	2.8%		0.035			0.019	
trans-chlordane	2001	0.87	0.066	7.6%	0.63			1.5	0.12	8.0%	0.85		
	2002	0.98	0.059	6.0%	0.65			1.1	0.11	10%	0.70		
	2003	0.65	0.028	4.3%	0.66	0.023	3.5%	0.45	0.087	19%	0.31	0.042	14%
	2004	1.0	0.026	2.6%	0.46	0.0059	1.3%		0.056			0.020	
	2005	0.79	0.016	2.0%	0.31	0.0075	2.4%		0.048			0.020	
trans-nonachlor	2001	0.71	0.052	7.3%	0.51			0.85	0.065	7.6%	0.56		
	2002	0.69	0.040	5.8%	0.49			0.72	0.062	8.6%	0.32		
	2003	0.67	0.018	2.7%	0.52	0.014	2.7%	0.37	0.038	10%	0.13	0.013	10%
	2004	0.77	0.025	3.2%	0.37	0.0093	2.5%		0.026			0.011	
	2005	0.77	0.010	1.3%	0.26	0.0088	3.4%		0.022			0.0094	
α-endos	2001	38	0.24	0.63%	13			18	0.18	1.0%	12		
	2002	30	0.25	0.83%	16			12	0.19	1.6%	6.8		
	2003	19	0.20	1.1%	22	0.24	1.1%	5.5	0.15	2.7%	6.6	0.15	2.3%
	2004	30	0.17	0.57%	12	0.18	1.5%		0.12			0.084	
	2005	18	0.13	0.72%	26	0.091	0.35%		0.095			0.064	
pp-DDE	2001	0.95	0.066	6.9%	0.69								
	2002	1.2	0.051	4.3%	1.4								
	2003	1.1	0.027	2.5%	1.1	0.017	1.5%						
	2004	1.3	0.056	4.3%	0.64	0.014	2.2%						
	2005	1.0	0.024	2.4%	0.54	0.012	2.2%						
pp-DDT	2001	2.1	0.22	10%	2.0			1.1	0.28	25%	1.1		
	2002	5.3	0.17	3.2%	3.1			1.7	0.31	18%	1.5		
	2003	2.3	0.099	4.3%	3.3	0.078	2.4%	2.8	0.19	6.8%	0.69	0.067	9.7%
	2004	4.0	0.15	3.8%	2.0	0.072	3.6%		0.068			0.024	
	2005	2.9	0.060	2.1%	1.8	0.043	2.4%		0.067			0.021	
pp-DDD	2001	0.31	0.030	9.7%	0.34			1.1	0.049	4.5%	0.78		
	2002	0.32	0.015	4.7%	0.39			0.63	0.040	6.3%	0.66		
	2003	0.17	0.014	8.2%	0.55	0.020	3.6%	0.063	0.034	54%	0.039	0.043	110%
	2004	0.36	0.016	4.4%	0.35	0.010	2.9%		0.026			0.024	
	2005	0.23	0.0071	3.1%	0.083	0.0055	6.6%		0.021			0.023	
HCB	2001	0.78	0.011	1.4%	0.39								
	2002	0.62	0.0085	1.4%	0.39								
	2003	0.55	0.0067	1.2%	0.37	0.0093	2.5%						
	2004	0.93	0.0085	0.91%	0.38	0.0077	2.0%						
	2005	1.0	0.0077	0.77%	0.98	0.011	1.1%						

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Wet Deposition						Dry Deposition					
		Lake Michigan			Lake Erie			Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect	SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
PCB 18	2001	1.8	0.061	3.4%	0.67								
	2002	1.5	0.030	2.0%	1.0								
	2003	1.2	0.029	2.4%	0.56	0.036	6.4%						
	2004	1.3	0.025	1.9%	0.85	0.025	2.9%						
	2005	1.2	0.023	1.9%	0.42	0.021	5.0%						
PCB 44	2001	1.3	0.059	4.5%	0.70								
	2002	1.2	0.055	4.6%	0.71								
	2003	0.90	0.034	3.8%	0.54	0.0046	0.85%						
	2004	1.1	0.052	4.7%	0.99	0.0034	0.34%						
	2005	1.3	0.032	2.5%	0.46	0.019	4.1%						
PCB 52	2001	2.4	0.13	5.4%	1.3								
	2002	2.0	0.092	4.6%	1.2								
	2003	1.5	0.055	3.7%	0.88	0.027	3.1%						
	2004	2.0	0.11	5.5%	1.8	0.025	1.4%						
	2005	2.4	0.088	3.7%	1.0	0.037	3.7%						
PCB 101	2001	2.1	0.17	8.1%	1.2								
	2002	1.9	0.15	7.9%	1.2								
	2003	1.6	0.085	5.3%	0.94	0.035	3.7%						
	2004	1.7	0.17	10%	1.6	0.029	1.8%						
	2005	2.3	0.13	5.7%	0.91	0.050	5.5%						
Suite PCBs	2001	29	2.5	8.6%	16								
	2002	33	2.1	6.4%	23								
	2003	30	1.3	4.3%	15	0.76	5.1%						
	2004	48	2.4	5.0%	34	0.84	2.5%						
	2005	48	1.8	3.8%	18	0.93	5.2%						
Phenanthre	2001	270	76	28%	250			140	42	30%	150		
	2002	250	36	14%	350			100	36	36%	78		
	2003	170	22	13%	210	15	7.1%	79	23	29%	61	7.2	12%
	2004	350	31	8.9%	240	15	6.3%	52	14	27%	48	6.3	13%
	2005	340	38	11%	210	11	5.2%	110	14	13%	130	6.4	4.9%
Pyrene	2001	170	84	49%	180			130	65	50%	180		
	2002	180	26	14%	270			110	49	45%	93		
	2003	130	21	16%	170	14	8.2%	88	34	39%	73	12	16%
	2004	230	29	13%	110	11	10%	62	23	37%	61	11	18%
	2005	310	40	13%	140	13	9.3%	160	23	14%	220	9.7	4.4%
B(b+k)	2001	200	81	41%	220			240	75	31%	390		
fluoranth	2002	240	25	10%	350			230	57	25%	240		
	2003	200	31	16%	260	25	9.6%	160	48	30%	230	20	8.7%
	2004	400	36	9.0%	220	20	9.1%	180	41	23%	250	27	11%
	2005	440	37	8.4%	230	21	9.1%	440	38	8.6%	420	22	5.2%
B(a)P	2001	70	48	69%	79			55	35	64%	92		
	2002	78	11	14%	110			55	23	42%	48		
	2003	65	14	22%	86	14	16%	34	17	50%	39	6.7	17%
	2004	130	23	18%	67	11	16%	34	12	35%	38	7.9	21%
	2005	140	24	17%	80	11	14%	93	11	12%	81	6.0	7.4%
Indeno	2001	120	81	68%	120			110	42	38%	190		
	2002	140	14	10%	210			120	33	28%	120		
	2003	120	18	15%	180	18	10%	83	28	34%	110	12	11%
	2004	260	20	7.7%	120	15	13%	80	25	31%	120	17	14%
	2005	250	25	10%	130	13	10%	210	23	11%	230	14	6.1%

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Absorption						Volatilization					
		Lake Michigan			Lake Erie			Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect	SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
α-HCH	2001	250	6.1	2.4%	170			-370	-7.3	2.0%	-66		
	2002	380	5.9	1.6%	180			-400	-7.5	1.9%	-68		
	2003	290	5.5	1.9%	120	4.1	3.4%	-350	-6.3	1.8%	-62	-1.8	2.9%
	2004	100	2.4	2.4%	43	1.8	4.2%	-370	-6.8	1.8%	-65	-1.9	2.9%
	2005	95	2.2	2.3%	48	1.4	2.9%	-410	-6.7	1.6%	-80	-1.8	2.3%
γ-HCH	2001	130	5.2	4.0%	88			-57	-1.1	1.9%	-40		
	2002	130	4.7	3.6%	55			-62	-1.2	1.9%	-41		
	2003	120	2.9	2.4%	63	2.2	3.5%	-55	-0.99	1.8%	-38	-1.1	2.9%
	2004	55	1.7	3.1%	27	1.4	5.2%	-58	-1.1	1.9%	-40	-1.1	2.8%
	2005	53	1.5	2.8%	27	0.86	3.2%	-63	-1.0	1.6%	-48	-1.1	2.3%
dieldrin	2001	79	13	16%	34						-250		
	2002	140	11	7.9%	31						-250		
	2003	87	7.8	9.0%	35	2.6	7.4%				-240	-6.9	2.9%
	2004	72	6.4	8.9%	25	2.4	9.6%				-250	-7.1	2.8%
	2005	78	7.4	9.5%	31	1.8	5.8%				-310	-7.0	2.3%
cis-chlordane	2001	12	2.3	19%	7.8			-97	-2.1	2.2%	-34		
	2002	12	1.7	14%	7.6			-100	-2.2	2.2%	-37		
	2003	11	1.3	12%	8.0	0.64	8.0%	-97	-1.9	2.0%	-35	-0.98	2.8%
	2004	7.4	0.92	12%	4.1	0.44	11%	-100	-1.9	1.9%	-35	-0.97	2.8%
	2005	11	1.2	11%	7.5	0.49	6.5%	-96	-1.7	1.8%	-43	-1.0	2.3%
trans-chlordane	2001	7.7	1.6	21%	5.6			-74	-1.6	2.2%	-30		
	2002	17	1.4	8.2%	6.2			-79	-1.6	2.0%	-33		
	2003	6.4	1.1	17%	5.6	0.43	7.7%	-74	-1.4	1.9%	-31	-0.85	2.7%
	2004	4.9	0.91	19%	3.6	0.38	11%	-76	-1.5	2.0%	-30	-0.86	2.9%
	2005	6.3	1.2	19%	4.8	0.39	8.1%	-72	-1.3	1.8%	-38	-0.92	2.4%
trans-nonachlor	2001	9.2	1.1	12%	4.8			-55	-1.2	2.2%	-23		
	2002	11	0.99	9.0%	5.1			-59	-1.2	2.0%	-25		
	2003	8.3	0.68	8.2%	4.0	0.28	7.0%	-55	-1.1	2.0%	-23	-0.65	2.8%
	2004	7.0	0.66	9.4%	3.5	0.28	8.0%	-57	-1.1	1.9%	-23	-0.65	2.8%
	2005	9.3	0.83	8.9%	4.9	0.31	6.3%	-55	-0.97	1.8%	-29	-0.70	2.4%
α-endos	2001	120	4.2	3.5%	140						-87		
	2002	210	2.6	1.2%	96						-94		
	2003	140	2.0	1.4%	190	2.5	1.3%				-89	-2.5	2.8%
	2004	73	1.7	2.3%	49	2.0	4.1%				-88	-2.5	2.8%
	2005	150	3.9	2.6%	160	2.1	1.3%				-110	-2.6	2.4%
pp-DDE	2001	11	1.4	13%	9.2			-150	-3.1	2.1%	-42		
	2002	11	0.92	8.4%	10			-160	-3.2	2.0%	-45		
	2003	12	0.74	6.2%	9.7	0.21	2.2%	-150	-2.8	1.9%	-43	-1.2	2.8%
	2004	8.1	0.80	9.9%	8.4	0.21	2.5%	-150	-2.9	1.9%	-42	-1.2	2.9%
	2005	8.3	0.83	10%	9.2	0.17	1.8%	-140	-2.6	1.9%	-53	-1.3	2.5%
pp-DDT	2001	19	2.4	13%	16			-6.7	-0.13	1.9%	-3.4		
	2002	27	2.4	8.9%	16			-7.3	-0.14	1.9%	-3.5		
	2003	27	2.2	8.1%	22	0.98	4.5%	-6.3	-0.11	1.7%	-3.2	-0.095	3.0%
	2004	11	1.4	13%	12	0.66	5.5%	-6.7	-0.12	1.8%	-3.4	-0.097	2.9%
	2005	15	2.1	14%	15	0.58	3.9%	-7.5	-0.12	1.6%	-4.2	-0.093	2.2%
pp-DDD	2001	9.4	0.50	5.3%	4.4						-8.1		
	2002	3.3	0.39	12%	3.6						-8.3		
	2003	5.8	0.39	6.7%	3.0	0.24	8.0%				-7.6	-0.22	2.9%
	2004	3.3	0.19	5.8%	2.5	0.100	4.0%				-8.0	-0.23	2.9%
	2005	1.8	0.13	7.2%	1.9	0.029	1.5%				-10.0	-0.22	2.2%
HCB	2001	120	3.7	3.1%	47						-75		
	2002	110	3.0	2.7%	52						-82		
	2003	100	2.3	2.3%	53	2.0	3.8%				-77	-2.1	2.7%
	2004	87	2.4	2.8%	27	1.4	5.2%				-76	-2.1	2.8%
	2005	81	2.4	3.0%	46	1.9	4.1%				-96	-2.3	2.4%

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Absorption						Volatilization					
		Lake Michigan			Lake Erie			Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect	SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
PCB 18	2001	20	6.4	32%	20			-38	-0.80	2.1%	-38		
	2002	20	4.1	21%	17			-41	-0.81	2.0%	-40		
	2003	19	3.8	20%	24	2.0	8.3%	-37	-0.71	1.9%	-38	-1.1	2.9%
	2004	8.9	1.9	21%	7.3	1.1	15%	-40	-0.75	1.9%	-31	-1.1	3.5%
	2005	9.7	3.2	33%	20	1.7	8.5%	-38	-0.67	1.8%	-47	-1.1	2.3%
PCB 44	2001	13	7.3	56%	27			-32	-0.67	2.1%	-35		
	2002	9.8	3.4	35%	26			-34	-0.69	2.0%	-37		
	2003	6.7	4.6	69%	10	0.057	0.57%	-31	-0.60	1.9%	-35	-0.99	2.8%
	2004	3.0	1.7	57%	2.0	0.096	4.8%	-33	-0.63	1.9%	-29	-1.00	3.4%
	2005	0.98	2.5	260%	7.4	0.064	0.86%	-32	-0.57	1.8%	-44	-1.0	2.3%
PCB 52	2001	16	6.2	39%	20			-110	-2.4	2.2%	-73		
	2002	18	4.8	27%	17			-120	-2.5	2.1%	-76		
	2003	15	4.6	31%	27	1.2	4.4%	-110	-2.1	1.9%	-72	-2.0	2.8%
	2004	8.9	3.4	38%	9.8	0.85	8.7%	-120	-2.3	1.9%	-60	-2.1	3.5%
	2005	9.6	6.8	71%	25	1.3	5.2%	-120	-2.0	1.7%	-90	-2.1	2.3%
PCB 101	2001	11	5.0	45%	13			-44	-0.92	2.1%	-56		
	2002	14	4.0	29%	12			-47	-0.94	2.0%	-58		
	2003	12	4.0	33%	17	0.81	4.8%	-43	-0.80	1.9%	-55	-1.6	2.9%
	2004	5.8	2.9	50%	5.9	0.51	8.6%	-45	-0.85	1.9%	-45	-1.6	3.6%
	2005	7.7	6.7	87%	16	0.72	4.5%	-45	-0.78	1.7%	-69	-1.6	2.3%
Suite PCBs	2001	240	93	39%	260			-1100	-23	2.1%	-990		
	2002	270	68	25%	240			-1200	-24	2.0%	-1000		
	2003	240	63	26%	350	20	5.7%	-1100	-20	1.8%	-980	-28	2.9%
	2004	170	51	30%	170	17	10%	-1100	-22	2.0%	-810	-28	3.5%
	2005	180	90	50%	420	27	6.4%	-1100	-17	1.5%	-1200	-29	2.4%
Phenanthre	2001	5000	4500	90%	9200						-1400		
	2002	5500	4400	80%	6800						-1400		
	2003	4000	3200	80%	6700	2100	31%				-1300	-38	2.9%
	2004	4400	3100	70%	7600	2100	28%				-1400	-39	2.8%
	2005	7000	4600	66%	11000	2200	20%				-1700	-38	2.2%
Pyrene	2001	340	670	200%	790						-89		
	2002	480	540	110%	630						-91		
	2003	290	360	120%	670	270	40%				-86		
	2004	250	370	150%	730	290	40%				-89	-2.5	2.8%
	2005	540	470	87%	1000	260	26%				-110	-2.4	2.2%
B(b+k)	2001	4.1	11	270%	53						-8.2		
fluoranth	2002	7.3	12	160%	50						-5.6		
	2003		8.1		40	7.0	18%				-7.7	-0.23	3.0%
	2004	17	8.4	49%	33	1.4	4.2%				-8.1	-0.23	2.8%
	2005	4.3	12	280%	34	11	32%				-10	-0.22	2.2%
B(a)P	2001		3.0		17								
	2002	3.8	2.8	74%	13								
	2003		1.6		6.9	2.2	32%						
	2004	3.6	2.5	69%	4.3	0.12	2.8%						
	2005	0.90	2.8	310%	7.1	1.5	21%						
Indeno	2001												
	2002												
	2003												
	2004												
	2005												

Appendix E: Lake Michigan & Lake Erie atmospheric loadings (kg/year)

		Net Gas Exchange				Total			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
α-HCH	2001	-120	-1.2	100		-92	-1.0	110	
	2002	-16	-1.6	110		13	-1.4	130	
	2003	-63	-0.84	58	2.2	-42	-0.71	72	2.4
	2004	-270	-4.5	-23	-0.11	-250	-4.4	-18	-0.054
	2005	-320	-4.5	-33	-0.36	-310	-4.4	-30	-0.32
γ-HCH	2001	73	4.1	48		120	4.4	63	
	2002	70	3.5	14		110	3.9	34	
	2003	64	1.9	25	1.1	83	2.1	40	1.3
	2004	-2.1	0.59	-13	0.29	21	0.79	-3.3	0.45
	2005	-9.8	0.43	-21	-0.22	-1.8	0.55	-16	-0.16
dieldrin	2001			-220		110	14	-210	
	2002			-220		170	13	-210	
	2003			-200	-4.3	100	8.6	-200	-4.0
	2004			-230	-4.7	94	7.2	-220	-4.5
	2005			-270	-5.2	89	8.0	-270	-5.0
cis-chlordane	2001	-86	0.23	-26		-78	0.61	-19	
	2002	-92	-0.50	-29		-81	0.038	-23	
	2003	-86	-0.55	-27	-0.34	-79	-0.37	-22	-0.12
	2004	-93	-1.0	-31	-0.53	-92	-0.93	-30	-0.49
	2005	-85	-0.48	-36	-0.55	-81	-0.39	-34	-0.49
trans-chlordane	2001	-66	0.023	-24		-64	0.21	-23	
	2002	-63	-0.22	-27		-61	-0.050	-25	
	2003	-68	-0.37	-25	-0.43	-66	-0.25	-24	-0.36
	2004	-71	-0.56	-27	-0.48	-70	-0.48	-26	-0.46
	2005	-66	-0.082	-33	-0.53	-65	-0.018	-33	-0.50
trans-nonachlor	2001	-46	-0.053	-18		-45	0.064	-17	
	2002	-48	-0.24	-19		-47	-0.14	-19	
	2003	-47	-0.38	-19	-0.37	-46	-0.32	-19	-0.34
	2004	-50	-0.44	-20	-0.37	-49	-0.39	-19	-0.35
	2005	-45	-0.14	-24	-0.39	-45	-0.11	-24	-0.37
α-endos	2001			49		170	4.6	74	
	2002			2.6		250	3.0	26	
	2003			100	-0.011	160	2.4	130	0.38
	2004			-39	-0.52	100	2.0	-26	-0.26
	2005			51	-0.50	170	4.1	77	-0.35
pp-DDE	2001	-130	-1.7	-33		-130	-1.6	-32	
	2002	-150	-2.3	-35		-140	-2.2	-34	
	2003	-130	-2.0	-33	-0.99	-130	-2.0	-32	-0.98
	2004	-140	-2.1	-34	-1.00	-140	-2.0	-33	-0.98
	2005	-140	-1.7	-44	-1.1	-130	-1.7	-43	-1.1
pp-DDT	2001	12	2.3	12		15	2.8	15	
	2002	20	2.3	13		27	2.8	17	
	2003	20	2.1	19	0.88	25	2.4	22	1.0
	2004	4.3	1.2	8.6	0.56	8.3	1.5	11	0.66
	2005	7.3	2.0	10	0.49	10	2.1	12	0.55
pp-DDD	2001			-3.7		11	0.58	-2.6	
	2002			-4.7		4.2	0.44	-3.6	
	2003			-4.6	0.015	6.1	0.44	-4.0	0.078
	2004			-5.5	-0.13	3.7	0.24	-5.2	-0.094
	2005			-8.0	-0.19	2.1	0.16	-7.9	-0.16
HCB	2001			-28		120	3.7	-28	
	2002			-30		110	3.0	-30	
	2003			-24	-0.15	110	2.3	-24	-0.14
	2004			-49	-0.75	88	2.4	-48	-0.74
	2005			-50	-0.43	82	2.4	-49	-0.42

Appendix E: Lake Michigan & Lake Erie atmospheric loadings (kg/year)

		Net Gas Exchange				Total			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
PCB 18	2001	-18	5.6	-18		-16	5.7	-17	
	2002	-21	3.2	-22		-20	3.3	-21	
	2003	-18	3.1	-14	0.96	-17	3.1	-13	0.99
	2004	-31	1.2	-24	0.0017	-30	1.2	-23	0.027
	2005	-28	2.6	-27	0.55	-27	2.6	-26	0.57
PCB 44	2001	-19	6.7	-8.3		-17	6.7	-7.6	
	2002	-24	2.7	-11		-23	2.7	-10	
	2003	-25	4.0	-25	-0.93	-24	4.0	-24	-0.93
	2004	-30	1.0	-27	-0.90	-29	1.1	-26	-0.90
	2005	-31	1.9	-36	-0.98	-30	2.0	-36	-0.96
PCB 52	2001	-98	3.8	-52		-96	3.9	-51	
	2002	-100	2.3	-59		-100	2.4	-57	
	2003	-97	2.5	-45	-0.85	-96	2.5	-44	-0.82
	2004	-110	1.2	-50	-1.2	-110	1.3	-48	-1.2
	2005	-110	4.7	-65	-0.84	-100	4.8	-64	-0.80
PCB 101	2001	-33	4.0	-43		-31	4.2	-42	
	2002	-33	3.1	-46		-31	3.2	-45	
	2003	-31	3.2	-38	-0.75	-29	3.3	-37	-0.72
	2004	-39	2.0	-39	-1.1	-38	2.2	-38	-1.0
	2005	-37	5.9	-53	-0.91	-35	6.0	-52	-0.86
Suite PCBs	2001	-860	70	-720		-830	72	-710	
	2002	-910	44	-780		-870	47	-760	
	2003	-840	43	-630	-8.1	-810	44	-610	-7.3
	2004	-960	29	-640	-11	-910	32	-600	-10.0
	2005	-930	73	-790	-2.4	-880	75	-770	-1.5
Phenanthre	2001			7800		5400	4600	8200	
	2002			5400		5900	4500	5800	
	2003			5300	2100	4200	3200	5600	2100
	2004			6200	2100	4800	3200	6500	2100
	2005			9600	2200	7400	4600	9900	2200
Pyrene	2001			700		640	810	1100	
	2002			540		770	620	900	
	2003			590		510	410	830	26
	2004			640	290	540	420	820	310
	2005			910	260	1000	540	1300	280
B(b+k) fluoranth	2001			45		450	170	650	
	2002			45		470	95	640	
	2003			32	6.7	360	87	520	52
	2004			25	1.2	590	85	490	48
	2005			24	11	880	87	670	55
B(a)P	2001					130	86	170	
	2002					140	37	160	
	2003					98	33	120	21
	2004					170	38	110	19
	2005					240	38	160	17
Indeno	2001					230	120	310	
	2002					250	47	330	
	2003					200	46	290	30
	2004					340	45	240	32
	2005					460	48	370	27

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Net Input					
		Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
α-HCH	2001	280	6.3	2.3%	180		
	2002	410	6.1	1.5%	190		
	2003	310	5.6	1.8%	130	4.2	3.2%
	2004	120	2.4	2.0%	47	1.8	3.8%
	2005	100	2.3	2.3%	50	1.5	3.0%
γ-HCH	2001	180	5.6	3.1%	100		
	2002	170	5.0	2.9%	75		
	2003	140	3.1	2.2%	78	2.4	3.1%
	2004	79	1.9	2.4%	36	1.6	4.4%
	2005	61	1.6	2.6%	32	0.91	2.8%
dieldrin	2001	110	14	13%	46		
	2002	170	13	7.6%	43		
	2003	100	8.6	8.6%	43	3.0	7.0%
	2004	94	7.2	7.7%	30	2.7	9.0%
	2005	89	8.0	9.0%	35	2.0	5.7%
cis-chlordane	2001	20	2.7	14%	15		
	2002	24	2.2	9.2%	14		
	2003	18	1.5	8.3%	13	0.86	6.6%
	2004	8.6	1.0	12%	4.8	0.49	10%
	2005	15	1.3	8.7%	8.8	0.54	6.1%
trans-chlordane	2001	10	1.8	18%	7.0		
	2002	19	1.6	8.4%	7.5		
	2003	7.5	1.2	16%	6.5	0.49	7.5%
	2004	6.0	0.99	17%	4.1	0.40	9.8%
	2005	7.1	1.3	18%	5.1	0.42	8.2%
trans-nonachlor	2001	11	1.2	11%	5.8		
	2002	13	1.1	8.5%	5.9		
	2003	9.3	0.73	7.8%	4.7	0.31	6.6%
	2004	7.8	0.71	9.1%	3.9	0.30	7.7%
	2005	10	0.86	8.6%	5.1	0.33	6.5%
α-endos	2001	170	4.6	2.7%	160		
	2002	250	3.0	1.2%	120		
	2003	160	2.4	1.5%	220	2.9	1.3%
	2004	100	2.0	2.0%	62	2.2	3.5%
	2005	170	4.1	2.4%	180	2.2	1.2%
pp-DDE	2001	12	1.5	13%	9.8		
	2002	12	0.97	8.1%	12		
	2003	13	0.76	5.8%	11	0.22	2.0%
	2004	9.3	0.85	9.1%	9.1	0.22	2.4%
	2005	9.4	0.85	9.0%	9.7	0.18	1.9%
pp-DDT	2001	22	2.9	13%	19		
	2002	34	2.9	8.5%	21		
	2003	32	2.5	7.8%	26	1.1	4.2%
	2004	15	1.6	11%	14	0.75	5.4%
	2005	18	2.2	12%	16	0.65	4.1%
pp-DDD	2001	11	0.58	5.3%	5.5		
	2002	4.2	0.44	10%	4.7		
	2003	6.1	0.44	7.2%	3.6	0.30	8.3%
	2004	3.7	0.24	6.5%	2.8	0.13	4.6%
	2005	2.1	0.16	7.6%	2.0	0.058	2.9%
HCB	2001	120	3.7	3.1%	48		
	2002	110	3.0	2.7%	52		
	2003	110	2.3	2.1%	54	2.0	3.7%
	2004	88	2.4	2.7%	28	1.4	5.0%
	2005	82	2.4	2.9%	47	1.9	4.0%

Appendix E: Urban Effect on Lake Michigan & Lake Erie Atmospheric Loadings (kg/year)

		Net Input					
		Lake Michigan			Lake Erie		
		SBD	Chicago	Urban Effect	STP	Cleveland	Urban Effect
PCB 18	2001	22	6.5	30%	21		
	2002	21	4.1	20%	18		
	2003	20	3.8	19%	25	2.1	8.4%
	2004	10	2.0	20%	8.2	1.1	13%
	2005	11	3.3	30%	20	1.7	8.5%
PCB 44	2001	15	7.4	49%	28		
	2002	11	3.4	31%	27		
	2003	7.6	4.6	61%	11	0.061	0.55%
	2004	4.1	1.7	41%	2.9	0.099	3.4%
	2005	2.3	2.5	110%	7.8	0.083	1.1%
PCB 52	2001	19	6.3	33%	22		
	2002	20	4.9	25%	18		
	2003	16	4.6	29%	28	1.2	4.3%
	2004	11	3.5	32%	12	0.88	7.3%
	2005	12	6.8	57%	26	1.3	5.0%
PCB 101	2001	13	5.1	39%	14		
	2002	16	4.2	26%	13		
	2003	14	4.1	29%	17	0.84	4.9%
	2004	7.4	3.0	41%	7.5	0.54	7.2%
	2005	10.0	6.8	68%	16	0.77	4.8%
Suite PCBs	2001	270	95	35%	280		
	2002	300	70	23%	270		
	2003	270	65	24%	360	20	5.6%
	2004	220	53	24%	200	18	9.0%
	2005	230	92	40%	440	28	6.4%
Phenanthre	2001	5400	4600	85%	9600		
	2002	5900	4500	76%	7200		
	2003	4200	3200	76%	6900	2100	30%
	2004	4800	3200	67%	7900	2100	27%
	2005	7400	4600	62%	12000	2200	18%
Pyrene	2001	640	810	130%	1200		
	2002	770	620	81%	990		
	2003	510	410	80%	920	290	32%
	2004	540	420	78%	910	310	34%
	2005	1000	540	54%	1400	280	20%
B(b+k) fluoranth	2001	450	170	38%	650		
	2002	470	95	20%	640		
	2003	360	87	24%	530	52	9.8%
	2004	590	85	14%	500	48	9.6%
	2005	880	87	9.9%	680	55	8.1%
B(a)P	2001	130	86	66%	190		
	2002	140	37	26%	180		
	2003	98	33	34%	130	23	18%
	2004	170	38	22%	110	19	17%
	2005	240	38	16%	170	18	11%
Indeno	2001	230	120	52%	310		
	2002	250	47	19%	330		
	2003	200	46	23%	290	30	10%
	2004	340	45	13%	240	32	13%
	2005	460	48	10%	370	27	7.3%

Appendix F.

Urban Effect on Lake Michigan and Lake Erie Atmopsheric Fluxes

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Wet Deposition				Dry Deposition			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
α-HCH	2001	1.4	0.56	1.0		0.023	0.0064	0.019	
	2002	1.4	0.58	1.5		0.021	0.011	0.012	
	2003	1.0	0.33	1.5	0.51	0.0070	0.029	0.0070	0.013
	2004	0.71	0.20	0.47	0.17		0.0064		0.0091
	2005	0.29	0.13	0.27	0.10		0.014		0.0042
γ-HCH	2001	2.2	0.87	1.6		0.040	0.069	0.049	
	2002	2.0	0.85	2.1		0.031	0.063	0.031	
	2003	0.87	0.51	1.6	0.78	0.012	0.043	0.015	0.030
	2004	1.1	0.50	1.0	0.53		0.021		0.038
	2005	0.38	0.32	0.61	0.18		0.016		0.0083
dieldrin	2001	0.83	1.4	0.78		0.71	2.1	0.50	
	2002	0.91	2.1	0.82		0.52	2.0	0.43	
	2003	0.60	1.1	0.70	0.51	0.18	1.2	0.15	0.57
	2004	1.0	1.1	0.59	0.45		1.2		0.39
	2005	0.50	0.72	0.36	0.30		1.0		0.36
cis-	2001	0.29	0.72	0.38		0.089	0.31	0.37	
chlordane	2002	0.44	0.66	0.52		0.093	0.81	0.15	
	2003	0.30		0.42	0.36	0.040	0.49	0.071	0.39
	2004	0.061	0.10	0.077	0.067		0.12		0.079
	2005	0.16	0.15	0.14	0.13		0.096		0.066
trans-	2001	0.041	0.18	0.068		0.071	0.33	0.090	
chlordane	2002	0.046	0.16	0.069		0.050	0.32	0.074	
	2003	0.031	0.075	0.070	0.080	0.022	0.24	0.033	0.14
	2004	0.048	0.072	0.049	0.020		0.15		0.068
	2005	0.037	0.043	0.033	0.026		0.13		0.069
trans-	2001	0.034	0.14	0.054		0.040	0.18	0.059	
nonachlor	2002	0.033	0.11	0.052		0.034	0.17	0.034	
	2003	0.032	0.049	0.055	0.046	0.017	0.10	0.014	0.046
	2004	0.036	0.068	0.039	0.032		0.070		0.038
	2005	0.036	0.027	0.027	0.030		0.059		0.032
α-endos	2001	1.8	0.65	1.4		0.87	0.50	1.3	
	2002	1.4	0.68	1.7		0.58	0.53	0.72	
	2003	0.88	0.53	2.3	0.82	0.26	0.41	0.71	0.52
	2004	1.4	0.47	1.3	0.63		0.34		0.29
	2005	0.85	0.36	2.8	0.31		0.26		0.22
pp-DDE	2001	0.045	0.18	0.073					
	2002	0.059	0.14	0.15					
	2003	0.050	0.075	0.12	0.058				
	2004	0.061	0.15	0.069	0.048				
	2005	0.049	0.067	0.058	0.042				
pp-DDT	2001	0.10	0.62	0.22		0.051	0.77	0.12	
	2002	0.25	0.48	0.33		0.082	0.86	0.16	
	2003	0.11	0.27	0.35	0.27	0.13	0.52	0.074	0.23
	2004	0.19	0.40	0.22	0.25		0.19		0.081
	2005	0.14	0.16	0.19	0.15		0.18		0.072
pp-DDD	2001	0.015	0.082	0.037		0.054	0.13	0.083	
	2002	0.015	0.041	0.041		0.030	0.11	0.070	
	2003	0.0079	0.038	0.059	0.067	0.0030	0.092	0.0042	0.15
	2004	0.017	0.043	0.037	0.034		0.071		0.081
	2005	0.011	0.020	0.0088	0.019		0.058		0.079
HCB	2001	0.037	0.031	0.041					
	2002	0.029	0.023	0.042					
	2003	0.026	0.018	0.040	0.032				
	2004	0.044	0.023	0.040	0.026				
	2005	0.048	0.021	0.10	0.037				

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Wet Deposition				Dry Deposition			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
PCB 18	2001	0.084	0.17	0.071					
	2002	0.071	0.081	0.11					
	2003	0.055	0.079	0.060	0.12				
	2004	0.060	0.067	0.090	0.085				
	2005	0.056	0.064	0.045	0.071				
PCB 44	2001	0.061	0.16	0.075					
	2002	0.055	0.15	0.075					
	2003	0.043	0.092	0.058	0.016				
	2004	0.052	0.14	0.11	0.012				
	2005	0.062	0.089	0.049	0.066				
PCB 52	2001	0.11	0.35	0.14					
	2002	0.096	0.25	0.13					
	2003	0.070	0.15	0.093	0.093				
	2004	0.095	0.30	0.19	0.087				
	2005	0.12	0.24	0.11	0.13				
PCB 101	2001	0.10	0.45	0.13					
	2002	0.089	0.42	0.13					
	2003	0.075	0.23	0.10	0.12				
	2004	0.078	0.47	0.17	0.099				
	2005	0.11	0.35	0.097	0.17				
Suite PCBs	2001	1.4	6.7	1.7					
	2002	1.6	5.8	2.4					
	2003	1.4	3.5	1.6	2.6				
	2004	2.3	6.7	3.6	2.9				
	2005	2.3	5.1	1.9	3.2				
Phenanthre	2001	13	210	26		6.5	110	16	
	2002	12	98	37		4.8	99	8.3	
	2003	8.3	59	22	51	3.7	62	6.5	25
	2004	17	85	25	50	2.5	37	5.2	22
	2005	16	100	23	39	5.4	39	14	22
Pyrene	2001	7.8	230	19		6.3	180	19	
	2002	8.4	71	29		5.1	140	9.9	
	2003	6.1	58	18	47	4.2	93	7.8	41
	2004	11	81	12	39	2.9	62	6.5	37
	2005	15	110	15	46	7.7	64	23	33
B(b+k)	2001	9.4	220	23		12	210	41	
fluoranth	2002	11	69	37		11	160	26	
	2003	9.4	85	28	84	7.5	130	25	69
	2004	19	98	23	70	8.3	110	27	91
	2005	21	100	25	73	21	100	44	77
B(a)P	2001	3.3	130	8.4		2.6	95	9.8	
	2002	3.7	30	12		2.6	63	5.2	
	2003	3.1	39	9.2	49	1.6	46	4.1	23
	2004	6.1	64	7.2	37	1.6	33	4.0	27
	2005	6.9	65	8.5	38	4.4	31	8.7	21
Indeno	2001	5.9	220	12		5.1	120	20	
	2002	6.4	39	23		5.7	90	12	
	2003	5.8	50	19	63	3.9	75	12	41
	2004	12	55	13	51	3.8	68	13	59
	2005	12	68	14	46	9.9	64	25	48

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Absorption				Volatilization			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
α-HCH	2001	12	8.3	18		-17	-10	-7.0	
	2002	18	8.1	19		-19	-10	-7.2	
	2003	14	7.5	13	7.0	-17	-8.7	-6.7	-3.1
	2004	5.0	3.2	4.6	3.0	-18	-9.4	-7.0	-3.2
	2005	4.5	3.1	5.1	2.4	-19	-9.2	-8.6	-3.1
γ-HCH	2001	6.1	7.2	9.3		-2.7	-1.5	-4.3	
	2002	6.2	6.5	5.9		-2.9	-1.6	-4.4	
	2003	5.6	3.9	6.7	3.7	-2.6	-1.4	-4.0	-1.9
	2004	2.6	2.3	2.8	2.4	-2.7	-1.5	-4.2	-1.9
	2005	2.5	2.0	2.8	1.5	-3.0	-1.4	-5.1	-1.8
dieldrin	2001	3.7	18	3.7				-27	
	2002	6.6	15	3.3				-27	
	2003	4.1	11	3.7	4.5			-25	-12
	2004	3.4	8.7	2.6	4.1			-27	-12
	2005	3.7	10	3.3	3.0			-33	-12
cis-chlordane	2001	0.55	3.2	0.84		-4.6	-2.8	-3.7	
	2002	0.59	2.3	0.81		-4.9	-3.0	-3.9	
	2003	0.53	1.8	0.86	1.1	-4.6	-2.6	-3.7	-1.7
	2004	0.35	1.3	0.44	0.76	-4.7	-2.6	-3.7	-1.7
	2005	0.53	1.7	0.80	0.84	-4.6	-2.4	-4.6	-1.8
trans-chlordane	2001	0.36	2.2	0.59		-3.5	-2.1	-3.2	
	2002	0.79	1.9	0.66		-3.8	-2.2	-3.5	
	2003	0.31	1.4	0.59	0.73	-3.5	-1.9	-3.3	-1.5
	2004	0.23	1.2	0.38	0.65	-3.6	-2.0	-3.2	-1.5
	2005	0.30	1.7	0.51	0.67	-3.4	-1.8	-4.0	-1.6
trans-nonachlor	2001	0.44	1.5	0.51		-2.6	-1.6	-2.4	
	2002	0.54	1.4	0.54		-2.8	-1.7	-2.6	
	2003	0.39	0.93	0.43	0.49	-2.6	-1.4	-2.5	-1.1
	2004	0.33	0.90	0.38	0.48	-2.7	-1.5	-2.5	-1.1
	2005	0.44	1.1	0.52	0.53	-2.6	-1.3	-3.1	-1.2
α-endos	2001	5.5	5.8	14				-9.3	
	2002	9.8	3.6	10				-10.0	
	2003	6.6	2.8	20	4.2			-9.5	-4.2
	2004	3.5	2.3	5.3	3.3			-9.4	-4.2
	2005	7.2	5.3	17	3.5			-11	-4.4
pp-DDE	2001	0.51	1.9	0.98		-6.9	-4.2	-4.5	
	2002	0.52	1.3	1.1		-7.4	-4.4	-4.8	
	2003	0.59	1.0	1.0	0.35	-6.9	-3.8	-4.6	-2.1
	2004	0.38	1.1	0.90	0.36	-7.1	-4.0	-4.5	-2.1
	2005	0.39	1.1	0.98	0.28	-6.8	-3.5	-5.6	-2.2
pp-DDT	2001	0.89	3.3	1.7		-0.32	-0.18	-0.36	
	2002	1.3	3.3	1.7		-0.35	-0.19	-0.37	
	2003	1.3	3.1	2.3	1.7	-0.30	-0.16	-0.34	-0.16
	2004	0.52	1.9	1.3	1.1	-0.32	-0.17	-0.36	-0.17
	2005	0.70	2.9	1.5	1.00	-0.35	-0.17	-0.45	-0.16
pp-DDD	2001	0.45	0.69	0.47				-0.86	
	2002	0.16	0.53	0.39				-0.89	
	2003	0.28	0.54	0.32	0.40			-0.81	-0.38
	2004	0.16	0.27	0.26	0.17			-0.85	-0.39
	2005	0.088	0.18	0.21	0.050			-1.1	-0.37
HCB	2001	5.5	5.0	5.0				-8.0	
	2002	5.3	4.2	5.5				-8.7	
	2003	5.0	3.2	5.7	3.4			-8.3	-3.7
	2004	4.1	3.3	2.9	2.4			-8.1	-3.7
	2005	3.8	3.3	4.9	3.3			-10	-4.0

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Absorption				Volatilization			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
PCB 18	2001	0.97	8.8	2.2		-1.8	-1.1	-4.0	
	2002	0.93	5.6	1.9		-1.9	-1.1	-4.2	
	2003	0.90	5.2	2.6	3.5	-1.8	-0.98	-4.0	-1.8
	2004	0.42	2.7	0.78	1.8	-1.9	-1.0	-3.3	-1.8
	2005	0.46	4.4	2.1	2.9	-1.8	-0.92	-5.0	-1.9
PCB 44	2001	0.63	10	2.9		-1.5	-0.92	-3.8	
	2002	0.47	4.6	2.8		-1.6	-0.95	-3.9	
	2003	0.32	6.3	1.1	0.097	-1.5	-0.82	-3.7	-1.7
	2004	0.14	2.3	0.21	0.16	-1.6	-0.86	-3.1	-1.7
	2005	0.046	3.4	0.79	0.11	-1.5	-0.79	-4.6	-1.8
PCB 52	2001	0.78	8.5	2.2		-5.4	-3.3	-7.8	
	2002	0.86	6.6	1.8		-5.8	-3.4	-8.1	
	2003	0.71	6.3	2.9	2.0	-5.3	-2.9	-7.7	-3.5
	2004	0.42	4.7	1.0	1.5	-5.6	-3.1	-6.4	-3.5
	2005	0.45	9.3	2.6	2.2	-5.5	-2.8	-9.5	-3.7
PCB 101	2001	0.53	6.8	1.4		-2.1	-1.3	-6.0	
	2002	0.65	5.5	1.3		-2.2	-1.3	-6.1	
	2003	0.57	5.5	1.8	1.4	-2.0	-1.1	-5.9	-2.7
	2004	0.27	3.9	0.63	0.87	-2.1	-1.2	-4.8	-2.7
	2005	0.36	9.2	1.7	1.2	-2.1	-1.1	-7.3	-2.8
Suite PCBs	2001	11	130	28		-52	-32	-110	
	2002	13	93	26		-56	-33	-110	
	2003	11	87	37	33	-51	-28	-100	-47
	2004	8.0	69	18	29	-54	-30	-86	-48
	2005	8.6	120	45	46	-53	-23	-130	-50
Phenanthre	2001	240	6200	980				-150	
	2002	260	6000	730				-150	
	2003	190	4400	710	3600			-140	-66
	2004	210	4300	810	3600			-150	-67
	2005	330	6300	1200	3800			-180	-66
Pyrene	2001	16	910	84				-9.5	
	2002	23	740	67				-9.7	
	2003	14	490	72	460			-9.2	
	2004	12	510	78	500			-9.5	-4.3
	2005	26	650	110	450			-11	-4.1
B(b+k)	2001	0.19	15	5.6				-0.87	
fluoranth	2002	0.35	17	5.4				-0.59	
	2003		11	4.2	12			-0.82	-0.39
	2004	0.79	12	3.5	2.4			-0.86	-0.39
	2005	0.20	17	3.6	19			-1.1	-0.38
B(a)P	2001		4.1	1.8					
	2002	0.18	3.8	1.4					
	2003		2.2	0.73	3.8				
	2004	0.17	3.4	0.46	0.21				
	2005	0.043	3.8	0.76	2.6				
Indeno	2001								
	2002								
	2003								
	2004								
	2005								

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Net Gas Exchange				Total (w/ dry deposition)			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
α-HCH	2001	-5.8	-1.7	11		-4.4	-1.1	12	
	2002	-0.75	-2.2	12		0.63	-1.6	13	
	2003	-3.0	-1.1	6.2	3.8	-2.0	-0.78	7.6	4.4
	2004	-13	-6.1	-2.4	-0.18	-12	-5.9	-2.0	-0.0035
	2005	-15	-6.1	-3.5	-0.61	-15	-6.0	-3.2	-0.50
γ-HCH	2001	3.4	5.6	5.1		5.7	6.6	6.8	
	2002	3.3	4.9	1.5		5.3	5.8	3.6	
	2003	3.0	2.6	2.7	1.9	3.9	3.1	4.3	2.7
	2004	-0.10	0.81	-1.4	0.49	1.0	1.3	-0.35	1.1
	2005	-0.47	0.59	-2.3	-0.37	-0.085	0.93	-1.7	-0.19
dieldrin	2001			-23		5.3	21	-22	
	2002			-24		8.0	19	-23	
	2003			-22	-7.4	4.9	13	-21	-6.3
	2004			-24	-8.1	4.5	11	-23	-7.2
	2005			-29	-8.9	4.2	12	-29	-8.2
cis-chlordane	2001	-4.1	0.31	-2.8		-3.7	1.3	-2.1	
	2002	-4.4	-0.68	-3.1		-3.8	0.78	-2.5	
	2003	-4.1	-0.75	-2.9	-0.58	-3.7	-0.26	-2.4	0.16
	2004	-4.4	-1.4	-3.3	-0.91	-4.3	-1.2	-3.2	-0.76
	2005	-4.0	-0.66	-3.8	-0.94	-3.9	-0.41	-3.7	-0.75
trans-chlordane	2001	-3.1	0.032	-2.6		-3.0	0.54	-2.4	
	2002	-3.0	-0.31	-2.8		-2.9	0.17	-2.7	
	2003	-3.2	-0.50	-2.7	-0.73	-3.1	-0.19	-2.6	-0.51
	2004	-3.4	-0.77	-2.9	-0.83	-3.3	-0.54	-2.8	-0.74
	2005	-3.1	-0.11	-3.5	-0.91	-3.1	0.063	-3.5	-0.81
trans-nonachlor	2001	-2.2	-0.072	-1.9		-2.1	0.25	-1.8	
	2002	-2.3	-0.33	-2.1		-2.2	-0.048	-2.0	
	2003	-2.2	-0.51	-2.0	-0.63	-2.2	-0.36	-2.0	-0.54
	2004	-2.4	-0.61	-2.1	-0.63	-2.3	-0.47	-2.0	-0.56
	2005	-2.2	-0.19	-2.5	-0.66	-2.1	-0.10	-2.5	-0.60
α-endos	2001			5.2		8.2	6.9	7.9	
	2002			0.28		12	4.8	2.7	
	2003			11	-0.019	7.7	3.7	14	1.3
	2004			-4.1	-0.90	4.9	3.1	-2.8	0.018
	2005			5.5	-0.86	8.1	5.9	8.2	-0.33
pp-DDE	2001	-6.4	-2.3	-3.5		-6.3	-2.1	-3.4	
	2002	-6.9	-3.1	-3.7		-6.8	-3.0	-3.6	
	2003	-6.3	-2.8	-3.5	-1.7	-6.2	-2.7	-3.4	-1.6
	2004	-6.7	-2.9	-3.6	-1.7	-6.7	-2.7	-3.6	-1.7
	2005	-6.4	-2.4	-4.7	-1.9	-6.4	-2.3	-4.6	-1.9
pp-DDT	2001	0.58	3.2	1.3		0.73	4.5	1.6	
	2002	0.93	3.2	1.4		1.3	4.5	1.9	
	2003	0.96	2.9	2.0	1.5	1.2	3.7	2.4	2.0
	2004	0.21	1.7	0.92	0.96	0.39	2.3	1.1	1.3
	2005	0.35	2.7	1.1	0.84	0.48	3.0	1.3	1.1
pp-DDD	2001			-0.39		0.51	0.91	-0.27	
	2002			-0.50		0.20	0.68	-0.39	
	2003			-0.49	0.026	0.29	0.67	-0.43	0.24
	2004			-0.59	-0.22	0.17	0.38	-0.55	-0.10
	2005			-0.86	-0.32	0.098	0.26	-0.85	-0.23
HCB	2001			-3.0		5.6	5.0	-2.9	
	2002			-3.2		5.3	4.2	-3.2	
	2003			-2.6	-0.25	5.0	3.2	-2.5	-0.22
	2004			-5.2	-1.3	4.2	3.3	-5.1	-1.3
	2005			-5.3	-0.74	3.9	3.3	-5.2	-0.70

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Net Gas Exchange				Total (w/ dry deposition)			
		Lake Michigan		Lake Erie		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland	SBD	Chicago	STP	Cleveland
PCB 18	2001	-0.83	7.7	-1.9		-0.75	7.8	-1.8	
	2002	-1.00	4.4	-2.4		-0.92	4.5	-2.3	
	2003	-0.87	4.2	-1.5	1.6	-0.82	4.3	-1.4	1.8
	2004	-1.5	1.6	-2.6	0.0030	-1.4	1.7	-2.5	0.088
	2005	-1.3	3.5	-2.9	0.95	-1.3	3.6	-2.8	1.0
PCB 44	2001	-0.89	9.1	-0.88		-0.83	9.3	-0.81	
	2002	-1.2	3.7	-1.1		-1.1	3.8	-1.1	
	2003	-1.2	5.5	-2.6	-1.6	-1.1	5.6	-2.6	-1.6
	2004	-1.4	1.4	-2.9	-1.5	-1.4	1.5	-2.8	-1.5
	2005	-1.5	2.7	-3.9	-1.7	-1.4	2.7	-3.8	-1.6
PCB 52	2001	-4.7	5.2	-5.6		-4.5	5.5	-5.4	
	2002	-5.0	3.2	-6.2		-4.9	3.5	-6.1	
	2003	-4.6	3.4	-4.8	-1.5	-4.6	3.5	-4.7	-1.4
	2004	-5.2	1.6	-5.3	-2.1	-5.1	1.9	-5.1	-2.0
	2005	-5.0	6.5	-6.9	-1.4	-4.9	6.7	-6.8	-1.3
PCB 101	2001	-1.5	5.5	-4.6		-1.4	6.0	-4.5	
	2002	-1.6	4.2	-4.9		-1.5	4.6	-4.7	
	2003	-1.5	4.4	-4.1	-1.3	-1.4	4.7	-4.0	-1.2
	2004	-1.9	2.8	-4.2	-1.8	-1.8	3.2	-4.0	-1.7
	2005	-1.8	8.1	-5.7	-1.6	-1.6	8.4	-5.6	-1.4
Suite PCBs	2001	-41	95	-77		-39	100	-76	
	2002	-43	61	-83		-41	67	-81	
	2003	-40	59	-67	-14	-38	62	-65	-11
	2004	-46	40	-68	-19	-43	47	-64	-16
	2005	-44	100	-84	-4.1	-42	110	-83	-0.94
Phenanthre	2001			830		260	6500	880	
	2002			570		280	6200	620	
	2003			570	3600	200	4500	600	3600
	2004			660	3500	230	4400	690	3600
	2005			1000	3800	350	6400	1100	3800
Pyrene	2001			74		30	1300	110	
	2002			57		36	950	96	
	2003			63		24	640	89	550
	2004			69	490	26	650	87	570
	2005			97	440	48	820	130	520
B(b+k)	2001			4.8		21	440	69	
fluoranth	2002			4.8		22	240	68	
	2003			3.4	12	17	230	56	170
	2004			2.6	2.0	28	220	52	160
	2005			2.6	18	42	220	72	170
B(a)P	2001					5.9	230	20	
	2002					6.5	96	19	
	2003					4.7	87	14	76
	2004					8.0	100	12	64
	2005					11	100	18	61
Indeno	2001					11	340	33	
	2002					12	130	35	
	2003					9.7	130	30	100
	2004					16	120	26	110
	2005					22	130	39	94

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Net Input (downward flux)			
		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland
α-HCH	2001	13	8.9	19	
	2002	20	8.7	21	
	2003	15	7.9	14	7.5
	2004	5.7	3.4	5.0	3.2
	2005	4.8	3.2	5.4	2.5
γ-HCH	2001	8.4	8.1	11	
	2002	8.2	7.4	8.0	
	2003	6.5	4.5	8.3	4.6
	2004	3.7	2.8	3.9	3.0
	2005	2.9	2.4	3.4	1.7
dieldrin	2001	5.3	21	4.9	
	2002	8.0	19	4.6	
	2003	4.9	13	4.5	5.6
	2004	4.5	11	3.2	5.0
	2005	4.2	12	3.7	3.7
cis-	2001	0.93	4.2	1.6	
chlordane	2002	1.1	3.7	1.5	
	2003	0.87	2.3	1.4	1.8
	2004	0.41	1.5	0.52	0.91
	2005	0.69	1.9	0.94	1.0
trans-	2001	0.48	2.7	0.75	
chlordane	2002	0.88	2.4	0.80	
	2003	0.36	1.8	0.70	0.95
	2004	0.28	1.5	0.43	0.73
	2005	0.34	1.8	0.54	0.77
trans-	2001	0.51	1.9	0.62	
nonachlor	2002	0.60	1.6	0.63	
	2003	0.44	1.1	0.50	0.58
	2004	0.37	1.0	0.41	0.55
	2005	0.48	1.2	0.54	0.59
α-endos	2001	8.2	6.9	17	
	2002	12	4.8	13	
	2003	7.7	3.7	23	5.6
	2004	4.9	3.1	6.6	4.3
	2005	8.1	5.9	20	4.1
pp-DDE	2001	0.56	2.1	1.0	
	2002	0.58	1.4	1.2	
	2003	0.64	1.1	1.1	0.41
	2004	0.44	1.2	0.97	0.41
	2005	0.44	1.2	1.0	0.32
pp-DDT	2001	1.0	4.7	2.0	
	2002	1.6	4.7	2.2	
	2003	1.5	3.8	2.7	2.2
	2004	0.71	2.5	1.5	1.5
	2005	0.84	3.2	1.7	1.2
pp-DDD	2001	0.51	0.91	0.59	
	2002	0.20	0.68	0.50	
	2003	0.29	0.67	0.38	0.62
	2004	0.17	0.38	0.30	0.29
	2005	0.098	0.26	0.21	0.15
HCB	2001	5.6	5.0	5.1	
	2002	5.3	4.2	5.6	
	2003	5.0	3.2	5.7	3.5
	2004	4.2	3.3	3.0	2.4
	2005	3.9	3.3	5.0	3.3

Appendix F: Urban Effect on Lake Michigan and Lake Erie Atmospheric Fluxes (ng/m ^{2}/day)

		Net Input (downward flux)			
		Lake Michigan		Lake Erie	
		SBD	Chicago	STP	Cleveland
PCB 18	2001	1.1	8.9	2.2	
	2002	1.0	5.6	2.0	
	2003	0.96	5.2	2.6	3.6
	2004	0.48	2.7	0.87	1.9
	2005	0.51	4.5	2.2	3.0
PCB 44	2001	0.69	10	3.0	
	2002	0.52	4.8	2.9	
	2003	0.36	6.4	1.1	0.11
	2004	0.19	2.4	0.31	0.18
	2005	0.11	3.5	0.83	0.18
PCB 52	2001	0.89	8.8	2.3	
	2002	0.95	6.8	2.0	
	2003	0.78	6.4	2.9	2.1
	2004	0.51	5.0	1.2	1.5
	2005	0.57	9.5	2.7	2.4
PCB 101	2001	0.63	7.2	1.5	
	2002	0.74	5.9	1.4	
	2003	0.64	5.8	1.9	1.5
	2004	0.35	4.4	0.80	0.97
	2005	0.47	9.5	1.8	1.4
Suite PCBs	2001	13	130	29	
	2002	14	99	28	
	2003	13	90	39	36
	2004	10	76	22	32
	2005	11	130	47	49
Phenanthre	2001	260	6500	1000	
	2002	280	6200	770	
	2003	200	4500	740	3700
	2004	230	4400	840	3700
	2005	350	6400	1200	3900
Pyrene	2001	30	1300	120	
	2002	36	950	110	
	2003	24	640	98	550
	2004	26	650	97	570
	2005	48	820	150	530
B(b+k)	2001	21	440	70	
fluoranth	2002	22	240	69	
	2003	17	230	57	170
	2004	28	220	53	160
	2005	42	220	73	170
B(a)P	2001	5.9	230	20	
	2002	6.5	96	19	
	2003	4.7	87	14	76
	2004	8.0	100	12	64
	2005	11	100	18	61
Indeno	2001	11	340	33	
	2002	12	130	35	
	2003	9.7	130	30	100
	2004	16	120	26	110
	2005	22	130	39	94