

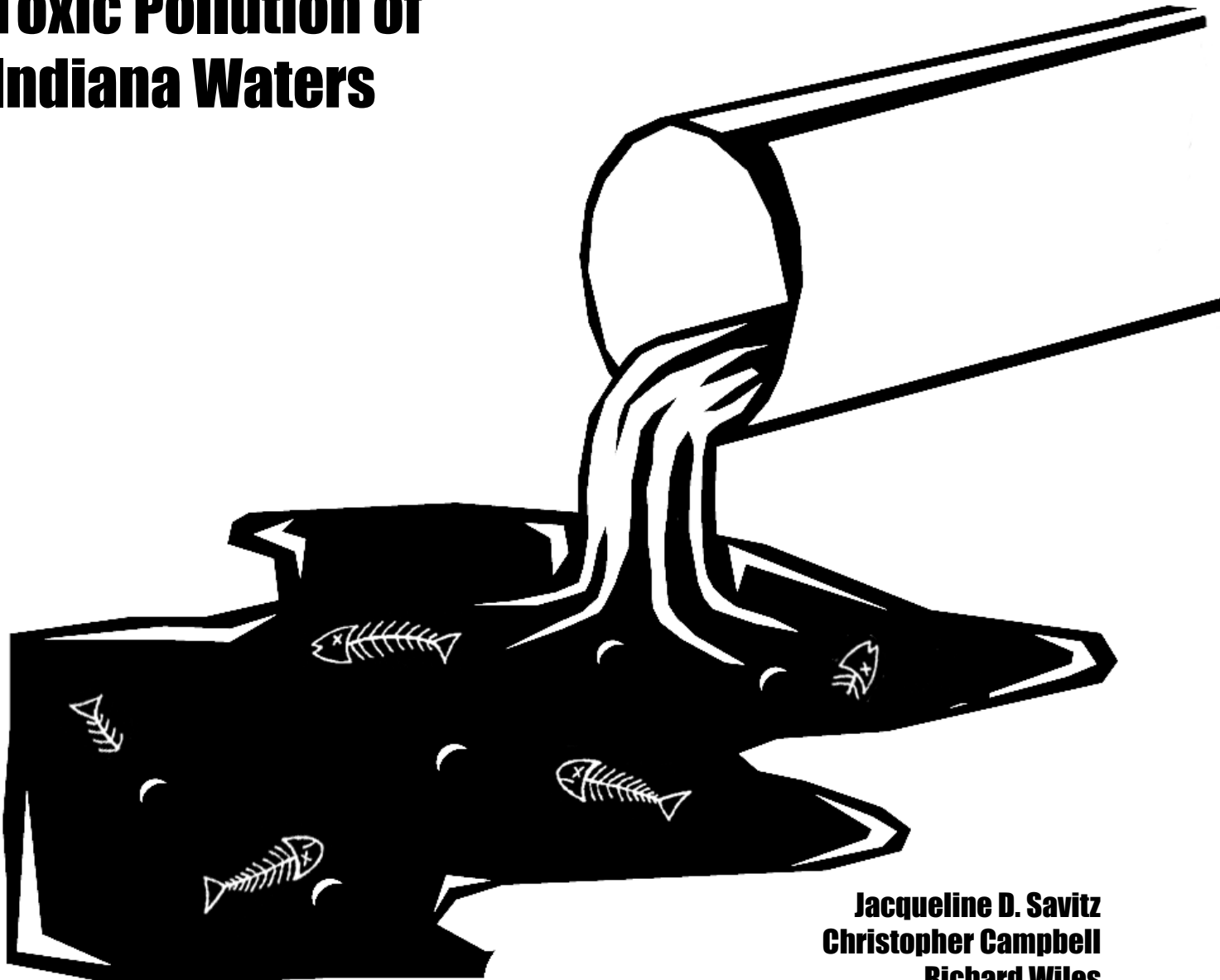


The State PIRGs



Dishonorable Discharge

Toxic Pollution of Indiana Waters



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Toxic Pollution of Indiana Waters

Executive Summary

Most Indiana citizens would be surprised to learn that scores of businesses and facilities across the state *legally* dump tons of toxic chemicals into the state's rivers, streams, lakes, and bays. Many of these same polluters flush millions more pounds of toxic substances down the drain to sewage treatment plants that taxpayers pay to operate and maintain. None of the toxic chemicals sent to publicly financed sewage treatment systems are reported as pollution by the EPA, even though a great deal of the toxic load eventually finds its way to Indiana streams and rivers.

The citizens of Indiana have a right to know about any pollution of their water, air or land that may pose a risk to human health or the environment. The goal of *Dishonorable Discharge* is to inform the public about the massive level of toxic pollution of the waters in their state, and point out the need for more comprehensive reporting of toxic chemical use, transport, and pollution, in Indiana and nationwide.

Factories and other industrial facilities dumped more than 6.9 million pounds of toxic substances directly into Indiana's waters between 1990 and 1994, according to a new analysis of the federal Toxics Release Inventory (TRI) (Table 1). Indiana ranked 20th among the states in toxic water pollution reported over those five years. Because of weaknesses and loopholes in federal pollution laws, most, if not all of these toxic discharges are perfectly legal.

As large as they are, these figures substantially underestimate toxic releases to waters and the environment because the TRI requires reporting of only about 340 of the 73,000 chemicals in commerce. The TRI also exempts certain industries from reporting, including utilities, sewage treatment plants, municipal incinerators, and manufacturing facilities with fewer than ten employees.

In addition, over twenty (23) million pounds of toxic materials were flushed to sewage treatment plants in Indiana from 1990 through 1994, 19th in the nation (Table 1.) EPA estimates that twenty-five percent of all discharges nationwide flow through sewage treatment plants untreated (EPA 1995). Applying this 25 percent estimate to Indiana raises the total amount of toxics dumped to the state's waters to an estimated 12.7 million pounds (Table 1).

The Indiana Harbor Ship Canal received the greatest amount of toxic water pollution in Indiana from 1990-1994, a total of 2,580,000 pounds, followed by the Wabash River, the Little Calumet River, and Lake Michigan (Table 2). The ten most polluted waterways in Indiana received 6,650,000 pounds of toxic pollution between 1990 and 1994, 95.9% percent of the total in the State.

The top three facilities reporting the most toxic pollution of Indiana's waters over this period were Inland Steel Company in East Chicago, which dumped 2,560,000 pounds of toxic chemicals, followed by Tippecanoe Labs., and Bethlehem Steel Corporation in the towns of Shadeland, and Burns Harbor, respectively (Table 3). The toxic chemicals dumped in the greatest amounts were ammonia, a total of 3,720,000 pounds, followed by ethylene glycol, and zinc compounds (Table 4).

General Electric Company dumped the most carcinogens into Indiana's waters, a total of 23,200 pounds, followed by Inland Steel Company and Clinton Labs. (Table 8). The Ohio River received the greatest amount of cancer-causing toxic chemicals in Indiana, a total of 24,000 pounds, followed by the Indiana Harbor Ship Canal and the Wabash River (Table 7).

Bethlehem Steel Corporation dumped the greatest amount of persistent toxic metals in Indiana's waters, a total of 156,000 pounds, followed by Clinton Labs. and U.S. Steel (Table 8). The Little Calumet River received the greatest amount of persistent toxic metals, a total of 140,000 pounds, followed by the Wabash River and the Grand Calumet River (Table 7).

General Electric Company dumped the greatest amount of toxic chemicals that cause reproductive damage or birth defects into Indiana's waters, a total of 33,000 pounds, followed by Weston Paper & Mfg. Company and Alcoa (Table 8). The Ohio River received the greatest amount of toxic chemicals that cause reproductive damage or birth defects, a total of 42,000 pounds, followed by the Wabash River and the Eel River (Table 7).

These discharges to Indiana's waters include only those wastes released by companies physically located in Indiana. Many waterways receive additional pollution from sources outside of the state. Information on toxic water pollution in other states can be found in EWG's state reports series, and in the national report, *Dishonorable Discharge*.

Recommendations

Americans have a right to know about any use, transport, or release of toxic substance in their communities that might pose a risk to human health or the environment. Required reporting under the TRI provides only a small portion of this information. Much more complete reporting is needed. Americans also have a right to know about toxic chemicals in the products they buy that may pose a risk to them and their children.

Full accounting of the use of toxic materials reveals many low cost opportunities for pollution prevention. In New Jersey, state officials estimate that every dollar spent on such materials accounting practices generates five to eight dollars in increased efficiency (GAO 1994). Without materials accounting industry will miss many opportunities for substantial low cost reductions in pollution, and the public and policy makers will be unable formulate strategies that most effectively reduce exposure to toxic substances in the environment and consumer products.

We recommend:

- Timely implementation of the EPA's proposed expansion of industries and facilities required to report toxic releases under the TRI.
- Expansion of TRI reporting requirements to include full materials accounting for any facility or industry that uses or releases a toxic substance that may pose a risk to human health and the environment.

Dishonorable Discharge

Toxic pollution of rivers, lakes, streams, and bays is a serious problem in all 50 states. Twenty five years after the passage of the Clean Water Act, nearly forty (40) percent of America's rivers, lakes, and coastal waters remain unsafe for fishing, swimming or basic recreation (EPA 1996b). (EPA 1995b). The pollution that fouls these waterways costs the state's economy millions of dollars in tourism, fishing, and development revenues that otherwise could be earned on or near these waters were they not so polluted (EPA 1996b).

Dishonorable Discharge Underestimates Toxic Pollution

The Toxics Release Inventory (TRI) provides a rough estimate of a small portion of the toxic chemicals that flow into America's waters. The toxic discharges reported in this study are based on TRI reported toxic releases to waterways and so-called "transfers" of toxics to publicly owned treatment works (POTWs) — the term of art that industry and the EPA use when an industrial facility dumps toxic chemicals into the local sewer.

The figures reported in *Dishonorable Discharge* dramatically underestimate the total amounts of toxic compounds that have been discharged, dumped, or made their way into rivers and lakes across the country over the past five years.

About 90¹ percent of all toxic discharges coming out of pipes into water (so-called point source discharges) are not reported to the TRI. This is because the TRI requires reporting on only about 343² of some 73,000 chemicals used in commerce, and because the TRI exempts many polluters (utilities, certain industries, and those with fewer than ten employees) from reporting requirements (EPA 1996).

About half of all toxics that pollute rivers come from surface runoff and air deposition, as opposed to pipes. Comprehensive accounting of this "nonpoint source" pollution is not available for all rivers on a national basis.

Taking all of the limitations of the existing information into account, Environmental Working Group believes that an accurate estimate of the total load of toxic pollution in many rivers and lakes over the past five years might be 20 times greater than the amounts reported here.

Hiding Toxics in the Sewer

The EPA does not include so-called "transfers" of toxic chemicals to sewer systems as an official "release" of a toxic chemical into the environment (EPA 1996). At the same time, the EPA estimates that 25 percent of all toxic chemicals transferred to sewers from industrial facilities pass through treatment and into the waterways that receive wastewater (EPA 1995).

Transfers of toxic chemicals to publicly owned treatment works (POTWs) — otherwise known as sewage treatment plants — were four times greater in 1994 than the amount of toxic chemicals released directly to water that are reported in the entire TRI that year. To estimate the total amounts of toxic substances dumped into Indiana’s waters, we used EPA’s assumption that 25 percent of all toxic chemicals transferred to POTWs pass-through untreated³. Table 1 presents the EWG estimate of toxic chemicals assumed to be discharged by the POTWs in Indiana. Estimates of toxic discharges from POTWs to specific rivers and bodies of water could not be accurately estimated because the sewage treatment plants are not required to report to the TRI.

Assuming a 25 percent flow-through does not permit discharge estimates for individual toxic chemicals that flow through the sewer system into waterways. In reality some chemicals flow through POTW’s untouched, while others are removed and held in the sludge, broken down in treatment, or allowed to evaporate into the ambient air as toxic pollutants.

How Toxic is Toxic?

Some 340 substances were required to be reported to the EPA for the years analyzed in this report. According to the EPA:

“For a chemical or chemical category to remain on or be added to the TRI list, it must be known to cause or reasonably be anticipated to cause one of the following:

- Significant adverse acute health effects at concentration levels that are reasonably likely to exist beyond facility boundaries as a result of continuous, or frequently recurring releases;
- In humans — cancer; teratogenic effects; or serious irreversible reproductive dysfunction, neurologic disorders, heritable genetic mutations, or other chronic health effects;
- A significant adverse effect on the environment because of its toxicity, its toxicity and persistence in the environment, or its toxicity and tendency to bioaccumulate in the environment of sufficient seriousness to warrant reporting under EPCRA section 313” (EPA 1996).

For most of the TRI chemicals, federal regulators and scientists have a disturbingly incomplete understanding of the long term toxic effects on the environment or human health. The vast majority of compounds reported in the TRI are not fully studied, even though they have triggered one of the above criteria.

Toxic discharges and runoff to water are a serious and largely unaddressed environmental and human health problem. Most, if not all of the pollution reported in Dishonorable Discharge is legal. Current pollution control laws like the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA) do little to move the nation towards reducing the toxic pollution cited in this report. In effect, these laws issue pollution licenses or exemptions from regulations.

One of the more glaring exemptions may be the so-called “domestic sewage exclusion” under RCRA, whereby toxic contaminants sent to sewage treatment plants escape otherwise applicable federal hazardous waste regulations. This accounts for the huge amounts of toxic chemicals that were dumped down the drain by American industry and end up in the nation’s rivers and streams. Another major source of toxic pollution of waters is agricultural pesticides. The runoff of pesticides from agricultural fields is not regulated under any federal law, and is not tabulated by the TRI nor included in this report. About 1.1 billion pounds⁴ of pesticides were used in the United States in 1993 alone (Aspelin 1994).

Dishonorable Discharge is based on data collected by the U.S. Environmental Protection Agency’s Toxics Release Inventory (TRI) for the reporting years 1990 through 1994, which includes the most recent data available. It includes the releases of only 343 chemicals from about 27,000 manufacturing facilities. The limitations of these data have been described above.

Analyzing Discharges by Body of Water

Discharges from TRI facilities were assigned to a given waterway based on the “receiving stream” reported to the EPA. Most waterways reported as “tributary” streams were included with their respective rivers in this report when it was possible to link them. For purposes of this analysis, toxic release data for major rivers themselves are tabulated separately, not summed as part of larger watersheds. For example, a “Tributary to the Mississippi River” was counted as Mississippi River, while the Missouri River was not, even though it eventually joins the Mississippi just above St. Louis. Small streams receiving large quantity discharges (such as Gravelly Run in Virginia and Clear Creek in Colorado) were reported individually, just as they are recorded in the TRI. State-level reports only include discharges to a given river from facilities that are physically located in this state, not discharges from facilities located in other states upstream.

Reporting Toxics Dumped Down the Drain

Enormous quantities of toxic chemicals are discharged to waterways via sewer systems. These so-called “transfers” of toxic chemicals to publicly owned treatment works (POTWs) totaled more than 250 million pounds in 1994, compared to 66 million pounds of direct discharges to waters reported in that same year. While the EPA does not count these transfers as environmental releases in the TRI, the Agency estimates that an average of 25 percent of these transfers flow through sewer systems into receiving waters (EPA 1995).

To better illustrate the amount of toxic chemicals that actually make it into the nation’s waters each year, we assumed that on average 25 percent of the toxic chemicals transferred to POTWs (a.k.a. sewers) by a reporting facility, ultimately pass through the sewage treatment plant untreated and in most cases are discharged to receiving waters.

Toxic chemical releases through POTWs were estimated statewide, but were not attributed to specific rivers at the state level due to the difficulty of verifying the receiving waters. Environmental Working Group will attempt to identify receiving waters more precisely future reports. All other analyses including facility discharges and top chemicals reflect direct discharges only, and not POTW release estimations.

Total discharges of persistent toxic metals, known or possible carcinogens, and chemicals known to cause reproductive effects, were calculated for specific rivers

based on information characterizing the toxic properties of these substances previously published by the EPA, the State of California, and the State of New Jersey, as well as other toxicological literature (Environmental Protection Agency, 1996; California Code of Regulations; New Jersey Department of Health; and Dixon, 1986). EPA's inclusion of known, probable, and possible carcinogens is based on determinations made by the Occupational Safety and Health Administration (OSHA), the National Toxicology Program (NTP), and the International Agency for Research on Cancer (IARC) (EPA 1996). Lists of chemicals included are found in the Appendix.

Notes

¹Estimate based on EPA report (National Sediment Contaminant Point Source Inventory: Analysis of Release Data for 1992. Final Draft.) (EPA, 1995) where data from TRI were compared to the Permit Compliance System (PCS) Database and found to represent only about 9%, at most, of discharges reported in PCS. Estimates from the GAO indicate that PCS regulates only 23% of all toxic water pollution (GAO, 1994).

²The exact number of chemicals required varies with the year. In 1994, 343 chemicals were reported. EPA has recently expanded the inventory to include about 650. These data, to be reported for 1995, will be available in 1997.

³EPA uses this factor since it is unlikely to greatly overestimate or underestimate the exact treatment efficiency (EPA 1995). This number will vary for any specific chemical; however it estimates pass through for chemicals as a whole, and is not applied to specific chemicals in this report.

⁴This value refers to pesticide active ingredients. The total volume of pesticide products, including so-called inert ingredients is far higher.

Appendix

Carcinogens

1,1,2,2-Tetrachloroethane	beta-Propiolactone	Michler's ketone
1,1-Dimethylhydrazine (UDMH) (alar trans. prod.)	Bis (2-chloroethyl) ether	Mustard Gas
1,2-Dibromo-3-chloropropane (DBCP)	Bis(chloromethyl) ether	N-Nitroso-N-ethylurea
1,3-Butadiene	Bromodichloromethane	N-Nitroso-N-methylurea
1,3-Dichloropropylene	Bromoform	N-Nitrosodi-n-butylamine
1,3-Propane sultone	Cadmium	N-Nitrosodi-n-propylamine
1,4-Dioxane	Cadmium compounds	N-Nitrosodiethylamine
1-Amino-2-methylantraquinone	Captan	N-Nitrosodimethylamine
1-Naphthylamine	Carbon tetrachloride	N-Nitrosodiphenylamine
2,4,6-Trichlorophenol	Chlordane	N-Nitrosomethylvinylamine
2,4-Diaminoanisole	Chloroethane (Ethyl chloride)	N-Nitrosomorpholine
2,4-Diaminoanisole sulfate	Chloroform	N-Nitrososarcosine
2,4-Diaminotoluene	Chloromethyl methyl ether	N-Nitrosopiperidine
2,4-Dinitrotoluene	Chlorophenols	Nickel
2-Acetylaminofluorene	Chlorothalonil	Nickel compounds
2-Aminoanthraquinone	Chromium	Nitrotriacetic acid
2-Methylaziridine (Propyleneimine)	Cupferron	Nitrofen
2-Naphthylamine	D&C Red No. 19	Nitrogen mustard (Mechlorethamine)
2-Nitropropane	DDVP (Dichlorvos)	ortho-Anisidine
3,3'-Dichlorobenzidine	Di -(2-ethylhexyl)phthalate	ortho-Anisidine hydrochloride
3,3'-Dimethoxybenzidine (ortho-Dianisidine)	Dichloromethane (Methylene chloride)	ortho-Toluidine
3,3'-Dimethylbenzidine	Diepoxybutane	ortho-Toluidine hydrochloride
4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline)	Diethyl sulfate	p-Aminoazobenzene
4,4'-Methylene bis(2-chloroaniline)	Dimethyl sulfate	p-Cresidine
4,4'-Methylene bis(N,N-dimethyl) benzenamine	Dimethylcarbamoyl chloride	p-Dichlorobenzene
4,4'-Methylenedianiline	Direct Black 38	p-Nitrosodiphenylamine
4,4'-Thiodianiline	Direct Blue 6	Pentachlorophenol
4-Aminobiphenyl (4-aminodiphenyl)	Direct Brown 95	Polybrominated biphenyls
4-Dimethylaminoazobenzene	Epichlorohydrin	Polychlorinated biphenyls
4-Nitrobiphenyl	Ethyl acrylate	Propylene oxide
5-Nitro-o-anisidine	Ethylene dibromide	Saccharin
Acetaldehyde	Ethylene dichloride (1,2-Dichloroethane)	Safrrole
Acetamide	Ethylene oxide	Styrene
Acrylamide	Ethylene thiourea (EBDC trans prod.)	Styrene oxide
Acrylonitrile	Ethyleneimine	Tetrachloroethylene (Perchloroethylene)
Allyl chloride	Formaldehyde	Thioacetamide
Aniline	Hexachlorobenzene	Thiourea
Arsenic	Hexachloroethane	Toluene-2,4-diisocyanate
Arsenic compounds	Hexamethylphosphoramide	Toluene-2,6-diisocyanate
Asbestos	Hydrazine	Toxaphene (Polychlorinated camphenes)
Auramine	Hydrazine sulfate	Trichloroethylene
Benzene	Hydrazobenzene (1,2-Diphenylhydrazine)	Tris(2,3-dibromopropyl)phosphate
Benzenidine [and its salts]	Isosafrole	Urethane (Ethyl carbamate)
Benzotrichloride	Lead	Vinyl bromide
Benzyl chloride	Lead compounds	Vinyl chloride
Beryllium and beryllium compounds	Lindane	Vinyl trichloride (1,1,2-Trichloroethane)
Beryllium compounds	Methyl iodide	

Persistent Toxic Metals

Antimony & Antimony Compounds
Arsenic & Arsenic Compounds
Barium & Barium Compounds
Beryllium & Beryllium Compounds
Cadmium & Cadmium Compounds
Chromium & Chromium Compounds
Cobalt & Cobalt Compounds
Copper & Copper Compounds
Lead & Lead Compounds
Manganese & Manganese Compounds
Mercury & Mercury Compounds
Nickel & Nickel Compounds
Selenium & Selenium Compound
Silver & Silver Compounds
Thallium & Thallium Compounds
Zinc & Zinc Compounds

Chemicals that Affect Reproduction

1,2-Dibromo-3-chloropropane
Cadmium
Carbon disulfide
Diethylhexyl phthalate
o-Dinitrobenzene
m-Dinitrobenzene
p-Dinitrobenzene
Ethylene glycol monoethyl ether
Ethylene glycol monomethyl ether
Ethylene oxide
Hexamethylphosphoramide
Lead
Styrene
Toluene
Trichloroethylene
Xylene(mixed isomers)
o-xylene
m-xylene
p-xylene
Di-n-butyl phthalate
Glycol ethers
Mercury Compounds
Mercury
Benzene
Aluminum
Arsenic
Nickel
Lindane
Vinyl Chloride

Source: Environmental Working Group. Compiled from California Proposition 65, EPA's TRI Public Data Release, New Jersey Department of Health, Hazardous Substances Fact Sheets, and Toxic Responses of the Reproductive System (Dixon 1986).

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Indiana

Toxic pollution of Indiana waters (1990-1994)

Table 1. Total reported toxic pollution of Indiana waters (1990-1994).

Direct Water Discharges	6,936,931 Pounds
Estimated Sewer Discharges‡	5,754,096 Pounds
Total Discharges to Waters	12,691,027 Pounds

Table 2. Indiana waters receiving the greatest amounts of toxic pollution (1990-1994).

River or Water Body	Toxic chemical release to waterbody (pounds)
Indiana Harbor Ship Canal	2,578,038
Wabash River	1,532,282
Little Calumet River	791,700
Lake Michigan	785,049
Grand Calumet River	473,280
Jordan Creek	183,048
Ohio River	113,159
Whitewater River	111,283
Eagle Creek	45,912
Sigerson Ditch	38,337

Table 3. Polluters reporting the greatest amounts of toxic chemicals discharged to Indiana waters (1990-1994).

Facility	City	Toxic chemical release to waters (pounds)
Inland Steel Co.	East Chicago	2,556,356
Tippecanoe Labs.	Shadeland	1,162,743
Bethlehem Steel Corp.	Burns Harbor	819,620
American Maize Prods. Co.	Hammond	596,656
U.S. Steel	Gary	514,300
Clinton Labs.	Clinton	291,755
Pfizer Inc.	Terre Haute	183,048
Amoco Oil Co.	Whiting	147,425
Dana Corp.	Hagerstown	111,543
New Paris Creamery Co.	New Paris	103,396

Table 4. Toxic chemicals discharged in the greatest amounts to Indiana waters (1990-1994).

Chemical	Toxic chemical release to waters (pounds)
Ammonia	3,715,671
Ethylene glycol	2,006,792
Zinc compounds	281,643
Sulfuric acid	162,664
Phenol	105,103
Cyanide compounds	93,650
Manganese compounds	87,885
Phosphoric acid	78,706
Chlorine	68,298
Glycol ethers	50,432

Table 5. Polluters reporting the greatest amounts of toxic chemicals discharged to Indiana sewage treatment facilities (1990-1994).

Facility	City	Toxic chemical release to sewers (pounds)
Ferro Corp.	Hammond	3,496,458
Reilly Ind. Inc.	Indianapolis	3,172,629
Bayer Corp.	Elkhart	2,743,584
Lilly Indl. Center 1555	Indianapolis	2,071,114
Eli Lilly & Co.	Indianapolis	1,195,472
Dana Corp.	Syracuse	1,050,000
Magnode Corp.	Indianapolis	817,829
Citizens Gas & Coke Utility	Indianapolis	587,196
Wayne Metal Protection Co.	Fort Wayne	514,662
Chrysler Corp.	Kokomo	505,119

‡ Total discharges of toxic chemicals to sewer systems in Indiana was 23,016,384 in 1990-94. EPA estimates that 25% of all toxic discharges to sewers pass through sewage treatment plants to receiving waters (EPA 1995).

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

Indiana

Toxic pollution of Indiana waters (1990-1994). Carcinogens, persistent toxic metals, and reproductive toxins

Table 6. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged into Indiana waters (1990-1994).**

Carcinogens	98,584 Pounds
Persistent Toxic Metals	495,581 Pounds
Reproductive Toxins	66,619 Pounds
Total (see note)	600,686 Pounds

Note: The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 6 may be larger than the total because a chemical may be in one or more categories, i.e. a chemical may be both a carcinogen and a reproductive toxin. Chemicals were counted only once for the total in Table 6.

Table 7. Indiana waters receiving the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** (1990-1994).**

Waters receiving the greatest amounts of carcinogenic chemicals in Indiana (1990-1994).**

River or Water Body	Carcinogens** released to waters (lbs.)
Ohio River	24,434
Indiana Harbor Ship Canal	22,607
Wabash River	17,115
Little Calumet River	8,100
Lake Michigan	6,123

Waters receiving the greatest amounts of persistent toxic metals in Indiana (1990-1994).

River or Water Body	Persistent toxic metals released to waters (lbs.)
Little Calumet River	140,200
Wabash River	115,882
Grand Calumet River	90,325
Indiana Harbor Ship Canal	60,916
Lake Michigan	22,700

Waters receiving the greatest amounts of reproductive toxins in Indiana (1990-1994).**

River or Water Body	Reproductive toxins** released to waters (lbs.)
Ohio River	42,496
Wabash River	15,446
Eel River	1,570
St. Joseph River	1,505
White River	1,000

Table 8. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Indiana waters (1990-1994).**

Top dischargers of carcinogenic chemicals to Indiana waters (1990-1994).**

Facility	City	Carcinogens** released to waters (lbs.)
General Electric Co.	Mount Vernon	23,184
Inland Steel Co.	East Chicago	22,565
Clinton Labs.	Clinton	9,960
Bethlehem Steel Corp.	Burns Harbor	8,100
Amoco Oil Co.	Whiting	6,165

Top dischargers of persistent toxic metals to Indiana waters (1990-1994).

Facility	City	Persistent toxic metals released to waters (lbs.)
Bethlehem Steel Corp.	Burns Harbor	155,600
Clinton Labs.	Clinton	113,225
U.S. Steel	Gary	103,300
Inland Steel Co.	East Chicago	46,266
LTV Steel Co. Inc.	East Chicago	14,650

Top dischargers of reproductive toxins to Indiana waters (1990-1994).**

Facility	City	Reproductive toxins** released to waters (lbs.)
General Electric Co.	Mount Vernon	32,698
Weston Paper & Mfg. Co.	Terre Haute	11,616
Alcoa	Newburgh	6,048
Countrymark Co-op. Inc.	Mount Vernon	3,750
Tippecanoe Labs.	Shadeland	2,239

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Indiana Harbor Ship Canal in Indiana

Total toxic pollution reported (1990-1994): 2,578,038 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Indiana Harbor Ship Canal in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Inland Steel Co.	East Chicago	2,556,356
LTV Steel Co. Inc.	East Chicago	21,350
Amoco Oil Co.	Whiting	332

Table 2. Toxic chemicals discharged in the greatest amounts to Indiana Harbor Ship Canal in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ethylene glycol	1,350,803
Ammonia	1,045,472
Cyanide compounds	73,754
Zinc compounds	25,456
Phenol	24,459
Lead compounds	22,560
Chlorine	22,297
Chromium compounds	10,600
Manganese compounds	2,300
Xylene (mixed isomers)	200

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Indiana Harbor Ship Canal in Indiana (1990-1994).**

Carcinogens	22,607 Pounds
Persistent Toxic Metals	60,916 Pounds
Reproductive Toxins	287 Pounds
Total‡	61,203 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Indiana Harbor Ship Canal in Indiana (1990-1994).**

Top dischargers of carcinogens to Indiana Harbor Ship Canal in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Inland Steel Co.	East Chicago	22,565

Top dischargers of persistent toxic metals to Indiana Harbor Ship Canal in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Inland Steel Co.	East Chicago	46,266
LTV Steel Co. Inc.	East Chicago	14,650

Top dischargers of reproductive toxins to Indiana Harbor Ship Canal in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
Amoco Oil Co.	Whiting	282

The Wabash River in Indiana

Total toxic pollution reported (1990-1994): 1,532,282 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Wabash River in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Tippecanoe Labs.	Shadeland	1,162,743
Clinton Labs.	Clinton	291,755
Mallinckrodt Veterinary Inc.	Terre Haute	28,324
Weston Paper & Mfg. Co.	Terre Haute	27,710
Jefferson Smurfit Corp. (U.S.)	Wabash	9,548
Inland Container Corp.	Newport	9,024
Landis & Gyr Energy	Lafayette	1,250
Harrison Steel Castings Co.	Attica	1,058
Applied Extrusion Techs.	Terre Haute	250
Flexel Indiana Inc.*	Covington	

Table 2. Toxic chemicals discharged in the greatest amounts to the Wabash River in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	1,323,478
Zinc compounds	113,450
Chlorine	34,440
Dichloromethane	13,595
Glycol ethers	12,121
Methanol	10,760
Ammonium nitrate (solution)	9,288
Acetonitrile	3,105
Acetone	2,020
Xylene (mixed isomers)	1,425

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Wabash River in Indiana (1990-1994).**

Carcinogens	17,115 Pounds
Persistent Toxic Metals	115,882 Pounds
Reproductive Toxins	15,446 Pounds
Total‡	145,902 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Wabash River in Indiana (1990-1994).**

Top dischargers of carcinogens to the Wabash River in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Clinton Labs.	Clinton	9,960
Tippecanoe Labs.	Shadeland	5,185
Landis & Gyr Energy	Lafayette	1,000
Harrison Steel Castings Co.	Attica	798
C & D Charter Power Sys.	Attica	125

Top dischargers of persistent toxic metals to the Wabash River in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Clinton Labs.	Clinton	113,225
Harrison Steel Castings Co.	Attica	1,058
Tippecanoe Labs.	Shadeland	1,000
Landis & Gyr Energy	Lafayette	250
Ford Meter Box Co. Inc.	Wabash	209

Top dischargers of reproductive toxins to the Wabash River in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
Weston Paper & Mfg. Co.	Terre Haute	11,616
Tippecanoe Labs.	Shadeland	2,239
Landis & Gyr Energy	Lafayette	1,000
Harrison Steel Castings Co.	Attica	529

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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The Little Calumet River in Indiana

Total toxic pollution reported (1990-1994): 791,700 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Little Calumet River in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Bethlehem Steel Corp.	Burns Harbor	791,700

Table 2. Toxic chemicals discharged in the greatest amounts to the Little Calumet River in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ethylene glycol	627,100
Manganese compounds	76,000
Zinc compounds	44,400
Ammonia	22,900
Lead compounds	8,100
Copper compounds	7,950
Chromium compounds	3,750
Cyanide compounds	1,000
Diethanolamine	250
Phenol	250

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Little Calumet River in Indiana (1990-1994).**

Carcinogens	8,100 Pounds
Persistent Toxic Metals	140,200 Pounds
Reproductive Toxins	0 Pounds
Total‡	140,200 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Little Calumet River in Indiana (1990-1994).**

Top dischargers of carcinogens to the Little Calumet River in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Bethlehem Steel Corp.	Burns Harbor	8,100

Top dischargers of persistent toxic metals to the Little Calumet River in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Bethlehem Steel Corp.	Burns Harbor	140,200

Top dischargers of reproductive toxins to the Little Calumet River in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Lake Michigan in Indiana

Total toxic pollution reported (1990-1994): 785,049 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Lake Michigan in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
American Maize Prods. Co.	Hammond	596,656
Amoco Oil Co.	Whiting	147,093
U.S. Steel	Gary	41,300

Table 2. Toxic chemicals discharged in the greatest amounts to Lake Michigan in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	739,971
Zinc compounds	15,600
Phenol	14,000
Nickel compounds	6,012
Chlorine	5,685
Cyanide compounds	1,300
Chromium compounds	1,088
Methyl tert-butyl ether	560
Toluene	267
Xylene (mixed isomers)	228

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Lake Michigan in Indiana (1990-1994).**

Carcinogens	6,123 Pounds
Persistent Toxic Metals	22,700 Pounds
Reproductive Toxins	606 Pounds
Total‡	23,306 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Lake Michigan in Indiana (1990-1994).**

Top dischargers of carcinogens to Lake Michigan in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Amoco Oil Co.	Whiting	6,123

Top dischargers of persistent toxic metals to Lake Michigan in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
U.S. Steel	Gary	13,000
Amoco Oil Co.	Whiting	9,700

Top dischargers of reproductive toxins to Lake Michigan in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
Amoco Oil Co.	Whiting	606

The Grand Calumet River in Indiana

Total toxic pollution reported (1990-1994): 473,280 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Grand Calumet River in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
U.S. Steel	Gary	473,000
Du Pont*	East Chicago	255

Table 2. Toxic chemicals discharged in the greatest amounts to the Grand Calumet River in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	310,000
Zinc compounds	70,500
Phenol	56,600
Chromium compounds	19,825
Cyanide compounds	15,800
Naphthalene	300
Ethylene glycol	250

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Grand Calumet River in Indiana (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	90,325 Pounds
Reproductive Toxins	0 Pounds
Total‡	90,325 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Grand Calumet River in Indiana (1990-1994).**

Top dischargers of carcinogens to the Grand Calumet River in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to the Grand Calumet River in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
U.S. Steel	Gary	90,300

Top dischargers of reproductive toxins to the Grand Calumet River in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Jordan Creek in Indiana

Total toxic pollution reported (1990-1994): 183,048 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Jordan Creek in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Pfizer Inc.	Terre Haute	183,048

Table 2. Toxic chemicals discharged in the greatest amounts to Jordan Creek in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	179,000
Acetone	3,990

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Jordan Creek in Indiana (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	3 Pounds
Reproductive Toxins	55 Pounds
Total‡	58 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Jordan Creek in Indiana (1990-1994).**

Top dischargers of carcinogens to Jordan Creek in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to Jordan Creek in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to Jordan Creek in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

The Ohio River in Indiana

Total toxic pollution reported (1990-1994): 113,159 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Ohio River in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
General Electric Co.	Mount Vernon	80,255
Alcoa	Newburgh	25,284
Countrymark Co-op. Inc.	Mount Vernon	6,510
Royal Crown Bottling Corp.	Evansville	1,000
Caldwell/moser Leather Co.*	New Albany	110

Table 2. Toxic chemicals discharged in the greatest amounts to the Ohio River in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Glycol ethers	38,273
Formaldehyde	20,864
Ammonia	16,588
4,4'-Isopropylidenediphenol	9,922
Phenol	8,951
Zinc compounds	2,792
Chromium compounds	2,333
Dichloromethane	2,048
Toluene	1,705
Antimony compounds	1,572

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Ohio River in Indiana (1990-1994).**

Carcinogens	24,434 Pounds
Persistent Toxic Metals	7,863 Pounds
Reproductive Toxins	42,496 Pounds
Total‡	73,406 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Ohio River in Indiana (1990-1994).**

Top dischargers of carcinogens to the Ohio River in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
General Electric Co.	Mount Vernon	23,184
Countrymark Co-op. Inc.	Mount Vernon	1,250

Top dischargers of persistent toxic metals to the Ohio River in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
General Electric Co.	Mount Vernon	5,460
Alcoa	Newburgh	2,403

Top dischargers of reproductive toxins to the Ohio River in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
General Electric Co.	Mount Vernon	32,698
Alcoa	Newburgh	6,048
Countrymark Co-op. Inc.	Mount Vernon	3,750

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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The Whitewater River in Indiana

Total toxic pollution reported (1990-1994): 111,283 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Whitewater River in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Dana Corp.	Hagerstown	111,283

Table 2. Toxic chemicals discharged in the greatest amounts to the Whitewater River in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Sulfuric acid	110,523
Trichloroethylene	505
Chromium	255

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Whitewater River in Indiana (1990-1994).**

Carcinogens	760 Pounds
Persistent Toxic Metals	255 Pounds
Reproductive Toxins	505 Pounds
Total‡	760 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Whitewater River in Indiana (1990-1994).**

Top dischargers of carcinogens to the Whitewater River in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Dana Corp.	Hagerstown	760

Top dischargers of persistent toxic metals to the Whitewater River in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Dana Corp.	Hagerstown	255

Top dischargers of reproductive toxins to the Whitewater River in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
Dana Corp.	Hagerstown	505

Eagle Creek in Indiana

Total toxic pollution reported (1990-1994): 45,912 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Eagle Creek in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Allison Engine Co.	Indianapolis	45,446
Olin Brass Indianapolis*	Indianapolis	466

Table 2. Toxic chemicals discharged in the greatest amounts to Eagle Creek in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	36,727
1,1,1-Trichloroethane	3,580
Dichloromethane	1,476
Ethylene glycol	1,369
Tetrachloroethylene	1,081
Copper	429
Chromium compounds	425
Chlorine	309
Silver	137
Cyanide compounds	128

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Eagle Creek in Indiana (1990-1994).**

Carcinogens	2,808 Pounds
Persistent Toxic Metals	1,242 Pounds
Reproductive Toxins	42 Pounds
Total‡	3,799 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Eagle Creek in Indiana (1990-1994).**

Top dischargers of carcinogens to Eagle Creek in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Allison Engine Co.	Indianapolis	2,766

Top dischargers of persistent toxic metals to Eagle Creek in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Allison Engine Co.	Indianapolis	776
Olin Brass Indianapolis*	Indianapolis	466

Top dischargers of reproductive toxins to Eagle Creek in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

The Sigerson Ditch in Indiana

Total toxic pollution reported (1990-1994): 38,337 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Sigerson Ditch in Indiana (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Plymouth Tube Co.	Winamac	38,337

Table 2. Toxic chemicals discharged in the greatest amounts to the Sigerson Ditch in Indiana (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Sulfuric acid	38,306

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Sigerson Ditch in Indiana (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	31 Pounds
Reproductive Toxins	0 Pounds
Total‡	31 Pounds

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Sigerson Ditch in Indiana (1990-1994).**

Top dischargers of carcinogens to the Sigerson Ditch in Indiana (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to the Sigerson Ditch in Indiana (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to the Sigerson Ditch in Indiana (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)