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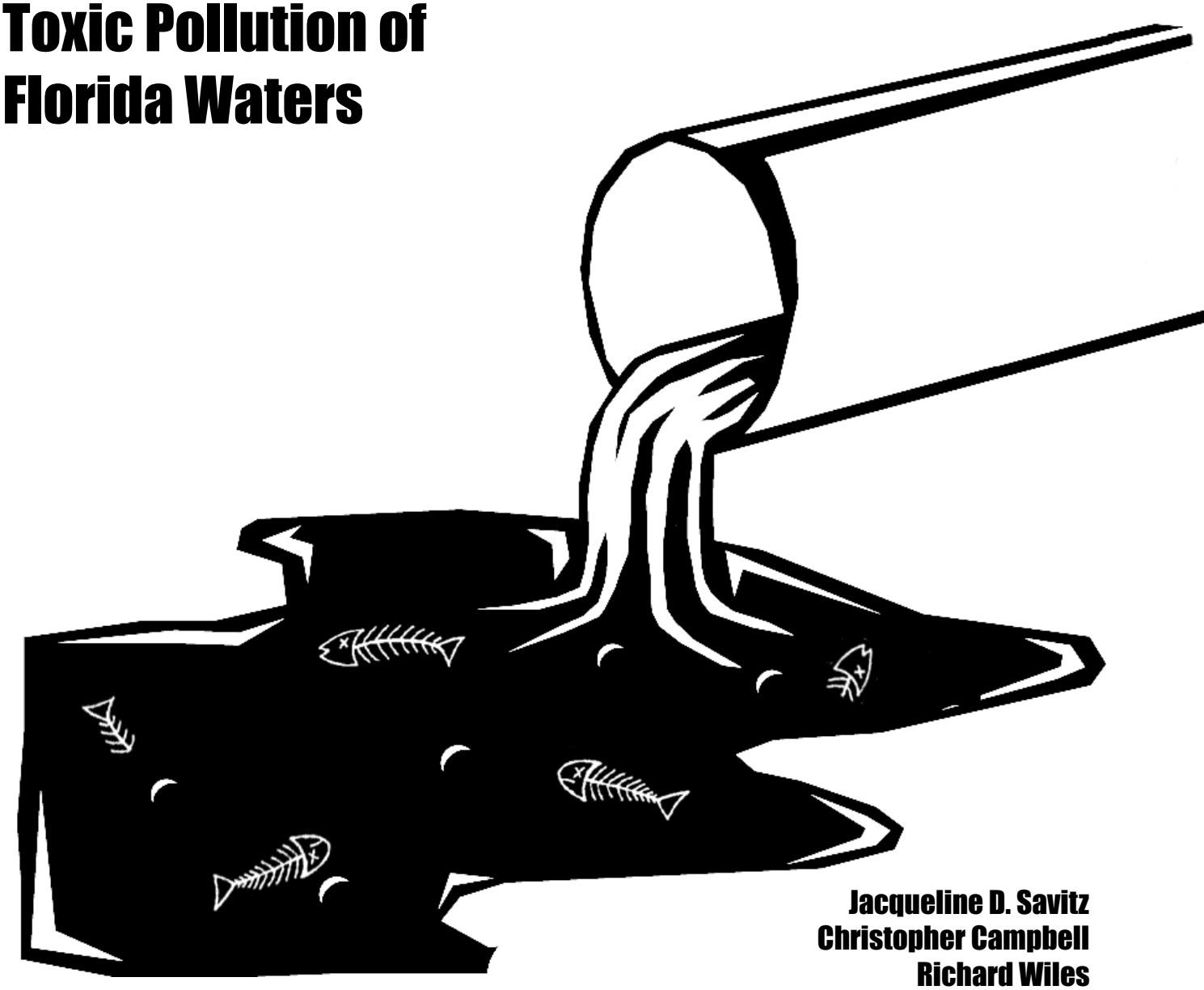
ENVIRONMENTAL WORKING GROUP™

Dishonorable Discharge

Toxic Pollution of Florida Waters



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Acknowledgments

We are grateful to Molly Evans who designed and produced the report and to Allison Daly who coordinated its release. Thanks to Ken Cook and Mark Childress for their editing and advice, and to Dale Klaus of U.S. PIRG who assisted with research.

Dishonorable Discharge was made possible by grants from The Joyce Foundation, the W. Alton Jones Foundation, The Pew Charitable Trusts, and Working Assets Funding Service. A computer equipment grant from the Apple Computer Corporation made our analysis possible. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of The Pew Charitable Trusts or our other supporters listed above.

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Dishonorable Discharge

Toxic Pollution of Florida Waters

Executive Summary

Most Florida 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 Florida streams and rivers.

The citizens of Florida 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 Florida and nationwide.

Factories and other industrial facilities dumped more than 12.1 million pounds of toxic substances directly into Florida's waters between 1990 and 1994, according to a new analysis of the federal Toxics Release Inventory (TRI) (Table 1). Florida ranked 13th 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 fifty-eight million pounds of toxic materials were flushed to sewage treatment plants in Florida from 1990 through 1994, 11th 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 Florida raises the total amount of toxics dumped to the state's waters to an estimated 26.7 million pounds (Table 1).

The Amelia River received the greatest amount of toxic water pollution in Florida from 1990-1994, a total of 7,460,000 pounds, followed by the Fenholloway River, Escambia Bay, and Eleven Mile Creek (Table 2). The ten most polluted waterways in Florida received 11,900,000 pounds of toxic pollution between 1990 and 1994, 98.2% percent of the total in the State.

The top three facilities reporting the most toxic pollution of Florida's waters over this period were Rayonier, Inc. in Fernandina Beach, which dumped 7,430,000 pounds

of toxic chemicals, followed by Buckeye Florida L.P., and Air Products & Chemicals Inc. in the towns of Perry, and Pace, respectively (Table 3). The toxic chemicals dumped in the greatest amounts were ammonia, a total of 10,200,000 pounds, followed by ammonium nitrate solution, and methanol (Table 4).

Georgia-Pacific Corporation dumped the most carcinogens into Florida's waters, a total of 49,500 pounds, followed by Buckeye Florida L.P. and Rayonier Inc. (Table 8). Rice Creek received the greatest amount of cancer-causing toxic chemicals in Florida, a total of 49,000 pounds, followed by the Fenholloway River and the Amelia River (Table 7).

Seminole Kraft Corporation* dumped the greatest amount of persistent toxic metals in Florida's waters, a total of 16,000 pounds, followed by Monsanto Company and Reeves Southeastern Corporation (Table 8). The St. John River received the greatest amount of persistent toxic metals, a total of 16,000 pounds, followed by the Escambia River and the some wetlands reported only as "Unnamed Wetlands South Of Reeves Rd." (Table 7).

Monsanto Company dumped the greatest amount of toxic chemicals that cause reproductive damage or birth defects into Florida's waters, a total of 632 pounds, followed by Mercer Products Company and Unimac (Table 8). The Escambia River received the greatest amount of toxic chemicals that cause reproductive damage or birth defects, a total of 630 pounds, followed by the Hillsborough River and a tributary of the Chipola River (Table 7).

These discharges to Florida's waters include only those wastes released by companies physically located in Florida. 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.

*This facility reported no discharges in 1994, and may also have reported zero discharges for other years.

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). In Florida, 50% of the rivers and streams surveyed (1,200 miles) had elevated levels of toxic chemicals (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 90[1] 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 343[2] 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 Florida's waters, we used EPA's assumption that 25 percent of all toxic chemicals transferred to POTWs pass-through untreated[3]. Table 1 presents the EWG estimate of toxic chemicals assumed to be discharged by the POTWs in Florida. 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 pounds[4] 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

[1]Estimate 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).

[2]The 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.

[3]EPA 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.

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

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
Toulene
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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Dishonorable Discharge

Florida

Toxic pollution of Florida waters (1990-1994)

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

Direct Water Discharges	12,140,425 Pounds
Estimated Sewer Discharges‡	14,577,310 Pounds
Total Discharges to Waters	**26,717,735 Pounds**

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

River or Water Body	Toxic chemical release to waterbody (pounds)
Amelia River	7,461,070
Fenholloway River	1,896,369
Escambia Bay	1,568,522
Eleven Mile Creek	482,625
St. John River	247,906
Suwannee River	80,211
Rice Creek	79,000
Alafia River	54,792
Manatee River	34,300
Larkin Canal	22,989

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

Facility	City	Toxic chemical release to waters (pounds)
Rayonier Inc.	Fernandina Beach	7,428,844
Buckeye Florida L.P.	Perry	1,896,369
Air Prods. & Chemicals Inc.	Pace	1,609,109
Champion Intl. Corp.	Cantonment	482,625
Seminole Kraft Corp.*	Jacksonville	136,151
Cytec Ind. Inc.	Milton	119,413
Jefferson Smurfit Corp.	Jacksonville	111,502
Gold Kist	Live Oak	80,362
Georgia-Pacific Corp.	Palatka	79,000
Mulberry Phosphates Inc.	Mulberry	47,215

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

Chemical	Toxic chemical release to waters (pounds)
Ammonia	10,161,083
Ammonium nitrate (solution)	1,104,768
Methanol	369,419
Ammonium sulfate (solution)	228,560
Acetone	80,976
Chloroform	66,640
Catechol	28,698
Zinc compounds	22,472
Phenol	21,535
Ethylene glycol	18,895

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

Facility	City	Toxic chemical release to sewers (pounds)
Stone Container Corp.	Panama City	43,279,970
St. Joe Forest Prods. Co.	Port Saint Joe	9,701,010
Scm Glidco Organics Corp.	Jacksonville	1,248,444
North American Biologicals	Miami	550,000
Continental Circuits Inc.	Winter Springs	293,452
Advanced Quick Circuits L.P.	Melbourne	286,263
Althin Medical Inc.	Miami Lakes	219,548
Longlife Dairy Prods. Co. Inc.	Jacksonville	188,314
PCR Inc.	Gainesville	171,072
AT&T	Orlando	164,667

‡ Total discharges of toxic chemicals to sewer systems in Florida was 58,309,243 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.

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Dishonorable Discharge

Florida

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

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

Carcinogens	74,119 Pounds
Persistent Toxic Metals	30,480 Pounds
Reproductive Toxins	1,764 Pounds
Total (see note)	**102,742 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. Florida waters receiving the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** (1990-1994).**

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

River or Water Body	Carcinogens** released to waters (lbs.)
Rice Creek	49,460
Fenholloway River	11,866
Amelia River	5,260
Eleven Mile Creek	4,850
Escambia River	632

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

River or Water Body	Persistent toxic metals released to waters (lbs.)
St. John River	16,000
Escambia River	5,642
Unnamed Wetlands South Of Reeves Rd.	800
Highway 17 Drainage Ditch	760
Montcrief Creek	750

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

River or Water Body	Reproductive toxins** released to waters (lbs.)
Escambia River	632
Hillsborough River	250
Tributary Of Chipola River	250

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

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

Facility	City	Carcinogens** released to waters (lbs.)
Georgia-Pacific Corp.	Palatka	49,460
Buckeye Florida L.P.	Perry	11,866
Rayonier Inc.	Fernandina Beach	5,260
Champion Intl. Corp.	Cantonment	4,850
Monsanto Co.	Cantonment	632

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

Facility	City	Persistent toxic metals released to waters (lbs.)
Seminole Kraft Corp.*	Jacksonville	16,000
Monsanto Co.	Cantonment	5,642
Reeves Southeastern Corp.	Tampa	2,145
Florida Wire & Cable Inc.	Jacksonville	945
Metalplate Galvanizing Inc.	Jacksonville	935

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

Facility	City	Reproductive toxins** released to waters (lbs.)
Monsanto Co.	Cantonment	632
Mercer Prods.co.*	Umatilla	255
Unimac	Marianna	250
Johnson Controls Inc.	Tampa	250
Florida Wire & Cable Inc.	Jacksonville	162

* 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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Dishonorable Discharge

The Amelia River in Florida

Total toxic pollution reported (1990-1994): 7,461,070 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Rayonier Inc.	Fernandina Beach	7,428,844
Container Corp. Of America	Fernandina Beach	32,226

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

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	7,366,802
Methanol	59,250
Acetone	15,131
Phenol	9,839
Chloroform	3,860
Catechol	3,412
Formaldehyde	1,400
Methyl ethyl ketone	1,321

‡ 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 Amelia River in Florida (1990-1994).**

Carcinogens	5,260 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**5,260 Pounds**

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

Top dischargers of carcinogens to the Amelia River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Rayonier Inc.	Fernandina Beach	5,260

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

Facility	City	Persistent toxic metals released to water (lbs)

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

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

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

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Dishonorable Discharge

The Fenholloway River in Florida

Total toxic pollution reported (1990-1994): 1,896,369 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Buckeye Florida L.P.	Perry	1,896,369

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

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	1,845,300
Acetone	20,300
Chloroform	10,220
Methyl ethyl ketone	7,100
Phenol	6,800
Catechol	4,682
Acetaldehyde	1,646
Cresol (mixed isomers)	320

‡ 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 Fenholloway River in Florida (1990-1994).**

Carcinogens	11,866 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**11,866 Pounds**

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

Top dischargers of carcinogens to the Fenholloway River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Buckeye Florida L.P.	Perry	11,866

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

Facility	City	Persistent toxic metals released to water (lbs)

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

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

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

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Dishonorable Discharge

Escambia Bay in Florida

Total toxic pollution reported (1990-1994): 1,568,522 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Escambia Bay in Florida (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Air Prods. & Chemicals Inc.	Pace	1,449,109
Cytec Ind. Inc.	Milton	119,413

Table 2. Toxic chemicals discharged in the greatest amounts to Escambia Bay in Florida (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonium nitrate (solution)	924,560
Ammonia	372,682
Ammonium sulfate (solution)	228,560
Methanol	38,720
Ethylene glycol	3,750
Zinc compounds	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 Escambia Bay in Florida (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	250 Pounds
Reproductive Toxins	0 Pounds
Total‡	**250 Pounds**

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

Top dischargers of carcinogens to Escambia Bay in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to Escambia Bay in Florida (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Air Prods. & Chemicals Inc.	Pace	250

Top dischargers of reproductive toxins to Escambia Bay in Florida (1990-1994).**

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

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

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Dishonorable Discharge

Eleven Mile Creek in Florida

Total toxic pollution reported (1990-1994): 482,625 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Eleven Mile Creek in Florida (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Champion Intl. Corp.	Cantonment	482,625

Table 2. Toxic chemicals discharged in the greatest amounts to Eleven Mile Creek in Florida (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	367,000
Methanol	95,005
Acetone	8,600
Catechol	5,400
Chloroform	3,350
Acetaldehyde	1,500
1,2,4-Trimethylbenzene	840
Methyl ethyl ketone	720
Cresol (mixed isomers)	140

‡ 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 Eleven Mile Creek in Florida (1990-1994).**

Carcinogens	4,850 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**4,850 Pounds**

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

Top dischargers of carcinogens to Eleven Mile Creek in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Champion Intl. Corp.	Cantonment	4,850

Top dischargers of persistent toxic metals to Eleven Mile Creek in Florida (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to Eleven Mile Creek in Florida (1990-1994).**

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

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

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Dishonorable Discharge

The St. John River in Florida

Total toxic pollution reported (1990-1994): 247,906 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the St. John River in Florida (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Seminole Kraft Corp.*	Jacksonville	136,151
Jefferson Smurfit Corp.	Jacksonville	111,502
U.S. Navy	Jacksonville	253

Table 2. Toxic chemicals discharged in the greatest amounts to the St. John River in Florida (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Methanol	176,428
Acetone	33,110
Zinc compounds	16,000
Ethylene glycol	10,961
Catechol	7,342
Methyl ethyl ketone	2,308
Ammonia	1,226
Dichloromethane	250
Acetaldehyde	175

‡ 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 St. John River in Florida (1990-1994).**

Carcinogens	425 Pounds
Persistent Toxic Metals	16,000 Pounds
Reproductive Toxins	0 Pounds
Total‡	**16,425 Pounds**

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

Top dischargers of carcinogens to the St. John River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
U.S. Navy	Jacksonville	250
Jefferson Smurfit Corp.	Jacksonville	175

Top dischargers of persistent toxic metals to the St. John River in Florida (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Seminole Kraft Corp.*	Jacksonville	16,000

Top dischargers of reproductive toxins to the St. John River in Florida (1990-1994).**

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

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

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Dishonorable Discharge

The Suwannee River in Florida

Total toxic pollution reported (1990-1994): 80,211 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Gold Kist	Live Oak	80,211

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

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	80,211

‡ 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 Suwannee River in Florida (1990-1994).**

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

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

Top dischargers of carcinogens to the Suwannee River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

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

Facility	City	Persistent toxic metals released to water (lbs)

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

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

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

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Dishonorable Discharge

Rice Creek in Florida

Total toxic pollution reported (1990-1994): 79,000 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Georgia-Pacific Corp.	Palatka	79,000

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

Chemical	Toxic chemical release to waterbody (pounds)
Chloroform	49,210
Ammonia	9,000
Catechol	7,862
Phenol	4,750
Acetone	3,835
Methyl ethyl ketone	3,829
Dichloromethane	250
Ammonium nitrate (solution)	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 Rice Creek in Florida (1990-1994).**

Carcinogens	49,460 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**49,460 Pounds**

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

Top dischargers of carcinogens to Rice Creek in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Georgia-Pacific Corp.	Palatka	49,460

Top dischargers of persistent toxic metals to Rice Creek in Florida (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to Rice Creek in Florida (1990-1994).**

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

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

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Dishonorable Discharge

The Alafia River in Florida

Total toxic pollution reported (1990-1994): 54,792 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Mulberry Phosphates Inc.	Mulberry	47,215
Cargill Fertilizer Inc.	Riverview	6,850
Cargill Fertilizer Inc.	Bartow	376
Farmland Hydro L.P.	Bartow	351

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

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	54,792

‡ 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 Alafia River in Florida (1990-1994).**

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

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

Top dischargers of carcinogens to the Alafia River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

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

Facility	City	Persistent toxic metals released to water (lbs)

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

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

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

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Dishonorable Discharge

The Manatee River in Florida

Total toxic pollution reported (1990-1994): 34,300 Pounds

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

Facility	City	Toxic chemical release to water (pounds)
Tropicana Prods. Inc.	Bradenton	34,300

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

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	34,300

‡ 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 Manatee River in Florida (1990-1994).**

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

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

Top dischargers of carcinogens to the Manatee River in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

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

Facility	City	Persistent toxic metals released to water (lbs)

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

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

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

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Dishonorable Discharge

The Larkin Canal in Florida

Total toxic pollution reported (1990-1994): 22,989 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Larkin Canal in Florida (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Lykes Pasco Inc.	Dade City	22,989

Table 2. Toxic chemicals discharged in the greatest amounts to the Larkin Canal in Florida (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	18,656
Ammonium nitrate (solution)	4,055
Ethylene glycol	278

‡ 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 Larkin Canal in Florida (1990-1994).**

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

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

Top dischargers of carcinogens to the Larkin Canal in Florida (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to the Larkin Canal in Florida (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to the Larkin Canal in Florida (1990-1994).**

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

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

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