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EXECUTIVE SUMMARY

October 18, 2002 marks the 30th anniversary of the Clean Water Act, landmark legislation that set the ambitious goals of making all waterways fishable and swimmable by 1983 and eliminating the discharge of pollutants into the nation's waterways by 1985. Although we have made important strides in water quality since the birth of the Clean Water Act, we are far from realizing its original vision.

In August 2002, U.S. PIRG and the State PIRGs released their annual report, *Permit to Pollute*, documenting the lax enforcement of the Clean Water Act by the U.S. Environmental Protection Agency (EPA) and state environmental agencies. We found that nearly 30% of major facilities examined were in Significant Non-Compliance with their Clean Water Act permits for at least one quarter during the 15 months beginning January 1, 2000 and ending March 31, 2001.[1]

Using previously non-public information provided by EPA in response to a Freedom of Information Act (FOIA) request, this report builds on the findings of *Permit to Pollute.* Rather than focusing on facilities categorized by EPA as in Significant Non-Compliance for permit exceedances or paperwork violations, for the first time we analyze all major facilities exceeding their Clean Water Act permits, reveal the type of pollutants they are discharging illegally in our waterways and detail the extent to which these facilities are exceeding effluent permit levels. We focus on permit exceedances for high hazard pollutants: toxicants known or suspected to cause cancer, reproductive and developmental disorders, and other serious non-cancer health effects.

On the Clean Water Act's 30th anniversary, we find that facilities across the country continue to violate the letter and spirit of the law, at times egregiously, for high hazard chemicals.

KEY FINDINGS INCLUDE:

Thousands of facilities continue to break the law.

◈ Nationally, 5,116 major facilities (81%) exceeded their Clean Water Act effluent permit limits at least once between January 1, 1999 and December 31, 2001, including 1,768 facilities (28%) for discharging chemicals known or suspected to cause cancer and/or serious non-cancer health effects.

◈ The ten states or territories that allowed the highest percentage of major facilities to exceed their Clean Water Act effluent permit limits at least once for high hazard chemicals are Puerto

Rico, Ohio, Rhode Island, District of Columbia, Virgin Islands, New York, Arizona, Massachusetts, West Virginia and Indiana.

These facilities often break the law more than once and for more than one pollutant.

◈ Nationally, 262 major facilities exceeded their effluent permit limits for at least 10 reporting periods between January 1, 1999 and December 31, 2001 for chemicals known or suspected to cause cancer and/or serious non-cancer health effects.

◈ Nationally, major facilities reported almost 88,000 exceedances of their Clean Water Act effluent permit limits between January 1, 1999 and December 31, 2001, including 15,803 exceedances for discharging chemicals known or suspected to cause cancer and/or serious non-cancer health effects.

◈ The ten states or territories that allowed the most exceedances of Clean Water Act effluent permit limits between January 1, 1999 and December 31, 2001 for high hazard chemicals are Puerto Rico, Ohio, Pennsylvania, Texas, New York, Indiana, Massachusetts, Connecticut, Louisiana and Florida.

These facilities often break the law egregiously.

◈ Major facilities, on average, exceeded their effluent permit limits for high hazard chemicals by 849%, or more than eight times the legal limit, between January 1, 1999 and December 31, 2001.

◈ Nationally, major facilities reported 1,562 instances between January 1, 1999 and December 31, 2001 in which they exceeded their Clean Water Act effluent permit limits for chemicals known or suspected to cause cancer and/or serious non-cancer health effects by at least tenfold (1000%), and 363 instances of violations exceeding 100-fold (10,000%).

◈ The ten states or territories that allowed the greatest number of egregious permit exceedances—at least 500%, or five times, over the effluent permit limits— between January 1, 1999 and December 31, 2001 for high hazard chemicals are Puerto Rico, Ohio, Pennsylvania, Texas, West Virginia, Indiana, Louisiana, Missouri, Maine and North Carolina.

At a time when our leaders should be working with the states to address this illegal pollution and make all of our waterways fishable and swimmable, the Bush administration has suggested, proposed, or enacted numerous policies that would weaken the Clean Water Act and threaten the future of America's rivers, lakes, streams and oceans. Rather than weakening the Clean Water Act, the Bush administration and our elected officials should mark the 30th anniversary of this critical legislation by tightening enforcement of Clean Water Act programs; strengthening standards to protect our rivers, lakes, streams and wetlands; and ensuring the public's right-to-know about water pollution by increasing and improving access to compliance data and discharge reporting.

Background: The State of America's Waterways

While the 1972 Clean Water Act has made strides in cleaning up some waterways, the "fishable and swimmable" goal of the Act remains the unmet benchmark of water quality in the United States. Consider the following:

• A majority of Americans live within 10 miles of a polluted river, lake, stream or coastal area.[2]

• Approximately 39% of our rivers, 51% of our estuaries, and 46% of our lakes are impaired for one or more uses and thus still too polluted for safe fishing or swimming.[3]

• Although the precise number is not known, EPA believes that more than 20,000 bodies of water throughout the country are too polluted to meet basic water quality standards.[4]

• Since 1988, there have been almost 61,000 beach closings and advisories and 231 extended closings and advisories (six to 12 weeks) at U.S. beaches. During 2001 alone, there were at least 13,410 days of closings and advisories, 46 extended closings and advisories (six to 12 weeks), and 73 permanent closings and advisories (more than 12 weeks) at U.S. ocean, bay, Great Lakes, and freshwater beaches. Including extended days, the total comes to 16,408 closings and advisories.[5]

• Every state in the country except for Wyoming issued fish consumption advisories in 2001, urging limited consumption of fish from their waters due to contamination caused by substances such as mercury, PCBs, chlordane, dioxins, and DDT and its byproducts (which continue to persist in our environment). The number of lake acres under advisory increased from 26% in 2000 to almost 28% in 2001, and the number of river miles under advisory increased from 10.5% in 2000 to 14% in 2001.[6]

• According to EPA's Toxic Release Inventory, polluters discharged more than 260 million pounds of toxic chemicals into our waterways in 2000 alone.[7]

As troubling as these findings are, the complete picture could be even worse. According to a report written by current and former environmental officials, EPA is not rigorous in its monitoring of water quality. In fact, the report concludes that the states are "free to manipulate numbers in order to falsely portray continuing progress in water quality when, in fact, what fragmentary reliable information exists often suggests the exact opposite."[8]

The National Pollutant Discharge Elimination System

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program aims to control water pollution by regulating point sources— industrial, municipal, and other facilities that discharge pollutants directly into surface waters of the United States. It is illegal to discharge pollutants through a point source without a NPDES permit, which contains limits on what can be discharged and in what amounts, as well as monitoring and reporting requirements.[9]

The term pollutant is defined very broadly by the NPDES regulations and generally includes any type of industrial, municipal, and agricultural waste discharged into water. For regulatory purposes, pollutants have been grouped into three general categories under the NPDES Program: conventional, toxic, and non-conventional. There are five conventional pollutants, as defined in Section 304(a)(4) of the Clean Water Act—five day biochemical oxygen demand (BOD5), total suspended solids (TSS), pH, fecal coliform, and oil and grease. Toxic pollutants, or priority pollutants, are those defined in Section 307(a)(1) of the Clean Water Act and include metals and manmade organic compounds. Non-conventional pollutants are those which do not fall under either of the above categories and include such parameters as ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).[10]

EPA is authorized under the CWA to directly implement the NPDES Program. EPA, however, may authorize States, Territories, or Tribes to implement all or parts of the national program. Currently, 44 states have the authority to implement the NPDES program, with Alaska, Arizona, District of Columbia, Idaho, Massachusetts, New Hampshire, New Mexico and Puerto Rico remaining under federal jurisdiction.[11]

EPA and the states are responsible for monitoring and enforcing the NPDES permits. NPDES permits require the facility to sample its discharges and notify EPA and the state regulatory agency of these results periodically—be it weekly, monthly or quarterly—and whether or not it is in compliance with the requirements of its permit. EPA and state regulatory agencies also will send inspectors to facilities in order to determine if they are in compliance with the conditions imposed under their permits. If facilities violate the terms of their permits, EPA and state regulatory agencies may issue administrative orders, requiring facilities to correct violations and assessing monetary penalties. The law also allows EPA and state agencies to pursue civil and criminal actions that may include mandatory injunctions or penalties, as well as jail sentences for persons found willfully violating permit requirements.[12]

Water Quality Permitting: Quantity vs. Concentration

A facility's NPDES permit can contain several different discharge limits for each parameter (pollutant), depending on the permit writer and parameter regulated. The permit limits generally fall within two categories: quantity and concentration.

Quantity refers to the mass of a pollutant discharged into a waterway and most commonly is measured in kilograms per day. A NPDES permit may set a *quantity average* that the facility may not exceed for a specified parameter. Quantity average refers to the quantity of a pollutant discharged averaged over the reporting period, which may be a week, month, quarter, etc., depending on the permit writer and the parameter.

Similarly, a permit may set a *quantity maximum* that the facility may not exceed for a specified parameter. Quantity maximum refers to the highest quantity of a pollutant recorded on any given day during the reporting period. The logic is that, for some pollutants, if an entire month's allowable amount was discharged all in one day, a waterbody might be severely damaged.

Concentration refers to the mass of a pollutant in a given volume of water, generally measured as milligrams per liter or parts per million. A NPDES permit may set a *concentration average* that the facility may not exceed for a specified parameter. Concentration average refers to the concentration of a pollutant discharged averaged over the reporting period.

Similarly, a permit may set a *concentration maximum* that the facility may not exceed for a specified parameter. Concentration maximum refers to the highest concentration of a pollutant recorded on any given day during the reporting period. In addition, a NPDES permit may set a *concentration minimum* that the facility may not fall below for a specified parameter. This permit requirement is rare and applies to parameters such as dissolved oxygen.

Analysis: Chemicals Poisoning America's Waterways

Each year, U.S. PIRG and the State PIRGs release an annual report, *Permit to Pollute*, documenting the lax enforcement of the Clean Water Act by EPA and state environmental agencies. The 2002 report, released in August 2002, found that nearly 30% of major facilities examined were in Significant Non-Compliance[a] with their Clean Water Act permits for at least one quarter during the 15 months beginning January 1, 2000 and ending March 31, 2001.[13]

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In response to our FOIA request, EPA provided us with summary data about active major facilities in the Clean Water Act's National Pollutant Discharge Elimination System. All information was generated from the Permit Compliance System (PCS) and Integrated Data for Enforcement Analysis (IDEA) system and covers the time period spanning January 1, 1999 through December 31, 2001. Refer to the methodology on Page 28 for more detail on the scope and limitations of this data.

We analyzed the facilities exceeding their NPDES permits for pollutants within two broad categories:

• **High Hazard Chemicals,** or chemicals that are suspected or known human carcinogens, known developmental or reproductive toxicants, or toxicants suspected to cause one or more non-cancer health effects, such as toxicity of the cardiovascular, endocrine, gastrointestinal, immune, musculoskeletal, neurological, renal, reproductive, and respiratory systems. (See Appendices 1 and 1a for detailed description of all high hazard chemicals analyzed in this report.)

• **All Parameters.** In order to offer reference and context for the high hazard chemical permit exceedances, we provide analysis of permit exceedances for all parameters (pollutants), which include the high hazard chemicals, conventional pollutants such as total suspended solids and fecal coliform, and non-conventional pollutants such as ammonia and nitrogen.

The key findings of this analysis are below. The tables that follow detail these findings, detailing permit exceedances by state, parameter and waterway, where available. The full data set is available online at www.uspirg.org.

[a] "Significant Non-Compliance" (SNC) is a tool used by EPA to identify the most severe and chronic violations reported to the Permit Compliance System. EPA may list a facility in SNC for repeat permit exceedances, failure to submit a Discharge Monitoring Report, failure to submit a Compliance Schedule Report, or other paperwork violations.

KEY FINDINGS:

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THOUSANDS OF FACILITIES CONTINUE TO BREAK THE LAW.

Nationally, 5,116 major facilities (81%) exceeded their Clean Water Act effluent permit limits at least once between January 1, 1999 and December 31, 2001, including 1,768 facilities (28%) for discharging chemicals known or suspected to cause cancer and/or serious non-cancer health effects. The ten states or territories that allowed the highest percentage of major facilities to exceed their Clean Water Act effluent permit limits at least once for high hazard chemicals are Puerto Rico, Ohio, Rhode Island, District of Columbia, Virgin Islands, New York, Arizona, Massachusetts, West Virginia and Indiana.

Table 1. Number of Facilities Exceeding their Clean Water Act Effluent Permit Limits: By State or Territory

State or Territory	# Violators: All Pollutants	% of Permitted Facilities	Rank	# Violators: High Hazard Chemicals	% of Permitted Facilities	Rank
Alabama	162	85.3%	**18**	20	10.5%	**45**
Alaska	40	88.9%	**11**	7	15.6%	**39**
Arizona	30	68.2%	**44**	20	45.5%	**7**
Arkansas	79	73.1%	**38**	7	6.5%	**49**
Colorado	79	77.5%	**33**	31	30.4%	**18**
Connecticut	103	91.2%	**10**	40	35.4%	**11**
Delaware	21	91.3%	**8**	7	30.4%	**17**
District of Columbia	3	75.0%	**35**	2	50.0%	**4**
Florida	166	71.9%	**40**	75	32.5%	**15**
Georgia	120	69.8%	**42**	34	19.8%	**31**
Hawaii	12	54.5%	**51**	4	18.2%	**34**
Idaho	33	78.6%	**29**	8	19.0%	**33**
Illinois	210	75.5%	**34**	57	20.5%	**30**
Indiana	159	86.9%	**15**	67	36.6%	**10**
Iowa	118	95.2%	**4**	19	15.3%	**40**
Kansas	48	82.8%	**22**	4	6.9%	**48**
Kentucky	114	88.4%	**12**	21	16.3%	**36**
Louisiana	210	86.4%	**16**	62	25.5%	**22**
Maine	80	92.0%	**6**	20	23.0%	**26**
Maryland	67	67.7%	**45**	19	19.2%	**32**
Massachusetts	123	87.9%	**14**	61	43.6%	**8**
Michigan	143	78.1%	**31**	64	35.0%	**12**
Minnesota	60	71.4%	**41**	9	10.7%	**44**
Mississippi	69	80.2%	**26**	27	31.4%	**16**
Missouri	127	85.8%	**17**	50	33.8%	**14**
Montana	12	27.9%	**52**	2	4.7%	**50**
Nebraska	42	75.0%	**35**	7	12.5%	**42**

Table 1, continued						
State or Territory	**# Violators: All Pollutants**	**% of Permitted Facilities**	**Rank**	**# Violators: High Hazard Chemicals**	**% of Permitted Facilities**	**Rank**
Nevada	8	80.0%	**28**	1	10.0%	**46**
New Hampshire	58	96.7%	**2**	17	28.3%	**21**
New Jersey	118	72.4%	**39**	26	16.0%	**38**
New Mexico	20	58.8%	**49**	8	23.5%	**25**
New York	324	91.3%	**9**	170	47.9%	**6**
North Carolina	194	84.0%	**20**	66	28.6%	**20**
North Dakota	21	80.8%	**25**	0	0.0%	**52**
Ohio	286	99.0%	**1**	196	67.8%	**2**
Oklahoma	73	78.5%	**30**	22	23.7%	**24**
Oregon	45	61.6%	**48**	6	8.2%	**47**
Pennsylvania	289	74.9%	**37**	95	24.6%	**23**
Puerto Rico	78	92.9%	**5**	60	71.4%	**1**
Rhode Island	24	96.0%	**3**	13	52.0%	**3**
South Carolina	143	77.7%	**32**	40	21.7%	**27**
South Dakota	16	55.2%	**50**	4	13.8%	**41**
Tennessee	126	81.3%	**24**	47	30.3%	**19**
Texas	438	80.2%	**27**	115	21.1%	**28**
Utah	28	84.8%	**19**	4	12.1%	**43**
Vermont	30	88.2%	**13**	7	20.6%	**29**
Virgin Islands	5	83.3%	**21**	3	50.0%	**4**
Virginia	96	68.6%	**43**	23	16.4%	**35**
Washington	55	64.0%	**47**	14	16.3%	**37**
West Virginia	85	91.4%	**7**	40	43.0%	**9**
Wisconsin	109	81.3%	**23**	46	34.3%	**13**
Wyoming	17	65.4%	**46**	1	3.8%	**51**
TOTAL	**5,116**	**80.8%**		**1,768**	**27.9%**	

Note: We excluded California from this analysis because the data were not reliable.

THESE FACILITIES OFTEN BREAK THE LAW MORE THAN ONCE AND FOR MORE THAN ONE POLLUTANT.

Nationally, 262 major facilities exceeded their effluent permit limits for at least 10 reporting periods between January 1, 1999 and December 31, 2001 for chemicals known or suspected to cause cancer and/or serious non-cancer health effects.

Table 2. Facilities with Most Reporting Periods in Exceedance of Effluent Permit Limits for High Hazard Chemicals

# of Reporting Periods in Violation	State	NPDES Permit #	Permittee	City	Parameter	Receiving Waters
99	PA	PA0012751	ZINC CORP OF AMERICA	PALMERTON	ZINC, TOTAL	AQUASHICOLA CREEK & LEHIGH RIVER
57	ME	ME0000639	HOLTRACHEM MFG. COMPANY	ORRINGTON	MERCURY, TOTAL	PENOBSCOT RIVER
56	TX	TX0112771	FRIEDE GOLDMAN OFFSHORE TEXAS	PORT ARTHUR	COPPER, TOTAL	
52	PR	PR0000698	PUERTO RICO ELECTRIC PWR AUTH	SAN JUAN	IRON, TOTAL	BAHIA SAN JUAN
37	WV	WV0003336	WEIRTON STEEL CORP	WEIRTON	ZINC, TOTAL	OHIO RIVER
36	HI	HI0020117	HONOLULU, CITY & CNTY	HONOLULU	DIELDRIN	
36	HI	HI0020117	HONOLULU, CITY & CNTY	HONOLULU	CHLORDANE	
36	PR	PR0025461	PRASA AIBONITO WWTP	AIBONITO	COPPER, TOTAL	AIBONITO RIVER
35	IN	IN0022829	EAST CHICAGO MUNICIPAL STP	EAST CHICAGO	PHOSPHORUS, TOTAL	GRAND CALUMET RIVER TO LAKE MICHIGAN
35	LA	LA0038814	VILLE PLATTE, CITY OF	VILLE PLATTE	COPPER, TOTAL	BAYOU JOE MARCEL
35	MA	MA0024414	WESTFORD ANODIZING CORP.	GRANITEVILLE	ALUMINUM, TOTAL	STONEY BROOK
35	MA	MA0100862	WINCHENDON W P C F	WINCHENDON	COPPER, TOTAL	MILLERS RIVER
34	IL	IL0022519	JOLIET EAST STP	JOLIET	COPPER, TOTAL	HICKORY CREEK, DES PLAINES RIV
34	PR	PR0025976	PRASA - CAGUAS RWWTP	CAGUAS	MERCURY, TOTAL	BAIROA RIVER
34	PR	PR0025976	PRASA - CAGUAS RWWTP	CAGUAS	ARSENIC, TOTAL	BAIROA RIVER
34	TX	TX0009148	PHILLIPS 66 CO-HUTCHINS	BORGER	SELENIUM, TOTAL	CANADIAN RIVER
33	FL	FL0169978	CITY OF LYNN HAVEN	LYNN HAVEN	PHOSPHORUS, TOTAL	
33	LA	LA0038407	DERIDDER, CITY OF	DE RIDDER	ZINC, TOTAL	BARNES CREEK, CALCASIEU RIVER
33	PR	PR0025356	PRASA CAYEY RWWTP	CAYEY	COPPER, TOTAL	LA PLATA RIVER
33	PR	PR0021679	PRASA VEGA BAJA STP	VEGA BAJA	PHOSPHORUS, TOTAL	CANO CABO CARIBE
33	PR	PR0023931	PRASA WTP EL YUNQUE FILTR PLT	RIO GRANDE	COPPER, TOTAL	ESPIRITU SANTO RIVER
32	PA	PA0002054	RELIANT ENERGY MID ATLANTIC	EAST WHEATFIELD	MANGANESE, TOTAL	CONEMAUGH RIVER
32	PA	PA0002054	RELIANT ENERGY MID ATLANTIC	EAST WHEATFIELD	IRON, TOTAL	CONEMAUGH RIVER
32	PA	PA0002054	RELIANT ENERGY MID ATLANTIC	EAST WHEATFIELD	ALUMINUM, TOTAL	CONEMAUGH RIVER

Refer to Appendix 2 for a complete list of facilities violating their permits for at least ten reporting periods by parameter during the time studied. A facility may have more than one reporting period for a parameter if it has multiple discharge locations.

Nationally, major facilities reported almost 88,000 exceedances[b] of their Clean Water Act effluent permit limits between January 1, 1999 and December 31, 2001, including 15,803 exceedances for discharging chemicals known or suspected to cause cancer and/or serious non-cancer health effects. The ten states or territories that allowed the most exceedances of Clean Water Act effluent permit limits between January 1, 1999 and December 31, 2001 for high hazard chemicals are Puerto Rico, Ohio, Pennsylvania, Texas, New York, Indiana, Massachusetts, Connecticut, Louisiana and Florida.

Table 3. Number of Exceedances of Effluent Permit Limits: By State or Territory

State or Territory	# Violations: All Parameters	Rank	# Violations: Hazardous Chemicals	Rank
Alabama	2610	12	140	29
Alaska	438	39	49	35
Arizona	469	38	194	22
Arkansas	1089	26	19	45
Colorado	595	34	109	32
Connecticut	2357	13	689	8
Delaware	386	41	65	34
District of Columbia	71	51	7	47
Florida	1983	15	553	10
Georgia	1740	18	219	18
Hawaii	565	36	182	23
Idaho	379	42	25	41
Illinois	2817	10	493	12
Indiana	2675	11	734	6
Iowa	2341	14	214	21
Kansas	769	32	7	47
Kentucky	1696	19	161	27
Louisiana	3857	7	635	9
Maine	1304	23	178	25
Maryland	765	33	129	31
Massachusetts	3262	8	690	7
Michigan	1513	21	225	17
Minnesota	496	37	49	35
Mississippi	1161	24	342	14
Missouri	1931	17	348	13
Montana	42	52	10	46
Nebraska	880	29	23	43

[b] We count any exceedance (greater than 0% above the permit level) for any given parameter during any given reporting period as a violation. As such, if a facility exceeds its permit level for a parameter for quantity average, quantity maximum, concentration average and concentration maximum during the same reporting period, we count this as four exceedances but as one facility in violation. We excluded California from this analysis, as the data were deemed unreliable. Paperwork violations are NOT included in this analysis.

Table 3, continued				
State or Territory	**# Violations: All Parameters**	**Rank**	**# Violations: Hazardous Chemicals**	**Rank**
Nevada	78	50	1	50
New Hampshire	1152	25	143	28
New Jersey	880	29	104	33
New Mexico	165	46	25	41
New York	4999	3	934	5
North Carolina	4572	5	331	15
North Dakota	129	47	0	52
Ohio	6780	2	1747	2
Oklahoma	1398	22	176	26
Oregon	396	40	27	40
Pennsylvania	4111	6	1133	3
Puerto Rico	9180	1	1940	1
Rhode Island	807	31	43	37
South Carolina	1645	20	218	19
South Dakota	86	49	20	44
Tennessee	2933	9	216	20
Texas	4941	4	1098	4
Utah	338	43	34	39
Vermont	285	44	40	38
Virgin Islands	170	45	6	49
Virginia	914	28	130	30
Washington	575	35	182	23
West Virginia	1940	16	537	11
Wisconsin	956	27	228	16
Wyoming	96	48	1	50
TOTAL	**87,717**		**15,803**	

THESE FACILITIES OFTEN BREAK THE LAW EGREGIOUSLY.

Major facilities, on average, exceeded their effluent permit limits for high hazard chemicals by 849%, or more than eight times the legal limit, between January 1, 1999 and December 31, 2001.

Table 4. Average Exceedance of Clean Water Act Effluent Permit Limits: By State or Territory

State	Avg Violation (Hazardous Chemicals)	Rank (Hazardous Chemicals)
Alaska	89%	47
Alabama	1344%	9
Arkansas	173%	40
Arizona	3872%	3
Colorado	807%	15
Connecticut	458%	22
District of Columbia	211%	37
Delaware	127%	44
Florida	594%	20
Georgia	528%	21
Hawaii	642%	19
Iowa	200%	38
Idaho	32%	49
Illinois	259%	32
Indiana	312%	29
Kansas	5789%	1
Kentucky	443%	24
Louisiana	686%	16
Massachusetts	236%	34
Maryland	879%	13
Maine	839%	14
Michigan	2268%	6
Minnesota	351%	27
Missouri	4143%	2
Mississippi	410%	26
Montana	224%	35

State	Avg Violation (Hazardous Chemicals)	Rank (Hazardous Chemicals)
North Carolina	271%	31
Nebraska	273%	30
New Hampshire	1101%	10
New Jersey	322%	28
New Mexico	655%	18
Nevada	13%	51
New York	211%	36
Ohio	3570%	4
Oklahoma	961%	12
Oregon	167%	41
Pennsylvania	249%	33
Puerto Rico	438%	25
Rhode Island	160%	43
South Carolina	661%	17
South Dakota	101%	46
Tennessee	2533%	5
Texas	1723%	8
Utah	105%	45
Virginia	1929%	7
Virgin Islands	444%	23
Vermont	80%	48
Washington	160%	42
Wisconsin	183%	39
West Virginia	1057%	11
Wyoming	26%	50
TOTAL	**849%**	

Note: We excluded California from this analysis because the data were not reliable.

Nationally, major facilities reported 1,562 instances between January 1, 1999 and December 31, 2001 in which they exceeded their Clean Water Act effluent permit limits for chemicals known or suspected to cause cancer and/or serious non-cancer health effects by at least tenfold (1000%), and 363 instances of violations exceeding 100-fold (10,000%).

Table 5. Facilities with the Most Egregious Exceedances of Effluent Permit Limits for Known Human Carcinogens

State	City	Permittee	Parameter	Qty Avg % Over	Qty Max % Over	Conc Avg % Over	Conc Max % Over	Report Period End Date	Receiving Waters
AL	FAIRFIELD	HONEYWELL INTERNATIONAL INC	1,1,2-TRICHLOROETHANE	66600	64848	0	0	12/31/99	VILLAGE CREEK
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	22079	0	0	2/29/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	0	0	54900	2/29/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	0	0	44900	2/29/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	0	0	44900	2/29/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	13789	0	0	4/30/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	0	0	20900	4/30/00	SALT RIVER
AZ	PHOENIX	PHOENIX, CITY OF	HEPTACHLOR EPOXIDE	0	0	0	20900	4/30/00	SALT RIVER
AZ	TOLLESON	TOLLESON, CITY OF	ARSENIC, TOTAL RECOVERABLE	0	68812	0	0	8/31/00	SALT RIVER
AZ	TOLLESON	TOLLESON, CITY OF	4,4'-DDT (P,P'-DDT)	0	16358	0	19900	8/31/00	SALT RIVER
AZ	TOLLESON	TOLLESON, CITY OF	4,4'-DDT (P,P'-DDT)	0	27142	0	53900	7/31/01	SALT RIVER
GA	BRUNSWICK	HERCULES-BRUNSWICK	TOXAPHENE	0	0	41875	0	9/30/99	DUPREE CREEK
GA	BRUNSWICK	HERCULES-BRUNSWICK	TOXAPHENE	0	0	66567	0	3/31/01	DUPREE CREEK
GA	BRUNSWICK	HERCULES-BRUNSWICK	TOXAPHENE	0	0	28295	0	9/30/01	DUPREE CREEK
HI	HONOLULU	HONOLULU, CITY & CNTY	CHLORDANE	9200	598	10292	679	2/28/99	
IL	HERBERT	U.S. CHROME CORPORATION	CADMIUM, TOTAL	250	0	10400	453	12/31/01	MOSQUITO CREEK
IL	LAWRENCEVILLE	AMERICAN WESTERN REFINING	BENZENE	0	0	0	11700	3/31/01	EMBARRAS RIVER
IN	MARION	MARION MUNICIPAL STP	LEAD, TOTAL RECOVERABLE	0	0	14186	8233	1/31/01	MISSISSINEWA RIVER
IN	ROCKPORT	AK STEEL CORP., ROCKPORT WORKS	CHROMIUM, HEXAVALENT DISSOLVED	2650	11580	0	0	11/30/00	
KS	PARSONS	US ARMY-KANSAS ARMY AMMUNITION	LEAD, TOTAL	0	0	0	41775	2/28/01	NEOSHO RIVER
ME	LIMESTONE	LORING DEVELOPMENT AUTHORITY	LEAD, TOTAL	33267	0	0	0	3/31/01	LITTLE MADAWASKA RIV/GREENLAW BROOK
MO	ANNAPOLIS	DOE RUN, GLOVER SMELTER	LEAD, TOTAL RECOVERABLE	0	0	14715	44344	12/31/99	SCROGGINS BR/BIG CREEK
MO	FOREST CITY	EXIDE TECHNOLOGIES	LEAD, TOTAL	27461	31361	0	0	5/31/99	CANON CREEK TO KINSEY BRANCH
MO	JOPLIN	JOPLIN, SHOAL CREEK WWTF	ARSENIC, TOTAL RECOVERABLE	0	0	0	59900	12/31/01	SHOAL CREEK
MO	VIBURNUM	DOE RUN,FLETCHER MINE/MIL	CADMIUM, TOTAL RECOVERABLE	0	0	0	16029	4/30/99	BEE FORK CREEK
NY	NEW ROCHELLE	NEW ROCHELLE SD	TETRACHLOROETHYLENE	0	21280	0	0	4/30/00	LONG ISLAND SOUND
OH	CLEVELAND	INTERNATIONAL STEEL GROUP, INC	LEAD, TOTAL RECOVERABLE	0	0	15558	0	10/31/99	CUYAHOGA RIVER
OK	PRYOR	PRYOR CREEK, CITY OF / MUNICIP	LEAD, TOTAL	0	0	25541	0	10/31/01	PRYOR CREEK, NEOSHO RIVER
PR	RIO GRANDE	PRASA WTP EL YUNQUE FILTR PLT	ARSENIC, TOTAL	0	0	0	12622	9/30/00	ESPIRITU SANTO RIVER

State	City	Permittee	Parameter	Qty Avg % Over	Qty Max % Over	Conc Avg % Over	Conc Max % Over	Report Period End Date	Receiving Waters
PR	TOA ALTA	PRASA WTP ENRIQUE ORTEGA	BERYLLIUM, TOTAL	0	0	0	34606	5/31/01	PINAS CREEK
PR	TOA ALTA	PRASA WTP ENRIQUE ORTEGA	BERYLLIUM, TOTAL	0	0	0	84606	6/30/01	PINAS CREEK
PR	VEGA BAJA	PFIZER PHARMACEUTICALS LIMITED	ARSENIC, TOTAL	0	0	0	13900	1/31/99	RIO CIBUCO AT VEGA BAJA, PR
PR	YAUCO	PRASA YAUCO STP	BERYLLIUM, TOTAL	0	0	0	38135	6/30/99	RIO YAUCO
TN	RIPLEY	RIPLEY STP	CADMIUM, TOTAL	0	0	73974	0	7/31/00	CANE CREEK
TN	THORN HILL	PASMINCO ZINC. INC.	CADMIUM, TOTAL	0	0	17100	58500	9/30/00	
TX	BAYTOWN	BAYER CORPORATION-BAYTOWN	NICKEL, TOTAL	0	0	14339	9014	7/31/01	
TX	EL CAMPO	EL CAMPO, CITY OF (THOMPSON)	LEAD, TOTAL	0	0	16567	31150	1/31/00	
TX	FREEPORT	DOW CHEMICAL CO-FREEPORT	CHLOROFORM	47966	0	0	0	12/31/01	BRAZOS RIVER
TX	GEORGETOWN	GEORGETOWN, CITY OF	HEPTACHLOR	9000	0	6835	14515	10/31/00	SAN GABRIEL RIVER, BRAZOS RIVER
TX	GEORGETOWN	GEORGETOWN, CITY OF	HEPTACHLOR	8985	0	7642	14515	4/30/01	SAN GABRIEL RIVER, BRAZOS RIVER
TX	LAKE DALLAS	UPPER TRINITY REGN WATER DIST.	LEAD, TOTAL	0	0	0	12943	3/31/00	LEWISVILLE LAKE
TX	POINT COMFORT	FORMOSA PLASTICS CORP TEXAS	CHLOROFORM	0	10131	0	0	3/31/01	
TX	RICHARDSON	NORTH TEXAS MUD (FLOYD BRANCH)	LEAD, TOTAL	0	0	11900	7563	4/30/00	FLOYD BRANCH, COTTONWOOD CREEK
TX	RICHARDSON	NORTH TEXAS MUD (FLOYD BRANCH)	LEAD, TOTAL	0	0	7900	11394	10/31/00	FLOYD BRANCH, COTTONWOOD CREEK
WV	INSTITUTE	QUALA SYSTEMS INC	CHLOROFORM	0	0	20953	10426	3/31/01	UT TO KANAWHA RIVER
WV	INSTITUTE	QUALA SYSTEMS INC	CHLOROFORM	0	0	49900	24900	6/30/01	UT TO KANAWHA RIVER
WV	MORGANTOWN	GE SPECIALTY CHEMICALS INC	ACRYLONITRILE	0	0	0	12612	4/30/99	MONONGAHELA RIVER
WV	MORGANTOWN	GE SPECIALTY CHEMICALS INC	ACRYLONITRILE	0	0	0	12612	4/30/00	MONONGAHELA RIVER
WV	MORGANTOWN	GE SPECIALTY CHEMICALS INC	ACRYLONITRILE	0	0	0	12612	4/30/01	MONONGAHELA RIVER

Refer to Appendix 3 for a complete list of facilities violating their permits by at least 1000% (ten-fold).

The ten states or territories that allowed the greatest number of egregious permit exceedances—at least 500%, or five times, over the effluent permit limits— between January 1, 1999 and December 31, 2001 for high hazard chemicals are Puerto Rico, Ohio, Pennsylvania, Texas, West Virginia, Indiana, Louisiana, Missouri, Maine and North Carolina.

Table 6. Number of Exceedances of Effluent Permit Limits for High Hazard Chemicals: 500% (Fivefold) or Greater

Rank	State	# of Violations
30	Alabama	12
48	Alaska	0
21	Arizona	31
45	Arkansas	1
24	Colorado	22
14	Connecticut	57
33	Delaware	5
45	District of Columbia	1
11	Florida	64
23	Georgia	25
12	Hawaii	58
48	Idaho	0
16	Illinois	53
6	Indiana	96
28	Iowa	14
41	Kansas	2
32	Kentucky	10
7	Louisiana	82
9	Maine	68
34	Maryland	4
17	Massachusetts	48
22	Michigan	30
30	Minnesota	12
14	Mississippi	57
8	Missouri	78
37	Montana	3
37	Nebraska	3

Rank	State	# of Violations
48	Nevada	0
18	New Hampshire	38
28	New Jersey	14
37	New Mexico	3
12	New York	58
10	North Carolina	67
48	North Dakota	0
2	Ohio	400
24	Oklahoma	22
41	Oregon	2
3	Pennsylvania	227
1	Puerto Rico	492
34	Rhode Island	4
26	South Carolina	21
37	South Dakota	3
19	Tennessee	35
4	Texas	171
41	Utah	2
45	Vermont	1
41	Virgin Islands	2
20	Virginia	33
26	Washington	21
5	West Virginia	104
34	Wisconsin	4
48	Wyoming	0
TOTAL		**2560**

Note: California was excluded from this analysis because the data were deemed unreliable.

The Bush Administration's Attack on the Clean Water Act

"I believe water is the biggest environmental issue we face in the 21st century in terms of both quantity and quality. In the 30 years since its passage, the Clean Water Act has dramatically increased the number of waterways that are once again safe for fishing and swimming. Despite this great progress in reducing water pollution, many of the Nation's waters still do not meet water quality goals. I challenge you to join President Bush and me to finish the business of restoring and protecting our nation's waters for present and future generations."—EPA Administrator Christine Todd Whitman[14]

As detailed in this report, thirty years after enactment of the Clean Water Act, polluters continue to violate the law—at times egregiously—by discharging pollutants into our nation's waterways that cause cancer and other serious non-cancer health effects. However, the letter and the spirit of the Clean Water Act have made measurable progress in the last three decades, although much remains to be done. At a time when the Bush administration should be working with the states to make all of our waterways fishable and swimmable, the Bush administration has suggested, proposed, or enacted numerous policies that would weaken the Clean Water Act and threaten the future of America's rivers, lakes, streams and oceans.

Taking Environmental Cops Off the Beat

Budget cutbacks threaten EPA's ability to effectively police the nation's polluters. As announced in April 2001, the Bush administration's proposed 2002 budget for EPA would have resulted in a 9% reduction in EPA's enforcement staff in Washington, DC and regional offices. The administration made these cuts despite admonition from Congress's investigative arm that "EPA currently cannot tailor such staff reductions in a manner to minimize potential adverse impacts on its enforcement program."[15] The move was eventually thwarted by Congress, which restored funds for enforcement activities. In report language on the final VA-HUD Appropriations bill, Congress explicitly and clearly stated that the White House should not attempt to cut the enforcement budget the following year. However, the White House has proposed cutting more than 200 EPA jobs in fiscal year 2003, which would result in fewer environmental cops on the beat, fewer inspections of facilities, and fewer resources for prosecuting environmental crimes.

Leaving Dirty Waters Dirty

Section 303(d) of the Clean Water Act requires states to identify waterways that remain impaired by pollution despite technology controls installed on sewage plants and factories. This program of the Clean Water Act—called the total maximum daily load, or TMDL, program—requires that states identify rivers, lakes

and coastal waters that remain polluted, rank them for priority attention, and then develop pollution limits for each body of water. If the state fails to do this, EPA is required to develop a priority waterway list for the state and issue its own pollution limit determination. States and EPA enforce the TMDL program by revising existing permits, including the pollutant limits and schedule for compliance.[16]

The Clean Water Act's TMDL program was ignored by states and EPA for years. However, after dozens of citizen lawsuits, EPA and the states finally took important steps to implement this cornerstone Clean Water Act program. In July 2000, EPA proposed a new rule, with a fiscal year 2002 effective date, to strengthen the program and place greater emphasis on reducing runoff of agricultural waste, fertilizer and sediment than before. The rule would require states to develop plans and start cleanup and water quality restoration programs within 10 to 15 years. The program would cover about 21,000 bodies of water—from lakes and ponds to segments of streams and major rivers—that EPA and the states have identified as too polluted for fishing and swimming because of stormwater runoff, agricultural runoff and point source pollution.[17]

This proposal drew much criticism from industries, farmers, cities, and others who were likely to face new pollution controls. Not surprisingly, Congress got involved, holding 13 oversight hearings and proposing various legislative "fixes" to delay or weaken the new rule. In the face of mounting opposition from industry officials, Congress placed the regulation on hold in July of 2000, prohibiting EPA from implementing the new rule before October 2001—which the Bush administration later extended to July 2003.

In July 2001, EPA and the Bush administration announced another extensive "redesign" of the Clean Water Act's TMDL program. EPA and the Justice Department asked the District of Columbia Circuit Court to postpone action on all legal challenges for 18 months, while the administration reviews the rule and attempts to make it more "workable" and acceptable to critics.

Recent reports indicate that EPA may use this review as an opportunity to gut the entire TMDL program by proposing changes that would permit increased pollution and further delay cleanups of polluted waterways by removing the controls, deadlines, and mandates that would ensure our polluted waters are cleaned up. Informal proposals include:[18]

• Relaxing EPA's mandatory responsibility to identify priority waterways and establish pollution limits where states fail to do so in a timely way.

"I encourage Americans to join me in renewing our commitment to protecting the environment and leaving our children and grandchildren with a legacy of clean water, clean air, and natural beauty."—President George. W. Bush, speaking on Earth Day 2001

• Eliminating fixed, enforceable schedules for states to set pollution limits for impaired waters.

• Encouraging states to de-list impaired waters by allowing states to report the quality of their waters less frequently than is required by the Clean Water Act or current regulations; creating alternative listing categories not authorized by the Act for impaired waters; and allowing states to list waters as "likely to achieve" water quality standards and therefore avoid setting pollution limits.

• Allowing states to rely upon predictions of future pollution reductions from non-point sources to compensate for increases in pollution from point sources.

Limiting the Scope of the Clean Water Act

In January 2001, a Supreme Court ruling held that the Army Corps of Engineers had exceeded its authority by blocking construction of a landfill that would have destroyed 17 acres of seasonal ponds. The Court determined that the seasonal ponds were "isolated, non-navigable, intrastate" waters not protected under the Clean Water Act as "waters of the United States." The Supreme Court ruling did not include a definition of "isolated, non-navigable, intrastate" waters or delineate explicitly between these waters and "waters of the United States" protected by the Clean Water Act. This leaves EPA and the Bush administration with the authority to determine which waters and wetlands fit the definition of "isolated, non-navigable, and intrastate" and therefore fall outside of the purview of the Clean Water Act.

"Congress passed the Clean Water Act with broad bipartisan support to protect our nation's wetlands, streams and waterways. Wetlands serve a vital function in our environment. This administration will continue to take responsible steps to ensure that we can preserve these vital natural resources for future generations of Americans."—White House Press Secretary Ari Fleischer, April 2001

The Bush administration's interpretation of this Supreme Court decision could be one of the most important environmental decisions made about water quality since the passage of the Clean Water Act thirty years ago. A loose interpretation of "isolated, non-navigable, intrastate" waters would remove many smaller—yet critical—waterways and wetlands from under the protective umbrella of the Clean Water Act, leaving these areas vulnerable to development, sedimentation and toxic pollution. A strict and scientific interpretation of "isolated" wetlands and waters would limit the application of the Court's ruling to a rather small percentage of America's waters. Waters that appear isolated may in fact be linked hydrologically via subsurface connections or biologically, as many species migrate seasonally between different wetlands and watersheds.

Draining and Filling America's Precious Wetlands

For more than a decade, the cornerstone of America's approach to wetlands protection has been a policy of "no net loss," which helped to slow the rate of wetlands destruction during the 1990s. In June 2001, with no public notice or opportunity for comment and despite a Bush administration announcement in April 2001 pledging to protect America's wetlands, the Army Corps of Engineers proposed a set of changes to this "no net loss" policy that would weaken the permitting process for wetlands destruction. This rule was finalized in January 2002.

At issue is the Clean Water Act's program for nationwide general permits. While the Clean Water Act allows the Corps to issue nationwide general permits for activities that discharge fill or dredged material into wetlands and streams, those permits may only be issued if the activities will have no more than "minimal adverse environmental effects," both individually and cumulatively. Activities performed under a nationwide permit do not require public notice or comment, and they undergo a much less

stringent review – if any – by the Corps than individual permits.

Specifically, the changes included in the Corps' weakened nationwide permits include:

• Allowing the Corps to waive the 300-foot limit on stream destruction for certain streams, meaning a developer could dig or fill a mile (or more) of a stream under a general permit that is only supposed to allow "minimal adverse effects."

• Loosening restrictions on filling wetlands in floodplains

• Bypassing the minimum requirement that there be at least one acre of wetlands protected or created for every acre destroyed (1:1 acreage mitigation)

• Eliminating the subdivision cap on water impacts for commercial and institutional developments, thus allowing developers of malls, industrial park and other uses to fill up to ½ acre of wetlands or other waters on each lot of any non-residential subdivision. This will result in a far greater loss of wetlands and streams than allowed under the current subdivision provision.

The new nationwide permit rule followed closely on the heels of an announcement by the Corps in late 2001 that eliminated the 1:1 acreage requirement for wetlands mitigation and weakened the standards developers must follow to compensate for wetlands destruction.

Turning Waterways into Waste Dumps for the Coal Industry

Mountaintop removal coal mining is prevalent in West Virginia, Kentucky, and Virginia and parts of Pennsylvania and Tennessee. "Mountaintop removal" all too literally describes this devastating practice, in which mining companies blow off hundreds of feet from the tops of mountains to reach the coal beneath, creating millions of tons of waste that is then dumped into nearby valleys and streams. According to a draft Environmental Impact Statement obtained by the *Charleston Gazette* through a Freedom of Information Act request, mountaintop removal mining could eventually destroy much of the Appalachian environment. The study found that without more stringent regulation, future mountaintop removal coal mining could obliterate 230,000 acres of ecologically diverse hills and hollows in West Virginia, western Virginia, eastern Kentucky and Tennessee. Already, between 1985 and 1999, at least 562 miles of Appalachian streams were buried under mining waste from mountaintop removal.[19]

Citizen lawsuits have challenged the legality of mountaintop removal under the Clean Water Act. However, the Bush administration moved to legalize this practice by finalizing a rule in May 2002 to remove a 25-year old regulation prohibiting waste dumping in waterways. The Bush administration changed a rule that defines the scope of the Army Corps of Engineers' ability to issue permits under the part of the Clean Water Act that regulates filling wetlands, streams and all other waters. (This is separate from the NPDES program detailed in this report). Remarkably, the Army Corps of Engineers has been permitting coal companies to dispose of mountaintop removal waste into streams for years, even though the agency has had no legal authority to do so. The Corps can issue permits to allow companies to fill streams, wetlands and other waters for development purposes but forbids the Corps from allowing the use of waste material to fill waterways. The Bush administration

deleted the language excluding waste as fill in order to let mining companies dump their wastes into streams—legally.

In a temporary victory for the environment, a federal judge in May 2002 ordered the U.S. Army Corps of Engineers to stop allowing coal companies to deposit millions of tons of waste from their mountaintop-removal mining operations into streams and valleys. U.S. District Judge Charles Haden II in Charleston, W.Va., said that the Bush administration's proposal to make the "valley fills" legal violated the Clean Water Act. He wrote in his decision, "The agencies' attempt to legalize their long-standing illegal regulatory practice must fail. ... The regulators' practice is illegal because it is contrary to the spirit and the letter of the Clean Water Act."[20]

Polluting Beaches and Threatening Public Health

Sanitary sewers carry wastes from buildings to sewage treatment plants. When these sewers are overloaded, inadequately maintained or obstructed, they often overflow, dumping raw and inadequately treated sewage into basements, streets, and waterways. EPA estimates that there are at least 40,000 sanitary sewer overflows nationally each year. Because sewer overflows contain raw sewage, they can carry bacteria, viruses, protozoa (parasitic organisms), helminths (intestinal worms), and borroughs (inhaled molds and fungi) and a host of other organisms that cause beach closings and kill fish. People coming into contact with these organisms, most often through drinking water, swimming in contaminated waters, or direct contact in basements and streets, may become seriously ill. Sewage-contaminated waters can cause illness ranging in severity from mild gastroenteritis (causing stomach cramps and diarrhea) to life-threatening ailments such as cholera, dysentery, infectious hepatitis, and severe gastroenteritis. [21]

In January 2001, EPA proposed to clarify and expand permit requirements for 19,000 municipal sanitary sewer collection systems in order to reduce sewer overflows. The proposed Sanitary Sewer Overflow Rule, the product of federal advisory committee that met for five years, would help communities improve some sanitary sewer systems by requiring facilities to develop and implement new capacity, management, operations, maintenance and public notification programs. [22] This rule would, among other things, require sewer operators to monitor sewers and notify health authorities and the public when overflows could potentially harm public health.

Within the next few months, EPA will decide whether to go forward with these proposed regulations or bow to the requests of special interests such as the Association of Metropolitan Sewerage Authorities (AMSA). AMSA argues that the Clean Water Act's requirement that all sewage be treated before it is discharged is too costly and difficult and favors a weakened rule.

RECOMMENDATIONS

Thirty years after passage of the Clean Water Act, with its most basic promises still unfulfilled, it is clear that we need to tighten enforcement of the law and strengthen the Act's fundamental principles. Unless illegal pollution is stopped, polluters punished, and legal pollution phased out by technological improvements, we will never realize the Clean Water Act's vision of waters free of toxic pollutants and safe enough for fishing and swimming.

The Bush Administration Should Strengthen, Not Weaken, the Clean Water Act

As detailed above, the Bush administration has suggested, formally proposed or enacted policies designed to limit the Clean Water Act in scope and in strength. Thirty years after the birth of this landmark legislation, more than 300,000 miles of river and shoreline and five million acres of lakes remain too contaminated for recreational use. Rather than weakening the Clean Water Act, the Bush administration should:

◈ Fully fund EPA at the levels necessary to hire adequate environmental enforcement staff.

◈ Direct EPA to adopt a strict interpretation of "isolated" waterways and wetlands based on hydrology and biology rather than politics.

◈ Direct EPA to abandon efforts to weaken the TMDL program, the Clean Water Act's primary program for cleaning up polluted waters.

◈ Declare "valley fills" and dumping of waste from mountaintop removal coal mining and other industrial operations into waterways to be illegal and contrary to the spirit and letter of the Clean Water Act.

◈ Direct EPA to implement the proposed rule to regulate sanitary sewer overflows and improve public notification of overflows that threaten human health.

◈ Direct the Army Corps of Engineers to abandon efforts to weaken wetlands protection in its permitting process.

Policy-Makers Should Tighten Enforcement of the Clean Water Act

As documented in *Permit to Pollute*, nearly 30% of major facilities examined were in Significant Non-Compliance with their Clean Water Act permits for at least one quarter during the 15 months beginning January 1, 2000 and ending March 31, 2001.[23] The Bush administration and Congress should act to strengthen lax enforcement of the Clean Water Act and enact new "teeth" to help reach the goal of fishable and swimmable waters.

◈ Prevent Facilities from Profiting from Pollution

The existing Clean Water Act allows "economic benefits" to be taken into consideration when assessing penalties. Unfortunately, this authority is greatly underutilized; EPA has acknowledged that penalties rarely recover the profits companies gain from their non-compliance. In other words, under current Clean Water Act enforcement practices, it often pays to pollute illegally, which creates incentives to break the law, allows states and violators to cut sweetheart deals, and places those who comply with the law at a competitive disadvantage. Courts and administrative hearing officers must assess a penalty that exceeds the amount of economic benefit gained by the polluter as the result of its non-compliance. In addition, any state with an authorized Clean Water Act program should collect and make public all fines levied and collected against polluters.

◈ Tighten Pollution Limits

Although the Act was premised upon a goal of zero discharge, its implementation has not come close to that goal. EPA has sanctioned a permit-to-pollute system rather than a pollution elimination system. With the Clean Water Act, Congress intended to eliminate water pollution through a gradual tightening of permits based on emerging control technologies. Progressive permit tightening, coupled with enforcement actions against permit violators, would eventually reduce industrial and municipal pollution levels to achieve the interim Clean Water Act goal of fishable and swimmable waterways and ultimately zero discharge.

Progressive permit tightening, however, has not occurred. In fact, one out of every four facilities is operating with expired permits.[24] In seven states and the District of Columbia, more than half of all water pollution permits for major polluters are expired.[25] By failing to regularly reevaluate permit limits and lower allowable pollution levels based on advances in technology, the government is missing a fundamental opportunity to reduce and eliminate pollution.

◈ Revoke Permits from Repeat Violators

Under the principles of the Clean Water Act, EPA and state agencies are not issuing facilities permits to pollute indefinitely, but are granting them a temporary right to discharge pollution into waterways while they reduce and eventually eliminate their waste stream. This temporary right must not be taken for granted. EPA and state agencies should deny permit issuance or renewal to applicants whose compliance history shows a repeated pattern of significant noncompliance with the Clean Water Act.

◈ Implement Pollution Prevention Initiatives

Pollution prevention means reducing the use of chemical inputs in order to generate less toxic waste, rather than relying on end-of-pipe pollution control technologies to stop waste chemicals from entering water discharges. Pollution prevention tends to be more effective in cutting use and often saves facilities money otherwise spent handling hazardous materials.

Each applicant for a permit to discharge of one or more pollutants should be required to submit, with the application for the permit, a pollution prevention plan that details the applicant's plans for reducing

and eliminating the use and discharge of such pollutants at a measurable rate.

Specifically, the pollution prevention plans should:

• Set a specific pollution prevention goal and timeline that fits within the overall context of moving toward zero discharge.

• Identify specific steps (material substitutions, technology changes, process changes) the facility can take to reduce its uses (inputs) of toxic chemicals, so that there is less pollution to control at the end of the pipe.

◈ Remove Current Obstacles to Citizen Suits

Citizens should be allowed to sue for past violations of the Clean Water Act, similar to the 1990 amendments to the Clean Air Act. Furthermore, citizen suits should not be precluded by inadequate government enforcement actions. Only judicial or enforcement actions that recoup the full economic benefit gained by violating the law should be allowed to preclude subsequent citizen enforcement.

◈ Citizens Should Be Able to Bring Penalty Actions Against Polluting Federal Facilities

Currently, the federal government enjoys sovereign immunity from penalty actions in the event of a Clean Water Act violation. Federal facilities that pollute illegally should be subject to the same enforcement mechanism as other facilities.

Expand the Public's Right to Know

Policy-makers should increase and facilitate public access to compliance data and discharge reporting. Access to accurate and consistent reporting is fundamental to the success of the Clean Water Act's permitting and enforcement programs. Without it, protection of our waterways is impossible.

◈ All "major" facilities discharging to ground waters, surface waters, or treatments works facilities should be required to submit discharge monitoring reports (DMRs) on a monthly basis; other permit holders should submit DMRs on at least a quarterly basis, and states should be required to input this data into the EPA Permit Compliance System.

◈ All Significant Industrial Users of Publicly Owned Treatment Works (POTWs) should be required to file DMRs monthly with the treatment works, states, and EPA regional offices, and states should be required to input this data into the EPA Permit Compliance System;

◈ EPA and the states should compile and make public an analysis of enforcement actions taken by EPA or the states during the preceding year, including the number of enforcement actions; the type of enforcement action; the average penalty assessed and collected for each action; the number of facilities in noncompliance and the reason for such noncompliance; the number and percentage of facilities with expired permits; the number and percent of waters that are impaired, and the acres of wetlands authorized to be filled, restored, or created.

◈ EPA should make compliance data on its computerized Permit Compliance System

database easily available to the public, including online Internet access which should be searchable by facility and location in a national database format.

◈ EPA should integrate environmental reporting and access to environmental data across different programs so that citizens can more easily determine various environmental conditions relevant to their geographic area or to a particular facility.

◈ California's facilities should comply with the same reporting requirements as all other states and input all DMR data into the Permit Compliance System. It is unacceptable that EPA cannot provide accurate Clean Water Act compliance information about the state with the sixth largest economy in the world.

◈ EPA should expand the public's right to know to include information on chemical *use*. While the Toxics Release Inventory discloses facilities' direct discharges of chemical pollution every year, there is no public information about chemicals used in workplaces and placed in products. This information not only represents a major exposure pathway for humans, but also is critical for preventing pollution. In order to move towards the Clean Water Act's goal of zero-discharge, industrial facilities need to practice pollution prevention –reducing the use of chemicals at the source – rather than relying on pollution control technologies to limit releases once waste has been generated. Requiring companies to disclose their chemical use gives them an incentive to reduce use. In Massachusetts, where chemical-use reporting is required, in combination with pollution prevention planning, companies have cut the use of toxic chemicals by 40%, reduced waste generated by 58% and decreased environmental releases by 90%.

Create a Federal Safety Net for Toxic Chemicals

Several of the chemicals identified as released by facilities in this report are banned in the U.S. Facilities continue to discharge banned chemicals such as PCBs and DDT, for example, because of their persistence in the environment once released. In addition, many of the most egregious violations in this report are for chemicals where clear health hazards exist, but for which use in production is not restricted.

The fundamental problem that allows this situation to develop is a major gap in federal chemicals policy. When a pesticide manufacturer or pharmaceutical manufacturer wants to manufacture a new product, they have to apply to the government for permission and conduct health tests to show that the product is not dangerous (or that its benefits outweigh the risks if there are risks). But for industrial chemicals, there is no such program. Instead, manufacturers merely give the government notice of the chemicals they are producing and the chemicals are assumed safe until proven otherwise.

The result is that basic health effects information is missing for approximately 85% of the 80,000 chemicals on the market today. Approximately 1,400 chemicals have been linked to specific health effects, but EPA lacks authority to limit or phase out their use. Federal policy-makers should overhaul federal toxics policy so that chemicals with clear evidence of health hazards or with incomplete health effects data are phased out.

METHODOLOGY

1. Obtaining the data. To obtain the data, U.S. PIRG submitted a Freedom of Information Act (FOIA) request in November 2001, to which we received a response in March 2002. We then were informed that EPA was giving the states an opportunity to review the data and offer changes and updates. We requested an updated version of the data, which we received in August 2002.

2. Ensuring accuracy of the data. In conjunction with the agency's planned release of the data on the Internet, EPA asked state agencies to verify the accuracy of the data contained in the Permit Compliance System by May 15th, 2002. EPA has offered the states several extensions as issues and questions have developed. EPA made the data available to the states through an online searchable interface (Online Targeting Information System) and provided step-by-step instructions for how to use the system to identify potential data errors. Throughout this process, EPA sent several letters to state commissioners advising them to verify and clean up the data.[26]

3. Scope and source of the data. The data provided through the FOIA request contains summary data about active major facilities in the Clean Water Act's National Pollutant Discharge Elimination System. All information was generated from the Permit Compliance System (PCS) and Integrated Data for Enforcement Analysis (IDEA) system. The data covers the time period spanning January 1, 1999 through December 31, 2001. EPA provided us with a database of approximately 87,000 records; each record represents a facility reporting a permit exceedance for a specific parameter. *The data do not include paperwork violations, such as late filing of Discharge Monitoring Reports.*

4. Data limitations. In the letter included with its response to our FOIA request, EPA noted that in certain instances, PCS parameter-level effluent violations will show the value 99999% over limit. This value is a code indicating that PCS was not able to properly interpret the measurement that was submitted by the permittee. Therefore, 99999% values are not necessarily violations; as such, we excluded 99999% values from our analysis.

We also eliminated all values of 99,900%, which EPA determined to be errors due to reporting of values such as "<.1 mg/L". In addition, we eliminated all records for which states reported discharges using a character such as "<", as we were unable to verify whether the PCS database correctly calculated the percentage over the effluent permit limit. We changed each of these values to ")", to reflect no violation.

In addition, the data covers major facilities only. Facilities are designated as "major" based on an EPA scoring system that considers a combination of factors, including toxic pollutant potential, streamflow volume, public health impacts, and proximity to coastal waters. For example, a major municipal facility is a publicly owned treatment works that serves a population of 10,000 or more, discharges

one million gallons or more of wastewater daily, or has a significant impact on water quality. Because we only looked at major facilities, this report examines only a small subset of the total number of facilities discharging pollutants into U.S. waters.

5. California data. EPA expressed concern that the California data were not accurate or trustworthy. The Permit Compliance System maintains current permit limits for only a small percentage of California's facilities, so some of the information may not be accurate. As such, we chose to exclude California from the report's analysis.

6. Definition of "violation." We count any exceedance (greater than 0% above the permit level) for any given parameter during any given reporting period as a violation. If a facility exceeded its permit level for a parameter for quantity average, quantity maximum, concentration average and concentration maximum during the same reporting period, we count this as four exceedances but as one facility in violation. Again, we did not include paperwork violations in this analysis.

7. Origin of "percent over" calculation for permit violations. The data we obtained through EPA did not contain the actual permit levels for each parameter for a given facility. Instead, EPA provided us with the reported discharge and the calculated percentage by which that discharge exceeded permitted levels. As such, we did not include in our analysis any records with a null or zero value for this calculated percentage.

8. Calculating the average permit violation by state. To calculate the average violation, we first averaged the violations by category (quantity average percent over, quantity maximum percent over, concentration average percent over, concentration maximum percent over), excluding non-violations (0) and fields displaying EPA's 99999% code. We then averaged each of these four averages together to obtain the state total average.

9. Categorization of hazardous chemicals. The bulk of the analysis in this report is limited to chemicals identified as having serious health effects. To determine the health effects of each parameter, we used Environmental Defense's Scorecard at http://www.scorecard.org/chemical-profiles/. The website details the potential health effects of each parameter and the scientific sources behind each categorization. For parameters not found on the Scorecard website, we consulted EPA's Integrated Risk Information System at http://www.epa.gov/iris/subst/. We then categorized each parameter within one or more of the following groups: suspected carcinogen, recognized carcinogen, recognized reproductive toxicant, recognized developmental toxicant, suspected cardiovascular/blood toxicant, suspected developmental toxicant, suspected endocrine toxicant, suspected gastrointestinal/liver toxicant, suspected immunotoxicant, suspected kidney toxicant, suspected musculoskeletal toxicant, suspected neurotoxicant, suspected reproductive toxicant, suspected respiratory toxicant, and suspected skin or sense organ toxicant.

NOTES

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