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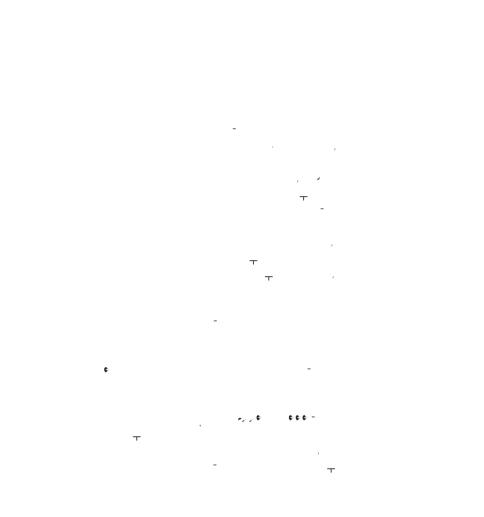




Table 1.5 P2 Implementation Barriers

S.a.e Agencie	MT.	*NE	NV	NH	NJ	NM	NY	NC	ND	OH	OR	PA*	PA⁺	SC	SD	ΤN	ΤX*	TX**	UT	VT	VA	WI^*	WI [*]	* WY	Total	%
Lack of capilal	x	x	x	x	х			x	x	х		x	x	x			х	x	х	x	x	x		х	36	69
S, aff change	x		x		x				x			x		x			х			х	x		х		21	40
Lack of managemen. commi.men.			x		х								x	x							x		х		18	35

Mon.ana**= Peak .o Prairie P2 Informa.ion Penn _1 ania*= PA DEP Penn _1 ania**= PENNTAP Te/a *= Lo, er Colorado Ri er A .hori._

Ter'a **= TNRCC Wi con in*= Wi con in DNR Wi con in**= Solid and Ha, Wa .e Ed ca.ion Cen.er, UW Er'en ion τ^{*}΄ • τ^{*} -

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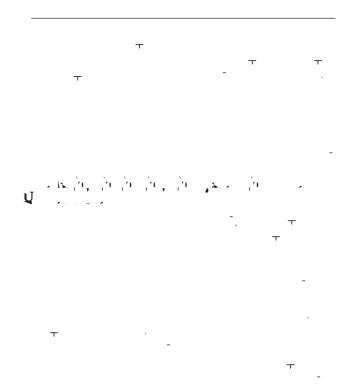
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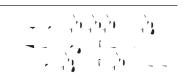
Enac.men. of major en ironmen.al .a. .e , incl ding NEPA, .he Clean Wa.er Ac., .he Clean Air Ac., and .he Re o rce Con er a.ion and Reco ar. Ac. (RCRA).ha. are ingle media in cope and foc on end-of-pipe poll .ion con.rol. [RCRA, a m Li-media for Trea.men., S.orage or Di po al Facili.ie (TSDF') b. no. for genera.or .]

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U.S. En ironmen.al Pro.ec.ion Agenc. (EPA) i crea.ed nder.he Nir/on Admini .ra.ion and appro ed.hro gh Congre ional ac.ion.

1975

The compan_ 3M e Labli he i. Poll Lion Pre ention Pa_ Program (3P). Thi program, a no el, ince the concept of appl_ting poll Lion pre ention compan_ τ ide and doc menting re L had not been tried before.



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Table 1.2 General Program Information continued

Local go ernmen, and other	AL	CA	CO	FL	IL	IL***	KY	OK	OH	DC	Total	%	Ave	S.a.e and non- .a.e aggrega.e	Total	%	Ave
Program location																	
Reg la.or			х	х			х				3	30					
Non-reg la.or	Х	х			х		х		х		5	50					
Uni ęr i						х					1	10					
Economic de elopmen.	х					х					2	20					
Local go ernmen.		х	х					х	х		4	40					
Small b ine de glopmen, cen er						х	х				2	20					
Non-pro - ,	х					х				х	3	30					
Program type																	
Small b ine en 🙀 i Jance	х		х			х	х				4	40			33	55	
P2,ech a i,ance	х			х	x	х	х	х			6	60			51	82	
Reg la.or																	

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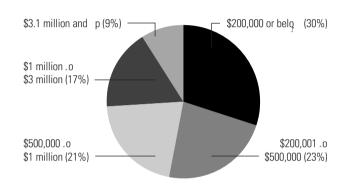
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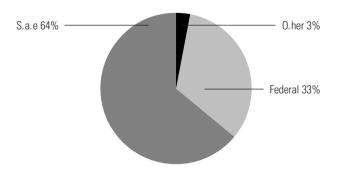
State Agency Budget Breakdown

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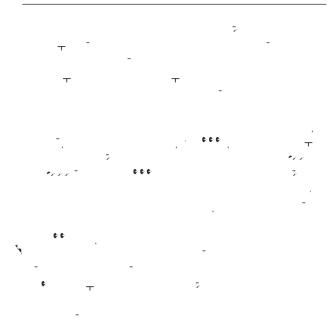
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Table 1.3 Data Gathering Statistics

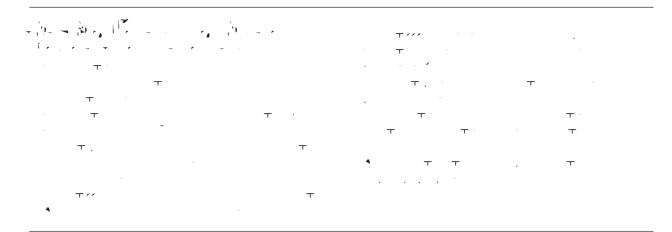


Table 1.3 Data Gathering Statistics

Local Agencie and o.h nona.e agencie		CA	CO	FL	1L**	IL***	KY	OK	OH	DC	Total	%	S.a.e and nona.e aggrega.e	Total	%
Thi program collec, da,a	x	x			х	х	x		х		6	60		51	84
Doc men.ed co . a ing	x				x	x	x				4	40		24	39
Srę	x				х						2	20		30	49
Ca e , die	x		x	x	x				x		5	50		37	61
0.her														5	8

The abo e are mea re ed.o collec. da.a. Illinoi **= Grea. Lake Regional P2 Ro nd.able Illinoi ***= NORBIC En ironmen.al A i .ance Cen.er

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Table 1.4

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	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Waler	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1990	NA	NA	NA	4,900,000	NA	NA	700,338	NA
1991	NA	NA	57,212,749	1,500,000	NA	NA	498,450	NA
1992	NA	NA	56,819,001	1,800,000	NA	228,000	2,148,622	108,700
1993	73,000	6,086,000	70,504,845	4,300,000	9,950,700	3,503,107	6,553,680	112,300
1994	13,465,495	13,128,035	170,028,741	2,000,000	150,700	30,600,000	6,850,173	858,191
1995	858,043	7,166,726	107,966,076	50,000	332,500	117,004,500	2,626,176	1,411,250
1996	3.7E10	229,019,655	3.0384E10	3,000,000	14,368,300	382,857,318	128,913,123	901,400
1997	1.1E10	1,259,966,957	2.405E10	200,838,662	7,446,500	1,244,234,855	97,193,109	2,429,011
1998	1.67E10	1.266E10	1.428E10	329,526,411	84,510,560	366,466,200	256,976,968	112,376,335
1999	25,595,600	5,417,635,672	893,995,152	157,000,251	72,770,924	893,647,984	50,949,572	8,997,300
2000	122,011,189	488,483,448	4,521,112,448	87,385,857	25,787,663	1,078,826,263	112,913,997	17,088,953
Total	6.486E10	2.008E10	8.043E10	1,228,138,181	215,317,847	4,117,368,227	666,324,208	144,283,440

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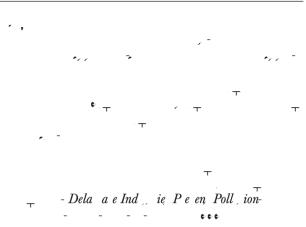
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1989 The -r , TRI da.a

The r . TRI da.a relea e er e a a major impe. for the creation of P2 program at the Federal le el, and for b ine e to reer amine their emition and, a te tream to pre ent pollition.

1989

The Ma ach e.. Legi la re nanimo L enac. The Torfic U e Red c.ion Ac. (TURA), nder, hich ind r_c diclo e i. e of orfic chemical and de elop plan, thich empha i e the red c.ion of orfic chemical e a a mean of poll tion pre ention. Se eral other take enact poll tion pre ention, a te minimitation planning la .

Ma ach e., al o la nche line Black lone projectione different method of coordinaling in pection enforcement and lechnical a i lance for all en ironmental media (air, , aler, alle). The late reorganite it elf lo revective le on learned nder line project.

Thi ame_ear, the Oregon S.a.e Legi Ia. re nanimo I_ pa e the Torfic U e Red ction and Ha ardo. Watte Red ction Act of 1989, thich, a tigned b_ the Go error on J I_ 24, the ame da_ the Matter ettic legi Ia.ion, a tigned into Ia.

1989-1993

N mero __a.e_pa poll_ion pre en ion planning la incl ding California, Tera , Minne o.a, Ohio, Ari ona, among o.her . Na.ion ide 23 _a.e_pa __ome__pe of la d ring_hi _ime period req iring facili.ie _o prod ce P2 planning repor. . The la __ar__a.e b__a.e. Some are no longer enforced, b__man_are__ill in effec__oda_.

1989-1998

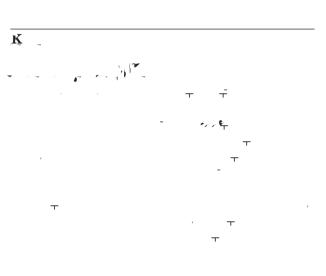
Thro gh ppor, from EPA and he late, e eral regional P2 grop begin to form, incl ding NEWMOA' Northeat P2 Ro ndtable (1989) and The Great Lake Regional Pollition Pregntion Ro ndtable (GLRPPR), in 1994. In addition a fegnon-go errimental organitation transfer proportione the metage of P2 incl ding the American In titue of Pollition Pregntion (AIPP). AIPP foct edion being a form for representative from Trade a lociation and a finded through EPA. L, ent definct in 1998.

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on Poll, ion P e en ion in Indiana-



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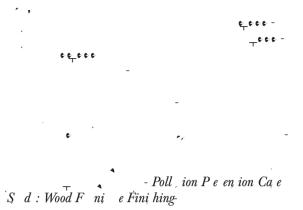
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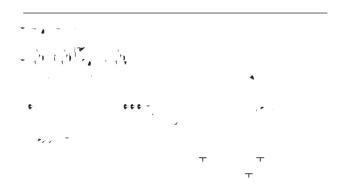
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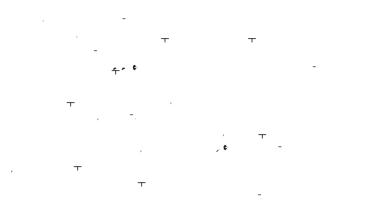
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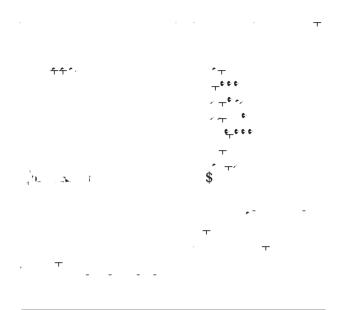
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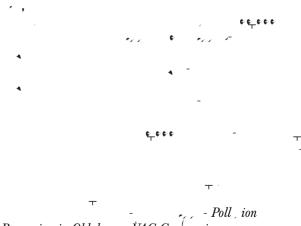
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P e en ion in Oklahoma: VAC Co po a ion-

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1997/98

A n mber of addi.ional ini.ia.i e and projec. pring p d ring.hi .ime period.ha. help promo.e P2 a arene , i.hin.he con.e/. of .ainabili., and prod c. .e, ardhip. One of .he e i .he la nching of .he Poll .ion Pre en.ion Re o rce E/Change (P2RX), a na.ional ne, ork of regional P2 cen.er , f nded.hro gh EPA, .o help di emina.e.echnical informa.ion on a, ide range of P2.opic .O.her landmark e en. incl de.he pa age of Oregon' Green Permi. Program legi la.ion. Thi program enco rage adop.ion of EMS incorpora.ing poll .ion pre en.ion. Wi con in al o e.abli he i. En ironmen.al Coopera.ion Pilo. Program aro nd .he ame.ime.

1998

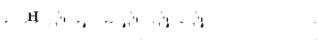
NPPR e labli he an ann al MVP2 (Mol. Vali able Poll Jion Pre en ion A, ard) program a part of the National P2 Week celebration. The elent, hich recognite effemplar, P2 effort, take place in Walhington D.C. eler September.

1998-2001

The U.S. National Poll Jion Prelention Rolind able begin the proce of reliting the Poll Jion Prelention Act of 1990. The relit of the effort is the releate of a comprehent is propolated the render of the Act.' prolition based on the decade of practical effortience ince the Act.' paage. Selectal editional brief ng to congrelitional mem-

ber and .aff.ake place.o promo.e.he propo al, b nke pl.er and 2.4 TDff.ake p5.h . i he brire iogerk e a g]TJpal e ince(En ironmen. eo .o help)]Tel Coopera.iong]TJ





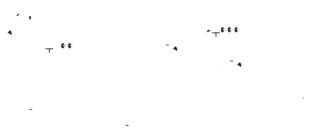








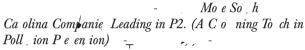
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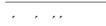
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2000-2002

2000

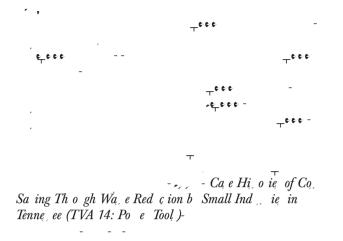
EPA la nche a ne ol n.ar ini.ia.i e, the National Performance Track and S.e, and hip program. Thi program pick p, here Projec. Er cellence and Leader hip (XL) and the Common Sen e Ini.ia.i e (CSI) CSI lef. off. P2 i not a core element of the program, b t it i an object e.

2000

U.S. Sena.or Frank La Lenb rg (NJ) in rod ce Lhe S.reamlined Reporting and Poll Lion Pregention Act, hich, o Id con olidate reporting reponibilitie for ind Lr, and Late II allo contain pro ition Lo en re that poll Lion pregention technical a it Lance i provided to companie reporting. The U.S. NPPR join an mber of prigate and p blic lector organitation in popting the legi lation.

2002

Poll Jion Pre en ion con in e to plat a critical role in meeting the en ironmental challenge of the 21 J cent r. De pite inten i e pre re on p blic and pri e ector P2 b dget, P2 i a ket element of cce f I program for inno ation and the tainability global L. NPPR end an of cial repre entation of both World S mmit on S trainable De elopment, held in Johanne b rg, So the Africa in Fall 2002.



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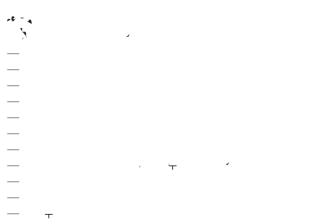
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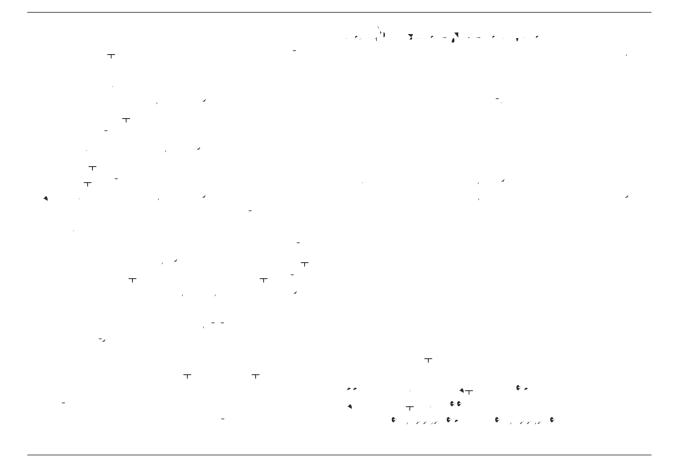
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Section 2: Quantitative Results

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	Pollution Preve	Pollution Prevented (pounds)			Water Conservation	Total Cost Savings	Impact on Economy	Impact on Environmental
	Air	Wa.er	Wa .e	Conservation (ni.)	(gallon)	(\$)	(\$)	(m Limedia re L)
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								

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Illinois, NORBIC Environmental Assistance Center

Pollution Prev	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economv
Air	Wa.er	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)

Indiana Clean Manufacturing Tech and Safe Materials Institute

Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
Air	Waler	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
108,000							807,691
758,000							1,157,850
440,000							178,000
886,000							968,011
1,652,000							533,535
1,048,000							1,126,300
2,852,000							1,427,353
	Air 108,000 758,000 440,000 886,000 1,652,000 1,048,000	108,000 758,000 440,000 886,000 1,652,000 1,048,000	Air Wa.er Wa.e 108,000	Air Wa.er Wa.e Combined* 108,000	Air Wa er Wa e Combined* Conservation (kWh) 108,000	AirWa.erWa.eConservation (kWh)Conservation (gallon)108,000Image: Servation (kWh)Image: Servation (gallon)Image: Servation (gallon)108,000Image: Servation (servation)Image: Servation (servation)Image: Servation (gallon)108,000Image: Servation (servation)Image: Servation (servation)Image: Servation (servation)Image: Servation (servation)108,000Image: Servation (servation)Image: Servation (servation)Image: Servation (AirWa.erWa.eCombined*Conservation (kWh)Conservation (gallon)Savings (\$)108,000II <t< td=""></t<>

Iowa Department of Natural Resources, Pollution Prevention Services

	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Waler	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1999			1,994,000		744,127	4,600,000	124,000	
2000			16,320,000			2,100,000	634,000	

Kentucky Pollution Prevention Center

	Pollution	Prevented (pounds	;)		Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Wa.er	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1990							681,338	
1991							415,450	
1992							216,034	
1993							166,180	
1994							216,034	
1995							764,428	
1996							747,810	
1997							747,810	
1998							847,518	
1999								

Kentucky, Jefferson County Air Pollution Control District, Pollution Prevention Program

Pollution Prev	rented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economv
Air	Wa.er	Wa Je	Combined*	(kWh)	(gallon)	(\$)	(\$)

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Massachusetts Department of Environmental Protection, Toxic Use Reduction Program

	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Wa.er	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1991			57,200,000					
1992			51,800,000					
1993			49,400,000					
1995			42,800,000					
1996			30,100,000					
1998			33,700,000					

Michigan Department of Environmental Quality, Environmental Assistance Division

	Poll	ution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air		Waler	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
199	3	706,278	432,740,391	7,653,347			160,000,000		
199	9	12,580	14,332,607	97,530,862			351,437,400		
200	כ	33,000		30,800			463,000,000		

Minnesota Technical Assistance Program

	Pollution	Prevented (pounds)		Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Wa.er	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1990				4,900,000			19,000	
1991				1,500,000			83,000	
1992				1,800,000			282,000	
1993				4,300,000			113,000	

New Jersey Department of Environmental Protection

Pollution Prevented (pounds)	Energy	Water	Total Cost	Impact on
	Conservation	Conservation	Savings	Economy
	Conservation	Conservation	Savings	Economy

New Mexico Environment Department, Green Zia Environmental Excellence Program

	Pollution Prevented (pounds)				Energy	Water	Total Cost	Impact on
	Air	Wa.er	Wa .e	Combined*	Conservation (kWh)	Conservation (gallon)	Savings (\$)	Economy (\$)
1999							5,000,000	
2000							30,000,000	

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	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Waler	Wa Je	Combined*	(kWh)	(gallon)	(\$)	(\$)
1992			4,800,000				24,888	
1993			350,000					
1994			16,000				4,051,464	
1995			741,871				508,000	
1996			236,992			41,685,000	1,270,000	
1997	24,000		479,268			160,000	1,350,000	
1998			15,038				324,000	
1999			600,000			583,590	848,700	
2000	44,189		875				169,700	

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North Carolina Division of Pollution Prevention and Environmental Assistance

	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Waler	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1992						228,000	1,600,000	
1993	40,000		710,000				5,000,000	
1994		10,000				22,700,000	667,500	
1995		7,000,000	21,700,000				639,300	
1996						1,400,000	9,700,000	
1997	32,000	4,400,000	20,600,000			40,200,000	8,500,000	
1998		319,500				12,100,000	23,000,000	
1999	50,000	77,000	8,200,000			668,000	6,000,000	
2000		30,000	2,900,000				211,600	

Ohio Environmental Protection Agency, Office of Pollution Prevention

	Pollution Preve	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Wa.er	Wa .e	Combined*	(kWh)	(gallon)	(\$)	(\$)
1994	12,231,883	37,535	12,776,984					
1998	69,500,000	14,000,000	13,400,000,000		32,000,000	27,000,000	192,300,000	5,000,000
1998	15,600,000	4,600,000	361,000,000					
2000			285,398,697					

Ohio, City of Cincinnati, Office of Environmental Management, P2 Program

	Pollution Prev	ented (pounds)			Energy Conservation	Water Conservation	Total Cost Savings	Impact on Economy
	Air	Wa.er	Wale	Combined*	(kWh)	(gallon)	(\$)	(\$)
1993	33,000							

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Pennsylvania DEP, Office of P2 and Compliance Assistance

Texas Commission on Environmental Quality, Texas P2 and Industry Assistance

Pollution Prevented (pounds)	Energy	Water	Total Cost	Impact on
	Conservation	Conservation	Savings	Economy
	concorrunon.		go	

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IN Clean Manufacturing Tech and Safe Materials Institute

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