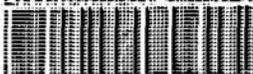


# **POLLUTION INCIDENTS REPORT - 1998 MIDLANDS REGION**

## **KEY FACTS:**

- **Total of 4061 substantiated pollution incidents in the Midlands Region in 1998. This represents 8% reduction on 4411 incidents last year.**
- **17 category 1 incidents in 1998**
- **Nationally, oil was the most common pollutant type for the first time. Oil caused 1291 (32%) substantiated pollution incidents in the Midlands in 1998. This represents a fall of 46 incidents (3%) on last years total.**
- **Nationally construction industry incidents increased by 6% on the previous year's figure. In 1998, construction incidents in Midlands Region numbered 111, similar to the previous year's total of 112.**
- **There was a 22% decrease in substantiated incidents from the sewage and water industry from 964 incidents in 1997 to 756 in 1998**



## Foreword

The Pollution Incident Statistics Report 1998 provides a graphical representation of pollution incident information for the Midlands Region in 1998. The data comes from the Region's Pollution Incident database. All the graphs and tables can be obtained in electronic format from Water Quality at Regional Head Office.

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## Water Pollution Incidents – Midlands Region 1998

### Incident Statistics

During 1998 there were 5376 reported water pollution incidents in Midlands Region. This represents a decrease of 8% on the total reported in 1997(5848). Of these, 4061 incidents were substantiated, which again represents an 8% reduction on the figure for 1997(4411), and also accounts for 22.7% of the national total (17,863). Of the 4061 substantiated pollution incidents that occurred in 1998, 17 were classified as category 1 incidents, 192 as category 2 and 3852 as category 3 incidents. Table 1 compares the distribution of incidents between categories for 1998 and 1997, with table 2 showing the distribution of substantiated incidents across the region.

*Table 1: Distribution of substantiated incidents between categories in Midlands Region, 1997-1998*

Category	1997	1998	% change
1	25	17	-32% (-8)
2	209	192	-8% (-17)
3	4177	3852	-8% (-325)
Total	4411	4061	-8% (-350)

*Table 2: Distribution of substantiated incidents in Midlands Region, 1998.*

Area	1998 (1997)	% of total 1998 (1997)
Upper Severn	708 (795)	18 (18)
Lower Severn	808 (877)	20 (20)
Upper Trent	1430 (1453)	35 (33)
Lower Trent	1115 (1286)	27 (29)
Total	4061 (4411)	100 (100)

### Major Incidents

In 1998, 17 incidents were classified as category 1 or "major incidents". This is a decrease of 8 incidents on last year's total of 25. The regional distribution of major incidents is shown in table 3 below.

*Table 3: Distribution of category 1 incidents in 1998*

Area	No. of category 1 incidents 1998 (1997)
Upper Severn	7 (2)
Lower Severn	1 (5)
Upper Trent	5 (11)
Lower Trent	4 (7)
Total	17 (25)

When classified by type of pollutant, 6 were placed as "oil & fuel" and "organic wastes" accounted for 5 incidents. The most common source was "industry", responsible for 8 major

incidents in 1998. Of the remainder, 5 were from source category "others" of which 4 were unknown.

### **Sources and Types**

The most significant change has been in the source category 'Sewage and Water WSPIC' where the number of pollution incidents has decreased by 22%, from 964 in 1997 to 756 in 1998. More specifically, reductions have occurred in the number of incidents from surface water outfalls, combined sewer overflows, sewage treatment works and pumping stations.

Although the numbers involved are small, the incidents from mining have increased by 44 %, from 27 incidents in 1997 to 48 in 1998, (in contrast to the 57 % decrease between 1996-1997). The largest increase is in the category for abandoned mines. This is set to become an important issue over the coming year.

**Table 3 Substantiated incidents by source for the Midlands Region 1997 and 1998**

Source	1997	1998	%change
Sewage & Water Ind	1229	986	-20
Transport	508	507	0
Industry	814	807	-1
Agriculture	407	418	+3
Domestic/Residential	151	151	0
Other	1302	1192	-8
Total	4411	4061	-8

When we look at the type of pollutants that resulted in substantiated pollution incidents it can be seen that the number caused by "sewage" has decreased by 17%, from 999 in 1997 to 830 in 1998. Within this category the largest reduction was in the number caused by crude sewage, with a fall of 19%. The Incidents from type category "others" (with suspended solids removed) have also fallen by 13% from 952 in 1997 to 832 in 1998.

**Table 4: Substantiated incidents by type for the Midlands Region 1997 and 1998**

Type	1997	1998	%change
Organic Wastes	445	453	+2
Chemicals	430	408	-5
Sewage	999	830	-17
Fuels & Oils	1337	1291	-3
Suspended Solids	248	247	0
Other	952	832	-13
Total	4411	4061	-8

### **Oil and Construction**

There were 1291 substantiated oil pollution incidents in 1998. Overall fuel and oil accounted for 32% of all substantiated incidents in Midlands Region in 1998. This represents a 3% decrease on the number reported in 1997(1337). Within the type category 'Fuels and Oils' the most common pollutant was diesel (DERV), accounting for 36% of incidents. However, the

number of diesel pollutions fell by 4% in 1998. Conversely, the number of incidents where the type of oil type was unknown increased by 18% from 252 incidents in 1997 to 297 incidents in 1998.

The number of incidents from the construction industry remained the same with 111 occurring in 1998 compared with 112 in 1997. Similarly, incidents where the pollutant type was suspended solids have also remained at a similar level, representing 6% of substantiated incidents. Nationally there was an increase in the number of pollution incidents from the construction sector.

## Total number of pollution incidents in Midlands Region 1987-1998

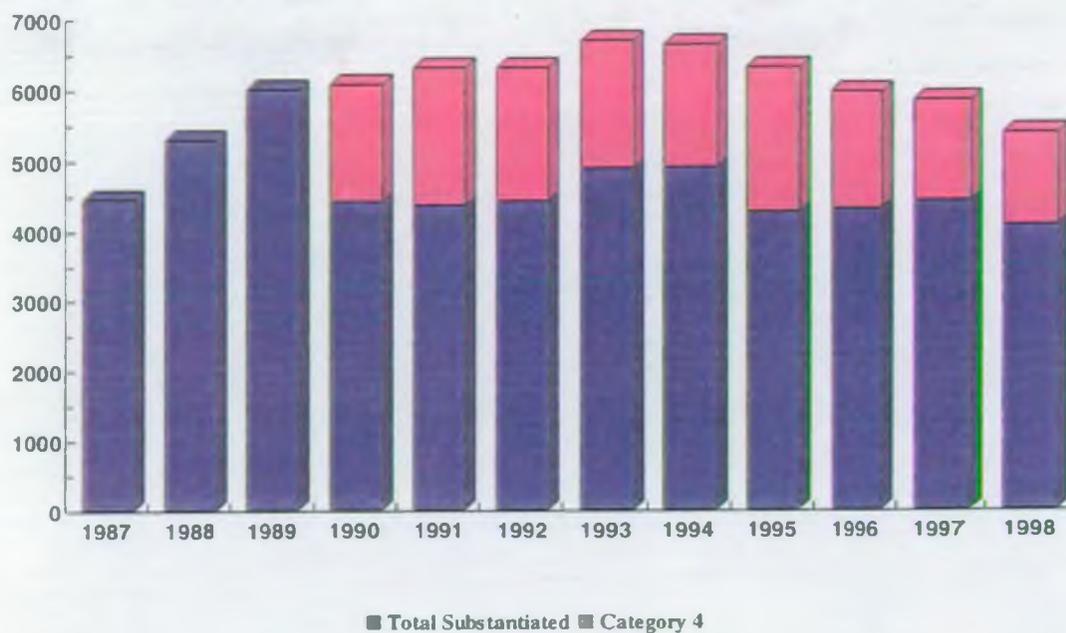
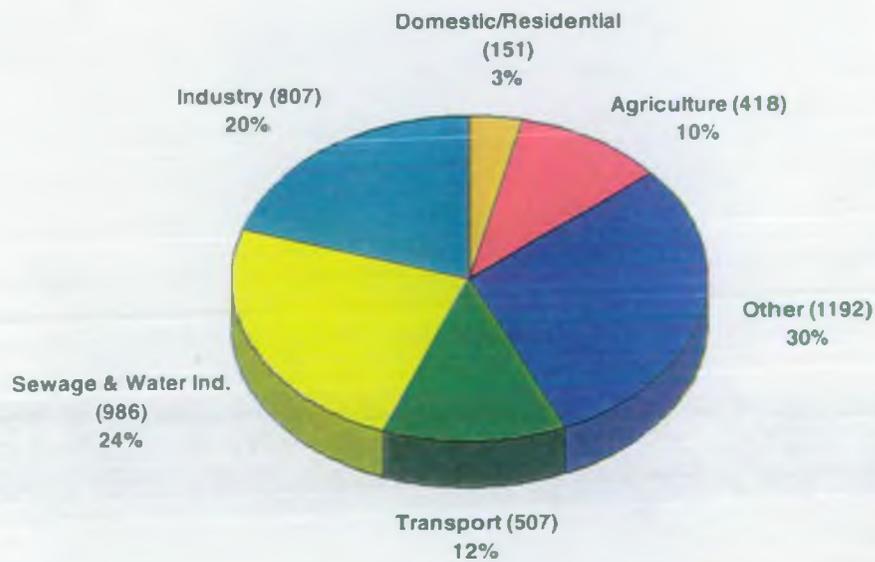


Fig 1

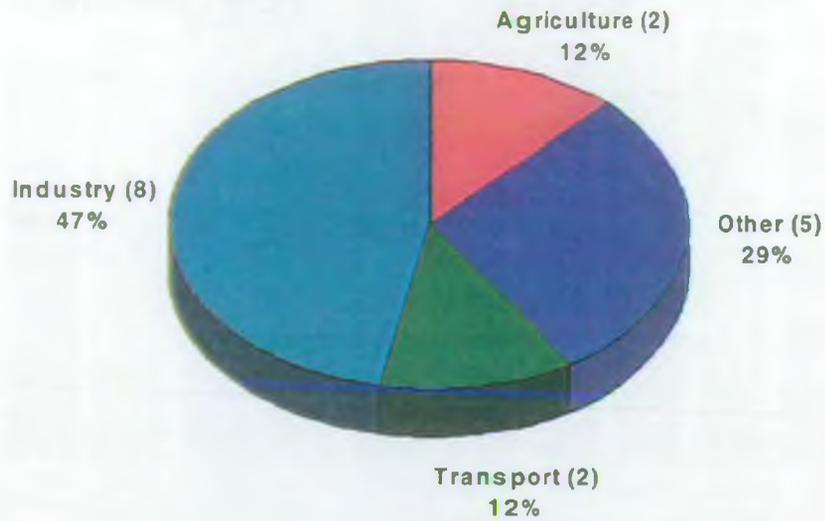
## Substantiated pollution incidents by source Midlands Region, 1998



Total: 4061

Fig 2

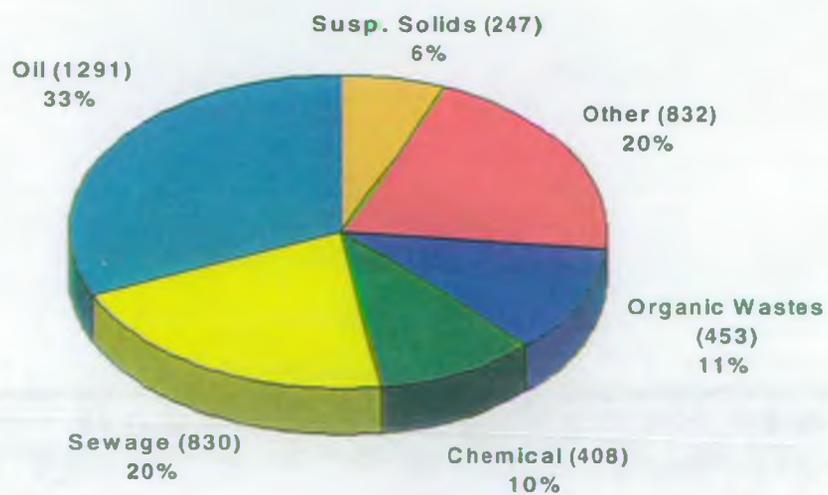
### Substantiated Category 1 pollution incidents by source Midlands Region, 1998



Total: 17

Fig 3

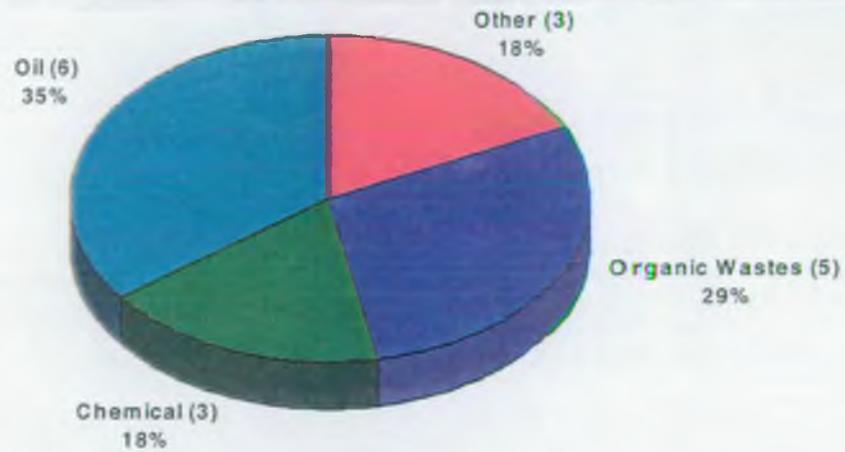
### Substantiated pollution incidents by type Midlands Region, 1998



Total: 4061

Fig 4

### Substantiated Category 1 pollution incidents by type Midlands Region, 1998



Total: 17

Fig 5

### Substantiated agricultural pollution incidents Midlands Region, 1998

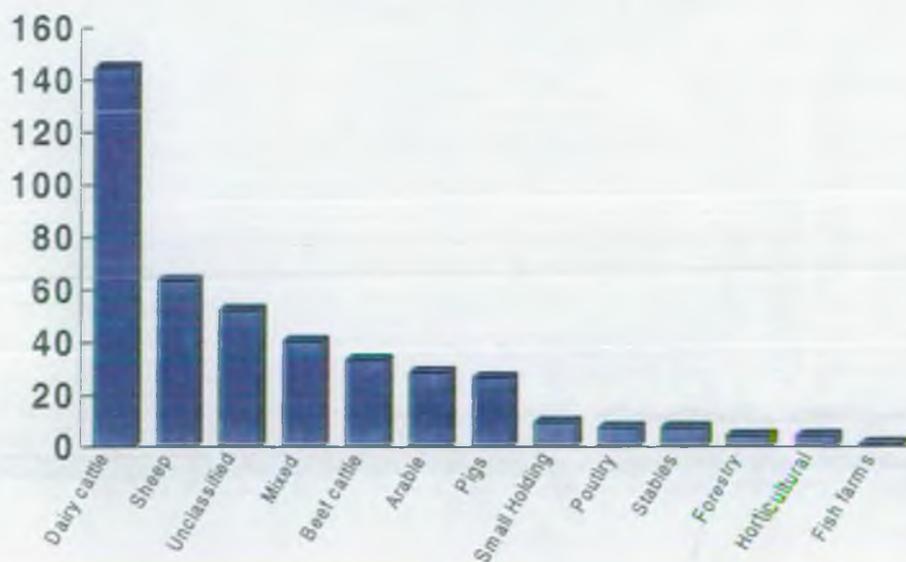


Fig 6

### Substantiated industrial pollution incidents (where classified) by source Midlands Region, 1998

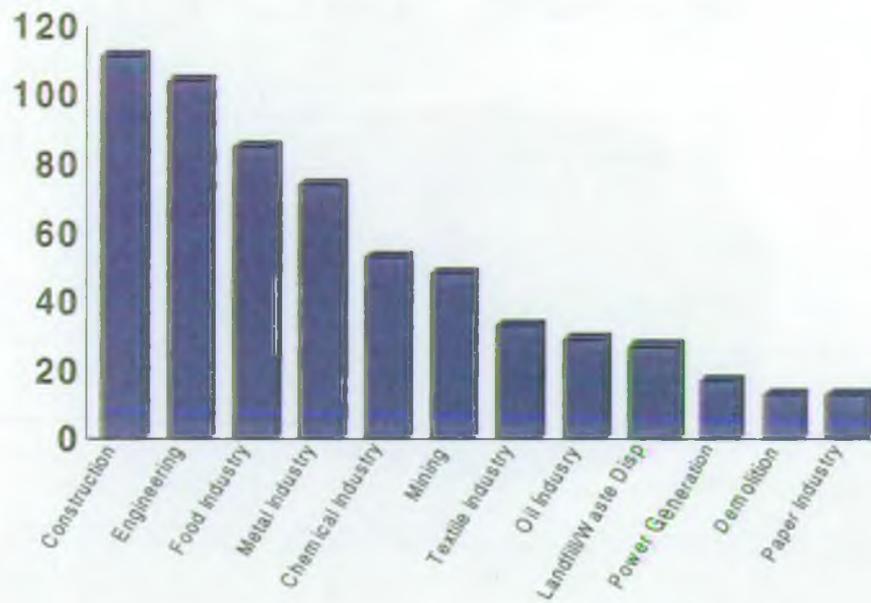


Fig 7

### Substantiated sewage and water industry related pollution incidents in Midlands Region, 1998

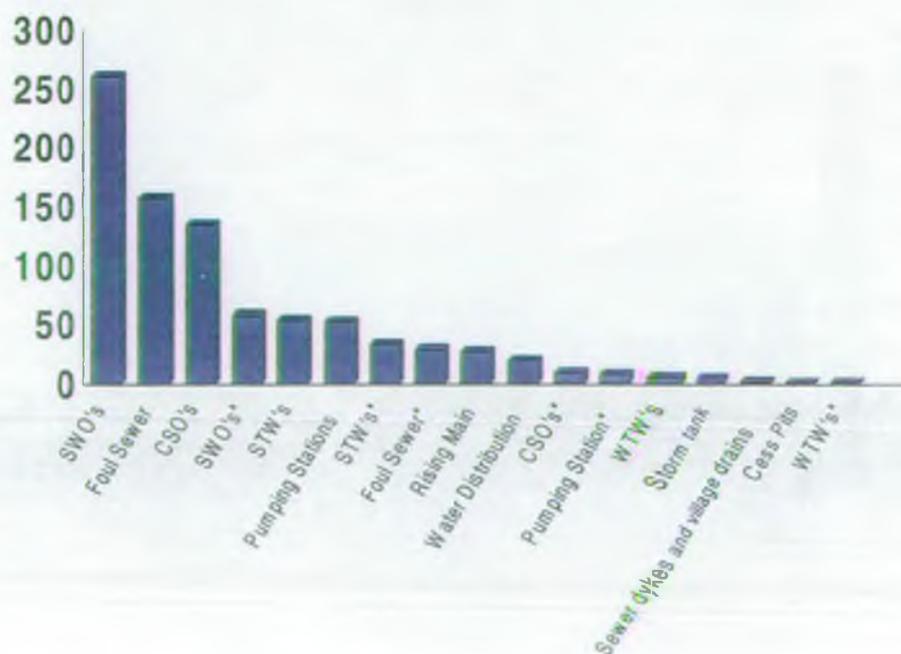


Fig 8

### Substantiated transport related pollution incidents Midlands Region, 1998

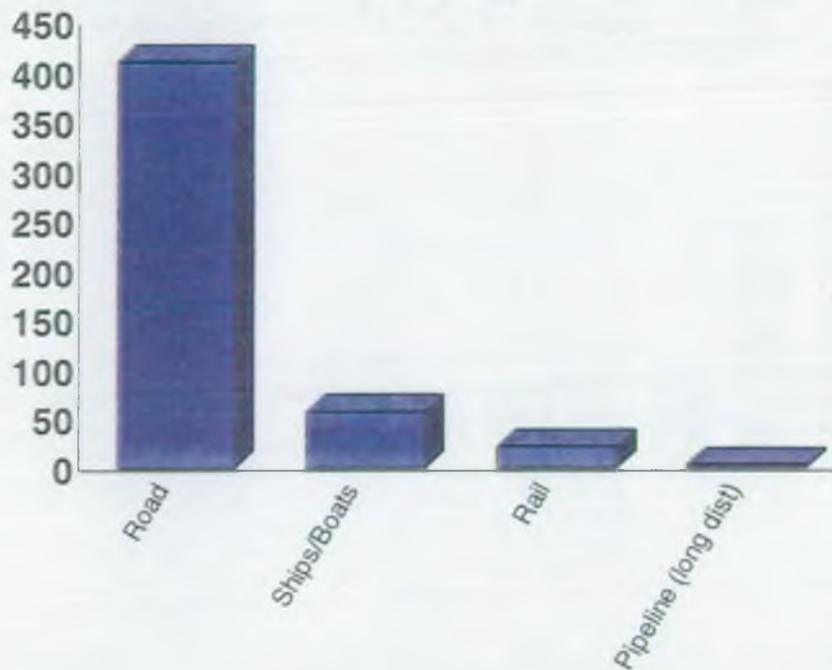


Fig 9

### Substantiated other sources of pollution incidents, where classified, Midlands Region, 1998

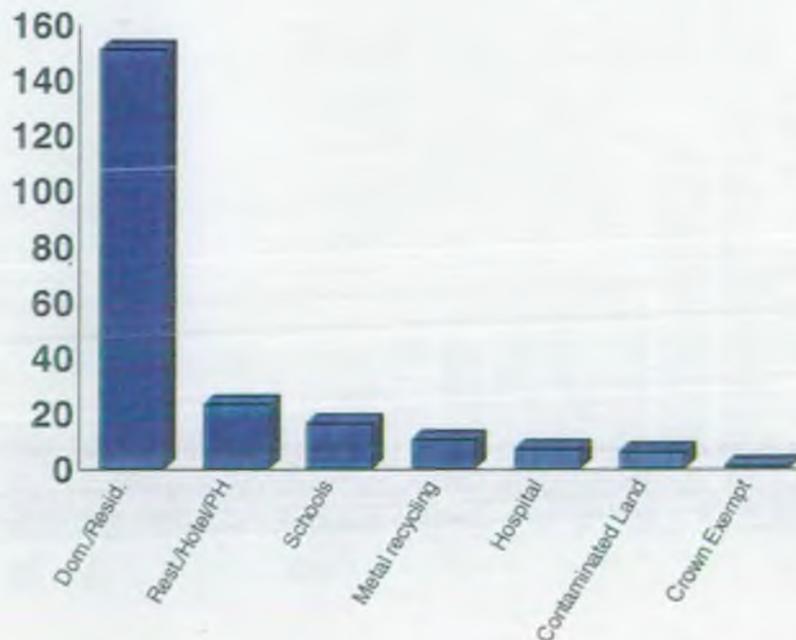


Fig 10

### Substantiated fuel & oil pollution incidents Midlands Region, 1998

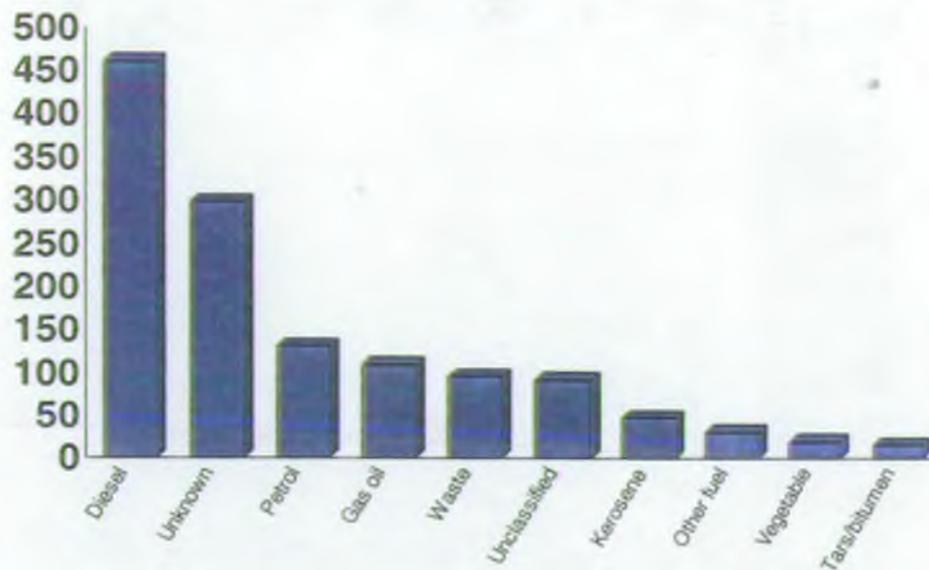


Fig 11

### Substantiated chemical pollution incidents (where classified) Midlands Region, 1998

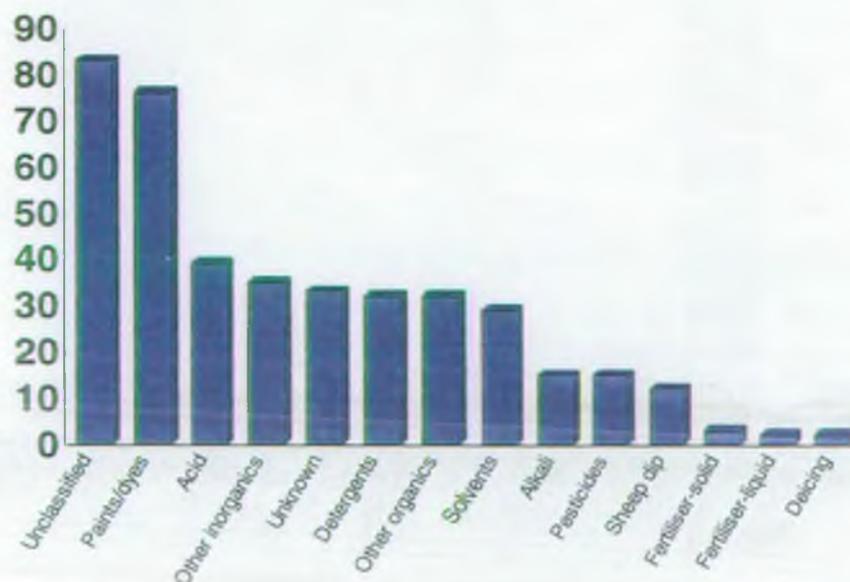


Fig 12

### Substantiated other types of pollutant (where classified) in Midlands Region 1998

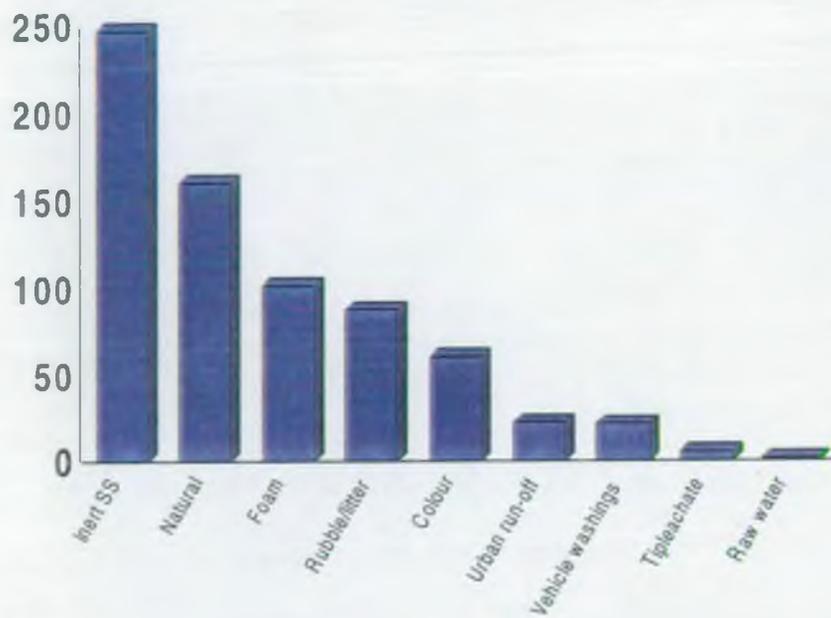


Fig 13

### Number of Major Incidents 1992-98 Midlands Region

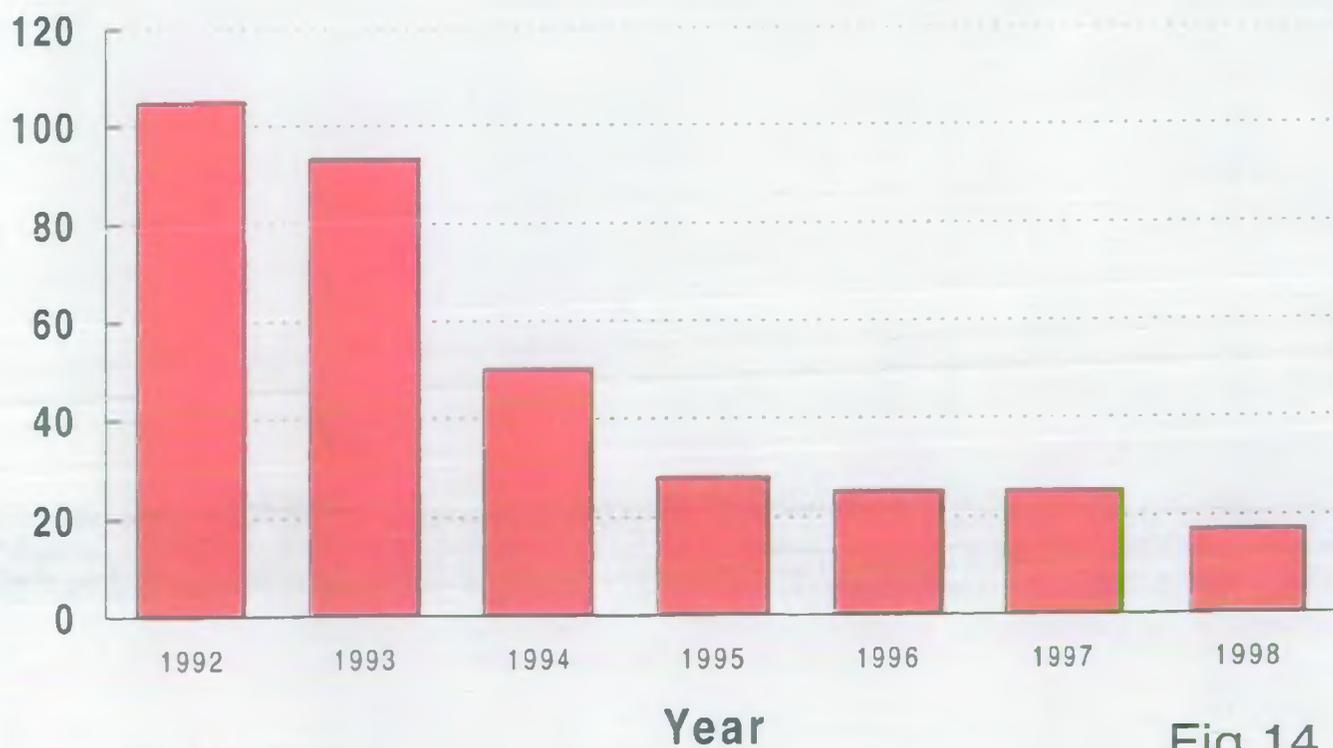


Fig 14

### Pollution Incidents - Upper Severn Area 1998

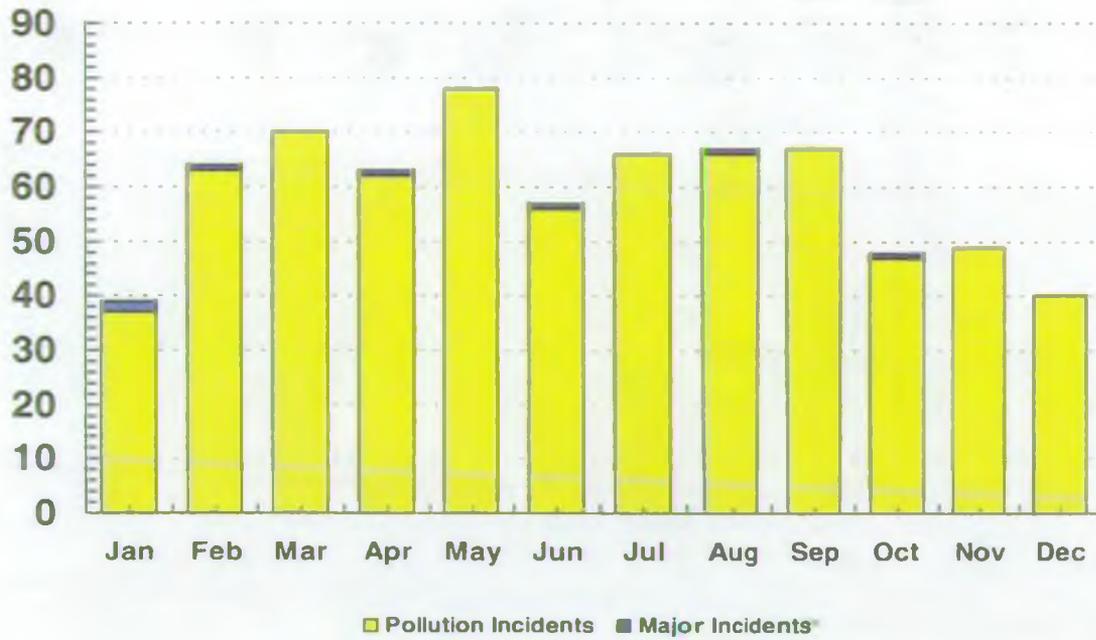


Fig 15

### Pollution Incidents - Lower Severn Area 1998

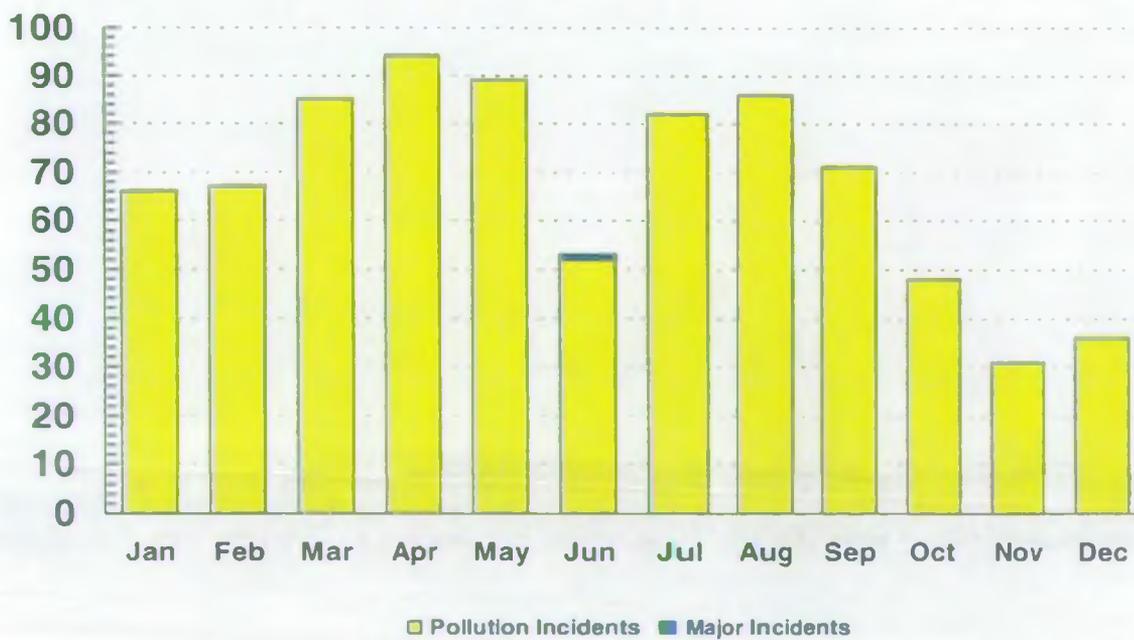


Fig 16

### Pollution Incidents - Upper Trent Area 1998

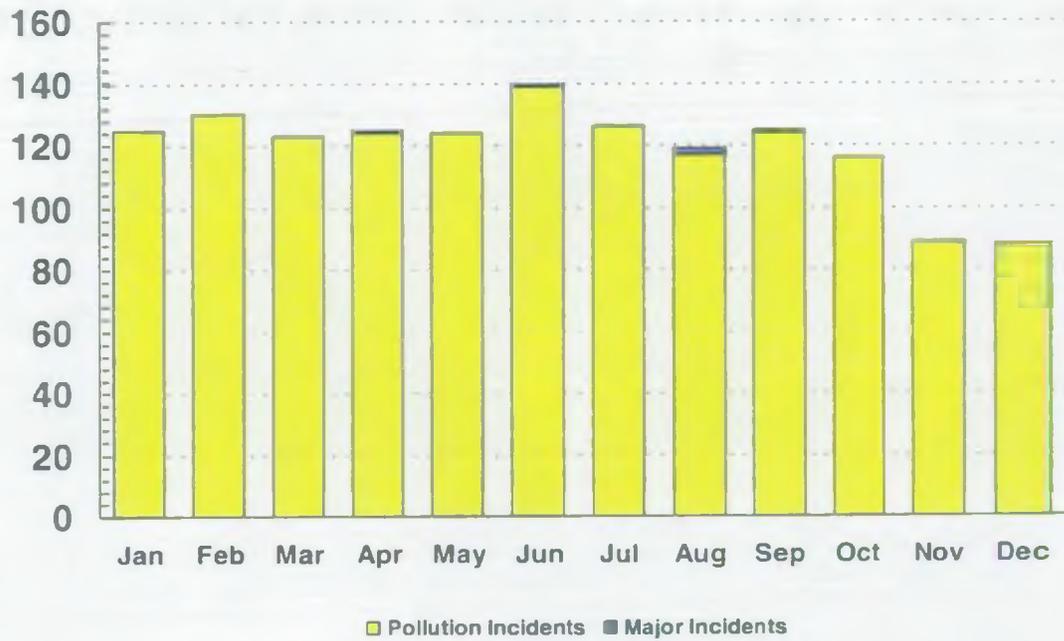


Fig 17

### Pollution Incidents - Lower Trent Area 1998

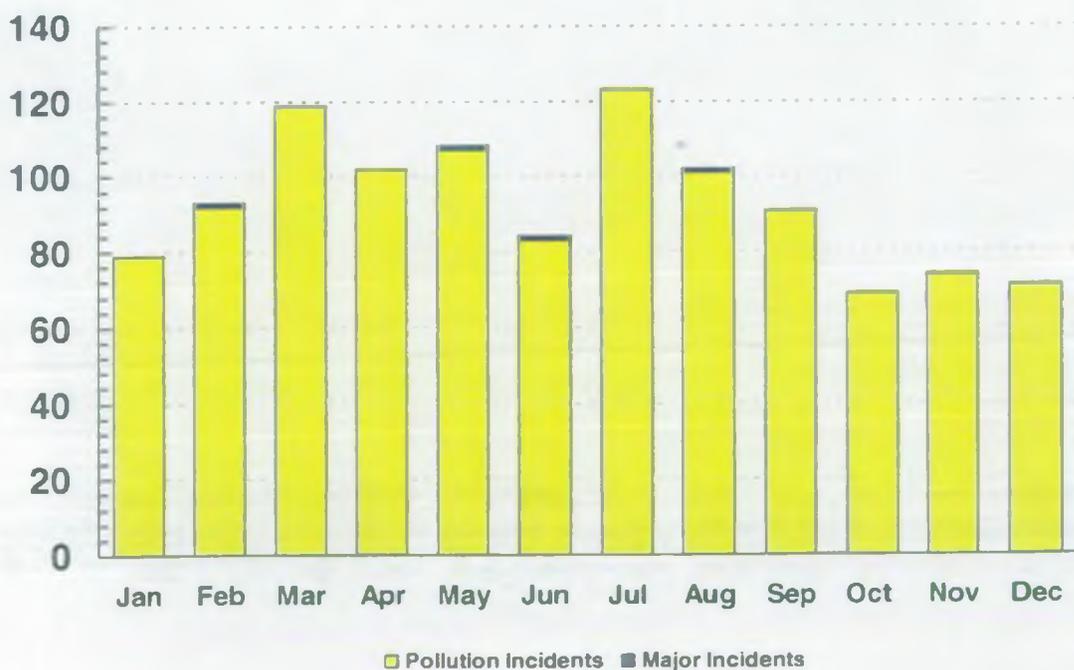


Fig 18

REGION: MIDLANDS		1998 INCIDENTS BY TYPE			
<b>Fuels and Oils</b>		<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>
Petrol		2	2	126	130
Diesel (DERV)		0	32	427	459
Gas oil (inc. agricultural)		1	14	93	108
Kerosene		0	7	40	47
Other fuel oil		0	7	23	30
Waste oil		1	3	91	95
Tars/bitumen		0	1	14	15
Vegetable oil		0	0	19	19
Unknown oil		1	5	291	297
Other		1	3	87	91
<b>TOTAL</b>		<b>6</b>	<b>74</b>	<b>1211</b>	<b>1291</b>
<b>Sewage</b>		<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>
Treated effluent		0	0	44	44
Septic tank effluent		0	1	102	103
Crude sewage		0	12	432	444
Storm sewage		0	3	83	86
Sewage sludge		0	2	13	15
Sewage debris/litter		0	0	44	44
Other		0	0	75	75
Unknown		0	0	19	19
<b>TOTAL</b>		<b>0</b>	<b>18</b>	<b>812</b>	<b>830</b>
<b>Chemicals</b>		<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>
Pesticides		1	1	13	15
Sheep dip		0	10	2	12
Fertilizer - liquid		0	1	1	2
Fertilizer - solid		0	0	3	3
De-icing		0	0	2	2
Acid		0	3	36	39
Alkali		1	4	10	15
Paints/dyes		0	4	72	76
Detergents		0	3	29	32
Solvents		0	2	27	29
Other organics		0	2	30	32
Other inorganics		0	6	29	35
Unknown		0	2	31	33
Other		1	6	76	83
<b>TOTAL</b>		<b>3</b>	<b>44</b>	<b>361</b>	<b>408</b>

<b>Organic wastes</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
Cattle slurry	0	9	89	98		
Pig slurry	0	5	16	21		
Other slurry	1	2	4	7		
Cattle manure (solid)	0	1	18	19		
Pig manure (solid)	0	1	2	3		
Poultry (solid)	0	0	3	3		
Horse manure (solid)	0	0	5	5		
Other manure (solid)	0	0	4	4		
Animal carcasses	0	0	93	93		
Milk	1	1	26	28		
Other organic susp solids	0	0	22	22		
Silage liquor	0	0	15	15		
Yard washings	0	0	30	30		
Dairy parlour washings	0	0	1	1		
Other	3	8	71	82		
Unknown	0	2	20	22		
<b>TOTAL</b>	<b>5</b>	<b>29</b>	<b>419</b>	<b>453</b>		
<b>Others</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
Foam	0	0	101	101		
Natural	0	5	155	160		
Vehicle washings	0	0	21	21		
Rubble/litter	0	0	87	87		
Inert susp. solids	0	6	241	247		
Colour	0	1	59	60		
Tip leachate	0	0	5	5		
Urban run-off	0	1	21	22		
Fire water	*	*	*	*		
Filter backwash water	0	0	0	0		
Raw water	0	0	1	1		
Unknown other	3	14	358	375		
<b>TOTAL</b>	<b>3</b>	<b>27</b>	<b>1049</b>	<b>1079</b>		
<b>TOTAL BY TYPE</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
	17	192	3852	4061		

<b>INCIDENTS BY SOURCE</b>						
<b>Industry</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
Chemical industry	1	8	44	53		
Oil industry	2	7	20	29		
Fuelling station	*	*	*	*		
Paper industry	0	2	11	13		
Food industry	1	6	78	85		
Textile industry	0	3	30	33		
Metal industry	1	10	63	74		
Engineering :	0	6	98	104		
Power Generation	0	1	16	17		
Landfill/waste disposal	2	2	23	27		
Construction	0	6	105	111		
Demolition	0	2	11	13		
Other	1	11	188	200		
<b>TOTAL</b>	<b>8</b>	<b>64</b>	<b>687</b>	<b>759</b>		
<b>Mining</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
Coal	0	2	10	12		
Aggregate (sand/gravel)	0	0	3	3		
Clay	0	0	7	7		
Quarrying - Hard rock	0	1	9	10		
Metal	0	0	0	0		
Abandoned mine	0	2	10	12		
Other	0	0	4	4		
<b>TOTAL</b>	<b>0</b>	<b>5</b>	<b>43</b>	<b>48</b>		
<b>Sewage and Water WSP/c</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>		
Sewage treatment works	0	2	52	54		
Combined sewer overflow	0	2	132	134		
Storm tank	0	1	3	4		
Rising main	0	0	27	27		
Water treatment works	0	1	5	6		
Water distribution system	0	1	18	19		
Surface water outfall	0	9	251	260		
Pumping station	0	2	50	52		
Foul sewer	0	4	153	157		
Other	0	0	43	43		
<b>TOTAL</b>	<b>0</b>	<b>22</b>	<b>734</b>	<b>756</b>		

<b>Sewage and Water - private</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>	
Sewage treatment works	0	0	33	33	
Combined sewer overflows	0	0	9	9	
Water treatment works	0	0	0	0	
Water distribution system	0	0	0	0	
Surface water outfall	0	1	57	58	
Pumping station	0	0	8	8	
Foul sewer	0	1	28	29	
Other	0	2	82	84	
<b>TOTAL</b>	<b>0</b>	<b>4</b>	<b>217</b>	<b>221</b>	
<b>Sewage and Water - other</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>	
Sewer dykes and village drains	0	0	2	2	
Cess pits	0	0	1	1	
Others	0	0	6	6	
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	
<b>Agricultural</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>	
Beef cattle	0	2	31	33	
Dairy cattle	0	9	135	144	
Pigs	0	4	22	26	
Poultry	0	0	7	7	
Sheep	0	10	53	63	
Arable	1	4	23	28	
Horticultural	0	0	4	4	
Smallholding	0	0	9	9	
Stables	0	0	7	7	
Kennels	*	*	*	*	
Fish farms	0	0	1	1	
Mixed	1	6	33	40	
Forestry	0	0	4	4	
Others	0	5	47	52	
<b>TOTAL</b>	<b>2</b>	<b>40</b>	<b>376</b>	<b>418</b>	
<b>Transport</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>	
Road	2	5	404	411	
Rail	0	0	22	22	
Ships/boats	0	4	53	57	
Airports	0	0	0	0	
Pipelines (long distance only)	0	0	3	3	

Other	0	1	13	14
<b>TOTAL</b>	2	10	495	507
<b>Others:</b>	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>
Hospital	0	0	7	7
Crown exempt	0	0	1	1
Domestic/residential	0	4	147	151
Restaurants/hotels/public houses	0	0	23	23
Contaminated land	0	0	6	6
Schools/educational establishments	0	0	16	16
Scrapyards (metal recycling)	0	0	10	10
Other	1	10	502	513
Unknown	4	33	579	616
<b>TOTAL</b>	5	47	1291	1343
	<b>Cat1</b>	<b>Cat2</b>	<b>Cat3</b>	<b>Total sub.</b>
<b>TOTAL BY SOURCE</b>	17	192	3852	4061
<b>TOTAL CATEGORY 4 INCIDENT</b>	1315			