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2002

Statistical Report

Division of Response Services Spill Report Case Load

Bureau of Remediation & Waste Management



TD 1042

S74

2002

January 2004

Compiled by: Diana J. Frith

TABLE OF CONTENTS

Reference	<u>Page</u>
Introduction	1
Response Zone Maps	2
Large Spills in 2002	7
Number of Spills Filed by Response Office and Spill Type (Stats and Graph)	9
Percentage of Spill Reports by Spill Type (Graph)	
Number of Spills by Month (Graph)	
Spill Reports Arranged by Medium Effected (Stats and Graph)	
Reports Broken Down by Cause of Spill	
Reports by Reporter Method (Graph)	
Reports by Product Spilled	
Top Twelve Products Involved in Reports (Graph)	17
Top Twelve Products Contaminating Wells (Graph)	18
Product Categories vs. Wells Impacted (Graph)	19
Number of Wells Impacted or Threatened Sorted by Spill Type and Product Found	20
Amount of Material Spilled by Response Office and Spill Type	21
Recovery Method (Narrative)	22
Recovered Amounts of Spilled Material by Spill Type and Recovery Method	
Recovery Methods (Graph)	24
Types of Hazardous Material Spilled (Narrative)	
Hazardous Materials and Other Non-Oil Materials Spilled	
Types of Facilities with Corresponding Subcategories	
Types of Facilities Involved in Spill Reports by Incident Location Category (Stats and Graph).	
Types of Facilities Involved in All Spill Reports (Graph)	
Types of Facilities Involved in Hazardous Material Incidents (Graph)	
Types of Facilities Involving Underground Storage Tanks (Graph)	
Types of Facilities Involving Aboveground Storage Tanks (Graph)	34
Discrepancies Between Surface Oil Cleanup Fund and Groundwater Oil	
Cleanup Fund Barrels (Narrative)	
Ground Water Fund Barrels of Product Transported into Maine	
Surface Fund Barrels of Product Transported/Transferred in Maine	37



INTRODUCTION

This report is the Maine Department of Environmental Protection's (DEP) statewide Statistical Report of the Division of Response Services spill caseload for 2002. Response Services Division staff in the Bureau of Remediation and Waste Management respond to oil and hazardous material spills throughout the state and act to mitigate the damage of these events to Maine's environment, public safety, and public health. In 2002, the Division of Response Services included 32 employees consisting of 22 Oil and Hazardous Material Specialists (OHMS), three Environmental Specialists, three Maintenance Mechanics, two Staff Development Specialists, one Health and Safety Director, and one Division Director, filed 2,736 reports dealing with oil and hazardous incidents throughout Maine. A summary of this activity is contained in this report. These statistics examine Response Services' activity from a variety of perspectives; in an attempt to highlight both Maine's environmental concerns and the kinds and numbers of situations Response Services personnel handle in a year.

The reader may notice a slight discrepancy in the total number of reports for the year. Several months are needed to compile all of the data, and the database content may change slightly during that time period. However, we at the Department are confident that these discrepancies are insignificant in regards to the statistical summaries.

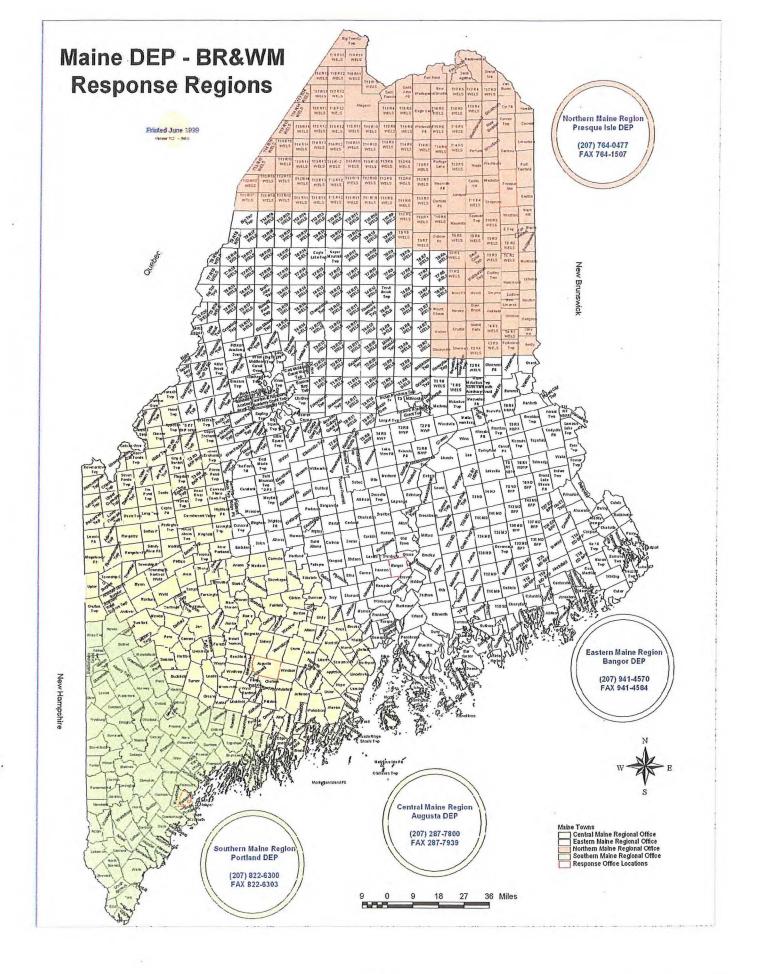
A Response report concerns a product that is classified as an oil incident, hazardous material incident, or as a non-oil/non-hazardous incident. An oil incident or a hazardous material incident is where a known or unknown product was released to the environment. The product also may have spilled at an industrial site, but was contained and diverted to a neutralization system, or fully recovered from a containment area and put back into a production process. A non-oil/non-hazardous incident is where a known or unknown product was reported to have been released to the environment; but upon investigation none could be found or the product found did not meet the criteria of an oil or hazardous material. Therefore, the product did not fall within this division's jurisdiction.

Response Services operates out of four regional offices. These are located in Augusta, Bangor, Portland, and Presque Isle. Office names are, on occasion, abbreviated:

Augusta	Α
Bangor	В
Portland	P
Presque Isle	PΙ

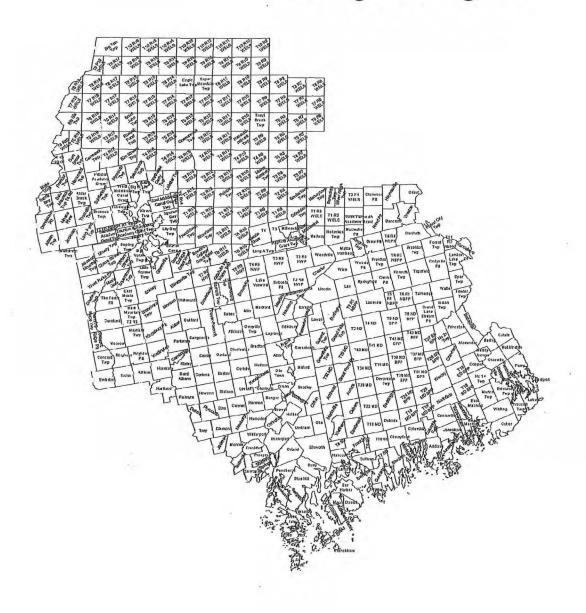
Abbreviations may also be used with Incidents and Hazardous Material:

Incident	Inc
Hazardous	Haz
Materials	Mat





Bangor Region







Portland Region







Presque Isle Region







Large Spills in 2002

The next two pages list some of the larger spills that took place during the year. The spill number, location town, and responsible party are listed. A brief synopsis of the official spill report provides basic information about the incident, including the amount spilled.

A-401-02 Jay International Paper: A systems failure allowed 45,000 gallons of 10% CIO2 solution (Chlorine Dioxide) to overflow a tank. All spilled material went to the plant acid sewer system where is was diluted and neutralized.

A-448-2002 Boothbay Harbor **Fishing Vessel** Aaron & Sarah: The fishing vessel Aaron & Sarah ran aground on Pumpkin Ledge and sank off the coast of Boothbay Harbor. Originally, the insurance representative for the vessel owner sought authorization to abandon the vessel at sea if the products on board were removed and decanted. That wish was not granted. One attempt to raise the vessel was abandoned due to rough weather. A second attempt was successful; however, 2,625 gallons of diesel fuel and 250 gallons of hydraulic oil were discharged to the ocean. Approximately 375 gallons of diesel fuel and hydraulic oil were recovered. The rough weather caused the remaining spilled fuel to disperse.



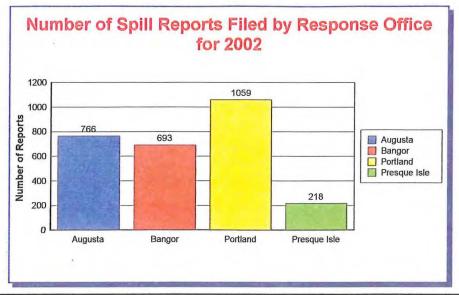
B-62-02 Searsport General Alum & Chemical Corp: A fitting to a storage tank broke off spilling 7,500 gallons of 50% Sodium Hydroxide. The Caustic Soda (pH 13) was released into the containment area of the bleach plant building concrete containment. The product was pumped into tank trucks until the fitting was replaced, and then replaced in the tank. The containment area was rinsed with water, and that material was used to make batches of sodium aluminate.

B-479-02 Baileyville Domtar Industries Corp: Due to failure of a pump house rubber flange, pressure chewed a hole in the front wall of the pump house causing an estimated 522,918 gallons of weak black liquor to spill. Most of the product was recovered from the spill containment pond and recycled back into their system. Some of the liquor was diluted with a significant amount of rainwater and was neutralized through the process sewer system; some of the material leached into the river and was neutralized; and some of the liquor was recovered from under the building.

I-31-02 Madawaska Frasier Paper: A pipe failure to a paper machine oil bowser system caused approximately 2,200 gallons of lube oil to spill. Product was discharged to the waste water system and also cleaned up at the clarifiers by the scum collection system. This material was sent to the sludge dewatering building and then to the sludge landfill with the solid waste. An unknown amount of oil was discharged to the St. John River.

P-568-2002 Scarborough Abenaqui Carriers: A tank truck hit a concrete berm which damaged the bottom piping of the truck resulting in a spill of 3,500 gallons of gasoline to catch basins and a nearby brook. An emergency dam was constructed at the end of a drainage ditch, which helped to recover most of the product. The spill area, drains, catch basins, and the brook were all flushed with water. This water and the product were recovered with the use of vacuum trucks. Upon removal of the dam, contaminated soil was excavated.



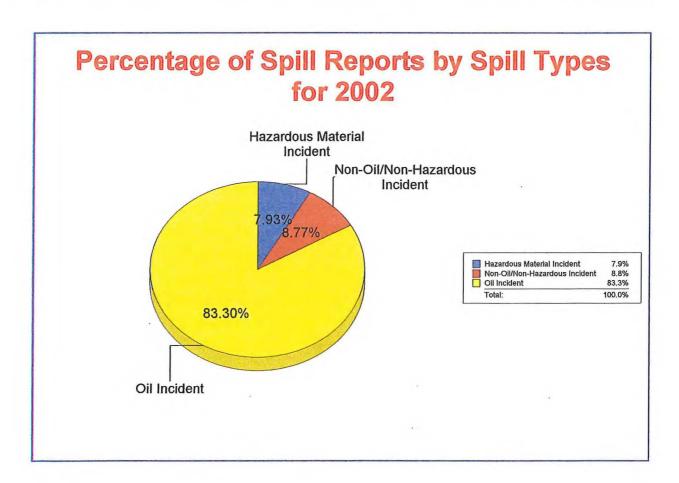


Reported Spills by Response Office and Spill Type for the year of 2002

Augusta			
	Hazardous Material Incident	48	6.27%
	Non-Oil/Non-Hazardous Incident	57	7.44%
	Oil Incident	661	86.29%
	Office Total Spills	<u>766</u>	
Bangor			
	Hazardous Material Incident	46	6.64%
	Non-Oil/Non-Hazardous Incident	75	10.82%
	Oil Incident	572	82.54%
	Office Total Spills	<u>693</u>	
Portland			
	Hazardous Material Incident	106	10.01%
	Non-Oil/Non-Hazardous Incident	90	8.50%
	Oil Incident	863	81.49%
	Office Total Spills	<u>1059</u>	
Presque Isle	· · · · · · · · · · · · · · · · · · ·		
	Hazardous Material Incident	17	7.80%
	Non-Oil/Non-Hazardous Incident	18	8.26%
	Oil Incident	183	83.94%
	Office Total Spills	218	
7	Fotal Spills for 2002	2736	

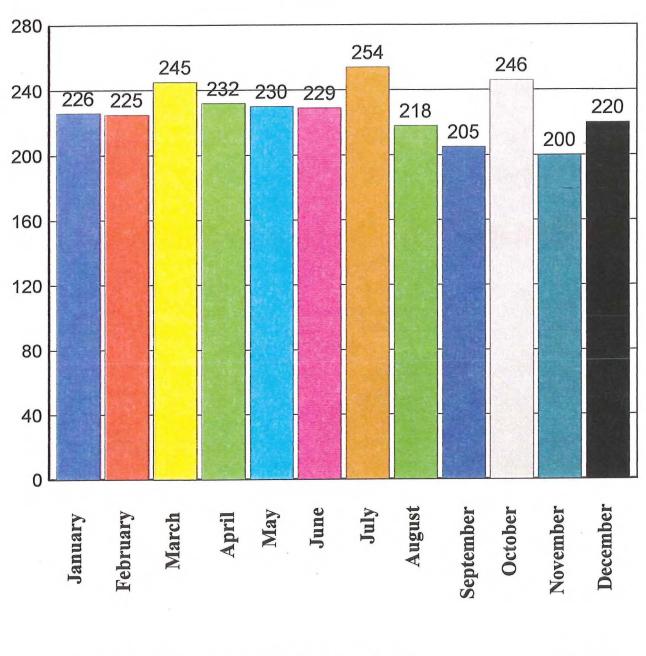
This report was run on 1/30/2004. Data is representative of this date.

Type of Spill	<u>Number of</u> <u>Spills Reported</u>	Percentage of Spills Reported
Hazardous Material Incident	217	7.93%
Non-Oil/Non-Hazardous Incident	240	8.77%
Oil Incident	2279	83.30%



This report was run on 1/30/2004. Data is representative of this date.

Number of Spills by Month for 2002

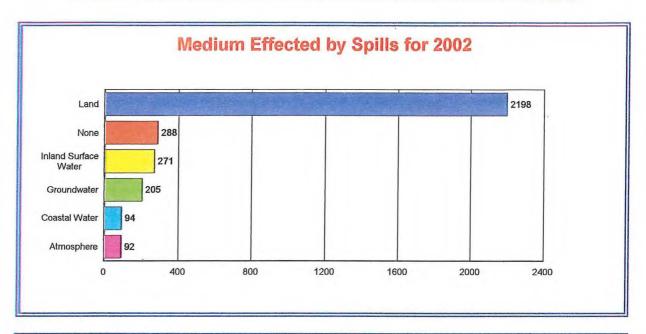


Total Number of Spills for 2002

2,730

This report was run on 1/30/2004. Data is representative of this date. Six reports are missing due to either late reporting or incorrect reported spill dates.

Spill Reports Arranged by Medium Effected for 2002



	Augusta	Bangor	Portland	Presque Isle	Total
Land	622	534	860	182	2,198
None	63	106	104	15	288
Inland Surface Water	96	55	100	20	271
Groundwater	34	40	108	23	205
Coastal Water	19	20	55	0	94
Atmosphere	18	12	61	1	92
Total	852	767	1,288	241	3,148

This report was run on 1/30/2004. Data is representative of this date. The number of Spill Reports reflected does not show the actual number of spills because one spill may have multiple mediums effected. We use "effected" for this report to mean that the spilled product had the effect of contamination on the reported medium.

Spill Reports for 2002 by Cause of Spill

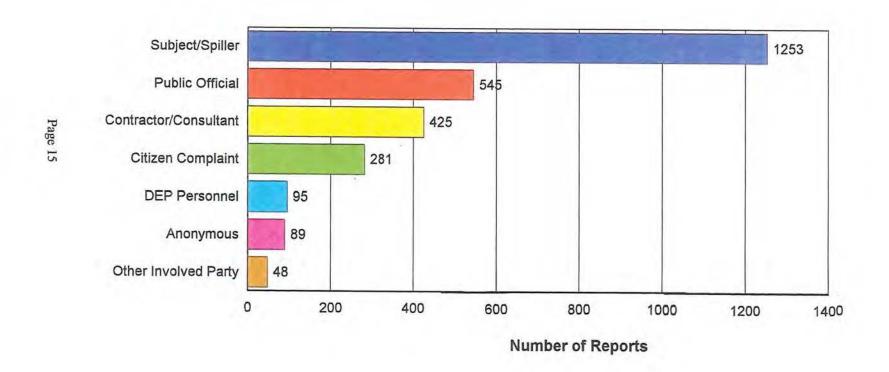
Augusta	Cause of Spill	Number of Spills
	Accident - Human Error	76
	Accident - Other	30
	Accident - Physical Breakage	40
	Accident - Poor Workmanship	20
	Accident - Storm Damage	20
	Accident - Transportation	70
	Corrosion - Other	12
	Corrosion - Piping	10
	Corrosion - Tank	40
	Discharge - Deliberate/Other	14
	Discharge - Vandalism	5
	Mechanical Failure - Gasket/Seal	19
	Mechanical Failure - Loose Fitting	37
	Mechanical Failure - Other	18
	Mechanical Failure - Piping/Hose	84
	Mechanical Failure - Valve	16
	Other - Known Cause	33
	Other - No Cause	60
	Other - Unknown	71
	Overfill	70
	Process Failure - Other	21
	Office Total	766
	- Carrier Admir	100
Bangor	Cause of Spill	Number of Spills
	Accident - Human Error	56
	Accident - Other	7
	Accident - Physical Breakage	81
	Accident - Poor Workmanship	2
	Accident - Storm Damage	
	Accident - Storm Damage	21
	Accident - Storm Damage Accident - Transportation	21 63
	Accident - Transportation	63
	Accident - Transportation Corrosion - Other	63 2
	Accident - Transportation Corrosion - Other Corrosion - Piping	63 2 11
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank	63 2 11 49
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge	63 2 11 49 1
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other	63 2 11 49 1 8
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism	63 2 11 49 1 8
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal	63 2 11 49 1 8 9
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting	63 2 11 49 1 8 9 4
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other	63 2 11 49 1 8 9 4 30
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other Mechanical Failure - Piping/Hose	63 2 11 49 1 8 9 4 30 4
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other Mechanical Failure - Piping/Hose Mechanical Failure - Valve	63 2 11 49 1 8 9 4 30 4 60 14
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other Mechanical Failure - Piping/Hose Mechanical Failure - Valve Other - Known Cause	63 2 11 49 1 8 9 4 30 4 60 14 34
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other Mechanical Failure - Piping/Hose Mechanical Failure - Valve Other - Known Cause Other - No Cause Other - Unknown	63 2 11 49 1 8 9 4 30 4 60 14 34 103
	Accident - Transportation Corrosion - Other Corrosion - Piping Corrosion - Tank Discharge - Bilge Discharge - Deliberate/Other Discharge - Vandalism Mechanical Failure - Gasket/Seal Mechanical Failure - Loose Fitting Mechanical Failure - Other Mechanical Failure - Piping/Hose Mechanical Failure - Valve Other - Known Cause	63 2 11 49 1 8 9 4 30 4 60 14 34

Spill Reports for 2002 by Cause of Spill

Portland	Cause of Spill	Number of Chill
Tortiano	Accident - Human Error	Number of Spill 100
	Accident - Other	32
	Accident - Other Accident - Physical Breakage	99
	Accident - Physical Breakage Accident - Poor Workmanship	10
		7
	Accident - Storm Damage	
	Accident - Transportation	103
	Corrosion - Other	12
	Corrosion - Piping	19
	Corrosion - Tank	56
	Discharge - Bilge	2
	Discharge - Deliberate/Other	30
	Discharge - Vandalism	5
	Mechanical Failure - Gasket/Seal	24
	Mechanical Failure - Loose Fitting	36
	Mechanical Failure - Other	22
	Mechanical Failure - Piping/Hose	62
	Mechanical Failure - Valve	14
	Other - Known Cause	59
	Other - No Cause	92
	Other - Unknown	139
	Overfill	92
	Process Failure - Other	44
	Office Total	1059
Presque Isle	Cause of Spill	Number of Spills
	Accident - Human Error	26
	Accident - Other	20
	Accident - Physical Breakage	24
	Accident - Poor Workmanship	4
	Accident - Transportation	15
	Corrosion - Other	2
	Corrosion - Piping	3
	Corrosion - Tank	24
	Discharge - Deliberate/Other	5
	Discharge - Vandalism	2
	Mechanical Failure - Gasket/Seal	1
	Mechanical Failure - Loose Fitting	10
	Mechanical Failure - Other	1
	Mechanical Failure - Piping/Hose	32
	Mechanical Failure - Valve	2
	Other - Known Cause	8
	Other - No Cause	10
	Other - Unknown	18
	Overfill	11
	Office Total	218
	Office Total	410

2002 Grand Total 2736

Spill Reports by Reporter Method for 2002



This report was run on 1/30/2004. Data is representative of this date.

Response Statistics 2002

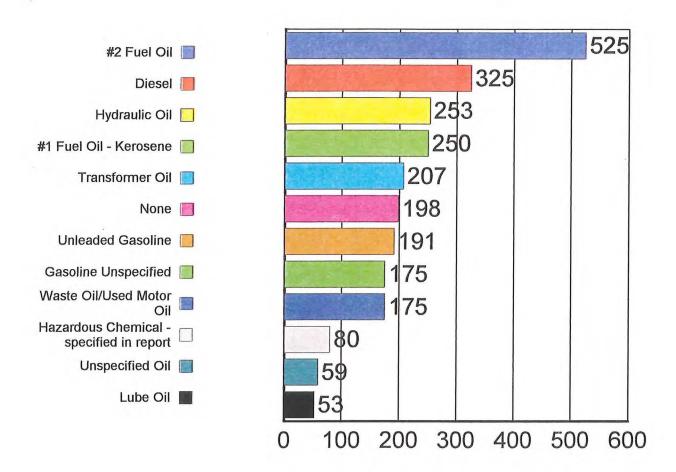
Spill Reports by Product Spilled for 2002 Number of Number of **Product Spilled Product Spilled Spills Spills** #1 Fuel Oil - Kerosene 250 Lube Oil 53 #2 Fuel Oil Marsh Sheen 525 14 7 #4 Fuel Oil Medical Waste 2 #5 Fuel Oil 2 Mercury 41 #6 Fuel Oil 19 Non-Chemical Non-Oil Specified in report 25 Algae Blooms/Plant Pollen Sheens 5 Non-Chemical Non-Oil Unspecified 2 9 Ammonia None 198 Non-Hazardous Chemical Specified in report Anti-freeze 45 20 7 Asphalt Non-Hazardous Chemical Unspecified 3 **Aviation Gasoline** 9 Oil - Other - Specify in Report 53 Chlorine 5 PCB Oil 6 Corrosive Pesticide General 8 6 Crude Oil Sulfuric Acid 1 12 **Demolition Debris** 6 Transformer Oil 207 Diesel 325 Transmission Oil 18 Gasoline Unspecified 175 Unknown Substance 16 Hazardous Chemical - specified in report 80 Unleaded Gasoline 191 Hazardous Chemical - Unspecified **Unspecified Fuel Oil** 11 21 Hydraulic Oil 253 **Unspecified Motor Fuel** 14 Hydrochloric Acid Unspecified Oil 2 59 Jet Fuel Waste Oil (as Haz Chem) 13 Waste Oil/Used Motor Oil Leaded Gasoline 4 175

This report was run on 1/30/2004. Data is representative of this date. The number of spill reports reflected does not show the actual number of spills because one spill may have multiple products spilled.

2

Liquors

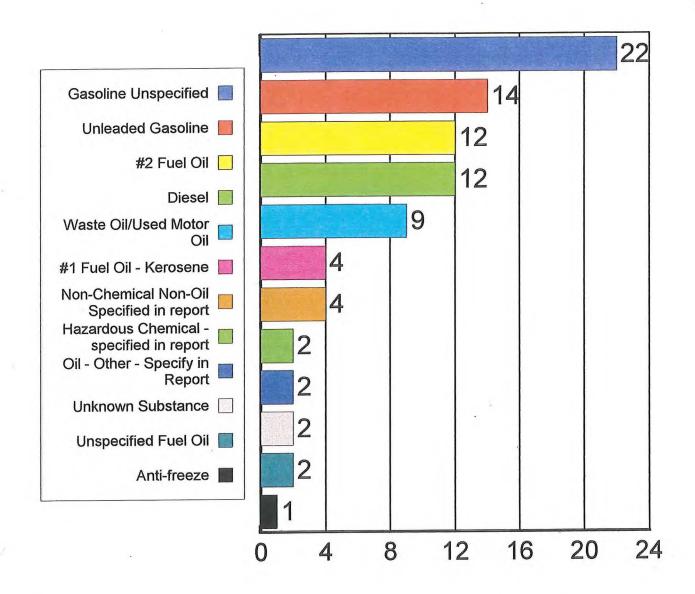
Top Twelve Products Involved in Reports for 2002



Number of Reports

This report was run on 1/30/2004. Data is representative of this date. The number of spill reports reflected does not show the actual number of spills because one spill may have multiple products spilled.

Top Twelve Products Contaminating Wells in 2002



Number of Wells Impacted

Product Catagories vs Wells Impacted for 2002

Product Category	Number of Spills	Number of Wells Impacted
Hazardous & NonHazardous Chemicals	262	3
Heavy Fuel Oils	28	0
Home Heating Oils	796	18
Motor Fuels	731	48
Non Oil, Non Hazardaous	244	4
Other Oils	826	12
Unknown	16	2
Total	2,903	87

The Product Catagories above contain the following product types:

Home Heating Oils :	Heavy Fuel	Motor Fuels :	Other Oils:	Hazardous &
	Oils:			Non-Hazardous
				Chemicals:
#1 Fuel Oil	#4 Fuel	Gasoline Unspecified	Lube Oil	Demolition Debris
# 2 Fuel Oil	#5 Fuel	Leaded Gasoline	Asphalt	Pesticide (General)
Heating Oils Unspecified	#6 Fuel	Unleaded Gasoline	Crude Oil	PCB Oil (over 50 ppm)
		Aviation Gasoline	Unspecified Oil	Sulfuric Acid
		Jet Fuel	Waste Oil	Corrosives
		Diesel	Transmission Oil	Chlorine
		Unspecified Motor Fue	els	Hazardous Chemicals
				Ammonia
				Hydrochloric Acid
				Medical Waste
				Antifreeze
				Liquors
				Non-Hazardous
				Chemicals
				Mercury

This table's primary purpose is to show that Home Heating Oils and Motor Fuels are the most frequent contaminants found by response services in wells (for groundwater). By this analysis, they are the greatest threat to Maine's groundwater. Close examination of the data shows that the ratio of home heating oils and motor fuel spills to well water contaminations is about 23:1. That is to say, on average, every twenty-fourth spill of home heating oil or motor fuel results in one contaminated well case.

This report was run on 1/30/2004. Data is representative of this date. The number of spill reports reflected does not show the actual number of spills because one spill may have multiple products spilled.

Number of Wells Impacted or Threatened for 2002

Sorted by Spill Type and Product Found

Spill Type	Product Found	Number of Incidents	Wells at Risk	Wells Impacted
Hazardons	Material Incident			
mazai uous .	Anti-freeze	1	1	0
	Hazardous Chemical - specified in report	6	13	1
	Hydraulic Oil	1	1	0
	Transmission Oil	1	1	0
	Unspecified Motor Fuel	1	1	0
Non Oil No	on-Hazardous Incident	1	-	
Non-On, INC	#2 Fuel Oil	1	1	0
	Anti-freeze	1	0	1
	Corrosive	1	1	0
	Gasoline Unspecified	3	5	5
	Non-Chemical Non-Oil Specified in report	3	5	3
	Non-Chemical Non-Oil Unspecified	1	1	0
	Non-Hazardous Chemical Specified in report	1	1	0
		10	14	0
	None	2	2	2
	Unknown Substance	2	1	1
	Unleaded Gasoline			0
	Unspecified Fuel Oil	1	1	
Albert L. A	Waste Oil/Used Motor Oil	2	2	0
Oil Incident		(0)	96	1
	#1 Fuel Oil - Kerosene	69	86	4
	#2 Fuel Oil	64	68	12
	Anti-freeze	2	2 .	0
	Demolition Debris	1	1	0
. 19	Diesel	28	35	12
	Gasoline Unspecified	30	28	17
	Hazardous Chemical - Unspecified	1	1	0
	Hazardous Chemical - specified in report	1	1	1
	Hydraulic Oil	5	7	0
	Lube Oil	1	1	0
	Mercury	1	1	0
	Non-Chemical Non-Oil Specified in report	1	0	1
	None	1	2	0
	Oil - Other - Specify in Report	9	16	2
	Sulfuric Acid	1	1	0
	Transformer Oil	1	1	0
	Transmission Oil	1	1	0
	Unleaded Gasoline	28	46	13
	Unspecified Fuel Oil	2	1	2
	Unspecified Motor Fuel	1	1	0
	Unspecified Oil	4	8	1
	Waste Oil/Used Motor Oil	11	14	9
Totals	Market West Three Times Times	301	373	87

This report was run on 1/30/2004. Data is representative of this date.

Amount of Material Spilled in 2002 by Response Office and Spill Type

Response Offi	ice Spill Type	В	G	P	U	Y
Augusta	Hazardous Material Incident	0	58,826	852	0	0
	Non-Oil, Non-Hazardous Incident	8	15	0	0	0
	Oil Incident	0	17,480	0	0	0
	Office Total	8	76,320	852	0	0
Bangor	Hazardous Material Incident	0	551,088	29,440	0	0
	Non-Oil, Non-Hazardous Incident	0	77	0	0	0
	Oil Incident	0	18,857	0	0	0
	Office Total	0	570,022	29,440	0	0
Portland	Hazardous Material Incident	0	3,574	1,501	0	0
	Non-Oil, Non-Hazardous Incident	0	331	30	0	0
	Oil Incident	0	52,135	10	0	40
	Office Total	0	56,040	1,541	0	40
Presque Isle	Hazardous Material Incident	0	196	0	0	. 0
	Non-Oil, Non-Hazardous Incident	0	1,571	0	0	0
	Oil Incident	0	10,037	0	0	0
	Office Total	0	11,804	0	0	0
Grand Total of	f All Offices Combined	8	714,186	31,833	0	40

NOTE: All numeric fields are BEST ESTIMATES by the OHMS involved based on the years of experience with spill events. Units of measure are abbreviated as follows:

B = Barrels

P = Pounds

G = Gallons

U = Unknown

Y = Cubic Yards

This report was run on 1/30/2004. Data is representative of this date.

Recovery Method

The following six pages detail the amount of material that was recovered using various recovery methods. Although it would seem logical to compare the amounts of material spilled in each region to the amounts recovered, the reader should avoid this comparison. The data is incomparable because the physical form of the recovered product may be different than the spilled form. A thousand gallons of gasoline could spill onto the ground, but cleanup may involve cubic yards of soil, gallons of pure gasoline, or pounds of saturated sorbent material.

The following list shows some of the recovery methods used by the responders when they enter report data into the HOSS (Hazardous Oil Spill System) database at the Maine Department of Environmental Protection.

Category

Vacuum Trucks

Pumps

Sorbents

Skimmers

Excavation

Burning

Treatment in Place

Other

None *

(Treated by) Licensed Treatment Facility

The following list details the abbreviations used on the next four pages for the amounts of material recovered.

Units of Measure

B = Barrels

G = Gallons

P = Pounds

T = Tons

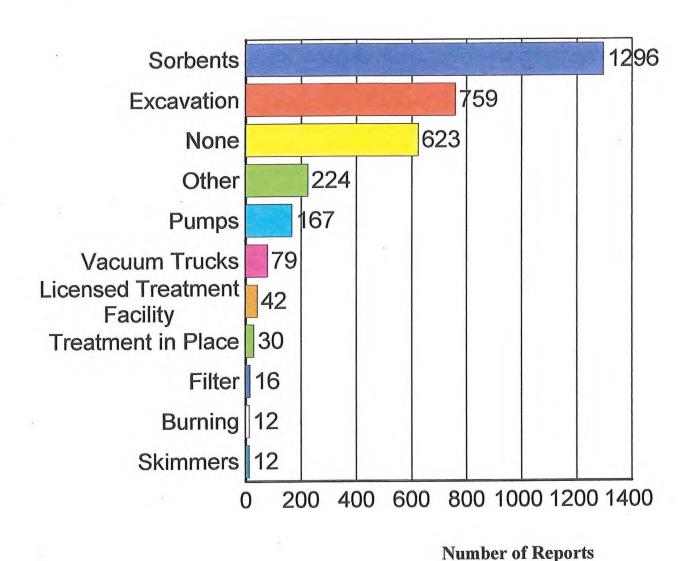
U = Unknown

Y = Cubic Yards

Recovered Amounts of Spilled Material in 2002 by Spill Type and Recovery Method

	Recovery Method	В	G	P	T	U	Y
Hazardous	Burning	0	0	0	0	0	0
Material Incident	Excavation	0	581	0	0	0	38
	Licensed Treatment	0	1,086,850	76	0	0	0
	None	0	6	0	0	0	0
	Other	0	27,938	6,176	0	0	5
	Pumps	0	1,118,002	6,002	0	0	14
	Sorbents	0	447	1,630	2	0	0
	Treatment in Place	0	282	1,600	0	0	9
	Vacuum Trucks	0	18,590	0	0	0	0
Non-Oil,	Excavation	0	0	20	70	0	11
Non-Hazardous Incident	None	0	0	0	0	0	0
	Other	0	227	50	0	0	0
	Pumps	0	285	0	0	0	0
	Skimmers	0	1	0	0	0	0
	Sorbents	0	1,760	0	0	0	0
	Treatment in Place	0	0	0	0	0	0
	Vacuum Trucks	0	1,195	0	0	0	0
Oil Incident	Burning	0	743	20	28	0	0
	Excavation	2,350	159,825	4,741	15,258	0	23,567
	Filter	0	5,507	0	379	0	110
	Licensed Treatment	1	10,404	0	109	0	11
	None	0	51	0	0	0	0
	Other	13	65,397	2,100	332	0	1,716
	Pumps	2,301	167,123	1,812	3,492	0	1,908
	Skimmers	0	6,969	0	177	0	36
	Sorbents	45	79,944	7,372	1,640	0	2,395
	Treatment in Place	5	68	20	402	0	2
	Vacuum Trucks	2,300	76,226	1,680	1,419	. 0	739

Recovery Methods Used in 2002



This report was run on 1/30/2004. Data is representative of this date. The total number of recovery methods used in 2002 is greater than the total number of spill reports due to some reports had multiple recovery methods used during a spill.

Types of Hazardous Material Spilled

The following table, "Hazardous Materials and Other Non-Oil Materials Spilled in 2002", contains a summary of the best information available to Response Services as to the types of chemicals and other hazardous materials spilled during 2002. It is not always possible to identify an unknown substance in any but the broadest of terms. General characteristics such as flash point, or pH are often the only factors that can be determined about an unknown without costly laboratory analysis. Given these factors, a substance may qualify as a hazardous material, yet remain an unknown.

The problem of estimating amounts spilled can also be difficult. Uncontrolled sites may have had any number of products dumped there for months or years, before anyone noticed or decided to report the event(s). Catastrophic events, like floods, result in barrels and other containers being released into the environment full or partially filled with product. These containers are often found empty or with their contents diluted. When a tank truck rolls over, a best estimate is made of the amount spilled, but the exact amount is seldom measured. If a responder is called to inspect leaking barrels at a site, it is often difficult to know how much product has already been lost into the ground. As a result of this, estimates of amounts spilled are often based on past experience with other similar spills. Each substance listed was discharged in at least the amount listed; usually it is reasonable to assume more than that amount was lost to the environment.

There are cases where this assumption should not be made. Most spills are industrial in nature; when a company either public or private has had an accident and product was lost. In general, industries know what chemicals are in what processes and in what volumes. Central Maine Power (CMP), for instance, knows how much oil is in a transformer and on those occasions when one is ruptured they make a fairly accurate assessment as to how much oil is lost. Keeping in mind the health and safety of the public as well as its employees, CMP then handles the material as though it were PCB contaminated until enough evidence is collected to indicate otherwise. Also, paper companies are quite precise in their figures of the amount of chlorine released into the atmosphere and the amount of chlorine dioxide spilled. Pure product fields, as a result of this industry scrutiny, should contain accurate data. Cases where a general family of hazardous materials is listed may well contain spill amounts that are much more than the amounts listed.

The following symbols have been utilized:

G - Gallons
P - Pounds
Y - Cubic Yards
B - Barrels

Unknown

IJ

Number of Incid	lent: Material Spilled	Amount Spilled	Unit of Measure
3	Algae Blooms/Plant Pollen Sheens	Unknown	${f U}$
1	245-T	0.00	G
1	8263 Plus	15.00	G
1	Acetone	Unknown	${f U}$
1	Acetylene	Unknown	${f U}$
1	Aerosol Carb Cleaner	250.00	P
1	Algae Blooms/Plant Pollen Sheens	Unknown	\mathbf{G}
1	Alkaline A	30.00	G
1	Aluminum Sulphate	12,000.00	G
2	Ammonia	0.00	\mathbf{G}
3	Ammonia	1,110.00	P
4	Ammonia	Unknown	${f U}$
23	Anti-freeze	54.35	\mathbf{G}
2	Anti-freeze	Unknown	\mathbf{U}
1	Asbestos	Unknown	${f U}$
1	Ash	Unknown	${f U}$
1	Bacteria	Unknown	${f U}$
1	Barvo ZN	5.00	\mathbf{G}
2	Black Liquors	530,918.00	\mathbf{G}
1	Bleach	Unknown	${f U}$
1	Carbon Tetrachloride	0.50	\mathbf{G}
2	Caustic Soda	205.00	\mathbf{G}
1	Caustic Solution	1,560.00	\mathbf{G}
2	Chlorine	8.50	. P
3	Chlorine	Unknown	. U
3	Chlorine Dioxide	45,400.00	\mathbf{G}
1	Concrete Sealer	1.00	\mathbf{G}
$\hat{1}$	Coolant	2.00	\mathbf{G}
5	Corrosive	1,052.00	\mathbf{G}
1	Creosote	0.10	\mathbf{G}
4	Demolition Debris	Unknown	${f U}$
1	Dinoseb	0.00	G
1	D'Limonene	0.00	G
1	Dry Cleaner Solvent	Unknown	${f U}$
2	Ether	0.00	G
1	Ether	50.00	P
1	Ethylene Glycol	25.00	G
1	Fertilizer Mulch	5.00	\mathbf{G}
1	Fiberglass	Unknown	${f U}$
1	Formaldehyde Solution	25.00	G
1	Freon	350.00	P
1	Glycol	1.00	\mathbf{G}
3	Hazardous Chemical - specified in report *	568.25	P
13	Hazardous Chemical - specified in report *	1,138.45	$\hat{\mathbf{G}}$
5	Hazardous Chemical - specified in report *	Unknown	Ŭ
4	Hazardous Chemical - Unspecified	123.50	G
4	Hazardous Chemical - Unspecified	Unknown	Ü
1	HCI, FH	0.00	P
-	,		

1 HCI, FH
This report was run on 01/30/2004. Data is representative of this date.

^{*}The amount spilled shown is the least amount spilled.

Hazardous Materials and Other Non-Oil Materials Spilled in 2002

1	Hydraulic Oil	Unknown	U
2	Hydrochloric Acid	1.25	G
1	Lead Debris	165.00	G
1	Liquid Oxygen	29,000.00	P
12	Marsh Sheen	10.00	G
2	Marsh Sheen	Unknown	U
2	Medical Waste - Syringes (3)	0.25	P
1	Melamine Contaminated Waste	20.00	P
9	Mercury	1.39	G
12	Mercury	Unknown	U
17	Mercury	84.22	P
1	Naptha	1.00	G
1	Naturally Ocurring Arsenic	Unknown	U
1	Nitric Acid	100.00	\mathbf{G}
1	Nitric/Hydrofluoric Acid	20.00	\mathbf{G}
8	Non-Chemical Non-Oil Specified in report	65.50	G
1	Non-Chemical Non-Oil Unspecified	1,000.00	G
1	Non-Chemical Non-Oil Unspecified	Unknown	U
189	None	0.00	
2	Non-Hazardous Chemical Specified in repo	320.00	P
4	Non-Hazardous Chemical Specified in repo	2,313.00	G
3	Non-Hazardous Chemical Unspecified	Unknown	U
1	Oxygen	Unknown	U
1	Paint Thinner	1.00	G
1	Paper Machine White Water	300.00	G
5	PCB Oil	4.39	G
2	PCB Oil	Unknown	U
3	Pesticide General*	0.50	G
2	Petroleum-based paint	10.00	. G
1	Phenolic Resin	0.50	\mathbf{G}
1	Phosphoric Acid 62 %	600.00	G
1	Photo Waste	50.00	\mathbf{G}
1	Piome 188 Resin	5.00	G
1	Piomel Resin	1.00	G
1	Potassium Hydroxide	2.00	G
1	Potassium Hydroxide 49%	3.00	G
1	Process Water	20.00	G
4	Propane	Unknown	\mathbf{U}
4	Propylene Glycol	121.00	G
1	R-22	2.00	P
1	Sewer	0.00	G
1	Sludge & Water	0.00	G
1	Sodium Caprylate	20.00	P
1	Sodium Hydroxide	10.00	P
1	Sodium Hydroxide	270.00	G
1	Sodium Hydroxide 50%	7,500.00	G
1	Sodium Hydroxide/Water mixture	30.00	G
5	Sodium Hypochlorite	5,500.00	G
1	Sodium Nitrite Solution	0.50	G
1	Soot	10.00	G
1	Standard Medical Waste	30.00	P
9	Sulfuric Acid	501.70	G
	04 10 0 10 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1		

This report was run on 01/30/2004. Data is representative of this date.

^{*}The amount spilled shown is the least amount spilled.

Hazardous Materials and Other Non-Oil Materials Spilled in 2002

1	Sulfuric Acid	Unknown	\mathbf{U}
1	Tetrachlorethylene	0.00	\mathbf{G}
1	Transmission Oil	5.00	\mathbf{G}
1	Transmission Oil	Unknown	\mathbf{U}
7	Unknown Substance	3,012.10	\mathbf{G}
7	Unknown Substance	Unknown	\mathbf{U}
1	Used Cooking Oil	65.00	\mathbf{G}
1	Waste Acetic Acid	220.00	\mathbf{G}
4	Waste Oil (as Haz Chem)	115.00	G
1	Wax	500.00	\mathbf{G}
· 1	Windshield Washer Fluid	0.50	\mathbf{G}
1	Xylene	5.00	G

This report was run on 01/30/2004. Data is representative of this date.

^{*}The amount spilled shown is the least amount spilled.

Types of Facilities with Corresponding Subcategories

The graphs on the next five pages utilize the following categories and subcategories:

Business

Business - Commercial

Business - Farm

Business - Industrial

Business - Other

Government

Government - Federal

Government - Local

Government - Military

Government - Other

Government - State of Maine

Government, Municipal or Religious Facility

Other

Other - Mystery

Other - None specified

Other - Religious

Other - Specified in Report

Residential

Residential - Multi Family

Residential - Other

Residential - Single Family

School

School - Private

School - Public

Terminal

Terminal - Air

Terminal - Bulk Plant

Terminal - Licensed

Terminal - Marina

Terminal - Other

Terminal - Service Station

Transportation System

Transportation - Air

Transportation - Marine

Transportation - Other Off Road

Transportation - Pipeline

Transportation - Rail

Transportation - Road

Utility

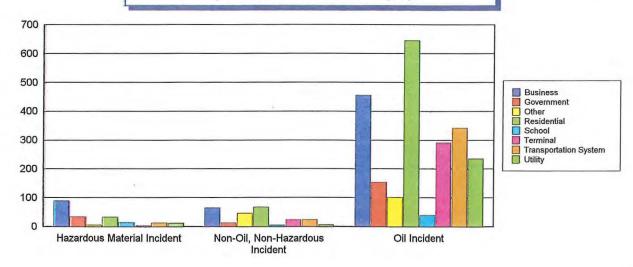
Utility - Other

Utility - Power

Utility - Telecommunications

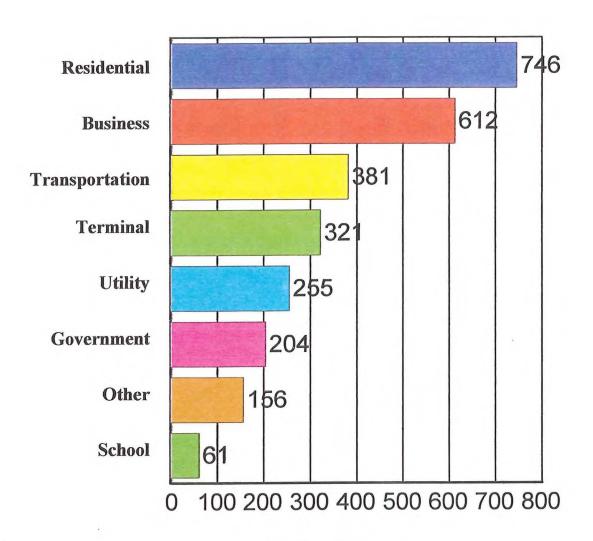
This report was run on 1/30/2004. Data is representative of this date.

Types of Facilities Involved in Reports during 2002 by Incident Location Category



Hazardous Material Incident	208
Business	90
Government	35
Other	6
Residential	33
School	15
Terminal	4
Transportation System	13
Utility	12
Non-Oil, Non-Hazardous Incident	258
Business	66
Government	14
Other	47
Residential	68
School	6
Terminal	25
Transportation System	25
Utility	7
Oil Incident	2,270
Business	456
Government	155
Other	103
Residential	645
School	40
Terminal	292
Transportation System	343
Utility	236
Grand Total of Spills	2,736

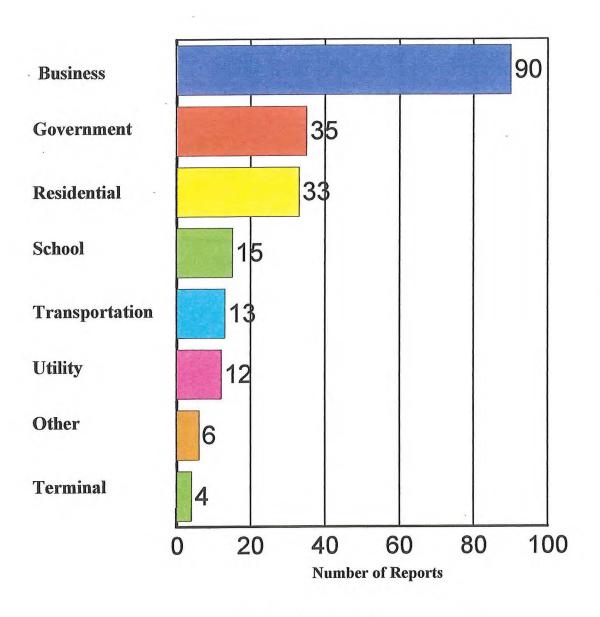
Types of Facilities Involved in All Spill Reports for 2002



Number of Reports

Total Number of Spills 2,736

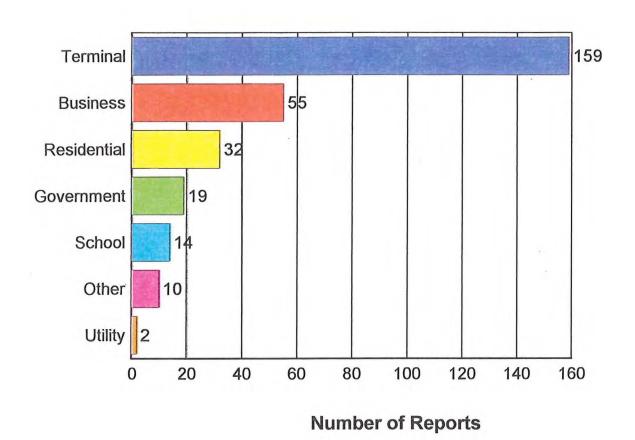
Types of Facilities Involved in Hazardous Material Incidents in 2002



Total Number of Reports

208

Types of Facilities Involving Underground Storage Tanks in 2002

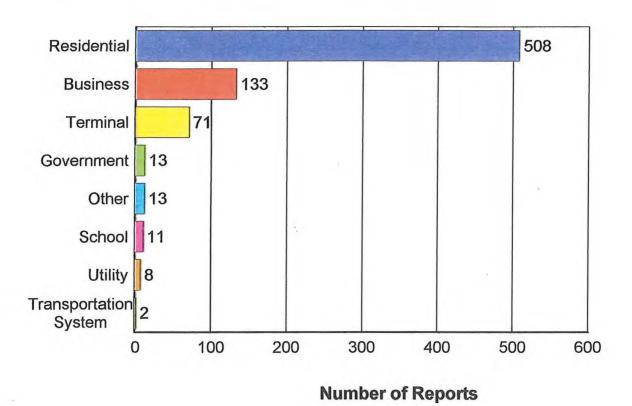


Total Number of Reports

291

This report was run on 1/30/2004. Data is representative of this date.

Types of Facilities Involving Aboveground Storage Tanks in 2002



Total Number of Reports

759

This report was run on 1/30/2004. Data is representative of this date.

Explanation of Discrepancies between 2002 Maine Coastal & Inland Surface Oil Clean-up Fund and Ground Water Oil Clean-up Fund Number of Barrels

The following two pages summarize the amount of specified products that have entered, or been transferred inside, Maine borders for 2002.

When product is first transferred into the state, the DEP applies the appropriate Maine Coastal & Inland Surface Oil Clean-up Fund and Ground Water Oil Clean-up Fund fees per barrel and these fees are deposited into the funds for the cleanup of future spills. The number of barrels of product is tracked by month and product type. Occasionally, product is transferred within the State from its initial repository to another storage site. The Maine Coastal & Inland Surface Oil Clean-up Fund transfer fees again apply and the number of barrels are tracked as a second transfer. As a result, the number of Maine Coastal & Inland Surface Oil Clean-up Fund barrels may be higher than the number of Ground Water Oil Clean-up Fund barrels in any given month.

The next two pages involve the following product types:

Ground Water Fund Barrels of Product Transported into Maine for 2002

<u>Product</u>	# of Barrels
Kerosene #1	1,220,665
Fuel Oil #2 (Diesel)	16,411,706
Fuel Oil #5	0
Fuel Oil #6	5,658,088
No Lead (Regular & Super)	20,373,041
Aviation	21,185
JP-4 (Jet Fuel)	0
JP-1 & Jet-A (Jet Fuel)	1,287,028
Asphalt	961,504
Crude Oil	152,591,366
Other Petroleum Products: (Mineral Oil, Hydraulic Fluid, etc)	48,091

<u>Total Barrels</u> <u>198,572,674</u>

Surface Fund Barrels of Product Transported/Transferred in Maine for 2002

of Barrels
1,220,665
16,622,885
0
6,532,470
20,373,041
21,185
0
1,287,028
961,504
52,591,366
48,091

Total Barrels

199,658,235