

MAINE STATE LEGISLATURE

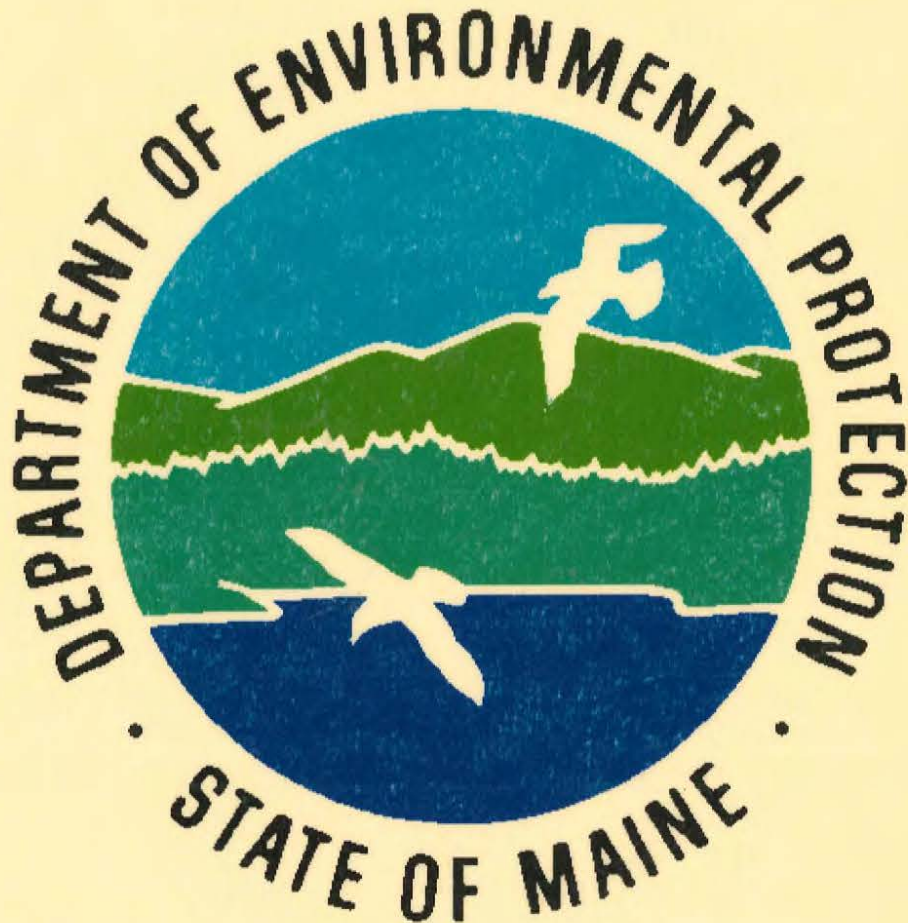
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2003
Statistical Report
Division of Response Services
Spill Report Case Load

Bureau of Remediation & Waste Management



January 2005

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1042
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S74
2003

Compiled by:
Diana J. Frith

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INTRODUCTION

This report is the Maine Department of Environmental Protection's (DEP) statewide Statistical Report of the Division of Response Services spill caseload for 2003. 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 2003, 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 2,798 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:

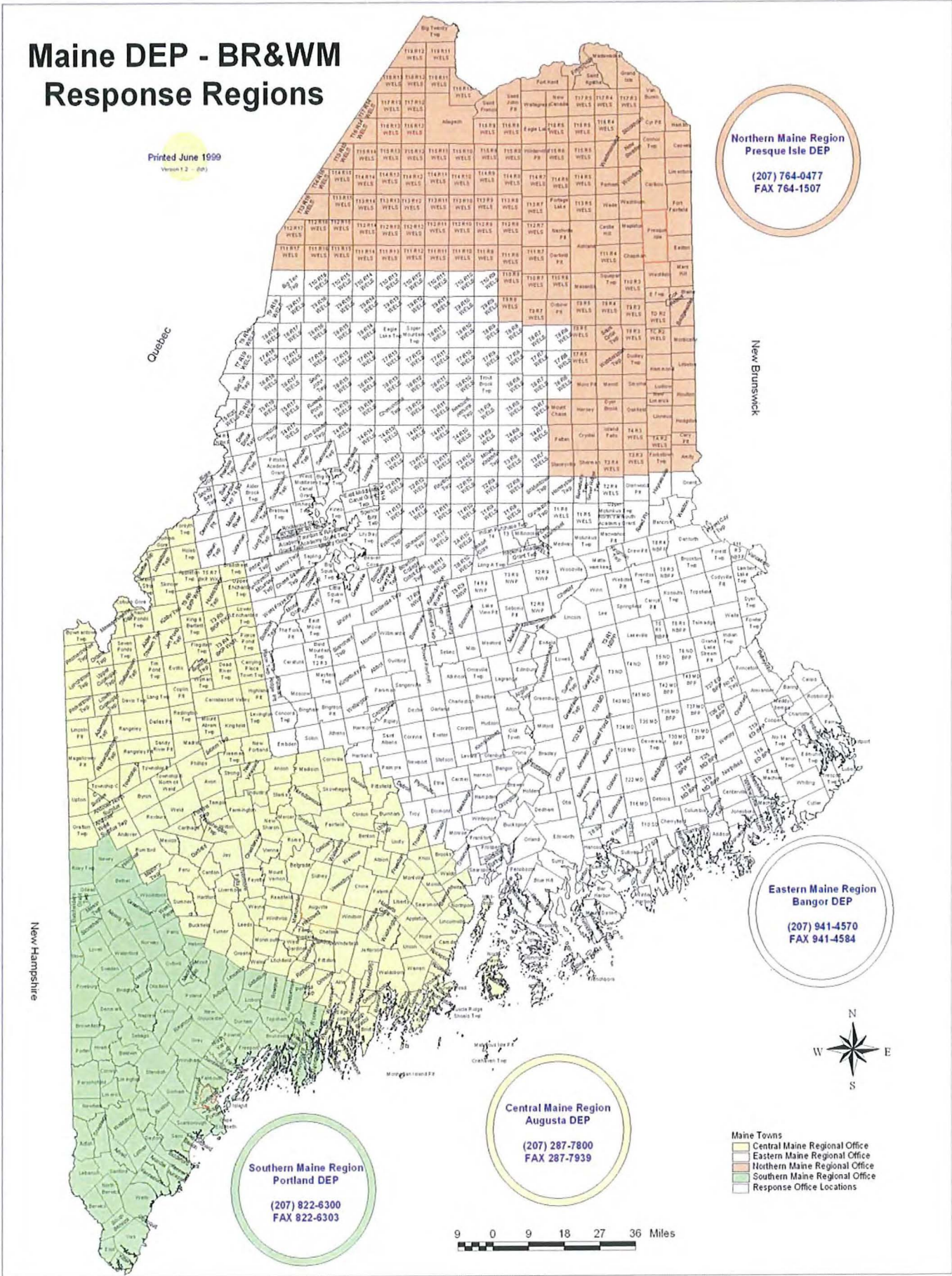
| | |
|--------------|----|
| Augusta | A |
| Bangor | B |
| Portland | P |
| Presque Isle | PI |

Abbreviations may also be used with Incidents and Hazardous Material:

| | |
|-----------|-----|
| Incident | Inc |
| Hazardous | Haz |
| Materials | Mat |

Maine DEP - BR&WM Response Regions

Printed June 1999
Version 1.2 - (04)



Northern Maine Region
Presque Isle DEP
(207) 764-0477
FAX 764-1507

Eastern Maine Region
Bangor DEP
(207) 941-4570
FAX 941-4584

Central Maine Region
Augusta DEP
(207) 287-7800
FAX 287-7939

Southern Maine Region
Portland DEP
(207) 822-6300
FAX 822-6303

- Maine Towns**
- Central Maine Regional Office
 - Eastern Maine Regional Office
 - Northern Maine Regional Office
 - Southern Maine Regional Office
 - Response Office Locations

9 0 9 18 27 36 Miles

Maine DEP - BR&WM Response Regions

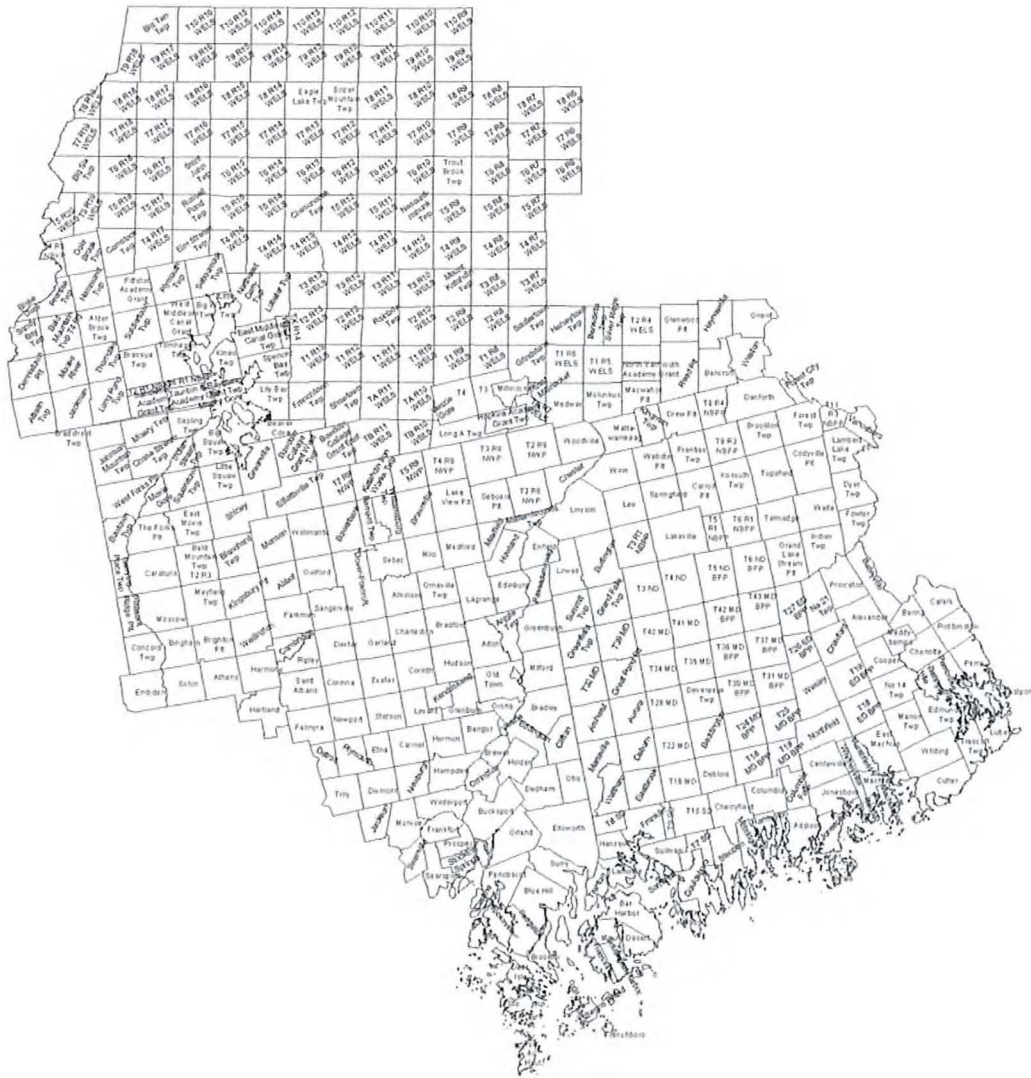
Augusta Region



Central Maine Region
Augusta DEP
(207) 287-7800
FAX 287-7939

Maine DEP - BR&WM Response Regions

Bangor Region



Eastern Maine Region
Bangor DEP
(207) 941-4570
FAX 941-4584

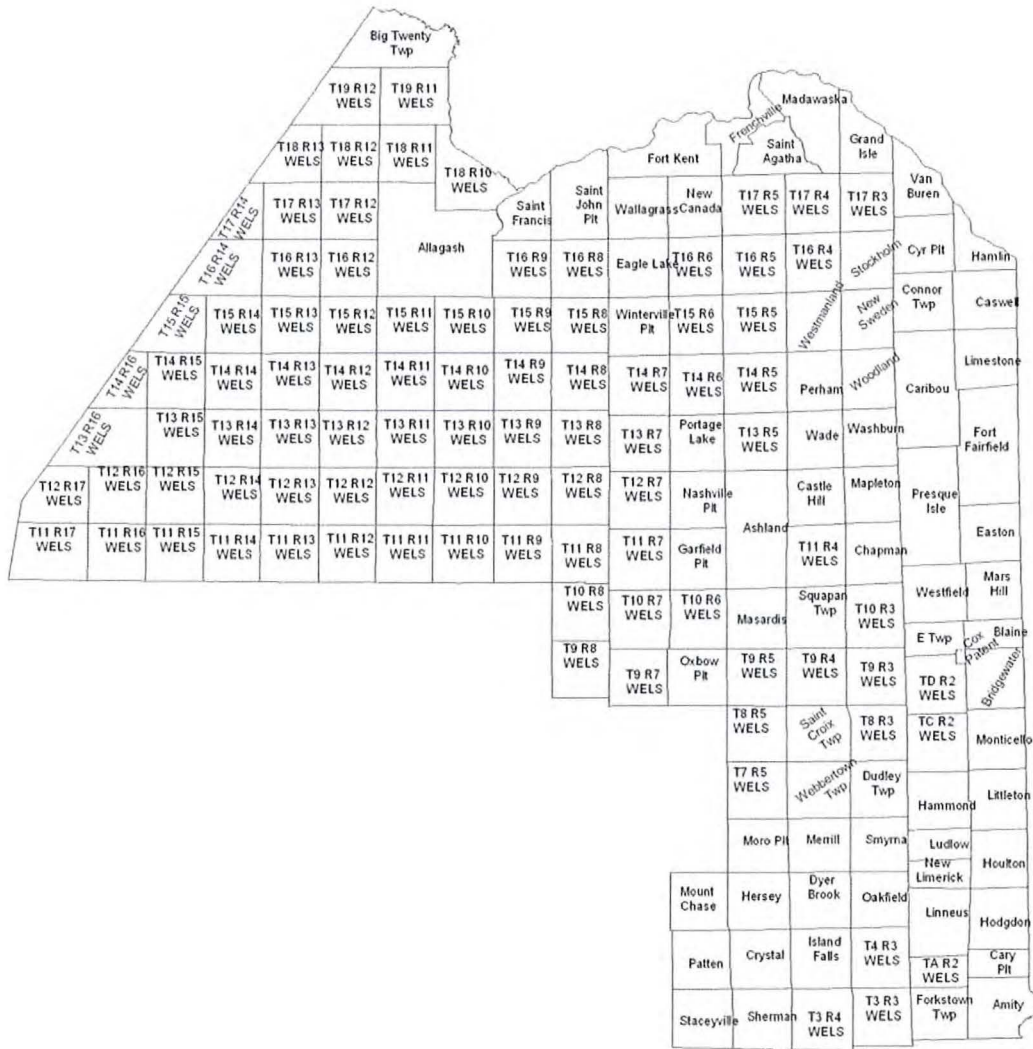
Maine DEP - BR&WM Response Regions

Portland Region



Maine DEP - BR&WM Response Regions

Presque Isle Region



Large Spills in 2003

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-575-2003 Buckfield Murray Oil Co.: A fuel delivery tanker overturned and ruptured on a country road. An estimated 1,300 gallons of #2 fuel oil spilled on the road shoulder where 300 gallons of free product were recovered and 292 tons of contaminated soil were excavated.

A-681-2003 West Gardiner Chapman's Oil: An overfill of approximately 500 gallons of #2 Fuel Oil resulted in the oil flowing into a nearby stream and pond. Ice blocks were cut out to allow the oil to pool on top of the water where it was collected through the utilization of pumps and sorbent materials. The excavation of contaminated soil was implemented in the Spring where approximately 100 cubic yards were removed.



B-18-2003 Millinocket Bowater – Great Northern Paper Inc.: The Millinocket mill's wastewater treatment plant had a pipeline failure at the force main. The failure resulted in an estimated 7,500,000 gallons of effluent bubbling up from under the pavement, flowing over the parking lot, and into Millinocket Stream.

B-46-2003 Bangor Bangor International Airport: An estimated 1,500 gallons of Jet Fuel leaked into two valve boxes via a leaky gasket between the tank farm side of the pipe line flange and the valve flange. Ice build-up was speculated to be the cause of the gasket becoming defective. The fuel was recovered with pumps.

I-125-2003 Easton J M Huber: An estimated 600 gallons of hydraulic oil leaked from a seal into Huber's hydraulic room. The oil was collected in floor drains and pumped in totes for disposal in Huber's boiler. Sorbents were used to clean residual oil from the floor.

P-263-2003 South Portland 4 Star Bulk Transportation: A tractor-trailer tanker

carrying JP-8 (jet fuel) failed to negotiate a turn at an intersection and rolled over. The truck slid along the pavement until being stopped by a granite curb. The tanker was breached and released its contents of an estimated 10,131 gallons to the ground. Unfortunately, the roads down gradient of the discharge had storm drains that emptied to a cove in the Fore River. The utilization of boom to contain and absorb the fuel, along with the use of vacuum trucks and excavation, proved to be effective methods in aiding the clean-up process of the free product.



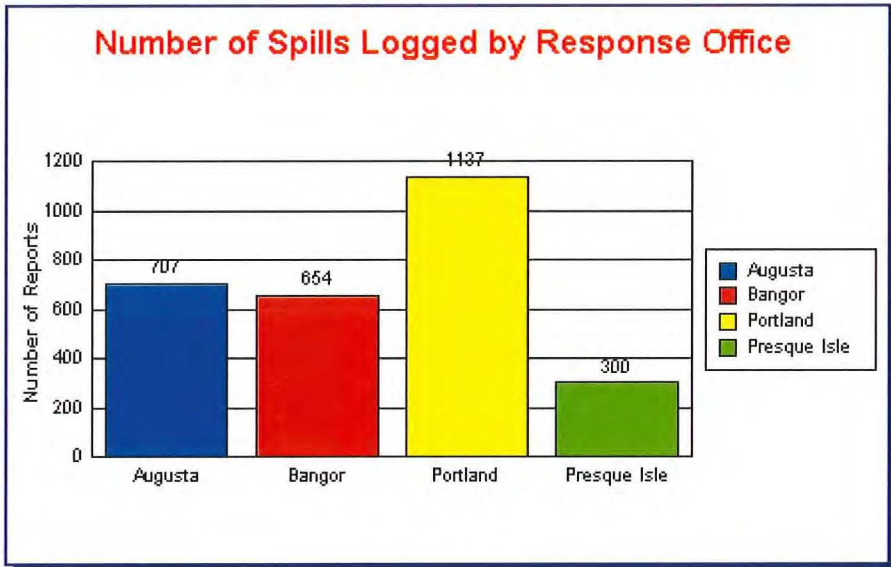
P-367-2003 Harrison Portland Pipeline Corp.: After being notified crude oil was surfacing along the pipeline in Harrison, excavation crews uncovered a rock beneath the pipeline that was causing an abrasion hole. This allowed an estimated 1000 gallons of crude oil to leak out. Patching the pipeline stopped the flow, and installation of a recovery well allowed for any free product to be recovered.



P-893-2003 Portland Burnham & Morrill Co.: While transferring #5 fuel oil from one above ground tank to another, an employee became distracted and overfilled the receiving tank by an estimated 3,000 gallons. The oil flowed out a vent pipe, on to a roof of the tank building, and then traveled in two directions: one to a back alley which had a roof drain leading to the facility's storm drain system, and the other to a parking lot with another storm drain pipe. Luckily, both drain systems met in an oil water separator prior to discharging into Casco Bay. The majority of the product was vacuumed up and the remainder was collected with sorbents.



**Logged Spills
by Response Office
and Spill Type
for the year of
2003**

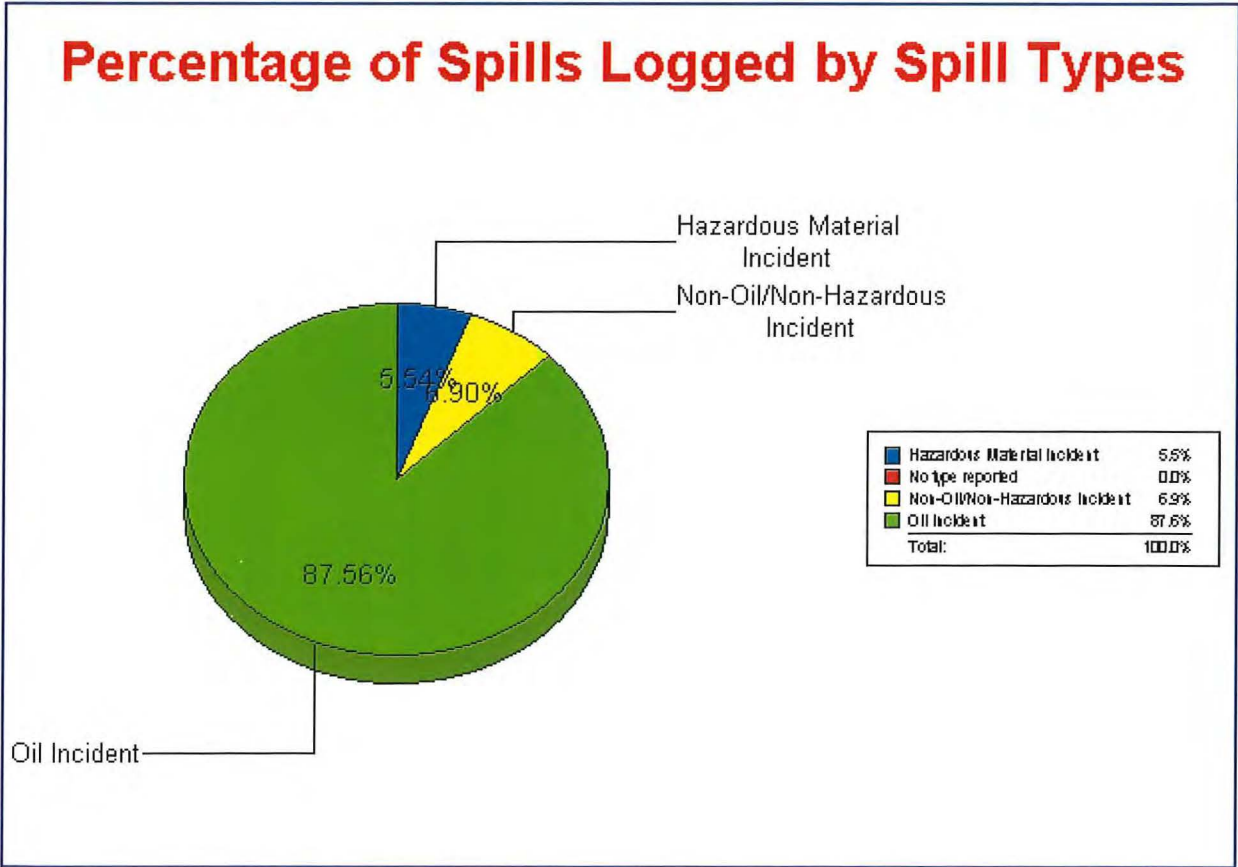


| Augusta | | |
|--------------------------------|--------------------|-------------|
| Hazardous Material Incident | 47 | 6.65% |
| Non-Oil/Non-Hazardous Incident | 29 | 4.10% |
| Oil Incident | 631 | 89.25% |
| Office Total Spills | <u>707</u> | |
| Bangor | | |
| Hazardous Material Incident | 27 | 4.13% |
| Non-Oil/Non-Hazardous Incident | 78 | 11.93% |
| Oil Incident | 549 | 83.94% |
| Office Total Spills | <u>654</u> | |
| Portland | | |
| Hazardous Material Incident | 68 | 5.98% |
| No type reported | 1 | 0.09% |
| Non-Oil/Non-Hazardous Incident | 63 | 5.54% |
| Oil Incident | 1005 | 88.39% |
| Office Total Spills | <u>1137</u> | |
| Presque Isle | | |
| Hazardous Material Incident | 13 | 4.33% |
| Non-Oil/Non-Hazardous Incident | 23 | 7.67% |
| Oil Incident | 264 | 88.00% |
| Office Total Spills | <u>300</u> | |
| Total Spills for 2003 | | 2798 |

This report was run on 1/10/2005. Data is representative of this date.

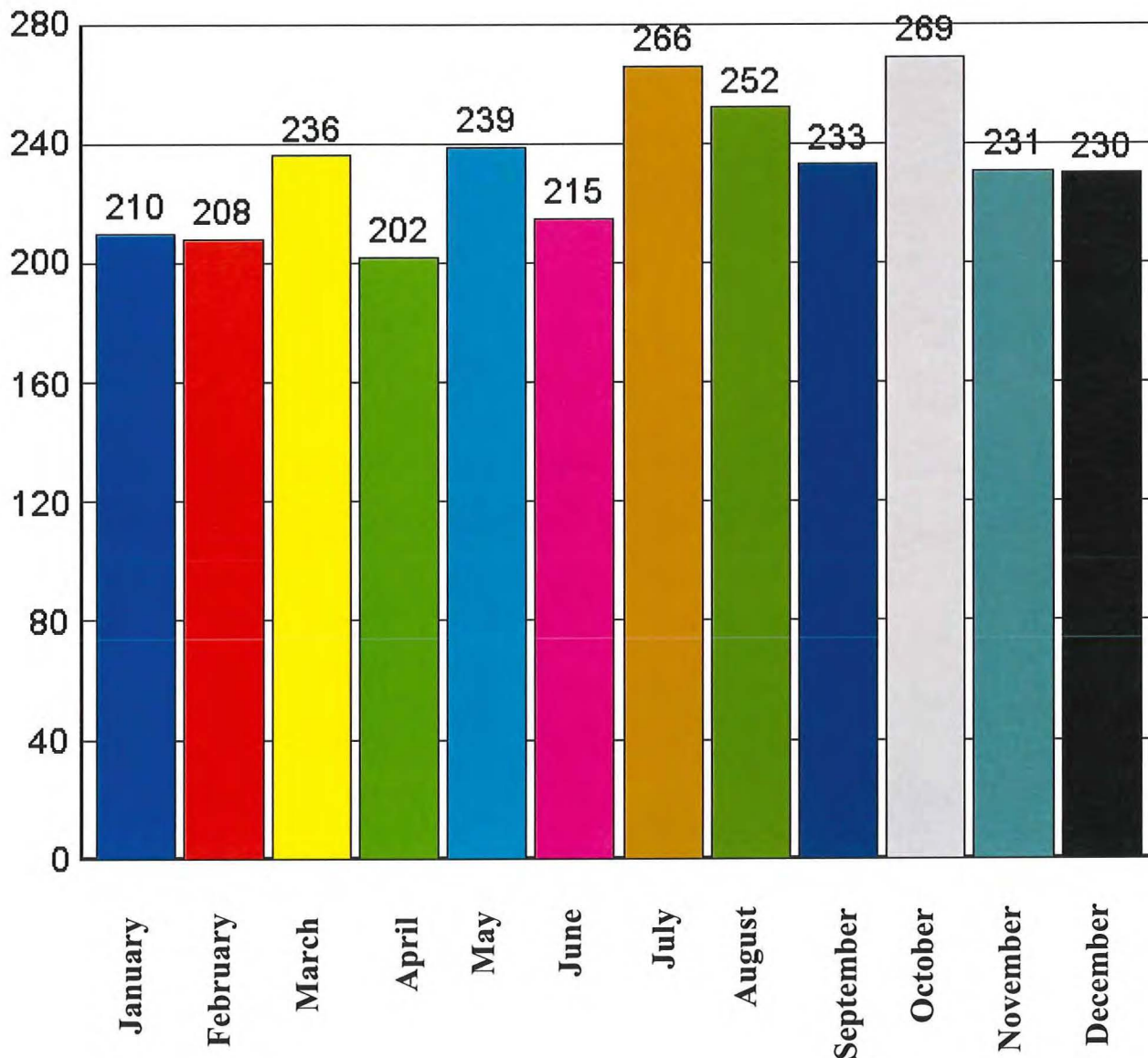
Percentage of Spills Logged by Spill Types for 2003

| <u>Type of Spill</u> | <u>Number of Spills Logged</u> | <u>Percentage of Spills Logged</u> |
|--------------------------------|--------------------------------|------------------------------------|
| Hazardous Material Incident | 155 | 5.54% |
| No type reported | 1 | 0.00% |
| Non-Oil/Non-Hazardous Incident | 193 | 6.90% |
| Oil Incident | 2449 | 87.56% |



This report was run on 1/10/2005. Data is representative of this date.

Number of Spills Reported by Month for 2003

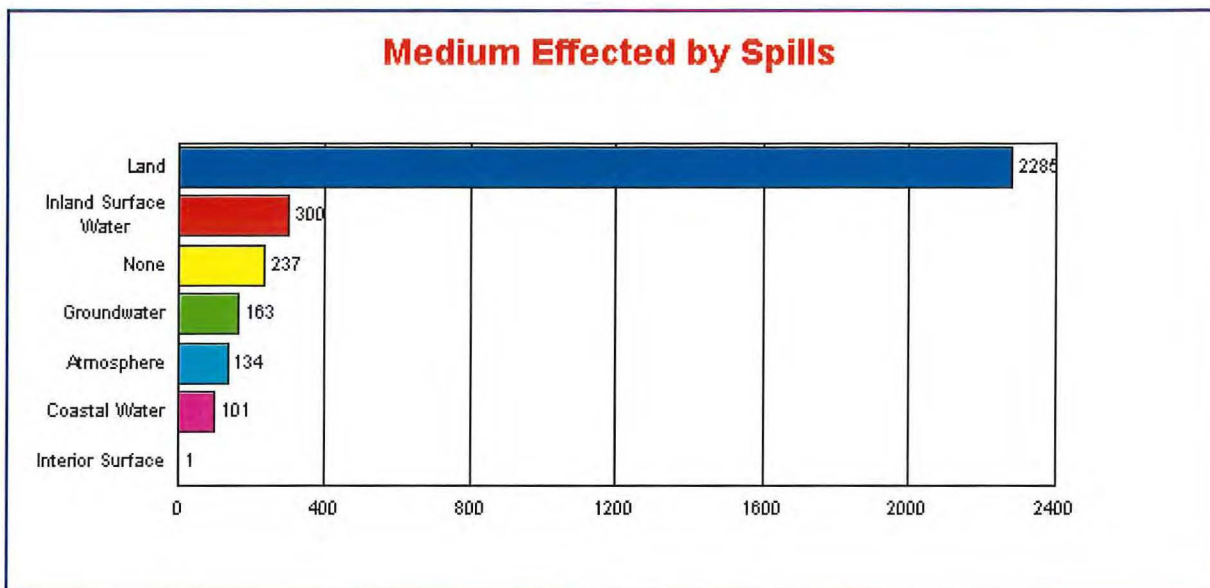


Total Number of Spills for 2003

2,791

This report was run on 1/10/2005. Data is representative of this date. Seven reports are missing due to either late reporting or incorrect reported spill dates.

Spill Reports Arranged by Medium Effected for 2003



| | Augusta | Bangor | Portland | Presque Isle | Total |
|-----------------------------|---------|--------|----------|--------------|-------|
| Land | 572 | 531 | 923 | 259 | 2,285 |
| Inland Surface Water | 95 | 61 | 115 | 29 | 300 |
| None | 52 | 76 | 91 | 18 | 237 |
| Groundwater | 25 | 26 | 91 | 21 | 163 |
| Atmosphere | 20 | 14 | 95 | 5 | 134 |
| Coastal Water | 27 | 14 | 60 | 0 | 101 |
| Total | 815 | 723 | 1,392 | 333 | 3,263 |

This report was run on 1/10/2005. 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 2003 by Cause of Spill |
|---|

| <u>Augusta</u> | <u>Cause of Spill</u> | <u>Number of Spills</u> |
|----------------|------------------------------------|-------------------------|
| | Accident - Human Error | 62 |
| | Accident - Other | 14 |
| | Accident - Physical Breakage | 47 |
| | Accident - Poor Workmanship | 14 |
| | Accident - Storm Damage | 23 |
| | Accident - Transportation | 60 |
| | Corrosion - Other | 11 |
| | Corrosion - Piping | 15 |
| | Corrosion - Tank | 43 |
| | Discharge - Bilge | 2 |
| | Discharge - Deliberate/Other | 15 |
| | Discharge - Vandalism | 5 |
| | Mechanical Failure - Gasket/Seal | 35 |
| | Mechanical Failure - Loose Fitting | 31 |
| | Mechanical Failure - Other | 31 |
| | Mechanical Failure - Piping/Hose | 76 |
| | Mechanical Failure - Valve | 16 |
| | Other - Known Cause | 18 |
| | Other - No Cause | 51 |
| | Other - Unknown | 51 |
| | Overfill | 82 |
| | Process Failure - Other | 5 |
| | Office Total | 707 |

| <u>Bangor</u> | <u>Cause of Spill</u> | <u>Number of Spills</u> |
|---------------|------------------------------------|-------------------------|
| | Accident - Human Error | 57 |
| | Accident - Other | 17 |
| | Accident - Physical Breakage | 52 |
| | Accident - Poor Workmanship | 5 |
| | Accident - Storm Damage | 17 |
| | Accident - Transportation | 44 |
| | Corrosion - Other | 9 |
| | Corrosion - Piping | 12 |
| | Corrosion - Tank | 45 |
| | Discharge - Deliberate/Other | 5 |
| | Discharge - Vandalism | 6 |
| | Mechanical Failure - Gasket/Seal | 33 |
| | Mechanical Failure - Loose Fitting | 22 |
| | Mechanical Failure - Other | 28 |
| | Mechanical Failure - Piping/Hose | 52 |
| | Mechanical Failure - Valve | 15 |
| | Other - Known Cause | 17 |
| | Other - No Cause | 76 |
| | Other - Unknown | 68 |
| | Overfill | 69 |
| | Process Failure - Other | 5 |
| | Office Total | 654 |

This report was run on 1/10/2005. Data is representative of this date.

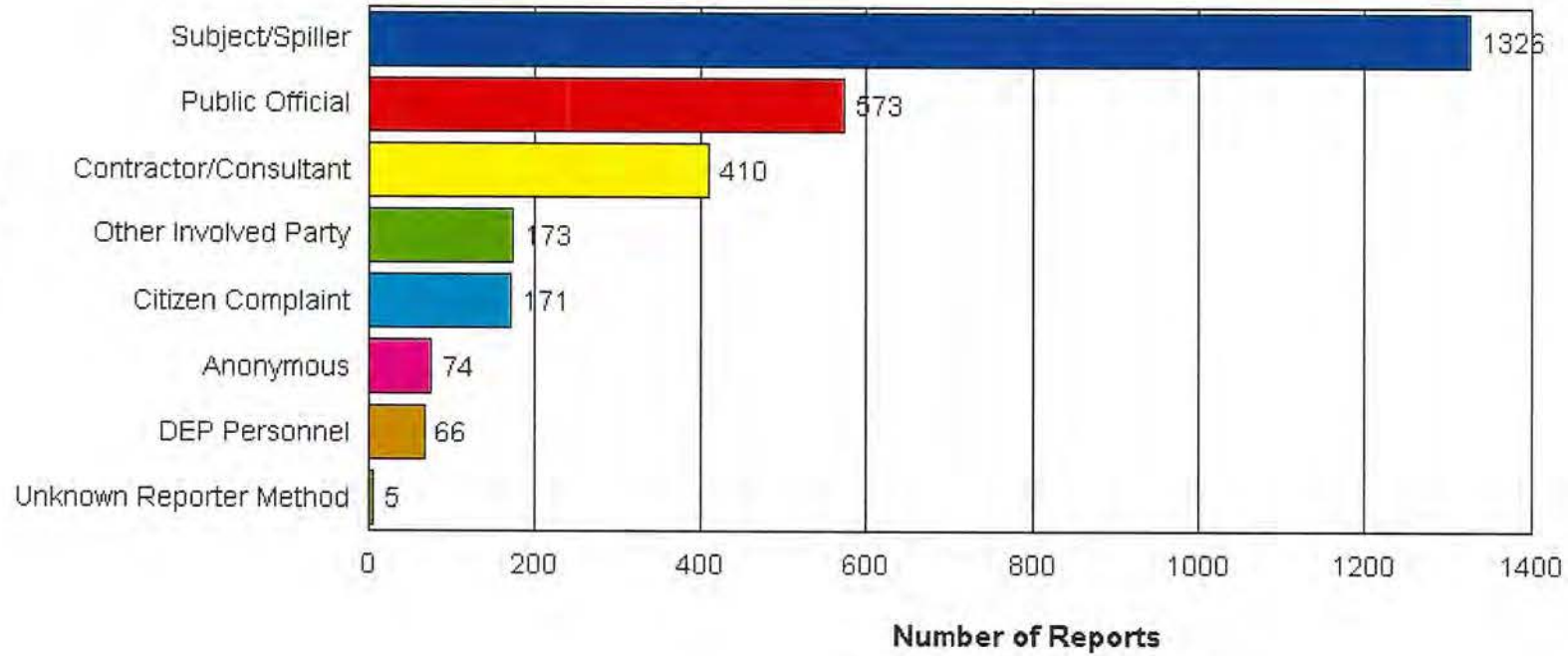
| |
|---|
| Spill Reports for 2003 by Cause of Spill |
|---|

| <u>Portland</u> | <u>Cause of Spill</u> | <u>Number of Spills</u> |
|---------------------|------------------------------------|-------------------------|
| | Accident - Human Error | 90 |
| | Accident - Other | 36 |
| | Accident - Physical Breakage | 102 |
| | Accident - Poor Workmanship | 16 |
| | Accident - Storm Damage | 7 |
| | Accident - Transportation | 127 |
| | Corrosion - Other | 21 |
| | Corrosion - Piping | 16 |
| | Corrosion - Tank | 67 |
| | Discharge - Bilge | 4 |
| | Discharge - Deliberate/Other | 25 |
| | Discharge - Vandalism | 8 |
| | Mechanical Failure - Gasket/Seal | 40 |
| | Mechanical Failure - Loose Fitting | 34 |
| | Mechanical Failure - Other | 62 |
| | Mechanical Failure - Piping/Hose | 78 |
| | Mechanical Failure - Valve | 16 |
| | No Cause Reported | 5 |
| | Other - Known Cause | 41 |
| | Other - No Cause | 84 |
| | Other - Unknown | 121 |
| | Overfill | 134 |
| | Process Failure - Other | 3 |
| | Office Total | 1137 |
| <hr/> | | |
| <u>Presque Isle</u> | <u>Cause of Spill</u> | <u>Number of Spills</u> |
| | Accident - Human Error | 28 |
| | Accident - Other | 10 |
| | Accident - Physical Breakage | 16 |
| | Accident - Poor Workmanship | 3 |
| | Accident - Storm Damage | 1 |
| | Accident - Transportation | 21 |
| | Corrosion - Other | 3 |
| | Corrosion - Piping | 6 |
| | Corrosion - Tank | 15 |
| | Discharge - Deliberate/Other | 6 |
| | Mechanical Failure - Gasket/Seal | 17 |
| | Mechanical Failure - Loose Fitting | 24 |
| | Mechanical Failure - Other | 19 |
| | Mechanical Failure - Piping/Hose | 57 |
| | Mechanical Failure - Valve | 6 |
| | Other - Known Cause | 13 |
| | Other - No Cause | 18 |
| | Other - Unknown | 18 |
| | Overfill | 19 |
| | Office Total | 300 |
| <hr/> | | |
| | 2003 Grand Total | 2798 |

This report was run on 1/10/2005. Data is representative of this date.

Spill Reports by Reporter Method for 2003

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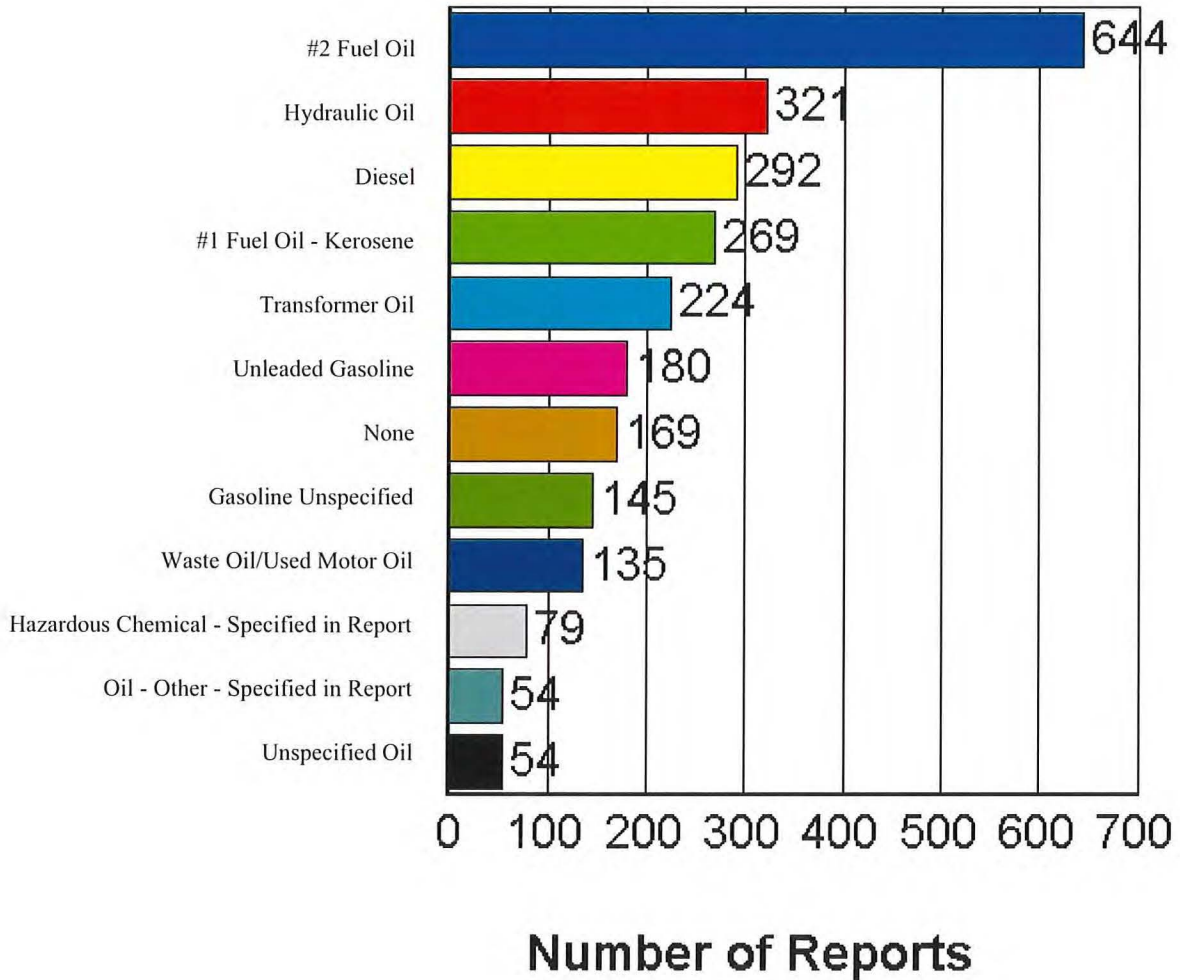
This report was run on 1/10/2005. Data is representative of this date.

Spill Reports by Product Spilled for 2003

| Product Spilled | Number of Spills | Product Spilled | Number of Spills |
|--|------------------|--|------------------|
| #1 Fuel Oil - Kerosene | 269 | Marsh Sheen | 12 |
| #2 Fuel Oil | 644 | Mercury | 25 |
| #4 Fuel Oil | 2 | Non-Chemical Non-Oil Specified in report | 34 |
| #5 Fuel Oil | 2 | Non-Chemical Non-Oil Unspecified | 6 |
| #6 Fuel Oil | 15 | None | 169 |
| Algae Blooms/Plant Pollen Sheens | 6 | Non-Hazardous Chemical - Specified in report | 16 |
| Ammonia | 4 | Non-Hazardous Chemical - Unspecified | 2 |
| Animal Fats/Remains | 1 | Oil - Other - Specified in Report | 54 |
| Anti-freeze | 29 | PCB Oil | 5 |
| Asphalt | 6 | Pesticide General | 11 |
| Aviation Gasoline | 7 | Premium Unleaded | 3 |
| Chlorine | 4 | Regular Gasoline | 5 |
| Corrosive | 3 | Sulfuric Acid | 8 |
| Crude Oil | 11 | Transformer Oil | 224 |
| Demolition Debris | 3 | Transmission Oil | 21 |
| Diesel | 292 | Unknown Substance | 10 |
| Gasoline Unspecified | 145 | Unleaded Gasoline | 180 |
| Hazardous Chemical - Specified in report | 79 | Unleaded Plus | 1 |
| Hazardous Chemical - Unspecified | 4 | Unspecified Fuel Oil | 6 |
| Hydraulic Oil | 321 | Unspecified Motor Fuel | 10 |
| Hydrochloric Acid | 5 | Unspecified Oil | 54 |
| Jet Fuel | 45 | Waste Oil (as Haz Chem) | 2 |
| Leaded Gasoline | 2 | Waste Oil/Used Motor Oil | 135 |
| Liquors | 3 | | |
| Lube Oil | 37 | | |

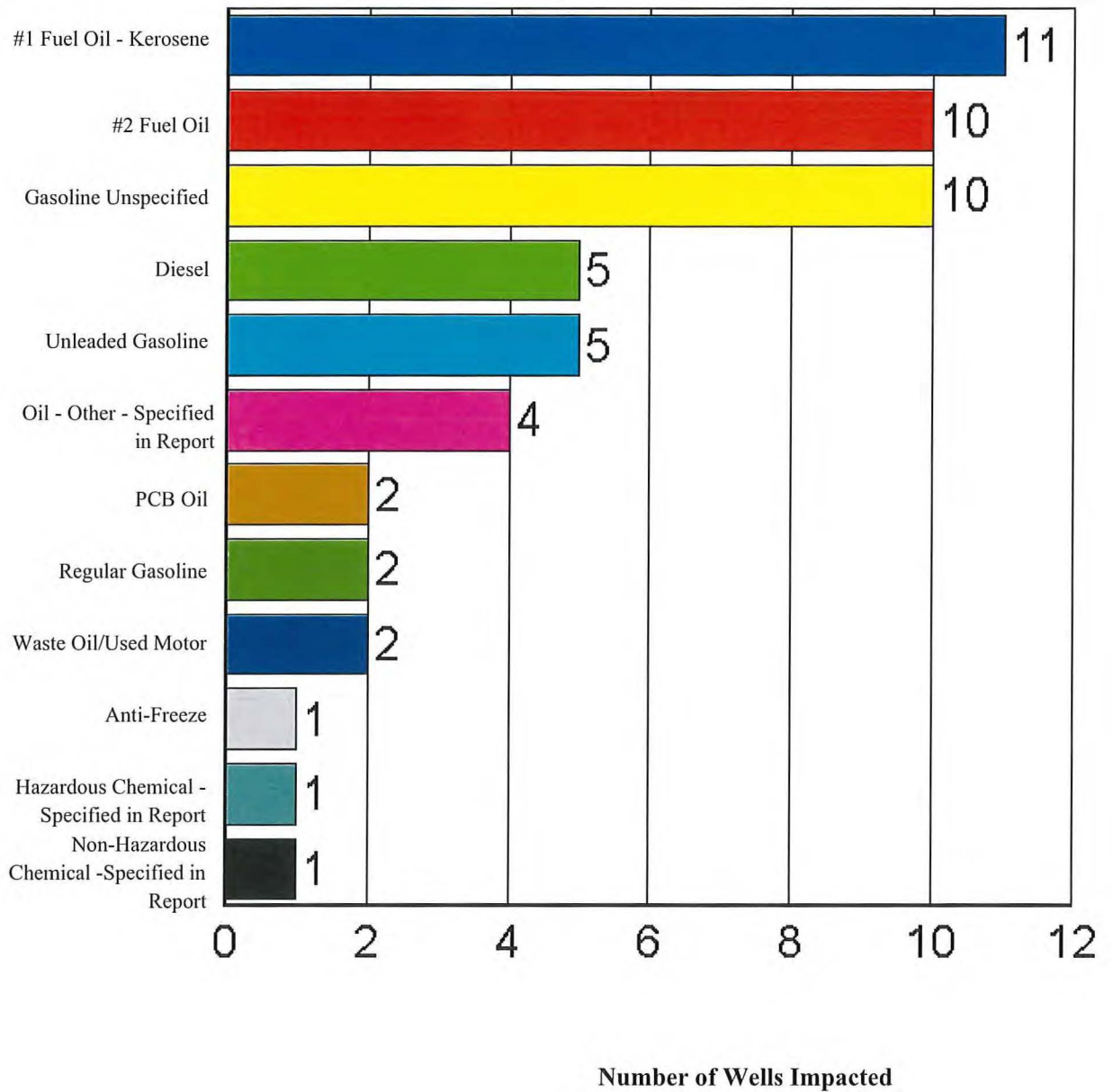
This report was run on 1/10/2005. Data is representative of this date. The number of spill reports reflected does not show the actual number of spills because one spill may have multiple products spilled.

Top Twelve Products Involved in Reports for 2003



This report was run on 1/10/2005. 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 2003



This report was run on 1/10/2005. Data is representative of this date.

Product Categories vs Wells Impacted for 2003

| <u>Product Category</u> | <u>Number of Spills</u> | <u>Number of Wells Impacted</u> |
|------------------------------------|-------------------------|---------------------------------|
| Hazardous & NonHazardous Chemicals | 203 | 5 |
| Heavy Fuel Oils | 19 | 0 |
| Home Heating Oils | 919 | 21 |
| Motor Fuels | 690 | 22 |
| Non Oil, Non Hazardous | 228 | 1 |
| Other Oils | 863 | 7 |
| Unknown | 10 | 0 |
| Total | 2,932 | 56 |

The Product Categories above contain the following product types:

| <u>Home Heating Oils:</u> | <u>Heavy Fuel Oils:</u> | <u>Motor Fuels:</u> | <u>Other Oils:</u> | <u>Hazardous & Non-Hazardous Chemicals:</u> |
|---------------------------|-------------------------|-------------------------|--------------------|---|
| #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 50ppm) |
| | | Aviation Gasoline | Unspecified Oil | Sulfuric Acid |
| | | Jet Fuel | Waste Oil | Corrosives |
| | | Diesel | Transmission Oil | Chlorine |
| | | Unspecified Motor Fuels | | Hazardous Chemicals |
| | | Premium Unleaded | | 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 37:1. That is to say, on average, every thirty-seventh spill of home heating oil or motor fuel results in one contaminated well case.

This report was run on 1/10/2005. 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 2003

Sorted by Spill Type and Product Found

| <u>Spill Type</u> | <u>Product Found</u> | <u>Number of Incidents</u> | <u>Wells at Risk</u> | <u>Wells Impacted</u> |
|--|--|------------------------------------|--------------------------|---------------------------|
| Hazardous Material Incident | | | | |
| | Corrosive | 1 | 1 | 0 |
| | Gasoline Unspecified | 1 | 1 | 1 |
| | Hazardous Chemical - Specified in report | 2 | 1 | 1 |
| | PCB Oil | 1 | 0 | 1 |
| Non-Oil, Non-Hazardous Incident | | | | |
| | Anti-freeze | 2 | 2 | 1 |
| | Marsh Sheen | 1 | 2 | 0 |
| | Non-Chemical Non-Oil Unspecified | 1 | 1 | 0 |
| | Non-Hazardous Chemical - Specified in report | 1 | 1 | 1 |
| | None | 4 | 5 | 0 |
| | Regular Gasoline | 2 | 0 | 2 |
| | Unspecified Oil | 2 | 1 | 1 |
| | Waste Oil/Used Motor Oil | 1 | 1 | 1 |
| Oil Incident | | | | |
| | #1 Fuel Oil - Kerosene | 85 | 108 | 11 |
| | #2 Fuel Oil | 98 | 135 | 10 |
| | Anti-freeze | 3 | 5 | 0 |
| | Demolition Debris | 2 | 4 | 0 |
| | Diesel | 23 | 44 | 5 |
| | Gasoline Unspecified | 20 | 31 | 9 |
| | Hazardous Chemical - Specified in report | 2 | 9 | 0 |
| | Hydraulic Oil | 8 | 10 | 0 |
| | Non-Chemical Non-Oil Specified in report | 1 | 2 | 0 |
| | None | 10 | 16 | 1 |
| | Oil - Other - Specified in Report | 7 | 13 | 4 |
| | PCB Oil | 1 | 1 | 1 |
| | Pesticide General | 1 | 8 | 0 |
| | Regular Gasoline | 1 | 1 | 0 |
| | Transformer Oil | 1 | 1 | 0 |
| | Transmission Oil | 2 | 3 | 0 |
| | Unleaded Gasoline | 14 | 22 | 5 |
| | Unspecified Fuel Oil | 2 | 3 | 0 |
| | Unspecified Motor Fuel | 2 | 3 | 0 |
| | Unspecified Oil | 1 | 1 | 0 |
| | Waste Oil (as Haz Chem) | 1 | 1 | 0 |
| | Waste Oil/Used Motor Oil | 17 | 22 | 1 |
| Totals | | 321 | 459 | 56 |

This report was run on 1/10/2005. Data is representative of this date.

**Amount of Material Spilled in 2003
by Response Office and Spill Type**

| Response Office | Spill Type | G | P | U | Y |
|--|---------------------------------|------------------|--------------|----------|-----------|
| Augusta | Hazardous Material Incident | 56,883 | 422 | 0 | 0 |
| | Non-Oil, Non-Hazardous Incident | 0 | 4,000 | 0 | 0 |
| | Oil Incident | 14,882 | 0 | 0 | 0 |
| | Office Total | 71,765 | 4,422 | 0 | 0 |
| Bangor | Hazardous Material Incident | 4,675 | 0 | 0 | 0 |
| | Non-Oil, Non-Hazardous Incident | 7,501,924 | 30 | 0 | 0 |
| | Oil Incident | 17,206 | 0 | 0 | 0 |
| | Office Total | 7,523,805 | 30 | 0 | 0 |
| Portland | Hazardous Material Incident | 544 | 2,260 | 0 | 0 |
| | Non-Oil, Non-Hazardous Incident | 350 | 0 | 0 | 0 |
| | Oil Incident | 43,646 | 105 | 0 | 20 |
| | Office Total | 44,540 | 2,365 | 0 | 20 |
| Presque Isle | Hazardous Material Incident | 140 | 0 | 0 | 0 |
| | Non-Oil, Non-Hazardous Incident | 1,493 | 200 | 0 | 4 |
| | Oil Incident | 6,589 | 0 | 0 | 0 |
| | Office Total | 8,221 | 200 | 0 | 4 |
| Grand Total of All Offices Combined | | 7,648,331 | 7,017 | 0 | 24 |

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 1/10/2005 . 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

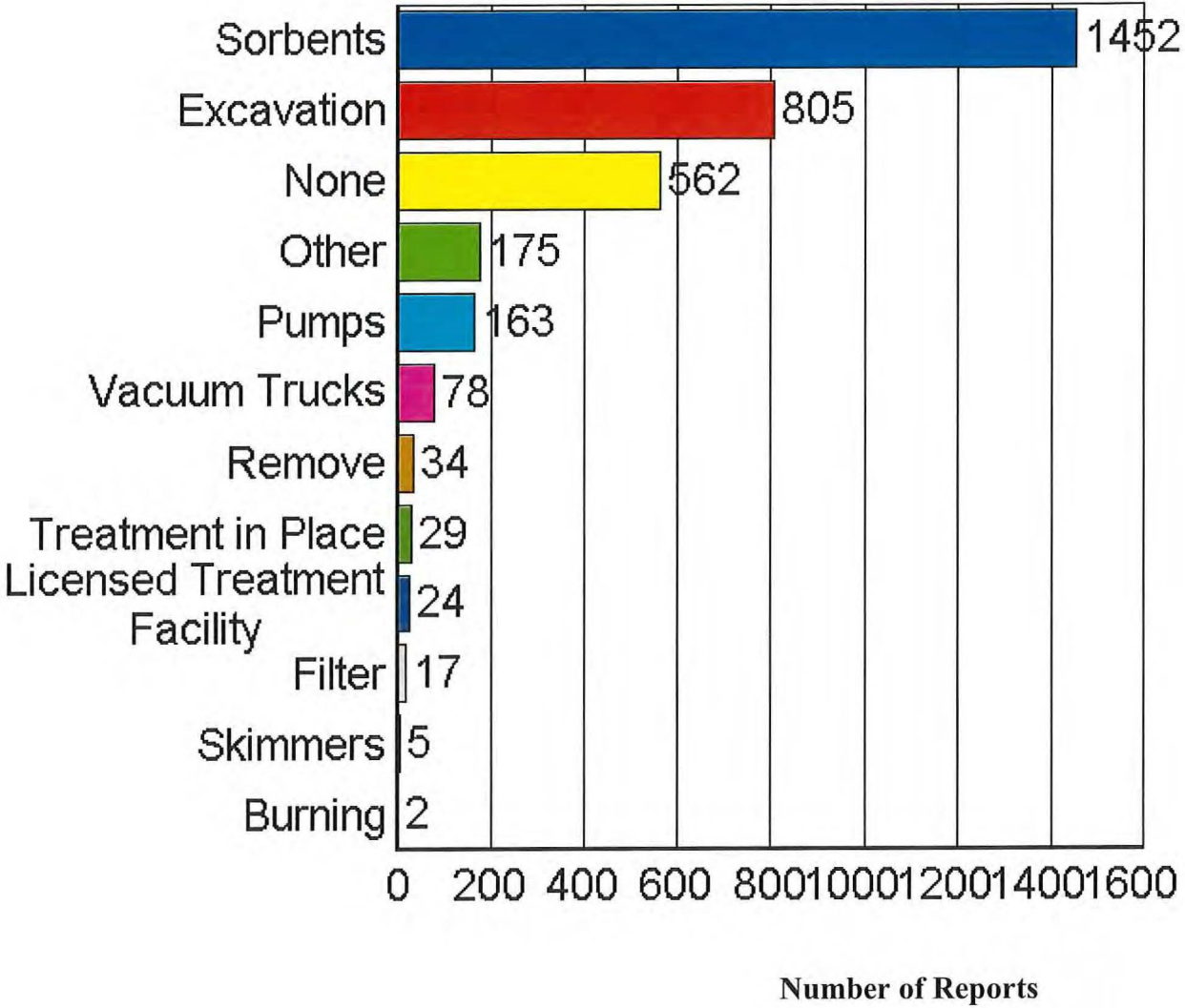
B = Barrels
G = Gallons
P = Pounds
T = Tons
U = Unknown
Y = Cubic Yards

Recovered Amounts of Spilled Material in 2003
by Spill Type and Recovery Method

| Recovery Method | | B | G | P | T | U | Y |
|---------------------------------|----------------------|----|---------|--------|--------|---|--------|
| Hazardous Material Incident | Excavation | 0 | 1,761 | 55,150 | 14 | 0 | 3 |
| | Filter | 0 | 0 | 0 | 0 | 0 | 0 |
| | Licensed Treatment F | 0 | 17,406 | 2,150 | 0 | 0 | 0 |
| | None | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 1 | 17,955 | 12,357 | 14 | 0 | 1 |
| | Pumps | 0 | 7,143 | 45,030 | 0 | 0 | 0 |
| | Remove | 0 | 8 | 0 | 0 | 0 | 0 |
| | Sorbents | 0 | 16,155 | 291 | 0 | 0 | 1 |
| | Treatment in Place | 0 | 1 | 0 | 0 | 0 | 0 |
| | Vacuum Trucks | 0 | 16,525 | 150 | 0 | 0 | 0 |
| Non-Oil, Non-Hazardous Incident | Excavation | 0 | 0 | 0 | 0 | 0 | 24 |
| | Filter | 0 | 0 | 0 | 0 | 0 | 0 |
| | None | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other | 0 | 1,710 | 15 | 0 | 0 | 0 |
| | Pumps | 0 | 5,000 | 0 | 0 | 0 | 0 |
| | Remove | 0 | 45 | 100 | 0 | 0 | 0 |
| | Sorbents | 0 | 57 | 250 | 0 | 0 | 0 |
| | Vacuum Trucks | 0 | 6,265 | 0 | 0 | 0 | 0 |
| Oil Incident | Burning | 1 | 0 | 50 | 0 | 0 | 0 |
| | Excavation | 55 | 100,982 | 16,301 | 20,348 | 0 | 10,082 |
| | Filter | 0 | 26,345 | 1,100 | 10 | 0 | 932 |
| | Licensed Treatment F | 0 | 11,705 | 0 | 47 | 0 | 0 |
| | None | 0 | 136 | 0 | 0 | 0 | 0 |
| | Other | 4 | 4,291 | 2,375 | 112 | 0 | 95 |
| | Pumps | 7 | 111,615 | 1,562 | 1,898 | 0 | 754 |
| | Remove | 0 | 1,699 | 510 | 132 | 0 | 33 |
| | Skimmers | 1 | 3,725 | 500 | 0 | 0 | 443 |
| | Sorbents | 77 | 116,589 | 15,884 | 4,002 | 0 | 1,399 |
| | Treatment in Place | 0 | 677 | 400 | 21 | 0 | 61 |
| | Vacuum Trucks | 0 | 120,846 | 2,180 | 3,432 | 0 | 542 |

This report was run on 1/10/2005. Data is representative of this date.

Recovery Methods Used in 2003



This report was run on 1/10/2005. Data is representative of this date. The total number of recovery methods used in 2003 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 2003", contains a summary of the best information available to Response Services as to the types of chemicals and other hazardous materials spilled during 2003. 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 |
| U | - | Unknown |

Hazardous Materials and Other Non-Oil Materials Involved in Spill Reports during 2003

| Number of Incidents | Material Spilled | *Amount Spilled | Unit of Measure |
|----------------------------|--|------------------------|------------------------|
| 1 | 245T Herbicide | Unknown | U |
| 1 | 3% Protein Fire Fighting Foam | 300.00 | G |
| 1 | Accord / Entry I Water | 15.00 | G |
| 2 | Algae Blooms/Plant Pollen Sheens | Unknown | U |
| 4 | Algae Blooms/Plant Pollen Sheens | Unknown | G |
| 1 | Ammonia | 1.00 | G |
| 1 | Ammonia | 5.00 | P |
| 2 | Ammonia | Unknown | U |
| 9 | Anti-freeze | 18.50 | G |
| 1 | Anti-freeze - Food Grade | Unknown | U |
| 1 | Aromatic Hydrocarbon | Unknown | U |
| 1 | Arsenic | 0.00 | G |
| 1 | Ballast Water | 1,000.00 | G |
| 1 | Barium | 0.00 | P |
| 1 | Battery Acid | Unknown | U |
| 1 | Bentonite Slurry | Unknown | U |
| 3 | Black Water | 265.10 | G |
| 3 | Boiler Blowdown Water | 1,200.00 | G |
| 1 | Borax | Unknown | U |
| 1 | Calcium - Liquid | 90.00 | G |
| 1 | Caustic Material | 50.00 | G |
| 1 | Caustic Soda | 6,923.00 | G |
| 1 | Chlorine | 5.00 | G |
| 1 | Chlorine | 0.10 | P |
| 2 | Chlorine | Unknown | U |
| 1 | Coal Dust | Unknown | U |
| 1 | Coal Tar Distillate Sludge | 3.00 | G |
| 1 | Contact Cement | 0.20 | P |
| 3 | Corrosive | 1.10 | G |
| 1 | Cyanide Compounds | 0.00 | G |
| 1 | Cyclohexene | 0.00 | G |
| 1 | Deracane | 50.00 | G |
| 1 | Dimethyl Xylene-phenyl | Unknown | U |
| 1 | Dinoseb | 0.00 | G |
| 1 | Driveway Sealer | 5.00 | G |
| 1 | Effluent | 7,500,000.00 | G |
| 1 | Fire Extinguisher Powder | Unknown | U |
| 1 | Formo-Cresol | Unknown | U |
| 1 | Hazardous Chemical - Specified in Report | 0.00 | P |
| 6 | Hazardous Chemical - Specified in Report | 47.10 | G |
| 7 | Hazardous Chemical - Specified in Report | Unknown | U |
| 1 | Hazardous Chemical - Unspecified | 0.00 | G |
| 3 | Hazardous Chemical - Unspecified | Unknown | U |
| 4 | Hydrochloric Acid | 16.50 | G |
| 1 | Hydrochloric Acid | Unknown | U |

This report was run on 1/10/2005. Data is representative of this date.

*The amount spilled shown is the least amount spilled.

Hazardous Materials and Other Non-Oil Materials Involved in Spill Reports during 2003

| | | | |
|-----|--|-----------|---|
| 1 | Hydrogen Sulfide | 0.00 | P |
| 2 | Isopropanol | 120.00 | G |
| 1 | Latex Mastic | 20.00 | G |
| 1 | Lead | Unknown | U |
| 1 | Lead Nitrate | 0.00 | G |
| 1 | Lethalaire | 0.00 | P |
| 1 | Lime | 30.00 | P |
| 1 | Lime - Dry | 1.00 | G |
| 1 | Lime - Mud | 4,000.00 | P |
| 1 | Lindane | 0.25 | G |
| 1 | Liquors - Black | 80.00 | G |
| 1 | Liquors - Green | 0.00 | G |
| 1 | Liquors - White | 47,000.00 | G |
| 1 | Manure | Unknown | U |
| 10 | Marsh Sheen | 0.00 | G |
| 2 | Marsh Sheen | Unknown | U |
| 6 | Mercury | 0.18 | G |
| 8 | Mercury | Unknown | U |
| 11 | Mercury | 8.57 | P |
| 1 | Metal Debris | Unknown | U |
| 1 | Methanol-based Paint Remover | Unknown | U |
| 1 | Methyl Diisocyanate | 25.00 | G |
| 1 | Methyl Ethyl Ketone | 1.00 | G |
| 1 | Methyl Mercaptan | 0.00 | P |
| 1 | Methyl Methacrylate | 2,242.00 | P |
| 2 | Methylene Chloride | 15.25 | G |
| 1 | Muriatic Acid | 0.50 | G |
| 1 | NaOH Solution 50% | 1,200.00 | G |
| 1 | Nitrous Oxide | 200.00 | P |
| 1 | Non-Chemical Non-Oil Specified in Report | 0.00 | G |
| 2 | Non-Chemical Non-Oil Unspecified | Unknown | U |
| 164 | None | 0.00 | |
| 4 | Non-Hazardous Chemical Specified in Report | | U |
| 1 | NOPCOTE C-104HS-FREE | 0.00 | G |
| 1 | Oil - Other Specified in Report | 15.00 | G |
| 1 | Orange Glow Cleaner | 1.00 | G |
| 1 | Paint - Epoxy | 1.00 | G |
| 5 | Paint - Latex | 1.25 | G |
| 1 | Paint - Oil Based | 0.25 | G |
| 1 | Paint - Stain | 5.00 | G |
| 1 | Parafin Wax | 45.00 | G |
| 5 | PCB Oil | 1.35 | G |
| 4 | Pesticide General | 1.23 | G |
| 2 | Petroleum Naptha | 2.50 | G |
| 1 | Picric Acid | 0.00 | G |
| 2 | Potassium Acetate 50% | 2.00 | G |
| 1 | Potassium Cyanide | 0.00 | G |
| 1 | Potassium Permanganate | 3.00 | G |
| 2 | Propane | 900.00 | G |

This report was run on 1/10/2005. Data is representative of this date.

*The amount spilled shown is the least amount spilled.

Hazardous Materials and Other Non-Oil Materials Involved in Spill Reports during 2003

| | | | |
|---|--------------------------|----------|---|
| 1 | Propane | 5.00 | P |
| 3 | Propane | Unknown | U |
| 1 | Resin | Unknown | U |
| 1 | Sand/Salt Mixture | 4.00 | Y |
| 1 | Sani-Pak Liquid | 10.00 | G |
| 1 | Sodium Hydrosulfate | Unknown | U |
| 1 | Sodium Hydroxide | 0.40 | G |
| 1 | Sodium Hydroxide | Unknown | U |
| 8 | Sodium Hypochlorite | 3,009.30 | G |
| 7 | Sulfuric Acid | 7.85 | G |
| 1 | Turpentine | 0.20 | G |
| 3 | Unknown Substance | 0.00 | G |
| 5 | Unknown Substance | Unknown | U |
| 1 | Vegetable Oil | 1.00 | G |
| 2 | Waste Paint | 1.00 | G |
| 1 | Waste Paint | Unknown | U |
| 2 | Waste Paint Thinner | 1.10 | G |
| 1 | Water - Mill Processed | 100.00 | G |
| 1 | Water - Oily | 0.00 | G |
| 1 | Water - Pretreated Waste | Unknown | U |
| 1 | Water / Sewage Mixture | Unknown | U |
| 1 | Wax Emulsion | Unknown | U |
| 1 | Xylene | 1.00 | G |

This report was run on 1/10/2005. 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

Other

- Other - Mystery
- 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

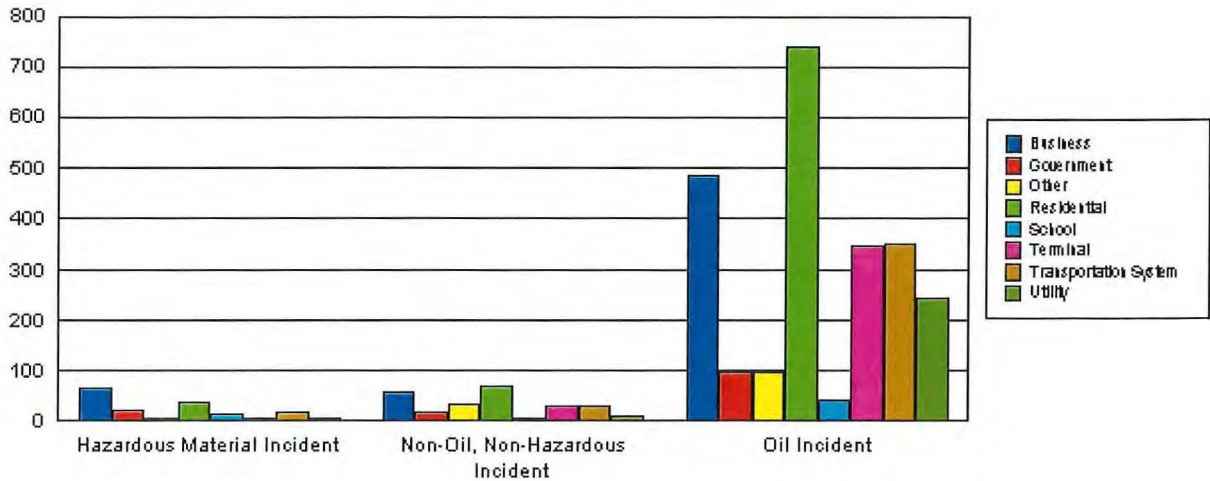
- Transportation - Air
- Transportation - Marine
- Transportation - Other Off-Road
- Transportation - Pipeline
- Transportation - Rail
- Transportation - Road

Utility

- Utility - Other
- Utility - Power
- Utility - Telecommunications

This report was run on 1/10/2005. Data is representative of this date.

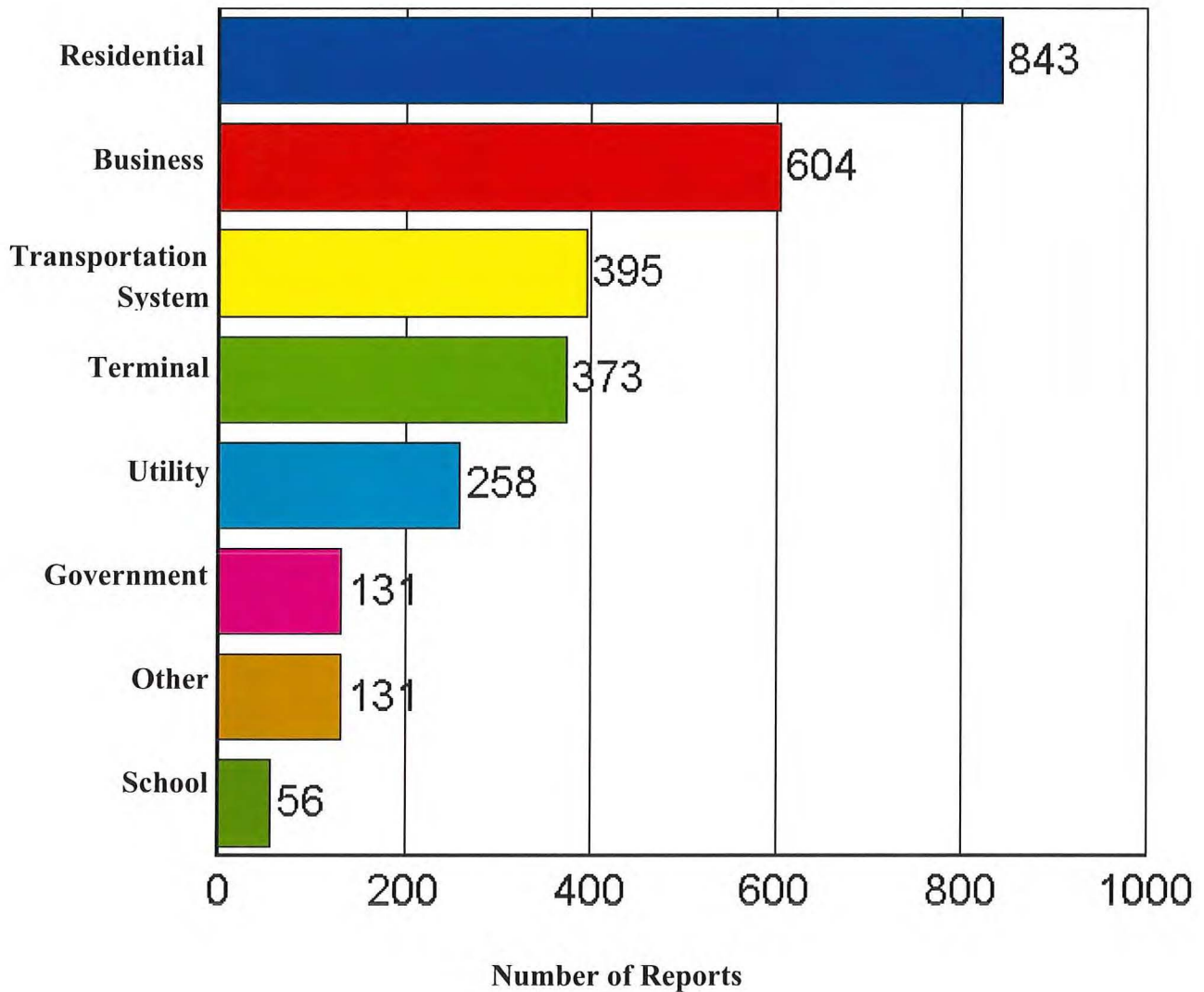
**Types of Facilities Involved in Reports during 2003
by Incident Location Category**



| | |
|--|--------------|
| Hazardous Material Incident | 158 |
| Business | 64 |
| Government | 18 |
| Other | 4 |
| Residential | 36 |
| School | 11 |
| Terminal | 3 |
| Transportation System | 17 |
| Utility | 5 |
| Non-Oil, Non-Hazardous Incident | 234 |
| Business | 55 |
| Government | 16 |
| Other | 30 |
| Residential | 67 |
| School | 4 |
| Terminal | 26 |
| Transportation System | 27 |
| Utility | 9 |
| Oil Incident | 2,399 |
| Business | 485 |
| Government | 97 |
| Other | 97 |
| Residential | 740 |
| School | 41 |
| Terminal | 344 |
| Transportation System | 351 |
| Utility | 244 |
| Grand Total of Spills | 2,791 |

This report was run on 1/10/2005. Data is representative of this date. Seven reports are missing.

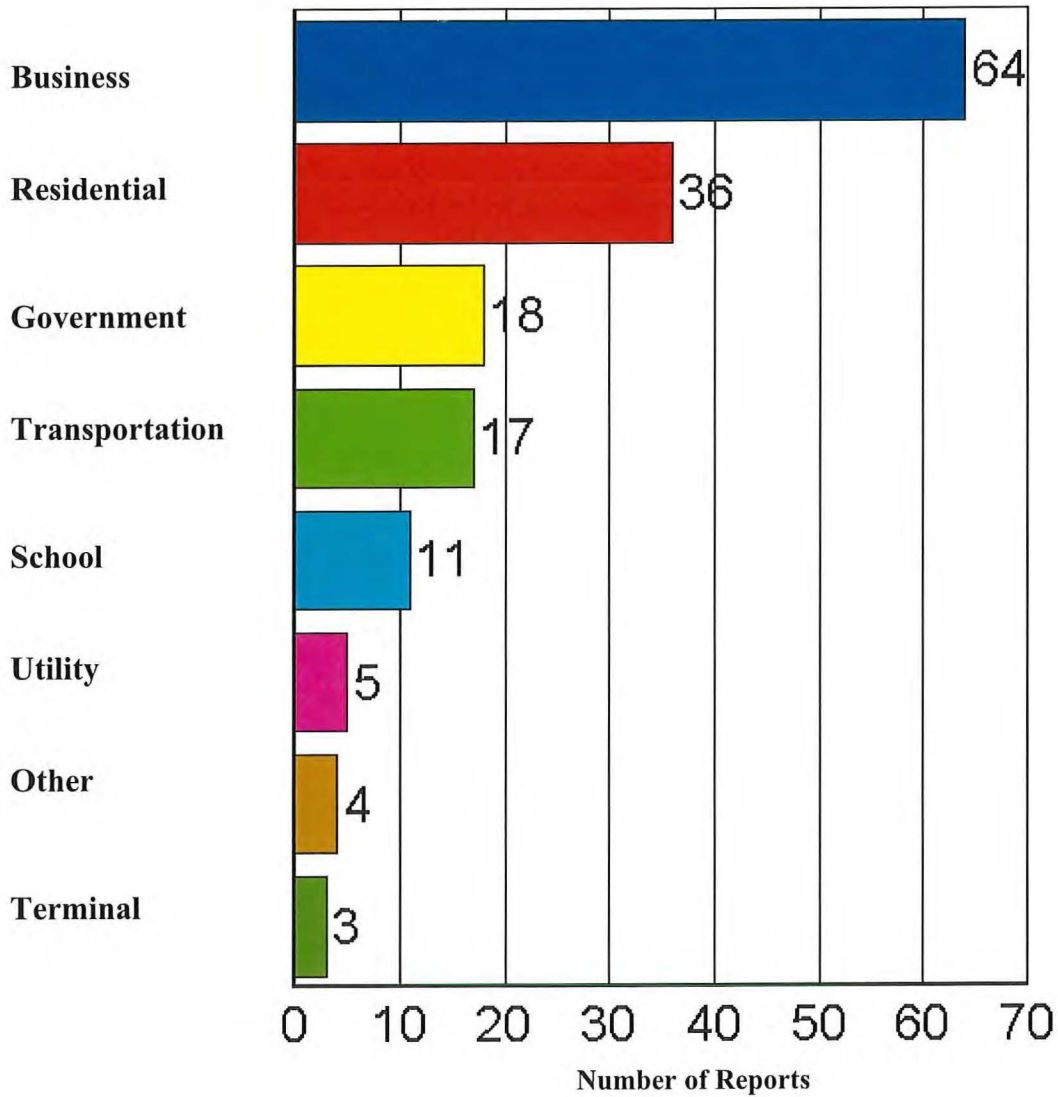
**Types of Facilities Involved in
All Spill Reports for 2003**



Total Number of Spills 2,791

This report was run on 1/10/2005. Data is representative of this date.

Types of Facilities Involved in Hazardous Material Incidents in 2003

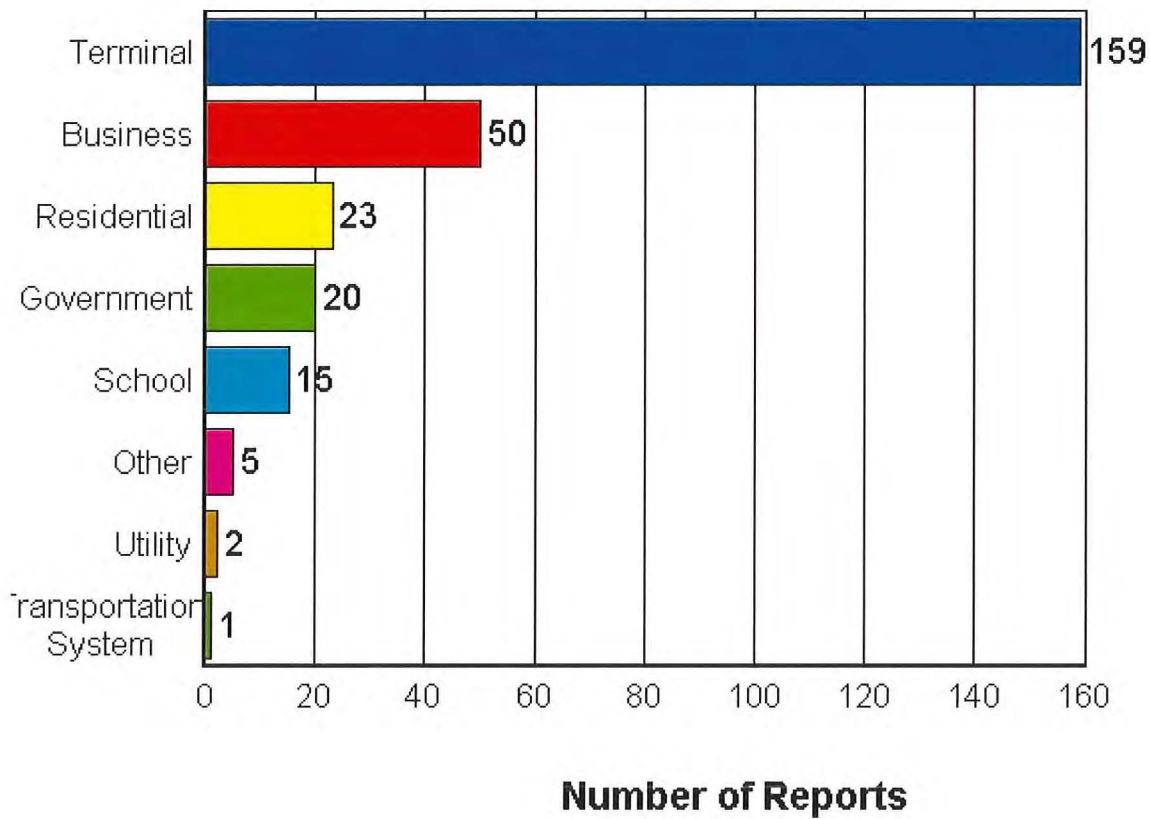


Total Number of Reports

158

This report was run on 1/10/2005. Data is representative of this date.

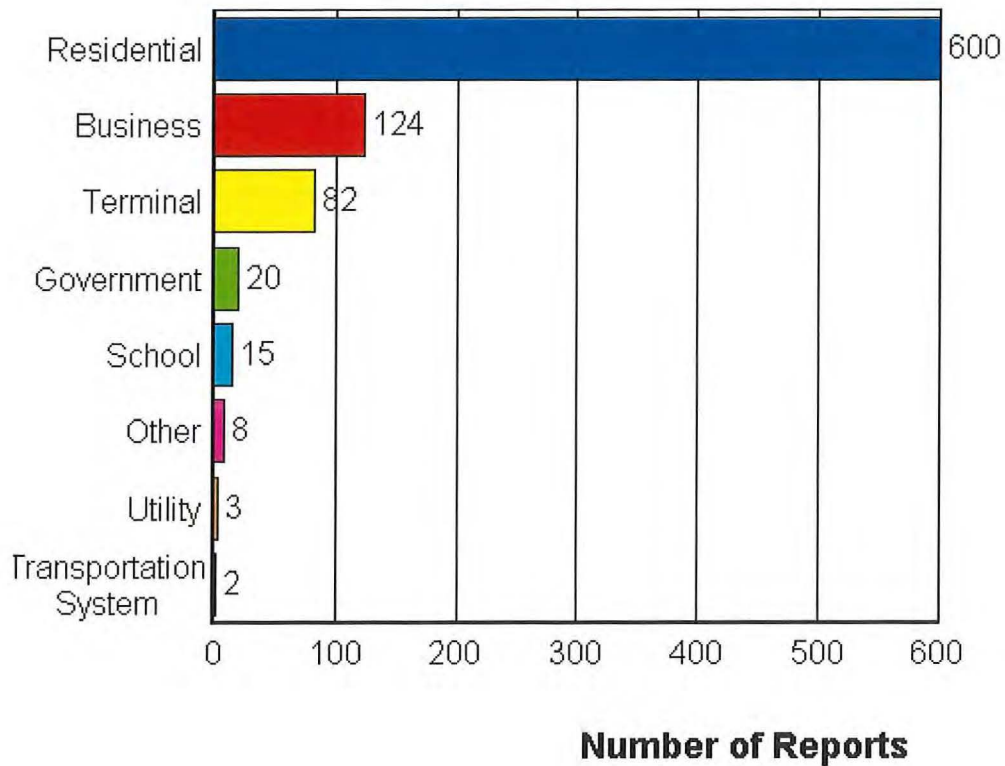
Types of Facilities Involving Underground Storage Tanks in 2003



Total Number of Reports 275

This report was run on 1/10/2005. Data is representative of this date.

Types of Facilities Involving Aboveground Storage Tanks in 2003



Total Number of Reports 854

This report was run on 1/10/2005. Data is representative of this date.

Explanation of Discrepancies between 2003 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 2003.

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:

- Kerosene #1
- Fuel Oil #2 (Diesel)
- Fuel Oil #5 & Fuel Oil #6
- No Lead (Regular & Super)
- Aviation
- JP-4 (Jet Fuel)
- JP-1 & Jet-A (Jet Fuel)
- Asphalt
- Crude Oil
- Other Petroleum Products:
(Mineral Oil, Hydraulic Fluid, etc)

As of July 1, 2003, the following changes were made:

1. Fuel Oil #2 and Diesel Fuel became two separate categories. This is a combined total.
2. Fuel Oil #5 became Fuel Oil #6. This is a combined total.
3. Gasoline was split into 2 categories: Regular Unleaded and Super Unleaded. This is a combined total.

These products will be listed separately in future reports.

Ground Water Fund Barrels of Product Transported/Transferred into Maine for 2003

| <u>Product</u> | <u># of Barrels</u> |
|--|---------------------------|
| Kerosene #1 | 1,261,729 |
| Fuel Oil #2 (Diesel)* | 18,041,929 |
| Fuel Oil #5 & Fuel Oil #6** | 6,385,454 |
| Unleaded (Regular & Super) | 21,274,316 |
| Aviation | 15,902 |
| JP-4 (Jet Fuel) | 0 |
| JP-1 & Jet-A (Jet Fuel) | 1,829,174 |
| Asphalt | 866,202 |
| Crude Oil | 160,343,856 |
| Other Petroleum Products: (Mineral Oil, Hydraulic Fluid, etc) | 32,033 |
| <u>Total Barrels</u> | <u>210,080,595</u> |

As of July 1, 2003, the following changes were made:

- * Fuel Oil #2 and Diesel Fuel became two separate categories. This is a combined total.
- ** Fuel Oil #5 became Fuel Oil #6. This is a combined total.
- *** Gasoline was split into 2 categories: Regular Unleaded and Super Unleaded. This is a combined total.

These products will be listed separately in future reports.

Surface Fund Barrels of Product Transported/Transferred in Maine for 2003

| <u>Product</u> | <u># of Barrels</u> |
|---|----------------------------|
| Kerosene #1 | 1,291,729 |
| Fuel Oil #2 (Diesel)* | 18,121,369 |
| Fuel Oil #5 & Fuel Oil #6** | 7,191,187 |
| Unleaded (Regular & Super)*** | 21,274,316 |
| Aviation | 15,902 |
| JP-4 (Jet Fuel) | 0 |
| JP-1 & Jet-A (Jet Fuel) | 1,829,174 |
| Asphalt | 866,202 |
| Crude Oil | 160,343,856 |
| Other Petroleum Products: <u>(Mineral Oil, Hydraulic Fluid, etc)</u> | <u>32,033</u> |
| <u>Total Barrels</u> | <u>210,966,4525</u> |

As of July 1, 2003, the following changes were made:

- * Fuel Oil #2 and Diesel Fuel became two separate categories. This is a combined total.
- ** Fuel Oil #5 became Fuel Oil #6. This is a combined total.
- *** Gasoline was split into 2 categories: Regular Unleaded and Super Unleaded. This is a combined total.

These products will be listed separately in future reports.