4. ANALYSIS OF STATEWIDE FLOW BY HAZARDOUS MATERIAL CLASS

The transportation of hazardous materials statewide was analyzed by type of hazardous material (class) transported by year, volume, and number of shipments, to identify statewide trends.

4.1 Hazard Class by Year and Volume

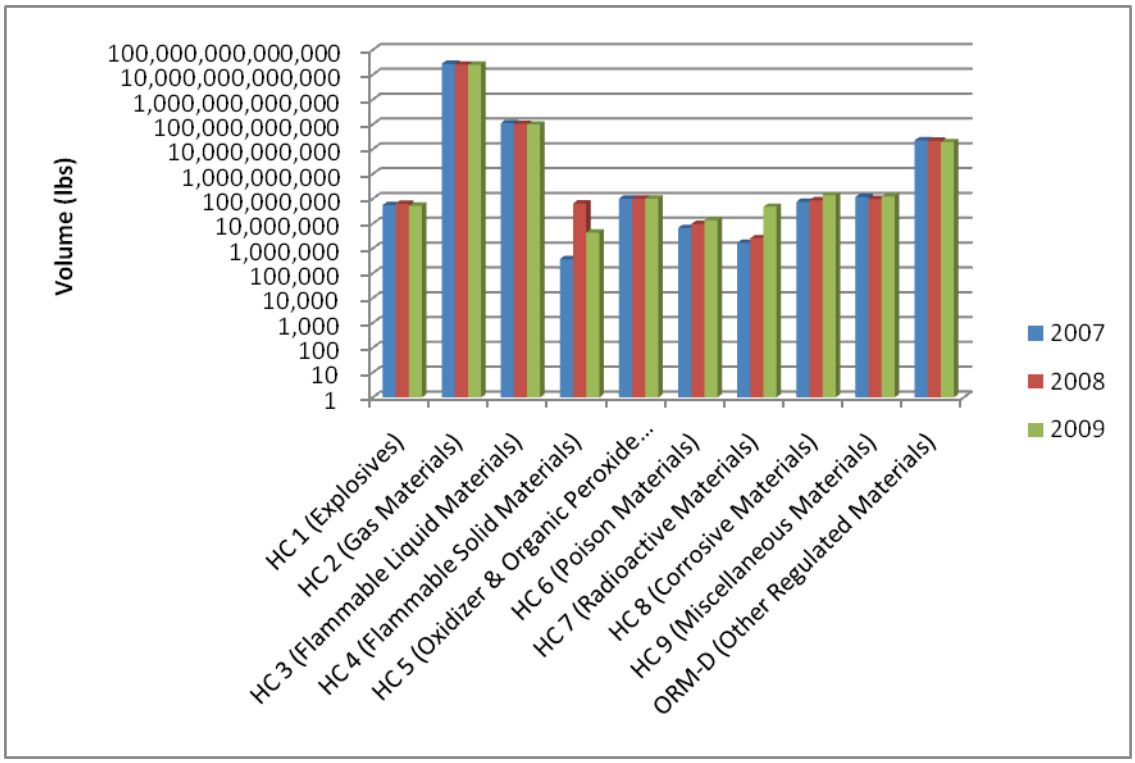
The total volume of hazardous materials transported within the State by Hazard Class is listed in Table 4-1. Hazard Classes 2 and 3 dominate the total volumes due to the volume of natural gas and petroleum products transferred via the statewide pipeline systems. Figure 4-1 depicts the volumes of Hazardous Materials shipped by year.

In general the volumes of hazardous materials shipped remain fairly consistent, with HC 4 and 7 seeing the greatest variability.

Table 4-1. Statewide Summary of Volumes Transported by Hazard Class

Statewide Summary of Volumes (lbs) Transported by Hazard Class			
Hazard Class	2007 (Total Volume in lbs)	2008 (Total Volume in lbs)	2009 (Total Volume in lbs)
HC 1 (Explosives)	55,865,218	62,812,440	52,675,640
HC 2 (Gas Materials)	27,598,898,519,034	25,639,414,809,063	25,317,771,957,302
HC 3 (Flammable Liquid Materials)	115,170,048,970	108,309,900,536	101,560,892,838
HC 4 (Flammable Solid Materials)	369,047	64,651,483	4,362,709
HC 5 (Oxidizer & Organic Peroxide Materials)	101,975,691	100,775,388	101,214,347
HC 6 (Poison Materials)	6,703,004	9,607,936	13,868,029
HC 7 (Radioactive Materials)	1,668,866	2,579,306	47,591,160
HC 8 (Corrosive Materials)	75,247,814	87,030,260	139,162,517
HC 9 (Miscellaneous Materials)	117,988,049	98,364,533	124,242,409
ORM-D (Other Regulated Materials)	22,464,000,000	22,113,000,000	19,305,000,000

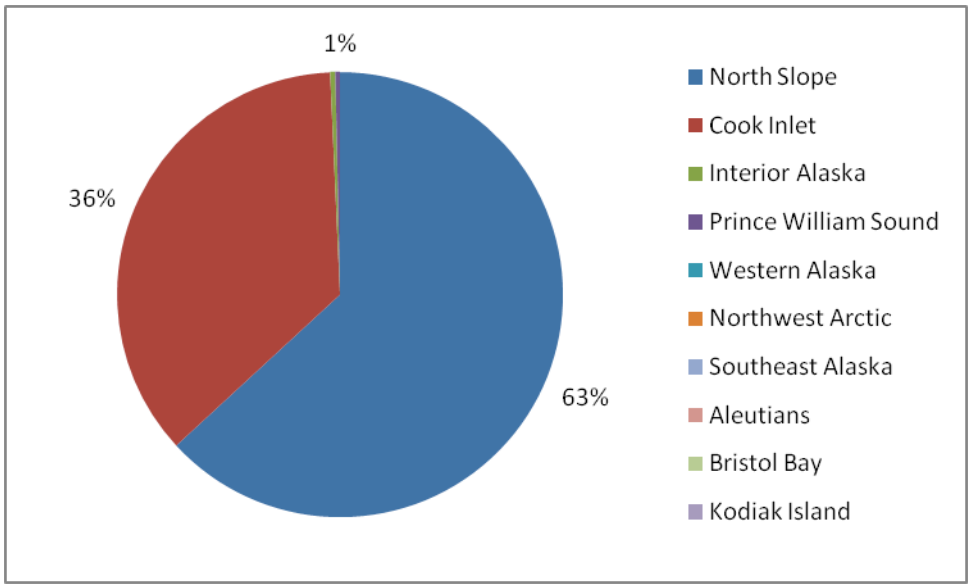
Figure 4-1. Volume of Hazardous Materials Shipped by Year



4.1 Hazard Class by Statewide Shipments per Year

Because HC 2.1 (Natural Gas), HC 3 (Petroleum Products), and ORM-D (Produced Water) make up 99% of the total volume shipped, a graphic breakdown of volumes of Hazard Class shipments statewide in a percentage of statewide volume demonstrates that the North Slope and Cook Inlet subareas dominate the volume of hazardous materials shipped within the State. Figure 4-2 depicts the Statewide breakdown by subarea by percentage of volume of hazardous materials shipped. The North Slope and Cook Inlet subareas account for 63% and 36% respectively of the total volume transported. The remaining subareas account for 1% of the total volume shipped within the State.

Figure 4-2. Statewide Breakdown by Subarea of Percentage of Volume of Hazardous Material Shipped.



Evaluation of the total number of shipments statewide of a given Hazard Class, for a given calendar year, provides a general idea of how the shipments are spread across the spectrum of commodities. For this comparison, pipeline shipments were pulled from the data as the shipment data captured for pipelines was based purely on production volume for a given year. For example, a single entry was made to capture the total crude oil volume shipped in the Trans-Alaska Pipeline during 2007. It should also be noted that the number of shipments evaluated for this general comparison is a subset of the much larger dataset that was used as the starting point for this project[31]. However, when comparing the percentage breakdowns of shipments by Hazard Class from this study with the breakdown found in the 2005 study, the results were similar. This lends some validity that the evaluation of the smaller subset, provided in this report, is representative of the larger dataset. Only very minor variations occur on a year-to-year basis in the breakdown of shipments statewide.

Figures 4-3 through 4-5 depict the breakdown of shipments for calendar years 2007, 2008 and 2009 respectively.

[31] The 7,500+ shipments analyzed in this study ultimately represent over 75,000 shipments statewide: Like commodities, shipped between the same locations during the same year were combined into a single data entry.

Figure 4-3. 2007 Statewide Breakdown of Hazardous Material Shipments by Hazard Class

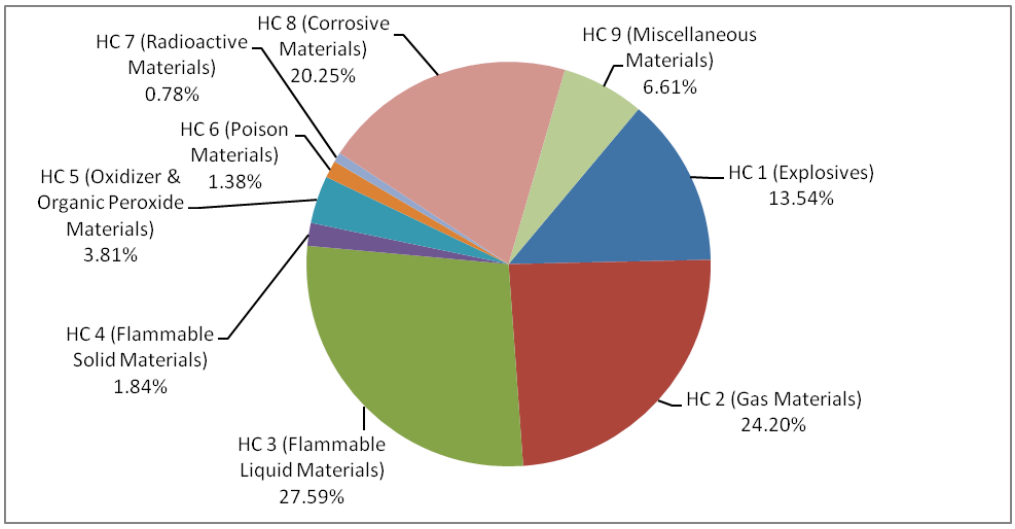


Figure 4-4. 2008 Statewide Breakdown of Hazardous Material Shipments by Hazard Class

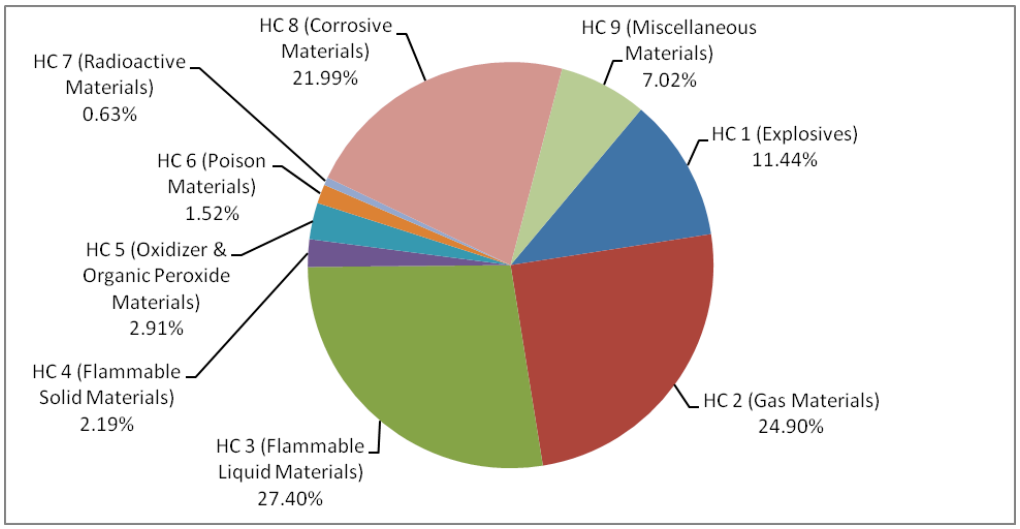


Figure 4-5. 2009 Statewide Breakdown of Hazardous Material Shipments by Hazard Class