



2016 HAZARDOUS MATERIALS COMMODITY FLOW ASSESSMENT

Overview of findings – Greater Spokane Emergency Management
Study Authors: WSU Division of Governmental Studies & Services

STUDY PURPOSE

- *...Hazardous materials flow studies help inform emergency plans for the procurement and staging of appropriate supplies and equipment, and assist in the development and provision of more focused training for emergency responders. In addition, hazardous materials flow studies are a prerequisite and important step in successfully applying for some types of grants, and support additional risk assessments and emergency planning projects.
(pg.2)*

PLANNING OPPORTUNITIES

- *Data collection and analysis findings indicate several opportunities for the city and county to plan for, prepare for, and address the mitigation of potential risks to the residents of Spokane County. These risks include:*
 1. Retail businesses stock many hazardous materials. These are resupplied and many trucks are below the reporting threshold for mandatory reporting of quantities.
 2. Significant quantities of Jet fuel delivered & stored Spokane International Airport.
 3. Significant quantities of hazardous materials transported through Spokane Co. by Union Pacific & BNSF Railroads.

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HAZARDOUS MATERIAL TRANSPORT BY RAIL

- BNSF & Union Pacific – Class I railroads which are classified as RI (carrying greater than 5 million tons).
- Both carry hazardous materials, BNSF carries a high volume of petroleum (Bakken Crude from North Dakota).
- Proximity of these railroads lines to densely populated areas, congested geographic areas, the Spokane River, and major roadways increases risk in the event of a hazardous materials-releasing incident. (pg. 17)

OIL BY RAIL

- Of particular concern to The Greater Spokane Emergency Management are the additional hazards and risks posed by the rail transport of petroleum. In 2011 there were few such shipments of oil. In 2013, 700 million gallons of crude oil were shipped through the State, and as of 2014, each week some 19 unit trains, each carrying approximately 3 million gallons of Bakken crude oil travelled across Washington State. (Washington State 2014 Marine and Rail Oil Transport Study, hereinafter referred to Rail Oil Study). Some 16 trains carrying Bakken crude pass through Spokane County each week at present (Id at 42), as this route is the most direct from the Bakken fields to the Puget Sound. (Id, ps. 35 and 59) (see the figure below, from the Rail Oil Study) The evolution (and litigation) of future national and regional oil plans notwithstanding, it is possible if not probable that the unit train traffic could triple by 2020. (Id, p. 43) Spokane County rail traffic will likely increase proportionally with increased rail traffic across the state. (pg.5)

PIPELINES & OTHER HAZARDOUS MATERIALS

- According to Washington Utilities & Transportation Commission – 6 hazardous liquid pipelines and high pressure natural gas pipelines are located within Spokane Co.
- ...associate risks with pipelines are likely consistent with that of the rail cars with petroleum based cargo.
- According to a spokesperson interviewed for a different project Spokane International Airport (SIA) reported that 15 – 20 million gallons of jet fuel are consumed annually at SIA.

DIRECT OBSERVATIONS

- Commercial Truck Traffic
- 8 days over three weeks.
- 6 locations throughout the county.
- Various times
- WSU personnel documented 718 placarded trucks from a total of 20,038 observed (Pg. 16)
- 321 class 2, (Flammable liquids), 61 Class 2, (Gases), 24 Class 8 (Corrosives), several carried organic peroxides, infectious materials, & miscellaneous dangerous goods. (Pg. 16)
- Summary of observations start on pg. 21.

IDENTIFIED RISKS

- Interstate 90 (east/west route for trucking through Spokane Co.)
- The potential for vehicles carrying hazardous materials to stop for either a short or a prolonged period at any number of truck stops in the county.
- Pipelines and railroad lines passing in or near the center of the City of Spokane and Spokane County, and the proximity of multiple sources of hazardous materials transportation to the Spokane River.
- The hazardous materials contained within manufacturing and production businesses and retail stores.
- The storage and transportation of propane across the county.

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RESPONSE AGENCIES SHOULD ANTICIPATE &
PREPARE FOR SPILLS OR OTHER HAZARDOUS
MATERIALS WHICH:

- A. Likely will involve major highways and railways
- B. Likely will involve flammable liquids or gases
- C. May occur near business and entertainment centers
- D. Will disrupt travel and commerce, and
- E. Could have significant environmental impact

OPPORTUNITIES TO ADDRESS RISKS THROUGH ALL PHASES OF EMERGENCY MANAGEMENT

- Prevention
- Preparedness & Planning
- Mitigation
- Response
- Recovery
- Complete details for each phase of emergency management are found on pages 30, 31, & 32.

QUESTIONS OR TO CONTACT GSEM'S LEPC LIAISON

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