



IOWA CRUDE OIL AND BIOFUELS RAIL TRANSPORTATION STUDY

April 2016

The Iowa Department of Transportation's Office of Rail Transportation and the Iowa Homeland Security and Emergency Management Department partnered to define the characteristics, risks, prevention, and emergency response systems for incidents involving the rail transportation of crude oil and biofuels (principally ethanol) in Iowa. This study identified gaps to assist in the development of policies, procedures, and actions to further reduce risks and improve emergency response throughout the state.

IOWA ETHANOL AND CRUDE OIL ROUTES



WORKING TOGETHER

The study considers both the physical characteristics (people, facilities, and environment) in the vicinity of the crude oil and biofuels rail routes, as well as the insight of representatives from all sides of this industry. Focusing on **prevention, preparedness, response, and recovery**; in-depth interviews were conducted with representatives of:

- Producers and shippers of ethanol in Iowa.
- Railroads that move large volumes of these commodities.
- Emergency managers who assess risk and plan for incident prevention and responses.
- Emergency personnel who will be responding to potential incidents.
- Federal agencies that regulate transportation safety and state agencies that oversee response and mitigation if an incident occurs.

4 billion	Gallons of ethanol produced in Iowa in 2015; the majority shipped by rail
2 billion	Gallons of crude oil shipped by rail through Iowa in 2014
3,851	Miles of railroad owned track in Iowa

The outcome of this study seeks to bring stakeholders together for safety and efficiency; not create new regulations or constrain economic development.

IMPROVEMENT STRATEGIES RECOMMENDED BY THIS STUDY

Prevention

- Assess potential for safety improvements at highway-railway at-grade crossings to prioritize public funds.
- Focus state funds on cost-effective railroad improvements that would reduce risk of incidents.
- Increase education and improve enforcement of current grade-crossing safety regulations.
- Develop an inspection program to help maintain appropriate standards at facilities where ethanol rail cars are loaded.
- Strengthen public-private partnerships to better understand railroad infrastructure programs and needs and how they can be paired with public funding opportunities.

8	Railroads hauling crude or biofuels in Iowa
99	Emergency management commissions in Iowa
36	Local emergency planning committees (LEPC) in Iowa
22	Hazardous materials teams operating in Iowa
7	LEPC planning regions in Iowa

Preparedness

- Appeal for dedicated, full-time county emergency management positions.
- Coordinate public/private skills for assessing at-risk zones by county to prioritize focus areas and improve response procedures, evacuation, and sheltering plans.
- Enhance local emergency planning commissions' membership, coordination, capabilities, and communications with railroads through direct contacts and online tools.
- Review the notification standards and broaden the reporting criteria to include other hazardous material movements.
- Develop closer communications and relationships between railroads and emergency management personnel.
- Develop methods for communicating and measuring gaps between response capabilities and needs.



Response

- Increase private and public (federal, state, and local) programmatic interaction to standardize appropriate response guidelines and training.
- Track private and public capabilities and the location and need for resources.
- Improve the accuracy and access of electronic data, while expanding its participation to all levels of the rail industry.

Recovery

- Increase awareness of the railroads' recovery programs.

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