

# 2011 Hazardous Materials Commodity Flow Study

## Fort Bend County, Texas

### Preliminary Results



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# What is a HazMat commodity flow study (HMCFS)?

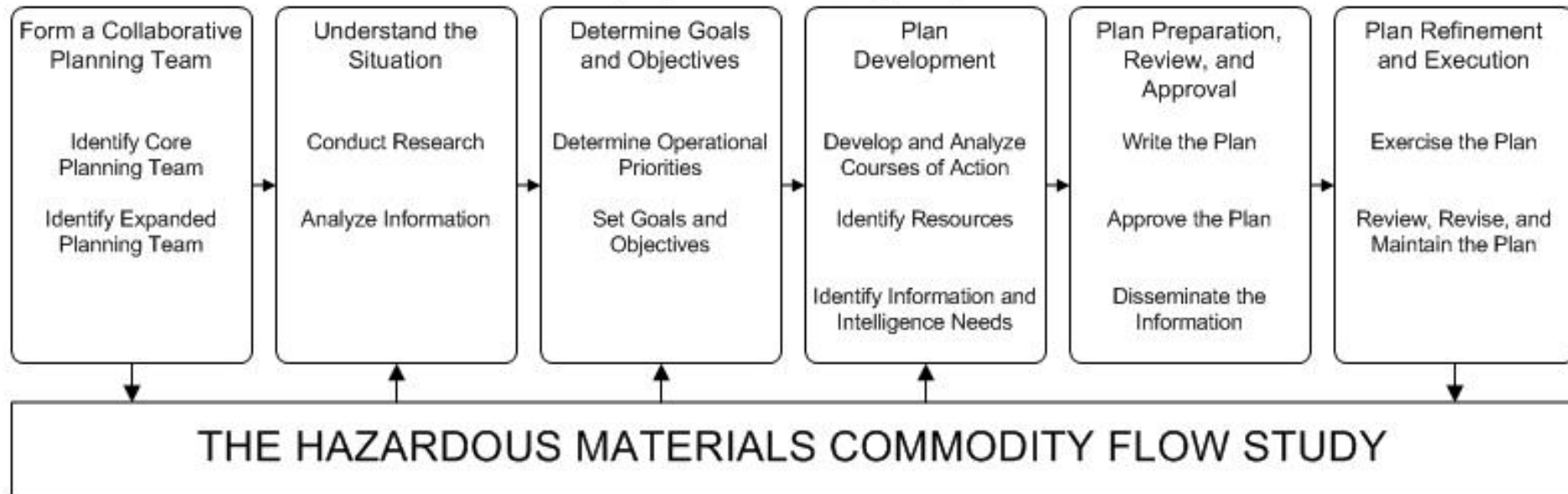
- A study that identifies the types and amounts of HazMat transported into, out of, within, and through a specified geographic area.
- Can include one or more transportation modes (as applicable): truck, rail, pipeline, waterway, and air. In most studies, truck transport requires the majority of effort.
- It is intended to provide basic information that can support a wide range of emergency planning, training, and response, as well as community and transportation planning activities.



# An HMCFS informs key elements of the emergency planning process.

## THE ALL-HAZARDS EMERGENCY PLANNING PROCESS

(Adapted from CPG 101, Figure 3.2)



Source: *Guidebook for Local Hazardous Materials Commodity Flow Studies*, by David H. Bierling, George O. Rogers, Deborah L. Jasek, Anna A. Protopapas, Jeffrey E. Warner, and Leslie E. Olson. Transportation Research Board of the National Academy of Sciences, Washington, D.C. 2011.

# What was the scope of the project?

Transport of HazMat by truck, rail, and pipeline

Timeframe: February-September 2011

Participants and data sources:

- Fort Bend County LEPC and affiliated agencies: Fort Bend County Engineering, Drainage District, Road and Bridge, Office of Emergency Management
- Texas Transportation Institute (state agency contractor)
- Railroads: BNSF Railway, Union Pacific Railroad, and Kansas City Southern Railroad (data providers)
- U.S. DOT – PHMSA and TxDOT (data providers)
- Texas Division of Emergency Management (grant administrator)



# Truck HazMat transport assessment

Truck traffic was observed on different roads, and the types and configurations of different trucks and hazmat placards were recorded and evaluated.

Included US 59, US 90A, Beltway 8, TX 6, TX 36, TX 99, Spur 10, Spur 529, FM 521, FM 723, and FM 2234.

TRUCK AND HAZARDOUS MATERIALS PLACARD COUNT SHEET		
Location: <i>BL 6</i>	Cont. Dir: <i>South</i>	Name: <i>Anton, Mike</i> Page: <i>1</i> of <i>1</i>
Day: <i>Thursday</i>	Date: <i>7/21/11</i>	Time: <i>17:15 - 18:45</i> Weather: <i>Clear</i>
Truck Type	Truck Configuration	UN/NA Placard ID (circle multiple placards on same truck)
Std. Tank:	Straight	
Low Press. Liquid, Comp. Gas, Cryogenic	Tractor-Trailer	<i>199 7, 1075, 1493, 1075, 1075, 253, 1075, 1203, 1075, 2693</i>
	Multi-Trailer	
Vacuum Tank	Straight	
	Tractor-Trailer	
Dry Bulk Tank	Straight	
	Tractor-Trailer	
	Multi-Trailer	
Box, Open Top, Curtainside, etc., and Container	Straight	
	Tractor-Trailer	<i>1886, 3082, Flammable Class 3</i>
	Multi-Trailer	
Refrigerated Van	Straight	
	Tractor-Trailer	
	Multi-Trailer	
Stepped or Flashed	Straight	<i>Flammable</i>
	Tractor-Trailer	<i>1001,</i>
	Multi-Trailer	
Service or Utility	Straight	
	Tractor-Trailer	
Other	Straight	
	Tractor-Trailer	
Comments:		



# Hazardous Materials Warning Placards

Actual placard size: 273 mm (10.8 inches) on all sides

## CLASS 1 Explosives



§172.522  
§172.523  
§172.524  
§172.525

\* For Divisions 1.1, 1.2, or 1.3, enter division number and compatibility group letter, when required; placard any quantity. For Divisions 1.4, 1.5, and 1.6, enter compatibility group letter, when required; placard 454 kg (1,001 lbs) or more.

## CLASS 2 Gases



§172.528  
§172.530  
§172.532  
§172.540

For NON-FLAMMABLE GAS, OXYGEN (compressed gas or refrigerated liquid), and FLAMMABLE GAS, placard 454 kg (1,001 lbs) or more gross weight. For POISON GAS (Division 2.3), placard any quantity.

## CLASS 3 Flammable Liquid and Combustible Liquid



§172.542  
§172.544

For FLAMMABLE, placard 454 kg (1,001 lbs) or more. GASOLINE may be used in place of FLAMMABLE placard displayed on a cargo tank or portable tank transporting gasoline by highway. Placard combustible liquid transported in bulk. See §172.504(f)(2) for use of FLAMMABLE placard in place of COMBUSTIBLE. FUEL OIL may be used in place of COMBUSTIBLE on a cargo or portable tank transporting fuel oil not classed as a flammable liquid by highway.

## CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet



§172.546, §172.547, §172.548

For FLAMMABLE SOLID and SPONTANEOUSLY COMBUSTIBLE, placard 454 kg (1,001 lbs) or more. For DANGEROUS WHEN WET (Division 4.3), placard any quantity.

## CLASS 5 Oxidizer & Organic Peroxide



§172.550, §172.552

For OXIDIZER and ORGANIC PEROXIDE (other than TYPE B, temperature controlled), placard 454 kg (1,001 lbs) or more. For ORGANIC PEROXIDE (Division 5.2), Type B, temperature controlled, placard any quantity.

## CLASS 6 Poison (Toxic) and Poison Inhalation Hazard



§172.504(f)(10), §172.554, §172.555

For POISON (PG I or PG II, other than inhalation hazard) and POISON (PG III), placard 454 kg (1,001 lbs) or more. For POISON-INHALATION HAZARD (Division 6.1), inhalation hazard only, placard any quantity.

## CLASS 7 Radioactive



§172.556

Placard any quantity - packages bearing RADIOACTIVE YELLOW-III labels only. Certain low specific activity radioactive materials in "exclusive use" will not bear the label, but the radioactive placard is required for exclusive use shipments of low specific activity material and surface contaminated objects transported in accordance with §173.427(b)(3) or (c).

## CLASS 8 Corrosive



§172.558

Placard 454 kg (1,001 lbs) or more.

## CLASS 9 Miscellaneous Dangerous

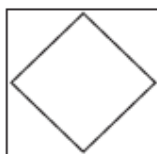


§172.560

Not required for domestic transportation. A bulk packaging containing a Class 9 material must be marked with the appropriate ID number displayed on a Class 9 placard, an orange panel, or a white square-on-point display.

§172.521

A freight container, unit load device, transport vehicle, or rail car which contains non-bulk packagings with two or more categories of hazardous materials that require different placards specified in Table 2 may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2 must be applied.



§172.527

White square background required for placard for highway route controlled quantity radioactive material and for rail shipment of certain explosives and poisons, and for flammable gas in a DOT 113 tank car (§172.507 and §172.510).

PLACARDS OR ORANGE PANELS



§172.332



and



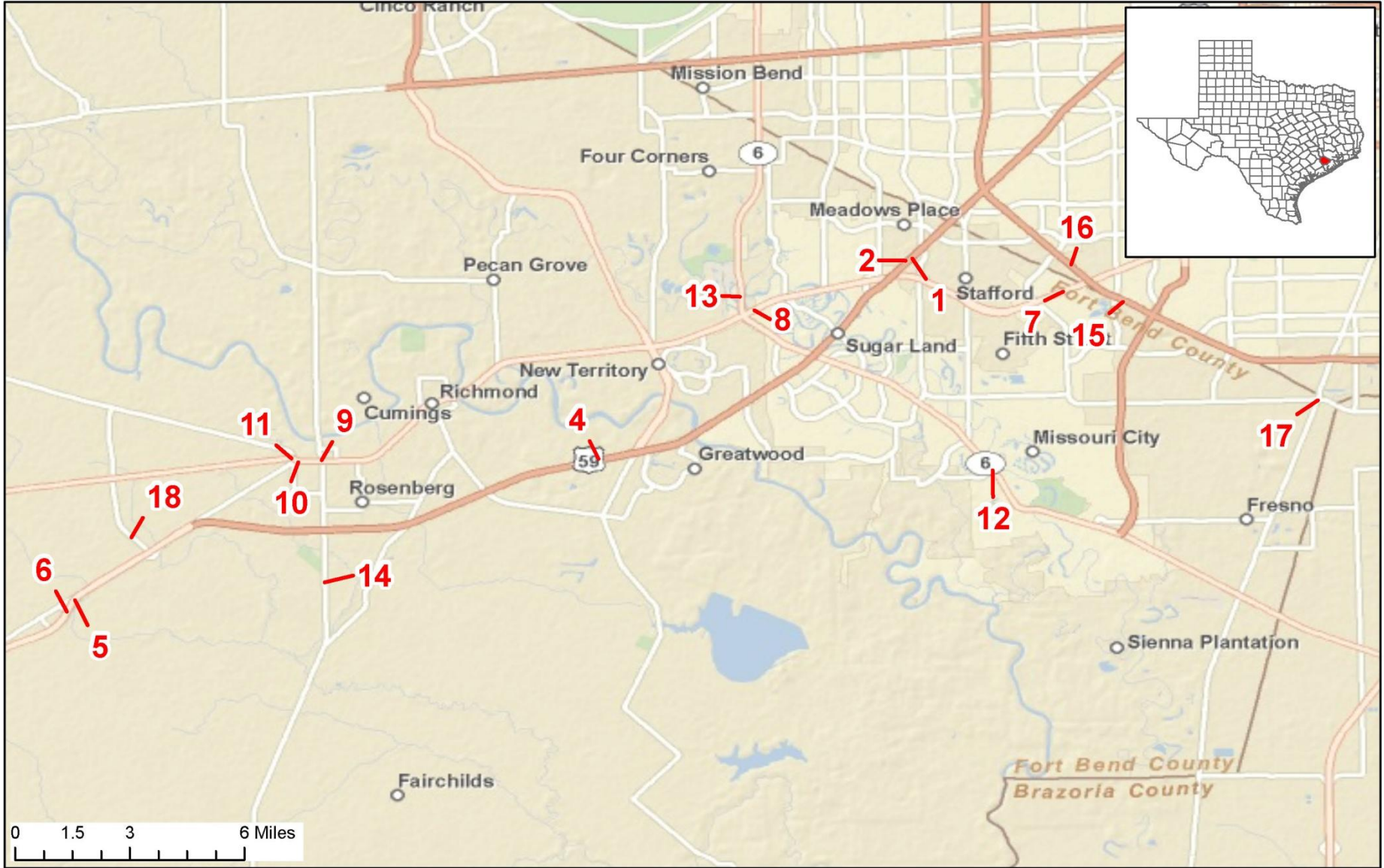
## IDENTIFICATION NUMBER DISPLAYS



MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packagings; (2) Vehicles or containers containing 4,000 kg (8,820 lbs) in non-bulk packages of only a single hazardous material having the same proper shipping name and identification number; and (3) 1,000 kg (2,205 lbs) of materials poisonous by inhalation in Hazard Zone A or B. See §172.301(a)(3) and §172.313(c).

Appropriate placard must be used.

**Response begins with identification!**



## Fort Bend County Truck Traffic Data Collection Sites

PREPARED BY THE TEXAS TRANSPORTATION INSTITUTE  
MULTIMODAL FREIGHT PROGRAMS

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# Overview of truck data collection effort

Segment	Directions	Total Observations		
		Directional Hours	All Trucks	HazMat Trucks
US 59, North of US 90A	NB and SB	51.5	13,300	890
US 59 Frontage, North of US 90A	NB and SB	51.5	2,140	71
US 59, South of Spur 529	NB and SB	46.0	7,322	604
Beltway 8, North of US 90A	NB	11.5	1,326	101
Beltway 8 Frontage, North of US 90A	NB	11.5	287	8
Beltway 8, South of US 90A	SB	16.5	1,932	156
Beltway 8 Frontage, South of US 90A	SB	16.5	257	9
US 90A, East of US 59	EB and WB	63.5	3,429	154
US 90A, between TX 99 and US 59	EB and WB	63.0	1,927	53
Ave. H (US 90A), East of 1st St., Rosenberg	EB and WB	30.0	460	32
Ave. H (US 90A/TX 36), West of 1st St., Rosenberg	EB and WB	58.0	1,837	115
US 90A, West of TX 36	EB and WB	38.0	450	19
TX 6, North of US 90A	NB and SB	33.0	1,157	30
TX 6, South of US 59	NB and SB	28.0	1,669	32
TX 36, North of US 90A	NB and SB	55.5	1,685	76
1st St. (TX 36), South of Ave. H, Rosenberg	NB and SB	30.0	953	65
TX 36, South of US 59	NB and SB	31.0	669	38
FM 723, North of Ave. H, Rosenberg	NB and SB	31.0	584	20
Ave. H. (Spur 529), West of US 90A/TX 36	EB and WB	28.0	263	5
Spur 10, North of US 59	NB and SB	31.5	1,290	35
FM 521, North of FM 2234	NB and SB	26.0	1,795	41
FM 521, South of FM 2234	NB and SB	26.0	1,860	37
FM 2234, West of FM 521	EB and WB	26.0	567	10
<b>Totals</b>		803.5	47,159	2,601



# Summary table of truck and HazMat traffic

Segment	Directions	Weekday Estimates		
		24-Hour	Daytime (8 a.m.-5 p.m.)	HazMat % (90% CI)
US 59, North of US 90A	NB and SB	8,950	5,000	6.7% (6.3-7.1%)
US 59 Frontage, North of US 90A	NB and SB	1,180	870	3.3% (2.7-4.0%)
US 59, South of Spur 529	NB and SB		2,870	8.2% (7.7-8.8%)
Beltway 8, North of US 90A	NB		1,180	7.6% (6.5-8.9%)
Beltway 8 Frontage, North of US 90A	NB		275	2.8% (1.6-4.9%)
Beltway 8, South of US 90A	SB		1,240	8.1% (7.1-9.2%)
Beltway 8 Frontage, South of US 90A	SB		140	3.5% (2.0-5.9%)
US 90A, East of US 59	EB and WB		980	4.5% (3.9-5.1%)
US 90A, between TX 99 and US 59	EB and WB		540	2.8% (2.2-3.4%)
Ave. H (US 90A), East of 1st St., Rosenberg	EB and WB		300	7.0% (5.2-9.2%)
Ave. H (US 90A/TX 36), West of 1st St., Rosenberg	EB and WB		580	6.3% (5.4-7.3%)
US 90A, West of TX 36	EB and WB		200	4.2% (2.9-6.1%)
TX 6, North of US 90A	NB and SB		660	2.6% (1.9-3.5%)
TX 6, South of US 59	NB and SB		1,110	1.9% (1.4-5.4%)
TX 36, North of US 90A	NB and SB		515	4.5% (3.7-5.4%)
1st St. (TX 36), South of Ave. H, Rosenberg	NB and SB		640	6.8% (5.6-8.3%)
TX 36, South of US 59	NB and SB		400	5.7% (4.4-7.3%)
FM 723, North of Ave. H, Rosenberg	NB and SB		380	3.4% (2.4-4.9%)
Ave. H. (Spur 529), West of US 90A/TX 36	EB and WB		160	1.9% (0.9-3.9%)
Spur 10, North of US 59	NB and SB		700	2.7% (2.1-3.6%)
FM 521, North of FM 2234	NB and SB		1,260	2.3% (1.8-2.9%)
FM 521, South of FM 2234	NB and SB		1,300	2.0% (1.5-2.6%)
FM 2234, West of FM 521	EB and WB		400	1.8% (1.1-2.9%)

# US 59

No surprise: highest overall truck traffic levels

- $\approx$  5,000 trucks during 'daytime' (8 a.m.-5 p.m.) in both directions near Sugarland
- 24-hour truck traffic is roughly double this level
- Peak is over 600 trucks per hour in both directions
- Nighttime traffic about 1/4 daytime traffic levels
- Truck traffic decreases to the south along US 59, but HazMat proportions increase

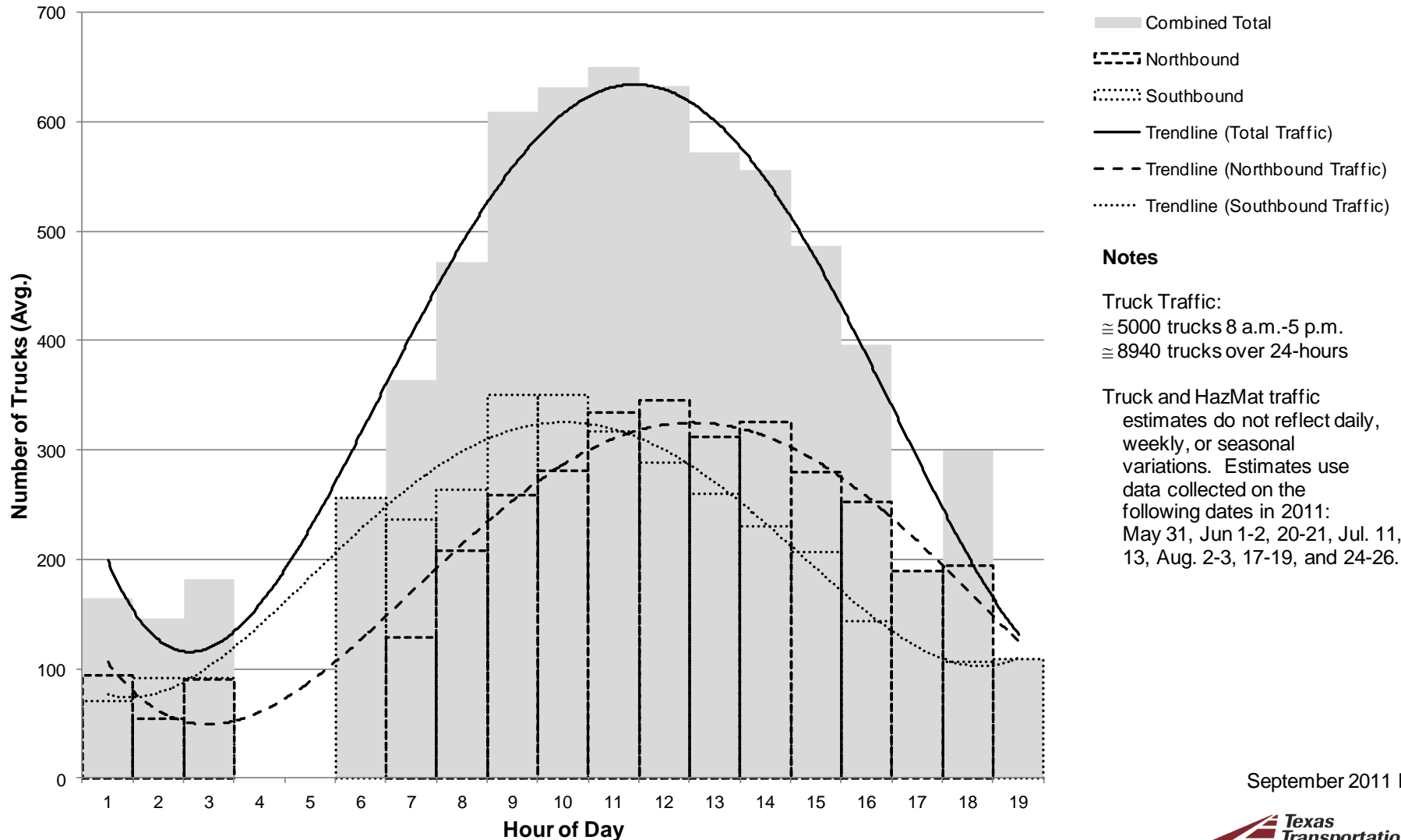
$\approx$  7-8% HazMat placards

- Predominantly Class 3 flammable liquids, Class 2 gases, and Class 8 corrosives, over 80% of all observed HazMat placards



# US 59, north of US 90A: Truck traffic levels

**Weekday Truck Traffic on US 59,  
North of US 90A, Fort Bend County, Texas**



**Notes**

**Truck Traffic:**

- ≅ 5000 trucks 8 a.m.-5 p.m.
- ≅ 8940 trucks over 24-hours

Truck and HazMat traffic estimates do not reflect daily, weekly, or seasonal variations. Estimates use data collected on the following dates in 2011: May 31, Jun 1-2, 20-21, Jul. 11, 13, Aug. 2-3, 17-19, and 24-26.

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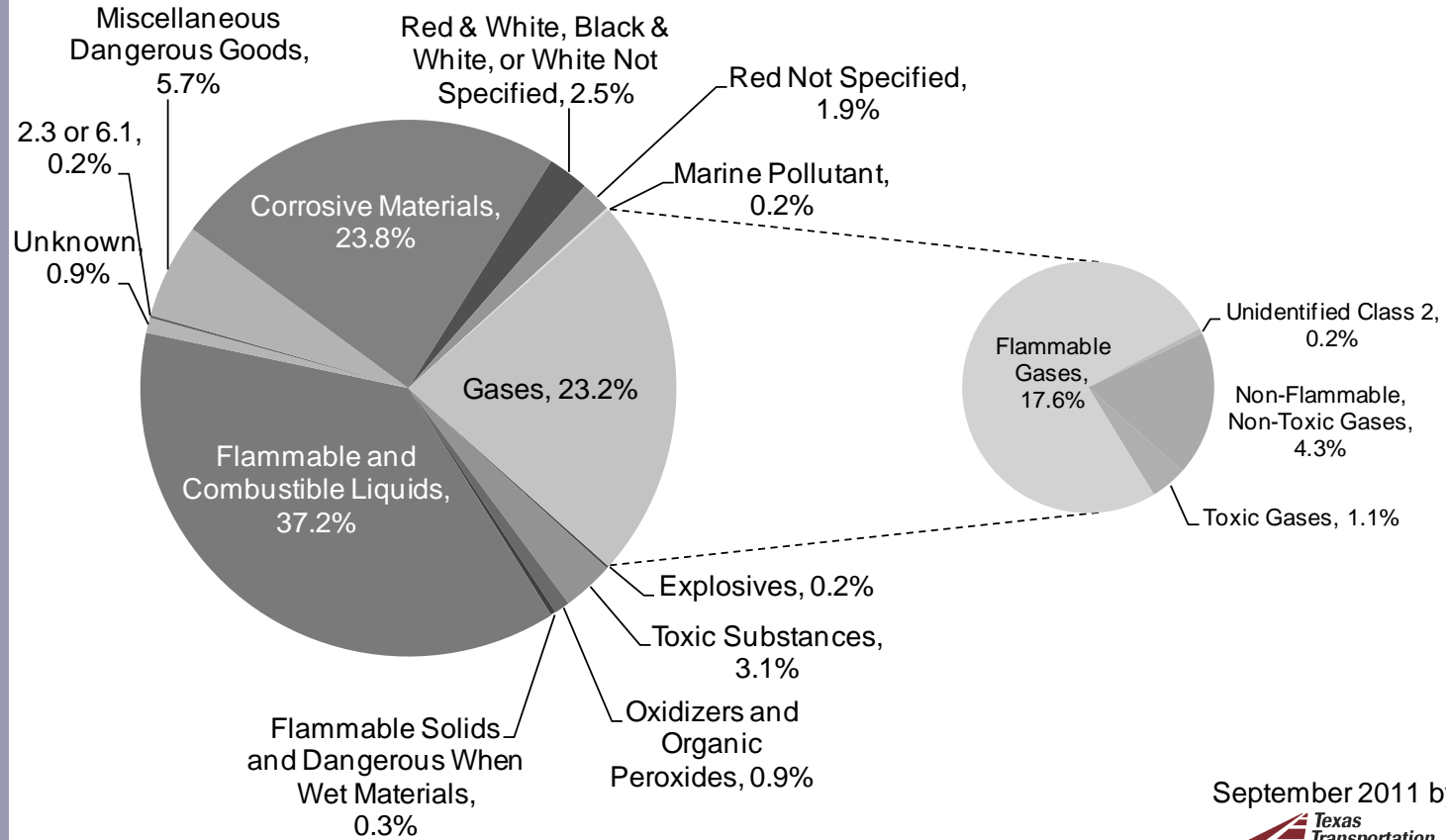
# US 59, south of Spur 529: Most-frequent *ERG* numbers

<b>2008 ERG Number</b>	<b>No. Placards Observed</b>	<b>% of Observed Placards</b>
128	179	27.7%
115	112	17.3%
154	72	11.1%
153	52	8.0%
127	36	5.6%
Unknown	32	4.9%
171	27	4.2%
137	18	2.8%
132	11	1.7%
157	10	1.5%
129P	10	1.5%
<b>Subtotal</b>	<b>559</b>	<b>86.4%</b>
<b>Overall Total</b>	<b>647</b>	<b>100.0%</b>



# US 59, south of Spur 529: HazMat type/class

## HazMat Placards by Class and Division: US 59, South of Spur 529, Fort Bend County, Texas



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# US 59, south of Spur 529: Most-frequent placard IDs observed

Placard ID	Material Description	Class	ERG #	Number Observed	% of Observed Placards
1075	Petroleum gases, liquefied‡	2.1	115	102	15.8%
1993	Combustible liquid, n.o.s.†	3	128	72	11.1%
1203	Gasoline, gasohol, or motor spirits	3	128	43	6.6%
Flammable	Flammable	3	127	30	4.6%
1791	Hypochlorite solution, may be with more than 5% available chlorine	8	121	28	4.3%
1863	Fuel, aviation, turbine engine	3	154	27	4.2%
Corrosive	Corrosive	8	153	26	4.0%
1830	Sulfuric (sulphuric) acid, may be with more than 51% acid	8	137	17	2.6%
3082	Environmentally hazardous substances, hazardous waste, or other regulated substances, liquid, n.o.s.	9	171	16	2.5%
1824	Caustic soda or sodium hydroxide, solution	8	154	15	2.3%
<b>Subtotal Above</b>				376	58.1%
<b>Total HazMat*</b>				647	100.0%

† Includes butane; butane mixture; butylene; isobutane; isobutane mixture; isobutylene; propane; propane mixture; and propylene.

‡ Includes combustible liquid, n.o.s.; compound, cleaning liquid (flammable); compound, tree or weed killing, liquid (flammable); diesel fuel; fuel oil; medicines, flammable, liquid, n.o.s.; and refrigerating machine.



# US 59, south of Spur 529: Special hazards placard IDs observed

UN/NA ID	Material Description	Class	ERG #	Number Observed	% of Observed Placards
1010	Butadienes or butadienes and hydrocarbon mixture, stabilized	2.1	116P	2	0.2%
1016	Carbon monoxide or carbon monoxide, compressed	2.3	119	3	0.3%
1017	Chlorine	2.3	124	3	0.3%
1079	Sulfur dioxide	2.3	125	2	0.2%
1238	Methyl chloroformate	6.1	155	1	0.1%
1242	Methyldichlorosilane (note: water reactive)	4.3	139	1	0.1%
1247	Methyl methacrylate monomer, stabilized	3	129P	7	0.6%
1301	Vinyl acetate, stabilized	3	129P	1	0.1%
1781	Hexadecyltrichlorosilane (note: water reactive)	8	156	1	0.1%
1809	Phosphorus trichloride (note: water reactive)	6.1	137	1	0.1%
2186	Hydrogen chloride, refrigerated liquid	2.3	125	1	0.1%
2218	Acrylic acid, stabilized	8	132P	1	0.1%
2668	Chloroacetonitrile	6.1	131	1	0.1%
2929	Poisonous or toxic liquid, flammable, n.o.s, organic and non-organic (Inhalation Hazard Zones A and B)	6.1	131	1	0.1%
3287	Poisonous liquid or toxic liquid, inorganic, n.o.s., (Inhalation Hazard Zones A and B)	6.1	151	1	0.1%
<b>Subtotal Above</b>				27	2.5%
<b>Total HazMat</b>				1,090	100.0%



# US 59, north of US 90A: Truck types and configurations

Truck Size and Type	Number of Trucks Observed	Percent of Total Trucks Observed	Number of Trucks Observed With HazMat Placard	Percent of Truck Size and Type With HazMat Placard
<b>Straight</b>	<b>4,005</b>	<b>30.1%</b>	<b>98</b>	<b>2.4%</b>
Box	1,716	12.9%	9	0.5%
Flatbed	848	6.4%	37	4.4%
Other	889	6.7%	0	0.0%
Refrigerated	288	2.2%	0	0.0%
Tank	107	0.8%	45	42.1%
Utility	157	1.2%	7	4.5%
<b>Hot Shot</b>	<b>226</b>	<b>1.7%</b>	<b>2</b>	<b>0.9%</b>
Flatbed	226	1.7%	2	0.9%
<b>Tractor-Trailer</b>	<b>9,014</b>	<b>67.8%</b>	<b>786</b>	<b>8.7%</b>
Box	2,944	22.1%	88	3.0%
Dry Tank	270	2.0%	0	0.0%
Flatbed	1,816	13.7%	20	1.1%
Other	2,166	16.3%	4	0.2%
Refrigerated	776	5.8%	3	0.4%
Tank	1,042	7.8%	671	64.4%
<b>Tandem</b>	<b>55</b>	<b>0.4%</b>	<b>4</b>	<b>7.3%</b>
Box	47	0.4%	4	8.5%
Dry Tank	1	0.0%	0	0.0%
Other	6	0.0%	0	0.0%
Utility	1	0.0%	0	0.0%
<b>Grand Total</b>	<b>13,300</b>	<b>100.0%</b>	<b>890</b>	<b>6.7%</b>

# Other HazMat traffic

Highest truck traffic levels on US 90A are east of US 59,  $\approx$ 1,000 trucks during 'daytime', 4.5% with HazMat placards

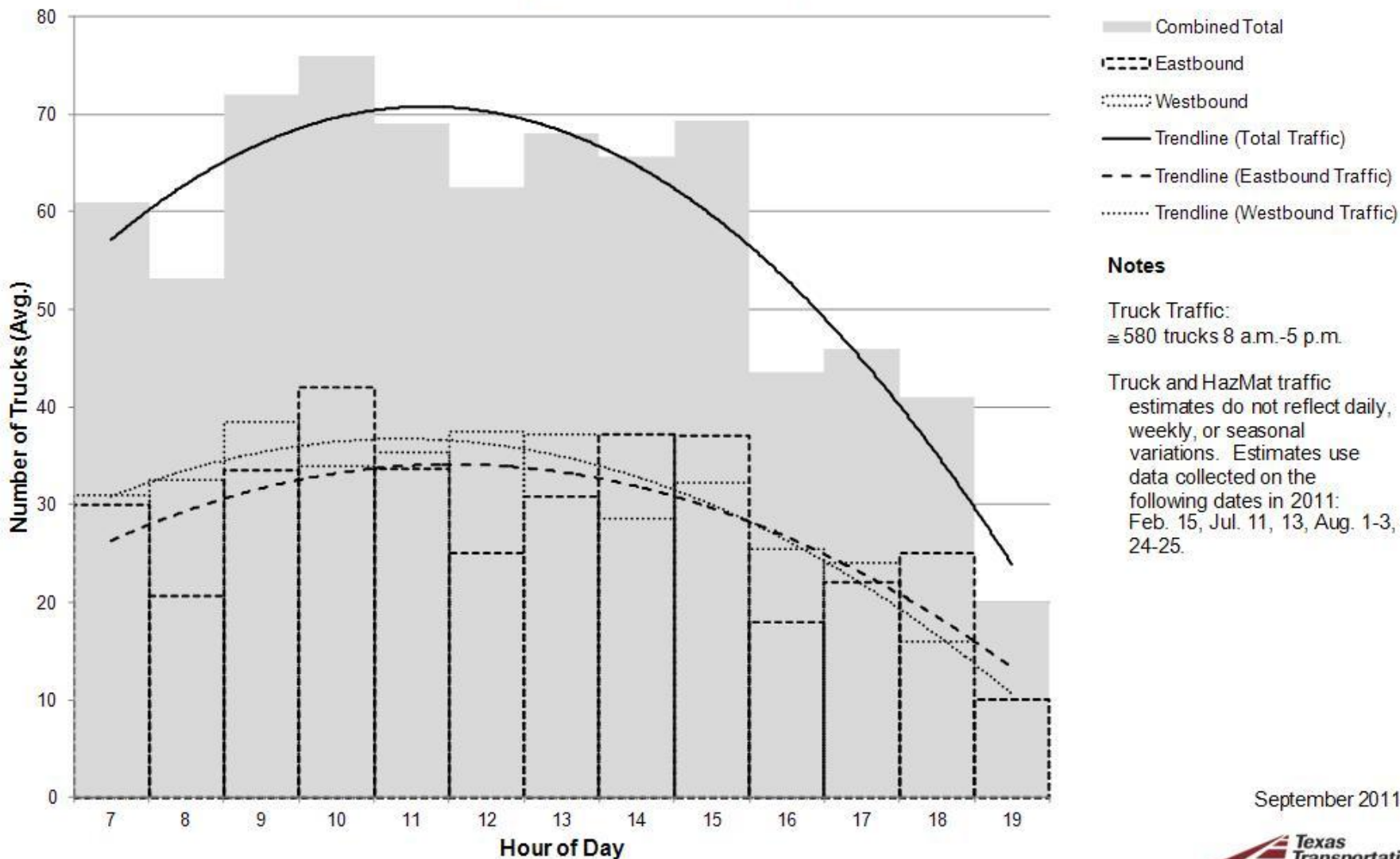
Avenue H and 1st Street in Rosenberg had between 500 and 700 trucks during daytime, 6-7% with HazMat placards

Beltway 8 had over 1,000 trucks each way during daytime,  $\approx$ 7-8% with placards



# Avenue H, Rosenberg: Commercial truck traffic levels

**Weekday Truck Traffic on Ave. H (US 90A/TX 36),  
West of 1st St., Rosenberg, Fort Bend County, Texas**



**Notes**

Truck Traffic:  
≅ 580 trucks 8 a.m.-5 p.m.

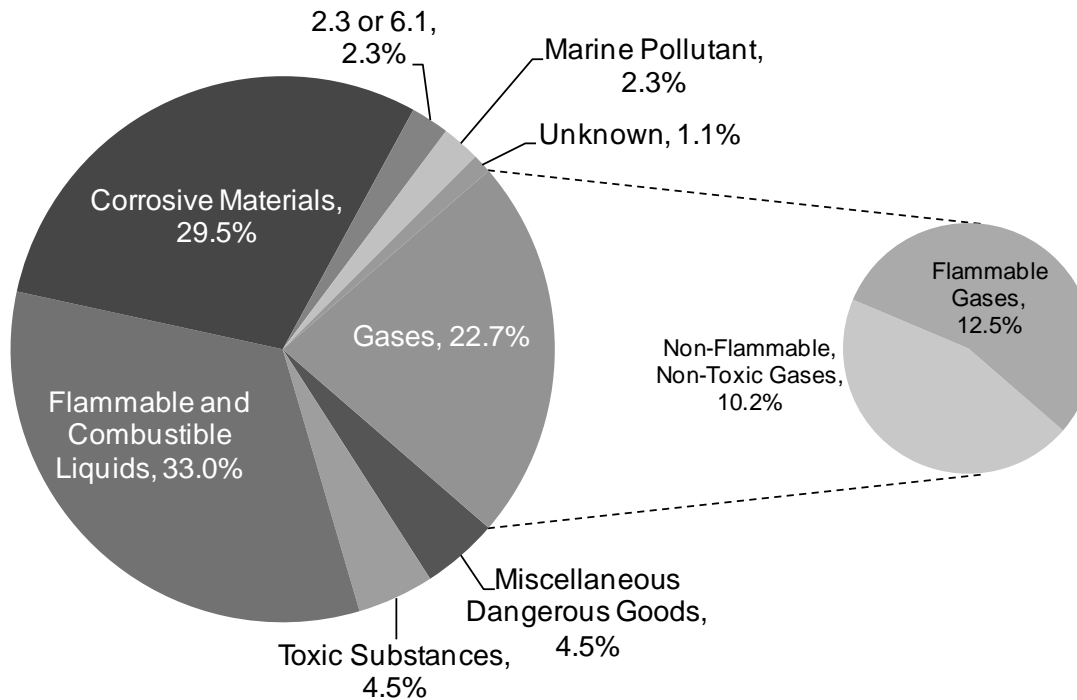
Truck and HazMat traffic estimates do not reflect daily, weekly, or seasonal variations. Estimates use data collected on the following dates in 2011: Feb. 15, Jul. 11, 13, Aug. 1-3, and 24-25.

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# 1<sup>st</sup> Street, Rosenberg: HazMat type/class

## HazMat Placards by Class and Division: 1st St. (TX 36), South of Ave. H, Rosenberg, Fort Bend County, Texas



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# Avenue H, west of 1<sup>st</sup> Street, Rosenberg: Most-frequent HazMat placard IDs observed

Placard ID	Material Description	Class	ERG #	Number Observed	% of Observed Placards
1993	Combustible liquid, n.o.s.†	3	128	16	11.8%
1203	Gasoline, gasohol, motor spirit, or petrol	3	128	14	10.3%
Non-flammable gas	Non-flammable gas	2.2	121	10	7.4%
1075	Petroleum gases, liquefied‡	2.1	115	8	5.9%
Marine pollutant	Marine pollutant	Unknown	Unknown	7	5.1%
Corrosive	Corrosive	8	153	7	5.1%
3257	Elevated temperature liquid, n.o.s., at or above 100°C (212°F), and below its flash point	9	128	6	4.4%
Flammable gas	Flammable gas	2.1	118	5	3.7%
2735	Alkylamines or amines, liquid, corrosive or polyalkylamines or polyamines, liquid, corrosive, n.o.s.	8	153	4	2.9%
Oxygen	Oxygen	2.2	122	4	2.9%
1824	Caustic soda or sodium hydroxide, solution	8	154	4	2.9%
2810	Poisonous or toxic liquid, organic, n.o.s., (Inhalation Hazard Zones A and B)*	6.1	153	4	2.9%
<b>Subtotal Above</b>				89	65.4%
<b>Total HazMat**</b>				136	100.0%

† Includes combustible liquid, n.o.s.; compound, cleaning liquid (flammable); compound, tree or weed killing, liquid (flammable); diesel fuel; fuel oil; medicines, flammable, liquid, n.o.s.; and refrigerating machine.

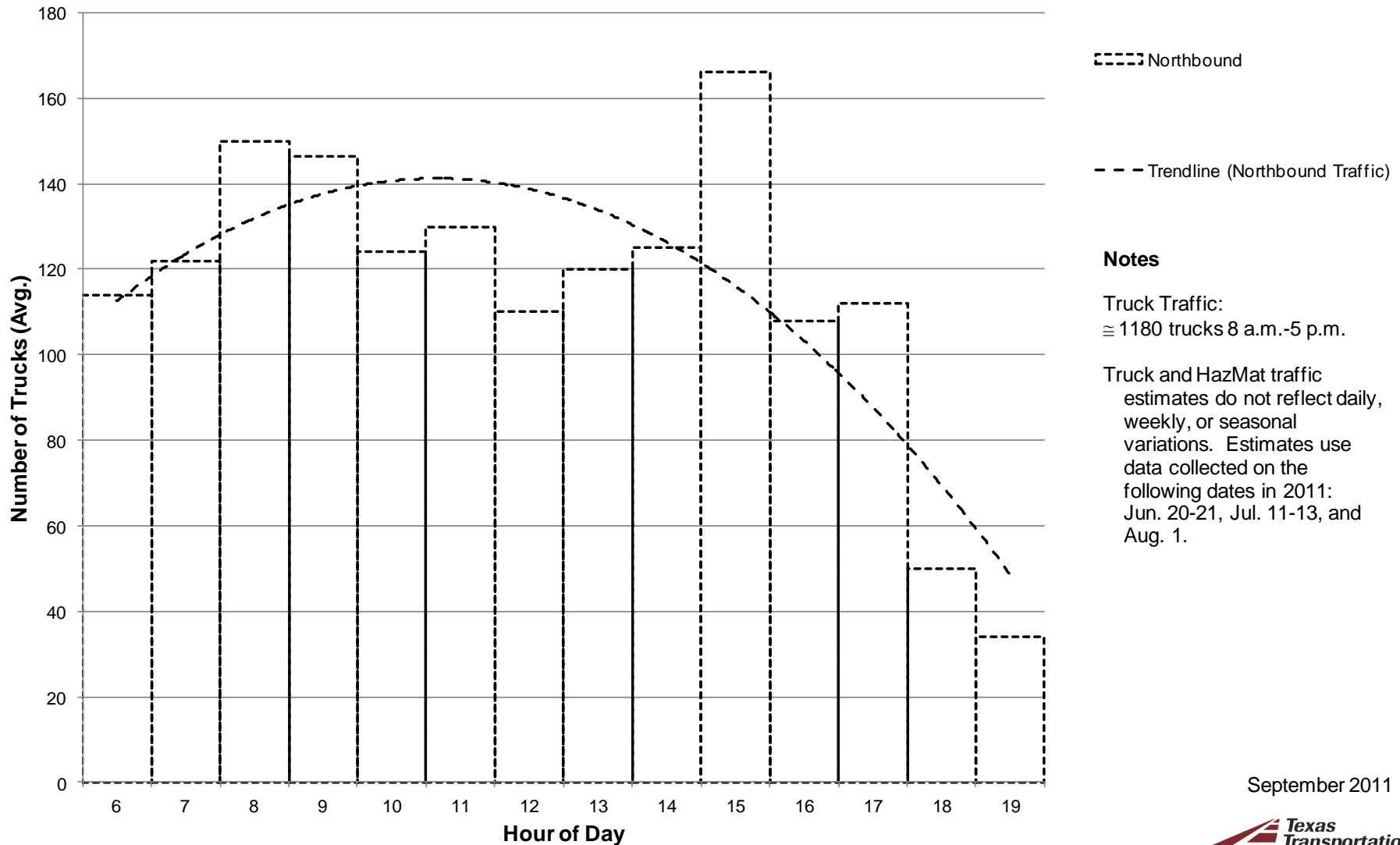
‡ Includes butane; butane mixture; butylene; isobutane; isobutane mixture; isobutylene; propane; propane mixture; and propylene.

\* Includes Buzz; BZ; CS; DC; GA; GB; GD; GF; H; HD; HL; HN-1; HN-2; HN-3; L (Lewisite); Mustard; Mustard Lewisite; Sarin; Soman; Tabun; Thickened GD; VX; and CX.



# Beltway 8, Missouri City area: Truck traffic levels

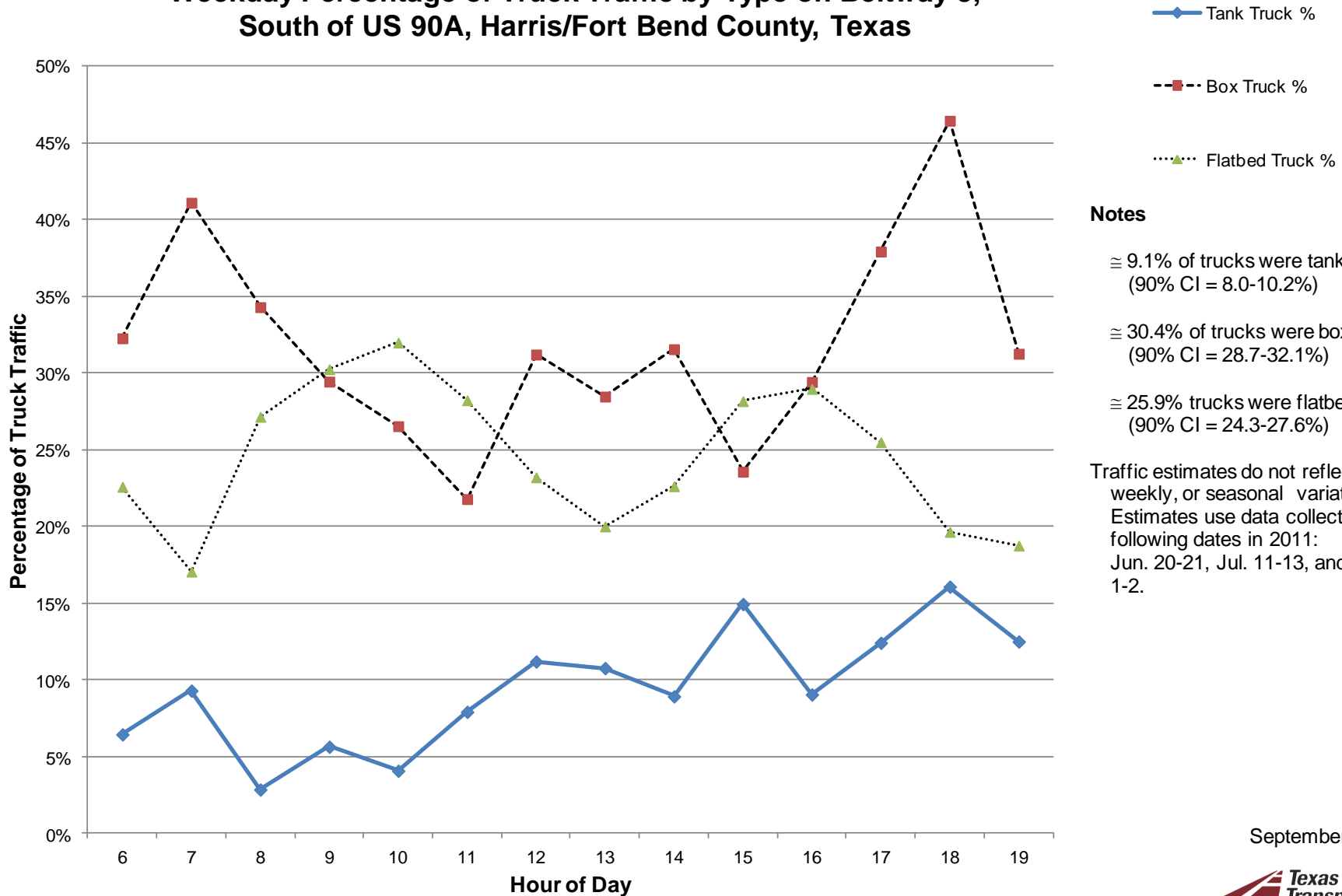
## Weekday Truck Traffic on Beltway 8, North of US 90A, Harris/Fort Bend County, Texas



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# Beltway 8, Missouri City area: Truck type proportions

**Weekday Percentage of Truck Traffic by Type on Beltway 8,  
South of US 90A, Harris/Fort Bend County, Texas**



**Notes**

- ≅ 9.1% of trucks were tankers (90% CI = 8.0-10.2%)
- ≅ 30.4% of trucks were box (90% CI = 28.7-32.1%)
- ≅ 25.9% trucks were flatbeds (90% CI = 24.3-27.6%)

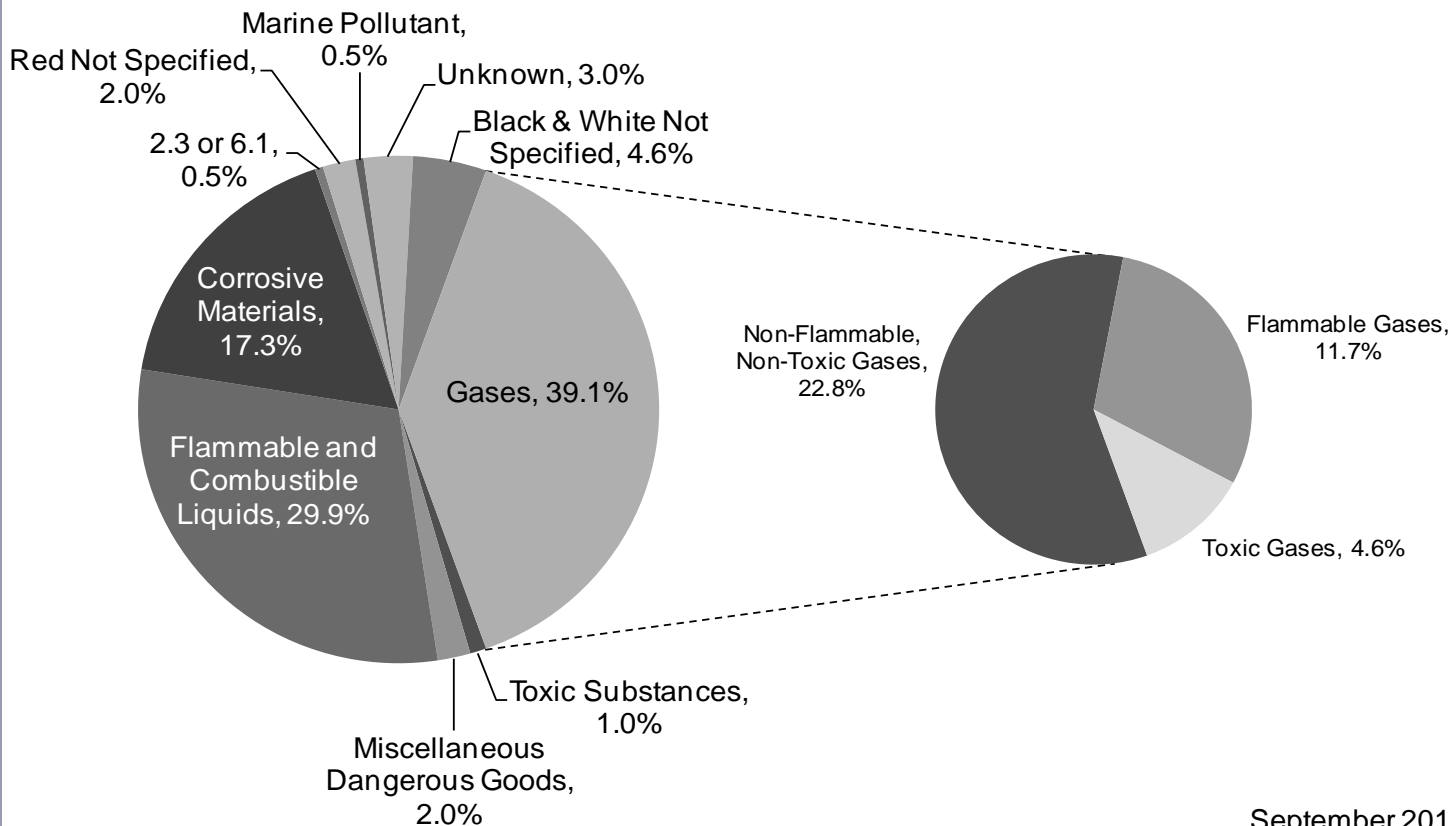
Traffic estimates do not reflect daily, weekly, or seasonal variations. Estimates use data collected on the following dates in 2011: Jun. 20-21, Jul. 11-13, and Aug. 1-2.

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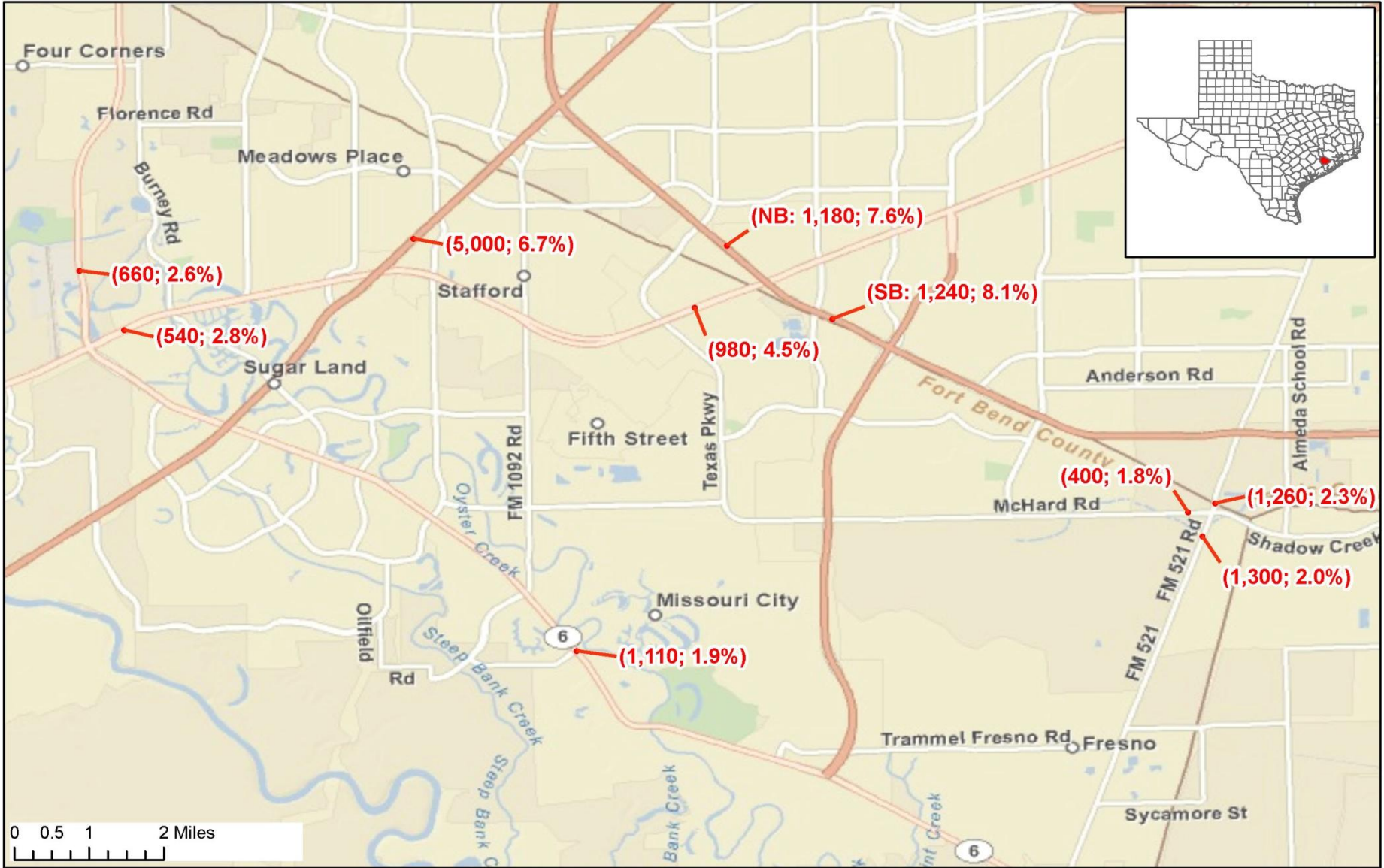


# Beltway 8 SB, Missouri City area: HazMat type/class

## HazMat Placards by Class and Division: Beltway 8, South of US 90A, Fort Bend County, Texas



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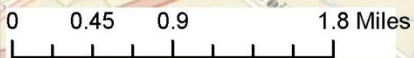
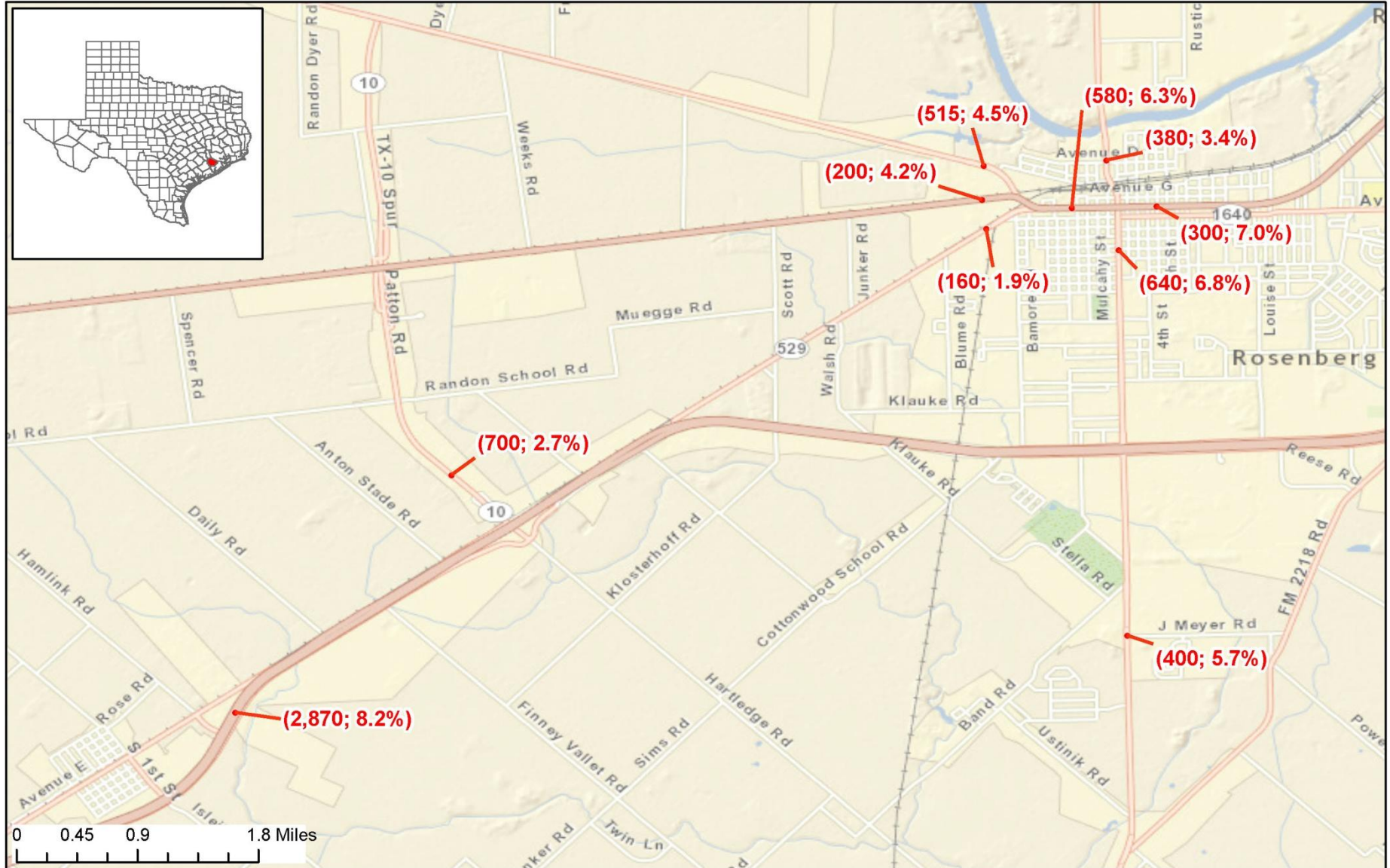


**Daytime (8 a.m.-5 p.m.) Truck Traffic Estimates for East Fort Bend County**

(Number of Trucks; % with Placard)

PREPARED BY THE TEXAS TRANSPORTATION INSTITUTE  
MULTIMODAL FREIGHT PROGRAMS

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### Daytime (8 a.m.-5 p.m.) Truck Traffic Estimates for West Fort Bend County

(Number of Trucks; % with Placard)

PREPARED BY THE TEXAS TRANSPORTATION INSTITUTE  
MULTIMODAL FREIGHT PROGRAMS

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# Summary/other truck traffic observations

Highest HazMat proportions observed on US 59, Beltway 8, Ave. H and 1<sup>st</sup> St. (Rosenberg), and TX 36

- Moderate to heavy truck traffic on these roads

Lowest HazMat proportions observed on FM 521, TX 6, Spur 10, US 90A (@ TX 99), FM 2234, FM 723, and Spur 529

- Light to moderate truck traffic on these roads



# Summary/other truck traffic observations

Class 3 flammable and combustible liquids, Class 2 gases, and Class 8 corrosives predominate, but...

Each road segment has different types of HazMat that are most prevalent

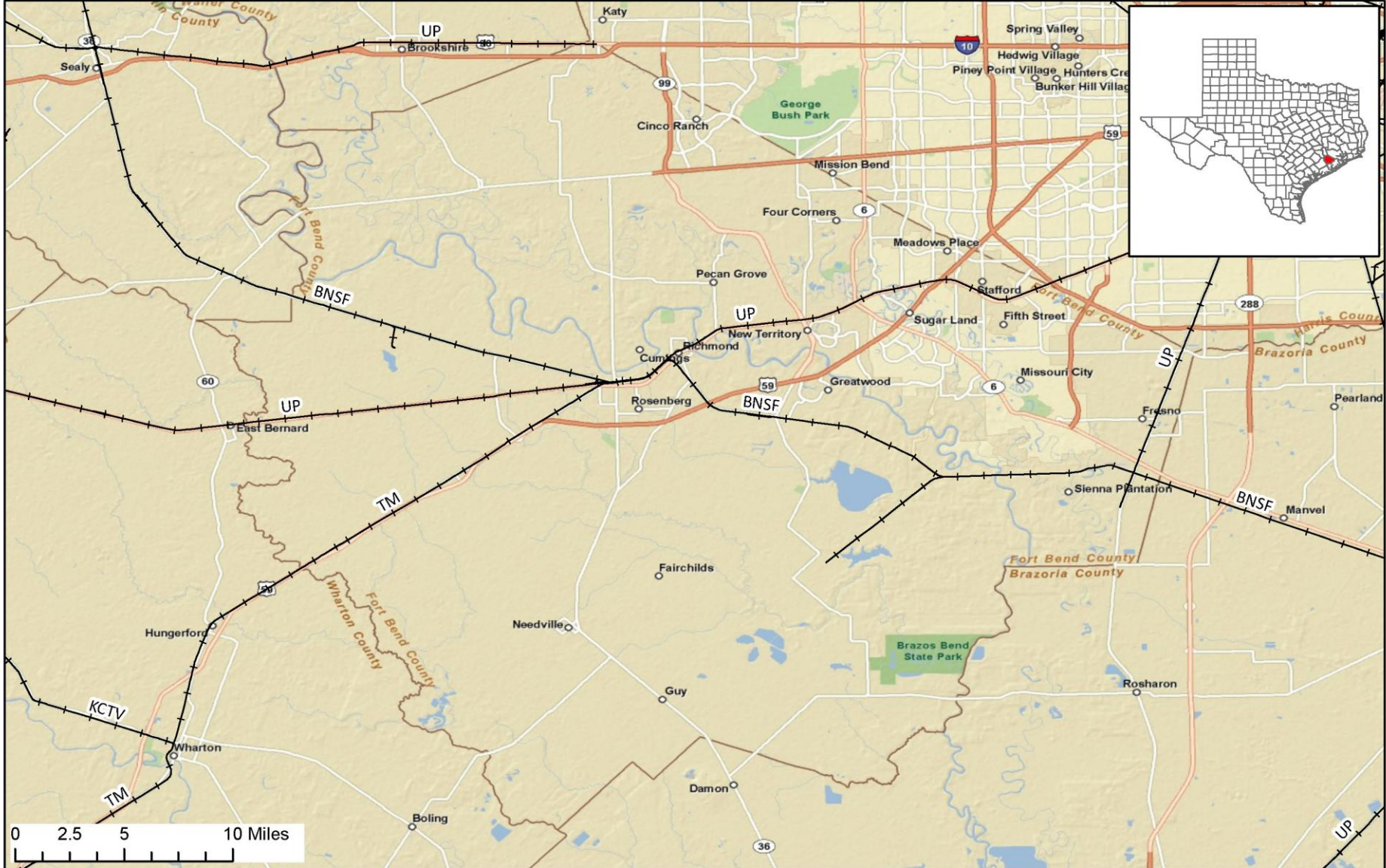
Other HazMat also transported (toxics, marine pollutants, flammable solids, water reactive, explosive, etc.)

On different road segments, the proportions of tank, flatbed, and box trucks that carry HazMat also vary widely...



# Rail and pipeline information: Distribution limits





## Fort Bend County Local Emergency Planning Committee Jurisdiction

PREPARED BY THE TEXAS TRANSPORTATION INSTITUTE  
MULTIMODAL FREIGHT PROGRAMS

COPYRIGHT 2011, Texas Transportation Institute.  
Major Sources: National Transportation Atlas Database (2010);  
ArcGIS Online Services.

Accuracy is limited to the validity of available data.

N



# HazMat transportation incidents



Clockwise from upper left: Collision of tandem box and container trucks, US-59, Polk County, Texas , 2010 (Source: [www.polkcountytoday.com](http://www.polkcountytoday.com)); Isobutylene tanker rollover, I-10, Jefferson County, Texas, 2010 (Courtesy Dave Ryan, The Beaumont Enterprise); Collision of BNSF and UP freight trains and chlorine release, Macdona, Texas, 2004 (Source: <http://www.nts.gov/doclib/reports/2006/RAR0603.pdf>); Rupture and explosion of hazardous liquids pipeline, Carmichael, Mississippi, 2007 (Source: <http://www.nts.gov/doclib/reports/2009/PAR0901.pdf>)



# Recent Fort Bend County HazMat incidents

June 8, 2011

## Tar truck overturns along U.S. 59

BY DON MUNSCH  
dmunsch@fbherald.com

A truck transporting tar overturned and spilled its contents on U.S. 59 North at Cottonwood School Road in the Rosenberg area late Monday night, causing a partial road closure. Crews were still at the scene early Tuesday.

The tanker of the truck was still in the median Tuesday morning. The 18-wheel truck actually hit another vehicle before it overturned.

Traffic had to be diverted to an access road on 59, but it was a short stretch of the road and traffic was not halted on the roadway.



STAFF PHOTO BY DON MUNSCH

This tanker carrying tar overturned Monday night on U.S. 59 near Cottonwood School Road. The tanker truck hit another vehicle and spilled molten tar at U.S. 59 North and Cottonwood School Road. The tractor-trailer driver was treated at a local hospital and released. Passengers in the car were not injured.

SEE TAR, PAGE 3

## U.S. 59 closed nearly 8 hours after fatal oil tanker accident

BY DON MUNSCH  
dmunsch@fbherald.com

A gas tanker truck driver died when his truck overturned on U.S. 59 near Texas 99 Tuesday morning.

Russell Brast, 38, of Wharton was driving southbound on U.S. 59 when the truck overturned around 11:30 a.m. and spilled diesel fuel on the roadway, said Doug Adolph, spokesman for the city of Sugar Land.

There were no other injuries. Brast died at the scene.

Traffic lanes on southbound U.S. 59 were closed for several hours and didn't reopen until 7:45 p.m.

Adolph said Brast's truck attempted to change lanes on U.S. 59 when it clipped a box truck and Brast overcorrected, lost control of the truck and struck a wall.

Two U.S. 59 southbound inside frontage lanes were closed because of the accident and traffic was detoured to the outside frontage road lanes at the 99 exit, according to a release Tuesday from the Texas Department of Transportation.

October 26, 2010

## Rosenberg Council approves new gas station on Ave. D

BY JUAN CARLOS REYES  
jreyes@fbherald.com

A new retail center is coming to northern Rosenberg.

Rosenberg City Council on Tuesday unanimously approved a request by Asim Properties Inc to construct a convenience store/gas station and retail space on the northeast corner of FM 723 and Avenue D.

Council also approved making improvements to an alley right-of-way associated with that property.

"I see nothing but a positive for that corner," said District 2 councilman Joe G. Segura. "It's going to bring a lot of good things for that neighborhood."

Mayor Vincent Morales added that he sees the area as a really nice redevelopment site for Rosenberg.

Council also approved a resolution authorizing the city manager to execute, for and on behalf of the city, an agreement relating to the temporary assignment of rights and obligations under the water supply contract between the city and the Gulf Coast Water Authority.

At its April 19 meeting, council approved authorizing the city manager to assign a portion of the city's 2011 allocation of the Brazos River Authority water supply to the Gulf Coast Water Authority, at the same rate paid to Brazos.

Gulf Coast contacted both Richmond and Rosenberg to have the assignment be extended for additional years, making the contract include an assignment of a portion of the city's allocation annually in 2011, 2012, 2013 and 2014.

Gulf Coast would be required to reimburse the city annually for the assigned

water at the same rate as Brazos.

Continuing the discussion on water, council members approved an action to call a public hearing at 7 p.m. Tuesday, June 19, at Rosenberg City Hall.

The public will be given an opportunity to voice their concerns on a proposed amendment of the city's water and wastewater impact fee ordinance. It's the first step in the ordinance that would exempt landscape irrigation systems installed completely within the public rights-of-way from the impact fees, as requested by the Task Force.

Commissioners vote to amend | Austin Elementary School presents Kindergarten Circus



Permission courtesy of the Fort Bend Herald and Texas Coaster.



# INFORMATION

Review: When, where, how, and how much are hazardous materials being transported in Fort Bend County?

Validate: How does HMCFS information compare with previous ideas about HazMat transport in the area?

Implement: What are lessons learned? How is success measured?

Identify: What emergency and community functions can be enhanced using HMCFS information?

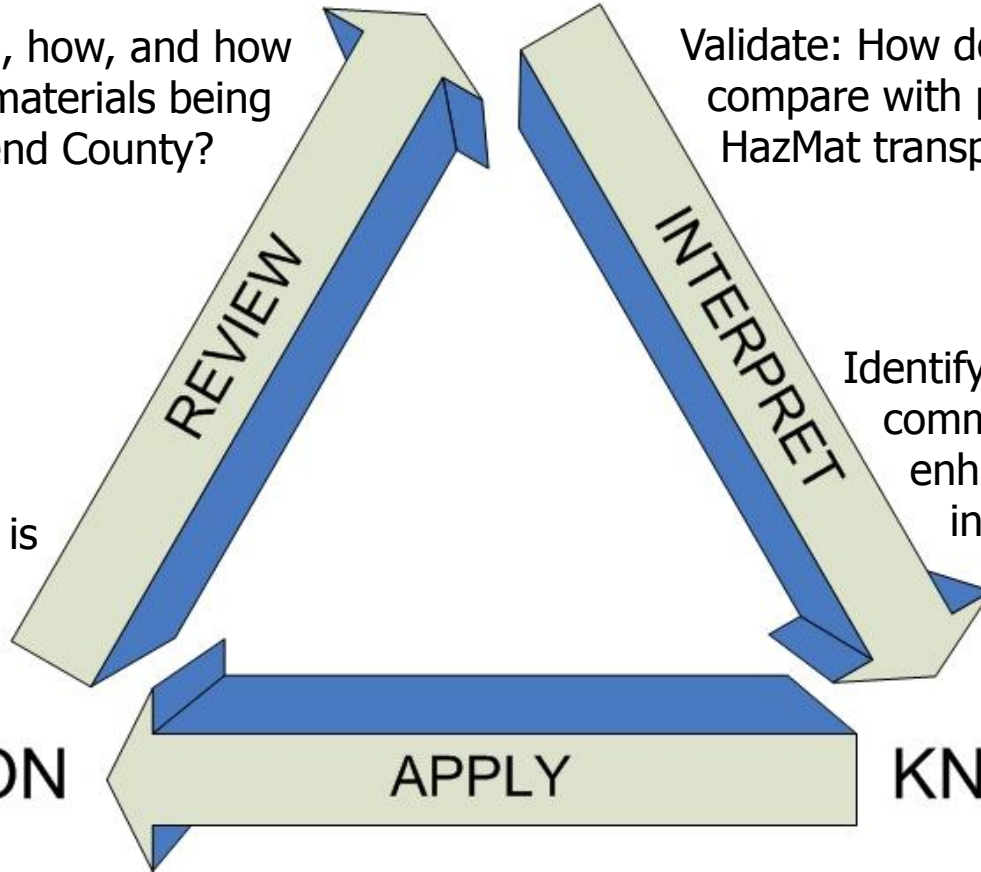
## ACTION

## APPLY

## KNOWLEDGE

Select: What are priorities for implementation? How can they be achieved?

Evaluate: What specific steps can/need to be taken to improve HazMat transport safety and security in Fort Bend County?



# Specific suggestions/questions for using the information

Where are the priority corridors for planning? Response?

Are there training, equipment, or supplies needs?

Where and when is population exposure greatest? Are evacuation/shelter-in-place protocols updated and exercised?

What are response capabilities? How would responders access incidents in congested areas?

Which locations or times need more information?

Who do you brief about the project results? How will results be distributed? Who will have access to the results?

Who else can use the information from the study?



# HazMat transport incident training

Available  
through  
TDEM/TEEX  
and  
TRANSCAER



Permission courtesy of Karen Scheel/TRANSCAER.



# Recommendations for local officials and agencies

- ✓ Raise public awareness
- ✓ Identify training scenarios and exercise them
- ✓ Plan for protective action
- ✓ Evaluate equipment and supplies
- ✓ Locate and schedule critical resources
- ✓ Conduct hazard and vulnerability assessments
- ✓ Integrate with other community plans
- ✓ Keep it current!



# Acknowledgements

- Ronald Drachenberg, Fort Bend County Engineering
- Adam Wright, FBC Drainage District
- Scott Wieghat, FBC Road and Bridge,
- FBC Drainage, Engineering, and R&B staff for assistance with data collection and coordination
- Robert Stone, FBC Office of Emergency Management
- Raymond Engelhardt, Fort Bend County LEPC Chair



Thank you for your attention!

Questions?

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