HMEP GRANTS

- Hazardous Materials Emergency Preparedness (HMEP) Grant
  - U.S. Department of Transportation program
  - Administered by TDEM
- HazMat transport accident and incident response
  - Emergency Planning and Community Right to Know Act of 1986 (EPCRA)
  - Comprehensive approach
- Provides
  - Emergency training and planning support
  - Financial and technical assistance
TDEM:

http://www.txdps.state.tx.us/dem/GrantsResources/

Joshua Bryant, Tech Hazards Unit Supervisor, Preparedness Section
Phone: (512) 424-5989
Email: Joshua.Bryant@dps.texas.gov

US DOT:

http://www.phmsa.dot.gov/hazmat/grants
HOW IT WORKS

- LEPC applies to TDEM for grant
  - Requires some matching funds

- Funds can be used for:
  - EOP reviews of EPCRA required plans
  - Commodity flow studies
  - Assessment of the need for regional HazMat teams
  - Assessment of local response capabilities
  - Conduct emergency response drills and exercises
  - Provision of technical staff to support planning
  - Additional activities require TDEM approval

SEE TDEM GRANT DOCUMENTS FOR FULL ACCOUNT
ABOUT TTI

Mission:
To solve transportation problems through research, to transfer technology, and to develop diverse human resources to meet the transportation challenges of tomorrow

Work:
600 research projects annually
200 different sponsors/clients – government and private sector
Education for students and professionals

Locations:
HQ - College Station;
Other offices: Arlington, Austin, Dallas, El Paso, Galveston, Houston, San Antonio, Waco, Washington, D.C., Mexico City and Doha, Qatar
TRANSPORTATION DISASTERS

- 2013, Lac-Mégantic, Quebec
- 2010, San Bruno, California
- 2005, Graniteville, South Carolina
- 2004, Macdona, Texas
- 2001, Baltimore, Maryland
- 1989, Valdez, Alaska
- 1976, Houston, Texas
- 1947, Texas City, Texas

CHALLENGES FOR DISASTER REDUCTION

1. Provide hazard and disaster information
2. Understand hazard producing processes
3. Develop mitigation strategies, technologies
4. Reduce vulnerabilities
5. Assess disaster resilience
6. Promote risk-wise behavior


COMMODITY FLOW STUDIES

HMEP Grant Program:
- HazMat flows within a jurisdiction
- System to keep such information current

Implementation:
- Where, when, how, and what kinds of HazMat are transported within or through jurisdiction
- Multiple or individual modes of transport:
  - Road, Rail, Air, Pipeline, Marine
- Optional:
  - Identify carriers
  - Shipment data (packaging, quantities)
HOW IT WORKS

PROCESS:

- Observation points are selected in consultation with jurisdiction officials
- Trained volunteers and TTI staff collect data over a defined period
- Data is collated and analyzed
- Report is presented to jurisdiction

TIME FRAME:

- Approximately 8-12 months from start to finish
WHAT YOU GET

- Truck traffic volumes – By vehicle type / time of day
- Percent of that truck traffic with placards
- What those placards are
- Breakdown of placards by hazard and frequency
- Specific, actionable recommendations for:
  - Elected Officials
  - Executive/agency heads
  - Emergency planners/OEM staff
  - Emergency responders
  - Communications and media relations/public education
USES

- Hazard, risk, & vulnerability analysis:
  - Identify potential incident “hotspots”
  - Identify most-common and most-dangerous HazMat

- Planning:
  - Revise emergency operations plans
  - Plan evacuation and shelter-in-place
  - Develop training and exercise scenarios
USES (continued)

- Resources:
  - Stationing of resources and personnel
  - Resource selection and acquisition
  - Evaluate mutual aid agreements

- Communications
  - Focus public education programs
  - Coordinate cross jurisdictional response and planning

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

† 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.
TRAFFIC PATTERNS

Weekday Truck Traffic on I-10, East of Junction, Kimble County, Texas

Notes

Truck Traffic:
- 1,500 trucks from 8 a.m.-5 p.m.
  (755 trucks EB, 745 trucks WB)
- 3,000 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 2012: Feb. 14, 17, Mar. 21, May 7-9, Jun. 4, 7-8, Jul. 24, 26.

August 2012 by Texas A&M Transportation Institute
PLACARDED TRUCKS

Average Number of Placarded Trucks per Hour on I-45, north Galveston County, Texas

Traffic estimates use data collected by Galveston County LEPC and TTI. They do not necessarily reflect actual daily, weekly, or seasonal variations.
PERCENTAGES

Weekday Percentage of Tank Truck Traffic with Placard on FM 140, South of TX 97, Charlotte, Atascosa County, Texas

- Combined Average
- Northbound
- Southbound

Notes

= 45.7% of tank trucks were placarded from 8 a.m. to 5 p.m.
(90% CI = 36.9-54.8%)

Traffic estimates do not reflect daily, weekly, or seasonal variations.
Percentages of HazMat Placards by Classification, Weekdays in 2014, on US 287, between Midlothian and Waxahachie, Ellis County, Texas

Percentages do not reflect daily, weekly, or seasonal variations. Does not include secondary placard classifications.
# CARRIER DATA

<table>
<thead>
<tr>
<th>Company DOT #</th>
<th>Company Legal Name</th>
<th>Total National Inspections 2009–2010</th>
<th>Inspection % Out of Service</th>
<th>Number Trucks in Sample</th>
<th>Placard IDs in Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>74816</td>
<td>Texas International Gas &amp; Oil Company</td>
<td>1,651</td>
<td>Vehicle: 7.66% Driver: 1.57% Hazmat: 0.71%</td>
<td>24</td>
<td>1075</td>
</tr>
<tr>
<td>233222</td>
<td>Transportes Lopez y Hijos SA de CV</td>
<td>436</td>
<td>Vehicle: 17.36% Driver: 0.23% Hazmat: 2.06%</td>
<td>4</td>
<td>1977, 2187</td>
</tr>
<tr>
<td>259823</td>
<td>Fletes Sotelo SA de CV</td>
<td>4,648</td>
<td>Vehicle: 12.27% Driver: 0.49% Hazmat: 3.45%</td>
<td>2</td>
<td>2990, 3082</td>
</tr>
<tr>
<td>298907</td>
<td>Rinchem Company Inc.</td>
<td>290</td>
<td>Vehicle: 9.82% Driver: 1.04% Hazmat: 2.80%</td>
<td>4</td>
<td>1052, Inhalation Hazard, Poison, Toxic 3268</td>
</tr>
<tr>
<td>557870</td>
<td>Express Tres Fronteras SA de CV</td>
<td>2,852</td>
<td>Vehicle: 16.67% Driver: 1.09% Hazmat: 0.61%</td>
<td>21</td>
<td>3268</td>
</tr>
<tr>
<td>558117</td>
<td>Eco Transportes Internacionales SA de CV</td>
<td>674</td>
<td>Vehicle: 7.74% Driver: 0.30% Hazmat: 4.30%</td>
<td>22</td>
<td>1044, 1046, 1436, 1866, 2037, 3077, 3164, 3257/Hot, 3305, Corrosive, Dangerous when wet, Flammable, Flammable solid, Class 9</td>
</tr>
<tr>
<td>589266</td>
<td>California Gas Transport Inc.</td>
<td>1,697</td>
<td>Vehicle: 16.06% Driver: 1.42% Hazmat: 0.58%</td>
<td>31</td>
<td>1075</td>
</tr>
<tr>
<td>604849</td>
<td>Transportes Kemsa SA de CV</td>
<td>3,658</td>
<td>Vehicle: 16.00% Driver: 0.22% Hazmat: 2.39%</td>
<td>14</td>
<td>3268, 3164</td>
</tr>
<tr>
<td>640568</td>
<td>Praxair Mexico S de RL de CV</td>
<td>171</td>
<td>Vehicle: 4.68% Driver: 0.00% Hazmat: 0.66%</td>
<td>7</td>
<td>1977, 2187</td>
</tr>
<tr>
<td>683428</td>
<td>Operadora de Transporte Internacional SA de CV</td>
<td>8,971</td>
<td>Vehicle: 13.65% Driver: 0.64% Hazmat: 15.38%</td>
<td>1</td>
<td>3082, Class 9</td>
</tr>
<tr>
<td>736393</td>
<td>Guyahnos SA de CV</td>
<td>58</td>
<td>Vehicle: 10.34% Driver: 0.00% Hazmat: 0.00%</td>
<td>1</td>
<td>3170</td>
</tr>
<tr>
<td>739066</td>
<td>Asfaltos de la Frontera SA de CV</td>
<td>180</td>
<td>Vehicle: 14.44% Driver: 0.56% Hazmat: 0.00%</td>
<td>5</td>
<td>3257/Hot</td>
</tr>
<tr>
<td>753534</td>
<td>Activa Transportes y Servicios Especializados SA de CV</td>
<td>99</td>
<td>Vehicle: 6.12% Driver: 0.00% Hazmat: 2.17%</td>
<td>5</td>
<td>1951, 1977, 2187</td>
</tr>
<tr>
<td>797792</td>
<td>Asfaltos y Pavimentos de Ciudad Juarez SA de CV</td>
<td>29</td>
<td>Vehicle: 3.45% Driver: 0.00% Hazmat: 0.00%</td>
<td>2</td>
<td>3257/Hot</td>
</tr>
<tr>
<td>815942</td>
<td>Transportes Hermanos Beltran SA de CV</td>
<td>308</td>
<td>Vehicle: 8.17% Driver: 0.00% Hazmat: 0.00%</td>
<td>2</td>
<td>3268</td>
</tr>
<tr>
<td>824454</td>
<td>Transportes Soto y Hijos SA de CV</td>
<td>1,585</td>
<td>Vehicle: 10.78% Driver: 0.44% Hazmat: 0.00%</td>
<td>1</td>
<td>3164</td>
</tr>
<tr>
<td>1613307</td>
<td>Deborah Lynn</td>
<td>0</td>
<td>Vehicle: 0.00% Driver: 0.00% Hazmat: 0.00%</td>
<td>1</td>
<td>1075</td>
</tr>
<tr>
<td>1613507</td>
<td>Transportadora SIlza SA de CV</td>
<td>41</td>
<td>Vehicle: 9.76% Driver: 0.00% Hazmat: 0.00%</td>
<td>5</td>
<td>1075</td>
</tr>
<tr>
<td>1692179</td>
<td>Border Express de Mexico SA de CV</td>
<td>671</td>
<td>Vehicle: 7.74% Driver: 0.30% Hazmat: 7.14%</td>
<td>2</td>
<td>Non-flammable gas</td>
</tr>
<tr>
<td>2153151</td>
<td>Antonio Enrique Campos Lee</td>
<td>124</td>
<td>Vehicle: 13.51% Driver: 0.00% Hazmat: 6.25%</td>
<td>2</td>
<td>3082</td>
</tr>
</tbody>
</table>

**Total** 156

**National Averages (2009–2010)**

- **Vehicle:** 20.72%
- **Driver:** 5.51%
- **Hazmat:** 4.50%
### Class 5.1 Material Shipments by Placards Displayed on Trucks

<table>
<thead>
<tr>
<th>Placard(s) on Trucks</th>
<th>Commodity Name</th>
<th>Number of Shipments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942</td>
<td>Ammonium nitrate</td>
<td>1</td>
</tr>
<tr>
<td>2014</td>
<td>Hydrogen peroxide solution, aqueous, 30 percent</td>
<td>1</td>
</tr>
<tr>
<td>2014, Corrosive</td>
<td>Hydrogen peroxide solution</td>
<td>1</td>
</tr>
<tr>
<td>Corrosive</td>
<td>Calcium hydrochlorite mixture, dry, 5.1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Oxidizing solid, N.O.S. 5.1 (1-Brano-3-Cloro 5,5-Dimethylhydantoin)</td>
<td>1</td>
</tr>
<tr>
<td>Corrosive, Oxidizer</td>
<td>Bioguard (Calcium hypochlorite, hydrated mixtures, 5.1, II RQ)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bioguard (Hydrogen peroxide, aqueous solutions, 5.1, (8) II)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bioguard (Oxidizing solid, N.O.S., Lithium hypochlorite mixture, 5.1, III)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bioguard (Trichloroisocyanuric acid, dry, mixture, 5.1, II)</td>
<td>1</td>
</tr>
<tr>
<td>Dangerous, Flammable</td>
<td>Chromium trioxide, anhydrous</td>
<td>1</td>
</tr>
<tr>
<td>Oxidizer</td>
<td>Ammonium nitrate</td>
<td>1</td>
</tr>
<tr>
<td>No placard</td>
<td>Chlorinating tablets - oxidizer 5.1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>
**EOP REVIEWS**

**HMEP Grant Program:**
- Development, improvement, testing, and implementation of EOPs under EPCRA
- Enhancement of EOPs:
  - Hazard analysis
  - Transportation incident response procedures (includes radioactive materials)

**TTI Implementation:**
- Evaluate jurisdiction’s EOP against National Response Team (NRT) 1-a criteria
- Score based on criteria
- Provide recommendations
- Identify best practices
EVALUATION PROCESS

Comprehensive Evaluation

- Evaluates content not format
- HazMat incident response
- 29 different planning categories:
  - Planning factors
  - Concept of operations
  - Warning systems
  - Personal/Indoor protection
  - Fire & rescue
  - On-Going incident assessment
  - Training
- Prioritizes and weights the evaluation
  - Shall, Should, Might
WHAT YOU GET

- Comprehensive report of EOP compliance with NRT-1a criteria
- Identification of EOP Strengths and Weaknesses by category and their specific location within the plan
- Actionable recommendations for plan improvement
- Best practices to implement, maintain, and share
- OPTIONAL – Comparison to other jurisdictions EOPs across High Priority categories
# SAMPLE SCORE CARD

Scores range from 0.00 (meets no NRT-1a criteria) to 2.00 (meets all NRT-1a criteria)

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>NRT-1a Criteria Category</th>
<th>Combined Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1</td>
<td>1.0 Incident Information Summary</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>6.0 Planning Factors</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>7.0 Concept of Operations</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>10.0 Emergency Notification Procedures</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>11.0 Initial Notification of Response Agency</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>12.0 Direction and Control</td>
<td>1.48</td>
</tr>
<tr>
<td></td>
<td>13.0 Communication Among Responders</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>14.0 Warning System/Emergency Public Notification</td>
<td>1.33</td>
</tr>
<tr>
<td></td>
<td>18.0 Response Personnel Safety</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>19.0 Personal Protection/Indoor</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>20.0 Personal Protection/Evacuation</td>
<td>1.66</td>
</tr>
<tr>
<td></td>
<td>21.0 Fire &amp; Rescue</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>22.0 Law Enforcement</td>
<td>1.33</td>
</tr>
<tr>
<td></td>
<td>23.0 On-going Incident Assessment</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>29.0 Training</td>
<td>0.64</td>
</tr>
</tbody>
</table>
Table B.1: *NRT-1a Criteria, Section 6.0 – Planning Factors.*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Content</th>
<th>Score</th>
<th>Document Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>List all of the assumptions about conditions that might develop in the district in the event of accidents from any of the affected facilities or along any of the transportation routes. Assumptions are the advance judgments concerning what might happen in the case of an accidental spill or release.</td>
<td>1</td>
<td>Criterion partially addressed in BP-IV-B and Annex Q IV A &amp; B. Annex Q-IV and Annex Q-Appendix-6 Point to missing maps. Does not include assumptions for specific facilities or transportation routes.</td>
</tr>
<tr>
<td>6.2</td>
<td>Identify and describe the facilities in the district that possess extremely hazardous substances and the transportation routes along which such substances may move within the district;</td>
<td>1</td>
<td>Criterion partially addressed in Annex Q-Appendix 6 &amp; 7 incomplete facility list (?). Annex 7 - empty - refers to map not included in the plan. Oil and gas facilities and transportation routes missing. Annex E-Appendix 2 identifies evacuation routes for transportation routes not identified in Annex Q. Evacuation routes in Annex Q-Appendix 8 are missing or unidentified. List of regulated facilities may be incomplete (?) Facility ID #’s with no associated facilities. References to maps are either missing the map or reference “sample maps.”</td>
</tr>
<tr>
<td>6.3</td>
<td>Identify and describe other facilities that may contribute to additional risk by virtue of their proximity to the above mentioned facilities;</td>
<td>0</td>
<td>Criterion not addressed.</td>
</tr>
</tbody>
</table>
WHAT WE’VE FOUND:

Strengths:
- Initial response activities and responsibilities
- Public protective decision making and criteria
- Local/state interfaces via the DDC

Weaknesses:
- Decontamination planning and procedures
- On-going incident site monitoring & contamination/dispersion surveys
- Training requirements for key personnel
- Exercise frequency, schedule, process, and incorporation of results
- Lack of cross-jurisdictional coordination and planning

Other Things to Consider:
- Review the way key HazMat-specific transport and facility information is held, updated, and incorporated into planning
- The EPCRA Community Emergency Coordinator (CEC) and Emergency Management Coordinator (EMC) should be same person
OTHER PROJECTS/ACTIVITIES

- HazMat Transport Workshop
- GIS Training
- Risk Analysis
- Promising Practices
Host: Jim Hogg County

- Focus: What do local officials need to know?
- Local, state, federal agency partners (TCEQ, TDEM, CST, CBP)
- Railroad (KCS) and contractors
- One-day workshop, participants from 12 counties
Why Geographic Information System (GIS)?

- Creates maps by stacking information from different map layers.
- Links location with characteristic information.
- The location data (spatial data) in GIS helps to display features in their geographic location. Characteristic information (attribute data) is other explanatory information about each feature displayed.
GIS TRAINING

CREATING BASE MAPS

Each layer represents dataset in QGIS. A layer comprises of data which can be either vector or raster.
Sequence of layers

The layer on top is given the priority on display by default.

Order according to the type of shapefiles:
- Points
- Line
- Polygons

While adding layers, as a general rule of thumb, add polygons, lines and then the point shapefiles.

In case it is a ‘no fill’ polygon, the order isn’t much of a significance.
RISK MANAGEMENT ANALYSIS

1. Review truck and rail incident histories, ID typical and high consequence events
2. ID most-frequent and special hazards
3. Update spatial information on populations and sensitive receptors
4. Describe release scenarios for truck and rail
5. Evaluate potential consequences (CAMEO, GIS)
6. Document outcomes
RISK LOCATIONS & TIMING

CRIS Incidents in La Porte, Texas (2013-2015)

CRIS-Reported CMV Incidents in the La Porte LEPC Area, 2013-2015
DEVELOP SCENARIOS

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
<th>Mode</th>
<th>Time</th>
<th>Weather</th>
<th>Wind</th>
<th>Material ID and Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-LI</td>
<td>SH 225 @ Sens Rd. Hwy.</td>
<td>12:50 p.m.</td>
<td>Clear, sunny, 90° F, 75% RH</td>
<td>6 mph from ESE</td>
<td>1218: Isoprene, stabilized</td>
<td></td>
</tr>
<tr>
<td>HP-LI</td>
<td>BC Blvd. @ SH 146 Hwy.</td>
<td>12:45 p.m.</td>
<td>Clear, sunny, 80° F, 60% RH</td>
<td>8 mph from NW</td>
<td>2218: Acrylic acid, stabilized</td>
<td></td>
</tr>
<tr>
<td>HP-LI</td>
<td>Fairmont Pkwy. @ Underwood Rd. Hwy.</td>
<td>2:10 p.m.</td>
<td>Clear, sunny, 92° F, 75% RH</td>
<td>8 mph from SSE</td>
<td>1230: Methanol</td>
<td></td>
</tr>
<tr>
<td>HP-LI</td>
<td>UPRR Strang Yard Rail</td>
<td>2:30 p.m.</td>
<td>Clear, sunny, 98° F, 78% RH</td>
<td>6 mph from SSE</td>
<td>1040: Ethylene oxide</td>
<td></td>
</tr>
<tr>
<td>LP-HI</td>
<td>SH 146 @ BC Blvd. Hwy.</td>
<td>3:15 p.m.</td>
<td>Partly cloudy, 90° F, 75% RH</td>
<td>8 mph from SW</td>
<td>2218: Acrylic acid, stabilized</td>
<td></td>
</tr>
<tr>
<td>LP-HI</td>
<td>Fairmont Pkwy @ SH 146</td>
<td>4:00 p.m.</td>
<td>Clear, sunny, 85° F, 75% RH</td>
<td>5 mph from SW</td>
<td>1301: Vinyl acetate</td>
<td></td>
</tr>
<tr>
<td>LP-HI</td>
<td>SH 146 FR @ Wharton Weems Hwy.</td>
<td>10:30 a.m.</td>
<td>Partly cloudy, 76° F, 60% RH</td>
<td>8 mph from NNW</td>
<td>1017: Chlorine</td>
<td></td>
</tr>
<tr>
<td>LP-HI</td>
<td>UPRR Strang Yard Rail</td>
<td>2:33 p.m.</td>
<td>Partly cloudy, 80° F, 65% RH</td>
<td>10 mph from ENE</td>
<td>1017: Chlorine</td>
<td></td>
</tr>
</tbody>
</table>
EVALUATE CONSEQUENCES


‘JUMPSTART YOUR LEPC’

A. Hazard Analysis Projects
   1. ID and map hazmat transport corridors
   2. Review population vulnerabilities
   3. Commodity flow study

B. Public Relations & Engagement Projects
   1. Develop incident history list
   2. Active LEPC culture
   3. Engage the community
‘JUMPSTART YOUR LEPC’

C. Emergency Planning Projects
   1. Inventory response resources
   2. Develop local expertise in planning tools
   3. Review existing plans
   4. Incorporate multi-hazard planning in LEPC

D. Response Training & Equipment Projects
   1. Evaluate community hazmat training program
   2. Leverage free training
   3. Identify and use train-the-trainer
   4. Obtain relevant hazmat PPE/response equip.
   5. Increase hazard detection capabilities
WHAT NEXT?

Visit:
http://www.txdps.state.tx.us/dem/GrantsResources/

TDEM Contact:
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Phone: (512) 424-5989
Email: Joshua.Bryant@dps.texas.gov

TTI Contact:
David Bierling, Research Scientist
Phone: (979) 862-2710
Email: dhb@tamu.edu
DISCUSSION

○ What areas of planning most concern you?
  ○ What do you need?

○ How would you use data from?
  ○ Commodity flow study
  ○ EOP review
  ○ Risk analysis

○ Who else in your jurisdiction could use it?
  ○ Who should recommendations target?
  ○ Do different users require different formats?

○ How should this information be formatted?
  ○ How do you like to see it displayed?