Request for Proposal:
Mid America Local Emergency Planning Committee (LEPC) 2021 Plan Update and Commodity Flow Study

<table>
<thead>
<tr>
<th>Major Requirements</th>
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<tbody>
<tr>
<td>RFP Response Deadline</td>
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<tr>
<td>First Meeting with LEPC to establish communication and scope of work expectations</td>
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<td>Budget</td>
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<td>Product Deadline</td>
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Product Description
Successful proposers will complete the following tasks within the allotted time. It is the expectation of the Mid America LEPC that the successful proposer will provide regular updates and involve appropriate members of the LEPC throughout the task processes.

1. Review the current LEPC plan against planning requirements to determine what information including figures and maps needs to be updated or what is missing or could be improved. The Current LEPC Plan is located at https://www.marc.org/Emergency-Services-9-1-1/LEPC/Activities/Planning provide a written list of recommendations to MARC and confirm which will be completed as part of this project.


3. Design and execute tabletop Exercise
   a. Identify needed expertise for design team, LEPC will recruit design team members which may include members of LEPC and local representatives from study locations.
   b. Conduct exercise planning meetings.
      i. A primary objective of the exercise is to test notification procedures of involved agencies in response to a significant hazardous materials incident at the intermodal facilities and the communications to those potentially impacted.
      ii. Exercise should include at least one location from the commodity flow study with the intent to learn more regarding effects of intermodal locations.
   c. Plan and design tabletop exercise and all needed materials
   d. Conduct tabletop exercise.
      i. Invite members of LEPC and local representatives from study locations.
   e. Draft and complete an After-Action Report/Improvement plan.

4. Update current LEPC plan to include updating the hazard analysis section using Appendix B, “Scope of Work- Hazard Analysis” as a reference and outline of expected deliverables.
   a. Update Resource Management section of Regional Hazardous Materials Emergency Preparedness Plan, and any other pertinent sections, including a list of maps and/or figures to best display hazardous materials and problem areas. This should include details from the completed commodity flow study.
   b. Gather and organize any missing or outdated contact information.
i. Contacts could include public or private entities.
c. Invite LEPC and other interested parties to an after-action conference to review plan.
d. Plan must include updated data and figures from commodity flow study and exercise.

Product Management
Appendix A, “Scope of Work – Commodity Flow Study,” and Appendix B “Scope of Work- Hazard Analysis” are the guidance the LEPC will use as a basis for the work. Use this information as a basis for describing your approach to the work and what will be completed. Aspects of the commodity flow study and the hazard analysis should be adapted to what applies to the intermodal facility.

Open Records Act and Proprietary Information
The Mid-America Regional Council (MARC) is a public organization and is subject to the Missouri Open Records Act (Chapter 610, RSMo). All records obtained or retained by MARC are considered public records and are open to the public or media upon request unless those records are specifically protected from disclosure by law or exempted under the Missouri Sunshine Law. All contents of a response to a Request for Bids, Qualifications, Proposals or information issued by MARC are considered public records and subject to public release following decisions by MARC regarding the bid request. If a proposer has information that it considers proprietary, a bidder shall identify documents or portions of documents it considers to contain descriptions of scientific and technological innovations in which it has a proprietary interest, or other information that is protected from public disclosure by law, which is contained in a Proposal. After either a contract is executed pursuant to the Request for Bids, RFQ or RFP, or all submittals are rejected, if a request is made to inspect information submitted and if documents are identified as “Proprietary Information” as provided above under Missouri Sunshine Law, MARC will notify the proposer of the request for access, and it shall be the burden of the proposer to establish that those documents are exempt from disclosure under the law.”

Application Process
To be eligible for consideration, one electronic copy (PDF) of the proposal must be received by MARC no later than 5:00 pm CST on March 20, 2020. Late submittals will not be considered. Please submit proposals to Amanda Horner ahorner@marc.org and Vickie Phillips vphillips@marc.org.

It is the responsibility of the person submitting a proposal by email to ensure that the proposal has been received by the appropriate MARC staff, and not blocked by a spam filter or rejected because of large attachments. To confirm receipt, you may contact Vickie Phillips at vphillips@marc.org or 816-701-8394. Questions regarding the application can be directed to Amanda Horner at ahorner@marc.org.

Application Requirements

1. Cover Page with:
   A. the name and address of the contracting firm, together with the name, telephone and fax number, and e-mail address of the primary contact person for purposes of this proposal.
   B. A listing of all proposed subcontractors, if any.
   C. Contract price for entire completed project.
2. Resumes of Project Lead and team (must have experience in HAZMAT and Emergency Planning and Community Right-to-Know Act (EPCRA), analysis, and planning and exercise development.

3. A detailed response to each of the following. Information may be entered into form directly or attached as a separate document. Not to exceed 5 pages.

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<tr>
<th>Minimum of 2 examples of similar completed work with contact information for references</th>
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<tr>
<td>Estimated Timeline of tasks</td>
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<td>Describe Approach to the plan update and to the exercise design and execution and evaluation</td>
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<td>Budget with estimated breakdown of cost per task</td>
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Appendix A
Scope of Work – Commodity Flow Study

The project will construct and publish a report on the goods that are moving through the particular area of interest. The study will identify hazardous materials transportation flow patterns in the study area, identify fixed facilities that handle, store, and transport hazardous materials, perform a general assessment of issues regarding hazardous materials transport, and perform an analysis of the data and assess vulnerabilities. Transportation Research Board’s Guidebook for Conducting Local Hazardous Materials Commodity Flow Studies is designed to support risk assessment, emergency response preparedness, resource allocation, and analyses of hazardous commodity flows across jurisdictions. This Guidance needs to be followed for all hazardous materials commodity flow survey (HMCFS) projects funded with HMEP grant program funds. To view this guidance or to order it, please refer to the link http://www.trb.org/Publications/Blurbs/165775.aspx. The following components should be included in the study:

General Summary
Provide a brief overview of:
- Background of the study (hazardous materials transportation overview, objective, project concept, data requirements).
- Regulations and statutes (compliance with requirements of Emergency Planning and Community Right to Know Act (EPCRA), local statutes) Utilization of information (purpose, how the product will be utilized).

Study Area Profile
Describe county profile briefly based on the following information:
- Geographic.
- Demographic.
- Climate and Weather.
- Transportation.
- Infrastructure.
- Emergency Response Organizations.
- Critical Facilities.

Data Collection
- Flow of Hazardous Materials through the Roads and Highways
  - Existing Data Overview:
    - Identify the routes used for hazardous materials transportation using locally or institutionally available data (transportation of hazardous materials in the study area by modes and routes).
    - Acquire information on incident and accident information for the study area; previous HMCFS), local, state and federal data on hazardous materials transportation, information maintained by local hazardous materials facilities and carriers, trade, environmental, and social advocacy organizations, and printed maps, etc.).
    - Electronic databases and reports (databases and reports that have information about transportation networks, commodity movements, system performance (traffic) levels, historical incident and accident occurrences and locations).
    - Identify facilities in the jurisdiction that receives, produces and transports hazardous materials, identify the transportation routes and the chemicals transported.
    - Evaluate existing data such as flow of commodities, hazardous materials, hazard class, traffic corridors, hazard traffic origin/destination, hazardous materials transported, etc. through the jurisdiction.
**New Data Collection:**

- Interview shippers, receivers, and carriers to determine type and quantity of hazardous materials by time, mode, and route, origin/destination, if possible.
- Interview local emergency responders, emergency managers, etc. to determine priority survey locations, transportation corridors, volume, frequency and time of shipments, and content of hazardous materials transport, etc.
- Develop strategies for field data collection in collaboration with LEPCs/emergency managers/local subject matter experts.

✓ **Develop a Survey Plan:**
  - Survey locations – maps and target survey sites, determine how the data collection sites will be chosen based on consultation with locals.
  - Dates, times, and duration of surveys.
  - Develop project data collection methods, count intervals, and describe precision, efficiency, and accuracy.
  - Data collection of main targets (see the data analysis section for additional information):
    - Overall truck traffic passing through the study area.
    - Local movement of hazardous materials by container type and configuration;
    - Local movements by hazard class and division and UN NA number.
    - Total movement and peak transportation times of the day.
    - Total movement and peak transportation by day of the week.
    - Placard count per site and per traffic direction – east/west/north/south or turning movements at intersections.
    - Routes and/or locations with highest placard counts.
    - Shipment sizes and packing methods, specific materials, and shipment origin and destination; and
    - Identification of top ranked thirty chemicals transported through local roads and highways.

✓ **Data Collection Strategy:**
  - Use appropriate statistical methods to determine sample size per segment of a road
    - The confidence level for sample size must be equal to or great than 90%; and
    - The margin of error (confidence interval) for sample size less than 5%
  - Count Intervals – things to be considered:
    - Starting count intervals on the 30-minute or hour can ease data analysis for differences in traffic patterns by time of day;
    - Using count intervals in even fractions of an hour simplifies the extrapolation of counting segments into 1-hour periods; 1-hour counts are preferred and 30-minute is a secondary option;
    - Conducting at least 1-hour or 30-minute counts reduces the effects of traffic variation while providing sufficient timeframes for recording traffic counts; and
    - Longer count durations are possible, but they should be recorded in separate 30- minute or 1-hour segments.

✓ Determine what resources will be needed for field data collection.
✓ Determine the data elements that will be collected during the survey (type of vehicles, no of vehicles, placard ID, hazard class, etc.) – develop the survey form.
✓ Determine:
  - Number of data collection sites per county, per road, or per highway segment.
  - Sample size based on statistical requirements and availability of resources.
  - Number of observations to be collected at a collection site during a 24 hour period to determine the peak traffic.
  - Number of observations to be collected at a collection site during the peak hours to determine flow of hazardous materials/commodities (collect at least six 1-hour samples per
day per location for each traffic direction. Use appropriate intervals to spread the data collection throughout the day.

- Number of days will be spent on data collection per location to determine the variation of hazardous materials traffic through the day of the week (collect data for at least 5 days a week).
- Schedule data collection - times of the day, days of the week, times of the year, etc.; and
- Submit data collection strategy/plan, survey form to KDEM for review and approval before data collection begins.

✓ Collect Field Data:
Determine traffic network by time of the day; collect at least five 1-hour or ten 30-minute samples per day per location for each traffic direction, during the study period to capture a realistic representation of the traffic flow through the jurisdiction. Conduct:
- Commercial vehicle survey.
- Total truck survey.
- Truck type and configuration:
  - Type: tank, van/box, step bed/flat bed, service/utility, refrigerated, other cargo bodies, etc.
  - Configuration – straight trucks, tractor trailer, tractor with multiple trailers, etc.
- Combined commercial vehicle and UN/NA placard ID survey:
  - Total truck and UN/NA placard ID surveys.
  - Truck type and configuration and UN/NA placard ID survey.
- Conduct directional (E-W-N-S) and intersection surveys.

○ Data Validation
Validate collected field data to ensure that the collected field data meet the data requirements of the HMCFS objectives. Check if precision of collected data match data requirements and what other information might help meet the HMCFS objective data requirements. Verify:
- If the collected data are appropriately documented.
- If there are data outliers or questionable values.
- Were the data collected at similar locations consistent; and
- If the information consistent across different sources (existing and new data from interviews, databases, surveys, etc.).
- Assess the need for new data collection and data refinement and address any issues.

➢ Flow of Hazardous Materials through the Railroad - Collect waybill hazardous materials information from railroad carriers (Standard Transportation Commodity Code data (STCC), collect data on release incidents, accidents, fatalities, and derailments.

➢ Movement of Hazardous Materials through the Pipelines - Map pipelines, obtain flow summary of materials transported through pipelines, incident information, etc.

➢ Movement of Commodities by Air - Airports and commodity transported/Storage of fuel in the airport.
Analyze Collected Data:
Determine flow of Hazardous Materials by road, rail, pipeline, air; produce maps, charts and tables, as applicable. Validate collected data and analyze to determine:

- **Roads and Highways**
  - Overall truck traffic passing through the study area.
  - Movement of hazardous materials by container type and configuration.
  - Local movements by hazard class and division transported.
  - Local movements by UN NA number – list.
  - Total movement per time segment & hazardous materials shipments as a percentage of total traffic.
  - Proportions of truck traffic by type and configuration and the percentages of placarded truck.
  - Identification of directional movements for both directions of a roadway or for turning movements at intersections.
  - Hazardous materials shipments in both placarded and un-placarded vehicles, shipment sizes and packing methods, specific materials, and shipment origin and destination.
  - Placard count per site and predicted routes.
  - Placard count per traffic direction – east/west/north/south.
  - Peak transportation times and days for identified routes.
  - Routes and/or locations with highest placard counts.
  - Lists variation of hazardous materials traffic from Placard Survey by day of week.
  - Establish major traffic corridors used for hazardous materials transportation.
  - Identify top ranked 30 chemicals transported through roads and highways.

- **Rail Road**
  - Analyze data on train derailments and chemical releases, depicts in tables.
  - Analyze data on roadway-rail grade crossings, determine vulnerable locations.
  - Include summary of hazardous incidents involving trains.
  - Estimates peak hour of traffic through the rail traffic corridor, list in tables.
  - List top 30 hazardous chemicals passing through the study area by the railroads in the region

- **Pipeline**
  - Provide relative breakdown of hazardous materials shipped through pipelines by total volume
  - Evaluate past accidents and trends.
  - Identify pipeline corridors and vulnerable areas.
  - Provide a summary of yearly volume of hazardous materials shipped via pipeline.

- **Air**
  - Determine relative breakdown of air cargo hazardous material shipments by total volume.
  - Determine air cargo hazardous materials shipments by county.
  - Assess hazards due to storage of fuel.

**Hot Spots:**
- Identify hot spots:
  - Identify areas and facilities along major traffic routes that are at a higher level of risk.
  - Geographical areas where a spill or release could create significant risk to the population.
Appendix B Scope of Work – Hazard Analysis

Develop one comprehensive Hazard Analysis to identify and assess potential hazards in the community, primarily from releases of Extremely Hazardous Substances (EHS) from fixed facilities and transportation of chemicals to and from the facilities. Natural, civil, and vector hazards can also be included to broaden the scope of the study. The final product will include the following:

**General Summary:** Provide an overview of:
- Background of the study
- Regulations and compliance issues
- Process used for analysis
- Utilization of information (purpose, how the product will be utilized)

**County Profile:** Describe county profile containing the summary of following information:
- Geographic
- Demographic
- Infrastructure
- Historical
- Geologic
- Climate & Weather
- Economic
- Transportation
- Response Organizations
- Critical Facilities

**Hazards Identification:** Identify, characterize and evaluate potential hazards in the jurisdiction, include pertinent maps as applicable:
- Identify EHS present in the community from County/State Tier II data, Environment Pollution Agency (EPA) data, Emergency Planning and Community Right To Know Act (EPCRA) data, United States Department of Transportation (USDOT) filings, Chemical Spill data, other state/federal databases that might contain information to identify hazard, field inspection of storage tanks, business sites, stored chemical sites, railroad spurs, water treatment plants, etc..
- Locate facilities with EHS exceeding the threshold planning quantity (TPQ), list type and quantity of EHS present in the community:
- Identify the top ranked 10 facilities with EHS chemicals in the community:
- List facility name, address, maps, longitude/latitude, and emergency contacts.
- List chemicals on site, characterize by:
  - Chemical Abstract Service (CAS) #, physical state, type of hazard (explosive, reactive, toxic, etc.).
  - Maximum quantity stored at a time, amount in largest or interconnected vessels.
  - Type and design of container (size and shape) and condition of storage.
- Identify transportation routes (on a map) for transporting chemicals, frequency of shipments, form of shipments, and quantity of shipments.
- Depict evacuation routes in the event of a chemical release.
- Additional facilities contributing or subjected to additional risk due to their proximity to facilities.
- Other technological hazards such as radiological, electromagnetic pulse (EMP)/geomagnetic storms, solar radiation, dam failure, power failure, major transportation incidents, etc.).
• Identify potential hazards from natural events such as flood, tornado, earthquake, drought, winter storm, excessive heat, landslide, wildfire, etc.
• Identify potential hazards from civil disturbance, terrorism, deliberate human actions to threaten or harm another person or cause damage to property or running of government.
• Identify potential hazards from biological agents, foreign animal disease (FAD), infectious disease, etc.

**Vulnerability Analysis:** Determine vulnerability of population, property, essential services, and environment from information obtained from hazard identification and community profile, focus on hazards that present greatest risk. Use tables and maps as needed to illustrate results. Assess the following:

• Estimate vulnerable zones for the top 10 locations with reported EHS and depict on a map.
• Assess vulnerability based on threat from EHS present at the facility and safeguards present -- such as chemical detection devices, alerting systems, shelter in place, etc.
• Estimate impact on life (population, animal, endangered species, etc.) in the event of a release.
• Identify impact on critical facilities within the vulnerable zone.
• Determine impact on the environment within the vulnerable zones.
• Determine impact on essential services within the vulnerable zones.
• Determine impact on response organizations and equipments within the vulnerable zones.
• Determine vulnerabilities from other technological hazards that were identified in the hazards identification process.
• Determine vulnerability of population, property, and environment based on potential natural incidents such as flood, tornado, earthquake, storms, severe winter weather, excessive heat, etc.; historical data, forecasts and trends.
• Determine vulnerability based on historical data on terrorism, civil disorder and any unrest or unlawful use of force, data sources such as homeland security data, and subjects of interest.
• Determine vulnerability based on historical data on infectious diseases, FAD, biological agents, insects, etc.

**Risk Analysis:** Evaluate risk using the following methods:

• Describe risk assessment methodologies. Collect chemical risk information (e.g. from EPA’s Chemical Emergency Preparedness and Prevention Office), unusual environmental conditions, assess population and properties that could be at risk. Present data in the form of tables. Describe:
  ▪ Risk rating methods for:
    ▪ Chemical Hazards.
    ▪ Natural Hazards.
    ▪ Other Hazards such as Civil Hazards, Vector Hazards.
• Describe models and algorithms used in risk analysis.
• Estimate risks for each hazard category using risk ratings and prioritizes risk based on conservative estimates and worst-case scenarios. Present data in tables for each hazard categories:
  ▪ Prioritize and rate to 10 facilities based on EHS present in the facility, historical accident records, and probability of release based on observation at the facility.
  ▪ Estimate probability that a release will occur and any unusual environmental conditions.
- Rate the severity of consequence to life/damage to property/damage to environment, if an actual release were to occur; rank high, medium, low, or use numeric ratings based on appropriate technical consideration.
- Assess risk due to other technological hazards that were identified in the hazards identification process.
- Develop Cascading Hazard Risk Matrix, showing potential secondary risks from primary sources to reflect local conditions. Presents data in tables.
- Assess potential risks for natural events such as flood, drought, wildfire, severe weather, earthquake, landslide, etc.; analyze other unique risk factors that might affect neighboring entities.
- Assess potential Civil Hazards risks from historical and other data sources such as homeland security data, law enforcement data, suspected targets within the jurisdiction, etc.
- Assess Vector Hazard risks from agricultural, ecological, FAD, infectious disease, historical data, etc.

**Conclusion and Recommendations:** Assemble information concerning hazards, vulnerability, and risk. Identify highest threat and recommend response actions; identify any gaps observed in data collection; time period for which the plan is valid; recommend maintenance of the plan.

**Resources:** Include state/county maps and tables, historic site maps, contingency maps and tables, references, acronyms, glossary