

# HAZARDOUS MATERIALS ROUNDTABLE

**MAY 13–14, 2025**

**National Fire Academy (NFA)  
16825 S. Seton Ave.  
Emmitsburg, MD 21727**

*Sponsored by the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), the International Association of Fire Chiefs (IAFC), and the U.S. Fire Administration (USFA).*



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The Roundtable's positions do not necessarily reflect the views of the PHMSA, USFA, or IAFC.

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## 1 Executive Summary

Hazardous materials (HazMat) are present in all communities, and they pose threats to people, the environment, infrastructure, and property. Due to the ever-present nature of such materials, it is critical to ensure that HazMat professionals, emergency responders, and communities understand their risks and how to respond when accidents occur. The HazMat Roundtable was developed to identify critical issues and to foster collective action to strengthen the Nation's HazMat community. Comprised of technical specialists and subject matter experts, the Roundtable meets annually to address pressing challenges and consequently help improve the Nation's public safety.

The HazMat Roundtable meeting was hosted by the National Fire Academy (NFA) in Emmitsburg, Maryland, on May 13th–14th. This event was sponsored by the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), the U.S. Fire Administration (USFA), and the International Association of Fire Chiefs (IAFC). The event was attended by HazMat technical specialists and practitioners from 30 different organizations. The objectives of the HazMat Roundtable were to review the accomplishments and best practices of HazMat Roundtable members over the past year, discuss the priority areas and recommendations from the previous year, determine focus areas for the next year, and develop recommendations for how the HazMat Roundtable can continue its role as an advocate for community preparedness and as a facilitator for collaborative-based preparedness solutions.

The agenda included HazMat Roundtable member and federal partner presentations; a review of the priority areas identified by the 2024 HazMat Roundtable; and discussion sessions to determine goals, action items, and recommendations for the HazMat community over the next year.

The following issues and recommendations were developed to synthesize the discussions of the two-day meeting:

- Affirmation of 2024 Priority Areas
  - The Roundtable confirms that the priority areas identified by the 2024 HazMat Roundtable remain relevant and critical to the HazMat community.
- Emerging Trends and Issues
  - Mutual Aid Reliance: Increased reliance on mutual aid for HazMat response due to resource constraints.
  - Nuclear Fuel: Re-emergence of nuclear fuel transportation and small reactor technology.
  - Lithium Batteries: Challenges with battery fires, disposal, and consumer education.
  - Compressed Natural Gas (CNG): Safety concerns with CNG tanks and lack of training for responders.
  - Electronic Shipping Papers: Transition to electronic shipping papers and the need for responder awareness.
  - Wildfires as HazMat Incidents: Recognition of wildfires as HazMat incidents due to contamination risks.
  - Hydrogen Pipelines: Emerging risks associated with hydrogen transportation and storage.
  - Robotics: Increased use of robotics in HazMat facilities and the implications for emergency response.
  - Flammable Refrigerants: Growing use of flammable refrigerants in commercial applications.

- Technology: Increasing technology and getting information as it is developed is an emerging trend. It would be helpful to have the ability to provide input as the technology is developed to increase safety of emergency responders and the public.
- Community Engagement: Lack of public engagement and awareness about HazMat risks and preparedness.
- Future Priority Areas
  - Collaboration: Strengthened relationships among federal, state, and private stakeholders.
  - Actionable Recommendations: Clear steps for addressing critical issues and emerging trends, and ownership of action items to ensure they are addressed.
  - Momentum: Agreement to meet more frequently (e.g., biannual virtual check-ins) to maintain progress.

This report describes the Roundtable discussions, provides high-level summaries of member presentations and updates, and details the Roundtable's feedback, recommendations, and suggested plans of action.

## 2 Meeting Participants

### 2.1 Special Acknowledgements

- Rick Edinger, the chairperson of the National Fire Protection Association (NFPA) Technical Committee for Hazardous Materials/Weapons of Mass Destruction Response who served as the Roundtable facilitator.
- Eriks Gabliks, the NFA Superintendent who hosted this Roundtable at the NFA facility in Emmitsburg, Maryland.
- PHMSA, NFPA, and IAFC, without whose sponsorship and support this Roundtable meeting would not have been possible.

### 2.2 Names of Participants

A complete list of participants can be found in [Appendix A](#) of this document. Acronyms can be found in [Appendix B](#).

## 3 Welcome

Erik Gabliks welcomed the HazMat Roundtable members to the 2025 meeting and provided an overview and history of the National Emergency Training Center. He also referred to the Roundtable charter, the importance of moving hazardous materials around the country safely from origin to destination, and the significance of protecting first responders from these hazardous materials when they respond to an incident. Typically, the focus is on the first element of the charter, moving materials safely; however, the Roundtable needs to focus on the second element as well. It needs to determine the best methods for protecting first responders and if possible, to get a seat at the table when new products are being developed and rolled out so that members can make sure they consider the impact on first responders. Together, Roundtable members can work to protect and strengthen the Nation's preparedness and response.

## 4 Roundtable Member and Federal Partner Updates and Presentations

Select Roundtable members provided updates regarding their organization's relevant work, recent HazMat preparedness efforts, and successes from the past year. Below is a list of those who presented:

- Erik Gabliks – National Fire Academy (NFA)
- Aaron Mitchell and Eddie Murphy – Pipeline and Hazardous Materials Safety Administration (PHMSA)
- James Burgess – International Association of Fire Fighters (IAFF), HazMat Training Department
- Tim Gablehouse – National Association of SARA Title III Program Officials (NASTTPO)
- Tom Miller – National Volunteer Fire Council (NVFC), HazMat Partners in Training (PIT Crew)
- Rick Edinger – National Fire Protection Association (NFPA)
- Jennifer Barre – Environmental Protection Agency (EPA)
- April Heinze – National Emergency Number Association (NENA)
- Mark Maday – Federal Railroad Administration (FRA)
- Joe Milazzo – Chemical Transportation Emergency Center (CHEMTREC)/Transportation Community Awareness and Emergency Response (TRANSCAER)
- Chuck Lineback – Federal Emergency Management Agency (FEMA)
- Janis McCarroll - FEMA
- Taylor Munday, Bob Royall, Skip Elliott, and Richard Miller - International Association of Fire Chiefs (IAFC)
- Bill Reese – Commercial Vehicle Safety Alliance (CVSA)
- Nick Hickson – Texas A&M Engineering Extension Service (TEEX)

### 4.1 Erik Gabliks, NFA

#### **Topic:** NFA Updates

The USFA's National Emergency Reporting System (NERIS) went live on November 4, 2024, and the roll-out is continuing as planned. NERIS will take the place of the National Fire Incident Reporting System (NFIRS) in 2026. The project is a joint effort between the USFA, Department of Homeland Security (DHS) Science & Technology (S&T), and UL Fire Service Research Institute (FSRI). The most up-to-date information on NERIS can be found at <https://www.usfa.fema.gov/nfirs/neris/>.

USFA has been working to modernize the NFA campus by updating classrooms, addressing deferred maintenance items, and improving Wi-Fi, and FEMA's National Disaster and Emergency Management University (NDEMU) recently created a classroom of the future where each student will have their own screen to participate actively in class.

The USFA is active in discussions with DHS and federal partners on addressing emerging issues such as per- and polyfluoroalkyl substances (PFAS) in firefighting foams and firefighter personal protective equipment.

NFA is focusing on incident management classes on and off campus and developing capacity for all-hazard incident management teams across the country. This year, the NFA has set a goal to have 90,000 students complete on-campus, off-campus, and virtual classes in topics ranging from HazMat to emergency medical services) to leadership and incident management. To see the NFA's full course catalog, follow this link: <https://www.usfa.fema.gov/nfa/courses/online/>.

## 4.2 Aaron Mitchell and Eddie Murphy, PHMSA

### **Topic:** PHMSA Updates

PHMSA is an administration within DOT, and its top priorities are safety and efficiency. PHMSA was impacted by the retirements and other options provided to government employees, and staff has been reduced. It is currently working on consolidating and regrouping, but the grants programs will continue without changes. PHMSA has just published a Request for Information on regulatory reform efficiency. PHMSA has been working on regulatory reform and upcoming surface transportation bills, emphasizing the importance of data-driven decision-making and maintaining safety and emergency response programs. Members are looking at some emerging areas such as battery energy and storage systems and are trying to address safety issues early in the process. PHMSA supports the Roundtable due to the importance of having the collective group work on these issues.

PHMSA is currently working with IAFC on a meeting on Tuesday, June 10, 2025, in Baltimore on battery energy storage systems as well as a rail summit that will hopefully be held before the end of the year. PHMSA will get information out to everyone, but if Roundtable members are interested, they are encouraged to reach out. PHMSA members are also working with EPA and the Hazardous Materials Management and Emergency Response (HAMMER) Federal Training Center on the Transportation Rail Incident Preparedness and Response (TRIPR) program to make it more comprehensive when it comes to HazMat incident risk-based response. They have been updating the curriculum regarding crude oil, ethanol, and other types of HazMat rail incidents. The TRIPR events can be tailored to the hazards and incidents that the region deals with, and PHMSA is hoping to launch the curriculum by September 2025.

## 4.3 James Burgess, IAFF, HazMat Training Department

### **Topic:** IAFF HazMat Training Department Updates

James Burgess, IAFF director of training and grants, highlighted the organization's busy year, focusing on various initiatives and programs. The IAFF established a working group to assist the National Transportation Safety Board (NTSB) in response to incidents such as the train derailment in East Palestine, Ohio, and a cargo ship fire in Newark, NJ. Additionally, the IAFF announced a joint partnership with the IAFC to create the first registered apprenticeship program for the fire service in the United States, addressing critical recruitment and retention issues. The HazMat training program has been emphasized, showcasing its success and growth, with over 200 requests for certification training received. This program trains thousands of firefighters annually and offers a variety of courses, including advanced HazMat technician training. The IAFF maintains its accreditation with the National Board on Fire Service Professional Qualifications (Pro Board) and is exploring additional accreditation pathways. A new course on responding to renewable energy emergencies is set to launch, focusing on safety and tactics for incidents involving electric vehicles and energy storage systems. Furthermore, the IAFF is developing an unmanned aerial vehicle (UAV or "drone") program to enhance safety and efficiency in emergency operations. Overall, the IAFF has an unwavering commitment to training, safety, and adaptation to new challenges in the fire service.

#### 4.4 Tim Gablehouse, NASTTPO

##### **Topic:** NASTTPO Updates

Tim Gablehouse discussed the work of NASTTPO in active promotion of planning processes, with broad community involvement, for HazMat and other hazards, highlighting significant advancement in measuring the success of these programs. Following a recent board meeting, the group decided to embrace findings from the Roundtable, focusing on enhancing community preparedness and support for HazMat, fire capabilities and creating an increased sense of personal responsibility among the members of the public. Recognizing there is a lack of community awareness and, as a result, active support for these services, members aim to increase awareness of risks, capabilities and means by which capability gaps are addressed. The board also plans to advocate for State Emergency Response Commissions (SERCs) to become more self-sufficient, acknowledging limitations in federal funding. The organization seeks to encourage state and local efforts to boost public awareness and involvement in preparedness planning, with initiatives such as holding a National State Emergency Response Commission (SERC) meeting and increasing attendance at its own semi-annual meetings. In each case the emphasis will be on demonstrating the success of broad community involvement in emergency planning and filling capability gaps. NASTTPO is also working on improving guidance documents and providing internship opportunities for students. Recognizing the aging workforce in the field and the necessity to attract younger individuals, NASTTPO is evaluating the creation of a recognition program for younger individuals interested in emergency planning, potentially involving partnerships with educational institutions. Additionally, the establishment of locally based 501(c)(3) nonprofits to raise funds for community support was highlighted as a successful model. NASTTPO aims to empower the public regarding their preparedness capabilities and to measure tangible outcomes in filling capability gaps through community engagement. Active promotion of these activities is deemed essential, with a focus on direct community engagement rather than passive methods. The importance of leveraging local groups and nonprofits to support these efforts was emphasized, along with a commitment to broadening the network of voices in the HazMat and emergency planning community.

#### 4.5 Tom Miller, NVFC, PIT Crew

##### **Topic:** PIT Crew HazMat Train-the-Trainer Program

Tom Miller, the chair of the HazMat response team within the Homeland Security Committee of the NVFC, has been a fire instructor since 1990. He discussed the PIT Crew program, designed to provide HazMat instructor training nationwide. Since its launch, the program has reached 17 states and conducted 22 in-person training sessions, educating 808 individuals, excluding recent trainings in Texas and Montana. The program offers on-demand virtual courses and has amassed 6,750 contact hours. Miller shared insights from training sessions, highlighting challenges faced by first responders, such as limited access to emergency response guides (ERGs) and the disconnect between state and tribal governments. He underscored the commitment of participants, who often juggle training with their firefighting responsibilities. The program also tackles gaps in risk assessment and incident action plan training, utilizing relatable examples to engage participants. Furthermore, Miller emphasized the necessity of tailoring training to local hazards and needs, covering various topics including lithium-ion battery training and infectious disease response. The program continues to adapt based on demand, broadening course offerings and concentrating on practical applications to better serve communities.

#### 4.6 Rick Edinger, NFPA

**Topic:** NFPA HazMat Response Committee

Rick Edinger chairs the NFPA 470/475 committee that is dedicated to enhancing awareness and operational training in fire safety and HazMat response. The NFPA plays a crucial role in developing and maintaining codes and standards through a consensus process that involves volunteers from diverse fields. The committee ensures that no single interest group dominates the standards, which encompass a broad spectrum of topics from firefighting to electrical codes. The NFPA revises its documents approximately every five years, with the National Electrical Code being the most significant update. Edinger elaborated on the evolution of these documents, highlighting the 2022 consolidation of multiple former HazMat standards into a single comprehensive document, NFPA 470. The next edition, scheduled to be published in 2027, will integrate competency-based language with job performance requirements, creating a unified standard that is more accessible for users. The committee is actively engaged in drafting this new document, aiming to streamline the number of chapters while ensuring that all essential competencies are included. Edinger underscored the necessity of upholding high-level training standards without dictating specific tactical responses, recognizing the varying complexities of incidents. Additionally, the committee is addressing feedback from a range of stakeholders to ensure that the updated standards remain relevant and effective for all users, including local fire departments and emergency responders.

#### 4.7 Jennifer Barre, EPA

**Topic:** EPA Updates

The EPA is actively engaged in updating regulations and making changes related to chemical emergency preparedness and management. Jennifer Barre addressed the transition within the organization and the uncertainties surrounding future housing within the agency. Key topics include ongoing regulatory updates for chemical emergency preparedness regulations, such as actions initiated under the current administration and other anticipated changes. Barre highlighted ongoing regulatory actions for the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 311-312 chemical inventory reporting updates [40 CFR part 370], the Risk Management Program [40 CFR part 68], and the Clean Water Act Hazardous Substances Facility Response Planning requirements [40 CFR part 118]. For the EPCRA 311-312 chemical inventory report updates, significant modifications to the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard were discussed, particularly the introduction of an aerosol hazard class, which complicates reporting due to the diverse nature of aerosol hazards. The presentation underscored the importance of directly integrating OSHA hazard categories into EPA regulations and emphasized the need for public feedback on proposed rules. Barre encouraged attendees to stay informed through EPA's newsletter [[www.epa.gov/epcra/serc-terc-monthly-updates](https://www.epa.gov/epcra/serc-terc-monthly-updates)] and to contribute to the enhancement of chemical safety regulations. Furthermore, Barre stressed the importance of utilizing updated resources and tools for emergency response, such as the CAMEO (Computer-Aided Management of Emergency Operations) Software suite [[www.epa.gov/cameo](https://www.epa.gov/cameo)], and the necessity for effective communication regarding regulatory changes. The session concluded with an invitation for questions and feedback from the audience, fostering an open dialogue about the regulatory processes and their implications for chemical safety and emergency preparedness.

#### 4.8 April Heinze, NENA

**Topic:** NENA Updates

NENA represents over 100,901 professionals across the United States, with chapters in Canada and Mexico, dedicated to establishing emergency number standards and best practices. NENA advocates at federal, state, and local levels, providing essential education for both professionals and the public. With membership exceeding 25,000, NENA highlights that while membership confers certain privileges, it does not restrict the representation of emergency services. The organization collaborates on a global scale to ensure the interoperability of technical standards and actively participates in various committees, including those with the NFPA. As an open standards body, NENA welcomes participation from anyone interested in the development of standards. Currently, NENA has a standard open for public review that focuses on the interactions between railroads and emergency services, providing guidelines for contacting railroads during incidents. The organization has also developed a comprehensive database for emergency communication centers, which serves both governmental and private sectors. NENA encourages active participation in standards development, particularly concerning emerging hazards and comprehensive standards for new technologies. The deadline for public comments on the current standard is June 16th. NENA's enhanced registry is available to government sectors at no cost, while non-governmental clients are subject to fees. The organization is committed to improving emergency response through enhanced communication and standards, addressing the needs of rural communities and advancing 911 services.

#### 4.9 Mark Maday, FRA

**Topic:** FRA Background and Current Initiatives

The HazMat division at the FRA is actively addressing personnel matters, including the expected arrival of political appointees. The deputy administrator and chief counsel are already in position, and the administrator's confirmation hearing recently took place. If approved, the administrator is anticipated to take on a senior advisor role shortly. On the regulatory side, the HM263 rule is set to take effect at the end of June; however, PHMSA has granted railroads an additional year for compliance due to technological challenges. The HazMat division will enforce this rule, determining how to manage exemptions and compliance issues. Ongoing discussions are taking place regarding rulemakings related to high hazard training, especially in light of the East Palestine incident. Recommendations stemming from this incident include the public release of a previously classified 2007 report on tank car mitigation processes, which will be updated for the first time in nearly 20 years. The project will unfold in two phases over 18 to 24 months, initially focusing on emergency tank car damage assessments and subsequently on enhancing communication and coordination during incidents. The FRA is committed to ensuring that no classified information is included in the updated report and will eliminate sensitive details regarding explosives. Collaboration with various stakeholders, including railroad directors and HazMat teams, is crucial for the project's success, and the FRA is dedicated to keeping everyone informed throughout the process.

#### 4.10 Joe Milazzo, CHEMTREC/TRANSCAER

**Topic:** CHEMTREC Update

CHEMTREC plays a critical role in managing hazardous materials incidents through ensuring timely reporting and effective communication. Therefore, it is important for stakeholders to contact CHEMTREC for support. Milazzo discussed various statistics concerning hazardous materials calls, including the frequency of reported incidents and the types of exposures. Milazzo provided an overview of the evolution of training and response strategies over the years, highlighting advancements in technology and communication that have enhanced the management of

hazardous materials. Additionally, the importance of community engagement and the ongoing need for training and resources for responders were emphasized. Milazzo acknowledged the contributions made by various individuals and organizations within the response community, reinforcing the significance of collaboration and the sharing of knowledge and resources to improve safety and preparedness in hazardous materials incidents.

#### 4.11 Chuck Lineback, FEMA

##### **Topic:** FEMA Updates

FEMA's Office of Emerging Threats oversees chemical incident planning and emphasizes the importance of effective planning and response strategies. The agency has faced recent challenges, including staff attrition and the assumption of new responsibilities; however, it continues to collaborate with partners and value feedback mechanisms in incident management. FEMA's Office of Emerging Threats is developing a distance learning training program (AWR-952-W), using its Planning and Decision Framework for Chemical Incident Consequence Management (CICM). While initially extensive, the course has been streamlined for clarity. Key topics covered include pre-event planning, incident recognition and characterization, and effective communication with external partners. The course also shares lessons learned from past incidents, such as the 2010 Gulf Coast incident, and establishes a framework for planning decisions. FEMA encourages communities to engage in exercises to improve their response plans and highlights the need for clear guidelines and strategies in managing chemical incidents. The online training can be found at the Center for Domestic Preparedness Web-Based Online Courses ([Online Courses | Online Courses](#)). Chuck Lineback also discussed the future role of government in these initiatives and the critical need for resource allocation to ensure effective incident management.

#### 4.12 Janis McCarroll, FEMA

##### **Topic:** FEMA Updates

FEMA encompasses various facets within its organization. The Preparedness Directorate focuses on the essential role of nuclear and radiological emergency preparedness. The retirement of Tom Warnock will be felt deeply, as he significantly contributed to enhancing community engagement in preparedness initiatives. Within the Technological Hazards Division, two key programs stand out: the Chemical Stockpile Emergency Preparedness Program and the Radiological Emergency Preparedness Program. Enthusiasm is growing for the future of nuclear power, particularly regarding the potential of small modular reactors and their implications for emergency preparedness. Furthermore, the organization is tackling the challenges of duplicating training efforts and resources, advocating for strategic pauses to assess community needs. A partnership has also been established with the Nuclear Regulatory Commission, addressing the evolving landscape of nuclear power, which includes the privatization of decommissioned sites and the emergence of advanced reactors. Transportation safety for nuclear materials is of paramount significance, as are new guidance documents that have the potential to assist communities in planning for these innovative technologies. Overall, there is a prevailing sense of optimism about the future of nuclear energy and its crucial role in disaster response and preparedness.

#### 4.13 Taylor Munday, Bob Royall, Skip Elliott, and Richard Miller, IAFC

##### **Topic:** IAFC Updates

The IAFC is actively engaged in two significant projects: a PHMSA-funded grant and an Assistance for Local Emergency Response Training (ALERT) grant, both aimed at enhancing

community safety and training programs related to HazMat and rail incidents. Richard Miller highlighted the IAFC Community Risk Reduction Conference, emphasizing the ongoing training initiatives provided by the IAFC Academy, which include propane and hydrogen training as well as an updated rural rail response training program. Addressing incident management and unified command during rail incidents is crucial, particularly in light of gaps identified in previous meetings and incidents, such as the train derailment in East Palestine. The presentation also introduces the development of a toolkit for HazMat teams, designed to improve engagement and provide centralized resources. This toolkit features dashboards and training materials, enabling users to upload and access pertinent information. The IAFC is seeking feedback on the toolkit and initiating a discussion regarding the categorization of HazMat teams using FEMA resource typing.

#### 4.14 Bill Reese, CVSA

##### **Topic:** CVSA Updates

CVSA is a 501(c)(3) nonprofit organization dedicated to enhancing commercial safety throughout North America. It was founded in 1980 in the Pacific Northwest to improve safety regulations and practices. Current CVSA members include all U.S. states and territories, all Canadian provinces and territories, and the country of Mexico. CVSA comprises four member classes: Class 1 members focus on roadside enforcement, Class 2 members represent local agencies, Class 3 members include industry stakeholders such as trucking companies and insurance firms, and Class 4 members are government entities. The organization addresses HazMat through specialized committees that meet biannually to tackle emerging challenges, including the rise of autonomous vehicles and hydrogen-powered transport. It offers training programs, including an annual conference and targeted courses on lithium batteries and HazMat regulations. The alliance underscores the significance of thorough training for roadside inspectors and industry personnel, ensuring they are well-prepared to manage HazMat safely. Additionally, it stresses the importance of understanding emergency response protocols and utilizing the emergency response guidebook and safety data sheets. In summary, the organization plays a vital role in fostering safety and compliance within the commercial transportation sector, adapting to technological advancements and regulatory changes while providing essential training and resources to its members.

#### 4.15 Nick Hickson, TEEEX

##### **Topic:** TEEEX Updates

TEEX was established in 1948 and is a leader in emergency response training, workforce training, and technical assistance. TEEEX has a far-reaching impact throughout Texas, the Nation, and the world. Last year, TEEEX trained over 225,000 participants representing individuals from every U.S. state and territory, as well as 124 countries worldwide. Major TEEEX programs include Fire and Emergency Services, Infrastructure and Safety, Law Enforcement and Protective Services, and Business and Cyber Solutions.

The TEEEX HazMat Program is accredited by the Pro Board to certify 14 levels of HazMat certifications as well as numerous other non-certification or custom courses. In fiscal year 2024, TEEEX issued 9,144 Pro Board certifications, with 3,499 of these being for HazMat courses. TEEEX's HazMat Program delivers training at the 297-acre TEEEX Brayton Fire Training Field in College Station, Texas, recognized as the Nation's largest live-fire training facility. Brayton Fire Training Field features 12 dedicated HazMat training props that simulate a variety of disasters. Additionally, the program has several mobile delivery teams that are available to travel nationally and internationally to provide training. In addition to the HazMat training delivered by the HazMat Program, TEEEX has a Department of Homeland Security/FEMA-funded Weapons of Mass Destruction training program that provides classes in incident management and response.

## 5 Historical Reviews & Perspectives (2020–2024)

### 5.1 2019 to 2023

The historical perspective reveals the HazMat Roundtable resumed meeting in 2019 and originally laid out seven key improvement areas:

- Planning
- Prevention
- Response
- Training
- Standard of Care
- Funding
- Information Sharing

At the 2019 Roundtable, the meeting process and report format were determined, and the members developed a list of issues, observations, and recommendations within each of the seven areas. In later years, these seven key areas were refined to the following list:

- Planning & Local Emergency Planning Committee (LEPC)/Tribal Emergency Response Commission (TERC) Performance
- Prevention/Mitigation
- Risk-based Response & Preparedness
- HazMat Training
- HazMat Standard of Care
- Funding
- Information Sharing

Before the 2023 meeting, Roundtable members participated in an online survey that asked them to assign a priority level to each of the seven improvement areas:

- Critical: Address within the near term (calendar year 2023)
- High: Address within the next 12–18 months
- Medium: Address within 24 months
- Low: Address after 24 months

Using the results of the survey and tailoring them based on discussions over the course of the 2023 Roundtable, participants agreed on the following critical and high-level issues:

- Critical Issues:
  - Information Sharing
  - HazMat Training & Funding
  - Funding & Prevention/Mitigation

- High-Level Issues:
  - Risk-Based Response & Preparedness

## 5.2 2024 Roundtable Outcomes

The 2024 HazMat Roundtable occurred on May 21st–22nd. The following agencies and organizations were in attendance:

- American Chemistry Council (ACC) Chemical Transportation Emergency Center (CHEMTREC)
- Ammonia Safety & Training Institute (ASTI)
- Environmental Protection Agency (EPA)
- Federal Emergency Management Agency (FEMA)
- Federal Railroad Administration (FRA)
- Department of Homeland Security (DHS)
- Department of Labor (DOL)
- Department of Transportation (DOT)
- DOT, Pipeline and Hazardous Materials Safety Administration (PHMSA)
- Grayson County Office of Emergency Management
- Hazardous Materials Management and Emergency Response (HAMMER) Federal Training Center
- International Association of Fire Chiefs (IAFC)
- International Association of Fire Fighters (IAFF)
- National Association of SARA Title III Officers (NASTTPO)
- National Association of State Fire Marshals (NASFM)
- National Association of State 911 Administrators (NASNA)
- National Emergency Number Association (NENA)
- National Fire Academy (NFA)
- National Fire Protection Association (NFPA)
- National Transportation Safety Board (NTSB)
- National Volunteer Fire Council (NVFC)
- Occupational Safety and Health Administration (OSHA)
- South Central Task Force (SCTF)
- U.S. Chemical Safety and Hazard Investigation Board (CSB)
- U.S. Fire Administration (USFA)
- University of Findlay All Hazards Training Center
- Utah Department of Public Safety
- Utah State Fire Marshal's Office, HazMat Section

- Utah Valley University (UVU) Emergency Services
- Washington State Patrol (WSP)

To prepare for the discussion and activities of the 2025 HazMat Roundtable, the issues, recommendations, and solutions from 2020 to 2024 were reviewed, analyzed, and consolidated. Issues and priorities discussed at the 2024 Roundtable were:

- Need for Better Quality Data: Collecting more and higher-quality data is critical in supporting all the HazMat Roundtable's priority areas. Collective action is difficult to organize and gain support for when there is insufficient data to demonstrate the effects of HazMat events and community gaps or to demonstrate the successes of partner projects and programs.
- Broader Public Engagement: HazMat response and emergency preparedness cannot occur successfully without the full engagement of the public. Each community and its members should have a strong understanding of the responsibilities and limitations of both their HazMat and emergency response teams as well as their roles in emergency planning.
- Need to Fill HazMat Response Program Gaps: There is a severe lack of resources among the Nation's HazMat response programs, limiting their ability to properly equip themselves for, prepare for, and respond to HazMat incidents. The HazMat Roundtable participants recommend increasing funding to support the delivery of HazMat response capabilities at every level.

Specifically, the 2024 Roundtable reviewed these critical or highly ranked issues and developed the following challenges and recommendations:

Challenge	Recommendation
<b>Data and Information Sharing</b>	
The world is changing and evolving, with new HazMat-related issues and challenges being raised every day.	Conduct a strategic-level HazMat information gap analysis that identifies and prioritizes the information needs of the HazMat planning and response communities.
Because people are overloaded with information from email, social media, etc., data sharing can be overlooked or ignored.	Create a marketing plan that defines more effective ways of collecting, assessing, and disseminating information so that it reaches a wider but more targeted audience.
Many HazMat-related organizations (e.g., volunteer fire departments) aren't aware that there is training and related materials readily available.	Investigate where information breakdown occurs and create a federal and emergency response repository that is available to the public (i.e., a one-stop shop of information and resources). Perform information triage to ensure information is posted by a trusted entity.

Challenge	Recommendation
Federal websites are hard to navigate with funding allocated to compliance, security, and paperwork. Information repositories require money for operations and maintenance.	Use non-governmental third-party vendors to build and host the data repository. Evaluate the potential use of longer-term funding sources to support activities. Implement a process for permanent funding to cover recurring maintenance costs.
Homeland Security-related grant funding is often obtained through the Threat and Hazard Identification and Risk Assessment (THIRA) process, while firefighter grant programs tend to focus on basic firefighting training and equipment and are not for HazMat threats or emerging issues.	Find alternative sources of funding that do not involve grants. Assess the potential to modify or broaden grant requirements.
<b>HazMat Response Program Sustainment</b>	
Grants.gov can be intimidating for some stakeholders and it's very difficult for nonprofits to navigate the grants process.	Create a grants process like Georgia's Grant Playbook.
States have their own processes and vary in their level of sophistication when applying for grants (e.g., some states use professional grant writers).	Obtain grant money without going through the state (i.e., going through the state is not technically a requirement). Implement processes and procedures to ensure that the grant money is spent properly.
Volunteer fire departments are organized differently (e.g., some fall under the county government or under the sheriff), and most are classified as nonprofit organizations, so they aren't eligible for certain federal grants.	Recommend creating a HazMat program like the Assistance to Firefighters Grants (AFG) to find alternative sources of funding such as raising money locally and use best practices to crosswalk grant programs.
It's difficult to identify who needs help and guidance at the local level.	Have NASTTPO talk to State Emergency Response Commissions (SERCs) on a state-by-state basis.
<b>Community Planning, Prevention &amp; Mitigation</b>	
It's difficult to define mitigation for local governments (i.e., is mitigation applying for FEMA grants or is it taking money to mitigate each potential hazardous incident).	Have local governments exercise control via their local regulatory boards—it's a local choice to determine if they want zero risk at a higher cost.
<b>Risk-based Response and Preparedness</b>	
We do not have the data to illustrate what the HazMat problem looks like in the United States.	Survey various HazMat stakeholders [e.g., North American Fire Training Directors, International Association of Emergency Managers (IAEM), and NASTTPO] to look at preparedness issues from different perspectives.

Challenge	Recommendation
HazMat tech staffing levels are decreasing due to retirement. Despite very robust incentives, recruiting people is still challenging.	Survey various HazMat stakeholders to determine if there are other ways to improve recruitment and retention.
It's difficult to bring the right people together (i.e., regulators and responders as well as those who look at response and preparedness from a community and commercial process versus the research and development process).	Have NASTTPO talk with anyone about LEPCs.

## 6 2025 Roundtable Discussion Topics

Following the member updates and a thorough review of the outcomes from the 2024 HazMat Roundtable, members engaged in a discussion regarding the evolution of prioritized issues over the past year, determining if there were any new issues to discuss and developing recommendations for resolving these issues.

### 6.1 Breakout Groups

At the end of the first day, participants were given the opportunity to synthesize the discussions and priority areas of the two-day meeting. Participants broke into small groups to discuss their answers to the following three questions:

- Past: Are the 2024 HazMat Roundtable priority issues still current?
- Present: What emerging trends and issues should we be monitoring?
- Future: If you were king/queen for the day, what one action would you take to make progress in our priority areas?

#### 6.1.1 Question #1: Are the 2024 HazMat Roundtable priority issues still current?

The breakout groups reported that they believe the 2024 HazMat Roundtable priority issues are still current but thought it would be useful to discuss the larger issues at a high level every year. Identifying specific issue champions to ensure that topics are addressed will help not only ensure follow-up but also expedite action. Though the ranked importance of the issues may fluctuate month-to-month and year-to-year, the HazMat Roundtable participants agreed to continue to monitor and address all of the priority issues. Below is a summary of the validated elements of the 2024 report.

Challenge	Recommendation
<b>Data and Information Sharing</b>	
Lack of clarity regarding what data is needed, where it is stored, and how it can be shared effectively.	<ul style="list-style-type: none"> <li>• Define the target audience for data.</li> <li>• Establish a centralized repository for HazMat data and information.</li> <li>• Form a working group to identify existing data sources and gaps.</li> <li>• Ensure data is vetted and credible, avoiding misinformation from unverified sources.</li> </ul>
<b>HazMat Response Program Sustainment</b>	
Uncertainty in federal funding and loss of institutional knowledge due to retirements and turnover.	<ul style="list-style-type: none"> <li>• Advocate for sustained funding and explore alternative funding sources beyond federal grants, such as non-profit foundations.</li> <li>• Increase awareness of available grants and training opportunities.</li> <li>• Address the need for better recruitment and retention strategies for HazMat responders.</li> </ul>
<b>Community Planning, Prevention, &amp; Mitigation</b>	
Local governments often lack engagement and stakeholder involvement in HazMat planning.	<ul style="list-style-type: none"> <li>• Encourage local governments to exercise control over HazMat planning with broad stakeholder involvement.</li> <li>• Provide state and local governments with assistance on how to effectively conduct planning and preparedness activities to improve participation and effectiveness.</li> <li>• Promote the use of federal tools and resources for risk assessment and mitigation planning.</li> <li>• Address disparities in LEPCs and use them to facilitate broad community involvement in planning, risk awareness, and filling capability gaps.</li> </ul>
<b>Data Collection and Analysis</b>	
Misconception that data is unavailable; the real issue is identifying and analyzing existing data.	<ul style="list-style-type: none"> <li>• Conduct a needs assessment to determine what data is required and where it can be sourced.</li> <li>• Use professional associations to map out data gaps and provide actionable insights.</li> </ul>

Challenge	Recommendation
<b>Staffing Levels</b>	
Decreasing number of HazMat response personnel due to retirements and retention issues.	<ul style="list-style-type: none"> <li>Expand focus beyond HazMat technicians to include all HazMat responders (e.g., operations-level personnel, incident commanders, dispatchers) as in the future, these team members may be asked to handle some of the tasks that HazMat technician normally handle</li> <li>Encourage chiefs and managers to prioritize HazMat training as part of initial firefighter training.</li> <li>Conduct surveys to assess staffing levels and training gaps; for example, the National Academy of Sciences may be able to conduct this study.</li> </ul>
<b>Technology Boom</b>	
Technology related to HazMat response has evolved rapidly and is continuing to expand. Emergency and hazardous materials responders need to understand the impact the materials have and how to work with them.	<ul style="list-style-type: none"> <li>First responders need to be brought into the development of new technology to provide input on the hazardous effects of the materials.</li> <li>Better monitoring and detection are needed.</li> <li>First responders need updated materials to respond to this new technology; this means more funding is needed for training and equipment.</li> </ul>
The emergence of new hazardous materials and new uses of existing hazardous materials in the country have created a lack of awareness of the dangers posed by these new substances.	<ul style="list-style-type: none"> <li>Encourage the development of communication materials that will point out potential hazards to the public.</li> </ul>

### 6.1.2 Question #2: What emerging trends and issues should we be monitoring?

Roundtable participants felt that there were several emerging trends and issues that should be monitored and that needed more focus in the future to prevent a threat to the HazMat community. The Roundtable participants understand that several of the emerging trends and issues (as provided in the executive summary) can be folded into priority areas but found it useful to specifically outline them to reduce future risks.

- Mutual Aid Reliance:** Increased reliance on mutual aid for HazMat response due to resource constraints.
- Nuclear Fuel:** Re-emergence of nuclear fuel transportation and small reactor technology.
- Lithium Batteries:** Challenges with battery fires, disposal, and consumer education.
- Compressed Natural Gas (CNG):** Safety concerns with CNG tanks and lack of training for responders.
- Electronic Shipping Papers:** Transition to electronic shipping papers and the need for responder awareness.
- Wildfires as HazMat Incidents:** Recognition of wildfires as HazMat incidents due to contamination risks.
- Hydrogen Pipelines:** Emerging risks associated with hydrogen transportation and storage.

8. **Anhydrous Ammonia in Natural Gas Pipelines:** Emerging risks associated with anhydrous ammonia being transported within natural gas pipelines. It also poses questions for federal clean-up and response authorities as natural gas is handled under oil statutes/regulations and anhydrous ammonia is handled under chemical statutes/regulations. This poses awareness threats if a first responder isn't aware that anhydrous ammonia could be mixed with natural gas during an accident.
9. **Robotics:** Increased use of robotics in HazMat facilities and the implications for emergency response.
10. **Flammable Refrigerants:** Growing use of flammable refrigerants in commercial applications.
11. **Technology:** Increasing technology and the hazards it presents need to be understood by first responders. We need this information as it is developed, or better yet, we need to provide input as it is developed to increase the safety of emergency responders and the public.
12. **Community Engagement:** Lack of public engagement and awareness about HazMat risks and preparedness.

#### 6.1.3 Question 3: If you were king/queen for the day, what one action would you take to make progress in our priority areas?

Breakout group participants reported that if they had one action that they could pursue during the coming year, they would focus on the following areas, if given unlimited resources and authority:

1. **Centralized Data Repository:** Create a one-stop shop for HazMat data and information.
2. **Focus Group for Emerging Issues:** Form a dedicated group to address emerging HazMat challenges.
3. **Intel for Responders:** Improve access to classified and confidential information for first responders.
4. **Research and Development:** Establish a centralized research and development process for emerging technologies and threats. This repository needs a champion or point person to lead this effort.
5. **Top-Down Training:** Ensure training flows from chief officers to responders.

## 6.2 Discussion Outcomes

Participants expressed satisfaction with the meeting's productivity and highlighted the following outcomes:

- **Collaboration:** Strengthened relationships among federal, state, private stakeholders, and community stakeholders.
- **Actionable Recommendations:** Clear steps for addressing critical issues and emerging trends.
- **Momentum:** Agreement to meet more frequently (e.g., biannual virtual check-ins) to maintain progress.

## 7 Next Steps

The next steps for the May 2025 HazMat Roundtable are:

- **Draft Report:** A draft of the 2025 Roundtable Report will be circulated for review by July 31, 2025. After the comments and feedback are adjudicated, the report will be published and posted on the PHMSA website by September 2025.
- **Follow-Up Meetings:** Potential virtual check-ins in November to track progress and refine strategies.
- **Implementation:** Professional associations and federal agencies will take ownership of specific action items.

## 8 Conclusion

The HazMat Roundtable successfully identified critical issues, emerging trends, and actionable recommendations to improve HazMat response and preparedness. The meeting emphasized collaboration, data sharing, and proactive planning to address current and future challenges.

## Appendix A: List of Participants

The 2025 HazMat Roundtable participants are listed in alphabetical order (based on last name) in the table below.

Name	Agency/Company/Organization
Jennifer Barre	U.S. Environmental Protection Agency (EPA), Chemical Branch
David Bierling	Texas A & M Transportation Institute
Marshall Braun	International Association of Fire Chiefs (IAFC)
Rachel Buczynski	National Volunteer Fire Council (NVFC)
James Burgess	International Association of Fire Fighters (IAFF), HazMat Training Department
Tim Butters	International Association of Fire Chiefs (IAFC)
Andy Byrnes	Utah Valley University (UVU) Emergency Services
Bob Clatterbuck	National Transportation Safety Board (NTSB)
Andrea Curtis	University of Findlay All Hazards Training Center
Art Deyo	Utah Department of Public Safety
Jeff Dulin	International Association of Fire Chiefs (IAFC)
Rick Edinger	National Fire Protection Association (NFPA) Technical Committee for Hazardous Materials/Weapons of Mass Destruction (WMD) Response
Rebecca Fontenot	U.S. Department of Homeland Security (DHS)
Tim Gablehouse	National Association of SARA Title III Officers (NASTTPO)
Eriks Gabliks	National Fire Academy (NFA)
Jennifer Grimes	International Association of Fire Fighters (IAFF)
April Heinze	National Emergency Number Association (NENA)
Nick Hickson	Texas A&M Engineering Extension Services (TEEX)
Pete Jensen	IAFC HazMat Committee
Kevin Krotzer	County of Lehigh
Scott Lancaster	Washington State Patrol (WSP)
Adam Leary	U.S. DHS Countering Weapons of Mass Destruction (CWMD) Office
Austin Leibforth	White Marsh Volunteer Fire Company
Kinha Lester	Bloomsburie
Chuck Lineback	Federal Emergency Management Agency (FEMA)
Mark Maday	U.S. DOT Federal Railroad Administration (FRA)
Andrew Maguire	U.S. Environmental Protection Agency (EPA)
Janis McCarroll	Federal Emergency Management Agency (FEMA)
Joe Milazzo	CHEMTREC®
Richard Miller	International Association of Fire Chiefs (IAFC)
Thomas Miller	National Volunteer Fire Council (NVFC)
Aaron Mitchell	U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)
Taylor Munday	IAFC HazMat Center
Eddie Murphy	U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)
Phillip Oakes	National Association of State Fire Marshals (NASFM)
Lisa Pine	North American Fire Training Directors (NAFTD)
Bill Reese	Commercial Vehicle Safety Alliance (CVSA)
Bob Royall	International Association of Fire Chiefs (IAFC), Hazardous Materials Committee and Harris County Fire Marshal Office (retired)

Name	Agency/Company/Organization
Bill Schoonover	U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)
Sarah Somers	Grayson County Office of Emergency Management
Crystal Thomas	National Transportation Safety Board (NTSB)
JoAnna Wagschal	Bloomsburie
John Woulfe	International Association of Fire Chiefs (IAFC)
Nicole Zawadzki	Hazardous Materials Management and Emergency Response (HAMMER)

## Appendix B: Acronyms

Name	Agency/Company/Organization
<b>ACC</b>	American Chemistry Council
<b>AFG</b>	Assistance to Firefighters Grants
<b>ALERT</b>	Assistance for Local Emergency Response Training
<b>ASTI</b>	Ammonia Safety & Training Institute
<b>CHEMTREC</b>	Chemical Transportation Emergency Center
<b>CNG</b>	Compressed Natural Gas
<b>CVSA</b>	Commercial Vehicle Safety Alliance
<b>CWMD</b>	Countering Weapons of Mass Destruction
<b>DHS</b>	Department of Homeland Security
<b>DOL</b>	Department of Labor
<b>DOT</b>	Department of Transportation
<b>EMS</b>	Emergency Medical Services
<b>EPA</b>	Environmental Protection Agency
<b>ERG</b>	emergency response guides
<b>FEMA</b>	Federal Emergency Management Agency
<b>FRA</b>	Federal Railroad Administration
<b>HAMMER</b>	Hazardous Materials Management and Emergency Response
<b>HazMat</b>	hazardous materials
<b>IAFC</b>	International Association of Fire Chiefs
<b>IAEM</b>	International Association of Emergency Managers
<b>IAFF</b>	International Association of Fire Fighters
<b>LEPC</b>	Local Emergency Planning Committee
<b>NAFTD</b>	North American Fire Training Directors
<b>NASFM</b>	National Association of State Fire Marshals
<b>NASTTPO</b>	National Association of SARA Title III Officers
<b>NENA</b>	National Emergency Number Association
<b>NFA</b>	National Fire Academy
<b>NFPA</b>	National Fire Protection Association
<b>NVFC</b>	National Volunteer Fire Council
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PFAS</b>	per- and polyfluoroalkyl substances
<b>PHMSA</b>	Pipeline and Hazardous Materials Safety Administration
<b>PIT</b>	Partners in Training Crew
<b>SCTF</b>	South-Central PA Regional Task Force
<b>SERC</b>	State Emergency Response Commissions
<b>TEEX</b>	Texas A&M Engineering Extension Service
<b>TERC</b>	Tribal Emergency Response Commission
<b>TRANSCAER</b>	Transportation Community Awareness and Emergency Response
<b>TRIPR</b>	Transportation Rail Incident Preparedness and Response
<b>UAV</b>	unmanned aerial vehicle
<b>USFA</b>	U.S. Fire Administration
<b>UVU</b>	Utah Valley University
<b>WSP</b>	Washington State Patrol