

Volume 1: The Planning Framework and Process

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Hazardous Materials and Train Derailment Emergency Planning Guide for School Districts and Community Colleges

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# **APPLICATION**

School districts and community colleges can use this document to guide the preparation of their emergency plans. Here, users will find a list of requirements of the Texas Education Code that apply today, along with known industry standards, and recommended actions and best practices that they can consider based on specific needs or circumstance, as applicable. The guide is data-driven and was developed following a comprehensive review of federal and state requirements, latest research literature, and input from professionals with specialized expertise in hazardous materials, train derailments, emergency management, and school safety. The information provided in this guide does not, and is not intended to, constitute legal advice; instead, all information, content, and materials available here are for general information purposes only. The content is provided "as is;" no representations are made that the content is error-free. Users are encouraged to contact their local counsel and/or local experts to obtain the most up-to-date legal or other information that applies to their case

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# LIST OF ACRONYMS

AAR after-action review

ADA Americans with Disabilities Act

CERT community emergency response team

DEMC district emergency management coordinator

EMC emergency management coordinator

EOC emergency operations center
EOP emergency operations plan

EPCRA Emergency Planning and Community Right to Know Act

FEMA Federal Emergency Management Agency

HazCom hazard communication
Hazmat hazardous materials

HMIRT Hazardous Materials Incident Response Team

IC incident commander

ICS Incident Command System

IEP individualized education program

IRT Incident Response Team

LEPC Local Emergency Planning Committee

NIMS National Incident Management System

NPS National Preparedness System
NRF National Response Framework

NRS National Response System

SDS Safety Data Sheet

SERC State Emergency Response Commission

SOP standard operating procedure
SRM Standard Reunification Method

SRO school resource officer

SRP Standard Response Protocol

TDEM Texas Division of Emergency Management

TEC Texas Education Code

TxSSC Texas School Safety Center

# I. INTRODUCTION

## **Takeaways**

- Hazardous materials incidents can occur in any Texas community.
- School districts must adopt multihazard emergency operations plans that address the five phases of emergency management: prevention, mitigation, preparedness, response, and recovery.
- Section 37.108 of the Texas Education Code requires a district-level emergency plan for train derailments if any facility in that district has any part of its property boundary line within 1,000 yards of a railroad track.
- Train derailments may lead to multiple, simultaneous evacuations of schools, shelter and reunification at alternate sites, closed roads, and restricted travel—issues addressed in a district plan.
- The biggest change for most districts between existing procedures and plans and those outlined in this guide is evacuation planning for major external hazmat events like train derailments.

This guide can help Texas education institutions address Texas Education Code (TEC) emergency planning requirements for train derailment emergencies and other hazardous materials (hazmat) threats and hazards. It provides specific information, sample plans, procedures, policies, and step-by-step instructions to implement a district-level hazardous material and train derailment annex within a multihazard district Emergency Operations Plan (EOP). The information in this guide is intended primarily for K-12 school and junior college district administrators and staff with responsibility for emergency planning and management, and generally applies to all types of schools—public, private, charter, rural, and urban.



The term hazardous materials (hazmat) in this guide refers to any chemical, biological, radiological, flammable, reactive, or explosive substance capable of causing short- or long-term health effects or death, or that causes environmental or property damage.

#### The Risk

#### Hazmat in Texas

Texas is home to one of the largest concentrations of petrochemical industries globally and some of the United States' most important oil and gas fields. Agriculture and manufacturing remain vital components of the state economy. These industries and others produce, use, and ship hazardous materials (hazmat) throughout the state. Texas has the largest network of pipelines in the United States and tens of thousands of miles of road and rail. Every community has at least



Hazmat is more than just toxic material. Releases of large quantities of flammable and combustible liquids like gasoline, diesel and crude oil, or flammable gases natural gas and liquified natural gases such as propane can pose immediate fire, explosive, and inhalation risks requiring evacuation of the vicinity. These materials are commonly transported by train, truck, and pipelines.

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some hazmat, somewhere. When safely stored, used, transported, and disposed of, hazardous materials provide many benefits. However, accidents can and do occur. Hazmat transport and facilities are among the top community threats cited by emergency responders in Texas.<sup>1</sup>

#### Hazmat and Texas Schools

Texas's history includes serious hazmat incidents with disastrous effects on schools and their communities:

- The March 1937 New London, Texas, explosion killed nearly 300 students, faculty, and visitors at the New London Consolidated School.
- Ten years later, the Texas City disaster of 1947, one of the worst hazmat accidents in history, killed over 500 people and destroyed much of Texas City, including schools.<sup>2</sup>
- The April 2013 West, Texas, disaster severely damaged or destroyed three of the four schools in West, Texas. Fortunately, schools were not in session during the West incident though the explosion killed 15 and injured nearly 200 people in the community.<sup>3</sup>
- A recent train derailment in Orange County led to the emergency evacuation of multiple schools.

These events demonstrate that serious incidents involving hazardous materials can happen anywhere, at any time. The location of many schools near railroad tracks, railyards, industrial facilities, roadways, or pipelines means there is the potential for serious hazmat incidents that can occur without warning.

# **Legal Requirements**

#### **Texas Education Code Section 37.108**

The Texas Legislature regularly updates laws and regulations that enhance emergency planning for school districts. Under Texas Education Code (TEC) Section 37.108, Multihazard Emergency Operations Plan, Safety and Security Audit, school districts and public junior college districts must adopt multihazard

Section 37.108 of the TEC requires a **district-level emergency plan** for train derailments if any school district facility has any part of its property boundary line within 1,000 yards of a railroad track.

emergency operations plans that address "prevention, mitigation, preparedness, response, and recovery" for all emergencies.<sup>5</sup> The newest regulations also establish new planning standards, audits, and enforcement mechanisms.

A recent survey about hazmat risk and response conducted by the TTI on behalf of the Texas Division of Emergency Management found more than half of 700+ rural and urban fire departments in Texas considered either hazmat transport or facilities to be one of their top community risks.

<sup>&</sup>lt;sup>2</sup> The more recent ammonium nitrate explosion in Beirut, Lebanon, shared similarities with the Texas City disaster.

Source: McGee, Kate. "West ISD Demolishing Schools Damaged by Plant Explosion." KUT 90.5 Austin NPR, July 5, 2013. https://www.kut.org/post/west-isd-demolishing-schools-damaged-plant-explosion.

In 2021, the State Legislature modified TEC 38.108, changing "district school" to "school district facility," a change that expands the requirement to include warehouses, bus yards, and athletic facilities. If any property line of the district is within 1,000 yards of a railroad track, the school requires a train derailment plan.

<sup>&</sup>lt;sup>5</sup> Senate Bill 11 (2019) added "prevention" to the list.

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Multihazard planning, a requirement of the regulations, usually includes planning for hazardous materials incidents on or off-site that impact school operations. Further, TEC Section 37.108 specifies:

A school district shall include in its multihazard emergency operations plan a policy for responding to a train derailment near a district property. A school district is only required to adopt the policy described by this subsection if a school district facility is located within 1,000 yards of a railroad track, as measured from any point on the school's real property boundary line. The school district may use any available community resources in developing the policy described by this subsection.

Under the law, school districts require an emergency plan for train derailments if any school or facility in that district has any part of its property line within 1,000 yards of a railroad track. That requirement affects many school districts in Texas.

Further, current TEC regulations include school district requirements for:

- Employee training for emergency response.
- Drills and exercises to prepare students to respond to emergencies.
- Coordination with local response organizations and public health agencies.
- A safety and security audit every three years.
- Compliance with standards published by the Texas School Safety Center (TxSSC).

This guide and the associated sample plans and material to implement hazmat incident plans, within the context of the TEC's broader requirements, can aid in hazmat planning. The recommendations also cover all phases of the emergency management cycle required by TEC Section 37.108: prevention, mitigation, preparedness, response, and recovery. The guides and sample plans allow districts to implement hazmat plans that work with existing school safety plans and organizational structures and meet district requirements under TEC regulations and Education Commissioner's Rules.

For most districts, the greatest difference between existing procedures and plans and those in this guide is **evacuation planning for hazmat incidents**. Evacuation due to significant hazmat incidents (like a train derailment) is likely to be different from other evacuations. Planning for an evacuation is one of the most important improvements that districts can make address hazmat emergencies.

## Is This Necessary?

Because of the variety and quantity of hazardous materials involved, rail transportation creates special considerations for emergency planning not always present in other modes of transport. Of course, rail incidents are not the only hazmat

By multiple measures, rail transportation is safer than transport on roadways. However, major rail incidents can also produce much larger impacts than those involving trucks. Pipelines are the safest mode of transport for hazardous materials, but like rail incidents, a pipeline incident often produces large-scale impacts and may pose serious fire and explosive hazards. Facilities and industries that use, store, and produce hazardous materials fall under various federal and state safety standards, depending on the quantity and type of material. The most dangerous materials require special safety programs and coordination with local communities. Incidents involving facilities and their severity depend on the material and quantity released. Most facility incidents are small in scale

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threats to schools, nor the most likely. Hazmat incidents also occur on roadways or pipelines, nearby industrial facilities, and inside school science laboratories and buildings. Further, hazmat incident risk and impact can extend well beyond 1,000 yards from their source, depending on conditions and materials. Therefore, all schools should include some hazardous materials emergency planning elements in their emergency operation plans, regardless of their proximity to a rail line.

Although some **schools** may already have hazmat emergency response plans, the law is clear: derailment planning is a **district** requirement. Helping districts meet that requirement is the purpose of this guide. Of course, as part of that district plan, individual schools must also know how to respond to a train derailment or other hazmat incident and incorporate appropriate procedures into their school policies, plans, and procedures.

Because major hazmat incidents often lead to evacuation out of the threat area, the district's role in planning for a hazmat incident should include evacuation, transportation, and reunification. Further, for some districts, as was the case in Mauriceville, Texas, in October 2020, a train derailment may include multiple simultaneous school evacuations while schools further away execute shelter in place or execute reunification plans. Due to downwind toxic hazards and the risk of fire and explosion, police and fire departments restrict travel and close roads - the usual routes for buses and parents may not be open. These are district problems that a district plan addresses.

#### Alignment with Other Emergency Planning Guidance

#### **Plans versus Procedures**

Many schools and school districts have adopted the TxSSC **standard response protocols** (SRPs)<sup>7</sup>. Although SRPs cover essential *procedures* for emergencies such as active shooter incidents, the SRP is not a *plan*. The SRP is an example set of classroom and school-level procedures to take in an emergency. The SRP is a sample standard operating procedure (SOP).

On the other hand, **district emergency operations plans** (EOPs) are more complex and address all kinds of emergencies using an all-hazards or multihazard approach. EOPs describe how an organization organizes for emergencies and responds to them. SOPs (i.e., SRPs) are the procedures individuals and small teams use to execute elements of the plan.

#### **Authorities Involved**

Various agencies are involved:

• TxSSC provides standards and guidance for emergency planning under TEC authority. 8

and involve small quantities. However, a large-scale incident can have widespread impacts, as the examples of West, Texas, and Beirut, Lebanon, both demonstrate.

<sup>&</sup>lt;sup>7</sup> Available at https://txssc.txstate.edu/tools/srp-toolkit/.

TxSSC provides many different toolkits for school safety and emergency planning as part of its responsibilities for the state's school safety program defined by the TEC. These break down into the following broad categories:

Regulatory guidance and standards: School Safety and Security Standards Toolkit and School Safety Law Toolkit

<sup>•</sup> General guidance on emergency planning: The High-Quality EOP Toolkit.

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- The Texas Education Commissioner provides additional guidance and refines the TEC standards by issuing Commissioner's Rules.
- The Texas Division of Emergency Management (TDEM) is the state agency responsible for emergency management in Texas. TDEM establishes standards for emergency management and planning for local and county emergency management plans and provides assistance and guidance for managing emergencies and disasters, including those due to technological hazards such as hazardous materials incidents.<sup>9</sup>

#### **Planning Tools**

TxSSC currently provides two primary tools to schools for emergency preparedness planning:

- The SRPs
- An EOP toolkit, which conforms to guidance from the Department of Homeland Security Federal Emergency Management Agency (FEMA), the Department of Education, and TDEM

This guide provides additional tools and specific guidance on hazmat and derailment-related emergency planning. The guide incorporates currently existing specific TxSSC guidance, like that in the School Pipeline Safety Toolkit and the K-12 Standard Reunification Method (SRM) Toolkit. This guide goes further and includes recommendations and research related to hazardous materials incidents affecting schools. <sup>10</sup>

This guide provides a **sample district emergency operations plan annex** in Volume 4. Both the sample plan annex provided here and those in the TxSSC EOP toolkit are based on sample emergency plan templates used by TDEM (in its Annex Q—Hazardous Materials). The TxSSC sample annex is shorter and represents TxSSC's minimum requirement for district train

• Specific guidance on different elements of school safety programs and parts of emergency planning: Training, Drilling and Exercising Toolkit, School Pipeline Safety Toolkit, Severe Weather Toolkit, Safety and Security Agreements Toolkit, Behavioral Threat Assessment and Management Toolkit, School Safety and Security Audit Toolkit, and Digital Threat Assessment Toolkit.

• Guidance on response drills and protocols that execute parts of emergency plans: K-12 Standard Response Protocol (SRP) Toolkit (Texas Edition) and K-12 Standard Reunification Method (SRM) Toolkit (Texas Edition).

Many of these different toolkits reference other standards and documents. The High-Quality EOP Toolkit references both Texas Division of Emergency Management and Federal Emergency Management Agency documents related to emergency management and planning, for example.

the State Emergency Response Committee, for which TDEM is a lead agency, overseas hazardous materials planning for county and local government in Texas. The SERC includes other agencies responsible for regulation of certain hazardous materials and responses to incidents involving those materials—such as the General Land Office, the Railroad Commission, and the Texas Commission on Environmental Quality.

Based on interviews with districts across the state conducted in preparation of this guide, there was some confusion regarding emergency plans and the SRP and SRM. The SRP and SRM are not emergency plans, nor do they meet the requirements of the TEC for train derailments. This guide incorporates two drills, evacuate and shelter in place (for hazmat), referenced in the SRP. However, this guide significantly expands on both, especially the evacuate drill, which does not cover hazardous-materials-incident-related evacuations other than gas leaks (which also appear in the school guide). As the SRP Toolkit states, "SRP is not a replacement... It's an enhancement to your existing safety plans." The implementation of the SRP or SRM is not a replacement for any school safety plan or program, nor is it an EOP. It is a set of procedures, primarily focused on active shooters and security incidents, that can enhance existing or new plans and programs and provide a common operating picture for school districts, local responders, and emergency management. The SRP does not address the specific requirements for train derailment planning for schools as it relates to evacuation.

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derailment emergency plans. The sample plan annex provided in Volume 4 of this guide is more comprehensive than the TxSSC annex and may align more closely with plans used by your community's emergency management and first responders. This approach can improve interoperability with planning and response of your local communities. Volume 4 also contains a

sample plan annex for individual schools that differs from the sample plan annex for districts. Although the TEC does not require plans for individual schools, it can be a good practice especially for high-risk schools.

# The sample plans in Volume 4 of this guide align with those used by emergency management and first responders in most Texas communities.

#### Where to Begin

Districts creating **new** emergency plans or newly appointed district emergency management coordinators (DEMCs) revisiting older plans should begin by

evaluating their multihazard planning using tools like the TxSSC High-Quality EOP Toolkit. Districts with **existing** plans or those looking to enhance their planning for train derailments and other hazardous materials incidents should begin with this guide, which includes references to specific TxSSC guidance like the Pipeline Safety Toolkit at appropriate points.

#### Implementing Recommendations

The good news is that most school districts already have some aspects of hazmat emergency planning covered, and the information in this guide can help districts to supplement and formalize existing procedures. For many districts, the most significant change to existing plans is EVACUATE (Hazmat Evacuation), which is different from other types of school evacuations due to the immediate, dispersed nature of the risk and how wind and terrain determine where the material travels. Addressing this gap is one of this guide's primary focus areas. This guide also covers planning for other, more frequent hazmat emergencies. Appendices A and C contain checklists for evaluating planning gaps and identifying actions to close capability gaps.

This guide contains much of the information necessary to efficiently implement new protective actions such as hazmat evacuation and shelter in place. With minor modifications and using other supporting assets accompanying the guide, school districts can quickly and readily implement the changes necessary to significantly improve their preparedness to respond to a significant hazmat incident like a train derailment. Further, because a hazmat evacuation flows into a reunification effort, school districts can use hazmat planning and exercises as an opportunity to improve their readiness in other areas. Both shelter and reunification form the basis of several emergency responses beyond hazardous materials emergencies.

#### 3-3-3 Model of Hazmat Incidents

In order to simplify things, this guide introduces a 3-3-3 model for hazmat incidents, used throughout (Figure 1). The model identifies three primary hazards/threats, three primary impacts, and three primary responses to hazmat incidents. While this is a generalization, it is a useful one that addresses most situations.

# **School District**

# **HAZMAT 3-3-3**

Identify, assess, and plan for potential hazmat emergencies in your district.

# **Identify** Potential Sources







# **Assess** Potential Impacts







# **Plan** for Potential Responses







Figure 1. Hazmat 3-3-3 Model.

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#### Hazmat Hazards/Threats

The three hazmat hazards and threats are:

- Internal/external threats.
- Internal hazards.
- External hazards.

#### Internal/External Threats

Threats are the deliberate use of any other toxic or hazardous substances on or near school district property with the intent to cause harm or instill fear. Threats include the use of the following on or near district property by students or visitors:

- Pepper spray or other chemical irritants.
- Improvised (including chemical) explosives.
- Irritant devices (stink bombs).
- Smoke bombs.<sup>11</sup>

Some active shooters have used chemicals, smoke, and explosive materials in conjunction with their attacks.

#### **Internal Hazards**

*Internal hazards* refer to hazmat incidents that may occur on school district property involving material under district control. Internal hazardous materials incidents include:

- Accidents and spills in science laboratories, transportation yards, swimming pools, and custodial activities.
- Natural gas leaks.
- Air quality issues with heating, ventilation, and air conditioning (e.g., toxic mold and improper circulation) or carbon monoxide.

Additionally, some districts may have large propane, natural gas, or carbon dioxide tanks on district property.

#### **External Hazards**

External hazards refer to hazmat transportation routes and facilities proximate to school district property. Figure 2 illustrates the proximity of schools in West, Texas to the site of explosion at the West Fertilizer Company, which has a rail line that runs through town past the former facility.

Many districts lack emergency plans that address evacuation from a significant external hazmat incident such as a train derailment. The lack of evacuation planning in a hazmat situation will likely be a primary gap in a district's emergency plan.

See also Ayana R Anderson, Taniece R Eure, Maureen F. Orr, Lloyd J. Kolbe, and Alan Woolf (2017), "Hazardous Chemical Releases Occurring in School Settings, 14 States, 2008-2013," *Journal of Environmental Health*, Volume 80, Number 4 (November), <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5812020/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5812020/</a>; and Centers for Disease Control and Prevention (2013), "Homemade Chemical Bomb Incidents – 15 States, 2003-2011," Morbidity and Mortality Weekly Report, Volume 62, Number 24 (June 21), 498-500. <a href="https://www.jstor.org/stable/10.2307/24852284">https://www.jstor.org/stable/10.2307/24852284</a>.

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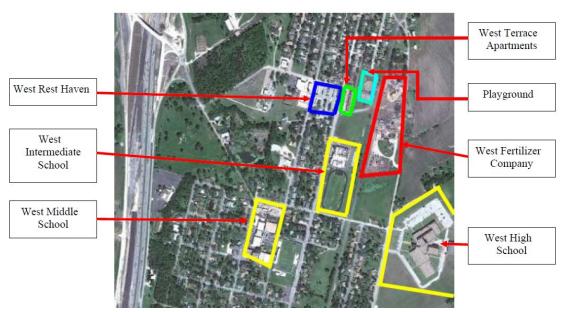


Figure 2. A Chemical Safety Board (CSB) graphic shows the proximity of schools and other facilities to the West Fertilizer Plant at the time of explosion in 2013. Not labeled are the interstate highway (left of image) and rail line (center-right of image) through West, which are both close to schools. (Source: CSB using Bing Maps 12).

Examples of external hazards include:

- Active rail lines.
- Pipelines.
- Industrial or warehouse facilities producing, using, or storing significant quantities of hazmat.
- Roadways.
- Fueling stations.
- Oil and gas wells.
- Aboveground or underground storage tanks.
- Airports.
- Water treatment plants.

Some districts may also have external risks from:

- Nuclear power plants.
- Biological contamination.
- Fertilizer, herbicide and pesticide spraying adjacent to school property.

<sup>&</sup>lt;sup>12</sup> U.S. Chemical Safety and Hazard Investigation Board (2013). *Investigation Report: West Fertilizer Company Fire and Explosion*. Report 2013-02-I-TX. Available at <a href="https://www.csb.gov/file.aspx?DocumentId=5983">https://www.csb.gov/file.aspx?DocumentId=5983</a>.

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#### Hazmat Impacts

Irrespective of their source, most hazmat incidents generally produce three potential impacts. The three impacts are:

- Toxic exposure (contamination or exposure impacts—chemical, biological, or radiological).
- Explosion (blast impacts).
- Fire (thermal impacts).

Toxic exposure is only one potential impact of a hazmat incident. Some of the most commonly transported hazardous materials in the United States are flammable liquids and flammable gases with particular fire and explosive impacts.

For many people, exposure to a toxic gas such as a cloud of chlorine or anhydrous ammonia is the first idea that comes to mind for a major hazmat incident such as a train derailment. However, just because an incident is a "hazmat" incident does not mean the primary impacts are always toxic exposure. Some of the most commonly transported hazmats in the United States include flammable liquids and flammable gases, with many of those posing relatively lower *toxic* exposure hazards and higher *explosive* and *fire* hazards. Depending on the materials involved in a major hazmat incident, the immediate threat of explosion, followed by fire may be more significant than toxic hazards, or they may be equal.

#### Hazmat Incident Responses

For most organizations and individuals, there are three potential responses to hazmat impacts:

- LOCALIZE INCIDENT (Isolate, Deny Entry, & Contain): Isolate/evacuate the immediate area and conduct spill control, first aid, and decontamination as necessary (most schools do this already in science laboratories or transportation yards).
- STAY (Shelter-in-Place): On order from the first responder incident commander (IC) or a designated school district official, staff, students, and visitors seal the building/structure to reduce exposure to vapors (similar to the SRP shelter procedures).
- **EVACUATE** (**Hazmat Evacuation**): On order from the IC, staff, students and visitors evacuate the property entirely or move vertically from lower to higher levels (if that is an option). When evacuating the property they move over a distance and direction crosswind or upwind and out of the isolation zone to a predesignated safe area where they can

shelter or meet transportation to take them to a shelter and reunification location. Because hazmat impacts can present themselves in seconds or minutes, bus transport may not be available, and the evacuation may need to proceed on foot. In extreme situations, it could be necessary to flee the scene if danger of catastrophic impact is imminent and apparent. (Hazmat evacuations are different from other evacuations like fire or active shooters because they depend on wind direction and distance).

Significant hazmat incidents like train derailments near schools may require **evacuation**. Due to the imminent danger, evacuations may be immediate, on foot, and over some distance.

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STAY (shelter in place) is one of three potential responses. A common misunderstanding among districts is that STAY is the primary response to all hazmat events. STAY may be the *less* likely eventual response for properties immediately adjacent to a major incident like a derailment when there is a significant potential for catastrophic impacts and risks of staying and sheltering are greater than evacuating. Districts must follow directions of first responders/incident commanders. If such direction is not available and catastrophic impacts are imminent and apparent, they may need to take immediate action to protect life. For fire or explosion threats, EVACUATE may be an appropriate initial reaction. For toxic gas releases, it may be better to initially STAY indoors with HVAC systems turned off until the initial gas cloud dissipates, followed by an orderly evacuation. These are extremely difficult calls to make. The complexity highlights the utmost importance for district and school personnel to become familiar with who are their local responders (including knowing which station or agency will be leading the hazmat response and the amount of time it will take for them to arrive on-scene) as well as the primary nature of the hazards and their potential responses—before an incident happens. These are key principles of *Preparedness* (discussed more in Volume 2), which is a core part of the planning process. Your community's Local Emergency Planning Committee (LEPC), discussed further in Section II, should be able to facilitate this.

Note that while districts have elements of the three hazmat responses in existing plans for incidents such as tornadoes, active shooters, and other hazards and threats, there are some critical differences between these and hazmat responses. Do not assume existing plans address hazmat responses. Based on reviews of current practices, many districts' emergency plans do not address evacuation from a significant external hazmat incident like a train derailment. This will likely be a primary gap in your district's emergency plan.

# **Special Considerations for Large High Schools and Junior Colleges**

The information throughout this guide's volumes generally applies to all schools, but some large high schools and junior colleges should consider other items in their emergency planning that are unique to their circumstances. While this guide does not explore all of these considerations indepth, Appendix B addresses some of them.

#### **Take Action**

Review your current emergency plans at the district and school level:

- Do they include the two primary responses to major hazmat incidents like train derailments: shelter in place (STAY) and EVACUATE due to hazmat?
- Do you have any district-owned facility property line within 1,000 yards of a railroad track?
- If so, does the district have a plan for train derailments that includes evacuation of that property?

# II. EMERGENCY PLANNING FRAMEWORKS

#### Introduction

When something terrible happens, particularly in hazmat incidents, seconds and minutes count - lives and property are at stake. Therefore, everyone must understand and follow a similar playbook before, during, and after an emergency. First responders and emergency management officials in the public, nonprofit, and private sectors do that through the National Preparedness System (NPS). The NPS helps different local, state, and federal partners plan for and

Effective planning requires understanding your district's hazards and threats, coordinating with partners about how you will deal with them, preparing for and practicing responses together, and then improving based on your experiences during practice and real-world events.

respond to emergencies and disasters using frameworks and principles common to all.

## **Emergency Management and Planning Frameworks**

This guide and sample plans align with common local, state, and national emergency planning structures and practices. Whether districts use the sample plans, a similar format, or some other plan template, district leaders and emergency coordinators should understand how their district's emergency plan relates to these local, state, and national plans and emergency management structures encompassed in the NPS.

# **Takeaways**

- Planning documents record the planning process results and establish the framework and responsibilities that your organization and its partners use during disasters and emergencies.
- The goal of all emergency preparedness, including planning, is the National Preparedness Goal.
- The National Incident Management System is how communities organize and coordinate resources during an emergency at the local, state, and federal levels.
- The Incident Command System is how first responders organize and coordinate their response to an emergency. This system is part of the National Incident Management System.
- The National Preparedness Goal has five areas: prevention, mitigation, preparedness, response, and recovery. The TEC requires school plans to address each area.
- Emergency management and response experts in your community can assist in developing and coordinating school district plans with other emergency response plans.

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#### The National Preparedness Goal and the National Preparedness System

The National Preparedness Goal is the goal for all emergency management in the United States. The goal is part of the NPS. The NPS is how the nation as a whole community prepares and plans to respond to emergencies. Transportation risks from hazardous materials, such as train derailments, are one of the "threats and hazards that pose the greatest risk," embodied in the National Preparedness Goal and the TEC.

The National Preparedness
Goal is a secure and resilient nation
with the capabilities required across
the whole community to prevent,
protect against, mitigate, respond to,
and recover from the threats and
hazards that pose the greatest risk.

#### National Response Systems and Frameworks

Organizations use the National Response System (NRS) and National Response Framework (NRF) to respond to emergencies. The NRS and NRF define how the whole community, from individual citizens to the president of the United States, works together in disaster response. The system is flexible, modular, and built around a common operating system that organizes how resources and response organizations flow into a disaster and ultimately end up working for an IC on the ground at or near an emergency or disaster site.

#### **National Incident Management System**

The National Incident Management System (NIMS) is how organizations implement their response to emergencies as part of the NRS at all levels of government. Texas requires the NIMS in all emergency management organizations, and those principles appear within this guide at various points. The NIMS focuses on coordinating resources. An analogy is how school or college districts coordinate the educational resources they provide to schools or campuses in concert with various stakeholders, local and state agencies, using guidance from the federal Department of Education. In emergency management, communities and the state support ICs via emergency operations centers (EOCs).

EOCs coordinate the resources provided to first responders through the NIMS. An emergency manager operating in a community EOC<sup>13</sup> works for a mayor or county judge in an emergency, coordinating resources for first responders, much as a district superintendent functions under a school board to provide resources to schools, with the other members of the EOC similar to the elements of school district administration working under the superintendent. This idea is more than an analogy. In some cases, these two roles (EOC and school district) directly align in an emergency.

#### Does My District Need an EOC?

Some larger school districts have a small group of key individuals that convene together in an emergency. In a way, this small group functions as a district EOC, and it is a sound practice that any district can implement. That said, the needs of each district will vary or find other solutions. Some districts use computerized or web-based communications systems to share information and coordinate emergency response actions from cell phones and tablets within the district. Districts

<sup>&</sup>lt;sup>13</sup> In this guide, the "community EOC" refers to the EOC of the primary jurisdiction where the incident occurs, be it a municipal or county jurisdiction.

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using such systems find that the system serves as a district EOC without bringing key personnel together in a central location. A virtual EOC is beneficial for larger districts and in hazmat events where travel is restricted. Some of these systems interface directly with the community EOC and first responders, reducing the need for liaisons.

#### Should My District Have a Liaison to the Community EOC?

Some Texas districts, large and small, have a dedicated spot for a district representative to their community EOC. For many districts, this arrangement makes sense. School response to a hazmat incident or natural disaster will, by its nature, be a community-level emergency, and other communities will involve school districts (e.g., using buses for evacuations or facilities for shelters). Having a school district representative/liaison in the community's EOC can significantly aid the response and ensure the district can efficiently receive needed resources and provide needed resources like shelter space and bus transportation.

#### **Incident Command System**

First responders use the Incident Command System (ICS) to organize their responses. First responders operate under a single incident command (IC) or unified IC. The IC coordinates the response to an incident through an established structure where different agencies and departments use a shared framework. The location they do this from is referred to as the incident command post (ICP).

The ICS is the NIMS front end. It may help to visualize the NIMS and the NRF as a funnel. The national, state, and local emergency management systems coordinate resources through the NIMS. These resources flow down to the IC, who organizes them, plans, and executes the response. To return to the comparison in an educational system, the IC is like a school principal. The teachers, custodians, librarians, food service, and administration are like the responders. Together they work to instruct students. The ICS is like the organizational structure they use within the school to make that happen. The difference between the ICS and how schools typically organize is that the ICS uses a system that, continuing the analogy, allows anyone in any role to arrive at the school and fulfill their role without additional training—it is universal.

#### How Does My District Function within the ICS?

In an emergency or disaster affecting a school or schools, responders and schools need to communicate vital information with each other. That means school leaders need to understand the IC's role in making decisions about evacuation or shelter in place during a hazmat disaster. More importantly, impacted schools need to make sure they have the means to communicate with ICs in an emergency (and vice versa). The easiest way is for school principals and the DEMC to coordinate and meet with local first responders well before a hazmat emergency happens, especially those at the nearest fire stations to each property. <sup>14</sup> Try to leverage opportunities and hold such meetings around fire safety courses, CPR training, or other events that bring fire departments to schools. Alternatively, consider starting an informal, regular meeting for coffee between key district/school leaders, community emergency management, and first responders.

The role of the DEMC and who fulfills that role is discussed later in this document. Generally, it is the central point of contact within the district for emergency planning.

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#### Coordinate with First Responders

In a major emergency, impacted schools may wish to interface directly with the IC, no matter the type of incident. Working that out ahead of time with local police and fire departments can go a long way to improving district readiness. Having a face-to-face meeting between key school personnel with the fire officer or official of the nearest fire station to the school and talking through how the school and the department will respond in a train derailment or other hazmat emergency can significantly increase the readiness of both to respond to a hazmat emergency (or any other kind of emergency), no matter how the school district chooses to interface with local ICs.

If your district does not already have strong working relationships with your local emergency responders, planners, and emergency managers, you should develop them. Additionally, districts should strongly consider joining their LEPC. LEPCs are a community's primary resource for hazardous materials emergency planning. Unfortunately, not every county in Texas has an active LEPC. If that is the case, encourage your local leaders to form one.

#### **Five Mission Areas**

While response is an integral part of emergency management, it is only one of five parts. The National Preparedness Goal and NPS identify a spectrum of five emergency management mission areas or phases:

- Prevention.
- Mitigation.
- Preparedness.
- Response.
- Recovery.

TEC Section 37.108 requires school district and public junior college emergency plans to address prevention, mitigation, preparedness, response, and recovery. These form the five mission areas of the National Preparedness Goal.

Figure 2 illustrates how they work together. TEC Section 37.108(a) states that school district and public junior college emergency operations plans must address these five mission areas.<sup>15</sup>

The mission areas are also known as the emergency management cycle or the phases of emergency management. Texas SB 11 (2019) added prevention to the requirements of the TEC, which already included preparedness, response, recovery, and mitigation.

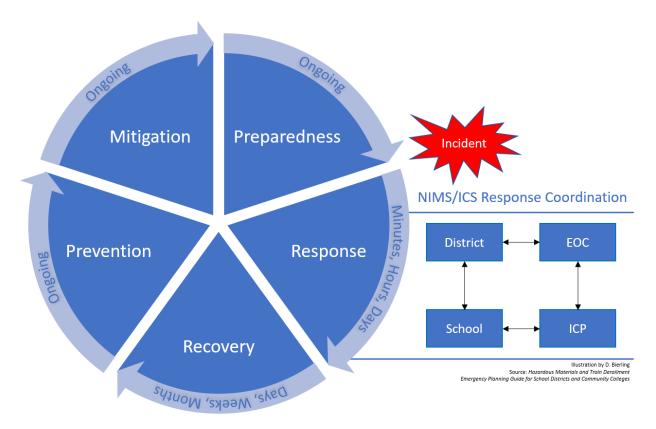


Figure 2. The Emergency Management Cycle.

EOPs and the five mission areas mutually support each other. The five mission areas are how emergency management happens. EOPs codify that process and link it to other plans in the community and state. The district plan tells everyone how they will work across the five phases and coordinates that activity within the district. Districts implement the policies, procedures, and projects necessary to achieve measurable progress and improvements during each phase of emergency management. The district coordinates school efforts on the same lines, linking individual schools and facilities and the community's emergency management structures. You can use the suggestions in this guide to address these five mission areas.

Section III takes you through a planning process that identifies your district's hazards, capabilities, gaps, and steps to address those gaps, all codified within an EOP that addresses the five areas.

Action items in Volume 2 can provide your district with ideas for specific projects and methods to focus on needs and gaps for each area.

Volume 3 contains steps your district can use to conduct a hazmat threat and hazard analysis.

Sample plans in Volume 4 include the five mission areas. The plans incorporate specific measures and procedures for each phase.

# **Response and Hazmat Experts in Your Community**

Understanding hazmat transportation routes and facilities, and the risks posed by each hazard is challenging. Identifying such threats and risks is the responsibility of your local emergency management coordinators (EMCs). EMCs work for county judges and city mayors, sometimes as part of an Office of Emergency Management. Response agencies such as fire departments and law enforcement also assist in individual schools' threat and hazard identification process and response planning at the district level. Beyond the TEC-required coordination, try to include local community emergency management and hazmat

TEC Section 37.108 notes that multihazard emergency operations plans must provide for "...measures to ensure coordination with the Department of State Health Services and local emergency management agencies, law enforcement, health departments, and fire departments in the event of an emergency."

experts in the district's emergency planning process at every level whenever possible.

#### **TDEM Districts and Larger School Districts**

Some school districts span multiple jurisdictions, including multiple municipalities and even multiple counties. The cross-jurisdictional problems may create challenges for interfacing with all of your local emergency management and response departments. To aid in that process, another level of emergency management expertise exists in Texas. TDEM divides the state into six regions, overseen by an assistant chief. <sup>16</sup> These regions divide further into districts, each with a district coordinator. District coordinators can help school districts and community colleges coordinate and plan when they cross jurisdictional boundaries.

### Local Emergency Planning Committees

TEC Section 37.108 requires school districts and public junior college districts to coordinate their emergency plans with local emergency management and first responders (e.g., police and fire departments, emergency medical services, and hospitals). Your LEPC should be the organization that functions as a hub for hazmat emergency planning in your community, including with emergency managers and emergency responders, that can assist your district in its coordination and risk assessment.

#### What Is an LEPC?

Congress passed the Emergency Planning and Community Right to Know Act (EPCRA) in 1986. EPCRA created LEPCs to plan for chemical emergencies and established residents' right to know about chemicals used and stored by industrial facilities in their communities. <sup>17</sup> LEPCs

For more information, see: Texas Division of Emergency Management. "Field Response." <a href="https://tdem.texas.gov/field-response/">https://tdem.texas.gov/field-response/</a>. Clicking on a region on this web page brings up the region, its districts, and the current assistant chief and district coordinators for each district.

EPCRA also created a state-level organization known as the State Emergency Response Commission (SERC). In Texas, SERC consists of 12 state agencies, a subset of the Texas Emergency Management Council. Recognized Native American tribes have a state equivalent to SERC, known as the Tribal Emergency Response Commission. The Texas SERC, primarily through the Texas Commission on Environmental Quality, administers the chemical inventory reporting system (Tier II) in the state that collects the information from EPCRA-regulated facilities.

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include representatives from local agencies, including emergency managers and emergency responders, industry, community groups, elected officials, and the media, and can also include the public. Some school districts send representatives to their local LEPC, and active LEPCs generally welcome such participation.

#### **How Can an LEPC Help My District?**

LEPCs help local emergency management develop and review EOPs for responding to chemical emergencies. <sup>18</sup> Active LEPCs, through their various participants, are usually aware of the various hazmat transportation and facilities in your community and their associated risks. LEPCs can also facilitate training and exercises for hazmat emergencies and provide information on request about industrial facilities that use or store hazmat in your community.

#### **How Do I Contact/Join My LEPC?**

In Texas, most LEPCs are organized by county area. Some LEPCs are organized by municipality (with multiple LEPCs per county) and others, especially in the western regions of Texas, are multi-county. Some large school districts find their jurisdiction encompasses multiple LEPCs. Unfortunately, in some counties, there is no active LEPC. The Texas Commission on Environmental Quality publicizes a list of LEPC contacts. <sup>19</sup> When in doubt, a community emergency manager or county judge will be the point of contact. If

If your jurisdiction has an inactive LEPC, encourage your local emergency management coordinator or lead local elected official (e.g., county judge or mayor) to restart it. See the <a href="Texas Local Emergency">Texas Local Emergency</a> Planning Committee Guide for more information.

your jurisdiction has an inactive LEPC, encourage your local EMC or lead local elected official (e.g., county judge or mayor) to restart it.

Several school districts report membership in their LEPC. It is a good practice to send a district representative to LEPCs. The benefits are two-way: districts can learn about the hazmat hazards in their communities and obtain assistance in planning. LEPCs can learn about the risks such hazards pose to area schools and work to mitigate some of those risks. The interpersonal and inter-organizational contacts between LEPC members create an important informal network for planning and response assistance during hazmat emergencies.<sup>20</sup>

SERC submits that information to the Environmental Protection Agency and shares local information with each LEPC.

In most local and county emergency operations plans in Texas, this appears as Annex Q—Hazardous Materials.
The TDEM template for Annex Q forms the basis for the sample plan in this guide.

For more information, see: Texas Commission on Environmental Quality. "Local Emergency Planning Committees and Fire Departments." December 29, 2020. <a href="https://www.tceq.texas.gov/permitting/tier2/local-emergency-planning-committee.html">https://www.tceq.texas.gov/permitting/tier2/local-emergency-planning-committee.html</a>.

Source: Barbour, Joshua, David H. Bierling, Paul A. Sommer, and Bradley Trefz. "Risk Communication Infrastructure and Community Resilience: Does Involvement in Planning Build Cross-Sector Planning and Response Networks?" *Journal of Applied Communication Research*, Vol. 48, No. 1, 2020, pp. 91-113. <a href="https://doi.org/10.1080/00909882.2019.1704828">https://doi.org/10.1080/00909882.2019.1704828</a>.

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# **Take Action**

- Have the DEMC meet regularly with (as applicable):
  - Local and county emergency manager(s).
  - LEPC(s).
  - TDEM district disaster coordinator(s).
  - Local responders (e.g., fire, police, EMS, hospitals, and public health).
  - Adjacent school districts.

- Establish and test at least two means of direct communication between the DEMC and local fire departments and the EOC.
- Ensure schools near active rail lines establish similar lines of communication and conduct regular coordination with their closest fire department station in case of a train derailment.

# III. SCHOOL DISTRICT HAZMAT EMERGENCY PLANNING PROCESS

#### Introduction

Multihazard planning standards in Texas and the United States include planning for hazardous materials incidents from any source, including train derailments. Planning for hazardous materials incidents ensures schools and districts meet the derailment requirement *and* TEC's multihazard requirements using established practices.

The NPS provides the planning framework used by emergency management (see the previous section). School districts implement the NPS's five mission areas for hazmat emergencies through the following process, described in further detail below, and the TxSSC High-Quality EOP Toolkit.

- 1. Form a planning team.
- 2. Identify potential threats and hazards.
- 3. Estimate capabilities and identify gaps.
- 4. Plan to deliver capabilities.
- 5. Build and sustain capabilities through training.
- 6. Validate capabilities through drills and exercises.
- 7. Review and update plans, procedures, and policies.

# 1. Form a Planning Team

# District Emergency Management Coordinator

School districts can enhance their emergency planning and response coordination through an individual or office within their organization charged with coordinating emergency planning, preparedness, and response under the district's senior leadership (i.e., district superintendent) and the School Safety and Security Committee. This responsibility often falls to a school resource officer (SRO) or other security or safety personnel in many districts. Some districts have full-time emergency managers or dedicated safety and security offices. In a few smaller districts, the superintendent assumes the role. Some districts also use volunteer staff or faculty to conduct emergency planning.

# **Takeaways**

The planning process is cyclical and consists of seven steps:

- 1. Form a planning team.
- 2. Identify potential threats and hazards.
- 3. Estimate capabilities and identify gaps.
- 4. Plan to deliver capabilities.

- 5. Build and sustain capabilities through training.
- Validate capabilities through drills and exercises.
- 7. Review and update plans, procedures, and policies.

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While larger districts may have a full-time DEMC or an office responsible for emergency response, school safety, and security, many smaller districts may assign the role as an added duty to an existing staff position. Regardless of how your district chooses to structure and staff its emergency management requirements, you should have one central point of contact (an individual or office). This guide and the associated sample plans and procedures call this person or office the DEMC.

#### Hazmat Emergency Planning Subcommittee

School districts should also consider forming a hazardous materials emergency planning subcommittee to assist the DEMC as part of the overall School Safety and Security Committee (see TEC Section 37.109 for more about School Safety and Security Committees). Representatives on your hazmat emergency planning subcommittee could include any or all the following:

- District and school administrators.
- School safety and discipline officials, police officials, or SROs.
- Transportation directors.
- Teachers (especially science teachers).
- Custodial and groundskeeping staff.
- Fire department representatives.
- LEPC representative.
- Local emergency management representative.
- Local railroad, pipeline, or industrial facility representatives (if available).
- Representative for students with disabilities.
- Parent or community volunteers.
- Student representatives (for high schools).
- Community emergency response team (CERT) members.
- Local media, public affairs, or other representatives responsible for communicating risks to your community.

## Hazardous Materials Incident Response Teams

Hazardous Materials Incident Response Teams (HMIRTs), as described in this guide and its sample plans and procedures, consist of key personnel within a school or facility who hold a critical emergency management role or whose job involves the storage and use of hazardous materials. Some schools use different terminology and staffing for incident response teams within their schools, adopting a team approach for all kinds of emergencies. If your district already uses a response team approach at the property/campus level, consider adding at least one individual to the existing structure to fulfill the role of hazmat advisor to the team. In this guide and the sample plans, HMIRT is shorthand for whatever team structure you use at the campus/facility level. It is a suggestion that can greatly enhance your planning and response in the event of a major emergency. Adjust the sample plans and practices to fit the needs of your district.

Having at least one individual (preferably more, in case of absence) trained in the school's emergency response procedures and policies for hazardous materials events is vital in a response.

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Incident response teams (no matter what structure or name your district gives them) can implement district plans at the school and facility levels and assist in activities like annual hazardous materials inventories and poison control programs. Incident response teams form the planning teams at schools and facilities. These teams assist DEMCs and the hazmat emergency planning subcommittee in recognizing and addressing issues that affect the district's individual campuses.

#### An HMIRT may include:

- Dean, principal, vice-principal, or another executive leader.
- Custodial and maintenance supervisor or staff.
- Science teachers or other faculty and staff using or storing hazardous materials.
- School nurse.
- SROs, security, or school police officers.

Depending on the circumstances, you may also consider including:

- Other faculty representatives, department heads, or school administrative staff.
- Athletic directors/coaches.
- Groundskeeping staff.
- Lunchroom or other support staff.
- Art teachers or other staff routinely that store or use hazardous materials.

For more information and projects that districts can use to build and sustain HMIRTs and better incorporate them into their response plans, see Volume 2.

# 2. Identify Potential Threats and Hazards

#### Threat and Hazard Assessment

The threat and hazard assessment identifies the specific potential risks to your schools and district and corresponds with understanding your district's hazard situation.<sup>21</sup> During this phase, a school safety sub-committee or the DEMC gathers information about the specific dangers posed to the district and its schools. The process is an essential part of planning. Unfortunately, it is also one that many districts and schools skip over or perform only at a surface level with a vague evaluation of both hazards and risks.

Skipping this step can be a serious mistake. A vague hazard and threat assessment makes goal setting and the prioritization of resources difficult or impossible. By assessing each property's potential risk, such as distance to a railroad track or other major hazmat transportation route, pipeline, or facility, a district can determine the properties at greatest risk and take measures to prepare for, protect from, and mitigate such risks. Whenever possible, districts should involve local emergency management, first responders, and local LEPCs in their threat and hazard assessment.

<sup>&</sup>lt;sup>21</sup> Emergency management refers to this process as threat and hazard identification and risk assessment. To limit the use of jargon, the guide uses the term threat and hazard assessment, which synonymous.

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Volume 3 of this guide includes examples of specific threats posed by hazardous materials to schools and provides a step-by-step example of locating and assessing such risks.<sup>22</sup>

If your district has not previously evaluated hazmat risks, the hazmat threat and hazard assessment may require some effort (see Volume 3 for ways to simplify things). Once you have developed a solid initial assessment, an update of that assessment in the future becomes more manageable. Because risks change over time, your Emergency Operations Basic Plan should specify the interval by which you reevaluate your threat and hazard assessments (preferably at least once every three years between safety audits or annually in areas of high hazmat-related activity or intensive development).

#### Frequency and Consequence

In addition to classifying the three hazards threats (internal hazards, external hazards, and threats), It helps to think about threats and hazards as spectrums between lower and higher frequency and between lower and higher consequences.

#### Lower Frequency—Higher Consequence

Lower-frequency but higher-consequence events seldom happen but produce devastating impacts when they do. Train derailments with hazmat releases are lower-frequency, higher-consequence incidents. Chemical facility explosions and pipeline incidents are other kinds of lower-frequency, higher-consequence incidents.

#### **Moderate Frequency—Moderate Consequence**

A spill of thousands of gallons of crude oil or motor fuel in a tanker truck rollover is an example of a moderate-frequency hazmat incident. The impacts depend on what spills and where, but the quantities—and therefore the impacts—are generally less than for train, pipeline, or chemical facility incidents.

#### **Higher Frequency—Lower Consequence**

Some of the most common hazmat events affecting schools are releases of pepper spray on school grounds (accidental or deliberate), school laboratory accidents, chemical bombs, gas leaks, carbon monoxide problems, incidents involving pool chemicals or pesticides, and spills or leaks in smaller quantity hazmat packaging. These higher-frequency incidents typically produce limited, short-duration consequences.

The list draws from three studies examining hazardous materials related events in or near schools using data collected by the U.S. Centers for Disease Control documented in the following sources:

<sup>•</sup> Anderson, Ayana R., Taniece R. Eure, Maureen F. Orr, Llyod J. Kobe, and Alan Woolf. "Hazardous Chemical Releases Occurring in School Settings, 14 States, 2008–2013." *Journal of Environmental Health*, Vol. 80, No. 4 (November 2017), pp. E1-E7.

Centers for Disease Control and Prevention. "Hazardous Chemical Incidents in Schools—United States, 2002–2007." Morbidity and Mortality Weekly Report, Vol. 57, No. 44, November 7, 2008, pp. 1197–1200. https://www.jstor.org/stable/23318758.

Centers for Disease Control and Prevention. "Homemade Chemical Bomb Incidents—15 States, 2003–2011." Morbidity and Mortality Weekly Report, Vol. 62, No. 24, June 21, 2013, pp. 498–500, <a href="https://www.jstor.org/stable/10.2307/24852284">https://www.jstor.org/stable/10.2307/24852284</a>.

See also Berkowitz, Zahava, Gilbert S. Haugh, Maureen F. Orr, and Wendy E. Kaye. "Releases of Hazardous Substances in Schools: Data from the Hazardous Substances Events Surveillance System, 1993–1998." *Journal of Environmental Health*, Vol. 65, No. 2, September 2002, pp. 20–22.

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#### Planning for All Hazmat Risks

As required by TEC Section 37.108(d), many school districts EOPs must include a policy for a lower-frequency, higher-consequence train derailment if they have a district facility within 1,000 yards of an active rail line. Consequently, this guide focuses primarily on external hazards posed by train derailments and other significant hazmat incidents.

Districts should plan for other lower-frequency, higher-consequence incidents when there is another nearby high-consequence hazmat source such as a pipeline, high-traffic roadway, fixed chemical facility, or commercial waterway. Your local emergency planning and response experts can help you identify such sources.

Volume 3 of this guide includes examples of specific threats posed by hazardous materials to schools and a step-by-step example of locating and assessing such risks.<sup>22</sup>

School district facilities may also have potential internal hazards and threats such as accidents involving cleaning products, pool chemicals, laboratory chemicals, and releases of pepper spray. Appendix C contains more information about the three types of hazmat incidents and their frequencies and consequences.

# 3. Estimate Capabilities and Identify Gaps

Beyond the threat and hazard assessment, other means of identifying gaps include after-action reviews, evaluations of drills and exercises, and post-disaster/incident reports. Once a district identifies its hazmat hazards and threats to district facilities, it assesses the district and community's capabilities to meet the response. This assessment requires outside support because districts must coordinate their response with first responders and community emergency management. Assumptions about such resources are dangerous. In a significant event like a train derailment, local fire and police may exhaust their own capabilities quickly, especially in smaller communities. Without coordination and testing through exercises, districts can quickly discover that resources they assumed would assist a school are unavailable.

After identifying resources needs and their availability, resources gaps become more apparent. By identifying gaps in resources, districts can identify ways to address those gaps. For example, a school in a potential protective action zone from a train derailment might require supplies to STAY (shelter in place). A school nearer a known hazard (within a potential initial isolation zone) might need special transportation assets to EVACUATE for students, staff, and visitors with disabilities. Pre-staging and preplanning such transportation are critical to an orderly, safe evacuation.

#### Coordinate with Local Partners

Gaps in resources or hazards exceeding district capabilities often require community partners to address. Communities and schools can address such gaps through coordination meetings that lead to memorandums of understanding or mutual aid agreements with local response agencies. LEPCs, and local EMCs can also assist in this process.

#### Capability/Gap Considerations

As it relates to hazmat (and many other emergency capabilities), schools should carefully consider their capabilities. Districts should evaluate capabilities in three categories:

- Capabilities they possess internally.
- Capabilities they assume will come from the local community (and the validity of those assumptions).
- Capabilities that require support from others not previously identified.

Many school districts do not have emergency plans that address evacuation from a major external hazmat incident such as a train derailment. This will likely be a **primary gap** in your district's current emergency plan.

In each area, gaps will become apparent using questions like those in Appendices C and D.

# 4. Plan to Deliver Capabilities

Plans address gaps identified in the previous step. Planning for emergencies is a continual process of improvement—plans should become more refined over time as new gaps and capabilities develop.

During this guide's preparation, research showed that many schools focused on STAY (shelter in place) as the only response to hazmat incidents. Especially for properties likely to be in initial isolation zones of train derailments (i.e., within 1,000 yards of an active rail line), where evacuation is a possible response, districts should make sure their emergency plans also cover EVACUATE.

Schools within 1,000 yards of a known hazard like a rail line or major pipeline should **prepare to evacuate** due to their presence in the initial isolation zone and the potential for an explosion, fire, toxic release, or other immediate danger. They may not always evacuate, but they must prepare to do so because of the complexity of such a response – failing to do so could cost lives.

Volume 4 offers sample district and school plans for hazmat emergencies in a Hazmat and Train Derailment Emergency Annex. The appendices in Volume 4 specify the content insertion into the district basic plan, shelter annex, and evacuation/reunification annexes, as appropriate. These annexes exceed TxSSC minimum train derailment plan annex requirements. They may also align more closely with your community's emergency management and local response emergency operations plans. If modified to your district's local conditions the hazmat annexes should also meet the TEC requirements for train derailment planning.

#### **Format**

Some school districts use a modified EOP format adapted from local and community EOPs that organizes the plan into a basic plan with several functional and hazard-specific annexes, including a Hazardous Materials Annex.<sup>23</sup> The sample plans, policies, and procedures in this

A functional annex focuses on a part of the response no matter the hazard, such as shelter, evacuation, or reunification. A hazard-specific annex focuses on areas that rely on the basic plan or functional annexes but that,

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guide do not establish a required format. Instead, the sample material follows the same format and organization used by communities across the state, adapted from the sample plans and annexes provided by TDEM, which conform to FEMA national standards. If districts use the same template as their community planners, community and district plans will align. This alignment makes comparing and coordinating plans easier. Similarly, it is simpler to identify gaps and problem areas when the plans align.

Regardless of the format used, districts must meet TEC and TxSSC standards for hazardous materials incidents and multihazard planning, no matter their particular circumstances. Districts must also ensure that each school or facility has appropriate plan content and procedures to address the threats and hazards they face and conducts drills, training, exercises, and reviews to prepare for incidents.

#### Hazmat Responses in the Sample Plans

As noted previously, STAY (shelter in place) is only one of three potential responses to a hazmat incident. Districts must plan and prepare to EVACUATE district facilities near major hazardous materials incidents. Due to the urgency of the threat and its proximity to school property, some of these evacuations could be immediate and on foot.<sup>24</sup>

The three responses described in this guide take the form of levels in the sample plans to align with community sample EOPs:

- Level I: LOCALIZE INCIDENT (Isolate, Deny Entry, & Contain): low-consequence, small-scale, often internal incidents with localized evacuation and cleanup (and individual first aid/decontamination if required).
- Level II: STAY (Shelter-in-Place): medium- or high-consequence offsite incidents leading to shelter-in-place orders from local ICs/first responders or designated school district officials.
- Level III: EVACUATE (Hazmat Evacuation): high-consequence incidents (external or internal) leading to a school/facility's evacuation and activation of the district shelter/reunification plan. The evacuation order may come from ICs/first responders or designated district officials, or staff members if direction from responders/ICs is unavailable and catastrophic danger is imminent and apparent.

# Incorporating the Phases of Emergency Management

Your district must also incorporate the five emergency management mission areas: prevention, mitigation, preparedness, response, and recovery.

due to that particular hazard, require additional planning and coordination, such as a hurricane or hazardous materials annex.

For example, see: Canadian Press. "'Small Amount' of Petroleum Coke Spills in CN Train Derailment near Prince George." March 6, 2020. <a href="https://vancouversun.com/news/local-news/school-evacuated-after-train-derails-near-prince-george">https://vancouversun.com/news/local-news/school-evacuated-after-train-derails-near-prince-george</a>. See also: Anderson, Ayana R., et. al. "Hazardous Chemical Releases Occurring in School Settings, 14 States, 2008–2013." *Journal of Environmental Health*, Vol. 80, No. 4, November 2017, pp. E1– E7. This article found that out of 335 school chemical incidents, 192 (57.3 percent) resulted in evacuation. Of these, 35.5 percent of the incidents injured persons.

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The sample plans in Volume 4 address each area of emergency management preparedness. Additionally, the sample plans link to action items that districts can use in an action plan for emergency preparedness improvement. Volume 2 provides suggestions for these action items.

#### Hazardous Materials Incident Response Teams

A district plan depends on the plans and the people at the campus level to execute the plan. The HMIRT concept described under Planning item 1 creates depth of capability within a district that can adjust to personnel changes, absences, and other circumstances. District hazmat emergency plans will be more difficult to execute without HMIRTs. This small team concept has value for

other areas as well. Schools and facilities can adapt the plans to address other emergencies.

School districts can create HMIRTs or adapt current Incident Response Team (IRT) practices to incorporate hazardous materials awareness and knowledge for each school/facility (a school/classroom procedure checklist is in Volume 2, Appendix D; a sample emergency plan annex template for school facilities is in Volume 4, Section V). If your school already uses an IRT approach for other incidents, incorporating hazmat-knowledgeable staff into those teams can fulfill the same need as an HMIRT.

If your district already uses an **incident response team** approach at the property/campus level, consider adding at least one individual to the existing structure to fulfill the role of hazmat advisor to the team. In this guide and the sample plans, HMIRT is shorthand for whatever team structure you use at the campus/facility level.

## Match Capabilities to Potential Threats and Hazards

A vital part of the planning process is identifying the district's capabilities to respond according to its plan.

The project ideas and action items identified in Volume 2 can help districts improve internal capabilities.

Further, districts should identify and coordinate with community responders to fill gaps in district capabilities. For example, a district might need additional transportation assets in a hazmat evacuation and coordinate with the city to use mass transit system buses through a prearranged agreement. These pre-coordinated agreements, known as memorandums of understanding or mutual aid agreements, address gaps. Plans specify how to activate those agreements and implement procedures for their use.

## Planning Considerations for Individuals with Disabilities and for Special Events

Emergencies pose unique issues for young children and persons with disabilities, preexisting medical conditions, or special cognitive, behavioral, or emotional needs. Emergencies at special events can also have unique considerations. Emergency plans must account for everyone, make the necessary accommodations for individuals with disabilities, and include such considerations throughout the plans. Failure to accommodate the needs of individuals with disabilities in emergency planning may violate TEC Section 37.108(f)(4) and the Americans with Disabilities

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Act (ADA).<sup>25</sup> Schools should collaborate with community partners and ADA experts to ensure equitable treatment to protect all students and staff that meets all appropriate requirements and best practices.

Further, the population requiring special planning considerations during hazardous materials releases is more extensive than persons with disabilities. The toxic effects of hazardous materials are more acute at lower dosage levels (compared to healthy adults) for younger children and those with respiratory conditions like asthma, COPD, or other preexisting medical conditions. School districts should incorporate ADA and medically vulnerable planning considerations into their plans for train derailments and other hazardous materials emergencies, just as they do for other emergencies. They should also consider how special event logistics, facility configurations, settings, and timing can affect an emergency response including SIP and evacuation.

For more considerations about planning for individuals with disabilities, consult Appendix D at the end of this volume. For more considerations about planning for special events, consult Appendix E.

# 5. Build and Sustain Capabilities through Training

See:

Training in the ICS/NIMS and related topics for key personnel at the district and school levels is available at no cost via the FEMA Independent Study Program at <a href="https://training.fema.gov">https://training.fema.gov</a>. Other training is available via <a href="https://training.fema.gov">PreparingTexas.org</a>. Districts can coordinate training through their LEPC, community EMC, or TDEM district coordinator. Recommended courses appear in Volume 2, Appendix B.

Schools should include an annual review of emergency procedures with staff, students, and key leaders as part of their regular training program, preferably before starting the school year. Schools should test their plans through drills and exercises regularly. Remember: exercises and drills are also training, perhaps the most important training a district conducts.

Additionally, the sample plans, policies, and procedures included in this guide include several elements, such as creating HMIRTs, that involve training for key personnel. Implementing policies and procedures such as annual hazardous materials inventories creates opportunities to deliver meaningful training through practice. At the same time, inventories and hazmat cleanouts can meet Occupational Safety and Health Administration hazard communication (HazCom) and Texas HazCom and Employee Right-to-Know regulations.<sup>26</sup>

For more information, see: U.S. Department of Justice Civil Rights Division. "Information and Technical Assistance on the Americans with Disabilities Act: Emergency Preparedness and Response." ADA.gov, June 30, 2020. <a href="https://www.ada.gov/emerg\_prep.html">https://www.ada.gov/emerg\_prep.html</a>. Some relevant cases include Gustafson v. University of California-Berkeley (2004), Savage v. City Place Ltd. P'ship (2004), and Shirey ex rel. Kyger v. City of Alexandria Sch. Bd. (2000). For a further discussion, see: Weibgen, Adrien A. "The Right to be Rescued: Disability Justice in an Age of Disaster." The Yale Law Journal, Vol. 124, No. 7, May 2015, pp. 2406–2469. <a href="https://www.yalelawjournal.org/note/the-right-to-be-rescued">https://www.yalelawjournal.org/note/the-right-to-be-rescued</a>.

<sup>• 29</sup> CFR 1910.1200, U.S. Occupational Safety and Health Administration Hazard Communication Standard, https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200.

# 6. Validate Capabilities through Drills and Exercises

The two primary means to validate emergency response capabilities are drills and exercises. Drills assess internal procedures for emergency response, focused on a single, specific operation or function. Exercises are more complex and often include outside partners. An exercise tests systems, organizations, and people in a dynamic response involving multiple operations or functions across the organization.

TEC and the Texas Commissioner of Education establish rules, standards, and minimum frequency for mandatory school drills. The commissioner's rules and standards for drill frequency and content come from consultation with TxSSC and the state fire marshal. Table 1 lists the minimum drill requirements in Texas.

Drill	Frequency		
Secure (Lockout)	Once per year		
Lockdown	Twice per year (once per semester)		
Evacuate (Hazmat)	Once per year		
Shelter in place for hazmat	Once per year		
Shelter for severe weather	Once per year		

Table 1. Texas Minimum Drill Requirements per Year

Fire evacuation drill

While the TEC and Commissioner's rules define drill requirements, they do not currently define exercise frequency. However, TEC Section 37.108 (4) requires district multihazard EOPs to establish a mandatory school drill *and* exercise program. Three-year audits inspect whether the district adhered to the drill and exercise schedule in their plan.

Four times per year (twice per semester)

Volume 2, Appendix C contains more information about conducting drills and exercises for your district, including links to resources available through TxSSC, SchoolSafety.gov, and the U.S. Department of Education.

# 7. Review and Update Plans, Procedures, and Policies

After each exercise, drill, or real-world event, it is crucial to gather participants and conduct an after-action review (AAR).<sup>27</sup> AARs are a critical process to implement improvement planning through an open forum designed to solicit feedback regarding what worked and did not work when executing a response plan. The goal of an AAR is to create actionable items for an

Texas Health and Safety Code, Chapter 502, Texas Hazard Communication Act, https://statutes.capitol.texas.gov/Docs/HS/htm/HS.502.htm.

Texas Health and Safety Code, Chapter 506, Public Employer Community Right-to-Know Act, https://statutes.capitol.texas.gov/Docs/HS/htm/HS.506.htm.

AARs, used extensively by the U.S. military and first responders, were more recently adapted for use in business management and organizational improvement. An AAR may take different forms depending on the organization though the principles remain the same. First responders and emergency management professionals may also refer to an AAR as a hotwash.

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improvement plan and to guide the review, modification, and updating of plans, procedures, and policies based on experience.

For more information on the AAR process and improvement plans, see:

- The TxSSC High-Quality Multihazard EOP Took Kit, 6.3 After-Action Review and Corrective Action Planning, which includes AAR documentation templates and samples.<sup>28</sup>
- Chapter 6 of the *Texas Local Emergency Planning Committee Handbook: Planning Committee Guide*. <sup>29</sup>
- A recently published guide for law enforcement organizations, *How to Conduct an After Action Review*, which offers a simple and easily adapted approach to AARs and improvement planning that schools may adapt to their purposes.<sup>30</sup>

Updating plans, policies, and procedures following AARs occurs through a process known as improvement planning or corrective action planning. Additionally, the school safety committee should review plans, policies, and procedures on a regular schedule defined in those plans. Most districts do this on a three-year schedule in line with their safety audits. An evaluation checklist for hazardous materials planning in Appendix A of this guide can guide such reviews.

#### **Take Action**

Use the seven-step emergency planning process:

- 1. Form a planning team.
- 2. Identify potential threats and hazards.
- 3. Estimate capabilities and identify gaps.
- 4. Plan to deliver capabilities.

- 5. Build and sustain capabilities through training.
- 6. Validate capabilities through drills and exercises.
- 7. Review and update plans, procedures, and policies.

Texas School Safety Center. "High Quality Multi-hazard Emergency Operations Plan (EOP) Toolkit, 6.3 After-Action Review and Corrective Action Planning." <a href="https://txssc.txstate.edu/tools/hq-eop-toolkit/6-evaluating/aar">https://txssc.txstate.edu/tools/hq-eop-toolkit/6-evaluating/aar</a>.

Trefz, B. A., D. H. Bierling, and F. A. Williams. Local Emergency Planning Committee Guide: Revitalizing and Improving Texas LEPCs for Local Preparedness. Produced by Texas A&M Transportation Institute for Texas Division of Emergency Management, 2019. <a href="https://tdem.texas.gov/wp-content/uploads/2020/01/2019">https://tdem.texas.gov/wp-content/uploads/2020/01/2019</a> 10 10 LEPC Guide-with-Cover.pdf. The relevant part begins on page 6–26 of the guide.

Zeunik, Jennifer, Joyce Iwashita, Frank Straub, Rick Braziel, Ben Gorban Blank Norton, and Brett Meade. How to Conduct an After Action Review. Washington, DC: U.S. Department of Justice, 2020. https://cops.usdoj.gov/RIC/Publications/cops-w0878-pub.pdf.

### IV. CONCLUSION

### **TEC Requirements**

TEC requirements for train derailment emergency planning are a district requirement that affects many Texas school districts. This guide offers an approach to meet these requirements and improve school safety and preparedness to respond to hazardous materials incidents and threats, no matter their origin.

TEC Section 37.108 requires a **district-level** emergency plan for train derailments if **any school district property** has any part of its property line within 1,000 yards of a railroad track. This guide recommends a similar approach (1,000 yards) for other transportation, pipeline, and fixed facility hazards for planning purposes, as well as an evaluation of internal hazmat threats and hazards. Planning and preparedness for train derailments can also address many other potential external hazmat incidents.

School districts and public junior college districts must adopt multihazard EOPs that address emergency management's five mission areas (phases): prevention, mitigation, preparedness, response, and recovery. The sample EOPs and other material in this guide incorporate these mission areas to meet this planning requirement for hazmat emergencies.

### **Takeaways**

The planning process is cyclical and consists of seven steps:

- School districts and public junior college districts must adopt multihazard emergency operations plans that address the five mission areas (phases) of emergency management: prevention, mitigation, preparedness, response, and recovery.
- TEC Section 37.108 requires a policy in district-level emergency plans for train derailments if any school district property has any part of its property line within 1,000 yards of a railroad track.
- There are three kinds of hazmat threat/hazard, three impacts/consequences from hazmat incidents, and three potential responses to hazmat emergencies.

- Use the seven-step planning process to identify and address hazmat threats and hazards and to identify and plan for capabilities to address them.
- Districts address the five mission areas phases in plans and action items that improve school readiness and reduce or eliminate risks.

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### **Threats and Hazards**

There are three kinds of hazmat threats and hazards:

- Internal/external threats.
- Internal hazards.
- External hazards.

Internal threats are individuals with access to school property who may intend to, or express interest in, using chemical bombs, hazmat, or irritant substances in pranks, attacks against individuals or groups, or property damage. Schools address these threats through their existing threat identification processes while educating those involved in that process about the specific threat of chemical bombmaking and experimentation.

Internal hazards are those posed by hazardous substances stored and used on school or community college campuses and include science laboratory chemicals; custodial supplies; pool chemicals; athletic field maintenance chemicals like fertilizer, pesticides, or herbicides; chemicals or fuel in bus/transportation yards; propane or natural gas storage, lines, and appliances; pepper spray carried and used by security personnel or students; or any other hazmat on school property.

External hazards come from four primary sources:

- Active rail lines.
- Pipelines.
- Hazardous materials transported on roadways.
- Fixed facilities like industrial plants, warehouses, aboveground and underground storage tanks, water treatment facilities, fuel stations, and other sites where hazmat is stored, used, or transferred from one mode of transportation or storage to another.

### **Hazmat Consequences/Impacts**

Hazmat produces three potential impacts/consequences:

- Explosion.
- Fire.
- Release of toxic material.

A large percentage of the hazardous materials transported by rail, pipeline, and roadway are flammable or explosive if their container catches fire or ruptures. In a train derailment or other incident near a school, that may require an immediate, on-foot evacuation of the property. The release of toxic material may result in an inhalation threat downwind of the release. The distance and effect of such a release are determined by the material and quantity spilled, weather, wind speed, and wind direction. Some releases produce effects extending miles from the incident site.

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### **Hazmat Responses**

There are three school responses to a hazmat incident:

- LOCALIZE INCIDENT (Isolate, Deny Entry, & Contain), a localized response for incidental or small spills consisting of a localized evacuation, first aid, and decontamination, if necessary.
- STAY (Shelter-in-Place), a shelter in place of a property or properties.
- **EVACUATE (Hazmat Evacuation)**, the evacuation of a property or properties offsite, or moving vertically from a lower to higher level (vertical evacuation, if an option).

Depending on proximity and concentration, first responders will determine initial isolation and/or evacuation zones around an incident and protective action zones downwind of the hazard, which may include areas of both evacuation and shelter in place. Train derailments are particularly problematic because they may lead to multiple simultaneous evacuations of some buildings, shelter in place at others, and shelter/reunification at alternate sites. Train derailments also produce closed roads and restricted travel—issues addressed in a district plan.

### **Planning Process**

Use the seven-step planning process described in Section III to identify and address hazmat threats and hazards and to identify and plan for capabilities to address them.

### **Project Ideas and Action Items**

Districts address the five emergency management mission areas (prevention, mitigation, preparedness, response, and recovery) in their emergency plans. Plans outline how the district selects and implements action items and projects to improve school readiness and reduce or eliminate risks.

Volume 2 provides example action items and projects.

### **Checklist for Districts Implementing Hazmat Planning**

The following material provides steps and projects that school districts can undertake to improve their hazmat planning and preparedness. The list is not exhaustive, and the needs of each district will vary. This checklist prioritizes areas that lead to improved hazmat plans for schools meeting state requirements, following this guide's recommendations.

Each section builds on the last. Where a district is in its planning process may affect where in this list the district begins. Priorities may also vary across districts—the complexity and time commitment required to complete many of these items vary. Depending on the district organization and approval process, some items/projects might take a few minutes, others weeks or months. This checklist is a starting point, especially for those districts without current hazmat plans or those starting anew.

Pla	anning Team
	Form a subcommittee of your school safety committee to address hazardous materials planning and risk assessment.  If you do not have a designated EMC for the district, consider designating someone.  Contact your local emergency manager and LEPC about hazmat risks in your district.
Th	reat and Hazard Analysis
	Conduct a hazmat threat and hazard assessment that examines potential threats and hazards from both internal and external sources, using information from the LEPC, local EMCs, local emergency responders (including hazmat teams), and internal inventories.  Determine if any district property is within 1,000 yards of a railroad track using Appendix A in Volume 3.
	Use the methods in Appendices B, C, and D in Volume 3 to examine other known hazards such as major roadways, pipelines, and hazardous materials facilities for oil and gas extraction, petroleum refineries or chemical plants, fuel terminals, warehouses, manufacturing, and agriculture.
En	nergency Preparedness Process
	Review existing district plans for hazardous materials using Appendix A.  Consider modifications or insertions in the district plan based on the sample information and guidance in Volume 4.
	Develop district-wide training and exercise plans and schedules for hazardous-materials-related training, drills, and exercises.
Pr	event Hazmat Incidents
	Conduct a districtwide hazardous materials inventory and remove or replace hazardous materials while increasing storage safety and security.
	Hold a meeting to increase awareness and coordination between SROs, local law enforcement, and school counselors about chemical and improvised bombmaking.
	Appoint a school safety committee liaison to discuss zoning and roadway restrictions in the vicinity of schools with municipal and county authorities.
Mi	tigate and Protect Schools from Hazmat Risks
	Include engineering controls that mitigate hazardous materials risks in all new school construction or remodeling projects.
	Install warning systems in especially vulnerable facilities and those within 1,000 yards of active rail lines.
	Discuss increased commercial vehicle enforcement and inspection activities near high-risk schools with local responders and law enforcement authorities.
	Discuss fire station siting and capabilities with fire departments, especially in the vicinity of high-risk schools.

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Pr	repare for Hazmat Incidents
	Develop a district-level training plan for hazardous materials and related emergency management training.
	Create and distribute incident spill response kits.
	Create and distribute shelter-in-place kits.
	Create and distribute emergency decontamination kits and install fixed decontamination facilities where needed.
Re	espond to Hazmat Incidents
	Evaluate existing school and facility responses, and publish modifications or changes if applicable.
	Evaluate high-risk school and facility evacuation planning based on prevailing wind directions, the location of hazards, and terrain.
	Determine the proximity and route to planned reunification centers from schools in relation to known hazards.
	Conduct shelter-in-place and evacuation drills based on new procedures, and review and modify plans based on the results.
Re	ecover from Hazmat Incidents
	Designate the responsible individuals for recovery planning in the event of a hazardous materials incident.
	Evaluate hazards, especially from rail lines, and determine the cost recovery procedures in an incident involving a known hazard that affects the district or district property.
	Designate cost-tracking mechanisms for all disasters, and discuss the means and procedures for cost recovery in a hazardous materials incident with district and community legal

representatives.

### ADDITIONAL RESOURCES

### Regulations

29 CFR 1910.1200, U.S. Occupational Safety and Health Administration Hazard Communication Standard.

<u>Texas Education Code Section 37.108</u>, Multihazard Emergency Operations Plan, Safety and Security Audit.

Texas Health and Safety Code, Chapter 502, Texas Hazard Communication Act.

<u>Texas Health and Safety Code, Chapter 505</u>, Manufacturing Facility Community Right-to-Know Act.

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<u>SchoolSafety.gov</u>, a federal interagency partnership that provides school safety and security planning resources across all five phases of emergency management.

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# APPENDIX A: DISTRICT HAZMAT PLAN REVIEW CHECKLIST

# Required EOP Contents Is any facility in the district within 1,000

	Is any facility in the district within 1,000 yards of a railroad track? If yes, then:  O Does the district have a hazardous materials annex in its <i>district</i> EOP that addresses train derailment or railway-associated hazardous materials incidents?  Does that plan include procedures for shelter in place?  Does that plan include procedures for evacuation and reunification?
	Does the plan address the five phases of emergency management: prevention, mitigation, preparedness, response, and recovery?
In	ternal/External Threats (Deliberate Hazmat Incidents)
	Does the district's threat assessment process include individuals who express interest in creating or using chemical bombs or other incendiary or explosive devices or who acquire the material to do so, or identify students who have had law enforcement contact involving such activities?
	Does the school district's threat assessment process include procedures and remedies for the unauthorized use or possession of pepper spray or other irritants?
In	ternal Hazards (Hazmat Incidents Occurring on School Property)
	Does the school/district hazardous materials annex address small spill response for internal incidents?
	Does the school/district identify locations of hazardous materials stored in the school/district (e.g., laboratories, transportation, and maintenance facilities) or where to find that information?
	Does the plan require those locations or the district to maintain Safety Data Sheets (SDSs) for each of those materials? Is there a process to verify compliance? Is there a record of compliance checks?
	Does the hazardous materials annex instruct the school/facility on actions to take in the event of a hazardous materials incident on school property (e.g., evacuate the area or call 911)?
	Does the hazardous materials annex include procedures for responding to pepper spray, stink or smoke bombs, or other chemical irritants on school property?
E	kternal Hazards (Hazmat Incidents Occurring near School Property)
	Is a school in the district within 1,000 yards of a major roadway (interstate highway or state highway) known to include hazardous materials carrier traffic?  On the district hazardous materials annex and the school response plan identify this threat and contain measures to respond to it?
	Is a school in the district within 1,000 yards of a pipeline?

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Do the district hazardous materials annex <u>and</u> the school response plan identify this threat and contain measures to respond to it?
 Is a school in the district within 1,000 yards of an EPCRA Tier II facility? (Note: information on Tier II facility locations is available from LEPC.)
 Do the district hazardous materials annex <u>and</u> the school response plan identify this threat and contain measures to respond to it?
 Is a school in the district in immediate proximity to agricultural land where the application of fertilizers, herbicides, and insecticides occurs via spraying (ground or aerial)?
 Do the district hazardous materials annex <u>and</u> the school response plan identify this threat and contain measures to respond to it?

# APPENDIX B: SPECIAL CONSIDERATIONS FOR LARGE HIGH SCHOOLS AND COMMUNITY COLLEGES

The information throughout this guide's volumes generally applies to all schools—public, private, charter, rural, or urban—at all levels of education—K–12 and community colleges. However, some large high schools and most community colleges must account for a few considerations in their emergency planning that are unique to their circumstances. The following list provides examples of some of these unique planning considerations.

### **Internal Threats**

- Due to increased access to weapons and materials, threats are more frequent and generally more dangerous among older students.
- Older students are more likely to experiment with explosive or hazardous substances and have access to the components to facilitate their activities.
- The open nature of some large high school and community college campuses increases the risk of external threats—individuals not associated with the school can more easily enter and attack the property or people on the property.

### **Internal Hazards**

- Community colleges and large high schools may have more hazardous materials and more dangerous materials in their facilities, especially in science laboratories.
- High schools and community colleges often have large athletic fields, swimming pools, vending concessions, and other facilities where hazardous materials are stored and used.
- Older students are more likely to bring pepper spray or other hazardous materials onto campus or have hazardous substances in their vehicles parked on school property.

### **External Hazards**

- Due to the fluctuating nature of daytime and nighttime populations at some large high schools and community colleges, full accountability in a shelter-in-place or evacuation action is difficult/impossible. Campuses should plan for teams to sweep/search properties as part of any shelter or evacuation action to ensure compliance and account for individuals.
- Teen and adult students may not comply with evacuation or shelter instructions or refuse to abandon vehicles, complicating evacuation. Large numbers of students on campus may spontaneously self-evacuate in their personal vehicles or on foot. This evacuation may increase the number of potential casualties in a hazmat event and tie up routes of ingress/egress for first responders. Plans should address this traffic problem and conduct training and messaging to discourage students and staff from self-evacuating, absent instructions to do so.
- Traffic control is also a problem if a large high school or community college is a designated community shelter or reunification point. Such facilities must have a traffic

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and crowd control plan, and campuses should possess the capability to execute it without external law enforcement.

### **Other Considerations**

- Community colleges and high schools often serve as community centers and meeting
  places for non-school-related groups and activities during and outside regular school
  hours.
- Special events like athletic functions, graduation ceremonies, performances, and other large school or community events often occur on community college or high school campuses or associated facilities. These facilities may require special planning and coordination with first responders.
- The occupancy hours at community college and high school campuses are longer than most other educational facilities, beginning before dawn and extending to late in the evening. A few private institutions and colleges may have residential facilities with 24-hour occupation. Because emergencies can occur outside the hours that key leaders and emergency management staff are on-site and able to respond, plans should detail how the campus will respond when it is only partially occupied outside of peak hours.
- High schools and community colleges often maintain facilities used by the community as
  Red Cross or other disaster shelters, requiring special planning and coordination with
  local emergency management, first responders, and outside groups. Acting as a
  designated shelter may also trigger requirements related to the ADA or other
  considerations for the safety and security of the school and its students that the
  implementing organization and the district must address.

### **APPENDIX C: EVALUATING CAPABILITY GAPS**

The following offers a set of questions districts can use to evaluate hazmat-related capability gaps and assumptions in their current emergency operations plans. Some of these will apply more broadly. The list is not comprehensive, and not all will apply to every district. Adapt and use these according to the specifics of your districts, as needed. Additionally, consult Appendix D regarding capability gaps related to emergency planning for persons with disabilities.

### **Mass Shelter Space**

- Based on the threat and hazard analysis, in a train derailment or other major evacuation event, what is the total potential population of the properties requiring evacuation to a shelter space?
- Can the district shelter that entire population on its own? Where? If not, how much additional space does it require?
- Does the community plan depend on schools to provide shelter for citizens and the public in a significant evacuation event? Can the school shelter the numbers of the public expected and their staff/students in an evacuation event? How will staff/schools segregate the two populations (public and student) to protect students?

### **Mass Transportation (Buses)**

- How will the district transport evacuated students to the identified shelter space(s)?
- Does the district have the needed transportation assets to transport all of the potentially affected populations?
- Where are buses located related to potential hazard/isolation zones? For example, if the bus yard is on one side of the tracks or near the rail line where the derailment occurs, can those buses still reach the areas required?
- Will drivers and transportation staff reach the bus yard if the rail crossings are closed or restricted by the incident?
- How many drivers can the school summon upon notice in the middle of a school day? How will you do this/can you do this? (Assume some of them might have to evacuate or shelter due to their presence in the isolation or protective action zone.)

### Incidental Spill Response and Cleanup

- Do school laboratories have the needed supplies to conduct incidental spill response and cleanup?
- Do instructors and custodial staff have the required training to conduct incidental spill response and cleanup?
- Does the district conduct regular HazCom training and update/maintain SDSs for each hazmat on school property? Do employees/staff know where to locate this information in an incident?

## First Aid / Emergency Decontamination for School Laboratory Accidents

- Do laboratories, industrial education shops, bus yards, and other facilities where hazmat is used or stored have eyewash and emergency decontamination facilities or supplies?
- Do laboratories, industrial education shops, bus yards, and other facilities where hazmat is used or stored have regularly checked and resupplied first aid kits?
- Do instructors and staff have the required training to conduct emergency eyewash, decontamination, and first aid?

### **Parking Lots and Fields for Staging Areas**

- Communities often plan to use school parking lots, gymnasiums, and athletic fields for staging, shelter, and responder recovery. Does your community plan on using district facilities for these purposes?
- Do these plans conflict with district plans for that space in the event of a hazmat evacuation, shelter, or reunification plan?

### **Shelter in Place**

- Does your district use the TxSSC SRP shelter procedures? Do your current plans modify these for hazmat (shelter in the SRP has some differences from hazmat shelter in place).
- How long can schools shelter for hazmat if necessary?
- Do classrooms and schools in potential downwind protective action zones have the needed supplies to conduct shelter in place? (Note: affected properties may be miles away from a railroad track.)
- Do current plans focus in the right places? Do schools near railroad tracks focus on evacuation and schools downwind focus on shelter, or is this reversed?
- Do shelter-in-place plans include essential necessities like restroom breaks and supplies like water and essential medication?
- Do you have plans to provide airway first aid for sensitive persons (who may require evacuation if they experience breathing difficulties)?

### Mass Decontamination/Non-school Evacuation

- Do district plans address hazmat incidents that affect special events/athletic facilities like football stadiums, graduation ceremonies, etc.?
- Have you discussed mass decontamination or emergency evacuation from a special event with local first responders? Is this reflected in district plans?
- What is needed to successfully evacuate these facilities/events if a hazmat event like a train derailment occurs nearby?

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### **Evacuation of Students, Staff, and Visitors with Disabilities**

- Do evacuation plans include the evacuation needs of students, staff, and visitors with disabilities?
- Do evacuation plans account for students, staff, and visitors requiring assistance or who may have mobility issues?
- Does the district/schools include emergency procedures in individual student plans (see Appendix D)?
- For schools/facilities close to railroads, how many students, staff, or frequent visitors disabilities?
- Do schools likely to evacuate in a derailment have transportation assets on site capable of moving students, staff, and visitors with mobility issues?

Previous plans may designate shelter locations for students or staff with disabilities, and depend on first responders to evacuate those students or staff.

Leaving anyone behind is not an option in a hazmat incident when the risks are immediate. Responders are often overwhelmed at the scene of a train derailment and unable to assist.

# APPENDIX D: PLANNING CONSIDERATIONS FOR PERSONS WITH DISABILITIES

Some of the issues requiring special consideration for students and staff with disabilities include:

- Those with mobility issues may find it difficult to evacuate over the distances required to leave the downwind area of the chemical release, or they may require help from others. Leaving such individuals in designated safe harbors for extended periods is not acceptable in most circumstances. The likelihood of inhalation injury or explosive/fire risks would endanger both those left behind and responders if they had to return to the area to evacuate people left behind.
- Younger children are more susceptible to the effects of toxic materials at lower doses than adults or teens and may require extra precautions.
- Airborne chemicals and vapors can trigger respiratory conditions that require immediate lifesaving treatment, especially in persons with preexisting medical conditions like asthma, COPD, or other respiratory conditions. While the long-term effects are still emerging, some students will likely also have respiratory weaknesses from COVID-19.
- Some students with special needs may experience elevated distress during emergencies, or they may have cognitive or other issues that limit their ability to make competent decisions necessary for their safety in an emergency.
- Some students, staff, or visitors with disabilities may require one-to-one aid in an evacuation.
- Any decision to evacuate or shelter in place in the event of a hazardous materials emergency must account for the presence of persons with disabilities, as well as those with respiratory disease, due to their increased vulnerability.

Some school emergency plans identify safe rooms or safe harbors for students with disabilities, wherein individuals are left behind during an evacuation and later evacuated by first responders.<sup>31</sup> In case of a major hazardous materials incident, such first responder assistance may not be available, especially in rural districts or during a large-scale disaster like a train derailment. Further, such plans raise severe ethical and legal concerns.

Because of the risks associated with hazardous materials and their environmental effects, the use of designated safe rooms may prove inadequate. For example, during an evacuation due to a gas leak or carbon monoxide alarm within a school, anyone left behind is likely to succumb to the effects of the gas, absent safe rooms with special engineering or expensive design features that can provide a fresh, uncontaminated supply of air. Further, the danger of fire and explosion associated with hazardous materials incidents like train derailments risks the life and safety of anyone remaining on site.

A best practice for schools is to conduct emergency planning down to an individual level for students, faculty, and staff with disabilities. Staff trained in ADA compliance can work with DEMCs and caregivers to plan out individual and caregiver responses in different emergencies

This is an area of litigation under the ADA. See: Weibgen, Adrien A. "The Right to Be Rescued: Disability Justice in an Age of Disaster." *The Yale Law Journal*, Vol. 124, No. 7, May 2015, pp. 2406–2469. <a href="https://www.yalelawjournal.org/note/the-right-to-be-rescued">https://www.yalelawjournal.org/note/the-right-to-be-rescued</a>.

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like hazardous materials incidents. Further, it is essential to include such planning in individual education plans (IEPs) or 504 plans. Discuss emergency plans with disabled staff, students, and their caregivers and include representatives from these communities in your planning process.

Several relatively recent legal decisions bear on emergency planning for students and staff with special needs, disabilities, and preexisting medical conditions. Under the terms of Communities Actively Living Independent and Free (CALIF) v. City of Los Angeles (2011), the court defined nine essential components of an effective emergency preparedness program. That case, among other things, established the principle that emergency plans must address the needs of persons with disabilities across nine essential components.<sup>32</sup> An emergency preparedness program must:

- 1. Include the development of comprehensive emergency plans. Such plans must address both specific types of emergencies and address specific procedures during emergencies.
- 2. Include assessments of the efficacy of emergency plans. This requires exercises and drills simulating various emergencies and may require public participants.
- 3. Include advanced identification of the needs that will arise and resources available to meet those needs during an emergency.
- 4. Provide plans for public notification and communication before, during, and after emergencies.
- 5. Provide policies or procedures concerning the concept of sheltering in place when evacuation to shelters is inappropriate or impossible.
- 6. Include plans to provide shelter and care for individuals forced to evacuate their homes during emergencies. Public schools often serve as designated community shelters. Care at such shelters includes food, water, sleeping areas, bathroom facilities, and medical attention, if necessary.
- 7. Plan to assist with evacuation and transportation.
- 8. Include plans to provide temporary housing when evacuees cannot return to their homes.
- 9. Have plans to assist in recovery and remediation efforts after an emergency or disaster.

In Brooklyn Center for Independence of the Disabled (BCID) et al. v. Mayor Bloomberg et al. (2015), the court ruled that the disabled had rights of equal access to any emergency services provided to non-disabled people, especially as it related to shelters, notification, and evacuation. Though both these landmark cases reflect rulings against local governments, they reflect a continuing trend regarding emergency preparedness and planning for persons covered under the ADA.

As they relate to schools, two ADA cases apply specifically, Shirey ex rel. Kyger v. City of Alexandria School Board (2000) and Jagielski-Bazzell v. Los Angeles Unified School District (2015). The first dealt with a disabled student in a wheelchair left behind in an evacuated school, and the latter dealt with emergency notification of deaf faculty. The precedents set by these and other cases are a complex and evolving legal topic. School districts should consult with legal counsel regarding ADA compliance in their emergency planning and involve disability advocates, parents, and other experts in their planning process to address the needs of their community.

Source: Adrien A. Weibgen (2015), "The Right To Be Rescued: Disability Justice in an Age of Disaster," The Yale Law Journal, Volume 124, Number 7 (May), 2406-2469, <a href="https://www.jstor.org/stable/43617083">https://www.jstor.org/stable/43617083</a>

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The following suggestions may help school districts improve their planning and emergency preparedness for students, employees, and visitors with disabilities during hazardous materials emergencies, depending on local circumstances:

- Ensure your district and school emergency plans address students and staff with disabilities requiring accommodations or that may increase their susceptibility during a shelter in place or evacuation due to hazmat.
- Develop a planning team as part of the school safety committee that includes administrators, faculty, staff, parents, and advocates to address the specific and individual emergency planning needs of students and staff with disabilities.
- Include discussions of emergencies, including hazardous materials emergencies, when working with families and incorporate emergency procedures into students' IEP or 504 plans.
- Your district's EOP must outline how the district will incorporate emergency planning
  into students' IEPs and what measures the district and school will take to accommodate
  students and staff with disabilities in an emergency, to include emergencies involving
  hazardous materials.
- Provide specialized training in emergency evacuation and shelter for those working with individuals with disabilities.
- Ensure that planned evacuation routes account for those with mobility issues, including students, staff, or visitors.
- Identify and train backup staff and faculty members to assist individuals with disabilities during evacuations. Staff not otherwise assigned to evacuation duties might report to a particular location and assist in evacuating students, visitors, or staff with disabilities.
- In high schools and community colleges with CERT programs, trained student volunteers acting under adult supervision can assist staff with evacuation or shelter in place of students or staff with disabilities. Alternatively, schools can create student buddy programs that train volunteer students to assist responsible adults in an emergency by building preestablished, trusted relationships with students who may respond negatively to the disruption of an emergency. Having trusted, trained partners can significantly aid in an orderly evacuation or help calm students in a shelter-in-place situation. <sup>33</sup>
- Drills, exercises, and other training should include persons with disabilities.
- Designate interior and exterior safe staging areas for those with disabilities to await evacuation at particularly vulnerable campuses within 1,000 yards of a known threat like a rail line or other known hazard; or consider using alternate sites away from known hazards for some education programs, if possible.<sup>34</sup>
- Consider pre-staging a bus or van at vulnerable facilities during the school day that can accommodate those with mobility issues in a hazardous materials emergency requiring an on-foot evacuation off the campus.<sup>34</sup>

Minors cannot assume responsibility for disabled individuals but may aid adults under certain circumstances. Such programs and procedures require adult supervision. Consult legal counsel regarding permissions and the legal requirements for such programs.

The use of shelter locations or safe rooms for disabled students used in some emergency plans may prove inadequate in a hazardous materials emergency, absent special engineering or design features to ensure safe air for both the students and designated responsible adults, and these cannot protect against fire or explosion risks.

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• Educate school nurses on the risks posed to students with preexisting medical conditions, especially those with respiratory conditions, likely to occur during a hazardous materials emergency. Consider staging supplies of portable oxygen for especially vulnerable campuses (recognizing such supplies may pose internal hazardous materials risks).

Additionally, the following recommendations include considerations for those with preexisting conditions that may necessitate additional support, like those with respiratory conditions, not typically included in planning considerations for individuals with disabilities, partly because of the unique nature of hazardous materials incidents.

- Assess procedures for the administration, storage, or use of medications like rescue
  inhalers in the event of a shelter-in-place or emergency evacuation action, and create a
  program to remind students to carry needed medications with them during the school day
  because they may not be able to obtain them from lockers or other locations during an
  evacuation.
- Due to the more acute toxic effects of chemical exposure on younger children at lower doses than those that affect adults or teenagers, additional planning for evacuation and medical support is necessary for elementary schools, and especially kindergartens and pre-school programs in proximity to a known hazardous materials source like an active rail line or pipeline.

Another consideration for schools related to accessibility is that many cities and counties designate school facilities as local shelters. Local shelters must meet specific accessibility requirements under the ADA, in line with FEMA recommendations.<sup>35</sup> That creates opportunities for communities and school districts to partner to improve accessibility and access within schools designated as public shelters. Such partnerships offer a unique opportunity for both communities and schools to address issues of accessibility as it relates to the ADA and may create additional funding opportunities through grant programs for communities looking to improve their resilience to disaster and improve their shelter operations.

Several cases define a number of community requirements for shelters and access to emergency services, including:

<sup>•</sup> Communities Actively Living Independent and Free (CALIF) et al. v. City of Los Angeles et al. (2011).

<sup>•</sup> Brooklyn Center for Independence of the Disabled (BCID) et al. v. Mayor Bloomberg et al. (2015).

<sup>•</sup> United Spinal Association et al. v. The District of Columbia et al. (2014). See also: Taylor, Barry. "The Development of Emergency Planning for People with Disabilities through ADA

# APPENDIX E: PLANNING CONSIDERATIONS FOR SPECIAL EVENTS

Special event facilities are those used by school districts for special events. These include:

- Auditoriums, courts, fields, and stadiums used for athletic events
- Theaters
- Natatoriums and swimming pools

Special event facilities under district control or leased by the district require additional planning and preparedness activities to ensure the safety of participants and spectators. Several primary concerns involve events at such facilities that go beyond planning for hazardous materials events during normal school operations or activities. These are:

- Security
- Internal/external hazards
- Evacuation and decontamination considerations

### **Security**

Security at special events is always a concern. Anytime large numbers of individuals gather, there is a potential for an attack or incident that could produce mass casualties. Planning for special events generally focuses on two primary aspects to increase security:

- Perimeter control and screening of entrants
- Increased coordination and joint planning with local law enforcement, fire departments, and EMS for mass casualty events

Special events facilities need to be extra vigilant for known threats identified through their threat assessment process. Individuals who have expressed violent intent or engaged in behaviors related to the ideation of violence against schools or individuals may attempt to target special events. Attacks may include improvised explosives, chemical explosives, incendiaries, stink bombs, or smoke devices. This companion district guide discusses these threats in more detail. Additionally, a growing trend involves the deliberate or accidental discharge of pepper spray or other self-defense irritants in and on school properties. See previous discussions in this and the district guide.

Special events facilities may utilize private security, police, or volunteers in their perimeter control. Planners should ensure security personnel have the proper training and experience, and that all personnel receive briefings before an event reviewing response procedures and any known threats or hazards. Procedures should be in place between the district and the facility manager to ensure communication between local law enforcement and the special event planners regarding threats or information about individuals or groups posing threats to the event.

### Internal/External Hazards

As it relates to hazardous materials and chemical, biological, radiological, nuclear, and explosive threats (CBRNE), special events planning includes identifying potential hazards near the event

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that may pose a hazard, the same as used to identify hazards that might affect schools as outlined in the District Guide.

Of primary concern are:

#### External Hazards

- Rail lines
- Roadways
- Pipelines
- Industrial or hazardous materials storage facilities

### Internal Hazards

- Safety and security of carbon dioxide cylinders used in vending and concession operations
- Safety and security of propane tanks used in vending and concession operations
- Chemicals stored on-site used in facility maintenance, especially chlorine for pools and herbicides or insecticides at athletic fields
- Air quality and HVAC, boilers, pool heaters, incinerators (especially for indoor venues)

### **Prevention, Mitigation, and Preparedness**

#### External Hazards

Specific measures unique to special events to address external threats include:

- Closure of roads in and around a special event with external perimeter security at checkpoints, parking areas, and public transit locations near the event
- Installation of hazardous materials and CBRN detection equipment, either temporary or permanent, at critical locations around the perimeter and within special event locations
- Coordination with railroad operators and industrial facilities for special precautions or planned limitations of certain activities during special events
- Increased police presence and traffic patrols on roads in the vicinity of the site and rerouting of any hazardous cargos
- Posting of additional security at high hazard locations and key intersections
- Requesting support and deployment of special teams, mass decontamination systems, or other support from state or federal agencies for certain high-profile events or when specific threat information requires additional support

#### Internal Hazards

Specific measures unique to special events to address external threats include:

- Pre-staging of decontamination and spill kits at critical locations
- Concession activities at many school special event facilities use volunteers. They also
  frequently use propane and carbon dioxide tanks that can pose significant hazards if
  improperly handled or used

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- Train all personnel working in concession areas in the proper storage, use, and exchange of compressed gas cylinders
- Regularly inspect cylinder storage and use
- Ensure fire department and emergency responders know where vendors use and store carbon dioxide and propane gas cylinders on site
- Check air quality at indoor venues, especially natatoriums and other locations where mold or other biological contamination can affect HVAC Systems
- Regularly inspect, maintain, and secure access to HVAC systems, boilers, incinerators, pool heaters, pool pumps, and other systems used at special event facilities
- Securely and safely store chlorine and other hazardous chemicals like pesticides and herbicides according to manufacturer's instructions and SDS information
- Train employees using such chemicals in proper handling, use, and storage
- Maintain an SDS for each chemical on-site and with the facility manager and DEMC.
   Include maps or other information that identifies the locations of materials to which the SDS applies.
- Request regular fire department safety inspections, especially before special events
- Post security at sensitive internal areas involving the operation of sensitive systems or storage of hazardous materials
- Consider off-site storage of hazardous materials not required during special events

### **Response Considerations**

Several aspects of special events require additional planning and response procedures beyond the sample plans, policies, and procedures in this guide and the district guide. Because special events vary so widely depending on the venue and the event, districts and facility managers should develop special event plans for each type of facility/event. Some events, like sporting events, will recur on a regular schedule yearly. Other special events, like a visit from a high-profile politician, will require single-use, event-specific plans developed in coordination with state and federal agencies.

No matter the circumstances, there are a few considerations related to response to hazardous materials incidents involving special events that planners ought to account for in some or all of their special event plans, depending on circumstances. A number of these considerations are HazMat/CBRNE unique, while others apply more broadly.

- EVACUATE (Hazmat Evacuation) procedures for large venues and evacuation rally points outside of downwind hazard zones
- Mass Decontamination procedures and location near designated triage sites
- STAY (Shelter-in-Place) procedures for indoor venues
- These must include procedures to maintain order and instructions for dealing with persons who attempt to leave the building against advice or orders from the incident commander
- Pre-designated staging areas for response teams and other support and routes into and out of the site for emergency responders
- Method of communication of instructions to large groups, especially once they leave the venue

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- Proximity to hospitals and medical facilities and means of transport to those sites in the event of a mass casualty incident
- Supplies of oxygen and other airway support equipment on-site and at support sites and facilities in the event of a toxic material release

### **Mass Decontamination**

For HazMat/CBRN events where large numbers of individuals become contaminated or where contamination is suspected, the emphasis is on rapid, hasty decontamination is necessary to reduce the number of potential casualties. For most venues/circumstances, local fire departments or a specialized unit using equipment or trailers designed for the purpose perform such hasty decontamination. Facility planners should coordinate their hazardous materials/CBRN planning for special events with these supporting agencies and units. The following describes the most common method of mass decontamination used by fire services. Facility planners may need to incorporate into their planning for special events.

Most mass decontamination plans depend on the principle that "dilution is the solution to all pollution" – or wet decontamination (decon). This principle is changing, though – consult your local fire department for more information. In all cases, outer clothing removal is critical. Under wet decon, after outer clothing removal, responders wash potentially contaminated individuals using a copious rinse of high volume, low-pressure water.

Security and fire department personnel will attempt to guide evacuating individuals – all treated as potentially contaminated, into a "decontamination triage," with ambulatory casualties routed through a hasty wash station consisting of a pumper truck and hose with a fog nozzle while other responders direct ambulatory casualties through the wash, instructing them to remove and pile their clothing. Departments may expand this to two trucks side by side and an aerial truck, increasing water volume and providing a lane with some privacy for casualties. As additional department assets deploy, casualties use bags for clothing, and firefighters shift to higher-level protective suits. They establish a separate lane for non-ambulatory casualties, using a dedicated trailer or another system to decontaminate the injured.

Following hasty decontamination, casualties completing this gross decontamination receive blankets or disposal clothing or suits. At this point, EMS and fire personnel conduct medical triage. Non-ambulatory, injured casualties also go through a two-stage triage (decontamination and medical). However, they may undergo medical triage before decontamination and again after. In contrast, ambulatory patients typically undergo medical triage only after decontamination. For the most part, ambulatory casualties will be low evacuation priorities from a safe assembly area after decontamination and may require shelter and support. Immediate and urgent non-ambulatory casualties will usually proceed to ambulance or other vehicle evacuation to medical facilities due to their injuries/condition. As time allows, ambulatory casualties and those triaged in delayed or expectant will move to shelters and medical facilities as resources allow.

Fire departments, hospitals, EMS, and police agencies, and other supporting agencies like the Texas National Guard Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNe) Task Force and the 6<sup>th</sup> Civil Support Team – Weapons of Mass Destruction (6<sup>th</sup> CST-WMD) can assist special events planners in developing plans for mass decontamination and in certain high-

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profile events they may pre-deploy and pre-stage assets to support high-profile events. Contact the Texas National Guard CBRNe Task Force via the Texas National Guard Joint Operations Center at (512) 782-5544 or <u>JOCTX@tx.ngb.army.mil</u>. You can reach the 6<sup>th</sup> CST-WMD at (512) 782-1900.