Electric Vehicle/Lithium-Ion Battery Fire Preparedness on the Pennsylvania Turnpike

New England ITS Interchange
October 9, 2025

Pennsylvania Turnpike At A Glance

565+
MILES

5
TUNNELS

140
FACILITIES

NEARLY **90**
INTERCHANGES

856
BRIDGES

1,400
EMPLOYEES

565+ MILES

5 TUNNELS

140 FACILITIES

NEARLY **90** INTERCHANGES

856 BRIDGES

1,400 EMPLOYEES

- **Tactics**
- **Resources**
- **Constraints**

READY....

OR NOT?

Project Timeline

READY....

OR NOT?

- 1/24/24 EV Fire Scope Discussion with PTC
- 2/15/24 Internal Planning Meeting
- 3/12/24 Working Group Kickoff
- 3/18/24 OSFC Meeting
- 4/12/24 Expanded Working Group Meeting
- 5/10/24 Survey Deployment
- 5/17/24 Survey Re-Deployment
- 6/18/24 Survey Re-Deployment (PTC Maintenance)
- 7/29/24 IBTTA Feedback
- August 2024 IBTTA Findings Summary
- Fall/Winter 2024 Formulate PTC Action Plan
- 2025 Implement Action Plan

Baker, CA• July 27, 2024

LAS VEGAS (KLAS) — Officials said that a truck fire closed large portions of Interstate 15 between Las Vegas and Los Angeles on Friday.

On Friday just before 6 a.m., California Highway Patrol officers responded to a report of a crash on I-15 northbound. Officials said the crash occurred when the driver of a 2020 Freightliner lost control and overturned onto the right shoulder of the freeway.

The flatbed trailer was loaded with a sealed container of six industrial-grade lithium-ion batteries. During the crash, the battery container became detached from the flatbed trailer and also rolled onto the shoulder.

When emergency personnel arrived at the scene, they saw a fire emerging from the ruptured hazmat container. Due to the “inherent danger” of the fire, a one-third-of-a-mile safety zone was set to ensure public safety, CHP said.

Boston, MA • July 11, 2025

An electric car fire on the Mass Pike shut down part of the highway in Boston and jammed traffic in several parts of the city Friday morning.

According to Massachusetts State Police, the car caught fire just after 7 a.m. on the westbound side of the Pike beyond the Prudential Tunnel. Making matters worse, several cars also hit debris on the road in that area.

The driver of the electric car later told WBZ-TV he believed that he hit something in the roadway, causing his Chevrolet to burst into flames and later explode.

The westbound side of the Pike was shut down and traffic was backed up all the way to Logan Airport. All lanes were re-opened more than two hours later, around 9:20 a.m., according to MassDOT.

"Boston Fire advised State Police that the engulfed vehicle is electric and will take several hours to extinguish," State Police spokesman Tim McGuirk said in a statement Friday. "For the safety of motorists and first responders, officials closed the roadway and All diverted traffic."

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pennsylvania
OFFICE OF THE STATE FIRE COMMISSIONER

AS OF 3/18/24

- **Currently no curriculum**
- **No specific position on specialized tools**
- **Key to planning is knowing all positive water sources**

IAFC BULLETIN

October 15, 2021

Fire Department Response to Electrical Vehicle Fires

Adapting our response plans through training, research, and experience is critical in the fire service. As sales of electric and hybrid vehicles increase, the fire service must continue to modify our tactics to properly respond and protect firefighters. Fighting vehicle fires is inherently dangerous. When responding to an electric or hybrid vehicle fire there are additional challenges responding crews must consider.

Additional response-specific information can be found on most automobile manufacture web pages. NFPA Quick Vehicle Response Guide

Pre-Incident

Modify or establish your department policy or standard response guideline to vehicle fires and ensure it includes practices for electrical vehicle fires. Include guidelines for limited interaction and when crews should allow the vehicle to burn.

When working on roadways, protect the work area per department policy. Staff should consider that this may include a vehicle fire or extrication. Staff operating on roadways should anticipate possibly longer time frames to manage/control EV vehicle fires and maintain heightened situational awareness.

NFPA has a full series of documents on various EV safety response (including emergency response guides by manufacturer).

Review response and post incident procedures with law enforcement and towing companies.

Batteries that have been or are suspected of damage or otherwise compromised, but have not caught fire, need to be monitored for thermal runaway.

Train on department policy and perform practical scenarios which support the response plan.

INCIDENT ACTIONS

When arriving on scene, the first arriving company should perform a proper size up. This includes the extent of the fire and if it is a compartment fire or includes the electric components of the car. Similar to other vehicle fires, is the engine compartment or the passenger compartment on fire? The best method for managing or controlling a battery fire is with water. Battery fires will initially show from under the vehicle.

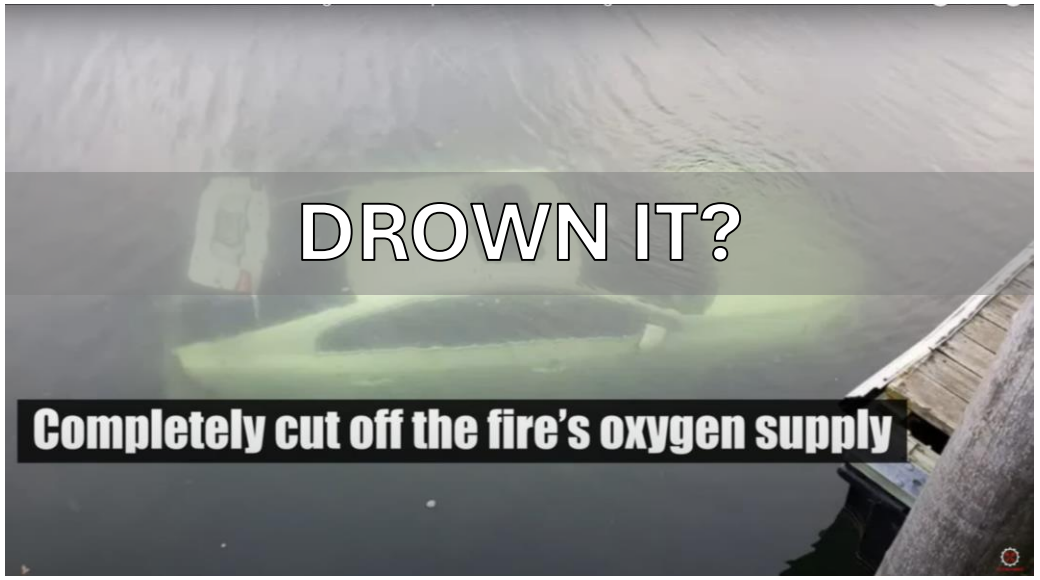
- Protect your work area through established department policy and establish tactical priorities (fire, extrication, victim care) and ensure the vehicle is in park and off, if possible.
- Wear full PPE with SCBA with face-piece and establish an appropriate command structure.
- Consideration and tactics may be categorized in offensive or defensive mode. This may be based on exposures and the extent of fire which may include actions to let the vehicle burn. Use a thermal imaging camera to help with the 360 size-up.
- Secure a large, continuous and sustainable water supply from one or more fire hydrants or multiple water tenders (3,000-8,000 gallons).
- Where safe, consider chocking the wheels. EVs move silently, so never assume it is powered off. Never assume that an EV will not move.
- Extinguish small fires that do not involve the high voltage battery using typical vehicle firefighting procedures.
- When attacking the vehicle fire, understanding that once the contents of the fire are extinguished, sustained suppression on the battery pack may be necessary. Use a large volume of water such as multiple 1¾-inch hand-lines to suppress and cool the fire and the battery. Put water on the burning surfaces.
- Have sufficient fire personnel and apparatus on scene for an extended operation to monitor the battery's heat or possible secondary ignition. The heat from the fire may have damaged additional cells, which may require additional suppression activities.
- Batteries should always be treated as energized. During overhaul do not make contact with any high voltage components.

Post Incident

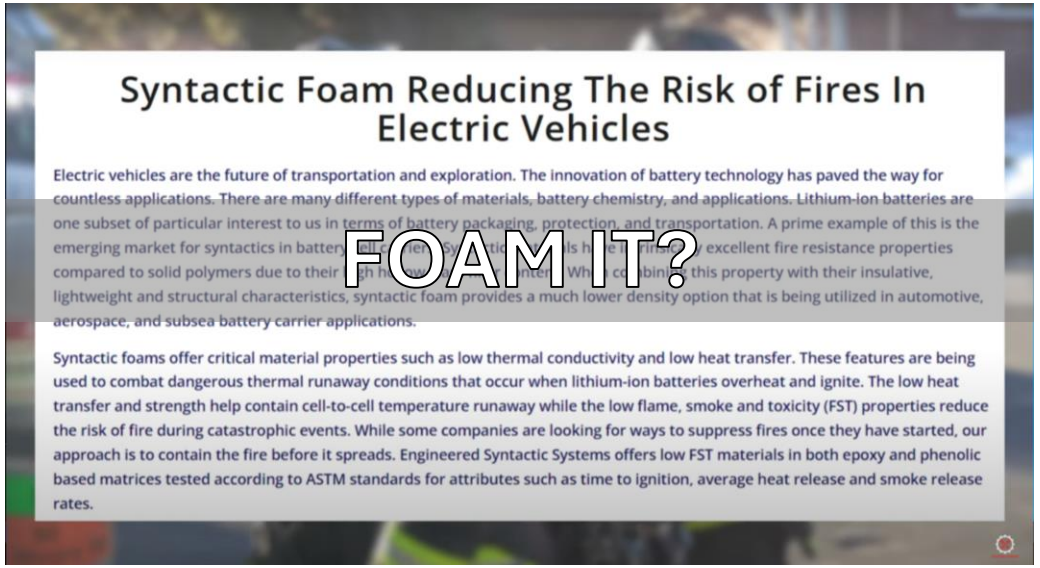
Brief the towing company and their personnel on the hazards, including providing 50' clear space around the vehicle once stored and never inside a building. An engine company may need to escort the vehicle to the recovery location.

Batteries should always be treated as energized and pose an ongoing risk to the investigator. Follow NFPA 921 protocol for vehicle safety during post-response investigation, arson investigation, and vehicle investigation.

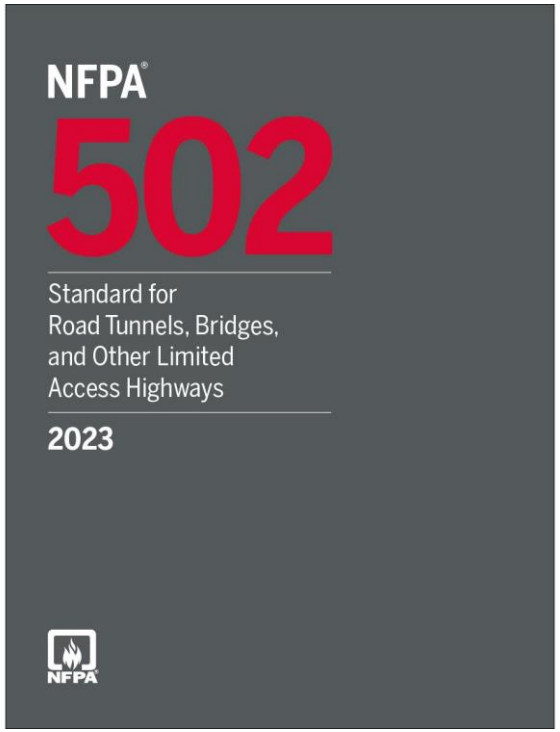
Thermal events with the battery system could continue for some time after the initial incident. Establish response protocol for secondary fires.

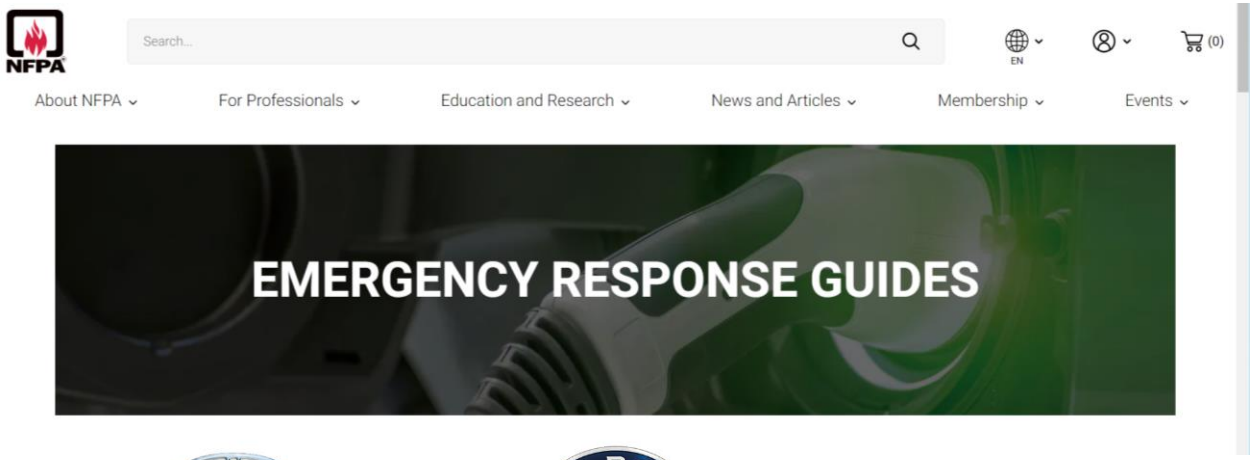

DROWN IT?
Completely cut off the fire's oxygen supply


COVER IT?


FOAM IT?
Syntactic Foam Reducing The Risk of Fires In Electric Vehicles
Electric vehicles are the future of transportation and exploration. The innovation of battery technology has paved the way for countless applications. There are many different types of materials, battery chemistry, and applications. Lithium-ion batteries are one subset of particular interest to us in terms of battery packaging, protection, and transportation. A prime example of this is the emerging market for syntactics in battery
excellent fire resistance properties compared to solid polymers due to their
this property with their insulative, lightweight and structural characteristics, syntactic foam provides a much lower density option that is being utilized in automotive, aerospace, and subsea battery carrier applications.
Syntactic foams offer critical material properties such as low thermal conductivity and low heat transfer. These features are being used to combat dangerous thermal runaway conditions that occur when lithium-ion batteries overheat and ignite. The low heat transfer and strength help contain cell-to-cell temperature runaway while the low flame, smoke and toxicity (FST) properties reduce the risk of fire during catastrophic events. While some companies are looking for ways to suppress fires once they have started, our approach is to contain the fire before it spreads. Engineered Syntactic Systems offers low FST materials in both epoxy and phenolic based matrices tested according to ASTM standards for attributes such as time to ignition, average heat release and smoke release rates.


LET IT BURN?
Different beast altogether





TOPICS: EMERGENCY RESPONSE

Acura Emergency Response Guides

TOPICS: EMERGENCY RESPONSE

Alfa Romeo Tonale Emergency Response Guides

TOPICS: EMERGENCY RESPONSE

Audi Emergency Response Guides

TOPICS: EMERGENCY RESPONSE

Subaru Emergency Response Guides

TOPICS: EMERGENCY RESPONSE

Tesla Emergency Response Guides

TOPICS: EMERGENCY RESPONSE

Toyota Emergency Response Guides

Capability Maturity Model

READY....
OR NOT?

Defines the “state of readiness” Across 4 Levels

Level 1

“Ad-Hoc”
Low level of capability

Level 2

“Managed”
Medium level of capability

Level 3

“Integrated”
High level of capability

Level 4

“Optimized”
Highest level of capability

MODIFIED Capability Maturity Model

1.Training – including manufacturer specific and NFPA guidance

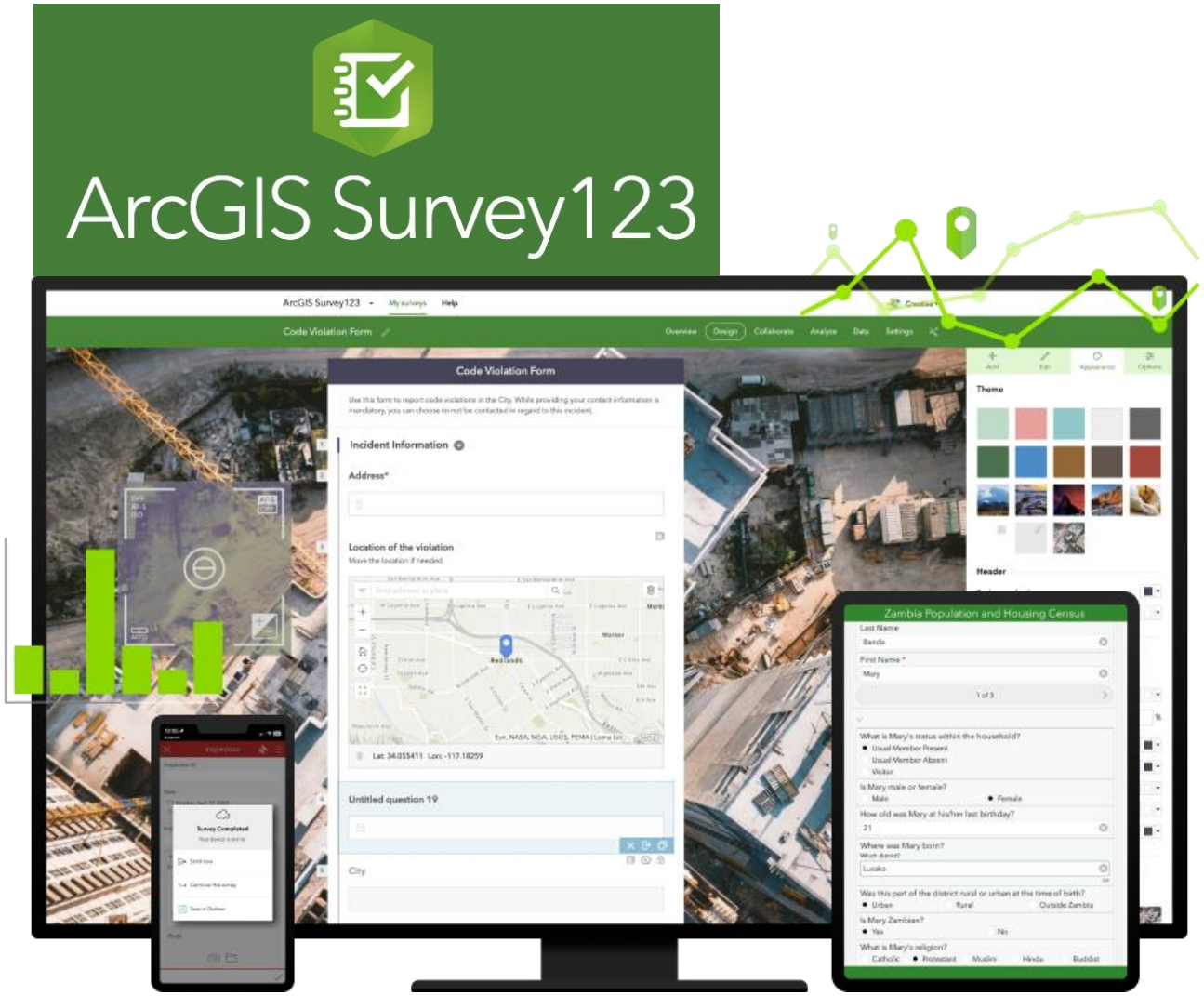
2.Tools & Resources – including standard and specialized firefighting equipment and water supply availability

3.Procedures – including documented procedures for operations, tactics, and command decision-making

4.Culture, including technical understanding

Level 1	Level 2	Level 3	Level 4
"Ad-Hoc" Low level of capability	"Managed" Medium level of capability	"Integrated" High level of capability	"Optimized" Highest level of capability

RESPONDER READINESS



- Survey prepared to:
  - Expedite information gathering from a wide number of responders
  - Formalize and centralize this information for study and understanding

Methodology

- To evaluate the survey responses a scoring system was created based on:
  - Level of training
    - Self-evaluation of training
    - Knowledge shared from trainings
    - Known areas for improvement
    - Technical understanding
  - Access to tools and resources
    - Both what they have, may need, and/or what they plan to obtain
- With a maximum of 20 to 25 points depending on responder

Tools

- Thermal Imaging Cameras
- Gas Monitors
- GoJacks
- Isolation Bags
- Fire Blankets
- Underbody Nozzles
- Emergency Plugs
- Lances
- EV Pools

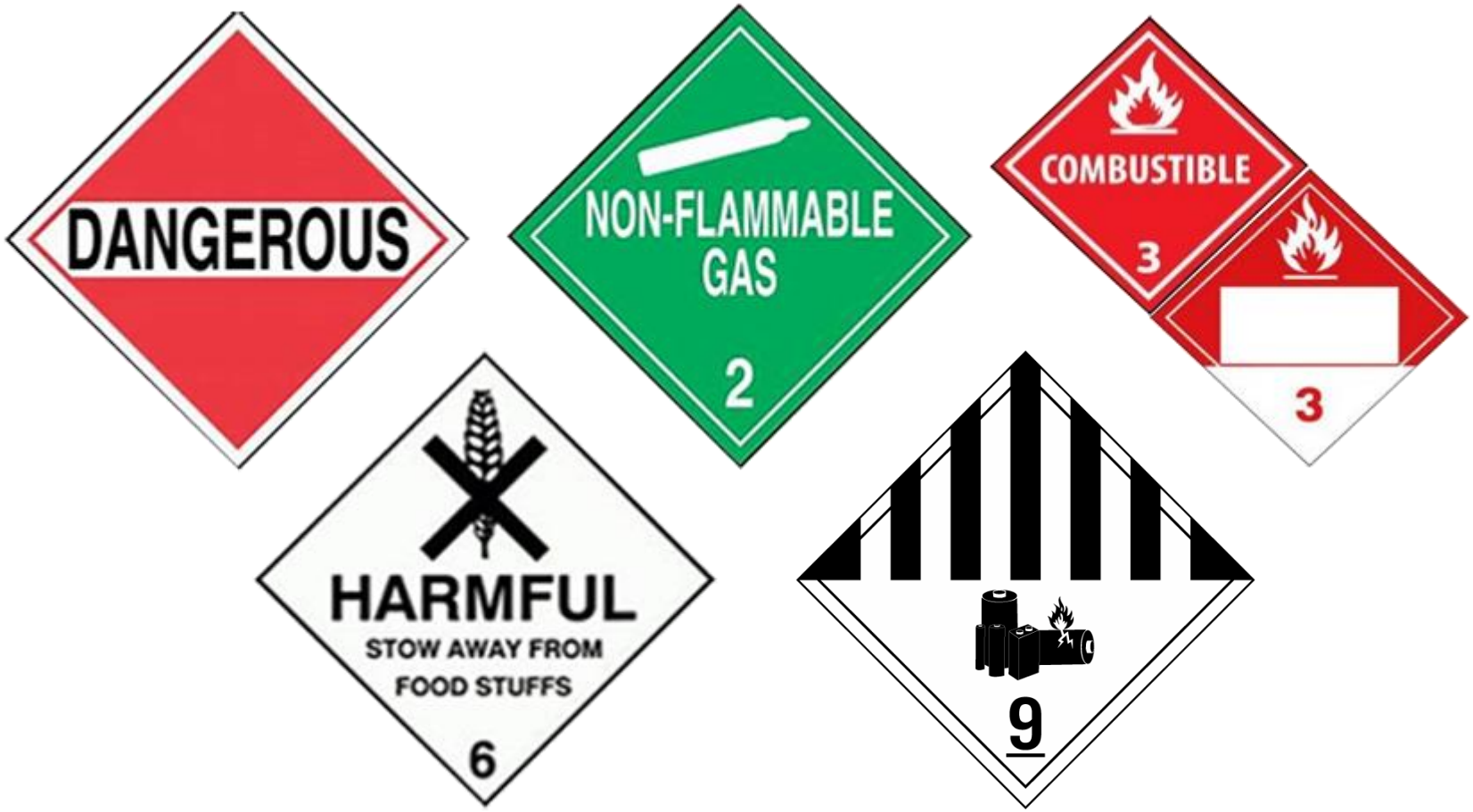
Capability Maturity Model Results

Dimensions	Level 1 Informal/Ad Hoc	Level 2 Managed/Repeatable	Level 3 Integrated/Defined	Level 4 Optimized	Current Scoring
Training	Core Concepts/Basic Training	Hands on/Advanced Training	Staff Fully Trained	Fully trained with a Subject matter expert on staff	**2**
Tools & resources	Standard equipment/limited water supply	Minimal specialized equipment/reliable water supply with minimal issues	Multiple pieces of specialized equipment/stable water supply	Specialized suppression equipment readily available/water supply is not an issue	**2.5**
Procedures	No established procedures	Procedures developed scenarios are encountered	Scenarios added to standard procedures	Well Documented operating procedures	**1.5**

TUNNEL READINESS

Hazardous Materials Classes Permitted

Source: www.paturnpike.com



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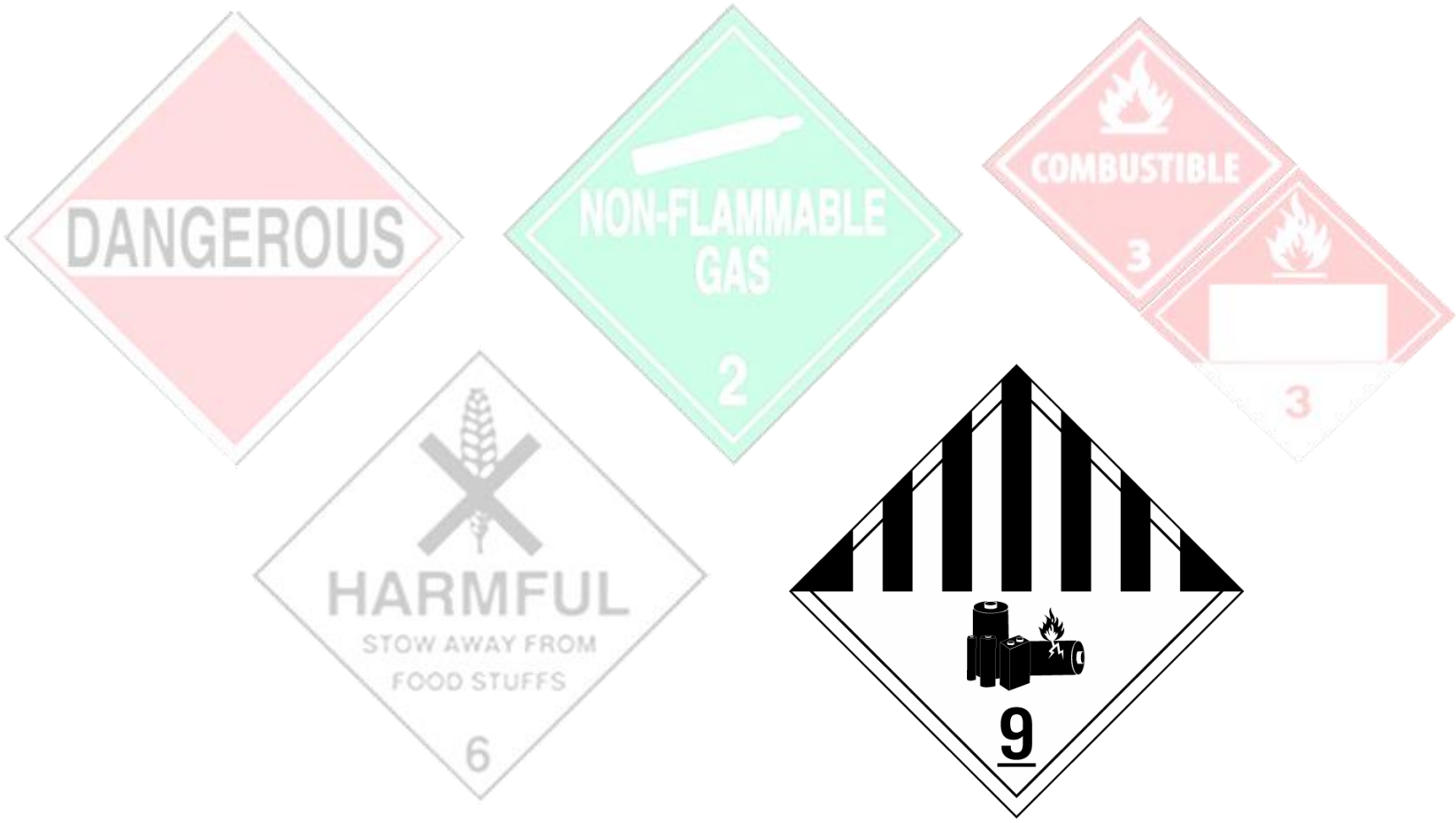
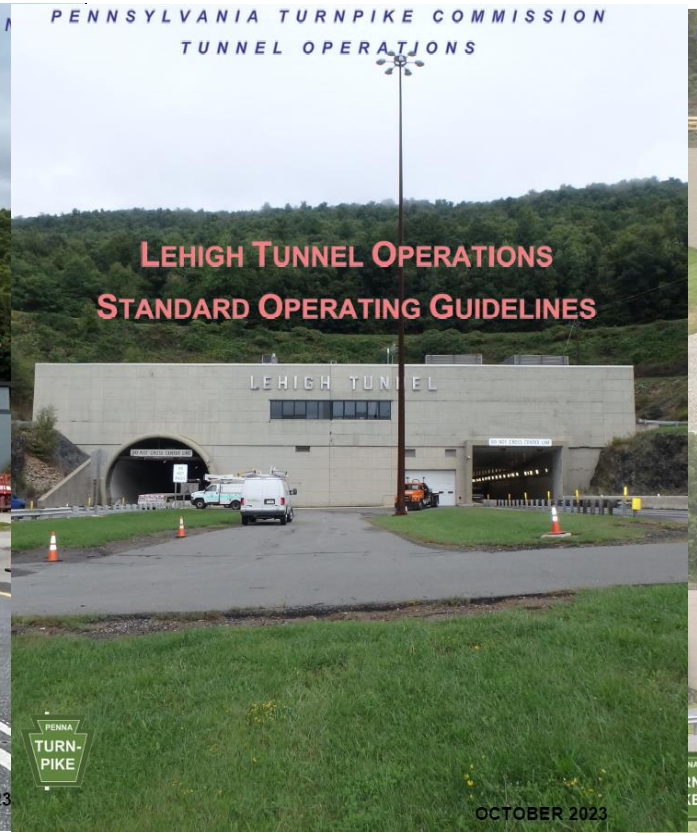


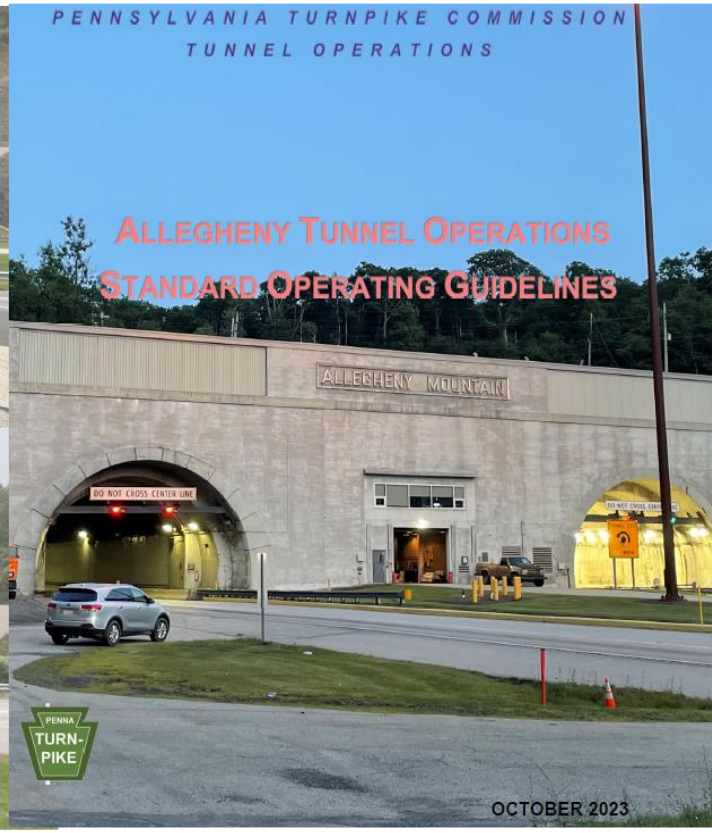

Tunnel Restrictions
Hazardous Materials
Prohibited
EXPLOSIVES 1
INHALATION HAZARD 2
DANGEROUS 4
ORGANIC PEROXIDE 5.2
INHALATION HAZARD 6
RADIOACTIVE 7
Prohibited In Bulk
FLAMMABLE GAS 2
FLAMMABLE 3
FLAMMABLE SOLID 4
SPONTANEOUSLY COMBUSTIBLE 4
OXIDIZER 5.1
POISON 6
CORROSIVE 8
Prohibited Vehicles
Westbound


9


PENNSYLVANIA TURNPIKE COMMISSION
TUNNEL OPERATIONS
TUSCARORA TUNNEL OPERATIONS
STANDARD OPERATING GUIDELINES
TUSCARORA MOUNTAIN
OCTOBER 2023


PENNSYLVANIA TURNPIKE COMMISSION
TUNNEL OPERATIONS
LEHIGH TUNNEL OPERATIONS
STANDARD OPERATING GUIDELINES
LEHIGH TUNNEL
OCTOBER 2023


PENNSYLVANIA TURNPIKE COMMISSION
TUNNEL OPERATIONS
BLUE MOUNTAIN & KITTATINNY
TUNNEL OPERATIONS
STANDARD OPERATING GUIDELINES
OCTOBER 2023


PENNSYLVANIA TURNPIKE COMMISSION
TUNNEL OPERATIONS
ALLEGHENY TUNNEL OPERATIONS
STANDARD OPERATING GUIDELINES
ALLEGHENY MOUNTAIN
DO NOT CROSS CENTER LINE
OCTOBER 2023

Other Tunnel Considerations:

- Are FDCs clearly marked?
- Is water pressure sufficient?
- Tunnel Wreckers are also Tunnel Guards
  - Training in push/pull/drag (additional training for EVs?)
  - SCBA needed?

CURRENT EFFORTS

- PTC and Contracted Responder cooperative training
- Turnpike 101
- Guidelines development
- Standpipe knowledge & testing
- Off-site Water Supply
- Revise Tunnel Incident Response Plans
  - Water Supply Training
- Urban vs. rural strategies
- Contracted Fire Dept. submit Li-Ion firefighting plan
- TOC revise dispatch to include County HazMat team?

- Acquire specialized tools
  - Fire blankets
  - Underbody nozzles
  - Emergency Plugs
- Identify strategic locations for specialized tool storage.
- Identify potential PTC vehicles to carry/supply specialized tools on-scene
- Expand Tunnel Wrecker capabilities (push/pull/drag)

- Acquire firefighting vehicles (PANYNJ-type vehicles)
- Train selected PTC staff in firefighting tactics.
- Additional fire suppression infrastructure in tunnels

HOLLAND TUNNEL 54663
2015 MACK MRU/MILLER INDUSTRIES/ANSUL 50AFFF/150 PKP

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- Turnpike 101
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- **Urban vs. rural strategies**
  - Can't expect rural FDs to have what we need. PTC supplied water tankers?
  - "Let it burn" strategy.
- **Contracted Fire Dept. submit Li-Ion firefighting plan**
  - Require contracted FDs to submit a Li-Ion firefighting plan for their service area
  - FD Reps from each district to discuss/review
- **TOC revise dispatch to include County HazMat team?**
  - Send HazMat immediately upon confirmation of Li-Ion battery(ies) onboard?

Electric Vehicle / Lithium-Ion Battery Fire Response Guidelines

While electric vehicle fires are less common than those involving conventional combusion engine vehicles, they present unique challenges which demand innovative firefighting techniques and technologies. Emergency Responders must be prepared to modify traditional strategies and tactics to successfully manage lithium-ion battery fires, whether they are contained within the body of an electric vehicle or being transported in bulk on the Pennsylvania Turnpike system.

CONTRACTED FIRE DEPARTMENTS

The PA Turnpike Commission Contracted Fire Departments shall assume a leadership position under a Unified Incident Command structure at all fire incidents, and shall operate in cooperation with PA Turnpike personnel and other responders.

Pre-Incident Planning

- Review/Update departmental Vehicle Fire SOP or Guidelines specific to lithium-ion battery and electric vehicle fires.
- Develop a reference document of emergency procedures for popular EV models.
- Review/update departmental SCBA policies specific to lithium-ion battery and electric vehicle fires.
- Locate and confirm all water supply locations in your Turnpike Service Area.
- Review all critical and vulnerable Turnpike Infrastructure in your Service Area.
- Complete PA Turnpike Commission Traffic Incident Management Training.

On-Scene Actions

- Perform Scene Size-Up.
- Establish a Temporary Traffic Control Area.
- De-Energize and secure vehicle (if safe).
- Establish sustainable water supply which can support uninterrupted volume of 20,000 gallons or more.
- Assess exposures and assign support units to protect critical infrastructure.
- Ensure adjacent responders utilize respiratory protection due to hazardous off-gassing.
- Prepare for extended operations time.

Post-Incident Actions

- Conduct post-incident care briefing for towing personnel.
- Assist with scene cleanup.
- Remain on scene to provide protection during vehicle loading.
- Consider Engine Company escort to tow yard in the event of reignition during transport.
- Consider hot wash or after action review to evaluate/improve tactics.

Version 1.0
May, 2025

SCENE SAFETY

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WATER SUPPLY/STANDPIPE LOCATIONS

Water supply is the singular most critical resource in the management of lithium-ion battery fires. Standpipes are located at the following mileposts:

East/West "Mainline" Turnpike		Northeast Extension I-476 (North/South)
250.8 (E/W)	337.2 (E/W)	26.3 (N/S)
330.9 (E/W)	338.0 (E/W)	27.7 (N/S)
335.6 (E/W)	354.4 (W)	29.2 (N/S)
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INFRASTRUCTURE PROTECTION

Responders should take measures to protect PA Turnpike exposed infrastructure adjacent to the fire to minimize damage from extreme heat and liquid runoff of hazardous materials. Critical infrastructure elements include:

- **Tunnels**
- **Bridges**
- **Overpasses**
- **Drains**
- **Service Plaza Buildings**
- **Service Plaza Fuel Areas**
- **Open Road Tolling Gantries**
- **ITS Device Infrastructure***

**ITS Device Infrastructure refers to roadside equipment supporting CCTV cameras and Dynamic Message Signs*

TOOLS & RESOURCES

The Pennsylvania Turnpike Commission has invested in several tools to assist contracted Fire Departments with lithium-ion battery fire suppression. These tools include Emergency Plugs, Fire Blankets, and Underbody Nozzles.

These tools will be carried on PA Turnpike Maintenance vehicles and can be provided upon request at an incident scene. See the reverse of this page for more information about the vehicles which carry these tools.

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Electric Vehicle / Lithium-Ion Battery Fire Response Guidelines

PENNSYLVANIA STATE POLICE - Pennsylvania State Police (PSP) are responsible for protecting and securing the incident scene, which includes assisting with the setup of temporary traffic control measures. If necessary, PSP personnel may provide emergency medical aid until Emergency Medical Services arrive. PSP shall also coordinate with PA Turnpike Maintenance to assess any need for a "Plan X" closure of the roadway. PSP personnel operating near any Lithium-Ion battery fire should consider use of breathing protection equipment (e.g. SCBA).

EMERGENCY MEDICAL SERVICES - Emergency Medical Services personnel are responsible for attending to any injuries on scene, while coordinating patient transport with other responders and Turnpike personnel. Patients requiring air medical flights shall be transported to nearby landing zones off of Turnpike property whenever possible. Any EMS personnel operating near a Lithium-Ion battery fire shall consider the use of breathing protection equipment (e.g. SCBA).

CONTRACTED SPILL RESPONSE TEAMS (CSRT) - Contracted Spill Response Teams provide expertise in the safe remediation of hazardous materials spills and leaks at incidents which occur on Commission property. In the event of hazardous runoff generated by a Li-Ion battery fire, CSRTs may work in cooperation with county-level Hazardous Materials Response Teams (HMRT). [need to get into if HMRTs will be dispatched for all Li-Ion fires because CSRTs don't have to be Act 165 certified]

AUTHORIZED SERVICE PROVIDERS - Authorized Service Providers (ASPs) are tasked with safely loading and removing all vehicles involved in a fire and assisting with debris cleanup. ASPs shall arrive with the appropriate equipment and engage in close coordination with Fire Department personnel to determine when the vehicle is safe to load and transport, and request an engine company escort if desired. Any transported vehicle(s) shall be taken to the ASPs facility and stored **outdoors** in an area that is (minimum) 50 feet away from any structures or combustible materials in all directions.

MAINTENANCE UTILITY WORKERS - Maintenance Utility Workers (MUWs) assist PA Turnpike customers and provide critical Traffic Incident Management support services. MUWs which are first on scene of a reported vehicle fire should safely assess the involved vehicle and advise the Traffic Operations Center of conditions. This report should indicate if the vehicle is known (or suspected to be) a hybrid or fully electrified vehicle. Upon the arrival of additional responders, MUWs shall assist with traffic control and backlog monitoring. MUW vehicles may also carry specific tools to assist with mitigtaing lithium-ion battery fires.

PTC MAINTENANCE - Satua inte noteatri iam menatua mendienatid imoent, visque fat, sed fic terore consuam prae, tessus perviris ommo Cas consum, omplis. Cidemqua virmaxim niciam publiaecii sed clare cote hosulis retis.
Od intemusquam adhui iam. O tra L. Marium ingulto Catiam publiis signoculem prehebatius cupicio con hos sentisque culla tu et; nicur lin strena, quondactam foredio nsulis. Romantem is, scit, nimactu robus, conlosuloc ium hortiae plicae intea nihi,

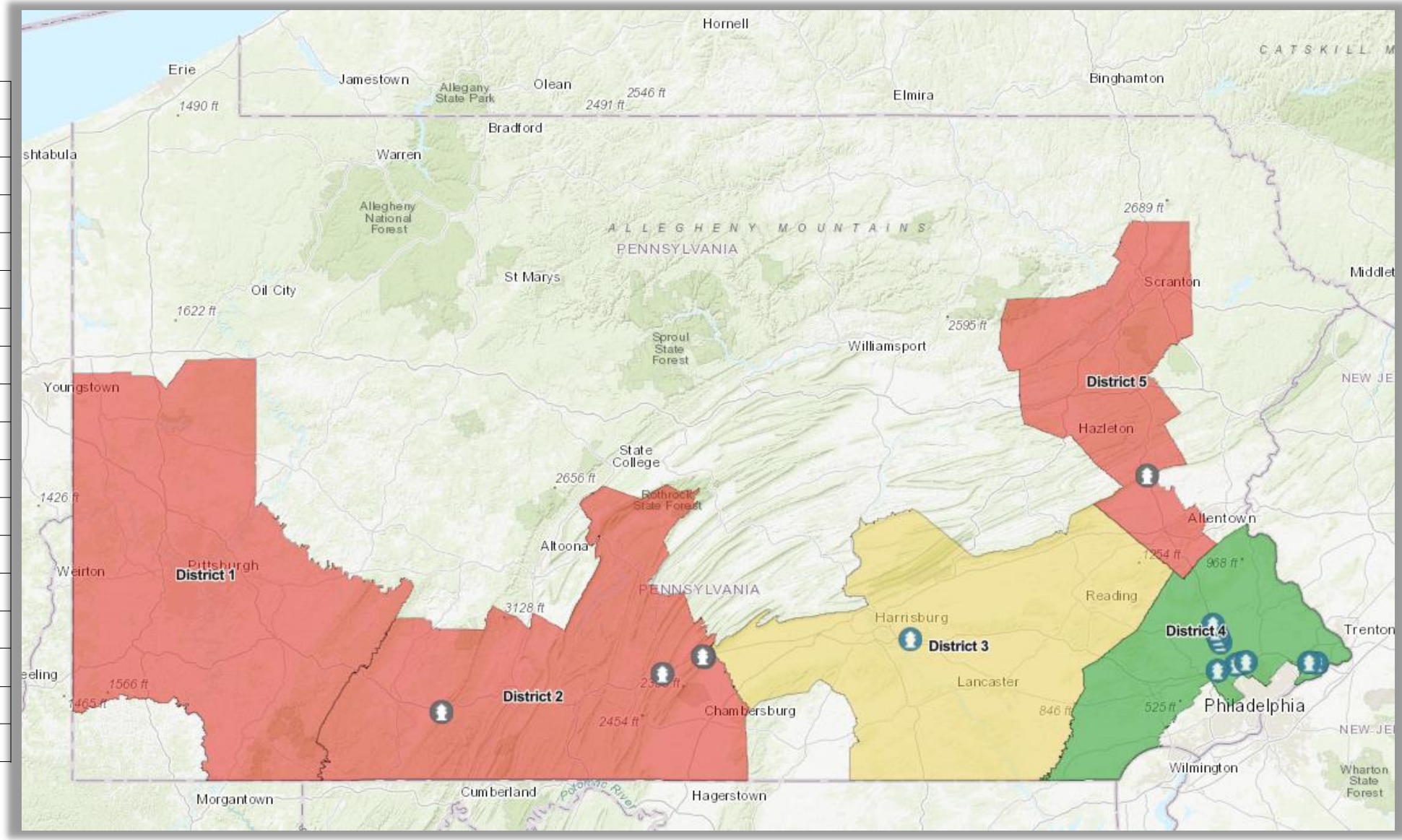
PTC TUNNEL WRECKERS / GUARDS - Satua inte noteatri iam menatua mendienatid imoent, visque fat, sed fic terore consuam prae, tessus perviris ommo Cas consum, omplis. Cidemqua virmaxim niciam publiaecii sed clare cote hosulis retis. Od intemusquam adhui iam. O tra L. Marium ingulto Catiam publiis signoculem prehebatius cupicio con hos sentisque culla tu et; nicur lin strena, quondactam foredio nsulis. Romantem is, scit, nimactu robus, conlosuloc ium hortiae plicae intea nihi,

TRAFFIC OPERATIONS CENTER - Upon notification of a Lithium-Ion or electric vehicle battery fire, immediate request a county Hazardous Materials Response Team.

Version 1.0
May. 2025

Planning for Li-ion Fires on the Pennsylvania Turnpike

Standpipe Location	District
Allegheny Tunnel	2
T250.8	3
Tuscarora Tunnel	3
Blue Mountain Tunnel	4
Kittatinny Tunnel	4
A26.3	4
A27.7	4
A29.2	4
A30.9	4
T338	4
T337.2	4
T336.9	4
T335.6	4
T330.9	4
T356.2	4
T354.4	4
Lehigh Tunnel	5



Monroeville Fire Department: EV Fire Preparedness

Location

District 1 | I-76 | T49.4 E - T63.2 E / T56.6 W - T47.7 W

Critical Infrastructure

The infrastructure that needs to be protected includes: Overpasses, Bridges, ORT Gantries, Toll Booths, and Service Plazas

Table 1. Overpass

Road	Location
Hulton Rd	49.5 E
Redd Rd	50.6 E
Milltown Rd	50.7 E
Unity Trestie Rd	52.4 E
Millers Ln	52.7 E
Saltsburg Rd	53.6 E
Center Rd	54.9 E
Beatty Rd	55.4 E
Old William Penn Hwy	56.2 E
William Penn Hwy	56.3 E
Pittsburg Int	56.5 E
Northern Pk	56.7 E
Abers Creek Rd	58.5 E
Murrysville Rd	59.6 E
Harvision Rd	61.7 E
SR 130	63.1 E
Total Overpasses	**16**

Table 2. Bridges

Crossing	Location
Creek	50.3 E
Leechburg Rd, Little Plum Creek, and Siple St	52.0 E
Westmoreland Heritage Trail	58.8 E
Lyons Run and Turtle Creek	59.0 E
Total Bridges	**4**

Table 3. Toll Booths

Name	Location
PA Turnpike Pittsburgh Interchange	57.0 E
Total Toll Booths	**1**

Table 4. Service Plazas

Name	Location
Oakmont Plum	49.3 E
Total Service Plazas	**1**

Water Sources

We determined suitable water bodies using county specific land cover data from Pennsylvania Spatial Data Access. This land cover data was developed from 2000 satellite imagery, so it is not up to date. There may be other water sources available nearby that fit this criteria, so it is up to the department's discretion when in the field whether to use this information.

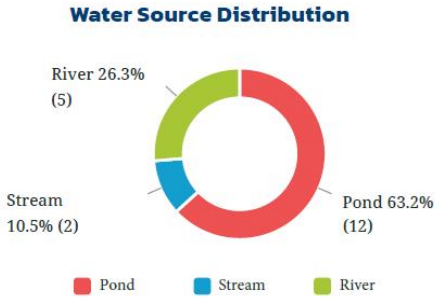
Potential water sources must:

- Be over 1 acre in area
- Be within 2 miles of the turnpike

The lack of standpipes in District 1 is a hindrance to fire prevention on the turnpike. If standpipes get installed in District 1, it would decrease the need to look for other water sources in a high stress and fast moving situation.

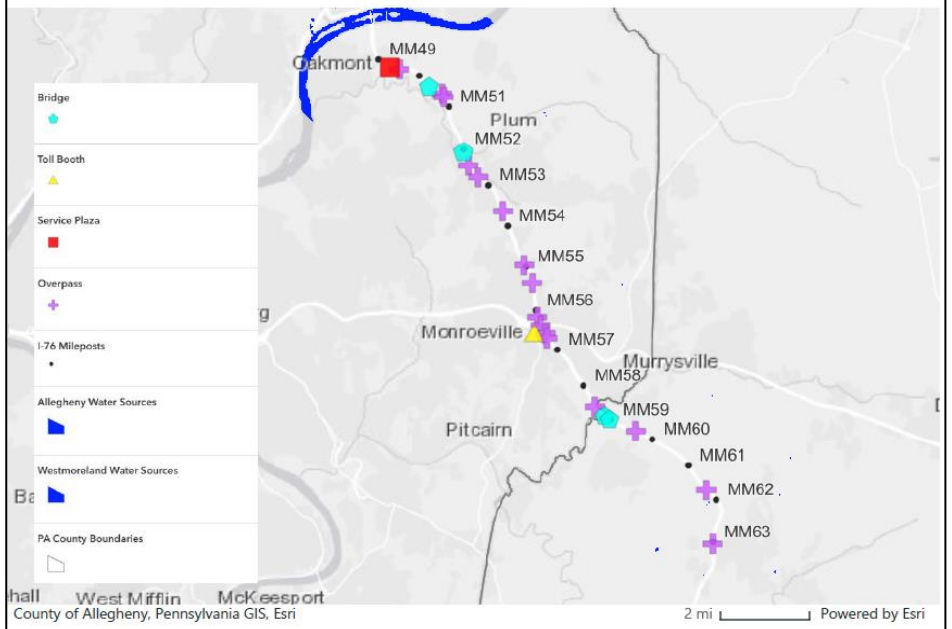
Table 5. Water Source Distribution

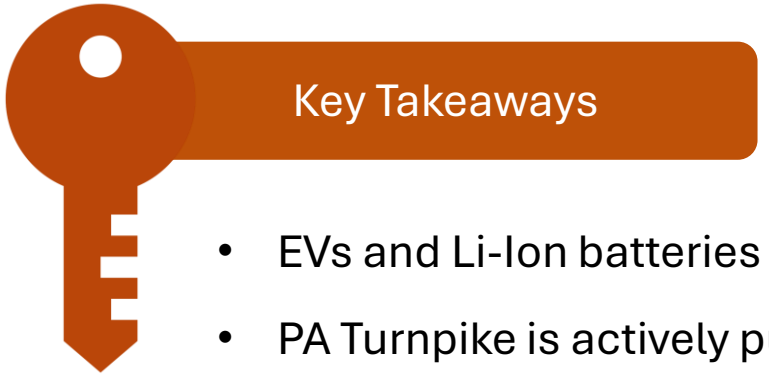
Water Source	Count
Pond	12
Stream	2
River	5
Standpipe	0
Total	**19**



Map

Map Link: https://driveeng.maps.arcgis.com/apps/mapviewer/index.html?webmap=b0c6f3017ee045429fbf55522a3faeaf



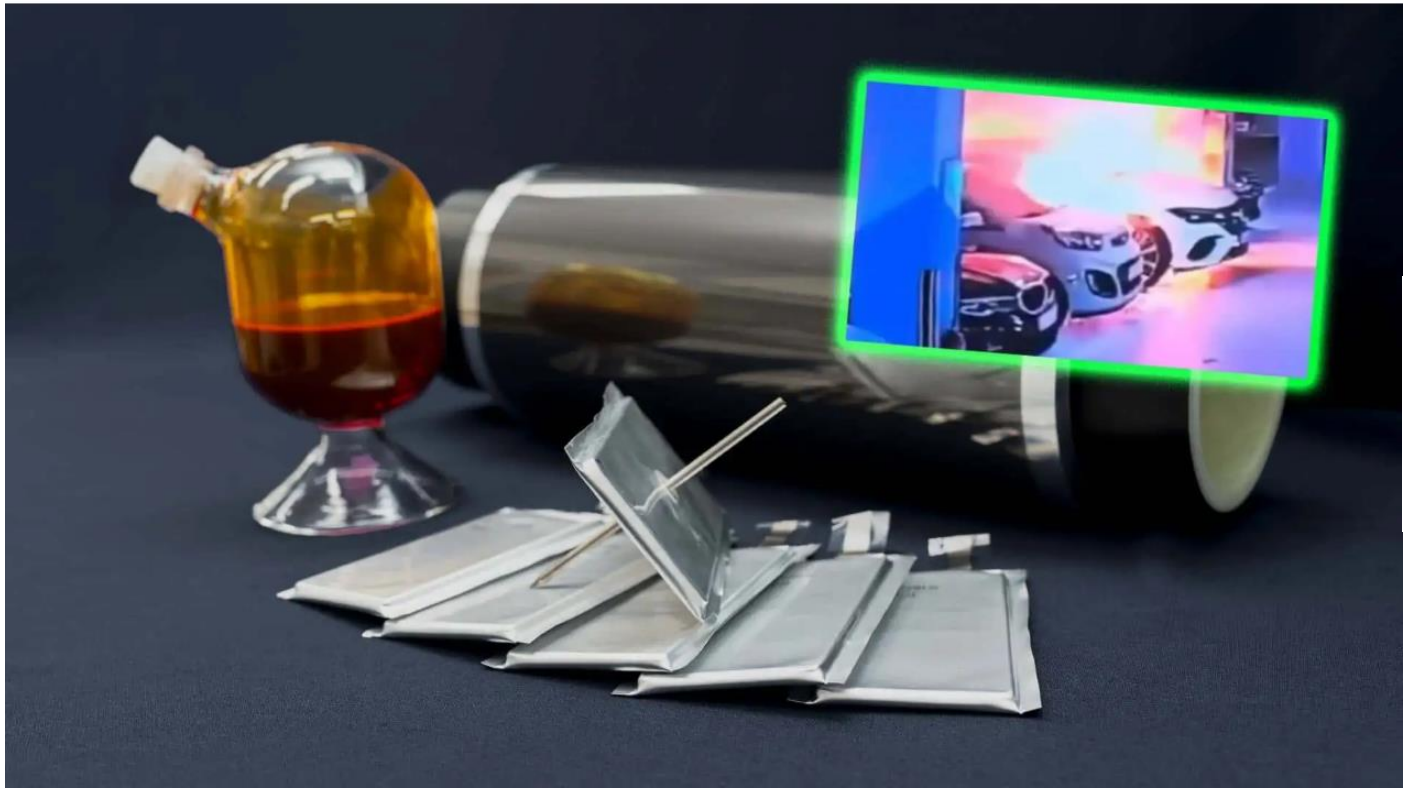


Key Takeaways

- EVs and Li-Ion batteries are here to stay
- PA Turnpike is actively pursuing early action items to improve firefighting efforts.
  - More complex (and expensive) options remain on the table.
  - Emphasis is needed for tunnel operations improvements related to fire.
- **Water is KING! Find out where it is and how to get a lot of it….quickly.**
  - **Don’t pierce**
  - **Don’t puncture**
  - **Don’t foam**
  - **Don’t be lured in by every new invention being marketed as the “singular solution”**
  - **Let it burn IS a viable option**
- Training and local level coordination is critical. Engage EVERYONE you can.

LG Chem Just Solved Thermal Runaway In EV Batteries

Seen scary EV fires that seem impossible to douse? LG Chem says it has a breakthrough solution for that.



South Korean battery maker LG Chem—which supplies EV batteries to Tesla, Ford and many others—says it has a breakthrough solution to prevent such fires. Its battery researchers worked with a special engineering team at the Pohang University of Battery Technology in South Korea to develop a special layer within the battery pack to suppress thermal runaway, which causes batteries to burn uncontrollably.

LG Chem says it plans to conduct safety testing in large-capacity EV batteries through 2025, and it can be applied to mass production in a short period of time. In automotive parlance, a short period of time can be at least a few years, if not decades. Either way, if LG Chem can make this available commercially down the line, it could play a huge role in improving public sentiments about the safety of EV batteries—not just in Korea, but across the globe.

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