



Peer Exchange Report

Emergency Operations and TSMO Peer Exchange

Purpose And Overview

NOCoE's Emergency Operations and TSMO In-Person Peer Exchange is intended to share knowledge, best practices, and innovations and to foster on-going collaboration where professionals can learn from each other's experiences and identify effective strategies.

The peer exchange aimed to enhance regional resilience by aligning strategies with industry standards and regulatory requirements. The exchange contributes to continuous improvement, ensuring transportation systems, management and operations are safer and more resilient in the face of disasters.

The peer exchange was a two-day in-person exposure to various aspects of the topic, taking place on April 30 and May 1, 2024.

Staff from specific state and local DOT programs were invited to speak and attend about their experiences on the topic and to share their local and regional perspectives.

Program Summary

The Emergency Operations and TSMO peer exchange was an in-person, 2-day long meeting. There were six plenary sessions and a site visit for the two day long program.

1. Federal Resources on Emergency Operations

The peer exchange kicked off with presentations from FHWA and FEMA, offering an insightful overview of actions and strategies on dealing with emergency. Emphasis was placed on how to tackle multi-faceted emergency threats through proactive measures. FHWA focused on their incident reporting while FEMA discussed their national preparedness system. Important takeaway from this segment was that disasters begin and end at the local level and every incident is unique!

2. Multiagency Coordination for Emergency Operations

There were four presentations which touched the importance of multiagency coordination for emergency operations. A presentation on I-95 bridge collapse was significant as it prompted swift response, with temporary road up in 12 days; Live Feed went viral and well-accepted by the public.



Figure 1: Live Stream Feed of I-95 Bridge Repair by PennDOT

Organizational & Operational Models for Emergency Response-NCHRP Report 1088: This presentation outlined three important lessons regarding emergency operations within agencies i.e., Be intentional about Emergency Management; Be prepared to scale up response; and Institutionalize Emergency Management Program.

Multi-Agency Emergency Management Coordination was presented by Washington State DOT where they discussed the statewide Virtual Coordination Center (VCC) to plan, prepare, respond and operate to emergency situations.

Texas DOT presented a case study on Regional Emergency Operations where they talked about their VEOCI software which supports their communication during emergency event operations.

3. Emergency Planning and Preparedness

The presentation on Emergency Planning and Preparedness from a TSMO perspective at NCDOT discussed pre storm and post storm efforts to prepare for all types of emergencies. Pre-season readiness involves touching base, updating plans, and practicing storm procedures at least twice a year for heightened awareness and preparedness.



Figure 2: Post-Disaster Dashboard by NCDOT for Efficient Communication

FHWA presented on Crowdsourcing for emergency operations where they talked different crowdsourced data types and provided successful examples on where crowdsourced data was used to tackle emergency operations.

EOps Site Visit-DDOT

Peer exchange participants were taken to DDOT's Emergency Operations Fusion Center and Traffic Management Center to observe their latest infrastructure and daily operations, gaining insights into real-time traffic management and emergency response coordination. The snippets from the site visit are attached below.



Figure 3: Virtual Coordination Center (VCC) by WADOT



Figure 4: Peer Exchange Participants Visiting DDOT's Fusion Center and Traffic Management Center

4. Planning for a More Resilient System and MPO Updates

USDOT presented on the importance of having proactive planning for resilient emergency operations and management. A resilient i.e., proactive-based planning system removes transportation vulnerabilities and reaction planning.

MDOT presented on the Baltimore's Francis Scott Key Bridge collapse. In 269 seconds – a bridge that took 5 years to build and provided 47 years of transportation mobility, collapsed into the lower Patapsco River, taking six construction workers' lives with it. The presentation emphasized having a data-driven,

post-disaster design inclusive of critical interdependencies, current and future threats, and long-term community needs that can result in resilient infrastructure for years to come. Additionally, the peer exchange invited panelists from the Oregon Metro and Atlanta MPO to provide updates on the on-going emergency operations and TSMO efforts at the local government level.

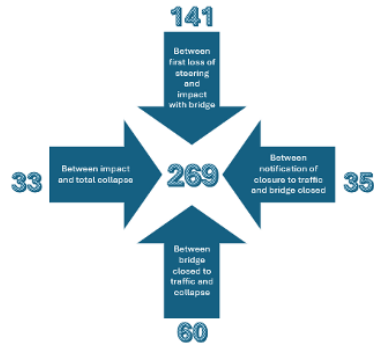


Figure 5: Timeframe of FSK Bridge Collapse

Poll Question/Answers

A poll was set up during the peer exchange, panelists were asked to participate in the poll Q/A session and responses were displayed live.

1. What is your organization’s definition of emergency operation in the context of Transportation Systems Management and Operations?

Answers: All hands on deck; readily available resources; efficient hierarchy and move infrastructure rapidly to the location of need, Pre-identified resources, staffing; All mode coordination; Interoperability and strong communication within the agencies.

2. Does your organization have an emergency operations plan?

Answers: MPOs have regional evacuation plans, DDOT has walkout plan, other agencies have emergency operation plans incorporated into their TSMO plans.

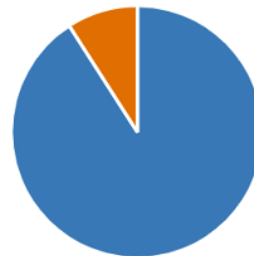
3. Is this your first time participating at a NOCoE Peer Exchange?

Answers: Only 2 participants out of 25 have previously been a part of NOCoE’s peer exchange.

4. How informative was the Emergency Operations and TSMO peer exchange?

Answers:

5 (Very Informative)	10
4 (Informative)	1
3 (Mostly Informative)	0
2 (Somewhat Informative)	0
1 (Not Informative)	0



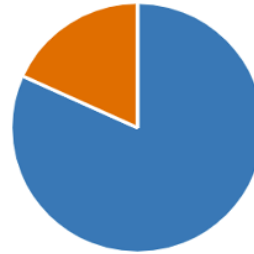
5. What did you think of the 2-day in-person peer exchange format?

Answers: 82% of the participants thought the 2-day full peer exchange was informative as they preferred the in-person format. There was an opinion of having a different room-layout with on-site lunch provisions. Another participant suggested that fewer plenary sessions would be ideal.

6. How likely are you to register again for a NOCoE peer exchange?

Answers:

● 5 (Very likely)	9
● 4 (likely)	2
● 3 (Neither likely nor unlikely)	0
● 2 (Unlikely)	0
● 1 (Very unlikely)	0



7. What other Emergency Operations and TSMO topics need to be further explored in future NOCoE research/events?

Answers:

- Multi-modal and critical services interdependencies.
- Partnering with locals on emergency response. FIFA World Cup, Event Transportation Management
- Effective use of social media, mass media, and newer data for imminent planning for, response during, and recovery from emergency events
- Models and example case studies for communication interoperability.
- Local agency partnerships with state agencies
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- “Coordinating with other agencies - maintaining relationships, establishing expectations, documenting roles/responsibilities, creating MOUs”
- How to build a resilient and redundant multimodal system for emergency operations and evacuation, e.g., repurposing bike and ped lanes, and/or using them to evacuate people....
- Possibly cross-border coordination- e.g., for FIFA events? Examples and practices for coordination with other agencies- transit, public works, etc. for different types of regular incidents and emergency events.

Next Steps

NOCoE will review the key takeaways from this peer exchange work on next steps. Based on participants' feedback, it is anticipated that priority topics that need to be further explored are:

- Successful regional partnerships
- Consistent communication strategies
- Seamless data analysis and communication methods

Further, NOCoE plans on continuing to deliver “agile” peer exchanges.

Appendix A: Attendees

1. Franbi Franco, FHWA (Cybersecurity)
2. Mike Mclelland, FHWA (Natural Disasters)
3. Jason Carnes, FHWA (Security and Infrastructure)
4. Kofhi Wakhisi, ARC
5. Pam Vasudeva, Washington State DOT
6. Dave Adams, PennDOT, District 6
7. Greg Jones, FHWA Office of Operations
8. Dale Picha, Texas DOT, San Antonio
9. Pat Bye, Consultant
10. Deb Matherly
11. Doug Noble, ITE
12. Charles Tenbrook, District Department of Transportation
13. Kelly Wells, North Carolina DOT
14. Caleb Winter, Metro
15. Ahnaf Morshed, ITE
16. Kevin Viita, ITS America
17. Bob Roller, FEMA (All Hazard Response)
18. Tony Leingang, Washington State DOT

19. Richard Montanez, City of Philadelphia
20. Sandy Hertz, Maryland DOT
21. Nicholas Ramfos, AASHTO
22. Matt Hardy, ITE

Appendix B: Resources Identified

1. <https://www.ncei.noaa.gov/access/billions/>
2. <https://www.houstontx.gov/mayor/Resilient-Houston-20200518-single-page.pdf>
3. <https://transportation.org/ctssr/resources/>
<https://www.trb.org/Publications/Blurbs/183144.aspx#:~:text=NCHRP%20Research%20Report%201093%3A%20An,better%20organized%2C%20understood%2C%20and%20worked>
5. <https://nap.nationalacademies.org/catalog/27286/state-dot-models-for-organizing-and-operating-emergency-response-a-guide>
6. <https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4957>
7. <https://www.marketplace.org/shows/marketplace-tech/training-for-the-next-crisis-with-serious-games/>
8. <https://gis.oregonmetro.gov/social-vulnerability-explorer/>
9. <https://www.fhwa.dot.gov/legsregs/directives/orders/51811c.cfm>
10. <https://www.fema.gov/pdf/plan/slg101.pdf>

Appendix C: Agenda

TUESDAY, APRIL 30, 2024

Time	Topic	Speakers
9:00 am	Welcome and Introduction	
–	• Facilitator Welcome	• Nick, NOCoE
9:30 am	• Agenda Review	• Ahnaf, ITE
(30 min.)	• Summary of expectations for this peer exchange	• Ahnaf, ITE
	• Questionnaire Survey	• Ahnaf, ITE
	Segment 1 – Federal Resources	
9:30 am	• FHWA EOps Program Overview (20-min.)	• Jason Carnes, FHWA
–	• Guide for All-Hazard Emergency Operations -	• Mike McClelland, FHWA
10:30 am	FEMA (20-min.)	• Robert Roller, FEMA
(60 min.)	• Q&A (20-min.)	

10:30 am	BREAK	
10:45 am – 11:45 am (60 min.)	<u>Segment 2 – Multiagency Coordination for Emergency Operations</u> • I-95 Birdge Emergency Response (20-min.) • Organizational & Operational Models for Emergency Response - NCHRP Report 1088 (20-min.) • Q&A	• Richard Montanez and David Adams (City of Philadelphia and Penn DOT) • Deb Matherly, MIRT LLC • Pat Bye, Consultant
11:45 am	LUNCH BREAK	
12:45 pm – 1:45 pm (60 min.)	<u>Segment 3 – Emergency Planning and Preparedness</u> • Emergency Planning and Preparedness from a TSMO perspective at NCDOT (40-min.) • Q&A	• Kelly Wells • North Carolina DOT • Ahnaf, ITE
1:45 pm	BREAK	
2:00 pm – 3:45 pm (105 min.)	<u>Segment 4 – Emergency Operation Site Visit and Peer to Peer Discussion</u>	• Charles Tenbrook, Jeremy Bersin, • Donte Lucas • DDOT
3:45 pm – 4:00 pm (15 min.)	<u>Day Wrap Up</u> • Summary and what to expect next • Day closing remarks	• Ahnaf, ITE • Nick, NOCoE

* All times shown are Eastern Standard Time.

WEDNESDAY, MAY 1, 2024

Time	Topic	Speakers
9:00 am – 9:15 am (15 min.)	<u>Recap from first day</u> • Highlights discussed on day 1 and objectives for day 2	• Ahnaf, ITE

<p>9:15 am – 10:45 am (90 min.)</p>	<p><u>Segment 5 – Planning for a More Resilient System</u> • Roadmap to Resilience: How Proactive Planning Paves the Way for Easier Mitigation (25-min.) • From Crisis to Continuity Navigating Resilience and Recovery in Interdependent Systems (25-min.) • Q&A</p>	<p>• Shawn Johnson, USDOT • Sandy Hertz, MDOT</p>
<p>10:45 am</p>	<p>BREAK</p>	
<p>11:00 am – 12:30 pm (90 min.)</p>	<p><u>Segment 6 – Workforce Training and Communication Strategies for Emergency Operations</u> • Case Study: Regional Emergency Operations (25-min.) • Multi-Agency Emergency Management Coordination in Washington State (30-min.) • Q&A</p>	<p>• Dale Picha, TxDOT • Pam Vasudeva and Tony Leingang, Washington State DOT</p>
<p>12:30 pm</p>	<p>LUNCH BREAK</p>	
<p>1:30 pm – 3:00 pm (90 min.)</p>	<p><u>Segment 7 – Putting Your Actions into Plans</u> • Crowdsourcing for Emergency Operations (50-min.) • MPO Updates on Emergency Operation in the TSMO Realm (30-min.)</p>	<p>• Vishali Shah, AEM Corporation and Greg Jones, FHWA • Kofi Wakhisi, Atlanta MPO • Caleb Winter, Portland Metro</p>
<p>3:00 pm – 3:30 pm (30 min.)</p>	<p><u>Day Wrap Up</u> • Gaps, Potential Actions, and Next Steps • Closing Remarks</p>	<p>• ITE • Nick, NOCoE</p>

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