



## Role of Transportation Management Centers in Emergency Operations Guidebook

The purpose of this guidebook from the Federal Highway Administration (FHWA) Transportation Management Centers Pooled Fund Study is to increase communication, collaboration, and cooperation among Traffic Management Centers (TMC) and emergency response agencies so they can effectively respond to a variety of situations from a localized traffic incident to major regional events such as hurricane evacuations. The key is to remove the technical and institutional barriers that prevent TMCs from fully supporting emergency operations.

The guidebook provides specific recommendations on a variety of topics, including the following:

- Phases of emergency response planning;
- Where TMCs and emergency operations personnel can work together;
- Description of the National Incident Management System (NIMS) and Incident Command System (ICS);
- Role of TMCs during and after an emergency;
- How to maintain cooperation between transportation and emergency management agencies; and
- Recommendations for additional activity.



*Photo courtesy of the Minnesota DOT.*

*The Minnesota Department of Transportation (Mn/DOT) joined other state departments, volunteer agencies, and the Minnesota National Guard to start operation of the State Emergency Operations Center in St. Paul within hours of the I-35 bridge collapsing over the Mississippi River.*

*[The TMC is] “the hub of a transportation management system, where information about the transportation network is collected and combined with other operational and control data to manage the transportation network and to produce traveler information.”*

***Institute of Transportation Studies  
University of California-Berkeley***

The Institute of Transportation Studies at the University of California-Berkeley notes TMCs are well suited to assist before, during, and after emergencies. Following are the emergency support activities TMCs can provide:

- Planning for anticipated events (hurricanes, winter storms, etc.);
- Detection, verification, and monitoring of roadway conditions;
- Assessing transportation system damage and capacity;
- Identification and management of public safety lifeline routes;
- Traffic control strategies to support emergency response and evacuation;
- Management of detours and evacuation routes;
- Dispatch of maintenance and support vehicles;
- Coordination with local transportation agencies;
- Development of event-specific operational strategies to address response phases;
- Warnings and public information/traveler alert requirements;
- Stabilization of traffic demand in the affected area; and
- Postevent debriefings.

To assist TMCs the guidebook includes a series of checklists along with information on best practices such as the example at left that demonstrate how TMCs already are supporting emergency operations.

Specific recommendations detail how TMCs can work with emergency operations centers (EOC) on preparedness activities such as what role the TMC will play in incident response; how the TMC will provide support for the incident command system; and what emergency operations procedures TMCs will offer for small and large-scale traffic incidents, planned events, and large-scale regional emergencies.

The key to a successful role for TMCs in emergency operations is planning. Emergency incidents usually occur with little to no warning. That is why TMCs should prepare for incidents through planning, training, and practice prior to an incident in the “pre-event” phase. Incident response lies at the core of a TMC’s mission. Rigorous, sustained, and coordinated pre-incident preparedness ensures an efficient and effective handling of future incidents. The guidebook highlights the pre-event activities TMCs should undertake, including the following:

- Establish an emergency preparedness working group;
- Perform a needs assessment;
- Develop a TMC Emergency Operations Plan (EOP) and Standard Operating Procedures (SOP);
- Develop a comprehensive preparedness guide; and
- Develop a Continuity of Operations (COOP) Plan.

A needs assessment, for instance, will identify the goals and objectives the TMC wants to accomplish; measurable targets; gaps and deficiencies; and a summary of needs for the Transportation EOP. Some of those needs might be the evaluation and selection of detour routes or the implementation of real-time communications/software links between the TMC and EOC.



Source: Cambridge Systematics, Inc.

The needs assessment involves the development of several important plans. An EOP is the coordinating document outlining an organization’s concept of operations during an emergency. It provides information on potential situations and planning assumptions, roles and

responsibilities, administration, and maintenance. The guidebook provides specific information on each of the sections and relates them back to the TMC’s role.

The guidebook includes specifics on COOP planning, which is a way transportation agencies define activities to perform if an emergency results in no access to essential operating and maintenance facilities, vehicle fleets, systems, and senior management and technical personnel.

The guidebook goes on to address the type of training TMCs should have and includes a list of recommended training topics along with information on drills or exercises that will test the TMC’s capability to execute their actions in an effective and integrated manner.

After planning comes the response and recovery phase and the guidebook goes into detail on the types of activities TMCs can perform. During response, TMCs can implement their operating procedures, conduct infrastructure surveillance, support security through closed circuit TV, and be involved in outreach to the media. TMCs must



Photo courtesy of the FHWA Road Weather Management Program.

respond to a variety of events, including traffic and large-scale incidents and large-scale planned events and national special security events. The guidebook gives detail on the initial and continuing recovery phases along with information on restoration activities.

The final phase in emergency operations is postevent. Large-scale events often create a need for immediate follow up to address any resulting damage and mitigate continuing threats to the public. TMCs play a central role in coordinating traffic recovery, but their capabilities may also lend themselves to supporting and/or coordinating recovery from a large nontraffic incident. The guidebook provides recommendations for ways TMCs can support an EOC and first responders.

After-action assessments of specific events and the development of improvement plans also provide a good opportunity for TMCs and Emergency Operations agencies to build relationships and coordinate their activities outside of the pressure of the event itself. Information is provided on how TMCs can effectively perform both of these tasks. The final part of the guidebook is a review of all TMC and EOC documents.

