Synthesis of Case Study Presentations

AASHTO Extreme Weather Event Symposium
May 21, 2013

EXTREME WEATHER EVENTS: SHARED LESSONS LEARNED AND BEST PRACTICES

Outline

- Diversity of state DOT experiences with extreme weather
- Frequently mentioned best practices
  - Preparation and maintenance
  - Monitoring and documentation
  - Communications and coordination
- Big Picture Lessons Learned
  - Teamwork
  - Leadership
- Q&A

Impacts of Extreme Weather on Transportation

Highlights from Case Studies

Extreme Weather Poses Serious Risks to State DOTs across the Country

- Blowing dust has been a contributing factor in more than 1,000 vehicle crashes in Arizona since 2000.
- Minnesota has experienced 117 flash floods since 1970.
- Estimates of damage due to Hurricane Sandy are at $71 Billion.
- Colorado is experiencing record heat and drought.

Best Practices

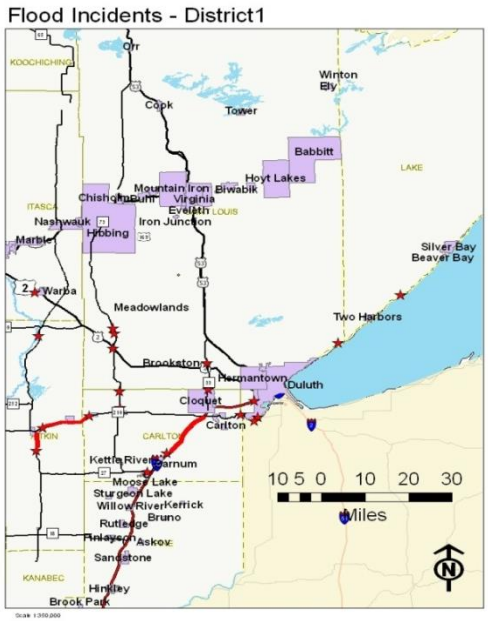
Preparation and Maintenance, Monitoring, and Communication

Best Practices: Preparation and Maintenance

- It pays to be ready and pre-plan
  - Have an incident response plan before an emergency
  - Improve the plan following an event
- Stage equipment for immediate response
  - E.g., traffic control devices for troopers to keep with them
- Practice exercises with real time roadway closures
- Actively monitor and maintain storm drainage

Best Practices: Monitoring and Documentation

- Pre-event "monitoring"
  - Monitor "problem" areas
    - E.g., burn areas
  - Install sensors to monitor conditions and alert staff of issues
    - E.g., DUST Monitoring System
    - E.g., CO DOT rain gages
- Post-event damage data tracking
  - Use tools to track damage online
  - Understand what needs to be tracked
  - Track data to meet FEMA requirements



Best Practices: Communications and Coordination

- Debrief after major incidents
- Use all forms of communications:
  - Social media
  - Overhead message boards
  - 5-1-1 system and travel alerts
  - Text messages

Lessons Learned

Teamwork and Leadership

Lessons Learned: Teamwork

- Every single case study mentioned the importance of team work and cooperation, both internally and externally
- Relationships, cooperation, and resource-sharing is essential
- Needs
  - Increased partnership and cooperation between agencies
  - More public outreach and education
  - More resources towards designing effective methods of communication

Lessons Learned: Leadership

- Often, effective emergency response requires someone with the command authority to make decisions quickly
- Leadership, a "can-do" attitude, and effective operations are key to responding to extreme weather events

Questions?

Discussion Questions

- *Show of hands:* How many people in the room have had to respond to a serious extreme weather event in the past year? Three years?
- Does anyone want to share their own experiences handling extreme weather? How were your experiences similar to or different from what our speakers presented?
- Does anyone have any other "best practices" or "lessons learned" that they would like to add to what has already been presented?
- What do state DOTs need in order to better prepare for extreme weather events? How can state DOTs improve their emergency response?
- What are the greatest challenges and barriers state DOTs face in increasing resilience to extreme weather?