

THE INCORPORATION OF TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO) ENABLES UTAH DOT TO EFFECTIVELY MANAGE THE 2017 SOLAR ECLIPSE AND RESPOND TO A LARGE SCALE EVENT

By Utah Department of Transportation (UDOT)

IN THIS CASE STUDY YOU WILL LEARN:

1. How Utah's TSMO program helped the state address a wide range of transportation challenges.
2. Why communications is an essential aspect of transportation operations.
3. That utilizing multiple TSMO strategies is the key to responding to a large-scale event.

BACKGROUND

Every minute of roadway closure has the possibility of causing harm: to first responders, motorists, infrastructure and the movement of goods and services. While UDOT's official TSMO planning efforts are relatively young, they actively employed collective TSMO knowledge and strategies for both the 2017 total solar eclipse event and a tanker truck fire incident that occurred on January 18, 2018.



The UDOT Traffic Operations Center opened its doors in 1999 and the agency has been planning strategic deployments of supporting projects since that time. A new set of TSMO guidelines helped to refine and refocus projects and initiatives including:

- A comprehensive and well-planned traffic management network
- Fiber optic connectivity
- Partnerships with local jurisdictions
- Effective traffic signal management efforts
- Real-time traveler information

2017 TOTAL SOLAR ECLIPSE

A total solar eclipse event happens once in a lifetime. It was estimated that over one million additional vehicles would be traveling through Utah before

and after the eclipse to the site of full totality. While Utah was a pass through state for visitors heading to rural southeastern Idaho to view the total eclipse, there was still a significant amount of planning required to manage these vehicles. Communications staff were honed into the possible traffic challenges well in advance, and because of the partnerships and relationships that the UDOT Traffic Management Division built over years of successful TSMO and traffic management implementation, a plan was already created and ready. UDOT developed a scalable and tactical response to the solar eclipse event and broadcast that response plan to all local and national media outlets, contractors, neighbor states and other affected parties.

UDOT utilized its existing travel demand management TravelWise program to encourage motorists to avoid the area if they were not part of the special event traffic, and to rethink their trip by going earlier or staying later. This message helped significantly to spread out the traffic volumes into more manageable groups. UDOT also started messaging through all channels early and relied heavily on ITS deployments to share the message.

The safety of staff, mobility of the public, public image, focus on returning the roadway to a free flow state and utilizing alternate routes with sound traffic signal retiming were all focused on during this incident.

TANKER TRUCK FIRE - JANUARY 18, 2018

Just as rush hour began on January 18, 2018, the UDOT Traffic Operations Center received notification of a tanker truck fire. The notification stated that



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the tanker truck was at a critical intersection of the interstate that carries over 300,000 vehicles per day. There was a full freeway closure for several hours, melted pavement and significant traveler delay. The traditional traveler information started by utilizing Dynamic Message Signs, the UDOT Traffic app and website, the 511-phone line, social media and by notifying partner agencies. Additional TSMO strategies that supported this event included: ramp metering, signal timing, traveler information and traffic incident management. Several different UDOT divisions worked closely with the Unified Fire Agency, Utah Highway Patrol, Utah Emergency Management Division, local municipalities, the Utah Governor's Office, local and national media and the Utah Division of Environmental Quality during this event.

The key to success within this incident was the reliance on TSMO strategies and UDOT's Incident Management Team (IMT) relationships with local law enforcement, developed over the last 20 years.

The tanker fire incident utilized all of UDOT's resources and planning efforts for managing a successful emergency event. Still, an after action review of the event identified potential improvements, including addressing alternate routing issues and potential data elements that could be captured to ensure better planning for a future event.

CONCLUDE WITH A CHALLENGE

While UDOT has been doing effective traffic management for more than two decades, the incorporation of Transportation Systems Management and Operations (TSMO) provides a greater emphasis on the goals and strategies of effective traffic management. UDOT also understands that a common message across jurisdictions helps for the traveling public to trust the message.

Over the last several years, UDOT's public approval rating has been steadily ticking upward and now sits at a near industry high of 75% positive public approval. UDOT is now shooting for a 90% public approval rating.



Melted pavement that was repaired in a short period of time thanks to good coordination.

FURTHER INFORMATION

NOCoE Knowledge Center: <https://transportationops.org/knowledge-center>