

CORRIDOR WIDE PLANNING AHEAD OF THE AMTRAK CASCADES DERAILMENT

BACKGROUND

On the morning of December 18, 2017, Amtrak train 501 derailed near DuPont, Washington, causing railcars and one locomotive to fall onto Interstate 5 (I-5), hitting several passenger cars and shutting down the freeway. I-5 southbound was ultimately blocked for 57 hours, an impressive accomplishment considering the necessity of surveying the incident for the investigation by the National Transportation Safety Board (NTSB), the process of removing a 270,000 pound locomotive, and the need for inspections and repairs before the area was cleared to open. Approximately 65,000 vehicles per day had to be diverted on this southbound route and forced onto local roads and highways.

While the use of drones to speed up the investigation played a large role in the quick clearance (see case study), as did the pre-staging of maintenance crews, much of the success of the clearance, the efficient detours, and the overall management of the incident was due to corridor wide planning efforts that had been undertaken via the I-5/Joint Base Lewis-McChord (JBLM) Corridor Joint Operations Working Group.



JBLM CORRIDOR JOINT OPERATIONS WORKING GROUP

The purpose of the JBLM Corridor Joint Operations Working Group is to “improve and maintain an efficient and effective multi-agency emergency response in an operation for all types of freeway incidents on the corridor of Interstate 5 through JBLM.” As the group’s charter states, the corridor is “constrained by the closed military installation on one side and a very minimal roadway infrastructure on the other” causing considerable congestion in the event of an emergency and creating major challenges for the region due to low-capacity arterials. To combat the geographical and regional issues in this corridor, the group was formed to improve interoperability, coordinate responder activities through a Unified Command, institutionalize best practices for Traffic Incident Management (TIM), and ensure a forum is maintained to communicate issues, ideas, and solutions.

Core agencies for the I-5/JBLM Joint Operations Group are the Washington State Patrol (WSP), Washington State Department of Transportation (WSDOT-Olympic Region), and Joint Base Lewis-McChord (JBLM) Installation Command. Serving with the JBLM are its Fire Chief, Provost Marshall, Traffic Section, Emergency Planner, HAZMAT Chief, Chief of Police, Directorate of Emergency Services Operations Chief, and Emergency Management. Ancillary partners listed in the Charter (but not limited to these as any agency is welcome in the area): Washington State Department of Ecology, Pierce and Thurston County (Sheriff, Emergency Management, Public Works, Medical Examiner/Coroner, etc.), City of DuPont, City of Lakewood, and area responders for Fire/Emergency Medical Services. The group meets monthly, is conducted under a signed charter, and fosters the key TIM goal of getting to know their partners before they meet them at an emergency.

While the TIM component of the group is becoming standard practice for regions around the country, this JBLM Corridor Joint Operations Working Group was uniquely prepared to efficiently manage an incident as major as the Amtrak crash in how it:

1. Developed in-depth, pre-planned detours
2. Coordinated consistent public communications

CASE STUDY: CORRIDOR WIDE PLANNING AHEAD OF THE AMTRAK CASCADES DERAILMENT

PLANNING FOR INCIDENTS AND PRE-PLANNED DETOURS

A major part of the JBLM Working Group is the establishment of pre-planned detours in the event of an incident. While Washington State DOT has developed pre-planned detour routes along the entirety of the corridor, specific plans for an incident near the JBLM were conducted through the JBLM Working Group. In fact, in August 2017, several months before the Amtrak derailment, the JBLM Working Group actually conducted joint incident response exercises and trainings for the bypass where the derailment occurred. This exercise involved the use of pre-planned detour routes, including a detour through JBLM, allowing local traffic to use the military base. In the hours after the crash occurred traffic was routed through Center Drive, through the military base, providing efficient detours for a large portion of the affected traffic.

The working group also worked with the National Guard installation at Camp Murray and local agencies in the region to pre-plan detour routes along state highways as well as city and county roads. After the derailment, vehicles were re-routed along these pre-planned routes, in some cases having to go great distances on local roads to bypass the freeway closure.



PUBLIC COMMUNICATIONS

Clear and accurate public communications were a major component of the successful rerouting and clearance after the Amtrak derailment and is another aspect of the JBLM Working Group. Two types of communication are involved in an incident of this magnitude:

1. An overview of the efforts occurring at the scene (rescue/recovery)
2. Regional transportation system: how to travel, detour routes, etc.

For this event, the complexity of the location meant communicating with all of western Washington.



As was pre-planned, during the incident all of the agencies' public information officers (PIOs) were stationed at a Joint Information Center. A primary function of the Joint Information Center is to ensure that there is a coordinated message coming from all responsible agencies and that every jurisdiction is able to communicate effectively. The result of the Joint Information Center was clear and concise messaging to the traveling public, leading to successful and safe detours to accommodate the approximately 65,000 daily travelers along the corridor.

WHAT WAS LEARNED

While the planning and coordination undertaken by the I-5/JBLM Corridor Working Group led to a successful and safe clearance of the incident, several key lessons were learned in the process:

- » **ADDITIONAL POTENTIAL FOR REROUTING VIA JBLM:** In the middle of the event additional actions by JBLM assisted with rerouting. This included closing off the base to their own personnel, which is a significant action: JBLM has a "total active population of nearly 210,000 inhabitants, making it the fourth largest military installment worldwide by population." This means, in any given day the JBLM is in the range of the 3rd largest city in Washington.
- » **THE BENEFITS OF REMOTE-CONTROL SIGNALS:** While remote technology isn't the highest priority investment for day-to-day needs, from the perspective of managing incidents they are a priority in the ability to avoid having to send crews out.
- » **MISSING DATA SOURCES FOR TRAVEL TIME CALCULATIONS:** For future incidents, it would be beneficial to have a method to introduce travel time calculations in areas where WSDOT instrumentation does not exist, especially along rural routes.
- » **COMMON COMMUNICATIONS PLATFORM FOR RESPONDERS:** A common platform for responders to share information would make for more efficient communications. The I-5/JBLM Joint Operations Group is in the process of implementing this for use by all agencies.

FURTHER INFORMATION

WSDOT Q&A Website: www.wsdot.wa.gov/Rail/questions-answers-derailment

NTSB Website: www.nts.gov

Case Study: [Drone Use During Amtrak Cascades Derailment](#)

¹ <https://www.aks.com/5-largest-military-bases-in-the-world/>

² <http://www.geonames.org/US/WA/largest-cities-in-washington.html>