MDT EMERGENCY OPERATIONS AND DISASTER PLAN

by

John Taylor, P.E.
Deputy Director

David Kack
Research Associate
and
Cody Salo
Research Assistant

Western Transportation Institute
College of Engineering
Montana State University

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ABBREVIATIONS

ASAP	As Soon As Possible
AVL	Automatic Vehicle Location
CAD	Computer Aided Dispatch
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
CONOCO	Continental Oil Company
DEQ	Department of Environmental Quality
DHS	Department of Homeland Security
DMS	Dynamic Message Sign
DNRC	Department of Natural Resources and Conservation
DOD	Department of Defense
DSR	Damage Survey Report
ECP	Emergency Coordination Plan
EDSP	Employee Disaster Survival Plan
EOC	Emergency Operations Center
EOD	Emergency Ordinance Disposal
EODP	Emergency Operations and Disaster Plan
ERG	Emergency Response Guide
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GIS	Geographic Information System
HAR	Highway Advisory Radio
HAZMAT	Hazardous Material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HQ	Headquarters (MDT Headquarters)
IC	Incident Command (er)
ICP	Incident Command Post
ICS	Incident Command System
IM	Incident Management

LEOC	Local Emergency Operations Center
ISB	Information Services Bureau
MAST	Military Assistance to Safety and Traffic
MDT	Montana Department of Transportation
MHP	Montana Highway Patrol
MUTCD	Manual of Uniform Traffic Control Devices
NFPA	National Fire Protection Association
NIMS	National Incident Management System
NRC	National Response Center
OSHA	Occupational Safety and Health Administration
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
SAR	Search and Rescue
SDES	State Disaster and Emergency Services
SERC	State Emergency Response Commission
SOP	Standard Operating Procedures
UCS	Unified Command Structure
USCOE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USDOTERG	United States Department of Transportation Emergency Response Guidebook
USFS	United States Forest Service
WMD	Weapons of Mass Destruction

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1. EXECUTIVE SUMMARY

To effectively respond to any emergency (disaster or incident), the Montana Department of Transportation (MDT) has developed an Emergency Operations and Disaster Plan (the Plan). The Plan defines a Concept of Operations; the processes and procedures, roles and responsibilities, for implementing an effective response and otherwise restoring the transportation system. The Plan is a "living" document; training, exercises, and experience with its implementation will undoubtedly suggest changes that will improve it.

The Plan, which defines MDT's responsibilities is important so that a coordinated effort with other agencies provides and effective and efficient response to any incident. The Plan also complies with Executive Order 17-04 which states that the Governor, "…do hereby formally recognize and adopt the National Incident Management System (NIMS) as a guide toward the development of Montana's approach to prevent, prepare for, respond to and recover from domestic incidents, regardless of the cause, size or complexity." MDT's authority to act in any incident is also based on State statutes (MCA 2-15-25, MCA 23 and MCA 60).

The ultimate responsibility for emergency management within MDT rests with the agency Director. However, MDT has decided that the Maintenance Division Administrator will be the Incident Commander for MDT during emergencies. Continuity of operations will be maintained in the event of an emergency, or absence of the Director or other key personnel. The established succession is:

- Director
- Deputy Director
- Maintenance Division Administrator
- Engineering Division Administrator
- District Administrators
- Maintenance Chiefs

The response by MDT should be linked to the level of the incident. There are three levels of incidents: Level I incidents are isolated accidents that are routinely handled by the local authorities, Level II incidents are situations that cannot be resolved with, or exceeds the capacity of, available local resources from the impacted area, and Level III incidents are catastrophic events that require massive amounts of resources from local, state, and federal governments.

The overriding issue among all possible response actions is SAFETY. The *personal safety* of MDT employees and the general public is the first consideration in determining what to do and what *not* to do. There are no exceptions.

All responses should be based on the Incident Command System. The Incident Command System (ICS) is the management tool for command, control and coordination of a response, and provides a means to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing the incident and protecting life, property and the environment. The Incident Command System is also based on the Unified Command Structure (UCS). UCS is the consistent, systematic means of organizing a variety of autonomous agencies into one concerted emergency response effort.

A key to the Incident Command System is that there is only one Incident Commander. The Incident Commander is the individual with the ultimate authority to direct the actions of all other responders at the incident scene. Should an MDT employee be the first on the scene of an incident, they become the *de facto* Incident Commander.

Depending upon the level of the incident, Emergency Operations Centers (EOCs) may be activated to act as a command post for the response to the incident. Depending upon the level of the incident, the State Emergency Operations Center (SEOC) may be activated. There would also be the possibility that any or all of the other EOCs: Department (MDT/EOC), District (DEOC), or Local (LEOC), Emergency Operations Centers may need to be activated.

Each Headquarters Division, District, Maintenance Division and Section has predefined responsibilities for accomplishing the tasks described throughout the document. The roles of MDT Executive Management are defined as is the nature of coordination that must take place within the Department.

Appropriate hazard specific responses are described for both manmade and natural incidents. Incident types discussed are: terrorism, homeland security, Weapons of Mass Destruction, earthquakes, floods, blizzards, wildfires, avalanches and landslides. Action items such as immediate response, evacuation, utility and lifeline repairs, and the possibility of secondary events are described.

The Helena Campus Survival Plan (Chapter 6) describes the unique responses and actions that must be taken in the event of a major incident at, or in the vicinity of, the Helena Campus, which is the location of MDT Headquarters. Natural and manmade disasters may be of such magnitude that Campus building occupants and people in the surrounding area might be forced to evacuate and establish off-site command posts at which to restore and continue essential services. The Survival Plan spells out numerous responsibilities; however, it emphasizes that it is the ability of each individual to *adapt* and to cope with virtually any need or demand of the moment that will result in successful management of the incident. A proper response will also likely occur if adequate training has occurred.

Training is outlined for Hazardous Materials Awareness and protocols of Incident Command. Training unique to the Helena Campus should be provided to line employees who form various “groups” responsible for evacuation, traffic control, facilities operations and damage assessment, search and rescue, medical support, “camp” staging areas, communications and initial standard operating procedures. Group team members are required to perform specific tasks during emergency situations at the Campus.

In response to an incident, MDT would be part of a coordinated effort, an effort coordinated through the use of the Incident Command System. By training MDT employees to respond based on the guidelines in the Plan, MDT should have a coordinated, effective and efficient response to any manmade or natural disaster (incident) which may occur in the State.

2. INTRODUCTION

Disasters, also referred to in this Plan as emergencies or incidents, frequently strike without notice. When a disaster occurs, it may affect many people; they rightly expect government to provide the necessary resources and to take the lead in minimizing loss of life, providing shelter and otherwise reestablishing stability and restoring normal operations of the transportation infrastructure. Montanans could be exposed to many hazards, all of which have the potential to disrupt operation of the transportation system, cause causalities, and result in major property damage. Disasters may be naturally occurring or caused by deliberate or accidental actions of groups or individuals.

If a disaster were to occur, restoring and maintaining the highway infrastructure during and after the occurrence of a major disaster is critical to recovery, and can only be accomplished if Montana Department of Transportation (MDT) employees are adequately trained *before* the disaster occurs to maintain operations and respond appropriately. MDT plays a unique and critical role in assuring the well being of its employees and Montana citizens, rapidly restoring damaged infrastructure, and supporting and coordinating with other State and local agencies. Access and egress to and from the affected area must be reestablished for passage of emergency vehicles and for evacuation of MDT employees and the public.

To effectively respond to an emergency, the Montana Department of Transportation must be prepared and have an Emergency Operations and Disaster Plan (the "Plan") that spells out processes and procedures as well as defines roles and responsibilities for the agency to implement an effective response and restore the transportation system. The Plan defines MDT actions that are intended to minimize loss of life and property, protect the integrity of the transportation infrastructure, repair damaged highways and structures, and to restore the flow of traffic as soon as possible. The Plan is the principal source of documentation for achieving an effective response to any incident, whether natural or man made.

Every MDT Headquarters Division and District has responsibilities for developing and implementing the specific tasks described in the Plan. Overall development, maintenance and successful implementation of the Plan will be directed by the MDT Disaster and Emergency Services Coordinator.

The Plan is intended as a "living" document. Therefore it must be flexible in its implementation. That is, once developed, experience with its implementation will undoubtedly suggest changes that will improve it.

In addition to this Introduction, major sections of the Plan include the:

- Executive Summary
- Emergency Operations Planning and Responsibilities
- Emergency Operations Response and Procedures
- Hazard Specific Responses
- Helena Campus Employee Disaster Survival Plan
- Training
- Summary

- Recommendations
- Appendices

The MDT Emergency Operations and Disaster Plan, The Helena Campus Employee Disaster and Survival Plan (Chapter 6), and the Highway Incident Management Response Guide (the “glove box” document) have been developed as “stand-alone" documents.

3. EMERGENCY OPERATIONS PLANNING AND RESPONSIBILITIES

Montana is exposed to many hazards, all of which have the potential to disrupt the transportation system, create causalities, and cause property damage. Possible natural hazards include, but are not limited to: earthquakes, floods, forest fires, severe weather events, tornadoes, volcanic eruptions, dam failures, and avalanches. Other situations that could cause disruptions include, but are not limited to: acts of terrorism, civil disorder, hazardous material incidents, nuclear accidents, biological, chemical, foreign animal diseases, and pandemics.

To effectively respond to a disaster, the Plan addresses processes, procedures and defines roles and responsibilities within the agency, as well as, the Department's defined role in the State of Montana's Emergency Coordination Plan (ECP). As shown in Figure 3-1, MDT is part of an overall response to a disaster.

It is intended that all Department personnel comply with those organizations having primary authority. In Montana, local government (city and/or county) and Indian tribal authorities are responsible for emergency management and initial response within their jurisdictions. Depending on the nature and size of the incident, State and/or Federal assistance may be requested if available local or tribal resources to deal with the event are inadequate.

Local governments have primary authority; however, this does not mean that any local government has authority over use of Department assets. During an emergency MDT assets have pre-defined MDT uses; any other request for use must be approved thorough appropriate channels. The Department will coordinate with all involved agencies to carry out the Department's collective responsibilities. It is of utmost importance that MDT coordinate the Department's responses thoroughly so that it can tackle emergencies with a truly synergistic effort.

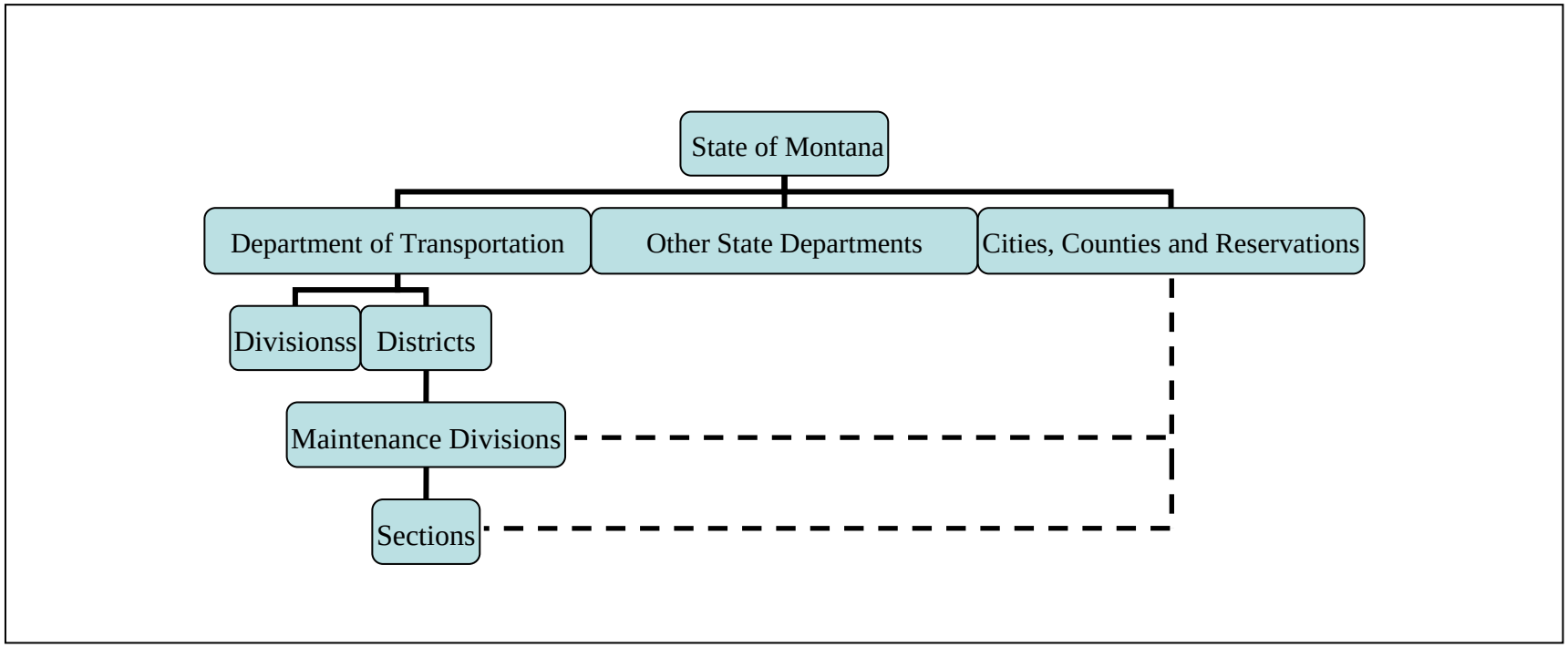

Figure 3-1: MDT Plan and Response Structure

Chapter 3 defines the authority of MDT to act in response to a disaster, MDT's succession of command, MDT's operations, general information about the Plan, and an introduction to levels of emergencies, the phases of emergency management, and emergency declarations.

3.1. MDT Authority and Responsibilities

The Montana Department of Transportation's mission is to serve the pubic by establishing a transportation system that emphasizes safety, environmental preservation, cost-effectiveness and quality. MDT's authority to act in any incident is based on State statutes (MCA 2-15-25, MCA 23 and MCA 60).

The ultimate responsibility for emergency management within MDT rests with the agency Director. However, MDT has decided that the Maintenance Division Administrator will be the Incident Commander for MDT during emergencies. Incident Command (IC) roles and responsibilities that will be used by MDT are defined in Chapter 4 of the Plan. For the Department to be effective it will take a collaborative effort of all Department personnel to function as outlined in this Plan.

3.1.1. Succession of Command

Continuity of operations will be maintained in the event of an emergency, or absence of the Director or other key personnel. The established succession is:

- Director
- Deputy Director
- Maintenance Division Administrator
- Engineering Division Administrator
- District Administrators
- Maintenance Chiefs

3.1.2. Organization Operations

As discussed in the Plan, MDT Headquarters Divisions, Districts, Maintenance Divisions and Section offices are obligated to define and document emergency operations functions in addition to their normal duties. In the event communications are lost with Headquarters, Districts, Divisions and Sections must be able to continue functioning and to take over response and recovery roles to ensure that the transportation system is brought back online as soon as practical. Each office is responsible for establishing procedures for:

- Operations during emergencies (which should be as close to day-to-day operations as feasible).
- A roster of persons to be called for emergencies, for continuity of operations to begin damage assessment and recovery efforts, and initiation of the Incident Command System to manage the situation.

- Compliance with the Department's and State defined responsibilities as outlined in this Plan.
- Training – a minimum of one tabletop or function exercise per year to prepare for potential emergencies and to revise operations plans as required.

For more information on how each Headquarters Division, District, Division or Section should respond in a disaster, see Chapter 4, Section 4.8 and Appendix B.

3.2. Plan Development and Maintenance

The Plan is the principle source of documentation of the Department's emergency management activities. Every headquarters Division, District, Maintenance Division and Section has some responsibility for developing or accomplishing tasks in some part of the Plan. Overall development, maintenance, and coordination of the Plan will be accomplished by the Department's Disaster and Emergency Services Coordinator.

The Plan does not address all possible scenarios nor does it provide complete "how to" instructions. However, the policies and procedures in the Plan will translate organizational tasking into specific action-orientated checklists.

3.2.1. Hazard Risk Analysis

The identification of potential hazards is the basis for mitigation efforts, and response and recovery planning. From an emergency operations planning perspective, the determination of what hazards merit special attention, what actions must be planned for, and what resources are likely to be needed should be identified and appropriate plans implemented. Specific identified hazards and responses are defined in Chapter 5. Over time, the threat from particular hazards may change, so the hazard analysis will require periodic updates.

Updates would include the identification of any new hazards, the knowledge of what incidents have occurred or could occur i.e. avalanche, dam failure, earthquake, terrorism, winter storm, etc., and which hazards may no longer exist. It is important to recognize hazards and their potential consequences. In updating the Plan, MDT should be asking what is the potential frequency, magnitude and intensity, location, duration, seasonal pattern, speed of onset and available warning of any hazard. What are the consequences of each identified hazard? What resources are available to respond to any new hazard, and how do we adjust the Plan based on this new information?

3.2.2. Evaluation/Validation

As the Plan is developed and reviewed, it should be checked for its conformity to applicable regulatory requirements and the standards of State and Federal agencies. Further, MDT should conduct "table top" exercises (as described in Chapter 7) involving representatives of each Division and District as a practical and useful means of validating the Plan.

In order to further review the Plan, MDT should consult with other states and federal governmental entities to allow them to suggest improvements based on their accumulated experience. Hazard-specific responses (Chapter 5) require periodic review to be certain that assumptions haven't changed and the identified method of response and recovery haven't changed as well.

3.2.3. Plan Maintenance

To remain useful, the Plan must be updated based on new information and/or requirements. A remedial action process will allow MDT's Disaster and Emergency Services Coordinator to identify and correct problems with the Plan. A remedial action process will capture information from exercises, post-disaster critiques, self-assessments, audits, administrative reviews, and the like, which may identify deficiencies that need to be corrected. Remedial actions may require revising assumptions and operational concepts and changing organizational tasks.

Further, the Plan should be reviewed on an annual basis, or as appropriate, or when significant issues and problems are identified through remedial action process and/or annual reviews. The annual review can be used to highlight new requirements (e.g., legislation) that need to be included in the Plan. The Plan must be maintained to be useful to MDT and its employees.

3.3. Training and Exercises

The Department will periodically provide training and conduct exercises to test the Plan and its procedures. The primary reason for this activity is to assure the Department maintains a readiness mode and to provide the basis for evaluating and modifying the Plan and procedures in order to maintain current operational conditions.

Each administrative area should conduct a functional or tabletop exercise on an annual basis. The exercises should be coordinated and presented by the Disaster and Emergency Services Coordinator. The exercises should be designed to test and evaluate the Plan and the responses by MDT employees.

Training and exercises are important because the Department and its employees are not involved with disasters on a day-to-day basis. Therefore, in order to have an effective response during a disaster, it is critical to support the training and exercises for emergencies and disasters.

Chapter 7 provides detailed information on training and exercises.

3.4. Emergency Declaration and Work

In general, a response to an emergency will occur without there first being a formal emergency declaration or proclamation. It is important, however, to document all work undertaken in a response situation, should reimbursements be available at a later date.

Typically, the Governor may declare a State of Emergency. However, certain MDT personnel also have the ability to make emergency declarations. Those individuals are:

- District Administrator or Maintenance Chief, when estimated repair work based on an emergency will cost $50,000 or less.
- District Administrator or Maintenance Chief, *with the concurrence of the Maintenance Division Administrator*, when estimated repair work will cost more than $50,000, but less than $200,000.
- Maintenance Division Administrator or Director when estimated repair work will exceed $200,000. For emergency declarations when estimated repair work will exceed $200,000 the Maintenance Division Administrator or Director will brief the Federal Highway (FHWA) Administration.

All federal agencies have the authority to assist local and State jurisdictions in situations involving direct and immediate threat to life or major property damage. However, all federal assistance is supplemental to State effort and can only be applied for if State and local forces, including those in the private sector, have been committed, exhausted, or are inadequate for the task.

Congress has recognized State and local emergency management responsibilities in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, amended:

- "It is the intent of Congress, by this Act, to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damages which result from […] disasters (Sec. 101(b), emphasis added)."
- "The purpose of this title is […] to vest responsibility for emergency preparedness jointly in the Federal Government and the several States and their political subdivisions" (Sec. 601).

The elected leadership in each jurisdiction is legally responsible for ensuring that necessary and appropriate actions are taken to protect people and property from the consequences of emergencies and disasters. Any request for Federal assistance would come from the State's Emergency Operations Center. See Appendix G for further information.

3.5. Categories of Incidents

The need for State or federal assistance is based on the level of the incident. As used in this Plan, there are three levels of incidents [1], which are:

Level I incidents are isolated accidents that are routinely handled by the local authorities. Level I incidents typically include, but are not limited to: traffic accidents, hazardous materials spills, floods, fires, and other natural disasters that require traffic control and/or limited repairs and debris removal.

Level II incidents are situations that cannot be resolved with, or exceeds the capacity of, available local resources from the impacted area. Level II emergencies generally involve several state agencies and may involve more than one district. An MDT District emergency operations center (Section 4.7) may be or may not be activated. Level II emergencies may or may not require a proclamation of a State of Emergency by the Governor and may or may not require a Presidential declaration of emergency or disaster.

Level III incidents are catastrophic events that require massive amounts of resources from local, state, and federal governments. The State Emergency Operations Center (SEOC) is activated to coordinate emergency management and response operations. MDT's headquarters emergency Operations Center (MDT/EOC) is activated to coordinate MDT operations and response with the state EOC. District EOCs will also be activated to coordinate local response and provide resources to the affected area. Level III emergencies will almost always involve a proclamation of State of Emergency by the Governor and a Presidential declaration of emergency or disaster.

3.6. Components of Emergency Management

Governments discharge their emergency management responsibilities by taking the following four interrelated actions: Mitigation, Preparedness, Response, and Recovery [2]. These actions

comprise a systematic approach, with each action building on the accomplishments of the preceding one.

- **Mitigation** actions are lasting, often permanent, activities designed either to prevent the occurrence or reduce vulnerability in ways that minimize the adverse impact of a disaster or other emergency.
- **Preparedness** is the establishment of programs, defining roles and responsibilities, and development of systems to more effectively respond to an emergency and to support and enhance response and recovery efforts. Planning, training, and exercises are among the activities commonly conducted in the preparedness phase.
- **Response** efforts are time-sensitive actions carried out to save lives and property, as well as to stabilize the situation and speed recovery. Response activities include direction and control, warnings, road repairs, traffic control, and other operational activities to provide a transportation system for the movement of people, goods, and services.
- **Recovery** involves restoration of the infrastructure and facilities. Short-term recovery actions are used to assess damages and return critical support systems to minimum operating standards; long-term recovery may continue for years. These efforts are critical in restoring the State's economic viability and the rebuilding of communities.

3.7. General Response Assumptions

The following assumptions are integral to implementation of the Plan, and are related to how MDT will function in response to any emergency.

- MDT will already have begun its assessment of roadways and structures to determine their ability to carry traffic and alternate routing of traffic and coordination of emergency response to the affected area will have been planned.
- Local (city and county) and tribal governments are primarily responsible for initial emergency response actions within their jurisdiction.
- If local and tribal resources are inadequate to achieve an effective response to an incident, a request for State assistance may be initiated.
- Montana's (hence, MDT's) ability to respond is based on available resources. If the response requirements are greater than State (or Department) capabilities, federal assistance will be requested.
- Priorities for search and rescue as well as infrastructure evaluation will be assigned and responses based on those priorities.
- MDT must be prepared to sustain operations and address immediate needs for a minimum of 72 hours from the inception of the incident.

3.7.1. Individual Responsibility

It is every individual's responsibility to be accountable for their own actions. It is understood that employees will likely attempt to attend to immediate family well being before they will

become available for participation in response and recovery efforts. MDT must account for this situation in planning for the Department's response to a disaster.

3.7.2. Preservation of Records

The Information Services Bureau (ISB) is responsible for the preservation of vital records and measures to ensure reconstitution of records, if necessary. Electronic Data Processing is a critical support element of the Department's ability to function. ISB has developed and implemented an electronic data processing disaster recovery plan that should enable continued operations during and after catastrophic disasters or national security emergencies.

3.7.3. Relationship Between Emergency and Normal Functions

It is important to understand that emergency functions should generally parallel routine day-to-day functions to the extent possible. Resources will be assigned to personnel familiar with those tasks whenever possible. It is critical, and should always be attempted, to maintain organizational continuity. In large-scale disasters, however, it may be necessary to draw upon people's basic skills and use them in areas of greatest need. Subject to the approval of the MDT Maintenance Division Administrator, day-to-day functions that do not contribute directly to emergency operations may be suspended for a period of time, for the duration of the emergency, or redirected to accomplish the emergency responsibilities of the Department of Transportation.

3.8. Summary

Chapter 3 introduced how the MDT Emergency Operations and Disaster Plan is integrated into the State's emergency management system. The chapter identified MDT statutory authority to act, and identified the succession of command, so that MDT can continue to function, even after a major disaster.

The chapter then discussed MDT's relationship with other governmental entities; focusing on the precept that local (city and county) and tribal governments have the primary responsibility to respond to an incident.

The next sections of the chapter focused on the assumptions made as a foundation of the Plan, how the Plan must be evaluated and maintained, and how training and exercises can be used to evaluate if the Plan is relevant, or needs to be modified.

Emergency declarations were discussed, and it was noted that certain MDT personnel have the ability to make an emergency declaration. The next section of the chapter discussed the three levels of incidents, and how the level of the incident is related to the magnitude of the response. The next section introduced the four phases of emergency management: mitigation, preparedness, response and recovery. The final section focused on the general assumptions made in how MDT would respond to a disaster.

4. EMGERGENCY OPERATIONS RESPONSE AND PROCEDURES

This chapter discusses incidents in general, and the response and procedures that must take place in reaction to an incident. It discusses the Incident Command System, Emergency Operations Centers, and provides information on the roles of MDT's various "units" including Headquarter Divisions, Districts, Maintenance Divisions, and Sections.

Incidents, as discussed in this Chapter, are unplanned events resulting in disruption of normal flow of traffic at a unique time and location. Incidents may result from either natural or manmade events; cause of the latter may be deliberate or accidental. Any incident may result in the partial or complete shutdown of normal MDT operations.

The purpose of this section of the Plan is to describe actions that MDT employees should take when they happen upon an incident or respond to a request for assistance. Not every conceivable incident type is addressed; rather, appropriate responses to a variety of incident types are discussed. Responses are structured so as to ensure the safety of MDT employees and the public, protection of MDT infrastructure and the environment, restoration of traffic flow, and the dissemination of information to the general public so that they can make informed travel decisions.

4.1. Responder Roles and Responsibilities

The overriding issue among all possible response actions is SAFETY. The *personal safety* of MDT employees is the first consideration in determining what to do and what not to do. There are no exceptions.

Due to the nature of the responsibilities of MDT personnel, there is a significant probability that they will unexpectedly happen upon an incident along the transportation system. There is an understandable inherent desire of people, when confronted with a calamity, to immediately "jump in" and assist those who may be injured. However, doing so may be injurious or deadly to MDT responders. There's an adage that makes the point of sizing up the situation before becoming involved: "Don't just do something – stand there."

If an employee is confronted with a significant incident, there are a number of prescribed actions which, if followed, should assure the safety of the employee as well as initiate the response. Also, if the employee is the first to respond, they become the de facto Incident Commander (see 4.1.1). Upon the arrival of law enforcement and/or emergency service resources, the MDT employee will thoroughly brief the ranking responder and hand-off the Command role to them. The MDT employee should then request instructions regarding what assistance they can provide and remain on-scene until their services are no longer needed. Assistance should only be provided in instances where the MDT employee's safety is assured. The primary responsibilities of MDT employees who are first on-scene are to:

- Assess the situation and take immediate actions to safeguard themselves, other MDT employees and the public. This should only be done if the *personal safety* of the MDT responder is guaranteed.
- Report the incident and relay the situation assessment to the appropriate MDT office as soon as possible. If warranted, the office will notify higher MDT authorities and relay

the assessment information. However, in certain circumstances, it might be prudent to first contact local authorities (e.g., if a vehicle is on fire and its occupants cannot escape). MDT authorities' need to become aware of the situation becomes secondary.

- Provide first aid and other assistance, but only within the envelope of *formal training* received and without compromising *personal safety*.
- Establish necessary traffic control to protect the scene and to alert oncoming drivers. Assistance should be requested if the situation requires a larger and expanded effort such as erecting detour signs, placing traffic control cones or staging pilot vehicles.

4.1.1. Incident Commander

The Incident Commander has authority to direct other responders at the scene. The *de facto* Incident Commander is the first responder to arrive; however; command may subsequently be transferred to another person based on who has primary authority for overall control of the incident. At transfer of command, the outgoing Incident Commander must give the incoming Incident Commander a full briefing and notify all staff of the change in command.

4.1.2. Incident Command System (ICS)

One of the most important "best practices" that has been incorporated into the National Incident Management System (NIMS) is the Incident Command System (ICS), a standard, on-scene, all-hazards incident management system already in use by firefighters, hazardous materials teams, rescuers and emergency medical teams. The ICS has been established by NIMS as the standardized incident organizational structure for the management of all incidents [3]. ICS is based on proven management tools that contribute to the strength and efficiency of the overall system. The following ICS components are taught as part of ICS training:

- Common Terminology
- Modular Organization
- Reliance on an Incident Action Plan
- Manageable Span of Control
- Comprehensive Resource Management
- Integrated Communications
- Establishment and Transfer of Command
- Chain of Command
- Unified Command
- Accountability of Resources and Personnel
- Information and Intelligence Management

ICS is the management tool for command, control and coordination of a response, and provides a means to coordinate the efforts of individual agencies. In fact, the use of ICS is mandated by the Montana Governor's Executive Order No. 17-04 and is used by the State Disaster and

Emergency Services (DES), MDT and local government, law enforcement and most federal agencies.

The Incident Command System lends itself to uniformity of command that is so essential to the successful management of an incident. All responders need to use the same terminology and organizational structure. When they work together managing an incident, there must be a clear understanding of information and immediate knowledge of the chain-of-command. If all agencies "on-scene" are using similar organizational structures and procedures, there should be few differences in operations. In essence, they function as one organization and can be managed as such by the Incident Commander.

One of the most important features of ICS is that it leads to solid working relationships among all personnel involved in the management of the incident. "Trust among responders cannot be developed during a crisis; it must be created through interim activities. Whatever is not working, will get worse during a crisis" [4]. Ideally, incident responders should know each other on a first-name basis. This is an excellent measure of mutual trust and confidence in each other's ability to perform under very stressful conditions.

Federal law requires the use of ICS for response to HAZMAT incidents. Most states are adopting ICS as the standard for responding to all types of incidents. ICS has been endorsed by the American Public Works Association and the International Association of Chiefs of Police, and has been adopted by the National Fire Academy as its standard for incident response.

4.1.3. Unified Command Structure (UCS)

The Unified Command Structure (UCS) is an important element in multi-jurisdictional or multi-agency domestic incident management. It provides guidelines to enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan, and interact effectively. Use of the Unified Command Structure overcomes much of the inefficiency and duplication of effort that can occur when agencies from different functional and geographic jurisdictions, or agencies at different levels of government, operate without a common system or organizational framework. In a UCS structure, the individuals designated by their jurisdictional authorities jointly determine objectives, plans, and priorities and work together to execute them.

Unified Command is a protocol for coordinating responses to incidents by two or more organizations. Under UCS, the Incident Commander interacts only with the ranking individual of other on-scene responding agencies.

MDT will become part of a Unified Command Structure when the State's Emergency Operations Center (SEOC) is activated. MDT may also become a part of a local or regional incident within the Unified Command Structure. The concept of Unified Command provides uniform procedures that enable all involved agencies to perform their roles effectively. Unified Command overcomes many inefficiencies and duplications of effort that occur when functional and geographical jurisdictions, or agencies from different governmental levels, have to work together.

4.2. On-Scene Incident Command

Based on the Incident Command System, an MDT employee, by virtue of being first on the scene, will be the de facto Incident Commander, and will function as such until another local

responder or law enforcement personnel arrives on scene. At that time all pertinent information and Incident Command will be transferred. When transferring command, the individual should get the name and phone number of the new Incident Commander and pass it on to the area office.

If an MDT employee is requested to report to, or comes upon an incident in progress where law enforcement or local responders already are on scene, he or she should report to the Incident Commander and find out if MDT is a required resource and if so, determine what functions are requested of MDT. However, MDT employees should refuse to execute an order if they believe their safety is in jeopardy.

MDT response can only be within MDT training and/or under the direction of the IC when there is assurance of the safety of MDT employees and equipment and that any appropriate safety equipment is provided. This is particularly important for two reasons. First, of course, is to ensure the safety of the MDT responder. Second and often overlooked by all responders, if actions are attempted by employees NOT within the content of their training, those actions may eventually lead to litigation. For example, MDT personnel are not trained in the extraction of victims of vehicle crashes. It is human nature to want to relieve the suffering of crash victims. If an attempt (successful or not) was made to extract someone, it might be alleged that because the employee did not have specific training, the victim's injuries were worsened by the attempt.

Major incidents such as wildfires and natural disasters will generally be staffed with an ICS team (Federal or State) that may request MDT to provide resources to meet the needs of the incident. If requested to respond or provide services (no matter from whom), the name, title, and phone number of the individual requesting the service should be recorded as should be the incident or disaster declaration number.

4.2.1. Traffic Control

Traffic control at incident sites should be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD) to the extent possible.

In situations when an immediate response must be taken to control traffic, the responder may use his/her best judgment and any available devices or equipment, whether in compliance with MUTCD or not, to control the work area and guide traffic through the incident, until proper controls are available. Any long-term modification of standard traffic control practices should be reviewed and approved by the Division Maintenance Chief or his/her designee.

MDT will provide initial traffic control, on MDT routes, at all-hazard incidents if it can be done safely. Once Incident Command has been established and the incident is expected to extend beyond 24-hours, MDT will review the situation and determine the best method for continued traffic control. If the required traffic control can be provided by private industry, MDT will provide the Incident Commander with a list of private traffic control companies to contact to provide further traffic control and a plan that meets MDT and MUTCD standards. The use of contracted traffic control frees MDT personnel to return to normal duties and still promotes the free flow of traffic through the incident site. An example may be the use of a pilot car to maintain traffic flow when smoke from a fire, sight seers, etc., are creating a safety hazards. The same may be true for a HAZMAT cleanup site.

If there is a potential to recover initial traffic control costs i.e. HAZMAT, wildfire, natural disaster, an MMS cost center should be established and the appropriate entity billed for services

provided. Common examples are HAZMAT incidents, truck accidents, rail crossing incidents, etc.

4.3. Phases of Incident Management

There are five phases related to an incident, and they are:

- Pre-incident planning
- Response
- Notifying the public
- Incident clearance
- Post- incident debriefings

These components of incident management are further described as follows:

4.3.1. Pre-Incident Planning

Routine and continuous planning for incidents among regional emergency responders is frequently given inadequate attention. This is not to imply that responders do not train. However, within any emergency response region (usually a county in rural areas), responders sometimes do not train together. While multi-agency simulations may be conducted on an annual or semi-annual frequency, they may be limited to “mega-scale” incidents rather than “routine” incidents. Training together for “what-if” scenarios is essential if responders are to work effectively as a team. Every responder at the scene must know specifically not only his or her own responsibility, but also the role of other responders at the scene.

4.3.2. Response

Responders to management of regional incidents usually include law enforcement, fire departments, towing and recovery companies, local and/or State departments of transportation, search and rescue teams and emergency medical personnel (the latter usually are aligned with regional/local fire departments). In addition, if severe trauma has occurred to one or more victims, helicopters or fixed wing aircraft may be requested to transport victims (once they are stabilized) to major trauma centers for treatment.

Incidents involving Hazardous Materials (HAZMAT) are potentially deadly throughout their management and require unique response procedures. Even if vehicles carrying hazardous materials have not overturned and/or the contents have not spilled or do not appear to be leaking, the consequences of mismanagement can be disastrous. For example, not all combustible gases are visible to the observer. Even though no fire may be present, it can occur spontaneously, resulting in disastrous consequences to responders. Vehicles carrying HAZMAT materials carry placards (see Appendix A) with numbers indicating the contained material. Manuals that easily fit in the glove box of any responding vehicle must be routinely distributed to anyone having incident management responsibilities. Without exception, safety of responders and the traveling public is paramount over all other considerations. When a HAZMAT incident occurs, the facility is usually closed or travel is restricted until it can be determined that the nature and status of the on-board material poses little or no threat to human life.

As a general rule, local responders (usually departments of transportation) will attempt to contain small spills of non-lethal materials as long as their personnel are not at risk in doing so. Cleanup, however, is universally accepted to be the responsibility of the owner of the material being transported. Rarely will public agencies attempt to remove any hazardous substance from the vicinity of the roadway. Even when public agencies contain minor spills (e.g., to prevent environmental degradation), the cost is borne by the owner/transporter of the cargo. Every HAZMAT incident is unique and it becomes the responsibility of the Incident Commander to use his/her best judgment and/or established agency policies as to what actions should be taken.

4.3.3. Notifying the Public

Notifying the traveling public of an incident should be proportional to the magnitude, severity, anticipated duration and type of incident. If the incident is relatively minor and if the MDT Incident Commander believes restricted flow of traffic can occur during management of the incident and/or normal flow of traffic can be restored within an hour or so, recommended measures would include notification of regional electronic commercial media, activation of public electronic media, such as Highway Advisory Radio (HAR) activation of upstream permanent and/or portable Dynamic Message Signs (DMSs) and including the situation on the 511 system. On the other hand, if the incident is anticipated to result in closure of the facility for an extended period, the Incident Commander should take more robust actions to directly and indirectly alert motorists to the situation. In addition to the above measures, messages specific to the incident should be placed on MDT's internet web page showing estimated duration of closure, alternative available routing, and where additional information may be obtained.

4.3.4. Clearance

Secondary crashes from vehicle queuing as a result of primary incidents make up 14-18 % of all crashes. On freeways, these secondary crashes account for 18 % of all deaths [5]. Similarly, on controlled access facilities, where trip lengths generally are longer and drivers may become fatigued or mesmerized by the boredom of driving on a wide-open facility for great distances at high speeds, upstream warnings of any type may go unheeded, resulting in a vehicle that impacts a slowly moving or stopped queue of vehicles at 70 miles per hour or more. The result is frequently multiple deaths and injuries involving many vehicles. Often, these "secondary crashes" are far more severe than the initial incident. Therefore, it is imperative that Incident Commanders make every reasonable effort, within the limits of safety at the primary incident, to clear the roadway and restore normal traffic flow as quickly as possible.

Sometimes an overturned truck may block the entire roadway. One of the first acts of the Incident Commander is to call properly sized and equipped towing and recovery vehicles to the scene. Once it is determined that the contents of the overturned vehicle are not toxic and pose no health risk to responders or the environment, the Incident Commander may order the towing and recovery vehicle to literally push the vehicle to (or over) the side of the roadway.

However, Incident Commanders and towing and recovery firms sometimes are reluctant to take such action, fearing litigation from the owner of the vehicle. In states where it does not already exist, "hold harmless" legislation should be enacted to protect decision makers. Destroying a cargo of goods, irrespective of their value, is virtually always preferable to waiting hours to remove large shipments via conventional means. Waiting traffic queues become longer as a

function of delaying the removal process and the risk for secondary crashes continues to grow until the wreckage is removed.

4.3.5. Post Incident Debriefing

When a major incident occurs, involving response by several regional agencies, the Incident Command System and Unified Command Structure should be utilized to assure that the incident is managed with the utmost efficiency. Usually, that is the case. However, no two incidents are exactly alike; thus, no two incident management scenarios are the same. Sometimes things go wrong. In such cases, responders know that some portion of the Incident Command System did not play out as expected. When this occurs, it is critical that representatives from every responding agency (ideally, the individuals who were on-scene) convene and discuss every aspect of the event beginning with the pre-planning phase and continuing to the point where the Incident Commander declared the event was over. These post-incident meetings are not intended to place blame or find fault with an individual or responding agency. Their purpose is to dissect the event and attempt to determine what might have been done differently and what the consequences of alternative actions would have been. In general, this is referred to as “lessons learned.” Its sole purpose is to improve responses to future incidents.

The first and last components of incident management, pre-incident planning and post-incident debriefings, are often not routinely practiced. However, even minor incidents may be (or become) incredibly complex. If such an incident is to be managed successfully, it will demand extraordinary teamwork, excellent communication and pre-planning involving all responders.

Every incident will be different and will require a response that relies on the best judgment of MDT and other response personnel to meet the needs of the situation for the short and long-term.

In order to utilize the Incident Command System and Unified Command Structure, one or more Emergency Operations Centers may be utilized to function as a command post in response to an incident. The following section describes Emergency Operations Centers in further detail.

4.4. Emergency Operations Center (s)

The severity of an incident has a direct impact on the required magnitude of the response, and how many Emergency Operations Centers (EOCs) may be needed. In Chapter 3 (3.3) it was noted that there are three levels of incidents. Depending upon the incident, various Emergency Operations Centers (EOCs) may be activated. Figure 4-1 shows the relationship between the various EOCs, which are described in detail in the remainder of Section 4.4.

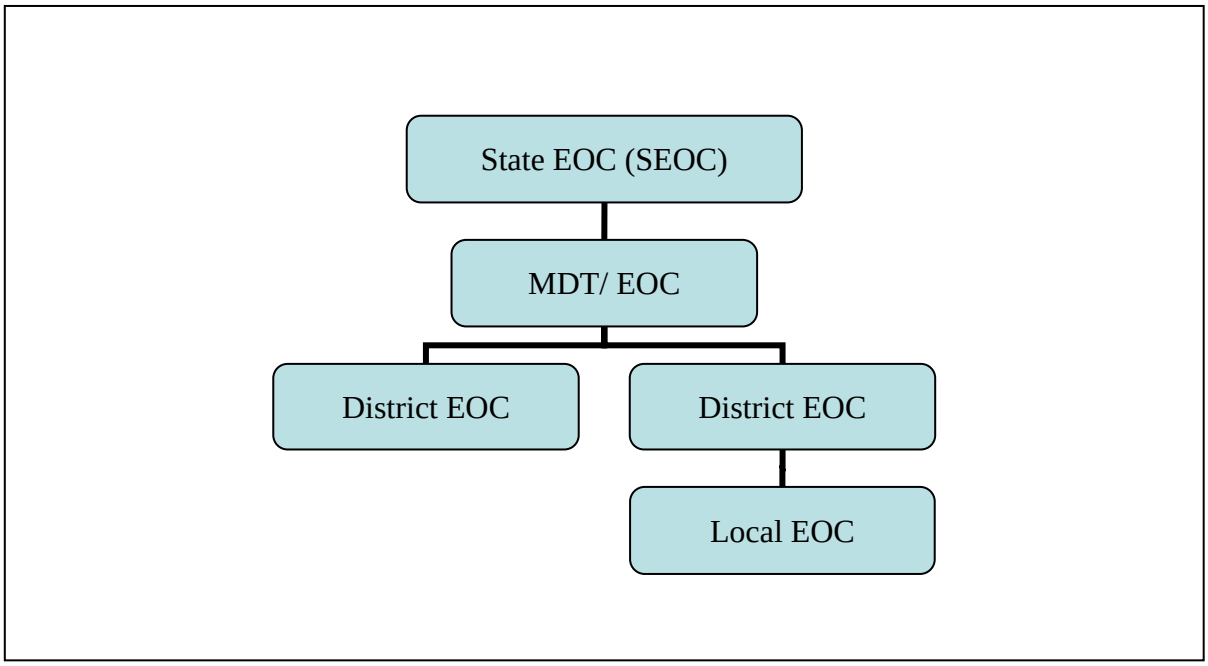

Figure 4-1: Emergency Operations Centers

4.4.1. State Emergency Operation Center (SEOC)

The State Emergency Operation Center (SEOC) is located at Ft. Harrison, Helena, MT. During a major (Level III) disaster the SEOC may be staffed with a liaison coordinators from each State agency involved with the emergency operations and recovery efforts. The Director of the State Disaster and Emergency Division (DES) coordinates the emergency management activities of the State agencies from the SEOC. The MDT Disaster and Emergency Services Coordinator or designee serves as the liaison with the SEOC.

The SEOC serves as the central point for Statewide coordination of emergency management and recovery efforts. It serves as the primary clearing house for coordinating instructions among agencies, the acquisition and reallocation of resources, and coordination with the Governor and the military.

After hours, and during weekends and holidays, the phone at the SECO is answered by a Highway Patrol dispatcher who will notify the State DES duty officer.

If the State EOC is activated, it is highly likely that the MDT Emergency Operations Center would also be activated.

4.4.2. MDT Emergency Operation Center (MDT/EOC)

The Engineering Conference room serves as MDT's Primary Emergency Operation Center. The conference room is located in the second floor of the Administration Building in Helena, although the Center may have to be relocated to another floor or building because of an incident. The MDT Emergency Operation Center (MDT/EOC) will be staffed by Headquarters personnel as needed to establish and maintain the Incident Command System (ICS). Depending upon the severity of an incident, the full EOC, or any portion thereof, may be activated. Staffing will be at the discretion of the Incident Commander.

The MDT Emergency Operation Center (MDT/EOC) is activated during a significant event (Level II or III) or for an event that escalates over time; or an event that has an impact on the transportation system. The functions of the MDT/EOC include:

- Interfacing with the State EOC and other agencies;
- Acting as a central point for the exchange of information related to the transportation system within the State;
- Assisting in the formulation of strategies to mitigate the remaining effects of, and recover from, a disaster; and
- Documenting decisions made, and orders given.
- Identifying and evaluating the availability and capacity of usable highways in the impacted region.
- Developing a State situation map showing damaged or destroyed highways and indicating which highways and bridges can be used as alternative routes.
- Informing the public and media of closed highways and other important transportation information.
- Estimating traffic demand for essential (response/recovery) movements for the effected areas of the transportation system.
- Issuing permits for the use of regulated highways and coordinate permit issuance and recognition with other States for Interstate travel.
- Coordinating efforts to erect signs and barricades on restricted or closed routes.
- Informing all Emergency Operation Centers of routes that are restricted within their boundaries of their responsibilities.

Information regarding the State's transportation system will be relayed to the SEOC, as the transportation system will have a significant role in recovery efforts. If the effects of an incident are limited to a District, a District Emergency Operations Center may be activated to provide a base of operations for the response to an incident.

4.4.3. District Emergency Operation Center (DEOC)

District Emergency Operation Centers are located at MDT District Offices to facilitate a coordinated response to an incident within a particular District. In the event that the Headquarters Building (Helena Campus) suffers significant damage, a District EOC may act as a surrogate EOC for the Department. The following criteria determine which District Office would act as a surrogate:

- Proximity to the campus
- Availability of necessary resources
- Knowledge and experience for dealing with major incidents

The function and the location of the District EOC will be established by the District Administrator or Maintenance Chief. District Emergency Operation Centers (DEOC) are

established on the basis of the need for a central operations center within the District. The DEOC serves as a communications and operations center for coordinating instructions within the District and to provide information to, and receive instructions from, the Department's Emergency Operation Center (MDT/EOC). These centers are also are the point of contact with the press and the public. The DEOC may undertake several or all of the following activities:

- Provide information to, and receive guidance and instructions from the Department's Emergency Operation Center regarding emergency operations.
- Act on the instructions from the MDT/EOC
- Identify and evaluate the availability and capacity of usable highways (including bridges and other structures) within the District.
- Develop a situation map showing damaged or destroyed highways, bridges, and other structures in the District, and indicate which roads (highways) can be used as alternative routes.
- Inform the MDT/EOC of all highway capacity reductions and closures within region boundaries.
- Inform the public and media of closed or restricted highways and other important travel information.
- Coordinate efforts to erect signs and barricades on restricted or closed routes.
- Make section facilities available to assist in emergency operations.
- Coordinate emergency operations with other State, county, and city agencies in the immediate area.

If an incident effects only a small portion of a District or County, a Local Emergency Operation Center may be activated to respond to the incident.

4.4.4. Local Emergency Operation Center

Depending upon the severity of an incident, and its impact on the transportation infrastructure, a Local Emergency Operation Center (LEOC) may be established by MDT. The LEOCs are established as close to the actual incident as practical, generally the nearest maintenance section. LEOC centers will be established and located at the Districts discretion. The LEOC should be managed by the Maintenance Chief or their designee.

The primary function of the Local Emergency Operation Center is to assist in facilitating the disaster/emergency recovery operations, the movement of essential traffic, establishment of liaison with the site Incident Commander, and act as a staging area for MDT assets. Depending on needs and the type and severity of the incident, only a Local Emergency Operation Center may be set up, and communications would take place directly with MDT/EOC. For isolated incidents, response operations are initiated from these local centers. These centers generally undertake the following activities:

- Provide information to, and receive guidance and instructions from the MDT/EOC.

- Maintain a list and situation map showing damaged or destroyed highways, bridges and other infrastructure in the local area and indicate which roads can be used as alternative routes.
- Begin response activities to reestablish a functioning system.

The Emergency Operations Centers provide a base of operations for responding to an incident. In responding to an incident, it is important that each District and Division within MDT coordinate their efforts, utilizing the Incident Command System. This coordination effort is outlined in the following section.

4.5. Department Coordination

One of the issues previously discussed was the importance of a Unified Command Structure. This structure allows various resources (State departments, local responders, etc.) to be coordinated in a unified response to a particular incident. Coordination within MDT will take place when each District, Division, Maintenance Division and Section follows the Unified Command Structure, and knows its particular roles and responsibilities. Figure 4-2 shows the organizational chart for MDT.

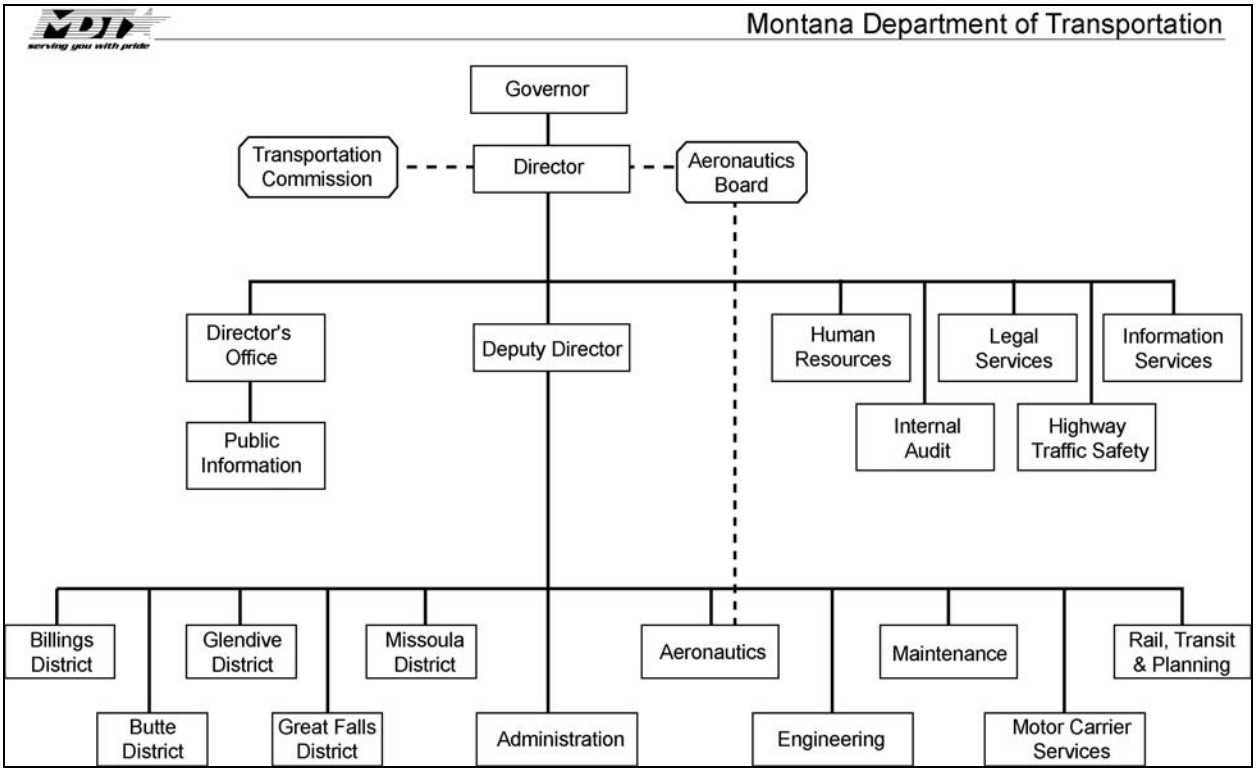

Figure 4-2: MDT Organizational Chart

The general role for each MDT Division in response to an incident is as follows:

4.5.1. Aeronautics Division

The Aeronautics Division has two bureaus: Safety and Education and Airport and Airways. The Safety and Education Bureau is responsible for registering Montana's pilots and aircraft, conducting air search and rescue training and operations and provides various seminars, clinics and promotes aviation education. The Airport and Airways Bureau assists airports with technical expertise, coordinates with the Aeronautics Board to process airport grant requests and maintains and operates: non-directional beacons, radio beacons, air-to-ground communication sites and the 15 State-owned airports.

Safety & Education Bureau

- Acts as the point of contact, on call 24/7, for Air search & rescue in the State through an agreement between the Governor and the Air Force Rescue Coordination Center.
- Provide technical expertise with regard to emergency locator transmitters, search and rescue procedures and winter survival.

Airport & Airways Bureau

- Maintains non-directional beacons and radio systems during emergency and non-emergency situations to ensure safe aircraft operations.
- Provide information regarding the conditions and usability of airports as they relate to emergency response.

4.5.2. Maintenance Division

In general, the Maintenance Division's role is to ensure the safety of the State's infrastructures and the traveling public. The Division also maintains the operability of roadway systems and provide assistance and support to other State and federal agencies when applicable. Specific actions include:

- Act as a means for communication using the network of available base stations, handheld and mobile radios, radio repeaters and special radio networks, or other methods as necessary to ensure proper communications between the MDT/EOC and other agencies or EOCs as directed.
- Provide accurate and timely roadway information to the traveling public and the SEOC.
- Support local jurisdictions (cities and counties) by providing management assistance with regard to incidents involving the highway system.
- Provide the SEOC with additional weather information collected from the remote weather monitoring sites.
- Provide traffic control assistance for purposes including evacuations, incident response, securing specific areas, or highway closures.
- Removal of debris from roadways, bridges, and other infrastructure and assist other agencies with debris removal situations.

- Identify facilities throughout the State that can provide secured storage of medical supplies and/or a site for mortuary services.
- Provide the use of facilities located throughout the State for sheltering locations if necessary.
- Provide for transportation of food items, or other supplies, if necessary, in coordination with other State Agencies.

4.5.3. Engineering Division

The Engineering Division, in general, acts as an in-house consultant to other State agencies, local or tribal governments requiring assistance with roadway or bridge design, construction management, inspection oversight or engineering related assessments. Specific actions include:

- Provides aerial photography assistance as necessary.
- Assessment of infrastructure damage (i.e., roadways, bridges and culverts) and assist with other damage assessment needs.
- Active member of the State Hazard Mitigation Team for establishing project priorities Statewide, developing the mitigation strategy and locating any possible al funds for project completion.
- The specific responsibilities for maintaining bridges and structures are within the Engineering Division Bridge Bureau. The MDT Emergency Operation Center (MDT/EOC) Incident Command System includes Bridge functions within the Operations section. Appendix C provides a detailed list of the actions to be taken to maintain the integrity of the bridges and other structures should an incident occur.

4.5.4. Motor Carrier Division

The Motor Carrier Division is responsible to implement the appropriate waiver of licensing, permitting and registration of vehicles necessary to aid in the various stages of an incident, including: response, evacuation, and recovery.

4.5.5. Rail, Transit and Planning Division

The Rail, Transit and Planning Division will provide support for MDT for mapping and other planning issues, and will be the primary point of contact between MDT and the various transit and rail operations within the State.

4.5.6. MDT Districts

The Districts have the responsibility to coordinate with the Local Emergency Operations Center(s), if activated, and the MDT Emergency Operations Center, if activated. The District EOCs have responsibility for their own District, or may provide response to an incident in another District, depending upon the severity of an incident.

While the Divisions and Districts each have a particular role to conduct should an incident occur, each Division and District will need to respond to the orders of the Incident Commander.

4.6. Individual Responsibilities

Appendix B provides a listing of individual responsibilities of MDT employees by job title.

4.7. Equipment

Montana Department of Transportation (MDT) equipment may readily be moved to other locations in the event of an emergency. Requests for equipment should be made to the MDT/EOC, if activated, or through the Equipment Bureau Chief. The Equipment Program maintains a master list of equipment by area and can activate transfers of equipment to the affected area. Appendix E provides further information on MDT equipment and other sources of equipment for use during an emergency.

4.8. Administration – Cost

MDT's Incident Command System uses resource numbers as a way of acknowledging a resource request. A resource number also ensures that MDT was requested and provided documentation for reimbursable activities performed. The employee's supervisor, Maintenance Chief or Superintendent, and the area office that made the request, should be notified once a resource number has been established. A resource number also ensures that MDT was requested and provides documentation for reimbursed of activities performed.

The resource order number and proposed response should be recorded. A MMS cost center should be established. Administrative response personnel should code their time to the 4300 account with appropriate detail.

4.9. Training

The importance of appropriate training for MDT employees with regard to incident response cannot be overstated. The most essential component of training is responding to a HAZMAT incident. Employees must be trained to recognize hazardous materials, take precautions which will insure their *personal safety* and what actions may be taken (or not taken) at the scene. They must be aware of their response options including rapidly departing the scene. Training must also be conducted as to how to safely establish traffic control. There must exist at least a general familiarity with what other agencies should be alerted. A "glove box" sized manual will be carried in every MDT vehicle; it will contain a comprehensive list of agencies, titles and names of potential responders and every applicable telephone number, including cellular and satellite telephones.

It is particularly important that MDT employees not provide any assistance for which they have not been trained. Chapter 7 provides further information on training.

4.10. Summary

Incidents, as discussed in Chapter 4, are unplanned events resulting in disruption of normal flow of traffic at a unique time and location. Incidents may result from either natural or manmade events; cause of the latter may be deliberate or accidental. Any incident may result in the partial or complete shutdown of normal MDT operations

MDT employees may find themselves to be the first to happen upon an incident. Therefore, the employee becomes the de facto Incident Commander until law enforcement or other emergency

service personnel arrive. It is absolutely essential that employees *do absolutely nothing* until they are assured of their own *personal safety*.

This Chapter defined roles and responsibilities, including the role of the Incident Commander, and contains definitions of the Incident Command System (ICS) and the Unified Command Structure (UCS). The single most important responsibility of MDT employees responding to, or at the scene of an incident is their *personal safety.* The specifics of on-scene Incident Command was discussed along with the need for traffic control measures.

The applicable phases of incident management: pre-incident planning, response, notifying the public, clearance and post-incident debriefings, were discussed, along with the possible establishment of various levels of Emergency Operations Centers.

The general role of each MDT Headquarters Division was noted, along with the caveat that in order to have an effective response to an incident, MDT must understand it roles and responsibilities, as well as how training can be used to ensure that everyone responding to an incident understands their particular role.

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5. HAZARD SPECIFIC RESPONSES

This Chapter describes procedures to be followed by MDT employees who respond to specific types of incidents, both manmade and natural. Section 5.1 of this Chapter deals with manmade incidents, be they deliberate or accidental; Section 5.2 focuses on natural disasters. Table 5-1 provides a brief list of potential hazards.

Table 5-1: Hazard/Incident Types

Natural	Manmade
Earthquakes	Terrorism
Floods	Weapons of Mass Destruction (WMD)
Wildfires	Hazardous Material (HAZMAT) Spills
Avalanches and Landslides	Wildfires
Blizzards and other extreme weather	Vehicle Crashes

The most important thing that MDT employees must remember when encountering an incident, is *personal safety*. They should not take any actions until they are certain there is no risk to themselves. If there is any doubt, they should move to a safe position and then request a response from appropriate local EMS and law enforcement organizations. If MDT employees are first on the scene, they are the de facto Incident Commander; however, as soon as other responders arrive, the command function is handed off to the new Incident Commander (typically a law enforcement person).

Regardless of the nature of the incident, MDT employees must protect themselves first and offer immediate assistance only if they can do so under safe conditions. A supervisor or the District Office should be contacted as soon as possible so that proper authorities can be notified and so that the employee may receive instructions regarding subsequent actions to be taken.

5.1. Manmade Incidents

Manmade incidents may occur either by accident, or by the deliberate actions of individuals or groups. Manmade incidents may involve either hazardous or non-hazardous materials. In any case, MDT employees need to asses the situation, and should immediately take actions to assure their *personal safety*. Once that is accomplished, communication must begin immediately to marshal the required resources to deal with the situation.

Incidents not posing a threat to safety may still prompt a great deal of effort by MDT and other agencies to protect environmentally sensitive areas and the transportation infrastructure. Cleanup from accidental material spills generally is the responsibility of the owner; however, MDT may choose to contain non-hazardous materials from entering environmentally sensitive areas as long as their *personal safety* is not compromised.

Due to the tragic events of September 11, 2001, an emphasis has been placed on response to the deliberate acts of individuals or groups, known as acts of terrorism.

5.1.1. Deliberate Acts - Terrorism

Terrorism is the defined as "the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" [6].

MDT personnel may be first to become aware of terrorist actions affecting them, the public and the transportation infrastructure. For example, the interchange of Interstate routes 15 and 90 could be subject to attack by use of explosives. Were that to happen, commercial, emergency and normal traffic along either highway would come to a standstill for an extended period. Therefore, employees must be trained to identify signs of acts of terrorism and they must understand that any event of this kind has the potential to harm, or even kill, people.

In response to increased acts of terrorism, the United States created the Department of Homeland Security.

5.1.2. Homeland Security

The Department of Homeland Security has a mission to, "Lead the unified national effort to secure America. We will prevent and deter terrorist attacks and protect against and respond to threats and hazards to the nation. We will ensure safe and secure borders, welcome lawful immigrants and visitors, and promote the free-flow of commerce" [7].

In addition to its mission, the Department of Homeland Security has seven strategic goals, of which several are relevant to MDT. The relevant strategic goals are as follows:

Awareness: MDT personnel are a part of the "eyes and ears" of the state. MDT personnel should be aware of suspicious activities, such as individuals taking pictures, videotaping, or otherwise observing infrastructure such as dams, bridges, etc. Any suspicious activities should be reported to law enforcement agencies.

Prevention: By having a high level of awareness and safety issues, MDT can ensure that the transportation infrastructure in Montana is as safe as possible. This may mean erecting additional security barriers or adding additional security measures to certain transportation infrastructure.

Protection: By informing law enforcement agencies of suspicious activities, and making sure all MDT employees are vigilant for any unusual activities, MDT can help protect the State and its transportation infrastructure.

Recovery: Should an incident occur, whether it is deliberate, accidental, natural or manmade, it may have an impact on the State's transportation infrastructure. In the event that the State's transportation infrastructure is compromised, MDT will have a significant role in the recovery efforts of the State.

In an effort to inflict major damage, and cause widespread fear and confusion, terrorists acts can include the use of Weapons of Mass Destruction.

5.1.3. Weapons of Mass Destruction (WMD)

Frequently, terrorists will employ Weapons of Mass Destruction (WMD) to cause maximum injuries, fear, as well as widespread disruption and destruction of targets. WMD are defined in Section 921 of 18 USC, Section 2332a as: "(A) Any destructive device including any explosive, incendiary, or poison gas; (B) Any weapon that is designed or intended to cause death or bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (C) Any weapon involving a disease organism; or, (D) Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life."

In the course of daily activities MDT personnel may be the first on scene of an event involving Weapons of Mass Destruction. There are a number of acronyms used to categorize and identify potential WMD threats. One of the easiest to remember is "**B' NICE**" [8] which stands for:

B - Biological (bacteria, viruses, toxins, etc.)

N - Nuclear/Radiological (nuclear devices, radiation releases, etc.)

I - Incendiary (fire – may include intentional wildfires)

C - Chemical (poison gases, nerve gas, cyanide, blister agents, etc)

E - Explosive (use of any materials for explosive reactions)

Incidents involving different WMD have diverse effects on people and property. Some of the key consequences and distinguishing marks for several types of WMD are:

- **Biological Agents** are living organisms or toxins that are used to cause death or disability. They have been manufactured, collected, processed, or concentrated, and then deployed with the intent to harm humans, animals, or crops. All biological agents have an incubation period. There is a time lag between exposure and signs of symptoms. There are two types of Biological Agents:
  - Pathogens are living organisms including bacteria, parasites and viruses that are dependent on a living host to survive and include such agents as: Anthrax, Plague, Tularemia (or Rabbit Fever), Cholera, Ebola, Dengue Fever, Encephalitis, and Smallpox.
  - Toxins are not living organisms, but are products of living organisms. Biological toxins are among the most dangerous compounds known; some, such as botulism toxin, are 15,000 times more deadly than the most lethal nerve agents. Toxins generally cannot be transmitted from person to person.
- **Nuclear/Radiological** devices derive their destructive power from an uncontrolled nuclear reaction or exposure to radiation from radioactive materials through the use of a dirty bomb or accident during transport of spent nuclear materials. Duration and type of materials exposure will determine the long-term affect on humans and plants. The best protection is being observant and looking for shipment placards.
- **Incendiary** devices produce fire. The largest threat to Montana is the intentional use of flammable materials to initiate large wildland or building fires. One of the easiest methods to employ an incendiary device is the traditional hand-thrown "Molotov cocktail", however, sophisticated electronic or mechanical devices and materials may be used to create a powerful incendiary device.

- **Chemical** weapons, until recently, have only been used in tactical military operations; they now have become available to non-governmental groups. Chemical agents include:
  - Nerve agents are some of the most deadly and feared substances. As a weapon, nerve agents usually form an aerosol or vapor cloud that may appear as a cloud. Nerve agents over stimulate the nerves and major organs, resulting in convulsions, loss of body control and frequently death.
  - Vesicants or blister agents affect the skin, eyes, mucus membranes and gastrointestinal tract. The most common types of Vesicants are Mustard gas, Cyanides, Pulmonary/Choking agents, and Industrial toxic chemicals.
- **Explosives** are the most common weapon of choice for terrorists. Agents used may be black powder, dynamite, TNT, plastic explosives, fertilizer and diesel fuel, etc. Explosive agents can be obtained on the commercial market and are easily concealed. Terrorists often use improvised explosive devices delivery such as: vehicles, pipes, satchels and others.

Some of the key consequences and distinguishing affects of several types of WMD materials are shown in Table 5-2.

Table 5-2: Signs of a Possible WMD Attack

WMD – Agent Used	Possible Distinguishing Signs
Biological (e.g., dispersion of bacteria, toxins, fungus, etc.)	• Unexplained deaths and illness possibly beginning a day or more after an incident • Immediate impacts mostly local to release but may be expanded through human transmittal • Possible persistence in environment • Possible geographic contamination

Nuclear/Radiological
(e.g., nuclear detonation with radioactive fallout, or dispersion of radioactive materials by non-nuclear explosion or pressurized gas)
	• Nuclear Detonation
	  o Large-scale infrastructure destruction
	  o Extensive radioactive fallout
	  o Long-term persistence in environment
	  o Geographic contamination
	• Non-explosive release
	  o Unexplained deaths and illness
	  o Impact mostly local to release but may be some distribution via, e.g., wind
	  o Persistence in environment
	  o Geographical contamination
	Conventional explosives used for dispersal may cause impacts, too

Chemical (e.g., dispersion of pesticides, mustard gas, chlorine gas, cyanide, tear gas, etc.)	• Unexplained deaths and illness • Impacts mostly local to release but may be some distribution via, e.g., wind beyond release site • May be marked by unusual clouds, haze, mist, odors, tastes, droplets, etc. • May be persistent in environment
Conventional Explosives (e.g., detonation of fuel oil-fertilizer bomb, military-type explosives, etc.)	• Casualties • Impacts mostly local to explosion • Structural collapse • Exposure to dust and hazardous building materials, e.g., asbestos • May be used to spread harmful radiological or chemical materials

Source: A Guide to Updating Highway Emergency Response Plans for Terrorist Incidents [6]

Planning

MDT will need to coordinate with law enforcement personnel if MDT employees notice any suspicious activities on or near the State's transportation infrastructure. Further, law enforcement should notify MDT should any credible threats be made against the State's transportation infrastructure.

Response

MDT employees may be the first to witness or discover an act of terrorism, whether the act utilized Weapons of Mass Destruction, or not. In responding to an act of terrorism, MDT employees would need to have a heightened sense of personal safety, due to the fact that there may be secondary incidents, and responders sometimes become the target of terrorist attacks. In addition, if Weapons of Mass Destruction were used in the terrorist attack, there is a strong possibility that the infrastructure may become contaminated.

Also, if an MDT employee is first on the scene of an incident, and they suspect the incident is cause by an act of terrorism, they should treat the scene as a possible crime scene. While MDT employees still need to respond to the incident, there are several other key factors to consider, including:

- Information: Try to document as much information as possible about the incident and the scene by taking notes and drawing basic diagrams.
- Contamination of the Scene: While responding to the incident, try not to disturb the scene. All of the items (including the debris) at the scene may provide clues to determine if the incident was caused by an act of terrorism. Therefore, if an MDT employee or subsequent Incident Commander believes the incident was caused by an act of terrorism, disturb or remove as little debris as possible. In fact, law enforcement agencies may rule the site as a crime scene, which may impact MDT's ability to perform its basic response actions.

MDT's response to a terrorist attack includes:

- First Aid: If properly trained, provide immediate aid to MDT employees or others who may have been injured in the attack.
- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident Commander.
- Damage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable for responders, and what routes must be restricted or closed. Also, determine if MDT buildings are safe, or if they are not able to be occupied. Check all MDT equipment to see what has been damaged, and what can be used in the response and recovery efforts. Remember, the area of the incident may be considered a crime scene, so be careful of what actions are being taken during this part of the response.
- Debris Clearance: Although a terrorist act may lead to debris on or near the transportation infrastructure, it is important to note that the infrastructure may be contaminated by various materials associated with a WMD attack. MDT employees much ensure that the infrastructure is not contaminated before they try to move any debris and establish a route for responders. Also, if it is likely that the incident was caused by an act of terrorism, debris clearance may not be possible until law enforcement agencies have had the opportunity for a thorough investigation.

Evacuation

Terrorist attacks typically occur with little warning. However, in the aftermath of an attack, it may be necessary to evacuate people from the area of the attack and the immediate vicinity of the incident.

- Damage Assessment: MDT employees will need to determine what transportation infrastructure has been damaged and what routes would be usable for evacuation routes.
- Debris Clearance: A terrorist attack may lead to debris along the transportation infrastructure. MDT employees may need to clear debris from roadways, bridges, or other transportation infrastructure to clear a path for evacuation. As previously noted, MDT employees should be cautious as the debris and infrastructure may be contaminated by materials used in the terrorist attack, such as WMD.

Utilities and Lifeline Repairs

Terrorist attacks can target vital infrastructure. Therefore, MDT personnel may have to develop plans for the permanent repair of roads, bridges or other structures. MDT may need to coordinate with other agencies and entities to aid in the restoration and repair of electrical power, natural gas, water, sewer, and telephone and communications systems.

Secondary Events

Terrorists sometimes target the responders to an incident, and may plan for secondary attacks to further confuse responders and the public, and cause even further damage. MDT employees and all responders must be aware of this situation, and be as cautious as possible when responding to an act of terrorism.

While deliberate incidents such as acts of terrorism do occur, many emergencies arise from accidents.

5.1.4. Accidental Incidents

As cited earlier, the release and dispersion of Hazardous Materials (HAZMAT) also can result from accidental incidents. Their effects are no less serious than the majority of WMD incidents; however, they usually are more confined to the immediate location of their release.

Hazardous Materials are defined broadly as:

> "Explosive, flammable, combustible, corrosive, oxidizing, toxic, infectious, or radioactive materials that, when involved in an accident and released in sufficient quantities, put some portion of the general public in immediate danger from exposure, contact, inhalation, or ingestion" [2].

Planning

The greatest risk for accidental hazardous materials transportation incidents lies along highways, rail lines, pipelines, rivers, and at ports. Several states also are exposed to nuclear waste incidents, due to routing of shipments for perennial storage. Jurisdictions with facilities that produce, process, or store hazardous materials are at risk, as are those jurisdictions with facilities for the treatment, storage, or disposal of hazardous wastes. These incidents may be compounded by (or caused by) the occurrence of natural hazards (e.g., earthquakes, floods) or, for highway

transportation of hazardous materials, poor weather conditions. In addition, other kinds of facilities (e.g., for natural gas) may contribute to risks posed by hazardous materials facilities.

As previously noted, OSHA's Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910) requires that the Incident Command System (ICS) be used for on-scene management of hazardous materials response activities.

Response Actions

Before approaching spilled, potentially hazardous materials, the vehicle's placard should be observed to determine whether the material is hazardous in any way. The absence of a placard should indicate that the material is harmless. However, if a placard is not visible, MDT personnel should not approach the vehicle. The companion "Glove Box" Manual, carried in every MDT vehicle, should be used to confirm the nature of the material. If the material is confirmed to be non-hazardous (e.g., diesel fuel), and might contaminate the environment, limited containment actions may be taken as long as employees are certain beyond any doubt that the material is "safe." Containment and debris removal are not the responsibility of MDT. Local responders, once on scene, are responsible for safety measures at an incident site.

If an MDT employee is *first* upon the scene of a HAZMAT incident, and their *personal safety* is assured, they must take the following steps:

- First Aid: Within the limits of their training, provide immediate aid to MDT employees and others who may have been injured in the accident.
- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident Commander.
- Damage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable by responders, and what routes must be restricted or closed.

Due to the nature of a Hazardous Materials spill, personal safety is a key issue, along with providing enough information about what substance may have been spilled, so that a proper response by other agencies can be initiated. Therefore, the following items are very important when dealing with a HAZMAT spill:

- If possible, identify the hazardous material involved and the severity (degree of threat to people, property, environment, etc.) of the incident before exposing response personnel to possible health hazards.
- For transportation incidents, information resources include placards, container labels, cargo manifests, and shipping papers. Also, surviving vehicle operators will know the vehicle contents. These items provide initial information that can be checked against the Glove Box Response Guide and the Emergency Response Guidebook (Orange Book). Shipping papers should also include an emergency contact number.
- For fixed facility incidents, this information should be readily available from the responsible party.
- Information critical to developing a proper response includes:
    - Time of the material's release

  - Quantity released
  - Characteristics of the immediately endangered area (e.g., body of water or dense residential/commercial district/ school nearby).
  - Color and odor of vapors (if readily noticeable), and any health effects noted
  - Direction and estimated height of any vapor cloud or plume observed
  - Wind direction and speed
  - Prevailing weather
  - Terrain characteristics
- It must be ensured that unnecessary people at the site are moved away (in a crosswind direction) and denied entry. For transportation hazardous material incidents, the Emergency Response Guidebook (Orange Book) contains recommended initial isolation zone distances for substances with poisonous vapors that are not burning and additional instructions in case of fire.
- The hazardous material must be contained. For liquids, it may be necessary to use ditches or dikes to contain the flow, so that removal may take place later. It also may be necessary to cover some materials with tarps to prevent vapors or fine material from rising. These actions should only be taken if *personal safety* of the MDT employee is assured.

The provision of accurate and timely emergency information immediately following a HAZMAT release is critical for the protection of lives and property. Therefore, it is equally critical that MDT employees who are first on the scene of a HAZMAT incident quickly inform the District and/or Maintenance Division office and local law enforcement officials of the situation. MDT may need to assist in establishing traffic control and detours around effected areas. In addition, MDT may need to provide information on evacuation routes for people fleeing a HAZMAT incident.

Evacuation

Hazardous materials evacuation planning is little different from evacuation planning in general. The most important difference is that initial movements should be crosswind. Another difference is that some transportation incidents may involve the evacuation of only a small area.

Evacuation may not always be necessary or advisable. In-place protection of the scene may be the preferred option. For some chemical hazards, using wet towels and shutting off air circulation systems may suffice; sometimes, the cloud may move past more quickly than an evacuation can be effected.

- Damage Assessment: MDT employees will need to determine what transportation infrastructure has been damaged and what routes would be usable for evacuation routes.
- Debris Clearance: A HAZMAT incident may lead to debris along the transportation infrastructure. MDT employees may need to clear debris from roadways, bridges, or other transportation infrastructure to clear a path for evacuation. As previously noted, MDT employees should be cautious as the debris and infrastructure may be contaminated by the HAZMAT materials.

Utilities and Lifeline Repairs

Hazardous Material incidents typically do not cause significant damage to infrastructure, unless an explosion or fire occurs as a result of the initial incident. However, MDT personnel may have to develop plans for the permanent repair of roads, bridges or other structures. MDT may need to coordinate with other agencies and entities to aid in the restoration and repair of electrical power, natural gas, water, sewer, and telephone and communications systems.

Secondary Events

HAZMAT spills may lead to secondary events such as explosions or fires. MDT personnel need to be very cautious when dealing with incidents involving Hazardous Materials. The Glove Box Response Manual and the Emergency Response Guidebook (Orange Book) provide further information on Hazardous Materials and their potential effects.

5.2. Natural Disasters

Natural disasters are caused by natural forces rather than by human actions. There are five potential natural disasters highlighted in this section, they are:

- Earthquakes
- Floods
- Wildfires
- Avalanches and Landslides
- Blizzards and other extreme weather

5.2.1. Earthquakes

An earthquake is a sudden, violent shaking or movement of part of the earth's surface (both horizontal and vertical forces) caused by the abrupt displacement of rock masses, usually within the upper 10 to 20 miles of the earth's surface. The earthquake hazard may consist of:

- Ground Motion: vibration and shaking of the ground during an earthquake has the most far-reaching effect and causes the most damage to buildings, structures, pipelines, etc.
- Ground Surface Fault Rupture: ground shaking is the result of a rupture of a fault beneath the surface. When ground shaking results in a rupture of the surface of ground, an opening of up to 20 feet or more in length and width may occur.
- Liquefaction: the ground temporarily loses its strength and behaves as a viscous fluid (similar to quicksand) rather than a solid.
- Landslides: sometimes an earthquake causes a landslide to occur. This involves a rock fall and slides of rock fragments on steep slopes.
- Secondary Hazards: consequences of earthquakes may include fire, HAZMAT release, or dam failure, among others.

Extensive areas of the United States are vulnerable to earthquakes. Thirty-nine States face the threat of a major damaging earthquake and are considered to be earthquake hazard areas [2]. As

shown in Figure 5-1, Montana has a significant potential for earthquake activity. In fact, since 1925, Montana has experienced five earthquakes with an intensity of 6.0 (Richter Scale) or higher [9]. The damage associated with this magnitude includes partial collapse of some buildings, some damage in specially-designed structures and massive damage to poorly built structures.

The following actions should be taken by MDT personnel following an earthquake:

Response

Depending upon the severity of an earthquake, the area requiring a response may be confined to a particular building or a section of a municipality; alternatively, a response may be needed that is much broader in scope. Specific actions to be taken include:

- First Aid: Within the limits of training, provide immediate aid to MDT employees and others who may have been injured in the earthquake.
- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident Commander
- Damage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable by responders, and what routes must be restricted or closed. Also, determine if MDT buildings are safe, or if they are not able to be occupied. Check all MDT equipment to see what has been damaged, and what can be used in the response and recovery efforts.

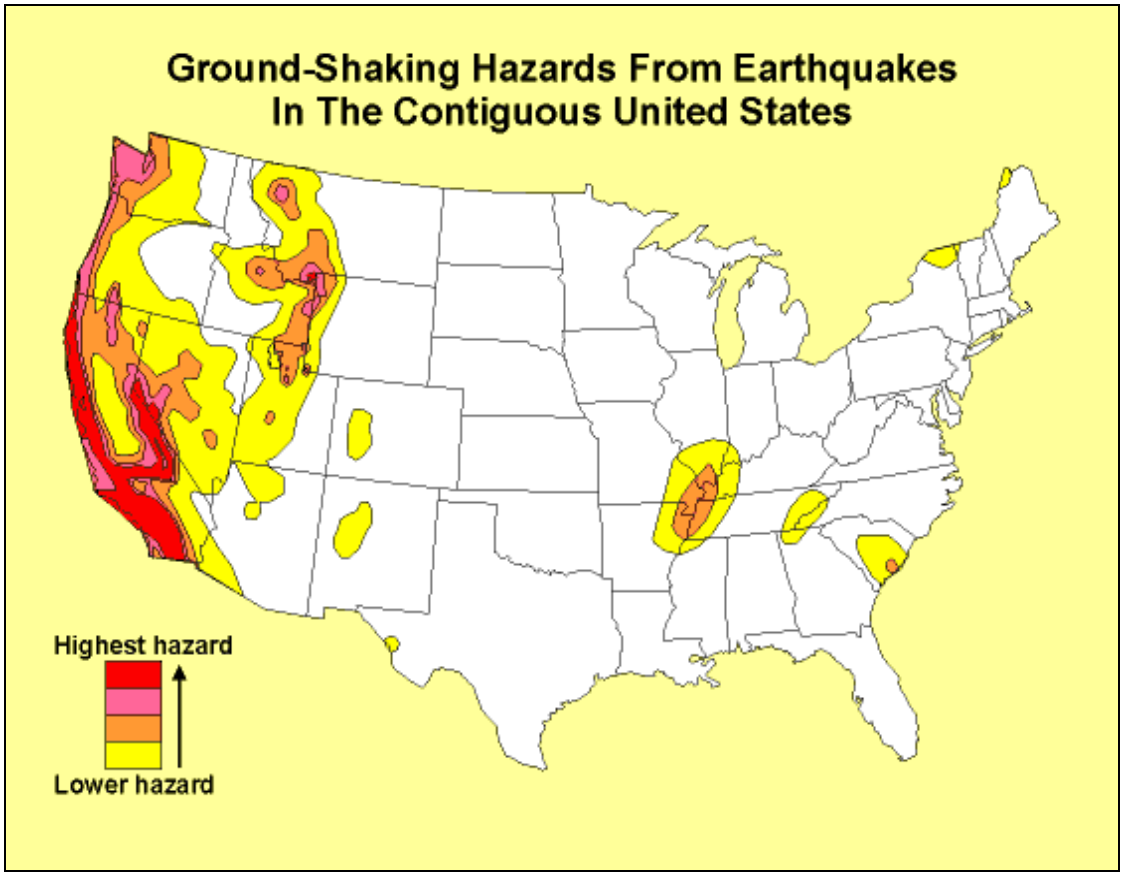


Figure 5-1: U.S. Earthquake Hazards [10]

- Debris Clearance: The identification, removal, and disposal of rubble, landslides, wreckage, and other materials which block or hamper the performance of emergency response functions. Specific activities include:
  - Demolition and other actions to clear obstructed roads
  - Repair or temporary reinforcement of roads and bridges
  - Construction of emergency detours and access roads
  - Access Control: Only those people directly involved in emergency response should be allowed to enter an area affected by an earthquake.

Evacuation

In an earthquake, evacuation means the immediate action of leaving a building, structure or area that may be unsafe. Actions required when evacuating people from a location affected by an earthquake include:

- Routing: MDT personnel must ensure that evacuation routes are safe and that information on safe, restricted and closed routes is communicated to the proper authorities and the public.

- Equipment: MDT may need to provide equipment to other jurisdictions to aid in the evacuation of an area that was impacted by an earthquake.
- Damage Assessment: Ground and aerial surveys may be required to determine the scope of damage and the status of key facilities. MDT personnel are responsible for determining the safety of affected roads, bridges, culverts and other transportation related structures.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of, emergency response personnel and vehicles, are a high priority action. Activities include:
  - Demolition and other actions to clear obstructed roads
  - Repair or temporary reinforcement of roads and bridges
  - Construction of emergency detours and access roads
  - Provision of traffic control

Utilities and Lifeline Repairs

MDT personnel may have to develop plans for the permanent repair of roads, bridges or other structures. MDT may need to coordinate with other agencies and entities to aid in the restoration and repair of electrical power, natural gas, water, sewer, and telephone and communications systems.

Secondary Events

In addition to the potential devastation caused by an earthquake, earthquakes can cause secondary events to occur, such as fires and dam failures (floods). Therefore, after an earthquake, it is important to be alert to the potential for additional emergencies.

5.2.2. Floods

Flooding occurs when normally dry land is inundated with water (or flowing mud). Flooding may result from: bodies of water overflowing their banks, including artificial ones like dams and levees; structural failure of dams and levees; and rapid accumulation of runoff or surface water.

Typically, the two major concerns that must be addressed in flood planning are: the suddenness of onset (flash floods and dam failures) and flood elevation in relation to topography and structures. Other factors contributing to potential damage are the velocity or "energy" of moving water, debris carried by the water, and extended duration of flood conditions. Flooding can happen at any time of the year, but is predominant in late winter and early spring due to melting snow, breakaway ice jams, and rainy weather patterns.

All States and territories are at risk from flooding. Apart from a rainy climate, risk factors usually present in combination and include:

- Rivers, Streams, and Drainageways: may often be subject to overflowing. The size of the stream can be misleading; small streams that receive substantial rain or snowmelt, either locally or upstream, can overflow their banks. High-velocity, low elevation

flooding can be dangerous and damaging. Six inches of moving water can knock a person off his or her feet; 12 inches of water flowing at 10 miles per hour carries the force of a 100 mile-per-hour wind.

- Dams and Levees: Dams or levees may give way, sending a large amount of water downstream. Information specific to dams is discussed later in this section.
- Steep Topography: increases runoff water velocity and debris flow. Lack of vegetation to slow runoff is another concern. Steep topography and a lack of vegetation can also lead to mudslides or landslides.
- Cold Climatic Conditions: Apart from snowmelt, Montana faces flooding problems associated with ice jams. In the spring, ice breaks away and then collects again at constriction points in rivers and streams (i.e., bends, shallows, areas of decreasing slope, and bridges); by trapping water behind it and subsequently giving way, an ice jam heightens flood levels both upstream and downstream. Ice jams occur in the fall with "frazil ice" (when a swift current permits formation of ice cover, but ice is carried downstream and attaches to the underside of ice cover there) and in winter when channels freeze solid [2].

Floods may be localized to a particular stream or river, or may be more widespread. Figure 5-2 shows areas of major flooding in the United States between January 1993 and December of 1997. Note that wide areas of Montana are subject to major flooding.

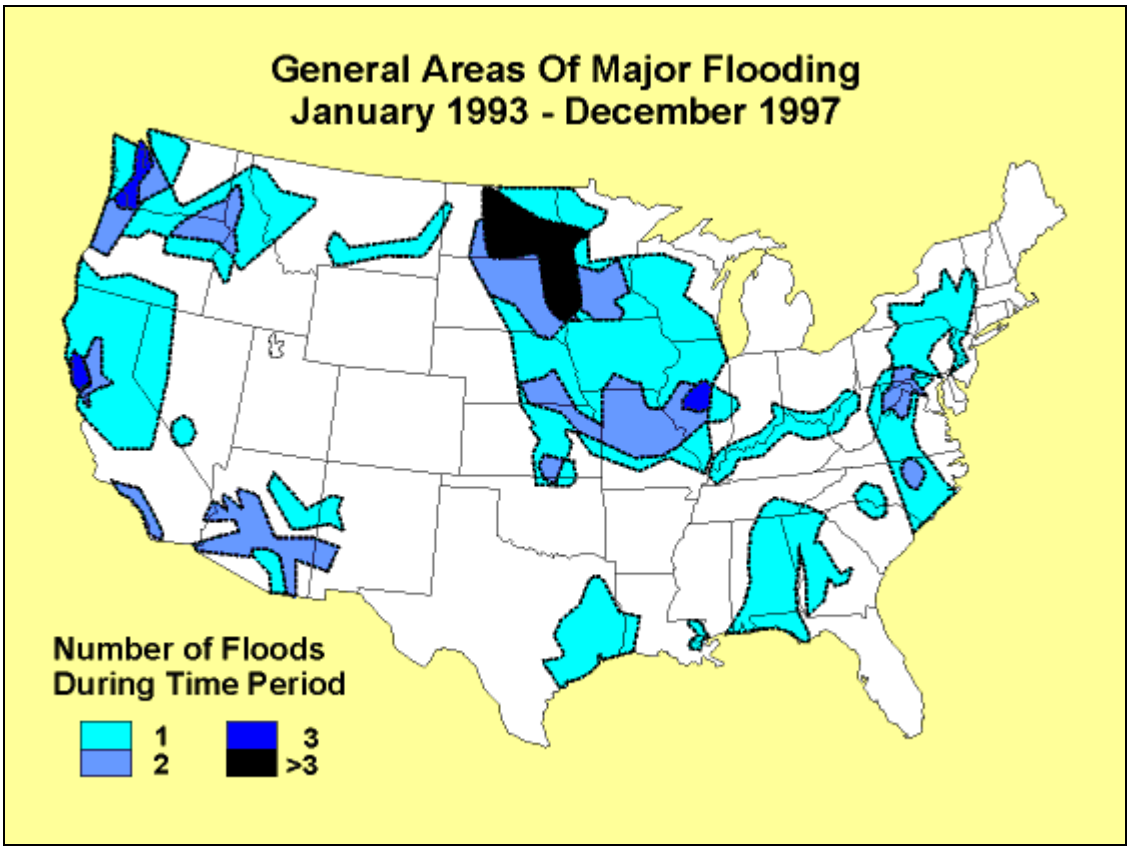


Figure 5-2: General Areas for Potential Flooding [11]

Planning

The extent of flooding depends somewhat upon the warning time available; this of course varies with the cause of the flooding and the distance a specific location is from the origin of the flooding. Intense storms may produce a flood in a few hours or even minutes at upstream locations, while areas downstream from heavy rains may have 12 hours or more to prepare. Flash floods occur within six hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching; floods from snowmelt may take months to develop [2].

Evacuation planning should take into account highways and bridges facing possible inundation. In evacuation planning for floods, consideration must be given not only to critical facilities and custodial institutions but also to recreational areas prone to flooding, the latter because sites are often physically isolated or because visitors may wish to isolate themselves from communication. Particular attention should be paid to critical facilities that are low-lying or in the path of projected debris flows.

Transportation routes subject to flooding should be identified and analyzed for the potentially disastrous effect flooded facilities would have on successful response and evacuation efforts. The following planning considerations should be addressed, for flood related evacuations:

- Maps that detail probable flood inundation areas and designated evacuation routes should be prepared.
- Coordination and implementation of mutual aid agreements with adjacent jurisdictions to facilitate evacuation should be drafted and enacted.
- Identification of potential locations for the placement of temporary levees and inclusion of this information on the appropriate maps should be undertaken.
- Obtaining assistance from the U.S. Army Corps of Engineers to build temporary emergency levees should be pursued [2].

When floods develop slowly enough to permit evacuation, MDT should, to the extent possible, provide other agencies and the public with information and instructions on the status of road closures and what routes must be avoided due to probable inundation.

It is often possible to predict where and when many floods will occur. Proper planning helps in this process. The following planning considerations should be addressed when planning for flood related incidents:

- Provisions for purchasing, stockpiling or otherwise obtaining essential flood fighting items such as sand bags, fill, polyethylene sheeting, and pumps (of the right size and type, with necessary fuel, set-up personnel, operators, and tubing/pipes).
- Resource lists that identify the quantity and location of the items mentioned above, as well as points of contact (day, night, and weekend) to obtain them.

In the event a flood does occur, the following actions are necessary:

Response

Much of the Interstate System and State Highways within Montana follow or cross rivers and streams. A flood may render much of this infrastructure unusable. Depending upon the

severity of a flood, the following steps constitute an appropriate response to a flooding incident:

- First Aid: Within the limits of training, provide immediate aid to MDT employees and others who may have been injured in the flood.
- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident Commander.
- Damage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable by responders, and what routes must be restricted or closed. Also, determine if MDT buildings are safe, or if they are not able to be occupied. Check all MDT equipment to see what has been damaged, and what can be used in the response and recovery efforts.
- Address the relocation of MDT and other government resources, vital records, and equipment to assure continuation of services and to prevent damage or loss.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of, emergency response personnel and vehicles, are a high priority action. Activities include:
    - Demolition and other actions to clear obstructed roads
    - Repair or temporary reinforcement of roads and bridges
    - Construction of emergency detours and access roads
    - Provision of traffic control
- Access Control: Only those people directly involved in emergency response should be allowed to enter an area affected by a flood.

Evacuation

Because flooding typically occurs along rivers and streams, it is often possible to plan for this type of incident. However, flash floods may cause an immediate need for evacuation of an area. Actions required when evacuating people from a flood include:

- Routing: MDT personnel must ensure that evacuation routes are safe and that information on safe, restricted and closed routes is communicated to the proper authorities and the public.
- Equipment: MDT may need to provide equipment to other jurisdictions to aid in the evacuation of an area that was impacted by a flood.
- Damage Assessment: Ground and aerial surveys may be required to determine the scope of damage and the status of key facilities. MDT personnel are responsible for determining the safety of affected roads, bridges, culverts and other transportation related structures.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of,

emergency response personnel and vehicles, are a high priority action. Activities include:

- Demolition and other actions to clear obstructed roads
- Repair or temporary reinforcement of roads and bridges
- Construction of emergency detours and access roads
- Provision of traffic control

Utilities and Lifeline Repairs

Structures left standing may have been weakened by water pressure and debris flows. Therefore, it is necessary to inspect roads, culverts, bridges and other structures to determine whether they are safe to utilize after a flood has occurred. Activities may include:

- Identification of bridges and structures that may threaten public safety
- Designation of those structures that may be safely used
- Identification of bridges and other structures that must be condemned

Dam Failure

One potential source of flooding is the failure of a dam. Dams may fail due to earthquakes, sudden increases in water pressure (flooding or heavy rains), or from inherent structural condition. In areas that would be inundated, were a dam to fail, a system should be developed that will:

- Alert key members of the emergency management staff when the local authorities receive notification that a problem exists or may occur at the dam.
- Disseminate emergency warning information (to the downstream public and other key response personnel) received from the dam's emergency management staff.
- Coordinate with others to facilitate the timely warning of the population at risk from dam failure.

There are approximately 3,500 *inventoried* dams in the Montana; they each hold at least 50 acre-feet of water or more. However, there may be more than 10,000 dams that have not been inventoried [12]. It is critical to identify significant structures, such as bridges, that are downstream from larges dams, because these structures may be impacted by a failure of the dam.

5.2.3. Blizzards

A blizzard is a severe snowstorm with strong winds and results in poor visibility. For a snowstorm to be classified as a blizzard winds must exceed 56 km (35 mi) per hour and the temperature must be 20f/-7c or lower [13].

Blizzard conditions may be limited to a specific area, such as a mountain pass, or may be more widespread. Most weather forecasts will indicate when conditions for a blizzard are present, although there may not be time to provide adequate warnings to motorists or other travelers.

In Montana, blizzards sometimes cause MDT to shut down roadways, and rescue stranded travelers. Snowplow operators are the most significantly impacted of MDT employees in this situation. In addition to being able to relay the real time weather conditions on the various roadways in a storm, snowplow operators themselves may become stranded in a blizzard.

Response

Due to weather forecasts, it usually is possible to predict when and where a blizzard will occur. This allows MDT time to prepare equipment and personnel for response. The response may be additional plows on the road, or extra crews to keep plowing 24/7. However, a blizzard may also occur with little warning, stranding vehicles on the road, and leading to the closing of particular passes or roads. Based on a blizzard, the response by MDT would consist of:

- Maintain communications with the District Offices and the Helena Campus to advise them of roadway and weather conditions. Advise other State (e.g., The Montana Highway Patrol) agencies, local agencies and the general public of any roadway/pass closures and alternative routes that are available. In severe weather, MDT would work with other agencies to issue "no travel" advisories, and post information on the Road Report number and the 511 traveler information system.
- Equipment: If motorists become stranded, MDT will work with first responders, usually law enforcement agencies, to provide access in order to rescue travelers.

Evacuation

The primary context for evacuation in a blizzard is to remove stranded travelers from the restricted or closed roadway. MDT snowplows and other MDT vehicles will attempt to "sweep" sections of roadways to assure no travelers remain prior to closing the roadway. This would be based on the severity of the storm. Also, the usual course of action is to advise "emergency travel only".

Secondary Events

Recovery from a blizzard is in the form of clearing the roads and passes of significant snowfall so that traffic flow can return to normal. However, heavy snowfalls can sometimes lead to avalanches, so MDT personnel must be on guard for this hazard.

5.2.4. Fires

A major fire, such as a forest fire, may or may not become a threat to a road or other structure, but it usually results in significant smoke to the extent that roadways must be closed to assure the safety of motorists. Closing a roadway may also be necessary to allow fire fighting equipment exclusive access to a particular area of concern. During the 2000 fire season, Montana experienced a total of 2,369 wildfires that burned a total of almost *one million acres* of land [14]. Figure 5-3 shows the location of forest fires in Montana in 2003, several of which resulted in road closures.

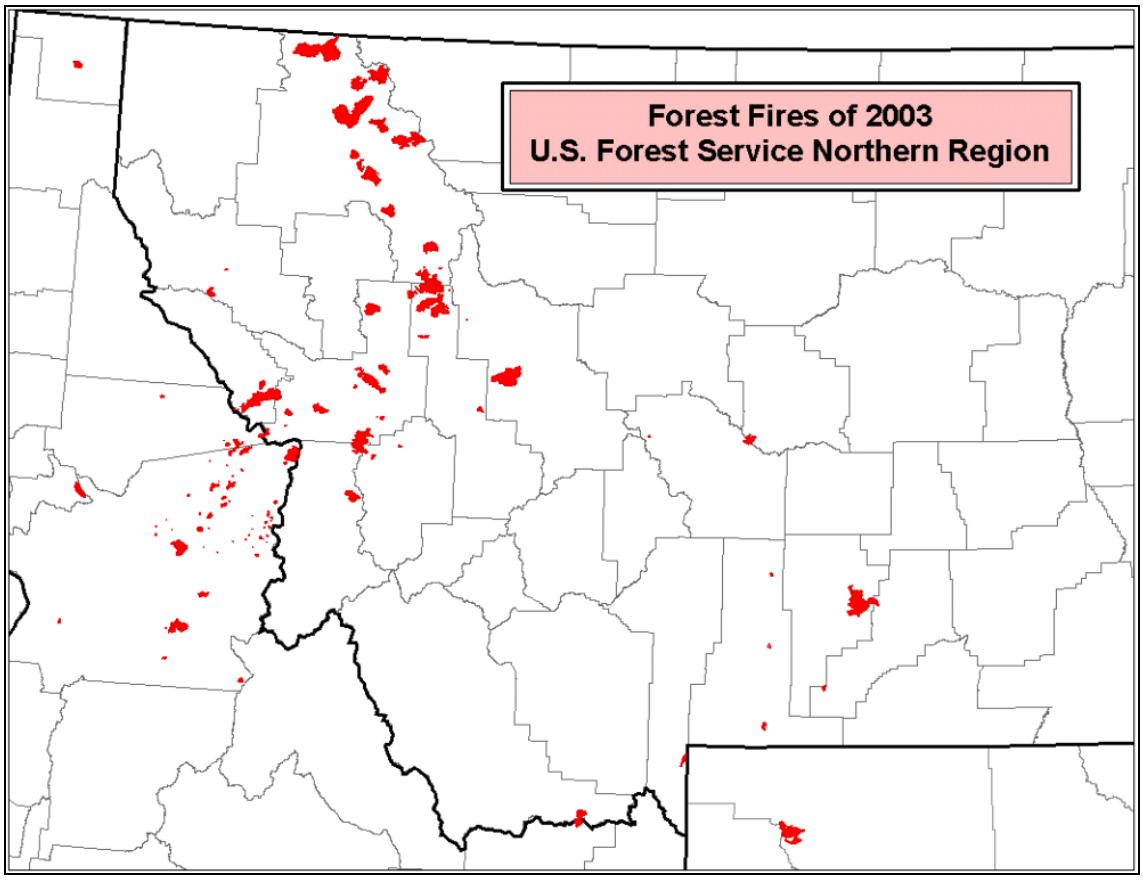


Figure 5-3: Major Fires in Montana 2003 [15]

Response

If a fire begins in the vicinity of, or rapidly expands to, an area near a roadway under MDT control, MDT may need to close the road, or restrict access to emergency vehicles only. These decisions are taken only after consultation with fire fighting officials. In 2004 a Memorandum of Understanding (MOU) was signed between MDT and the U.S. Forest Service in which MDT agreed to provide traffic control for the first 24 hours of a major fire. In addition to providing traffic control, hazards may be created, as trees burned by a fire may fall on the roadway. MDT is responsible for removing the debris. An active response by MDT includes:

- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident CommanderDamage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable by responders, and what routes must be restricted or closed. Also, determine if MDT buildings are safe, or if they are not able to be occupied. Check all MDT equipment to see what has been damaged, and what can be used in the response and recovery efforts.

Evacuation

Depending upon the path of the fire and extent of the smoke, and the likelihood that it may threaten structures or people, an area may have to be evacuated; that decision rests with fire

fighting personnel. However, if an evacuation is necessary, MDT must coordinate with other agencies to inform the public of safe evacuation routes.

- Routing: MDT personnel must ensure that evacuation routes are safe and that information on safe, restricted and closed routes is communicated to the proper authorities and the public.
- Equipment: MDT may need to provide equipment to other jurisdictions to aid in the evacuation of an area that was impacted by a major fire.
- Damage Assessment: Ground and aerial surveys may be required to determine the scope of damage and the status of key facilities. MDT personnel are responsible for determining the safety of affected roads, bridges, culverts and other transportation related structures.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of, emergency response personnel and vehicles, are a high priority action. Activities include:
    - Demolition and other actions to clear obstructed roads
    - Repair or temporary reinforcement of roads and bridges
    - Construction of emergency detours and access roads
    - Provision of traffic control

Recovery

The focus of recovery efforts subsequent to a significant fire is to ensure that the MDT infrastructure (roads, bridges, culverts) are safe for use. If requested, MDT may opt to render assistance to local jurisdictions. MDT will assess damage that may have occurred to its assets in the area of the fire.

5.2.5. Avalanches and Landslides

An avalanche is “a rapid downhill flow of a large mass of snow or ice” [13]. An avalanche also has the potential to carry other debris in its flow, such as trees and rocks. A landslide is “the sudden collapse of part of a mountainside or cliff” [13].

Due to the mountainous terrain in Montana, there exists a significant potential for both avalanches and landslides to occur. These incidents typically follow periods of heavy moisture, either in the form of rain and/or snow or due to physical dynamics unique to snow mass.

The primary outcomes of concern to MDT, resulting from these events, are to close a section or sections or the roadways. Because many MDT employees are frequently “on the road”, they may be the first to discover these incidents. MDT is the primary agency responsible for clearing and repairing damage to the roadway.

Response

- First Aid: Within the limits of training, provide immediate aid to MDT employees and others who may have been injured in the avalanche or landslide.

- Communications: Establish communications with the District Office or Helena Campus to advise them of the situation. Determine who will act as the Incident Commander.
- Damage Assessment: Determine what transportation infrastructure (roads, bridges, culverts, dams, etc.) has sustained damage, what routes are useable by responders, and what routes must be restricted or closed. Also, determine if MDT buildings are safe, or if they are not able to be occupied. Check all MDT equipment to see what has been damaged, and what can be used in the response and recovery efforts.
- Address the relocation of MDT and other government resources, vital records, and equipment to assure continuation of services and to prevent damage or loss.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of, emergency response personnel and vehicles, are a high priority action. Activities include:
  - Demolition and other actions to clear obstructed roads
  - Repair or temporary reinforcement of roads and bridges
  - Construction of emergency detours and access roads
  - Provision of traffic control
- Access Control: Only those people directly involved in emergency response should be allowed to enter an area affected by an avalanche or landslide.

Evacuation

Evacuation is typically not an applicable function for these hazards because the event usually occurs with little or no warning. However, MDT employees may be asked by Search and Rescue professionals to assist in recovery of victims. Due to the fact that avalanches and landslides might typically occur following periods of heavy precipitation, MDT employees and other officials should always be alert to conditions that might cause these incidents.

- Routing: MDT personnel must ensure that evacuation routes are safe and that information on safe, restricted and closed routes are communicated to the proper authorities and the public.
- Equipment: MDT may need to provide equipment to other jurisdictions to aid in the evacuation of an area that was impacted by an avalanche or landslide.
- Damage Assessment: Ground and aerial surveys may be required to determine the scope of damage and the status of key facilities. MDT personnel are responsible for determining the safety of affected roads, bridges, culverts and other transportation related structures.
- Debris Clearance: Identification, removal, and disposal of rubble, landslide tales, wreckage, and other material which may block, or hamper the performance of, emergency response personnel and vehicles, are a high priority action. Activities include:
  - Demolition and other actions to clear obstructed roads.

- Repair or temporary reinforcement of roads and bridges.
- Construction of emergency detours and access roads and
- Provision of traffic control

Utilities and Lifeline Repairs

MDT personnel will develop plans for the permanent repair of roads, bridges or other structures if necessary. MDT will coordinate with other agencies and entities to assist in access for the restoration and repair of electrical power, natural gas, water, sewer, and telephone and other communications systems.

5.3. Response Agencies

Due to the nature of their jobs, MDT employees may be the first on the scene of an incident, be it manmade or of a natural cause. Due to the fact that they are first on the scene, the MDT employee becomes the de facto Incident Commander. One responsibility is for the MDT employee at the scene to contact law enforcement personnel and the closest MDT office to alert other agencies of the incident.

This communication will typically occur through the use of two-way radio communications. However, if the MDT employee or someone else on the scene has a cellular phone or another way to make a phone call, there are several agencies that could be called, depending upon the type of incident.

In reporting incidents to the response agencies, callers should attempt to provide as much of the following information as possible, including:

- Their name and call back number.
- On-scene contact person and phone number, location and description of event.
- Status of the event (ongoing or over), any life threatening situations.
- Container type, labels, truck/railcar number, shipping papers, or other identifying information.

5.3.1. State Disaster and Emergency Services (DES)

The State's Disaster and Emergency Services office will typically be informed by law enforcement personnel of an incident. However, if a severe incident were to occur, MDT personnel can contact the DES office directly.

Phone number: 1-406-841-3911

5.3.2. CHEMTREC

The Chemical Transportation Emergency Center (CHEMTREC) provides 1-hour assistance to emergency responders and all others handling Hazardous Materials incidents. Expert advice from government and industry specialists is available. CHEMTREC is a free service provided by the chemical industry. It ensures that the industry's capabilities and expertise are available in emergency situations. The shipper or manufacturer of the material can usually be contacted through CHEMTREC for assistance with information on proper handling of the material.

Phone number: 1-800-424-9300

5.3.3. National Response Center

The National Response Center (NRC) is the single federal government center to which releases of hazardous substances should be reported. Federal law requires that anyone who releases a reportable quantity of a hazardous substance into the environment immediately notify the NRC.

Reportable quantities vary for different materials from less than a pound to thousands of pounds. It is the responsibility of the owner of the material to report the release.

Phone number: 1-800-424-8802

5.3.4. DES County Coordinators

Generally, each county has as Disaster and Emergency Services County Coordinator who is responsible for dealing with hazardous materials incidents in the county; they also are responsible for implementing safety measures at a hazardous material incident site, coordinating the cleanup of spilled substances, necessary evacuation, and notification of the incident to the public. Coordinators can be reached directly, or through local law enforcement agencies, or the State Disaster Duty Officer, who is available 24 hours a day, 7 days a week, at the phone number listed in Section 5.3.1.

5.3.5. Department of Environmental Quality (DEQ)

State environmental personnel may become involved in an incident after notification by local authorities to ensure appropriate cleanup is performed. DEQ typically responds after the incident has stabilized, and is focused on the long-term affects of any incident.

5.4. Summary

This chapter discussed both manmade (either accidental or deliberate) and natural disasters. Deliberate acts (acts of terrorism) can utilize Weapons of Mass Destruction (WMD). These weapons may use biological, nuclear, incendiary, chemical or explosive elements; remember "B'NICE". Table 5-1 highlighted the various "agents" that may be used in a WMD attack, as well as some possible distinguishing signs of each agent. The chapter then discussed the role of Homeland Security, and how MDT's employees can play a possible role in this process.

It was discussed that Hazardous Material (HAZMAT) spills or other incidents may occur from the accidental actions if groups or individuals, yet these incidents require the same response from MDT and other agencies. Specific actions were detailed for MDT employees to follow in response to either deliberate or accidental manmade incidents.

The chapter then discussed five natural incidents (disasters) that may occur in Montana: earthquakes, floods, blizzards, fires, and avalanches and landslides. A description of each natural disaster was presented, along with actions to be taken by MDT and its employees. Because many of these natural disasters have the ability to significantly affect the transportation infrastructure in Montana, MDT must continue to plan for an effective response should one or more of these natural disasters occur.

Finally, this chapter discussed some of the other agencies, both state and federal, that would be involved in the response to a natural or manmade incident. Most of the MDT responses that are highlighted in Chapter 5 will be discussed in the *Glove Box Manual* that will be carried in all MDT vehicles.

6. HELENA CAMPUS EMPLOYEE DISASTER SURVIVAL PLAN

6.1. Introduction

The Montana Department of Transportation (MDT) Headquarters is located in Helena on what is commonly referred to as the "Campus." The Campus includes an Administrative Building and several other MDT structures (Figure 6-1).

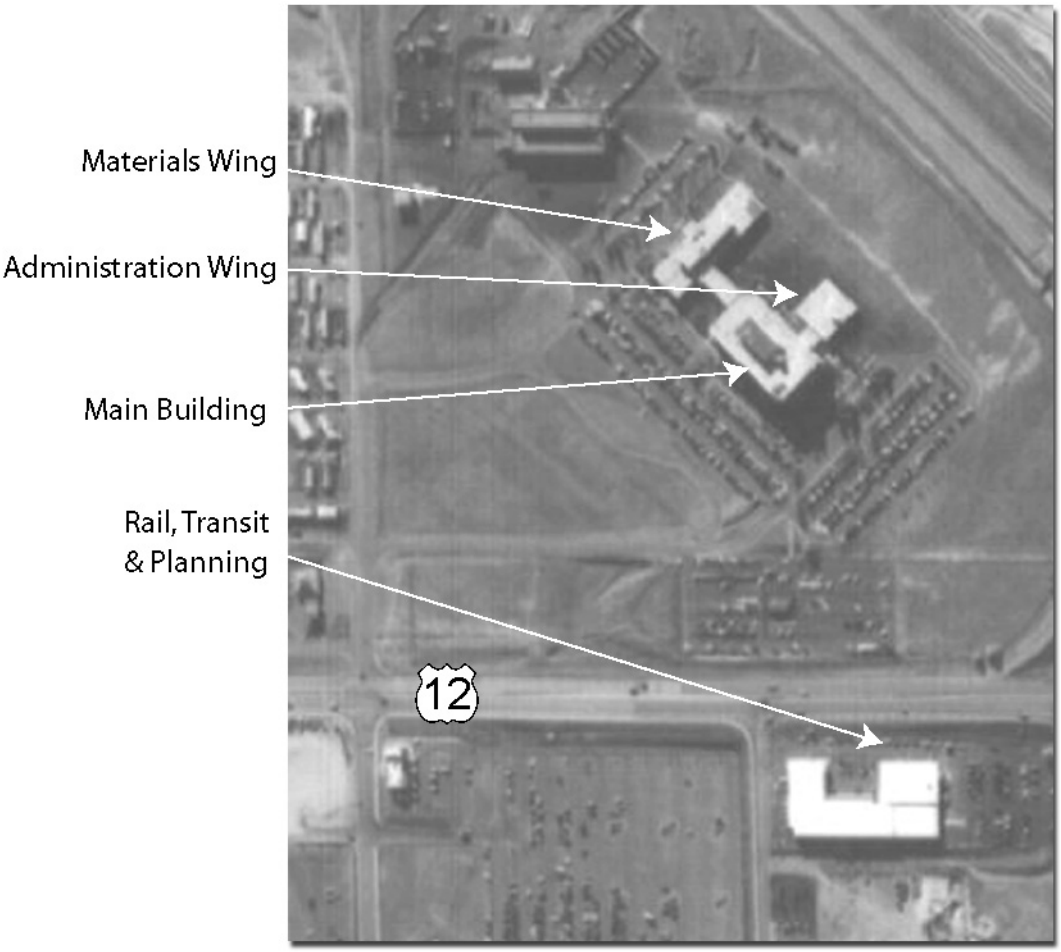


Figure 6-1: Helena Campus Facilities

As noted in the MDT Emergency Operations and Disaster Plan, disasters may be naturally occurring or caused by the deliberate or accidental actions of groups or individuals. Some naturally occurring events are earthquakes, floods, fires, blizzards and other severe weather events. Manmade disasters might result from acts of terrorism, the use of Weapons of Mass Destruction (WMD), civil disorder, deliberate or accidental release of hazardous materials, major explosions and nuclear/radiological accidents. Both natural and manmade disasters may be of such magnitude that Campus building occupants and people in the surrounding area might be forced to partially or completely evacuate Campus buildings and establish command posts elsewhere at which to restore and continue essential services. This Survival Plan examines the

concept of operations with regard to what actions must be taken by MDT employees (and others) to minimize loss of life and injuries and damage should such an incident occur.

Unique to the Campus is the close proximity of two fuel farms which, if they exploded, might not only engulf the Campus but also make evacuation difficult, if not impossible. Fuel farm tank leakage also could constitute a major problem due to vapors forming from a spill and generating an explosive "cloud of fumes" that could easily ignite, touching off a catastrophic explosion. This issue is addressed in more detail in Section 6.6.

If such a major incident were to occur, chaos most likely would prevail in the absence of a carefully conceived and executed Survival Plan. As with the management of any incident, pre-planning for disasters is the key to stabilizing the situation and carrying out subsequent actions that will minimize the loss of life and injuries as well as restore essential services. MDT employees must have both the knowledge and training they will need to carry out their responsibilities.

The Survival Plan stipulates what actions should be taken by MDT employees to efficiently evacuate the Campus (including assisting people who are, or have become, disabled), respond effectively and assist injured persons, as well as restore everyday activities. The safety and health of MDT employees are integral to successful implementation of the Survival Plan. Recovery of injured personnel, provision of initial medical treatment, as well as food and shelter, are primary concerns in the event of a disaster.

Once MDT has stabilized the situation and can support itself, it can direct its attention to its mission and provide support throughout the disaster area. Should a disaster occur, resources must be marshaled; actions coordinated and critical decisions must be made usually under extremely stressful conditions. The first few moments when personnel are awaiting outside assistance are especially critical particularly in cases where the survival of injured persons is at stake. Everyone involved in reacting to a disaster of any magnitude must understand that success depends greatly upon individual and group *flexibility* to cope with changing circumstances. The Survival Plan spells out numerous responsibilities; however, it is the ability of each individual to *adapt* and to cope with virtually any need or demand of the moment that will result in successful management of the incident.

6.2. Assumptions

A number of assumptions have been made that are integral to development and implementation to the Survival Plan. They include:

- Local municipal governments have the primary responsibility for taking emergency actions and for allocating resources that must be committed to save lives and to minimize injuries.
- Statewide and local government plans have been developed to facilitate coordination of outside assistance for a large scale disaster; however, it is necessary for the Campus, through development and implementation of the Survival Plan, to be prepared to carry out disaster response and recovery operations in support of:
    - Campus facilities and personnel (for a major disaster, it is generally accepted that MDT must be prepared to respond internally for a minimum of 72 hours before additional resources may be available.)

- Other MDT facilities
- The State Emergency Coordination Plan (ECP)

The MDT Emergency Operations and Disaster Plan development and implementation of the Survival Plan do not promise that any single disaster response will be perfect, or even executed as planned. MDT's resources may be overwhelmed; however, the Department will make every reasonable effort to respond as planned within the resources available under the circumstances.

6.3. Concept of Operations

Concept of Operations is a term used to describe the responsibilities of individuals and groups taking part in an event; e.g. planning for and recovering from a disaster affecting the Helena Campus. It is essential to build redundancy into the Survival Plan because key decision makers and other critical personnel may become casualties and not be able to function, or they may be away from the Campus on business or vacation/sick leave or otherwise not be available.

Local, State and federal government responsibilities include making every effort to protect life and preserve property from disasters. When a disaster exceeds local government's capability to respond, assistance likely will be requested from State government. State government, upon request, provides assistance to local government as necessitated by the nature and magnitude of the disaster. However, State assistance is provided only after all local resources have been exhausted.

6.4. Support Groups

MDT has designated eight Support Groups, each of which will carry out specific, although different, functions in the event of a disaster affecting the Campus. Group members are MDT volunteers and must be trained to function effectively (see Chapter 7 of the MDT Emergency Operations and Disaster Plan for more information on training). An exception, however, is the Medical Support Group which is made up of trained Emergency Medical Technicians. Each Support Group must prepare *instructional plans* to be included in the Survival Plan. These documents will specify the operational functions and responsibilities of the Groups' personnel in the event of a disaster. Explicit directions and procedures will be contained in manuals and/or directives that each Group will develop. When complete, they too, will be incorporated in the Survival Plan as Annexes. The Survival Plan has designated each floor/wing as the focus of the Support Groups. Immediately following a major disaster, Support Groups have the responsibility of reestablishing MDT operations to the extent possible. To do this effectively, succession of command must be established and practiced prior to an event occurrence.

Groups involved in disaster management within the MDT organizational structure should try to ensure that personnel responsibilities during a disaster remain as close to their normal day-to-day activities to the extent possible under the circumstances. It is highly desirable to maintain organizational continuity and assign familiar tasks to personnel. Managers and Supervisors within the Administration Building are responsible for carrying out effective efforts directed at safety, loss prevention and preplanned disaster survival action. Carrying out these responsibilities requires adherence to the Survival Plan, protection of personnel, commitment of resources and budget allocations for equipment, materials and effective training.

During training exercises and in an actual disaster, employees located in the Administration Building are responsible for adhering to the floor/wing published directions. Employees should familiarize themselves with Emergency Operations Plans and be prepared to assist during an actual disaster. Each employee is responsible for his or her own actions.

If it becomes necessary to evacuate, Administration Building employees and visitors shall proceed expeditiously to a pre-designated assembly area and wait for further instructions. An assembly area helps to account for all employees and may function as a source of immediate manpower for necessary actions.

Notwithstanding the foregoing, each ambulatory employee must decide whether they wish to assist other employees who may be injured or are otherwise unable to function for themselves.

The Support Groups, shown below, have been designated to carry out the following functions in the event of a significant incident. The Support Groups listed in bold type are currently operational and are otherwise able to carry out their assigned responsibilities:

- **Evacuation**
- **Traffic Control**
- **Facilities Operation and Damage Assessment**
- Search and Rescue
- **Medical Support**
- Camp Staging
- Communications
- Initial Standard Operating Procedures

Each Support Group must be prepared to extend their operational functions and responsibilities to other Campus agencies, to other agencies and organizations in the Helena area or as directed by proper authority. Moreover, in addition to direct support of the Administration Building and other Campus facilities, each Group must be prepared to respond to contingency operations that may include deployment of personnel and equipment outside the Helena Campus immediate area of recovery; e.g., to Missoula or any other MDT site. Should Groups be called upon to provide personnel and equipment and supplies to other areas requiring survival assistance, emergency equipment and supplies sent should not exceed 75% of resources on-hand. About 25% of disaster resources will be held in reserve for dealing with potential additional damage from subsequent emergencies (e.g., earthquake aftershocks).

Every floor/wing line of succession for the Survival Plan is in effect to facilitate maintaining order during implementation. A Helena Campus Incident Command Post (ICP) will be established within the immediate disaster area; recovery efforts will directed from the ICP. Figure 6-3 shows the order of authority.

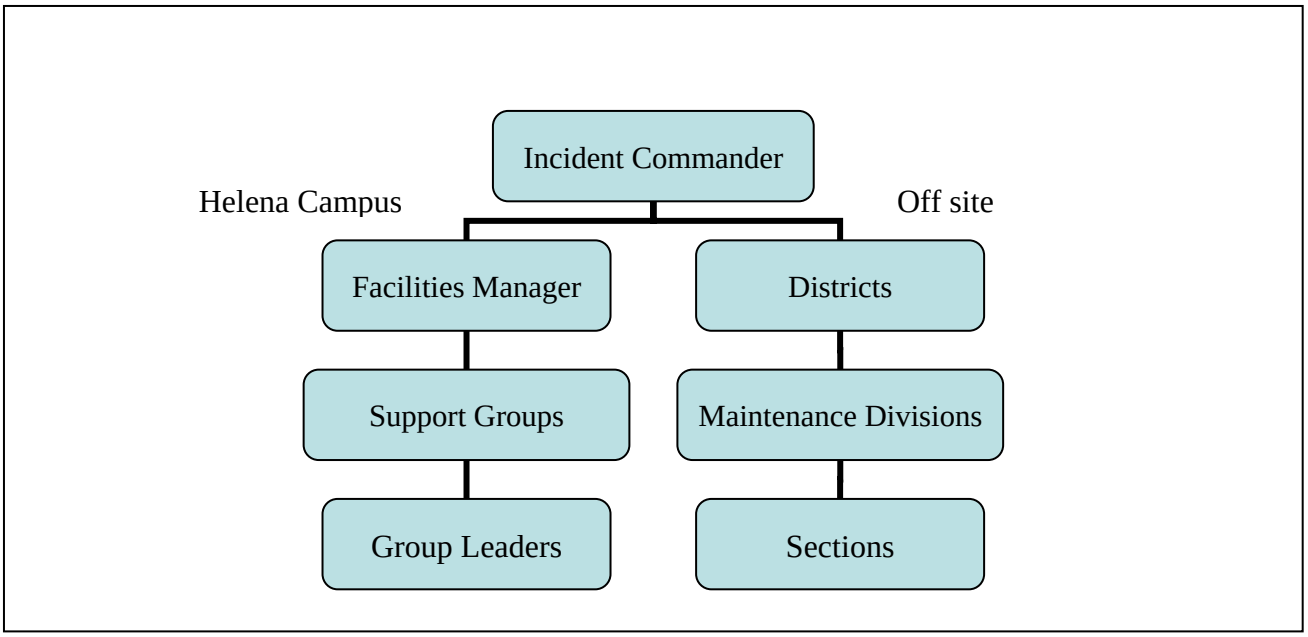


Figure 6-2: MDT Chain of Command

The overall MDT Incident Commander is the Maintenance Division Administrator. In the event of a major incident, the line of succession depends on its location. If, for example, the event occurs within or near the Campus, the Building Facilities Manager reports to the Incident Commander.

Within the Survival Plan's first hour of activation, each Group Leader is required to establish an informal log within which to enter significant task activities, current status and general functioning of the Group. As a minimum, the log will have an every half hour entry which will express and indicate the general operating activities in which the Group is involved and any pertinent information regarding the operations of the Group. Written summaries of actions are important for post-disaster assessments and reviews (lessons learned).

Each Group leader is responsible for establishing procedures for the conduct, activities, procedures and reporting of their Group during and subsequent to the disaster. Each Group will have, as a minimum:

- General operational procedures
- A roster of Group members
- A copy of the Survival Plan
- An operational log/journal reflecting all activities/tasks
- Group manuals/directives for operational needs

6.5. Group Responsibilities

6.5.1. Evacuation Group

The Evacuation Group is the first line of preparedness. The Evacuation Group will assist with the safe and expeditious evacuation of the employees from the Administration Building whenever

there is cause to evacuate the building and to execute an accountability process in the assembly area. Building evacuation must be conducted safely and expeditiously. Once safely out of the building, it is paramount that the Group account for all employees. In the assembly area the Group will conduct a continual accounting of employees and others (visitors and customers who were in the building at the time of the evacuation) until everyone has been accounted for.

The Evacuation Group has a Group Leader. The Group Leader is responsible for preparing the Evacuation Group plans, assuring that floor/wing Coordinators are familiar with the plans, accounting for employees in the assembly area and for assuring, to the extent possible, there are sufficient numbers of floor/wing coordinators, that they are properly equipped and, that each Coordinator is familiar with the contents of the Evacuation Plan. The Evacuation Group Leader interacts with the Employee Disaster Survival Plan Coordinator, who is also the designated Headquarters Building Incident Commander (the MDT Maintenance Administrator).

The Evacuation Group consists of from three to five team members from each floor / wing in the Administration Building. The team members have been designated to assure that in case of an evacuation, each floor/wing will have at least one member present. Team members are required to attend quarterly update briefings and attend semi-annually Group meetings. Updated information is made available to team members by attendance at floor/wing meetings and through periodic briefings by the Evacuation Group Leader. All new team members receive a briefing by the Evacuation Group Leader or a designated alternate.

Each floor in the Administration Building is to have a senior team member appointed. He/she will be responsible to the Group Leader to ensure that:

- The required number of team members have been assigned to each floor/wing
- Equipment needs are adequate
- Each assembly area has been identified for their floor
- A floor accountability status report is provided to Group Leader
- Other actions are carried out as directed by the Group Leader

Any team members who transfer, move out of the building, or do not wish to continue in their role, must identify a replacement from within the given floor/wing to ensure that each floor/wing is properly staffed. Group Leaders must be notified in writing of every change.

In the event of an Administration Building evacuation, the team members will perform the following actions:

- Check restrooms, conference rooms, individual offices, cubicles and other common areas in their floor/wing to assure employees are aware of the evacuation and that they begin evacuation immediately.
- To the extent possible, know who the employees working in their floor/wing are.
- Make note of any employee who is not evacuating and/or is unable to evacuate and go the assembly area. Report their location and status (i.e. mobility, injury condition, number of people, etc.) to the employee who is keeping a record of evacuees in the assembly area.

- Assure that visitors in the building are directed to evacuate the building and report to the assembly area for accountability and directions.
- If there is only one team member available from a floor/wing, that individual will check that area and must be the last person to leave.
- At the assembly area, the team member must be prepared to supplement evacuation plan operations, if requested, by assisting other Groups with their responsibilities such as assisting the Medical, Staging and Traffic Control Groups.
- If a team member is no longer able to continue, a replacement must be identified. Group Leaders must be alerted to this fact. If a team member becomes aware of a pending change, volunteers should be requested as soon as possible from among other employees in the area.
- Disabled personnel or other individuals unable to evacuate without assistance will require help from an employee who will escort the individual(s) to the appropriate floor/wing stairwell and remain with them until professional help arrives.
- Depending on the type and magnitude of the disaster, building evacuation and specific evacuation procedures for persons with restricted physical mobility must be developed and implemented. Doing so is the responsibility of the Evacuation Group Leader.

Currently accepted procedures for evacuating a person in a wheel chair are to escort the individual to the nearest stairwell and remain with them. Evacuation Group personnel should be advised of the situation and told that a team member is remaining with the disabled person. When emergency service personnel arrive, e.g., fire, search and rescue, they will be directed to the location to assist in the evacuation. Rescuers will immediately notify the Evacuation Group Leader of the their location, their reason for staying, and the number of people remaining on the floor/wing/stairwell.

As an alternative, depending on the reason for evacuation and, if warranted, employees may assist a disabled person by carrying the individual or carrying them in a wheelchair/chair. Use of a two or four person lift is the preferred method of carrying. A two/four person lift is when two people are on each side of a wheelchair/chair or four people on each corner of a wheelchair/chair, lift and carry the individual down the stairs and outside. A two person “fireman lift” is when two people interlock their forearms together and a person sits between the two people as they evacuate outside.

The Evacuation Group Leader and team members have been designated and the Group is prepared to carry out their mission should an evacuation become necessary.

6.5.2. Traffic Control Group

The Traffic Control Group has been established to assure efficient and effective control of vehicular and pedestrian traffic at the main points of egress and access within the general area of the Campus during emergencies that warrant evacuation of the Administration Building. They also are responsible for directing emergency personnel to specific locations where their assistance is most needed. Coordinating with the Evacuation Group, they assist in assuring that no one reenters the Administrative Building. The Group also is tasked with developing a traffic control plan and the implementation of traffic control at the main points of ingress and egress

As with other Groups, the Traffic Control Group will have a designated Group Leader who will be responsible for developing the Group's operational plans, ensuring the Group has an adequate number of team members at all times, assuring that Group members are appropriately and adequately trained, establishing traffic control points along the circumference of the incident, and other such traffic control duties as may be assigned. The Group Leader fulfills their responsibilities through the Survival Plan coordinator (Headquarters Site Incident Commander).

Depending on the nature and extent of the incident, team members will report to their assigned traffic stations and/or to the designated traffic control points. Vehicle traffic may not be allowed in the general parking areas and entrances to the Administration Building may be barricaded. Traffic control directions will come from the Incident Commander. In the event that the Group Leader is absent, one of the team members will take charge and direct accomplishment of the Group's responsibilities until properly relieved or replaced.

Team members will receive direction from the Traffic Control Group Leader. All team members shall be equipped with the appropriate equipment. Their responsibilities include:

- Assisting in safely directing pedestrian traffic to the staging area
- Designating a parking area for emergency vehicles upon their arrival
- Being prepared to install concrete barriers and establishment of vehicle and pedestrian traffic control areas
- Providing traffic control as long as required
- Reporting any problematic situations
- Assist with other duties as directed

Disabled and other personnel, as well as the traveling public, most likely will have only limited mobility. It is important to appreciate that the public also may need assistance during an emergency. When the opportunity arises, the status of the situation should be explained to those whom may be delayed from exiting the scene. Difficult as it may be, Group members should try to maintain and project a positive attitude and avoid confrontation. Team members must remember that they are not law enforcement officers (unless deputized at the scene) and should act accordingly. Doing so will do a great deal to restore order and minimize panic. As a representative of MDT, individual conduct must be, and be seen as, outstanding.

The Traffic Control Group Leader and team members have been designated and the Group is prepared to carry out their mission should an evacuation become necessary.

6.5.3. Facilities Operation and Damage Assessment Group

The primary mission of the Faculties Operation and Damage Assessment Group is to conduct a damage assessment of MDT owned and leased facilities and to assess the difficulty of maintaining and continuing essential operations. They must also determine which operations will not be able to be carried out. The Group also is charged with conducting an initial building inspection by floor/wing after an earthquake or other major incident causes significant damage.

The Group is under the direction and control of the Facilities Manager and is charged with conducting preliminary building inspections to assess the construction and structural safety of the building/facility being evaluated. In addition, it must ensure that appropriate shutdown/startup

procedures are in place and implemented so as to reduce damage to essential building systems. A list of hazardous or toxic substances within the building should be compiled and maintained and conspicuously posted throughout the Campus buildings. Personnel must be aware that potential exposure can occur through inhalation and skin contact.

The Group Leader is responsible for assuring that team members have training in how to evaluate buildings. This will include, but not be limited to, assuring that all team members have the required equipment and supplies to conduct and complete their mission assignments. The Facilities Operation and Damage Assessment Group Leader coordinates with the Survival Plan coordinator, who is also the designated Headquarters Site Incident Commander.

The Team should be activated immediately following an incident that requires evaluation of the Administration Buildings, due to concern about structural safety. All available team members will be alerted and they will assemble at a pre-designated location where they will await further instructions, provision of necessary equipment and regional or local field deployment.

Two of the teams will be dedicated to support the OSC needs; the remaining teams will serve as backup, or be directed to support regional damage assessment activities, as needed. In addition, teams may be detached to support other State agency assessment needs. The Facilities Operation and Damage Assessment Group

The Facilities Operation and Damage Assessment Group Leader and team members have been designated and the Group is prepared to carry out their mission should an evacuation become necessary.

6.5.4. Search and Rescue Group

The mission of the Search and Rescue Group (SAR) is to determine the location of victims and to rescue employees trapped within the Administration Building or other buildings on the Campus. The importance of their function cannot be overstated, because the State does not have a designated Search and Rescue organization. Assistance to this Group would have to come from the outside, and could take up to 24 hours or more to arrive. Moreover, outside assistance might be directed to higher priority locations.

As with other Groups, the safety of the Search and Rescue Group members is the number one priority during all operations. The Search and Rescue Group Leader works through the Employee Disaster Survival [EDS] Plan coordinator, who is also the designated Assistant Headquarters Site Incident Commander.

The SAR Group Leader will insure, to the extent possible, that the floor/wing:

- Team members have the correct personal equipment and are properly trained before assignment to any SAR operations.
- Team searches are conducted with a minimum of two persons and the team assignment and location log are kept current.
- Damage Assessment Team [DAT] has cleared each area before assigning a team to the area or at least one team member has attended an ATC 20 training class.
- Insure that all operations have a Safety Officer designated. The Safety Officer will have the final word on all rescue operations for the SAR Group.

- SAR personnel will take assignments and orders from SAR chain of command. Those teams who have been detached for special operations will follow orders from the organization to which they are assigned.
- SAR team members will not answer questions from the press. All questions from the media will be directed to the Incident Commander or the Department's Public Information Officer.

Individual teams and their members will insure the floor/wing SAR procedures are followed.

- Each team must have operating radio communications equipment.
- All active participating team members will have, as a minimum, a current certificate of completion from the Rescue Systems 1 course from the Department of Emergency Management, Lewis and Clark County, or thirty hours of rescue training by MDT SAR personnel, and trained in basic First-aid.
- All team members will be properly briefed and debriefed for each mission.
- Team members will not enter any confined space, such as a collapsed room.
- Deceased victims will be located, identified, marked with white flagging and left in place until rescues of survivors are completed and SAR operations have transitioned into the recovery stage of operations.
- Hazards will be marked with red danger barrier tape or when conditions dictate, a red light stick.
- The MDT SAR Training Officer will keep an updated roster, in the SAR supply container, of team members and their SAR training qualifications, status and classes attended.
- All radio communications will be kept to a minimum.
- For direct and detailed SAR operations, MDT employees should refer to SAR Group manuals.

Members of the Search and Rescue Group have not yet been designated.

6.5.5. Medical Group

The Medical Group will have a Group Leader and team members who are current and certified in basic first-aid and/or advanced first aid procedures. The Medical Group Leader works through the Employee Disaster Survival [EDS] Plan coordinator, who is also the designated Headquarters Site Incident Commander.

The Group must be ready to provide emergency medical assistance in the event of an earthquake or other disaster and to work with other emergency teams. They will provide basic first-aid and assist local EMT personnel and/or Physicians tending to the injured.

In the event of an emergency, the Medical Group will set up at a location to be determined by the Group Leader acting in concert with the Incident Commander. They will be ready to provide immediate first aid treatment to persons needing care. They will assist in the triage function with

regard to which victims need to be evacuated for additional medical treatment, which victims need only on-site medical care, and for which victim's death is imminent or has occurred.

Team members will receive direction from the Medical Group Leader or lead team member. All team members will maintain a current first-aid card and/or an advanced first-aid certification. To the extent possible, medical team members should receive advance first aid training.

During emergency situations team members must understand that the general level of anxiety , or even panic attacks, by employees are likely and that they should do everything within their power to comfort these people and reassure them that everything will be alright.

Arrangements should be made for Group members to have opportunities to train with or participate directly with trained medical personnel.

The Medical Group leader and team members have been designated, and are prepared to carry out their mission.

6.5.6. Staging Group

As evacuation procedures are initiated, and continue, employees must attempt reach the assembly area designated by the Incident Commander. The Staging Group is responsible for provision of necessary food and water requirements. Also, there may be a need for temporary shelter to protect injured victims of the disaster.

The Staging Group Leader is required to maintain the level of strength necessary to fulfill the responsibilities of the Group. However, the greatest benefit of the Team's support is that team members know what resources are available, and how they should be deployed. Additional support may be available; however, the Staging Group Leader will work through the Employee Disaster Survival [EDS] Plan coordinator, who is also the designated Headquarters Site Incident Commander.

The Staging Group Leader or the lead team member will insure, to the extent possible, the floor/wing:

- Selects an alternate building or establish a "camp site"
- Maintains adequate water supplies and sets up shelter as soon as possible
- Provides blankets when needed
- Establishes and designates camp locations for sleeping, medical treatment, food and support shelter requirements

This Group is integral to the Disaster and Emergency Operations Plan and will function under the Unified Command Structure.

Group members will be called upon initially to set up the camp area and provide and allocate resources to maximize the chances for survival. Work will be of significant duration and rapidly paced as the need to provide environmental protection may be important to survival. Priority will be given to the Medical Group's needs of attending to the injured. Second priority will be assigned to the needs of surviving employees. Specific responsibilities include:

- Operating power generators to provide light and heat as warranted.

- Erecting up tents, provide blankets, issue protective weather gear, provide warm drinks and cook for the camp; set up a system for re-supply of survival supplies.
- Remaining cognizant of the special needs of disabled or temporarily disabled employees in the camp area. In coordination with the Medical Group, designate a temporary morgue area. If possible, a morgue should be established in coordination with the County Health Department.

Sufficient potable water will be very important during the survival effort. Protection from the weather will require immediate action. Demands of many things will be instant. Employees should give their all, but also give due diligence to their *personal safety*.

The Staging Group leader and team members have not yet been identified.

6.5.7. Communications Group

The roles and responsibilities of this group have not yet been defined.

6.5.8. Initial Standard Operating Procedures Group

Standard operating procedures are established to provide an automatic response by Group Leaders and team members. The Standard Operating Procedures (SOP) are to be implemented automatically whenever the Survival Plan is activated; they will lead to a more efficient and timely operation. SOP should expedite MDT's response efforts during the initial phase of the Survival Plan.

These procedures are applicable to all Group members and are to be initiated without the need to tell or otherwise direct employees to do so. All Group Leaders and the respective team members are required to execute the SOP.

During the selection of personnel for ad hoc and planned assignments, the floor / wing personnel should be selected first because they will have standard equipment and qualifications. Personnel may be drawn from the assembly area to supplement efforts when the Survival Plan is implemented. Personnel will be assisting the respective groups and providing relief and doing tasks as needed and directed by the Group Leader/person in charge.

- Evacuation Group
    - Sent (_x_) people to HSIC to help provide administrative assistance and support during the incident.
    - Sent (_x_) people to the Medical Group to provide assistance/support to the Medical Group during the incident.
    - Sent (_x_) people to the Traffic Control Group to provide assistance/support to the Traffic Group with their duties.
    - Sent (_x_) people to the Staging Group to provide assistance/support to the Staging/Camp Group.
- Traffic Control Group
    - Be prepared to accept additional people to supplement operational work needs in the group.

- Damage Assessment Group
    - Request additional administrative support personal, if required to assist in documentation, from the HSIC.
- Search and Rescue Group
    - Request additional administrative support personal, if required to assist in documentation, from the HSIC.
- Medical Group
    - Be prepared to accept additional people to work with the medical team members.
- Staging Group
    - Be prepared to accept additional people to supplement your activity needs in establishing a camp/survival area.

Special note should be taken of any disabled employees who have had to remain in the building. Assurance that the building is safe must be ascertained and verified by a Professional Engineer before personnel enter to search for the missing and injured. Two-way communications must be established and continuingly be in place with an outside source prior to entry. Communications must be redundant before rescue personnel enter.

6.6. Fuel Farm Proximity

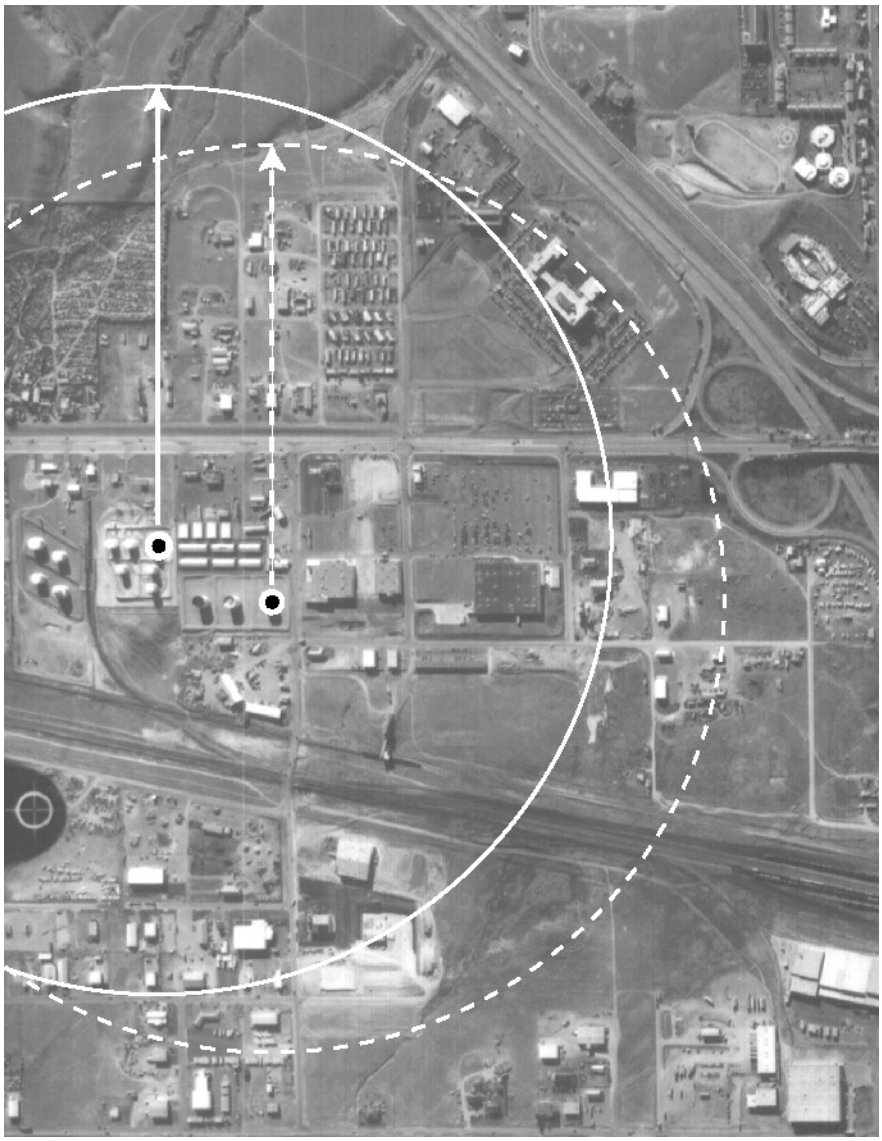
As stated earlier, there are two fuel farms in close proximity to the Campus. These fuels farms are owned by CONOCO-Phillips (CONOCO), and Exxon-Mobil. The fuel farm's proximity to the Helena Campus is problematic in that if a fire, an explosion or leakage of fuel were to occur, a conflagration could result and cause disastrous consequences in terms of loss of life. The Farm is located about a half mile from Campus buildings (see Figure 6-2). CONOCO believes this distance negates concerns that an explosion or spill on would impact MDT. CONOCO stores gasoline in a total of seven tanks. The largest tank contains 30,000 barrels; the smaller ones hold 20,000 barrels each. Fuel oil also is stored at the site. In addition, Exxon-Mobil has six tanks at the same location with similar contents. The CONOCO facility is staffed by only six people but does have a disaster-emergency operations plan. However, the plan is primarily designed to contain spills rather than react to fires or explosions. For a large spill, CONOCO would have to obtain additional equipment. Other CONOCO resources are as far away as Texas. There are no on-site firefighting capabilities. Although authorities might be able to acquire fire suppressing foam from Maelstrom Air Force Base in Great Falls, it is 91 miles away.

The consequences of a significant earthquake to their fuel storage facilities are a major concern to CONOCO. Also, there is a pipeline passing under the facility at a depth of 30 to 36 inches.

Each year, CONOCO conducts one table top exercise and two deployment exercises. They are held in conjunction with a local rural fire department and the Lewis and Clark County Department of Emergency Services (DES). MDT is welcome to attend but seldom does so.

In 2000, nearly 1,250 barrels of diesel fuel were accidentally vented while filling one of the large storage tanks. CONOCO believed that evacuation should take place within a quarter-mile radius of the facility. However, the Lewis and Clark County Sheriff believed it would be prudent to

evacuate people within a one-half mile radius and ordered that it be done. Because the MDT Campus is located just outside the half-mile radius (Figure 6-3), MDT officials were not contacted. Nonetheless, when MDT officials learned of the event, they prudently made the decision to evacuate the Campus.



The rings represent a distance of ½ mile from the respective fuel tanks.

Figure 6-3: Location of Fuel Farms

After the evacuation order was given, it took nearly 50 minutes for the final MDT employee to reach the intersection of 18th Street and Highway 12, an intersection that would take only a minute to reach during normal traffic flow. If the released product had been fumes from gasoline, one can only imagine the extent of fatalities, injuries and damage resulting from a fire if the fumes were ignited.

MDT anticipates that, as part of a new development, an additional interchange will be constructed along Interstate 15. If this in fact happens, its completion will be measured in years.

In the meantime, because MDT employees evacuating the Campus must exit via a roadway in close proximity to the fuel farms, plans for an alternative evacuation route should be developed.

6.7. Summary

As the Headquarters for MDT, it is important that there be a comprehensive plan that addresses how employees will be evacuated and cared for should a disaster strike the Helena Campus. MDT has identified eight groups, four of which are already formed, that will provide support for the Campus and MDT operations for the first 72 hours after a disaster. Each Group has a Group Leader, and will have a detailed plan of specific actions to carry-out after a disaster occurs.

In addition to natural disasters, the MDT Campus may be harmed due to the proximity of the Fuel Farms as noted in Section 6.6. In 2000, an overflow of fuel occurred, and even though the Helena Campus was not within a ½ mile radius of the spill, MDT did decide to evacuate its Headquarters. Unfortunately, the escape route actually caused MDT employees to get closer to the spill, before they could move away from the potential disaster. In addition to the Fuel Farms, there is also a fuel pipeline that is near the Helena Campus.

The Helena Campus Employee Disaster Survival Plan will be supplemented with additional materials that will be created by MDT and the Group Leaders. It is important that training sessions be conducted so that each Group knows its specific functions, and plans can be checked to ensure that they are relevant. Chapter 7 of the MDT Emergency Operations and Disaster Plan contains more information on training.

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7. TRAINING

This chapter provides recommendations for training MDT employees. In order to assure appropriate responses to a given incident, the Department's personnel must maintain their readiness through training, table top exercises and refresher courses. Also, comprehensive training will provide education about potential hazards and encourage *personal safety*.

Depending upon the physical location of their job, there are several types of training that may pertain to employees. There are hazardous materials and incident command system training, which pertain to employees that may come upon or respond to an incident. Information regarding these types of training is included in Section 7.2 (HAZMAT Training) and Section 7.3 (Incident Command System Training). Additional training (Section 7.4) should be provided to MDT employees who work at the Helena Campus. This training should focus on the tasks that may be required of these employees who may be part of the groups that were identified in Chapter 6.

MDT employees should not perform tasks (responses) that are beyond the level of training they have received. OSHA recommends that any employee that is not properly trained should contact fully trained personnel, and not attempt to control activities for which they are not trained. If an employee has any question or doubt, they should contact appropriate authorities for assistance immediately.

Finally, emergency response typically requires communication and cooperation among the different agencies responding to an incident. Communication and teamwork concepts are strengthened through cross training sessions. MDT should coordinate the training of its employees with local response agencies in order to foster the cooperation between the organizations.

This chapter provides information and recommendations on the following topics:

- Federal and State regulations that provide general guidance for training programs
- Hazardous materials training information including standards for training individuals to the awareness level
- Incident command system training
- Helena campus training, including recommended training for each group
- Training methods that can be utilized for the training program
- Tabletop exercises that may be used in the training program

7.1. Federal and State Regulations

The following federal and state regulations should be viewed as guidelines for MDT as it enhances its training program.

7.1.1. Hazardous Materials Regulations

The Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation (29 CFR 1910.120) is the applicable regulation for MDT's employees. Transportation employees are typically trained at the "Awareness" level.

According to OSHA 1910.120 (q)(6)(i), "First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the authorities of the release. They would take no further action beyond notifying the proper authorities of the release." Employees trained at the awareness level are expected to recognize potential danger, protect themselves, call for trained personnel and secure the area. It is most important that the employee make proper notification so that an effective emergency response will take place.

7.1.2. Incident Command System Regulations

In Title 29 of the Code of Federal Regulations, 1910.120 (q)(6)(v), OSHA sets the minimum level of training and competencies required for Incident Commanders. Further, federal regulations require the use of the Incident Command System (ICS) in all responses to Hazardous Materials incidents. OSHA rule 1910.120 requires that all organizations that have the potential to handle hazardous materials must use the ICS. If an MDT employee is the first to arrive on the scene of an incident, he or she becomes the *de facto* Incident Commander. Therefore, training about the Incident Command System is relevant.

7.1.3. Executive Order 17-04

In November 2004, Montana Governor Judy Martz signed Executive Order 17-04. This Executive Order states that Montana does, "…formally recognize and adopt the National Incident Management System (NIMS) as a guide toward the development of Montana's approach to prevent, prepare for, respond to and recover from domestic incidents, regardless of the cause, size or complexity."

Even with these federal and state regulations, however, it is the individual employer who must ensure that its employees are competent to perform their assigned duties safely. Therefore, MDT must determine the type(s) and depth of training it will provide to its employees.

7.2. Hazardous Materials Awareness Training

OSHA 1910.120(q)(6) defines training requirements for employers. The regulation states, "Training shall be based on the duties and functions to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:"

The relevant paragraphs for Awareness Level training are 1910.120(q)(6)(i) and 1910.120(q)(6)(i)(A) though 1910.120(q)(6)(i)(F). These regulations state that, "First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident. 1910.120(q)(6)(i)(A)
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present. 1910.120(q)(6)(i)(B)

- The ability to recognize the presence of hazardous substances in an emergency. 1910.120(q)(6)(i)(C)
- The ability to identify the hazardous substances, if possible. 1910.120(q)(6)(i)(D)
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan (including site security and control) and the U.S. Department of Transportation's Emergency Response Guidebook. 1910.120(q)(6)(i)(E)
- The ability to realize the need for additional resources, and make appropriate notifications to the communication center. 1910.120(q)(6)(i)(F)

7.2.1. Suggested Course Criteria

- Review of and demonstration of competency in performing the applicable skills of 29 CFR 1910.120(q).
- Hands-on experience with the U.S. Department of Transportation's Emergency Response Guidebook (ERG) and familiarization with OSHA standard 29 CFR 1910.120.
- Review of the principles and practices for analyzing an incident to determine both the hazardous substances present and the basic hazard and response information for each hazardous substance present.
- Review of procedures for implementing actions consistent with the local emergency response plan, the organization's standard operating procedures, and the current edition of DOT's ERG, including emergency notification procedures and follow-up communications.
- Review of the expected hazards including fire and explosions hazards, confined space hazards, electrical hazards, powered equipment hazards, motor vehicle hazards, and walking-working surface hazards.
- Awareness and knowledge of the competencies for the First Responder at the Awareness Level covered in the National Fire Protection Association's Standard No. 472, Professional Competence of Responders to Hazardous Materials Incidents.

7.2.2. Testing and Certification

Written examinations can be used to measure competency. A physical demonstration of skills may also be used for testing purposes. If a skills demonstration is used, the tasks chosen and the means to rate successful completion should be fully documented by the Training Director. Written documentation should be provided to each student who satisfactorily completes the training course.

7.2.3. Training Schedule

Initial training is generally accepted to be valid for one year at which time a refresher course is recommended. Refresher courses can be taught in any manner designated by the Training Director. All Hazardous Materials training, including refresher training, should be documented.

7.2.4. Hazardous Materials Awareness Suggested Resources

Many organizations offer hazardous materials training packages. All training materials must be approved by the Training Director. The following organizations provide appropriate training courses for awareness level employees:

- FEMA offers self-paced online courses. The web site can be accessed at: www.training.fema.gov
- The Safety Training Academy has 8 hour awareness level courses available. The web site can be accessed at: www.safetytrainingacademy.com/hazmat%20main.htm
- The Florida Division of Emergency Management offers course materials for both students and instructors. The web site can be accessed at: www.floridadisaster.org/cps/SERC/train.htm

7.2.5. Recordkeeping and Quality Control

Records should list the dates courses were presented, the names of the individual course attendees, and those individuals successfully completing each course, and the number of training certificates issued. These records should be maintained for a minimum of five years after the date an individual participated in a training program. These records should be available and provided upon the individual's request or as mandated by law.

The Training Director should conduct or direct an annual written audit of the training program. Any program modifications that address deficiencies should be documented, approved, and implemented. The audit and the program modification documents should be kept on record.

7.2.6. Hazardous Materials Instructor Training

OSHA 1910.120(q)(7) states: "Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach." Instructors should be required to maintain professional competency by participating in continuing education or professional development programs or by successfully completing an annual refresher course with the successful demonstration of instructional skills and knowledge of the applicable subject matter and having an annual review by the Training Director.

The "Hazardous Waste Operations and Emergency Response" standard (HAZWOPER), 29 CFR 1910.120, states in paragraph (e)(5) that "Trainers shall be qualified to instruct employees about the subject matter that is being presented in training". In addition, 29 CFR 1910.120(e)(5) explains that the qualifications of the instructors may be shown by academic degrees, completed training courses and/or work experience.

7.2.7. Hazardous Materials Trainer Resources

Several organizations offer courses for certifying hazardous materials instructors. Montana Disaster and Emergency Services offers train-the-trainer programs. In addition, professional organizations such as the National Fire Protection Association (NFPA), have established

professional standards for instructors (NFPA 1041) that can be used to evaluate instructor training and certification.

7.3. Incident Command System Training

As discussed in Chapter 4 of the Plan, the Incident Command System (ICS) is the model for command and control, and provides a means to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing an incident and protecting life, property, and the environment. Training is recommended to ensure that all who may become involved in an incident are familiar with ICS principles.

Unity of command is the concept by which each person within an organization reports to only one designated person in their agency. The highest ranking person in each organization then reports (interacts) with the overall Incident Commander. A unified command allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies. Unified command does not mean losing or giving up agency authority, responsibility, or accountability. The concept of unified command means that all involved agencies contribute to the command process by:

- Determining overall objectives
- Planning jointly for operational activities while conducting integrated operations
- Maximizing the use of all assigned resources

Under unified command, the following factors apply:

- Response to the incident functions under a single, coordinated Incident Action Plan
- The Incident Commander has responsibility for implementing the Incident Action Plan
- One Incident Command Post is established

There are four functional areas within the Incident Command System. These areas are displayed in Figure 7-1.

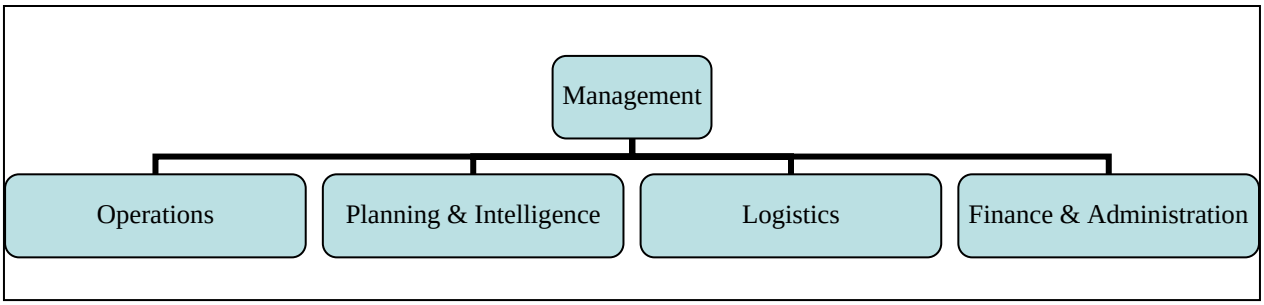

Figure 7-1: Incident Command System Functional Areas

7.3.1. Training Sources

The Emergency Management Institute, created under the Federal Emergency Management Agency (FEMA), sets forth a comprehensive entry-level course for training of employees in the Incident Command System. This course offers responders an introduction to the ICS, the major components of ICS, incident facilities, incident resource management and ICS assignments.

Federal law requires the use of the Incident Command System for response to hazardous materials incidents. FEMA has a self-paced online version of the course that covers ICS training requirements. This course includes a written Final Examination, which must be completed and returned to FEMA's Independent Study Office for scoring. To obtain credit for taking this course, an individual must successfully complete (75% correct) this examination regardless of whether the course is completed through self-instruction or through group instruction. The Final Examination may be taken as many times as necessary to obtain a passing grade.

In addition to the FEMA course, other ICS courses include:

- National Fire Academy Self Study course (free CD-ROM).
- FEMA IS-195 Basic Incident Command System course including printed and online materials: http://training.fema.gov/EMIWeb/IS/is195.asp
- OSHA Incident Command System Tool: www.osha.gov/SLTC/etools/ics/

The National Fire Academy ICS Self Study Course is recommended, because it is free to public organizations and contains appropriate training and testing materials.

7.3.2. Training Schedule

ICS training needs only to be completed once. However, it is recommended that refresher training be given on an annual basis. The ICS refresher training may include any material the Training Director wishes to emphasize.

7.3.3. Incident Commander Training

The Incident Commander is the individual who, at any one time, is responsible for and in control of the response effort. This is equivalent to the On-scene Incident Commander as defined by OSHA 29 CFR 1910.120. In the event that an MDT employee comes upon an incident, he or she becomes the *de facto* Incident Commander until appropriate authorities arrive and relieve the individual of control. Because the MDT employee will likely act as the Incident Commander for a short period of time, it is more important that employees understand the fundamentals of the Incident Command System rather than specific Incident Commander responsibilities. However, Incident Commander training may be of value to higher level employees.

7.4. Helena Campus Training

As noted in Chapter 6, there are certain groups identified at MDT's Helena Campus that would be activated during an incident. The types of training required for the members of these groups ranges from basic traffic control training to Advanced First-Aid. It is important that MDT employees receive training appropriate to the group to which they have been assigned. The survival of coworkers and others may depend on this training.

Evacuation Group

The Evacuation Group should have basic Incident Command System training as well as training for the proper procedures of evacuating disabled employees. This includes the different techniques for carrying disabled employees in wheelchairs down stairs and around other obstacles.

Traffic Control Group

The Traffic Control Group should be familiar with MUTCD procedures for temporary traffic control. Basic training in the use of temporary traffic control measures and procedures is necessary.

Facilities Operation and Damage Assessment Group

The Facilities Operation and Damage Assessment Group should have Hazardous Material Awareness training as well as Incident Command System training. There are situations that may potentially expose these employees to hazardous materials, and they should have this training in order to keep themselves and others safe. This team's members also should have training in how to evaluate structural deficiencies and damage in structures (buildings).

Search and Rescue Group

The Search and Rescue Group should be familiar with the Incident Command System and at least half of the members should have attended an ATC 20 training class so they are able to evaluate the safety of building damage following an earthquake or other disaster. All active participating team members will have, as a minimum, a current certificate of completion from the Rescue Systems 1 course from the Department of Emergency Management, Lewis and Clark County, or thirty hours of rescue training by MDT SAR personnel, and training in basic First-aid.

Medical Group

The Medical Group consists of trained Emergency Medical Technicians. This training includes Basic First-Aid and/or Advanced First-Aid procedures. The Group should also have basic Incident Command System training or knowledge. Arrangements should be made for Group members to have opportunities to train with or participate directly with trained medical personnel.

Camp Staging

The Camp Staging Group should have knowledge of the Incident Command System.

Communications

The roles, responsibilities, and training for this group have not yet been defined.

Initial Standard Operating Procedures

The Initial Standard Operating Procedures personnel will be assisting the respective groups and providing relief as needed, and when directed by the Group Leader or Incident Commander. Basic knowledge of the Incident Command System as well as Basic First-Aid and temporary traffic control procedures would be beneficial.

7.5. Training Methods

There are several methods for training employees. Traditional methods are an option if there are a number of students that require training in a particular topic. However, there are other options available that are not dependent on the availability of an instructor. Training for Hazardous Materials Awareness should be completed in a more traditional fashion because of the course

content and OSHA recommendations. Typical classroom instruction and physical demonstrations may be the preferred method for teaching Hazardous Materials information. This is not the case for Incident Command System training. ICS material changes very little over time, because of the standard incident response structure. Therefore, individual study of the material is often an option and presents little imposition on instructor resources. Training MDT employees to perform their duties with regard to the Helena Campus plan may be best accomplished through the use of group exercises (table top exercises) and a physical demonstration of their skills.

The various types of general training methods are:

- Individual Study
- Classroom Instruction
- Group Exercises (table top exercises)
- Physical Demonstration

MDT must determine which types of training methods are appropriate for the training of its employees. Consideration should be taken for the types of material being taught as well as the number of individuals receiving the training.

7.6. Table Top Exercises

There are two table top exercises in this section that can be used to reinforce training, or determine if previous training efforts were successful. The first exercise relates to an incident that occurs on a highway, and would be relevant to maintenance crews, or MDT employees who are frequently traveling the highways within the state. This exercise would rely on the MDT Incident Response Guide (Glove box document) as the main source of information.

The second table top exercise relates specifically to an incident at the Helena Campus. This exercise would test the plans developed by each of the Groups identified in Chapter 6. This exercise would help determine if each Group has received enough training to ensure an adequate response to an incident.

7.6.1. Highway Incident

General

MDT operations personnel frequently are “on the road” in the performance of their responsibilities; hence, they may be first-on-scene at an incident; i.e., arrive before local authorities. If so, they become the de facto Incident Commander. Their actions, taken until other authorities arrive, may be extremely critical in that they must assure their own *personal safety*, alert local authorities and other MDT personnel to the incident and provide as much information as possible as well as establish temporary traffic control. Chapter 4 of the MDT Disaster and Emergency Operations Plan specifies what actions are to be taken. Employees must be trained to perform (or not attempt) certain functions. Table Top Exercises are often the best method to test their knowledge of how to respond safely.

Tabletop Exercise

Maintenance and other operations personnel will convene in a series of meetings to be held throughout the State. Meetings may be in the form of formal classroom settings, tailgate sessions or any other setting conducive to learning.

Prior to the meetings attendees will be asked to read Chapter 4 to familiarize themselves with expectations for their actions. The meeting format will include general familiarization by the instructor, a brief recap of actions described in Chapter 4, presentation of the Situation described below and, depending on attendance, breakout sessions in a few groups where attendees will develop and document the series of actions that should be taken. Some elements of Chapter 4 are:

- Assure *personal safety*
- STOP
- Observe and assess; "don't just do something-stand there"
- Report the incident and situation to MDT or other EMS
- Provide assistance only within limits of training and without compromising *personal safety*
- Act as de facto Incident Commander
- Relinquish Incident Command when other responders arrive
- Brief new Incident Commander on situation
- Determine if continued presence on site is requested
- Establish traffic control as warranted
- Document everything

Situation

It is shortly after midnight when an MDT foreman comes upon an overturned tanker on Interstate 90 just east of Bozeman. About an inch of packed snow covers the roadway. In the distance, the foreman is able to make out the silhouette of a badly damaged car and its occupants, one of whom is crying out for help and appears to be badly injured. From the overturned tanker, the vehicle's placard **(1075)** is clearly visible; the Glove Box Guide indicates that it is carrying liquid propane.

Midway through the exercise, the Instructor will inform the group(s) that a loud hissing sound can be heard by the foreman, indicating that the valve is leaking and that trainees may want to modify the response in light of this new information.

Response

The breakout groups will reconvene and discuss their outcomes, and enter into a general discussion and critique of actions to be taken. If the classes are too small to form breakout groups, the instructor will lead them in a brainstorming session to determine the best outcome. In addition, several good suggestions for improving the response are anticipated and will be recorded.

7.6.2. Earthquake Near Helena Campus

General

When any operational plan is developed, whether it will work as planned or not, is best tested by an exercise involving all personnel who most likely will be called upon to act during an actual disaster. Simulated exercises to test the plan's efficacy are commonly referred to as Table Top Exercises. What follows is a description of actions to assure that the plan works and to identify what remedial actions are warranted to improve it.

Organization

MDT has developed a Disaster Survival Plan for the Helena Campus. The Plan identifies eight Support Groups each of which is charged with assuring that one of the following functions is performed:

- Evacuation
- Traffic Control
- Facilities Operation and Damage Assessment
- Search and Rescue
- Medical Support
- Camp Staging
- Communications
- Initial Standard Operating Procedures

Exercise

Each of the eight MDT Support Groups has (or will have) developed a specific Action Plan describing what steps the Group must take to fulfill its responsibilities in the event that the simulated exercise described below were to occur.

Once all Groups have completed their Action Plans, Group Leaders will be convened by the Maintenance Division Administrator and told that within a month or so, a simulated exercise will occur without warning. He will not tell them the nature of the exercise. When the exercise is spontaneously announced, each Group Leader will be responsible for leading their team through the exercise in accordance with their specific Action Plan. Their Action Plans will *not* be available to them during the simulation (in a real disaster, they most likely would have been misplaced).

Each Group will then assemble in a large room and identify what actions are necessary to form an effective response to the event. They will be encouraged to coordinate with other Groups.

The entire exercise is anticipated to last no more than four hours and will be videotaped to be used as a training tool.

Situation

A magnitude 7.5 earthquake has occurred approximately twenty-five miles southeast of Helena along a previously unknown fault line. Widespread damage has occurred and casualties are anticipated. Virtually all utility services have been disrupted within and in the vicinity of the City.

Damage within the Helena area is severe. A few buildings have collapsed; others appear to be unstable. The Montana Department of Transportation Administration Building on Prospect Avenue has sustained moderate structural damage, most of it on the third floor. As with most earthquakes, aftershocks are expected.

Midway through the exercise, the facilitator will advise each Group Leader that two unforeseen problems have occurred: the entire MDT executive staff (including the Incident Commander) has been injured to the extent that they no longer can function. Also, cell phone communication has become overloaded and can no longer provide effective communication; radio communication is spotty. Each Group Leader will be advised to alter their gameplan to account for these unanticipated occurrences.

Response

When each Group has completed its work, the Groups will again convene and report out. A comparison will be made between each Group's Action Plan and those steps developed during the simulation. Deviations from the Action Plans will be noted, discussed and recorded.

Following the Group reports, the facilitator will lead a discussion on the importance of each Group periodically revisiting their Action Plan, the need for flexibility on the part of Group members, the importance of communication, remaining current as to who has come and gone for each group, the need to coordinate among groups in a real disaster, the need to periodically update the Action Plan(s) contents and other issues resulting from the simulated exercise.

7.7. Summary

MDT has a responsibility to determine what types of training are appropriate for its employees and the level to which they will be trained. This chapter outlines the various types of training MDT employees may require, such as Hazardous Materials Awareness Training, and Incident Command System Training. Various criteria and resources are listed which will assist MDT in creating a training program for its employees. However, the information contained in this chapter should be viewed as recommendations to MDT.

Based on its responsibilities defined in the State's Emergency Service Plan, and the likelihood that MDT employees are likely to be the first to discover many incidents on the State's transportation network/system, MDT will ultimately need to decide the breadth and depth or the training it will provide to its employees.

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8. SUMMARY

Disasters and lesser emergencies may result from natural causes or from accidental/deliberate acts of man. Regardless of the cause, the Montana Department of Transportation (MDT) must be ready to respond because maintenance and continued operation of the transportation infrastructure are critical to evacuation of citizens as well as providing access to disaster sites by emergency services. Therefore, MDT has commissioned preparation of the Emergency Operations and Disaster Plan (the Plan). MDT already has developed and implemented a skeletal concept of what the Plan is and what it is not. That framework has been invaluable in developing the Plan.

The Plan's overarching credo is the *personal safety* of MDT's employees. It emphasizes, often in detail, specific actions that should (or should not) be taken in coping with an emergency situation. However, it also acknowledges that, in the end, employees' judgment will be the deciding factor.

The Incident Command System and Unified Command Structure is the umbrella under which emergency actions take place. In fact, a Governor's Executive Order mandates the use of these systems.

Hazardous materials, be they the result of vehicle spills or the product of acts of terrorism, can be lethal if they are not dealt with properly. The Plan contains very specific guidelines for MDT employees, should they encounter hazardous materials of any kind and from any source. Also included are generic HAZMAT placards by which employees should be able to identify types of hazards and protect themselves accordingly. The Plan is accompanied by a Highway Incident Management Response Guide in the form of a quick reference "glove box" document that should be carried in every MDT vehicle.

The importance of up-to-date training is cited as an essential component of effective responses to disasters and other emergencies. Numerous sources of applicable training have been identified. Table top exercises have been developed to simulate field emergencies and enable responders to competently carry out their responsibilities in the event of a real world event. Training should be continuous and reflect the most current information and accepted procedures.

A separate and distinct Survival Plan for MDT Headquarters (the Helena Campus) is included in the document; it details actions to be taken and who should take them should a disaster or other severe emergency situation compromise the functions of HQ personnel and critical operations. Several Groups have been identified to carry out specific actions such as: evacuation, traffic control, search and rescue, et al.

Several recommendations are made which, if implemented, will greatly enhance the effectiveness and efficiency of the Plan. A number of Appendices provide additional detail that may be warranted in the event that the Plan is activated.

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9. RECOMMENDATIONS

The following recommendations should enhance the effectiveness of the Plan, and the response to an incident:

- **Satellite Phones** - Communications in Montana can be problematic due to the rugged terrain and vast wide-open spaces. While vehicle to vehicle radio communications are generally effective, there are "dead spots" where radio and cell phone communication simply won't work. Under emergency conditions, where time is critical, there must be an effective wireless medium that is effective under all circumstances. MDT already uses a small number of satellite telephones. **The number of "satphones" should be much more prolific within the organization.** All MDT management team members should carry them, as high level instructions to various employees must be failsafe. Each District should have at least six, distributed among the District Administrators, Maintenance Chiefs and other key personnel who most likely would be needed should a disaster occur.
- **Legislation** - Highway vehicle crashes sometimes involve heavy trucks and buses. In many cases these large vehicles come to rest across the roadway. The result can be that lengthy vehicle queues may form and extend miles upstream from the site. Secondary crashes usually are at high speed and may be anticipated to result in severe or fatal injuries. Therefore, once the incident has been stabilized, efforts should begin immediately to remove vehicles from the roadway and restore traffic flow. However, once it is confirmed that the truck/tanker's contents do not pose a threat to responders, the large vehicle should be removed without regard for the value of the contents. This may mean pushing the vehicle to (or over) the side of the roadway. First responders often are reluctant to do this, fearing they will become targets of litigation. **MDT should advocate for "hold harmless" legislation.** Doing so will indemnify responders from personal liability should cargo be destroyed.
- **Employee Safety** - District, Division and Campus **evacuation plans should be completed as soon as possible.** Training for these plans should follow closely and include Group "cross training" as a major component.
- **Training Program** – In order to achieve an effective and efficient response to an incident, MDT should invest in a training program and equip its employees with the tools described earlier in this document to assure their own *personal safety*, and perform effectively at incident scenes**. The training programs described in Chapter 7 should be finalized and the training should begin as soon as possible.**
- **Cross Training** - MDT should become involved in multi-organization emergency response training and participate in realistic simulated joint training for Hazardous Material releases and other incidents. Cross training for the Helena campus would include incidents that may occur due to the close proximity of the Fuel Farms and Fuel Pipeline.
- **Response** - The Glove Box Guidelines should be carried in *every* MDT vehicle.
- **Planning** - Evacuations may involve rerouting of traffic to facilitate dispersion of vehicles away from the incident scene and providing alternative routes for safety and/or

motorist convenience. **MDT should map (GIS) and periodically review the carrying capacity, width and height (trusses) of structures on primary and secondary roadways** to assure that large vehicles will not exceed critical bridge dimensions and safe load limits. MDT should urge counties and other municipal government to do the same.

- **Technology** - MDT should consider installing Automatic Vehicle Location (AVL) systems for use on all of its vehicles. This would make possible the use of Computer-Aided Dispatching (CAD) for dispatching the nearest available vehicles to the scene of incidents, checking roadway availability during severe weather conditions and as input to the 511 system. Information could also be provided for quickly locating snowplow operators, should they become disoriented in a whiteout or become disabled.
- **Employee Safety (Helena Campus)** - Staffing of Helena Campus groups and emergency team should be completed soon, so that integrated training may be undertaken for emergency evacuation.
- **Procurement** - MDT should consider developing an Emergency Contract with private sector contractors so that availability of supplemental equipment, materials and personnel can be quickly determined and brought to the scene(s).
- **Documentation** - MDT should consider placing "disposable" cameras in the glove boxes of all maintenance vehicles for use at incident scenes. These low cost cameras would allow personnel to photograph MDT infrastructure; such as the size of any drop off between edge of pavement and shoulder, proper placement of traffic signs and temporary traffic control setups, and any other feature that would prove useful; should anyone allege that MDT infrastructure contributed to the incident.

  Further, if an incident is believed to have been caused by an act of terrorism, the cameras may provide evidence should such documentation (evidence) become necessary for further investigation by law enforcement agencies.

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12. APPENDICES

Appendix A - Hazard Placards

Appendix B –Responsibilities by Job Title

Appendix C – Bridges and Structures Specific Activities

Appendix D – Communications Plan Details

Appendix E- Equipment

Appendix F – Standard Forms

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APPENDIX A: HAZARD PLACARDS

APPENDIX B: RESPONSIBILITIES BY JOB TITLE

This section provides information on the responsibilities by MDT based on their job title, in the event of an incident.

General Employee Information

It will be important for all staff to be available in an emergency. All employees are encouraged to make a plan with their family and be prepared. The peace of mind that your family is taken care of will eliminate any anxiety and enable you to perform your job.

No matter where in the State a disaster/emergency should occur every employee should be aware they may be reassigned to the affected areas. It should also be understood that not all personnel will be required immediately. Staff will be called they are needed. However, in the event of a major earthquake maintenance section personnel will begin damage assessments inspections as soon as practical.

Director MDT

Oversees the direction and control of the Department's disaster/emergency response actions. Leads the executive and policy decision-making process.

Action items

- Leads the discussion and decision making process with the Executive Management Team.
- Acts as liaison with Governor, Legislature, Legislative Committees, state Government, Federal Highway Administration and other state and federal agencies.
- Coordinates with neighboring jurisdictions. Establishes and maintains communications with neighboring State's and Canadian Provinces, as appropriate.
- Requests Federal Assistance. Serves as the State's primary representative for requesting federal assistance through FHWA.
- Coordinates communications and assures public information is appropriate. Authorizes issuance of press releases.

Deputy Director

Assists the Director in carrying out their responsibilities. In the absence of the Director, assumes the Director's responsibilities.

Maintenance Division Administration (MDT Incident Commander)

Responsible for overseeing the Department's Emergency Operations Center activities, and ensure appropriate response to an event including the coordination between the State EOC, MDT/EOC, and field operations. Command responsibilities are **executive** in nature. They are designed to develop, direct, and maintain a viable organization and to keep that organization coordinated with other State EOC, other state and federal agencies, elected officials, and the public.

Managerial Responsibilities

- Organizing to meet the needs of the incident
- Establishing incident control objectives
- Setting priorities for work accomplishment
- Assuring development of Command-approved Action Plans
- Approval of resource orders and releases
- Approval of public information outputs
- Coordination within MDT, and with public officials and other agencies
- Appointment of Section Chiefs, Communications Bureau Chief, Safety Officer, and Public Information Officer

Action Items

- Oversees the establishment of the MDT/EOC.
- Maintains communications with the Director or their representative.
- Delegates appropriate tasks to the appropriate Section Chiefs i.e. Operations, Planning, Logistics, and Administration.
- Ensures that everyone maintains an individual log, to include telephone and activity action for each position in the EOC.
- Conducts briefings or provides updates approximately every two hours, or as necessary. Also, conducts a shift change briefing every half hour before the actual shift change.
- Keeps the Communications Supervisor appraised of the EOC communications needs.
- Provides input to the Public Information Officer (PIO) about activities and response status.
- Approves, or acquires approval for, administrative and/or policy changes to address response needs.

Operations Section Chief

The Operations Section responsibilities are of line nature. Operations is the "doer" in the organization, where the real work of incidents is accomplished. Operations is charged with carrying out Command direction. Responsibilities include:

- Achieving command objectives
- Directing tactical operations
- Participating in the planning process
- Modifying Action Plans to meet contingencies
- Providing intelligence to Planning and Command

- Maintaining discipline and accountability

Agency Program Responsibilities

- Maintenance Division – responsible for initial damage assessment and activities to try reestablish a connective route for emergency response to, and evacuation from, the affect area, establishment of alternate routes, and other necessary traffic control. Coordination of the deployment of resources.
- Engineering Division – responsible for more in-depth damage assessments and short and long-term recovery efforts.
- Staging Manager – manages the staging of assets.

Additional groups, task forces, and or single resources may be implemented, to meet specific purposes, or deactivated as the situation changes.

Action Items

- Report to the Incident Commander or Emergency Operations Center Supervisor. Provide routine updates to the IC.
- Establish and maintain an individual log of actions taken during the event, and ensure that all other functions within the Operations Section do the same.
- Ensure that the Operations Section is set up and adequately staffed. (Expanded or contracted as needed.)
- Coordinate requests for resources with the Planning and Logistics Section Chief and ensure that up to date information is posted on the appropriate status board.
- Assign Operational staff to maintain continuous contact with the affect area.
- Perform other duties as required.
- Upon demobilization collect all status reports, situation analysis, forecasts, and individual log reports from the operations Section staff member(s). Pass these files on to the Administrative Section Chief.

Planning Section Chief

Planning Section responsibilities are of the staff nature. They are support of Command and Operations, and designed to provide past, present, and future information about the incident, and provided analysis of data in order to anticipate potential needs or impacts, and recommend appropriate responses. The Planning Section includes “Technical Specialists” that are qualified to provide the Planning with technical advice and or data critical for incident management i.e. bridge engineers, structural engineers, etc. The purpose of the position is to assure that plans are complete and realistic, regardless, of the nature of the problem.

Managerial Responsibilities

- Managing accurate resource status - manpower and equipment, etc. assigned
- Situation Analysis – gather and analyze situational data

- Estimating future probabilities – situational needs
- Preparing alternative strategies – what ifs
- Conducting planning meetings – Command and Ops briefings
- Compiling and distribution of Action Plans
- Documentation – what was done and where
- Demobilization – releasing of assets

Groups, task forces, and or single resources may be assigned to assist in meeting specific Planning purposes.

Action Items

- Report to the Incident Commander (IC) or Emergency Operations Center Supervisor. Provide routine updates to the IC.
- Establish and maintain an individual log of actions taken during the event, and ensure that all other functions within the Operations Section do the same.
- Coordinate the posting of information with the Operations Section Chief.
- Supervise the evaluation of incoming data (requests and reports). Appraise the IC or Emergency Operations Supervisor of any changes in condition that may lead to a threat to transportation faculties, employees, or public health and safety.
- Perform other duties as required.
- Upon demobilization collect all status reports, situation analysis, forecasts, and individual log reports from the operations Section staff member(s). Pass these files on to the Administrative Section Chief.

Logistics Section Chief

Logistics Section responsibilities are also of **staff** nature. Logistics provides all of the personnel, equipment, and services required to manage the incident. Following the "functional clarity" concept of ICS, Logistics is responsible for two sub-functions for the incident.

- *The Service Branch* is responsible for those tasks that "keep the organization going," such as communications, food services, and medical care for the incident personnel.
- *The Support Branch* assures that all parts of the organization can function; they provide adequate facilities, obtain supplies and resources, and service equipment.

It is important to note that once human, technical, and mechanical resources are obtained by Logistic, the management of those resources is turned over to Planning and Operations.

Managerial Responsibilities

- Communications – ensures communications needs are met
- Supply – provides what's needed when
- Facilities – what's usable and where

- Ground Support – transportation and equipment
- Security – of MDT facilities and employees
- Food & Medical supplies as needed

Groups, task forces, and or single resources may be assigned to assist in meeting specific logistic section needs.

Action Items

- Report to the Incident Commander or Emergency Operations Center Supervisor. Provide routine updates to the IC.
- Establish and maintain lists of personnel, supplies, and materials from federal, state, local governmental agencies and the private sector which might be required to support the emergency/disaster.
- Establish and maintain an individual log of actions taken during the event, and ensure that all other functions within the Operations Section do the same.
- Coordinate the acquisition of resources as they are need for an emergency/disaster response, including transportation requirements for personnel, supplies, and materials.
- Maintain a list of the resources available for emergency/disaster response support.
- Coordinate the posting of information with the Operations Section Chief.
- Perform other duties as required.
- Upon demobilization collect all status reports, situation analysis, forecasts, and individual log reports from the operations Section staff member(s). Pass these files on to the Administrative Section Chief.

Administrative/Finance Section Chief

Finance is also a **staff** function. This Section is responsible for financial management and accountability on the incident. In keeping with the functional clarity concept, Finance authorizes expenditures in accordance with agency policies, but does not actually order or purchase anything. The Logistic Section obtains all needs after approval from Finance. In addition to incident record keeping, this Section performs four other critical functions:

- *Disaster Relief Records* are used to coordinate with state and federal (FHWA – Emergency Relief) representatives and to assure that cost and damage records are prepared in proper format to assure reimbursement of private and public costs.
- *Contracting* is arranged with vendors for all services not available through involved agencies. This function assures legal preparation of contracts, keeps use time on equipment and other services e.g. food caters, portable toilets) and assures that services are provided.
- *Agreements with other Agencies* are necessary during complex, multi-agency incidents when it is frequently quite cost-effective to share, or trade resources.

- *Injury and Damage* documentation is prepared is prepared by the entity that is responsible for prompt recording of all injuries to incident personnel. Finance/Administration is also tasked with preliminary documentation of event that may lead to claims against the agency. Documenting events when they occur, instead of weeks or months later, is a major task. Such events might include damage to private property, personal injury, or any other kind of loss that could be construed to be a result of incident management activity.

Managerial Responsibilities

- Admin/finance is responsible for managing the financial and record-keeping aspects of an emergency/disaster. Ensuring that the appropriate costs and documentation is accumulated to meet federal reimbursement requirements.
- Time & Cost Records – using available management systems
- Procurement
- Comp/Claims – state & federal billing
- Groups, task forces, and or single resources may be assigned to assist in meeting specific logistic section needs.

Action Items

- Report to the Incident Commander or Emergency Operations Center Supervisor. Provide routine updates to the IC.
- Establish and maintain an individual log of actions taken during the event, and ensure that all other functions within the Operations Section do the same.
- Coordinate the acquisition of resources as they are need for an emergency/disaster response, including transportation requirements for personnel, supplies, and materials.
- Maintain a list of the resources available for emergency/disaster response support.
- Coordinate the posting of information with the Operations Section Chief.
- Perform other duties as required.
- Upon demobilization collect all status reports, situation analysis, forecasts, and individual log reports from the operations Section staff member(s). Pass these files on to the Administrative Section Chief.

Disaster and Emergency Service Coordinator

- Serve as the primary point of contact with the SEOC and MDT/EOC.
- Report to the SEOC and manage MDT emergency operations when requested by IC.
- Advise SEOC of the disaster policies and capabilities of MDT.
- Provide SEOC with status reports of MDT operations.

- Provide incident information to the Incident Commander and Director as required.
- Manage recovery activities with FHWA, FEMA, and other programs.

Engineering Division Administrator

- Coordinate the activities of the Preliminary Damage Assessment (PDA) teams and Damage Survey Report (DSR) teams to inspect damaged highway facilities both for functional and nonfunctional classified roads. (Teams are generally composed of federal, State and local personnel.)
- Record and report data regarding damage locations, surveys, descriptions, and estimated cost to repair or replace.
- Upon completion of on-site damage assessments, submit official damage estimates to the FHWA.
- Maintain contact with MDT/EOC and FHWA.
- Maintain liaison with the Montana contractors Association and other general contractors

Aviation Manager

- Maintain contact with MDT/EOC.
- Perform disaster operations assigned to aviation.
- Coordinate emergency reconnaissance and photographic missions of Department's aircraft.
- Report the results of emergency missions to MDT/EOC.
- Coordinate emergency air transportation of personnel and essential supplies.
- Coordinate the requests for aircraft support with MDT/EOC and other State and federal agencies.
- Coordinate damage assessment of aircraft and facilities.

Equipment — Equipment Bureau Administrator

- Coordinate and direct the activities of the Equipment program.
- Maintain a Statewide inventory of all equipment available for emergency response and recovery operations.
- Locate available equipment through coordination with area Maintenance chiefs, Maintenance and Shop Superintendents.
- Assist affected regions in locating and obtaining resources.

Facilities — Facility Manager

- Coordinate and direct the activities of the Facilities program.

- Maintain a Statewide inventory of all available facilities for emergency response and recovery operations.
- Coordinate damage assessment and repairs.
- Assist affected regions in locating and obtaining alternate facility resources.

Communication — Radio Systems Manager

- Provide communication resources and support such as communications engineering, personnel, and equipment to support Statewide emergency operations.
- Coordinate communication capabilities with the MDT/EOC and the Incident Commander, and SEOC.
- Maintain the survivability of or make repairs to the communication system.

Public Affairs — Communications and Public Involvement Director

- Provide information to the media and the public concerning the status of the disaster and the condition of the transportation system.
- Support the State Emergency Public Information Officer at the SEOC.

District Administrators and Maintenance Chiefs

- Establish the area Emergency Operations Center when requested by the Incident Commander or Disaster and Emergency Services Coordinator.
- Serve as Emergency Program Coordinator for the district/division.
- Report all highway conditions to and maintain communication with MDT/EOC.
- Recommend emergency response strategies.
- Provide assistance to the MDT/EOC on emergency response coordination and operations.
- Evaluate preliminary disaster information and determine the extent of damage.
- Determine the resources (equipment and personnel) available for emergency response operations and request additional resources through the MDT/EOC.
- Assign resources to impacted areas.
- Coordinate services required for performing road repairs and implementing traffic control devices (such as signs and barricades).
- Coordinate mobilization of roadway and bridge maintenance personnel and equipment.
- Coordinate emergency traffic control.
- Coordinate emergency inspection for roadway safety and structure integrity.
- Coordinate detour assignments with adjoining areas and MDT/EOC.
- Maintain liaison with local construction and equipment rental companies.

- Coordinate equipment rentals with the Regional Equipment Superintendent.
- Under direction from the Incident Commander, serve as a member of the damage assessment team and provide damage assessment estimates for the functional classified roads.
- Review the Emergency Response Checklist.

Maintenance — Maintenance Superintendents

- Take appropriate actions for emergency response operations.
- Maintain an inventory of available equipment at area offices for use in emergency response and recovery operations.
- Maintain communication with the sections and MDT/EOC.
- Ensure appropriate documentation is maintained.
- Review the Glove Box Response Guide

Section Personnel

- Perform a preliminary damage assessment and determines the extent of damages.
- Report damage assessments including the location and description of damages and ability to initiate recovery actions to open roadways to District/Division office.
- Coordinate emergency traffic control with surrounding sections.
- Provide assistance to local and federal officers.
- Serve as the primary point of contact for a preliminary damage assessment between MDT/EOC and local agencies.

Communication — Radio Operations Supervisor

- Activate Emergency communication systems as necessary.
- Provide Communications resources and support such as communications equipment and personnel, to support Statewide emergency operations.
- Coordinate Communications capabilities with MDT/EOC.
- Coordinate Communications with other local, State, and federal, agencies.
- Maintains the survivability of and make repairs to the communications system as required.

Construction — District Construction Engineer

- Coordinates mobilization of construction and contractor personnel and equipment.
- Performs a preliminary damage assessment and determines the extent of damages.
- Reports damage assessments including the location and description of damages and ability to initiate recovery actions to open roadways to District/Division office.

- Under direction from the Incident Commander serves as a member of the damage assessment team and provide damage assessment estimates for the functional classified roads.
- Maintains liaison with construction and equipment rental companies and with local general contractors.
- Coordinate emergency engineering functions, including plans, specifications, and cost estimates emergency responsibilities listed by personnel title.

APPENDIX C: BRIDGES AND STRUCTURES SPECIFIC ACTIVITIES

The purpose of this appendix is to provide a list of actions to take after a catastrophic event occurs involving bridges and structures on the State maintained highway system. In this document, a minor earthquake is defined to be one in which the Richter magnitude is 6 or less; a major earthquake in the range of 6 to 7; and a great earthquake registers at 7 and above. No one can predict the occurrence or nature of a disaster. It is important that personnel be familiar with emergency procedures so that plans can be quickly implemented and updated to the specific situation. Although these procedures are designed for earthquake responses; they can be easily modified to fit any disaster.

Note: The term "bridges" is used generically to define bridges, structures, or other assets above or below the roadway that will require inspection for structural capacity.

Responsibilities

The specific responsibilities for MDT bridges and structures are within the Engineering Division Bridge Bureau. The MDT Emergency Operation Center (MDT/EOC) Incident Command structure includes Bridge functions within the Operations section. Actions are as follows:

1. The Bridge Function would be responsible for directing the initial inspection efforts, coordinating recovery efforts, and maintenance of the bridge status database file(s). The Bridge Bureau in the Helena Campus will be responsible for developing and issuing status reports, preparing capacity calculations for damaged bridges, coordinating post-earthquake investigative teams and preparing plans for investigation, shoring, and repair.
   - Will coordinate the design effort for major repairs and any necessary coordination with the FHWA.
   - Will frequently communicate detailed information (called in, if possible) to the MDT/EOC in the first 24 to 48 hours and at least twice a day until the urgency subsides. For major bridges, such as viaducts, complex interchanges, and waterway crossings, reports should be communicated as soon as information is available.
   - Will be responsible for developing and maintaining the information file. Will prepare inspection progress and damage assessment reports for the MDT/EOC and administrative staff.
   - Copies of inspection reports will be transmitted daily or when practical to the applicable District/Division EOC. To assist the limited staff in the district, inspection and support personnel will be sent from the District/Division EOC as needed. For each area, the administrator should make an early assessment of their needs and request the number of personnel and skills required. On the basis of the reports from the field personnel, the Bridge Engineer will assess the need for special equipment and transmit a request to the MDT/EOC.
2. Develop and implement a plan to survey bridges leading to and within the affected area(s). Plan would identify manpower and equipment needs that would be communicated to the MDT/EOC.
3. Conduct a detailed survey of all bridges in the affected area, identifying all damaged structures and recording the nature and extent of damage of each structure.

4. Provide technical guidance to district/division personnel for emergency actions that must be taken to ensure public safety and to prevent additional damage to the structures.
5. Formulate Post-Earthquake Investigative Teams. The Post-Earthquake Investigative Team will perform on-site damage evaluation to determine the cause of failure/damage and the sequence (primary and secondary) modes of failure/damage.
6. Recommend repairs to be done to damaged bridges and provide plans, specifications, and estimated cost of those repairs. Develop emergency shoring and repair designs.
7. Maintain information files for all inspected bridges, recording information regarding operational status, general description of any damage repair activity, and rough cost of repairs.

Action

Any incident within the State that causes damage to the State transportation system will be considered a disaster. When a disaster occurs, the Bridge Engineer will be contacted by the State Disaster and Emergency Services Coordinator, the MDT/EOC, or the area Maintenance or Engineering staff. Other staff will be contacted based on the level of the incident (see Section 6).

Bridge and Structures staff members will be expected to respond as follows:

Event Occurs While at Work

Helena Campus buildings may be evacuated and assessed for damage and habitability. Injured will be administered to by staff trained in first aid, and further medical attention will be summoned if necessary.

Emergency Response Team will make a preliminary assessment of damage and determine the staffing level needed. All employees shall make themselves available for possible assignment. It will be important for all the staff to be available in an emergency. All employees are encouraged to make a plan with their family and be prepared. The peace of mind that your family is taken care of will eliminate any anxiety and enable you to perform your job.

Event Occurs While Not at Work

- No matter the Richter Magnitude: Employees should be prepared to come to the office, if called.
- Richter Magnitude 6.0 to 7.0: Employees should be prepared to come to the office within the next 24 hours, if called.
- Richter Magnitude 7.0 and above: Employees should be prepared for reassignment to the affected areas. If you have not been contacted within 48 hours try and contact or report to the office.

It is understood that employees will take care of their personal (family) needs and safety before they are expected to respond as indicated above. It should also be understood that not all personnel will be required immediately staff will be called they are needed. However, in the event of a major earthquake bridge inspection personnel are going to be required to start inspections as soon as practical. Bridge Inspection personnel on field assignment should call the

nearest District/Division office they can reach for instructions. It may be necessary to go to hospitals, Sheriff's offices, etc. to make such calls.

Inspection teams may be air lifted to the damaged area(s).

Office Activities

Responsibilities of the Construction Engineer

1. Establish, or designate an acting chief to establish, a command center at the Bridge office. Subtasks include the following:
2. Identify personnel available for inspection teams or other tasks.
3. Establish a 24-hour staffing schedule for the command center.
4. Post maps of the damaged areas
5. Contact the MDT/EOC to inform them of your activities. Contact them for additional equipment or manpower needs.
6. Initiate and coordinate assignment of MDT team members to FHWA/MDT Damage Assessment Teams.
7. Designate a staff member to collect and record information on all repair projects. There may be a large number of damaged structures, and numerous emergency repair projects. Repairs will be done by maintenance forces, emergency contracts, regular contracts, or by change orders for bridges within the limits of ongoing construction contracts. Depending on the size and complexity of the repair project, design of the repairs may be handled by field personnel or by the Bridge Design Section. To avoid confusion, duplication of assignments, false starts, etc., staff members should be assigned to collect and record information on all repair projects. These persons should be the central source and clearing house for information regarding repairs projects. Copies of the bridge reports related to damage inspections in a region will be sent to the regional administrator.
8. Conduct daily staff meetings to provide a brief summary of important events, decisions, agreement, and assignments.
9. Assign and coordinate post-earthquake investigation teams as reports of bridge failures are received from the field.
10. Prepare and distribute a daily summary report to the MDT/EOC. The summary should consist of short remarks to keep those involved informed.

Responsibilities of the Bridge Bureau

The following list provides a list of the responsibilities of the Bridge Bureau.

1. Contact the Construction Engineer to advise on the location of the event and activities. If the Construction Engineer cannot be reached, contact the MDT/EOC.
2. Establish, staff, and operate the Bridge office including the following:
   - Assign an Inspection engineer to accompany an initial reconnaissance flight.

- Assign a staff member to create a computer data file to record damage reports as they are called in.
- Assign a staff member to receive and redirect non-critical phone calls to minimize key manager involvement. Calls from the media should be directed to the MDT/EOC or the Public Information Officer.
- Coordinate requests from regions for inspections.
- Respond to requests for engineering information for structural assessments from the field.
- Assign a staff member to receive, record, and forward offers from other agencies and the private sector to provide equipment, material, special services, advice, etc.
- Post maps of the damaged areas to provide a visual display of damaged sites.
- Establish 24 hour staffing schedule, as needed.
- Assign a staff member to coordinate lodging requirements for all out-of- town personnel involved in disaster-related activities.

3. Identify inspection needs for and coordinate inspection efforts with affected districts.
   - For a minor event, assign inspection team leaders and teams, coordinating efforts with region personnel and send to the affected regions. If transportation resources are needed contact the MDT/EOC.
   - For a major or great event, delegate the coordination of teams and inspection team leaders to Supervisors who will travel to the affected District EOC(s) to coordinate local efforts. These supervisors should report to the Bridge Bureau every two hours during the first 24 hours after dispatch, or as often as necessary.
4. Request additional supplies, equipment, and personnel through the MDT/EOC.
5. Inform the Bridge Bureau of collapsed or severely damaged bridges to which a post-earthquake investigation team should be sent.
6. Prepare summary reports for the Bridge and Structures Engineer.

Field Activities

Responsibilities of Inspectors

In a major or great event, the Bridge Bureau will dispatch an Inspection Supervisor to establish immediate bridge inspection coordination at the District EOCs. The Inspection Supervisor will direct the bridge damage assessment effort and prioritize and coordinate emergency bridge repair activities within the region. The Inspection Supervisor will coordinate the inspection Team's efforts with region maintenance crews. Inspections may be made with a Bridge Inspection team leader and crews of maintenance personnel. Maintenance personnel should accompany the survey teams to initiate repairs that maintenance could do to reestablish traffic flow.

Field Inspections

All field personnel should apprise the Helena Bridge EOC and the appropriate District EOC where they will be spending the night. Affected regions should request blocks of rooms at commercial lodging facilities for inspection teams and out-of-town personnel. This will greatly facilitate the recovery efforts. The following steps will also facilitate field inspections:

1. By the time the Inspection Teams arrive at their assigned area, region maintenance crews will usually have already checked for damage (Level I Inspection). Unless given other instructions by Bridge and Structures in Helena, the team should check with region personnel to discover which structures have been damaged. These structures should be inspected first (Level II and III Inspections), so that emergency actions to shore or repair these structures can begin as soon as possible.
2. If the members of the Inspection Team are not familiar with an area, they should request the assistance of at least one region maintenance staff member. These individuals can guide the team through alternate routes if heavy damage has occurred.
3. All damage assessment teams should have local maps and a copy of the Bridge List with them.
4. After the severely damaged bridges have been initially inspected and actions have been taken to ensure their safety, a more detailed inspection or investigation should be undertaken. Inspection Engineers should ask the regions to provide equipment and personnel if needed to help in this effort.
5. Hinges in box girders, footings, and piles are structural elements that are sometimes difficult to inspect. These elements may suffer great damage under seismic motion. Good indicators of possible damage are spalling of the concrete at deck expansion joints, barrier rails and bearing seats, and large cracks or ground settlement over the footings.
6. Aftershocks, traffic, or simply gravity loading may extend damage in an already damaged structure. Inspection teams should mark all the termination points, width of large cracks, date, time of inspection and inspector's name, on the structure itself to facilitate the detection of condition changes in the bridge's members.
7. Collapsed and severely damaged bridges should be evaluated by post earthquake investigation teams. The construction Engineer will coordinate the activities of the post-earthquake investigation teams, as well as their interactions with the FHWA.

Closure, Repairs, and Shoring

At the beginning of any inspection, consider the following:

1. Is the structure in imminent danger of collapse? If so,
   - Coordinate with the maintenance personnel to stop traffic from crossing the bridge.
   - Inform the District EOC of the closing.
   - Provide details on what needs to be done to ensure public safety and prevent further damage.

- Recommend traffic restrictions on the bridge will be implemented based on the recommendations of the inspection teams.
- Shoring or repair requests should be sent to the Helena EOC and District EOC.
- The Helena Bridge Bureau will make decisions concerning repair implementation.
- The District EOC will inform the MDT/EOC of closings and repairs.

Reports

The reports will be submitted, verbally, as soon as possible by each inspection team as they complete each bridge or structure inspection. Every day, or as requested, a more refined and detailed reports shall be submitted to the Bridge Bureau who will provide the MDT/EOC with a copy and status report on affected bridges and any limitations, including closures, that have been identified.

Communication

The Bridge Bureau EOC will notify the involved regions of Inspection Teams or Inspectors coming to their area. Team leaders will maintain regular contact with the District EOC and MDT/EOCs via any means possible. Teams will be provided, when possible vehicles with two-way radios, or handheld radios to maintain communicate with each other and the area offices. The teams will communicate with the region maintenance personnel by face-to-face contact in the field, radio and telephone. The Region Communications Center may relay messages between the two groups.

Checklist for the Construction Engineer

Establish, or designate an acting chief to establish, a Bridge EOC within the Bridge Bureau Office for the coordination of requests from MDT/EOC and the Districts. Subtasks include the following:

- Identify personnel available for inspection teams or other tasks.
- Establish a 24-hour staffing schedule for the EOC if necessary.
- Post maps of damaged areas.
- Contact the MDT/EOC to inform them of your activities.
- Request additional resources such as: vehicles, equipment, additional communication, etc.
- Initiate and coordinate assignment of MDT inspection team members to the FHWA MDT Damage Assessment Teams.
- Designate a staff member to collect and record information on all repair projects.
- Conduct daily staff meetings to provide a brief summary of important events, decisions, agreements, and assignments.
- Assign and coordinate post-earthquake investigation teams as reports of bridge failures are received from the field.

- Prepare and distribute daily summary report to the MDT/EOC.

There may be a large number of damaged structures, and numerous emergency repair projects. Repairs will be done by Maintenance forces, emergency contracts, regular contracts or by change orders for bridges within the limits of ongoing construction contracts.

Depending on the size and complexity of the repair project, design of the repairs may be handled by field personnel or by the Bridge Design Branch. To avoid confusion, duplication of assignments, false starts, etc., a staff member should be assigned to collect and record information on all repair projects. This person should be the central source and clearing house for information regarding repair projects. Copies of the bridge reports related to damage inspection in a region will be sent to the regional administrator.

Checklist for the Bridge Bureau

Contact the construction Engineer to advise on the whereabouts of the event and activities. If the Construction Engineer cannot be reached, contact the MDT/EOC if it has been activated.

Establish, staff, and operate the Helena Bridge EOC. Subtasks of establishing the Bridge EOC include the following:

- Assign an Inspection Engineer to accompany an initial reconnaissance flight.
- Assign a staff member to create a computer data file to record damage reports as they are called in.
- Assign a staff member to receive and redirect non-critical phone calls to minimize key managers' involvement. Calls from the media should be directed to the MDT/EOC or the s Public Information Officer.
- Assign a staff member to receive, record and foreword offers from other agencies and the private sector to provide equipment, material, special services, advice, etc., to the appropriate region EOC.
- Post maps of the damaged areas to provide a visual display of damage sites.
- Establish a 24-hour staffing schedule for the EOC, if needed.
- Assign a staff member to coordinate lodging requirements for all-out-of-town personnel involved in disaster-related activities.
- Coordinate request from regions for inspections.
- Respond to requests for engineering information for structural assessments from the field.
- Identify inspection needs for and coordinate inspection efforts with affected regions.
- Request additional supplies, equipment, and personnel from the MDT/EOC.
- Inform the Bridge EOC of collapsed or severely damaged bridges to which a forensic investigation team should be sent.
- Prepare summary reports.

Checklist for Team Leaders

- Assemble team after receiving directions from the Bridge Preservation Engineer or the Bridge and Structures Engineer, for Post-Earthquake investigative teams.
- Check the personal equipment of each team member.
- Check the vehicle and communications equipment before leaving.
- Notify the region EOC of the team's location when you enter or leave a region.
- Provide inspection results to the Bridge EOC (or region EOC in a major or great earthquake) every two hours, if possible. Post-Earthquake investigative teams will report to the Helena Bridge EOC.
- If it is necessary to keep the lines of communication open.
- Once teams are in the field they should contact the District EOC, for additional equipment, supplies or personnel request.
- Take photographs of every bridge inspected that show signs of damage. Keep a photograph log.
- Get the names and addresses of persons who may have taken photographs before you arrived.
- In any unexpected situation, make decisions based on the objectives of ensuring the safety of the traveling public and protection of State property, and contact the District EOC (or region command center in a major or great earthquake) ASAP.
- When finished with your shift, provide the District EOC with your motel name, location, and phone number.

Inspection Focus

The following items should be checked in any post-earthquake inspection:

- Bearings
- Joints
- Primary structural elements, and
- Alignment of rails, members and joints.

APPENDIX D: COMMUNICATIONS PLAN

This appendix describes communications systems that may be damaged, or used during an incident.

High Band 150 MHz System

The 150 MHz System provides a communications link from truck to truck and truck to base over 95% of the State. This system may be the only method of communication in the event of a catastrophic earthquake. The system not only meets the needs of the , it also enables the to communicate with other State and local entities through direct contact or through the mutual aid channel. The system is highly dependent on repeater sites located areas that may be difficult to access during an event.

MDT also maintains a couple of portable repeater systems that have the potential to enhance system services should the normal repeaters fail. A portable repeater could be placed in a single engine aircraft to provide emergency communications capabilities if all other system fail.

State to State

MDT communications program has a 1.5 – 30 MHz radio system that is designed to communicate between States. This system can provide a communications link should all other systems fail.

Regular Phones

Regular phone lines maybe damaged or become saturated during an emergency and may only provide limited service. If local calls cannot be made, it may be possible to communicate via long distance calls with another State Emergency Operations Center, who could call back into the State of Montana and establish a conference call.

<u>Idaho</u>

Idaho Bureau of Disaster Services (208) 334-3460

<u>Wyoming</u>

Wyoming Office of Homeland Security (307) 777-4900

Wyoming Highway Patrol (800) 442-9090

<u>South Dakota</u>

South Dakota Division of Emergency Management (605) 773-3231

South Dakota Highway Patrol (605) 773-3105

<u>North Dakota</u>

North Dakota Division of Emergency Management (701) 328-8100

North Dakota Highway Patrol (701) 328-2455

Canada

CANUTEC (Canadian Transport Emergency Centre) 1-613-996-6666

Cellular Phones

Cellular phones can also be used for emergency communication. Site inspectors and other emergency response field personnel should have cellular phones for communication from the site. The cellular phone system is dependent on towers, a dependable power source, and a ground based switch that is functional. Depending on the emergency cellular phones may not be operational and if they are they will be subject to call congestion that will limit the number of users in the network. Cellular units equipped with their own antennae and repeater systems should not be affected by saturation. Cellular phones should be used by emergency management office personnel for non-emergency communications to provide key field personnel a greater number of available channels on the two-way radio system.

Pay Phones

Pay phones are part of the emergency communication system and have priority in receiving service over private phone lines. Employees should be encouraged to use pay phones to contact family members if regular phone lines become saturated.

Highway Advisory Radios (HAR)

HARs are portable radio system designed to provide continuous programmed messages that can be accessed using a vehicle or other AM/FM radio. These systems provide a method of dispersing information to the traveling public so they can make informed travel decisions.

Travelers Information System

MDT maintains an extensive Travelers Information System. The system is designed to acquire roadway information and disseminate the data to other interested parties and post on the s web site and through the 511 system. This system will provide essential information on a broad scale that is easily accessible by computer and land-based and cellular telephones.

Amateur Radio

Amateur radios can be used to back up normal communication. Area amateur radio operator groups should be contacted and met with annually to review options should an emergency occur that may require communications methods beyond MDT and commercial systems.

Helena Campus Communications

Helena Campus Communications will be coordinated through the MDT/EOC who will communicate status to the SEOC and internal administrators and staff. Communications will be kept to a minimum to allow everyone to do their jobs and keep communications lines available. As soon as practical after an event the MDT/EOC will try to establish communications with field offices using conventional and/or two-way communications systems. It may be necessary to start a truck-to-truck relay to get communications established to the affected area. During extended emergency operations, the Helena Campus may request additional staff at the SEOC

for 24-hour communication coordination. The MDT/EOC will have a point of contact for communication with the MDT staff at the SEOC.

District/Division EOC Communications

If the Helena Campus or MDT/EOC cannot be contacted using conventional or two-way radio systems Area Offices will continue to try until a communications link is established. That may be a truck-to-truck relay. Field operations are expected to establish communications with outlying sections to determine status of manpower and equipment and to provide initial damage assessments. Damage information should be gathered and documented in a hard copy format and in an electronic format to be transmitted as soon as a data link is established. During extended emergency operations, the Division Offices should establish a single point of contact for communication with the MDT/EOC staff.

Communications among Districts/Division should be conducted as necessary to coordinate the status of routes connecting division. Manpower and equipment resources should be request through the MDT/EOC. If the Helena Campus cannot be reached, and contact can be made with the adjoining division, field operations should request assistance directly. In most emergencies, only a few regions are impacted. Non-impacted regions will be contacted, as needed, to provide additional material, equipment, or personnel. In the event the Helena Campus cannot be contacted field operations must assume the responsibility of activating and staging manpower and equipment, until requested.

Districts/Divisions should communicate with Helena Campus when road closures will exceed four hours because of weather or other significant events. Significant events may have to be reported to FHWA, State EOC, and MDT administrative staff.

Communications With The Public

During an incident, communications with the public becomes an issue. The biggest problem is inconstant and inaccurate information being provided to the public. The standing operations procedure for an emergency is to provide basic information. Formal news releases will be coordinated through the Public Information Officer in the Directors Office. The SEOC, if activated, it will become the official source of news releases and public information. If you are contacted by the news media have them contact the SEOC 406-842-3911. Road information communicated to news media and Public Information Office should include information normally needed by the media.

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APPENDIX E: EQUIPMENT

MDT Equipment

Montana Department of Transportation (MDT) equipment can be readily moved to other locations in the event of an emergency. Requests for equipment should be made to the MDT/EOC, if activated, or through the Equipment Bureau Chief. The Equipment Program maintains a master list of equipment by area and can activate transfers of equipment to the affected area. The Chief of the Equipment Bureau would establish a staging location outside the affected area to pre-stage equipment before assignment to the affected area.

Motor Pool

The State Motor Pool maintains a fleet of vehicles at the Helena Campus for daily dispatch. These vehicles would be available for dispatch should they be required to meet transportation needs during an event. Vehicles would be issued on a priority bases and may be dispatched to a staging area to meet transportation requirements in the affected area. Additional units are on long-term lease and may be reassigned if needed.

Rental Equipment

Equipment from private rental equipment companies can also be used during emergencies. Requests for equipment should be directed to the MDT/EOC, if activated, or to the Chief Equipment Bureau who will arrange for additional equipment.

Rental Vehicles, Equipment, Materials, Supplies or Operating Services would comply with purchasing guidelines.

The State is self-insured. The owner of the equipment may require evidence of self-insurance. This requirement may be satisfied with a copy of the insurance Statement in each vehicle. If the owner is not satisfied with the documentation, a request for a Certificate of Insurance should be made to the manager of the Tort Defense Division of the Department of Administration.

Note that the self-insurance pool only covers liability. Other damages would not be covered.

State Agency Equipment

<u>Disaster and Emergency Services</u>

The use of other State agency or other equipment should be coordinated through the States Disaster and Emergency Services (DES) program. In the event of an emergency the State Emergency Operations Center (SEOC) would be activated and the Department would have a representative at the SEOC. A request would be made to the:

> Duty Officer
> Disaster and Emergency Services
> 406-841-3911
> (After hours, weekends and holidays the phone is answered by a Highway Patrol dispatcher and they will notify the duty officer.)

<u>Department of Natural Resources</u>

Heavy equipment belonging to the Department of Natural Resources and Conservation (DNRC) is primarily used to suppress and control forest fires. However, MDT may request DNRC equipment for other emergency relief operations if the equipment is not being used. Requests for the loan of equipment should be made through MDT/EOC who will contact the SEOC.

Military Resources

The State may use military resources during designated natural and man-caused emergencies. However, military assistance can only be obtained if all State and local resources, including those in the private sector, have been committed, exhausted, or are inadequate for the task. They may then be obtained without a Presidential declaration of emergency or disaster. Military resources include the National Guard and the Department of Defense. Requests for military resources will be made through the MDT/EOC who in turn will request the resources through the SEOC.

Obtaining Military Resources

The most expedient process for obtaining military equipment is to make a request through the MDT Disaster and Emergency Services Coordinator who will notify the SEOC who will coordinate all requests for military resources through the appropriate military liaison. If the MDT Disaster and Emergency Services Coordinator or the MDT/EOC cannot be contacted, direct requests can be made to State Disaster and Emergency Service SEOC.

Duty Officer
Disaster and Emergency Services
1-406-841-3911
(After hours, weekends, and holidays the phone is answered by a Highway Patrol dispatcher and who will notify the duty officer.)

National Guard

The National Guard's mission is to provide military support to civil authorities for the preservation of life, prevention of human suffering, and the restoration of public services, during State emergencies or on the order of the Governor. Support capabilities of the National Guard include the following:

- Roadblocks and traffic control
- Mobile and fixed communication
- Emergency evacuation (land/air)
- Perimeter security/quarantine
- Delivery of supplies
- Disaster search teams
- Aerial reconnaissance
- Civil disturbance operations (e.g., riots, protests)
- Emergency shelter

The most expedient process for obtaining National Guard assistance is to make a request through the MDT Disaster and Emergency Services Coordinator, who will notify the SEOC which will notify the Guard liaison of the requests for resources.

Department of Defense

The Department of Defense (DOD) includes the U.S. Army, U.S. Navy, U.S. Air Force, and U.S. Marine Corps. Both the regular and reserve components of each branch are part of the DOD. The State National Guard does not become a part of the DOD until activated for federal duty by the President. The U.S. Coast Guard is a component of the Federal Department of Transportation but becomes part of the U.S. Navy during wartime. DOD has adopted the following policy regarding its role in assisting State and local governments during peacetime civil emergencies:

1. The federal government will provide an orderly and continuing means of supplemental assistance to State and local governments in their responsibilities to alleviate the suffering and damage that result from civil emergencies.
2. Upon the declaration of a major disaster or emergency by the President, the Director of the FEMA, or their designees, the Associate Director for Disaster Response and Recovery, FEMA Regional Directors, and Federal Coordinating Officer may direct any federal agency to provide assistance to State and local governments by:
   - Using or lending equipment, supplies, facilities, personnel and other resources;
   - Distributing medicine, food, and other consumable supplies; and
   - Rendering emergency assistance.
3. Use of DOD military resources in civil emergency relief operations must be limited to resources that are not immediately required for the execution of the military's primary mission. Only equipment and supplies that DOD has declared surplus (i.e., that is not immediately required for military missions) may be loaned or donated to State and local governments. For major pieces of power equipment, such as bulldozers, cranes, or road graders, DOD will provide an operator unless the borrowing organization provides reasonable assurance that it has a qualified operator. Without a Presidential declaration, DOD assistance can be obtained in the following cases:
   - Lives are endangered and the needed military resources are available.
   - A mutual aid agreement has been executed with local DOD commanders.
   - Military Assistance to Safety and Traffic (MAST), Search and Rescue (SAR), or Explosive Ordnance Disposal (EOD) services are needed.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USCOE) is a functional branch of the U.S. Army. The USCOE is organized into regional offices and Montana is covered by two regional offices. The Northwest corner of the State is in the Seattle region and the rest of the State is in the Omaha region. The primary function of the USCOE in this region is flood fighting and flood mitigation activities. Flood fighting may include the following:

- Temporarily raising the height of levees with sandbags.

- Strengthening flood control works with armor rock.
- Evacuating people and livestock.
- Providing assembly of plants and supplies (e.g. sandbags, plastic sheeting).
- Providing 24-hour technical assistance during the event.
- Removing logs, debris, and ice jams.

Sandbags

Sandbags can be obtained through SEOC. These sandbags are only to be used in emergency situations. Requests for State sandbags should be made to:

Duty Officer
Disaster and Emergency Services
406-841-3911
(After hours, weekends, and holidays the phone is answered by a Highway Patrol dispatcher and who will notify the duty officer.)

If more sandbags are needed, EMD will request them from the U.S. Army Corps of Engineers. In addition to State and federal sandbags, sandbags may be obtained from the sources below. (The telephone directory may reveal additional sources.)

Justus Bag Company, Inc.
East 11205 Trent
Spokane, WA 99206
(509) 924-8353 or 1-800-456-7878

Fisher Bag Company, Inc.
2301 South 200th Street
SeaTac, WA 98198
(206) 870-8816; emergency 24 hour (206) 937-3776

APPENDIX F: STANDARD FORMS

The following forms are to be used to help "manage" an incident. A copy of each form is included at the end of this Appendix. These forms are from the National Fire Equipment System (NFES). Although an organization may develop its own forms to use during Incident Management, these forms have been standardized for use by different organizations.

Additional forms can be obtained at the National Incident Management System (NIMS) website:

www.nimsonline.com/download_center/index.htm#forms The PDF forms on this website are more complete than the Word format. Forms are also available from the OSHA website: www.osha.gov/SLTC/etools/ics/ These forms are in a PDF format.

Incident Briefing (Form 201)

Page 1 of Form 201 is used for a sketch of the incident if no better document is available. This is particularly valuable during the early stages of an incident to record situation, clarify thinking and communications about locations and to focus attention on overall objectives. This form can also be used to describe travel routes for resources (a "travel plan") and locations of special facilities such as casualty collection points or evacuation centers. More sophisticated maps should be used for detailed planning if they are available. Page 2, 3, and 4 of Form 201 are used to provide documentation on simple incidents and as a briefing format for succeeding Incident Commanders and other overhead personnel if the incident escalates.

Incident Objectives (Form 202)

Form 202 is the key to effective action. It is the initiator of the planning and control process and the place where Command begins to form and direct the organization. The form allows Command to describe all desired objectives and priorities.

Organization Assignment List (Form 203)

Form 203 shows who has been assigned on the incident. It shows who's in charge and details reporting relationships. It also serves as a sequential record of the resources available by the time period. Form 207, the Organization Chart (described later), can be used in conjunction with, or instead of Form 203.

Division Assignment List (Form 204)

Form 204 begins to manage the process of who does what. It is the place where actual tasks necessary to meet Command objectives are described, and may be used to further define priorities. Completed forms assist the "reality checking" phase by making span-of-control and communications decisions visible.

Completed forms are distributed as part of the Action Plan. All Sections, all Branch Directors, and all Division Supervisors have forms showing the re-sources under their direction, and the task assigned to those resources.

Incident Radio Communications Plan (Form 205)

Form 205 is one of the major tools that can bring order out of chaos on complex incidents. Its preparation and use improves multi-agency communications regardless of the types of

capabilities of the involved radio systems. Preparation of the 205 is facilitated by completion of Form 216 and Form 217, described below.

Medical Plan (Form 206)

Form 206 is primarily intended to serve incident personnel. Medical needs are not necessarily at the top of the list of initial needs; however, it is one of the most important in maintaining the incident. In the case of a major incident a Medical Division would be assigned the duty of caring for incident personnel, using the information from a Form 206 prepared for that purpose.

Organizational Chart (Form 207)

Form 207 provides a more visually detailed picture of the organization. It can be used in place of Form 203 (the Organizational Assignment List).

Incident Status Summary (Form 209)

Form 209 provides a summary of current status. The form serves Command as an overview of the incident and may be used to forward details to local, State, and federal agencies interested in incident details and control progress. It my also be used (along with the entire Action Plan) as a briefing document for the media and elected officials.

Check-In List (Form 211)

Form 211 is a basic tool for Planning, Finance, and Logistics Sections. It provides data on all authorized resources on the incident and can be used very effectively to weed out those forces or persons who have simply gravitated to the incident because of its magnitude or notoriety. Item 5 on the form ("Order/Request Number") serves as an indicator of legitimacy: if the resource has been requested by Command there will be some kind of record of request; if the resource is voluntary response, this form will define it as such.

Unit Log (Form 214)

Form 214 is prepared by all assigned Units, Division supervisors, and Branch directors. It provides a record of actions, problems, and intelligence for future planning and a record of pass events. It also assists in maintaining accountability.

Operational Planning Worksheet (Form 215)

Form 215 is a valuable tool for Action Plan preparation and overall management response to any incident. Command objectives are listed, and the resources "required", "have ", and "need" are shown. From this worksheet, and the process of its preparation, Command, Planning, Operations, and Logistics gain valuable management information. The reality of objectives (shown in the "Work Assignments" column) may be checked against resources availability, the total workload estimated, assignments further clarified, and the resource deficits, if any, recognized and corrected, if possible.

Radio Requirements (Form 216) and Frequency Assignment (Form 217) Worksheets

Forms 216 and 217 are the initiators of Form 205 (The Communications Plan). Block 5 of Form 217 ("Radio Data") may be modified to show the radio availability from any group of agency

disciplines. Any qualified communications technician will be able to prepare this form quickly, given a general familiarity with agencies involved in even the most complex incidents. This information is then adapted into form 205 by the Logistics Section for use in the Action Plan.

Support Vehicle Inventory (Form 218)

Form 218 is prepared by the Logistics Section to provide records and maintain availability information on support and service vehicles. It is a tool for Finance and serves Command and Operations by showing the authorized vehicles on the incident.

Air Operations Summary (Form 220)

Form 220 records air operations details. The Operations Section uses this form to manage aircraft in a manner that provides the best possible coordination between air and ground forces. Finance also uses the form in cost accounting.

Demobilization Checkout (Form 221)

Form 221 provides a method to record the release of personnel and equipment following the conclusion of the response to an incident. This form completes the cycle of an incident, indicating when resources were returned to a “normal” status.

Incident Debriefing

Although there is not a specific form to use for this process, it is very important that a debriefing meeting is held after an incident to determine what went right, and what may have been done better. This debriefing helps to determine if the Plan is timely and accurate as to what actions should be accomplished in response to a particular incident.

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APPENDIX G: FEDERAL DISASTER ASSISTANCE

All federal agencies have the authority to assist local and State jurisdictions in situations involving direct and immediate threat to life or major property damage. However, all federal assistance is supplemental to State effort and can only be applied for if State and local forces, including those in the private sector, have been committed, exhausted, or are inadequate for the task.

Eligible assistance can be obtained after a Governor's or Presidential declaration of "emergency" or "major disaster." State assistance is available for State disasters/emergencies. This portion of the manual primarily addresses the Federal assistance provided by the Robert T. Stafford Disaster Relief and Emergency Act, Public Law 93-288, as amended (Public Assistance). The *Emergency Relief Manual* primarily addresses assistance provide through the Department of Transportation, Federal Highway Administration (FHWA) that deals with federal and State highways (Governmental Assistance)

Federal Highway Disaster Funds

Disasters can cause extensive bridge and roadway damage beyond the State's financial ability to respond. When an emergency exceeds the State's capability, federal assistance can be requested. Two sources for federal highway disaster funds are available:

1. The Federal Highway Administration (FHWA) under Title 23, USC, Section 125, for the restoration of damaged roads and bridges on functional classified systems.
2. The Federal Emergency Management Agency (FEMA) under Public Law 93-288, as amended by PL 100-707, the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, for the restoration of damaged roads and bridges off functional classified systems.

Federal Highway Administration (FHWA)

Federal funds for damaged roadways and bridges that are on or part of the functional classified system (National Highway System) are obtained through FHWA. These funds are available after the Governor has issued a Proclamation of Emergency. A Presidential declaration of major disaster is not necessary.

Federal Emergency Management Agency (FEMA)

Federal funds for damaged roads and bridges off the federal aid system are obtained through FEMA and the federal/State public assistance program after a Presidential declaration of major disaster. If a Presidential declaration is appropriate, the Governor will request it on the basis of federal/State/local damage assessments.