DNRC FIRE MANAGEMENT

Montana Department of Natural Resources and Conservation

Briefing Manual
for
Northwest Compact
and
Other Out-of-Geographic-Area Resources

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INTRODUCTION

Purpose of the Package:
The purpose of this briefing for imported resources is to:

Help you become familiar with the Montana State Wildfire Management Organization;
Introduce you to the details of fire suppression activities in Montana;
Expedite your integration into Montana's Fire Operations; and,
Provide some safety information on fire line issues you may encounter while in Montana.

You may receive two (2) briefings when you arrive in Montana. This package will cover the general topics for the DNRC. The second will be a deployment briefing given when you arrive at your assigned incident, or Area Office.

If you have any questions or are unclear on anything, please ask for clarification from the assigned advisor, or agency representative.

Enjoy your assignment in Montana, learn from it, share your knowledge and ideas (we expect to learn from your expertise) and please, above all, work safely.

Topography:
There are a variety of landscapes in Montana: the approximately 50,000,000 acres (20,234,363 hectares) of state and/or county protection offer remarkable topographical contrasts.

The western portion of the state is primarily mountainous. Valleys can be heavily populated with mountain ranges surrounding them entirely. Elevations at the valley bottoms typically range from the mid 2,000 foot elevations to the 5,000 foot range (609-1,524 meters). Mountain elevations range from the upper 3,000 foot range to the 8,000-9,000 foot range (914-2,438/2,743 meters). Road systems are numerous in most of DNRC's direct wildland fire protection areas.

The eastern portion of the state is primarily rolling flat terrain with localized smaller mountain ranges. It is also characterized by many river break areas that make passage difficult. Most lands are privately owned and fire protection is the primary responsibility of local Volunteer Fire Departments.

As a firefighter, you must be aware of the local conditions and terrain. While the steep slopes can make fire control operations difficult, you need only work slowly and safely, while paying particular attention to the effect slope has on fire behavior, loose falling debris, and proper footing.

SAFETY

Safety comes first in ALL our operations. If you feel unsafe, think you are unqualified, or are uncomfortable in a task or operational assignment, back off and seek assistance from your supervisor. The following are thoughts or processes that you, individually, or as an IMT need to consider in all your actions.

Risk Management
Engineering a safe workplace is a daunting challenge in the best conditions, one that is doomed to fail in the context of wildland firefighting operations where we cannot control the environment. We must understand, safety in a typical workplace cannot be achieved through managerial controls alone, personnel are requisite in creating safety.

The wildland fire environment has tremendous variability, some of which is predictable and some which is not. Safety often relies on employee judgment, creativity and adaptation in a complex environment. In other words, fireline safety is not an end state; it is a continuous process assessment, understanding and adaptation to conditions presented in a complex and highly variable environment.

Regulations, direction and guidance must be dynamic and stimulate rather than suppress individual thinking. Since wildland fire is a continuing, progressive profession, it is both desirable and necessary that new ideas and new techniques be expeditiously evaluated and incorporated if proven to be sound. Units are encouraged to modify procedures contained in manuals for the purpose of assessing new ideas prior to initiating recommendations for permanent changes.

Manuals provide the best available operating instructions for most circumstances, but no manual can cover every situation or replace sound judgment.

LCES

LCES stands for Lookout(s), Communication(s), Escape Routes, and Safety Zone(s). The LCES approach stresses the same principles contained in the 10 Standard Fire Orders and the 18 Watch Out Situations.[1] Like these latter guidelines, the principles contained in LCES must be viewed as an interconnected and interdependent system. It is not sufficient to evaluate each principle individually; instead each must be viewed in the context of the others. For example, the best safety zone is of no value if your escape route does not offer you timely access when needed.

LCES is a key concept which is to be identified to each firefighter prior to when it is to be used. The nature of wildland fire suppression dictates that LCES must be continuously evaluated and, when necessary, re-established as time and fire growth progress. *"There occur times when men's lives are at stake when they alone must make the decision as to the course of action they select."*

(A quote from P.D. Hansen, Region 1 Forester, Comments after he read the Mann Gulch fire Review in September 1949)

[1]See the appendices for the 10 Standard Orders and 18 Situations That Shout Watch Out

NORTHERN ROCKIES GEOGRAPHIC AREA

The Northern Rockies Geographic Area encompasses Montana, northern Idaho, and North Dakota.

All agencies within the Northern Rockies Geographic Area are represented on the Northern Rockies Coordinating Group. The Northern Rockies Coordinating Group (NRCG) is made up of representation from the states, including all wildland federal agencies (Bureau of Land Management – BLM, United States Forest Service – FS, Bureau of Indian Affairs – BIA, Fish and Wildlife Service – FWS, National Park Service – NPS), local government, sheriff and peace officers, county fire wardens, the Fire Chiefs Association, and Disaster and Emergency Services (DES). Each representative from their respective agency has been delegated the authority to make decisions for their agency. As the fire season intensifies, this Board of Directors may meet, either through weekly conference calls or in person, and act in the role of a Multi Agency Coordination Group (MAC Organization) prioritizing the allocation of critical resources across the Northern Rockies.

Fire suppression in Montana is accomplished for the most part in an interagency effort. DNRC is a signatory, along with the five wildland federal agencies, to the Cooperative Fire Management and Stafford Act Response Agreement which is often referred to as the Six Party Agreement. DNRC represents local government through this agreement. Due to many agencies having jurisdictional responsibilities, it is common practice to be in a Unified Command Structure.

DNRC FIRE MANAGEMENT and ORGANIZATION

DNRC Fire Management has the critical task of minimizing losses from wildfires within its protection throughout the state. To do this, it provides direct protection to approximately 5,000,000 acres (2,023,436 hectares) in western Montana and through a County Co-op Program for the remaining 45,000,000 acres (18,210,926 hectares) Statewide. Through the County Co-op Program the local counties provide wildland fire protection.

The State Forester is the Division Administrator for the Forestry Division. The Forestry Division is responsible for fire suppression activities within the state on private, state, and federal lands protected by the state. The Forestry Division is subdivided into several Bureaus. The Fire and Aviation Management Bureau takes the lead for fire suppression statewide.

DNRC has subdivided the state into six areas: the Northwestern Area, Southwestern Area, Central Area, Northeastern Area, Eastern Area, and Southern Area. Each area has a Land Office which is managed by an Area Manager with a staff including a Fire Program Manager. Some of the larger Land Offices (western Montana) are subdivided into Unit Offices managed by a Unit Manager, with staff including a Fire Supervisor for most units.

INITIAL ATTACK PREPAREDNESS

Initial Attack is the action taken to halt the spread or potential spread of a wildfire between the time it is reported and before the next burning period. This shouldn't be longer than a 24 hour timeframe. By state law the DNRC is mandated to aggressively initial attack all fires and keep them as small as possible. The state strives to keep 95% of fires at 10 acres (4 hectares) or less. Initial attack always takes priority over on-going management of large fires unless the large incident is located in the Wildland Urban Interface (WUI). This may be the exception.

Montana DNRC is an engine based initial attack organization. It also relies on a state aviation program. The three direct protection Land Offices in western Montana each have a Type 2 helicopter with helitack module assigned. There are two additional Type 2 statewide helicopters stationed in Helena, Montana, as well as two Type 3 helicopters for statewide use.

All resource needs including helicopters and air tankers are ordered through dispatch. Typically hand crews are comprised of twenty individuals including the crew supervisor. There are Interagency Hot Shot Crews (IHC), Type 2 IA Crews, and Type 2 Crews. IHC and Type 2 IA crews can be broken up into squads if needed. IHC and Type 2 IA crews will almost always come with their own transportation. Type 2 Native American crews will generally be transported by bus.

LINE AUTHORITY

All initial attack incidents fall under the authority of either the Unit Managers or the Area Managers for state fires. We refer to Unit Managers and Area Managers as Line Officers. All federal fires also fall under the authority of the local Federal Agency Administrator/Line Officer.

Wildfires are organized by size and/or complexity. Type 1 fires are the most complex and Type 5 the least. Typically the local Agency Administrator has line authority for all fires at the Type 5, 4, 3, 2, and Type 1 level. Generally the Area Managers exercise their authority to manage the Type 1 incidents.

There are several standing Type 3 organizations in Montana but generally they are put together as Ad Hoc teams from local resources. There are two National Type 1 teams, five Type 2 teams, and one Type 2 Wildfire Management Team in the Northern Rockies. The Type 1 and Type 2 teams are organized under the ICS format and generally travel with 14 plus 6 mentored trainees as a short team, or 27 plus 12 trainees as a long team. The IMT's will mobilize as requested and negotiated with the agency administrator/line officer.

Incident Commander Responsibilities:

The Incident Commander (IC) will receive from the local Agency Administrator(s) a written Incident Situation Assessment (ISA (state)), or a Wildland Fire Decision Support System (WFDSS (Federal)) outlining the selected strategy or strategies for management of the assigned incident. The IC will also receive a written Delegation of Authority from the responsible Agency Administrator(s). The Delegation of Authority will give the IC direction and expectations in

management of the incident. The IC will also be directed to function in Unified Command if theimpacted agencies agree that would be the appropriate command structure. The IC should ensure daily updates are relayed to the Agency Administrator(s) or his/her appointed agency representative(s).

DNRC will request the assignment of Trainee's to your incident. You may also be requested to host a local All Hazard Type 3 IMT. You and your organization will be expected to provide shadowing opportunities, and or work assignments for the length of their stay.

The IC must ensure they are providing for workforce management: All incident personnel are expected to meet the 2 to 1 work-to-rest ratio. Drugs and alcohol are prohibited while on incident assignments. Additionally, the IC must ensure all personnel assigned to the incident promote a courteous, polite, and professional image for the host agency, themselves, their employers, and the Incident Management Team to which they are assigned; both on the incident and in our communities. It is important that we convey a professional image that is worthy of the respect and confidence of the public we serve.

The IC is responsible for providing oversight in managing suppression costs. Costs should be minimized without compromising safety. Cost management direction may be included in your Delegation of Authority and deployment briefing. Direction may include capturing costs in the ISUITE database and the need to provide specific maps for cost apportionment on multi-jurisdictional incidents. Cost management objectives may be included as a performance measurement in the IC and IMT evaluation.

The IC is responsible for ensuring an Operational Planning Worksheet (ICS-215), and the Operational Safety Form (ICS-215A) are used to assure safety has been mitigated prior to Incident Action Plan preparation.

There is also an expectation that the IC conduct community meetings if directed or the need presents itself. The IC also is expected to keep local leaders, i.e. County Commissioners, County Sheriff, Fire Department Chiefs, City Mayors, etc. updated on incident progress. Cooperation and maintaining or enhancing local relationships is a very important expectation of the IC.

It is the IC's responsibility to ensure: an Operational Period Briefing is done for each operational period, an Incident Action Plan is produced for each operational period, a formal Transfer of Command Plan is completed prior to transfer of command to a different entity, and the documentation for the final fire package meets the agency's expectations.

The IC and IMT should plan for a formal Closeout with the agency administrator. This will include the IC presenting a "Lessons Learned", and handoff of the final fire package. The host agency will provide a performance evaluation for the IMT and/or IC.

STRUCTURE PROTECTION

The DNRC policy for structure protection states: protecting the structure from the threat of damage from an advancing wildland fire normally does not include an attack of fire that is inside the structure. It involves the use of fire control lines (constructed or natural) and the extinguishing of spot fires near or on the structure. It involves the use of standard wildland protection tactics, control methods, and equipment, including fire control lines and the extinguishing of spot fires near or on the structure[2].

Generally structure protection is accomplished in a joint effort with local government Fire Departments.

EVACUATIONS

In the state of Montana, authority for evacuations and declarations comes primarily from the Chief Executive Officer (County Commissioners) of the jurisdiction through the Local Emergency Operations Plan (EOP). A copy is available thru the local Disaster & Emergency Services (DES) Director. The County Sheriff or Fire Chief may order a small, localized evacuation and/or control access for an initiating, localized incident but the EOP is the overall authority for larger, longer duration events. The county sheriff and only the county sheriff has the authority and responsibility for initiating evacuations outside of a municipality. Generally this will be accomplished by the local sheriff utilizing their staff. However, in the smaller populated counties the local sheriff may need the Incident Management Team's assistance. The Incident Commander should make every attempt to meet, establish the process, and work closely with the local county sheriff or their assigned deputy early into the incident. Generally the Incident Commander recommends the need for evacuation to the local sheriff.

AVIATION

The DNRC relies upon a fleet of aircraft maintained and operated by the Fire & Aviation Management Bureau's Air Operations Section. This fleet consists of three fixed-wing and seven rotor-wing aircraft. A majority of these aircraft were acquired through the Federal Excess Property Program (FEPP), therefore some limitations and restrictions do apply to the use of these aircraft. The DNRC may also utilize Call-When-Needed (CWN) aircraft by ordering them through local dispatch centers or the Northern Rockies Coordination Center.

Guidelines covering FEPP, department aircraft usage, and operations are contained in the DNRC's Air Operations Manual (1500 Manual) located on-line by following the internet link: http://www.dnrc.mt.gov/forestry/fire/Manuals/manuals.asp. This manual is available through any line officer or Agency Representative. The DNRC also utilizes the Interagency Helicopter Operation Guide (IHOG). The IHOG is also available through any Line Officer, Agency Representative, or by the following internet link: http://www.nifc.gov/policies/ihog.htm

[2]See the appendix for the Northern Rockies Structure Protection Guidelines

Aviation Supervision:

The Air Operations Section Supervisor/Chief Pilot is responsible for the general administration, supervision, and direction of all air operations for the department. This position is located in Helena at the DNRC Aviation Facility along with the Air Operations Safety Pilot, Chief Maintenance Inspector, and mechanics. The Air Operations Section Supervisor directly supervises the pilots assigned to each aircraft. He also coordinates the maintenance schedules and locations of each aircraft. The Northwestern, Central, and Southwestern Areas each have an Air Operations Supervisor who is responsible for the day-to-day air operations. In the Eastern, Northeastern, and Southern Areas this responsibility is given to the Area Fire Program Managers.

Helicopter Operations:

A Helicopter Manager will be assigned to the helicopter for every mission. The Helicopter Manager assists the Pilot in Command with the coordination of operational and logistical assignments given to the aircraft. Helicopters may come with a full Helitack module; module includes Manager plus 4 crew members, or as few as a Manager depending on the mission. This module will assist with ground support for the helicopter, and firefighting duties as assigned. The Pilot in Command does have the final say in flight safety and aircraft operations. Load calculations, manifesting, briefings, refueling, pilot flight time/duty day limitations and other information on helicopter operations can be found in the DNRC 1500 Manual. Helicopter managers, crewmembers, and pilots will also be able to answer any questions regarding operations.

Fixed-Wing Operations:

The DNRC has three single engine Cessna fixed-wings. The primary role of these aircraft is aerial detection and fire reconnaissance missions. The three aircraft are located in the Northwestern, Southwestern, and Central Areas.

Flight Following:

During any fire mission DNRC aircraft will flight follow with the local dispatch center responsible for the mission/assignment. Flight following will be established between dispatch and the aircraft upon take-off. The following information will be passed on to dispatch by radio:

- Aircraft registration
  - Amount of fuel onboard
  - Number of passengers
  - ETA to destination

Note: DNRC aircraft utilize Automated Flight Following (AFF). If AFF is unavailable, 15 minute check-ins by radio will be done. Aircraft status, location, and heading will be transmitted to dispatch.

Crash/Search and Rescue:

Each area has updated DNRC Crash/Search and Rescue Guides posted in dispatch and at the Unit Offices. Keep in mind that you may be working with aircraft from another agency. Therefore it is important to relay all information on an aircraft incident to the local dispatch center as soon as possible. Do not delay medical care while determining who the aircraft belongs to. Dispatch will assist in this area.

Overdue Aircraft

If an aircraft fails to check in, or fails to make contact on schedule, contact the local dispatch center immediately. The appropriate Aircraft Crash/Search and Rescue Guide procedures will be implemented by the local dispatch center.

Downed Aircraft

In the event of a downed aircraft, the first personnel aware of the aircraft must ensure that information is forwarded to the local dispatch center as soon as possible.

The dispatch center must be informed as to the type, color and registration of the aircraft. The employee should give the time and location of the accident and the number of persons on board, but not their names. He or she should also attempt to provide an accurate description of the site including elevation, aspect, ground cover, position and slope. The weather and access to the site is an integral part of this report as is a description of the known injuries and damage to the aircraft.

The dispatchers will provide this information to the necessary contacts and activate the appropriate Crash/Search and Rescue Guide.

Providing Help

In some instances, it may be necessary to initiate assistance or medical aid to the accident site. The following tips are for those providing assistance:

- ✈ Ensure the fastest possible aid and evacuation. In the absence of absolute knowledge to the contrary, assume all persons on board survived, all are injured, and all are burned.
- ✈ Treat injuries to maintain life and avoid infection. With burns, sterile covering and fast evacuation is critical.
- ✈ Take notes and photographs, mark location of unconscious persons or bodies before moving them, (do not move obvious fatalities, except for protection from fire, etc.).
- ✈ If the incident involves a DNRC aircraft an agency representative or designee will assume the Incident Commander role for the incident within the incident. Refer media inquiries or other questions to the IC or PIO.

If you are assigned specifically to a DNRC air operation, procedures for aircraft operations and incidents will be covered in detail during an aviation briefing.

RADIO COMMUNICATIONS

The Montana DNRC statewide radio system is managed and maintained by the Communications Engineer and one Field Service Technician located in Missoula. The system is comprised of 32 remote mountain top sites which provide extended coverage communication links to 20 DNRC offices and 9 Interagency Dispatch Centers. As of June 30, 2011 all DNRC frequencies will operate in conventional, FM, analog mode employing 12.5/7.5 KHz (narrowband) channel spacing.

All radio communications activities for state government agencies are authorized and controlled by the Federal Communications Commission (FCC). The FCC has developed rules and regulations that we must adhere to.

Rules concerning authorized transmissions provide for:

- Any communications related directly to the imminent safety-of-life or property.
- Communications directly related to activities for which the license was authorized. Such as for Forestry Conservation and Fire Suppression activities.

The rules also prohibit:

- The transmission or retransmission of broadcast related material (music, television etc.)
- Any transmission which purposefully interferes with another station.
- Superfluous communications containing profane or obscene words, language or meaning.
- Any transmission not related to forestry conservation and fire suppression activities.

Safety

Safety rules and regulations are developed and enforced by the Occupational Safety and Health Administration (OSHA) and referenced by the FCC. According to OSHA's "Right to Know" rule the DNRC must inform all personnel that radio frequency (RF) energy is considered a hazard. The potential hazard exists in the form of RF burns described below.

RF Burns

When direct contact with an object which is radiating radio frequency energy occurs there is the potential for serious injury. The main effect of direct exposure to RF fields is heating of body tissues as energy from the fields is absorbed by the body. The end result can be damage to soft tissues, similar to burns caused by exposure to intense heat, hence the term RF burn.

Medical Attention

Should RF burns occur seek professional medical attention as damage to internal organs or tissues can occur and may not be immediately apparent.

Special Concerns

As a precautionary measure, manufacturers of portable radio antennas encase the antenna with a rubberized protective coating to prevent contact with the metal portion of the antenna. However, mobile radio antennas and some base station and repeater antennas are completely exposed and direct contact with them, when transmitting, can cause severe RF burns. Do not touch antennas when transmitting.

Communications Priorities

Communications involving the imminent safety of life or property are to be given top priority. Priorities specific to DNRC operations are as follows:

- Medical and other Emergencies.
- Aircraft engaged in tactical operations. i.e. water or retardant drops, etc.
- Report of new fires
- Initial Attack fire communications
- Fire Support communications
- Administrative Support communications.

Terminology

Mobile Relays are referred to as Repeaters; therefore duplex channels are referred to as "repeater channels" or "repeater pairs". Simplex or talk-around channels are referred to as "direct" channels which are the output frequency of the repeaters. Others are listed below.

Command – a frequency or channel reserved for communications involving command and control of an incident by field command staff on scene or by a dispatch center.
Tactical or TAC – a frequency or channel used for operations by mobile and portable units usually on scene for activities related to the incident.
Air-to-ground – a frequency or channel reserved for communications between aircraft and field personnel on the ground.
Air-to-air – a frequency or channel reserved for communications between aircraft.
Victor – an aviation frequency utilizing amplitude modulation (AM) may be used air-to-air or air-to-ground.

Protocol: All messages to be sent over-the-air should be well thought out before the operator activates the transmitter. The use of *Clear Text* radio language and business like practices will ensure that messages will be easily understood and air time will be kept to a minimum especially during emergency situations.

Some examples of Clear Text are

Affirmative / Negative	Self explanatory.
Can handle	Do not need any additional resources.
Clear	Used at the end of a conversation. Indicates the conversation is done and the channel is clear for others to use.
Copy or copies	Used to acknowledge that a message was received.
In route	Indicates unit is proceeding to a non-fire assignment.
In quarters	Indicates engine/person has returned to the station.
In service	Operational and available for dispatch.
Loud and clear	Able to understand a received transmission very well.
Out of service	Not operational and unavailable for dispatch.
Ready to copy	Ready to receive information.
Responding	Proceeding to a dispatched incident.
Routine check-in	Scheduled check-in with dispatch via radio.
Stand-by	Please wait for information or don't give information yet.
Traffic (Emergency) traffic	Information to be communicated via radio. Emergency information to be communicated via radio.
Unreadable	Unable to understand a received transmission.

Transmitting a Message

To initiate a call first announce the name/designator of the person or station you wish to communicate with, followed by your name/designator and the name of the channel or system you are calling on. For example: "Missoula Dispatch, Engine 1126 on Union Peak repeater". Further transmissions do not require identifying the channel/system you are using. When the communication is completed, clear the channel by stating your call sign or unit/name designator followed by the word clear. The example would be: "Missoula Dispatch clear, KXR836"... "Engine 1126 Clear".

Frequencies

The DNRC communications system is comprised of 6 duplex (repeater) frequency pairs and 3 simplex (tactical) frequencies. These frequencies are shared on a statewide basis so the use of CTCSS (tones) is employed. Each Land Office and Unit within a Land Office area is assigned a duplex pair and may have one or more repeaters operating on this frequency pair. However, in some instances a second duplex pair is used. Repeaters are identified by the name of the mountain top where they are located and should be referenced in the initial contact transmission. Direct channels are shared and therefore named according to the office using them, such as Missoula Unit direct or Southwest Land Office direct. The 3 tactical channels are named as well following a state government scheme noted below: Their designators and functions are: DNRCTAC1 = primary ground tactical, YELLOW = Primary air to ground, secondary tactical, ORANGE = secondary air to ground or ground tactical.

The State of Montana Department of Administration's (DOA) Public Safety Services Bureau (PSSB) has licensed additional frequencies that are shared as Mutual Aid channels. These Mutual Aid frequencies are named by a color code scheme which designates the discipline or function where they are used. For example the Mutual Aid *Fire* frequencies are labeled: RED, MAROON, CORAL, SCARLET, RUBY and GARNET. The DNRC also has authorization to utilize frequencies of our cooperators such as the USFS, BLM, local government and various other state and county agencies.

Frequency Plans The Fire and Aviation Management Bureau, Land Offices and Units all have unique frequency plans too extensive to be listed here. Check with the local dispatch center or fire manager once you are assigned for frequencies used in their designated area.

INCIDENT DISPATCHING

No one process fully describes wildfire dispatching in Montana. Suppression and support resources are dispatched to DNRC wildfires in a manner that best meets the needs of the local organization depending on the time of year and the location of the incident. Wildfire season in Montana normally runs from mid-June through mid-September. Seasonal state dispatchers are employed during fire season and depending on the locale will typically work in an interagency dispatch center with employees from the US Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and others. During the summer fire season most dispatch activity occurs through the interagency dispatch organizations. During the off-season DNRC resources are typically dispatched by the local area or unit office but again this may depend on the local area/unit arrangement with their interagency dispatch center. Your assignment will likely occur during the summer wildfire season so the remaining discussion will describe dispatch via the Montana Interagency Dispatch organizations.

Initial Attack Dispatch

Initial Attack dispatch describes the mobilization of initial response resources to an emergency wildfire. DNRC initial attack units typically work closely with an interagency dispatch center either receiving dispatch orders from a center or informing the center of responses made on fires reported directly to the units. Depending on the locale, unit offices may maintain direct radio communication with IA resources or this vital communications function may be maintained by the interagency center. As the situation warrants and as authorized by the DNRC duty officer the unit office or dispatch center may order additional resources from adjacent units or zones. This enables a quick buildup of IA resources through a minimal organizational hierarchy. As the situation escalates and more and more resources are deployed a more formal hierarchical organization is followed under the Incident Command System to ensure adequate logistics support, effective intelligence gathering, and wider access to aircraft and other suppression resources.

If an out-of-area resource is mobilized to Montana DNRC with the expectation that they will operate in an initial response role it is important that the resource be fully briefed on local initial attack dispatch procedures. Unlike resources mobilized in the national dispatch system, resources mobilized under the Northwest Compact are typically limited in a response role in support of the DNRC only. This limitation is more than offset by the freeing up of other resources for use by DNRC's interagency cooperators.

Support Dispatch

The Northern Rockies Mobilization Guide, Chapter 20 is available as an operating plan at http://www.fs.fed.us/r1/fire/nrcg/ops_plans_index.htm and describes in detail the dispatch organization established to support wildfire activity. The hub of this organization is the Northern Rockies Coordination Center (NRCC) located in Missoula, Montana. This organization is the primary conduit for the mobilization of wildfire resources between dispatch zones within Montana, Northern Idaho, and North Dakota as well as in and out of the Northern Rockies Geographic Area. The State of Montana DNRC desk at the NRCC is also the primary contact point for the mobilization of DNRC resources in support of members of the Northwest Wildfire Protection Compact. The operating plan for this organization may be found at the previously mentioned link or at the DNRC site:
http://www.dnrc.mt.gov/forestry/Fire/Business/Documents/Agreements/2009NWCompact.pdf

The NRCC is organized functionally under Aircraft, Equipment, Crews, Overhead, and Intelligence. The primary contact number is 406-329-4880, Duty Officer Cell 406-544-2632, DNRC Cell 406-544-3473. Each dispatcher or coordinator should be able to provide support to any NRCG member agency but if you have the need to discuss business with a specific organization ask for that agency's representative. The NRCC web site is: http://gacc.nifc.gov/nrcc/ which provides a wealth of information about dispatch in Montana as well as intelligence information regarding the current wildfire situation.

The NRCC supports 14 zone dispatch centers as follows

BDC	**Billings Dispatch Center** – Billings, Montana Provides support to the Montana DNRC Southern Land Office	406-896-2900
BRC	**Bitterroot Dispatch Center** – Hamilton, Montana No direct support provided to the Montana DNRC	406-363-7133
BZC	**Bozeman Dispatch Center** – Bozeman, Montana Provides support to the Montana DNRC Central Land Office, Bozeman Unit	406-587-6719
CDC	**Coeur d'Alene Dispatch Center** – Coeur d'Alene, Idaho No direct support provided to the Montana DNRC	208-772-3283
DDC	**Dillon Dispatch Center** – Dillon, Montana Provides support to the Montana DNRC Central Land Office, Dillon Unit	406-683-3975
GDC	**Great Falls Dispatch Center** – Great Falls, Montana No direct support provided to the Montana DNRC	406-731-5300
GVC	**Grangeville Dispatch Center** – Grangeville, Idaho No direct support provided to the Montana DNRC	208-983-6800
HDC	**Helena Dispatch Center** – Helena, Montana Provides support to the Montana DNRC Central Land Office, Helena Unit	406-444-4242
KIC	**Kalispell Dispatch Center** – Kalispell, Montana Provides support to the Montana DNRC Northwestern Land Office, most units	406-758-5260
KDC	**Kootenai Dispatch Center** – Libby, Montana Provides support to the Montana DNRC Northwestern Land Office, Libby Unit	406-283-7740
LEC	**Lewistown Dispatch Center** – Lewistown, Montana Provides support to the Montana DNRC Northeastern Land Office	406-538-1072
MCC	**Miles City Dispatch Center** – Miles City, Montana Provides support to the Montana DNRC Eastern Land Office	406-233-2900
MDC	**Missoula Dispatch Center** – Missoula, Montana Provides support to the Montana DNRC Southwestern Land Office, most units Also supports the Montana DNRC Northwestern Land Office, Plains Unit	406-829-7070
NDC	**North Dakota Dispatch Center** – Minot, North Dakota No direct support provided to the Montana DNRC	701-333-0260

Each dispatch zone is organized to provide support to their local agencies. Zone operating plans, although similar throughout the State of Montana, will differ to reflect the local character of wildfire activity and their customer agencies. Consult with local DNRC officials to identify the specific dispatch protocols under which you will operate when working with the Montana DNRC.

Resources mobilized to Montana in support of the Montana DNRC will/may initially be mobilized to a central location. Once in-briefing and other initial administrative business has been completed you will be re-assigned either to an area Land Office or directly to a DNRC wildfire. When your assignment is complete you will be demobilized in a manner similar to that when you were mobilized. You will typically report to a central location for a debriefing. This debriefing might occur at your assignment location if time and travel or other considerations warrant. Travel arrangements to your home unit will be made by the local unit in consultation with the NRCC, the DNRC Fire & Aviation Management Bureau, and your home agency.

ADDITIONAL INFORMATION

Safety Guide to Bears, Reptiles, Insects and Plants

Bears

Black bears can be found in most of Montana, but grizzly bears are primarily found in western Montana. Bears are wild animals that demand your respect. They are unpredictable and can inflict serious injury. **Never** feed or approach a bear.

a) Tips for Safe Camping:

- Put away food and garbage.
- Do not cook or eat in or near your tent.
- Use a flashlight at night.
- If you spot fresh bear sign, choose another area.
- Avoid smelly foods.
- Cache food away from your tent.
- Pack out all garbage.

b) Tips for Safe Hiking:

- Make noise as bears feel threatened if surprised, and will avoid groups.
- Be alert when traveling into the wind, as bears will not be able to get your scent.
- Stay away from dead animals and berry patches (food sources for bears).
- Watch for bear sign: tracks, droppings, and fresh digging.

c) If a Bear is Confronted:

- Make a wide detour or leave the area.
- Do not run. This may trigger an attack, and most bears run as fast as a racehorse.
- Don't throw anything at a bear.
- Watch the bear for aggressive behavior.
- Back away from a bear slowly.
- Climb a tree if you can.

d) Attacks

If you are attacked by a grizzly:
Play dead. (Assume the fetal position, protecting your head, neck and chest.) Mature grizzlies are poor climbers so climb a tree, really fast!

If you are attacked by a black bear:
Try to escape by climbing a tree. Black bears can climb trees but they would be below you and can be more easily fended off.

Grizzly Bear

Black Bear

REPTILES

Snakes Alive, Watch Your Step!

Reptiles

Prevention is the best cure for many injuries and this is certainly true in the case of snakebites. Bites from poisonous snakes are extremely painful and sometimes fatal. Therefore, it is better to learn to avoid them.

If you live, work, or even vacation in areas inhabited by poisonous snakes, you need to be aware of a few things about snakebites.

In Montana you will or could potentially encounter rattlesnakes.

Here are some ideas for avoiding snakebites when working or relaxing outdoors:

- Learn whether there are any poisonous snakes in the area, and where they are likely to be found. Find out what they look like. Rattlesnakes, of course, can often be identified by their warning rattle.
- Watch your step. Don't put your feet where you can't see them - in tall grass, for instance. Be careful when stepping out of a vehicle.
- Be careful where you place your hands. When climbing rocks, for instance, don't reach for handholds which you cannot see clearly.
- Wear appropriate personal protective clothing, including high leather boots and long leather gloves if you are in snake territory.
- Avoid known den areas in the spring and the fall.
- Be particularly alert to snakes in warm weather, when they are the most active (although they will probably be found in the shade).
- Slowly ease away from a possibly poisonous snake if you meet one.

If a poisonous snake bites you, try to stay calm. By panicking, you just speed the circulation of poisoned blood.

The traditional snakebite remedies of cutting the wound, sucking out the poison and using a tourniquet to reduce circulation all can cause serious tissue damage. The treatment recommended today is to immobilize the affected limb by splinting and get the patient to the hospital quickly. If possible and without undue risk, you should kill the snake and bring it to the hospital with you so the medical personnel will know exactly what they are dealing with.

A bite from a poisonous snake can be extremely serious. If you live in poisonous snake territory, take precautions when you work or play outdoors to avoid snakebites.

INSECTS

Spiders

Preventing bites by spiders in high risk situations calls for simple, common sense measures. When working in enclosed infested areas, particularly in such places as the crawl spaces beneath homes, wear protective clothing, including long sleeves tucked into gloves, long pants tucked into boots, and coveralls or a jacket with a hood. Wear gloves when working outdoors in potential habitats such as woodpiles and rock gardens. Keep bare hands out of places that you cannot see, and do not use bare hands to turn over possible hiding places: Many bites by snakes and spiders occur when the victim uses bare fingers to turn over wood or other objects that conceal the hidden organism.

Hobo

Male Hobo

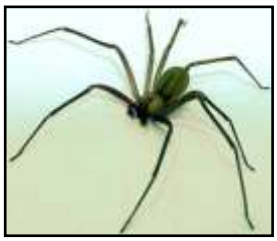
The hobo spider is found generally in the northwest part of the United States, western Canada, and throughout Europe. This Arachnid is typically 11-15 mm long and of mixed brown or earthy colors. The hobo spider is one of a small number of spiders in North America whose bites are generally considered to be medically significant.

Although this species of spider has a reputation for aggressiveness, they will normally avoid contact with humans. Most bites occur when the spider is accidentally crushed or squeezed by a human. The initial bite by the hobo spider usually is not painful, but in about thirty minutes a hard area will appear. Within 15 to 35 hours the sore will blister. The blister will break in around 24 hours, and the wound left behind generally will heal very slowly. The fully developed lesion may reach 3 cm or more in diameter which may take several months to heal and often leave permanent scars. In some cases, tissue loss is so severe that surgical removal of damaged tissue and repair are needed.

The occurrence of systemic illness is variable. However, the most common symptom is a severe headache, sometimes occurring within 10 hours (sometimes ~30 minutes) that does not respond to aspirin. The headaches have been compared to migraines and may persist for a week, sometimes accompanied by nausea, weakness, fatigue, temporary loss of memory, and vision impairment. The hobo spider bite is not considered to be fatal.

Because hobo spider bites are often mistaken for the brown recluse spider bite, it is always a good idea to bring in the spider if possible when seeking medical attention, which should be immediately after any spider bite.

Brown Recluse



Brown Recluse

Brown recluse spiders are usually between 6–20 mm, but may grow larger. While typically light to medium brown, they range in color from cream-colored to dark brown or blackish gray. The cephalothorax and abdomen may not necessarily be the same color. These spiders usually have markings on the dorsal side of their cephalothorax, with a black line coming from it that looks like a violin with the neck of the violin pointing to the rear of the spider, resulting in the nicknames fiddleback spider, brown fiddler or violin spider.

As suggested by its specific epithet *reclusa* ("recluse"), brown recluses are rarely aggressive, and actual bites from the species are rare. The spider usually bites only when pressed against the skin, such as when tangled up within clothes, towels, bedding, inside work gloves, etc. Many human victims of brown recluse bites report having been bitten after putting on clothes that had not recently been worn or lying undisturbed on the floor. The initial brown recluse bite frequently is not felt and may not be immediately painful, yet such a bite can be serious.

While it is important to note that the majority of brown recluse spider bites do not result in any symptoms, cutaneous symptoms occur as a result of such bites more frequently than systemic symptoms. In such instances, the bite forms a necrotizing ulcer that destroys soft tissue and may take months to heal, leaving deep scars. These bites usually become painful and itchy within 2 to 8 hours, pain and other local effects worsen 12 to 36 hours after the bite, and the necrosis develops over the next few days.

Black Widow

Black Widow

Black widows are notorious spiders identified by the colored, hourglass-shaped mark on their abdomen. Several species answer to the name, and they are found in temperate regions around the world. The black widow is a medium-sized spider whose body is about 1.27 centimeters long. The name is derived from the mistaken belief that the female invariably kills the male after mating.

Black widow spiders are nocturnal and, thus, are active at night. They prefer dark corners or crevices. They are said to avoid human dwellings, but you can find them in such areas as outhouses and garages.

This spider's bite is much feared because its venom is reported to be 15 times stronger than a rattlesnake's. In humans, bites produce muscle aches, nausea, and a paralysis of the diaphragm that can make breathing difficult; however, contrary to popular belief, most people who are bitten suffer no serious damage—let alone death. But bites can be fatal—usually to small children, the elderly, or the infirm. Fortunately, fatalities are fairly rare; the spiders are nonaggressive and bite only in self-defense, such as when someone accidentally sits on them.

Not all adult female black widows exhibit the red hourglass on their abdomen—some may have a pair of red spots or have no marking at all, but any markings that are present are bright red. Adult male black widows are a quarter the size of the female, and are usually gray or brown rather than black and red; while they may sometimes have an hourglass marking on their abdomen, it is usually yellow or white, not red. The bite of a male black widow is not considered dangerous to humans; it is the bite of the adult female black widow from her much larger venom sacs that has given this spider its dangerous reputation.

While there is great variation in specifics by species and by gender, any spider exhibiting a red hourglass on the abdomen and having a shiny black body is an adult female black widow.

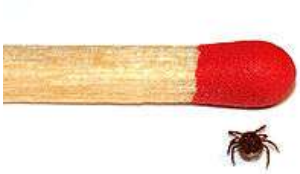
Ticks

Ticks are blood-feeding parasites that are often found in tall grass where they will wait to attach to a passing host. A tick will attach itself to its host by inserting its chelicerae (cutting mandibles) and hypostome (feeding tube) into the skin. The hypostome is covered with recurved teeth and serves as an anchor.

Ticks can be found in most wooded or forested regions throughout the world. They are especially common in areas where there are deer trails or human tracks. Ticks are especially abundant near water, where warm-blooded animals come to drink, and in meadows wherever shrubs and brush provide woody surfaces and cover.

Changes in temperature and day length are some of the factors signaling a tick to seek a host. Ticks can detect heat emitted or carbon dioxide respired from a nearby host. They will generally drop off the host when full, but this may take several days. Ticks are more active outdoors in warm weather, but can attack a host at any time.

While most tick bites do not result in disease, some do. Only certain types of ticks carry disease, and there is only a very small chance of them giving it to you. However, because the resulting disease can be serious, it is worth taking steps not to get bitten.



Avoiding ticks - To protect yourself against tick and insect bites	**What to do if you find a tick on your body**
1. Walk on cleared trails wherever possible when walking in tall grass or woods.	1. Use tweezers or forceps to gently get hold of the tick as close to the skin as possible. Don't touch the tick with your hands.
2. Wear light colored clothing, tuck your top into your pants, and tuck your pants into your boots or socks.	2. Without squeezing the tick, steadily lift it straight off the skin. Avoid jerking it out. Try to make sure that all of the tick is removed.
3. Put insect repellent (containing DEET) onto clothing and all uncovered skin. Reapply as frequently as directed on the container.	3. Once the tick has been removed, clean the bite area with soap and water or rubbing alcohol. Wash hands with soap and water.
4. Check clothing and scalp (covered or not) when leaving an area where ticks may live. Make sure the lighting is good so that you will not miss seeing the ticks.	4. If possible, save the tick in a container with a tight fitting top. Label container with date, name of person bitten, what part of the body was bitten, and where the tick probably came from.
5. Regularly check household pets which go into tall grass and wooded areas.	5. This container should be taken in to your doctor's office as soon as possible for testing.
	6. Ask your physician for further advice.

Diseases Spread by Ticks

Several human diseases are caused from tick bites. The most well known is Lyme disease. Other includes relapsing fever, tularemia, and Rocky Mountain spotted fever. All of these diseases are extremely rare in Montana. If you have the following symptoms within days or weeks after being bitten by a tick, please report them to your physician immediately. Tell him/her when and where a tick bit you.

1. General symptoms of headache, muscle and joint pains, fatigue or weakness of the muscles of the face.
2. Skin rash, especially one that looks like a "bull's eye". It may or may not be where the bite was.

Treatment

If you have Lyme disease or another tick-related disease, you will need antibiotics to prevent complications of the disease.

Plants

Devil's Club (Oplopanax horridus)

Quick Check
Coarse stems about 1" thick, bristling with light brown, needle-like spines.

Range
Mostly found in western Montana, especially wherever cedar grows. Elevation ranges from the lower valleys (2,000' level) to approximately 4,500'.

Devil's club stands out because of its large, maple-like leaves and thick, spiny stems. In the mottled shadows of cedar swamps, devil's club grows abundantly wherever the ground is black, soft and damp. Its light brown stems rise in crooks and twists to support large, exotic leaves which spread like green platters to catch the filtered sun's rays. Long, yellowish spines bristle from the stems and sparse, thin thorns project from the underside of leaf and stem. Terminal clusters of white flowers appear in June. They later change to a pyramid of bright red berries very noticeable during August.

Poison Ivy (Rhus radicans)

Quick Check
Green glossy leaves in threes. Dull white berries close to stem.

Range
Can be found throughout the state, but not a predominant plant species.

Despite being found in Montana there are few people who can make definite recognition. Being a sun loving plant poison-ivy is found in a specialized habitat where the careful observer quickly comes to look for it.

Its large, wavy-edged leaves in threes and whitish berries in loose clusters part way up the stem are positive identifying features. In the fall the plant turns a colorful scarlet and soon loses its leaves although the berries may remain all winter.

The poison which causes severe irritation to the skin is oil contained in all parts of the shrub. Poisoning may result from contact with shoes or clothes that have been worn around the shrub or from smoke from the burning plant.

If exposure is suspected, thoroughly washing in several changes of very soapy water is recommended. A coating of soft soap or strong solution of Epsom salts over the affected areas are good home antidotes. The standard remedy is calamine lotion obtainable at all drug stores.

The poison runs its course and usually clears up in several days time. Goats and cattle graze on poison-ivy without harm and may help in its eradication.

Poison Oak (Rhus diversiloba)

Fortunately this is comparatively rare in Montana. Occasional shrubs are found in dry locations in central and eastern Montana. There has also been documentation of this species in southwest Montana. Poison-oak may be a straggly, erect shrub or more commonly a stout climber. The three leaflets are roughly round in outline but sometimes irregularly lobed or toothed often causing a superficial resemblance to an oak leaf.

Stinging Nettle (Urtica lyallii)

The chances are that a person will first discover stinging nettle the hard way, for there is little to tell of its presence in the thickets. After a few encounters one watches for the rather ragged opposite leaves and the inconspicuous drooping clusters of greenish or whitish flowers. The coarsely toothed leaves are covered with fine stinging hairs which cause a severe irritation lasting for several days. Often great masses of it grow together making it almost impossible to pass through. Young nettle makes excellent greens and Indians used it in weaving cord. Some European species produce an excellent fiber equal to the best linen.

Range: Across the state in shady places.

Water Supply - Giardia

The Giardia parasite - which can cause diarrhea, abdominal cramps, nausea and/or vomiting, weight loss and fatigue lasting up to three weeks - can be carried by humans as well as by certain domestic and wild animals. These parasites can get into any surface water (lakes, streams, rivers) and thereby contaminate water used for human consumption. Although Giardia and other infections can be spread by wildlife, water quality problems may also arise from humans practicing unhealthy backcountry hygiene (if proper toilet facilities are not available, human wastes should be buried, well away from streams and other water bodies). Precautions should always be taken to avoid sewage contamination of surface water. Backcountry travelers should always boil water for at least two minutes or chemically treat water before drinking it or brushing teeth. Use bottled water wherever possible.

APPENDICIES

- Glossary of Terminology
- Mop-up Template
- Suppression Repair Template
- Suppression Considerations in Meeting Operational Objectives
- State of Montana Wildland Fire Agreements
- NRCG Community and Structure Protection Letter
- Instruction for Incident Situation Assessment
- Montana DNRC Incident Situation Assessment
- 10 Standard Fire Orders
- 18 Watch Out Situations

GLOSSARY OF TERMINOLOGY
For
Northwest Compact Resources

Fireline – Guard/same standards; down to mineral soil and approximately 12-18 inches/30-45 centimeters

Fuel Truck/Helitender – Fuel truck for rotor wing aircraft; Bowser

Blivet – Slingable water bag for suppression; Stillwell

Fuel Break – Referenced by size in accordance to fuel height; Fuel Free

Hardware – Water handling hardware used for hose lays; Jewelry

Helicopter – Any reference to rotor winged aircraft; Machine

Copy – Understood message on the radio; Check

Slash – Logging residue; Waste

Sucker Hole – Break in the weather that can allow rotor wing flight

Gated Wye – 3 way

Inline T – Used for water handling; Water Thieve

Pack of Batteries – Pack of AA batteries typically 9 AA's; Stick-o-batteries

Sleeping Pad – ½" pad; Foamy

Waterdog – Wispy moisture in air; Ghosts

Burning Snag – Whole tree length or partial; Chico

Recon Flight – Recky

Type 6 Engine – Referred to as Brush Rig by local government

Suppression Repair – Suppression Rehab

Stocking Hat – Tuque

MOP-UP GUIDELINES

_____ Incident

General Considerations

Mop-up is a critical phase of your IMT's assignment. All mop-up should take the following items into consideration:

- Values at risk inside and outside the control line.
- Current and predicted weather conditions.
- Site conditions in areas adjacent to the fire (fuels, topography).
- Access to the fire, travel time, etc.
- Preparedness levels, personnel available, etc.

Special Consideration

Fires in wildland urban interface (WUI) areas are the highest priority fires for mop-up. WUI fires and mop-up may have priority over initial attack in some instances outside any WUI areas if there is risk of the WUI fire escaping control. Planning for mop-up for a WUI fire should always consider a worst case weather scenario.

General Guidelines

1. Extinguish all hot spots that may pose a threat to the containment lines, until those lines can reasonably be expected to hold under the foreseeable weather conditions.
2. Ensure 100% mop-up of all spot fires outside the fire perimeter or 1 to 2 chains into the black depending on size.
3. Where life and property values are extremely high the fire perimeter will be mopped-up for a minimum distance of 3-5 chains into the black fire area.
4. Line or mop-up around all unburned islands of fuel within 5 chains of the containment lines.
5. Eliminate the re-burn potential within 5 chains of the containment lines in unburned islands that have continuous fuels extending beyond 3 to 5 chains of the containment line.
6. Analyze the snag felling needs based upon firefighter safety concerns and the threat to the containment lines. Mitigate snag hazards in mop-up operations by:
    - Isolating areas to reduce re-burn potential.
    - Minimize or limit the number of firefighting personnel in hazard areas.

If further direction or clarification is necessary please contact either myself or my Unit Fire Supervisor as soon as possible.

Unit Manager Name _____

(Printed)

_____ Date: _____

(Signature)

FIRE SUPPRESSION REPAIR PLAN TEMPLATE

Montana Department of Natural Resources and Conservation

This template is designed to give a general outline of what is required to be prepared for a visiting IMT and/or documentation purposes of local repair efforts. Use what is necessary within this template to prepare your fire suppression repair plan.

PREPARED BY

(Name)	**Date**
(Agency)	(Title)

Fire Suppression Repair Team Members Contributing to this plan include: (if more than one)

APPROVED BY

(Incident Commander)	Date
(Name) (Unit Manager/Area Manager)	Date

GOALS

This fire suppression repair plan is designed to guide the planning and implementation of repair measures on the _____fire, which burned on lands managed by the Montana Department of Natural Resources and Conservation, and private lands including commercial timber lands managed by _____ _____, and timber/ranch lands managed by approximately _____ small private owners.

The **intent of this fire suppression repair plan** is to mitigate or eliminate resource or other damage occurring as a result of fire suppression activities not to complete all long-term land rehabilitation/restoration needs.

Implementation of this plan will be in compliance with management direction and standards and guidelines contained in the Montana DNRC Wildland Fire Suppression 900 Manual.

RESPONSIBILITIES

This plan provides consistent fire suppression repair standards in order to provide seamless implementation of repair activities, reduce repair costs, and protect common resource values impacted by suppression activities. Implementation of this plan will be conducted by the Incident Management Team under the authority of resource advisors and/or the agency administrator.

Repair activities on Montana DNRC Lands, county access lands/roads and other private lands will be conducted by the IMT under the authority of the Montana Department of Natural Resources and Conservation. Activities conducted on private ownerships will be coordinated by the Montana DNRC with each private property owner.

Repair of the Incident Base Camp or other sites on private lands used as staging areas and drop points will follow repair standards outlined in this plan or as displayed within individual rental agreements.

OBJECTIVES

The following objectives will be met for all rehabilitation work completed on the _____ _____fire:

1. **Firefighter Safety** – Ensure all suppression repair work is done in a safe and efficient manner.
2. **Vegetation and Soils** – Avoid accelerated soil erosion and reestablish vegetation to prevent accelerated soil erosion.
3. **Water Quality and Watershed Values** – Minimize sediment delivery into streams and/or drainages to maintain water quality.

4. **Cultural Resources** – Protect any cultural resource sites that were impacted and repair areas where fire suppression activities destabilized slopes near sites.
5. **Travel Management** – Restrict unintended/undesired motorized vehicle access that may have been created by the construction of dozer lines. Provide for reestablishment of pre-incident road closures and reestablish administratively desired roadway widths/conditions to pre-disturbance widths/conditions.
6. **Cleanup** – Remove suppression related equipment, (debris, trash, signing, flagging) at facilities used by suppression personnel.
7. **Facilities** – Restore access roads, camps, equipment staging areas, helibases, helispots, retardant plants, and other sites to original pre-fire condition.
8. **Resource Recovery** – Stage (deck) commercial materials generated during fireline construction for salvage by respective land owners.
9. **Private Land Values** – Provide consistent fire suppression repair treatments that are responsive to various land owner needs.
10. **Cost Containment** – Ensure that treatments are feasible and costs are considered while developing and implementing fire suppression repair treatments.

GUIDELINES

Specific sites in need of repair will be categorized by geographic area and identified by geographic area and/or Branch or Division where applicable. A **Repair Operations Guide** may be developed and coordinated with the Incident Management Team (IMT) to ensure timely repair. The Resource Advisor or designee will provide the IMT with recommended amendments to this plan for Incident Action Plan preparation. The following general guidelines will be followed during all repair activities:

1. Agency Resource Advisor(s) will be available to work with fireline personnel during implementation of suppression repair.

2. Assessments will be ongoing, based on operations and events as they occur within the _____fire perimeter. Additional sites that are discovered in the field should be subsequently mapped and repaired.

3. Motorized equipment used for repair will be thoroughly cleaned of any plant materials that could potentially contain noxious weed seeds prior to entering planned repair work areas. In addition, all vehicles involved in the fire incident will be re-cleaned prior to demobilization from the incident to reduce the risk of transporting noxious weed seed to other areas. Vehicle washing logs will be completed to document compliance if so requested.

4. All materials used in repair efforts will be certified noxious weed free (straw, seed, etc.) Weed free certification will be provided to the Incident Management Team upon purchase or transport of materials.

5. Implementation monitoring will occur concurrently with completion of repair work. Any adjustments to prescriptions based on monitoring will be recommended to the Operations Section for inclusion or modification of Incident Action Plans.

6. To ensure safety of personnel performing suppression repair work, an onsite analysis of the hazards will be discussed and addressed each day before work is begun.

7. Where operations were established on private land, additional repair requests beyond those cited in this plan (as identified by the landowner) will be agreed to in writing by the Incident Management Team with concurrence by the Resource Advisor/Agency Administrator prior to completion.

8. No repair work shall commence at identified cultural sites without consultation with the Resource Advisor or other applicable agency representative.

STANDARDS

Salvage of Merchantable Timber

When applicable, salvage merchantable timber from firelines prior to rehabilitation.

- Skid logs to designated locations along established roads.
- Use intersections and switchbacks where feasible to reduce need for developing new landings.
- If needed and possible sort by ownership.

Dozer Lines, Staging Areas, Safety Zones, Helispots

After salvage of merchantable timber

- Evenly reposition litter and organics, top soil, and large woody debris onto disturbed areas. Scarify compacted areas to a depth of 18 inches/45 centimeters. Scatter additional unused material to eliminate berms and debris piles. Where cut and fill has occurred (benched fireline) re-contour fireline to natural slope gradient prior to placement of litter, organics, and woody debris. Eliminate evidence of the line as much as practical.
- Construct water bars (see specifications below). Applicable to firelines and restricted/closed roads.
- Seed disturbed areas with Seed Mix (See specifications below).
- Restore stream crossings (see specifications below).
- Block off motorized access. Where available, use boulders and large woody debris.
- Remove all trash, equipment, and flagging.

Hand Lines

- Reposition litter and organics, top soil, and large woody debris onto disturbed areas. Scatter additional unused material to eliminate berms and debris piles along the fireline. Eliminate evidence of the line as much as practical.
- Construct water bars (see specifications below).
- Block off motorized access. Where available, use boulders and large woody debris.

- Remove all trash, equipment, and flagging.

Pumping and Drafting Sites

- Restore all water sources that were used to supply hose lays, tenders, and engines during the suppression efforts to their pre-fire condition.
- Restore natural contour.
- Seed disturbed areas with Seed Mix (see specifications below)
- Remove any dams or other devices used to pool water and all litter, trash, and flagging.
- Remove hazardous material containment pads, if used, and dispose of properly.

Open Roads used as Firelines or Contingency Lines

- Remove vegetation debris (cut limbs and brush) from road cuts and ditches and culvert catch basins and scatter on road fills outside of the travel way. Where excessive amounts of materials prevent scattering, pile or windrow material along the road fill outside of the travel way.
- Restore all existing drainage features, i.e. culverts, rolling dips, cross-drains, belted drains, and ditches damaged during fireline construction.
- Remove debris from culverts that have been blocked or made ineffective due to suppression efforts.
- Grade road surface to reestablish original road widths and ensure a smooth driving surface free of rocks and obstructions.
- Clean ditches and culvert lead-ins during grading activities to remove debris and allow for free flow.
- If dry conditions exist, water roads as necessary during grading activities to ensure missing road surfacing materials and to eliminate generation of additional surface fines.
- Seed road surfaces and cut/fill slopes with Seed Mix (see specifications below). Fertilize (see specifications below).

Restricted (gated or bermed) Roads used as Firelines or Contingency Lines

- Remove vegetation debris (cut limbs and brush) from road cuts and ditches and culvert catch basins and scatter on road fills outside of the travel way. Where excessive amounts of materials prevent scattering, pile or windrow material along the road fill outside of the travel way
- Restore all existing drainage features, i.e. culverts, rolling dips, cross-drains, belted drains, and ditches damaged during fireline construction.
- Where surface drainage is not evident, construct drivable water bars generally every 500 feet/152.4 meters. At stream crossings, water bars shall be constructed on each side of the crossing to prevent surface flow into the stream crossing. Near streams, water bars shall drain into a buffer area and not directly into the stream channel.
- Grade road surface to reestablish original road widths and ensure a smooth driving surface free of rocks and obstructions.
- If dry conditions exist, water roads as necessary during grading activities to ensure missing of road surfacing materials and to eliminate generation of additional surface fines.

- Clean ditches and culvert lead-ins during grading activities to remove debris and allow for free flow.

- Remove debris from culverts that have been blocked or made ineffective due to suppression efforts.
- Restore road restriction devises (gates, berms, barriers) removed or damaged to provide access for fire suppression activities. Replace locks, lock-Ts, signs and other damaged items.
- Seed road surfaces and cut/fill slopes with Seed Mix (see specifications below). Fertilize (see specifications below).

General Access Roads

- Grade road surface to remove ruts, rills, and washboards. Light or Spot Grading may be performed where road surface imperfections are not evident.
- Grade ditches only where fire vehicle traffic has damaged ditch profile or deposited debris within the ditch.
- If dry conditions exist, water roads as necessary during grading activities to ensure mixing of road surfacing materials and to eliminate generation of additional surface fines.
- All litter, trash, equipment, signs and flagging will be removed.

Fire Camps/Spike Camps/Helibases/Retardant Plants

- Areas where excessive retardant was spilled will be mitigated by removing as much of the retardant as practical and farming or diluting the remainder into the soil. Specific actions will be developed jointly with Landowners or their representatives.
- Wood chips should be raked to remove the majority of litter and the remainder raked evenly across the area (if chips were used).
- Seed and fertilize all disturbed areas with Seed Mix (see specifications below).
- Repair and fence and replace any gate that was cut or moved to access suppression activities.
- All litter, trash, equipment, signs and flagging will be removed.
- Restore natural topography where power and telephone lines were trenched.
- Refer to rental agreements with specific landowners for other requirements.

Vehicle (Weed) Washing Station (if applicable**)**

- Collect and dispose of all organics, debris, and washing waste in approved landfill.
- Grade road surface to remove ruts and surface imperfections.
- All litter, trash, equipment, and signs will be removed.
- Monitor annually for 2 years. Apply herbicides annually, or as necessary to remove weed germinates.

SPECIFICATIONS

Water Bars

- Cut water bars diagonal to fire line.
- Ensure that each water bar has a direct outlet and drains into a vegetation or rock filter.
- Utilize Excavators (preferred over dozers if possible) for repair of dozer lines and along roadways that have been cleared for firelines. Dozers may only be used to perform final construction of water bars on dozer lines. Excavators should be used to pull berms and redistribute side cast fills and woody debris (eastside open prairie utilization of Road Graders may be preferred). Dozers may also be utilized on larger safety zones, especially those near roads.
- Water bars for dozer lines should be 12" deep and 18-24" high for the berm. If soil is loose, augment water bar with woody debris and/or rocks if available.
- Hand line water bars should be 8" deep and 12-18" high for the berm. If soil is loose, augment water bar with woody debris and/or rocks.

Fire Line Slope	Suggested Spacing
10-20%	100 feet/30.4 meters
20-30%	75 feet/22.8 meters
30-40%	50 feet/15.2 meters
40-50%	25 feet/7.6 meters
50%+	20 feet/6.09 meters

Seeding

Seed Certification (if applicable)

- Certified, blue-tagged seed shall be used where a name variety or cultivar is specified. Blue tags, that are removed to mix or spread the seed will be saved and provided to the host agencies Resource Advisor.
- All seed purchased will be certified free of seeds from weeds listed on the current "All States Noxious Weeds List".
- The origin of wildland native seeds is verified by a certification of the "Source Identified Class" with an attached yellow tag.
- When using commercially purchased seed check with the supplier for the seed source point of origin. Point of origin should be as close to the re-vegetation project as possible. Seeding elevations should be within 1000 feet (304.8 meters) below or 500 feet (152.4 meters) above the seed origin elevation. Seed origin should be within a 500 mile (804.67 kilometer) radius of the re-vegetation site.

Seed Mix and Application

- Apply seed following completion of repair activities (i.e. replacement of organics and debris and road grading activities).
- Do not mix seed and fertilizer in spreaders. Apply seed and fertilizer separately to prevent scarification of the seed hull by abrasive fertilizer.

Seed Mix: Montana State DNRC	
Apply to all firelines, safety zones, and repair areas.	
Species	**Pounds PLS per Acre**
(example): Annual Ryegrass (l) Lolium Multiforum	(example): 14
(example): Slender Wheatgrass (N) Elymus trachycaulus (Revenue)	(example): 6
	Total

Fertilizer Application

- Apply _____ dry fertilizer at rate of _____ lbs/acre
- Apply fertilizer only to roads used for firelines. Do not apply to dozer or hand constructed firelines. Do not apply to general access roads.

Stream Crossings

- Remove all litter, top soil, and small woody debris (brush and branches) positioned within the stream during line construction.
- Re-contour disturbed soils to blend with the natural stream banks above and below the crossing. Place large woody debris (greater than 10 inches/25.4 centimeters diameter as available) within the floodplain or along stream banks so as to not fully obstruct stream flows. **Note:** large wood may enter the stream channel as long as it is fully secured (partially or fully buried) within the floodplain beyond the stream channel so as to prevent movement during high flows.
- Construct water bars above both sides of the crossing where runoff can be diverted onto non-erodible materials and dissipated before it reaches the channel.
- Minimize additional damage to riparian vegetation and disturbance to soils.
- Install slash filter windrows at base of slopes parallel to stream channel. Windrows should be placed at least 10 feet/3.04 meters from stream edge as to not infringe upon natural stream flow and floodplain function.

Suppression Considerations in Meeting Operational Objectives

Table

While meeting DNRC suppression objectives for fires escaping initial attack, firefighters should be mindful of the following during all operational activities.

"When opportunities are present during suppression operations give consideration to the following."

Resource or Activity	CONSIDER	ATTEMPT TO AVOID
Strategy / Planning	At in-briefing, meet with Line Officer and clearly identify fire progression points at which you will get back together and review goals and objectives.	Keeping original control goals and objectives long after the fire behavior and size has changed.
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Base and spike camps	Asking the local Unit/Area Office or their assigned representative if weed free base and spike camp locations have been identified, or need to be identified.	Set up of base and spike camps without asking the local Unit/Area Office on weed status for the site you are considering.
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Line Construction	Building only line you feel confident you can hold and safely patrol.	Contingency line construction without specific approval of the Line Officer.
	Mapping all line by location (including ones not used) and type as you build it – report and provide line map at end of every shift to Plans unit.	Building line without mapping it or assume someone else will find and repair it.
	Selecting the appropriate equipment for the job. Use in the following priority: 1. Natural barriers 2. Handline or FLE 3. Excavator 4. Skidgens 5. Feller Bunchers/Clippers 6. Dozers 7. Logging is last choice	Determination of line construction type solely on excess equipment that might have been ordered or is available.
	Building fireline out of riparian areas and at least 50 feet from stream channels. Consult Agency Rep as needed.	Avoid building mechanical fireline down a stream bed, defined draw or in a riparian area.
	Minimizing disturbance to riparian vegetation, large woody debris and riparian filters.	1. Cutting riparian vegetation unless it is scouted and perpendicular to the stream channel. 2. Clean-out of Large Woody Debris from streams or cut riparian logs into short rounds.
	Minimizing width of fuel breaks and constructed line. Base width upon current and predicted fire behavior.	Constructing wide lines as fuels decrease or the line is crossing natural barriers.

Resource or Activity	CONSIDER	ATTEMPT TO AVOID
Use of Dozers	Asking yourself how "**you"** are going to repair the line to pre-fire condition as it is being built	Building dozer/cat line thinking it will be someone else's job to repair the line.
	Scout all mechanical equipment line locations prior to line construction.	Letting operators build line without specific direction from the dozer boss.
.	Scouting and selecting dozer creek crossings where there are gentle and/or hardened banks. **Always** lift blade when crossing. If crossing location is soft, lay 6-8" dia trees in the stream and drive (walk) equipment across them.	Allowing a dozer to run up or down a creek channel or cross a channel with very soft banks.
	When building mechanical (dozer or excavator) line make every attempt to assign crews to hold and patrol it.	Building mechanical line and leave un-patrolled when the fire is nearby.
	If possible, Blading soil and seed from weed infestations *TOWARD* a road that cat line is anchoring to or an already infested area when feasible.	Blading soil and seed from weed infestations into uninfested areas.
	Minimizing damage to structures, fences, reference posts, and other structural improvements. If it is not possible to avoid fences, attempt to cut the wire, and not tear down with equipment.	Fences, and other structural improvements during line construction.
	Handling, storing and dispensing fuel, lubricants and other chemicals at least 50 feet from a drainage way • Use approved containers for fuel, lubricant and chemicals • Properly store and discard all empty containers.	1. Refueling on a bridge or within 50 feet of a drainage way. 2. Leaving any hazardous materials on-site after the incident.
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Water/Diversions/Pumps	Diverting water from creeks at low rates and developing storage. Ask Unit Office for possible drafting site locations and map.	Diverting water at high rates and dewatering that can significantly reduce instream flow, and complete draw down of a water dip source.
	Having spill kits, extra containment pads and tarps with all pumps.	The use of pumps or storage of fuel next to a creek without containment pads.
	Storing fuel and oils on containment pads away from the water's edge.	Refueling pumps right next to or over live water.
	Recording locations of aerial water dip sites used.	
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Retardant	Maintain a buffer when flying retardant parallel to a drainage way, avoid when possible.	Dropping retardant over water or riparian areas.
	Mixing and loading retardant at least 300 ft. from streams and riparian areas.	Mixing or loading retardant within 300 ft. of streams and riparian areas.

Resource or Activity	CONSIDER	ATTEMPT TO AVOID
Potential Low Impact Practices	Building only the necessary line needed, and consider how you will rehab the line to pre-fire condition as you build it.	Building fire line thinking it will be someone else's job to repair it.
	Packing out all your litter and any other litter you find at all times.	Dropping litter, leaving litter you find, or assuming someone else will pick it up later.
	Using cold-trail, wet line or a combination when appropriate.	Building line when the fire is out.
	Minimizing the fireline standard where firelines connect with roads especially on Private ground.	Building high standard line into roads because they may develop into non-system roads or ATV trails after the fire.
	Minimizing bucking and cutting of trees and the number of cut surfaces and resulting "rounds" or logs.	Cutting down or felled logs into lots of short sections.
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Helispots	Checking potential helibases and helispots for noxious weeds BEFORE using the site – if possible use only weed free sites or mitigate prior to use.	Use of weed infested sites for helibases, helispots, staging, parking, landing, cargo loading or loafing areas.
	Asking the local Unit/Area Office if weed free helibases and helispots have been identified.	Set up of a wheelbase or helispots without asking the local Unit/Area Office the weed status on the site you are considering.
	Minimizing weed spread at helibases by incorporating weed prevention and containment practices such as mowing, flagging or fencing weed patches, designating weed-free travel routes.	Establishing or use of a weed-infested area for a wheelbase, heliport or landing zone.
	Providing weed prevention briefings for helibase staff.	The assumption that wheelbase staff will know weed prevention practices or local noxious weed species.
	Inspecting, and if necessary cleaning, contract fuel and support vehicles before and after each incident when travelling off road or through weed infestations.	Allowing wheelbase vehicles to drive through or park in weed infested areas.
	Inspecting and removing weed seed and plant parts from all cargo nets.	Loading nets or cargo in weed infested areas.
	Avoiding heliport locations that are wet or may have sensitive vegetation.	Creating openings that are larger than needed to safely accomplish the objective.
	Flight paths into and out of helispots to avoid flying over live water and riparian areas.	Landing aircraft in or near riparian areas.
Resource or Activity	**CONSIDER**	**ATTEMPT TO AVOID**
Weed Prevention Practices	Discussing the weed situation with the Unit Rep at initial briefing.	Beginning without discussing weeds with local Agency Rep.
	Setting up a weed washing station for all ground transportation no later than two shifts after commencing with ground disturbing activities.	Operating past the first two shifts if a weed washing station has not been set up.
	Posting; weed identification and prevention posters at readily visible locations around camp.	Not educating all fire personnel on the incident of weed issues and concerns.
	Blading soil and seed from weed infestations *TOWARD* a road that cat line is anchoring to or an already infested area when feasible.	Blade soil and seed from weed infestations into uninfested areas.

Resource or Activity	CONSIDER	ATTEMPT TO AVOID
	Inspecting all fire going vehicles regularly to assure that undercarriages and grill works are kept weed seed free. All vehicles sent off Unit for fire assistance should be cleaned before they leave or return to their home.	Demobing vehicles until they have had an undercarriage wash.
	Minimizing weed spread in camps by incorporating weed prevention and containment practices such as: mowing, flagging or fencing weed patches, designating weed-free travel routes and washing equipment.	Establishing camps in weed infested areas.

STATE OF MONTANA WILDLAND FIRE AGREEMENTS

Introduction

The purpose for the list of the following agreements is to give the incoming IC, and IMT an overview of what the State of Montana currently has in place with its partners. If you have the time or need to review an existing agreement ask the assigned agency representative or agency administrator for the information. If they do not have it locally they will be able to give you a website, contact name, or telephone number where you can find the agreement. One example of a need that may occur during your incident assignment is closing or signing a roadway. The agreement with the Department of Transportation would give you the information needed to be able to do so.

(Agreements currently in place)

● **Montana Cooperative Fire Management and Stafford Act Response Agreement** - (This agreement is to document the commitment of the Agencies to improve wildland fire management by facilitating the increased availability of resources including but not limited to: the exchange of personnel, equipment, supplies, services, and funds among the agencies in accordance with this agreement.)

● **Montana State-County Cooperative Fire Protection Agreement** - (This agreement is a cooperative fire control agreement with all 56 counties within the State of Montana. The agreement enables the state to provide organizational, financial and planning assistance, equipment, and training to the county. The county in turn will protect all state and private lands within the county from wildland fire.)

● 2010 Montana FEMA-STATE Agreement for the Fire Management Assistance Grant Program **– (This agreement allows the state to be eligible for funds through the Fire Management Assistance Grant Program.)**

● **Northwest Wildland Fire Protection Agreement (Northwest Compact)** – (This agreement allows the state to receive assistance in prevention, preparedness (presuppression) and control of wildland fires between the member agencies of the Northwest Compact.)

● **The Emergency Management Assistance Compact (EMAC)** – (EMAC was established to allow interstate assistance by establishing written agreements between member states to provide assistance in managing any emergency or disaster that is declared by the governor.)

● Fire Protection Agreement Between State of Montana, Department of Natural Resources and Conservation and U.S. Department of the Interior, Bureau of Reclamation, Great Plains Region **– (Agreement to provide prevention and control of wildland fires on 2776 acres (1123 hectares) of Bureau of Reclamation land.)**

● Fire Protection Agreement Between State of Montana, Department of State Lands and U.S. Department of the Interior, Bureau of Indian Affairs and the Salish and Kootenai Tribes of the Flathead Indian Reservation **– (The Salish and Kootenai Tribes agree to provide wildland fire protection on approximately 133,628 acres (54,077 hectares) of state and private land that is within the boundary of the Reservation.)**

● Memorandum of Agreement Between Montana Department of Military Affairs, Montana National Guard and Montana Department of Natural Resources and Conservation, Forestry Division **– (Agreement with the National Guard to provide DNRC with support and resources to suppress wildland fires once a Governor's emergency is declared.)**

● Memorandum of Understanding between the Forestry Division and the Trust Lands Management Division, Department of Natural Resources and Conservation **– (Agreement with DNRC Trust Lands Division to provide support and staff to assist in the suppression of wildland fires.)**

● Interagency Agreement between the Montana Department of Corrections and the Montana Department of Natural Resources and Conservation **– (Agreement with DOC to provide DNRC with a prison crew to assist in the suppression of wildland fires.)**

● Memorandum of Agreement between the Montana Department of Natural Resources and Conservation and the Montana Sheriffs and Peace Officers Association - **(Agreement that enables the MS&POA to provide law enforcement officers to assist DNRC in the event of a need for large scale evacuations of the public in situations in which a local jurisdiction is overwhelmed.)**

● Memorandum of Agreement between Montana Department of Transportation and Montana Department of Natural Resources and Conservation, Forestry Division **– (Agreement to provide DNRC with resources that facilitate reasonably safe and efficient movement of road users through or around temporary traffic control zones created by incident management activities, while reasonably protecting workers, incident management responders and equipment.)**

● Memorandum of Understanding between the National Center for Landscape Fire Analysis, College of Forestry and Conservation, University of Montana and Montana Department of Natural Resources and Conservation **– (Agreement to cooperate and coordinate between the parties concerning wildland and prescribed fire training and certification.)**

● Operating Plan for Montana, South Dakota and North Dakota Fire Assistance **– (Agreement to provide assistance to one another in time of extreme fire danger, when fire suppression resources within on state have been exhausted or in the case of boundary line fires.)**

● Interstate Mutual Aid Compact between the State of Idaho and the State of Montana **– (Agreement among participating states to provide voluntary assistance in responding to any disaster or imminent disaster that overextends the ability of local and state governments to reduce, counteract, or remove the danger.)**

● Interstate Mutual Aid Compact between the States of Montana and Washington **– (Agreement among participating states to provide voluntary assistance in responding to any disaster or imminent disaster that overextends the ability of local and state governments to reduce, counteract, or remove the danger.)**

● **Montana Smoke Management Memorandum of Agreement** – (Agreement to implement the Montana/Idaho Airshed Group Operating Guide and share responsibility for minimizing or preventing smoke impacts to communities when using fire to accomplish land management objectives.

● **City of Miles City** – (Agreement by the city to provide DNRC with contracted fire services.)

● **Missoula City Fire Department** - (Agreement by the city to provide DNRC with contracted fire services.)

*****Note: Additional agreements may be in place at local administrative units to accommodate local needs.**

NORTHERN ROCKIES COORDINATING GROUP

COMMUNITY AND STRUCTURE FIRE PROTECTION
Guidelines for the Northern Rockies
August 2007

Wildland fire agencies have primary responsibility for fire suppression within their respective protection areas. These responsibilities include preventing a wildfire from spreading into areas where there are structures and assisting local fire agencies in protecting structures from the advancing wildland fire.

Our first and foremost intent within the Northern Rockies is to keep our firefighters and the public safe. Once that safety can be ensured then we will work towards keeping the wildland fire away from structures and communities. Our strategies and tactics should be based on that intent. When there is a need to engage in structure protection we need to ensure that we are taking safe and appropriate tactical actions that are cost effective.

There may be cases where another fire protection entity also has the responsibility for structure fire suppression and/or wildland fire. We will engage in a unified effort with local fire agencies to ensure that there is a shared responsibility. When the management of a wildland fire has the potential to impact another entity's protection or jurisdictional responsibility, we need to engage in dialogue with those parties. It becomes especially critical when the values at risk involve structures. Those discussions should be initiated before of a wildland fire impacts another entity's area of responsibility. Discussions should include roles and responsibilities, what capabilities each party has, how the parties will interface with each other, and how responsibilities for costs will be addressed.

It is important to:

- Identify ***if*** there is another entity that has the responsibility for wildland fire protection, structure suppression and/or structure protection.
- Identify ***where*** those areas are.
- ***Define*** the roles, responsibilities, and capabilities of the parties regarding wildland fire protection and structure fire suppression when there are areas of overlapping responsibility.
- ***Identify*** how the parties will interface when management action points are reached or when the wildland fire impacts another's protection or jurisdictional responsibility.
- Identify the roles and financial responsibilities of each party and ***document*** the rationale when plans or contingencies require structure protection.
- Document the ***rationale*** for the actions taken if structure protection is provided and there is not another entity that has structure suppression or protection responsibility.

Jurisdictional entities such as rural fire departments may have limited capability within their own areas of jurisdiction to respond to the potential impacts created by a wildfire. It is important to understand what capability they do have and if they have options to reach out to others to enhance that capability, either tactically or financially.

Instructions for the Completion of the DNRC Incident Situation Assessment (ISA)

Section 1: Situational Awareness

Incident Name
Enter the incident name that has been assigned by the jurisdictional agency. Once a name has been assigned to the incident, it should not be changed if at all possible.

Incident Number
Enter the incident number that has been assigned by the jurisdictional agency. **Never use the same incident number for two different incidents in the same calendar year.** The incident number should start with the 2-letter state identifier, followed by the 3- letter unit or agency identifier and the incident number. (e.g., MT-SWS-000006, MT-EAS-044681.

Latitude and Longitude
Enter the latitude and longitude in degrees, minutes and seconds derived from the point of origin of the incident. If possible, when using GPS to determine the latitude and longitude, set the receiver datum to NAD83. This data is utilized to generate maps and reports from the local level up to the national level.

County(s)
Enter the county(s) in which the incident originated and incident is located.

DNRC Unit
Land Office and Unit where the incident is located.

Cause
Select the appropriate general cause (e.g., Human, Lightning, or Under Investigation). For other incident kinds enter non-applicable (N/A).

Start Date and Time
Enter the date in mm/dd/yyyy format and the time (military time - 1630) that the incident began in the respective data entry blocks.

Current Size
For fire incidents, enter the acreage.

Date/Time of Fire Situation Assessment
Enter the date using the preferred format of mm/dd/yyyy (e.g., 08/07/2008) and the time in military time.

% Contained
For wildfire incidents enter the percent of the incident that is contained. For non-fire incidents, leave blank unless appropriate.

Jurisdiction
What entity has legal jurisdiction of the lands involved in the incident?

Protection
What entities have legal wildland fire protection responsibilities?

Preparedness Level
Preparedness Level (PL) based on the local, Northern Rockies and National Mobilization Guide. National and Northern Rockies PL can be found on the Daily Situation reports.

Current Weather Conditions
For fire incidents, enter the current readings for peak wind gusts, wind direction, maximum temperature, and minimum relative humidity.

Section 2: Values at Risk

Structure Information
Structure information is accounted for according to structure type. Types are defined as follows:

- **Residence:** a place where one lives: a house, apartment, or other shelter used as the residence of a person, family or household. This includes primary and secondary residences. Duplexes and apartments are to be considered as multiple residences.
- **Commercial Property:** real estate zoned for business or industrial use. This includes income-producing property, such as office buildings, restaurants, shopping centers, hotels, industrial parks, warehouses, and factories.
- **Outbuilding/Other:** a constructed building not designed for continuous human occupancy, such as barns, equipment sheds, outhouses, etc. Other structures or outbuildings do not include power poles, fences, pipelines, bridges, etc. These are number-only entry boxes.
- **# Threatened:** Enter the number of structures threatened by type for the current reporting period. A structure is threatened if it is at risk of loss or damage, or endangered during the operational reporting period. This typically includes structures subject to mandatory evacuation. This block will be cleared out each day.
- **# Damaged:** Enter the number of structures damaged by type for the duration of the incident. A structure is damaged if its' usefulness or value is impaired. This block will be carried over each day.
- **# Destroyed:** Enter number of structures destroyed for the duration of the incident. A structure destroyed is equivalent to a structure declared lost. This block will be carried over each day.

Threat to Human Life/Safety
Check any or all boxes that are relevant for the reporting period for each of these situations:

- Evacuation(s) in progress
- No evacuations(s) imminent
- Potential future threat
- No likely threat

Due to the sensitivity of the information be accurate in your assessment. Provide a detailed explanation of these events in Remarks Block.

Communities and Infrastructure, timber, grazing lands, watershed, and other values threatened.

Describe significant threats to communities, critical infrastructure, natural and cultural resources such as timber, wildlife, habitat, watershed, grazing lands, agricultural areas, endangered species, historical resources, or other valuable resources and describe their value or significance in terms of 12, 24, 48, and 72-hour time frames.

For example, a ranch house, barns and other outbuildings, located in Division C have the probability of being burned over in about 12 hours, a community of 300 homes and businesses northeast of the fire could be impacted by the fire-front in 48 hours, and the fire will directly threaten a water storage area in 72 hours. Use the Section 7 - Remarks to elaborate.

Section 3: Fire Growth Potential

Indices, Fuels, Topography and Predicted Weather

ERC for the general area, short description of the existing fuels, fuel model as described below, general topography and general predicted weather patterns.

For wildland fire incidents, select the appropriate *primary fuel* carrier from the thirteen Fire Behavior Fuel Models in the pull-down menu, list shown below. This portion of the block is required.

The Primary Fire Behavior Fuel Models include:
• 1 - Short Grass (1 foot/30.4 centimeters)
• 2 - Timber (grass and understory)
• 3 - Tall Grass (2.5 feet/0.76 meters)
• 4 - Chaparral (6 feet/1.82 meters)
• 5 - Brush (2 feet/0.60 meters)
• 6 - Dormant Brush, Hardwood Slash
• 7 - Southern Rough
• 8 - Closed Timber Litter

- 9 - Hardwood Litter
- 10 - Timber (litter and understory)
- 11 - Light Logging Slash
- 12 - Medium Logging Slash
- 13 - Heavy Logging Slash

Additional information pertinent to fuels/materials involved can be described in the text block for any incident or event kind, including additional detail on the types of fuels involved (e.g., while the primary fuel on a wildfire may be light logging slash, a number of other fuel types may be involved such as grass and chaparral.

Fire Growth Potential
Provide an estimate of the direction in which the incident is expected to spread, migrate, or expand in 12-, 24-, 48-, and 72- hour timeframes based on observed fire behavior. Include an estimate of the acreage or area that will be affected. Emphasize the predicted movement of the fire, not the predicted fire behavior. Include the "why" (conditions affecting fire behavior such as low RH or high winds) and the "where" of the prediction (location, direction and amount of spread). The predicted movement of the fire should be consistent with the timeframes reported for values threatened in Section 2 and expressed as low, medium and high.

Section 4: Other Jurisdictions Impacted

Describe significant threats to other jurisdictions in terms of 12, 24, 48, and 72-hour time frames.

Comments: For example, the fire is predicted to be on Fallon County in 24 hours and Carter County in 72. It will move from DNRC Direct Protection to county protections in 48 hours.

Section 5: Strategic Assessment

Use the check boxes to assess your incident. The Relative Risk Assessment is included as an attachment. Document any conversations or contact with the affected stakeholders.

Describe safety concerns and control problems such as heavy fuels, steep terrain, difficult access, adverse weather conditions, and extreme fire behavior anticipated in the next two to three operational periods. Include social/political/economic concerns or impacts. Relate critical resource needs to the planned actions if given the critical resource and how the resource is going to be utilized to mitigate the situation (e.g., T1 engines critical for structure protection).

Give a short assessment of the likelihood of meeting the containment or control targets given the current resources and management strategy. Tie in information related to critical resource needs. If containment is unlikely, explain why.

Section 6: Fire Control Objectives and Strategy (Option A & Option B)

Develop Priorities, Objectives and Strategies for at least one Option. Option B is to describe actions to be taken if Option A fails.

The fire control objectives and strategies detail how you are going to accomplish your objectives, and provide decision-making documentation.

Objective: what you are aiming at achieving, what is your goal?

- To prevent the fire from moving from xxxx Cr. into the adjacent commercial timbered areas.
- To prevent fire from reaching 20 yr old regenerated unit, or use of a geographic landmark to keep fire south of USFS Road # XXX

Strategy: how do you plan to achieve your objective?

- Full response methods, direct or indirect attack.
- Modified response methods, contingency line, helispot construction

Tactics: what are you going to do to achieve your strategy and you may have several options, however:

Full suppression (direct or indirect attack)

- Use of two unit crews to anchor base of fire; use two excavators to complete fuel break from A to B on east and west flanks for complete containment
- R/W support from a mix of heavy/medium/intermediate/light for bucketing, moving of equipment, fill relay tanks, personnel moves.

Modified suppression

- Use of two unit crews to anchor base, let fire burn out to natural barriers
- No other action anticipated.
- No action until specific boundaries/trigger point are crossed

All the objectives, strategies and tactics are thought through and based on the values at risk with an estimated cost of suppression. The cost of the action, in relation to the values at risk, in combination with the tactics etc. must lead to a logical conclusion of which and why a particular option is chosen; i.e. building a fire line at the bottom of a slope as opposed to mid slope.

Preferred Option and Rationale

List your preferred Option and the reasons that lead you to that decision.

Section 7: Remarks

Section 8: Approval Block

Agency administrator approval for the appropriate level of incident with the date and time signed. Reiterate your rationale for your decision.

Reassess preferred option if: Examples; (Control objectives not met after three operational periods, significant increase in number and type of values at risk, span of control exceeds capability of assigned incident management organization, continued lack of critical resources, and/or increased threat to adjacent jurisdictions/infrastructure).

IF REASSESSMENT INDICATES NEED TO MODIFY PREFERRED OPTION, RETURN TO SECTION 6.

Montana DNRC

INCIDENT SITUATION ASSESSMENT

SECTION 1: SITUATIONAL AWARENESS	
FIRE NAME:	FIRE NUMBER:
IGNITION-LEGAL/LAT.LONG:	COUNTY(s):
DNRC UNIT:	CAUSE:
START DATE/TIME:	CURRENT SIZE:
DATE/TIME OF FIRE ANALYSIS:	% CONTAINED:
JURISDICTION:	PROTECTION:
PREPAREDNESS LEVEL: Local Level _____ Northern Rockies _____ National Level _____	CURRENT WEATHER CONDITIONS: Wind Speed _____ Wind Direction _____ Temperature _____ Relative Humidity _____

SECTION 2: VALUES AT RISK

Type of Structure:	**Structure Information** **#Threatened**	**#Damaged**	**#Destroyed**	**Threat to Human Life/Safety**
Residence:				Evacuation(s) in Progress ☐ Yes ☐ No
Commercial:				Evacuation(s) imminent ☐ Yes ☐ No
Outbuilding/Other:				Potential future threat ☐ Yes ☐ No No likely threat ☐ Yes ☐ No

Other Values

Communities, Critical Infrastructure, Timber, grazing land, watershed, and Other Values Threatened:

12 hours: _____

24 hours: _____

48 hours: _____

72 hours: _____

SECTION 3: FIRE GROWTH POTENTIAL

ERC: _____
Fuels: _____
Fuel Model(s): _____ _____ _____
Topography: _____
Weather: _____

FIRE GROWTH POTENTIAL (CONT)

Observed Fire Behavior:

GROWTH POTENTIAL (ACRES):	PROBABILITY OR CONFIDENCE LEVEL:

12 hours:	☐ Low ☐ Medium ☐ High
24 hours:	☐ Low ☐ Medium ☐ High
48 hours:	☐ Low ☐ Medium ☐ High
72 hours:	☐ Low ☐ Medium ☐ High

SECTION 4: OTHER JURISDICTIONS IMPACTED

12 hour: Name(s) of Jurisdiction
24 hour: Name(s) of Jurisdiction
48 hour: Name(s) of Jurisdiction
72 hour: Name(s) of Jurisdiction

Comments:

SECTION 5: STRATEGIC ASSESSMENT

Resistance to Control: ☐ Low ☐ Medium ☐ High
Resource Availability (Potential to fill requests): ☐ Low ☐ Medium ☐ High
Relative Risk Assessment Completed: ☐ Yes ☐ No
Local/Unit Capabilities: ☐ Good ☐ Limited ☐ Marginal
Stakeholders Contacted: ☐ Yes ☐ No
Documentation of Stakeholders Discussion:

Major problems and concerns (control problems, social/political/economic concerns or impacts, etc.)

How likely is it that containment/control targets will be met, given the current resources and suppression/control strategy:

SECTION 6: FIRE CONTROL OBJECTIVES AND STRATEGY (include organization required)

(Options should consider COST, VALUES at RISK, and RISK MANAGEMENT)
OPTION A(Objectives/Strategy/Priorities):

OPTION B(Objectives/Strategy/Priorities):

Preferred Option and Rationale:

REMEMBER – FIREFIGHTER AND PUBLIC SAFETY IS THE FIRST PRIORITY FOR ALL OBJECTIVES AND STRATEGIES

SECTION 7: REMARKS

REMARKS:

SECTION 8: APPROVAL BLOCK

AGENCY ADMINISTRATOR'S NAME: (Please Type): _____

AGENCY ADMINISTRATOR'S SIGNATURE: _____.

DATE: _____

TIME: _____

RATIONAL: _____

Reassess preferred option if: Examples; (Control objectives not met after three operational periods, significant increase in number and type of values at risk, span of control exceeds capability of assigned incident management organization, continued lack of critical resources, and/or increased threat to adjacent jurisdictions/infrastructure).

IF REASSESSMENT INDICATES NEED TO MODIFY PREFERRED OPTION, RETURN TO SECTION 6.

APPENDIX:

MAP
RELATIVE RISK and POTENTIAL INCIDENT COMPLEXITY (Complexity Analysis)
LARGE FIRE BRIEFING PACKAGE
DELEGATION OF AUTHORITY

10 STANDARD FIRE ORDERS

The 10 Standard Fire Orders were developed in 1957 by a task force studying ways to prevent firefighter injuries and fatalities. Shortly after the Standard Fire Orders were incorporated into firefighter training, the 18 Situations That Shout Watch Out were developed. These 18 situations are more specific and cautionary than the Standard Fire Orders and described situations that expand the 10 points of the Fire Orders. If firefighters follow the 10 Standard Fire Orders and are alerted to the 18 Watch Out Situations, much of the risk of firefighting can be reduced.

Fire Behavior

1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times.
3. Base all actions on current and expected behavior of the fire.

Fireline Safety

4. Identify escape routes and make them known.
5. Post lookouts when there is possible danger.
6. Be alert. Keep calm. Think clearly. Act decisively.

Organizational Control

7. Maintain prompt communications with your forces, your supervisor and adjoining forces.
8. Give clear instructions and insure they are understood.
9. Maintain control of your forces at all times.

If 1-9 are considered, then...

10. Fight fire aggressively, having provided for safety first.

18 WATCH OUT SITUATIONS

1. Fire not scouted and sized up.
2. In country not seen in daylight.
3. Safety zones and escape routes not identified.
4. Unfamiliar with weather and local factors influencing fire behavior
5. Uninformed on strategy, tactics, and hazards.
6. Instructions and assignments not clear.
7. No communication link between crewmembers and supervisors.
8. Constructing line without safe anchor point.
9. Building line downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and the fire.
12. Cannot see main fire, not in contact with anyone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather gets hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain or fuels make escape to safety zones difficult.
18. Feel like taking a nap near fireline.