

MONTANA FIRE SERVICES’ Response Planning, Mutual Aid, Command and Field Operations Guide

11/05/22 –48th Edition
(updates all previous editions)



If you need Mutual Aid help, turn to page 2



NEXT MEETING at Eastgate FD
November 4, 2023

“...a timely & measured response to a request for help.”

(from the Montana Fire Service Mutual Aid Mission Statement)

“There is no such thing as ‘It can’t happen here.’.”

Doug Williams, Nov. 7, 2009

“I got it. I’m on it.”

Sheriff Leo Dutton, June 20, 2014

“Yes, I can.”

est. 1997

MontanaMutualAid.org

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HOW TO GET HELP

HOW TO ASK FOR HELP

REQUEST SCRIPT

REQUEST NOTES

PEOPLE WHO WILL HELP YOU

HOW TO MAKE THE REQUEST FOR MUTUAL AID

How to request Mutual Aid when you need help

1. Make your request directly to the person or organization from whom you are requesting mutual aid (see names and contact numbers on page 12 of this document).

If you do not know who to ask for mutual aid help, see #2, below.



2. Call anyone on list of “People Who Will Help You” on page 6.

If you need support for anything regarding Montana Fire Service Mutual Aid, call anyone on list-“People Who Will Help You”**page 6.**

3. Contact the Lewis and Clark County Fire Coordinator at the numbers below:

If you need support for any part of the Montana Fire Service Mutual Aid process, including a request for mutual aid, contact the Lewis and Clark County Fire Coordinator at the numbers below:

Lewis and Clark County Fire Coordinator at:

Lewis & Clark Co. 911 Center 447-8293, 442-7883, 447-8461

or

Kevin Ore (Eastgate FD) c 1-406-422-2076

Dave Sammons (East Valley FD) c 459-5160, p 441-0641

MONTANA FIRE SERVICE MUTUAL AID CONTACTS REQUEST SCRIPT

Say the following things:

- 1) “This is an emergency.”
- 2) “This is _____
(your name, FD, and role or rank).”
- 3) “I have a _____
(structure fire, wildland fire, or rescue) emergency.”
- 4) “I am requesting Mutual Aid from _____
(contact’s name).”
- 5) “Please contact _____
(list all contact names) by pager.”
- 6) “Have _____ (contact names) call me
@ _____ (your call back number).”
- 7) “If you can’t reach _____
(contacts) within 10 mins, please call me back.”
- 8) “Thank You.”

MONTANA FIRE SERVICE MUTUAL AID CONTACTS REQUEST SCRIPT

1. Who is asking for help?

Name (s):

Call back numbers (including direct cell phone numbers of the person[s] requesting mutual aid, 911 Center, any BOO #s, other contact info)

Organization:

Role or rank:

2) What is the problem there?

C. A. N. (conditions, actions, needs) report from incident:
(Structure fire, Wildland Fire, Rescue, other)

3) What help is being asked for? For how long will the help be needed?

4) Where should we stage? Who/How contact once staged (Comm)?

PEOPLE WHO WILL HELP YOU

Brandon Brunelle (Glasgow) 230-2472, 228-4801, 228-4333
Ed Burlingame c 270-4285, h 387-4582
Bob Burlingame 703-999-6488
Joe Calnan (Frenchtown) c 240-5759, Missoula Co 911 406-258-4760
CHEM-TREC 1-800-424-9300 Poison Cntrl 1-800-525-5042
Rich Cowger c 321-1180, Stillwater Co 911 322-5326
Bryan Connelley c 570-0506, h 388-0905
Brian Crandell c 539-5237
John Culbertson c 581-8310, w 771-4328, h 585-1296
Nate Curtis 1-406-788-9339
Mike Doto c 491-9308, h 782-9308
Bob Drake c 431-3600
Rodney Dresbach (Rosebud) c 253-0208
Shawn Eggar (Wolf Point) c 939-5769, h 653-2965, w 525-3337
Jane Ellis h 777-3304
Bob Fry (AAGG) c 431-0102
Gordon Gieser (Polson Rural) w 546-4392, Lake Co 911 883-7301
Britton Gray c 223-4478, Disp. 307-344-2535, h 307-344-9006
Steve Harada 911 Center in Wolf Pt 653-6240, c 650-2222
Kraig Hansen (Chinook FD) c 945-3834
Bobby Hanson 263-8625, dispatch 228-4333
Jason Jarrett c 580-1838
Craig Jeppson c 498-5444
Joe Page (Whitefish FD) w 863-2483, Flathead Disp 758-5610, ext 2
Todd Kitto (Broadwater Co. FD) c 580-9764, B'water Co 911 266-3441
Tom Kuntz (Red Lodge FD) 406-855-6198, Carbon Co 911 Center 446-1234
Terry Larson c 855-5602
Leonard Lundby (Cascade Co.) h 727-5968, c 899-8873, 911 Ctr 454-6978
Gary Mahugh (Creston FD) c 250-8233
Dave Maser c 431-8034
Jim Mastin c 223-9461, h 1-757-495-3366
Jason McAllister c 403 8774
Sue Mergenthaler (Eastgate FD) c 431-2458
Chris Mork c 581-5315
Brian Nelson (Wibaux FD) c 701-218-0267 or 701-872-6648, h 406-795-2605, 911 Ctr 795-2222
Cory O'Brian c 459-4595
NRC 1-800-424-8802 MT DES 324-4777
Kevin Ore (Eastgate FD) c 422-2076, 911 Ctr 447-8293, 442-7883, 447-8461
Joe Page (Whitefish FD) c 253-3473
Rick Paulson (FSTS) c 406-381-2390
Troy Petersen (FSTS) c 406-836-0086
Jerry Prete (FSTS, Miles City) c 461-2274
Ed Shindoll (Broadwater County) c 949-5535, BC 911 266-3441
Lyn Stimpson (Montana City FD) c 461-4420, Jeff Co 911 225-4075
Butch Weedon c 406-788-0222
Derek Yeager w 247-4406, c 672-5182

MONTANA MUTUAL AID CONCEPT

MONTANA MUTUAL AID MISSION STATEMENT & CONCEPT

MMA PROCEDURES: HOW MONTANA MUTUAL AID WORKS

“MAYDAY” PROCEDURE

COUNTIES THAT WILL HELP YOU

ETIQUETTE

RESPONDING COMMAND STAFF NOTES

PRE-RESPONSE CHECK LIST

MONTANA MUTUAL AID MISSION STATEMENT

“We are committed to a timely and measured response to a request for help.”

Concept

Yes, you can ask for help from another fire department (or other organization) without having a written mutual aid agreement in place. See the sections of Montana Code Annotated.

It makes sense to have things in place before the big one. Start local, with your neighbors. Work from there.

Meet and greet long before you call for help. MMA meeting have been a good place to meet and greet. (see dates on cover).

You can ask for Command help (Friend-O-Command, Command Psychic Friends Network, Command Helpers, Command Staff, others), as well as fire trucks and fire fighters (and anything else you need).

There are many options for people to call for help and people who will help you navigate the Montana Mutual Aid process. (see page 6, People Who Will Help You)

It is helpful to have response plans in place before you have the need for them. “There are times when making it up as you go ain’t the best choice”.

Response plans can include Mutual Aid Run Cards, Maps, Commo Plans, Phone Lists, Logistics Lists, others. See Lewis and Clark County folks, Flathead County folks, Law Enforcement folks, EMS folks, Hospital folks, Public Health folks, Emergency Management folks, others.

The more people in your organization that know how to use Montana Mutual Aid, the better the chance your requests for help will go smoother.

“If you want to get, you gotta give”.

Take a look at your own stuff. Make an assessment of what you can give. Staying home and covering for people who have responded to a MMA request is, in fact, just as righteous as going. Sometimes, all you can give is coverage at home.

PROCEDURES - HOW MONTANA MUTUAL AID WORKS

24 Hour Request/Contact Procedures and Timelines:

The initial contact shall be made to a 24 hour communications center capable of generating a callback to the requesting party within 15 minutes. An answer confirming or denying the request must be given within 30 minutes of the request to an available phone number. Responding agencies should attempt to be responding within 60 minutes of the initial contact. All responding agencies may replace crews as often as necessary to maintain the capability of the resource for the duration of the commitment.

Standard Deployment Increments/Operational Periods:

The standard deployment increments for apparatus and personnel are 12 and 24 hours from time of request to time of return home. The standard deployment increments for management staff are 24 and 48 hours from time of request to time of return home. Requests for apparatus, personnel and management staff are renewable by the requesting agency. The standard minimum operational period will be 8 hours. Task Forces are expected to stay intact.

Who Pays What Costs:

A requesting agency shall provide fuel and reasonable welfare items for responding agencies. However, responding agencies may elect not to be reimbursed.

Insurance Coverages/Liabilities:

Each responding agency shall be responsible for insurance on their people, their equipment, and their actions.

Equipment Breakdown Costs:

As a minimum, responding agencies shall be responsible for their own equipment costs. The Requesting agency may reimburse all or part of equipment breakdown costs.

Logistical Support:

Responding agencies should be self-sufficient. Motor fuel and oil will be the responsibility of the requesting agency. Responding resources should send and use what they can afford to give.

Transitions if a Declaration is made or a responsible party is identified:
In the event a funding source becomes available either through a declaration or responsible party, responding agencies may be compensated from the time of deployment.

Upon Release from a Montana Mutual Aid Request:

Upon release from a mutual aid request, Fire Departments may enter into other arrangements. The original requesting agency is not expected to facilitate other arrangements.

Management System:

The requesting agency will identify and operate under an incident management system.

Accountability - The Incident Commander shall be responsible for the complete, written check-in, tracking of activity, location, and time (for the duration of their deployment) and demobilization of every unit deployed to their incident.

Risk Management Plan:

The following Risk Management Plan is applicable to all Fire Departments when ever they are deployed to a mutual aid incident when no mutual aid agreement exists between the requesting and responding fire department[s]:

The Incident Commander or Task Force Management Staff for mutual aid Task Force deployments (here after, Incident Commander) will integrate risk management onto the regular functions of Incident Management.

The basic risk analysis plan shall be based on the following approach:

1. Response is initiated on the assumption that lives and property can be protected from imminent danger
2. Firefighter will risk their lives a lot (calculated, significant) to protect savable lives.
3. Firefighters will risk their lives a little (calculated, significant) to protect savable property.
4. No risk to Firefighters will be allowed to protect lives or property that are already lost.

The Incident Commander shall weigh the risk to firefighter against the possible results of their actions. There are situations, including but not limited to situations where violent reactions endanger operations or rescue incidents where there is no possibility of victim survival, where the risk to firefighters is unacceptable and a

decision to take “No Offensive Action” shall be permitted to be the appropriate decision. Firefighter safety and survival shall be the major consideration when conducting offensive and/or defensive operations.

In evaluating risk, the Incident Commander shall consider the following as the basis of the decision:

1. Risk Management based operations
2. Standard Conditions
3. Standard Operating Procedures
4. Fully Trained Operating Crews
5. Fully Protected Firefighters
6. Quickly Established and Visible Command
7. Safety Monitors & Tactical Reserve (On Deck-RIC)
8. Early and ongoing Incident Evaluation
9. Pessimistic evaluation of, and reaction to, changes
10. “Experience Bank” review and critique

Standard risk management shall be the regular on-going basis for all Firefighters in the incident management system to understand where Firefighters will be, where Firefighters will not be, what Firefighters will be doing and what Firefighter will not be doing at the incident scene.

At large incidents and special operation incidents, the Incident Commander shall assign a Safety Officer position to a qualified person with the specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations.

No risk or incident need shall justify deviation from this standard.

“MAYDAY!” PROCEDURE

Lost, Trapped or Missing Fire Fighter

Mayday

The radio message “**Mayday**” will be used by fire fighters to report their status as being lost, trapped, or injured and needing rescue. Any member may use “**Mayday**” to report a lost fire fighter. Any report of “**Mayday**” will receive priority radio traffic. The term “**Mayday**” will be reserved ONLY to report a lost, trapped, or injured fire fighter(s). The term “emergency traffic” will be used to report all other emergencies.

On Deck / Rapid Intervention

The IC must have ready an equipped, incident knowledgeable, “On-Deck” team ready to deploy. At a minimum, the IC should brief the team about the incident strategy, tactics, risks, crew location and communications plan. The “On-Deck” team must be a component of the IC’s incident plan.

MMA CONTACT INFO BY COUNTY

Beaverhead Co	Beaverhead Co 911 683-3700, BJ Klose 660-1469
Blaine Co	Kraig Hansen, Blaine Co 911 357-3260, c 945-3834
Butte Silver Bow Co	BSB 911 782-4224, Mike Doto c 491-9308, h 782-9308, Mike Leary c 498-3707, h 494-3615
Broadwater Co	Pg Ed Shindoll, c 949-5535, 266-4425, Chuck Plymale @ Broadwater Co. 911 Center 266-3441
Carbon Co	Pg Tom Kuntz (cell 855-6198), @ Carbon Co 911 #446-1234
Cascade Co	911 Cnr 406-454-6978, Leonard Lundby (Manchester FD), Jason McAllister 406-403-8774
Conrad FD	Chief Kevin Moritz 289-0289
Dawson Co	Pg Richie Chrisafulli, Dawson Co 911– 377-2364
Fallon County	Baker Fire Chief Tom Bruha, 978-3473
Fergus County	Lewistown FD Joseph Ward, 406-538-7219, 911 Ctr 406-538-3413
Flathead Co	Pg Creston Duty Officer @ Flathead Co 911 260-4319
Gallatin Co	Hyalite FD Fire Chief Brian Nikolay 451-4726, John Culbertson 581- 8310 or Hyalite FD Duty Command Officer or Amsterdam FD Duty Command Officer
Glacier Co	Chief Walter Berry, Del Bonita FD, 406-450-0275, 338-5000(24 hr 911 Center)
Hill Co	Nathan Courtneage, Havre FD, 406-390-4241, 911 Ctr 406-265-4361
Jefferson Co	Pg Montana City Chief–Lyn Stimpson or Duty Officer at 911 Ctr 225-4075
Lake Co	Gordon Gieser, c 546-4392 ,Lake Co 911 883-7301
Lewis & Clark Co	Pg, Ore, Shephard, Sammons, or Duty Fire Coord. @ L&C 911 447- 8293, 442-7883, 447-8461
Lincoln Co	LC EMA Brent Teske 334-7194, LFD Fire Chief Steve Lauer, 283-1883, Bull Lake, Fire Chief Clyde Miller, 295-0126
Madison Co	Pg MVFD Fire Chief Sean Christensen @ Mad Co 911 843-5301, c 570-6741, w 682-4748, h 682-7864, Station 682-3311
Mineral Co	Jerry Doctor St. Regis 649-7027 or 822-3555(Mineral Co. 911) Joe Calnan @ Msla Co 911 258-4760, or 240-5759 Joe's cell
Park Co	Park County 911 # 222-2050
Phillips Co	911 Center 654-1211, Malta FC Michael Flatt, 673-3252
Pondera Co	Kevin Moritz FD Conrad FD, 406-289-0289, 911 Ctr 406-271-4060
Ravalli Co	911 Ctr 363-3033, Rex Olsen, c 550-0938, Scott Hackett, 369-1847, Bill Perrin, h 777-3937,
Richland Co	Richland Co. 911 433-2919, pg Chief Larry Christensen 489-2919, Deputy Rural Chief-Rob Gilbert c 489-2763 w 433-1122 h 488-1486
Roosevelt Co	911 Ctr 653-6240, Clint Bushman, 853,8849 , or Steve Harada 650-2222
Sanders Co	Randy Woods, Hot Springs 741-2325w, 741-2472h
Sheridan Co	Rodney Price, 939-4625, 911 Ctr 406-765-1200
Stillwater Co	Pg Rich Cowger c 321-1180, Stillwater Co 911 322-5326
Teton County	Nick Dale, Fairfield FD, 406-590-2510, Teton Co. 911 Ctr 406-466-5781
Toole Co	Ben Widhalm, Shelby FD, 4064601196 Toole Co. 911 Ctr 406- 434-5855
Valley Co	Valley Co. Long Run- Sara Bryan, 263-2800, Brandon Brunelle 230-2472, Fire Warden Rob Brunelle 263-7621 – Valley Co 911 228-4333
Yellowstone Co	Derek Yeager, d 247-4406 c 672-5182

ETIQUETTE, GUEST/HOST GENERAL

(by Fire Chief Jane Ellis(ret.), Stevi Fire)

INVITATION

Guest: Get an invitation. Standing invitations are acceptable, and encouraged.

Host: Extend invitations thoughtfully

CHECK-IN/OUT

Guest: Connect as soon as possible with the host system. Some communication en route is helpful. Check-in formally when you arrive on scene. Check out as you leave.

Host: Have a clear way to receive incoming resources. Designate check-in frequency and staging area. A cell contact for en route resources is helpful. Have a demob plan and check-out available as soon as possible in case someone needs to leave suddenly. Make check-out easy

BRIEFING

Guest: Accept the plan of the host. Let the host know as soon as possible if you need something you don't have in order to complete your assignment.

Host: Have a plan, and communicate it clearly and fully. Provide maps and a comm plan as a minimum. Provide a complete written plan as soon as possible.

MANNERS

Guest: Be nice. Make suggestions politely, but keep working while you're talking. Play your role. If you have an issue talk to the host, not everyone else.

Host: Be nice. Know what you want. Listen to suggestions. Evaluate suggestions quickly and implement, modify or discard.

SAFETY

Guest: Operate safely or, please stay home.

Host: Have a safety system in place or build a safety system with the first capable people to arrive.

RESPECT THE WORK

Guest: Come to work. Be good at the work you represent yourself as capable of doing. Do not disqualify the work because of your qualifications. It all needs to get done.

Host: Know what work you want done. Have everyone work inside the Risk Management Plan. Manage the work and the responders. Ask yourself, “Am I capable of managing this incident?”. If the answer is “No”, get command help coming early.

LOGISTICS

Guest: Bring your own stuff to support your work and your basic needs while you are at the incident.

Host: Provide as much logistical support as you can.

UNDERSTANDING

Guest: Show up, listen, learn and help out. Be understanding.

Host: Listen and learn from responders. Be easy to help. Be understanding.

TRANSLATING

Guest: Come prepared to translate. Work using the host’s terms.

Host: Be ready to translate from host to guest, and between guests.

APPRECIATION

Guest: Appreciate the opportunity to serve.

Host: Appreciate the assistance you receive.

ETIQUETTE, GUEST/HOST COMMAND STAFF

BE CONSIDERATE

Guest: Be considerate of the conditions under which the hosting Chief is operating.

Host: Be cognizant of what the responder is giving up to come and help.

SITUATION

Guest: Recognize the hosting entity and understand their situation.

Host: Understand your situation and explain it succinctly.

LISTEN

Guest: Listen a lot. Help quietly.

Host: Know what you want, ask for it. Listen for feedback.

ASSIGNMENTS

Guest: Accept whatever assignment you are given and capable of. Don't bitch about being assigned a task or position that might not be your favorite role.

Host: Accommodate the strengths and preferences of guests where/when you can.

PUBLIC INFO

Guest: Don't talk to the media (or anyone else for that matter) unless the host specifically asks you to.

Host: Make clear who the PIO is. Ask media to work through that person.

FRIENDS DON'T LET FRIENDS

Guest: Friends don't let friends run incidents what they are too tired to be effective. If you have to deliver this news, do so in private.

Host: Manage yourself. Take a hard look in the mirror. Listen when you are so tired you can't. Don't wreck your support system.

INTERPERSONAL

Guest: You have an absolute obligation to get along with whomever else the host has asked to come and help. Manage your past, present and future. If you can't go along with the host, ask the host for a note allowing you to leave. Try to find your own replacement if you select yourself out of the response.

Host: Try not to invite mortal enemies. If you need the enemies, brief them privately, tell them you need them both and you need them to cooperate. Ask them not to make things any harder for you than they already are.

DEMOB

Guest: Leave when its time. If you can't tell when it's time, ask.

Host: Don't keep anyone longer than you need to. Be sensitive to signs that people want to go home.

PRE-RESPONSE TRIP CHECKLIST

- Invitation - Get one.
- Standing, pre-arranged invites are good.
- Note: (consequence for arriving without an invitation may include:
- Ex-Lax, ex-communication, execution, execution w/prejudice, execution w/extreme prejudice)
- Warm, dry work clothes
- Personnel roster list
- Food, water and required meds for responders
- Shelter, sleeping bag
- Hygiene stuff-toothbrush, chem toilets, hand soap, dish soap, etc
- PPE & SCBA
- Radios and batteries and chargers
- Cell and sat phones and batteries and chargers
- Flashlights - all shapes and sizes, and batteries, lots
- Batteries for everything (lots)
- Tools - hand, power, extrication
- Compressed air
- Generator, lights, cords
- Thermal imagers, 4 gas meters
- Fuel and oil, spare parts
- A developed plan for rotation of personnel, shared with host
- Other _
- Bonus points for bringing enough to share.

Notes: Contributed by Capt. Jason Jarrett, GCSO

MONTANA AUTHORITIES & ENABLING LEGISLATION

7-33-2108. Mutual aid agreements-request if no agreement exists-definitions.

- (1) A mutual aid agreement is an agreement for protection against disasters, incidents, or emergencies.
- (2) Fire district trustees may enter mutual aid agreements with the proper authority of:
 - (a) other fire districts;
 - (b) unincorporated municipalities;
 - (c) incorporated municipalities;
 - (d) state agencies;
 - (e) private fire prevention agencies;
 - (f) federal agencies;
 - (g) fire service areas;
 - (h) governing bodies of other political subdivisions in Montana; and
 - (i) governing bodies of fire protection services, emergency medical care providers, and local government subdivisions of any other state or the United States pursuant to Title 10, chapter 3, part 11.
- (3) If the fire district trustees have not concluded a mutual aid agreement, then the trustees, a representative of the trustees, or an incident commander may request assistance pursuant to 10-3-209.
- (4) As used in this section, “incidents”, “disasters”, and “emergencies” have the meanings provided in 10-3-103.

History: En. Sec. 1, Ch. 107, L. 1911; amd. Sec. 1, Ch. 19, L. 1921; re-en. Sec. 5149, R.C.M. 1921; amd. Sec. 1, Ch. 130, L. 1925; re-en. Sec. 5149, R.C.M. 1935; amd. Sec. 3, Ch. 97, L. 1947; amd. Sec. 2, Ch. 75, L. 1953; amd. Sec. 2, Ch. 77, L. 1959; amd. Sec. 1, Ch. 118, L. 1959; amd. Sec. 1, Ch. 2, L. 1965; amd. Sec. 1, Ch. 333, L. 1969; amd. Sec. 1, Ch. 120, L. 1973; R.C.M. 1947, 11-2010(d); amd. Sec. 2, Ch. 149, L. 1993; amd. Sec. 1, Ch. 46, L. 1997; amd. Sec. 1, Ch. 292, L. 2007.

7-33-4112. Mutual aid agreements-request if no agreement exists-definitions.

- (1) A mutual aid agreement is an agreement for protection against disasters, incidents, or emergencies.
- (2) Councils or commissions of incorporated municipalities may enter mutual aid agreements with the proper authority of:
 - (a) other incorporated municipalities;
 - (b) fire districts;
 - (c) unincorporated municipalities;
 - (d) state agencies;
 - (e) private fire prevention agencies;
 - (f) federal agencies;
 - (g) fire service areas;

- (h) the governing body of other political subdivisions; or
 - (i) governing bodies of fire protection services, emergency medical care providers, and local government subdivisions of any other state or the United States pursuant to Title 10, chapter 3, part 11.
- (3) If the council or commission has not concluded a mutual aid agreement, the council or commission, a representative of the council or commission, or an incident commander may request assistance pursuant to 10-3-209.
- (4) As used in this section, the terms “disasters”, “emergencies”, or “incidents” have the meanings provided in 10-3-103.

History: En. Sec. 1, p. 73, L. 1899; re-en. Sec. 3326, Rev. C. 1907; re-en. Sec. 5109, R.C.M. 1921; re-en. Sec. 5109, R.C.M. 1935; amd. Sec. 1, Ch. 4, L. 1937; amd. Sec. 1, Ch. 97, L. 1947; amd. Sec. 1, Ch. 151, L. 1947; amd. Sec. 1, Ch. 73, L. 1949; amd. Sec. 3, Ch. 2, L. 1965; R.C.M. 1947, 11-1901(b); amd. Sec. 3, Ch. 149, L. 1993; amd. Sec. 6, Ch. 46, L. 1997; amd. Sec. 4, Ch. 292, L. 2007.

7-33-2202. Functions of county governing body.

- (1) The county governing body, with respect to rural fire control, shall carry out the specific authorities and duties imposed in this section.
- (2) The governing body shall:
- (a) provide for the organization of volunteer rural fire control crews; and
 - (b) provide for the formation of county volunteer fire companies.
- (3) The governing body shall appoint a county rural fire chief and as many district rural fire chiefs, subject to the direction and supervision of the county rural fire chief, that it considers necessary.
- (4) Pursuant to 76-13-105(3), the county governing body shall, within the limitations of 7-33-2205, 7-33-2206, 7-33-2208, and 7-33-2209, either:
- (a) directly protect from fire land in the county that is not in a wildland fire protection district, as provided in 76-13-204, or under the protection of a municipality, state agency, or federal agency; or
 - (b) enter into an agreement for wildland fire protection with a recognized agency, as that term is defined in 76-13-102.
- (5) The county governing body may enter into mutual aid agreements for itself and for county volunteer fire companies with:
- (a) other fire districts;
 - (b) unincorporated municipalities;
 - (c) incorporated municipalities;
 - (d) state agencies;
 - (e) private fire prevention agencies;
 - (f) federal agencies;
 - (g) fire service areas;
 - (h) governing bodies of other political subdivisions in Montana; or
 - (i) governing bodies of fire protection services, emergency medical care providers, and local government subdivisions of any other state or the United States pursuant to Title 10, chapter 3, part 11.

(6) If the county governing body has not concluded a mutual aid agreement, the county governing body, a representative of the county governing body, or an incident commander may request assistance pursuant to 10-3-209.

History: En. Sec. 2, Ch. 173, L. 1945; amd. Sec. 1, Ch. 229, L. 1973; amd. Sec. 13, Ch. 397, L. 1977; R.C.M. 1947, 28-602(part); amd. Sec. 1, Ch. 615, L. 1983; amd. Sec. 2, Ch. 46, L. 1997; amd. Sec. 2, Ch. 292, L. 2007; amd. Secs. 18, 26, Ch. 499, L. 2007.

7-33-2313. Repealed. Sec. 2, Ch. 167, L. 2007.

History: En. Sec. 3236, Pol. C. 1895; re-en. Sec. 2080, Rev. C. 1907; re-en. Sec. 5147, R.C.M. 1921; re-en. Sec. 5147, R.C.M. 1935; amd. Sec. 6, Ch. 118, L. 1965; amd. Sec. 18, Ch. 157, L. 1977; R.C.M. 1947, 11-2007; amd. Sec. 4, Ch. 46, L. 1997; amd. Sec. 2, Ch. 429, L. 2003.

10-3-209. Political subdivision requests for assistance-application to fire districts, fire service areas, and fire companies in unincorporated places-immunity

(1) If an incident, emergency, or disaster occurs in a political subdivision that has not concluded a mutual aid agreement pursuant to 10-3-202, the local or interjurisdictional agency, incident commander, or principal executive officer of the political subdivision may request assistance from another public or private agency.

(2)

(a) The following individuals or entities may request assistance with an incident, emergency, or disaster if a mutual aid agreement has not been concluded for protection of the area within the jurisdiction of these individuals or entities:

(i) the trustees of a rural fire district created pursuant to Title 7, chapter 33, part 21, a representative of the trustees, or an incident commander for the district;

(ii) the chief of a rural fire company organized pursuant to 7-33-2311 or an incident commander for the chief;

(iii) the governing body of a fire service area created pursuant to Title 7, chapter 33, part 24, a representative of the governing body, or an incident commander for the area.

(b) A request for assistance by an individual or entity under subsection (2)(a) may be made to any of the following:

(i) a fire district;

(ii) an unincorporated municipality;

(iii) an incorporated municipality;

(iv) a state agency;

(v) a private fire prevention agency;

(vi) an agency of the federal government;

(vii) a fire service area;

(viii) the governing body of a political subdivision; or
(ix) the governing bodies of fire protection services, emergency medical care providers, and local government subdivisions of any other state or the United States pursuant to part 11 of this chapter.

(3) A public or private agency receiving a request pursuant to subsection (1) or (2) shall determine if it will provide the requested assistance or if it will provide other assistance and shall inform the requesting local or interjurisdictional agency, principal executive officer, incident commander, or other individual or entity making the request, as soon as possible, of that determination. The nature and extent of assistance provided by a public or private agency may be determined only by that public or private agency.

(4) The incident commander of the local or interjurisdictional agency making a request for assistance has overall responsibility for command of the resources provided by a public or private agency responding to a request. However, operational control of individual pieces of equipment and personnel furnished by the responding public or private agency remains with that agency.

(5) This section does not waive an immunity or limitation on liability applicable to any of the following entities or individuals requesting or receiving assistance pursuant to this section:

- (a) a fire district;
- (b) a fire service area;
- (c) a fire company;
- (d) an unincorporated municipality, town, or village;
- (e) a political subdivision; or
- (f) an agent, employee, representative, or volunteer of an entity listed in this subsection.

History: En. Sec. 8, Ch. 46, L. 1997; amd. Sec. 6, Ch. 292, L. 2007.

10-3-103. Definitions. As used in parts 1 through 4 of this chapter, the following definitions apply:

(1) “Civil defense” means the nuclear preparedness functions and responsibilities of disaster and emergency services.

(2) “Department” means the department of military affairs.

(3) “Disaster” means the occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or artificial cause, including tornadoes, windstorms, snowstorms, wind-driven water, high water, floods, wave action, earthquakes, landslides, mudslides, volcanic action, fires, explosions, air or water contamination requiring emergency action to avert danger or damage, blight, droughts, infestations, riots, sabotage, hostile military or paramilitary action, disruption of state services, accidents involving radiation byproducts or other hazardous materials, outbreak of disease, bioterrorism, or incidents involving weapons of mass destruction.

(4) “Disaster and emergency services” means the preparation for and the carrying out of disaster and emergency functions and responsibilities, other than those for which military forces or other state or federal agencies are primarily responsible, to mitigate, prepare for, respond to, and recover from injury and damage resulting from emergencies or disasters.

(5) “Disaster medicine” means the provision of patient care by a health care provider during a disaster or emergency when the number of patients exceeds the capacity of normal medical resources, facilities, and personnel. Disaster medicine may include implementing patient care guidelines that depart from recognized nondisaster triage and standard treatment patient care guidelines determining the order of evacuation and treatment of persons needing care.

(6) “Division” means the division of disaster and emergency services of the department.

(7) “Emergency” means the imminent threat of a disaster causing immediate peril to life or property that timely action can avert or minimize.

(8)

(a) “Incident” means an event or occurrence, caused by either an individual or by natural phenomena, requiring action by disaster and emergency services personnel to prevent or minimize loss of life or damage to property or natural resources. The term includes the imminent threat of an emergency.

b) The term does not include a state of emergency or disaster declared by the governor pursuant to 10-3-302 or 10-3-303.

(9) “Political subdivision” means any county, city, town, or other legally constituted unit of local government in this state.

(10) “Principal executive officer” means the mayor, presiding officer of the county commissioners, or other chief executive officer of a political subdivision.

(11) “Temporary housing” means unoccupied habitable dwellings, suitable rental housing, mobile homes, or other readily fabricated dwellings.

(12) “Volunteer professional” means an individual with an active, unrestricted license to practice a profession under the provisions of Title 37, Title 50, or the laws of another state.

History: En. Sec. 3, Ch. 218, L. 1951; amd. Sec. 2, Ch. 220, L. 1953; Sec. 77-1303, R.C.M. 1947; amd. and redes. 77-2302 by Sec. 9, Ch. 94, L. 1974; amd. Sec. 4, Ch. 335, L. 1977; R.C.M. 1947, 77-2302; amd. Sec. 4, Ch. 430, L. 1983; amd. Sec. 2, Ch. 71, L. 1987; amd. Sec. 1, Ch. 176, L. 1995; amd. Sec. 1, Ch. 391, L. 2003; amd. Sec. 4, Ch. 63, L. 2009; amd. Sec. 2, Ch. 255, L. 2009.

**INITIAL ACTIONS, NOTES
AND CHECKLISTS**

**COMMON BENCHMARKS & TACTICS
FOR STRUCTURE FIRES**

**COMMON BENCHMARKS AND TACTICS
FOR EMS/MCI**

START TRIAGE

RESOURCE DEFINITIONS

THE PREPARED FD

MONTANA ENGINE COMPANY +

Critical Factors - Structure Fire

Critical Factor	Unknown	Discernable	Clearly Present	Serious Hazard	Extremely Severe	Fatal
Build Size		Small	Medium	Large	Humongous	Ultra
Fire Stage		Nothing Showing	Working	Extended	Deep	Fully Inv
Location of Fire		Known	Unknown			
Ventilation		Seeping	Some Venting	Multiple Vents		Structural Damage
Smoke		Faint	Present	Moderate	Heavy	Zero Vis
People		Present	Exposed			
Ltwt. Const.		Not Exposed	Exposed	Insulted Involved	Involved	Kaboom!
Exposures		Distant	Some Exposures	Multiple Exposures		Exposures on Fire
Basement (s)		Known (360°)	Unknown (no 360°)			
Wind		Any Wind	Upwind	Downwind/In Flow Path		
Occ Hazard		OK	Light	Mod	Mod+	Heavy
Fire Load		Normal	Normal+	Mod	Mod+	Heavy
Access In		OK	Mod Barrier	Complex	Heavy Security	Locked Out
Exit Out		OK	Complex	Detained	Stuck	Flat-Assed Trapped
Interior Clutter		OK	Confused	Obstacle Course	Awful Maze	Grid Lock
Resources		3 deep/operating position + command officers in forward positions				Not enough/no reserve
Water Supply vs Fire		Enough+Reserve	Enough	Less than Enough		No water
Bldg. Use - Comm'l/Residence		Small-Med Res	Md-Lg Residence	Small Med Comm'l	Med-Large Comm'l	Huge-Ultra Commercial
Distance into Hazard Zone		50' Normal	80' Stretch	150' Big Stretch	250' Too Far	400' Fatally Far

Thanks to Fire Chief Alan V. Brunacini for writing this down & sharing it.

COMMON BENCHMARKS AND TACTICS FOR EMS/MCI

07/31/98

1) All Patients Triage/ Extricated

- Initial dispatch information for Hazmat Cues
- Get smarter about incident (people, AQ monitoring, Info)
- Hazmat cues – Occupancy/ Containers/ Signage/ Papers/

People

- Locate/ Designate Transportation & Treatment Areas
- Locate Patients – Consider ejections & walk aways (homes)
- Stabilize Vehicle/ Mechanism

Cribbing / Chocks, Deflate tires, De-energize

- Protect/ Access points – 1 3/4” handline per vehicle

De-energize, Remove Glass, Try Doors

- Triage – Give Pt numbers (I and D) to Treatment & Transport
- Ask Treatment for Pt movement plan to Treatment Areas
- Extricate Pts – Roof, Doors, Dash Roll
- Move Pts to Treatment Areas

2) All Patients In Treatment (Primary All Clear)

- Establish Treatment Areas: Immediate/ Delayed/ Minor/ Morgue
- Tell Triage/ Extrication about patient movement plan
- Re-Triage within Treatment Area – ABC’s
- Tell Transport Pt numbers (I and D) & ask about loading areas
- Move Pts to loading areas

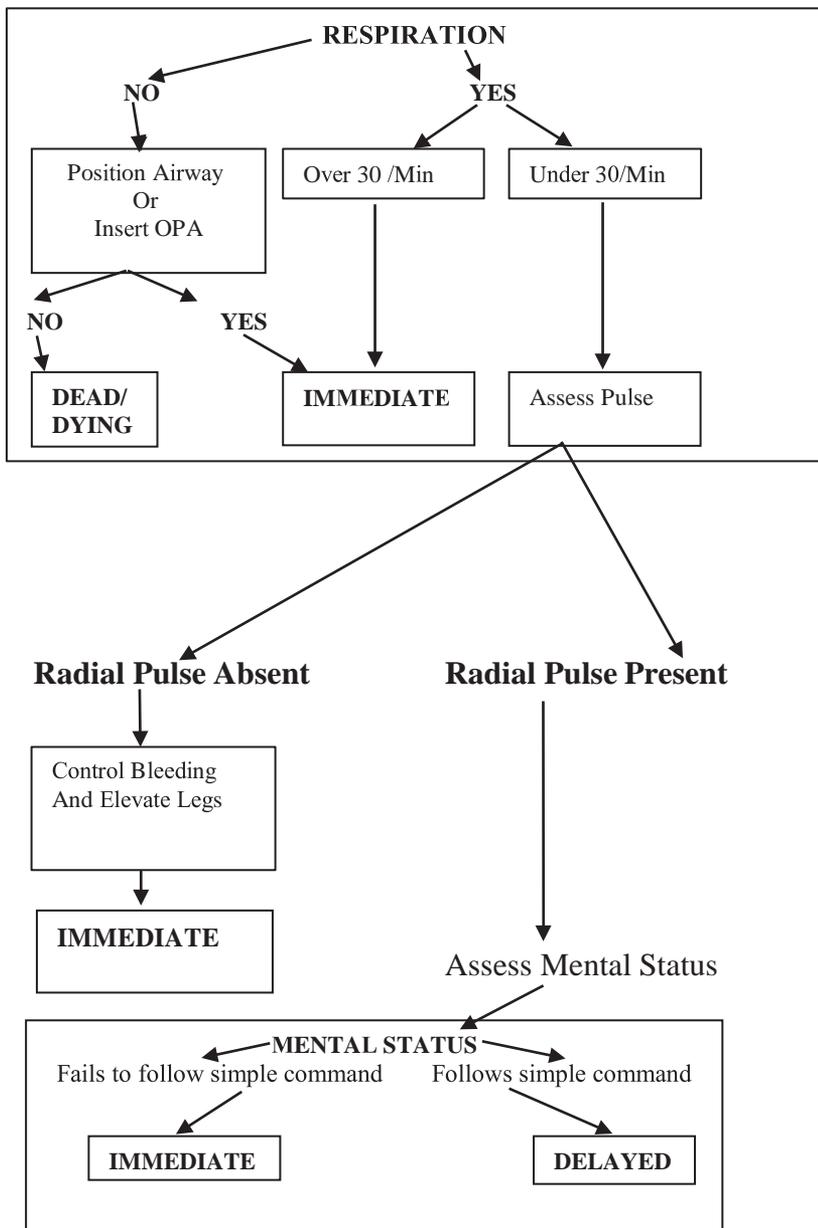
3) All Patients Transported

- Tell Treatment Pts movement plan to loading areas
- Contact Medical Control w/ Pt numbers (ID) / Get destinations
- Record Pts ID, Transportation & Destination

LOAD/GO

START TRIAGE

All Walking Wounded → MINOR



EMS MCI Kit – examples for apparatus (2018 03 03)

examples provided by Jason Revisky, NREMT-P, Hyalite Fire District

Assumptions: This equipment, along with related training, supports:

- a level of care one level above the care provided by civilians...
- treatment for the most immediate, life threatening injuries
- transport to definitive care
- equipment and materials with no expiration date
- 2 examples of similar deployable equipment are listed below

MCI Kit -Individual Fanny Packs + blankets, emerg. blankets & cervical collars
note: a blanket, emergency blanket, & C collar may be 1 “set” per patient

- 10 ea. blankets, 10 ea. emergency blankets, 10 ea. C collars, and 2 ea. patient moving tarps (ex. Megamover)
- 4 fanny packs, one per crew member containing the following:
 - 2 inch tape, roll, 2 ea. per pack
 - Tourniquets, 2 ea. per pack
 - Large multi-trauma gauze pads, 2 ea. per pack
 - Occlusive dressing, 5 ea. per pack
 - Trauma shears, 1 ea. per pack
 - Sharpie pen, 1 ea. per pack
 - Extra gloves, enough to allow addressing multiple patients
 - Eye protection, 2 ea. per pack
 - Protective masks, enough to allow replacement in field
 - Triage tags, 10 ea. (ex. AZ START Triage tags for pt. accountability)

MCI Kit – Single Cache

- Triage tags – 40 ea. (ex. AZ START Triage tags for pt. accountability)
- Blankets, 10 ea.
- Emergency Blankets, 10 ea.
- Cervical collars, 10 ea.
- Patient moving tarps, 2 ea. (ex. Magamover)
- 2 inch roll tape, 8 ea.
- Tourniquets, 8 ea.
- Large multi-trauma gauze pads, 8 ea.
- Occlusive dressing, 20 ea.
- Trauma shears, 6 ea.
- Sharpie pens, 6 ea.
- Eye protection, 8 ea. (supplements individually carried EMS PPE)
- Gloves and masks, enough to allow replacement in field

RESOURCE DEFINITIONS

I. Structure Fire Crew

A structure fire crew is defined as three or more fire fighters(including the crew leader), capable of operations inside a structure fire, with their own equipment, supervision, communication and transportation.

Equipment:

SFPPE

1 SCBA per fire fighter (if possible, 1 or more spare tanks per SCBA)

1 Halligan tool or equal per crew (“irons”)

1 flashlight per crew

1 radio

Supervision: One crew leader per crew

Radio Call Sign: Last name of crew leader (incident) or Structure Crew (Dispatch)

II. Emergency Medical Service Crew:

An emergency medical service crew is defined as two (prefer three or more) members, all of whom are capable of BLS operations at the first responder level with their own equipment, supervision, communication, and transportation.

Equipment:

EMS “Jump Kit”

Oxygen tank, regulator, and delivery equipment (mask and/or cannula)

Infection control equipment including, but not limited to, gloves, eye protection, mask, long sleeves, long pants and shoes

1 radio

1 flashlight

Supervision: One Radio Call Sign: Last name of crew leader (incident) or EMS Crew (Dispatch)

III. Structure Fire Engine

A structure fire engine is defined as a mobile fire apparatus with specified equipment, a driver/operator and a Structure Fire Crew. Staffing will include one fire fighter qualified to drive and operate the engine, and a Structure Fire Crew. Driver/operator will stay with the engine.

Engines for structure fire assignments will have the following capabilities:

Pump, 500 GPM(minimum), with 20’ suction hose capable of flowing the rated

capacity of the pump.
Water tank, 400 gal.

Equipment:

1 - 150 foot(or longer), pre-connected 1.5 inch(or larger) hose
1 - Positive pressure blower/fan
1 - Ventilation saw
Ladders, one 20' extension, one 14' roof
Adapt to 2.5" NST male + female, 4.5" NST male, 6" NST female, and 5" Storz
Hydrant wrench, 1 radio, 1 flashlight

Definition may be met using multiple vehicles (ex. 2 door engine with a pick up truck, with a D/O and a Structure Fire Crew)

Radio Call Sign: "Engine"

IV. Brush or Wildland Fire Engine

A mobile fire apparatus with specified equipment and a minimum staffing of three fire fighters including a qualified driver/operator, a fire fighter (may be more than one), and a crew leader capable of fighting wildland fires. The driver/operator will stay with engine.

Brush or Wildland apparatus will have the following minimum capabilities and equipment:

Pump, 50 GPM, with 20' suction hose capable of flowing the rated capacity of the pump
Water tank, 200 gal.

Equipment:

Personal Protective Equipment for members fighting a wildland fire: Clothing, Nomex or NFPA 1977 compliant or greater protection One fire shelter per person assigned to the apparatus.
Hand tools, three wildland tools of the department's choice and bladder bag
2 radios, 1 of which shall be portable
1 flashlight

Radio Call Sign: "Brush or Wildland"

V. Tanker or Water Tender

A mobile fire apparatus with specified equipment and a driver/operator.
One fire fighter capable of driving and operating the apparatus, with personal protective equipment appropriate to the call (either wildland or structure fire).

Pump, suggest 250 gpm
Tank, 1000 gal., Dump, 34 inches above ground level, Fill, 5 inch Storz coupled.

Equipment:

Portable Tank
1 flashlight

Radio Call Sign: “Water Tender” or “Tanker”

VI. Rescue

A mobile fire apparatus with four (or more) fire fighters including a crew leader and a driver operator capable of performing rescue services and the work of a structure fire crew. The crew assigned to the Rescue will have the equipment, supervision, and transportation specified for a Structure Fire Crew elsewhere in these procedures.

Additional Equipment:

Set of basic rescue hand tools including but not limited to:

1 - Ball-peen hammer, 1 - Spring loaded center punch, 1 - chisel

Cribbing

Lifting device - air bags, jacks, spreader, rams Hand winch for remote holding - related rope, straps, etc

AC power generation - related lights, extension cords, adapters Power hydraulic spreader

Ram - power hydraulic or hand hydraulic

Reciprocating saw - blades for metal and wood, spare blades for both

Other power saw(s) - to cut wood and metal, extra blades, chains, saw fuel 2 radios, 1 of which shall be a portable radio

1 flashlight

Recommended Equipment:

Air Quality Monitor (ex. four gas, LEL, O2, H2S, CO)

Radio Call Sign: “Rescue”

VII. Ladder

A mobile fire apparatus with specified equipment and a crew leader, a driver/operator and a minimum of two fire fighters. The aerial device will have a rated ladder, or platform, with a minimum working extension of 65 feet.

Equipment:

All equipment specified for a Structure Fire Crew

Full NFPA compliant(to current standard) of ground ladders

1 flashlight

Radio Call Sign: “Ladder” or “Truck”

VIII. Support

A mobile fire apparatus with a driver/operator capable of supporting breathing air, salvage, loss control, emergency decontamination, defensive spill containment, and fire fighter rehab services.

Equipment:

SCBA cascade or compressor - three large tanks, 4500 psi minimum

Assorted absorbents (clay, other)

Brooms

Fire Fighter rehabilitation supplies

Loss Control/Salvage supplies

Emergency decontamination supplies (Haz-Mat First Responder Operations Level)

2 radios, 1 of which shall be a portable radio

1 flashlight

Radio Call Sign: “Support” or “Squad”

IX. EMS Vehicles (non-transporting):

A mobile fire apparatus that delivers an EMS Crew (including an assigned crew leader) and additional BLS equipment to an incident. This definition is for non-transporting units.

This vehicle is staffed with a emergency medical service crew which is defined as two (prefer three or more) members, all of whom are capable of BLS operations at the first responder level with their own equipment, supervision, communication, and transportation.

Equipment:

EMS “Jump Kit”

Oxygen tank, regulator, and delivery equipment (mask and/or cannula)

Infection control equipment including, but not limited to, gloves, eye protection, mask, long sleeve shirt, long pants and shoes

BLS orthopedic stabilization equipment

Blankets

2 radios, 1 of which shall be a portable radio

1 flashlight

Radio Call Sign: “QRU”

X. Transport Ambulances

The request for transport ambulance resources will be initiated by the IC, or designee, of the specific incident. See page 130, Montana Fire Department Based EMS Transport Resources

XI. Command Vehicles

A mobile fire apparatus, capable of seating four full sized fire fighters, offering strong radio communications capability and support for incident management functions.

Equipment:

Full set of incident management system documentation
Full set of reference material appropriate to the incident
2 radios, 1 of which shall be a portable radio, 1 flashlight

Radio Call Sign: “Management”, “Command”

XII. Management Staff

A fire fighter with the ability to perform a variety of incident management functions. Also a person with a specific ability in the requested area of incident management, i.e. Water Supply Branch Director.

Equipment: Personal Protective Equipment, appropriate to the call (structure and/or wildland fire).

Flashlight and 1 radio

Transportation: Individual, may be a fire department vehicle or when authorized by the Fire Chief of the fire department granting mutual aid, a personal vehicle.

Radio Call Sign: “Management Staff”, “Command Staff”

Notes:

1. All radios are required to be capable of communicating on a minimum of the 7 frequencies including those listed in the communications plan.
2. Transportation of fire fighters on Structure Fire Crews, EMS crews, and Management Staff shall be by fire department vehicle or, when authorized by the Fire Chief of the fire department granting mutual aid, a personal vehicle.

A Prepared Fire Department (or community)

-notes by Jane Ellis, 12-06-2006

1. Competent with the basics
Command
Fire fighting and Rescue
EMS - (if not direct delivery, then connect with whoever does EMS)
2. Agile, able to adapt basics to other types of events
3. Connected with: other emergency responders, EMS, SAR, LE, 911, PH,
Mutual Aid Community groups (churches, service groups, youth groups)
Public - ability to communicate
4. Families covered
Spouse /kids know members will be gone
Provide for emergencies @ home
5. Acknowledge the possible, prepare(first) for the reasonable & likely
6. Stockpiles 1-2 weeks of stuff
Basics and non-perishable
As small storage as possible
Make clear decision about whether the stockpile is for public or department
(& families)
Maintain stockpile - or don't bother to develop it
7. Encourage other agencies to do their part
(FD shouldn't have to stockpile body bags)
8. Know how to quickly put citizen volunteers to use
9. Questions to think about:
How long? How complete? For how many? How large an area?
10. Host set expectations for help.

Maybe it's incremental. Are we more/better prepared than we were yesterday?

USAR IN MONTANA -EQUIPMENT LISTS

Engine Co. + (plus)

Some, Some More, A lot

Collapse Rescue

Basics PPE For everyone

For 1 rescue crew of 5 FFs for 24 hours of work
Dust masks - (N-95) - (6 per FF/ 30 per crew)
Eye protection - glasses and goggles, full face respirators
Ear Plugs - disposable
Work gloves - plain leather, 3 pair FF / 15 pair per crew
Work clothes - coveralls, bib overalls and shirt, pants, &
Jackets (hats)
Hard hats or rescue helmets
Helmet lights and Flashlights plus batteries and bulbs
Batteries - industrial alkaline (30 AA per person 150 per crew,)
Drinking water - 35 ½ liter bottles(case)/ FF - 5 cases/ crew
Food - 20 meals for 5-person crew per 24 hours
Knee pads - two sets/FF, 10 sets /crew - foam or hard
Marking crayons, perm markers, and spray paint - lots
Marking instruction diagrams - laminated & corded
Yellow barrier tape - 5 rolls (1,000' per roll)
Waterless hand soap - 8-16 oz per crew per 24 hours
Paper towels, TP
Eye wash, eye drops, sun screen, lip protective
Small pocket mirrors, 6 per crew
Rain gear - 1 set per person
Duct tape - 1 roll per person
Hand tool kit - small hand tools
Folding chairs
Tarps

Notes: Add more for give-aways, example (water, dust masks, etc.)

Hand tools - Dismantle or disassemble wood frame

Pry bars - 60" pinch single bevel chisel point (example: council tool)
Hand saws for wood
Metal hack saws - spare blades
Irons - axes and or sledge or maul
Crow bar (36 inch) and
Nail puller (wonder bars) - all sizes
White buckets and white bucket straps

Shovels - 28" folding head,
Square nose (start with longer handle, cut to size)
Spade (long handle)
Bottle jacks - 12 ton, 20 ton
Utility knives - extra blades
Hand mauls - 4 lbs with ribbed handle (Nupla)
1 inch x 12 inch or longer cold chisels (Enders) with 9 or 10 inch
Vise grips for stand off
24 ea 4" x 4" and 2" x 4" 8', 12" x 12" by 3/4" gussets what will fit on your truck
Tool belts
16 to 20 oz framing hammers, tapes, nails (8p and 16p), squares, pencils
Listening sticks (solid and 1.5 to 2 inch PVC)
The next step is electrical powered recip saws, gen set, cords, lights

Power Tools - first step - recip saws, gen sets, cords, lights

2 ea, 2 kw generators (46 lbs ea)
2 ea, 100' 10/3 cords
2 ea, 300-500 watt work lights
2 ea, 11amp recip saws with long cords
many extra blades (boxes of 100)
2 ea extra gas, plugs, oil and small tools
The next step is search cam, more power tools, chain and rotary saws, hydraulic
rescue tools, air bags etc.

Power Tools - second step - Search cam is force multiplier

Search camera
Chain saws
Rotary saws
Drills (cordless with lots of spare batteries and chargers)
Rebar cutters
Power hydraulic, bolt cutters, hack saws, recip saws
Hydraulic tools set - spreaders, cutters, rams,
Air bags
Rope rescue gear
Shoring stuff wood members, 2 inch pipe and screw jack ends
Air compressor and hoses and air nailers
The next step is power tools for concrete construction
Power Tools - third step - Concrete boring and saws
Boring tools
Concrete saws

Shoring notes:

20+ - 5/4" - 4' x 8' sheets
Wood (4' x 4") or pipe (2 inch) with screw jack ends are fine
12 inch power miter saw
Ellis clamps
Airshore or paratech type stuff tele post are fine

HAZARDOUS MATERIALS

HAZ-MAT CRITICAL FACTORS

COMMON BENCHMARKS

CRITICAL FACTORS

CHEMICAL/BIOLOGICAL INDICATORS

CHEMICAL & PHYSICAL PROPERTIES

VAPOR DENSITY

DECONTAMINATION

HAZ-MAT OPERATIONS CHECKLIST

**8 COMMON HAZARDOUS MATERIALS
FOUND IN MONTANA**

WMD CONSIDERATIONS/ACTIONS

CST

HAZ-MAT CRITICAL FACTORS

John Culbertson, PhD, MT Fire Training School

There are basically 5 questions or considerations that need to be addressed to get a very good handle on hazard behavior.

1. Is it a SOLID, LIQUID, or GAS?

SOLID = Keep water off it!! Otherwise probably not a big deal.

Cover it if it is blowing around.

LIQUID = What is its vapor pressure? Over 20 mm Hg is significant, consider where the vapors are going and their effects.

Where is it flowing? Consider defensive confinement.

GAS = Hard to control where it's going. Is it dispersing or hanging around?

2. What are the environmental/topography conditions?

Temperature, Wind, Precipitation. All effect the hazard behavior, how depends on the product. Use NIOSH Pocket Guide.

Stay upslope, upwind

3. Will it BURN?

If an LEL/UEL is listed, it has the potential to burn.

What is its FLASH POINT (FL.P.)? If it less than ambient, it could flash.

4. Will it RISE or SINK?

LIQUIDS = If it is soluble (miscible) it will not separate. It will make a new solution. If it is NOT soluble, Specific Gravity will tell you if it will sink or float (Water =1, < floats, > sinks). If it floats, there is a good chance it is flammable.

GASES/VAPORS = Use Molecular Weight (M.W.).

M.W. air = 29, < rises, > sinks.

5. Will it mix with water?

Solubility = % by weight that will mix with water. Miscible means completely soluble.

Ties in with question #4.

These questions are in no particular order and they are for the most part dependent upon one another.

COMMON BENCHMARKS & TACTICS FOR HAZ-MAT FRO (02-01)

1) Primary All Clear and Hazard Confined

Strategy is DEFENSIVE at FRO level

- Identify Product
- Hazard Behavior Prediction - NAERG and Chem
- Physical Properties (NIOSH guide)
- Establish Emergency Decon
- Find responsible party
- Stay out of the product

<p>Isolate -</p> <p>Deny Access Monitor hazard & weather</p>	<p>Evacuate -</p> <p>PPE w/ SCBA Monitor hazard & weather</p>	<p>Decon /Hot Zone/ Confine</p> <p>Known Product (NAERG) PPE w/SCBA Monitor hazard & weather</p>
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- Protect saveable lives - Remove people from hazard and/or hazard from people
- FIND THE COLD ZONE & DO DEFENSIVE CONFINEMENT (Wind and slope)
- Utilities / Ignition Sources - control'em
- Set up Rehab
- Execute Water Supply Plan
- Establish On-Deck or RICs, forward deploy, brief, recon, improve egress, establish Triage/EMS
- Check for extension, all sides, voids, downslope, downwind, downstream Check for extension in exposures/layers /Loss Control
- Secondary All Clear - Occupant / Customer Accountability

2) Incident Stabilized & Customer cared for

- Customer Care/Recovery Assistance

Connect with the Customer

Command - Critical Factors Worksheet for HazMat Incidents

	Nothing savable - no risk to FFs- Protecting savable property - Risk a little - Protect savable lives - Risk a lot					
	Discernable	Clearly present	Serious Hazard	Extremely Severe	Fatal	Unknown
Are people present?	NO people	YES people				
Is there a release?	NO	YES (use ERG)	Flammable	Flammable and/or Toxic		
Where is it going?	Away from people		Toward people			
Fire Involvement	Product burning		Ignition source present	Impingement		
What is it?	Solid		Liquid/Gas			
Ventilation?	Diluting on it's own			Not diluting		
Wind/Slope alignment?	Neither in alignment		One in alignment	Both in alignment		

CHEMICAL / BIOLOGICAL INCIDENT INDICATORS

Indicators of Possible Use

Unusual Dead or Dying Animals

Lack of insects

Unexplained Casualties

Multiple Victims

Serious illness

Nausea, disorientation, difficulty breathing, convulsions.

Definite casualty patterns

Unusual Liquid, Spray or Vapor

Droplets, oily film

Unexplained odor

Low flying clouds/for unrelated to weather

Suspicious Devices/Packages

Unusual metal debris

Abandoned spray devices

Unexplained munitions

HAZ-MAT SITUATIONS

Indicators of a Possible Haz-Mat Incident

- 1) Vapor plume – low lying fog – cloud
- 2) More than a single product mixing or potentially mixing
- 3) Product is on fire or fire is impinging on container
- 4) Product is reacting with air or water – looks like it is boiling or bubbling
- 5) Victims are down and not responding
- 6) Victims complaining of dizziness, nausea, difficulty breathing, burning/reddened skin, diminished level of consciousness.
- 7) Dead animals or plants
- 8) Fire with weird color flame or smoke
- 9) Container severely damaged – large crack dents, exposed to direct flame contact
- 10) Sound–rapid escape of gas or liquefied gas, loud roar, high pitch, crackling noise
- 11) Container cooking off or ruptured containers in area
- 12) Containers and equipment used to make illegal drugs (acetone, ammonia, lye, lithium, etc)

CHEMICAL & PHYSICAL PROPERTIES FOR HAZ-MAT

Culbertson, Stormont, NAERG, & NIOSH
Pocket Guide, r.2007-03

1. Temperature is a big deal

68oF - 72oF standard temp floor

2. MW - Molecular Weight (tells if a vapor/gas will rise or sink)

air = 29, mw of >29 tends to sink, mw <29 tends to rise and dissipate, look low/
down/down hill

3. VP - Vapor Pressure

760mmHg = 1 atmosphere at 68oF

VP of product >760mm, product will be gas,

lower ignition temp

VP of product <760mm, product liq/solid,

higher ignition temp

For reference -

VP of 10 mmHg is a liquid that is very volatile

VP-0	VP-18	VP-180	VP-2610
rock	H2O	acetone	Acetylene

4. FP - Flash point in oF - Need ambient temp -

FP <ambient - produces vapor, LEL somewhere

FP >ambient - no vapor, no LEL

For reference - gasoline has a FP of -36oF

5. IT - Ignition temp - Ranges 350oF-1200oF

we bring ignition sources (fire trucks, tools)

6. SOL – Solubility – Will it mix with water?

Miscible – Completely mixes with water (100% soluble in water)

7. SPGR

Specific gravity - When mixed with water, and not miscible, will it sink or float?

SPGR water = 1 SPGR >1 sinks, SPGR < 1 floats

VAPOR DENSITY

John Culbertson, PhD, MT Fire Training School

- 1) If > 1 but < 2 , mixes well with air, generally found at waist level.
- 2) If > 2 but < 3 , does not mix well with air, generally found at knee level.
- 3) If > 3 , does not mix with air, found low to the ground.

Notes on vapor density/molecular weight/mixing:

Our atmosphere is a very dynamic, turbulent, mixing chamber, even at ground level.

We need to stress the word “tendency” when we refer to vapors rising or sinking. If there is even the slightest of a breeze, a chemical with a $VD > 1$ can be found at dangerous concentrations well above the ground.

For example: use is Argon (Ar). It is the third most abundant chemical in our atmosphere. It has a MW of 40 ($VD = 1.4$). It is found at an equal concentration from ground level to over 60,000 feet.

Another example are the chlorofluorocarbons (CFC’s). CFC’s are VERY heavy, but in a short period of time they make it to the stratosphere and have an effect on the ozone layer.

All this is scientifically proven. Even considering the longer mixing times that Ar and the CFC’s have compared to a hazmat event, significant mixing occurs almost instantly due to the nature of our turbulent atmosphere.

Therefore, in the chem. Phys properties for the six chemicals, under Vapor Density, you might change “will” collect in low areas to “can”. People should not think a product will only be found low to the ground and possibly not worry about an ignition source 10 feet above ground.

Concentration in air (ppm) 1300 Rule

For approximate vapor concentration of a solid or liquid chemical in a container (building), Multiply VAPOR PRESSURE by 1300.

Example: Vapor Pressure of 50 mm Hg

$50 \text{ mm Hg} \times 1300 = 65,000 \text{ ppm}$

Compare 65,000 ppm to IDHL. Gives worst case scenario.

HAZ-MAT EMERGENCY DECON FRO LEVEL

(03/02/07)

For Fire Fighters with PPE and SCBA

Step #1 - Rinse all surfaces w/diffused water stream, (watering wand), completely wet, about 1 minute

Step #1a - Spray soap solution on all surfaces (pump spray can), no scrub/contact, completely cover with soap spray, about 2 minutes(use only for oily, immiscible products)

Step #2 - Rinse all surfaces w/diffused water stream, (watering wand), completely rinse off all soap solution, about 2 minutes

Step #3 - Move to undress area at end of decon area

Step #4 - Remove SCBA facepiece last, remove and bag PPE gear and clothing.

Step #5 - Put on clean Tyvek suit

Step #6 - Do EMS evaluation

For patients:

Step 1 - Rinse while they are removing clothing

Step 2 - Remove clothing, leaving undergarments on person(bag)

Step 3 - Rinse again after clothing is removed

Step 4 - Put on clean Tyvek suit, go to EMS evaluation

Haz Mat notes:

CL2 - Poisonous gas, skin absorbable

_____ cide = bad for humans

Infinite dilution is the solution

“What is the worst thing that will happen if we do nothing?”

HAZARDOUS MATERIALS CHECKLIST/SITE SAFETY PLANNING

1) Incident type:

- Chemical release
- Fire
- Meth Lab
- Terrorism
- Casualty/EMS
- Bomb
- Other _

2) Risk Management Assessment:

- Savable Life at Risk
- Savable Property at Risk
- No Risk

3) Incident Location and directions:

4) Hazards:

- Flammable
- Slip, Trip, Fall – Surfaces
- Corrosive
- Explosive
- Reactive
- Topography
- Toxic Inhalation Hazard (TIH)
- Lighting
- Out of sight - Recon - go/no go
- Energized

5) Environment:

- Current Winds: Direction: _____ Speed: MPH
- Forecasted Winds: Direction: _____ Speed: MPH
- Temperature: Current - _ Range - High _ Low _
- Precipitation; Current -Yes _ , No_
- Forecasted - Yes _ , No _ , Dew Point _

6) Container:

- Flame Fire impingement (fall back 1 mile IAW Guide Page 115)
 - Battle Damage - No leak /Leaking_
-

HAZARDOUS MATERIALS CHECKLIST CONT'D

7) Chemical:

- Chemical Name: _____
- UN Ident. Number: _____, ERG Guide Number: _____, _____
- _____, NIOSH Guide page: _____, yr. _____, color _____
- NFPA 704 Fire _____ Life _____ Reactive _____ Special _____

- Amount in container _____ Gallons, or Pounds
- Amount spilled _____

- Continuous spill _____ Yes _____ No
- Estimated Rate of Leak _____ (amount) per _____ (time)

- Vaporizing/Evaporating? _____ Yes _____ No
- Spilled on Ground _____ Yes _____ No
- Spilled on Water _____ Yes _____ No

8) Incident Command:

Incident Name: _____
Incident Commander: _____
IC, Organization: _____
Safety Officer: _____
HM Task Force Liaison: _____
HM Task Force Leader: _____
HM Tech Safety Officer: _____
PIO phone number: _____

9) Responsible Party for Release:

Name: _____
Address: _____
Insurance Company: _____
Phone Number: _____
Point of Contact: _____
On-Scene Liaison: _____

HAZARDOUS MATERIALS CHECKLIST CONT'D

12) Personal Protective Equipment:

Equipment on site:

Level A Yes ___ No ___

Level B Yes ___ No ___

Level C Yes ___ No ___

F/F Turnouts Yes ___ No ___

Number Self Contained Breathing Apparatus; _____

Amount of Grade D air needed - # of tanks _____psi _____

Equipment needed on site:

Level A Yes ___ No ___

Level B Yes ___ No ___

Level C Yes ___ No ___

SCBA Yes ___ No ___

F/F Turnouts Yes ___ No ___

13) On Deck - Rapid Intervention Plan

Staffing needed _

Level of Protection needed _____

HM Cert Level needed _____

Staffed Equipped Training Cert

Location

Decon Plan for On Deck - Rapid Intervention

Commo Plan

Radio Procedures for On Deck - Rapid Intervention Deployment

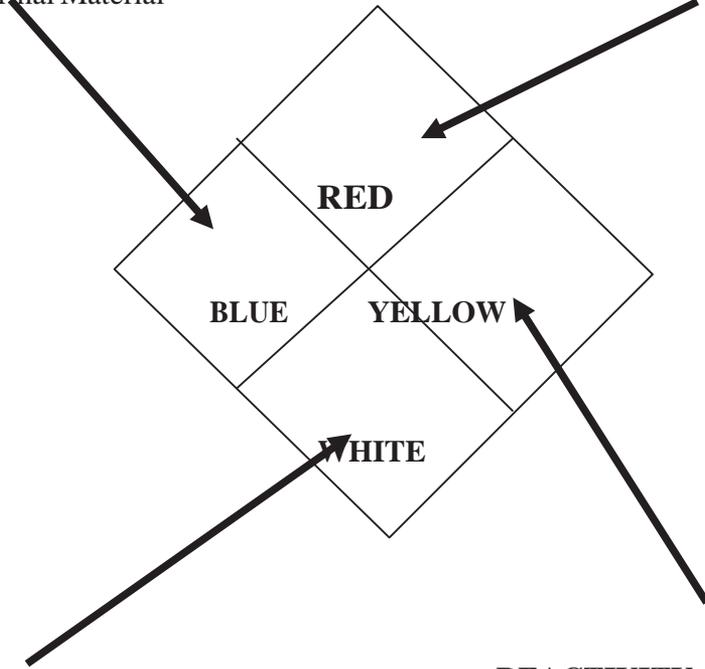
On Deck - Rapid Intervention works for: _____

HEALTH HAZARD

- 4 Deadly
- 3 Extreme Danger
- 2 Hazardous
- 1 Slightly hazardous
- 0 Normal Material

FIRE HAZARD

- 4 Below 73° F
- 3 Below 100°F
- 2 Below 100°F < 200°F
- 1 Above 200°F
- 0 Will not burn



SPECIFIC HAZARD

- ACID – Acid
- ALK – Alkali
- COR – Corrosive
- OXY – Oxidizer
- P – Polymerization
- ~~W~~ – Use no Water

REACTIVITY

- 4 May Detonate
- 3 Shock & heat may detonate
- 2 Violent Chemical change
- 1 Unstable if heated
- 0 Stable

83RD CIVIL SUPPORT TEAM MONTANA NATIONAL GUARD

How to Request our Assistance:

Official requests for support during an incident must process through your local Disaster and Emergency Services (DES) Coordinator to the State DES Operations Center at (406) 324-4777.

What We Do:

- We work for the Incident Commander
- We respond to incidents involving weapons of mass destruction (WMD), hazardous materials, and other emergency situations
- We operate in cooperation with regional HAZMAT teams and other local first responders
- We provide presumptive identification of chemical, biological, and radiological agents
- We provide recommendations on event mitigation, medical treatment, and follow-on state and federal resources
- We facilitate communications interoperability and provide secure reach-back capabilities
- On request, we can provide immediate response to save lives, prevent human suffering, and mitigate property damage under the authority of Department of Defense Directive 3025.1

What We Don't Do:

- We do not assume command of an incident
- We cannot perform Explosive Ordnance Disposal / Bomb Squad operations
- We cannot conduct mass casualty decontamination operations
- We cannot operate continuously for more than 72 hours on scene without additional personnel and resources

Special Considerations:

- We can deploy an Advance Party to a incident scene within 90 minutes of alert by the MT National Guard Joint Operations Center
- Our primary means of deployment is via ground transport...our ability to quickly arrive on scene is limited by the driving time to your location
- Our support does not cost any \$\$\$
- We are always available to conduct training at your location at no cost. We will tailor training to fit your needs. To schedule training with the 83rd CST, please contact (406) 324-3680 (office)

Montana Regional Hazardous Materials Response Teams

There are 6 hazardous materials regional response teams. To request a hazardous materials regional response team, contact State of Montana, DES at **406-324-4777** and ask for the Duty Officer to contact you.

EMERGENCY RESPONSE GUIDEBOOK NOTES (ERG)

Following are ERG guides for 8 common hazardous materials released in Montana

Unknown Material / Mixed Load NAERG Guide 111

SCBA mandatory. Fire

isolate ½ mile.

DECON: Use water, 10 gpm for 20 minutes, remove clothing

LPG – PROPANE

NAERG Guide 115 Placard: 1075

Gases-Flammable

Initial isolation 160 to 330 feet

Tank fire isolate 1 mile

DECON: Move to fresh air

Chemical / physical properties	Behavior
Vapor density = 2.0 (Air =1); M.W. = 44	Gas will collect in low areas.
B.P. = -44 F	Gas at normal Montana temps.
Vapor Pressure = 107 psi (190 mm Hg)	Pressure in container liquefies the gas, release will create a vapor cloud.
Explosive range 2.1 % - 9.5 %	Vapors are highly flammable.
Auto ignition temp. = 761 F	Static electrical arc and vehicles are ignition sources.
IDLH = 2100 PPM or 10 % of LEL	SCBA mandatory.
Warmer, windy weather is better.	Helps disperse vapors.
Colder, calmer weather, not so good.	Vapor cloud stays more concentrated, greater risk of health or explosion hazard.

MTH – Natural Gas
NAERG Guide 115 Placard: 1971

Gases-Flammable

Initial Isolation 160 to 330 feet

Tank fire isolate 1 mile

DECON Move to fresh air.

Chemical / physical properties	Behavior
Vapor density = 0.55 (Air =1); M.W. = 16.04	Gas will collect in elevated areas
B.P. = -258 °F	Gas at normal Montana temps.
Vapor Pressure = N/A if found in piping supply	Generally shipped as gas in distribution and delivery pipelines.
Explosive range 5 % - 15 %	Vapors are highly flammable.
Auto ignition temp. = 1004°F	Static electrical arc and vehicles are ignition sources.
IDLH = None Listed	SCBA mandatory. gas is an asphyxiant
Warmer, windy weather is better.	Helps disperse vapors.
Colder, calmer weather, not so good.	Vapor cloud stays more concentrated, greater risk of health or explosion hazard.

GASOLINE**NAERG Guide 128****Placard 1203****Flammable liquid****Initial Isolation** 330 to 660 feet**Tank fire isolate** 1 mile**DECON** Use water, 10gpm for 20 minutes, remove clothing**Reportable Quantity = 25 gallons.**

Chemical and physical properties	Behavior
Vapor density > 1 (Air =1); M.W. about 72	Vapors will collect in low areas
Flash point = -45 F, Vapor pressure = 300 mm Hg	Liberates flammable vapors at normal Montana temps.
Boiling point = 102 F	Liquid at normal Montana temps.
Specific Gravity = 0.7 (Water = 1), not soluble in water.	Liquid will float on water.
Auto ignition temp. = 530 F	Vapors will ignite by any arc or spark
Vapors are a health hazard attacking CNS.	SCBA mandatory.
Warmer weather increases evaporation.	More flammable vapors being liberated.

ANHYDROUS AMMONIA
NAERG Guide 12 Placard 1005

Gases-Corrosive

Initial isolation 330 to 660 feet

Tank fire isolate 1 mile

DECON Use water, 10gpm for 20 minutes, remove clothing

Chemical / physical properties	Behavior
M.W. = 17	Gas will initially go to low places because it is cold, but as it warms up it will have a tendency to rise
B.P. = -28 F	Gas at normal Montana temps.
V.P. = 129 psi	Liquified gas / container under pressure
Miscible	Mixes with water, corrosive run-off
Explosive range 15% to 28% May create explosive atmosphere when gas is confined. Should be treated as an explosive gas when released inside a structure or enclosed area.	
Auto Ignition Temperature = 1274 F	May find ignition source from arc, spark, or open flame.
IDLH = 300 ppm (0.003%)	SCBA mandatory
Warmer, windy weather is better.	Helps disperse vapors.
Colder, calmer weather, not so good.	Vapor cloud stays more concentrated, greater risk of health or explosion hazard.

SULFURIC ACID**NAERG GUIDE 137 Placard 1830****Corrosive-Water reactive****Initial isolation** 160 to 330 feet**Tank involved in fire** isolate ½ mile**DECON** Use water, 10gpm for 20 min., remove clothing, transport

Chemical / physical properties	Behavior
Reactive with organics and water.	Do not apply water, violent reactions and harmful vapors.
S.G. = 1.84, Miscible	Heavier than water, but mixes with water.
Nonflammable	Won't burn, but can support combustion and may produce flammable gases (hydrogen).
V.P. = .001 mm Hg	Very minimal vapors in pure form. Readily forms vapors when it comes in contact with the environment, especially water.
Freezing Point about 37 F	Could freeze in winter time.
Temperature change in weather.	Not much effect.

CHLORINE**NAERG GUIDE 124 Placard 1017****Gas-Toxic and/or Corrosive - Oxidizing.****Initial isolation** Large spill 900 ft; downwind 4.2 miles (night)**Fire isolate** ½ mile**DECON** Use water, 10gpm for 20 min., remove clothing, transport

Chemical / physical properties	Behavior
Vapor density = 2.67 , M.W. = 71	Gas is heavier than air, will collect in low places.
B.P. = -29 F	Gas at normal Montana temps.
V.P. = 100 psi	Liquified gas / container under pressure.
Nonflammable - strong oxidizer	Violent reaction with ammonia, acetylene, fuels.
Miscible	Mixes with water, toxic run-off.
IDLH = 10 ppm (.0001%)	SCBA mandatory.
Warmer, windy weather is better.	Helps disperse vapors.
Colder, calmer weather, not so good.	Vapor cloud stays more concentrated, greater risk of health or explosion hazard.

CARBON MONOXIDE
NAERG GUIDE 119 Placard 1016

Gases-flammable

Initial isolation 330 to 660 ft

Tank fire isolate 1 mile

DECON Move to fresh air

Chemical / physical properties	Behavior
M.W. = 28 (Air = 29)	Vapors are buoyant in air.
B.P. = -313 F	Gas at Montana temps.
V.P. = 514 psi	Gas at high pressure in container.
Explosive range: 12.5% to 74%	Wide explosive range.
Auto ignition temp = 1166 F	May find ignition source from arc, spark, or open flame.
IDLH = 1200 ppm (.12%) colorless, odorless	SCBA mandatory, use monitor.
Warmer, windy weather is better.	Helps disperse vapors.
Colder, calmer weather, not so good.	Vapor cloud stays more concentrated, greater risk of health or explosion hazard.

NOTE: Petroleum products spills and injuries were not calculated by Center of Disease Control because they were not hazardous chemicals according to their charter. Flammable gases and liquid (organic and hydrocarbon) were the most significant spills in Montana accounting for 56% of all spills reported in the state.

WEAPONS OF MASS DESTRUCTION

Bomb Threat Standoff

Threat Description	Explosives capacity (TNT equivalent)	Building Evacuation Distance ¹	Outdoor Evacuation Distance ²
Pipe Bomb	5 lbs	70 FT	850 FT
Homicide Belt	10lbs.	90 FT	1,080 FT
Homicide Vest	20 lbs	110 FT	1,360 FT
Briefcase/Suit-case Bomb	50 lbs	150 FT	1,850 FT
Compact car	500 lbs	320 FT	1,500 FT
Sedan	1,000 lbs	400 FT	1,750 FT
Passenger/cargo van	4,000 lbs	640 FT	2,750 FT
Small moving van(single)/delivery truck	10,000 lbs	860 FT	3,750 FT
Moving van (tandem)	30,000 lbs	1,240 FT	6,500 FT
Semi-trailer	60,000 lbs	1,570 FT	7,000 FT

Notes and sources: various sources, validated by Wizard Boy(McGinnis), Bomb Tech, Missoula Co. SO (ret.)

1 Governed by ability of an un-strengthened building to withstand severe damage or collapse

2 Governed by the greater of fragment throw distance or glass breakage/falling glass hazard. Note that pipe and briefcase bombs assume cased charges which throw fragments farther than vehicle bombs.

WMD - CHEMICAL

- 1) Stay Upwind, Uphill, and out of the product.
- 2) Isolate scene (80 to 160 ft) and deny entry.
- 3) Establish IC (size up, commo, crew tracking)
- 4) Use risk management plan

___ Savable life Savable property Nothing to save

- Prepare for mass decon.
- Shut down HVAC systems, prevent air movement.
- Contact law enforcement. Connect with LE in-charge person
- Customer care (what can you do to help customer).

WMD - Chemical NAERG Guide 153

SCBA mandatory

DECON Use water, 10 gpm for 20 min., remove clothing

Chemical / physical properties	Behavior
Vapor Pressure and Vapor Density = most have low VP and large VD	Most do not give off significant vapors, but if they do, are much heavier than air.
Explosive range = ?	Most are not flammable.
IDLH = most are low.	Toxic, SCBA and skin protection mandatory.
Warmer, windy weather not so good.	Helps spread the agent.
Colder, calmer weather is better.	Will help reduce spread of agent.

IMPROVISED CHEMICAL DEVICES (ICD)

Nomenclature	Probability Pathology	Evidence	Initial Incident Actions
Local hazardous materials sites used against community	MINOR: Weapons grade warfare agents have not been employed to date.	Any container that has been breached with out cause.	Follow ERG safety protocol. Stay upwind and uphill of incident ERG GP 153
Small explosive device or charge designed to breach containers at fixed site facility	MODERATE: Improvised devices could be used by criminals & terrorists.	Any abandoned pressure and non-pressure container	PPE: SCBA and F/F turn-outs in the Cold Zone
Transportation containers with explosive device to contaminate community	Dispensing a hazardous chemical (ex. Chlorine) could be accomplished easily,	Any explosion that may have caused a spill or leak.	SCBA and Level B in the warm zone
Nonbulk containers left in a facility with Hazardous/Toxic chemical with timer	chemicals can be stolen or acquired.	Any container out of place	Before patient treatment DECON
Chemical weapon or dispensing device to atomize liquids	Understand the chemicals physical properties and environmental conditions to understand its effect on a targeted population.	Events and venues that REPORT a release or odor	Remove outer garments leave under clothing
	People poisoning symptoms: SLUDGE S salivation L lacrimation U urination D defecation G gastro intestinal distress E emesis	Sick people inside a facility with rapid on-set of like symptoms	Complete wet DECON with water GOOD
			A Foam (CAFS) and H ₂ O rinse – BETTER
			Once patients have been DECONed, provide treatment NOT BEFORE!

WMD - BIOLOGICAL

- 1) Stay Upwind, Uphill, and out of the product.
- 2) Isolate scene (80 to 160 ft) and deny entry.
- 3) Establish IC (size up, commo, crew tracking)
- 4) Use risk management plan

___ Savable life Savable property Nothing to save

- Prepare for mass decon.
- Shut down HVAC systems, prevent air movement.
- Contact law enforcement. Connect with LE in-charge person
- Customer care (what can you do to help customer).

WMD - Chemical NAERG Guide 158

SCBA mandatory

DECON Use water, 10 gpm for 20 min., remove clothing

Chemical / physical properties	Behavior
Most are spores or in aerosol form.	Will move with air currents.
Explosive range = 0	Not flammable.
Infective dose = most are low.	Toxic, SCBA and skin protection mandatory.
Warmer, windy weather not so good.	Helps spread the agent.
Colder, calmer weather is better.	Will help reduce spread of agent.

WMD - BIOLOGICAL

(Unknown, small quan)

NAERG Guide 158

Use HEPA APR or SCBA

Decon - Wash hands, remove clothing, wash hands, take shower

Fire responder actions

1. Isolate area
2. Shut down HVAC or ventilation system in area of powder
3. Establish appropriate decon based on degree of customer contact with powder
4. Establish appropriate decon plan for responders based on degree of contact with powder
5. Request response of and connect with in-charge LE person

Notes -

IMPROVISED BIOLOGICAL DEVICE (IBD)

Nomenclature:	Probability Pathology	Evidence	Initial Incident Actions
<p>Biological contamination Bacterial, Toxin or Virus that must have a host to survive (except anthrax) Container may be herbicide sprayer, spray can, or some other device to spread agent</p>	<p>MINOR Biological agents are difficult to culture and most will not survive outside of a host. Sun light kills most viral and bacterial agents</p>	<p>psychosomatic</p>	<p>Community has a number of unexplained illnesses as tracked by the community health agency</p> <p>RP may report white powder or suspicious container</p>
	<p>Inhalation and ingestion are the primary routes of exposure 1 to 7 days incubation Flue like symptoms progressively worsening</p>		
	<p>People experiencing complaining of health problems @ powder calls are</p>		

Follow
Community
Health
Agency
recommendat
ion

Practices
Seek
treatment if
something
comes up

ERG GP:
158

PPE:
Universal
Precaution
s for
infectious
disease
control

Not an
emergency

Reported
white
powders call
Community
Health
Agency, take
names,
numbers and
addresses

ALL
EMPLOYEE
S WASH
HANDS.
Infectious
Disease
Universal

IMPROVISED EXPLOSIVE DEVICE (IED)

Nomenclature:	Probability Pathology	Evidence	Initial Incident Actions
<p>Pipe-bombs to Rental trucks (Ammonium Nitrate and Fuel Oil) ANFO</p>	<p>SIGNFICANT: The WMD tool of choice (so far) for Terrorist Used in Oklahoma City and 1995 and 2001 in New York</p> <p>Mechanical injury and burns. There may be other WMD chemical or radiological devices</p> <p>Inhaling particulates from building collapse will have long-term health consequences.</p>	<p>Detonation and rubble pile</p> <p>Unexploded, any device in any shape. Usually metallic – car, plane or train.</p>	<p>DETONATION: Stay out of line of sight & take cover</p> <p>Rescue those outside of the collapse zone. Grab and go</p> <p>Patient treatment starts when out of the line of sight, outside of the collapse zone.</p> <p>PPE: SCBA and Turn-outs</p> <p>UNEXPLODED: Follow bomb threat stand-off on Page 45 or the MT mutual aid field guide</p>

IMPROVISED BIOLOGICAL DEVICE (IBD)

Nomenclature:	Probability Pathology	Evidence	Initial Incident Actions
<p>low level radiological source (industrial or medical equipment) with explosive device to disperse radiological material</p>	<p>MINIMAL: Materials are available and technology is low. However high level radiological sources are tightly controlled</p> <p>Alpha/Beta particles ingestion/inhalation primary route and is extremely hazardous Gamma photons passes through the body and is measured dose x time Radiation poisoning 50 REM blood count changes 100 REM Nausea and Fatigue WBC reduction</p>	<p>Reading on radiological meter greater than background</p> <p>10 mr/hr considered action level</p> <p>Small explosion</p> <p>Radiological container with DOT markings</p>	<p>Approach uphill and upwind ERG GP 165 PPE: F/F Turn-outs Taking meter readings mark hot zone Walking patients DECON remove clothing any METER reading wash w/H₂O - GOOD A foam - BETTER</p>

AMTRAK PASSENGER RAIL OPERATIONS

(Thanks to Charlie Cox, Amtrak Manager of Emergency Preparedness)

Two Amtrak passenger trains known as “The Empire Builder” travel through Montana each day proceeding both east and west bound. Utilizing BNSF Railway tracks they pass through communities along the “Hi Line” in Montana. Each train has the capacity for approximately 500 passengers, though passenger counts are often lower, passenger counts varies based on time of year. Additionally, during the course of the year it also possible to find smaller passenger operations being conducted by other railroads covering special occasions in their area.

Overview

Passenger Locomotives

Passenger locomotives utilize power similar to their freight counterparts. Fuel capacities are in the range of 2,000-2,200 gallons of diesel fuel. The diesel power plant powers a generator that produces 600 volts of electricity that powers the propulsion motors mounted on the locomotive axles. As with freight locomotives the same risks are present with both high voltage and amperage generation.

Passenger locomotives powerplants also deliver “Head –End-Power” (H.E.P.) also known as “Hotel Power” to the passenger cars for heat, light, air conditioning and related power requirements. This is delivered from the locomotives to each car by a “HEP” cable that is carrying 480 volts for the length of the train. Within each car this power is transformed into:

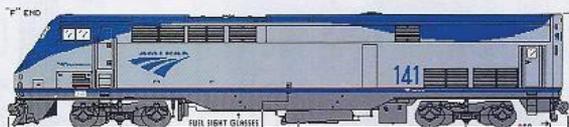
- 220/240volts to power heating, air conditioning and stoves
- 110/120 volts to power lighting, doors and wall outlets
- 74 volts DC powers battery chargers for emergency lighting

The controls for powering the “HEP” system are found in the cab of the lead locomotive, on the left hand or assistant engineer’s side of the console.

Like their freight counterparts, electrical fires should be fought utilizing dry chemical extinguishers after the fuel has been shut-off at one of at least 3 available locations.

Empire Builder Train 7 and 8/27-28 Usual Consist

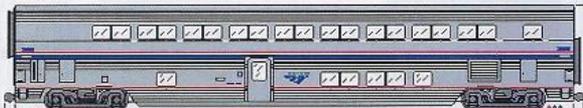
2 — P-42 Diesel Locomotives



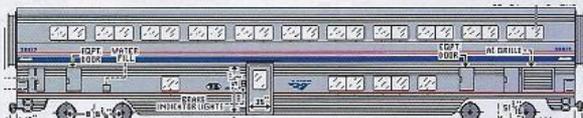
1 — Baggage Car



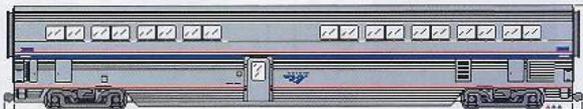
1 — Superliner Transform Sleeper



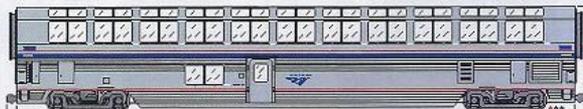
2 — Superliner Sleepers



1 — Superliner Diner



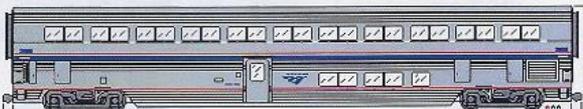
1 — Superliner Lounge



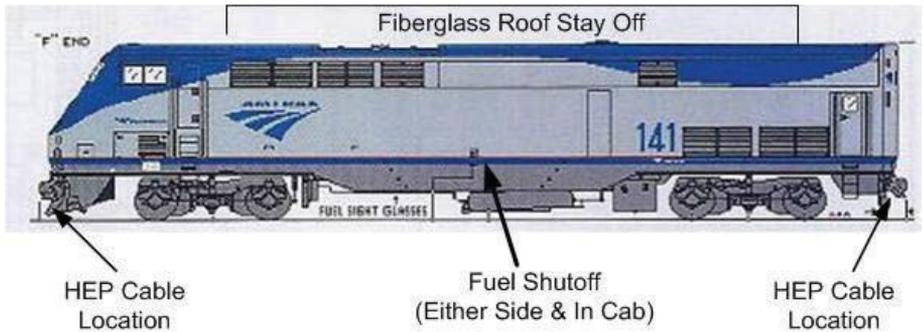
1 — Superliner Coach/Bag



3 — Superliner Coaches



Amtrak Locomotive



Amtrak Crew Staffing

Amtrak trains employ a variety of supervisory and service personnel:

Conductor – The conductor, is in charge of the train. They will be found in the passenger cars.

Assistant Conductor – Like the conductor they will be found in the passenger car area.

Engineer/Asst Engineer – The engineer and assistant engineer will be found in the operating area of the lead or first locomotive.

On-Board Service Crew (OBS)– OBS crews are responsible for guest services in each passenger car.

Emergency Response (Critical Factors)

When arriving at an emergency occurring on Amtrak equipment response personnel should:

- Seek out the conductor. He/She will serve as Amtrak's liaison to your incident command. They will have the most up to date information concerning the size of the train and number of passengers and employees. (Remember, trains stop often and people get on/off)
- From the conductor, determine the number of injuries and their location.
- Utilize the conductor for communications with each employee on board
- Utilize the conductor for communications with Amtrak headquarters and the host railroad operations center.

Emergency Operations

Due to crashworthiness requirements, passenger locomotives and cars are built to be resilient so as to protect the passengers.

Points to consider:

- Fire/rescue extrication equipment will have limited effect in gaining access through car bodies and roofs.
- Interior egress can be quite confining and require other options for the removal of passenger. Therefore, responders should know the location and operation of designed access points, i.e. emergency windows.

- If the HEP is still employed the high voltage cabling will be found below the car floor level, do not approach cables until you are sure that the 480 volt H.E.P. has been shut down.

Car to Car – Passengers can be moved from one car to another through end doors. On Superliner equipment (the predominate cars on the Empire Builder) this option is available only on the upper level.

Vestibule Doors

- Single level cars may be equipped with vestibule doors that are located at one end or the other of the car. They may be equipped with a trap door that must be moved out of the way to access the integral steps.
- Superliner cars have vestibule doors located on the lower level at the car mid-point. Access from the upper deck to the lower level is by a very narrow stairs.

Exterior of Car

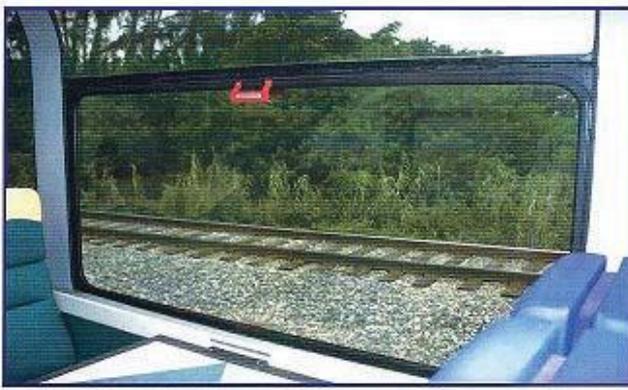


Emergency Windows Labels



Emergency Windows

A minimum of four (4) are found on each car. These are identified on the inside by a red pull handle and labeling. The handle will remove the window bead zipper strip. On the exterior of the car windows are identified by labeling and all that is required to remove the zipper strip is a screw driver. A ladder would be required to access the windows on the upper level from the ground. Window weights and sizes may vary.



Interior of Car-
Emergency Window
Access Handle

Evacuation Decision Factors

With the assistance of the conductor a plan should be developed to determine what evacuation is necessary.

Consider:

- If safe to do so, leave locomotives running to provide heat, lighting and air conditioning.
- Evacuate passengers to other areas of the train that are stable. Consider is it safer to leave the passengers on the train or remove them to a safer location.
- Consider moving passengers that require evacuation to another car more suited to exit characteristics.

Bi-level equipment Passenger Removal Considerations:

- Use an extension ladder, position the tip at the window sill.
- Tie off the tip of the ladder to the base of the seat inside the car.
- Perform a ladder slide with the patient using a stokes basket, skid stretcher, backboard or half back device.
 - If the patient requires a lowering system, use the seat base or opposite window frame for an anchor point for your system or a change of direction pulley.
 - If there are several patients to remove, do not reset the system. When the initial patient is on the ground tie a new figure 8 on a bight and begin to lower the next patient.
 - Ensure all edges are padded for protection of patient, personnel and rope.



RAILROAD EMERGENCY OPERATIONS

Railroads operating in Montana

Emergency Phone Numbers

(updated 02/15/2018, by Ed Burlingame)

BNSF Railway Network Operations Center 1-800-832-5452

AMTRAK National Operations Center 1-800-331-0008

Union Pacific Railroad Harriman Dispatch Center 1-888-877-7267

Montana Rail Link Dispatch Center 1-800-338-4750, Request Chief Dispatcher

Watco (Mission Mountain, Yellowstone Valley RR) 1-866-386-9321 Ext: 6171

Dakota, Missouri Valley & Western Railroad 1-800-891-6445

Central Montana Railroad 406-567-2223 After 1700: 406-567-2573

Butte, Anaconda & Pacific 1-855-258-4514

Chemtrec 1-800-262-8200

Reporting Emergencies

- Contact the appropriate railroad dispatch center
- Identify yourself, your agency, the state, city and location
- State the nature of the emergency
- If available, give the railroad milepost, crossroad or DOT Crossing Number located at the nearest road crossing.

Operating Around/On Railroad Right of Way

- Notify the railroad through dispatch if you will be operating any closer than 30 feet to the railroad right of way.
- Provide a landmark closest to your location such as a road crossing, bridge or railroad milepost. All road crossings are equipped with a location specific identifier and emergency phone number.
- Through dispatch, provide the name and contact phone of the on-scene fire/rescue contact.
- Request a railroad employee respond to assist guidance, communications and safety.
- Expect rail traffic at any time. Post lookouts 2 miles on either side of the incident to “flag” any nearby rail traffic. The universal RR stop signal is an underhanded swinging motion using a flare, light or brightly colored flag.
- It takes the average freight train traveling at 55 mph more than a mile—the length of 18 football fields—to stop.
- Post an on-scene lookout at the incident scene.
- Never step on rail head, it is extremely slippery
- Do not stand or place hands within railroad switches. They can be operated remotely and will trap extremities.

- If possible, do not walk within the rails. Utilize the outside of the ballast edge. Walking inside the rails contains trip hazards and ballast rock may be loose.
- Run hose lines under rails to prevent hose laceration.

Arrival at Railroad Emergencies

- Seek out the conductor; they are in charge of the train. Trains generally operate with only an engineer and conductor. There may also be additional employees on-board to perform work.
- Determine risks. I.e. injuries, car damage, hazardous materials, weather influence, resource needs.
- Determine isolation zone based upon train consist information, placards, Emergency Response Guidebook, and/or consultation with shipper and railroad.
- Minimize climbing on rail equipment. If it is necessary, use equipment and areas intended for access and “Three Point Contact”.
- Do not walk or stand on couplers.
- Stay clear of air hoses. They contain pressures up to 120 psi with high volumes.

Locomotives

Background

Information

Locomotives are found in a variety of sizes ranging in horsepower from 1000 to over 6,000 horsepower. Their weight likewise varies with some smaller units weighing in at 248,000 lbs while larger “Road Switchers” can weigh as much as 416,000 lbs. Modern freight locomotives are propelled by the locomotive diesel engine powering an alternator or generator, which in turn provides electrical power to drive axle equipped motors which in turn propel the locomotive and following train consist. To sustain the diesel engine, locomotives may contain anywhere from 600 gallons up to 5,500 gallons of diesel fuel and with up to 500 gallons of lubricating oil and a similar amount of dyed cooling water.

Electrical Systems

Direct Current (DC) /Alternating Current (AC)

Locomotives operate with a variety of electrical systems. Low voltage DC power in the form of 36 volt batteries is connected in series to provide 72 volt high amperage current to start the locomotive. The diesel engine spins either an alternator or generator to power the traction motors. These units provide generally 600 volts of power with amperage in the 1200-1900 range.

(AC) Locomotives

AC locomotives employ basically contain the same power generating equipment as their DC counterparts. However, in order to maximize on power efficiency, they employ AC traction motors. This requires that they be equipped with inverters, rectifiers and capacitors. This requires a power system approaching 3000 volts. These systems may take several hours to de-energize.

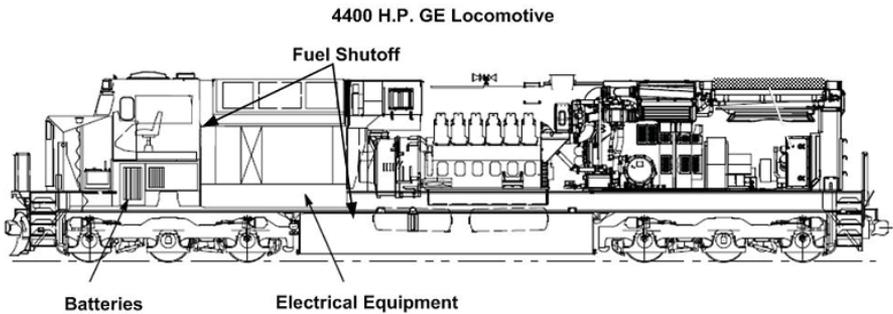
Emergencies Involving Locomotives

- Observe guidelines outlined “Operating Around/On Railroad Right of Way”
- Seek out the train crew.
- Determine if there are any injuries to crew members.
- Determine if the locomotive has been secured by the braking system.
- Determine if the fuel system has been shut down. This is a “Red” button located on either side of the locomotive adjacent to the fuel tank fill and in the cab on the back wall labeled “Engine Shutdown”.
- Determine if the engine and power systems have been shutdown. This is found inside the cab, on the back wall and is marked “Battery Switch”.

Locomotive Fires

Follow the above information and in addition:

- Do not climb aboard a locomotive involved in fire.
- Use Dry Chemical extinguishers to control fire in electrical equipment. Do not use water or foam in these areas.
- Use foam solution to control fuel fed fires on the ground.



Drawing credit: General Electric Co.

Railcar Characteristics

Railcars are found in a variety of configurations. They may take the form of:

- **Boxcars** – Used for bulk but, generally package merchandise
- **Mechanical Refrigerated cars** –Used to transport perishables. Equipped with a diesel driven refrigeration system and employ their own fuel tank.
- **Non Pressure Tank Cars** – Liquids under pressures up to 100psi
- **Pressure Tank Cars** – Liquids and gases under pressures of 100-600psi
- **Cryogenic Tank Cars** – Super refrigerated liquids and gases
- **Open Top Hoppers & Gondolas** – Used to ship coal, ores and other solid materials
- **Covered Hopper Cars** – Used to ship grain, fertilizer, plastic pellets and other bulk solids.
- **Flat Cars** – Used to ship intermodal equipment, machinery
- **Intermodal Double Stack Well Cars** – Used to ship intermodal containers and portable tanks.

Hazardous Materials

Rail transported hazardous materials can be encountered in a variety of rail transport cars and container configuration. In the event of a confirmed risk or leak best practice is to:

- Seek information from the on-board train crew.
- If the crew is unavailable, contact the host railroad through their emergency phone number.
- Contact Chemtrec or the shipper.
- Conduct operations outlined in the ERG.
- Refer to the Hazardous Material Critical Factors found in the MMAFOG.
- Initiate contact with a Montana Regional Haz-Mat Team through your county's Office of Emergency Management.

**EARTHQUAKE TECHNICAL
RESCUE/USAR**

EARTHQUAKE INTENSITY/SCALES

STRUCTURAL ENGINEERING NOTES

USAR BUILDING MARKING SYSTEM

WINDSHIELD SURVEY

COLLAPSE

CONFINED SPACE

TRENCH

USAR

UTAH USAR TEAMINFO

BASE OF OPERATIONS

STANDARD EARTHQUAKE INTENSITY RATING (LACOFD)

Level 0 = Nothing felt

Level 1 = Earthquake felt, no damage

Level 2 = Items off shelves; windows broken

Level 3 = Block walls down

Level 4 = Structures off foundations

Level 5 = Structural collapse

Standard Site Survey

1. Move apparatus to safe location, generally outside
2. Contact dispatch on dispatch channel
3. Make site survey of personnel, equipment, and facilities
4. Report intensity, resource stat., site survey to Fire Coord
5. Secure utilities and station as needed

Standard Jurisdictional Survey

1. Intensity Level of 2 or greater, do jurisdictional survey
2. Record activity on unit log
3. Give report to Fire Coordinator or IC or In Charge person
 - Status of high hazard occupancies
 - Status of major transportation arteries
 - Other significant information
 - Determine resources needed
4. Only interrupt jurisdictional survey to respond to life threatening incidents

Standard Risk Management Plan

- risk a lot → protect savable lives
- risk a little → protect savable property
- no risk → lives/property already lost

STRUCTURAL ENGINEERING TIPS

- Buildings and building elements are built straight and plumb. As materials fail, they start to deflect. If a beam, floor, roof, truss is sagging during a fire or destructive event, there is a reason – stay clear, remain safe.
- Bridges are built straight and plumb. If it sags or is bouncy, stay clear, remain safe.
- Buildings are comprised of interlocking parts that are co-dependant for stability. A roof is supported on walls. However, the roof also supports the walls from tipping over. If you lose a wall, don't go near that part of the roof. If you lose the roof, be prepared to either brace the walls, or not go near them. They may tip over.
- One critical concept to grasp is that of redundancy. Redundancy is defined as a structural element that is duplicated, for example a floor joist or roof rafter. If a redundant element is lost, the adjoining redundant elements may share the load, avoiding catastrophic failure.
- Vertical load bearing elements are either walls or columns. Neither item is considered redundant. If you lose a non-redundant element, catastrophic failure may occur. Don't lose a column!
- Steel beams and columns lose 50% of their strength at 1100° F.
- Steel beams can sag as low as 600 degrees F, which can compromise structural integrity.
- Concrete beams, columns, and walls lose strength at 600 degrees F and a significant portion of their strength at 1000 degrees F.
- On average, a building is designed using a safety factor of 2:1. The building was designed assuming full strength of all members, and under ideal conditions. No building was meant to be on fire, nor was it designed for that condition! If you are on a fire, not only have all safety factors been eliminated, but the fire has cut into the structural support. Don't count on a non-existent safety factor. You are at a structure for a reason – it is on fire.

Matt Anderson, PE, M.S. structural engineering

Hyalite Engineers 406-586-1718 c, 406-587-2781 desk

EARTHQUAKE SCALES

Moment Magnitude	Richter Magnitude	Mercalli Intensity	Description
1.0 – 3.0	2	I	Usually not felt, detected by Instruments
3.0	2	II	Felt by few, especially on upper floors of buildings, detected by instruments
3.9	3	III	Felt noticeably indoors, vibration like a passing vehicle, cars may rock.
4.0	...	IV	Felt indoors by many, outdoors by few, dishes and doors disturbed, like heavy truck nearby, walls-cracking sound
4.9	4	V	Felt by most people, slight damage; some dishes and windows broken, some cracked plaster, trees disturbed
5.0	5	VI	Felt by all, many frightened and run outdoors, damage minor to moderate
5.9	5 to 6	VII	Everyone running outdoors, much damage to poor design buildings, some chimneys broken, noticed by people driving cars
6.0	6	VIII	Everyone runs outdoors, damage is moderate to major. Damage minor in well designed structures, major in poor designs; chimneys, columns, and walls fall, heavy furniture turned, well water changes; sand and mud ejected

6.9	7	IX	Major damage in all structures, ground cracked, pipes broken, shift foundation
7.0 +	7 & 8	X	Major damage most masonry & frame structures destroyed, ground badly cracked, landslides, water sloshed over river banks, rails bent.
	8	XI	Almost all masonry structures destroyed, bridges fall, big fissures in ground, land slumps, rails bent greatly
	8 & above	XII	Total destruction. Ground surface waves seen, objects thrown up into air. All construction destroyed

Notes:

Richter Magnitudes (ML) are based on the movement of an instrument needle and increase logarithmically, 10 times for each number jump, so ML 8 is not twice as large as ML 4, it is 10,000 times as large! Richter Magnitude is an open-ended scale.

Moment Magnitude (MW) is the modern version of the Richter Magnitudes. Moment Magnitude is based on the energy released by an earthquake and is also logarithmic, but by a factor of 32, not 10. MW 4 releases 65,000,000 btu while MW8 releases 69,000,000,000,000 btu. The largest Moment Magnitude recorded to date was 9.5 and occurred in Chile on 05/22/1960.

Mercalli Intensity (MM) is based on actual observations of the resulting damage, and therefore can not be measured on instruments.

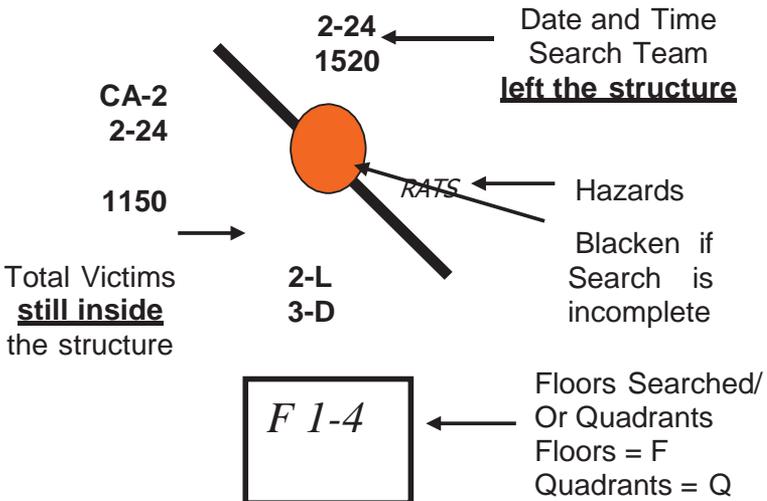
SEARCH MARKINGS

Utilizing the Standard USAR Decal

Main Entrance Search Marking WHEN YOU ENTER

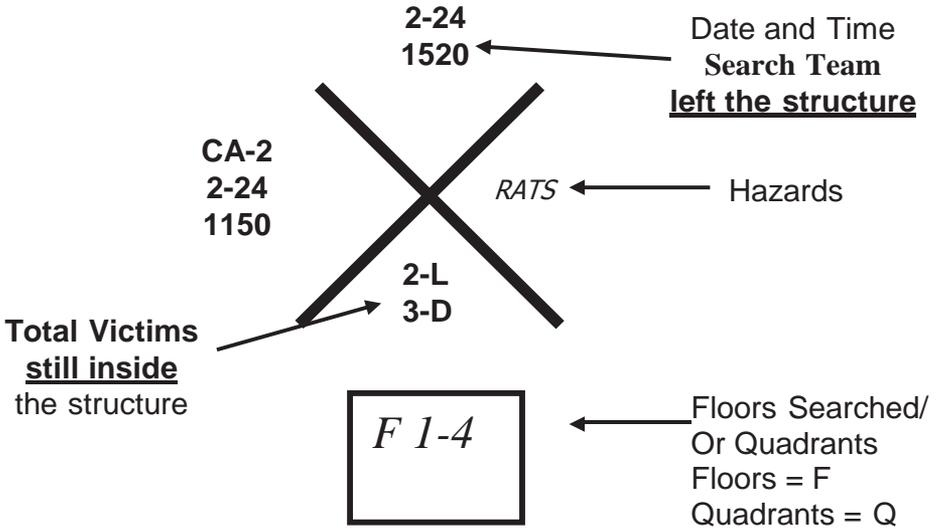
- * Search Team Identifier → CA-2
 - * Date of Entry → 2-24
 - * Time of Entry → 1150
- 

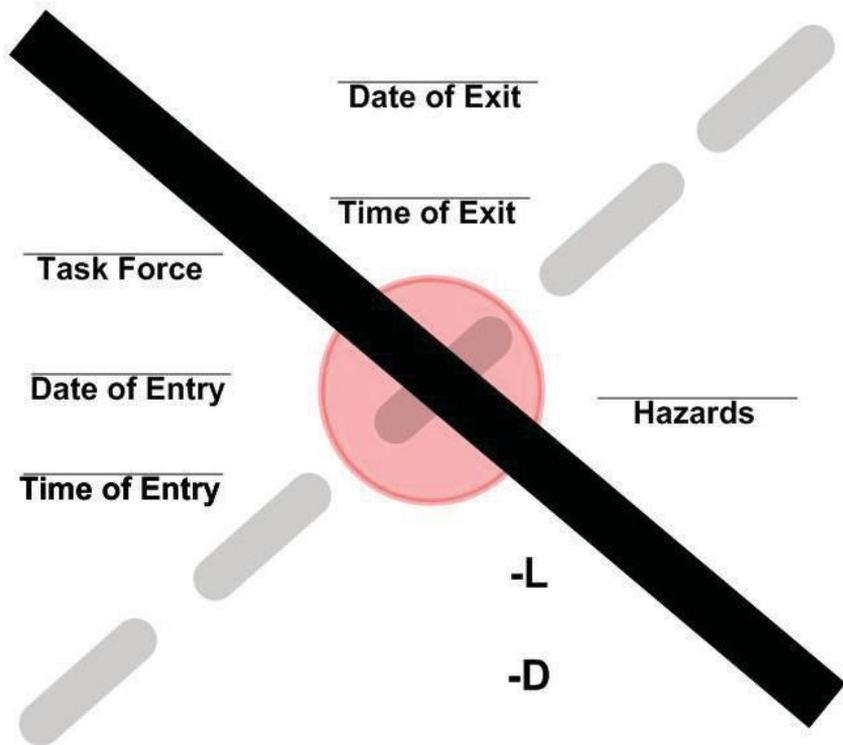
Main Entrance Search Marking WHEN YOU EXIT – INCOMPLETE SEARCH/NO ENTRY



SEARCH MARKINGS CON'T

Main Entrance Search Marking WHEN YOU EXIT- COMPLETED SEARCH





Address:

Areas searched if incomplete

<p>***** SEARCH MARKING LEGEND *****</p>	<p>Incomplete Search/No Entry</p> <p>2-24 1520</p> <p>Co-1 2-24 1150</p> <p>2-L 3-D</p> <p>RATS</p>	<p>Completed Search</p> <p>2-24 1520</p> <p>Co-1 2-24 1150</p> <p>2-L 3-D</p> <p>RATS</p>
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USAR-BUILDING MARKING SYSTEMS

(US Army Corps of Engineers)

US&R STRUCTURE SPECIALIST FOG ENGINEERING REFERENCE

BUILDING MARKING SYSTEM

GENERAL:

A uniform building marking system has been developed by the National US&R Response System.

There are 4 categories of structural markings:

- Identification Marking
- Structure/ Hazards Evaluation Marking
- Victim Location Marking
- Search Assessment Marking

The building marking system was established to ensure:

- Differentiation of structures within a geographic area
- Communicate the structural condition and status of
- US&R operations within the structure

Identification markings on structures should be made with International Orange spray paint and placed on the building surface.

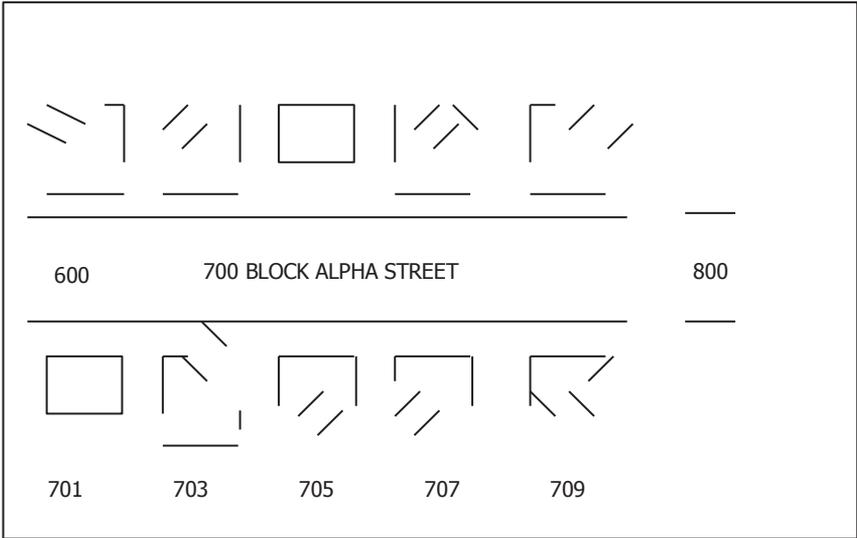
Identification markings should be placed on the normal address side of the structure.

If at all possible, the existing street name and building number will be used. If some previously existing numbers are obliterated, an attempt should be made to reestablish the numbering system based on nearby structures.

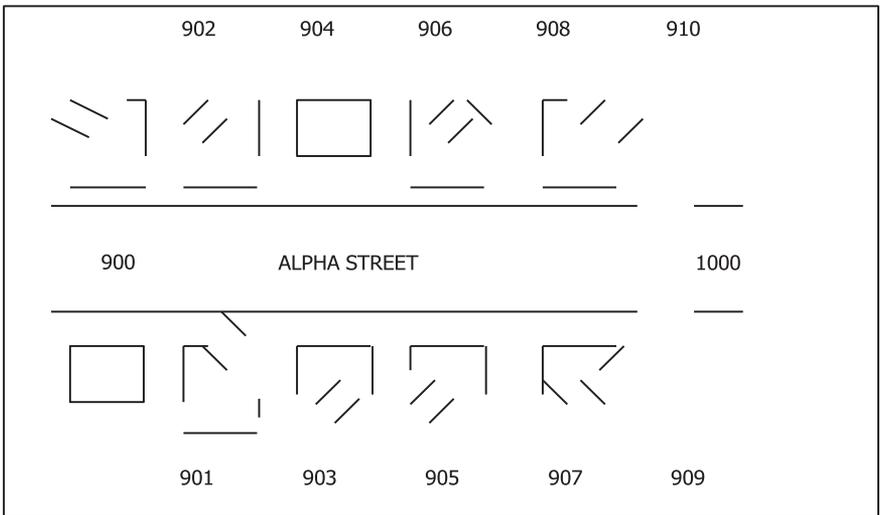
If no numbers are identifiable on the given block, then US&R personnel will identify the street name and number based on other structures in proximity to the site and the structures will be assigned appropriate numbers to differentiate them.

BUILDING MARKING SYSTEM CON'T

Identification Marking



CASE 1 – SOME NUMBERS ARE KNOWN, FILL IN BETWEEN

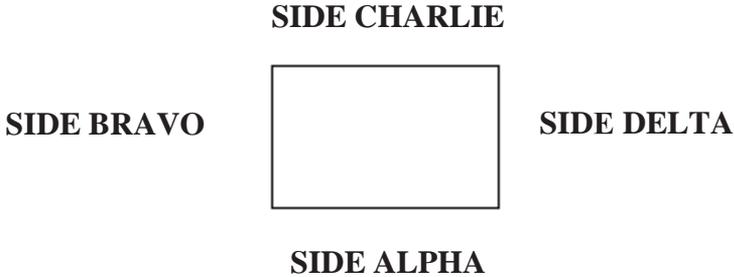


CASE 1 – SOME NUMBERS ARE KNOWN, FILL IN BETWEEN

BUILDING MARKING SYSTEM CON'T

Identification Marking

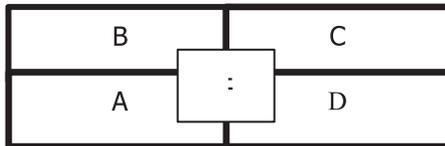
It may be necessary to identify locations within a structure, and refer to locations within a single structure. The ADDRESS SIDE of a structure will be referred to as SIDE ALPHA. Other sides of the structure will be assigned numerically in a clockwise direction from Side ALPHA.



700 BLOCK ALPHA STREET

Building Quadrants

The interior of the structure will be divided into **QUADRANTS**. Quadrants will be identified **ALPHABETICALLY** in a clockwise manner starting from where the side 1 and side 2 perimeter meet. The center core will be identified a **QUADRANT E**.



US&R STRUCTURE SPECIALIST FOG

ENGINEERING REFERENCE

BUILDING MARKING SYSTEM (cont)

Identification Marking

Multi-Story buildings must have each floor clearly identified. If the floors are not clearly discernible, they will be numbered as referenced from the exterior. The grade level floor will be designated as Floor 1 and, moving upward the second floor would be Floor 2.

Conversely the first floor below grade level would be B-1, the second B-2, etc.

In the event that structural columns require identification, use the existing column grid identification numbering system from the structural plans if at all possible. In the event that the plans are not available use the structural column grid shown below. Mark columns with 2 ft high orange/red letters/numbers. In multi-story buildings, some columns should be with the story level just below the column mark.

(mark thus: FL-2 for 2nd floor)

D	□	□	□	□	□
C	□	□	□	□	□
B	□	□	□	□	□
A	□	□	□	□	□
	1	2	3	4	5

WINDSHIELD SURVEY

First Step - Pre-Event

(by Capt. Ed Burlingame, Fairfax Co. F&R(ret.), Blankenship FD, MTFSTS)

How

- Divide the potential affected area into pre-designated divisions.
- Establish travel routes that quickly cover as much ground as possible.
- Establish priority structures.
- Select a division command and staging area.

Pre-Event Risk Assessment

Locate and Survey Structures that are important for health, safety, shelter and continuity of services.

- Fire & Police Stations
- Medical Facilities
- Assisted living facilities
- Schools and public buildings
- Churches
- Utilities – Power, water, sewer, gas
- Roads, bridges, culverts
- Dams, ponds, impoundments
- Private structures

Pitfalls & Hazards

- Have the survey for your assigned division ready prior to arrival in the area.
- Avoid stopping to render assistance, keep moving to get the big picture.
- Be objective and cautious of early overstatement or understatement of damages.
- Keep personnel safety in the forefront.

COLLAPSE INCIDENT RESPONSE

Tactical considerations for the First Responder - Operations Level

1) Stay away from damaged buildings.

2) Primary assessment

- Secure witnesses or responsible person.
- Determine location, number and conditions of patients/victims
- Determine intact access to patients, possibility to improve.
- Is there a way out for responders?
- Can you make more?
- Determine location and number of buildings involved.

3) Secondary assessment

- Type of building
- Building construction type
- Assess hazards - secondary collapse, gas, electric, water.
- Assess needs for additional personnel – (search dogs, ARC, structural engineer)
- Assess need for additional equipment – (100 ton cranes, heavy equipment)
- Assess transportation conditions – (establish transportation corridor)

4) Subdivide incident organization

- | | |
|-----------------------------|-------------------------|
| • Safety | • Air Ops |
| • Building Triage | • Haz-mat (FRO or Tech) |
| • Search | • Staging |
| • Accountability | • Information |
| • Extrication (tech rescue) | • LE Liason |
| • Medical - MCI Plan | • PIO |

Collapse Incident Response

1) Rescue Operations

- Remove surface patients
- Make general area safe(traffic, etc)
- Make rescue area safe - secure utilities
- Establish perimeter - deny access
- Establish transportation corridor
- Establish Treatment & Transport areas and morgue – pt. accountability
- Remove non-essentials from rescue area
- Establish building triage teams
- Establish planning process for building search teams and rescue teams
- Transfer patients to treatment

2) Action plan for specific building

- Determine structure type
- Interview neighbors, survivors to determine how many potential victims and points last seen.
- Obtain building plan or draw crude plan
- Probable location of voids
- Best access
- Multiple, hardened exits for responders
- Basements
- Move info to supervisor and to Planning function

3) Use call out - listen search techniques

CONFINED SPACE INCIDENT RESPONSE

Confined Space - defined:

1. Large enough to physically enter
2. Not designed for continuous employee occupancy
3. Limited entry and egress

Permit Required Confined Space - defined

1. Atmospheric Hazards
2. Configuration Hazards
3. Engulfment Hazards
4. Any other recognized hazard

Acceptable Entry Conditions:

Oxygen between 19.5% and 22.5%

Lower Explosive Limit(LEL) <10% of the products LEL

Toxicity <IDLH

Monitor the atmosphere continuously.

Source document - OSHA 29 CFR 1910.146

CONFINED SPACE INCIDENT RESPONSE

Tactical Considerations for the First Responder Operations Level

Phase 1 - Size-Up

Primary Assessment

- Secure witness or competent person _____
- Identify immediate hazards _____
- Location, number, condition of patients _____
- Secure entry permit

Secondary Assessment

- What type of space _____
- Products in space or last in space _____
- Hazards: atmospheric, mechanical, electrical
- Diagram of space
- Structural stability of space _____
- Required personnel and equipment at scene _____
- Additional resources necessary? _____
- Atmospheric monitoring: ventilation,
- Strategy - offensive (rescue) or defensive (recovery)

Phase 2 - Pre-entry Operations

- Initiate Fire Department Confined Space Rescue Permit
- Make General Area Safe
 - Establish Perimeter
 - Evacuate if necessary
 - Traffic and crowd control
- Make Rescue Area Safe
 - Establish/Affirm accountability
 - Secure hazards - lock-out, tag-out

TRENCH INCIDENT RESPONSE

Trench defined:

Any trench 4 feet deep or greater must have a means of egress within 25 feet of any worker.

Any trench with a hazardous atmosphere or a potential hazardous atmosphere that is 4 feet deep or greater must be monitored prior to employee entry.

An excavation 5 feet deep or greater must have an approved protective system to protect employees from cave-ins.

Protective systems shall be placed from the top working down and removed from the bottom working up so as to protect the employee during construction or removal.

Many FDs consider all soils to be “Type C” and protective systems and practices shall be used accordingly.

Timber shoring should be designed by a registered engineer, licensed in Montana.

Source Document: OSHA 29 CFR 192

Trench Incident Response

Phase 1 - Size up

Primary Assessment

- Secure witnesses or competent person_
- Identify immediate hazards_
- Location, number, condition of patients/victims_

Secondary Assessment

- Trench collapse Yes , No_
- Proper equipment and personnel on scene Yes , No_
- Additional resources necessary ventilation, shoring, retrieval system

Phase 2 - Pre-Entry Operations

- Traffic control
- Crowd Control
- Heavy equipment shut down
- Establish zones
 - Hot <50’
 - Warm > 50’ and < 150’
 - Cold >150’ out to 300’
- Make rescue area safe
- Establish accountability and lobby control
- Secure hazards - gas, electric, utilities
- Place ground pads
- De-water trench from outside trench
- Monitor atmosphere from outside trench
- Ventilate from outside trench

Phase 3 - Rescue Operations

- Make trench lip safe
 - Assess spoil pike
 - Approach from ends
- Place/affirm ground pads

HAZARD ZONE COMMAND

– USAR NOTES

General Notes

- Risk management model applies
- Search and rescue of patients (survivable) the objective
- Divide area to be searched - assign sectors
- Triage structures and likelihood of occupied/survivable (by patients) structures
- Hasty - primary - secondary searches by sector
- Load equipment for use - first needed is last loaded
- Set up out side, clear area, well lit, outside collapse zone

Basic Approach

- Triage - hasty - primary – secondary (accounting)
- Secure site(s) - deny access
- Secure utilities
- Survey site(s)
- Search for surface patients first - do the easy stuff first
- All quiet - shout/whistle/horn and listen
- Examine for voids
- Assess voids
- Bore holes
- Check haz-mat (meter)
- Search cam - look, mirrors
- Enlarge opening
- Harden opening
- Enter/access
- Shore up
- Move/remove debris
- Extricate

Repeat

- Shore up
- Move/remove debris
- Extricate

HAZARD ZONE COMMAND

– USAR NOTES

Info at time of request for USAR - or ASAP – Info

USAR TFs would like to know when you request them:

Weather forecast and NWS/NOAA weather office and zone, web address would be helpful, other reliable weather sources for your area. Also road conditions reports.

Fuel - What is available locally, where is it, do hosts have access to the fuel?

Food - What is available locally, what is it, do the hosts have access to the food?

How is food sanitation/storage?

Safety concerns - What are local hazards? What do they need to bring to manage hazard/risk?

Commo plan – radio (especially initial contact, freqs, tones), phone – land line, cell, sat, E-mail addresses Is email functioning? What commo is working in local area?

Hospitals - Are local hospitals functioning? What is their level of care? Level 1 trauma center? Level 2 trauma center? Don't get hurt level trauma center?

Base of Operations (BoO) - Off load location and available help - Fork lift(s)?

Contact person - to connect USAR TF with hosts – all numbers and contact info including e-mail, meet location

Information to have ready for exchange and cross briefing upon the arrival of the USAR Team, an advance element of the USAR team, or the FEMA Incident Support Team(IST).

Hosts should be prepared to exchange the information listed below with the arriving USAR/IST leadership. The sooner this info is exchanged, the sooner the USAR team can connect with the host responders and go to work. This is initial briefing information from the National USAR Response System FOG.

Initial Briefing:

- Provide copies of maps, pictures, plans, commo info, phone numbers, e-mail addresses, etc.
- The current local incident management organization and reporting requirements
- Physical location of the Incident Command Post (ICP)
- Chain of Command and coordination contact information
- Planning/Briefing meeting schedule and location (in MT,
- Strategy/Planning/Briefing)
- Current Situation & Goals and Objectives– C.A.N. report
- Operational Issues – consider commo, safety, risk mgmt, emergency signaling, evacuation signals and rally points
- Local medical system issues
- Communications issues
- Transportation issues
- Logistical support issues and ordering process
- Hazard behavior, safety, health, and security issues
- Media issues
- Notes from Montana responders in addition to the above

Initial Briefing format:

- Connect guest and hosts responders with similar roles.
- Provide a place to meet and conduct the Initial Briefing.
- The L&C County Fire Council, Gallatin County Fire Council and Flathead County ICP trailers and Gallatin County Sheriff's Command Vehicle (call sign "6-CV") are well suited.
- Provide copies of maps and pictures. Multiple copies of maps are very useful. Several large format display maps helps USAR Plans folks. Many copies (50) of 8.5" x 11" or 11" x 17" street maps with street names, addresses, North, and a scale are very useful for the USAR Search and Rescue Teams.
- Have folks available to help unload and set up the USAR equipment. A fork lift is very useful for this process. As many folks as you are able to arrange, probably not more than 30. A fork lift is very useful.

As much as possible, connect similar roles and functions.

Line up the host person with the guest person. Same deal with all functions.

Initial Briefing Tactical Worksheet:

Fill out, hand off to assisting USAR leadership

- Provide copies of maps, pictures, plans, commo info, phone numbers, e-mail addresses, etc.
- The current local incident management organization and reporting requirements
- Physical location of the Incident Command Post(ICP)
Chain of Command and coordination contact information
Planning/Briefing (in MT, Strategy/Planning/Briefing) meeting schedule and location
- Current Situation & Goals and Objectives – C.A.N. report

Operational Issues – consider commo, safety, risk mgmt

Local medical system issues

Communications issues Transportation

issues

Logistical support issues and ordering process Hazard

behavior, safety, health, and security issues Media

issues

UTAH TASK FORCE 1

- SPECIFIC NOTES

URBAN SEARCH & RESCUE TASK FORCE FACT SHEET

Task Force Name:

COMPOSITION

- Tactical unit for search and rescue operations;
- Multi-disciplinary organization:
 - Search element
 - Medical element
 - Rescue element
 - Technical support element
 - Command element
- Totally self-sufficient for the first 72 hours of operation;
- Full equipment cache to support the Task Force's operations
- Supported by DHS/FEMA sponsored Incident Support Team.

CAPABILITIES

- Capable of round-the-clock search and rescue operations (two 12-hour shifts).
- Search operations:
 - Physical
 - Canine
 - Electronic
- Rescue operations in various types of structures:
 - Wood frame
 - Steel frame
 - Unreinforced masonry
 - Reinforced masonry
- Sophisticated medical treatment capabilities limited to
 - Injured Task Force members
 - Initial treatment of victims encountered during operations
- Technical support capabilities for Task Force operations:
 - Structural integrity assessment
 - Liaison with heavy equipment/crane operators
 - On and off site communication capabilities within Task Force, IST, and local jurisdiction
- Hazardous materials assessments.
-

- TASK FORCE SUPPORT REQUIREMENTS

TRANSPORTATION

- Vehicles/aircraft needed for the movement of the Task Force and cache. We will usually bring our own, but there may be special need

- Medical transport required for extricated victims
- Evacuation required for any injured Task Force member

COMMUNICATIONS

- The Task Force's radios are set to frequency
- It would be advantageous to provide the Task Force with a radio from the host jurisdiction
- Reporting requirements need to be identified (how/when)
- Secure communications with the medical transport and to member evacuation systems

INITIAL STRATEGIC/TACTICAL BRIEFING

- If available, copies of past, current, and future Incident Action Plans should be provided
- Strategic/tactical assignment clearly identified for the Task Force
- Media considerations
- The local jurisdiction's Public Information Officer (PIO) should be identified; and
- The local jurisdiction's media procedures (info release, interviews, etc.) should be identified
- Appropriate area maps, building plans, or other information should be provided.

TASK FORCE MISSION CAPABILITIES FACT SHEET

DHS/FEMA US&R Task Forces are capable of providing the following additional actions when dispatched to a disaster site:

US&R OPERATIONS

- Conduct physical search and rescue operations in damaged and collapsed structures
- Provide emergency medical care to disaster response personnel
- Provide emergency medical care to the injured
- Reconnaissance duties – assess damage and needs and provide feedback to local, State, and Federal officials
- Assess and shut off utilities to houses or buildings
- Assess hazardous materials surveys and evaluations of affected areas
- Conduct structural and hazard evaluations of government and municipal buildings needed for immediate occupancy to support disaster relief operations
- Assist in stabilizing damaged structures, including shoring and cribbing operations, on damaged buildings as required.

CITIZEN ASSISTANCE/OUTREACH

- Direct citizens to available response and recovery services such as medical, food, water, shelter, etc., once established
- Distribute tarps, sheeting, and furring strips to occupants of damaged dwellings
- Assist homeowners and occupants in securing their property from the effects of weather, looters, etc

ASSISTANCE TO LOCAL EMERGENCY RESPONSE PERSONNEL

- Assist local emergency response personnel in coordination of their response efforts
- Assist in the establishment of emergency communications links
- Clear streets, highways, airports, and government support facilities of trees and debris
- Mark and identify streets and buildings
- Manage, direct, and train local volunteers and first responders in basic US&R operations
- Provide medical treatment information to local physicians on disaster-related injuries such as crush syndrome

URBAN SEARCH & RESCUE TASK FORCE MEDICAL TEAM FACT SHEET

Task Force Name: _____

COMPOSITION

Organization

- Medical Manager(s) (emergency physicians); and
- Medical Specialists (Paramedic/RN-qualified);
- Totally self-sufficient for the first 72 hours of operation; and Full medical equipment cache to support the Medical Team's operations

CAPABILITIES/LIMITATIONS

- Designed to provide sophisticated (and possibly prolonged) pre-hospital and emergency medical care
- Medical Team treatment priorities:
 - First** – Treatment of Task Force members, including canine and support personnel
 - Second** – Entrapped victims directly encountered by the Task Force
 - Third** – Others as practical
- It is not the intent of the Medical Team to be a freestanding medical resource at the disaster site
- Capable of round-the-clock operations (two 12-hour shifts)
- Comprehensive medical equipment cache designed to support
 - 10 critical cases
 - 15 moderate cases
 - 25 minor cases
- It is expected that Task Force “fixed asset” medical equipment (i.e., defibrillators, monitors, ventilators, etc.) will not leave the rescue site with any patients but will be maintained for the continued protection of the Task Force members.

MEDICAL TEAM SUPPORT REQUIREMENTS

TRANSPORTATION

- Medical transport required for extricated victims; and
- Evacuation required for any injured Task Force member;

COMMUNICATIONS

- Reporting requirements to the Incident Command Post; and
- Secure communications with the transport systems listed above;

MEDICAL HAND-OFF PROCEDURES FOR VICTIMS

- Type of triage tags being used;
- Exchange of assets (backboards, splints, etc.); and if necessary; procedures for handling deceased victims;

DESIGNATED LOCAL MEDICAL LIAISON FOR SPECIAL MEDICAL NEEDS

(Emergency Medical Services (EMS) Medical Director or equivalent)

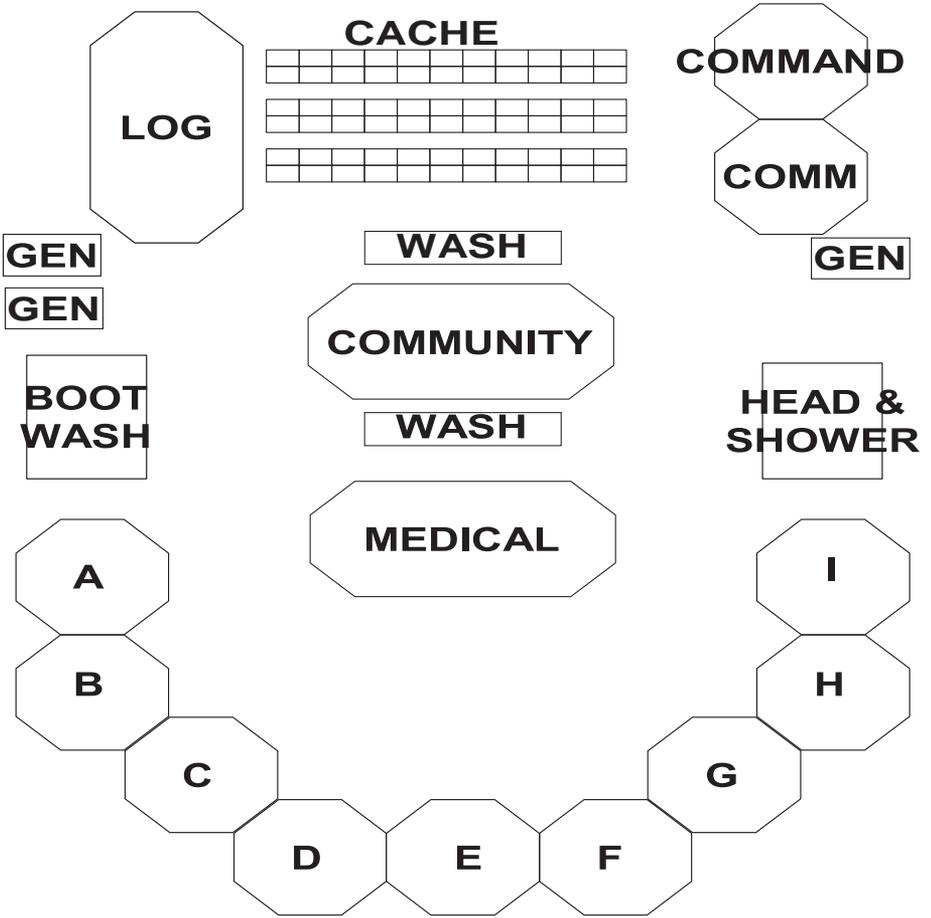
BASE OF OPERATIONS (BoO)

The selection of a BoO is one of the most important determinations made during a deployment. The specific location may be predetermined by the local jurisdiction or the IST prior to the arrival of the Task Force. In absence of the IST, the TFL must identify an appropriate site. Regardless of who makes the determination, the following factors should be considered:

- Proximity to the rescue work sites
- Useable structures for shelter and cache set-up
- Safety of useable, adjacent structures
- Sufficient open, level space
- Access to transportation routes
- Safety and security
- Tranquility (facility's quality to accommodate resting off-duty personnel) and Environmental considerations.
- Minimum size in Montana, UTTF 1 prefers about 2 acres, 400' by 200', prefers paved surface with water drainage. The USAR FOG suggests an area about 150' x 110' area is minimum needed to set-up the BoO.

Preferred size 400' x 200' (with a minimum of 150' x 150')

USAR BASE OF OPERATIONS DIAGRAM



UTAH TASK FORCE ONE CONTACT INFORMATION

Erik T. Sandstrom Unified
Fire Authority US&R
Battalion Chief 2651 South
600 West
Salt Lake City, Utah 84115 Cell
801-824-3709
Fax 801-977-5127
Email esandstrom@ufa-slco.org

Dave Vialpando Salt
Lake City Fire US&R
Captain
2651 South 600 West
Salt Lake City, Utah 84115 Cell
801-913-3658
Office 801-977-5118
Email david.vialpando@slcgov.com

Salt Lake City Fire Dispatch
Dispatch Center 801-799-4231
Fax 801-799-3684

WILDLAND URBAN INTERFACE

**COMMON BENCHMARKS, TACTICS
AND CRITICAL FACTORS FOR
WILDLAND URBAN INTERFACE**

**WILDLAND FIRE BEHAVIOR AND
WEATHER INTERPRETATIONS**

**STRUCTURE PROTECTION IN THE
INTERFACE - TRIAGE FACTORS**

COMMON BENCHMARKS & TACTICS FOR INTERFACE

1. Fire Control and Primary All Clear

Strategy and Tactics and Orders Offensive when FFs are in LCES and the hazard is behaving. Go defensive when FFs cannot do LCES or fire is in alignment.		
Evac Warn/Order LCES & predict FBx Accountability Deny Access	Defend Structure LCES & predict FBx Triage LCES by home Primary Search- Prep	Attack the Fire LCES & predict FBx Pick fight favoring FFs Protect Exposures

To Do:

<ul style="list-style-type: none"> • <u>Establish On Deck</u>, forward deploy, brief, recon(TI), improve egress, establish Triage • <u>Access & Egress</u> - open up new access & egress - in and out, mark routes • <u>Check for extension</u>, all sides, spotting, downwind, upslope, burned/unburned line • <u>Check for extension in exposures</u>-layers /voids/Loss Control(TI) 	<ul style="list-style-type: none"> • <u>Supply water to pumper</u> (Offensive - lay in, or 1st tanker, direct connect) • <u>Secondary Search/All Clear</u> - Occupant / Customer Accountability - Customer care • <u>Rehab</u> - set up, connect w/EMS • <u>Loss Control</u> • <u>Assign</u> - <input type="checkbox"/> <u>Liaison</u> <input type="checkbox"/> <u>PIO</u> <input type="checkbox"/> <u>Customer Care</u>
--	---

2. Loss Stopped

- Loss Control- Clean up, cover up, store(w/SCBA)
- Check for extension(TI)

3. Incident Stabilized & Customer cared for

- Customer Care/Recovery Assistance to customer- **connect**

Local Incident Management in the Interface - Critical Factors for ICs in the Interface (2007-11-03)

Risk Management	Nothing savable - no risk to FFs- Protecting savable property - Risk a little - Protect savable lives - Risk a lot					
Critical Factor	Discernable	Clearly present	Serious Hazard	Extremely Severe	Fatal	Unknown
Safety Zones	Site specific, and Okay(for apparatus, for personnel)				Anything else	
Lookouts	Can see hazard and FFs				Anything else	
Communications	First call, immediate answer(within crew, adjoining crews, to supervisor)				Anything else	
Escape Routes	Site specific, and Okay				Anything else	
Slope	Fire at above top of slope		Flat	Mid slope, Fire below FFs, down slope		
Aspect	NNE	E	SE	S or SSW		
Wind	Calm		>10 mph	>20 mph	>30 mph (higher winds = extra SZ - defensible space)	
SAW Alignment	None(no two or more factors in alignment)		2 factors in alignment		3 factors in alignment	
Able to see FFs	Can see all FFs and fire		Can not see some FFs		Can not see FFs	
Spotting	None	Any	Some	More	Lots	
Fuel	None/Sparse		Grass		Canopy	
IC's Instict	Okay	Uneasy	Nervous	Stressed	Oh Shit	

WILDLAND FIRE BEHAVIOR AND WEATHER INTERPRETATIONS

(Thanks to Eric Kurtz, Sonny Stiger, Tim Murphy and JP Harris)

Winds - Major factor in spread of fire, spotting

Breeze - concern if fire is in light fuels (grass)

>15 mph - can cause fire in dry 1000hr fuels to run

Aspect - The direction a slope faces. Major factor in intensity. South-

West - lots of afternoon solar pre-heat, will burn hard& fast

Slope - The steeper the slope, the harder and faster a fire will burn

Adjective Class - Overall index of fire danger

- High • Very High • Extreme are important

Red Flag Warning, Fire Wx Watch, Front coming through, Severe Wx Warning Big deal! winds \geq 15mph, shifting winds.

Red Flag Warning - significant event, 4-6 hours out

Temperatures: Maximum at 85oF or above is noteworthy

1000 hr fuels - % Fuel Moisture in 3" and bigger fuels

12% or less is critical, % Fuel Moisture in fuels <1/4"(grass, brush) <7% is critical fire behavior indicator

Burning Index - Temps and winds – Rate of fire spread 60 + is noteworthy

Energy Release Component – How hot will the fuels burn? 50 + is noteworthy

Haines Index - Probability of extreme fire behavior 5 or 6 rating out of max. of 6 is critical

Relative Humidity - < or = to 20% is critical, MPB affected <20% (Sonny)

Humidity Recovery - Especially in light fuels(grass).

40% or less - Active burning, intensive patrol.

Safety Zone – MPB affected – 8X Flame Height

POI \geq 60% (MPB stands)

Info regarding ANS for wildland fire fighting:

<http://dnrc.mt.gov/divisions/forestry/docs/fire-and-aviation/pms444-preventing-ais-transport.pdf>

STRUCTURE PROTECTION IN THE INTERFACE - TRIAGE FACTORS

Positives

- + A structure on a ridge with the roadway or driveway on the opposite side from the approaching fire
- + A structure with 100 feet or more of clearance and no ornament vegetation near the weak points of the structure.
- + A structure where safety zones are obvious (large green areas or natural barriers)
- + Fire Approaching from a higher elevation than the structure you're protecting, with little or no wind.
- + A backing fire (fire burning against the wind toward your location)
- + A north or east aspect. Because of lower fuel temperatures, & higher fuel moistures structures on these aspects are generally safer to protect provided wind speed is low (less than 15 mph)
- + An available source of water, such as a hydrant, private water tank, swimming pool, spa, or garden hose supply. We recommend connecting to a hydrant if one is available and you plan on staying.

Negatives

- Any structure on a slope (mid-slope structure) with the fire approaching from below
- A structure that is in a draw (the terrain in an in-turn), or in a saddle
- A structure that is w/o defensible space, or in a saddle
- A structure that will require locating your engine between the structure and the fire without adequate defensible space
- A structure that has considerable vegetation (ornamental or native) impinging on it
- A structure that has an LPG tank that is impacted or exposed with brush or other combustibles
- A structure or road that has trees surrounding it, or branches entwined from tree to tree, giving the structure or road the appearance of being in a tunnel or cave
- A steep slope below the structure
- Heavy fuel below your location

- A structure that looks like a junkyard with considerable flammable, easily ignitable material, such as old construction wood, piles of brush or leaves
- A south, southwest, or west aspect (the direction the slope faces). These aspects are the most hazardous on which to defend a structure & will require additional defensible space.
- Time of day which should be considered as a unit with aspect. We highly recommend Campbell's Fire Prediction System class to improve your size-up or triage ability.
- Fuel type and height. Sagebrush will burn much faster than the heavier fuels, especially if they have grasses as a component of their fuel bed. These are considered light, flashy fuels.
- No water source or limited water source. Remember, don't bet crew member lives, or apparatus, on water supply or a hose line
- A wood-sided structure or one with a wood shingle roof

Notes:

These are a few of the many negatives and are just that. They're not red lights, but yellow lights. However, if you have numerous yellow lights, you might have to re- think. "Do the tactics still match the current conditions?" Re-evaluate your position, and reaffirm the location of safety zones - and the time and distance to reach them - for all members. After establishing LCES and making a fire behavior prediction use any available time to mitigate negatives, such as native or ornamental fuel, removing combustibles that would perform as a host for spot fires or spread.

Thanks to Battalion Chief John P.(JP) Harris, County of Los Angeles Fire Department (ret.) for writing this stuff down and sharing it.

SOME THOUGHTS ON STAY AND PROTECT

Jane Ellis, November, 2017

Definition: You are making a well thought out decision to defy an evacuation order, and are willing to accept all the consequences that go with that decision.

These are just my observations. Things may vary depending on individual circumstances.

1. Minors cannot make this decision, and their parents cannot make this decision for them.
2. Are you personally really capable of staying and protecting?
 - a. Physically - no big health issues, mobile
 - b. Can you stand isolation for a prolonged period of time (several days to weeks)
3. Do you really know what you're letting yourself in for?
 - a. Have you experienced this type of disaster before? (ex: Have you lived through a firestorm?)
4. Is your property sufficiently hardened for you to safely survive there?
 - a. Defensible/survivable space
 - b. Plan in advance for your vulnerable spots
 - c. Water supplies
 - d. Food supplies
 - e. Utilities
 - f. Communications
5. **YOU CANNOT, MUST NOT EXPECT RESCUE AFTER THE FACT**
6. You may decide to evacuate after the fact, but you cannot get in the way of emergency operations if you do so.
 - a. Have to move livestock in advance
 - b. Have to move big stuff like trailers, boats, etc. in advance
7. Do not bully others into staying (family members)
8. Do not seduce others into staying (neighbors)
9. Have some kind of firefighting capability
 - a. ATV with spray unit
 - b. Irrigation system
 - c. Decent domestic well (10 gal/min or better)

SOME THOUGHTS ON PROPERTY HARDENING

Jane Ellis, November, 2017

These are just my observations. Individual circumstances will vary.

1. Defensible/survivable space
2. Generator
 - a. Permanently installed with transfer switch
 - b. Weekly auto tests
 - c. Well maintained
3. Domestic Water supply
 - a. Bottled water
4. Food Supply
 - a. Develop a pantry,
 - b. Rotate stock
 - c. Even with generator, keep a stock of canned goods
5. Financial Hardening
 - a. Check on insurance coverage
 - b. Savings – rule of thumb was to have 6 months salary in savings. If you want to be able to get back to normal quickly after a disaster damages your property, you might want to have more than that
 - c. Have some actual cash on hand

IF EVACUATED

Again, just my thoughts. Individual circumstances will vary.

Some observations from watching Hurricane Harvey hit Houston:

1. Folks went from middle class to street people-like circumstances in the shelters overnight.
2. We learned that some folks are still waiting for insurance settlements from Hurricane Sandy
3. Big systems get overwhelmed by big events, so don't count on that Red Cross check for your next meal. Hence, keep some cash on hand. Especially, if you see a natural disaster coming.
4. You can be the master of your own recovery if you have done some financial hardening
5. When you evacuate, never mind the memorabilia, take the stuff you need to live for the next month – clothes (all seasons), business papers (if not recorded somewhere), non-perishable food.

HAZARD ZONE COMMAND

STANDARD ASSIGNMENT FOR RECON

STANDARD BRIEFING BY IC

**CRITICAL FACTORS FOR LARGER
INCIDENTS**

COMMAND HELPERS

**HAZ ZONE COMMAND 1 HR ET
CONVERSATION**

MMA TASK FORCES

MMA FD TRANSPORT AMBULANCES

HAZ ZONE LOGISTICS AND FINANCE

UNIFIED COMMAND

MEDIA GUIDE

PUBLIC CALL CENTERS

STANDARD ASSIGNMENTS FOR RECON – SITUATION STATUS

If Command will be sending out crews to learn about what is happening in an area, here's some standard considerations for that assignment.

Risk management plan based action FFs may:

- risk a lot to protect a save-able life
- risk a little to protect save-able property
- risk nothing to save lives or property already lost

Stay together - Company/TF-ST/Sectors -Division-Groups

Communication - first call, immediate answer (talk-in-up-sideways) / Don't deploy beyond your comm / Simple, to the point communications, use CAN reports Trigger

points - Hazard behavior - Withdrawal from hazard

Don't fishhook yourself or your company

Rally plan -- Decision points, locations, comm plan x 3, updated Push

information to Plans (up) - Push situation status-CAN reports Do the

situation status - triage - don't get sucked into it

Tell us what will be needed to resolve problems - solutions Pre-

plan what to do, when you don't know what to do

On-Deck crew(s) or RIC organic to TF-ST /Division-Groups Tracking/Accountability –

Written who, where, when, what

Reporting to/on what frequency - affirmed contact –

Go only as far as your commo – commo is your ticket to ride

Get Standard Briefing from the IC – see next page

STANDARD BRIEFING – ICTO ARRIVING HELP

Your direct supervisor is _____

You directly supervise _____

Our customer is _____

Communications - first call, immediate answer (in-out-up-down-side) “Mayday”
Procedure – Fire fighter in any immediate life safety need

Area of operation _____

Adjacent forces _____

Staging _____

Base of operations _____

Affirm risk management plan, why

RISK A LOT, RISK A LITTLE, RISK NOTHING

Logistical support – how _____

What _____

Service interruption time line - push-pull _____

Rally plan – decision points, locations, comm plan x 3, updated

Check in – demob _____

Tracking (written - who, where, when, what) procedures

Map information _____

Escape routes _____

Safety zones _____

Thresholds/Decision points _____

Local issues - emerging, ongoing, historical, sensitive points

Planning cycle - strategy/planning/briefing/gather intel

Operations cycle –

When are you going to start working? _____

Stop working when? _____

Known local contacts in area of operation _____

Hazards in area of operation –

Known _____

Suspected _____

Historical hazard behavior prediction _____

Record personnel time, equipment time

Purchases - Incident name, print your name, Organization name, date & time

Notes:

THOUGHTS ON CRITICAL FACTORS FOR LARGE INCIDENTS

Determination that something is a large incident, and that you will need mutual aid should flow directly out of the incident size-up.

Questions to ask yourself during size-up:

- | | |
|--|-----|
| 1. Is this (or will it soon be) geographically large? | Y N |
| 2. Is this gonna take more than 8 (?) hours? | Y N |
| 3. Is the weather an additional problem? | Y N |
| 4. Does this involve a technical specialty (haz mat, tech rescue, etc) | Y N |
| 5. Is this politically sensitive (ex: school, nursing home, etc)? | Y N |
| 6. Is there another political body that will have an interest? | Y N |
| 7. Is there a probability/possibility that I will be overwhelmed? | Y N |

If the answer to any of these is yes, you need mutual aid. Move on to the following questions:

1. How much of what resource do I need?
 - Firefighting (geography, intensity of work)
 - Rescue (intensity of work)
 - EMS
 - Law Enforcement
 - Specialties
 - i. Haz Mat
 - ii. Tech Rescue
 - iii. Large equipment
 - Strategic reserve
2. How much management help do I need?
 - Gee, I can't figure out the answer to #1
 - Geographical/functional divisions
 - Liaisons with other agencies or political bodies
 - PIO
 - Safety
 - Senior Advisor ((your name here) control)
 - Gee, I wish someone was managing the immediate operations while I figure all this out
3. Meeting management
 - Some place as quiet as possible
 - Everyone who needs to be there, but there are no extras
 - The meeting's conductor needs to be fierce and stay on track
 - IC needs to listen to options, but then be decisive and end the discussion
4. Information dissemination
 - In writing if possible

- Consistent message(s) to everyone
- Deliver just once if possible to assemble everyone who needs to hear it
- As simple as possible and still have enough detail to get the right work done
- Confirm understanding

Thanks to Fire Chief Jane Ellis, Stevensville Fire(ret.)

HAZARD ZONE COMMAND

Command Helpers

Ed Burlingame (Flathead Co)	Plans, Logistics, Safety
Bob Burlingame	Commo, logistics, planning, safety, Haz Mat
Rich Cowger (Stillwater Co)	IC Support, Ops, PIO, Liaison, Safety, Plans
Brian Crandell (FSTS)	IC Support, Ops, Safety, PIO, Liaison, Plans, Finance
John Culbertson (FSTS)	Command support, Haz Mat, other stuff, too.
Larry Detienne (Sheridan Co)	c 406-480-5350, dispatch 406-765-1200
Mike Doto (Silver Bow)	Logistics, Groundsupport
Bob Drake (L&C Co.)	Finance, Logistics, Plans, PIO
Jane Ellis (Rav Co)	IC Support, Finance, Plans, PIO, Liaison
Ross Fitzgerald (Power)	Logistics, Operations
Bob Fry (L & C Co.)	IC Support, IC Liaison, PIO, Ops, Plans, Safety
Britton Gray (YNP)	Structural IC Support, Ops, Safety, Plans
Kraig Hansen	IC Support, Ops, Planning 945-3834
Steve Harada (Roosevelt Co)	IC Support, Operations, Safety
John P. Harris	760-631-4329, 760-522-0298, available in MT upon request, in 4-12 hrs - interface, structure protection
Jason Jarrett (Gall Co)	IC Support, SAR & LE Liaison, Operations, Safety, PIO, Plans, Commo, AAGG
Craig Jepson	406-498-5444, all-around good guy
Pat Keim	439-0305, 442-0249, all-around hand, specialty is rail
Tom Kuntz (Red Lodge)	IC Support, Liaison, PIO, Plans
Terry Larson (FSTS)	Logistics, Operations, Safety, Plans – Tech Spec (heavy equipment, rigging), Haz Mat, IC Support
Gary Mahugh (Flathead)	IC Support, Ops, Planning Ops
Dave Maser (L&C Co)	Plans
Jim Mastin	Structural – IC Support, Ops, Water Supply
Jason McAllister	IC Support, logistics, operations, plans
Sue Mergenthaler (L&C Co)	IC Support, Finance, Logistics, Liaison
Chris Mork c 581-5315	Helicopter dude, IC support, all-around hand
Brian Nelson (Wibaux FD)	IC Support, handy guy
Cory O'Brian	Command, Operations, HM - 459-4595
Kevin Ore (Eastgate FD)	IC Support, Operations, Logistics
Jerry Prete (FSTS)	IC Support, PIO Safety, Ops, go'fer
Jason Revisky 580-9473, Hyalite FD	IC Support, Support Officer
Ed Shindoll (Broadwater Co)	IC Support, Structural
Bruce Suenram (Rav Co)	IC Support, Plans, PIO, Safety, GIS
Scott Waldron c 640-1033	IC Support, Ops, Safety, Interface/Structure Prot
Butch Weedon (Gore Hill, ret.)	IC Support, Ops, Plans
Bill Wegner (L&C Co)	Logistics, Operations
Doug Williams (Ft Benton)	Plans, Safety, PIO

COMMAND HELPERS 1 HOUR ET CONVERSATION CHECKLIST

Standard Command Situation Status, Forecast, and Action Planning

1) What is the deal here?

What are the Conditions? Actions? Needs? (CAN)

What are the customer's needs?

Who are they? What do they want?

Who/what are they connected to?

What/who is our management staff connection to customers? What is at risk?

What is the applied risk management profile at this incident? Immediate Intermediate/Long-term

What is our resource status?

Fire fighters, MS? #, duration, later increments

Other FDs Customer self help

Customer - neighbors Customer - contractors Coverage plan for effected FDs

Logistics indigenous/in the pipe line/available

Who has the jurisdictional responsibility for this incident? Current Assumptions – Strategic (MS), tactical (crews) Current Actions:

Strategy, strategic goals, tactical objectives and tactics? Effectiveness?

How to improve?

Efficiency? How to improve?

Who are we connected to in relation to outcomes/hazards? (i.e.

Northwest Energy, landowner)

2) What are three forecasts of outcomes? Related intervention options?

Assumptions?

How do we get our neighbors (FDs) home? How do we get home?

How do we get customer referred/handed off (NGOs)/stabilized?

Intervention options - Immediate/intermediate/long term assumptions/impacts What are our strategic goals and what are our strategy options?

What objectives can we affect?

Tactical requirements to complete objectives? What resources do we have to work with?

Risk management profile for options from no intervention to maximum intervention What is do-able (positive outcomes/influences) with what we have available?

Is there a role for a responsible private individual (owner/contractor etc.) in this incident? Can we reach agreement with them about alternatives and preferred alternative?

How effects FFs?

How effects customers?

How effects routine service delivery? (us and neighbor FDs) How are we living with a bad situation?

What is the highest value we can get for the time fire fighters are going to spend here?

3) Command Plan for Incident

What are the challenge and verify time frames for this escalated incident? Who will challenge and verify? When?

What is the command helper plan for this incident?

Have we conferred with every available management staff? Recently? Fully informed?

Have we called (phone)/talked to every member to see how they can contribute to the plan?

Is there a person responsible for this incident? What is

the standard logistics plan for this incident? Drinking

water? Sanitation? Food? Shelter?

Communications? Fuel? Transportation? Coverage? Relief? Rehab (med)?

What is the sustainable water supply plan for the extended operations.

History of long duration:

Any event with ongoing operations at the 1-hour elapsed time mark. USFS calls with a smoke/fire in the National Forest and asks for help. Hay

stack fire / Buried slash pile/ Tire fires.

House fires that don't respond to offensive operations within 20 minutes.

Response to a mutual aid extended/escalated operation.

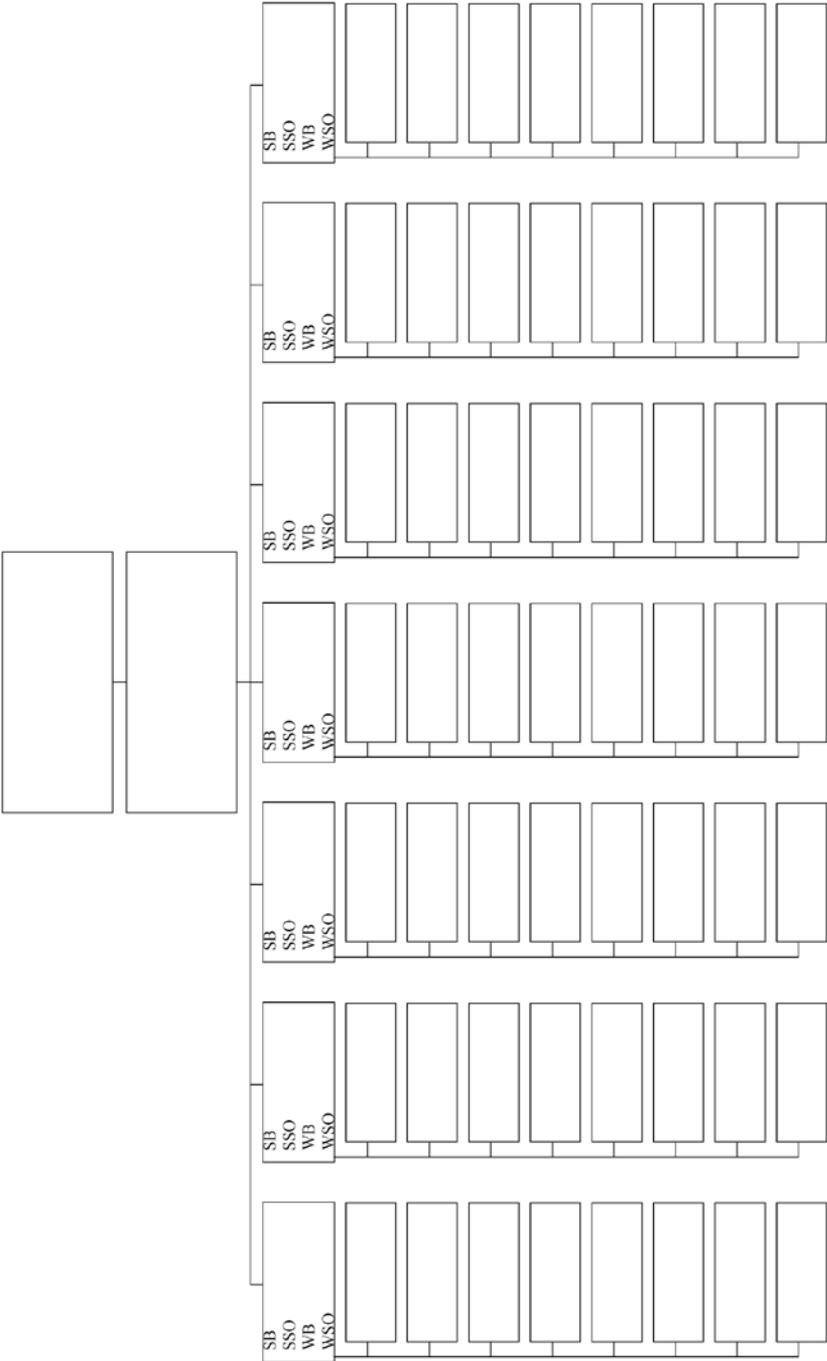
Out of county dispatches (first crew back home at alarm time plus 12 hours)

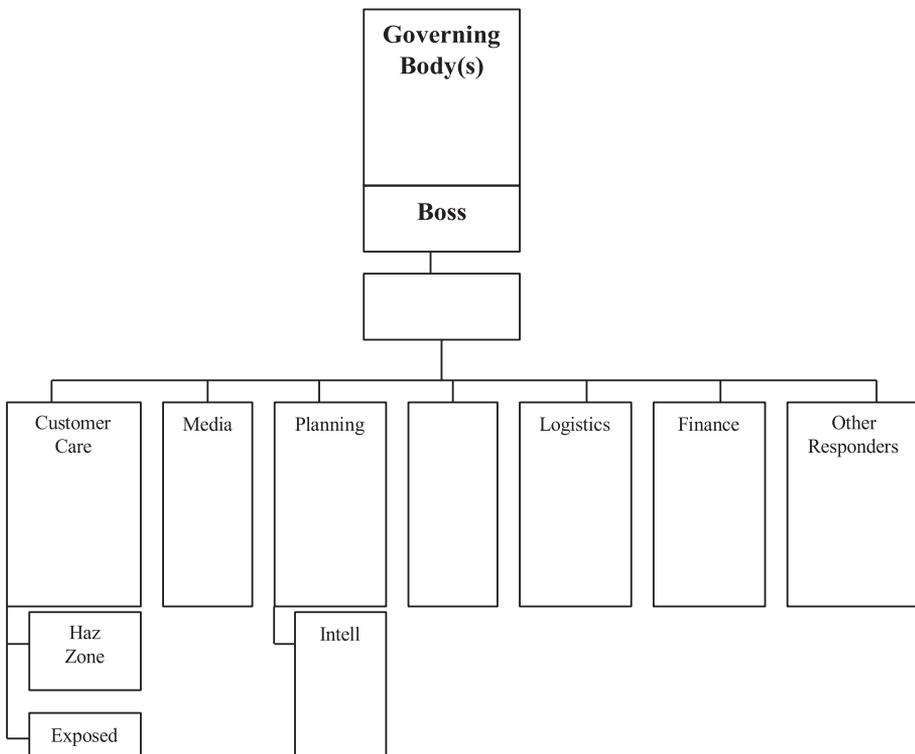
Road blockage, serious, need heavy equipment.

Example Standard IAP

Hazard – Behavior & Potential Prepared by:	Location	___/___/___@_ _ Date Time
Hazard Location – Hazard Behavior & Current Location Hazard Zone Exposed Not Involved		
Weather – Wind-Direction/Speed		Temp
Risk Management Model – Firefighters may, in a calculated manner:		
Risk their lives a lot to protect a save-able life Risk their lives a little to protect save-able property Risk their loves at all to protect what is already lost		
Critical Factors: see MMA Blue Book for hazard specific critical factors People involved or exposed Weather – wind and temp		
Strategic Goals		
<ul style="list-style-type: none"> • Responder operate safely • Provide for the safety of involved and exposed members of the community • Stabilize hazard, minimize spread of the hazard • Limit impact of hazard • Inform community & media about what is happening resulting from the incident • Respond in a manner that is cost effective • • 		
Safety Notes – Who is assigned to Safety		
Item	Location	Resolution
<ul style="list-style-type: none"> • Wear PPE • Crews stay together • Communication connection • Driver slower– Seatbelts fastened • Respect traffic • 	Incident wide “ “ “ “	All properly worn Stay with crew, look for boss Slow down to go faster, click it Awareness and barrier from
<ul style="list-style-type: none"> • EMS Plan– Report medical emergencies to your supervisor as a “Mayday”. Use EMS people in your crew to provide initial care, arrange transport (fly/drive) 		

Organization, Staffing & Communications Plan





Bosses	Contact Numbers & Email	

Governing Body(ies)/Elected Officials	Contact Numbers & Email	

Media	Contact Numbers & Email	
Reverse 911		
Tech – Twitter		

Customer Care	Contact Numbers & Email	
Family Care - Responders		

TASK FORCES AVAILABLE THRU MMA

Lewis and Clark and Jefferson Counties Rescue TaskForce

50 Fire Fighters and 6 Management Staff

Point of Contact: Lewis and Clark Co. Fire Coordinator (see page 3) ask for “Maximum Rescue Deployment Mutual Aid Run Card”

Flathead County

25 Firefighters and Command Staff

Call dispatch 406-758-5610 and ask that they page: Gary Mahugh, Chief 2501

Gallatin and Park Counties Rescue TaskForce

50 Fire Fighters and 12 Management Staff in 6 or more vehicle

Points of Contact: Hyalite FD Chief Brian Nikolay 451-4726, John Culbertson 581-8310 or Hyalite FD Command Officer or Amsterdam FD Command Officer

Hi Line Task Force

25 Fire Fighters and Management Staff

Valley County – Fire Chief Sara Bryan, 263-2800, 911 Ctr 228-4333

Valley Co. Fire Warden Rob Brunelle 263-7621

Glasgow City–Chief Brandon Brunelle, 228-4801

Wolf Point FD – Clint Bushman, 853-8849

Phillips County - Clark Kelly, h 654-1969, w 654-2087

Mike Flatt ,County Chief c 390-1646, w 673-3252, Phillips Co. Disp. 654-1211

Malta Fire Chief, Josh Newman, 509-750-5352

Blaine County – Kraig Hansen Fire Chief, 357-3691 or cell 945-3834

Fort Peck – Chief Landon Holte 228-4333, cell 671-8578

Roosevelt Co. VFD – Fire Warden Cam Friede 480-2136, Mike Olsen 480-0730

St. Marie VFD – August Aho 263-9733

Culbertson VFD-Alan Aspenlieder, Chief 790-0888 cell

Bainville VFD-Lyle Lambert, Chief 769-7039

Cascade County and Points North Rescue TaskForce

20 Fire Fighters and Management Staff

Sun Prairie FD 788-9339, Leonard Lundby 406-899-8873, or Gore Hill FD

Command Staff at Cascade Co 911 454-6879 , Fire Chief Jason McAllister

406 403 8774, FC Nick Dale, Fairfield FD 406-590-2510 (Teton Co.), FC

Walter Berry, Del Bonita FD, 406-450-0275 (Glacier Co.), FC Kevin Moritz,

Conrad FD 406-289-0289(Pondera Co.), Chief Nathan Courtnage, Havre FD

406-390-4241

Stillwater and Carbon Counties Rescue Task Force

20 Fire Fighters and Management Staff

Rick Cowger – Columbus FD 406-321-1180

Stillwater County 911 Center 406-322-5326

Tom Kuntz – Red Lodge FD, 406-855-6198 Carbon County 911 Center 446-1234

Missoula Co

15 Firefighters and Management Staff

Joe Calnan – Frenchtown FD Missoula Co Disp 406-258-4760, c - 406-240-5759

Silver Bow County Rescue TaskForce

15 Fire Fighters & Management Staff

Mike Doto, c 491-9368, Mike Leary @ BSB 911 #782-4224 Dave Kneebone, c 498-5312

Eastern Montana Rescue Task Force

40 Fire Fighters and Management Staff

Glasgow City- Chief Brandon Brunelle, 230-2472, 228-4333

Valley Co. Long Run, - Chief Sara Bryan, 263-2800, Valley Co 911 228-4333

Mobile cascade port air comp, generators, bottled water

McCone Co. – Circle VFD, Jess Beery Chief, c 939-3318, h 485-3313

West Glendive FD – Dawson Co. 911 377-2364

Sidney VFD & Richland Co – Chief Larry Christensen c 489-4629, LEC 433-2919

Assistant Chief Rob Gilbert

Terry FD – Dwight Tague, c 951-6165, h 635-5702, 911 Center 788-7101

Wibaux FD – Brian Nelson, c 701-218-0267 or 701-872-6648, h, 406-795-2605, 911 Center 795-2222

Baker FD – Tom Bruha, 978-3473, Fallon County 911 -778-7139

Glendive FD – 911 Center 377-2364

Broadus VFD – Raymond Ragsdale Chief 935-2242

Wolf Point –Fire Chief Clint Bushman 853-8849

Plentywood – FC Bill Nyby 765-8525, Medicine Lake Jim Bobo c 480-5957, Sheridan Co. Dispatch 765-1200

Ravalli County

5 engines, 25 firefighters and command staff

Rex Olsen c 550-0938, Ravalli Co. 911 406-363-3033, Fire Warden Charley

Lamson 239-7384, Brad Mohn 360-4379

MONTANA FIRE DEPARTMENT BASED EMS TRANSPORT RESOURCES

Carbon – Red Lodge, **Stillwater** – Columbus, **Lincoln** – Fisher River

Flathead – Whitefish, Evergreen, Olney, Kalispell, Marion, West Valley, Big Fork,

Big Mountain, **Gallatin** – Big Sky Fire, Hyalite Fire (BLS), Three Forks

Ambulance, West Yellowstone Fire, **Missoula** – Frenchtown Fire

HAZARD ZONE – LOGISTICS SUPPORT

Stuff folks have that they will share - you call, they haul, that's all.

Drinking water

In the possession of the FD. .5 liter, or more per bottle, by case or pallet, note: it takes about ½ pallet of drinking water per day for a TF.

Eastgate F.D. (L& C Co.) 1 pallet, .51 bottles

West Yellowstone FD (Gallatin Co.) 1 pallet, .51 bottles

Valley Co. Long Run, bottled water

Hyalite Fire Dept., bottled water

Sun Prairie FD – pallet drinking water

SCBA compressor and fill station mobile trailers

Ravalli County – Three Mile FD

Lewis Clark County – West Valley FD

Silver Bow County – Centerville FD

Gallatin County – multiple air cascades, no mobile compressors

Valley Co. Long Run – portable air compressor

Motor fuel – mobile

Eastgate FD – 500 gallons/100 gallons fuel tender, fill to order

Hyalite Fire Dept. – 100 gallons diesel fuel tender

Mobile Decon Shower 4 stall – Libby FD – Lincoln County 911 – 293-4112,
Broadwater County, 949-5535

Hand sanitizer – bulk or single towelettes

Toilets – portable

Incident command post – mobile

Lewis and Clark County – trailer

Flathead County - trailer

Gallatin County – Trailer thru Gallatin County Fire

Gallatin County Sheriff – Command Vehicle (“6-CV”), truck mounted

Red Lodge – “The Bus”

Safety equipment – PPE (gloves, N-95 mask, eye protection)

Hand tools – (sledge hammers, pry bars, shovels, buckets, claw hammers, wonderbars, Channel loc pliers, etc)

Generators and lights

Small Generators – Valley Co Long Run, Broadwater Co, 35 kw propane

Extension cords – 12/3 or better, 100’

Markers – permanent, dry erase, duct tape, spray paint, logging crayons

Barrier tape – “Fire Line”, “Hazard”, etc.

Search camera –

Flathead County thru Creston FD

Batteries - AAA, AA, C, D

Combustible gas meters

Gallatin County FDs – at least 10

Mobile Cascade –Valley Co. Long Run

Hyalite Fire – 8 x 6,000psi, fill station (Rescue 6)

Serious service truck

Manchester FD – 180 gallons gas, 200 gallons Diesel fuel, welder, genset lights, tools, air impact wrench (big), torch, air compressor

Flat bed truck with piggy back fork lift

Manchester FD – 20 ft flatbed, for moving palletized stuff

Mask wipes – Wolf Point FD

Class A foam – Wolf Point, Hyalite Fire(Gallatin Co.)

Class B foam – Libby – Steve Lauer – 283-1883

CRITICAL ISSUES FOR LARGE INCIDENT FINANCE

1. Will it be necessary to pay for more resources than the host district’s budget can absorb?

- Will the duration exceed MMA ability?
- Will even basic logistics (food, fuel) exceed the local budget?
- Are there specialized resources that can only be gotten by paying?

2. If yes to any of the above, then you need to find a financial partner. Notify all the appropriate local officials as soon as possible.

- Fire District Trustees
- City Council
- County Commissioners
- DES Coordinator – make sure they are making state level notifications if the incident will exceed all local resources collectively
- District’s Attorney

Special Note: If the incident is haz mat, determine if there is a “responsible party.” If there is, retain an attorney with special expertise in environmental law as soon as possible.

3. Do you need additional financial record keeping help?

- Does the District already have a really handy financial person? Probably needs to be more than whoever pays the monthly bills.
- Is record keeping assistance available from the County Auditor’s office?
- Can you find someone through MMA that can help guide financial record keeping?

4. Keep meticulous records of what is expended. You must be able to justify the reimbursement you will eventually be asking for.

- Personnel Info
 - i. W-9
 - ii. I-9
 - iii. Timesheets and some indication of what they were doing
- Equipment Info
 - i. Time used and purpose
 - ii. Have a contract, or signed release
 - iii. Be sure who owns the equipment
 - iv. Be sure operator is covered by work comp
 - v. Sole proprietor – if payment will be over \$600, get soc sec #
- Activity logs and Incident Action Plans
- If you missed info early in the incident, get it captured as soon as possible. Don't wait until the end of the incident because no one will remember then.

5. Possible funding sources

- County 2-mil Disaster Levy
- State – Governor's Disaster Fund
- Federal – FEMA
- These all will pay for extraordinary costs: people and equipment not normally on the jurisdiction's payroll
- Haz Mat – Owner/shipper is responsible for "all necessary costs", which means you can recover regular time of regular employees, too. With a haz mat incident, be prepared for a long legal fight that will involve not only the responsible party, but their attorneys. This may create cash flow issues that will need to be shared with the County, and maybe the State.

6. Wildland Fires

- DNRC – Co-op program, County Assist
- FEMA fire grants
- Be careful about signing cost sharing agreements
- Be careful about agreeing to become part of unified command. Be clear about whether or not that means you're accepting a part of the financial consequences of all the command decisions that are made.

7. Get a Disaster Declaration in place as soon as possible

- Should be handled by the County DES Coordinator. You may need to answer questions for the County Commissioners before they will adopt it.
- If it's needed, get it in place early. Be sure it dates to the beginning of the incident. Most funding sources will not cover costs incurred before the date of the incident.

8. Be prepared to be audited, maybe several years later

- Keep complete file on the incident, including activity logs, time sheets, incident

action plans, copies of invoices, claims, etc

9. Do not try to work from your memory.

10. Be prepared for damage claims after the incident

- Do not deny claims out of hand. Being nice and listening to Mrs or Mr Smith may make the issue go away, or may minimize the cost.
- Having good activity logs will help establish whether or not the damage was actually caused by the incident.

Thanks to Fire Chief Jane Ellis, CPA, Stevensville Fire (ret.)

HAZARD ZONE COMMAND

Example of a Unified Command procedure

Gallatin County Incident Management System

UNIFIED COMMAND

Purpose: An Incident Management System (IMS) is hereby adopted for the purpose of appointing officials from local government to be in charge of response and recovery operations for specified emergencies and disasters. The Gallatin County Incident Management System (GCIMS) is a system of systems, generally organized by jurisdiction or functional discipline. (Ex. Gallatin County Fire Council standard operating procedures)

Components of the IMS: The incident management system has a number of components. These components working together interactively provide the basis for an effective IMS concept of operation:

- Common terminology
- Modular organization
- Integrated communications
- Unified command structure
- Consolidated action plans
- Manageable span-of-control
- Predesignated incident facilities
- Comprehensive resource management

Unified Command: Unified Command is a system to address the operational needs of any given event. The role of the unified command participants is to create an integrated package to respond to those needs.

The need for a unified command structure is brought about because:

- Incidents have no regard for jurisdictional boundaries or functional disciplines. Virtually every response involves multiple functional disciplines and often multiple jurisdictions.
- Individual agency responsibility and authority is normally legally confined to a single jurisdiction and functional discipline.

The concept of unified command simply means that all agencies who have a jurisdictional responsibility or a functional discipline responsibility at a multi-jurisdictional incident contribute to the process of:

- Determining overall incident strategic goals
- Selection of strategies
- Insuring that joint planning for tactical activities will be accomplished.
- Insuring that integrated tactical operations are conducted. Making maximum use of all assigned resources

Where there are multiple jurisdictions and/or functional disciplines operating on an event, every effort should be made to adopt standard operating procedures that address multiple agency interoperability. (ex. GCFC/GCSO Joint Response to Violent Incidents SOP) (Gallatin County Communications Plan)

Selection of Unified Command Participants: The proper selection of participants

to work within a unified command structure will consist of:

- Any jurisdiction or discipline who's safety of a responder is affected.
- Any jurisdiction or discipline who has customers affected by the event.
- Any jurisdiction or discipline who's workload is affected by the event.
 - Money already spent
 - Resources already committed
 - Committed to spend money
 - Committed to providing additional resources

The criteria can, and should be reviewed and verified periodically throughout the incident.

Responsibility of Unified Command Participants: It is the responsibility of the participants in the unified command group to represent their individual jurisdictions, responders, or customers needs. These needs will be the basis for identifying strategic goals and tactical objectives to mitigate the incident at hand.

Participants must have either:

- Direct "decision making authority" for the agency
 - Able to commit money and/or resources

Or

- Immediate access to someone within your agency who does have that authority.

Consider using C.A.N. (Conditions, Actions, Needs) reports as an initial means of exchanging information between agencies.

*** The intent of having the above mentioned personnel as part of the Unified Command Group is an effort to make efficient and accurate decisions in a timely manner. ***

Critique Process- improving “next time” (AVB&SH)

Conditions

What was the situation encountered?

Actions

What was done in response to the situation?

Outcomes

What resulted from the actions taken?

Lessons Learned or Reinforced

Based on the outcomes, what was learned, or reinforced? (opportunity to ask “why?”, 5 x)

Action Plans (Do what’s next, keep going. AVB

Do the right thing, at the right time, in the right way,
and for the right reason, WSW)

(for each Lesson Learned and Lesson Reinforced, list what we’ll start, stop, and keep doing.)

Start doing:

Stop doing:

Keep doing:

MEDIA GUIDE

Interview Tips

Be prepared, write down notes and review before interview.

Be concise.

Use the words “_____Fire Department.” Message.

Be honest. If you don't know, say so!

Take opportunities to promote FD & human interest stories.

Remember, everything is on the record.

Be courteous and helpful to the media.

Be yourself.

If you need help, ask for a PIO.

No sunglasses. - Turnouts OK.

Fire Information

For injuries/fatalities - DO NOT release names until next of kin is notified and IC says its okay to release names.

Good response times/time under control

Address and unit number

Cause and dollar loss - per investigator (only if known)

Do not give out name of occupant/owner

Conditions on arrival/damage, Specifics of operations

Fire prevention issues/smoke detectors

Unusual hazards/problems

Relocation of residents

Number of FD units at incident

Human interest/exceptional performance

With OK from IC/Safety, provide media w/close vantage

Each Alarm = 10 FD units/30 fire fighters

EMS Information

For injuries/fatalities - DO NOT release names until next of kin is notified and IC/PIO says it's OK to release names.

Good response times

Injuries & treatment

Specifics of operations, Unusual hazards/problems

Human interest/exceptional performance

Coordinate information with other agencies

Numbers, genders, hospital, condition of patient(s)

IF CLEARED BY IC/PIO

Haz Mat Information Chemical/Product

Good response times and number of units

Types and quantity of chemicals

Hazards to public/environment

Cause of release

Specifics of operations

Area evacuated

Anticipated length of operation

Human interest/exceptional performance

General chemical information (see Chemical & Physical Prop)

Rescue Information

Good response times

Age, Gender, no names, injuries, resident or tourist

Cause of incident Specifics of operations - Unusual hazards

THOUGHTS ON PUBLIC INFO CALL CENTERS

Missoula County 911 Director Jane Ellis (ret.)

11/3/07

Big piece of customer service

Information sources

- Decide at the beginning what sources are official and what info can be given out. Call takers need to adhere to that party line.
- Sources
 - Local Fire, Law Enforcement, Public Health
 - State Agencies
 - Federal Agencies
 - Don't repeat info from the general public, but it may be valuable to pass on to operations
- Have to have cooperation from Operations to get good current info
- Background Information
 - Good maps with named roads, topography and incident boundary
 - Websites
- Develop a "scout" position who goes out in the field to gather info from Ops

Staffing

- Call Takers don't all need to be responders. Helpful if some of them are. Great use for light duty people
- CT's need excellent phone skills, lot of empathy
- Need to not gossip
- Willing to stay within the party line

- Sharp enough to pass info off to Ops when it seems important
- Find people available for large blocks of time, means less training
- CT's should use call-backs when they don't know
- Training
 - How to talk to stressed people
 - Brief on evacuation policies and procedures
 - Jargon of the incident
 - What they might expect fro questions
 - Brief on any technology they might be using

Physical Facilities

- Phone system where you can publish one number and have multiple pick-ups
- White boards for rapidly changing info
- Wall space to hang maps
- Notebooks for each Call Taker to keep info in
- Computers with access to internet
- Access to TV news is helpful

**NOAA NATIONAL WEATHER SERVICE
FORECAST ASSISTANCE**

NOAA operates National Weather Forecast Centers in Missoula, Great Falls, Glasgow and Billings. These centers can provide valuable spot weather forecast information to All-Hazard incidents.

Spot weather for an incident can be obtained in two ways:

- A direct call to the local forecast center.
- Submission of a “Spot Weather Request” from the closest center’s website.

A phone call to the center would be the preferred method. This would allow direct connection with a center meteorologist. They could than establish who needed the information, type of incident, what type of meteorology product was required and a call back number for updates or follow-up.

Request Template

Incident Name: _____

Date: _____ **Time:** _____

Requesting Agency: _____

Requesting Official: _

Contact Person: _____

Phone Number: _____

Fax Number: _____

Incident Type: Wildfire Haz-Mat Flood SAR Other

Describe: _____

Reason for Request

*Must choose either Wildfire or one of the Non-Wildfire reasons

- Wildfire
- Non-Wildfire *choose one:*
 - Under the Interagency Agreement for Meteorological Services (USFS, BLM, NPS, USFWS, BIA)
 - State, tribal or local fire agency working in coordination with a federal participant in the Interagency Agreement for Meteorological Services.
 - Essential to public safety, e.g. due to the proximity of population centers or critical infrastructure.

Location

*Lat: _____ *Long: _____

*Elev: _____ Top: _____ Bottom: _____

*Aspect: _____

7.5' Quad: _____

Legal: (T/R) _____ Size: (Acres) _____

*Enter Lat/Lon (WGS84/NAD83 preferred), Legal(T/R) also acceptable.

Fuel

Type: _____

Sheltering

- Full
- Partial

Primary forecast elements

(What/When do you need?)

TDA	TNT	TMR	(Today, Tonight, Tomorrow)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clouds / Weather
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chance of Wetting Rain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relative Humidity
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20 Foot Wind
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Smoke Dispersion

What weather information do you need and in what time frame(s)?

Weather Service Regional Offices

Missoula 406-329-4840,

Spot Weather: spot.nws.noaa.gov/cgi-bin/spot/spotform?site=mso

Great Falls 406-453-2081

Spot Weather: spot.nws.noaa.gov/cgi-bin/spot/spotform?site=tfx

Glasgow 406-228-4042

Spot Weather: spot.nws.noaa.gov/cgi-bin/spot/spotform?site=ggw
or wrh.noaa.gov/firewx/?wfo=ggw

Billings 406-652-0851

Spot Weather: spot.nws.noaa.gov/cgi-bin/spot/spotform?site=byz

Requesting a Helicopter from Montana DNRC

Prepared by Chris Mork, 406-581-5315

When should we ask for air support?

- High values at risk
- Structures threatened
- High probability of large growth
- Limited local capacity and or capability
- Long response times from local IA resources
- Poor or no road access
- Pre-planned
- Need for prompt technical assistance
 - Heavy Equipment Direction
 - Sawyer
 - Burning
 - Line Supervision
 - Mapping
 - Recon

What you get with a DNRC Helicopter & crew

- Purpose built machine
 - Highly experienced and qualified pilot
 - Up to 324 gal of water/bucket
 - Foam application
 - Troop & Cargo transport
- Crew capacity and capability for a multitude of tasks
 - IC assistance
 - Heavy Equipment Direction
 - Line Supervision
 - Burn operations
 - Chain saw/hazard tree felling
 - Engine Operations
 - Air support expertise
- Conduit to DNRC fire program

What we need for initial response.

- Location
 - Latitude and Longitude
 - Degrees, Decimal, Minutes (DDM)
 - Ex. 45°30.500' N x 111°45.250' W
 - If not in DDM, let dispatch know and they can convert
- Ground Contact name
 - IC or designee
 - Monitor Yellow/Orange frequency, or specified channel
- Basic fire size-up
- Special Requests/needs
 - Specialty function or equipment
- Any other information you want to give.

Upon aircraft arrival:

When we get within range (5nm) or sight of incident we will attempt initial contact with the person listed from our dispatch information. We will make initial contact on the Yellow frequency unless the incident is in an area of known interference. We will not engage the incident unless we can make positive contact with a ground contact (we will stage). Having someone listen to the radio for initial contact is imperative. As we arrive on-scene we will be going thru our arrival procedures; these procedures include an overflight of the incident, incident size-up, water source identification, Landing and Safety Zone identification, and other hazard ID to personnel and aircraft.

We will ask what our assignment/task will be to help us size-up and prepare to assist. If you know of any hazards, water supply or other critical information to pass on please feel free after initial contact is made. We are more than happy to assist the needs of the incident in any way we can.

What we would like from you

- Conditions, Actions, Needs report
 - Task, Location, Objective assignment
- Water Identification

How to order:

Each county may have a different protocol for ordering DNRC resources. Worst case scenario is to call your local DNRC office, interagency dispatch center or me and ask for the help. Work with your local DNRC office and/or fire wardens for local ordering protocols.

Water:

- Less and less available – Climate (snowpack, rainfall), land owner permission, I.A.S
- Preplan, pre-identify, pre-use agreements

YOUR RESPONSE INFORMATION

YOUR ASSISTANCE INFORMATION

YOUR RESPONSE NOTES

ADJOINING STATE CONTACTS

MMA RADIO PLAN

ROLES DURING A MONTANA MUTUAL AID DEPLOYMENT

- Person (s) who receive the request for help from an Incident Commander
 - Get a helper - Get 2 phone lines, one for incoming only, prefer landlines
 - Send scouts out ahead of fire trucks
- Person (s) who locate and contact MMA help for an Incident Commander
- Person (s) to assemble MMA Task Forces at home
- Person (s) who go with MMA Task Forces to incident
- Person (s) who go to incident commander ahead of MMA task forces, and help the requesting IC receive & deploy the MMA Task Forces

Connect, stage and get briefed, Scout (hazard, logistics, commo, etc)

- Person (s) who move information from the IC back to the homes of the MMA Task Forces during deployment
- Person (s) staying back to help facilitate and connect the needs of the responding mutual aid companies, and the requesting incident commander.

Other roles:

- Home response area covered during deployment
- Keep connected to responding command helpers
- Find “On Deck” help
- Facilitate logistical support (fuel, food, water, etc)

<p style="text-align: center;">Assisting Department</p> <p>Department Name/County: _____</p> <p>Task Force Leader: _____</p> <p>Stay Behind Contact: _____</p> <p>Stay Behind Phone: _____</p> <p>Resource</p> <p>Unit/Type: _____</p> <p>Date: _____ Time: _____</p> <p>Destination: _____</p> <p>Staging Location: _____</p> <p>Incident Type: _____</p> <p>Travel Radio Channel: _____</p> <p>Incident Check-In Radio Channel: _____</p> <p>Assisting Personnel</p> <p>Crew Leader: _____</p> <p>Firefighters: _____</p> <p>_____</p> <p>_____</p>	<p style="text-align: center;">Assisting Department</p> <p>Department Name/County: _____</p> <p>Task Force Leader: _____</p> <p>Stay Behind Contact: _____</p> <p>Stay Behind Phone: _____</p> <p>Resource</p> <p>Unit/Type: _____</p> <p>Date: _____ Time: _____</p> <p>Destination: _____</p> <p>Staging Location: _____</p> <p>Incident Type: _____</p> <p>Travel Radio Channel: _____</p> <p>Incident Check-In Radio Channel: _____</p> <p>Assisting Personnel</p> <p>Crew Leader: _____</p> <p>Firefighters: _____</p> <p>_____</p> <p>_____</p>
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<p style="text-align: center;">Assisting Department</p> <p>Department Name/County: _____</p> <p>Task Force Leader: _____</p> <p>Stay Behind Contact: _____</p> <p>Stay Behind Phone: _____</p> <p>Resource</p> <p>Unit/Type: _____</p> <p>Date: _____ Time: _____</p> <p>Destination: _____</p> <p>Staging Location: _____</p> <p>Incident Type: _____</p> <p>Travel Radio Channel: _____</p> <p>Incident Check-In Radio Channel: _____</p> <p>Assisting Personnel</p> <p>Crew Leader: _____</p> <p>Firefighters: _____</p> <p>_____</p> <p>_____</p>	<p style="text-align: center;">Assisting Department</p> <p>Department Name/County: _____</p> <p>Task Force Leader: _____</p> <p>Stay Behind Contact: _____</p> <p>Stay Behind Phone: _____</p> <p>Resource</p> <p>Unit/Type: _____</p> <p>Date: _____ Time: _____</p> <p>Destination: _____</p> <p>Staging Location: _____</p> <p>Incident Type: _____</p> <p>Travel Radio Channel: _____</p> <p>Incident Check-In Radio Channel: _____</p> <p>Assisting Personnel</p> <p>Crew Leader: _____</p> <p>Firefighters: _____</p> <p>_____</p> <p>_____</p>
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Assisting Department

Department Name/County: _____

Task Force Leader: _____

Stay Behind Contact: _____

Stay Behind Phone: _____

Resource

Unit/Type: _____

Date: _____ Time: _____

Destination: _____

Staging Location: _____

Incident Type: _____

Travel Radio Channel: _____

Incident Check-In Radio Channel: _____

Assisting Personnel

Crew Leader: _____

Firefighters: _____

Assisting Department

Department Name/County: _____

Task Force Leader: _____

Stay Behind Contact: _____

Stay Behind Phone: _____

Resource

Unit/Type: _____

Date: _____ Time: _____

Destination: _____

Staging Location: _____

Incident Type: _____

Travel Radio Channel: _____

Incident Check-In Radio Channel: _____

Assisting Personnel

Crew Leader: _____

Firefighters: _____

Assisting Department

Department Name/County: _____

Task Force Leader: _____

Stay Behind Contact: _____

Stay Behind Phone: _____

Resource

Unit/Type: _____

Date: _____ Time: _____

Destination: _____

Staging Location: _____

Incident Type: _____

Travel Radio Channel: _____

Incident Check-In Radio Channel: _____

Assisting Personnel

Crew Leader: _____

Firefighters: _____

Assisting Department

Department Name/County: _____

Task Force Leader: _____

Stay Behind Contact: _____

Stay Behind Phone: _____

Resource

Unit/Type: _____

Date: _____ Time: _____

Destination: _____

Staging Location: _____

Incident Type: _____

Travel Radio Channel: _____

Incident Check-In Radio Channel: _____

Assisting Personnel

Crew Leader: _____

Firefighters: _____

Acknowledgments

Chair Sue Mergenthaler, AAGG
Fire Chief Ken Mergenthaler
Fire Chief Don Abbott, and Bev
Fire Chief Rick Abraham
Fire Chief Alan V. Brunacini
Fire Chief Brandon Brunelle
Captain II Bobby Burlingame
Captain II Ed Burlingame
Fire Chief Fred Cady
Asst. Chief Craig Campbell
Fire Chief Bruce Charles
Battalion Chief Kevin Conant
Fire Chief Chris Connealy
Fire Chief Roy Cornell
Fire Chief Rich Cowger
Captain John Culbertson
Asst. Chief Chris Dahlhauser
Fire Chief Bobby Drake
Sheriff Leo Dutton, L&CCSO
The Eastgate Fire Fighters
Fire Chief Dean Ellis
Fire Chief Jane Ellis
Fire Chief Bob Fry
Fire Chief Russ Giese
Fire Chief Gordon Gieser
Fire Chief Dean Glover
Fire Chief Britton Gray
Fire Chief Kraig Hansen
Fire Chief Bob Hanson
Fire Chief Steve Harada
Batt Chief John P.(JP) Harris
Fire Chief Steve Hester
Fire Chief Peter Hodge
Fire Chief Aaron Holst
Battalion Chief Jeff Jackson
Capt. Jason Jarrett, GCSO
Captain Craig Jeppson
Asst Chief Bob Kun
Chief Tom Kuntz

Fire Chief Ed Lewis
Captain Doug Lobaugh
Dan Madrzykowski, P.E., PhD
Fire Chief Leonard Lundby
Fire Chief Gary Mahugh
Fire Chief Dave Maser (Plans Wiz)
Fire Chief Jim Mastin
Fire Chief Ron Mastin
Sr Deputy David McGinnis
Fire Chief Thomas F. McIsaac
Captain Nate Messer
Fire Chief Tim Mort
Fire Chief Tim Murphy
Batt Chief Cory O'Brian
Fire Chief Kevin Ore
Batt Chief Dewey Perks
Fire Chief William Perrin
Fire Chief Curtis Pietrick
Fire Chief Ed Plaughter
Fire Chief Jay Reardon
Fire Chief Jason Revisky
Deputy Chief Rick Roatch
Fire Chief Mitch Ross
Fire Chief Mike Schafer
Fire Chief Al Scholes
Fire Chief Jerry Shephard
Shirley and Jim
Sheriff Dan Springer, GCSO
Fire Chief Sonny Stiger
Assistant Chief Steve Storment
Fire Chief Bruce Suenman
Fire Chief Bruce Varner
Fire Chief G. Scott Waldron
Fire Chief William J. Weber
Fire Chief Butch Weedon
William S. Westfall
Sheriff Doug Williams, CCSO
EMS Director Linda Williams
Fire Chief Derek Yeager

MUTUAL AID CONTACTS FOR NEARBY STATES

Idaho: Larry Simms, Fire Chief Hauser Fire Department, ID
North Idaho Fire Chiefs 1-208-773-1174 hauserfd@cda.twcbc.com

Wyoming: Teton County Fire , 24 hour dispatch Teton County 911 1-307-733-2331,
Office 1-307-733-4732

South Dakota: _____

North Dakota: Rob Knute Minot Rural Fire Asst Chief and director of ND state fire school

Washington: Spokane County Fire District 4 Office 1-509-467-4500 info@scfd4.org

Mutual Aid Box Alarm System(MABAS) :
CEO Jay Reardon Office 1-630-717-2744 Cell 1-847-727-6331

Canada:

MONTANA FIRE SERVICE MUTUAL AID - Radio Plan

Montana Mutual Aid Frequencies

Identifier	Function	National Designato	Tx (Mobile Perspective)	Rx	Notes
Gold	Check-In/Staging	None	153.9050	153.9050	
Maroon	Command/Control	VFIRE21	154.2800	154.2800	
Coral	Fireground #1	VFIRE22	154.2650	154.2650	
Scarlet	Fireground #2	VFIRE23	154.2950	154.2950	
Copper	Fireground #3	VFIRE24	154.2725	154.2725	Note 1, 2 & 3
Burgundy	Fireground #4	VFIRE25	154.2875	154.2875	Note 1, 2 & 3
Crimson	Fireground #5	VFIRE26	154.3025	154.3025	Note 1, 2 & 3
Red	MT State Fire Mutual Aid	None	154.0700	154.0700	
Neon	General Mutual Aid and Coordination	None	157.4250	157.4250	Note 4
Ruby	Fire Repeater	None	159.830	153.830	Note 5
Garnet	Fire Repeater Control	None	159.3450	159.345	Note 5
Tan	Medical Air-Ground	VMED28	155.3400	155.3400	
White	Hospital - Ambulance	None	155.2800	155.2800	
Pink	EMS Dispatch EMS Command & Control	None	155.3850	155.3850	

Notes

Note 1	Secondary to adjacent 7.5khz licensed channels. Use caution when assigning channels that are close in frequency and geographical proximity.
Note 2	Maximum mobile power is 100 watts
Note 3	Narrowband configuration only
Note 4	Maximum mobile power is 40 watts, narrowband configuration. Not available in multiple Northern Tier Counties due to FCC limitations. See <i>Mutual Aid and Common Frequencies Manual 2011</i> .
Note 5	Establishment of the Ruby/Garnet repeater requires equipment and a change in frequency configuration.

**Montana Interoperable
Narrowband Frequencies
(FCC License Required)**

Frequency	Name	National Designation	Usage	Restriction Notes
172.2250 Base Tx 170.4750 Base Rx	Alpha	None	General Use Multi-Agency Mobile Repeater	15 watt
172.3750 Base Tx 170.5750 base Rx	Bravo	None	General Use Multi-Agency Mobile Repeater	15 Watt
154.4525	Charlie	None	General Purpose Interoperability for Fire, EMS, Law including Local, State & Federal	15 Watt
155.7525	Delta	None		15 Watt
158.7375	Echo	None		15 Watt
159.4725	Fox	None		15 Watt

Other Frequencies, their use and restrictions are available in the *Mutual Aid and Common Frequencies Manual 2011* as well as *National Interoperable Field Operations Guide, version 1.4*

National Non-Federal VHF Interoperable Channels *

Description	National Designator	Frequency	Tone
Calling	VCALL 10	155.7525 Tx/Rx	CSQ/156.7
Tactical	VTAC 11	151.1375 Tx/Rx	CSQ/156.7
Tactical	VTAC12	154.4525 Tx/Rx	CSQ/156.7
Tactical	VTAC 13	158.7375 Tx/Rx	CSQ/156.7
Tactical	VTAC 14	159.4725 Tx/Rx	CSQ/156.7

*May be used when user holds an FCC Public Safety License per Part90

North Dakota Interoperable Radio Zone 5

North Dakota utilizes a standard configuration in “Zone 5” of their radios for mutual aid use.

North Dakota Statewide Interoperability Bank/Zone 5

	Rx/Tx Freq	Tx/RX CTCSS Tone	Primary/Intended Use	Common Name (National Designation)
CH1			Not Used	
CH2	155.475	156.7	State Radio NCS and Incident Command	S3VLAW31
CH3	155.475	156.7	State Radio NCS and Incident Command	S3VLAW31
CH4	151.1375	156.7	Incident Command Net (Alternate/Spare)	VTAC11
CH5	154.4525	156.7	Incident Command Net (Alternate/Spare)	VTAC12
CH6	158.7375	156.7	Operations Section Chief Net	VTAC13
CH7	155.7525	156.7	Staging Area Manager Net	VCALL10
CH8	155.370	146.2 CSQ	Law Command (Lead Tactical Law Enforcement Official)	LAWCMD
CH9	155.430	192.8	Law Enforcement Tactical 1	LAWTAC1
CH10	155.505	192.8	Law Enforcement Tactical 2	LAWTAC2
CH11	155.4825	156.7	Law Enforcement Tactical 3	VLA32
CH12	154.295	156.7	Fire Command (Lead Tactical Fire Official)	SVFIRE23
CH13	154.2725	156.7	Fire Tactical 1 (Fire Div/Branch/Group)	VFIRE24
CH14	154.2875	156.7	Fire Tactical 2 (Fire Div/Branch/Group)	VFIRE25
CH15	154.3025	156.7	Fire Tactical 3 (Haz-Mat)	VFIRE26
CH16	154.280	156.7	Fire Tactical 4 (Alternate/Spare)	VFIRE21
CH17	154.265	156.7	Fire Tactical 5 (Alternate/Spare)	VFIRE22
CH18	155.340	156.7	EMS Command (Lead Tactical EMS Official)	S5VMED28
CH19	155.3475	156.7	EMS Tactical 1 (EMS Div/Branch/Group)	VMED29
CH20	159.4725	156.7	EMS Tactical 2 (EMS Div/Branch/Group)	VTAC14
CH21	155.160	156.7	Search & Rescue (SAR) Ground Operations	SARWFM

Notes

National designators utilize the following format:

V=VHF radio service, Fire, Law & Med self-explanatory, 31, 21, 29 etc are the frequency designator

SVLAW31, SVFIRE23, S5VMED28 are North Dakota equivalents to the National Designator assignment. See: *National Interoperable Field Operations Guide, version 1.4*

Exposure Reduction – Decon after fires

John Culbertson, PhD, MT Fire Training School

Do the following to reduce exposure to toxic byproducts of structure fires.

To minimize skin absorption of contaminants during (or after) a fire response:

- Wear NFPA 1971/1981 compliant protective ensembles for structural fires during knockdown and overhaul for all fire responses.
- Wear long hoods that are unlikely to come untucked during operations.
- Wash hands immediately and shower as soon as possible after fire suppression, overhaul, and investigation activities.
- Put on clean clothing after showering.
- Launder turnout gear routinely using purpose built PPE extractor or a professional service. Do not launder this gear at home.
- Clean other equipment that could contact the skin if it is visibly soiled.
- Clean SCBA facemasks after each use using cleaners approved by the manufacturer.

To minimize the potential inhalation of contaminants off-gassing from contaminated gear:

- Remove SCBA (and hood) last when doffing gear after fire suppression activities.
- Doff gear before entering the rehab area.
- Store gear on the outside of the apparatus during the ride back to the station.
- Do not store gear in personal vehicles or living areas.

References:

- Fent, K. et.al, (2014). Systemic Exposure to PAH's and Benzene in Firefighters Suppressing Controlled Structural Fires., *The Annals of Occupational Hygiene*, 58, (7), pp 830-845.
- Fent, K. et.al. (2013). Evaluation of Dermal Exposure to Polycyclic Aromatic Hydrocarbons in Firefighters., Report No 2010-0156-3196, U.S. Department of Health and Human Services.

Notes:

MAYDAY notes: Don&Bev Abbott- ProjectMAYDAY.net

● Prevent situations that may result in MAYDAY situations

- Prior to entry, cool fire.
- Prior to entry, clear smoke.
- Prior to entry, 360°, confirm conditions of reduced fire & smoke persist for >90 sec., or crews remain outside.
- Upon fire cooling, smoke clearing, and 360°, once entering, crews immediately check spaces, voids and layers.
- If clutter is encountered, mitigate clutter, or crews stay out of cluttered area.
- Crews push/pull CAN reports with Sector or IC.
- Maintain crew integrity, with 1st call/immediate answer communications required to operation inside ISP.
- IC functioning at strategic level, inside cab, with SO & SA, written crew tracking: crew leader, time, location, assignment

● **16 Radio transmissions heard prior to a “MAYDAY”**

“We have zero visibility conditions.” (59%)

“We have fire above our heads.” (81%)

“We have fire below us.” (56%)

“We need more line, extend our line.” (36%)

“We have not found the fire.” (67%)

“We are running out of air.” (73%)

“This is a hoarder house.” (54%)

“We had a flashover.” (37%)

“We have had a ceiling/roof collapse.” (37%)

“We have lost multiple windows.” (29%)

“It’s really hot in here, we are backing out.” (44%)

“Our exit has been blocked.” (21%)

“We are sending FF_____ out with a problem.” (19%)

“We have a hole in / collapsed floor.” (56%)

“We have a lot of sprinkler heads going off.” (54%)

“Command has lost communications with crews.” (19%)

- If you hear 1 or more of these transmissions, a MAYDAY may be co-incident, or may occur in the immediate future.

Withdraw members to areas with reduced hazards ASAP.

Do what’s next. Keep going. AVB

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
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Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Response Plan ___ / ___ / ___

Command Structure Wildland Rescue Other _____

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

Name:
Contact info: Cell: Agency access: PSAP: Other:
Notes:

MMA 9 Line Medical Evacuation Worksheet

1. Location of incident– Address

Ground directions

GPS info

2. POC Radio frequency _____ . _____, Channel _____

Radio Call Sign _____

3. Nature of Incident and # of patients

Nature of incident: _____

_____ I - Immediate

_____ M - Minor

_____ D - Delayed

_____ Deceased

4. Description of injuries, and/or mechanism of injury, by patient(s)

5. # of patients by ability to move under their own power

_____ # of patients able to move under their own power(ambulatory)

_____ # of patients requiring assistance to move(litter, et al)

6. Specialized equipment needed

None

Extrication

Other(describe)

Hoist

Rope Rescue

7. Method to guide responders in to patient

Directions to location patient

Location to meet person to act as guide to location of patient

Access point, and distance and terrain from access point to patient

8. Patient(s) Transportation Needs info

9. Terrain/Access info for reaching/transporting patient(s)