

Wildland Fire Response in a COVID Fire Environment

Development of Management Practices

> Facilitating COVID Precautions on Wildland Fires

Best (BMP) and



NM EMNRD Wildland Fire Response in a COVID -19 Environment

Timeline to COVID -19 Best Management Practices

***** March 11 : New Mexico saw the first cases of COVID-19.

March 16 : The Forestry Division began work on COVID-19 fire crew Best Management Practices (BMP) using NM Department of Health (NMDOH) and Center for Disease Control (CDC) Guidelines.

March 26: a DRAFT of BMP and Guidelines were presented to Forestry Division and NM DOH for review.

March 30: FINALIZED BMP's and Guidelines were adopted, published and released to field offices for immediate application.



. Continue to encourage all employees to stay home if they are sick. Sick employees who report will be sent home.

All doors in every building are an exit, however there is only one identified entrance so managers can assess the health of every person in the building.

Visitors should be discouraged. Units shall place signs on doors explaining that entrance is only through one door.

4. At the beginning of every shift, crew members before coming to work or entering the district failies shall complete a self-neck to desmine if they are "sick" or "not sick". Each person in charge of the crew or the individual must notify the district offlow staff once they or the crew has completed the self-neck if a crew member has one or more of the following symptoms that crew member will not come to work or will immediately leave the location, return to her which, and notify person in charge of their condition.

A. Fever with or without chills (38 C/100.4 degrees F)
 B. Uncontrollable secretions or excretions that would likely result in the employee

B. Uncontrollable secretions or excretions that would likely res sneezing or blowing their nose when talking to a colleague

C. Sore throat
 D. Productive or uncontrolled cough (unable to control cough when talking to a colleague) OR a cough lasting more than two weeks

E. Influenza or COVID-19-like illness (fever and cough, shortness of breath, or sore throat)

F. Diarrhea associated with an acute illnes

G. Body aches and pains

Halfway through, and at end of shift, the person in charge will have each member set revaluate.

Fever with or without chills (38 C/100.4 degrees F)? Verified with thermometer (if possible) Sore throat?

COVID-19 Daily Symptom Checker Guidelines

FULL NAME:		
SYMPTOM	YES	NO
Fever with or without chills (38 C/100.4 degrees F)		
Uncontrollable secretions or excretions that would likely result in the employee sneezing or blowing their nose while performing work duties or talking to a colleague		
Sore throat		
Productive or uncontrolled cough (unable to control cough while performing work duties or talking to a colleague) OR a cough lasting more than two weeks		
Influenza or COVID-19-like illness (fever and cough, shortness of breath, or sore throat)		
Diarrhea associated with an acute illness		
Body aches and pains		
COMMENTS:		

NM EMNRD Wildland Fire Response in a COVID -19 Environment

Best Management Practices

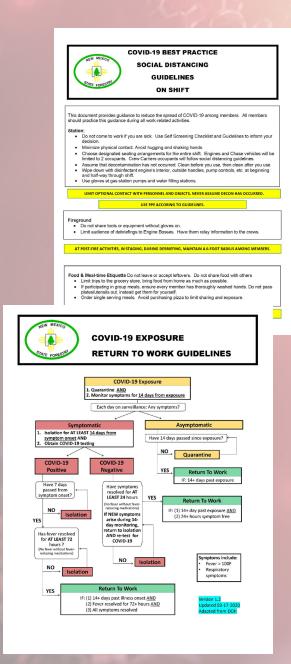
Included in the BMP publication:

- Self screening guidelines
 - Encouraging people to remain at home if symptomatic.
- Personal Daily Checklist Symptom Questionnaire

On shift work guidelines includes:

- At the station
- Fire ground
- Food handling etiquette

Return to Work Guidelines





NM EMNRD Wildland Fire Response in a COVID -19 Environment

NM DOH and CDC COVID-19 Updates

May 14th, 2020 In the preceding weeks, as the CDC and NM DOH released new information about COVID-19, the Forestry Division incorporated the newest findings into our BMP document and released a new version in the form of a "pocket" booklet.

estry Division Response to COVID-19 Fire Environment NM DOH and CDC COVID-19 Updates

The latest version of our BMP Guidelines Pocket Guide includes:

Personal health condition checklist and "screening" questionnaire.

and the Wildland

- Personal sanitary practices which includes mask wearing, hand washing and social distancing.
 - Work/office "check in to work" protocols.
 - Office staffing and cleaning protocols.
- Vehicle and equipment care and disinfecting which included: hand tool disinfecting and fire vehicle cleaning and disinfecting.
 - Along with "fire ground" guidelines and expectations.
 - Driving guidelines allowing for 2 people per vehicle to maintain social distancing.

New Mexico Energy, Minerals and Natural Resources Department, Forestry Division

> COVID-19 BEST PRACTICES GUIDE



May 14, 2020

estry Division Response to COVID-19 Fire Environment "Other than Routine"

- As EMNRD's Forestry Division Best Management Practices (BMP) were being developed our federal, county and municipal partner wildland fire suppression agencies quickly began developing their own COVID -19 BMP's.
- As the fire season approached and was quickly upon us, *social distancing* to prevent and slow the spread of COVID-19 had a big impact on fire crews.
- After a season off, most fire crews would greet their fellow firefighters on the fire ground with greetings and hand-shakes.
- Not this 2020 fire season!



and

Social distancing has become the norm, the concept "Module As One" was born.

- "Module As One" is the same as "module as a crew or family." It does not mean to actually module as an individual. Hand and engine crews fight fire together, eat and camp together.
- On a fireline, the fire is the focus but crews try not to co-mingle close (less than 6 feet apart) to other crews if it is avoidable. Risk of transmission of coronavirus out in the open air is low.
- In camp, coronavirus is the focus. Use face coverings and physical distancing around those not in your module!

COVID RESPONSE MODULES (CRM's)

- Cooperating with area fire departments the Forestry Division initiated the development of COVID Response Modules (CRM's) based on processes fire departments had already developed for their own use. These fire department CRM's consisted of :
 - Decontamination Modules used to spray and disinfect inside cabs of trucks, crew carriers, office space, equipment and other high traffic high touch areas.
 - Medical teams made up of EMS providers are used to screen fire fighters on at incident, on fire ground and treat as necessary.
 - Medical teams in specific COVID ambulances. These units were used to isolate and treat possible COVID-19 positive firefighters on scene.
 - All decontamination and health provisions are followed using fire department, CDC and NM DOH protocols.

NMSF RMP COVID RESPONSE MODULES TYPES



Type 4 Module will consist of 1 Support Vehicle and 2 Operators/DECON Technicians Recommend 1 Type 4 Decon Module per 40 vehicles or per 50 personnel or for a Type 4/Type 3 emerging incident.

Larger capacity DECON ONLY MODULES are available: 2 person DECON Module able to decon 150 vehicles per day or 4 person DECON Module able to decon 300 vehicles per day.

COVID Response Module Type 3

COVID Type 4 Module PLUS One - 2 person Line Medic Team w/vehicle fire line qualified EMT's with COVID Prescreen Capabilities + BLS/ILS medic kits (Suggest Ordering Type 3 module on Initial Order for Type 4 and for expanding Type 3 incident.)

COVID Response Module Type 2

COVID Type 4 Module **plus** One - 2 person Line Medic Team w/vehicle fire line qualified EMT's with COVID Prescreen Capabilities + BLS/ILS medic kits **PLUS** Incident Dedicated COVID -19 ILS/BLS Ambulance to serve as COVID -19 patient care/quaratine/or as needed.

COVID Response Module Type 1

COVID Type 4 Module **plus** One - 2 person Line Medic Team w/vehicle fire line qualified EMT's with COVID Prescreen Capabilities + BLS/ILS medic kits **PLUS Incident Dedicated COVID -19 ALS/ILS or BLS Ambulance** to serve as COVID -19 patient care/quaratine/or as needed.

DECON Modules will be equipped with a compressed air system made up of either portable air compressors or a Self Contained Breathing Apparatus (SCBA) portable system with the ability to refill the SCBA bottles.

All compressed air DECON systems will maintain a minimum of 35 PSI to produce a fine mist of decontaminite. Additional "hand pump" sprayers will also be available from the modules for portability.Decontaminite will be CDC Approved for COVID-19 virus.

A local government fire department may not have the capacity to fill a module as listed above.

A second or third local government fire department will be considered to fill the module order.

This will be determined at the State Forestry Division District level.

Any Module Component can be ordered separately and independent of the module.

COVID-19 Dedicated Incident Ambulance can serve as temporary COVID pt care, quarantine or as needed. Separate incident medical personnel could be considered for the incident that will respond to NON COVID related incidents.

Operators and EMT's will consist of a minimum of BLS or ILS. If 24 hour coverage is ordered/needed, additional Operators, EMT's or Paramedics must be ordered. All vehicle's provided are on separate FD RMP Rate Sheets and specific vehicle information will be furnished when the order is placed.



EMNRD Forestry Division Response to COVID-19Wildland Fire EnvironmentResourceMobilization Plan (RMP) COVID RESPONSE MODULES –department guides for mobilizing CRM's





Fire Department COVID Response Mobile Decontamination Module (CRM) Guide

To assist in this year's fire season response to the COVID Pandemic local government fire departments can assist in the containment of the virus by building a mobile decontamination unit or COVID Response Module (CRM). These units will be used to decontaminate fire vehicles and equipment on wilding fire incidents.

Many local volunteer, county and municipal fire departments already have the equipment necessary to "build" a mobile CRM. Following is information that will assist you and your department in building a Mobile CRM.

Please contact your local New Mexico State Forestry District Office with further questions and assistance.

 CRM Decon Units will be required to wear PPE and change out regularly (the sending agency will provide adequate supplies with the resource)
 All COVID-19 Precautions including Social Distancing is a requirement while decontaminating equipment and vehicles and while assigned to the incident.



The goal is to deliver a CDC Approved COVID-19 disinfectant, with a FINE MIST at a sustainable 35 PSI for a complete vehicle (inside/outside), equipment, on "high touch" surfaces and other sites as needed.

Equipment Needed for Compressed Air System to generate a sustainable 35 ps System 1 Generator/Compressor System Portable generator 20. -gallon air. compressor with in-line filters

Air nose with quick connectors Paint "can" type sprayer, regulator built in preferable. 35 psi must be sustained to produce a fine mist of disinfectant.

System 2

Self Contained Breathing Apparatus (SCBA) System SCBA Bottles (Spray time will vary with tank capacity) SCBA Harness or back- back "Buddy Breathing quick connect" on the LOW pressure side "Quick connect" connectors for air hose Paint spray can (with built in regulator is preferred) Access to a mobile SCBA refill system or compressor (Approximatey) L5 bottles may be required to DECON 1 whiche)

> Hand – pump or garden type sprayer's can be used for portability in some situations. This is not recommended for primary use.



APPROVED DISINFECTANTS & USE <u>NEW MEXICO STATE FORESTRY- DISINFECTANT DECONTAMINATION AND</u> <u>SPRAYER APPLICATION INSTRUCTIONS</u>

The disinfectant sprayer can be used anytime that a Command Vehicle, Engine or Crew true inclusion be cleaned, not just after a suspected UVD-193 contamination. Wither type varies and the prapared solution created by Kosher sait, commercially available disinfectant tablets or a bleach (oddum hypochlorite) product, the spray application is similar. The variant safe fill for each projected is approximately three (3) class of the tagging the solution container is critical. Any solution after three days should be discussed of .



Solution Preparations:

Ecolox Tech's Electrolyzed Water System

Generates hypochlorous add (HOCI) with an ORP between +800 and +1000 (setting 3). "Setting 3 is the preferred cycle for disinfectant purposes." Instructions for Generate Hypochlorous Acid (HOCI) Cleaner & Disinfectant 2. Addta water (or purfled water up to the 1 Liter mark 2. Using 1 gam mesuring spoon, add 1 gam Koshe sait per 1/2 Liter of water * 3. Add 1 typ. of distilled white vinegar** (5%) (Optional but recommended to optimize pH) 4. Place idi and plag: in the power supply *** 5. Press to Power On • Press one for Setting 1

- Setting 1 System runs for 3 minutes Filled to 1 Liter mark generates 40 ppm * Use only food
 grade salt (NaCl). It is recommended to use Kosher salt only since it contains no iodine.
- Press twice for Setting 2
 Setting 2 System runs for 5 minutes Filed to 1 Liter mark generates 60 ppm (for sanitizing fruits and vesetable)
- Press three times for Setting 3
- Setting 3 System runs for 8 minutes Filled to 1 Liter mark generates 100 ppm Filled to 0.5 Liter mark – generates 200 ppm

** Adding vinegar will lower pH therefore allowing hypochlorous acid (HOCI) to be the dominant free chlorine molecule. *** Power supply must be dry.

The CDC recognizes electrolyzed water, also called "superoxidized water", and the microbiocidal activity of <u>hypochlorous acid (HOCI</u>) in its guidelines for disinfection and sterilization in healthcare facilities. FDA cleared per Food Contract Notification #1811 and USDA Organic.

Defense Soap Defense Disinfectant Tablets

Defense Soap's disinfectant tablets are a safe, EPA-registered bleach alternative in effervescent tablet form. Using the power of hypochlorous acid, our disinfectant is effective against a broad range of microorganisms which includes C. difficile spores, Hepatitis B, and Norovirus.

- The single dose tablet delivers accurate strength solution every time, eliminating the need to measure and pour guesswork.
- Simply drop 1-2 large tablets into a sprayer for every gallon of water used or 1-2 small tablets into a sprayer for every quart.
- One gallon covers about 6,000 square feet (about four wrestling mats). If not using an
 electrostatic sprayer, dispense disinfectant with a pump sprayer and spread evenly with a
 microfiber mop. The disinfectant must remain on the mats 4-10 minutes (depending on strength
 of solution) to achieve the maximum kill of microorganisms.

Defense Soap's disinfectant tablets are a safe, EPA-registered bleach alternative in effervescent tablet form. Using the power of hypochlorous acid, our disinfectant is effective against a broad range of microorganisms which includes C. utificitie spores, Hepatitis B, and Narovirus.

Defense Soap's Disinfectant Tablets recently made the EPA's list of approved antimicrobial produc for use against Novel Coronavirus SARS-CoV-2, the Cause of COVID-19*



After consultation with local fire departments the Forestry Division developed a standard for COVID Response Modules and published guidelines for fire departments statewide to build their own RMP CRM for wildland fire incidents.



Introduction Co Presenter : Albuquerque Fire Rescue Coordinator Brian Fox

Wildland



Municipal and County Fire Department COVID – 19

• Local government fire departments had been on the "front lines" for several weeks as an increase in COVID -19 cases spread across New Mexico.

• Local government fire departments recognized need for quick decontamination of ambulances and equipment after COVID patient contact.

Response to

and



Photo courtesy of Albuquerque Journal



EMNRD Forestry Division Response to COVID-19 and the Wildland Fire Environment Municipal and County Fire Department Response to COVID – 19

- Captain Brian Fox, Wildland Fire Coordinator for Albuquerque Fire Rescue spent several weeks helping to coordinate the City of Albuquerque's response to the pandemic in the city's Emergency Operations Center.
- Captain Fox assisted the Forestry Division, along with officers from other metro area fire departments, in the development of standards for COVID Response Modules to wildland fires.



Photo courtesy of Albuquerque Journal





Albuquerque Fire Rescue Response to COVID - 19

AFR's COVID DECON/Screening units

- DECON materials
- Thermometers
- PPE for up to 100 personnel
- Documentation
- 2-wheel drive or 4-wheel drive units



Albuquerque Fire Rescue COVID Screening and DECON Unit setting up at the Los Charcos Fire on Isleta Pueblo



Albuquerque Fire Rescue Response to COVID – 19





AFR DECON System Components

- Air compressor
- Paint gun electric or battery powered
- 4000 ppm bleach
- 2 5 gallon buckets
- 1 4 quart measuring cup
- 1 4 cup mixing cup
- 5 gallon of 4000 ppm bleach



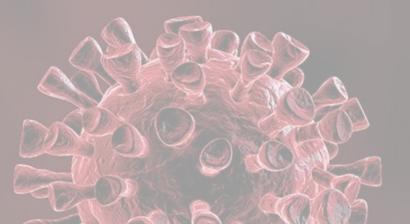


Albuquerque Fire Rescue Response to COVID – 19

The next slide is the AFR COVID-19 Decontamination Training Video with Captain Brian Fox This slide would be the AFR COVID-19 Decontamination Training Video with Captain Brian Fox



Introduction Co Presenter : Mary Stuever, Chama District Forester

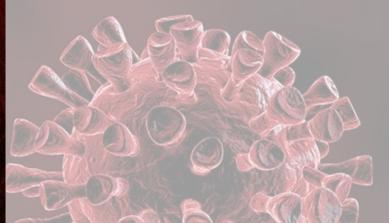




- Mary Stuever, Chama District Forester
- Forestry Division's first large fire of the season
- 1145, May 10th Chama District Office a fire reported west of Lumberton, NM with Dulce VFD and Chama VFD en route. Pablo Montenegro from Chama District office also responds.
- Fire escapes control attempts of initial attack, determination made to call in Type 3 Team, as well as multiple resources including helicopter and air tankers (a total of 8 drops made that day)



- District had several fires prior to this – some experience with COVID19
- First call out for Type 3 Team





Lessons Learned Right Away

- SWCC guidelines
- Request for testing at demobilization action denied
- No template language for Delegation of Authority



Lumberton – COVID-19 Sanitation Units



Lumberton Mock Drill with Team



Final Thoughts

- Fire Service as learning organization?
- Best approach creating supportive environment, rather than punitive environment
- Tendency to fall back on old behaviors; takes a commitment community to make changes





Introduction Co Presenter : Louis Casaus , New Mexico Forestry Division District Forester, retired and current Operations Section Chief AD for the Cibola National Forest

And we will bring back AFR Captain Brian Fox to discuss their experiences with national fire scene COVID Response.



National Large Fire and COVID Management

- Interagency Fire Management Board (FMB) establishes the COVID-19 Wildland Fire Medical and Public Health Advisory Team (MPHAT) to assist as interagency medical, public health consultation and to develop protocols and guidelines applicable to fire operations.
- Each agency has published their own BMP's Agency
- State government BMP's differ from NM however basic COVID precautions remain consistent.





As the western United states fire season ramped up incident fire managers had established:

- Virtual fire check in and demobilization of resources with documents exchanged via email.
- Most incidents used spike camps or camped resources using "Module As One" concept with few gatherings of people.
- Fire briefings were conducted using basic COVID Guidelines ie: social distancing, masks and lots of hand sanitizer in camps where gatherings could not be avoided.
- Many resources received daily fire briefings through radio communications.

Ordering Units have inserted COVID 19 BMP into the Resource Orders to inform in coming resources of local COVID BMP's.

Special needsNLocal, State, or County OnlyGMust be Self Sufficient3All resources must adhere to the CDC Guidelines and NWCG WildlandFFire Response Guidance which pertain to COVID-19. This includes, butCis not limited to; hand sanitizing, social distancing, decreasingCexposure and COVID-19 PPE that includes face masks. All resourcesCmust be self-sufficient on an incident for 72-hours. Contact the dutyCofficer prior to your arrival for the district that you will be assigned toCper your resource order directions. Duty Officers will provide a districtCin-briefing with additional Covid-19 protocols/guidelines.CReport to:Chuchupate Station34580 Lockwood Valley Rd.Frazier Park, CA,93225



National Large Fire and COVID Management

- Western states fire incident managers have added COVID -19 Medical Liaison advisory personnel to assist in managing and tracking COVID – 19 positive fire fighters.
- Western states have reported "clusters" of COVID positive cases at incidents.
- Management of the COVID-19 is made easier by the "Module As One" concept. Crews were isolated and quarantined before spread of COVID-19 spread through out incident base camps.



Summary of EMNRD Forestry Division 2020 Fire Season in the COVID -19 Environment

- With guidance from New Mexico's Department of Health, Forestry Division's leadership established COVID -19 wildland fire response and operational guidelines in early March.
- Forestry Division fire fighting crews experienced no COVID-19 positive cases throughout the summer fire season.
- EMNRD's Forestry Division's fire managers and firefighters, with other agency firefighters, using basic COVID-19 BMP's and "Module As One" concept, suppressed New Mexico's wildland fires safely and effectively.

 This will end the presentation I and the co presenters will be happy to answer questions at this time.