



To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Hazardous Air Quality

The purpose of this memo is to discuss the affects of our air quality due to wildfire smoke and dry, dusty working conditions. At this time of year in our western states the land is dry, hot and often holding an active wildfire. Dust is generated from hiking and working and the smoke from fires in the area soon begin to fill valleys with a haze. The MCC has no specific policy regarding working in conditions where the air quality is poor or compromised. The crew leaders in conjunction with the project sponsor or technical advisor must rely on their judgment to maintain the crew's health and safety while completing the project to the best of their ability. By understanding the different levels of air quality, MCC leaders and staff will be able to assess the hazard levels and adjust the crew's risk of smoke/dust exposure and their health impacts.

Smoke from a wildfire is made up of carbon dioxide, water vapor, carbon monoxide, hydrocarbons, nitrogen oxides, particulate matter and other organics. The composition of smoke varies with fuel type as well. The vegetation and wood surrounding the fire will determine the amount of polyphenols, oils, fats, resins, waxes and starch which produce different compounds when burned.

Particulate matter: mixture of solid particles & liquid droplets found in the air. These tend to be less than a micron in diameter and scatter light, which decreases visibility.

Carbon monoxide: is a colorless, odorless gas produced as a by-product of incomplete combustion. This gas is most prominent around smoldering fires.

Polyphenols: a group of chemical substances found in plants (example: cellulose, lignin, tannins)

Dust kicked up from hiking and working is comprised of organic material from the surrounding landscape. This includes: local rock composition, vegetation breakdown, soil, and animal and insect debris from the area.

How do these health factors affect you?

Individuals with compromised lungs are at a higher risk for poor air quality affects. Be aware of members who smoke, have asthma, or other respiratory health problems. Dusty and smoking conditions can cause:

- Cough
- Scratchy Throat
- Irritated Sinuses
- Shortness of Breath
- Chest Pain
- Headaches
- Stinging Eyes
- Runny Nose
- Bloody Nose
- Asthma Exacerbations

What can you do?

To prevent or minimize the health effects of poor air quality do the following:

- Be aware of members’ physical capabilities and monitor them for signs of fatigue and illness.
- Be sure members who have asthma are carrying their inhaler, and fellow members know where it is located.
- Avoid wearing contact lenses.
- Rotate crew members out of poor air quality areas.
- Allow breaks to rest and drink plenty of water throughout the day.
- Locate a camp in well ventilated areas not prone to inversions.
- If water is available reduce dust in camp by watering drier social areas.
- A wet towel or bandana may help relieve dryness; however it will not protect lungs from smoke.
- Adjust working hours to a cooler/damp part of the day when dust/smoke may be minimal.
- When symptoms are respiratory in nature, it maybe appropriate to reduce active work.
- Persistence or severe symptoms could require a rest period in a clean air environment.
- Use the values below to determine the local forest fire smoke category.

Health Effects Category	Visibility Ranges (miles)
Hazardous	< 1.3
Very Unhealthy	2.1 – 1.3
Unhealthy	5.0 – 2.2
Unhealthy for Sensitive Groups	8.7 – 5.1
Moderate	13.3 – 8.8
Good	> 13.4+

Please reference your Crew Leader Manual’s section on Environmental Factors Guidelines - Air Quality for more information on the above health effect definitions as well as other safety practices.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Subject: **Insect Bites and Stings**

Date: January 31, 2018

Dealing with insects is an unavoidable tenant of working with MCC. At work, on breaks, cooking dinner, around the campfire– sometimes the biggest relief of the day comes from zipping up your tent and enjoying a moment's rest free from the swarms of bugs that try to feed on you.

Although you may become accustomed to lopping past bee hives, eating lunch near an ant hill, and flicking mosquitoes off of you on a regular basis, staying vigilant with insect bite and sting self-care is an absolute must throughout the season. There is a high risk of bacterial infection from bites that are scratched open and then covered with dirt and grime. Someone on your crew could also have an unexpected allergic reaction to a bite or sting. A severe allergic reaction is cause for evacuation.



Get immediate medical attention if person has:

- Trouble breathing
- Feelings of faintness or dizziness
- Hives
- Swollen tongue
- History of severe allergy reaction to insects

Upon being bitten or stung, follow this care routine:

- 1) Remove the stinger or source of irritation.
 - ...Scrape the area with a CLEAN fingernail or use tweezers to remove it. DO NOT pinch the stinger.
 - ...Clean the area thoroughly with soap and water.
- 2) Control swelling.
 - ...Ice the area
 - ..Elevate if on an arm or limb
 - ...Remove any tight-fitting clothing or objects in case swelling occurs
 - ...Benadryl can be taken to prevent swelling and itching
- 3) Treat symptoms.
 - ...For pain take ibuprofen or acetaminophen
 - ...For itchiness and swelling take an antihistamine such as Benadryl
- 4) Follow-up.
 - ...Clean daily, apply antibiotic ointment, and keep covered to prevent infection. Bites can take 2 – 5 days to heal.
 - ...Avoid scratching. Hydrocortisone cream, calamine lotion, aloe vera, rubbing alcohol, vinegar, salt water, lemon juice, coconut oil, or heat from a fire or hot water can help alleviate the itching. You can also buy travel-sized specialty gels at outdoor stores that include ingredients like baking soda and tea tree oil.

MCC Safety Memorandum

These are some of the common Rocky Mountain insects to be aware of in the woods:

Ticks



Ticks in Montana and the surrounding states can cause:

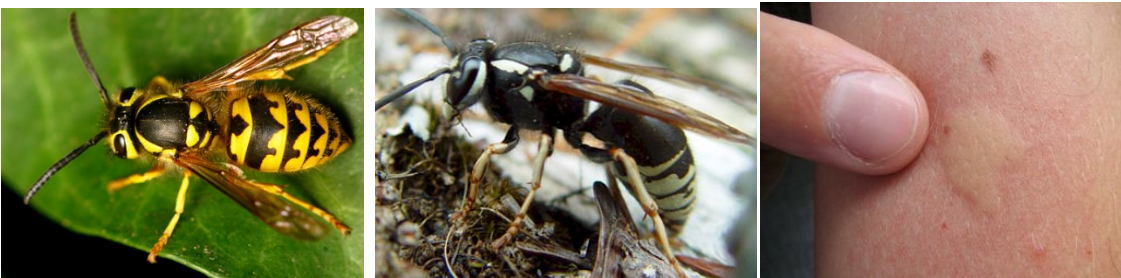
- Rocky Mountain Spotted Fever (sudden onset fever, deep muscle pain, severe headaches, chills, rash appears on extremities - symptoms begin 3-12 days after a tick bite. Must be treated with antibiotics).
- Colorado Tick Fever (fever for 3-4 days, fever abates and continues 1-3 days later for another few days)
- Tularemia or "Rabbit Fever" (skin ulcers, swollen and painful lymph glands, inflamed eyes, sore throat, mouth sores, diarrhea, or pneumonia)

Check for ticks every night before you go to bed, and encourage your crew to do the same! Make sure to thoroughly check your head, behind your ears, in the folds behind your knees, your armpits, and your pubic area.

If you find a tick lodged in your skin:

1. Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
2. Pull upward with steady, even pressure. Don't twist or jerk the tick; this can cause the mouth parts to break off and remain in the skin. If this happens, remove the mouth parts with tweezers. If you are unable to remove the mouth easily with tweezers, leave it alone and let the skin heal.
3. After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.

Bees & Wasps



Western Yellow Jacket

Bald-faced Hornet

Most people will have only a localized reaction to a bee sting. In the normal reaction to a bee sting, the skin is reddened and painful. Swelling and/or itching may also occur, but the pain usually disappears over a few hours. Treat as described

MCC Safety Memorandum

above. If the swelling begins to spread across the body, seek medical attention immediately. About 3% of people stung by bees have allergic reactions, and .8% of bee sting victims experience anaphylaxis (a severe systemic allergic reaction).

Spiders



Hobo



Northern Black Widow



Western Black Widow



Beginning stages of Hobo bite



Beginning stages of Black Widow bite

People with suspected hobo or black widow spider bites should seek medical attention if symptoms worsen. In addition to lesions that form at the place of the bite, hobo spider bites can cause severe headaches, nausea, and vomiting, and black widow spider bites can cause chills, fever, nausea, vomiting, and severe abdominal pain.

Mosquitoes



Although rare, there are West Nile virus cases in Montana every year. Use bug spray, wear long sleeves whenever possible, and treat bites as described above.

No See-ums (“Biting Midges”)



No see-um bites are painful, itchy, and tend to come in batches, but typically no see-ums do not transmit disease in Montana. Many bug sprays are effective against no see-ums. Take care of your bites and consider buying a mesh bug net or jacket for use around camp to alleviate some of the aggravation.

Horse/Deer Flies



Horseflies use long mandibles to rip open the skin in order to gain access to the blood. This allows flies to successfully bite through fur or clothing. The bites are very painful, forcing the victim to focus on tending to the wound rather than killing the fly. Because of this, the fly will typically get away after biting and it will then return to drink the blood as necessary.

Fly bites tend to swell up bigger than mosquito bites and have a longer healing time. Bug sprays can be effective against horse flies. On rare occasions horse fly bites can cause anaphylaxis and diseases such as anaplasmosis and tularemia.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

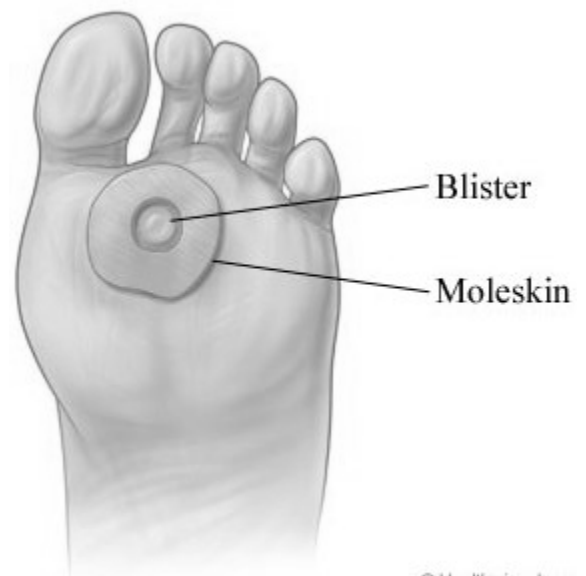
Date: January 31, 2018

RE: Blisters

Yeah, we know, it's an absurd time in the season to get blisters. Everyone's feet (and hands) are as tough as bear grass roots right now. Or if they aren't you probably aren't going to admit to it. But guess what??? Blisters are common and plague even the most seasoned and grizzled feet (or hands) *throughout* the season. **A blister that is not properly cared for can result in significant pain, missed work, and, in some cases, infections that can become life threatening!**

Blisters touch us all, often in mysterious ways. So here are a few friendly DOWN WITH THE BLISTERS reminders.

- 1) Prevention is your friend. Keep feet as dry as possible. Switch out socks at lunch if you are working in water. Dry feet properly after a river crossing. (suggestion: a bandanna or pack towel.) Also, stiff gloves/socks full of holes can rub your hands/feet the wrong way. Solution: New gloves/socks.
- 2) Prevention is your friend!! As soon as you feel a "hot-spot" or rubbing, cover with duct tape, athletic tape, electric tape, or some sort of moleskin cushion. Taylor this to what feels comfy to you.
- 3) If a puffy, gross blister appears, DO NOT tear the skin off. Simply sterilize a needle and the blister itself and poke a small hole at the lower edge of blister. Let it drain. Repeat 3x a day as necessary.
- 4) If you remove any blister-skin, treat as an open wound: keep clean, and treat with topical antibiotic.



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MCC Safety Memorandum

Date: January 31, 2018

To: Field Staff, Youth and Field Crew Leaders

Subject: Working in Burned Areas

From: MCC Risk Management Committee

If you work on trails, it is highly likely that your crew will find itself working in an area recently affected by a forest fire. There is work to do there. In burned areas, trails are destroyed, burned trees fall across tread, the loss of vegetation on the surrounding hillsides leads to erosion, and that means waterbars and other erosion control structures. Burned Area Emergency Recovery (BAER) funds are a common source of MCC project work. These areas are unstable environments, making for hazardous worksites and less than ideal places to camp.

What to look for in burned areas:

- **Take your time and be careful where you step.** That black ash that covering everything is **slippery**, especially when wet. Forest fires also burn underground tree roots, leaving unseen cavities that easily collapse- look for these near burned stumps.
- **At the campsite**, assess your campsite for hazard trees. Locate tents and common areas well away (more than 1 ½ tree lengths). Remove hazard trees if absolutely necessary- walk away from those beyond your ability. Identify and flag safe travel routes (to the latrine, for instance) and other tripping hazards.
- **At the worksite**, situational awareness is a crucial skill. Identify overhead hazards such as hazard trees, widow makers, and loose rocks. Look up during wind gusts, and leave the area (move to the green, or an open area) during sustained winds.
- **Bring sunscreen and stay hydrated.** The forest canopy may no longer be there- expect lots of sun. Bring plenty water for the day. Erosion is a factor, and will lead to increased sediment loads in water sources. Prepare for this by bringing additional water filters (if you are using the paper Kayadyn style hand pumps and gravity filters). Keep this equipment clean and maintained.
- Bring a **bandanna or dust masks** if hot, dry, ashy conditions make for difficulty breathing.
- **As always**, wear your PPE, stay positive, and have fun.



MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Hazardous Material Risk Management

The purpose of this memo is to make all MCC employees aware that hazardous materials are consistently used by crews. MCC utilizes a variety of hazardous materials: white gas and propane to cook food, gas and oil in chainsaws, chemicals for noxious weeds, DEET to keep off mosquitoes, linseed oil on tool handles, etc. It is important to understand what hazardous materials are and be prepared to respond to hazardous material incidents, should they occur.

The primary tool MCC provides is the Material Safety Data Sheets (MSDS). The cover of the MSDS lists a variety of hazardous materials and what page to find more information about the material. The MSDS page includes the chemical, the effects of overexposure, first aid measures, how to transport the material, recommended PPE, fire fighting measures and other pertinent information. Please take some time to read over the notebook and understand the key concepts associated with handling hazardous material. Be conscious of where these materials are stored and how they are transported. If it is combustible it should not be transported inside an MCC vehicle. If you are on a project where chemicals are used, be sure to ask the partner how to use and transport the material safely, and what to do in the event of an incident. It is important to be proactive while working with hazardous materials.

It is essential that employees understand and utilize the MSDS and other resources that mitigate risks associated with hazardous materials. Most incidents with hazardous materials are easily avoidable if proper precautions and procedures are adhered to. The more you know the safer your crew will be.

Attachments: None

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: NA

Subject: It's Hunting Season!

The purpose of this memo is to ensure supervisors and crews are aware that hunting season has begun. There are many risks associated with working in the outdoors and employees of MCC should be aware of the risks and strategies to mitigate these risks.

Tens of thousands of hunters will be entering Montana's wilds over the next several months! Please take a moment to review the following safety guidelines.

- Speak with your sponsors and TAs about the likelihood of hunting in your project area
- Familiarize yourself with the hunting regulations and seasons at www.fwp.mt.gov
- Use MCC Work Site signs at trailheads or near your site, to alert the public
- Speak with hunters when you encounter them at trailheads, on the trail, or in camp
- Don't travel by yourself, particularly off-trail
- Wear bright colors, like blaze orange, to compliment your MCC uniform

Overall, it is the responsibility of everyone to be aware of the risks associated with working outdoors in Montana during hunting season. Crews and supervisors alike should strive to have safety conversations focused on safely working outdoors

Attachments: None

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Hygiene and Illness

The purpose of this memo is to ensure MCC employees understand and practice proper hygiene. Hygiene is often overlooked in a MCC project or backcountry setting and can be most often mitigated by the simple task of washing and sanitizing your hands. Being prepared and following sensible safety and health guidelines can ensure a hygienic camp and a hygienic MCC member.

Hygienic risks:

- Water-borne illness such as giardia and cryptosporidium can cause serious stomach cramps, diarrhea, bloating, excess gas, and weight loss.
- Food-borne illnesses such as salmonella and staph food poisoning can cause abdominal pains, vomiting, diarrhea, severe nausea, cramps, headaches and fever, and cramps.
- Yeast infections can cause abdominal cramps, itching and/or burning in the private areas (esp. females).
- Urinary tract infections (UTIs) can cause frequent urinating, a burning sensation while urinating and blood or bacteria in the urine.
- 'Rot crotch' can cause fungal build up in the private area (esp. males), itching and burning and odor.
- Athlete's foot can cause bad odor, itching, and burning.
- Blisters can cause foot irritation, burning and itching, and discomfort while walking or hiking. If untreated it can lead to an infection.
- Teeth and gum problems occur from the infrequent usage of a toothbrush and toothpaste and can lead to malodorous breath, tooth decay, cavities and mouth sores.

Strategies to Mitigate Risks:

- **WASH AND SANITIZE YOUR HANDS!**
- Ensure food is properly stored.
- Ensure that food is cooked thoroughly.
- When purifying or filtering water, make sure the source is a reliable water source. Boiling water is an excellent way to kill off bacteria and viruses. Use water filters, purifying tablets and, if necessary, chemical treatment such as iodine tablets or solution. Ensure that the camp latrine and sump are away from your water source so as not to pollute your water supply with fecal runoff.
- Bring extra pairs of clean socks and underwear, and extra sanitary supplies.
- Be sure to keep your private areas clean and dry.
- Maintain a good and healthy diet.

Attachments: None

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

RE: Lightning



Lightning Facts:

- The U.S. has had about 40 lightning fatalities and 400 lightning injuries per year over the past decade. Some resources report up to 100 lightning fatalities a year in the U.S.
- Many lightning related human fatalities are caused from seeking refuge from rain under trees.
- Hearing the rumble of thunder means that lightning is within 10 miles (no matter how faint).
- Lightning strikes can result in Neuro-electrical damage (resulting in the heart to stop beating and breathing to stop), burns, trauma, and psychological effects.

When is lightning a threat to you?

Anytime it's within 10 miles of you (anytime you even hear thunder rumbling in the distance)

The 30/30 rule is helpful in judging when to take cover: if there is less than a 30 second delay from flash to bang, then you should be indoors or in the safest location possible. Do not resume activity until 30 minutes after you hear the last rumble.

Reducing the risk:

- Find safer terrain if you hear thunder (ideally indoors or in a stand of trees that are similar in height)
- Get in the lightning position if lightning is striking nearby

AVOID: peaks, ridges, cave entrances, rock shelters, overhangs, bodies of water, lone/tall trees, tree trunks, tents, and potential conductors such as wet ropes, metal fences, measuring tapes, power lines, railroad tracks, handrails, bridges, and other metal objects.

When Taking Cover as a Crew in the Backcountry:

- Space out at least 20 feet apart
- Get in the lightning position- This is no substitute for getting to safer terrain! This is for when it is impossible to get to a safer location and lightning is striking.
 - Put your feet together
 - Crouch
 - Wrap your arms around your legs
 - Close your eyes
 - Cover your ears



Ultimately, be aware of your surroundings. Make a plan for where you and the crew will go if there is lightning in the area. Be prepared and take lightning seriously!

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Culture of Caring

The purpose of all safety policies is to help promote a safe, secure work environment for everyone. But safety does not come from a series of 'rules' designed to control people's behavior for fear of punishment. It stems from a sense of team commitment where everyone looks out for everyone else and has the courage to speak out when unsafe actions or conditions exist. Our Safety Policy Statement is the first step in creating that 'Culture of Caring' which reflects co-worker's respect for and responsibility to one another. Safety is much more than simply following written policies. Safety depends on certain qualities within all members of the team and the team as a whole. These qualities include:

- Self-Efficacy – "I can do it"
- Optimism - "I expect the best"
- Belongingness – "I care about my co-workers"
- Self-Esteem – "I care about myself"
- Personal Control – "I am in control"

We believe that 'all accidents are preventable.' In fact, we want to stop using the term 'accident' because it implies that there were root causes out of our control. But the best way to avoid injuries in the future is to share openly what has happened in the past, identify contributing factors, address them and communicate that learning to everyone. That requires an atmosphere of openness, acceptance and caring within the entire organization. It requires full reporting of all 'close calls' as well as injuries so that everyone can look at the facts and learn from anyone's experience without fear of retribution.

The challenge is for you to create that 'Culture of Caring' within your crew and within your region. If you don't have it currently, your crew needs to honestly confront that situation and identify what changes need to be made to create such a culture. We have as our ultimate goal to go through an entire season without a single incident. We do not want to adopt the attitude that 'accidents are just a part of what we do so we accept them. One of many ways that the MCC encourages vigilance in risk management and safety is to provide crews with regular memos on safety topics. Relevant to common issues throughout your term of service, the intent of these memos is to raise awareness and to act as a reminder of risk management strategies. Most importantly we hope these memos will stimulate conversation and discussion, ultimately fostering a culture of safety and caring on your crew.

MCC Safety Memorandum

Attachments: MCC Safety Policy Statement

MCC Safety Policy

It is the policy of the Montana Conservation Corps to provide all employees and participants with a safe and healthy workplace. Safety is of such importance that it will take precedence over productivity whenever necessary to protect employees or participants. An effective health and safety program is an integral part of conducting our work; **safety awareness must be part of everything we do and it must be everyone's responsibility.**

The Montana Conservation Corps is committed to providing safe and healthy conditions for each of its employees and participants. In return, we expect each employee and participant to recognize their obligations to conduct themselves in a way that supports both their own safety and the safety of their co-workers. To ensure a safe working environment is maintained, all employees and participants shall actively promote safety and accident prevention as a primary part of their normal job functions.

Each employee and participant is responsible for implementing this policy by continually observing safety practices, guidelines and standards in all program activities and locations including during transportation, while on the project site, and during educational and recreational activities. It is the goal of this policy to minimize accidents and incidents for everyone in every area of the program. Full cooperation of all employees and participants at all levels is essential to achieve this goal successfully.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: NA

Subject: Nutrition

The purpose of this memo is to ensure crews that everyone understands that nutritious meals are essential for building and maintaining a strong, productive, and happy crew. Mealtime is also an opportunity to increase team morale and strengthen crew dynamics while making certain that every person has the essential nutrients needed for the vigorous lifestyle required for MCC activities.

Here are a few considerations when planning and preparing meals:

- Hydration is essential- Water makes up 60 to 80% of what we are made of.
- Wash your hands! Good hygiene is essential in safe food preparation.
- Know your crew's preferences (vegetarian, omnivore, food allergies, etc.).
- Be proactive in offering advice to less experienced cooks- this may be the first time many have prepared meals for themselves, much less for a hungry crew.
- Prepare balanced meals. Physically active people need carbohydrates, which are easily converted to energy, and can be found in grains, starchy vegetables, and bread. Carbohydrates combined with protein can help repair muscle and promote tissue growth- nuts, animal products, beans are a few sources. Other fruits and vegetables are necessary to round out the vitamins and minerals we use. Fats and sweets can provide a quick energy boost and can help morale people.
- Use whole, unprocessed food products whenever possible.
- Make plenty of food. Most serving sizes are based on a 2000 calorie diet and sufficient for a more sedentary lifestyle. Life with MCC will increase that number. According to NOLS cookery, 1.5 pounds of food per day will provide 2500-3000 calories; 1.75-2 pounds translate to 3000-3500 calories; while 2-2.5 pounds will provide 4000-5000 calories.

A well balanced nutrition is essential to maintaining a healthy and happy lifestyle especially considering the demanding environment created by a MCC lifestyle. It is critical that everyone eats well, eats healthy, and eats plenty. The proper implementation of a nutritious meal plan can help create a safe, healthy, and positive crew environment.

Attachments: None

MCC Safety Memorandum

To: Staff

From: Risk Management Committee

Date: NA

Subject: Office to Field Visits and the Risk of Injury

The purpose of this memo is to address the risk of injury associated with field visits. We often have the task of venturing from behind our desks to the front of the field. The risk of injury is heightened when our bodies are not used to the rigors of field work. An attitude of invincibility and over-confidence can lead to negligence in correct body posture and lifting techniques, improper safety techniques, negative modeling to corps members, and contribute to a false sense of group invincibility.

Signs and Aspects of invincibility and over-confidence:

- Over confidence and/or complacency in your ability.
- Ignoring the 'red flags.'
- Super-instructor syndrome—the need to project invincibility.
- What has worked in the past will work again.
- The belief in something that is not true.
- Rigid adherence to schedule.
- False sense of security—it can't happen to me.

Strategies to mitigate risks:

- Take your time and ask for help if you need it.
- Take time to 'work harden' your body.
- Get the necessary rest your body needs. Stretch frequently.
- Curb the ego; we are in the field to help members learn and grow.
- Be aware of your surroundings and environment (e.g. heat, cold, fatigue).
- Be willing to be flexible, adapt to changes and change if necessary.
- Be a part of the group, do things together. Foster inclusiveness.
- Set realistic goals for the group and yourself.
- Be communicative. Utilize safety circles as important and necessary.
- Foster a safety 'culture' within the crew to oppose group conformity.

It is the responsibility of all MCC employees to ensure the safety of themselves and others. It is extremely important that staff understand their limitations created by not consistently working in the field. A rigorous and safe approach to working in the field will help all involved. Therefore it is important that staff understand respect their own limitations for the betterment of themselves and all MCC employees.

Attachments: Task Assessment Chart

MCC Safety Memorandum

Task Assessment Chart Example:

TASK DIFFICULTY	High	<p>‘Over the mountain or through the swamp?’</p> <p>MEDIUM conformity pressure</p>	<p>Challenging river crossing, or maybe evaluating a vague medical complaint</p> <p>HIGH conformity pressure</p>
	Low	<p>‘Pasta or burritos?’</p> <p>LOW conformity pressure</p>	<p>Practicing lightning drills</p> <p>MEDIUM conformity pressure</p>
Baron, Vandello, and Brunsman, 1996		Low	High
		TASK IMPORTANCE	

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: 3/3/15

Subject: Personal Protective Equipment (PPE)

Sometime this season you might find yourself thinking or even saying “WHY DO I HAVE TO WEAR THIS HARD HAT?” or “DO I *REALLY* HAVE TO WEAR SAFETY GLASSES?”

First, open up your trusty manual and flip to the little chart related to PPE. This chart will tell you what PPE is required and/or suggested for a variety of situations that you might face this season. It’s important to note that this seemingly simple chart did not develop overnight. Workplace PPE standards have evolved over the past century with origins dating back hundreds of years (mostly related to injury prevention in battle).

The first workplace hard hat was developed by the E.D. Bullard Company, a mining equipment firm in California. E.W. Bullard, son of the company’s founder, returned from WWI with a steel helmet and an idea to improve industrial safety. In 1919 the first true “hardhat” was patented. The use of hard hats expanded in the coming years as a mandatory piece of equipment for many workers across the country, from the Hoover Dam to oil rigs in Texas. Look on your trusty MCC hardhat; you’ll see Bullard printed on the brim. Nearly 100 years of technology and industry experience have gone into making the hardhat on your head today.

Safety glasses, chaps, ear protection, work boots, and even rain gear all share a similar history.

Workplace PPE was born from a need to minimize exposure to a variety of hazards workers face every day. Consider the hazards that you could face at MCC; chainsaws, felling trees, barbed wire fence, crushing rocks, etc. What are we all most scared of in the backcountry? Serious injury. PPE industry standards and MCC policy are in place to minimize your exposure to hazards and the chances for a serious backcountry injury.

Here are some tools to help you:

- Refer to your manual and when in doubt, wear it.
- Bring an extra set. Sometime this season someone will forget a piece of their PPE, so be prepared with backups.
- Fix it. When your gloves are in tatters that means they were trash two hitches ago. Patch your pants or by new ones. Waterproof your raingear.

You and your crew’s safety is the most important factor to the success of your season. Safety starts with PPE.

In the words of Cliff Kipp, make good choices.

Attachments: None

MCC Safety Memorandum

Date: January 31, 2018

To: Youth and Field Crew Leaders, Field Staff

Subject: POISON IVY

From: MCC Risk Management Committee

Leaves of Three, Let it Be

Poison ivy, poison sumac and poison oak are all of the same plant family, and contain the same rash-causing chemical: urushiol. Poison ivy is the only one of these three plants found in Montana. No matter what time of the year, crews should keep their eyes peeled for these three, shiny green leaves that are poison ivy's tell-tale characteristic. In Montana, poison ivy typically grows along river and stream corridors, in rocky areas and in the plains and foothills of the lower mountain ranges. "It can potentially occur anywhere in the state if the conditions are right, it'll grow under a variety of conditions" (*Cathy Seibert – Plant Taxonomist at MSU*).



- **Identify:** Poison ivy has lush, broad, almond-shaped leaflets that grow in groups of three. Leaf color ranges from light green (usually younger leaves) to dark green (mature leaves) with a waxy finish. Leaves may change to red, orange, or yellow in the fall. Leaflet clusters are alternate on the vine, and the plant has no thorns. A low-growing plant with woody stems, poison ivy may grow as a trailing vine on the ground, as standalone shrub, or as a climbing vine on various supports. The plant rarely grows at altitudes above 4,900 ft.
- **Urushiol:** Urushiol is the rash-causing clear liquid that leaks from poison ivy when the stems are broken by wind or a passing animal, or when insects chew holes in the leaves. The liquid may appear black when exposed to oxygen. Urushiol penetrates the skin within minutes of contact, causing a reaction ranging from itching and irritation with a red, scaly skin rash, to oozing lesions. In addition to direct contact with the plant, people can also pick up urushiol deposited on gear or clothing, which may stay active for up to a year (FDA). According to the USDA, about 85 percent of the population will have an allergic reaction to urushiol.
- **The Reaction:** "People often get one rash-free contact with poison ivy before having a reaction, usually you have to have prior exposure to be sensitized to it, [and] in future exposures, the reaction is worse and worse" (*Brian Rogers – Bozeman dermatologist*). People typically react to urushiol within 48 hours, but the reaction can take several days to manifest. A poison ivy rash may last anywhere from one to four weeks, depending on severity and treatment. People with less-severe reactions to urushiol will likely develop red, scaly rashes with inflammation or non-colored bumps. More severe reactions may manifest as blistering and oozing lesions. In extreme cases, a reaction can progress to anaphylaxis.
- **Treatment:** In most cases, an over-the-counter product to ease itching or a topical cortisone cream will reduce the rash effect. Calamine lotion or oatmeal and baking soda baths may also relieve discomfort. For severe reactions, systemic cortisone shots or pills may be needed. If your skin comes in contact with poison ivy, wiping the affected area with rubbing alcohol then washing with soap and water will help remove urushiol from the surface of the skin. Clothes, gear, and tools that have come in contact with poison ivy should be cleaned with rubbing alcohol or soap and water. Note: The oozing fluid released by scratching blisters does not spread the poison, this fluid in the blisters is produced by the body and it is not urushiol itself.
- **Caution:** When poison ivy is burned, urushiol can cause reactions in the face, eyes and lungs. This rash will appear in the lining of the lungs, causing extreme pain and possibly fatal respiratory difficulty.

Aides in Identification

- "Leave of three, let it be." and "Side leaflets like mittens, will itch like the dickens."

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: July 7, 2011

Subject: Rattlesnakes



Of the ten snake species that live in Montana, only the prairie rattlesnake is venomous. Also known as the western rattlesnake, the prairie rattler is found in open, arid country and ponderosa pine savannahs. It often dens on south-facing slopes in areas with rock outcrops. Rattlesnake bites are extremely rare. Of the hundreds of thousands of hunters, hikers, and backpackers traversing Montana each year, only five or six report being bitten, according to the Rocky Mountain Poison and Drug Center in Denver. The center also notes there was not a single death among the 45 reported prairie rattlesnake bites in Montana during the last eight years.

The prairie rattlesnake is a medium-sized species with venom glands that harbor only moderate amounts of venom. Rattlesnakes are shy, retiring creatures. If left alone, they won't bother people. But if a rattlesnake thinks it will be stepped on or otherwise harmed, it may bite. These snakes are armed with a pair of hollow, hinged fangs that fold back against the roof of the mouth. A rattlesnake strikes most often on the hand, calf, or ankle, leaving one or two small fang marks. When bitten, a person will likely feel intense pain at the bite area. Other symptoms may include difficulty breathing, nausea, vomiting, swelling, and gangrene.

Rattlesnakes like summer evenings the best, just as the sun is going down and when it has gone — they are most active nocturnally in summertime. Rattlesnakes are not generally sitting about in the open — if they are in the open, they are moving through it much of the time. Rattlesnakes want to avoid contact with predators who can easily spot them in the open, including humans and large animals. As such, you will most likely encounter rattlesnakes around rocks, shrub and brush, or wherever there are nooks for them to hide among. However, on sunny days, you might find rattlesnakes warming themselves on warm rocks or asphalt.

Behave appropriately when hiking, climbing and working:

When in rattlesnake territory, think like a rattlesnake to keep your mind on how they might behave so that you can behave accordingly:

- Stay out of the way. Keep alert as you hike, walk, and climb. Stick to well-used trails and do not wander off into tall grass, underbrush and weeds where rattlesnakes may be hiding.
- Do not stick your hands in the wrong places (down holes, under rocks and ledges, or into brush). These are key hiding places for rattlesnakes.
- When hiking or working, it is best to carry a tool or a long, sturdy and light stick, to help prevent using your hands in areas where snakes may hide.
- Don't sit down on tree stumps or logs without first checking inside.
- Take care where you land your feet. A foot coming straight down next to, or on top of a snake is asking for a bite. Snakes rely on vibration to hear and can sense you coming if you have stomped about loudly enough.
- If you do walk into the range of a rattlesnake, calmly back off as quickly and quietly as you can.
- Take care around water. Rattlesnakes can swim.

MCC Safety Memorandum

- Do not provoke a rattlesnake. Angering a snake will result in one response — you become its target.
- If you see a snake, leave it alone. Live and let live — back off!

Be vigilant when camping:

There are risks during camping that you need to address:

- Check the campsite before setting up. Arrive in daylight and set up in daylight. On warm nights, rattlesnakes may still be hanging about and if you cannot see what you are doing, you are at risk.
- Shut the tent flap if camping in rattlesnake territory or you may wake up to a very unwelcome surprise. Always check before going to bed that an unwanted guest isn't already lodged inside, attracted by warmth or the interesting hiding possibilities presented by a tent.
- Shake out sleeping bags before hopping in.
- Take care collecting firewood. Piles of wood are an ideal hiding place for rattlesnakes.
- Use a flashlight at all times during night walks.

If someone is bitten by a Rattlesnake:

Remain as calm as possible! Dashing about will move the venom around the body faster.

- Remove the victim and others from the strike zone (one-third to one-half of the snake's length)
- Immediately remove rings, bracelets, and other constricting jewelry or clothing.
- Immobilize the bitten limb with a splint or sling (applied loosely so circulation is not cut off) and keep it lower than heart level.
- Get professional medical care as soon as possible after any venomous snake-bite. Try to get the victim to a hospital within three hours (though a snakebite victim should not run). The victim should be kept calm, and exertion should be avoided. Physical activity increases absorption of the venom.
- Walk the victim at a steady but relatively slow pace back to a vehicle, or to a place where an ambulance or helicopter can be met. Keep the victim's heart rate as low as possible to slow the spread of the venom. If possible, use a horse, ATV, or litter to carry the victim.

Rattlesnakes play an important role in the balance of nature. Each year they consume millions of rodents, which can become agricultural pests and spread disease such as hantavirus. Unless a rattlesnake has invaded your backyard and poses an immediate threat to you, your family, or your pets, don't kill it. Enjoy watching this fascinating snake from a distance and let it be.

MCC Safety Memorandum

Date: January 31, 2018

To: Field Staff, Youth and Field Crew Leaders

Subject: Dealing With Risky Project Partners

From: MCC Risk Management Committee

Once upon a time...there was an MCC crew that split up for the hike to move camp. The crew was carrying full packs, and many had tools in their hands while hiking. During the hike, it so happened that 2 corpsmembers were paired with a USFS Technical Assistant (TA), and were well ahead of their Crew Leaders on the trail.

When they got to a creek crossing, the USFS representative suggested using a downed log to cross the creek. The creek was less than 12' across, had lots of rocks extending above the surface of the water, and was less than 2' deep.



The TA and one corpsmember made it across the downed log fairly easily. The other corpsmember, who was carrying a crosscut saw, expressed concern for her ability to safely use the log, but was encouraged by the TA to give it a try.

She made it about half-way across the log before her pack hit a branch and she face-planted into the creek. She was evacuated for a smashed face, suspected collar-bone break, and potential head/neck trauma.

Turns out the TA was a former gymnast.

How This Story Applies To You

It is highly likely that over the course of your project season, you'll encounter folks working for partner agencies who may not maintain the same standards for Risk Assessment and/or Risk Management as we expect at the MCC. The possible reasons for the difference are many: Agency TAs might have technical skills but perhaps not institutional crew leading experience; they might have a macho attitude; they might simply not be seeing the risk involved in a particular activity; and they definitely won't

know your crews' abilities as well as you will. The point is not to assign blame, but rather to encourage you, as Leaders, to take more responsibility.

- Remember that as Crew Leaders, YOU, not the agency representatives, are ultimately responsible for your crew's safety and well-being. Similarly, YOU, not the agency representatives, are responsible for your crew's adherence to MCC protocols/policies. **Don't abdicate your responsibility.**
- Be sure to communicate your crew's daily agenda to the agency representative right away. Things like the use of **PPE, Driving Policies, Stretch Circle, the Safety Chat, taking adequate breaks for water/rest, Backcountry Travel Protocols, Water Crossings, Tool Usage**, etc. These should not come as a big surprise to the agency, but it'll be up to you to confirm those practices, and discuss the impact on the work day.
- While many folks have lots of experience, like agency representatives, many do not and are therefore less capable of operating safely in the field without guidance. Thus, our protocols/policies are in place to ensure everyone's safety. **Don't apologize for MCC policies; they come from experience, are sometimes adapted from agencies' own policies, and can be very effective tools for developing judgment in folks new to our field of work.**
- Invite the agency representatives to join your Stretch Circle and Safety Talks to offer their perspective and insight.
- **No one, not even the agency representative, wants to deal with an incident, injury, evacuation or wreck.** Taking time for safety awareness always pays off.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Sprains and Strains

The purpose of this memo is to address the prevention of sprains and strains. Not only can stretching be an enjoyable way start your active work day, but it's also an essential means to help keep your body strong, healthy and injury-free throughout the long season. MCC statistics clearly reflect that sprains and strains are a leading type injury in this line of work.

- **Sprains** are the stretching or tearing of ligaments, which are bands of fibrous tissue that connect one bone to another. They can cause rapid swelling and can occur mildly, moderately or severely. Usually, the greater the pain and swelling, the more severe the injury.
- **Strains** are the stretching or tearing of muscle or tendon and are commonly referred to as "pulled" muscles. Like sprains, strains can vary in severity and result in pain, stiffness, swelling and bruising.

Sprains and strains occur commonly and most often only result in minor injuries; however, some of these injuries have been severe enough to result in evacuations from remote locations. Others have resulted in reconstructive surgery, followed by months of intensive physical therapy.

Factors which can contribute to sprains and strains include:

- **Poor conditioning** – lack of conditioning can leave muscles weak and prone to injury
- **Poor technique** - improper landing or movement may affect risk of injury
- **Fatigue** – tired muscles are less likely to provide good support for joints
- **Improper warm-up** – helps to loosen muscles and increases joint range of motion, making muscles less tight and less prone to trauma and tears.

When dealing with sprains and strains in the field, use the **P.R.I.C.E.** approach - **P**rotection, **R**est, **I**ce, **C**ompression and **E**levation. Recommendations for reducing risk of strains and sprains injury include:

- When working or hiking, be sure to always have sturdy footwear
- Watch your footing and slow down while traveling on uneven surfaces.
- Switch out activities periodically so as to limit repetitive motion injuries.
- Know your current physical and mental limits.
- Take "mini" stretch-breaks throughout the day to limber up some of the more heavily used muscle groups.

Attachments: None

WATER CROSSINGS CAN BE DANGEROUS!!!!



THIS PICTURE IS FROM A CREEK CROSSING THAT RESULTED IN AN EVACUATION BY AIRPLANE WHICH OCCURRED ON 7/13/10

WATER CROSSINGS ARE POTENTIALLY HAZARDOUS AND REQUIRE STRICT ATTENTION!

It can happen to anybody!
TAKE YOUR TIME!

TAKE A MOMENT AND REMIND YOURSELF OF THE RISKS WHEN CROSSING A WATERWAY:

Ask in advance: Discuss ahead of time with your sponsor/field staff whether there will be stream crossings during a project. Bring a water safety rope with you on hitch, carry it and use it.

Come prepared with appropriate footwear: boots, tennis shoes, secure sandals. DO NOT cross with bare feet or flip flops. Don't be afraid to get your feet wet. Utilize a sturdy stick or tool to maintain balance, unbuckle your backpack, and pass tools across.

Look for hazards: stop and scout out the safest route. If necessary, look upstream and downstream for a better route. Look for hazards in and outside of the immediate crossing area (downstream strainers, fast currents, rocks, etc). Talk it over with your crew to make sure everyone is comfortable and on the same page. Conditions change suddenly. Pay close attention to weather, terrain, and time of day. **Crossing logs can be dangerous!** Don't assume that crossing ON TOP of a log is the safest route.

Use spotters: For larger high flowing rivers, put a safety spotter upstream (watching for hazards flowing down from upstream: logs, boaters, etc) and downstream (ready with safety rope if someone goes down).

Techniques: Choose from a variety of crossing techniques. (Refer to handouts). One may be more appropriate than others given the river width/depth, group comfort level, number of people, resources, etc.

REMEMBER: Don't cross unless the entire crew feels comfortable. Unbuckle all pack straps, secure boots to pack and WAIT to resume hiking until everyone has crossed safely. Use proper judgment! Do not get over-confident because you cross the same creek over and over. Do not give in to peer pressure.

The safety of you and your crew is in your hands

Use caution when crossing and abide by MCC Backcountry Travel Procedures.

The safety of the crew should never take backseat to a dangerous crossing or demands of the sponsor—be willing to say NO!

Report unsafe creek crossing practices to staff.

Your safety is the most important thing~





Safety Memo

Avoiding/Dealing with Wrist Pain

Date: January 31, 2018

To: Field Staff, Youth and Field Crew Leaders

From: MCC Risk Management Committee



Meet Jedd. Jedd is currently a Field Project Coordinator in the Northern Rockies office.

Jedd has worked with the MCC for a total of 4 seasons; 2 as FPC, 1 as a Crew Leader and 1 as a Crew Member. Jedd has also worked with the Southwest Conservation Corps leading a saw crew, and has volunteered as a sawyer on a hurricane relief effort.

Jedd has spent many, many days in the field, swinging hand tools into dirt/rocks, and running chainsaws. Jedd is 25. Jedd's wrists hurt. Jedd wants to continue to do this type of field work into the future, but not at the price of his mobility, nor with daily pain/aggravation.

Jedd is fully committed to stretch circle and staying healthy, which is why Jedd felt compelled to visit a medical professional to determine a prognosis for his

aching wrists.

Jedd's Physical Therapist has indicated that Jedd should be able to continue in this field, pain free (and brace free), provided he takes good care of his wrists moving forward. Thus, Jedd will be utilizing the wrist modifications (below) offered with the stretch protocols.

We would like to see all of our crews incorporate the following modifications for **Plank**, **Up Dog**, and **Down Dog** in order to mitigate the onset of wrist/arm/shoulder issues. The modifications are called **Dolphin Plank**, **Sphinx**, and **Dolphin** respectively.

Dolphin Plank



Sphinx



Dolphin



MCC Safety Memorandum

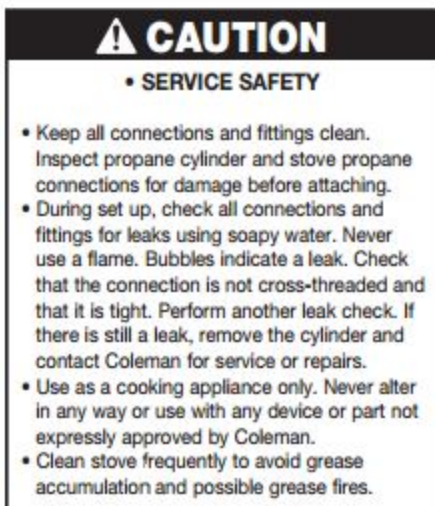
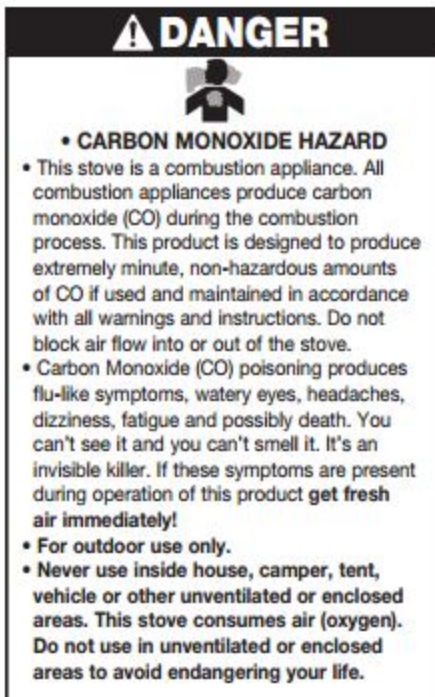
From: Risk Management Committee

Date: January 31, 2018

Subject: Stoves

To: All Crews

The use of our propane and white gas stoves can seem so common that it is easy to become complacent about their use and care.



As you spend more time becoming familiar with your equipment it is easy to forget that there may be people on your crew who do not have the same level of comfort that you do with each piece of gear. We see a number of incidents occur due to a lack of familiarity and an unwillingness to ask. Remember to ensure everyone knows how to properly light, use and maintain your stoves, especially when new people are brought onto your crew.

Some things to keep in mind before leaving the office:

- Check the condition of your gear, inspect for damage
- Ensure the cleanliness of your gear, clogged vent holes can cause irregular fuel flow
- Test your gear before leaving on hitch

Hazards to keep in mind in the field:

- Set your stove up in a safe spot—level, large propane ‘bombs’ standing upright, in a well ventilated area. CO buildup from inefficient combustion is a huge hazard.
- Corroded burners leak fuel and remove your ability to control the flame, as can corroded tubes connecting valves to burners. Remove grease and other liquids and store out of the rain to avoid a compromised stove.
- Cracked hoses or o-rings can result in fire at the source of the crack
 - Wait for the stove to cool before cleaning or storing, hot stoves may result in injury or melted gear
 - Inability to light your stove quickly may result in a large combustion if too much fuel has been emitted, stop and air out before trying a second time.

Refer to your field guide for maintenance issues

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Proper Tool Use and Ergonomics

The purpose of this memo is to ensure that crew members utilize proper ergonomics when handling and working with tools. It is critical that tools are used properly and for their intended purpose. Proper tool use will vary with different tools.

Stance:

- Legs apart, body loose and fluid, balanced posture. Use legs and butt muscles, not your upper body. The proper stance will help you avoid back injuries, which are some of the most common and potentially serious injuries that occur each year.

Stay close to your work:

- Keep your legs bent so that your center of gravity is lower and to prevent having to bend over at the waist. This also helps increase accuracy.

Tool rotation:

- Rotate the tool you are using. Make frequent effort to switch sides of your body and hands. It may take some time to develop comfort using your non-dominant side, but with practice you will become equally proficient.

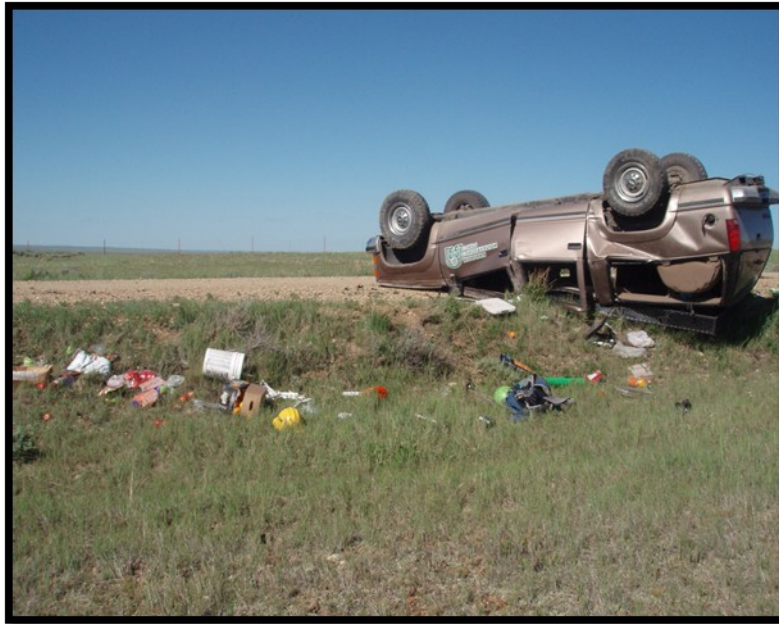
Job rotation:

- As with tools, rotating tasks can help avoid injury. If you have been digging all morning, try moving rock or doing re-vegetation work in the afternoon. The more you can rotate the tasks and body parts being used, the less likely you are to injure yourself.

It is critical that all crews participate in a rigorous stretch circle every morning, stretch often throughout the day, always use tools correctly, and always wear PPE. These key risk mitigation strategies coupled with proper ergonomics can help ensure a safe and healthy workplace.

Attachments: None

WE'LL SAY IT AGAIN FOLKS-GO EASY!!!!!!!!!!!!!!!!!!!!!!



THESE PICTURES ARE FROM A ROLLOVER ACCIDENT THAT OCCURRED ON 6/14/10 – there were NO serious injuries!

Driving is the MOST hazardous activity undertaken by the MCC.

This CAN happen to you!

TAKE A MOMENT AND REMIND YOURSELF OF THE RISK DRIVING THESE VEHICLES POSES.

Please remember the following:

- MCC rigs have a high center of gravity.
- Roof racks-loaded OR empty-make your vehicle top heavy.
- You will travel on loose surfaces and/or uneven terrain with road conditions that change suddenly.
- Washboard, soft shoulders and other hazards are often NOT SEEN COMING.
- Traveling at high speeds inhibits your ability to navigate these situations safely.

The safety of you and your crew is in your hands.

Use caution when driving and abide by MCC driving policies.

Inform your sponsor of MCC's policy of driving 5mph below the speed limit and ask that they do the same when escorting you.

Report unsafe driving practices to staff.

Your safety is the most important thing~



MCC Safety Memorandum

From: MCC Risk Management Committee

To: Crews Participating in WHWH

Date: January 31, 2018

Subject: Warm Hearts Warm Homes

Warm Hearts Warm Homes is a great project for so many reasons; the obvious direct impact on Montanans, the fact that you get to sleep in beds, the fact that you don't have to use heavy or motorized tools, the list goes on.

However, just because you're not outdoors doesn't mean you're not still facing considerable risks. Please review the bullets below and keep in mind how you might keep you and those you're working with safe for the next two weeks.



Driving remains the single most dangerous activity in which we engage. You may be in unfamiliar surroundings, in adverse weather conditions, and new to driving these vehicles. PLEASE use a navigator, utilize the Smith Systems driving methods, reduce in-vehicle distractions and generally drive cautiously.

Lead Paint: Lead paint is only a concern in pre-1978 homes. Fortunately, it will not poison you via simple contact, only if it's inhaled or digested. The best practice is to avoid disturbing any chipping/flaking/peeling paint, AND, because lead is most often

spread hand to mouth; WASH YOUR HANDS

Asbestos: exposure to Asbestos does not always result in illness. Asbestos is only harmful if particles are released into the air, SO DON'T DISTURB IT! You will most likely only encounter asbestos in attics, within wall spaces or on old pipe-wrap. If there is white pipe wrap around anything, don't disturb it (see photo). When in doubt, don't mess with it. If you believe asbestos is present, don't announce that it is asbestos to the homeowner (you are not an expert). Instead, say you're concerned and will pass the information along to professionals.



Sockets/Outlets: only install bulbs/gaskets when these are in **PERFECT** condition. If they are not, leave the materials with the residents.

Compact Florescent Light Bulbs: CFLs contain a very small amount of mercury. If a bulb breaks, the mercury is released as a vapor. If a bulb is broken, follow these steps for clean up: **1)** remove everyone from the room (even pets), **2)** ventilate the room for 5-10 minutes, **3)** shut off AC/Central Air if there is some, **4)** use sticky tape, or a damp towel to daub up pieces of the bulb, **5)** place the pieces and towels in a zip-lock bag or other sealable container, **6)** Once that's done, THEN you can vacuum the area. (Are there directions for disposing of the bulb parts or do they just throw it in the trash can?)

Pets: Pets should be on your radar at all times, and you must be prepared to make a judgment call as to whether your safety is in danger. Ask that the client sequester (that means 'put away') the animal and, if they are unwilling, you can always decide not to complete the appointment if you feel your safety is compromised. Also, be sure to take note of any team members who suffer from allergies and be ready to mitigate their exposure in homes with lots of dander.

Unsafe Persons: The majority of the people you encounter while weatherizing with (will) be warm, appreciative, and have something to teach you. That said, for better or worse, weirdos do exist in this world, and your team may encounter some during your travels. Inappropriate behavior should never be tolerated by any client. Do your best to avoid any one team member being alone with any client. This will not only protect you from in appropriate actions on their part but also protect you from allegations made by clients. If at any time you feel your safety is compromised, put an end to the visit. If a client appears to be intoxicated, put an end to the visit. Be sure to document the incident and report it to your regional staff.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Fire

Summer is finally here, and throughout Montana and the Northern Rocky Mountains, that means fire season. As the snow melts, the rain stops falling, blue skies and rising temperatures, increase the occurrence and risk of wildfire. Simply put, the backcountry is highly flammable. MCC crews have been affected by fires in the past. These affects have resulted in evacuations, loss of equipment, injury, and the disruption of project schedules. It is the responsibility of the crew to handle and be mindful in its use of fire. They should be aware of, and know how to respond in the event that a fire occurs.

Annually, once the snow melts, and the rain dries up, and the days grow long in May and June, fire season arrives. Summers are hot and dry. Lightning producing, afternoon thunderstorms are the norm in the mountains. Fire season will peak in the hottest of summer months, July and August. As the days shorten and bring longer nights, and cooler nighttime temperatures, the instances of wildfires starting diminishes, although fire season is not over until the snow falls.

Daily, as you may have noticed, the sun begins to heat the atmosphere, reaching its peak in the heat of the day, when naturally, fires' activity also peaks. Hot air is active, unstable, and it rises, creating thunderheads as it interacts with the cooler air and topography of mountain tops. Then comes the thunder and lightning, often without sufficient rainfall to suppress the ignitions caused by lightning strikes, which may smolder in trees and undergrowth for days before they become apparent.

In the western mountains, most fires are started by lightning strikes. Although we cannot control the weather, we can be prepared. The second most common cause of wildfires is human activity, which we can control.

Prevention and Preparation

- Do a fire hazard analysis at your camp and on the worksite: Is your kitchen area free of flammable materials- pine needles, duff, etc? Have you designated a "smoking section" on mineral soil? Is a campfire necessary? If you have a campfire, make sure is it cold to the touch when you are done, and never leave one unattended.
- Communication with dispatch/sponsor agencies is essential. Who do you contact? Do you have enough batteries?
- Listen to fire weather- talk to your sponsor about when it is broadcasted over the radio. Dispatch will discuss topics such as the Haines Index, Wind Speed, Lightning Activity Level (LAL) and the chance of wetting rain. Please see corresponding definitions and level readings below.
- Know how to read a map, and be able to identify your location and the location of potential wildfires, and be able to communicate this information.
- Carry your evacuation plan, and keep it updated.
- Smoke, haze, and the omnipresent campfire smell of a burning forest is a common presence during the summer. You may not necessarily be in danger- be aware of current conditions.
- If you see a plume of smoke within your vicinity, it never hurts to call it in. Often, our crews are the only eyes out there.
- Firefighting is best left to professionals with proper equipment and training. Keep your distance from active fire operations as well as active fires.
- Review the fire protocols and procedures in the MCC Crewleader Handbook, pay special attention to the fire stages and prohibitions during each stage.

MCC Safety Memorandum

Further Resources

- <http://www.inciweb.org/>
- <http://mt.gov/fire.mcpx>

Haines Index (HI) ~

Used to indicate the potential for rapid fire growth due to dry and unstable atmospheric conditions over a fire area. The index is a simple way to measure the atmosphere's contribution to the fire's growth potential. A high Haines Index is correlated with large fire growth where winds do not dominate fire behavior.

2	Very Low Potential (Moist and stable lower atmosphere)
3	Very Low Potential
4	Low Potential
5	Moderate Potential
6	High Potential (Dry and unstable lower atmosphere)

Keetch-Byrum Drought Index (KBDI)

The KBDI is a daily value representative of the water balance where yesterday's drought index is balanced with today's drought factor (precipitation and soil moisture). The drought index ranges from 0 to 800; an index of 0 represents no moisture depletion and an index of 800 represents absolutely dry conditions.

0-200	Soil and large class fuel moistures are high. Most fuels will not readily ignite or burn.
200-400	Lower litter and duff layers are drying and beginning to contribute to fire intensity. Heavier fuels will still not readily ignite and burn.
400-600	Lower litter and duff layers actively contribute to fire intensity and will burn actively. Expect complete consumption of all but the largest fuels. Drying of soil will lower live fuel moistures allowing live fuels to become available to burn.
600-800	Often associated with severe drought and increased wildfire occurrence. Expect intense deep burning fires with significant spotting problems. Live fuels will burn actively at these levels and expect fires to be difficult to contain and control.

Lightning Activity Level (LAL)

LAL 1	• No thunderstorms
LAL 2	• Isolated thunderstorms. • Light rain occasionally reaches the ground. • Lightning very infrequent. • 1-5 strikes in 5 minutes.
LAL 3	• Widely scattered thunderstorms. • Light to moderate rain will reach the ground. • Lightning is infrequent. • 6-10 strikes in 5 minutes.
LAL 4	• Scattered thunderstorms. • Moderate rain is commonly produced. • Lightning is frequent. • 11-15 strikes in 5 minutes.
LAL 5	• Numerous thunderstorms. • Rainfall is moderate to heavy. • Lightning is frequent and intense. • More than 15 strikes in 5 minutes.
LAL 6	• Widely scattered dry thunderstorms. • No rain reaches the ground. • Lightning is infrequent. • May constitute the issuance of a Red Flag Warning.

Weather Watch/Weather Warning

A **Watch** is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location, and/or timing is still uncertain. A **Warning** is issued when a hazardous weather or hydrologic event is occurring, is imminent, or has a very high probability of occurring. A warning is used for conditions posing a threat to life or property.

Windspeed Ranges

Foehn 40 to 60 mi/hr common; up to 90 mi/hr reported at 20 ft.
 Land breeze 2 to 3 hours after sunset, 3 to 5 mi/hr at 20 ft.
 Sea breeze 10 to 15 mi/hr at 20 ft.
 Up-valley wind ... 10 to 15 mi/hr, early afternoon and evening at 20 ft.
 Upslope winds as high as 4 to 8 mi/hr at midflame height
 Downslope winds 3 to 6 mi/hr at midflame height

BEAUFORT SCALE FOR ESTIMATING 20-FT WINDSPEED

Wind Class	Wind Speed (mph)	Nomenclature
1	<3	Very light - smoke rises nearly vertically. Leaves of quaking aspen in constant motion; small branches of bushes sway; slender branches and twigs of trees move gently; tall grasses and weeds sway and bend with wind; wind vane barely moves.
2	4-7	Light - trees of pole size in the open sway gently; wind felt distinctly on face; loose scraps of paper move; wind flutters small flag.
3	8-12	Gentle breeze - trees of pole size in the open sway very noticeably; large branches of pole size trees in the open sway; tops of trees in dense stands sway; wind extends small flag; a few crested waves form on lakes.
4	13-18	Moderate breeze - trees of pole size in the open sway violently; whole trees in dense stands sway noticeably; dust is raised on the road.
5	19-24	Fresh - branches are broken from trees; inconvenience is felt in walking against wind.
6	25-31	Strong - tree damage increases with occasional breaking of exposed tops and branches; progress impeded when walking against wind; light structural damage to buildings.
7	32-38	Moderate gale - severe damage to tree tops; very difficult to walk into wind; significant structural damage occurs.
8	>39	Fresh gale - surfaced strong Santa Ana; intense stress on all exposed objects, vegetation, buildings; canopy offers virtually no protection; wind flow is systematic in disturbing everything in its path.

Source: Fire Behavior Field Reference

Severe Fire Behavior Potential Related to Relative Humidity and Fuel Moisture Content

R.H. %	1-HR F.M. %	10-HR F.M. %	Relative ease of chance ignition and spotting; general burning conditions
>60	>20	>15	Very little ignition; some spotting may occur with winds above 9 mi/h.
45-60	15-19	12-15	Low ignition hazard--campfires become dangerous; glowing brands cause ignition when relative humidity is <50 percent.
30-45	11-14	10-12	Medium ignitability--matches become dangerous; "easy" burning conditions.
26-40	8-10	8-9	High ignition hazard--matches always dangerous; occasional crowning, spotting caused by gusty winds; "moderate" burning conditions.
15-30	5-7	5-7	Quick ignition, rapid buildup, extensive crowning; any increase in wind causes increased spotting, crowning, loss of control; fire moves up bark of trees igniting aerial fuels; long distance spotting in pine stands; dangerous burning conditions.
<15	< 5	< 5	All sources of ignition dangerous; aggressive burning, spot fires occur often and spread rapidly, extreme fire behavior probable; critical burning conditions.

MCC Safety Memorandum

To: Incoming Participants

From: MCC Risk Management Committee

Date: January 31, 2018

Subject: Preparing for the Physical Demands

We talk about it in our recruitment materials, we talk about it in the interview, we ask about it in the Medical History Review, and references to it are numerous in blog posts from former members; physical conditioning is a critical component to your enjoyment and success in the MCC.

Unfortunately, conditioning is consistently underestimated, undervalued and overlooked by incoming Corpsmembers. Physical strains may include, but are not limited to, the following:



- Long days of shoveling, digging and swinging heavy tools repetitively
- Heavy lifting, pushing, pulling and bending
- Hiking and carrying 45-65 lb. backpacks at altitudes up to 12,000 ft.
- Working, eating, and living in the outdoors in all weather conditions
- Walking on steep or uneven terrain
- Working in extremes of heat or cold

You now have less than one month before you're expected to report to an MCC office somewhere in Montana. No doubt, you're focused on gathering necessary gear, getting things in order for you to be away from home for a while, and making plans for finding housing and making the move.

We cannot stress enough the value and importance of also spending time getting your body ready for the physical rigors that you'll experience. If you're not already, we recommend you consider incorporating some of the following tips as a means of

improving your physical conditioning prior to the start of your MCC term.

- **Go hiking three times/week, for at least 2-4 miles.**
- **Carry a pack with 20-40lbs of weight to get used to the feeling.**
- **Hike/Walk in your work boots, as often as you can and make sure they are broken in.**
- **Walk up and down steep hills in your area. Try to maintain your pace up hills. Our crews are often travelling on trails with more than 18% grades, and by the end of the season will be expected to hike at a rate of 3.5-4 miles and hour**
- **Strengthen your core and your extremities. History has shown us that work-hardening injuries in MCC occur most often with lower backs, knees, ankles and wrists.**
- **Begin a stretching regiment in order to enhance flexibility, decrease muscle soreness, and reduce your potential for injury.**

The Montana Conservation Corps wants all its members to complete their term of service successfully. In the past, we have had numerous members fail to complete the program because they underestimated the physical demands placed on them or overestimated their own capabilities, particularly at the beginning of the season. You will find a difference between the romantic image of 'building trail in the Rockies' and swinging a 5 lb. Pulaski or using a chainsaw for hours at a time.



MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: **Working and Living in Cold Weather**

The purpose of this memo is to address the risks associated with living in cold weather conditions. Supervisors and crews should be aware of the inherent risks and mitigation strategies associated with living and working in cold weather. Uncomfortable cold conditions can lead to lower work efficiency and higher accident rates. The cold impairs performance of manual dexterity and complex mental tasks. Sensitivity and dexterity of fingers are reduced and deeper muscles can be affected which result in reduced muscular strength and stiff joints.

- ***Dress warmly and stay dry***
 - Wearing breathable light layers with a shell jacket. Perspiration will increase heat loss, so remove extra layers of clothing when you feel too warm.
 - Wear wicking fabrics. Wool, silk and polypropylene inner layers of clothing hold body heat better than cotton.
 - Protect your feet, hands and head.
- ***Warm up and fuel up***
 - Do some jumping jacks or other form of physical activity for 5-10 minutes.
 - Avoid coffee or caffeinated drinks as this increases heat loss from the body.
 - Stay hydrated, Eat properly and often.
- ***Be cautious about traveling and driving:***
 - Pay attention to advisories, winter storm watches and warnings.
 - Let someone know your destination and arrival time when traveling on icy roads. Ask them to notify authorities if you are late. Check in regularly with staff.
 - Don't rely on the vehicle to provide sufficient heat; take extra clothing and/or blankets and waterproof matches should the vehicle break down.
 - When driving on icy roads, drive much slower! Do not brake or accelerate hard.
 - ***Refer to MCC Guide to Job Hazard Assessment, MCC Vehicle manual & the MCC Crew Leader manual for more information***

Being prepared and following sensible health and safety precautions can make all the difference when working in cold weather. If you are having difficulty determining whether or not to continue on a project due to cold weather, look at your crew's performance & morale and contact regional staff for guidance.

Attachments: Threshold Limit Values Work/Warm up Schedule Chart

MCC Safety Memorandum

Working in Cold Weather (attachment)

THRESHOLD LIMIT VALUES WORK/WARM-UP SCHEDULE FOR FOUR-HOUR SHIFT *											
Air Temperature Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind	
° C (approx)	° F (approx)	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks
-26° to -28°	-15° to -19°	(Norm breaks) 1		(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4
-29° to -31°	-20° to -24°	(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32° to -34°	-25° to -29°	75 min.	2	55 min.	3	40 min.	4	30 min.	5	↓ Non-emergency work should cease ↓	
-35° to -37°	-30° to -34°	55 min.	3	40 min.	4	30 min.	5	↓ Non-emergency work should cease ↓			
-38° to -39°	-35° to -39°	40 min.	4	30 min.	5	↓ Non-emergency work should cease ↓					
-40° to -42°	-40° to -44°	30 min.	5	↓ Non-emergency work should cease ↓							
-43° to below	-45° & below	↓ Non-emergency work should cease ↓									

*Source: Adapted from Threshold Limit Values (TLV) and Biological Exposure Indices (BEI) booklet: published by ACGIH, Cincinnati, Ohio, 2008.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: January 31, 2018

Subject: Working in Heat



The purpose of this memo is to address working conditions and risk mitigation strategies for dealing with heat and heat related illness. **Working in extreme heat with direct sun exposure can be a serious health threat during the field season.** It is not uncommon for temperatures to exceed 100 degrees Fahrenheit.

Utilize the policy manual's "Heat Related Concerns" section to dictate the frequency of breaks.

There are three kinds of major heat-related disorders—**heat cramps**, **heat exhaustion** and **heat stroke**. You need to know how to recognize each one and what first aid treatment is necessary.

- **Heat Stroke** is the most serious heat related disorder and occurs when the body's temperature regulation fails and body temperature rises to critical levels. It is a medical emergency that may result in death. The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature. If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. Until professional medical treatment is available, the worker should be placed in a shady, cool area and the outer clothing should be removed. Douse the worker with cool water and circulate air to improve evaporative cooling. Provide the worker fluids (preferably water) as soon as possible.
- **Heat Exhaustion** is only partly due to exhaustion; it is a result of the combination of excessive heat and dehydration. Signs and symptoms are headache, nausea, dizziness, weakness, thirst, and giddiness. Fainting or heat collapse is often associated with heat exhaustion. Workers suffering from heat exhaustion should be removed from the hot environment and given fluid replacement.
- **Heat Cramps** are usually caused by performing hard physical labor in a hot environment. Heat cramps have been attributed to an electrolyte imbalance caused by sweating and are normally caused by the lack of water replenishment. It is imperative that workers in hot environments drink water every 15 to 20 minutes and also drink carbohydrate-electrolyte replacement liquids (e.g., sports drinks) to help minimize physiological disturbances during recovery.

All employees should understand the symptoms of these three heat related illnesses. It is critical to drink small amounts of water frequently; wear light-colored loose-fitting clothing; take breaks as needed; figure out a flexible work schedule with sponsors; meet the basic needs of fluid, rest, and water; and always be aware of dehydration and its symptoms. Overall, use common sense in extreme situations to prevent injury and incidents when the temperatures rise this field season.

MCC Safety Memorandum

To: All Crews

From: Risk Management Committee

Date: NA

Subject: Why is it important to have safety policies and procedures?

The purpose of this memo is to ensure that everyone gain a better understanding of why safety policies and procedures exist. Many of you at some point this season have or will question why we have specific safety policies and procedures that we do. All of the policies which MCC adheres to were developed from the organization's experience. Often when an organization is starting out these types of policies are not fully know; it is only from the experience of many seasons that an organization knows what to include in these policy lists. The policy and procedure list is reviewed each season and improved where needed base on our experience and feedback from the field.

The most basic reason MCC has an in-depth policy is to avoid injury to you and fellow Crew Member and Leaders. MCC places your experience as the top priority. Injuries will happen this season that may be due to lack of experience, the hard physical work, or poor judgment. MCC's goal is to mitigate risk as much as possible. But the bottom line is that:

- All of the policies are developed for the well-being of MCC Members and Leaders.
- They provide a written standard of clear expectations.
- Safety is dependent on the good judgment of the people implementing those policies.

MCC crews complete a lot of potentially dangerous work. Without safety policies and procedures our injury rates would be higher. Also MCC's safety policy and procedures are a large part of the reason we are so well respected by so many of our project partners. Remember you are the reason the safety policies and procedures are in place MCC believes in providing you a safe and productive experience. If you have questions regarding safety policy and procedures please feel free to talk to your Regional Staff. Safety is an area which is constantly growing and evolving. MCC Staff welcome feedback on the safety policies and procedures. We want to be able to provide the very best guidance available. The best information comes from the field with what works and does not work. Have a safe season.

Attachments: None



Safety Memo

Avoiding/Dealing with Back Pain

Date: January 31, 2018

To: Field Staff, Youth and Field Crew Leaders

From: MCC Risk Management Committee

The Northern Rockies Region has encountered a number of incidents involving BACKS this year. As we all know, our backs are pretty much connected to every motion we could ever ask of our fine bodies—which rates them pretty high on the list of things to take care of. Also- for active people, like all of you passionate trail pups, back safety isn’t something confined to this season. Back Safety is forever. We would prefer to not encounter any more back injuries throughout the final weeks of this amazing season (or to see any crop up for you all later on in life!), so, crews: Take Heed! Practice Back Safety!

#1 Ergonomics

A phrase many of you have heard over and over this season.



“As another option, squat rather than kneel to lift an object from the floor. Stand as close to the object as possible, positioning it between your knees as you squat. Keep your feet parallel, as shown here, or stagger one foot ahead of the other. It might help to tilt one edge of the box up to ensure a firm hold.”
“As you stand, be careful to hold the object close to your body. Maintain the natural curve in your lower back, and keep your core muscles tight. Use your leg muscles — not your back — to lift the object.” –Mayo Clinic Slideshow

Use these techniques when picking up anything- from the lightest feather to a heavy rock. Good form is a good habit, and it doesn’t have to be heavy for your back to fail. Do a test lift first for heavy objects to ensure that you are capable of lifting it without hurting yourself. Keep your head tilted up, “skying your eyes.” This will help keep your body in the proper position. Remember- repetitive lifting throughout the day or hitch can wear you out, which often results in loss of focus on form. Stay vigilant! In general, keep a flat back and use your entire body, especially your core and legs- whether you are lifting, digging, hammering, using the McCleod...

#2 Know your body, know your limits.

It doesn’t make you weak or wimpy. It’s RISK MANAGEMENT, folks.

Did you know that MCC has a policy that follows advice from the experts: “No one should ever lift more than one third of their weight without assistance.” That means a 140 lb person should only lift MAXIMUM 46.6 lbs. How heavy is YOUR pack? Consider lightweight packing alternatives, including sharing tents, dehydrated or light weight food, and minimizing the “extras’ you bring in. (Maybe 4 hardcover books is too many...) Please ensure that your pack is well-packed, well-balanced, and properly fitted. This will reduce the stress on your body. Additionally, be prepared to look twice at that huge rock or log and carefully consider if it is within your range. You may have the ability to lift something that weighs more than is safe for your body. Ask yourself, “Is this safe?”

#3 Stretch

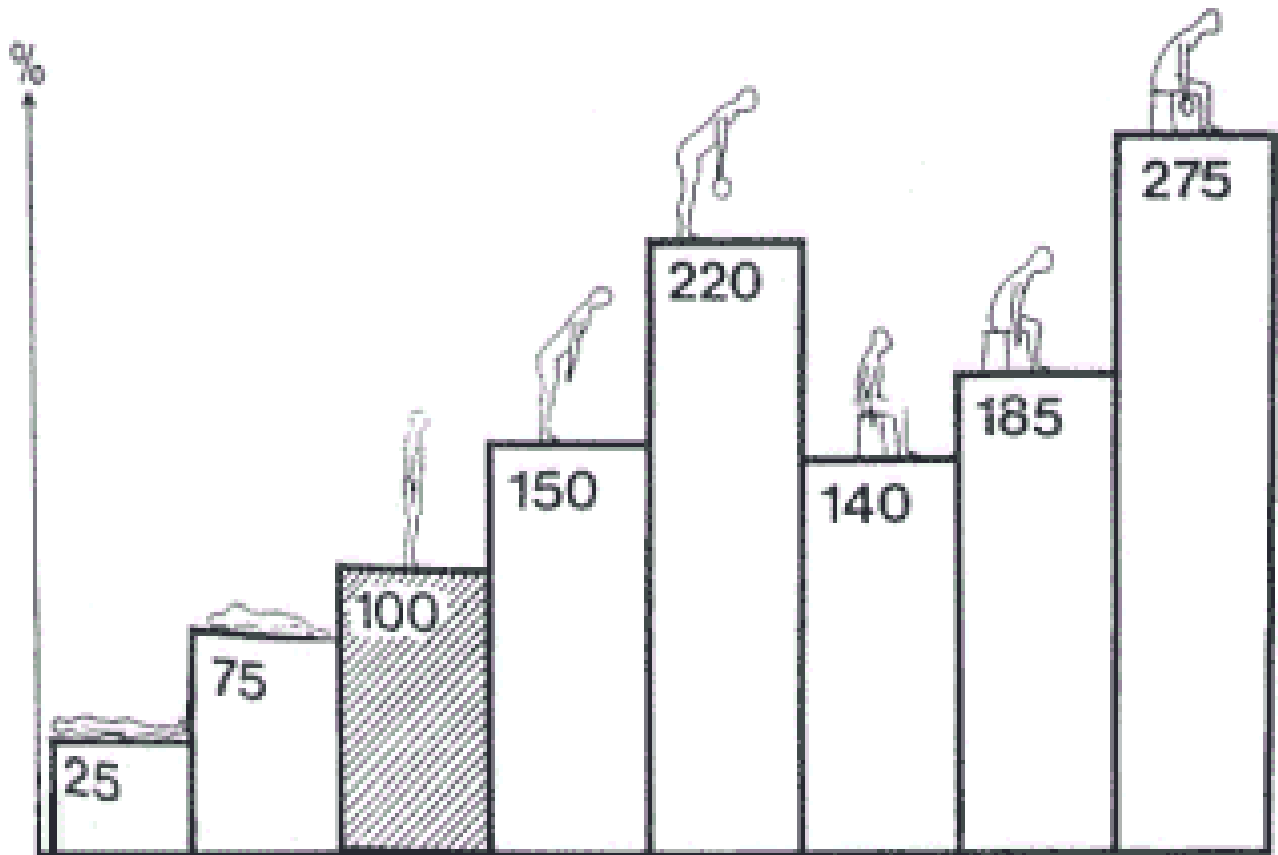
We don’t ask you to do it because it’s funny to watch.

Take pre and post-work stretches seriously. Practice good form. If you are unsure about a stretch, ask. If you feel a part of your body (or back!) is not getting appropriately stretched, bring it up. And PLEASE, PLEASE, stretch throughout the day. If you are hunched over digging for much of the day, it’s important to regularly stretch your back in the opposite direction.

#4 How to Deal

If you do hurt yourself.

What are your options? Rest is at the top of the list. Seek medical care if need be but no matter what, don’t try to power through an injury. Your body is giving you an important clue- and you need to clue in. In the meantime, reduce your pack weight, stretch if it is not painful to do so, ice/ibuprofen if appropriate, and practice perfect ergonomics. This means even when using the bathroom, tying your shoe, or lying down for the evening.



CLOSE CALLS!

News you need to know!

- ☀ Identifying and mentioning close calls in your crew reports = AWESOME!
- ☀ Reviewing close calls during safety meetings = AWESOME!
- ☀ Discussing close calls with your crew via debrief = AWESOME!
- ☀ Filling out an incident report after a close call occurs = SO AWESOME!

Sidenote: AWESOME also happens to = necessary.

Identifying and tracking close calls is one way we work to improve our safety culture as an organization. After you turn in an IR we enter the info into an online database. We review entries regionally and state wide with the Risk Management Committee. We use the info to help determine where we need to step up our game, whether with additional trainings, improved gear, or new safety memos. At the end of the day, reporting your close call may in fact prevent someone else from future injury, and that is awesome!

So please keep reporting, we love it!

Thank you for reading! When in doubt, report it out! :)



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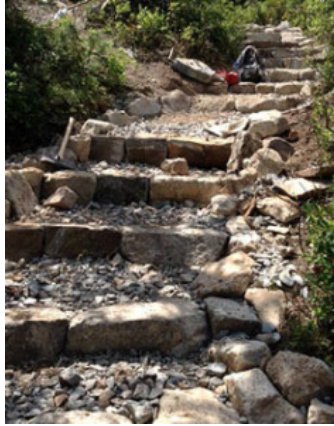


MCC Safety Memorandum

To: MCC Field Crews

From: Heidi Genito

Date: 6/4/2016

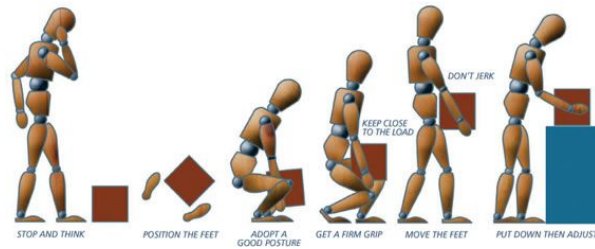


ROCK WORK SAFETY

Rockwork is glamorous and beautiful work, and a skill we all strive to improve upon here in the world of trails... However, it can also be very tedious and lend itself to a higher rate of injury due to the nature of moving heavy objects. In the past 2 weeks alone we have had 3 rock related injuries in region!

ERGONOMICS: Proper lifting and bending...

- Get in a good position with neutral spine (natural curves) while working...avoid awkward posture as much as possible
- Lift with your legs NOT YOUR BACK!!!
- Keep loads close to your body
- **Use your core!**
- Move your legs to turn while holding a load, don't twist your torso
- Engage the pelvic floor (**squeeze those tooter muscles!**) before lifting a heavy object... this will engage your stabilizing muscles – which will protect your back



WATCH YOUR FINGERS AND HANDS!!!

- Solicit others for help when moving heavy or awkward size rocks, don't feel you need to go it alone
- **COMMUNICATE! COMMUNICATE! COMMUNICATE!** Talk through your plan first; let your partners know when you have a good grip, or if you need to set the load down for a break
- While rock harvesting, communicate with crew ahead of time: make sure no one is in the path of a potential loose rock if you are up on a hillside. Yell "ROCK!" should you lose one, and get out of its path – do not try to brace it's weight... be committed to safety rather than attached to keeping that rock
- When using a rock bar make sure no one is putting their hands on the rock where digits could become squashed should the bar slip
- Move slowly and thoughtfully... and wear your gloves

MCC Safety Memorandum

To: MCC Crews

From: Staff

Date:

Safety Memo: Roof Rack Loading

The Purpose of this memo is to address the close calls and incidents that have occurred due to overlooking some key measures that ensure all items loaded on the roof racks are tightly secured. Driving is one of the most dangerous activities we do while on the job, and this element further adds to the risks involved. If items become unsecured during transport they can cause serious loss and damage not only to oneself but others on the road as well; major accidents can occur in the blink of an eye when our systems fail or if we are being negligent.

Proper procedures for safe travels with a loaded roof rack:

- Items placed on the roof rack should not exceed a total of 200 lbs.
- Secure items such as tools, packs, or gear tightly in a tarp to keep dry and easier to secure with straps and bungees. Make sure the ends of the tarp are all tightly tucked and burrito-ed to keep it from flapping in the wind.
- Use a ratchet strap or additional bungee to secure items such as propane or dolmars so that you are not relying on one bungee should it break in transit
- Replace old and tattered bungees or straps
- Do not load your heaviest items on the roof, such as coolers, food bins, etc...
- All fuel, bear spray, and tools must be on the rack or in a trailer and not inside the vehicle
- Hard hats, eye protection, gloves, and work boots are required to be worn by everyone loading or unloading vehicle racks
- Use clear communication between the person on the roof and those on the ground handing items up i.e. "I got it..."; use good ergonomics, get a partner to help lift heavier items
- After everything has been loaded have someone else do a double check that everything is tightened down properly and that all bungees and straps are taught

Safety Memo: Linseed Oil Rags and Spontaneous Combustion

The purpose of this safety memo is to inform you and your crew of the risks associated with the improper disposal of linseed oil soaked rags as well as pertinent protocols GY will now be instating.

Using linseed oil to preserve our tools is an important part of our maintenance process. The byproduct of this treatment – linseed oil soaked rags – can pose a serious risk. Improperly stored linseed oil rags are notorious for their ability to spontaneously combust. These instances are rare but the implications are deadly serious.



As an oil soaked rag dries, the oil oxidizes and creates an exothermic reaction. Spontaneous combustion occurs when the accumulated heat exceeds the rate of heat dissipation. That being said, a pile of linseed rags = major fire hazard. Linseed rags can be dried safely and we've been doing so at GY for some time. Rags have been laid out on concrete so they can dry on a non-flammable surface, well ventilated.

The reason for changing this system stems from a recent discovery of linseed rags piled in with the rest of our shop rags; easy mistake, significant accident potential.

We've recently acquired an oily rag disposal bin where all linseed rags will be deposited from now on. The bin is designed to reduce risks associated with disposal of these rags. Ideally rags are removed at the end of each day for offsite disposal, commercial or otherwise. Since we can't reliably pull off daily disposal, the bin will be partly filled with water as an added security measure. Staff will dispose of accumulated rags periodically.

Please deliver this memo, ensuring everyone on your crew understands this new system and the reasons for it.

A good rule to follow as an organization – Never make the news in a bad way.

Thanks!

-GY

MCC Safety Memorandum

To: All MCC Participants and Staff
From: Kate O'Neill, Director of Programs
Date: 7/14/2017
Subject: **Anonymous Reporting Form**

As part of MCC's commitment to safety and a culture of caring, we're excited to announce the roll-out of our Anonymous Reporting Form, available through our website under the "Contact Us" page. This form is one step among many to demonstrate MCC's commitment to accountability and following best practices as they relate to our Diversity and Inclusion Plan.

This form is intended to allow MCC AmeriCorps Members, MCC Staff, and the general public to submit an anonymous report to MCC's Director of Programs. Subjects of your report may include but are not limited to, incidents of abuse, harassment, intimidation, discrimination or unsafe practices that are putting yourself or others at risk.

The report is directly submitted to the Director and Associate Director of Programs, and will allow you to include your contact information if you wish, though that is voluntary, and not a requirement for submitting a report.

Our hope is that MCC is constantly creating a place where open dialogue and communication are encouraged, as evidenced through our focus on leadership fundamental skills such as giving and receiving feedback, conflict resolution, and providing opportunity for areas of growth. We also recognize that situations arise which require additional levels of action and support, while maintaining safety as a top priority. This Anonymous Reporting Form is our way of providing a safe place to do that.

Thank you to your commitment and pledge "to make our people safer, smarter and healthier."

Please direct any questions to your Regional Director.

MCC Safety Memorandum

To: All MCC Crews

From: James Gasaway

Date: 4 August 2017

Subject: Bear Safety and Storage

This memo is to remind crews of proper bear safety around camp as we proceed through the season. Bear safety is of utmost importance at this particular moment. In the dry summer months, bears are roaming farther and farther in order to find adequate food supplies. Additionally, reduced air quality, due to substantial fires within Montana, is causing bears to be problematic and more aggressive. In order to ensure the safety of Montana Conservation Corps personnel and to abide by Leave No Trace Ethics, please discuss and adhere to the following guidelines concerning bear safety around camp.

Recently, Park Rangers in Yellowstone National Park have had to speak both to crews camping in the park and to Greater Yellowstone regional staff about the state of our camps. The following is pulled directly from feedback given to our Regional Director:

To avoid attracting bears, store all food, trash, scented items, coolers, and cooking tools in a bear-resistant container or your vehicle. ***Tents, truck beds, unattended packs, and picnic tables are not safe from bears.***

This includes clean dishes left out on tables or hanging low in a bag to dry, as well as re-used/re-purposed water bottles that used to contain other things (Tea, Gator aid ...) and dish or hand soap.

Failure to abide by these bear safety protocols puts yourself and your crew in extreme danger, as well as other visitors to your general work area. This behavior also fails to recognize properly the huge environmental threat presented by the habituation of wildlife. Although bear populations have expanded in recent years, habituation leads directly to a bear becoming a substantial problem as it relies increasingly on human populations as a primary food source. REMEMBER: A FED BEAR IS A DEAD BEAR!

Review and discuss MCC Camp Setup guidelines located in your Field Guide.

MCC Safety Memorandum

To: All Crews

From: Staff

Date: 8/28/17

Fire Restrictions

We are at the height of fire season across all the regions we work in. Land management agencies attempt to reduce the likelihood of human-caused fires by using Fire Restrictions.

According to the USDA, "Fire Restrictions come in different stages and become more prohibitive with each stage. Most forests begin by implementing a Stage I Restriction and if conditions worsen, Stage II is implemented. There is no "Stage III" when conditions worsen further. Instead, a forest closure is usually the next step which means the public is not allowed to enter the boundaries of the national forest due to the danger."

Stage I Restrictions:

What is Prohibited:

- No building, maintaining, attending, or using a fire, campfire, or stove fire except in Forest Service developed recreation sites (not including rental cabins or dispersed camping areas).
- No smoking except in an enclosed vehicle or building, or in specific developed recreation sites.

What is Allowed:

- Petroleum-fueled stoves, lanterns, or heating devices providing such devices meet the fire underwriter's specification for safety.
- Shooting firearms IS allowed. Just make sure to follow normal federal rules: No shooting within a 150 yards of a campsite, developed recreation site or occupied area, residence or building. No shooting across a road, trail or body of water, or in any manner or place whereby any person property is exposed to injury or damage as a result of such discharge. No shooting in a cave.

Stage II Restrictions:

What is Prohibited:

- No fires, campfires, charcoal, coal, and wood stoves. (except using a device that is solely fueled by liquid petroleum or LPG fuels that can be turned on and off in areas that are barren or cleared of all overhead and surrounding flammable materials within three feet of the device).
- No smoking (except within an enclosed vehicle or building).
- No using an explosive.
- No possessing, discharging, or using any type of firework by pyrotechnic device. Fireworks are always prohibited.
- No operating a **chainsaw** or any other equipment powered by an internal combustion engine from the hours of 9 a.m. to 8 p.m. (except generators with an approved spark arresting device within an enclosed vehicle or building or in an area that is barren or

MCC Safety Memorandum

cleared of all overhead and surrounding flammable materials within three feet of the generator).

- No welding or operating an acetylene or other torch with open flame.
- No operating or using any internal or external combustion engine without a spark arresting device properly installed, maintained, and in effective working order (this does not include motor vehicles. This is aimed at things such as landscaping tools).
- No discharging firearms, air rifles, or gas guns (except while engaged in a lawful hunt pursuant to state, federal or tribal laws and regulations).
- No possessing or using a motor vehicle off National Forest System roads. Vehicles must follow Travel Management Rule regulations and cannot drive/park over any vegetation at any time.

What is Allowed:

- Common generators with working spark arresting device may be operated between 8 p.m. and 11 a.m., as long as you have cleared flammable material at least 3 feet around it or it is enclosed in your vehicle (such as the rear portion of an RV).
- Liquid petroleum or LPG fueled stoves, grills, lanterns, or heating devices as long as you have:
 - Cleared flammable material at least 3 feet around it.
 - It is placed in an area that has no overhead flammable materials.
 - All it is doing is producing flame and can immediately be turned off and there is no element continuing to burn after it has been turned off.

Please read your PIS carefully and talk with your project partner to determine the level of fire restrictions in place in your project area. The expectation is that you will understand and adhere to the rules above when land management agencies deem it necessary. Thank you for your hard work in preventing human caused wildfire.



Information taken from USDS Forest Service Website:

<https://www.fs.usda.gov/detail/coconino/home/?cid=stelprdb5423784>

MCC Safety Memorandum

To: MCC Crew Leads

From: James Gasaway

Date: June 23, 2017

Subject: Hitch Rack Safety Protocols

The purpose of this memo is to instruct Crew Leads and Crew Members in the proper use of Hitch-Mounted Cargo Racks while traveling and in the field. As part of its ongoing assessment of safety protocols and tools when transporting a large number of tools, heavy gear, etc., MCC has implemented the use of Hitch-Mounted Cargo Racks as a possible solution to transport issues.

When taking a Hitch-Mounted Cargo Rack into the field, ensure rack is seated securely in the hitch receiver. Insert pin through holes in hitch rack and hitch receiver. Secure pin with metal clip.

Load Hitch-Mounted Cargo Rack as you would usually load your Rooftop Cargo Rack, creating a burrito for tools and utilizing ratchet straps and bungee cords to keep things in place. Priority should be given to heavier items – water containers, large gasoline cans, dolmars, etc. – and items at risk of blowing away on top of your rig – cooler lids, Action Packers, etc. Hitch-Mounted Cargo Racks are generally able to carry up to 500 pounds.

While driving with a Hitch-Mounted Cargo Rack attached to your vehicle, be aware of increased vehicle hazards. As always, utilize a backer/spotter when in reverse to check for clearance with this extra vehicle length. When traveling off-highway with Hitch-Mounted Cargo Rack, drive slowly through extreme dips to avoid bottoming out, putting undue stress and strain on the rig's hitch mount and the Hitch-Mounted Cargo Rack itself.

After crew has offloaded gear from Hitch-Mounted Cargo Rack, assess the necessity of this piece of equipment while out in the field. If Hitch-Mounted Cargo Rack is not needed in the daily transport of personal gear or tools, this piece of equipment should be left in a safe place at camp where theft will not be an issue.

Upon return to MCC Regional Office, check in with Regional Staff about the use of the Hitch-Mounted Cargo Rack – how crew incorporated this item into their plans, safety concerns, ease



of use, etc.