Safety briefing for GLORIA Great Basin field workers

Our work involves quite a few hazards. However, in spite of repeated hikes to the summits, many hours spent in field work by dozens of workers, over many years, we haven't had (and never want) a single serious accident. There is only one way to continue this trend—to be safety conscious all of the time. There is no data we can collect that is worth a serious injury.

We'll be exposed to strong sunlight, high elevation, wind, cloud-shade, and very possibly rain or hail. Being prepared for the conditions includes:

1. Good footwear and extra clothing to keep you warm and dry even in rain and wind.
2. Protection from intense sunlight: sunglasses (an extra pair too), hat, sunscreen
3. Enough water to stay well hydrated…at least 2 liters for the day
4. Enough food to keep your energy up… a solid lunch and some mid-morning and mid-afternoon snacks

Effective response to accidents. If someone falls and splits open a knee to the bone, or gets a severe head injury, what could we do to help them, and how long would it take us to summon help? We need to be able to offer basic treatment for the wound, to place an emergency call within 10 minutes of an accident, and to care for the patient for hours. Early request is critical, but it can still take 2 to 4 hours for help to arrive.

1. First aid kits, with key items, including a splint, at least available among the team members.
2. Communication between team members. We'll have small handi-talkies for several people.
3. Cell/satellite phone to reach an emergency dispatch center.

Avoid the hazards of rough terrain and high places.

1. Step carefully and **don't be in a hurry** either hiking or working. Loose or projecting rocks and our survey strings are all tripping hazards.
2. When working near a drop-off **remain at least one step from the edge**. An accidental misstep or a bump from a coworker or wind can then be countered without stepping over the edge.
3. When negotiating a steep pitch keep 3 of your 4 hands/feet on the rock at all times.
4. Be careful not to dislodge rocks, and avoid working directly above someone on a steep slope. If a rock falls yell "rock" loudly to those below, regardless of where you think that rock is going.
5. **Avoid lightning**. Heed the forecast and watch for signs of developing storms. Always leave in time to be well off the summit by the time lightning is a threat. Wet rocks can be much more slippery than they were as you climbed up, and a real hazard if you are hurrying down.
6. **Watch for altitude sickness.** If you get a headache, feel lightheaded, and especially if you feel nauseous, tell someone right away, drink more water (or Gatorade), and have a sit (in the shade if there is any!). Sometimes the feeling will pass, and you'll feel fine to carry on. By telling someone early, they can help you decide whether you should head downhill based on whether your condition is improving, staying the same, or getting worse. **The only sure cure for altitude sickness is going to a lower elevation!**

The hardest thing is to always be alert and careful, never letting inattention or impatience cause you to do something you'd regret. Try to be attentive every minute.

Everyone should know their location & the way back to base in poor visibility. Several team members should:

1. Have the simple tools, a map and compass, at least several team members.
2. Have a good GPS and input the location of camp or vehicle. And GPS coordinates (lat/long & NA 83 datum the best) are essential when requesting rescue response.

Nearest hospitals are in Mammoth, Bishop, and Gardnerville for when prompt treatment is essential. Regional trauma centers are in Fresno and Reno. Mammoth Hospital is overall a little better than Northern Inyo Hospital

in Bishop, but anything altitude related should clearly go to Bishop from WMRC. The best, closest trauma center is Fresno Trauma Center.

Calls to 911 will go to CHP, to the Mono Co. Sheriff Office, from there to our SAR team. A 911 call is good, and they will usually be able to get GPS coordinates from the calling location. Usually there is a significant loss of information along the calling chain, so, in addition, call the Sheriff Office (760-932-7549). If you aren't sure whether or not to launch a search or rescue, call Jim Bishop (cell: 760-937-6317), and he may be able to help.

-In all cases better to call too early than too late. No one minds responding for a false call. Early start can help a lot; daylight is precious, injuries get worse, and lost people get much more lost. Search areas expand exponentially.
- Don't assume a response will not happen until morning. SAR will usually respond at night, so always call.
- Assume that the dispatcher or SO contact knows nothing about our mountain geography.
- If giving GPS coordinates make sure to provide datum (NAD 27 or 83) as well as coordinates, whether lat-long or UTM. Lat. & Long. on NA 1983 datum us best.
-You may have to explain situation several times to different people: CHP, brief; SO, brief; SAR Ops leader (15 min); Base asst, several hours for a missing person.
- WIM & WDS will probably get Mono SAR, but could get Inyo SAR or both. Dunderberg gets Mono SAR.
- If acquiring info from other team members, be as thorough as possible, particularly for a missing person.
- Let SAR know how much cell phone battery you have. You can conserve by turning off and receiving calls at a specified time. Texting, vs calling, will save battery too.
- If at WMRC, it may be better to stay there to inform SAR by phone/radio rather than going out to look or help.
- There is no charge to victims for SAR (all volunteer) or most helos
- Ambulance and CareFlight (helicopter) will charge patients, not WMRC or GLORIA.
- Response time is slow; volunteers need time to pull away from jobs, family, etc.
- Helicopter units need to call in staff and do flight and maintenance checks.
- Delay is frustrating for patients, helpers, and SAR. Count on 2-4 hrs. for help to arrive.

See http://www.monosar.org/ for more info on the SAR team. The Operations page has a good overview.

Helicopter resources (but will almost always have a ground response as well).
- A variety of helicopters and crews can be available (though not always), from CHP, Navy, Air National Guard, private medical, NPS contract. Some have hoists and long lines, some fly at night (about 50% chance of being available).
- It will help the responding agency to provide the best choice for a helicopter to have good basic information about the incident. In considering a request for a helicopter, be ready to provide:
  coordinates in lat-long (not UTM); elevation; slope
  nature of landing zone (LZ); obstacles and hazards
  wind speed and direction; weather conditions
  patient's injuries and background medical information

Helicopter safety
1. **Rotor blast: Protect eyes and turn away when helicopter lands; hold onto or secure loose equipment**
1. **or vegetation.**
2. **Stay in view of the pilot and approach helicopter only when signaled by pilot**
3. **Stay low and with nothing projecting upward; try not to approach from the uphill side**
4. **NEVER go behind the helicopter; the nearly invisible spinning tail rotor can kill you**