

UCD IMPROVE Technical Information #226G

Field Safety Plan

*Interagency Monitoring of Protected Visual Environments
Air Quality Research Center
University of California, Davis*

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DOCUMENT HISTORY

Date Modified	Initials	Section/s Modified	Brief Description of Modifications
05/14/21	SRS	All	Separated TI: A-H doc into individual TIs
5/17/21	IVP	3,4,5,6,10,11	Added missing sections
07/15/22	SRS	All	Annual formatting, no procedural changes

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1. PURPOSE AND APPLICABILITY

The purpose of this technical information (TI) is to describe the procedures, equipment, training, and documentation needed to ensure the safety of field maintenance crews during site maintenance visits.

2. SUMMARY OF THE METHOD

UC Davis field technicians visit each IMPROVE monitoring site at least once every two years. This document describes the steps to be taken to ensure their safety both at the site and during travel to and from the site. Also addressed is the safety of visitors who might accompany them to the site. Training and documentation required to enhance safety are also described in this TI.

3. DEFINITIONS

- SPOT GPS: An emergency satellite text messaging and SOS beacon device
- UC Davis LMS: An online job training resource used by the university
- AQRC: Air Quality Research Center of UC Davis
- IMPROVE: Interagency Monitoring Program of Visual Environments
- UC Davis: University of California, Davis

4. HEALTH AND SAFETY WARNINGS

The nature of field work implies unpredictable dangers from working in remote environments. This document will outline the systematic procedures of our group follows to prevent serious injury and illness. However, additional care should be practiced by the traveler to assess specific dangers associated with the location being visited.

5. CAUTIONS

All UC Davis employees making site visits will be required to read this document and to complete the prescribed training and documentation before embarking on a site visit trip.

6. INTERFERENCES

Not applicable.

7. PERSONNEL QUALIFICATIONS

All UC Davis field staff are required to undertake field maintenance training prior to going on a maintenance trip. *UCD IMPROVE SOP #226: Site Maintenance* and its associated TI documents form the basis for this training. The training is conducted and supervised by experienced members of the UC Davis field staff.

First Aid, CPR, and Wilderness training are strongly recommended for field staff. This training is offered on campus through UC Davis Campus Recreation and Unions. Information on classes and schedules can be obtained through the UC Davis Outdoor Adventures website: <https://campusrecreation.ucdavis.edu/outdoor-adventures>

8. EQUIPMENT AND SUPPLIES

The following safety-related equipment should be available for the site maintenance crew:

- Ladder or alternative safe roof access
- Safety harness and lanyard to wear while working on the roof
- Other necessary fall protection equipment per fall safety plan
- First aid kit
- SPOT GPS
- Personal protective equipment for power tools (safety glasses, gloves)
- Cell phone
- Closed-toed shoes
- Drinking water
- Insect repellent and mesh hood
- List of nearest emergency room for each site

9. PROCEDURAL STEPS

9.1 Travel

1. To prevent fatigue field crews should avoid working more than 12 hours on any given day, including on-site time, travel time, and lunchtime. An exception is made for air travel days. The limit for these exceptions is 16 hours and if it must be exceeded, the traveler must attempt to limit the drive between the airport and the hotel to one hour.
2. Drivers should not drive more than two hours before taking a break or switching driving with their trip partner.
3. Texting while driving is not allowed under any circumstances. Not only is it generally unsafe, it is also expressly forbidden by our Federal contract. Drivers will pull over if they need to send or receive a text message.
4. Making or receiving phone calls without a hands-free set while driving is not allowed under any circumstances. Drivers will pull over if they need to use their cell phones.
5. Be sure to rent an off-road vehicle (from National/Enterprise whenever possible,

otherwise first obtain prior approval from Risk Management at 530-752-2629) if you need to visit sites requiring off-road access. Drive the off-road vehicle in a safe, responsible manner. Do not travel to off-road sites in a standard passenger vehicle.

6. Do not offer rides to non-UC Davis employees such as friends or hitchhikers. Site operators or other local IMPROVE employees may ride to and from the sites with the UC Davis field crew.
7. Always use the university travel website to register each trip to be signed up for travel insurance.

9.2 On-Site Maintenance Work

1. Electrical Safety – no damaged or frayed electrical equipment should be used. Electrical equipment should not be used around water nor during adverse weather conditions such as thunderstorms.
2. Using Tools – apply the safety precautions associated with any tools that are used. Do not use tools that are broken or that may otherwise be unsafe. Wear appropriate personal protective equipment for each type of tool.
3. Working on the Roof – caution should always be exercised when working on the roof of a shelter.
 - a. Access the roof only with a ladder or other safe device. Do not climb on unsafe equipment such as chairs or stacked concrete blocks. If there is no safe roof access then do not perform the roof-related tasks such as servicing the stacks.
 - b. Wear a harness if the roof seems to be especially high or steep. Refer to the site-specific fall safety plan if it has been deemed a “high” risk site. Secure the harness to something stable such as a railing or post that has been engineered for either fall arrest or work positioning, depending on the level of risk.
4. Footwear – closed-toed footwear should always be worn when working on-site. Wearing sandals or other open-toed footwear is not allowed.
5. Weather Restrictions – do not work during weather conditions that may be unsafe. During thunderstorms, in particular, stay indoors until conditions become safe.

9.3 Safety for Site Operators and Other Guests

1. Inform all non-UC Davis personnel that safety is a priority during maintenance visits and that they must follow all safety instructions given by the UC Davis staff.
2. The roof restrictions are the same for non-UC Davis personnel as they are for UC Davis staff. Namely, only a ladder or other safe route must access the roof, and a safety harness must be worn if the roof seems especially high or steep.
3. Non-UC Davis personnel are to use tools only at the direction of UC Davis staff. Personal protective equipment must be worn if required for the type of tool.

9.4 General Safety

1. Know the location of the nearest emergency room. When planning the trip obtain this information from the local operator at each site and compile a list including all of the sites on the trip.
2. Carry a first aid kit.
3. Carry a SPOT GPS so you can report your exact location for evacuation or roadside assistance in case of an emergency. Travelers should send a SPOT “We are OK” update when they arrive at the site and a second update when they leave the site.
4. If in a foreign country, know the location and contact information for the nearest U.S. Consulate.

9.5 Environmental Safety

1. Be aware of the effects of heat. Drink plenty of water throughout the day to remain hydrated.
2. Pace yourself when working at high altitude. Stop and take a break if you feel dizzy or short of breath.
3. Be prepared for insects, especially flying insects. Carry insect repellent and a mesh hood to use when insects are bothersome.
4. Be alert for snakes and spiders. Do not step or place your hands and feet where you cannot see.
5. Be alert for bears or other large animals. Make plenty of noise as you approach any secluded location so the animals will not be surprised by your arrival. Most animals will flee if they can sense that you are coming.
6. There are several urban IMPROVE sites and care should be taken to lock the vehicle and to secure work and personal equipment while at the site.

10. DATA AND RECORDS MANAGEMENT

1. Field staff supervisors should maintain a list of the location of the nearest emergency room to each site. This list should be updated as needed based on information obtained from the site operators during the trip planning stage.
2. Travelers should prepare a trip plan for each trip, to be filed with their supervisor prior to departure. The plan should include:
 - a. Where you will be each day (sites visited and planned hotel)
 - b. The location of the nearest emergency room each day
 - c. Cell phone numbers for each traveler
 - d. Emergency contact information for each traveler

Guidance on preparing a trip plan can be found on the UC Davis Safety Services website:

<https://safetyservices.ucdavis.edu/units/ehs/research/field/planning>

3. Prior to each trip, each traveler should register for UC traveler insurance coverage and should print out the insurance card. Details and registration information can be found on the UC Risk Services website:

<https://www.ucop.edu/risk-services-travel/index.html>

4. Travelers should obtain the rental car contract and keep it in the rental car at all times.
5. Online training courses are recorded using the UC Davis Learning Management System (lms.ucdavis.edu). Supervisors are required to make sure all relevant safety courses are assigned to employees and the employees maintain a record of completion of all the courses.

11. QUALITY ASSURANCE AND QUALITY CONTROL

Not applicable.

12. REFERENCES

1. *UCD IMPROVE SOP #226: Site Maintenance*
2. campusrecreation.ucdavis.edu/outdoor-adventures
3. lms.ucdavis.edu
4. safetyservices.ucdavis.edu/units/ehs/research/field/planning
5. ucop.edu/risk-services-travel/index.html