

# SEG FIELD CAMP HSSE PLAN

Boise University Geophysics Field Camp  
May 11-29, 2019  
Boise, Idaho

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# Introduction and Purpose

## Revisions Status

This document was last revised on Tuesday October 22, 2019 (11:56:00 MDT). This is version 1.1 of the SEG-sponsored *Idaho Geophysical Fieldcamp* HSSE Plan.

## Custodian

Dr. Dylan Mikesell is the fieldcamp leader and will act as the custodian of the field camp HSSE Plan for during the 2020 geophysical field camp. Below is Dr. Mikesell's contact information.

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## Purpose

The purpose of this HSSE plan is to outline how we will respond to HSSE issues in the field during our geophysics fieldcamp. This document outlines how we will manage incidents that occur in the field. We have identified specific hazards that exists at this year's field site, and we provide action plans for how we will address these hazards, first to minimize risk, and second how we will respond in the case we need to execute our response plan. In our risk matrix, we have identified all potential field hazards and characterized the HSSE risks. In this document we address each of these risk and outline our response plan.

## Description of Project

### Description

The project is designed to provide practical experience for undergraduate geophysics students at University of Boise in geophysical field acquisition techniques. Topics and techniques include reflection seismology, broadband seismic data acquisition, well logging, vertical seismic profiling, gravity and magnetic field measurements, ground penetrating radar, GPS surveying. The field camp will be hosted in the foothills of Boise, a semi-arid high-mountain desert ecosystem. The terrain is gentle hills with both paved and dirt access roads. The field data will be collected in open areas of sagebrush and native grasses. The higher elevations may have pine trees. All data will be collected on private property and we do not require any special permits, only land-owner permission.

The camp is led by an experienced professor in their fourth year leading this field camp. Graduate student teaching assistants will also help to deliver the field experience and will be the drivers of all field vehicles. Students will drive from campus to the field site each day. Students will stay on campus during the month-long field camp. The drive is approximately 30 minutes each way. We will use one field van per 6 students. We will also have two trucks that are used to haul equipment...(expand more on vehicles as needed).

For the seismic survey, we will use a sledge-hammer source and a 24-channel cabled geophone system. For the broadband seismic acquisition, we will do direct burial of three-component seismometers, each with a solar panel, charge controller, and car battery...(list all equipment used in surveys).

Local hazards in the field site include rugged topography (e.g. loose boulders), animals (i.e. rattlesnakes), and hot, sunny days. There are also some areas where students will need to cross barbed-wire fencing...(expand on other hazards).

## Project Specific

We will be collecting near-surface geophysical data sets. These do not require large equipment (e.g. vibrator truck sources) or high-voltages. The largest hazard is the terrain and hot days in June in Idaho.

# General HSSE Planning

## Reporting Structure

To understand and mitigate the exposure to field hazards potentially encountered at the Field Camp, all camp participants attend a camp and program overview (Day 1) plus daily morning meetings and evening debriefings. Students are placed in sub-teams consisting of four to six members along with two teaching assistants and assigned to a van. Each day there is one TA-lead that helps the Director coordinate the TAs and the day's field activities. Each group will also designate one student as the TA backup in the case that the emergency occurs with the TA. At the morning meeting, the daily activities and teams are reviewed and possible hazards are introduced before heading to the field site. In the evening, groups meet to discuss their day's efforts and the situation they have encountered. Faculty gathers after dinner each night to review the day's activities and any injury reports from students and TAs. The Director is the responsible party and primary point of contact for all HSSE issues during the field camp. The backup person is the lead-TA each day. Any personal problems or concerns are addressed by the geophysics camp Director or other faculties.

## Resources

Each van group will be handed out a full safety kit and be informed of all hospital contacts for emergency purposes. A road map with the evacuation will also be provided, as well as all important contact phone numbers (e.g. the field camp lead, all TAs, and other field instructors).

## Project Specific Procedures

Each day groups are assigned a van. Within the van are RF radios and walkie-talkies. Radios can be used to communicate over large distances, from van to van. Walkie-talkies are used to communicate among the small group members. Each pair of students has a walkie-talkie. TAs and other faculty instructors are the personnel responsible for driving vans. In the case that stormy weather arrives (i.e. lightning with thunder less than 3 seconds after) participants will be required to return to vans until the weather passes.

## PPE Requirements

All field camp participants will be required to have long pants and ankle-high boots. Gloves, hardhats, and safety glasses will be provided to participants at the beginning of camp (Day 1). Each participant is responsible to keep these items and have them with them each day in the field. Each participant is also required to bring water and sunscreen to the field. For participants working on roadways, reflective vests will be provided during that time, as well as signs and other traffic safety tools.

## Safety Critical Information

Prior to the actual field camp, students will meet in the classroom to discuss critical safety information. For example, evacuation plans and medical emergency instructions will be provided to all students in the form of print outs. All students will complete their emergency contact form, which includes providing health information such as allergies. The project leader will have all of this information in the field at all times as well.

## Test Exercises/Training

All students will complete a mandatory CPR training prior to going into the field through the Boise University Recreation Center. TAs and the lead instructor will also complete a three-day wilderness first responder course prior to the field camp. During the introduction each day before we leave campus for the field, students will be instructed about possible hazards in the field that day, and safety protocols will be reviewed as a group before getting into vans.

# Emergency Response Plans

## Summary

In the case of an emergency, the group TA should be immediately notified. After that, the TA should notify the lead-TA and the Director via radio communication. If the TA is the one having the emergency, the designated student leader will take these responsibilities. The lead-TA, Director, or other faculty personnel will then help coordinate the response and make sure that the action plan associated with that emergency/risk is implemented. In the case of an emergency or injury, an incident report will be completed by the group TA (or student lead) in coordination with the lead-TA after the emergency has been resolved. The lead-TA will then bring that incident report to the faculty instructors and Director once all groups have returned from the field. The camp leaders will then discuss the incident report and make adjustments to the next day's field plan as necessary. Should the emergency or injury require that a participant's emergency contact be contacted, the Director will take on that responsibility.

## Emergency services

Within 15 miles of the field site are two hospitals located within Boise city limits. There are also life flight emergency responders (medevac) associated with each hospital. In the event of a medical emergency, the lead-TA and Director will be radioed immediately and informed of the situation. The group TA who has taken the Wilderness Responder class will work with the lead-TA and Director to coordinate the response. Emergency services will be contacted if the situation calls for such and the participant may wait for a medical ambulance or medevac. Otherwise, participants may be driven by a TA to a hospital for treatment of non-life threatening conditions.

## Contact information

All participants will have submitted their Contact Notice/Health Information form. The lead-TA and Director will have copies of this information with them in the field at all times. Each van will also have a printed copy of the Director's contact information, all TA and field instructor contact information, as well as information (including addresses) for all emergency services. These emergency services will be St. Luke's hospital, St. Al's hospital, Ada County Sheriff's non-emergency line, Boise Police Department's non-emergency line, 911 services, and Boise University Office of Health and Safety contact information. Each morning before the vans leave campus we will do a radio check to make sure all vans are on the same channel and able to communicate as needed in the field.

**Dr. Dylan Mikesell, Field Camp Director**

[dylanmikesell@boisestate.edu](mailto:dylanmikesell@boisestate.edu)

208-426-1404

**Mike Smith, Field Camp seismic leader**

[m.smith@boise.edu](mailto:m.smith@boise.edu)

208-426-1111

**Each TA - TBD**

TA's Contact info

**Boise Police Department**

General questions: (208) 570-3421

Non-emergency dispatch/Request an officer: (208) 377-6234

**Ada County Sheriff**

Media Inquiries/Hotline: (208) 577-3143

Day Reporting :(208) 577-2455

**St. Luke's Boise Medical Center**

190 E. Bannock St.

Boise, ID 83712

(208) 921-2222

[Directions/Map](#)

**Saint Alphonsus Regional Medical Center**

1055 North Curtis Road

Boise, Idaho 83706

(208) 431-2121

[Get Directions](#)

# Hazard Management

## Risk Matrix

The image below lists all of the risks we have identified related to the proposed field work and the field site. In this section we address each of the items we identified in our Risk Matrix.

SEVERITY	FREQUENCY			A	B	C	D	E
	People	Assets	Environment	No previous incidents on record	Has occurred during general field activities	Has occurred during similar geophysical activities	Happens more often than yearly in similar geophysical activities	Happens more often than monthly in similar geophysical activities
0	No injury / illness	No damage	No effect			Automobile mechanical failures		
1	Slight injury / illness	Slight damage	Slight effect			Insect/arachnid bites; batteries	Cactus spines, nettle; slips, trips, falls; sunburn	
2	Minor injury / illness	Minor damage	Minor effect			Rattlesnake bites; field equipment hazards	Dehydration; heat exhaustion	
3	Major injury / illness	Local damage	Local effect		Wildland fires	Automobile accidents	Lightning, severe weather	
4	Fatality / permanent disability	Major damage	Major effect					

1. C0 - Automobile mechanical failures:

We sometimes have visual contact, but always radio contact with vans. In some areas there is cell phone communication. We can use any of these if communication methods in case of vehicular trouble. We have multiple vehicles used in field work so we can shuttle students to/from field as needed if a vehicle stops working.

2. D2 - Dehydration; heat exhaustion:

Students are required to keep drinking water readily available by using their own personal water bottles. Each van also has a large water jug. Students are also required to have hats and sunscreen. Training in symptoms is provided on Day 1. If this issue is encountered the participant shall cease work, seek water and shade, and inform their TA, field instructor, or another participant. This information will be relayed to the TA-lead for the day and the Director.

3. ... (continue this list to identify what is done in the case of each risk in the table)

4. ...

5. ...
6. ...
7. ...

# Signatories

Dr. Dylan Mikesell

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Printed Name, Custodian	Signature, Custodian	Date
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Dr. Dylan Mikesell

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Printed Name, Program Leader	Signature, Program Leader	Date
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Mr. Mark Smith

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Printed Name, Organization Rep.	Signature, Organization Rep.	Date
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## Check list

### Introduction & Purpose

TOPIC	CRITICAL ITEMS	CHECKED
Revision status	Clearly indicate latest date and status of revision	X
Custodian	State & provide contact information for the custodian of HSSE plan and program leader (may be same individual)	X
Purpose	State the plans purpose – which should be to define a management system that (1) ensures project specific hazards have been identified, (2) a plan has been established to mitigate items, and (3) appropriate individuals are in place to execute the plan	X

### Description of Project

Description	Describe important project specific issues such as: <ul style="list-style-type: none"><li>• Project area.</li><li>• Legal/regulatory license requirements.</li><li>• Resources – leader/participant experience.</li><li>• Restricted areas.</li><li>• Terrain.</li><li>• Camp locations.</li><li>• Types of equipment used.</li><li>• Number and types of vehicles/vessels used.</li><li>• Cable/energy source configurations.</li><li>• Local physical major hazards, e.g. rivers, lakes, pipelines, offshore structures, shipping lanes, fishing activities, conflicting or parallel operations</li></ul>	X
Project Specific	A basic description of the geophysical operation and any special characteristics e.g. vibrator trucks; bulldozers; high voltage equipment; special environmental requirements; difficult terrain etc.	X

## General HSSE Planning

Reporting Structure	<p>Summary of who has HSSE responsibilities and describe authorities of key staff or participants, highlighting any key HSSE focal points. Make sure to address:</p> <ul style="list-style-type: none"> <li>• Who will be the responsible party/primary point of contact for any HSSE issues during your field camp?</li> <li>• Who will be the backup person?</li> </ul>	X
Resources	Description of resources provided to participants in preparation for activities.	X
Project specific procedures	<p>A summary of project-specific procedures to include, for example, where relevant:</p> <ul style="list-style-type: none"> <li>• Participant rosters</li> <li>• Communications system</li> <li>• Transport of personnel (who's driving?)</li> <li>• Weather constraints</li> <li>• Small boat operations</li> <li>• Operations near fixed structures</li> <li>• Helicopter movements</li> <li>• Camp construction and camp moves</li> <li>• Substance abuse testing</li> <li>• Waste management</li> <li>• Exclusion zones</li> <li>• Agreed other restrictions not included in crew HSSE plan</li> </ul>	X
PPE requirements	<p>Identify any special Personal Protective Equipment (PPE) that will be required.</p> <p>Your list may include things like:</p> <ul style="list-style-type: none"> <li>• safety helmets and hard hats</li> <li>• gloves</li> <li>• eye protection</li> <li>• high-visibility clothing</li> <li>• safety footwear</li> <li>• safety harnesses</li> </ul>	X

Safety Critical Information	A summary of critical safety information provided to participants. (e.g. maps and charts; hazard notifications on structures; vessel/rig and well movements; diving activities; etc.)	X
Test Exercises / Training	List any additional emergency exercises or training to be conducted in preparation for the field excursion.	X

### Emergency Response Plans

Summary	Summarizes emergency response procedures.	X
Emergency services	Describes the emergency services that are available in the event of an emergency e.g. coastguard; medevac; hospitals; evacuation; fire-fighting. <i>Set the call out procedures</i> <sup>1</sup> . Describe the transport plan in the event of a medical emergency (illness, accident, etc.).	X
Contact information	Contact telephone; fax; email; radio etc. numbers for all relevant project personnel (including emergency contact), third parties, and emergency services. List the nearest medical facility(s), location and contact information. The information for participants should be gathered in the Contact Notice/Health Information form. (Make sure the PDF for Contact Notice/Health Information is uploaded separately from your HSSE plan.)	X

### Hazard Management

Risk Matrix	Details of the process used to manage project specific hazards identified in Risk Matrix with clearly allocated responsibilities for risk reduction activities.	X
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<sup>1</sup> *Set the call out procedures* is intended to be an outline or designation of who is taking action if any of the emergency numbers need to be contacted. In almost all cases this is likely the person leading the field camp, but there should be a backup in case the lead is the one who needs emergency attention.

**Administrative Authorization**

Signatories	HSSE plan should be signed by custodian, program leader, and organizational representative	X
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