Off Road Driving
Panel discussion on lessons learned & precautions

UC Fieldwork Toolkit
Leadership Training Series
May 24, 2023
University of California

Field Research Safety

View recording and materials at: training.ucr.edu/fieldworkleadership2023
▪ 90-min panel discussion

▪ Please **mute** until Q&A at the end

▪ Ask questions or post comments by using the “chat”

▪ Please complete an **evaluation** after the webinar

▪ Thank you!
Invited Speakers

Breezy Jackson, Director of UC Merced's Yosemite & Sequoia Field Stations

Steven Devanzo, Operations Manager for UCLA's White Mountain Research Center

Brett Pickering, Boating Safety Officer at UCSD’s Scripps Institute of Oceanography

Geoff Davis, Network & Systems Engineer, Geophysics & Planetary Physics at UCSD
Challenging Roads & Field Sites with Difficult Access

Photos: Shared by Breezy Jackson and Brett Pickering
Challenging Roads & Field Sites with Difficult Access

Summit Hut constructed in 1955 on White Mountain Peak is 8 km north of Barcroft Station

**Geolocation:** (37°38′03″N / 118°15′20″W)

**Elevation:** 4342 m (14,242′)

Photos: UCLA’s White Mountain Research Center, [wmrc.edu](http://wmrc.edu)
Challenging Roads & Field Sites with Difficult Access

Photos: Toro Peak field site in Riverside County; overlooks the Anza Borrego Desert State Park and the Salton Sea to the south, Palm Springs to the east, and has line of sight all the way to La Jolla (courtesy of Geoff Davis, UCSD)
Early Planning

What are we doing?

Where are we going?

Who is going?

How are we getting home?
Vehicle Maintenance

Routine Maintenance

Pre-trip Checklists

Daily Checklists
Pre-Trip Inspections

**Weekly Vehicle Checklist**

*Check and Add as Needed*
- Oil
- Coolant
- Tire Pressure
- Washer Fluid
- Wiper Blades

**Confirm Presence and Condition**
- Fire Ext./Shovel/Chains/Emergency Water
- Spare Tire/Jack/Lugwrench
- Emergency Kit

Rig______Date________Name______________

Photo: Breezy Jackson, Yosemite, winter Mono wind event
Secure your load, pre-run your route

2wd Rental truck with 6 and 8 foot antennas.

Rough road to summit of Santiago Peak in Orange County. License plate rattled off, but the antennas made it without a hitch.

Tight corners, loose terrain, fire damage required pre-running the route in a smaller vehicle.

Photo courtesy of Geoff Davis, UCSD.
Training and/or Vehicle Orientations

Know your vehicle’s capabilities and limitations.

Photo: 4WD training at Hollister Hills SVRA with the Driving Company, UC Berkeley/Blue Oak Ranch Reserve truck and staff
Vehicle Safety Kits

1 blue duffel bag containing all of the kit items
1 set jumper cables
1 rope
6-8 hand warmers
4-6 body warmers
1 multi-wick candle
1 flashlight (hand crank option for power)
2 small plastic garbage bags
1 larger plastic garbage bag
1 Blizzard Bucket® containing:
2 snack bars (allergy sensitive)
Matches
Jump Start Instructions, Winter Survival Guide
Metal mug
Police sign
1 space blanket
WMRC
Emergency Kit
Example

Photos: Steven Devanzo, UCLA

VEHICLE CHECKLIST

<table>
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<th>2023</th>
<th>GMC Sierra</th>
<th>Triton 250</th>
<th>Old Toy</th>
<th>Turbo 150</th>
<th>New Toy</th>
<th>F-15 Old 150</th>
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Weather Forecasting & Assessing Road Conditions

Photos: Steven Devanzo

Photos: Inyo County Sheriff’s Office; elderly man trapped in California snow for a week before being rescued (2023); had taken a wrong turn off Hwy 168
Decision-making in the field: When to turn back?

Photos: Geoff Davis, Cuyamaca Peak in San Diego County; Breezy Jackson, Yosemite, winter; Steven Davanzo, White Mountain Road, early summer
Accidents: Baja Mexico

- Enroute to remote dive site
- Two injured with lacerations & head trauma
- No cell service
- A local person driving by summoned EMS
- Injured were evacuated by plane before dark from nearby airstrip

Photo: Shared by Eric Hessell, UCSB
Accidents: Baja Mexico

• Ensure effective communication options established throughout the field expedition (Sat phone, InReach, etc).
• Have a plan for potential language barriers during an emergency.
• Plan on remote air strips having restrictions, etc.
• Have insurance cards readily available for the entire team and critical UC numbers.
• Have outlet converters for the region you are in so you can charge your cell phone from the hospital, etc.
• Ensure equipment in the vehicle is secure.
• Auto insurance in Mexico for UC vehicles has restrictions. Only people signed up on the added Mexico policy can drive the vehicles.

• Drive conservatively and ensure drivers don't become too tired or drive for too long.

Lessons learned shared by Eric Hessell, UCSB Diving Safety Officer
Accidents: Greyhound Incident

Photo: Shared by Brett Pickering, UCSD
Accidents: Lost Brakes

Photos: Shared by Steven Devanzo
Other Lessons Learned

Photos: Shared by Christin Fine, Energy & Environmental Research Center, University of North Dakota, CSHEMA Symposium 2023
Other Lessons Learned

Photo: Steven Devanzo
Resources

4 x 4 Basics Workbook

Publisher: The Driving Company. Includes practical content intended for public agencies, responders & others that need to drive off road for work.
Specialized Training

- ATVs
- Tractors
- Towing/Trailers
- Snowmobiles
International Considerations

- Insurance
- Local laws & norms
- Vehicles: stick shift, right-side steering wheel
- Reliable local drivers for hire?

UC Travel Risk Management & Insurance

Contacts: Campus Risk Managers

Photo: Shared by Meagan Fitzpatrick, Princeton
Locked gates

Check with land managers in advance.
Carry codes/keys.

Bring a grinder and spare locks in case you get locked in.

Photo: One of many locked gates at Santa Margarita Ecological Reserve - Geoff Davis (UCSD)
Share the Road

Open range, expect cattle.
Respect speed limits. Don’t take shortcuts.
Follow Leave No Trace principles.
▪ Ask questions by using the “chat”

▪ Or raise your “hand” if you’d like to unmute and ask a question

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▪ Thank you!