

**Geochemistry & Ecology of Red Mat Systems (GERMS)  
Undergraduate Summer Research Program**

**Red Layer Microbial Observatory (RLMO)**  
National Science Foundation  
Western Oregon University  
Yellowstone National Park



**NSF Microbial Observatories Packing and Food Survey - Please Review**  
**If you have specific questions, concerns, or requests, please email them to Sarah ([boomers@wou.edu](mailto:boomers@wou.edu)) by July 8 – especially if then involve things like breakfast things (as I'm buying some food in advance around July 9).**

Date	Activities	Included Support
July 13	Planning Meeting (9-12 a.m.)	None, receive stipend checks and per diem (cash)*
July 14	Drive to Idaho Falls (12 hours)	Transportation, lodging, all day per diem*
July 15	Drive to West Yellowstone via Tetons	Transportation, lodging, all day per diem*
July 16	Imperial Research	Transportation, lodging, breakfast/lunch, dinner per diem*
July 17	Hillside Research, Old Faithful sightseeing	Transportation, lodging, breakfast/lunch, dinner per diem*
July 18	Canyon sightseeing	Transportation, lodging, breakfast/lunch, dinner per diem*
July 19	Fairy Research	Transportation, lodging, breakfast/lunch, dinner per diem*
July 20	Drive Home (15 hours)	Transportation, lodging, all day per diem*
July 23-27	Microbiology Lab Open – Finish Portfolios	None

*Travel support does not include meals during the drives and nightly dinners in the field. See support notes below for information about per diem rates.*

Field Trip Information	Optional Questions
<b>Vehicles:</b> Taking one 12-passenger state van to Yellowstone. Shawn Coreson will also be bringing his personal vehicle. Approved drivers include Sarah, Nana, Katie, Erin, Cibyl, Nelson, and Niki. I REALLY appreciate all your effort to be approved.	None.
<b>On the Road Meals:</b> Fast food style lunch (e.g. Subway) using stipend support. Dinner will be Applebee's/Denny's using stipend support.	None.
<b>Tentative Field Breakfasts:</b> Planning cold cereals with milk, instant warm cereals, and bagel/toast with condiment. Individuals will prepare on own in the kitchen area based on planned daily departure times. If you are a coffee drinker, there is a simple coffee maker but you should bring your own coffee supplies.	Any specific requests?
<b>Tentative Field Lunches:</b> planning simple peanut-butter/jelly sandwiches, hard and soft granola bars, cheese blocks, and some daily fresh produce (apples and carrots). Water, in bottles you fill at the hotel, will be the only beverage for hiking during the day because sugary things dehydrate you. If you want to bring your own Gatorade-style hydration materials, please let me know specifics.	Any specific requests?
<b>Tentative Dinners:</b> In the field, dinner is on your own in West Yellowstone using stipend support. Restaurant options include various price range within 3-4 block walking distance. The kitchen will not be available because undergraduates, Kelly, and I will be doing work after each field day and will need access to the kitchen.	None.
<b>Clothing List:</b> * Be Prepared For EVERY Kind of Weather and Lots of Mud... Sitting/working 60-90 minutes in foul weather (which has happened) Tennis shoes or lightweight hiking boots - MUST be broken in Back-up comfortable shoes/sandals for around town, hotel, on road	Please alert me to any items you have questions about. There are some cheap substitutions I can

<p>4-6 pairs of good socks - ideally, synthetic or wool for hiking  Warm Weather: T-shirt, shorts, wide-brimmed hat (avoid cotton)  Average Weather: long-sleeved shirt, long pants (avoid cotton/jeans)  Foul Weather: sweater or fleece top, rain-jacket (bottoms optional), warm hat  <i>If you get cold easily: gloves and a neck-warmer</i></p>	<p>recommend.</p>
<p><u>Hiking Stuff (Non-Clothing):</u> *  A comfortable small backpack (for raingear, warm clothes, lunch, water)  Anti-Sun stuff: sunscreen (SPF 15-40), lip balm, sunglasses  Personal First Aid: bandages, moleskin/blister tape, choice legal painkiller  Flashlight or headlamp  2X1L water bottles or hydration system and way to carry them with pack  Women - bring menstrual supplies regardless of your predicted cycle  <u>People need to carry toilet paper each day - taken from hotel before we leave</u>  <i>We will carry an advanced first aid kit for major problems</i>  <i>Some larger packs with science gear will be shared/distributed.</i></p>	<p>Concerns?</p>
<p><u>Safety/Communication Information:</u>  We will be on public trails 90% of the time, within 4 miles from the road  Hiking policy (rain or shine) - no sub-parties of less than 4 will break-away  We call regional ranger offices daily to report plans and check on bear status  No guns in the park; only pepper spray (front/back leaders carry 2 bottles)  Limited cell phone reception throughout park; we carry one cell phone  No phone at hotel; payphone across street at Laundromat  <i>No incidents of bear aggression in North America with parties of 4 or more</i></p>	<p>Please describe any concerns or relevant health/first aid information I should know about (e.g. allergies to bee stings etc.).</p>
<p><u>Alcohol Policy</u>  No alcohol may be carried or consumed in the state van - PERIOD  Alcohol is available in West Yellowstone for legal, individual purchase  Legal drinking after designated activities are over is a personal choice  Impaired states - either while drinking or the morning after – will be discouraged</p>	<p>Concerns?</p>

\* Please be aware that 8 people in a 12-person in a van is tight; please limit your total packed gear to a small duffel/gym-bag and your pack. We seriously do not have a lot of room in the van!!!!

Hotel Information

**Idaho Falls (night 1 on the road):** Comfort Inn, 195 S. Colorado Ave., Idaho Falls, ID; (208) 528-2804. All major amenities. Unfortunately, we typically arrive between 8-9 (i.e. little time to enjoy, say, the pool/hot tub). They do have a free continental breakfast, which we will be taking advantage of the next morning. We have 5 double rooms – Nelson/Shawn; Nana/Erin; Cibyl/Lisa; Katie/Niki; and Sarah.

**West Yellowstone (all other nights):** Pioneer Motel, 515 Madison Ave, West Yellowstone, MT; (406) 646-9705. Limited amenities (i.e. there is a TV but no phones in the room and no continental breakfast; payphone across street at laundromat). We have 3 double rooms and the mobile home (seriously): Nelson/Shawn, Nana/Erin, Cibyl/Lisa – with Katie/Niki/Sarah in the mobile home. Unlike the double rooms, the mobile home (staging area) has a kitchen with a small refrigerator. Individuals can use some space for snacks.

Please provide any additional feedback, comments, concerns, or questions. If additional thoughts or questions come up, you will receive a follow-up on July 8.

Some equipment and science training will take place during mandatory planning meeting when stipends and per diems will be distributed.