Utah Water Research Laboratory
COVID-19 Operations Plan

November 6, 2020

This Operation Plan provides specific guidance for employees of the Utah Water Research Laboratory (UWRL) as we transition back to on-site operations. These guidelines are designed to minimize the risk of exposure to faculty, students, employees, and the public. This plan will remain in place until USU sends notification regarding the lifting of COVID-19 limitations and the return to a “new normal.”

Guiding Principles

1. Follow USU, Local, and State Public Health authority directives.
2. Protect the health and safety of the UWRL community.
3. Recognize the uncertainty and evolving nature of the COVID-19 situation, and promote a culture of informed individual and collective responsibility for safety in the UWRL.
4. Remain productively engaged in research.

The COVID-19 epidemic and response to it is uncertain and evolving rapidly. Public health guidance cannot anticipate every unique situation. Uncertain and conflicting messages are likely to arise from leadership at various levels as leaders struggle with how to respond. A response to uncertainty is information. Everyone should stay informed by following credible news and authoritative recommendations such as those from the CDC, State, and University and act with common sense and wise judgment to take personal responsibility for the safety of themselves and others around them.

Here are some information sources:

- USU Research COVID-19 Website [https://research.usu.edu/covid19/](https://research.usu.edu/covid19/)

This UWRL operations plan does not supersede USU policies, rather it should be used in conjunction with these policies and is intended to give specific UWRL plans consistent with these policies.
Work Schedules for Employees

1. Work from home (telework/remote work) is allowed and encouraged for anyone who can do so effectively or who is at high-risk or caring for someone who is high-risk.
2. Supervisors and employees will coordinate schedules for work from home and work on-site.
3. Employees with their own single-occupancy offices may work on site.
4. Physical distancing will be required for employees and student teams who work in shared offices, workspaces, and laboratories. Office set ups will incorporate a physical barrier or at least 6 ft. of separation between workstations, and employees will not be located adjacent to or facing each other. Supervisors are encouraged to arrange for employees in shared work spaces to stagger work schedules to maximize physical distancing.
5. The Standard Operating Procedures (SOPs) developed by each Faculty member, Principal Investigator, and/or laboratory lead, will address specific details of physical distancing and work hour staggering in the shared work areas for which they have responsibility.

Employee Safety Guidelines

1. All employees will follow USU’s COVID-19 hygiene standards. These include washing hands frequently and/or using hand sanitizer; avoiding touching their eyes, nose, or mouth with unwashed hands; and covering coughs and sneezes. Please refer to more details at https://www.usu.edu/covid-19/staying-healthy/prevention.
2. Employees are required to wear a face covering in accordance with USU face coverings guidelines https://www.usu.edu/covid-19/staying-healthy/face-coverings. The UWRL will provide two face coverings for each employee, available from the UWRL receptionist. Additional face coverings are available via USU, the State of Utah, and for purchase. The receptionist will maintain a supply of disposable face masks for visitors or anyone who does not have one.
3. Face coverings are required when in public areas in the UWRL (common areas, hallways, restrooms, break rooms, or other spaces where employees may pass or interact at close distance), when visiting other employees’ offices, or anywhere where 6-ft social distancing is difficult to maintain.
4. Face coverings are not required when an employee is alone in his/her own office.
5. Some individuals may not be able to use a face covering due to medical conditions, including those that make it hard to breathe with a face covering. These individuals must maintain proper physical distancing of 6 feet or more at all times.
6. Individuals who are not able to wear a face covering or mask due to a medical condition and need a work accommodation, should talk to their supervisor or contact the ADA Coordinator in Human Resources. These situations will be addressed on a case-by-case basis. Students unable to wear a face covering or needing an accommodation should contact the USU Disability Resource Center.
7. Meetings will be scheduled in spaces that facilitate physical distancing and/or will occur remotely using web-conferencing tools.
8. Employees are encouraged to use email and/or messaging services like Slack for coordination and communication of activities and schedules to minimize in-person meetings.
Facility Protocols to Protect Employees

1. Employees who feel sick or experience any COVID-19 symptoms should isolate themselves immediately. Stay away from others, leave, and return home or to a safe place and seek medical care. Refer to https://www.usu.edu/covid-19/if-you-are-sick/.
2. UWRL employees should inform their supervisor and USU risk management (risk@usu.edu) of any development of symptoms or results of monitoring and testing for COVID-19 and act on the advice received.
3. Supervisors who receive information on COVID-19 symptoms or positive test outcomes from their employees should inform USU risk management (risk@usu.edu) and act on the advice received.
4. USU-approved COVID-19 signage that lists COVID-19 symptoms will be posted at entrances to the UWRL.
5. Cleaning supplies have been obtained and will be resupplied, working with facilities, for cleaning high-touch surfaces in our work areas.
   a. Employees should wipe down their respective workstations daily.
   b. Conference Rooms are to be used by reservation only to facilitate and encourage cleaning protocols and responsible usage.
   c. Conference tables and chair arms will be wiped down by the meeting host prior to and at the conclusion of the meeting using supplies available in the conference rooms.
   d. Appropriate notices will be posted in each conference room and meeting place with room capacity and respiratory hygiene and etiquette guidelines.
   e. Conference rooms will be limited to the following numbers of people to facilitate physical distancing: Third floor: 10 people, Mezzanine: 4 people, First Floor: 4 people
6. Reception area staff will work behind a plexiglass barrier to conduct business.
7. Chairs in the reception area will be located more than 6-ft apart.
8. Unless it creates a privacy, data security, fire, or other security risk, internal doors will be propped open to increase ventilation and avoid the use of door handles.

Travel

Travel Authorization

1. Travel is allowed following USU travel guidelines: https://www.usu.edu/covid-19/operations/travel.
2. All USU travelers are required to submit a Travel Authorization (TA) and, upon the completion of their travel, to complete the USU Travel Questionnaire (https://usu.service-now.com/usu/catalog_item.do?sysparm_id=9a76164bdbc58d09bd3dff6489619a9) that documents the locations visited and the duration of stay in each location.
3. Completion of the travel questionnaire is requested for personal travel.
4. UWRL travelers should, as part of their TA request, include comments or attach a document that addresses: (1) the time sensitive purpose of the travel (why this travel is needed now and cannot be postponed, e.g. to collect data that would otherwise be lost or for an unavoidable in person meeting); (2) the traveler’s plans for safety during travel (physical distancing, vehicle occupancy, accommodation and meals); (3) the COVID-19 risk in the location being visited or transited. (e.g., from this case calculation tool https://colab.research.google.com/drive/1FUJi0k0i-9EMEu_6YZZX3czPKgoJGykX) for the
county you are visiting or other equivalent information); (4) Plans for alternate work from home arrangements or self-quarantine for the two weeks following return if USU risk management designates that this is required. Travelers should check with USU risk management (risk@usu.edu) just prior to the trip, to assess the need for self-quarantine upon return.

**UWRL Vehicle Use**

- Face coverings are required in USU vehicles when riding with others (see https://www.usu.edu/covid-19/staying-healthy/face-coverings)
- For longer trips, separate vehicles should be used if at all possible.
- To facilitate the use of separate vehicles, if a research project is unable to pay for the extra expenses incurred through use of multiple vehicles, the PI may request funding as needed to support the additional vehicle costs. The UWRL will provide funding for the extra vehicle costs from WA-2.3 (Travel). Approval of these additional expenses below $200 is automatic. Approval of additional travel expenses above $200 should be obtained in advance by emailing the director.
- UWRL vehicles will be disinfected between each use according to the UWRL Vehicle Disinfection Plan included below and as a PDF (see https://uwrl.usu.edu/files/pdf/covid/uwrl-c19-vehiclecleaning.pdf).

**Vehicle Cleaning and Disinfection Plan**

**COVID-19 Vehicle Cleaning and Disinfection Plan**

*Prepared by Randy Martin, Joan McLean, Ryan Dupont
*Approved by UWRL Director David Tarboton

*7/15/20*

**Document Purpose**

This document outlines the steps that will be undertaken to ensure the safety of UWRL staff and related field team members operating University, UWRL, or other project vehicles during the COVID-19 pandemic. This plan has been developed following USU policies (https://www.usu.edu/covid-19, https://research.usu.edu/covid19/) and guidelines put forth via the Centers for Disease Control and Prevention (https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/disinfecting-transport-vehicles.html) as follows:

- Each vehicle will be cleaned and disinfected before it can be check out by another person.
- UWRL Business Office Staff will clean each vehicle after it has been checked back in to the UWRL and will leave a completed form on the driver’s seat in the vehicle to designate disinfection has occurred (see end of document for form).
- If surfaces are visibly dirty, prior to disinfection, those surfaces should be cleaned with water and mild detergent as appropriate for the surface being cleaned.
- Two disinfection protocols have been approved: ozone disinfection and/or wet disinfection.
- While disinfecting the vehicles, employees must wear a mask, latex or nitrile gloves, and washable eyewear for their personal protection (see Part 4 below).
**Ozone (O₃) Disinfection**

Gas-phase ozone (O₃) can be used as an effective disinfection for the inactivation of surface viruses within enclosed systems (Tseng and Li, 2008; and others). Ozone disinfection is a function of concentration and exposure time, and the following guidelines are based on Tseng and Li (2008). UWRL/EQL has an A2Z Ozone, Inc. Model MP-3000 O₃ generator which can be used for vehicle disinfection and checked out from the Business Office.

**Ensure the silica gel in the drying tube is blue in color**

If the silica gel is mostly pink, it needs to be replaced and regenerated.

Contact Joan McLean, Joshua Horton, Dr. Dupont, or Dr. Martin for help with silica gel replacement.

**To disinfect a vehicle:**

1. Close vehicle windows and doors during disinfection
   - It may be necessary to have one window slightly open for access to a power outlet
2. Place O₃ generator in a centralized location in the vehicle -- make sure the O₃ exhaust tube is unblocked, ideally pointing up
3. Plug the unit into a 120v AC circuit
4. Turn the TIMER dial to 15 minutes and the OZONE CONCENTRATION dial to 40
   - This is calculated to achieve a cab-wide O₃ concentration of ≥10 ppm and achieve a virus destruction of ≥99% based on 50” x 60” x 70” cab (Dodge RAM 1500), with 200 ppm O₃ flowrate of 14 Lpm (specified generator settings)
5. Turn the COMPRESSOR to the ON position
6. Turn the OZONE switch to the ON position
7. Close any open vehicle doors and windows and let the system operate until the timer shuts off
8. Open the vehicle doors/windows and allow the vehicle to vent for at least 10-20 minutes or until the smell of O₃ (lightning/rain “fresh”) is no longer noticeable

**WARNING:** **HIGH O₃ CONCENTRATIONS ARE A HUMAN HEALTH HAZARD.** It is important that no individuals remain in the vehicle while the O₃ generator is operating.

**WARNING:** **INTERIOR O₃ DISINFECTION DOES NOT DEACTIVATE VIRUS ON EXTERNAL SURFACES.**

All external touchpoints and surfaces should still be wet wiped, as described below.

**Wet Disinfection/Cleaning Procedures**

Use these wet disinfection/cleaning procedures in the case ozone disinfection is not possible. The guidelines listed below are summarized from the CDC protocols for non-emergency transport vehicles:
**Ensure adequate vehicle ventilation** – Vehicle doors and windows should remain open during disinfection to ensure adequate ventilation.

**Focus on vehicle surfaces and touchpoints** – Disinfecting efforts should focus on surfaces and touchpoints within the vehicle. These include, but are not limited to hard seats, arm rests, door handles, seat belt buckles, mirrors, light and air controls, inside door and window controls, and other grab handles.

- Wipe or spray disinfectants on surfaces then let them dry naturally to allow sufficient contact time for virus inactivation
  - **ELECTRONIC SURFACES** – Use disinfectant spray with ≥70% alcohol solution or another manufacturer-approved product on electronic surfaces (touchscreens, tablets, etc.).
  - **VEHICLE SURFACES** – To avoid surface discoloration or deterioration, disinfects to be used should be bleach and hydrogen peroxide free, rather based on quaternary ammonium or citric acid

Recommended disinfectants include many Lysol products, Fantastik All-Purpose Cleaner, Nu-Gen Disinfectant Wipes, Panther Disinfectant Towelette, ClearCide Wipes, or a water solution with ≥70% alcohol, although this should be avoided for leather as it can lead to excessive drying.

**Other suitable disinfectants** can be found on EPA’s “Registered Antimicrobial Products for Use Against Novel Coronavirus SAR-CoV-2” ([https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)); just make sure they are not bleach or hydrogen peroxide based.

**PPE Requirements during Disinfection/Cleaning**

While disinfecting/cleaning a vehicle, individuals must wear the following:

- A protective mask (N95, cloth, etc.). *Clean or dispose of the mask following use*
- Disposable latex or nitrile gloves
- Washable eye protection

The EQL will provide of gloves and eye protection to be kept in reception for use in vehicle disinfection.

**Field Work**

**COVID-19 General Field Safety Plan**

The UWRL COVID-19 or Other Infectious Disease General Field Safety Plan describes UWRL field safety protocols specific to COVID-19 safety, including a restatement of some information on travel and use of vehicles. (The UWRL COVID-19 or Other Infectious Disease General Field Safety Plan PDF is available at https://uwrl.usu.edu/files/pdf/covid/uwrl-c19-fieldsafety.pdf):

**UWRL COVID-19 or Other Infectious Disease General Field Safety Plan**

*Prepared by Joan McLean, Joshua Hortin, Patrick Strong*

*Approved by UWRL Director David Tarboton*

7/15/20

**Document Purpose**

When the State of Utah is under any disease risk phase other than Green (“New Normal,” coronavirus.utah.gov) and/or the University is at any stage of its Infectious Disease Response other than level 5 or 4 (“Normal conditions” or “Increased Readiness,” usu.edu/covid-19/operations/plan-levels), the requirements of this section apply.

**Travel and Use of Vehicles**

- Face coverings are required in USU vehicles when riding with others (see https://www.usu.edu/covid-19/staying-healthy/face-coverings)
- For longer trips, separate vehicles should be used if at all possible.
- To facilitate the use of separate vehicles, if a research project is unable to pay for the extra expenses incurred through use of multiple vehicles, the UWRL will provide funding for the extra vehicle costs by approval of the director.
- UWRL vehicles will be disinfected between each use according to the UWRL Vehicle Disinfection Plan.

**Field Work**

- All field work should be conducted following the field activity and sampling (if any) procedures developed by the PI as part of their standard operations.
- Field activities should be reviewed in advance by the field team and adjusted or adapted to address physical distance, mask wearing and tool handling needs. Plans should address needs for, and minimization of, tool and equipment sharing (e.g., one employee operates a field computer, while the other installs sensors and dataloggers).
- Any member of the field team may veto a field activity plan without penalty if they feel it will be unsafe.
- Project leaders may not override disagreement with a field activity plan and should continue to work with the field team until all agree it is safe before heading into the field.
• Before beginning field work, all parties should confirm that no team member is currently exhibiting or has been experiencing COVID symptoms within the last 14 days. Refer to https://www.usu.edu/covid-19/staying-healthy/prevention as a reference for common COVID symptoms.
• While in the field, team members will strive to maintain at least 6 feet of distance between individuals. If work requires contact closer than 6 feet, then project-specific PPE—at a minimum face covering—must be worn. Work closer than 6 feet should be minimized to the extent possible.
• While in the field, employees will wear cloth face coverings consistent with USU’s guidance on face coverings at https://www.usu.edu/covid-19/staying-healthy/face-coverings.
• While working in the field, team members should sanitize their hands frequently (before and after each set of tasks, especially if using equipment that may subsequently be used by someone else). PI’s or field team leads are to ensure that sufficient hand sanitizing supplies are available.
• Any additional COVID-19 specific procedures needed for field work should be described in Standard Operating Procedures developed by faculty and research team leads to augment this document and existing (pre-COVID) Field Safety Protocols that are already in place. These individual COVID-19-specific safety plans are available upon request to Steve Barfuss at steve.barfuss@usu.edu.

Meetings, Events, and Visitors

Meetings
1. Meetings should be conducted using virtual systems (e.g. Zoom, Webex) where possible.
2. In person meetings among UWRL faculty, staff, students and visitors should follow USU guidelines for physical distancing and room occupancy and cleaning.

Events
3. Events (e.g. conferences, workshops and organized open meetings) that include external visitors and participants require approval from the central university committee. See https://www.usu.edu/covid-19/operations/gatherings, for USU guidelines for events and gatherings.

Visitors

⚠️ UWRL COVID-19 Information for Visitors

The Utah Water Research Laboratory (UWRL) is following all USU, local, and state public health authority directives relative to COVID-19 guidelines. For the health and safety of our students, faculty, staff, and visitors, we are taking the following precautions:

1 A visitor is anyone not employed by or registered as a student at Utah State University.
• **VISITORS to the UWRL** are limited to those with official business and must be pre-approved by the UWRL Director (per USU policy [https://www.usu.edu/covid-19/operations/travel](https://www.usu.edu/covid-19/operations/travel)). Groups of more than 4 visitors are currently not permitted. Use the attached form to request visitor approval.

Visitors to the UWRL will be approved only if they have not had a known exposure to people with COVID-19 and have not experienced COVID-19 symptoms in the last two weeks. Visitors from locations with a high infection rate will need to describe what they have done/are doing to limit their exposure and prevent themselves becoming infected.

• **TRAVELERS** to the UWRL are expected to (1) consider the risk in the locations they are traveling from and (2) answer the pre-travel health/COVID-19 screening questions on the visitor form to obtain travel/visit approval.

• **REMOTE MEETINGS** using web-conferencing tools are encouraged to minimize in-person meetings.

• **FACE COVERINGS** are required in all public spaces at the UWRL in accordance with State of Utah guidelines for State buildings including higher education. The receptionist has a supply of disposable, one-time use masks available for any visitors who don’t have one.

• **PHYSICAL DISTANCING**/physical barriers are being implemented for employees and student teams who work in shared offices, workspaces, and laboratories.

• **FREQUENT CLEANING/DISINFECTING** of high-touch surfaces such as door handles, stair rails, and conference tables/chairs is ongoing.

• **HAND SANITIZER** is available in the lobby, conference rooms and other locations for visitors to use. Disinfectant wipes are also available for cleaning of conference/meeting room surfaces.

• **IN-PERSON MEETINGS** should follow USU/UWRL guidelines for physical distancing, room occupancy and cleaning as posted in conference rooms. The host will wipe down tables, chairs and any computer components used using disinfectant wipes. Protective face masks are required, but may be removed once seated and at least 6 ft. apart.

**NOTE:** These guidelines are in effect until USU authorities notify us to remove the COVID-19 restrictions.

**Visitor Pre-Travel Approval Request Process**

1. The UWRL host completes the “Questions for Host” on the form linked below and obtains the information in the “Questions for Visitors” by either sending the form to the visitor or asking the visitor directly.

2. When forms are complete (one form for each visitor), the UWRL host emails the completed form(s) to Jan Urroz at urroz@usu.edu.

3. Jan Urroz will seek approval from the UWRL Director and inform the host via email whether the visitor request has been approved or declined. Please allow at least two days for director approval.

Download UWRL COVID-19 Pre-Travel Visitor Approval Request Form (fillable PDF) at: https://uwrl.usu.edu/files/pdf/covid/uwrl-c19-visitor-form-10-13-20-fillable.pdf

*(NOTE: If you select the fillable pdf, download the form to your computer before entering information; otherwise, the information entered will be lost when you click the link to use the case rate tool.)*

These guidelines are in effect until USU authorities notify us to remove the COVID-19 restrictions.

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**Training and Communication Plan**

1. A copy of this plan will be emailed to department employees once approved.
2. UWRL leadership will hold a web conference for UWRL employees to discuss these guidelines and to answer any questions from employees.
3. Supervisors will monitor (using passive observation) their onsite employees for potential symptoms and send employees home who exhibit symptoms.
4. The UWRL will post USU-approved signage setting expectations for staying home when sick, respiratory hygiene and etiquette, and workplace behavior.
5. Employees who have been tested for COVID-19 and are waiting to receive test results, are requested to complete the USU COVID-19 questionnaire at: https://usu.service-now.com/usu/covid_19_question.do.

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**Utah COVID-19 Health Guidance Levels and Return to Normal**

Complete lifting of the limitations in this document will occur upon notification from USU authorities that COVID-19 restrictions are removed. A transition of Cache Valley to a Low Transmission Level (see https://coronavirus.utah.gov/utah-health-guidance-levels/ ) does not alter these plans as face coverings, social distancing and other COVID-19 safety measures are still strongly recommended and may be required locally under Utah’s Health Guidance Levels (see https://coronavirus.utah.gov/utah-health-guidance-levels/).

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**Individual Plans**

Each UWRL research lead has established an approved COVID19 plan to ensure the safety of his/her research team. These plans are available upon request by contacting Steve Barfuss at steve.barfuss@usu.edu.