

# Utah Water Research Laboratory COVID-19 Operations Plan

April 23, 2021

This Operation Plan provides specific guidance for employees of the Utah Water Research Laboratory (UWRL) as we adjust and respond to the ongoing pandemic. 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 pandemic continues to affect students and employees at the Utah Water Research Laboratory. It is essential that everyone 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.

Helpful resources for COVID safety and response include:

- Coronavirus (COVID-19) Information for Utah State University <http://www.usu.edu/COVID-19>
- USU Research COVID-19 Website <https://research.usu.edu/covid19/>
- State of Utah <https://coronavirus.utah.gov/utah-leads-together/>
- Utah System of Higher Education COVID-19 updated <https://ushe.edu/ushe-covid-19/>
- Center for Disease Control and Prevention <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

This UWRL operations plan does not supersede USU policies; rather it should be used in conjunction with these policies and is intended to provide specific UWRL plans that are consistent with these policies.

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## Work Schedules for Employees

1. Working from home (telework/remote work) continues to be allowed and encouraged for anyone who can do so effectively or who is at high-risk or caring for someone who is high-risk. However, supervisors are encouraged to seek safe ways for employees who have been working at home to return to on-site work as the employee is comfortable doing so, for example, by utilizing mask and social distancing protocols or becoming vaccinated (see <https://www.usu.edu/covid-19/testing/vaccine> ).
  2. Supervisors and employees will coordinate schedules for work at home and on site.
  3. Employees with their own single-occupancy offices may work on site.
  4. Physical distancing continues to 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 workspaces 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.
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## 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. The UWRL expects employees to follow USU guidelines for social distancing at <https://www.usu.edu/covid-19/staying-healthy/social-distancing>.
  4. Meetings will be scheduled in spaces that facilitate physical distancing and/or will occur remotely using web-conferencing tools.
  5. 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.
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## Facility Protocols to Protect Employees

1. Employees who feel sick or experience any COVID-19 symptoms should isolate themselves immediately and follow USU guidelines (see <https://www.usu.edu/covid-19/if-you-are-sick/>).
2. UWRL employees should inform their supervisor and USU risk management ([risk@usu.edu](mailto: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](mailto:risk@usu.edu)) and act on the advice received.
4. USU-approved COVID-19 signage that lists COVID-19 symptoms are 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.
  6. Employees should wipe down their respective workstations as needed.
  7. Cleaning supplies have been provided in conference rooms for cleaning of surfaces as needed.
  8. Appropriate notices will be posted in each conference room and meeting place with room capacity and respiratory hygiene and etiquette guidelines.
  9. 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
  10. When interacting with the UWRL receptionist, students and employees will follow mask and social distancing protocols.
  11. Chairs in the reception area will be located more than 6-ft apart.
  12. Unless doing so will create 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.
  13. This plan will be reviewed with students and employees regularly through email communications. New employees will be given specific instructions and guidance regarding the UWRL COVID safety plan.
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## Travel

### Travel Authorization

1. Travel is allowed following USU travel guidelines (<https://www.usu.edu/covid-19/operations/travel>).
2. For all travel, USU recommends limiting out-of-state travel, avoiding travel to high-risk locations, and following CDC guidelines when a person does travel (<https://www.cdc.gov/coronavirus/2019-ncov/travelers/>)

### UWRL Vehicle Use

- Face coverings continue to be required in USU vehicles when riding with others (see <https://www.usu.edu/covid-19/staying-healthy/face-coverings>)
- For longer trips, separate vehicles may be used.
- 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 prior to each use according to the UWRL Vehicle Disinfection Plan below.

## 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*

Updated 3/16/21

#### **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:

- UWRL Business Office Staff will clean and disinfect each vehicle that has been returned to the UWRL before it can be checked out by another person.
- The person cleaning the vehicle will mark the appropriate box at the top of the vehicle check-out form to indicate to the next occupant that the car has been sanitized.
- Visibly dirty surfaces will be cleaned with water and mild detergent as appropriate for the surface being cleaned before disinfection.
- Two disinfection protocols have been approved: wet disinfection and/or ozone disinfection. Wet disinfection will occur in each vehicle following each use. Ozone disinfection will be used only when a user of the vehicle indicates having COVID-19 symptoms or tests positive for the COVID-19 virus within one week after use.
- While disinfecting the vehicles, employees must wear a mask, latex or nitrile gloves, and washable eyewear for their personal protection (see PPE Requirements below).

#### **Wet Disinfection/Cleaning Procedures**

Wet disinfection/cleaning procedures will be used after each vehicle use prior to the vehicle's next use. 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, disinfectants 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>); just make sure they are not bleach or hydrogen peroxide based

## Ozone (O<sub>3</sub>) Disinfection

Gas-phase ozone (O<sub>3</sub>) 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 O<sub>3</sub> generator that can be checked out from the Business Office and used for vehicle disinfection.

### Instructions for use:

#### 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 O<sub>3</sub> generator in a centralized location in the vehicle -- make sure the O<sub>3</sub> 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 O<sub>3</sub> 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 O<sub>3</sub> 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 O<sub>3</sub> (lightning/rain “fresh”) is no longer noticeable.

**WARNING: HIGH O<sub>3</sub> CONCENTRATIONS ARE A HUMAN HEALTH HAZARD.** It is important that no individuals remain in the vehicle while the O<sub>3</sub> generator is operating.

**WARNING: INTERIOR O<sub>3</sub> DISINFECTION DOES NOT DEACTIVATE VIRUS ON EXTERNAL SURFACES.** All external touchpoints and surfaces should still be wet wiped, as described below.

### 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.

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## 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 as outlined below. (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 Health Guidance Level other than Low Transmission (<https://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,” <https://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.

## Fieldwork

- All fieldwork 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.
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- Before beginning fieldwork, 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 fieldwork 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](mailto:steve.barfuss@usu.edu).
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## Meetings, Events, and Visitors

### Meetings

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

### Events

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<sup>1</sup>

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:

- **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>). Groups of **up to 10 visitors** are currently permitted. Hosts may request approval for larger groups if they establish appropriate protocols for lab and visitor safety. [Request visitor approval](#) using the Pre-Travel Visitor Approval Request Form linked below.
- **APPROVAL** will be granted for visitors following the CDC guidelines for safe travel. However, visitors should delay travel and cancel their visit if, in the 14 days prior to the visit, they (1) receive a positive COVID-19 test result, (2) develop symptoms of COVID-19, or (3) have been around someone diagnosed with or suspected of having COVID-19 (unless you have recovered from COVID-19 within the past 3 months or are fully vaccinated).
- **TRAVELERS** to the UWRL are expected to (1) consider the risk in the locations they are traveling from and (2) answer the pre-travel 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.

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<sup>1</sup> A visitor is anyone not employed by or registered as a student at Utah State University.

- **PHYSICAL DISTANCING**/physical barriers have been implemented for employees and student teams who work in shared spaces. **HAND SANITIZER** is available in the lobby, conference rooms, and other locations for visitor use. Disinfectant wipes are also available for cleaning of conference/meeting room surfaces.
- **IN-PERSON MEETINGS** should follow USU guidelines for physical distancing and room occupancy. Facemasks 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. Email completed forms (one per visitor) to Jan Urroz at [jan.urroz@usu.edu](mailto:jan.urroz@usu.edu).
2. Please allow at least two days for approval.

Download UWRL COVID-19 Pre-Travel Visitor Approval Request Form (print PDF) at:  
<https://uwrl.usu.edu/files/pdf/covid/uwrl-c19-visitor-form-4-20-21-print.pdf>

Download UWRL COVID-19 Pre-Travel Visitor Approval Request Form (fillable PDF) at  
<https://uwrl.usu.edu/files/pdf/covid/uwrl-c19-visitor-form-10-20-21-fillable.pdf>

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

## Training and Communication Plan

1. A copy of this plan has been emailed to department employees.
2. UWRL leadership held 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. Supervisors/administrators will inform the Business Services Office to initiate vehicle ozone cleaning if necessary (employee with positive Covid-19 test or experiencing symptoms has used a lab vehicle within the past week) and will work with them to alert anyone else who may have used the same vehicle in the interim of a potential exposure via vehicle surfaces.
5. The UWRL has posted USU-approved signage setting expectations for staying home when sick, respiratory hygiene and etiquette, and workplace behavior.
6. Employees who contract COVID-19 should comply with all related USU COVID-19 policies:  
<https://www.usu.edu/covid-19/if-you-are-sick/>.

## 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 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/>).

## 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](mailto:steve.barfuss@usu.edu).

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