

June 8, 2020

Critical questions leading to protocols for conducting environmental sampling/fieldwork (volunteer and professional) in the COVID-19 era

The Stroud Water Research Center does not give specific recommendations or endorsements of protocols to other individuals or organizations about conducting field and laboratory activities in the COVID-19 era because there are too many factors (reflecting different participants, methods, and sites) that are unknown to us and each organization needs to assess their activities and activities they sponsor with volunteers. Here are questions that we consider essential in making the decision to activate or continue field and laboratory activities in the Covid-19 era:

1. Our 1st rule is no one should participate if they are not feeling well or have reason to believe they may have been exposed to the coronavirus. They should also not participate if there is any reason for self-quarantine (e.g., due to possible exposure concerns).
2. All state and federal COVID-19 guidelines should be followed and your place of business should have approval for your operations (e.g., in PA - are you in “red”, “yellow”, or “green” categories for returning to work?).
3. Is the sampling critical or important for your project and needed to meet your grant deliverables, e.g., as requested by your funding agency (e.g., required by permit or contract) or optional (e.g., engagement)? If not critical, what is the penalty or cost of temporally discontinuing field sampling relative to added risk of potentially greater exposure to the coronavirus?
 - a. If critical, are other critical programs currently being conducted in person at/by your institute?
 - i. If yes, are there COVID-19 protocols being practiced that need to be applied to field sampling?
 - ii. If no, how is this critical activity different?
 - b. If engagement, are other engagement programs currently being conducted in person at your institute?
 - i. If yes, are there COVID-19 protocols being practiced that need to be applied to field sampling?
 - ii. If no, how is this engagement activity different?
4. Are the collectors/staff/volunteers trained to work independently? If not, what would it take to make them more independent or should you only use the independent workers?
 - a. If you allow individuals to go into the field alone, do you have “virtual buddy” protocols (i.e., regular check-in communications)? Does the virtual buddy know when, where, and what the individual is doing?
 - b. How will water bodies be accessed safely to ensure safe access and exit from the water body?

5. Are the collectors able to assess and apply standard safety protocols that would make them ready to assess the added risks to their own personal safety associated with potential coronavirus exposure?
6. Is a collector going to sample one site or multiple sites? If multiple sites, are there known differences among sites that affect COVID-19 risk (e.g., raw sewage, public interactions)? Known differences need to be reviewed, with the option to exclude sites with unacceptable risk (e.g., raw sewage, too much public interaction).
 - a. If accessing multiple sites or traveling longer distances, will you allow/support their access to common bathrooms, restaurants, hotels? These are added risks to your collectors/staff/volunteers that could be avoided or justify not visiting these sites.
7. Can collecting teams be reduced to 2 people so collectors practice the buddy system with a family member or the same team member?
 - a. Can/should collectors travel to the sites in separate vehicles?
 - b. Can/should collectors meet at the site versus convening at the "office"?
 - c. Can/should collectors have separate collection equipment that is not shared with another teammate or team?
 - i. Can you clean/disinfect/dry equipment between "shared use"
8. Do the collectors have sufficient personal protective equipment – gloves, masks, hand sanitizer and/or alcohol?
9. Can social distancing be practiced safely while field sampling? If not, why? Is the problem the participants, the method, or the site, and how can that be changed to maximize the distance between participants (more precaution is better)?
10. In preparation for field collections, can all equipment (nets, meters, jars, coolers, etc.) be prepared and organized by a single person, and picked up separately by each team?
11. When collecting is completed, can samples and equipment be returned to the lab or office safely, with little or no additional risk of coronavirus exposure to field team or office personnel?
12. Can any laboratory preparation or processing be conducted safely, with little or no additional risk of coronavirus exposure to the laboratory team or office personnel?
13. Do all participants understand and accept the risks of potential coronavirus exposures?
14. Are you tracking the whereabouts (when, where, who) of all collectors for potential contact tracing, if needed?

Our primary strategy is to stay well (protect our staff/volunteers) while doing our science. Our protocols are under constant revision and subject to change at any time.

The above questions are extensions of our normal safety questions and concerns (e.g., risks of personal injury from accidents involving equipment, vehicles, or the physical habitat, and from chemical and pathogen exposure).