

## COVID – 19 Staff Safety and Security Protocol Guide

The purpose of this document is to give direction and recommendations during the COVID-19 pandemic with a focus on protecting the safety and security of all staff in Water Mission country programs. This includes special guidance for all essential personnel who are required to physically report to work in the office and travel to communities.

This document is meant to provide basic guidelines for protecting staff safety, however these recommendations may need to be adapted and modified depending on any local and national mandates in each country program. The following workplace recommendations have been adapted from World Health Organization (WHO)<sup>1</sup>, Center for Disease Control (CDC)<sup>2</sup>, and Occupational Safety and Health Administration (OSHA)<sup>3</sup> guidance on workplace preparedness and from guidance from medical professionals<sup>4</sup>.

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<sup>1</sup> World Health Organization. "Getting your workplace ready for COVID-19", Accessed on 27 March 2020, <https://www.who.int/docs/default-source/coronaviruse/advice-for-workplace-clean-19-03-2020.pdf>

<sup>2</sup> Center for Disease Control. "Interim Guidance for Businesses and Employers: Plan, Prepare, and Respond to Coronavirus Disease 2019", Accessed on 30 March 2020. <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>

<sup>3</sup> Occupational Safety and Health Administration, "Guidance on Preparing Workplaces for COVID-19," Accessed on 30 March 2020, <https://www.osha.gov/Publications/OSHA3990.pdf>

<sup>4</sup> Medical guidance from Dr. Jon Stoeber, MD, Pulmonary and Critical Care Medicine, Mt. Sinai St. Luke's, NYC. Dr. Stoeber is well researched in coronaviruses and treated the first critical COVID-19 patients in NYC before becoming ill with the virus himself. He is now working with NYU Medical and Mt. Sinai St. Luke's on emerging treatments for the virus.

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## Guidance for Country Directors and In-Country Leadership

We require all country leadership to follow the procedures defined as requirements, and to consider implementing the procedures defined as recommendations. Please communicate to Group 1 Functional Safety/Security lead if you find more efficient solutions or if you are unable to uphold certain requirements. You will find a list of definitions of terms used in the document below and detailed supply lists, procedures, and other tools in the Annex at the end of this document.

### Definition of Cleaning, Sanitizing, and Disinfecting

Cleaning, sanitizing, and disinfecting are all ways to help control the spread of infectious diseases. Although all three of these actions are effective, understanding the difference between them can be critical.

- **Cleaning** refers to the removal of germs (or pathogens), dirt, and impurities from surfaces. It does not kill pathogens, but by removing them, it lowers their numbers and the risk of spreading infection. Cleaning is done with water, a cleaning product, and scrubbing. Cleaning also removes the food and water that all pathogens need to survive and reproduce.
- **Sanitizing** is the use of a chemical product or device that reduces the number of pathogens on surfaces or objects to a level considered safe for public health (99.9%). Sanitizing kills most pathogens but not all. The label on a sanitizer will state its germ (or pathogen) reduction (i.e., 99.9%) and what surfaces on which they are intended to be used.
- **Disinfecting** refers to using chemicals to kill a minimum of 99.999% of pathogens. Disinfectants are less gentle but are more effective at killing pathogens than sanitizers.

All three of these actions are temporary. As soon as the surface has been touched, coughed, or breathed on, pathogens will again be present and start growing. To help prevent an outbreak, bathrooms and any frequently touched surfaces must be cleaned and disinfected a minimum of once per day. Some areas may need to be cleaned and disinfected after each use. Clean with regular soap or detergent and water. Then, after rinsing, use a disinfecting solution. Further directives on when to use these three methods are given throughout this document.

## Recall Roster

All country program offices should have an all-staff Recall Roster to be created and maintained by HR and program safety officers. A recall roster is an organized plan for contacting all members of an organization to facilitate the rapid spread of information. This needs to be accomplished through direct phone communication.

- Every program/office will establish a recall roster utilized for:
  - Notifications and updates
  - Morale and welfare checks
- Utilize current modes of communications – Cell phone, WhatsApp
- Roster will be shared with all in country staff, regional directors, and Charleston safety POC
- Tree structure with maximum 5-7 direct contacts at each level
  - This roster will be integrated with the Water Mission master recall roster
  - Each person will contact all persons on their list and report back
  - If a person cannot be contacted – call the next down on the list and so on until all staff are contacted
  - Incorporate an excel tracker sheet for official record of recalls

## Best practice hygiene recommendations<sup>5</sup>

Current evidence suggests COVID-19 spreads primarily through respiratory droplets. When someone infected with COVID-19 coughs, exhales, or speaks they release droplets of infected fluid. Transmission can also occur through people touching surfaces infected with these droplets, and then touching their eyes, nose, or mouths, or, through breathing in infected droplets in the air.

In general, staff are recommended to practice the following preventative procedures, regardless of whether they are at home, work, or travelling:

- **Regularly and thoroughly wash your hands with soap and water.** The most effective way to clean your hands is with soap and water. Hands should be scrubbed with soap and water for a minimum of 20 second before rinsing. Washing hands with soap and water is preferred over the use of hand sanitizer. Sanitizer is not effective all removing dirt, chemicals, and other harmful substances from your hands. Additionally, sanitizer does not kill all pathogens.
- **Use hand sanitizer when soap and water is not available.** When it is not possible to wash your hands with soap and water, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used. Use an adequate amount of the product to completely cover your hands. Please refer to the product instructions before applying to skin. Rub the product all over the surfaces of your hands until dry. It is recommended to keep hand sanitizer on your person or in your vehicle, so that it is readily accessible for when hand washing is not possible.
- **Disinfect areas and items of common use.** Chlorine, a commonly used disinfectant, can inactivate both bacteria and viruses given sufficient contact time and concentration. Both for protection from the chlorine solution and any potential microbes and viruses, always wear gloves when performing cleaning and disinfection. The disinfectant may be applied by pouring

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<sup>5</sup> World Health Organization, "Q&A on coronavirus (COVID-19)", Accessed on 27 March 2020, <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>

or spraying the solution onto a clean cloth, and then using the soaked cloth to wipe the contaminated areas. Alternatively, the disinfectant may be sprayed directly onto the area (with a spray bottle or other applicator). Allow the surface to remain wet for at least 15 minutes to allow for adequate contact time. Do not rinse objects, floors, and surfaces that were disinfected with the chlorine solution (except for stainless-steel surfaces). It is recommended to maintain access to a disinfectant and use as often as needed at the office, in vehicles, and at home.

- **Maintain at least 2-meter (6 feet) distance between yourself and anyone else.** Remember that when someone coughs or sneezes, they spray small liquid droplets from their nose or mouth. If you are too close, you can breathe in these droplets, which may contain the COVID-19 virus.
- **Avoid touching eyes, nose and mouth.** These are the main ways for the virus to enter your body. Hands touch many surfaces and can pick up viruses.
- **Cover your mouth and nose with your bent elbow or tissue when you cough or sneeze.** Then dispose of the used tissue immediately and follow hand washing procedures.

## All-Staff Requirements

The following requirements apply to all-staff are intended to protect the health and safety of our teams and prevent the spread of COVID-19. If available, Water Mission reserves the right to test staff temperatures daily. Staff members with a low-grade fever (37.3 C or more) will be sent home and should not report to work for 14 days, or longer if symptoms continue beyond 14 days. Employees may consider a return to work 48 hours (2 days) after symptoms are completely gone, and they have been given authorization from their supervisor.

Water Mission's normal sick leave policies will remain in effect at this time but will be flexible and consistent with local labor law public health guidance<sup>6</sup>.

### Use of Face Masks

- Water Mission Staff will always wear face masks while on duty
- This includes staff who are:
  - Working in the office
  - Attending meetings away from the office
  - Performing project work in communities
- The use of a mask alone is insufficient to provide an adequate level of protection. Whether or not masks are used, maximum compliance with hand hygiene and physical distancing remains critical to prevent human-to-human transmission of COVID-19.
  - Please see below for more information on proper mask management.
    - [COVID-19 guidance on face masks](#)
    - [COVID-19 face mask use training](#)

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<sup>6</sup> Center for Disease Control, "Interim Guidance for Businesses and Employers: Plan, Prepare, and Respond to Coronavirus Disease 2019"

If you are ill, stay home.

- If you are ill or experiencing a fever, cough, diarrhea, headache, or shortness of breath, **you must stay home and notify your supervisor immediately**. Even if you feel well enough to work but are still experiencing mild symptoms, do not come in. **If you report to work sick, you will be sent home and will be subject to disciplinary action.**
- You must also stay home (or work from home) if you have taken simple medications, such as paracetamol/acetaminophen, ibuprofen or aspirin, which may mask symptoms of infection.
- We highly recommend that you contact your health care provider or the local public health department, to give them the details of your symptoms.
- We highly recommend that you self-isolate for 14 days upon becoming ill and an additional 48 hours after symptoms subside. Avoid close contact with other people, including family members.
- You must contact your supervisor to receive approval before you can report back to work.

If you become ill at work, return home immediately.

- **In the Office**
  - Contact your supervisor and return home immediately. Do not take public transportation. If medical attention is required, please contact ambulance for transport to medical facility.
  - If no other option exists, another Water Mission employee may transport you home using a Water Mission vehicle. You must sit in the backseat and both you and the driver are required to wear a mask or scarf that covers both nose and mouth for the duration of the journey.
  - Once home we highly recommend that you contact your health care provider or the local public health department, to give them the details of your symptoms.
  - We highly recommend that you self-isolate for 14 days upon becoming ill and an additional 48 hours after symptoms subside. Avoid close contact with other people, including family members.
  - You must contact your supervisor to receive approval before you can report back to work.
  - If utilized, the driver of the sick employee must also self-isolate.
- **In the Field**
  - Contact your supervisor and use the Water Mission vehicle to return home immediately with all the Water Mission employees that traveled with you into the field.
  - Communicate to your supervisor if you were in close contact with any community members or non-Water Mission staff.
  - All employees in the vehicle should wear a mask or scarf that covers both nose and mouth for the duration of the journey.
  - All employees should be dropped off at their homes (except for the driver) before the vehicle is returned to the Water Mission office.
  - We highly recommend that you and all employees that traveled together should contact your health care providers or the local public health department, to give them the details of your symptoms.

- We highly recommend that you self-isolate for 14 days upon becoming ill and an additional 48 hours after symptoms subside. Avoid close contact with other people, including family members.
- You must contact your supervisor to receive approval before you can report back to work.

#### If are exposed to a suspected COVID-19 case

- If you believe you have been exposed to someone, including family and friends, who is ill with COVID-19 or exhibiting fever, cough, diarrhea, headache, or shortness of breath, you should stay home and notify your supervisor immediately. **If you report to work after you believe you have been exposed, you will be sent home and will be subject to disciplinary action.**
- We highly recommend that you self-isolate for at least 14 days from your suspected exposure. Avoid close contact with other people, including family members.
- You must contact your supervisor to receive approval before you can report back to work.

### Enhanced Office and Field Operations Safety and Security Procedures

The following enhanced safety and security procedures apply to all global offices to ensure that we can continue our critical mission to supply safe water to vulnerable populations while also striving to minimize the risk of staff exposure to COVID-19. The global pandemic is quickly evolving, so these procedures are subject to change at any time.

#### In-Office Operations

##### *Entrance into Water Mission Facilities*

Only staff members, staff vehicles, and Water Mission vehicles are permitted to enter any Water Mission compound. All other visitors or vehicles must have authorization from the Country Director.

- Compound Entry Point Setup
  - Each office should utilize their security personnel or have a designated staff member to ensure that compound entry procedures are followed.
  - A cleaning and sanitizing point should be set up outside of the main compound entrance and should include:
    - Vehicle cleaning and disinfection station directly outside the compound
      - If it is not possible for safety or other reasons to set up outside the compound a designated “quarantine” area inside the compound should be established as far as possible from staff locations for cleaning and sanitizing
    - A hand washing station
    - COVID – 19 awareness and hand washing signs
  - All secondary entrance points should be monitored with security or locked in security is not available
- Office Entry Point Setup
  - A second cleaning and disinfection point should be set-up at the main office entrance and should include:

- A hand washing station
  - COVID – 19 awareness and hand washing signs
  - Secondary entrance points into the building should be secured as needed
- Compound/Office Entrance Procedure
  - All vehicles are required to be cleaned and sanitized prior to entering the compound if the area is secure to set up a cleaning station
    - If not secure outside the compound it should be set up inside the compound in an area isolated from the office
  - All staff are required to wash hands every time they enter the compound
  - All staff are required to wash hands every time they enter the office building

### *Workspaces*

All workspaces should be modified to promote social distancing and sufficient office ventilation.

- Set up split shift time for employees – (per Country Director)
- For employees who will be required to report to the office, workstations should be modified to ensure seats are at least 2 meters (6 feet) apart.
- Social distancing recommendations apply during morning devotion/huddle as well and chairs should be set up at least 2 meters (6 feet) apart.
- Remove additional chairs to ensure proper spacing
- Open windows and doors whenever possible to make sure the office is well ventilated.
- Discourage staff from using other staff's phones, desks, tools, and equipment when possible
- COVID – 19 awareness and hand washing signage posted throughout office and common areas
- Hand sanitizer readily available

### *Meetings*

- Conduct all meetings virtually unless an in-person meeting is essential.
  - All staff are encouraged to use Microsoft Teams. Microsoft Teams can be used to replace face-to-face meetings.
- Essential, in-person meetings should have no more than 10 participants.
- Set and enforce social distancing at 2 meters (6 feet) for all essential meetings and consider hosting them outside instead of in a conference room.

### *Office Disinfection*

A regular office cleaning and sanitizing schedule should be documented, posted, and executed.

- Minimum of once per day, and more frequently in areas of high use as needed
- Offices - including tables, desks, door handles. Note that chlorine solution (disinfection) will cause damage to any electronics. It is best to sanitize electronics with the use of an alcohol wipe.
- Kitchens, latrines, and other common areas – sinks, commodes, counters, floors, etc.

### *Vehicles*

- Keep all Water Mission vehicles secured inside the compound
- Each will be equipped with first aid kit and a cleaning and disinfection kit
- NO UNAUTHORIZED PASSENGERS IN VEHICLE
- Vehicles will be cleaned and disinfected after every use
  - Initially outside of compound\* see page 6
  - Secondary detailed cleaning and disinfection inside the compound
- Limit no more than two staff to be in vehicle at same time

### Travel and Field Operations

All work-related travel should be in teams of two and programs should consider obtaining police or security escorts **if potential threats exist**. When possible, no more than 2 people should travel in a Water Mission vehicle at any time. Consider sending staff to the field in separate vehicles or utilizing motorcycle travel when other options are not available.

### Public Transportation

- Staff are prohibited from using public transportation to get to the office, or to travel into the field.
  - If appropriate, Water Mission country programs may offer to pay the difference in cost to encourage staff to use alternative modes of transportation
- Consider utilizing vehicles owned by the country program to provide transportation to/ from work, etc.

### Travel Preparation

This section gives directives and recommendations for staff while they are traveling outside of the compound / office. This could be travel to communities, meetings, or business errands for Water Mission. Please note that further guidance regarding routine community work in light of COVID-19 can be found in the [COVID-19 and routine project activities document](#).

- Make sure staff have the latest information on areas where COVID-19 is spreading. You can find this [here](#). Ensure that staff are aware and comply with instructions from local authorities and any local restrictions on travel, movement, or large gatherings where they are travelling.
- Water Mission should assess the benefits and risks related to upcoming travel plans based on the latest information
- Avoid sending employees who may be at higher risk of serious illness (e.g. older employees and those with medical conditions such as diabetes, heart and lung disease) to areas where COVID-19 is spreading.
- Consider establishing a rotation of traveling staff.

### Social Distancing<sup>7</sup>

- Staff should not touch anyone and practice social distancing and stand about 6 feet apart.
- Staff should be advised not to convene large groups of people (10+), and should advise community members to practice social distancing, particularly during any gathering convened by Water Mission.

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<sup>7</sup> Medical guidance from Dr. Jon Stoeber, MD, Pulmonary and Critical Care Medicine, Mt. Sinai St. Luke's, NYC.

### *Personal Hygiene*

- Staff should wash their hands regularly with soap and water upon arriving and departing destination, as well as frequently while working, especially after touching common surfaces (door handles, money, etc.). When it is not possible to wash your hands with soap and water, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used.
- Staff should also adhere to the [best practice hygiene recommendations](#) outlined earlier in this guide while conducting work in the field.

### *Equipment Disinfection<sup>8</sup>*

- Equip staff with a spray bottle of disinfectant (chlorine solution) and wipes (or cloths) for disinfecting equipment used while working in communities.
- Disinfect all equipment and materials after you have touched something. For example, after you have worked on a piece of equipment, clean thoroughly and spray completely with disinfectant.
- Regularly wipe down cell phones with an alcohol wipe (sanitizer). This is especially important after sharing phones with another person. (Note that chlorine solution will cause damage to a cell phone and should not be used with a cell phone or any electronics.)

## External Meetings

### *Meeting Preparation*

- Based on the latest information, Water Mission should assess the benefits and risks related to face-to-face meeting attendance. When possible, attend meetings virtually rather than face-to-face.
  - Avoid sending employees who may be at higher risk of serious illness (e.g. older employees and those with medical conditions such as diabetes, heart and lung disease).
- Upon accepting a meeting invitation, please reply and ask that the venue be wiped down before the meeting and that a room's capacity limit is fixed and not exceeded.
  - Ask about the number of attendees. If more than 10 people are attending, please do not attend.
- When possible, minimize potential exposure by having only one or two delegates from Water Mission attend meeting.
- Bring water or a snack with you to avoid taking any food/drinks offered at the meeting.

### *Meeting Attendance*

- Arrive early to assess the space. If it looks too closely packed to allow you to keep 2 meters (6 feet) between you and other participants, please leave.
  - If the room looks big enough to handle the expected group sit furthest from the door to avoid everyone walking past you on their way in to take their seat.
  - If seats are less than 2 meters (6 feet) apart, remove the seat beside you or place your bag/ jacket/ other item on it to prevent anyone from sitting too close.
- Do not shake hands or hug anyone
- It is permissible to encourage the meeting chair to open the meeting with basic safety protocols to be followed during the meeting. If the chair of the meeting does not mention it ask that basic guidelines be followed, including the following:

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<sup>8</sup> Medical guidance from Dr. Jon Stoeber, MD, Pulmonary and Critical Care Medicine, Mt. Sinai St. Luke's, NYC.

- Keep space between people
- Refrain from handshakes
- If anyone must cough or sneeze, please do so into their sleeve, scarf or a tissue
- Use hand sanitizer on your hands when you have taken your seat. Use an alcohol wipe on all surfaces in your vicinity upon taking your seat (table, armrests of chair, etc.)
- Do not take anything offered (food, drinks, handouts).
- Keep your seat at the end of the meeting and wait until the room empties to avoid close contact and crowds while exiting the room.
- Re-sanitize your hands upon exiting the room. When available, wash your hands with soap and water

#### *Post Meeting*

- Please leave your contact information (name, phone number) with the event organizer.
  - If someone at the meeting or event was isolated as a suspected COVID-19 case, the organizer will only be able to inform you if they have your contact information.
- If you have potentially been exposed to someone with a suspected or confirmed COVID-19 case, report this to your supervisor immediately and follow the procedure outlined in Staff Guidelines.

#### Off-Duty Health and Safety Guidelines

These guidelines exist to help staff understand how to minimize their risk of exposure to COVID-19 when they are at home and off-duty.

#### *General household preparedness tips*

The following list of staff household preparedness tips is adapted from CARE guidance<sup>9</sup>:

- Create an emergency contact list: family, friends, neighbors, healthcare providers, teachers, employers, local radio stations, and other community resources
- Clean and disinfect high-touch surfaces in household common areas (ex. Tables, doorknobs, light switches, remotes, toilets, sinks)
- Choose a room in your house that can be used to separate infected household members from others.
- Avoid sharing personal items. Where possible, each family member should use his or her own cutlery, sponge, and towel.
- Help your child develop proper handwashing skills. Wash hands often with soap and water for at least 20 seconds before rinsing. Lead by example by properly washing your hands.
- If you care for older adults or children at home, plan and prepare for caring for them should they or you become sick.
- If possible do not shake dirty laundry. Wash items using the warmest appropriate water setting for the items and dry completely.
- Continue practicing everyday preventive actions, especially handwashing and keeping space between yourself and others.
- Stay home if sick. The sick person should eat/ be fed in their own room if possible.

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<sup>9</sup> CARE, "Protect yourself and your family: Household preparedness tips for COVID-19", Accessed March 30, 2020.

<https://watermission.sharepoint.com/:i/s/Intranet/Programs/Community%20Development/ESTqTpZkWChLnRtUpG21jrEBJNzAlTqOq4yaad2yfKD5rA?e=iuYm2e>

- Stay informed about the local COVID-19 situation. Visit the websites of WHO, CDC, and local/national health authorities for updates.
- After coming home from work, staff should wash hands and change clothes as soon as possible. If possible, also bathe. The virus can survive in hair.
- Wipe down groceries and anything that comes from a market or store with a sanitizer or disinfection solution. Then, wash hands for 20 seconds with soap and water.
- Avoid crowded areas and public transportation if possible
- Have a supply of food staples and household supplies like laundry detergent, cleaning supplies, bathroom items, basic medical supplies, and diapers if you have small children

#### *Hospital and health Care facility visits*

Hospitals and health care facilities are likely to have a higher likelihood and concentration of COVID-19 cases. For this reason, personal visits should be considered with extreme caution.

#### *Visits to hospitals or health care facilities not related to COVID-19 (for yourself or a family member)*

- When possible, treat personal or family illnesses/ailments at home.
- If professional medical assistance is necessary, consider any options that would involve tele-health (internet or phone) consultation without having to visit the hospital or health care facility.
- If tele-health options are not available and a physical visit is necessary, travel with a hygiene kit that includes soap, hand sanitizer, and chlorine solution spray and cloths for disinfection.
- Avoid touching common surfaces (pens, chairs, counters, handles). If necessary, use alcohol wipe or disinfection cloth from hygiene kit to first wipe down these surfaces. Sanitize or disinfect again after use.
- Continue to maintain 2 meters (6 feet) of distance when visiting. If the facility is crowded, consider waiting for consultation outside. Perhaps even suggest visiting with the doctor outside, as well.
- At the beginning of consultation, first wash hands with soap and water, or utilize a hand sanitizer, and then offer the soap or sanitizer to doctor/nurse/physician. It is important to protect them as well as yourself.
- Ensure that doctor/nurse/physician thoroughly clean or sanitize their hands and use sanitized gloves before filling any medication requests/requirements.
- If you must visit a hospital or healthcare facility for any reason, let your supervisor at Water Mission know. Please do not attend any community, institutional, government, or office meetings until at least 5 days without symptoms after your last visit to a hospital or health care facility.

#### *Visits to hospitals or health care facilities related to COVID-19 (for yourself or a family member)*

If you suspect that you or a family member has contracted COVID-19, or someone has a confirmed case, it is best to treat at home under quarantine and isolation. However, in a small percentage of cases, infection becomes severe enough that hospitalization is necessary.

- Inform supervisor at Water Mission of situation.

- If you experience trouble breathing or shortness of breath, consider travelling to a health care facility equipped with ventilators.
  - Please consult with a medical professional if you suspect you have contracted COVID-19
- Wear a mask during travel to and in the health care facility.
- Keep 2 meters (6 feet) distance from others whenever possible.
- Avoid touching common surfaces.
- Wash hands with soap and water or utilize hand sanitizer often.
- Follow self-isolation and quarantine guidelines for 14 days or at least 48 hours after symptoms subside.

## Annex 1: Recommended Hygiene Kits

### 1a - Recommended Staff Hygiene Kit for COVID-19

When travelling to visit communities, institutions, and/or attend meetings, it is important to travel with the following supplies to protect yourself and others:

Item	Quantity
Hand soap (liquid or bar)	2
Alcohol-based (>60%) hand sanitizer	2
Pre-moistened disinfectant wipes/towels	1 package
Latex or rubber gloves	3 pairs
Thermometer (ideally infrared)	1
500-10000 mL of liquid or spray disinfectant (chlorine solution)	1 spray bottle
Paper/hand towels or cleaning cloths	3
First aid kit	1

Face mask	x1 disposable mask per person per day or x5 reusable cloth masks per person (plus laundry soap for washing)
Plastic bag (for storing face masks)	1

### 1b - Recommended Hygiene Kit for COVID-19 for Distribution

If you are planning a distribution of materials to equip families in a community or institution, the following materials are necessary:

Item	Quantity
Hand soap (liquid or bar)	2
Alcohol-based (>60%) hand sanitizer	2
Disinfection supplies bleach wipes/towels or pre 500-1000mL of liquid or spray disinfectant (chlorine solution) with paper/hand towels or cleaning cloths	1 package or 1 bottle and 3 rolls/cloths
WASH Cycle 3 brochure	2
Construction instructions for handwashing station	1
<a href="#">COVID-19 Awareness Brochure</a>	2

## Annex 2: Liquid soap, Sanitizer, and Disinfections recipes

### Annex 2a: Soap-making recipe

To produce 40 liters of liquid soap, you will need:

Chemicals	Quantity	Unit
Soda ash	16	Teaspoonful
Sulfonic acid	2	Liter
Formalin	1	Liter

<b>Glycerin</b>	$\frac{1}{2}$	<b>Liter</b>
<b>Color</b>	3	Teaspoonful
<b>Water</b>	40	Liter
<b>Perfume</b>	9	Milliliter
<b>Salt</b>	$\frac{1}{2}$	Kilogram

<b>Hardware</b>
Plastic bucket
Tea spoon
Cup
Gloves
Masks
Wooden rod

### Liquid Soap Making Procedure

1. Combine soda ash and sulfonic acid in the plastic bucket and stir with wooden rod for 1 minute. (Use gloves and masks to avoid direct contact with your skin).
2. Add a small amount of water and continue stirring slowly.
3. While continuing to stir, mix with formalin.
4. Add salt to the solution and mix thoroughly with the wooden rod until the salt is completely dissolved.
5. While stirring, continue to slowly add water.
6. Add and stir the glycerin into the solution.
7. Add color (any may be chosen as preferred by target market). (Note: Stirring is a nonstop task until the end, a process that in total requires about 20 minutes.)
8. After chemicals are mixed and dissolved well, add perfume to the solution.

### Tips

1. Stirring is a nonstop task for 20 minutes.
2. Water is added little by little to avoid overflow of Formalin
3. Continue to stir in one, consistent direction.

### Annex 2b: How to Make Hand Sanitizer

Hand sanitizer is manufactured using only the following ingredients in the preparation of the product

- (Select one of two options) (1) Ethanol (96%); **OR** (2) Isopropyl alcohol (99.9%)
- Glycerin, or glycerol (98%)
- Hydrogen peroxide (3%)
- Sterile water (boiled or distilled). Water should be used as quickly as possible after it is rendered sterile.

The hand sanitizer is manufactured according to the following formula:

- Ethanol (80%, volume/volume (v/v)) in an aqueous solution; **OR** Isopropyl alcohol (75%, v/v) in an aqueous solution
- Glycerin, or glycerol (1.45% v/v)
- Hydrogen peroxide (0.125% v/v)
- Sterile water

Do not add other active or inactive ingredients, such as ingredients to improve the smell or taste, due to the risk of accidental ingestion in children. Different or additional ingredients may impact the quality and potency of the product.

### 10 Liter Hand Sanitizer Preparation – Step by Step Instructions

1. Begin with 8,333 mL of ethanol **OR** 7,515 mL of isopropyl alcohol in a closable, 10-liter container
2. Add 417 mL of hydrogen peroxide

3. Add 145 mL of glycerin (or glycerol) (Note: glycerin is very viscous and will stick to the walls of the measuring container. Therefore, the measuring container should be rinsed with some sterile water, and then emptied into the 10-liter container.)
4. Add enough sterile water to bring the mixture to 10 liters
5. Close the 10-liter container quickly to avoid evaporation
6. Mix the solution by shaking the container
7. Immediately divide the solution into final containers (e.g., 100 mL to 500 mL bottles)
8. Allow the final containers to sit for 72 hours prior to use

## Annex 2c: How to Make a Chlorine Solution for Disinfecting

The table below shows the Water Mission standards for disinfection uses of chlorine solutions.

Chlorine Concentration	Disinfection Use
500 mg/L (0.05%)	Handwashing
	Laundry (after cleaning)
5000 mg/L (0.5%)	Cleaning materials, aprons, boots, cooking utensils and dishes
	Washing personal protective equipment (e.g., gloves)
	Cleaning equipment, tools, and buckets
	Cleaning bathrooms and surfaces

The following equations show how to calculate the amount of chlorine to be added to a given volume of water to achieve a target solution concentration for three chlorine sources:

1. Bleach – Diluted Sodium Hypochlorite

*(Example: 1 Liter of 5.25% bleach per 4 L H<sub>2</sub>O to achieve 1% chlorine concentration)*

\*Adjust the % sodium hypochlorite to match what is indicated on the bleach source.

2. Calcium Hypochlorite - Granular

*(Example: 77 grams of Calcium Hypochlorite (65% available chlorine) per 5 L H<sub>2</sub>O to achieve 1% chlorine concentration)*

\*Adjust to match the % Available Chlorine according to the CalHypo product being used

3. ACL56 – Granular Dichlor

*(Example: 90 grams of ACL56 (56% available chlorine) per 5 L H<sub>2</sub>O to achieve 1% chlorine concentration)*

See Water Mission’s [Chlorine Solution Tables](#) documentation for quick reference to the amount of chlorine source necessary to produce solutions of varying concentrations and volume sizes. The turbidity of the water must be less than 5 NTU to be utilized for effective chlorination. Be aware that calcium hypochlorite and ACL56 must not be used at the same time. Doing so may result in major safety concerns / equipment failure.

Prior to mixing a chlorine solution, put on personal protective equipment (chemical resistant gloves, mask, and goggles). Add the necessary volume of water to the mixing container for the desired solution. Slowly add the appropriate amount of bleach or granular chlorine to the water. It is recommended to add the bleach or granular chlorine incrementally using a separate container like a tablespoon or a small cup with indicated volumetric measurements. This is helpful to reduce spilling or splashing when the bleach or granular chlorine hits the surface of the water. Use a clean glass stick (or a similar device if no glass stick is available) to stir well for about 10-30 seconds (or until the granular chlorine dissolves, if using granular). When mixing is complete, clearly label the container, indicating the concentration of the chlorine solution. Cover the container when not in use, and do not store it in direct sunlight. Wait 30 minutes prior to use.

Ideally, the mix solution should be used within 24 hours of creating the batch. The shelf life of the solution depends on the type of bleach:

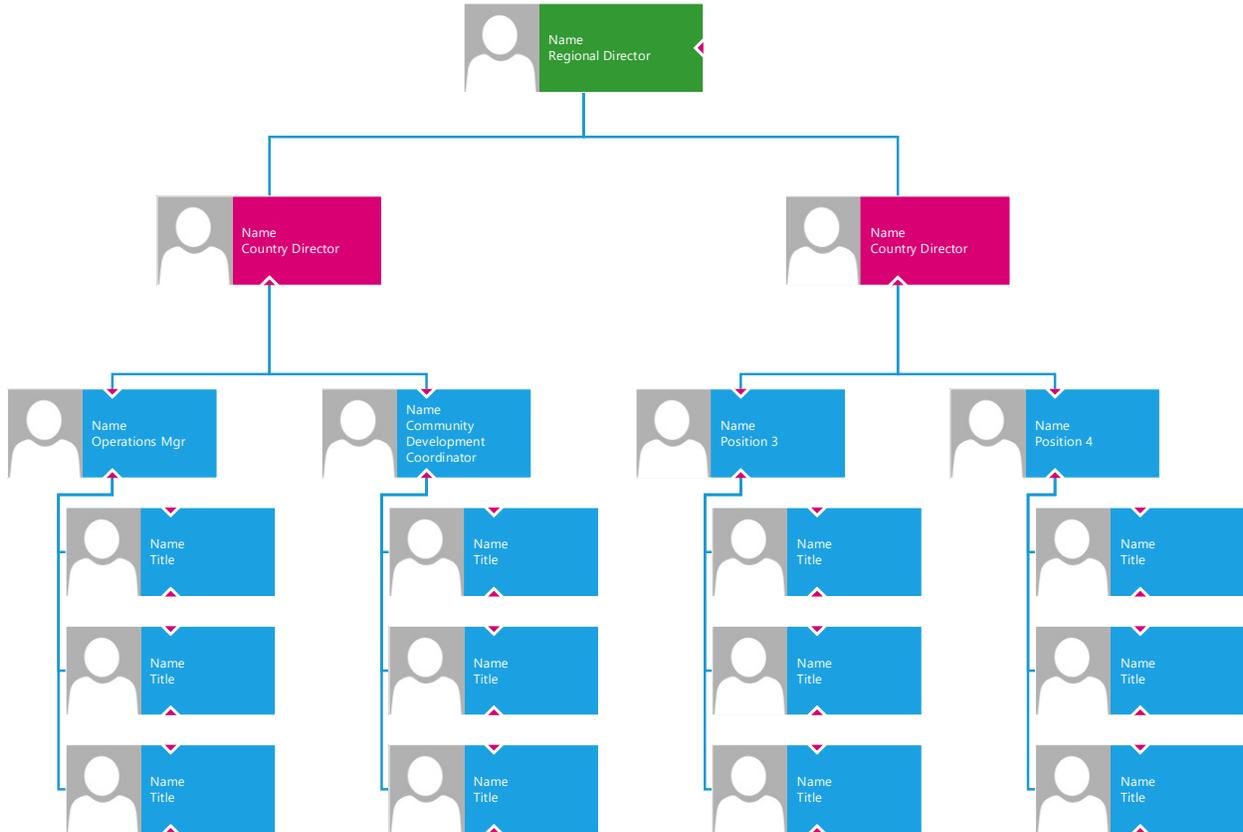
- Sodium Hypochlorite: 2 to 3 weeks (CDC, 2014)
- Calcium Hypochlorite: up to 40 days (WHO, 2020)
- Sodium dichloroisocyanurate (ACL 56): 2 days (MDPI, 2018)

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### Annex 3: Recall Roster Example



## Annex 4: Supplies list

- Decontamination
  - Personal Protective Equipment (PPE)
    - Masks
    - Eye protection
    - Latex gloves
  - Spray bottles for sanitizing solution
  - Lysol or similar disinfectant spray
  - Clorox or similar bleach wipes
  - Hand soap
  - Bleach or similar chlorine solutions
  - Cloth hand towels
  - Hand sanitizer
  
- Other supplies (as applicable to a long-term lockdown)
  - Staple food items – rice, beans, other non-perishables
  - Water, coffee
  - Vitamins
  - Sanitary supplies (male and female)
  - Office supplies