As Water Mission builds out an emergency program around handwashing stations, clear standards are needed to ensure excellence in our work. This document provides global requirements and recommendations around handwashing stations.

This is Version 5.0 developed on June 16, 2020. To make sure you are accessing the latest version, and to get other helpful resources, visit Water Mission COVID-19 Resources Landing Page. This is a living document, which will change and improve as each country program develops and shares best practices around handwashing.

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1. REQUIREMENTS FOR HANDWASHING STATIONS

The following requirements apply to all community-level handwashing stations. Please note that more information regarding each of these categories is available in the corresponding section below.

This document outlines requirements that all handwashing stations must meet as a minimum, as well as additional recommendations. While all minimum requirements listed here are compulsory for all community-level handwashing stations, each team will need to determine how to best apply the recommendations to each handwashing location. Minimum requirements differ for household-level handwashing stations (see 2.5 Household-Level Handwashing Station). The handwashing station program is not “one size fits all”. The best solutions will be different from country to country, from location to location, and even two similar looking locations may have different solutions because of the difference in the local community.

In addition to the requirements listed below, country programs should follow any relevant local or national policies.

<table>
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<tr>
<th>CATEGORY</th>
<th>MINIMUM REQUIREMENTS*</th>
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<td>Handwashing station options</td>
<td>• Select from approved handwashing station options</td>
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<td>Social distancing</td>
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<td>– Work with communities to ensure adequate soap supply for twelve months</td>
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<td>• Provide 1 spray bottle of disinfection solution and paper towels/ cleaning cloths</td>
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<td>for cleaning handwashing station</td>
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<td></td>
<td>• Provide mask and gloves for handwashing station operator</td>
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<td>• Establish a plan for resupply of consumables with handwashing station operator</td>
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<td>Handwashing station operator</td>
<td>• Designate and train handwashing station operator on following duties:</td>
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<td>operator training</td>
<td>– Ensuring soap and water are always present at handwashing station</td>
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<td>– Regular disinfection of handwashing station</td>
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<td>– Ensuring social distancing practices are being followed</td>
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<td>– Ensuring that the area around handwashing station is clean and hygienic,</td>
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<td>and that trash is disposed of properly</td>
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<td>– Management of wastewater disposal from handwashing station</td>
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<td>Signage and branding</td>
<td>• Use signage that is consistent with branding guidelines</td>
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<td>– “Handwashing Station” sign, if standalone handwashing station is used</td>
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<td>Post handwashing instructions at each handwashing station</td>
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<td>Place social distancing guides on the ground to enforce social distancing</td>
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<td>Monitoring</td>
<td>• Report on all handwashing station installations at commissioning using mWater</td>
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<td></td>
<td>• Establish and implement plan for follow up</td>
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* Please note that these standards do not apply in full to household-level handwashing stations. Please see 2.5 Household-Level Handwashing Station for further detail.
2. HANDWASHING STATION OPTIONS

The following section provides quality standards for the three acceptable community-level handwashing station options within the handwashing station program, as well as quality standards for household-level handwashing stations.

Local procurement or manufacturing of handwashing stations is preferable to ensure handwashing stations can be acquired and installed as quickly as possible.

Please note that estimated costs below only include material costs. Labor costs for all relevant activities should also be taken into consideration when selecting a handwashing station option. All labor and labor related expenses will need to be included in the proposed budget.

Alternatives to the options below should be submitted and reviewed by the Charleston Global Advisors.

2.1 Option 1: Low Cost Community-Level Handwashing Station

Option 1 can be implemented using two distinct approaches: 1) temporarily designating an existing tap valve as a handwashing only valve, or, 2) installing a tippy tap.

The first approach utilizes an existing tap valve at a water distribution location and designates it as a temporary handwashing-only valve. This option is recommended for kiosk-style water distribution points and is intended to be a temporary solution only for the duration of the COVID-19 response. The following are requirements that must be met to use this approach within the low-cost option:

1. There must be other taps available at the location for safe water distribution
2. The use of the valve cannot impede or reduce the ability to efficiently collect safe water
3. The valve must be located at least 2m (6’) from other distribution valves to ensure social distancing can be enforced at water distribution points
4. Must have drainage or ability to collect wasted water (See Wastewater (greywater) disposal below)
5. Must have a place for supplying soap (solid or liquid) at the valve
6. Must include proper signage to clearly distinguish the valve for handwashing use and not for water collection. This valve may only be used for handwashing during this time.
   a. Signage distinguishing valve as “handwashing only” should be removed at agreed upon time, at which point the valve will return to its original function as a water distribution point
7. Must follow all brand guidelines (see Signage and branding, below)
8. Estimated cost approximately 20 USD (materials only)

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1 The World Health Organization recommends maintaining at least 1 meter (3 feet) of distance. Water Mission is following the more rigorous CDC guideline of at least 2 meters (6 feet).
The second approach within the Option 1 is to utilize a tippy tap or a group of tippy taps for community-level handwashing. However, it is important to remember that high demand at a handwashing station will require that the water storage container be refilled often. Therefore, tippy taps are not the desired solution for high traffic areas and should be used with caution and only where the handwashing station operator can ensure water is always available at the tippy tap for handwashing with soap. Please see Annex 2: Tippy Tap Guidance for further details on tippy tap construction and minimum standards.

2.2 Option 2: Medium Cost Community-Level Handwashing Station

This option consists of an elevated water storage container, or piped water, with a hand-operated valve and can be purchased in country or built in country.

1. Must have a drainage or wastewater collection system (See Wastewater (greywater) disposal below)
2. Must have a place for supplying soap (solid or liquid)
3. Must follow all brand guidelines (see Signage and branding, below)
4. Estimated cost approximately 60 USD (materials only)

2.3 Option 3: High Cost Community-Level Handwashing Station

This option is a more professional version of the medium cost option. This option is recommended for highly visible locations (clinics, markets, etc.), and, is recommended for the refugee setting. It could include hands free, foot pedal controls for the valve and/or soap dispensing. The following requirements must be met to use the high cost option:

1. Must have drainage or wastewater collection system (See Wastewater (greywater) disposal below)
2. Must have a place for supplying soap (solid or liquid)
2.4 Wheelchair Accessible Handwashing Station

This category is meant to capture those handwashing stations that were specifically built to serve individuals who utilize wheelchairs. While many handwashing stations installed by Water Mission may meet basic standards for wheelchair accessibility, this category is designed to capture only those stations that were installed with the express intention of serving persons with physical disabilities.

Wheelchair accessible handwashing stations should be appropriate for use by those with mobility limitations for them to use safely and with dignity. Please note that foot pedals are not recommended for wheelchair accessible handwashing stations. The following requirements must be met to use the wheelchair accessible option:

1. Must have a drainage or wastewater collection system (See Wastewater (greywater) disposal below)
2. Must have a place for supplying soap (solid or liquid)
3. Must follow all brand guidelines (see Signage and branding, below)
4. Access route is free of obstacles, and if applicable, a ramp with a mild slope is installed to enable wheelchair access.
5. Basin and tap valve should be a maximum of 850 mm (34”) from ground level.
6. Tap valve for handwashing can be accessed and easily used by individuals with mobility limitations. A maximum horizontal distance of 500 mm (20”) between the tap valve and the user.
7. Soap supply should also be a maximum of 850 mm (34”) from ground level and a maximum horizontal distance of 500 mm (20”) between the soap dispenser and the user.
8. Must have a sign posted to designate the handwashing station as wheelchair accessible.

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Please note that wheelchair accessible handwashing stations can be utilized as either a household-level solution, or as a community-level solution. Designation as a household- or community-level solution will impact the standards that apply to the handwashing station, as well as follow up requirements.

### 2.5 Household-Level Handwashing Station

While priority is given to community-level handwashing stations, household-level handwashing stations may also be pursued. Water Mission staff may provide training for construction of tippy taps, provide materials required for tippy taps, or even supply prefabricated household handwashing station options.

Guidance, instructions, and minimum standards for Tippy Tap construction are provided in Annex 2: Tippy Tap Guidance.

Please note that household-level handwashing stations are not required to meet the general requirements listed in section 1. Requirements for handwashing stations, as these requirements apply to community-level handwashing stations. Of the general requirements found in Section 1, only the following guidance applies to household-level handwashing stations:

- Supplies and consumables
  - Provide soap
  - Establish a plan for resupply of consumables
- Signage and branding
  - Post handwashing instructions at each handwashing station
- Monitoring
  - Report on all handwashing station installations at commissioning using mWater

The following requirements must be met for household-level handwashing stations:

1. Must have a place for supplying soap (solid or liquid)
2. Estimated cost approximately 20 USD (materials only)

### 2.6 Option Selection and Station Location Guidance

Water Mission recommends that handwashing stations be placed at all Water Mission water distribution points, as well as in high traffic areas within the community. These include, but are not limited to, public toilets, markets, health centers, and public transportation stations.

Please use the following guidance to select a handwashing station option for various contexts and determining the location of the handwashing station.

Ultimately, the decision for which handwashing station option should be selected for a given context will be determined by regional and country program directors, in conjunction with the Global Programs Advisor and WASH Program and Planning point person from each country program team.
Ability to adhere to social distancing guidance

The handwashing station must be set up in such a way that those washing their hands can adhere to social distancing guidelines (2m / 6 ft, between people). Option 1, for example, should not be selected if it is not possible to maintain 2m between someone washing their hands at the designated valve, and someone else collecting water at a different valve.

Multiuser handwashing station can also be selected as an option for high traffic areas. However, these stations must meet the same requirements listed above. It is critical that a multiuser station maintain the social distancing requirements of 2m (6’) between users. Therefore, a physical barrier such as a plastic or glass divider is mandated. A physical barrier should only be used in instances where the 2m (6’) cannot be maintained at the handwashing station, as physical distancing is the better alternative for protecting users.

Visibility of the handwashing station

When placing a handwashing station in a highly visible, or centrally located area, a higher-cost option is likely to be the most appropriate option. Examples of a highly visible location include: city center, police station, or a health center. In these highly visible contexts, a more professional looking station will reflect Water Mission’s value of excellence.

Required water storage capacity for handwashing

An additional consideration for selecting the appropriate handwashing station for a context is the volume of water needed for handwashing at that location. This is likely to be impacted by the following: estimated number of users, frequency of handwashing by each user, and frequency of water storage refilling by handwashing station operator.

The first step when determining the appropriate water storage capacity needed at the handwashing station is to determine the number of people who will use the station each day. The Sphere Handbook recommends 1-2 liters of water per person per day for handwashing.

The next step is to determine how many times each person will use the handwashing station each day. For locations such as a health center or market users might only frequent the station once a day, whereas at a water collection point or public toilet, a user might return twice or more each day. Estimating frequency of demand will allow for a better estimate of the total daily demand of water at the station.

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And finally, it is important to consider how often the water supply at the handwashing station can be refilled. In some areas where water collection points may be numerous and spread out over long distances, it is not feasible to require a system operator who is now also serving in the position of handwashing station operator to return multiple times per day to refill a station’s water supply. In some cases, piped water can also be used.

These three considerations can provide guidance for estimating the required volume of water storage needed at each handwashing location, and therefore, selecting the appropriate handwashing station option.

**Water quality for handwashing**

In addition to water quantity, the quality of water available to the handwashing station is also an important factor when choosing locations. Water Mission prefers that all handwashing stations be supplied with water produced by our safe water system. If water from our safe water systems is not available, water from another source is allowable as long as the water does not come from a surface water source and the water has been tested to verify that there is no coliform (fecal or total) present. If testing of the water shows that there is total or fecal coliform present, then either a different source of water must be used (which does not have total or fecal coliform) or the water must be disinfected with chlorine prior to use. The Charleston engineering team is available to help determine the best method to treat with chlorine. Lastly, any governmental guidelines in place regarding the quality of handwashing station water should be considered. If governmental guidelines are more restrictive than the Water Mission guidelines outlined above, then the governmental guidelines are to be followed.

**Considerations for handwashing stations in schools**

When serving a school or another setting with children, the height of handwashing basin, tap, and soap for children should be between 500 and 700 mm.

### 2.7 Prioritization of Handwashing Station Installations

While our goal is to serve as many people as possible, as quickly as possible with handwashing stations, the priority for handwashing station installation should be in alignment with the priorities articulated in Water Mission’s strategy document outlining programmatic focus areas in COVID-19 affected communities (published March 24, 2020). In short, the priority for installing handwashing stations, as they align with ministry-level goals, are as follow:

1. Vulnerable communities:
   a. Refugee settlements in Uganda and Tanzania
   b. Ongoing disaster response initiatives. The Abacos (Bahamas) as a result of Hurricane Dorian/ flooding support in southern Tanzania.
   c. All TradeWater projects
2. Healthcare facilities where Water Mission is currently engaged or has engaged in the past
3. COVID-19 specific emergency response water and sanitation requests identified and prioritized by local government, partners, or other agents

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4. Water Mission water distribution points
5. High traffic public areas including markets, parks, and public transportation stations
6. Households

3. SOCIAL DISTANCING

The handwashing station must be set up in such a way that those washing their hands can adhere to social distancing guidelines (2m / 6 ft, between people). All handwashing stations must be set up in such a way that there is always a distance of 2m / 6 ft between all people (those washing hands, those waiting to wash their hands, those collecting water).

3.1 Queuing Procedures

Water Mission staff should work with handwashing station operators to ensure social distancing practices are followed by those queuing for water, as well as those washing their hands.

When queuing and waiting for water or for access to the handwashing station, families should maintain 2 meters (6 feet) of separation. Since COVID-19 can spread through sneezing, coughing, and water droplets from breathing, this distance minimizes the risk of transmission from one person to another.

The handwashing station operator should ensure that community members do not congregate around the handwashing station.

Tape, paint, chalk, or even rocks or sticks on the ground must be used to mark the ground to guide families in keeping the appropriate distance. Please see example to the right. All handwashing stations are required to have a social distancing guides on the ground.
Further detail regarding proper queuing procedures at water distribution points can be found in the Water User Safety Guidelines document.

### 4. SUPPLIES AND CONSUMABLES

At installation, the following is required:

- **Provide soap**
  - Water Mission will work with communities to ensure adequate soap supply for twelve months.
  - See Annex 1: Estimating Soap Supply for estimating guidance
  - Liquid or solid soap is acceptable
- **Soap must be located at the handwashing station.**
  - To avoid theft of solid soap, the following soap storage options are recommended if solid soap is utilized:
    + Soap on a rope or string
    + Soap stored in hanging bag
- **Provide 1 spray bottle of disinfection solution and paper towels/cleaning cloths for cleaning handwashing station**
  - See Station Disinfection procedures below for more information
  - Provide mask and gloves for handwashing station operator
  - Handwashing station operator should be trained on proper mask use and management in alignment with Water Mission’s guidance on face masks.
- **Establish a plan for resupply of consumables with handwashing station operator**
- **Plan for tracking non-revenue water vs. expected revenue water**

Discuss a plan for resupply of consumables (soap, disinfection solution, paper towels or cleaning cloths) established between Water Mission and handwashing station operator. Water Mission will work with communities to ensure adequate soap supply for twelve months. Please discuss resupply strategies with the handwashing station operator (and Safe Water Committee if this handwashing station is being installed in a pre-existing community project) and determine how resupply costs will be covered after initial supply of soap is consumed, and what supply chains exist locally for purchasing soap.

Water Mission may agree to reimburse expenses incurred by handwashing station operator that are agreed upon in advance (for example, soap resupply).

Handwashing station installation will have an impact on water consumption, and Water Mission should work with tap operators and Safe Water Committee if this handwashing station is being installed in a pre-existing community project to discuss how to handle this increase in non-revenue water. Please establish a plan for this increase in non-revenue water in advance and determine a plan for how to account for this non-revenue water. While it may be difficult to know exactly how much water is being used for handwashing, it may be helpful to compare the three months of non-revenue water consumption before the handwashing station was installed, with the monthly non-revenue water consumption after the handwashing station is installed, to roughly estimate the amount of water being used for handwashing.
5. HANDWASHING STATION OPERATOR TRAINING

It is required that each handwashing station have a designated handwashing station operator, who will carry out the responsibilities listed below and serve as the key contact for the handwashing station. In existing community-managed safe water projects, the current tap operator could also be designated as the handwashing station operator and be expected to carry out the required duties, as this falls within the scope of their current role as tap operator.

If the handwashing station is in a public area (market, high-traffic area), a community leader, SWC member, or other trusted contact may be designated as the handwashing station operator. In high-use areas, it may be appropriate to hire a handwashing station operator and pay them a daily wage if deemed necessary by the Global Program Advisor, WASH Program and Planning, and country program/ regional directors.

This handwashing station operator will be the key contact for the handwashing station and will be responsible for the following:

- Ensuring soap and water are always present at the handwashing station
  - Treated water is preferred. See water quality for handwashing section above.
- Regular disinfection of handwashing station
  - See station disinfection procedures below
- Ensuring social distancing practices are followed at the handwashing station
  - People should maintain 2 meters from one another; see queuing procedures above
- Ensuring that the area around handwashing station is clean and hygienic, and that trash is disposed of properly
- Management of wastewater disposal from handwashing station
  - See wastewater (greywater) disposal below

5.1 Station Disinfection Procedures

All surfaces of the handwashing station must be regularly disinfected utilizing the provided disinfecting solution. The handwashing station operator should wear gloves whenever working with a chlorine-based disinfecting solution.

“Regular disinfection” will vary based on context, but at a minimum each handwashing station must be disinfected once per day. For a hands-free handwashing station, disinfection once-per-day may be acceptable,
while for a high-touch handwashing station with a hand-operated valve, disinfection should take place routinely throughout the day. Please work with the handwashing station operator to determine the appropriate schedule for handwashing station disinfection.

The ideal disinfectant solution at handwashing station and water distribution points is 0.5% chlorine. Higher concentrations can have adverse effects to skin under prolonged exposure. Lower concentrations may prove to be ineffective. Use this guide for a step-by-step process on how to safely prepare a disinfection solution.

Additionally, the handwashing station operator should ensure that the area around handwashing station is clean and hygienic, and that trash is disposed of properly.

5.2 Proper Use of Mask and Gloves

The handwashing station operator must wear a mask when refilling the handwashing station with water, resupplying soap, disinfecting the handwashing station, or disposing of wastewater. The handwashing station operator must be trained on proper mask use and management in alignment with Water Mission’s guidance document and training presentation regarding proper face mask use.

The handwashing station operator should wear gloves whenever working with a chlorine-based disinfecting solution.

5.3 Wastewater (greywater) Disposal

Proper drainage of wastewater (greywater) for a handwashing station requires that there is no standing water located around the station or where users queue. This can be achieved by diverting or collecting the greywater and through preventative measures to improve drainage during implementation of the handwashing station.

Greywater can be disposed of by directly diverting it into in a septic system, sewer system or soak pit or by collecting it in a basin beneath the station and disposing of it in one of the aforementioned options. If wastewater will be collected in a plastic container below the station, the handwashing station operator will be responsible for disposing the collected wastewater in a designated area.

Preventative measures include sizing soak pits large enough to manage the greywater, placing stations on well-draining surfaces and/or adding material such as gravel to improve infiltration. Remember that a much larger quantity of water will be wasted as compared to water collection stations and therefore proper collection and disposal is crucial. Excess water in an area not only creates muddy and unpleasant facilities but also increases the potential for waterborne illnesses.
5.4 Station Security

Security of the handwashing station must be addressed with the handwashing station operator, and a protocol for ensuring station security must be documented. This may include locking or otherwise securing the handwashing station to a fixed object, moving the handwashing station inside of a locked building overnight for storage, or other agreed upon strategy.

6. SIGNAGE AND BRANDING

Please see Water Mission Handwashing Station Brand Guide to access general recommendations for installing branded materials to all Water Mission handwashing stations. The recommendations include the type of signs, approximate dimensions, and suggested materials for installation. At a minimum, each handwashing station should include the following:

- **“Handwashing Station” Sign**, if standalone handwashing station is used (Options 2 and 3)
  - Available in Bahasa, Chichewa, Creole, English, French, Luganda, Spanish, and Swahili
- **“Handwashing Only” Sign**, if converting a water distribution point valve into a handwashing station (Option 1)
  - Available in Bahasa, Chichewa, Creole, English, French, Luganda, Spanish, and Swahili
- **Visual Handwashing Instructions** for proper handwashing practice (see bottom photo)
  - Available in Bahasa, Chichewa, Creole, English, French, Luganda, Spanish, and Swahili
- **If Wheelchair Accessible**, must have “Wheelchair Accessible” sign.
- **Social distancing guides on the ground** to enforce social distancing (tape, paint, chalk, or even sticks and stones can be used). (Please see section above for queuing procedures)

Please ensure Water Mission branded materials are consistent with branding guidelines and clearly display our logo. While there is likely to be variety in appearance of handwashing stations due to available supplies, when possible please utilize brand colors for handwashing station tanks and stands.

Please note that Water Mission staff must be wearing branded clothing when working in communities, particularly within this scope of work. It is important for Water Mission staff to distinguish themselves as WASH workers from a safety and security perspective.
7. MONITORING

Report on all handwashing station installation, including the following information: GPS coordinates, contact information for handwashing station operator, estimated people served, material costs, quantity of soap provided, and more.

Water Mission is utilizing the mWater platform for monitoring handwashing station installations. This platform will enable staff to report on handwashing station installations while in the field using their smartphone or other mobile device.

Water Mission staff should establish and implement a plan for follow up. The first follow up should be completed within 2 weeks of handwashing station commissioning. Subsequent follow ups should take place at least once a month, unless otherwise agreed upon. The goal of these follow ups is to ensure the handwashing station is operating and has an adequate supply of all consumables for the duration of the 12-month program. WhatsApp messaging, phone calls, or in-person visits are acceptable for these follow ups. Document these routine check-ins using the Handwashing Station Follow Up forms in mWater.

Water Mission is responsible for follow ups to the handwashing station unless otherwise agreed upon. If another organization will be responsible for monitoring the on-going functionality of a handwashing station, this should be clearly documented with an MOU in place to outline their responsibilities.

Please note that follow-ups are not required for household-level handwashing stations.

7.1 Estimating ‘Number of Persons Served Per Day’ for Handwashing Stations

Metric: ‘Number of persons served per day’ by the handwashing station.

Water Collection Purpose (household use, vending, etc.)

Only people who directly use the handwashing station will be counted, regardless of the number of water containers they purchase.

- The number of people served per day by the handwashing station will be less than the number of people per day receiving safe water from where the handwashing station is located. This is because the whole household that receives the safe water does not all come to collect the water. Commonly only one person comes to collect water for the entire household.

- Additionally, we know that in some countries where water vending is common, only the delivery men (or women) come to fill multiple bottles to then deliver to multiple households (e.g., Honduras, Indonesia). This means that only the delivery driver(s) will be counted as a person serviced by the handwashing station, though many people are counted as serviced by safe water they deliver.

Variance by Service Population

The way people are counted will vary based on location of the handwashing station.

- For handwashing stations located at water distribution points (or market areas, or community centers) in communities, it is assumed that each person washing their hands only uses the station once per day. Therefore, each use of the handwashing station is counted as a new person served (though it is acknowledged that there may be a small number of people that come more than once and are double counted).

- For handwashing stations located at an institution (e.g., health clinic, school), the population of that institution (e.g., health clinic staff and patients, school children and staff) will only be counted once, even though they may wash their hands multiple times per day at the station.
Calculation of Service Population

# people / # handwashing stations = # served per station

Water Mission staff responsible for the implementation of the handwashing station will be responsible for determining service population. Here are a few examples of how that determination may be reached:

- **Example 1**: Community Handwashing Station, Routine Water Collection: If the area around the handwashing station has 300 households, and as stated above, we assume only one person per household comes to collect water, then the number of people served per station per day would be estimated at 300.
  
  - 300 people / 1 handwashing station = 300 served per station.

- **Example 2**: Community Handwashing Station, Routine Water Collection: If the area around the handwashing station has 300 households, and there are two handwashing stations (Handwashing Stations A and B) installed in the community at water distribution points, and as stated above, we assume only one person per household comes to collect water, then the number of people served per station per day would be estimated at 150 for each handwashing station.
  
  - 300 people / 2 handwashing stations = 150 served per station.

  + The commissioning report for handwashing station A would report 150 people served
  + The commissioning report for handwashing station B would report 150 people served

- **Example 3**: Institution-based Handwashing Station: If the handwashing station is installed at a clinic, we may choose to count the total number of staff and the average amount of patients per day (and other guests to the clinic, if appropriate). (Note with this example that it is understood the clinic staff will likely wash their hands more than once per day, but they are only counted as one person served per day.) If 3 handwashing stations were installed at a healthcare facility with 50 staff, that serves 250 patients per day, then the number of people served per station would be estimated at 100 per handwashing station.
  
  - 50 staff + 250 patients / 3 handwashing stations = 100 served per station

Based on multiple assumptions and calculations, the maximum amount of people served that can be reported is 550.

- Please note that if a handwashing station is designed for multiple users and has multiple basins for handwashing, this maximum amount of people served can be multiplied by the number of basins.
  
  - A multiuser station with 2 different basins for handwashing could serve a maximum of 1100 people per day.

8. ADDITIONAL RECOMMENDATIONS: HYGIENE PROMOTION AND BEST PRACTICES FROM BEHAVIORAL SCIENCE

It is recommended that all handwashing station installations should be accompanied with hygiene promotion campaigns. Country program staff should seek out low-cost, scalable, and effective strategies for complementing handwashing station installation that utilize proven behavior change strategies.

This may include the following: radio spots, billboards, posters, banners, WhatsApp health promotion messaging campaigns, etc.

In the case of handwashing stations within existing Water Mission projects, consider mobilizing existing WASH Promoters. These WASH promoters have received WASH promotion training in the past through Water Mission’s standard activities and are likely to be recognized in their community as an authority on health promotion.

Please work with Safe Water Committee members and community leaders and ask them to set an example for frequent handwashing at the handwashing station, and to encourage community members to do the same.
**Best practices from Behavioral Science**

Studies show that interventions involving construction of handwashing stations are much more effective in creating long term positive handwashing behavior change when coupled with behavior change communication approaches and best practices from behavioral science.

Below is a list of best practices for encouraging positive handwashing behavior change.

- Make handwashing stations beautiful, colorful, conveniently located, and easy to use  

- Invest in soap that people like to use (smells good, doesn’t dry out hands)

- Use nudges and environmental cues to remind people to practice behavior
  - Painted footprints on the ground
  - In one study, painted footprints on the ground led to a 64% increase in handwashing behavior.
  - See photo to the right, which shows an example of nudges from Water Mission Indonesia.
  - Installing mirrors at eye level at handwashing stations
  - One study showed that installing mirrors at handwashing stations increased handwashing behavior from 25% to 62%
  - Use of brightly colored paint and painted handprints at handwashing station

  ![Left: Handwashing station uses painted footprints and painted hands as nudge for practicing handwashing. (Photo: Haiti)](left_image_url)

  ![Right: Brightly colored handwashing station in Kenya conveniently located next to a tapstand. (Photo: Kenya)](right_image_url)

- Create perceived social pressure- make people feel that people around them are watching whether they wash their hands
  - Messaging like “Did your neighbor wash their hands?”

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8 Wash’em. “How to Design Handwashing Facilities that Change Behavior.”


– A sticker with eyes on it, at a handwashing station has been found to increase handwashing behavior.\textsuperscript{13}

• Consider the wide range of factors that influence people’s handwashing behavior
  – “Knowledge alone does not change behavior!”\textsuperscript{14}

• Make sure soap and water are always available

• Make handwashing messaging fun, surprising, and change messages often
  – “Clean up your act”
  – “Water doesn’t kill germs, soap does!”
  – “Others are watching – better wash your hands”
  – “To be truly beautiful always have clean hands.”
  – “What are the top ten carriers of infection? Answer: each one of your fingers.”
  – “Unwashed hands. Eewww!”
  + All of these messages are credited to “Wash’Em”\textsuperscript{9}

9. ADDITIONAL RECOMMENDATIONS: REFUGEE CONTEXT

UNHCR recommends the use of foot pedal handwashing stations that allow for hands-free use. When possible, this guidance should be followed in the refugee setting.\textsuperscript{15}

ANNEX 1: ESTIMATING SOAP SUPPLY

Estimates for quantity of soap needed at each handwashing station are based on technical WASH guidance from UNHCR, which states that 250 grams (375mL) per person should be used for COVID-19 handwashing purposes\textsuperscript{16}. In order to calculate the amount of soap required at each handwashing station use the following formulas.

\[
(\text{number of people using station})/\text{day} \times (8 \text{ grams})/\text{person} \times (30 \text{ days})/(1 \text{ month}) = \text{grams/month}
\]

\[
(\text{number of people using station})/\text{day} \times (12 \text{ mL})/\text{person} \times (30 \text{ days})/(1 \text{ month}) = \text{mL/month}
\]

From there you can use the total number of grams or mL per month to determine how many bars of soap or how many bottles of liquid soap you will need for the handwashing station.

\begin{itemize}
  \item Wash’em. “How to Design Handwashing Facilities that Change Behavior.”
\end{itemize}
ANNEX 2: TIPPY TAP GUIDANCE

The Tippy Tap is a low-cost hand washing station that provides a low-tech solution for running water to meet hygiene standards. A Tippy Tap can be used as a community-based solution or a household option. However, it is important to remember that stations with a large number of users will require that the water storage container be refilled often and is therefore not always an ideal solution for these high traffic areas. It is generally recommended that the water storage container hold at least 3-5 liters.

The following instructions from tippytap.org can be used for constructing a Tippy Tap.

Tippy tap manual credit: tippytap.org
There are a number of ways to construct a Tippy Tap. In addition to these instructions, some alternatives include using wooden boards instead of sticks or branches, or, threading the string or wire through the container cap instead of around the neck of the container (see photos below).

The tippy tap should be cleaned regularly and worn out parts may need to be replaced.

**Minimum Standards**

As previously mentioned, there are several ways to construct a Tippy Tap. The following are the minimum standards that must be met:

1. The Tippy Tap must have a drainage basin. One way to drain the water is through a soak pit. A 40cm by 40cm and 20cm deep hole can be dug below the Tippy Tap. The soak pit should be filled with rocks or gravel. The soak pit will prevent the area from becoming muddy or from creating an area of standing water that can become a breeding ground for mosquitoes.

2. The Tippy Tap must have a foot pedal operation mechanism. There are several Tippy Tap designs that require users to open the cap of the water storage container or tilt the container. These designs should not be used. It is crucial to ensure that the station has handsfree operation so that users do not have to touch any part of the Tippy Tap in order to operate.

3. The Tippy Tap design must include soap. Liquid or bar soap secured to the station must be provided to ensure that users can properly wash their hands.

**ANNEX 3: SUMMARY TABLE OF COMMUNITY-LEVEL HANDWASHING STATION OPTIONS**

<table>
<thead>
<tr>
<th>METRICS</th>
<th>OPTION 1: LOW COST COMMUNITY-LEVEL</th>
<th>OPTION 2: MEDIUM COST COMMUNITY-LEVEL</th>
<th>OPTION 3: HIGH COST COMMUNITY-LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Water Storage</td>
<td>Container (~3-10 L) or piped</td>
<td>Container (~5-150 L) or piped</td>
<td>Container (&gt;250 L) or piped</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>METRICS</th>
<th>OPTION 1: LOW COST COMMUNITY-LEVEL</th>
<th>OPTION 2: MEDIUM COST COMMUNITY-LEVEL</th>
<th>OPTION 3: HIGH COST COMMUNITY-LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Materials</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Durability</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Permanence</td>
<td>Low</td>
<td>Med - High</td>
<td>Med - High</td>
</tr>
<tr>
<td>Hands Free</td>
<td>Optional</td>
<td>No</td>
<td>Optional</td>
</tr>
<tr>
<td>Recommended Location</td>
<td>Households, low traffic areas</td>
<td>Water points, medium traffic areas, existing tap stands</td>
<td>High traffic areas, schools, health care centers, existing water kiosks &amp; tap stands</td>
</tr>
</tbody>
</table>

**Examples**

- Tippy Tap
- 2L Envirosan
- 5L Envirosan
- 10L Envirosan
- Single Basin
- Piped Water
- Dual Basin
- Dual basin and foot pedal operated
- Piped water from safe water storage tank

* Handwashing stations designed to be wheelchair accessible should have tap valve, basin, and soap heights at a maximum of 850 mm, and stations designed for children at heights of 500 - 700 mm.

** This table only presents a summary of community-level options.
Note

For any questions regarding Water Mission’s COVID-19 Emergency Handwashing Program, please contact Lara Lambert, Director of Community Development, llambert@watermission.org

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