

# Emergency water standard

28 March 2023

## Key points

- Interpret indicators with care when population size fluctuates significantly.
- The volume of water produced daily includes leakages, spillage and waste. Since 10-35% of water is normally lost to these causes, it is advisable to take spillage into account when assessing a water distribution system's performance. Seasonality also affects water availability. More water is usually available in the rainy season and less in the dry season. In addition, water needs rise with air temperature and increased physical activity. To establish an accurate average level of water availability, take readings in different seasons throughout the year.
- When selecting locations for testing water quality, prioritize water points that are furthest from and closest to the water treatment point, and locations situated at joints or branch points in the piping network.
- To assess the number of houses and their distance from water points, use either a camp layout map or GIS mapping procedures (if these exist). Plot functioning water points on a scaled camp map to calculate the number of households within the distances recommended for emergencies or post-emergency situations.

## 1. Overview

Water is essential to life, health and dignity and access to it is a basic human right. All refugees should have assured access to adequate water of good quality, to sanitation facilities, and hygiene promotion practices. In emergencies a WASH response is critical, to reduce mortality and morbidity, and enhance refugees' protection, dignity and quality of life.

It is vital to monitor water indicators, to ensure that the coverage and outcomes of WASH programmes are appropriate. Programme monitoring should use the UNHCR WASH Monitoring System (WMS).

## Standard / indicators

The main water supply standards below, defined by Sphere, have been endorsed by UNHCR.

- Access and water quantity. People have equitable and affordable access to sufficient quantity of safe water to meet their drinking and domestic needs.
- Water quality. Water is palatable and of sufficient quality for drinking and cooking, and for personal and domestic hygiene without causing a risk to health.

UNHCR WASH indicators in emergencies and post-emergency situations:

**Objective:** Supply of potable water increased or maintained

**Output Objective:** Refugees have safe access to water of sufficient quality and quantity

Indicator	Unit	Emergency Standard	Post Emergency Standard		
				Camp	Out of Camp
Average # litres of potable water /person/day.	l/p/d	>=15	>=20	yes	yes
Average # l/p/d of potable water collected at household level.	l/p/d	>=15	>=20	yes	yes
Tests with 0 faecal coliforms/100 ml of water (at non-chlorinated water collection locations).	%	>=95	>=95	yes	no
Tests showing free residual chlorine 0.2-2 mg/l and NTU<5 (at chlorinated water collection locations).	%	>=95	>=95	yes	no

Number of persons per usable water tap.	Person/tap	=<250	=<100	yes	no
Number of users per usable handpump/well.	Person/handpump or Person/well	=< 500	=<250	yes	no
Households collecting drinking-water from protected/treated sources	%	>=70	>=90	yes	yes
Distance from dwellings to taps / water collection locations.	meters	=<500	=<200	yes	yes
% Households with at least 10 litres/person potable water storage capacity	%	>=70	>=80	yes	yes

## 2. Main guidance

### Emergency standard

UNHCR has selected 9 key indicators to monitor emergency WASH programmes. They focus on access to water and its quantity and quality, and need to be monitored during the first six months of an emergency.

Five indicators should be collected every week during emergencies:

- **Litres/person/day.** 15 litres per person per day.
- **Users per usable well / hand pump.** The litres per person per day indicator can be linked to this indicator, which declares that in emergencies no hand pump or well should be used by more than 500 persons.
- **Water quality (faecal coliforms).** This tests for the presence of faecal coliforms at non-chlorinated water collection locations. The standard requires that more than 95% of 100ml. water samples should show nil faecal coliforms (0 coliforms/100ml of water >=95%).

- **Water quality (residual chlorine).** This tests chlorinated water collection locations for the presence of free residual chlorine (FRC), as well as the clarity (turbidity) of water expressed in terms of nephelometric turbidity units (NTU). Samples should have less than 5 NTUs (NTU < 5) per litre of water, and 95% of samples should have more than 0.2 mg and less than 2 mg/l of free residual chlorine per litre of water (FRC 0.2-2 mg/l & <5NTUs; >=95%).
- **Persons per usable water tap.** In emergencies, no water tap should be used by more than 250 people.

Four indicators should be collected at least during the emergency phase, by using the rapid household survey method and mapping.

- Households (HHs) collecting drinking water from protected/treated water sources. More than 70% of households should be collecting their drinking water from protected/treated water sources.
- Average # l/p/d of potable water collected at household level. In emergency situations, households should be collecting on average at least 15 litres of water per person per day (l/p/d). When populations fluctuate significantly, it is essential to monitor the actual use of water, and to establish how many households are able to meet the accepted international standard for minimum daily water quantity in emergencies ( $\geq 15$  litres).
- Households with at least 10 litres/person potable water storage capacity. More than 80% of households should have storage capacity for at least 10 litres of potable water storage per person.
- Distance from dwelling to water points. In emergency situations, the maximum distance from dwellings to taps or water collection locations should be 500m. (A water collection location is a set of taps/faucets.) This indicator measures access to water.

Apply national standards to out of camp situations (such as settlements and dispersed or scattered rural and urban locations), with regard to distances to water points or unmetered water sources, and number of persons per tap. Where no national standards are in place, work towards UNHCR indicators or towards the achievement of nationally defined targets under the sustainable development goal framework.

## Longer-term standard

The same indicators are collected in post-emergency situations, but different standards are applied.

- **Litres/person/day.** In post-emergency refugee situations, the minimum allocation of water is 20 litres per person per day. This standard covers domestic and individual needs only. If agricultural activities are planned, additional amounts of water for livestock and plants must be considered.

- Supplementary and therapeutic feeding programmes, hospitals, clinics, and schools need water in addition to the daily supply, for basic hygiene and preparing food. (In health centers, the minimum is 10 litre/outpatient/day and 40-60 litres/inpatient/day. In feeding centres the minimum is 20-30 litres/inpatient/day and 15 litres per caregiver/day. In schools, the minimum is 3 litres/pupil/day. In mosques, the minimum is 2-5 litres/person/day).
- **Users per usable well or hand pump.** No hand pump or well should be used by more than 250 persons.
- **Households (HHs) collecting drinking water from protected/treated water sources.** More than 95% of households should collect their drinking water from protected water sources (piped, protected springs, tapstands, handpumps with apron and sanitary seal).
- **Persons per usable water tap.** No water tap should be used by more than 100 persons.
- **Distance from dwelling to water points.** Dwellings should be no further than 200m from water points.
- **Households with at least 10 litres/person potable water storage capacity.** At least 85% of households should be using narrow-necked containers or covered containers with a tap.

Apply national standards to out of camp situations (settlements and dispersed or scattered rural and urban locations), with regard to distances to water points and unmetered water sources, and number of persons per tap. Where no national standards are in place, work towards UNHCR indicators or towards the achievement of nationally defined targets under the sustainable development goal framework.

## Annexes

[UNHCR indicators guidance](#)

[Sphere Handbook \(2018\)](#)

## 3. Links

[UNHCR WASH Manual \(2020\)](#) [World Health Organization Drinking Water Guidelines, 2017](#) [UNHCR, Handbook for Emergencies, 2015](#) [UNHCR, Water Manual for Refugee Situations, 1992](#) [Updated WHO/WEDC Technical Notes on WASH in Emergencies \(2013\)](#) [WASH Monitoring System](#)

## 4. Main contacts

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