STANDARD SECTOR INDICATOR CODE: HE-070	**Schools with Functional, Clean, New or Improved Drinking Water Stations:** Number of schools with functional, clean new or improved drinking water stations.	
HEALTH SECTOR	**Sector Schematic Alignment** • **Project Area:** Environmental Health • **Project Activity Area/Training Package:** WASH: Water, Sanitation, and Hygiene	
Type: Short-term Outcome	**Unit of Measure**: Schools	**Disaggregation:** **Type of Drinking Water Station:** New, Rehabilitated

To be counted for this indicator, all of the following criteria must be met:

- The school has a designated drinking water station, **and**
- The drinking water is clean and it has been correctly purified, or is drawn from an improved source **and**
- The drinking water station is in good working order **and**
- The drinking water station is clean and free from debris.

Definitions:
Drinking water station - is a designated easily accessible place where clean drinking water is available. It may be a drinking fountain or a water storage vessel that has been filled with clean safe water and has a spigot. In order to be effective the vessel must be frequently refilled with purified water

Functional drinking water station – is defined as a being operational has clean purified water and is not blocked.

Safe drinking water is defined as water that is disinfected and stored safely prior to drinking. According to WHO safe water is water that upon testing does not have detectable *E. coli* in any 100 milliliter (ml) sample. Water in the drinking water station must come from an improved source (school connection to public water source; public standpipe; borehole; protected dug well; protected spring; rainwater) or must be correctly purified and stored.

Ways to purify water: defined as water that has been: 1) filtered through a cloth then boiled for a minimum of one minute, 2) treated with iodine using an appropriate ratio of water to disinfectant 3) treated with chlorine bleach using an appropriate ratio of water to disinfectant 4) treated using solar water disinfection method 9 also known as SODIS) for disinfecting water using only sunlight and plastic PET bottles

- **Boiling** is the most certain way of killing all microorganisms. Water temperatures above 160° F (70° C) kill all pathogens within 30 minutes and above 185° F (85° C) within a few minutes. So in the time it takes for the water to reach the boiling point (212° F or 100° C) from 160° F (70° C), all pathogens will be killed, even at high altitude. To be extra safe, let the water boil rapidly for one minute, especially at higher altitudes since water boils at a lower temperature (see page 68.)
- **There are two types of chemical purification**: those using iodine and those using chlorine. The effectiveness of all chemical treatment of water is related to the temperature, pH level, and clarity of the water. Cloudy water often requires higher concentrations of chemical to disinfect. If the water is cloudy or filled with large particles, strain it, using a cloth, *before* treatment. Large particles, if swallowed, may be purified only "on the outside."
    - Add the chemical to the water and swish it around to aid in dissolving. Splash some of the water with the chemical onto the lid and the threads of the water bottle so that all water areas are treated. The water should sit for *at least* 30 minutes after adding the chemical to allow purification to occur. If using tablets let the water sit for 30 minutes *after* the tablet has dissolved. The colder the water, the less effective the chemical is as a purifying agent. Research has shown that at 50° F (10° C), only 90 percent of *Giardia* cysts

were inactivated after 30 minutes of exposure. If the water temperature is below 40° F (4° C), double the treatment time before drinking. It is best if water is at least 60° F (16° C) before treating. You can place the water in the sun to warm it before treating.
    - Iodine is light sensitive and must always be stored in a dark bottle. It works best if the water is over 68° F (21° C). Iodine has been shown to be more effective than chlorine-based treatments in inactivating *Giardia* cysts. Add 5 drops per quart of Liquid 2% Tincture of Iodine when the water is clear. Add 10 drops per quart when the water is cloudy. Potable Aqua is an iodine tablet product; follow the manufacturer's instructions for use.
    - *Be aware that some people are allergic to iodine and cannot use it as a form of water purification.* Persons with thyroid problems or on lithum, women over fifty, and pregnant women should consult their physician prior to using iodine for purification. Also, some people who are allergic to shellfish are also allergic to iodine. If someone cannot use iodine, use either a chlorine-based product or a non-iodine-based filter, such as the PUR Hiker Microfilter, MSR WaterWorks, or the Katadyn Water Filter.
- **Chlorine Treatment** Chlorine can be used for persons with iodine allergies or restrictions. Remember that water temperature, sediment level, and contact time are all elements in killing microorganisms in the water. Treat with chlorine bleach using an appropriate ratio of water to disinfectant, i.e., add 1/4 teaspoon (16 drops) of bleach per gallon of water if the water is cloudy and 1/8 teaspoon (8 drops) if the water is clear.
- **Solar Water Disinfection (SODIS)**: The SODIS method is very easy to apply. A transparent and colorless PET bottle is cleaned with soap. Then, the bottle is filled with water and placed in full sunlight for at least 6 hours. The water has then been disinfected and can be drunk.

"Improved" sources of drinking water include:

• Household connection is defined as a water service pipe connected with in-house plumbing to one or more taps (e.g. in the kitchen and bathroom) or piped water connection to a tap placed in the yard or plot outside the house.
•Public standpipe is a public water point from which people can collect water. Public standpipes can have one or more taps and are typically made of brickwork, masonry or concrete.
•Tubewell or borehole is a deep hole that has been driven, bored or drilled, with the purpose of reaching groundwater supplies.
•Protected dug well is a dug well that is protected from runoff water by a well lining or casing that is raised above ground level and a platform that diverts spilled water away from the well. A protected dug well is also covered, so that bird droppings and animals cannot fall into the well.
•Protected spring. The spring is typically protected from runoff, bird droppings and animals by a "spring box", which is constructed of brick, masonry, or concrete and is built around the spring so that water flows directly out of the box into a pipe or cistern, without being exposed to outside pollution.
•Rainwater refers to rain that is collected or harvested from surfaces (by roof or ground catchment) and stored in a container, tank or cistern until used.

"Unimproved" sources of drinking-water include:

•Unprotected spring. This is a spring that is subject to runoff, bird droppings, or the entry of animals. Unprotected springs typically do not have a "spring box".
•Unprotected dug well. This is a dug well for which one of the following conditions is true: 1) the well is not protected from runoff water; or 2) the well is not protected from bird droppings and animals. If at least one of these conditions is true, the well is unprotected.
•Cart with small tank/drum. This refers to water sold by a provider who transports water into a community. The types of transportation used include donkey carts, motorized vehicles and other means.
•Tanker-truck. The water is trucked into a community and sold from the water truck.

•Surface water is water located above ground and includes rivers, dams, lakes, ponds, streams, canals, and irrigation channels.
•Bottled water is considered to be improved only when the household uses drinking-water from an improved source for cooking and personal hygiene; where this information is not available, bottled water is classified on a case-by-case basis.

Rationale: 1.6 million people (90% are children under 5), die every year from diarrheal diseases (including cholera) attributable to lack of access to safe drinking water and basic sanitation. This indicator directly corresponds to Goal 7, target 10 of the Millennium Development Goals (MDG) which calls on countries to: "Halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation". Meeting the MDG target would avert 470 thousand deaths and result in an extra 320 million productive working days every year. Economic analyses show that the benefits of investment to achieve the target would be considerable. Depending on the region of the world, economic benefits have been estimated to range from US$ 3 to US$ 34 for each dollar invested.

Measurement Notes:

1. **Sample Tools and/or Possible Methods (for Peace Corps staff use):** Volunteers should use data collection tools to measure progress against project indicators. A data collection tool to measure this indicator could be based on one of the following methods—survey and observation—though there may be other data collection methods that are appropriate. Please check PCLive for data collection tools. Once a tool has been developed, post staff should have a few Volunteers and their partners pilot it, and then distribute and train Volunteers on its use.

2. **General Data Collection for Volunteer Activities:** All Volunteer activities should be conducted with the intention of achieving outcomes – knowledge change (short-term), skills demonstration (intermediate-term), and behavioral changes (intermediate to long term) as defined by the progression of indicators within the objectives of a project framework. The progression of measurement for all Volunteer activities should begin with baseline data being conducted prior to the implementation of an activity (or set of activities), followed by documenting any outputs of the activities and then later at the appropriate time, measurements of specific outcomes (see the bullet on “frequency of measurement”).

3. **Activity-Level Baseline Data Collection:** Activity-level baseline data should be collected by Volunteers/partners before or at the start of their activities with an individual or group of individuals. It provides a basis for planning and/or assessing subsequent progress or impact with these same people. Volunteers should take a baseline measurement regarding the outcome(s) defined in this data sheet. Volunteers should collect baseline information early in their work with schools, and may use their judgment to determine timing because the information will be more accurate if the Volunteer has built some trust with the school faculty first. The information for the baseline measurement will be the same or very similar to the information that will be collected in the follow-on measurement (see the bullet on “frequency of measurement”) after the Volunteer has conducted his/her activities and it is usually collected using the same data collection tool to allow for easy management of the data over time.

   Because Volunteers are expected to implement relevant and focused activities that will promote specific changes within a target population (see the “unit of measure” above), taking a baseline measurement helps Volunteers to develop a more realistic snapshot of where individuals within the target population are in their process of change instead of assuming that they are starting at “0.” It also sets up Volunteers to be able to see in concrete terms what influence their work is having on the individuals they work with during their service. Please note that data collection is a sensitive process and so Volunteers will not want to take a baseline measurement until they have been able to do some relationship and trust-building with the person/people the Volunteer is working with, and

developed an understanding of cultural norms and gender dynamics.

4. **Frequency of Measurement:** For reporting accurately on this outcome indicator, Volunteers must take a minimum of two measurements with members of the target population reached with their activities. After taking the baseline measurement (described above), Volunteers should take at least one follow-on measurement with the same school to assess how many have a functional, clean new or improved drinking water station. This measurement is taken typically after completing one or more activities focused on achieving the outcome in this indicator and once they have determined that the timing is appropriate to expect that the outcome has been achieved. Please note that successful documentation of a behavior change or new practice may not be immediately apparent following the completion of activities and may need to be planned for at a later time. Once Volunteers have measured that at least one school has achieved the indicator, they should report on it in their next VRF.

   Volunteers may determine to take more than one baseline and one follow-on measurement with the same individual (or group of individuals) for the following valid reasons:

   - Volunteers may want to measure whether or not any additional individuals initially reached with activities have now achieved the outcome in the indicator, particularly for any activities that are on-going in nature (no clear end date);
   - Volunteers may want to enhance their own learning and the implementation of their activities by using the data collected as an effective monitoring tool and feedback mechanism for the need to improve or increase their activities;
   - A Peace Corps project in a particular country may choose to increase the frequency of measurement of the indicator and Volunteers assigned to that project will be required to follow in-country guidance.

   In all cases, any additional data collection above the minimum expectation should be based on the time, resources, accessibility to the target population, and the value to be gained versus the burden of collecting the data. Following any additional measurements taken, Volunteers should report on any new individuals achieving the outcome in their next VRF.

5. **Definition of Change:** The minimum change to report against this indicator is a school has a functional, clean new or improved water station as compared to what was measured initially at baseline. In the case of this indicator, if the school the Volunteer/partner works with already had a functional and clean drinking water station before beginning to work with the Volunteer/partner, then the Volunteer would not be able to count the school for this activity because the Volunteer's work did not actually lead to the desired change. However, if as a result of working with the Volunteer/partner, the school decided to construct a functional clean new or improved drinking water station, that would count because the Volunteer's work influenced this change.

6. **General Reporting in the VRF**: The "number achieved" (or numerator) that Volunteers will report against for this indicator in their VRFs is the number of schools that, after working with the Volunteer/partner, now have functional clean new or improved drinking water station(s). The "total number" (or denominator) that Volunteers will report on for this indicator in their VRFs is the total number of schools who participated in the activities designed to meet this indicator.

7. **Reporting on Disaggregated Data in the VRF:** This indicator is disaggregated by "Type of Drinking Water". When reporting in the VRF, a Volunteer should disaggregate by new or rehabilitated.

Data Quality Assessments (DQA): DQA are needed for each indicator selected to align with the project objectives. DQAs review the validity, integrity, precision, reliability, and timeliness of each indicator. For more information, consult the Peace Corps MRE Toolkit.

Alignment with Summary Indicator: WASH access