Spring

A. GENERAL INFORMATION

A.1. Spring information

Spring location (e.g. village, town, community, parish, district, province, state)								
Additional location information State the reference system and units, if using coordinates (e.g. national grid reference coordinates, GPS coordinates)								
Year of construction of spring				**Approximate number of households using this water source** Circle one of the options below				
				1–10	11–50	51–100	101–500	>500
Circle the options below				If **Yes**, describe (e.g. what happens, how often, for how long)				
Is the spring affected by flooding?	Unsure	No	Yes					
Is the spring affected by drought?	Unsure	No	Yes					

A.2. System functionality

Circle **Yes** or **No** to indicate if water is currently available from the spring. If **No**, describe why (e.g. faulty or missing component, low water level) and then go to Section B. In Section C, record the corrective actions needed for the spring to provide water, and record the details of any alternative water source(s) currently being used.

Is water currently available from the spring?		If **No**, describe why (then go to Section B)
Yes	No	

A.3. Weather conditions during the 48 hours before inspection

Circle the temperature and precipitation options below to indicate the main conditions during the 48 hours before the inspection. More than one option may be circled if conditions changed during this time. Record additional information in Section C if needed.

Temperature	<0 °C	0–15 °C	16–30 °C	>30 °C
Precipitation	Snow	Heavy rain	Rain	Dry

A.4. Water quality sample information

Record details of any water quality samples taken during the inspection. Include information for any parameters tested. Add **NA** if information is not applicable. Record additional information in Section C if needed.

Sample taken? Circle **No** or **Yes**		**Sampling location**		**Sample identification code**		**Other information**					
No (go to A.5)	Yes										
Parameter tested		*E. coli*[a]		*or* Thermotolerant (faecal) coliforms[a]		Additional parameter		Additional parameter		Additional parameter	
Results and units		Results	Units	Results	Units	Results	Units	Results	Units	Results	Units

A.5. Water treatment

Tick (✓) the appropriate box(es) and provide additional information as needed.

❑ **No treatment applied.**

❑ **Treatment applied at the spring.** Describe (e.g. chlorine dose, frequency of dosing, how it is applied).[b]

❑ **Treatment applied downstream of the spring.** Describe (e.g. water treatment plant, household water treatment).

[a] The presence of *E. coli* (or thermotolerant [faecal] coliforms) suggests recent faecal contamination. If detected, further action is needed, such as additional sampling and investigation of potential sources of contamination, and/or household water treatment advisories (e.g. boil water notice). *Note* – thermotolerant (faecal) coliforms are distinct from "total coliforms", where total coliforms do not necessarily indicate recent faecal contamination.

[b] Where chlorine is applied, the free chlorine residual concentration in the drinking-water should be tested and the result recorded in Section A.4. Where possible, turbidity and pH should also be measured. For general information on chlorination, refer to Technical notes on drinking-water, sanitation and hygiene in emergencies: measuring chlorine levels in water supplies (WHO & WEDC, 2013).

General notes

- This form is intended for use on a single spring source. Where there are multiple springs to be inspected, additional forms will be needed. Springs may be inspected on a rotational basis where there are too many to cover during each inspection.
- If other water sources are in use (e.g. dug well, borehole), or if users collect and store water in the home, carry out additional sanitary inspections using the corresponding sanitary inspection packages.

B. SANITARY INSPECTION

IMPORTANT: Read the following notes before completing the sanitary inspection

1. Tick (✓) the appropriate box for each question. For guidance, refer to the numbered risk factors in Figure 1; the numbers in the figure are linked to the questions. Record any additional risk factors present in Section C. Refer also to the *Technical fact sheet* for information on the individual components of the spring. *Note* – the questions in this section are example risk factors only, which can be used as a starting point for adapting the form to the local context.
2. Tick the **NA** (not applicable) box if the question ***does not apply*** to the spring being inspected.
3. Tick the **No** box if the question does apply to the spring being inspected, but the risk factor ***is not present***.
4. Tick the **Yes** box if the risk factor ***is present***. For important situations that require attention, record the corrective actions to be taken in the last column. These notes can be used to develop a detailed improvement plan, documenting what will be done, who will do it, by when it will be done and what resources are required. For guidance, refer to the *Management advice sheet*. Where possible, address the most serious risk factors first, considering low-cost or no-cost improvements that can be made immediately.
5. If a question cannot be answered because access to a component is not possible, tick the **Yes** box. Record these issues in Section C for further investigation.

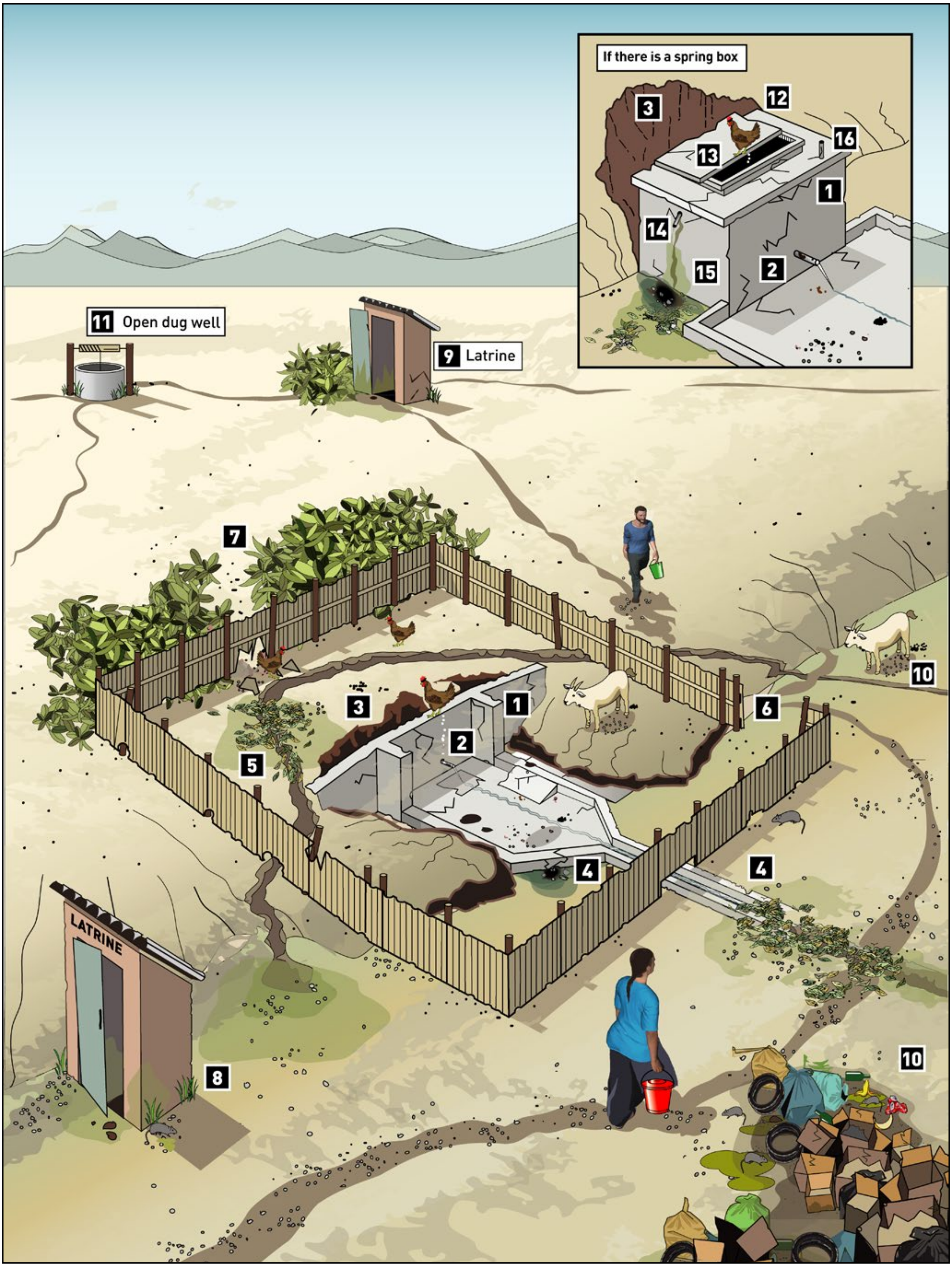

Figure 1. Typical risk factors associated with a spring. Main picture shows a protective spring wall. The inset picture (top right) shows an alternative design with a spring box.

	Sanitary inspection questions	NA	No	Yes	If Yes, what corrective action is needed?
1	**Does the spring lack a functioning protective structure?** Contaminants could enter the spring if there is no protective structure in place (e.g. a masonry or concrete wall, or a spring box). This could also happen if there is a protective structure in place, but it is damaged (e.g. deep cracks, gaps, leaking).	❑	❑	❑	
2	**Is the outlet pipe missing or in poor condition?** Contaminants could enter the water during collection if there is no outlet pipe in place. This could also happen if the outlet pipe is poorly maintained (e.g. damaged, severely corroded, leaking, dirty).	❑	❑	❑	
3	**Is the backfill area behind the protective structure eroded?** Contaminants could enter the spring if the backfill area shows signs of erosion (e.g. from surface water run-off).	❑	❑	❑	
4	**Is drainage inadequate, which could allow water to accumulate in the spring area?** Stagnant water could contaminate the spring if there is no drainage system in place. This could also happen if the drainage system is damaged (e.g. deep cracks) or blocked (e.g. from leaves, sediment). This is especially likely after rain. *Note* – the presence of pooled water and/or erosion under the apron may indicate poor drainage.	❑	❑	❑	
5	**Is a stormwater diversion ditch *above* the spring absent or blocked?** Surface water could contaminate the spring if there is no diversion ditch in place, or if it is blocked. Excessive run-off could also damage the spring components. *Note* – the presence of erosion around the spring may indicate inadequate diversion of surface water.	❑	❑	❑	
6	**Is the fence or barrier *around* the spring missing or inadequate so that animals could enter the spring area?** Animals could contaminate or damage the spring area if the fence or barrier around the spring is missing. This could also happen if the fencing or barrier is broken or poorly built (e.g. has large gaps), or the entry point (e.g. gate) does not close securely.	❑	❑	❑	

	Sanitary inspection questions	NA	No	Yes	If Yes, what corrective action is needed?
7	**Is the fence or barrier *uphill* of the spring absent or inadequate?**[c] Animals could contaminate the spring area if there is no fence or barrier uphill of the spring, or if the fence or barrier is broken or poorly built (e.g. has large gaps).	❑	❑	❑	
8	**Is there sanitation infrastructure within 15 metres of the spring?**[d] Sanitation infrastructure (e.g. latrine pit, septic tank, soakage field, sewer pipes) close to the spring may affect water quality. For example, waste could seep into the groundwater or overflow and be washed into the spring area, particularly after rain. Visually check structures in this area, and ask community members, to see if the structures are sanitation related.	❑	❑	❑	
9	**Is there sanitation infrastructure on higher ground within 30 metres of the spring?**[d] Contaminated groundwater and surface water may flow downhill from sanitation infrastructure towards the spring. This could result in harmful microorganisms and other contaminants entering the spring, particularly after rain.	❑	❑	❑	
10	**Can other sources of pollution be seen within 15 metres of the spring (e.g. open defecation, animals, drinking troughs for livestock, rubbish, commercial activity, fuel storage)?**[d] The presence of animals or faeces on the ground close to the spring poses a serious risk to the safety of the drinking-water. Contaminants from other waste (e.g. household, agricultural, industrial) could seep into the groundwater and contaminate the spring.	❑	❑	❑	
11	**Is there any unprotected entry point to the aquifer within 100 metres of the spring?**[d] An unprotected entry point to the aquifer (e.g. uncapped borehole, open dug well) could allow contaminants to enter the groundwater and contaminate the spring.	❑	❑	❑	

[c] An adequate fence or barrier means that the uphill area is closed-off to where the groundwater is at least 2 metres deep or 30 metres away from the spring (general guidance only – refer to note d).

[d] General guidance only. Appropriate minimum safe distances depend on local factors including soil type and permeability, depth of the water table, and volume and concentration of contaminants. For guidance on determining minimum safe distances for polluting activities, refer to Guidelines for drinking-water quality: small water supplies (WHO, 2024).

	Sanitary inspection questions	NA	No	Yes	If Yes, what corrective action is needed?
Where there is a spring box[e]					
12	**Are there any signs of contaminants inside the spring box?** The presence of animals or faeces inside the spring box is a serious risk to the safety of the drinking-water, and indicates that harmful microorganisms are present. Sediments may also contain harmful microorganisms and other contaminants (such as metals) that can affect the safety or acceptability of the water.	❑	❑	❑	
13	**Is the inspection hatch lid missing or in poor condition?** Contaminants could enter the spring box (e.g. from the entry of contaminated water following rain, entry of animals) if the inspection hatch lid is missing (or open, unlocked). This could also happen if the lid is damaged (e.g. deep cracks, severely corroded, does not fit tightly when closed).	❑	❑	❑	
14	**Does the overflow pipe lack adequate protection from vermin?** Contaminants could enter the spring box (e.g. from insects, rodents, birds), if the overflow pipe is not covered with a vermin-proof screen (e.g. mesh, gauze).	❑	❑	❑	
15	**Is the overflow pipe poorly designed so that overflow water falls from a height on to the ground?** The spring box structure may be undermined and damaged if water from the overflow pipe erodes the ground beneath the spring box. This could affect water quality, or result in water loss.	❑	❑	❑	
16	**Are the air vents poorly designed so that contaminants could enter the spring box?** Contaminants could enter the spring box if the air vents are facing upwards, or are not covered with a vermin-proof screen.	❑	❑	❑	
	Total number of Yes responses				

[e] Where there is a protective wall in place instead of a spring box, record this information in Section C and tick the **NA** (not applicable) box for questions 12-16.

C. ADDITIONAL DETAILS

Include any additional risk factors,[f] recommendations, observations (e.g. spring box construction material, spring box volume) or remarks from users of the water source (e.g. problems with the taste, odour or appearance of the water, water source reliability). Attach additional sheets and photographs if needed.

f These risk factors should be considered for future inclusion in Section B.

D. INSPECTION DETAILS

Name of inspector: ____________________

Organization: ____________________

Designation/title of inspector: ____________________

Signature: ____________________ Date: __________

Name of water supply representative: ____________________

Contact number (if available): ____________________

Signature (if available): ____________________ Date: __________

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Website: https://www.who.int/health-topics/water-sanitation-and-hygiene-wash

World Health Organization

Spring

This technical fact sheet provides background information on a spring, which supports the sanitary inspection of this drinking-water source.[a]

A spring is formed when groundwater is naturally forced up to the surface. For example, where solid rock or clay layers block the underground flow of groundwater.

Groundwater is considered to be better quality than surface water in many places. However, appropriate treatment/disinfection are required for groundwater sources that are vulnerable to contamination.

A spring source consists of a protective structure, such as a wall or spring box, with an outlet positioned below the lowest natural water level. Different types of spring systems exist, ranging from basic springs where water is collected by users directly at the source, to springs that feed larger storage tanks which may be connected to piped distribution networks.

Spring sources should have adequate capacity to meet the needs of users at all times of the year. Limited capacity could result in users seeking alternative drinking-water sources that could be less safe.

The water collection area should be built so it is accessible for all users.[b]

Figure 1 shows a common type of spring source consisting of a protective wall and outlet pipe. Alternatively, a spring box may be in place instead of a protective wall, as shown in Figure 2. These figures show typical designs. Other designs can also provide safe drinking-water.

Typical risk factors associated with a spring source are presented in the corresponding *Sanitary inspection form.*

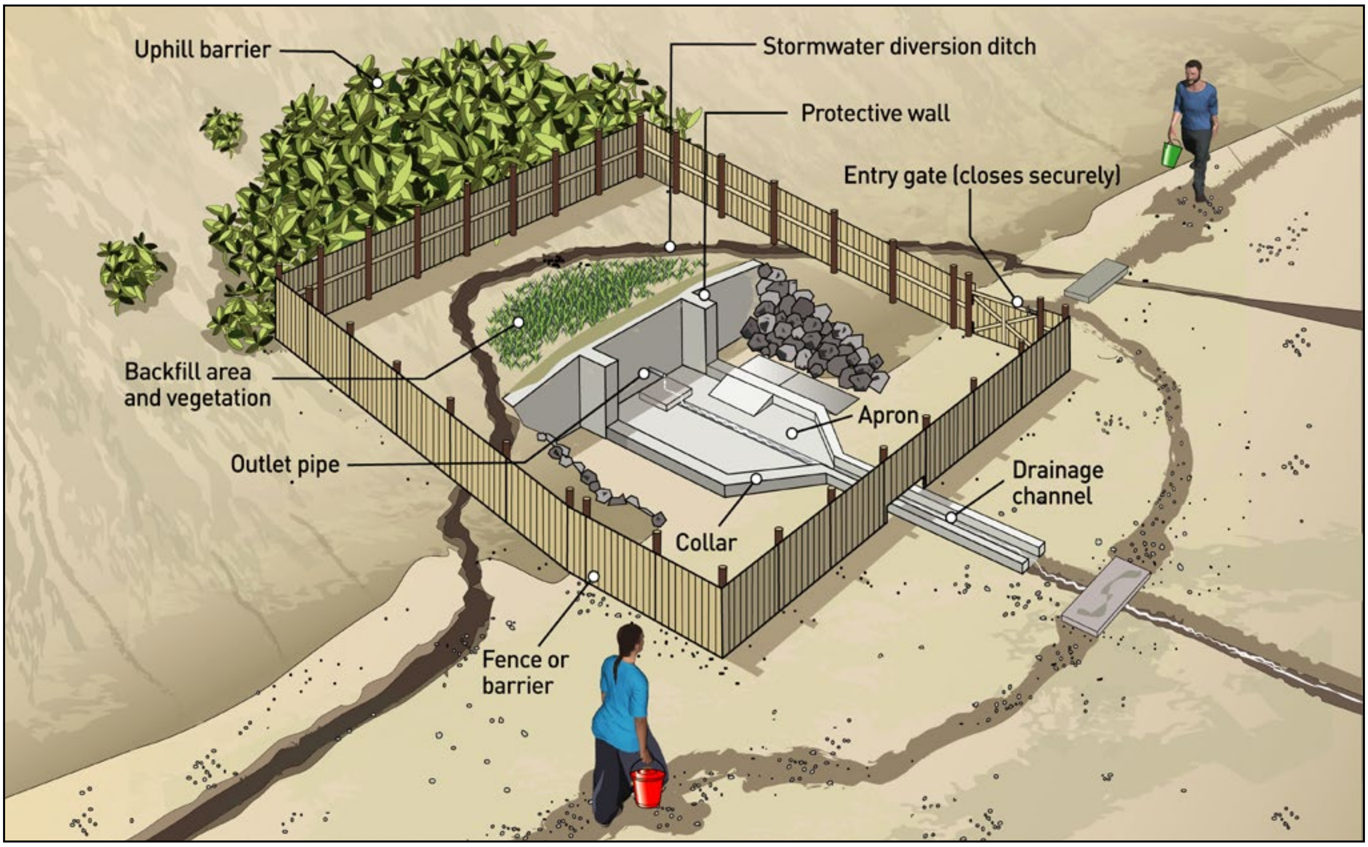

Figure 1. A common spring source with a protective wall in a sanitary condition

[a] This fact sheet is not intended to serve as a guide to construction. For more detailed guidance on the design and construction of a spring, refer to Spring catchment: series of manuals on drinking water supply, Vol. 4 (Meuli and Wehrle, 2001).

[b] For guidance on designing accessible facilities, refer to Water and sanitation for disabled people and other vulnerable groups: designing services to improve accessibility (Jones & Reed, 2005).

A spring supply typically includes the following main components.

General spring components

- **Protective wall or spring box:** Directs spring water to an outlet as it leaves the ground. Typically constructed from concrete or masonry, this structure protects the water from contamination until it is collected by the user.
- **Outlet pipe:** A pipe (e.g. metal or plastic) that delivers water from the spring to the user. *Note* – the outlet pipe should be raised off the ground to minimize the risk of contamination during water collection.
- **Apron:** A reinforced stone, brick or concrete floor to drain water away from the spring area. The apron should slope down from the spring towards a collar for adequate drainage. The apron also provides a standing area for users when collecting water.
- **Collar:** The raised edge of the apron that captures water and directs it to a drainage channel.
- **Backfill area:** The area immediately behind the spring structure that protects the spring water as it flows to the surface. To stop erosion, the backfill area should be planted with light vegetation (e.g. grass). The roots from heavier vegetation (e.g. trees, larger bushes) could undermine and damage the spring structure or pipework.
- **Drainage channel:** Directs water away from the spring (e.g. to join a larger waterway or drain into the ground). The drainage channel should slope down from the spring. This prevents water ponding and stagnating, which could contaminate the spring. Drainage water may also be used to provide water for livestock or other activities, provided that these activities occur at a safe distance downhill from the spring.[c]
- **Stormwater diversion ditch:** Diverts uphill surface water away from the spring structure. The diversion ditch should have sufficient capacity (i.e. depth, width) to manage the most likely volumes of stormwater flow.
- **Fence or barrier:** A physical barrier to stop animals from contaminating the spring area or damaging the components. It may also prevent unauthorized access by people. The fence or barrier should have an entry point (e.g. a gate) that can be closed tightly and latched shut/locked. Where practical, the fence or barrier should ideally be constructed at least 15 metres from the spring (general guidance only).[c]

  A fence or barrier should also be present uphill of the spring to where the groundwater is at least 2 metres deep or 30 metres away from the spring (general guidance only).[c]

Spring box components

- **Inspection hatch:** Allows access to the spring box for inspection, operations and maintenance, or improvement works. The inspection hatch should have a lid (or cover) that is tightly fitting and lockable to stop contaminants from entering the spring box, and to stop unauthorized access by people.
- **Overflow pipe:** Directs excess water from the spring box to a drainage channel. This stops the spring box overflowing in an uncontrolled way, which could contaminate the spring or damage components. The overflow pipe should be facing downwards and have a vermin-proof screen (e.g. gauze or mesh) to stop contaminants entering the spring box. Water from the overflow pipe should not erode the ground beneath the pipe, as this could undermine and damage the spring box, which could lead to contamination or water loss.
- **Air vent:** Allows ventilation in the spring box. The air vent should be facing downwards and have a vermin-proof screen to stop contaminants entering the spring box.

Additional considerations

Before the spring is constructed, sources of naturally occurring contaminants (e.g. arsenic, fluoride) and contamination from human activities (e.g. agriculture, industry) should be investigated to determine their impact on groundwater quality. Latrines and other sanitation facilities should be identified before choosing a site for the spring.

After a new spring box is constructed, it should be cleaned, flushed and disinfected (e.g. with chlorine) and flushed again, to disinfect the components before the water is used. Ideally, water quality testing should be conducted before the spring is commissioned to confirm the water is safe for consumption. Periodic disinfection and testing may also be required (e.g. after flooding, after maintenance).

When constructing new springs or rehabilitating old ones, all materials used should be safe for contact with drinking-water (e.g. using materials approved through an appropriate certification scheme).

[c] For guidance on determining appropriate minimum safe distances for polluting activities, refer to Guidelines for drinking-water quality: small water supplies (WHO, 2024).

[d] Guidance for disinfecting a spring box may be adapted from Technical notes on drinking-water, sanitation and hygiene in emergencies: cleaning and disinfecting water storage tanks and tankers (WHO & WEDC, 2013).

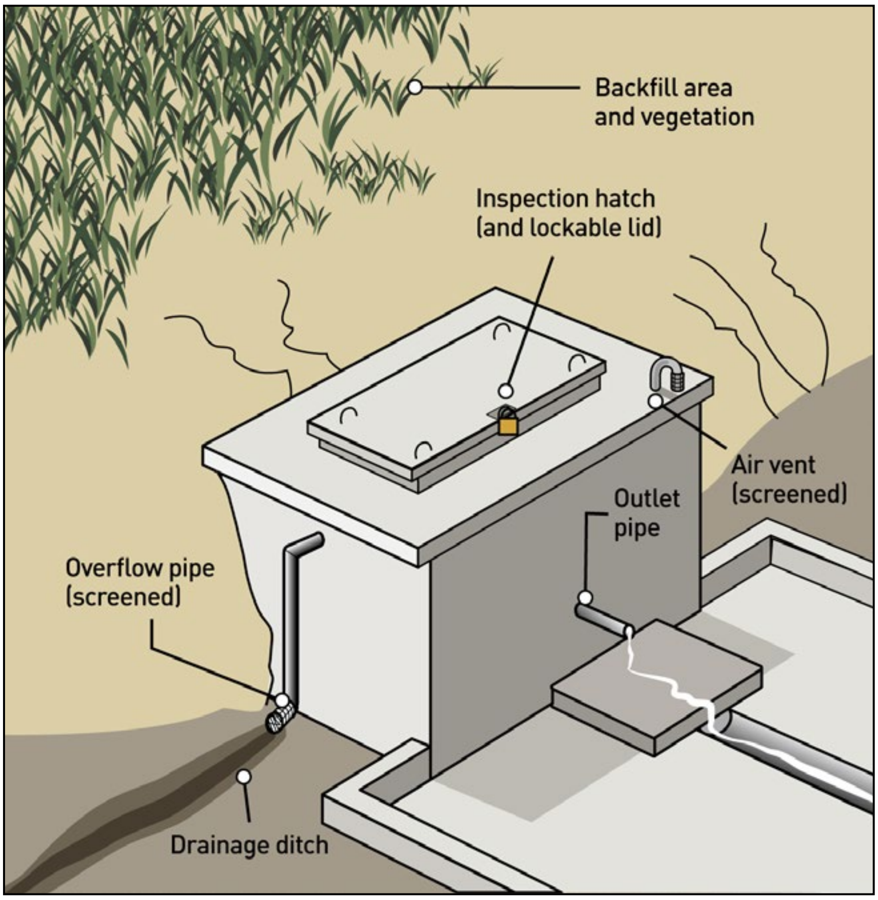

Figure 2. A common spring source with a spring box in a sanitary condition

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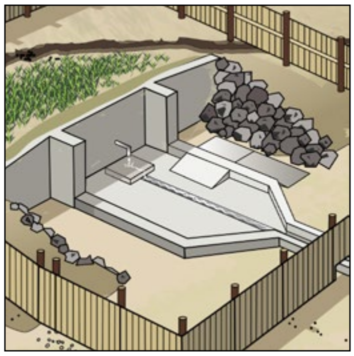
World Health Organization

Spring

This management advice sheet provides guidance for the safe management of a spring, which supports the sanitary inspection of this drinking-water source.



Guidance for typical operations and maintenance (O&M) activities is provided in Table 1 including suggested frequencies for each activity. These activities are important for keeping the spring in good working condition and protecting drinking-water quality.

Table 2 lists potential problems that may be identified during a sanitary inspection, and provides basic corrective actions to consider for each problem.

This management advice sheet can also support routine management and monitoring practices, which are required to help ensure the ongoing safety of the water supply.

A. OPERATIONS AND MAINTENANCE

Basic O&M can usually be carried out by a trained owner, user or caretaker/operator (e.g. simple maintenance tasks such as cleaning the spring area). Larger repairs and maintenance tasks (e.g. repairing the spring box structure) may need skilled labour which can be provided by local craftspeople, or with support from outside of the local area.

The condition of the spring should be inspected routinely to help prevent contaminants entering the spring. Any damage or faults should be repaired immediately (e.g. deep cracks in the spring box wall, broken fence, soil erosion behind the spring box). Standard operating procedures (SOPs) should be developed for important O&M tasks (e.g. inspecting the spring box). These should be followed by trained individuals so the work is carried out safely and the spring is not contaminated during the work.

Consultation with the relevant authorities may be needed to ensure that sanitation infrastructure (e.g. latrine pits, septic tanks, sewers, soakage fields) is not built near the spring unless hydrogeological studies show that it is safe to do so. Consideration should also be given to catchment activities that extract groundwater (e.g. for irrigation, mining, power) to ensure an adequate quantity of drinking-water to meet the needs of users.

Activities other than collection of drinking-water (e.g. laundry, washing, bathing) should not be permitted at the spring area. These should be carried out at a safe distance downhill from the spring.

Adequate treatment/disinfection are required before consuming the drinking-water if the spring is vulnerable to contamination, or if the water could be contaminated due to unhygienic storage and handling by the user during transport or in the home.

Table 1. Guidance for developing an operations and maintenance schedule

Frequency	Activity
Daily to weekly	• Check and clean the spring facility, including the outlet pipe. Remove any polluting materials (e.g. faeces, rubbish). • Check that the outlet pipe is in good working condition. Repair or replace damaged parts as needed, then clean and disinfect it (e.g. with chlorine). • Where present, check that the spring box inspection hatch lid (or cover) is in place and in good condition, and is closed and locked securely. Repair or replace damaged parts, and lock as needed. • Check that the inside of the spring box is clean (e.g. free from animals, faeces, sediment build-up). Drain as needed, then clean and disinfect it (e.g. with chlorine).[a] • Check that the drainage channels are clear and in good condition. Remove debris or repair as needed. • Check that the fence or barrier is in good condition and that the entry point (e.g. gate) can be closed securely and latched shut/locked. Repair as needed.

Table 1. ...continued

Frequency	Activity
Weekly to monthly	• Where present, check that the spring box air vent and overflow pipe are in good condition. Ensure that protective vermin-proof screens are securely fitted and in good condition. Repair or replace damaged parts. • Check that the stormwater diversion ditch is clear and in good condition. Remove debris or repair as needed.
Annually	• Perform detailed inspection of the protective wall or spring box and the backfill area for signs of damage or failure. Repair as needed.[b]
As the need arises[c]	• If present, drain the spring box, remove debris or sediment and clean the internal walls (e.g. using a brush and clean water), and then disinfect the spring box (e.g. with chlorine).[a] • Rehabilitate the spring box or protective wall (e.g. repair the walls).[b] • Replace any eroded earth around the spring structure, and fill any depressions in the ground where water ponds. • Monitor water yield and use to identify changes (e.g. during periods of drought). • Ensure procurement of any materials in contact with drinking-water and water treatment chemicals (where used) are safe for drinking-water use.

[a] Guidance for disinfecting a spring box may be adapted from Technical notes on drinking-water, sanitation and hygiene in emergencies: cleaning and disinfecting water storage tanks and tankers (WHO & WEDC, 2013). This activity is required following a contamination event (e.g. after flooding, presence of animals in the spring box). *Note* – in water scarce areas, consult with local health authorities before draining the spring box to make sure that the risk to water quality justifies the loss of water. If the spring box is drained, alternative water supply arrangements may be needed to ensure that users have sufficient water quantity to meet domestic needs.

[b] For guidance on construction aspects, refer to Spring catchment: series of manuals on drinking water supply, Vol. 4 (Meuli and Wehrle, 2001).

[c] See Table 2 for potential problems that could trigger these activities.

General notes

- The suggested frequencies in Table 1 are a minimum recommendation. The frequency of activities may need to be increased depending on the local context. A suitable O&M schedule should be made for each site, including who is responsible for performing the work. Completion of activities as per the O&M schedule should be recorded, including additional details for any problems identified and corrective actions undertaken.
- Only people with relevant training and skills should undertake the activities in Table 1. Appropriate safety measures should be in place when entering a spring box for inspection or maintenance. Safety risks such as asphyxiation and structure collapse should be appropriately managed. Care should be taken when handling disinfection products.
- For guidance on appropriate frequencies for monitoring (e.g. sanitary inspections, water quality testing), refer to Guidelines for drinking-water quality: small water supplies (WHO, 2024).

B. PROBLEMS AND CORRECTIVE ACTIONS

Each problem in Table 2 is linked to the same question number in Section B of the *Sanitary inspection form*. Where relevant, corrective actions should be completed by trained individuals according to SOPs. Where needed, develop awareness raising and education programmes, and if necessary, local rules or regulations, to support safe drinking-water management in the context of the guidance provided in Table 2.

If problems are identified that represent an immediate threat to drinking-water safety (e.g. likely presence of faecal contamination in the water supply, positive *E. coli* detection), consider what immediate actions should be taken to minimize the risk to public health (e.g. advise users to seek an alternative safe drinking-water source, disinfect the water at the point of use).

Table 2. Common problems associated with a spring source, and suggested corrective actions

Question	Problem identified	Corrective actions to consider
1	The spring lacks a functioning protective structure (e.g. a protective wall or spring box in good working condition), which could allow contaminants to enter the spring.	• If there is no protective structure in place, seek the relevant skilled help to construct a wall or spring box. • If the protective structure is in poor condition (e.g. damaged, deep cracks, gaps, leaking), repair the structure as needed (e.g. repair mortar or brickwork). • Consider what immediate actions should be taken to minimize the risk to health in the interim (e.g. advise users to treat the water before consumption or use an alternative safe water source).
2	The outlet pipe is absent, or it is in poor condition, which could allow contaminants to enter the water during collection.	• If the outlet pipe is absent, rehabilitate the spring structure to include an outlet pipe. • If the outlet pipe is in poor condition, repair or replace the outlet pipe, then clean and disinfect it (e.g. with chlorine). • If the outlet pipe is dirty, clean and disinfect it. • Communicate the importance of routine cleaning/maintenance of the outlet pipe.
3	The backfill area is eroded (e.g. due to surface water run-off and the absence of vegetation), which could allow contaminants to enter the spring.	• Rehabilitate the backfill area with suitable filler material (e.g. earth) and plant light vegetation (e.g. grass, small bushes) to protect against erosion. • Ensure adequate drainage is in place to prevent erosion of the backfill area (see row 5).
4	The drainage is inadequate (e.g. absent, damaged or blocked drainage channel), which could result in stagnant water contaminating the spring.	• If a drainage channel or soakaway is absent, dig a temporary channel to divert water away from the spring site. Construct a permanent solution as soon as possible. • If a drainage channel or soakaway is not working, consider whether maintenance is needed (e.g. repairing, cleaning), or if deepening, widening or extending is required.
5	The stormwater diversion ditch uphill of the spring is absent or inadequate, which could allow surface water run-off to contaminate the spring or damage its components.[d]	• If a stormwater diversion ditch is absent, dig a temporary uphill ditch to divert surface water away from the spring area. Construct a permanent solution as soon as possible. • If an uphill diversion ditch is present but it is not working, consider whether maintenance is required (e.g. repair, cleaning), or if deepening, widening or extending is required.
6	The fence or barrier around the spring is absent or inadequate, which could allow animals to contaminate or damage the spring area.	• If absent, construct a robust fence or barrier with a lockable gate that closes securely. • If a fence or barrier is present but inadequate to prevent access, repair or replace it. • If the entry point (e.g. gate) to the spring area is damaged and/or does not close securely, repair or replace it.

Table 2. ...continued

<table>
<tr><th>Question</th><th>Problem identified</th><th>Corrective actions to consider</th></tr>
<tr><td>7</td><td>The fencing or barrier uphill[d] of the spring is absent or inadequate, which could allow contaminants to enter the spring (e.g. from animal faeces, open defecation, agricultural practices).</td><td>• If absent, construct a robust fence or barrier an appropriate distance uphill of the spring.
• If an uphill fence or barrier is present but inadequate to prevent access, repair or replace it.
• If an uphill fence or barrier is present but it is an insufficient distance from the spring, extend the fence or barrier further uphill from the spring.</td></tr>
<tr><td>8</td><td>There is sanitation infrastructure (e.g. latrine pit, septic tank, soakage field, sewer line) within 15 metres of the spring that could contaminate the spring (e.g. from overflow, seepage).[e]</td><td rowspan="2">• Involve local authorities to assess the significance of the risk from the sanitation infrastructure.
• Consider what immediate actions should be taken to minimize the risk to public health (e.g. issue household water treatment advisory).
• Consult with local authorities to consider appropriate steps to relocate or eliminate the source of pollution.</td></tr>
<tr><td>9</td><td>There is sanitation infrastructure on higher ground within 30 metres of the spring that could contaminate the spring.[e]</td></tr>
<tr><td>10</td><td>There are other sources of pollution (e.g. open defecation, animals, drinking trough for livestock, rubbish, commercial activity, fuel storage) within 15 metres of the spring that could contaminate the spring.[e]</td><td>• Where practical, remove the pollution (e.g. remove animal faeces, rubbish). Communicate the importance of maintaining the spring area in a clean condition.
• Consult with local authorities and users to consider:
  ◦ appropriate actions to relocate or eliminate the source of pollution
  ◦ other actions to minimize the issue from occurring again (e.g. signage, enforcement measures).</td></tr>
<tr><td>11</td><td>There is an unprotected point of entry to the aquifer (e.g. open or uncapped well or borehole) within 100 metres of the spring that could provide a direct pathway for contaminants to enter the groundwater and contaminate the spring.[e]</td><td>• Consult with local authorities to:
  ◦ assess the significance of the risk from the unprotected point of entry to the aquifer
  ◦ cover the point of entry in the immediate term
  ◦ consider what actions are appropriate to permanently seal, decommission or relocate the point of entry.</td></tr>
<tr><td colspan="3">Where there is a spring box</td></tr>
<tr><td>12</td><td>There are signs of contaminants (e.g. animals, faeces, sediment build-up) in the spring box, which could present a serious risk to water quality.</td><td>• Remove the contaminants immediately if possible.
• Consider what immediate actions should be taken to minimize the risk to public health (e.g. advise users to treat the water before consumption).
• Drain, clean and disinfect the spring box (e.g. with chlorine).[a]
• Consider appropriate measures to minimize the risk of contaminants entering the spring box from this source in the future (e.g. locking the inspection hatch, securing the fence or barrier).</td></tr>
</table>

Table 2. ...continued

Question	Problem identified	Corrective actions to consider
13	The inspection hatch lid is missing (or open, unlocked), or it is in poor condition (e.g. deep cracks, severely corroded, does not fit tightly when closed), which could allow contaminants to enter the spring box.	• If the inspection hatch lid is missing or in poor condition, provide a temporary cover (e.g. impermeable plastic sheeting) over the inspection hatch to minimize the entry of contaminants. Repair or replace the hatch and/or lid as soon as possible. • If the inspection hatch lid is open or unlocked, communicate the importance of closing and locking the lid securely when not in use (e.g. through awareness raising, signage).
14	The overflow pipe is inadequately protected (e.g. with a mesh or gauze), which could allow vermin (e.g. insects, rodents, birds) to enter the spring box and contaminate the water.	• If the overflow pipe is unprotected, cover the pipe with a vermin-proof screen (e.g. gauze or mesh). • If the overflow pipe screen is damaged (e.g. ripped, broken) or has wide gaps, replace with a functioning vermin-proof screen.
15	The overflow pipe is poorly designed and allows overflow water to fall from a height and erode the ground beneath the spring box, which could damage the spring box and affect water quality, or result in water loss.	• Modify or extend the overflow pipe so that it does not erode the ground beneath it, and directs the overflow water away from the spring area (e.g. via a drainage channel).
16	The air vents are poorly designed (e.g. facing upwards) or unprotected (e.g. no vermin-proof screen), which could allow contaminants to enter the spring box.	• If the air vents are facing upwards, modify the vents so they face downwards. • If the air vents are unprotected, cover the vents with a vermin-proof screen. • If the air vent screens are damaged or have wide gaps, replace with functioning vermin-proof screens.

[d] As a general guide, a fence or barrier should also be present uphill of the spring to where the groundwater is at least 2 metres deep or 30 metres away from the spring (refer to note e).

[e] General guidance only. Appropriate minimum safe distances depend on local factors including soil type and permeability, depth of the water table, and the volume and concentration of contaminants. For guidance on determining minimum safe distances for polluting activities, refer to Guidelines for drinking-water quality: small water supplies (WHO, 2024).

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