

Advisory

Apart from providing minimum required quantity of drinking water to the people, the operation and maintenance authorities should always bear in mind that its quality is maintained at all times, especially during monsoon season, to safeguard the health of the community. Manmade activities; rapid industrialization and agrochemical contamination increasingly affect the quality of water resources. Poor operation management and unsatisfactory sanitary practices are the major key areas responsible for water contamination.

Complaints of contaminated water supply are often received during rainy season. Contamination is the introduction into water of toxic materials, bacteria or other deleterious agents that make the water hazardous and therefore unfit for human use. These problems arise mainly due to leakage in water supply pipelines and water supply through uncleaned service reservoirs (OHSR and CWR/GLR). Subsequently, complains of water borne diseases, like Diarrhea, Cholera, Typhoid & Hepatitis (A&E) might be also reported, which causes sometimes law and order problem. This advisory is hereby issued to avoid contamination of water and how to tackle situation when contaminated water supply is reported. For ensuring uninterrupted water supply during the monsoon all field officers will ensure 24 hours patrolling of all important pipelines which are prone to damage and present/control from any damage. Wherever there is a need for taking any advance action for its strengthening, that must be taken. Also keep watch on areas, which are most likely to be affected by overflow/breach of rivers/bunds/terms in order to avoid any damage of pipelines/sources.

Utmost attention should be paid to detect and repair of damages and leakages. Ensure to be proactive in identifying and rectifying the critical zones. Frequent and improved supervision of transfer/distribution system, prompt repair and good maintenance be ensured to maintain uninterrupted water supply.

1 Essential maintenance actions prior to start of rainy season to avoid contamination of water.

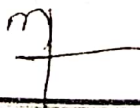
1.1 Leakage control

Wastage/Contamination of water in the transmission system and distribution network occurs by the way of leakage from pipes, joints and fittings. Where water supply is, by and large water, intermittent (i.e. supply is not 24X7), the



external pollution may get sucked into the system through points of leak, during non-supply hours when the system is not under pressure, causing health hazards.

- 1.1.1 Leakage through house connections: - can be controlled by adopting correct plumbing practices and improving the methods used for tapping the main and giving house connection and strict quality control on the pipe material used for house connection.
 - 1.1.2 Visible leaks: - It can be observed by maintenance staff while carrying out other works on the water supply system. Carry out inspection of all distribution network for leakage prior to rainy season to identify such visible leakages. Critical areas, where leaks often occur must be identified and appropriate corrective measures must be implemented.
 - 1.1.3 Special attention should be paid during inspection/survey on vulnerable locations in the system where water pipeline are crossed through sewer/drains, water logged locations, septic tank or soak pit.
- 2 Cleaning of Service Reservoirs and Clear Water Reservoirs should be maintained as per the circular no. 23360 dt. 02.06.2020 issued by this office. The reservoirs must be cleaned in every six months.
- 3 Essential maintenance actions, when supply of contaminated water supply is reported:
- City level consumer forums (group of senior citizens, vigilant volunteers, councillors, staff of local body, women group or common man) may be set up to keep a vigil on the water supply to prevent possible contamination and make periodical reporting to the operation and maintenance agencies for appropriate action well in advance. When contaminated water supply is reported, following action should be taken with time bound manner:-
- Shut the water supply in that area **immediately** through sectionalising valves.
 - Intimate to local administration and health department, **immediately**. Keep in touch with local administration. Publicise, not to use water stored in their domestic reservoirs (Underground and overhead) by proper manner. Ask them to empty out that water **immediately**.
 - Start transporting potable (ensure quality of source) water through tankers or water cans, **immediately**.
 - Detect the leakage or source of contamination and repair them **within 24 hrs.**



Concerning commissioner/Executive Officer should monitor whole process of leakage repair. Keep watch over points/locations, that have been repaired, for next few months. Remove or relocate the pipeline (distribution/transmission mains) passing through sewer/drain to some hygienic level.

- During the execution of the repair work hygienic conditions must be made to prevail at various stages till the completion of work. Precautions should be essentially kept in practice during leakage repair for site cleanliness, storage of tools and equipment and prevention of contamination during repair work.
 - When the leakage repair is ensured, immediately follow flushing of. However, in such case chlorinator is adjusted to apply chlorine or hypochlorite solution at the rate of 50 ppm. Heavily chlorinated water should be allowed to stand in the pipeline for at least 30 min. and preferably for 12 hours before being replaced with potable water.
 - Publicise to consumers of area not to use chlorinated water, where problem was reported. Ask them to drain out this heavily chlorinated water, if they have stored in their domestic tanks (underground & overhead).
 - Take sample after flushing and test for bacteriological examination. It must be free from e-coli.
 - Distribute chlorine tablets to residents of that area to use them in their domestic reservoirs.
 - Ensure residual chlorine level 0.2ppm at terminal points of water supply in that area. When water supply is restored after leakage correction.
 - Keep vigil on that area for next few months.
- 4 If findings of sanitary inspection of source treatment plant distribution system is unsatisfactory bacteriological quality of water after treatment or in the distribution system confirm bacteriological quality and if necessary, recommend boiling or use of disinfectant (Bleaching powder) home.
- a) Ensure 0.5 mg/l free residual chlorine at tail end. Recommend boiling and use of chlorine tablets.
 - b) Conduct a detailed sanitary inspection of whole water supply system and rectify the shortcomings found.
- In case of localised epidemic of enteric infection.
- a) Take samples for bacteriological analysis. Without waiting for its result.



immediately chlorinate water supply so that the tail end has minimum 0.5mg/1 of free residual chlorine. Recommended boiling and use of chlorine tablets at home.

- b) Conduct a detailed sanitary inspection of source and distribution system and rectify the short comings found.
- 5 Safe management practices of water supply during COVID-19 crisis to be followed as per the guidelines forward and the circular no. 18315-22 dt. 29.04.2020 of this office.

Please follow the detailed directions regarding CPHEEO manual.

2/11/20
(Ujjawal Rathore)

Director cum Joint Secretary

Date: 12/06/2020

No.F(55)/CE/DLB/WS/Gen/2019-20/25706-739

Copy to following for information and necessary action:

1. SA to Hon'ble Minister, LSGD, GoR.
2. PS to Secretary, LSGD, GoR.
3. PS to Director cum Joint Secretary, DLB, GoR.
4. Executive Director, RUDSICO, Old Working Women Hostel, Behind Nehru Place, Lal Kothi, Tonk Road, Jaipur email: ruifdco@gmail.com.
5. PD, RUIDP, AVS building, Jawahar Circle, JLN Marg, Jaipur email:mailruidp@gmail.com and mail.ruidp@rajasthan.gov.in
6. District Collector, Sriganganagar, Nagaur, Bikaner, Bundi, Jaipur, Jaisalmer, Karauli and Rajsamand.
7. Chief Engineer, DLB, Jaipur.
8. Deputy Director (Regional), Local Self Government Department, Ajmer, Jaipur, Kota, Jodhpur, Bikaner, Udaipur and Bharatpur.
9. Chief Accounts Officer, DLB, Jaipur.
10. Commissioner/Executive Officer, Municipal Council/Board, Sriganganagar, Nagaur, Jaisalmer, Bundi, Karauli, Nokha, Nathdwara, Chomu and Takhatgarh.
11. PRO, DLB, Jaipur
12. Programmer, IT cell, DLB Jaipur to upload this advisory on website.
13. Guard file.

12/06/20
(Bhupendra Mathur)
Chief Engineer