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## WATER QUALITY MONITORING REPORT Most Probable Number (MPN) of Bacteria in Dayalbagh Wells

Date of Reporting : <u>15-Sep-2022</u> Date of Sampling : <u>12-Sep-2022</u>

## WHO Prescribed Permissible Limit for MPN is <10 and for pH is 6.5 to 8.5

S.No.	Name of Well	MPN Of Bacteria in Sample (Per ml)		Is MPN Below Permissible	KMnO <sub>4</sub> Colour		рН	
		Current Value	Previous Value	Limit of 10?	Current	Previous	Current Value	Previous Value
1	Gangavas	3.0	3.6	Yes	Light Pink	Light Pink	7.2	7.2
2	Dayal Nagar	3.6	3.6	"	"	"	7.3	7.3
3	Prem Nagar	3.6	3.6	"	"	"	7.3	7.2 *
4	Dunn Tubewell	3.6	3.6	"	"	"	7.3	7.4
*5	Punjabi Farm	3.6	3.0	"	"	"	7.2	7.4
6	Dairy West	3.0	3.0	"	"	"	7.3	7.1 *
7	Pavan Kuan	3.0	3.6	"	"	"	7.4	7.2 *
8	DEI Dairy	3.6	3.6	"	"	"	7.3	7.3
9	Ganga Jal	3.6	3.6	"	"	"	7.5	7.5
10	Gaushala	3.6	3.6	"	"	"	7.4	7.5

Remarks of Water Quality Research Group: In this report the MPN and pH values are within the WHO prescribed Permissible Limits. As per the <u>Instructions of Most Revered Gracious Huzur</u>, received on the last report, wells with low pH ie below or equal to 7.3 were treated with Ca(OH)<sub>2</sub>. We met with partial success in the case of Dairy West well, Pavan Kuan and Prem Nagar well but there was no change observed in the case of Gangavas and Dayal Nagar. It is recommended that the medication of wells having pH below or equal to 7.3 be continued till desired results are achieved.

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- 1) The study aims at continuous monitoring of potable well water to detect the presence of coliforms using the "multiple fermentation tube" or "most probable number" technique.
- 2) In this method measured portions of a water sample are placed in test-tubes containing a culture medium. The tubes are then incubated for a standard time at a standard temperature. It is customary to report the results of the multiple fermentation tube test for coliforms as a most probable number (MPN) index. This is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the test.
- 3) As a standard remedy, Potassium Permanganate is added in the ratio of 0.1 gm per litre to well water if MPN exceeds permissible limit. If the pH is less than permissible limits i.e., it is acidic, Hydrated Lime Powder i.e., Ca(OH)<sub>2</sub> is added in the ratio of 0.037 gms per litre of water. The two remedial processes mentioned above are periodically repeated till the desired water quality is achieved.