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Summer Water Crises of Ujjain City

Parag Dalal

Department of Chemical Engineering, Ujjain Engineering Collage Ujjain, (M.P.) India

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Abstract: Water is an essential need for every living organism. Ujjain is a beautiful city situated in the middle of India surrounded by river Kshipra from three sides making itself the lifeline of the city. In summer season whole of the river is dried up and also Gambhir dam {main drinking water source of the city} goes up to ventilation also giving the local public a huge problem of water scarcity.

Key words: Gambhir Dam, Kshipra River, water scarcity

INTRODUCTION

The Ujjain city is situated in the heart of India at 491.6MSL. The periphery of Ujjain city is very large consisting of 54 wards. Out of these 54 only few are densely populated. The summer season gives a large problem of water scarcity in mainly 13 wards which are most densely populated and away from filter plant. The people of these wards are dependent on other water sources i.e. wells, bore wells, bavdis etc. but these sources of ground water are also on a stage of dying in the absence of proper management and awareness of the local public towards them.

MATERIAL AND METHODS

A survey has been performed to get the information of the available water sources and their usages. Some wards with high population density are chosen their numbers are 1, 2, 3, 4, 5, 6, 7, 43, 44, 45,

46, 47 and 48 these comprises of both new area of the city and old area of the city. The water scarcity in these wards is most as they are away from the filter plant and have a high amount of population gradient. In summer season the public health engineering department which works under Ujjain Municipal Corporation work hard for the supply of water in these areas. Various groundwater sources are been used and then their water is supplied with their tankers and some private tankers. The data is been collected and analyzed to find out how these secondary resources of water are been used and managed.

RESULT AND DISCUSSION

Thirteen different wards are selected of old area of the city and new area of the city and the secondary water sources data is tabulated below in **Table 1.**

Table 1

Ward No	Ward Name	Number of Bore wells		Number of Wells		Number of Hand pumps		Number of Tankers	
		Existing	New	Existing	New	Existing	New	Small	Big
1	Bherugharh	5	9	13	3	6	4	4	6
2	Ghadhkalika	10	5	9	4	6	3	2	5
3	Mangalnath	12	2	8	3	14	2	7	2
4	Gayatri Shakti Peeth	9	5	4	1	11	2	7	1
5	Indira Nagar	13	2	11	Nil	8	6	18	7
6	Gandhi nagar	11	2	6	1	7	4	6	2
7	Aankpat	14	3	7	Nil	7	5	16	6
43	Laxmi Nagar	12	2	8	1	13	2	28	22
44	Freeganj	11	2	4	Nil	12	7	29	15
45	Dewas Road	24	13	17	4	6	2	34	19
46	Shastri Nagar	11	2	4	Nil	10	4	7	2
47	Alakhdham	13	4	11	1	7	5	32	17
48	Nanakheda	14	3	7	Nil	13	3	15	4

The variation and fluctuation of the above also effect on density of population and also difference of status of living of people within wards. After tabulation of this data the status are been taken and then used to manage these sources. Out of the whole water supply done by the department about 40% is done by small tankers and 25% by big tankers (capacity more than 4000 Liters up to 13000 Liters) the other major source is private bore wells consisting about 13% but these are limited in a small area. Another major source is public bore wells or hand pumps consisting of about 17% of the supply rest is left for wells which contributes to about 5% of the total supply.

Out of all these sources wells are having worst condition as their management is never done so generally residents nearby use them as dumping sources. If their water is tested they give amazing

results which will never be recommending for drinking similarly various bore wells also give us the saline water and contaminated polluted water.

Future Scope: The Physico chemical characteristics of all these sources must be analyzed and then the precaution should be taken to cure them and manage them.

CONCLUSION

It is been concluded that all the resources of water are in a hazardous condition and should be managed as soon as possible. Firstly the management of major source of drinking water (Gambhir dam) should be done. Awareness of people towards rain water harvesting should increase and a number of stop dams should be made on river Kshipra to stop more water runoff of the city. A big awareness program should be launched with help of local government and NGO's from school level to administrative level is done for awareness of saving water and conservation of secondary resources of drinking water.

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Corresponding author: **Dr. Parag Dalal;**

Department of Chemical Engineering Ujjain Engineering College,

Ujjain, (M.P.) India