

***Visit Report of Shri Arun Kumar Misra Secretary, Department of Drinking Water and Sanitation, Ministry of Rural Development, Government of India to Bilwara, Rajasthan on 19<sup>th</sup> July 2010***

Shri Arun Kumar Misra, Secretary, Department of Drinking Water and Sanitation, Ministry of Rural Development, Government of India (Secretary DW&S) and Shri K Mazumdar, Deputy Adviser, Department of Drinking Water and Sanitation, visited Bilwara on 19<sup>th</sup> July 2010 to make an assessment of the status of drinking water in the district.

On arrival at Bhilwara Secretary (DW&S), had a discussion with Sh. Ram Lubhaya Principal Secretary, PHED, Government of Rajasthan, District Collector, Bilwara, Ms. Manju Rajpal, Chief Engineer, PHED and State level officials of Public Health Engineering Department regarding overall drinking water situation in the district. Principal Secretary, PHED, Government of Rajasthan informed that in the rural area of Bhilwara out of about 3000 habitations, 2000 habitations are tanker fed and in most of the towns the frequency of water supply particularly in Bhilwara city it is once in 5 to 6 days for the duration of 1 hour mainly based on supply by train from Kota.

During the discussion District Collector mentioned that rain in terms of intensity and frequency has been only 450 mm, 411mm & 300 mm in years 2007, 2008 & 2009 against an average rainfall of 700 mm per year. This is compounded by over extraction of ground water for irrigation and industry and most of the surface sources have dried up and the ground water level has receded to the extent that only saline water from deeper aquifer is available. The rural water supply system are mostly ground water based like tubewells, handpumps, single phase power pumpborewell, dug wells etc but the yield is grossly depleted. District Collector further mentioned that under MNREGA, deepening of ponds, nadis, and new recharging structures are being taken up and Chief Engineer, PHED mentioned that under NRDWP 310 numbers of sustainability structures are proposed to be taken up during the current financial year at an estimated cost of Rs 4.50 crore.

## **Field Visit**

### **Visit to Railway Yard**



Secretary, DW&S, Government of India along with the State officials visited the railway yard where rail water-tankers was been decanted to a ground level storage tank. To supplement the water availability in Bhilwara town, water rails make 2-3 trips per day with 72 tankers each of 20 kilo-litre capacity i.e. 14.40 lakh liter of water per trip from Kota, about 175 km away. State officials mentioned that transportation of water by rail was also made in the year 2001, 2004, 2009 from Nasirabad which is 110 km away from Bhilwara, but this year as adequate water is not available in Bisalpur dam transportation is being carried out from Kota.

### **Visit to Kawa Kheda locality of Bhilwara city**

Interaction with the people of Kawa Kheda locality of Bilwara City revealed that the frequency of treated water supply is once in 5-6 days. Most the house has supply points in the form of pits in front of their house and the delivery point is about 3 feet below the road level. The chances of contaminated water entering the pipeline during the rainy season is very high. Some of the houses have constructed underground tanks of 2500 liters capacity in front of their houses to store water for 6 days. To fullfill the minimum water requirement people have to fetch water from single phase panghat borwells, handpumps and tubewells which is not only saline but yield is also very poor.



*It was pointed out that this may result in skewed water supply where in few houses will have sufficient water and most of the others will be deprived of life line supply. Water charge is only Rs 30 per month for house connection. The District Collector and the PHE Department were advised to look in to the matter.*

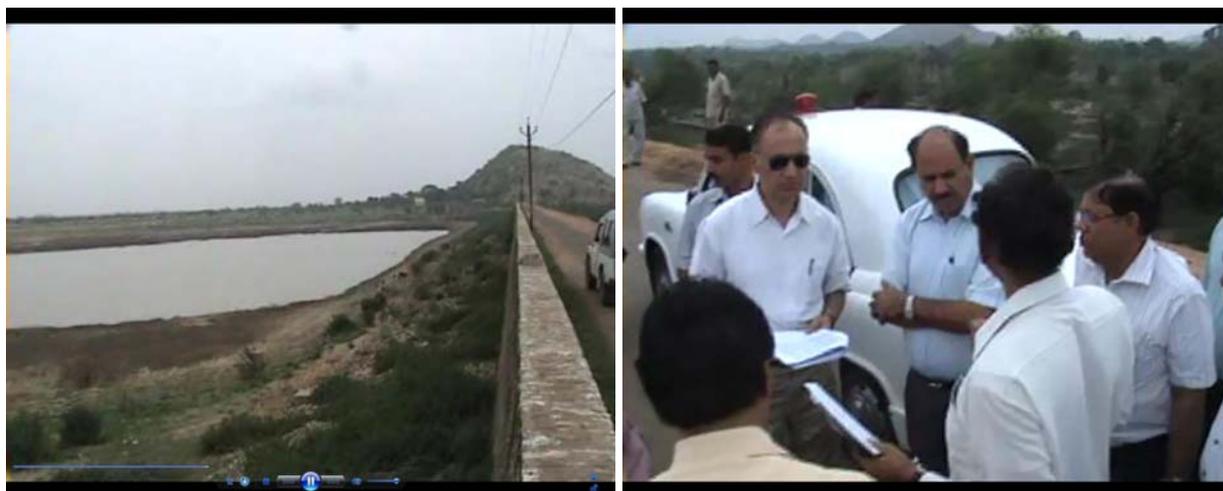
### **Visit to Kotri village**

This village of Bhilwara Tehisl located about 1.5 km away from Meja Dam has population about 2000 and water supply is based on two tubewells of 450 feet deep yielding water about 30KL per day which works out to about 15 liters per capita per day (lpcd). The water supply system is maintained by PRI under Janta Jal Yojna. Village has it's own water sources in the form of openwell at down stream of Meja Dam, which is dry. The water supply of the village is augmented by tanker water transportation at the rate of 3 tankers per day.



## Visit to Meja Dam

This dam is about 12 km away from Bhilwara city and was the main source of drinking water for Bhilwara city as well as surrounding area. For Bhilwara city 62 tubewells have been installed in the submergence of dam but at present except for 10 tubewells all are almost dry. As per records shown by PHED, sufficient water was available till 1996. After 1996 the water receipt in the dam abruptly reduced. The design capacity of the dam is 2930 mcft and water received in 2007, 2008, 2009 was 140 mcft, 21 mcft, 31.67 mcft respectively.



The main reason could have been construction of a large number of small ponds, anicuts etc. in the catchment area of the dam without any planning or without catchment area management and monitoring. Principal Secretary, PHED informed that more than 27,000 anicut has been constructed and 64 major and minor dam has been constructed over 8 streams in the district. Main flowing river in the district is Banas river which is dry due to less rainfall in the catchment and as a consequence large numbers of tubewells sunk in Kankroliya Ghati area could not get recharged sufficiently.

## Visit to Meja Village

Village has population of about 2000 and piped water supply system with domestic water connections. Two number of dug wells situated on the bank of local pond fitted with pumps are the main source of drinking water. Only one dug well has water and the other dug well is dry. But since the yield of the functional dug well is very low it does not meet the basic requirement of the people as such the drinking water is supplied by transportation through tankers. It is mentioned that the hydrogeological formation is also not good for water recharging of ground water aquifer. The villagers mentioned that the surface run-off from the village goes directly in to the near by stream which is of no use to the village. They suggested that the run-off from the village should be diverted to the village pond for improving the availability of drinking water.

*The Executive Engineer of Irrigation Department was advised to look in to the matter. It was also mentioned that in case there is barrier of impervious rock formation between the two dugwells hydrofacturing techniques can be adopted to link the two aquifers.*

## Visit to Bera village

Visited Bera village to see an anicut constructed on local nallas at an estimated cost of Rs 12 lakh under master plan of Ground Water Department, Government of Rajasthan. The villagers informed that all the existing 7 numbers of hand pumps are seasonal. They stated that anicut is a useful structures for recharging ground water as well as the existing dugwells in the nearby village. They have found that such measures also reduces the salinity of water.



### **Presentation on Bhilwara Water Supply project for World Bank funding**

Presentation on Chambal Bhilwara water supply project for Bhilwara city, 8 other urban towns , 1688 village of Bhilwara District , 68 villages of Chittorgarh district and 10 enroute village of Madhya Pradesh was given by PDCOR Ltd, consultant engaged by Government of Rajasthan.

Bhilwara City has been a centre for Industrial growth in early 80's and early 90's but due to regular scarcity of water and excessive exploitation of ground water not only is the city facing drinking water crisis but further industrial growth has stopped. As per the rate of population growth in the district in the past years, the drinking water demand for Bhilwara city for the year 2044 will be 121 MLD and industrial demand shall be 50 MLD. Present sources are not capable of discharging demanded yield and therefore an alternative sustainable surface source is required to be identified.

To solve the drinking water problem in Bhilwara district, water supply project for Bhilwara town, 8 other urban towns and 1688 villages of Bhilwara district has been proposed taking Chambal River as a sustainable source of water. Proposed location of source is near Bhainsroadgarh on upstream of Jawahar Sagar Dam. Proposed site of Intake well is about 122Km from Bhilwara town. Since about 70Km transmission main will pass through Chittaurgarh district, it is also proposed to cover 68 en-route villages of Chittaurgarh district by this project. It is proposed to execute the project with the financial assistance of World Bank at an estimated cost of Rs 2000 crore.

Intake well of dia 12.0 meter is proposed to construct near village Bhainsroadgarh with 190 MLD capacity water treatment plant about 1500 meter from intake. Raw water transmission main 1500 mtr length of M.S. pipe 2000 mm size and M.S. pipe clear water transmission main in 64KM length of 1500 mm dia and 57KM length of 1400 mm dia shall be laid upto Bhilwara. From Bhilwara Junction 400mm, 800mm, 1200mm MS pipe line is proposed up to different hedad works in Bhilwara town. Similarly MS pipe line of different diameter is proposed upto proposed pumping stations in other urban town also.

*Secretary (DW&S) mentioned that a comprehensive drinking watersupply project proposal covering both urban and rural areas (merging phase I and phase II project proposal) needs to be prepared by the State Government and sent to Government of India for consideration. It was also highlighted that the scheme should give the importance to management of water supply schemes by the village\urban local bodies themselves. As a preparatory move the Department should designate the Project Unit of PHED for this work.*