

**Comments in reference to the order dated 01.04.2016 passed by Hon`ble National Green Tribunal (NGT) Principal Bench, New Delhi in the Original Application No. 448 (THC) / 2013, U. R. Beniwal V/s State of Rajasthan & Others.**

**1. Report in relation to which area, if any, where extraction of water would be necessary for maintaining hygiene and environment as well as the life of the people in Jodhpur.**

Groundwater levels in Jodhpur city area have shown continuous rising trend since 1997. This has caused serious problem of appearance of water in the basements of buildings and dampening of walls in some parts of the city. In view of the above, Central Ground Water Board (CGWB) has taken up the study in 2001 to identify the causes of the rising water level problems in Jodhpur city and its remedial measure. The executive summary of the CGWB study report has been annexed herewith as **annexure -1**.

**Present status of Depth to Water Level in Jodhpur City area:**

The rising trend of ground water level has been observed in the Jodhpur city since 1997 and now it has reached up to the alarming stage in old walled city and its adjacent areas. The areas affected with rising water table have been divided in 4 zones which have shown in fig.1. The zone wise details of water level as on 15.08.2015, which are being monitored by Ground Water Department, Government of Rajasthan are shown below. The depth to ground water map (Pre monsoon, 2015) of Jodhpur city is presented in fig.2.

Zone No.	Name of Zone	No. of stations being monitored	Initial Average Water Level in m bgl (April 2009)	Minimum ground water level in m bgl	Maximum ground water level in m bgl	Average ground water level in m bgl
1	2	3	4	5	6	7
Zone 1	Kharbooja Baori Zone	4	1.38	0.35	3.30	<b>1.95</b>
Zone 2	Baiji ka Talab Zone	10	3.60	2.02	12.13	<b>5.94</b>
Zone 3	Gulabsagar-Fatehsagar Zone	12	2.61	0.10	12.01	<b>3.23</b>
Zone 4	Laxminagar-Mahamandir - BJS Colony Zone	8	3.62	1.70	4.52	<b>2.97</b>

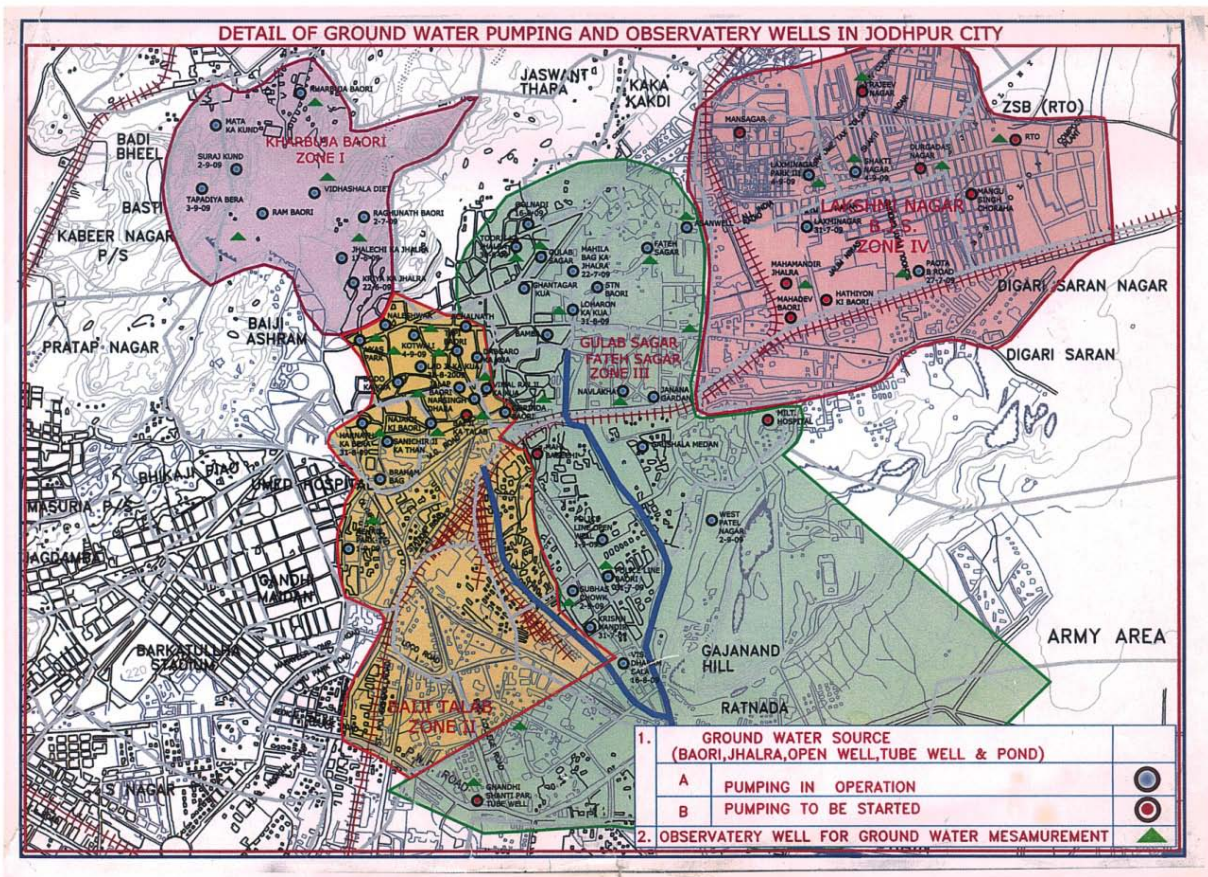


Fig.1: Map showing zones affected with rising water level problem of Jodhpur city.

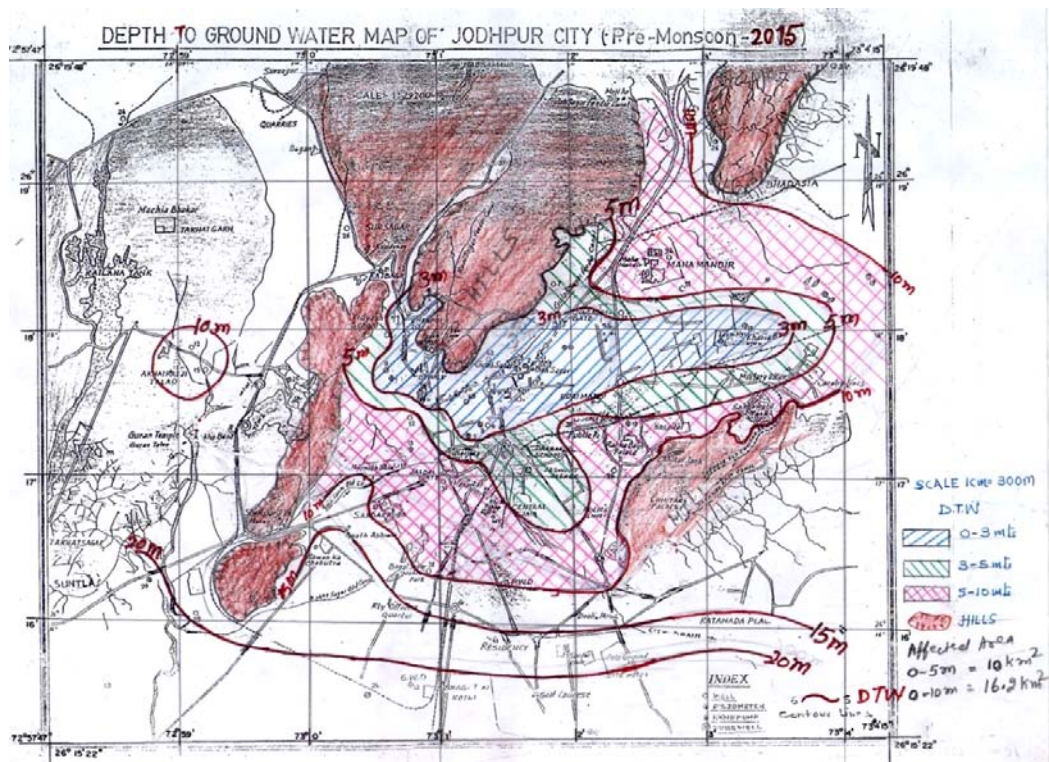


Fig.2: Depth to Ground Water Map (Pre-monsoon, 2015) of Jodhpur City.

### Ground Water Quality in Jodhpur City area:

Chemical quality of ground water in Jodhpur urban area exhibits wide variation ranging from fresh to saline water. The electrical conductance (micromhos/cm at 25<sup>0</sup>C) of ground water ranges between 310 (Gaushala near Police Line) to 8850 at Zanana Garden. Most of the water samples (90%) are having the Electrical conductance less than 2500 micromhos/cm at 25<sup>0</sup>C and only 10% samples are having the Electrical conductance more than 2500 micromhos/cm at 25<sup>0</sup>C.

**Chemical quality of the ground water is characterized by high Nitrate concentration.** In the major part of the walled city and Ratanada area ground water contains high nitrate (>45PPM). High fluoride concentration is observed in Ratanada area, Military Hospital area and Polo ground area. The Ground water Quality analysis of the water samples of rising water level affected area of Jodhpur City for the period of Pre-monsoon -2014 is given in table as below.

Table showing the Ground water Quality analysis of the water samples of rising water level affected area of Jodhpur City for the period of Pre-monsoon -2014.							
S. No.	Well Location	E.C. ( $\mu$ S/cm)	TDS (mg/L)	pH	Cl <sup>-1</sup> (mg/L)	NO <sub>3</sub> <sup>-1</sup> (mg/L)	F (meq/L)
1	AKHERAJ JI KA TALAB	1450	734	7.5	156	32	0.32
2	JETHA BERA	810	422	7.5	71	7	0.08
3	J.N.VYAS PARK	490	275	7.3	43	20	0.32
4	KRIYA KA JHALRA	780	410	7.6	71	10	0.24
5	RAGHUNATH BAORI	970	485	8	64	33	0.08
6	KAILANA - I	630	362	7.1	57	38	0.00
7	KAILANA - II	590	347	7.3	50	33	0.20
8	AJEET BHAWAN	1980	1169	8.0	199	144	6.00
9	RAMANUJ KOT	1330	844	7.4	113	240	0.40
10	POLICE LINE	2800	1688	7.7	333	242	3.72
11	MILITARY HOSPITAL	6800	4166	7.7	1135	510	2.40
12	FATEH SAGAR	1080	581	7.2	128	15	0.40
13	DEO NAGAR	1770	1082	7.3	234	178	0.00
14	SIWANCHI GATE	1500	841	7.6	156	131	0.20
15	GANTAGHAR	1330	742	7.5	135	102	0.00
16	NAV CHOKIYA	830	510	7.4	71	56	0.08
17	GAUESHALA	310	161	7.2	35	4	0.00
18	POLO GROUND	3220	1843	8.6	362	184	5.16
19	GORINDA BAORI	1400	856	7.7	135	113	0.24
20	CAZARI	1680	969	7.7	191	186	0.24
21	HATHI RAM KA ODA	800	479	7.5	57	35	0.08



22	KHANDA FALSHA	1190	653	7.4	92	35	0.00
23	ZANANA PARK	8850	5612	7.7	1489	1459	1.44
24	NEHRU PARK	430	248	7.4	28	28	0.00
25	HIGH COURT BACK	1040	612	7.6	78	43	0.40
26	P.W.D. COLONY	1100	604	8	92	27	1.80
27	SARDARPURA	2460	1464	7.8	241	204	1.12
28	MAHAMINDER JHALRA	2040	1169	7.6	213	240	0.80
29	TUNWARJI KA JHALRA	1460	832	7.6	106	135	0.60
30	GULAB SAGAR	1420	814	7.5	135	14	0.48
31	NEW CAMPUS UNI.	500	287	7.3	43	28	0.00

### **Remedial Measures adopted to address the problem of excessive groundwater and its utilization**

As a remedial measure, total 89 pumping stations have been put to extract ground water by Public Health & Engineering Department (PHED) for lowering of water table in affected areas. At present a total 27.892 MLD of ground water is being extracted by PHED through these abstraction structures. Out of this, 11.839 MLD is being utilized for conjunctive use in water supply, 5.337 MLD for gardening and remaining 10.716 MLD water is being discharged in Sewers and Nallahs by the PHED.

**In view of the above, there is an urgent need to lower the water table to avoid damage to civil structures and environment in the affected area of rising water level of Jodhpur city. In view of the same it is recommended that the ground water extraction from the area marked as Zone-I, Zone-II, Zone-III and Zone-IV in figure-1 given above in Jodhpur city is necessary for maintaining hygiene and environment as well as life of the people in Jodhpur.**

**Further it is also recommended that the ground water is being abstracted from the 89 sources from the rising water level affected area of Jodhpur city and is being discharged into the sewer and Nallas by PHED should be used gainfully for utilization in the industries and other uses within the city and adjoining areas by concerned State Govt. Departments.**

### **2. Report in relation to which parts of Jodhpur are critical or no extraction of ground water should be permitted.**

In Jodhpur district, four blocks i.e. Osian, Bhopalgarh, Bilara and Mandore has been declared notified w.e.f. 13.08.2011 by Central Ground Water Authority (CGWA) for regulation of ground water abstraction and management vide Public Notice 2/2011 (Copy of the notification dated 13.08.2011). The District Collector of the Jodhpur district has been declared as the "Authorized Officer" by the CGWA vide Statutory Order dated 19.08.2011

and empowered to take action as deemed fit for prohibition & restriction on the construction, installation of any ground water abstraction structure in Jodhpur district. As per the CGWA guidelines, in notified blocks/ areas, permission to abstract ground water through any energized means will not be accorded for any purpose other than drinking water. In non-notified blocks/areas, NOC for Ground Water withdrawal will be considered for industries/infrastructure projects which are either 'new' or under 'expansion' as per the prevailing guidelines of CGWA.

As per the Hon'ble NGT order (in OA No. 34/2014) dated 9.07.2015 and CGWA guidelines w.e.f. 16.11.2015, all existing Industries/projects which are drawing ground water and have not obtained NOC for ground water withdrawal from Central Ground Water Authority, either due to its coming into existence prior to formation of CGWA or due to Central Ground Water Authority, Government of India exemption from obtaining NOC as per earlier guidelines, shall apply to CGWA for NOC for ground water withdrawal with immediate effect. This would be applicable to States/UT's in which regulation of ground water withdrawal is being done by CGWA. The application has to be submitted online. The grant of NOC would be considered as per prevailing guidelines. It would be mandatory for these industries/projects to submit water quality report of effluents, if any, vetted by competent authority. The industry/project should have valid EC or 'consent to operate' under water act or referral letter issued by the State/ Central regulatory authority. A Public Notice dated 14.11.2015 has also been issued by CGWA, New Delhi in this connection for information of industries/projects.

Industries using water as raw material/water intensive industries like packaged drinking water, mineral water industries, distilleries, breweries, soft drink manufacturing industries, textiles, paper & pulp, etc. shall not be granted NOC for groundwater withdrawal from Over-Exploited areas. In Safe, Semi- Critical & Critical areas, NOC for ground water withdrawal is mandatory for these industries as per the CGWA guidelines. The

Table: Showing the categorization of the blocks in Jodhpur district as on 31.03.2011.

S. No.	Block	Net Annual Ground Water Availability (mcm)	Existing Gross Ground Water Draft for Irrigation (mcm)	Existing Gross G.W. Draft for Dom. & Ind. Use (mcm)	Existing Gross Ground Water Draft for all uses (mcm)	Stage of G.W. Development. (%)	Category
1	2	3	4	5	6	7	8
1	<b>BALESAR</b>	23.0749	43.3902	6.9440	50.3342	218.13	<b>OVER EXPLOITED</b>
2	<b>BAORI</b>	29.5836	112.1711	13.9320	126.1031	426.26	<b>OVER EXPLOITED</b>
3	<b>BAP</b>	56.7013	18.8964	5.7760	24.6724	43.51	<b>SAFE</b>
4	<b>BHOPALGARH</b>	51.2830	121.5065	9.9366	131.4431	256.31	<b>OVER EXPLOITED</b>
5	<b>BILARA</b>	42.6893	106.3878	11.1534	117.5412	275.34	<b>OVER EXPLOITED</b>
6	<b>LUNI</b>	21.2937	13.7416	1.8180	15.5596	73.07	<b>SEMICRITICAL</b>
7	<b>MANDORE</b>	26.3419	36.2156	8.1804	44.3960	168.54	<b>OVER EXPLOITED</b>
8	<b>OSIAN</b>	53.1362	181.9125	17.2800	199.1925	374.87	<b>OVER EXPLOITED</b>
9	<b>PHALODI</b>	46.1695	45.5220	23.3520	68.8740	149.18	<b>OVER EXPLOITED</b>
10	<b>SHERGARH</b>	36.8605	51.8926	5.7808	57.6734	156.46	<b>OVER EXPLOITED</b>
	<b>DISTRICT</b>	<b>387.1338</b>	<b>731.6363</b>	<b>104.1532</b>	<b>835.7895</b>	<b>215.89</b>	<b>OVER EXPLOITED</b>

categorization of the blocks in Jodhpur district based on ground water resource estimation as on 31.03.2011 is given in table below:

**In view of the above, and as per the CGWA guidelines ground water extraction cannot be permitted in four notified blocks i.e. Osian, Bhopalgarh, Bilara and Mandore blocks of Jodhpur district for any purpose other than drinking water. Industries using water as raw material/ water intensive industries like packaged drinking water, mineral water industries, distilleries, breweries, soft drink manufacturing industries, textiles, paper & pulp etc. will also not be permitted to abstract ground water in the non-notified overexploited blocks of Jodhpur district i.e. Balesar, Baori, Phalodi and Shergarh blocks.**