

केंद्रीय भूमि जल बोर्ड

जल संसाधन, नदी विकास और गंगा संरक्षण

विभाग, जल शक्ति मंत्रालय

भारत सरकार Central Ground Water Board Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti Government of India

AQUIFER MAPPING AND MANAGEMENT OF GROUND WATER RESOURCES AJMER DISTRICT, RAJASTHAN

> पश्चिमी क्षेत्र, जयपुर Western Region, Jaipur

Report on

AQUIFER MAPPING AND MANAGEMENT OF GROUND WATER RESOURCES AJMER DISTRICT, RAJASTHAN (UNDER XII PLAN)

Principal Contributors

Dr. Arijit Dey, Regional Director (I/C) Dr. Waseem Ahmad, Superintending Hydrogeologist Sh. M.K.Sharma, Senior Hydrogeologist Sh. Vipin Mishra, Senior Technical Assistant

Compiled By

Ms. Navjot Kaur, Junior Hydrogeologist Sh. Vipin Mishra, Senior Technical Assistant

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National Aquifer Mapping Programme District Ajmer, Rajasthan

PART A

Technical Report of District Ajmer, Rajasthan

1. Introduction

The increasing water scarcity has become one of the most challenging problem for developing country like India. Groundwater is a precious natural water resource considered as a readily available and safe source of water for domestic, agriculture and industrial uses. Our growing dependability on ground water has started diminishing this resource. The most significant change in the groundwater scenario in India is that the share of bore well irrigation went up from a mere 1 percent during 1960-61 to 60 percent during 2006-07 as per Indian Agricultural Statistic, 2008. About 85% of the rural drinking water supply is also met from ground water sources. Thus a need was felt for scientific management of groundwater resources and the need has turned to urgency in the present times. There has been a paradigm shift from groundwater development to groundwater management over the last decade. The importance of groundwater for national development has deemed it necessary to be more specific; more general "groundwater management" has become "aquifer management" to answer the specific queries on availability and sustainability. CGWB has taken up National Project on Aquifer Management (NAQUIM) in XII & XIII Plan period to formulate sustainable aquifer management plan.

1.1 Purpose and Scope

Aquifer mapping is a scientific process wherein a combination of geological, geophysical, hydrological and chemical fields and laboratory analyses have been applied to characterized the quantity, quality, and sustainability of ground water in aquifers. Aquifer mapping is expected to improve our understanding of the geological framework of aquifer, their hydrologic characteristics, water level in aquifer and how they changes over time and space and the occurrence of natural and anthropogenic contaminants that affect the portability of groundwater. Results of these studies will contribute significantly to resource management tools such as long term aquifer monitoring network and conceptual and quantitative regional groundwater flow models to be used by planners, policy makers and other stake holders. Aquifer mapping at appropriate scale can help to prepare, implement, and monitor the efficacy of various management interventions aimed at long term sustainability of our precious groundwater recourses, which in turn will help to achieve drinking water scarcity, improved irrigation facilities and sustainability of water resource in the state.

Under the National aquifer Programme, it is proposed to generate Aquifer Maps on 1:50000 scale, which basically aims at characterizing the aquifer geometry, behavior of groundwater levels and status of groundwater development in various aquifer system to facilitate planning of their suitable management. The major activities involved in this process include compilation of existing data, identification of data gaps, generation of data for feeling data gaps and preparation of different aquifer layers.

To get a clear 3D hydrogeological geometry of the aquifer system and water level behaviour, it was felt to generate more data through Groundwater Exploration, VES and to establish more numbers of monitoring stations for better understanding of the groundwater regime behavior in terms of both quantity and quality.

The state of Rajasthan comprises 34 districts. Out of these, 25 districts have already reached the level of over-exploitation. Various developmental activities over the years have adversely affected the ground water regime in the State. In the state of Rajasthan, National Aquifer Mapping & Management Programme (NAQUIM) has been taken up in 14 districts during current (XII) five year plan in four phases and Ajmer district has been covered in the first phase.

1.2 Location and Extent

The Ajmer district covering geographical area of 8,481 sq.km. is situated between $25^0 38$ ' & $26^0 58$ ' North Latitude and $73^0 54$ ' & $75^0 22$ ' East Longitude and occupies 2.48% of the total area of state (Figure 1). The name of Ajmer is derived from the word "Ajaymeru" which means the invincible hill. It is sub-divided into 4 sub-divisions namely Ajmer, Beawar, Kekri & Kishangarh and comprises of 6 tehsils & 8 blocks. The total number of villages in the district is 1,111 and total population is 25,84,913 comprising sex ratio of 950 females per 1000 of males (Census 2011 data). The decennial population growth rate of the district is 18.66% (2001-2011).



Figure 1: Index map of Ajmer District

1.3 Physiography and Drainage

The district is broadly triangular in shape and is generally a plain area interspersed with low hills of Aravalli ranges. The Aravalli hill ranges run parallel to each other roughly in NE-SW

direction giving rise to elongated valleys and divide plains of Marwar from the high elevated land of Mewar. The minimum elevation of 301 m amsl is found in Kekri block whereas highest elevation of 870 m amsl is observed in Pisangan block. Sand dunes and cluster of sand mounds cover a large part of the Sarsuti valley and area around Picholian & Pushkar valley. These features are usually formed due to abrupt termination of a hill range or existence of wind gaps in the hills.

There are no perennial rivers in the district. The major rivers of the district are Banas, Khari, Sagarmati and Rupnagar, which are ephemeral in nature and develop very good drainage system of the district. The district falls under three basins, i.e., Banas (64.88%), Luni (23.74%) & Shekhawati (11.38%). The breakup of the basin area falling in various tehsils is given in table-1:

S No	Tehsil	Area in sq km			
		Banas Basin	Shekhawati Basin	Luni Basin	
1	Ajmer	233.2	262.1	1291	
2	Beawar	514.4	0	728.7	
3	Kekri	1741.7	0	0	
4	Kishangarh	1168.8	700	0	
5	Nasirabad	994.7	5.9	0	
6	Sarwar	867	0	0	
	Total	5519.8	968	2019.7	

Table1: River basins of Ajmer district

Pushkar & Budha Pushkar are the two natural lakes present near the Ajmer city. The Pushkar Lake is nearly rectangular in shape and covers 22 sq.km of area. Due to heavy pumpage, the Budha Pushkar Lake has greatly dwindled in size from the original size of 1.5 sq.km. to a few hundred sq.m.

The physiography and drainage map of Ajmer district is depicted in figure 2.





1.4 Climate and Rainfall

January is the coldest month of this district with mean minimum temperature of 7.6° C and maximum temperature of 22.7°C. The temperature in the summer month of June reaches up to 48°C. The there is drop in temperature due to onset of monsoon in the end of June and temperature rises again in the month of September. The atmosphere is generally dry except during the monsoon period. The humidity is highest in the month of August with mean daily relative humidity of 80%. The annual potential evapotranspiration in the district is 1565.6 mm and is the highest in the month of May (243 mm).

The Climatological data of Ajmer district is shown in figure 3.

The mean annual rainfall (1987-2013) of the district is 450.2 mm. Almost 95% of the total annual rainfall is received during the southwest monsoon, which enters the district in the last week of June and withdraws in the middle of September. The probability of average annual rainfall exceeding 300 mm is only 90%, except at Mangliawas. However, there is 10% probability that the average rainfall exceeds 600 mm. The drought analysis based on agriculture criteria indicates that the district is prone to mild and normal type of droughts. Severe & very severe type of droughts are very rare and have occurred only twice in the following areas: 1987 & 2002 (Srinagar); 1977 & 1987 (Todgarh); & 1991 & 1993 (Vijaynagar).



Figure 3: Climatological Data

1.5 Soils & Land Use

1.5.1 Soils

The four types of soils are generally found in Ajmer district, i.e., Sierozome, Lithosol & Regosol, Brown soil and Alluvium which are discussed below.

a. Sierozome: This is arid soil, sandy loam to sandy clay, deep brown, calcareous and found in the northern part of Silora block. Cultivation is limited due to climatic factors.

b. Lithosols and Regosols of Hills: This type of soil is found in the western part of district in the Aravalli hills and hill slopes. These are reddish brown to greyish brown in colour and are mainly found at shallow depths where usually gravels are present. Cultivation is limited due to limited root zone.

c. Brown Soils (Saline Phase): These soils are pale brown to yellowish brown in colour and are developed mainly from alluvium and Proterozoic & Archaen rocks. These are associated with seasonal water table and are saline in nature. Cultivation is limited due to salinity.

d. Alluvium: These are found in plains and derived from alluvium. The richest type of alluvium soil is obtained from the sand hills of Pushkar. These are non-calcareous, semi-consolidated to

unconsolidated, brown, loamy sand to sandy loam and occupy gently sloping terrains in central and eastern part of the district.

1.5.2 Land Use

The total forest area of the district is 563.64 km.sq. (6.64%). The area under cultivated land is 5,742.43 sq.km. (67.70%) while under uncultivated land is 2,174.93 sq.km. (25.64%). Net area under irrigation is 578.33 sq. km. which is 6.81% of the total geographical area of Ajmer district. Currently, there is no irrigation project in this district. Dug wells are the prime source of irrigation whereas bore wells & tube wells are limited because of low discharge. Dug well and tube well together irrigate about (95.80%) of total cultivated area and rest 4.20% of area is irrigated by canals, tanks and other sources.

The major Kharif crops of the district are bajra, jowar, pulses, maize & groundnut and the main Rabi crops are wheat, barley, gram & oil seeds. Cotton is another important cash crop grown in the district.

1.6 Data Analysis

Data collected from Ground Water Department, Government of Rajasthan, PHED and CGWB has been brought to a standard format and integrated location map have been prepared for groundwater monitoring, exploration, surface water and agriculture data. Based on these maps and hydrogeological conditions in the area, Ajmer District needs further data to be generated in the gaps. The details of existing data for exploration, VES and monitoring are given in Annexures I, II and III, respectively, for the selected NAQUIM areas.

1.7 Data Collection & Generation

On the basis of available data of exploratory tube wells drilled by CGWB/GWD/PHED, the status of data were assessed and based on that, gaps were identified for data to be generated in respect of quality, quantity and lithology (through exploration as well as VES). Data pertaining to available statistics on cropping pattern and land under agriculture use was collected from statistic directorate for recommending the management plan of the available resource keeping in view of the prevailing cropping pattern. The details of data generation proposed during different AAPs are given in Table 2. The proposed locations for exploration, VES, cation-anion analysis and isotopic analysis are presented in Annexures IV, V, VI and VII, respectively.

Table 2: Data Generation during different AAPs

AAP 2013-14

	Taluka	Bhinay	Jawaja	Masuda
	District	Ajmer	Ajmer	Ajmer
	Area (sq.km.)	230	270	500
Sl.No	Activities			
1	DATA GENERATION			
1.1	Generation of geological and geomorphological layers			

	Taluka	Bhinay	Jawaja	Masuda
1.1a	Sub-surface geology,Geomorphological Analysis & Land Use Pattern(Sq.km)	230	270	500
1.2	Surface and Sub-surface geo electrical and gravity data generation			
1.2a	Vertical electrical Sounding (VES) (Nos @ 27/TS)	6	0	14
1.2b	Bore Hole Logging (Nos - Old+New)	0	0	0
1.3	Hydrological information and Parameters on Ground water recharge			
1.3a	Soil infiltraion studies (Nos @ 3/TS)	1	1	3
1.3c	Preparation of Drainage Map , Demarcation of Water Bodies, Rainfall data analysis for estimation of recharge to ground wtaer Canal flow ,impact of recharge structures analysis, surface water-ground water interaction studies etc (area in sq.km)	220	270	500
1.4	Generation of Hydrogeological data for preppartion of Hydrogeological maps in 1:50,000 scale	230	270	500
1.4a	Water level monitoring (No of stations* frequency) (Nos- KOW+EW/OW)	19	22	46
1.4b	Exploratory drilling (EW & OW) including Pumping test (Nos)			
i	Soft Rock(300m) -EW	0	0	0
ii	Soft Rock(300m) -OW	0	0	0
iii	Soft Rock(200m) -EW	0	0	0
iv	Soft Rock(200m) -OW	0	0	0
v	Hard Rock(200m) -EW	1	0	3
vi	Hard Rock(200m) -OW	1	0	3
1.4c	Slug test (Nos @1/TS)	0	1	1
1.4d	Specific Yield test (Nos @3/TS)	1	1	3

	Taluka	Bhinay	Jawaja	Masuda
1.4e	Microlevel sub-surface hydrogeological data from existing wells (Nos @54/TS))	16	8	27
1.5	Genertation of water quality parameters			
1.5a	Analysis of Ground water for major anion and cations (Nos as per WS collections from all KOW)	19	22	46
1.5b	Analysis of Ground water for heavy metals(Nos @13/TS)	19	22	46
1.5c	Analysis of Ground water for Pesticides/Bacteriological contamination in Ground water (Nos @10/TS)	3	3	7
1.5d	Carbon dating (Nos @1/TS)	0	1	1
1.5e	Isotopic studies (Nos @ 9/TS)	3	3	7

AAP 2014-15

	Taluka	Bhinay	Jawaja	Masuda
	District	Ajmer	Ajmer	Ajmer
	Area (sq.km.)	577	214	317
Sl.No	Activities			
1	DATA GENERATION			
1.1	Generation of geological and geomorphological layers			
1.1a	Sub-surface geology,Geomorphological Analysis & Land Use Pattern(Sq.km)	577	214	317
1.2	Surface and Sub-surface geo electrical and gravity data genertaion			
1.2a	Vertical electrical Sounding (VES) (Nos @ 27/TS)	25	20	9
1.2b	Bore Hole Logging (Nos - Old+New)	0	0	0
1.3	Hydrological information and Parameters on Ground water recharge			
1.3a	Soil infiltraion studies (Nos @ 3/TS)	2	5	0

	Taluka	Bhinay	Jawaja	Masuda
1.3c	Preparation of Drainage Map , Demarcation of Water Bodies, Rainfall data analysis for estimation of recharge to ground wtaer Canal flow ,impact of recharge structures analysis, surface water- ground water interaction studies etc (area in sq.km) Generation of	577	214	317
	Hydrogeological data for preppartion of Hydrogeological maps in 1:50,000 scale			
1.4a	Water level monitoring (No of stations* frequency) (Nos- KOW+EW/OW)	25	17	16
1.4b	Exploratory drilling (EW & OW) including Pumping test (Nos)			
i	Soft Rock(300m) -EW	0	0	0
ii	Soft Rock(300m) -OW	0	0	0
iii	Soft Rock(200m) -EW	0	0	0
iv	Soft Rock(200m) -OW	0	0	0
v	Hard Rock(200m) -EW	2	3	1
vi	Hard Rock(200m) -OW	2	3	1
1.4c	Slug test (Nos @1/TS)	1	4	0
1.4d	Specific Yield test (Nos @3/TS)	2	5	0
1.4e	Microlevel sub-surface hydrogeological data from existing wells (Nos @54/TS))	32	9	21
1.5	Genertation of water quality parameters			
1.5a	Analysis of Ground water for major anion and cations (Nos as per WS collections from all KOW)	25	17	16
1.5b	Analysis of Ground water for heavy metals(Nos @13/TS)	25	17	16
1.5c	Analysis of Ground water for Pesticides/Bacteriological contamination in Ground water (Nos @10/TS)	9	8	4
1.5d	Carbon dating (Nos @1/TS)	1	0	1
1.5e	Isotopic studies (Nos @ 9/TS)	9	8	4

AAP 2016-17

	Taluka	Arain	Bhinay	Kekri	Kishangarh (Silora)	Peesangan	Srinagar
	District	Ajmer	Ajmer	Ajmer	Ajmer	Ajmer	Ajmer
	Area (sq.km.)	1064	344	890	1013	1108	940
Sl.N o	Activities						
1	DATA GENERATION						
1.1	Generation of geological and geomorphologic al layers						
1.1a	Sub-surface geology,Geomor phological Analysis & Land Use Pattern(Sq.km)	1064	344	890	1013	1108	940
1.2	Surface and Sub-surface geo electrical and gravity data genertaion						
1.2a	Vertical electrical Sounding (VES) (Nos @ 27/TS)	43	14	40	46	48	30
1.2b	Bore Hole Logging (Nos - Old+New)	0	0	0	0	0	0
1.3	Hydrological information and Parameters on Ground water recharge						
1.3a	Soil infiltraion studies (Nos @ 3/TS)	6	0	3	6	8	4
1.3c	Preparation of Drainage Map , Demarcation of Water Bodies, Rainfall data analysis for estimation of recharge to ground wtaer Canal flow ,impact of recharge structures	1064	344	890	1013	1108	940

	Taluka	Arain	Bhinay	Kekri	Kishangarh (Silora)	Peesangan	Srinagar
	analysis, surface water-ground water interaction studies etc (area in sq.km)						
1.4	Generation of Hydrogeologica I data for preppartion of Hydrogeologica I maps in 1:50,000 scale						
1.4a	Water level monitoring (No of stations* frequency) (Nos- KOW+EW/OW)	35	7	23	32	41	32
1.4b	Exploratory drilling (EW & OW) including Pumping test (Nos)						
i	Soft Rock(300m) -EW	0	0	0	0	0	0
ii	Soft Rock(300m) -OW	0	0	0	0	0	0
iii	Soft Rock(200m) -EW	0	0	0	0	0	0
iv	Soft Rock(200m) -OW	0	0	0	0	0	0
v	Hard Rock(200m) - EW	8	3	5	8	7	4
vi	Hard Rock(200m) -OW	8	3	5	8	7	4
1.4c	Slug test (Nos @1/TS)	2	2	2	3	1	3
1.4d	Specific Yield test (Nos @3/TS)	6	0	3	6	8	4
1.4e	Microlevel sub- surface hydrogeological data from existing wells (Nos @54/TS))	65	30	62	68	75	67
1.5	Genertation of water quality parameters						

	Taluka	Arain	Bhinay	Kekri	Kishangarh (Silora)	Peesangan	Srinagar
1.5a	Analysis of Ground water for major anion and cations (Nos as per WS collections from all KOW)	35	7	23	32	41	32
1.5b	Analysis of Ground water for heavy metals(Nos @13/TS)	19	6	16	18	20	17
1.5c	Analysis of Ground water for Pesticides/Bacter iological contamination in Ground water (Nos @10/TS)	15	4	15	17	20	13
1.5d	Carbon dating (Nos @1/TS)	1	1	1	1	2	1
1.5e	Isotopic studies (Nos @ 9/TS)	15	4	15	17	20	13

2. Aquifer System

Geologically, Ajmer district is occupied by Bhilwara and Delhi Supergroups, which have been further divided into groups and formations. The rocks of Bhilwara Supergroup occur from Deyi in the north-east through Kishangarh to Sarwar area, underlying the marwar plains and comprise meta-sedimentary sequences with associated migmatic complex and igneous rocks. The main Aravalli range extending from Rupnagar in the north to Todgarh in south is occupied by the rocks of Delhi Supergroup which comprises calcareous, argillacious and arenaceous metasedimentary sequences with associated basic volcanics and igneous rocks.

The rocks of the district have been complexly folded, faulted, metamorphosed and migmatised during orogenic episodes related to different geological cycles. The generalized geological succession of the district is tabulated in table 3. Aquifer system in the study area is governed by the underlying geological formations as well as the recharge conditions and level of ground water exploitation.

Based on the existing data and the data generated so far, map of aquifer system for Ajmer district has been prepared and depicted in figure 4. The major aquifers of the district are alluvium, schist, gneiss, granites, limestone and phyllite of Bhilwara Supergroup & Delhi Supergroup. Groundwater occurs under unconfined to semi-confined conditions in weathered and fractured part of the consolidated formation. The hard rocks form generally poor aquifers compared to alluvium.

Alluvium covers only 494 sq.km. (5.83%) area of district and is found at isolated locations in eastern (Kekri block) & western parts (Pisangan, Srinagar & Silora block) . The thickness of alluvium near Srinagar is 20 m whereas in the Roopnagar valley it is quite thick and extends up to 40m. The yield of tube wells in alluvium varies from 50 to 150 m^3/day .

Schist covers 2,690 sq.km.(31.72%) of area in the western part of the district in parts of Pisangan, Srinagar, Silora, Masuda and Jawaja blocks. The yield of open wells tapping schist varies from 40 to 80 m³ /day whereas wells located along the intrusions of quartz vein and pegmatite yield 100 to 170 m³ /day.

Quartzite forms aquifer in different isolated areas of limited extent, mainly in topographic lows in the western part of the district in the vicinity of Roopnagar, Shangarh, Ajmer, Beawar and west of Nasirabad. The yield of wells tapping quartzite ranges from 40 to $100 \text{ m}^3/\text{day}$.

Limestone occurs between Bassi & Nand along Sasuti valley, confluence of Sasuti & Sagarmati Rivers in the north and Baktawarpura in the south. It does not form potential aquifer and yield of wells upto 100 m^3 /day has been observed at isolated locations.

The transmissivity of alluvium aquifer is about 40 m²/day whereas it varies from 4.6 to 330 m² /day in hard rock areas.

Post Delhi Intrusives		Erinpura granites Sendra Ambaji granite & gneisses Kishangarh syenite Phulad ophiolite suit		
Delhi		Barr Formation	Ajabgarh	Ajmer
Supergroup	Kumbhalgarh Group	Kotra Formation	Group	Formation
		Beawar Formation	-	
		Sendra Formation		
		Todgarh Formation		
		Kelwara Formation	Alwar	Naulakha
	Gogunda Group	Antalia Formation	Group	Formation
				Srinagar
				Formation
Bhilwara		Sawar Group	Morhi Fo	rmation
Supergroup		Giyan Asind Acid Rocks	Rajpur-jalayan	Mafic Rocks
	Intrusive	Mangalwar Complex Kekri		
		Formation	Sandmata Complex Banranch formation	

 Table 3: Geological succession (Geological Survey of India)





2.1 Ground Water Exploration before NAQUIM

A total number of 66 nos. of bore wells (6 in Alluvium & 60 in Hard formations) have been drilled in different parts of the district. In alluvial area 5 nos. of EW & 1 nos. of SH have been drilled. The depth of tube wells ranges from 31 to 50 m and discharge varies from 277 to 330 lpm. The Transmissivity of alluvium aquifer is $41 \text{ m}^2/\text{day}$ and storage coefficient is 5.4×10^{-2} . In hard rock terrain, 51 nos. of bore wells (5 nos. of OW) and 9 nos. of Pz have been drilled. The depth range of bore wells varies from 35 to 203 m whereas discharge ranges from less than 50 to 720 lpm in these formations.

2.2 Ground Water Exploration under NAQUIM

After the detailed studies of aquifers and optimization of data gap analysis, a total no. of 62 bore wells have been established in Ajmer district under NAQUIM including 10 Pz, 18 OW and 34 EW. The details of the wells along with their aquifer parameters have been given in Annexure VIII. The depth of drilling varies 35.1 m to 202.90 m and the discharge of these wells ranges from meager to 15 lpm.

Based on the lithologs of exploratory wells drilled by CGWB and GWD, a lithological model has been prepared for Ajmer district. (figure 5)



Figure 5: 3-D Lithological Model

From the selected available data from exploratory wells, various cross sections depicting the aquifer disposition along with aquifer saturation and quality maps using Rockworks software have been prepared which are shown below in figure 6A & 6B.



Figure 6A: Aquifer Disposition with Saturation



Figure 6B: Section along A A'

Under Mission Mode, 122 No. of VES have been conducted in Ajmer district. (Locations in Annexure XI). On the basis of available and generated geophysical data, interface between saline and fresh groundwater formations has been demarcated and shown below in figure 7.



Figure 7: Aquifer dispositions with Quality of Groundwater

3. Groundwater Levels

3.1 Depth to Water Level

The depth to water level as recorded at 28 NHS ranges from 3.13 to 30.80 mbgl during pre monsoon and 1.45 to 28.89 mbgl during post monsoon. The depth to water level maps for pre monsoon and post monsoon, 2015 are shown in figure 8 and figure 9, respectively. According to depth to water level map of pre monsoon, 2015, the water level ranges between 5 to 20 mbgl in major part of district covering Bhinai, Masuda, Jawaja, Srinagar and parts of Pisangan, Kishangarh & Kekri blocks. It is shallower in eastern parts and quite deeper upto 40 mbgl in northern & western parts of district. The depth to water level map for post monsoon is also showing the same pattern of water levels as the pre monsoon map.



Figure 8: Depth to Water Level – Pre-monsoon (May 2015)





3.2 Long Term Fluctuation

The decadal water level fluctuation map for the last 10 years (2006-2015) has been presented in figure 10. The water level rise varying from 0 to 4 m has been observed in most parts of district covering Kekri, Bhinai, Arain, Masuda, Jawaja and Kishangarh blocks. In major part of Srinagar and Pisangan blocks, water level rise of more than 4 m has been seen during this time period. However, water level fall upto 2 m has also been observed in some isolated patches in northern, central and southern parts of district.



Figure 10: Decadal Fluctuation in water level

The long term Hydrographs for selected stations have been presented in Figure 11. The hydrographs of Arain, Kekri, Jawaja, Kishangarh, Srinagar and Pisangan blocks are showing water level rise both during pre monsoon as well as post monsoon. The rate of water level rise varies from 0.06 to 0.18 m/year during pre monsoon and 0.03 to 2.48 m/year during post monsoon. In Bhinay and Masuda Blocks, water level decline rates varying from 0.07 to 0.23 m/year during pre monsoon and 0.06 to 0.11 m/year during post monsoon have been observed. At places, the water levels have gone so deep that the alluvial part of the aquifer is almost completely desaturated.







Figure 11: Behaviour of water levels with time

3.3 Elevation of Water Table

Based on the available data, the water table elevation map has been generated and shown in figure 12. As per map, the elevation of water table in the area ranges between 325 to 515 m amsl. The highest elevation of water table of nearly 515 m amsl is in the south western part of the district while the lowest elevation of 320 m amsl has been observed in the south eastern part of district.

Water Table Elevation





Figure 12: Water Table Elevations

4. Groundwater Quality

The Quality of groundwater of Ajmer district in general varies from potable to saline. The shallow ground water aquifers are comparatively more deteriorated than the deeper aquifers. The hydrochemistry of principal chemical constituents of ground water based on the NHS monitoring data for this district has been given in table 4. The hydrochemistry of wells drilled under NAQUIM has been presented in Annexure IX. The water samples are also collected from specific sites for stable isotope analysis and the locations of these sites are given in Annexure X. The samples collected for stable isotope analysis are under analysis.

Block	EC (mmhos	EC (mmhos/cm at 25 [°] C		Chloride (mg/l)		Nitrate (mg/l)		Fluoride (mg/l)	
	Min	Max	Min	Max	Min	Max	Min	Max	
Arain	1120	9180	90	2246	55	300	0.40	3.50	
Bhinai	-	-	_	-	_	-	-	-	
Jawaja	560	5960	63	1326	15	250	0.80	1.20	
Kekri	488	10490	54	2792	2	60	0.40	1.50	
Masuda	920	2430	116	392	16	165	0.50	1.20	
Pisangan	1950	4020	350	1040	55	65	0.60	1.80	
Srinagar	1510	4300	181	842	25	150	1.10	2.30	

Table 4: Ranges of Principal chemical constituent in groundwater

The details of important water quality parameters have been discussed below:

4.1. Electrical Conductivity (EC)

The Electrical Conductivity value in Ajmer district varies from 488 to10490 μ S/cm at 25^oC. The Iso electrical conductivity map of Ajmer district according to pre monsoon, May 2015 data is presented in figure 14. A very high value of EC more than 3000 mmhos/cm at 25^oC has been observed in Arain, Bhinay, Sringar and Kishangarh blocks. In major part of these blocks, the EC value is more than 5000 μ S/cm at 25^oC. In entire western side and some south eastern parts, EC values are less than 3000 μ S/cm at 25^oC.





As compared to shallow aquifer, deeper aquifers are brackish to saline with electrical conductance ranging between 670 & 12320 μ S/cm at 25⁰C. Groundwater is brackish (more than 3000 to 18030 μ S/cm) along Bhilwara – Ajmer border near the Khari River. High conductivity

in groundwater makes the area unfit for non-salt tolerance crops. Mostly Salt tolerant crops are suggested in these areas.

4.2. Fluoride

The concentration of fluoride in Ajmer district varies from 0.40 to 3.50 mg/l. In Srinagar, Masuda, Pisangan and Jawaja blocks, high fluoride values of more than 1.5 mg/l exceeding its permissible limit have been observed during pre monsoon, May 2015. Deeper aquifer has relatively better quality water in respect of fluoride contamination and varies from 1.0 to 7.96 mg/l. The distribution of the fluoride content in Ajmer district as per May, 2015 hydrochemical data is shown in figure 14.



Figure 14: Distribution of Fluoride Map

4.3. Nitrate

The concentration of the nitrate in Ajmer district varies from 2 to 300 mg/l. The Nitrate distribution map for pre monsoon, May 2015 has been presented in Figure 15. The higher values of Nitrate above its permissible limit of 45 mg/l have been observed in Pisangan, Masuda and Srinagar blocks.



Figure 15: Nitrate Distribution Map

4.4. Iron

The value of iron in Ajmer district varies from 0.1 to 5.1 mg/l. In Pisangan, Masuda and Srinagar blocks, iron values above its permissible limits of 0.3 mg/l has been seen. The Iron distribution map for pre monsoon, May 2015 has been presented in Figure 16.





5. Groundwater Resources

The Groundwater resources have been reassessed as on 31.3.2013 based on the methodology recommended by Groundwater Estimation Committee (1997). The blockwise resources for Ajmer district are given in Table 5. All the blocks of Ajmer district fall in over exploited category.

Groundwater resource estimation data of Ajmer district shows that net groundwater availability of the district is 320.6615 MCM whereas ground water draft for all uses is 471.4042 MCM. Due to this, the stage of groundwater development has reached to 147.01%.

Block	Area of Block (Sq.km.)	Potential zone area (Sq.km.)	Total Annual Groundwa ter Recharge (MCM)	Natural Discharge during Non- Monsoon season (MCM)	Net Annual Groundwa ter Availabilit y (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. Develop ment (%)	Cate gory
ARAIN	1194.40	1064.01	45.4517	4.5452	40.9065	42.8634	3.9694	46.8328	114.49	OE
BHINAI	1216.19	1150.82	49.3181	4.9318	44.3863	46.1352	4.0533	4\50.1885	113.07	OE
JAWAJA	674.51	484.33	21.8493	2.1850	19.6643	21.8732	6.5426	29.4158	149.59	OE
KEKRI	985.92	889.67	55.456	3.8829	51.5717	84.03242	4.9804	89.0128	172.60	OE
MASUDA	891.99	817.00	35.8287	3.5829	32.2458	33.9672	3.7621	37.7293	117.01	OE
PISANGAN	1239.91	1108.05	61.3554	5.8284	55.5270	106.3695	9.4225	115.7920	208.53	OE
SILORA	1245.09	1012.88	49.1238	4.9124	44.2114	54.6984	4.7341	59.4325	134.43	OE
SRINAGAR	1032.99	940.00	35.3552	3.2067	32.1485	33.0642	9.9364	43.0006	133.76	OE
DISTRICT	8481.00	7466.76	353.7368	33.0753	320.6615	424.0035	47.4007	471.4042	147.01	OE

Table 5 Groundwater resource, Draft and stage of development (as on 31.03.2013)



Figure 17: Groundwater Resources over the years

The year wise comparison of net ground water availability with gross ground water is shown in figure 17. It shows that gross draft has significantly increased over time from 2004 to 2013 due to over usage of ground water resources.

5.1. Groundwater Recharge

The total groundwater recharge during monsoon and non monsoon season through rainfall and other sources in Ajmer district is 353.7368 MCM. Considering the natural discharges @ 10%, the Net groundwater Availability comes out to the value of 320.6615 MCM

5.2. Groundwater Abstraction

The groundwater development in the district is being done through dug wells, bore wells and dug cum bore wells. Dug wells with horizontal boring are very common. The diameter of dug well varies from 3 m to 5 m. The depth and diameter of the dug wells and tube wells depend on formation and geomorphology. However, general depth of dug wells ranges from 25 to 30 m and bore wells between 80 to 100 m in alluvium & 65 to 200 m in hard rocks. The present stage of ground water development in the district is 143.57%, which indicates that the scope of groundwater development is already exhausted.

6. Groundwater Related Issues & Problems

6.1. Decline in Water Level

All blocks fall under over-exploited category having stage of groundwater development more than 100% which has been resulted due to depletion in water level. The long term analysis of hydrographs shows that the rate of decline in groundwater is more in Masuda and Srinagar blocks.

6.2. Quality Hazard

Salinity: Salinity is found beyond permissible limit in more than 40% of samples collected from the Ajmer district.

Fluoride: Fluoride content above permissible limit is found in 14% of the samples.

Nitrate: Nitrate content beyond permissible limit is found in the 17% samples collected from the district.

6.3. Water Scarcity

Almost entire district is facing groundwater scarcity problem, though water supply from Bisalpur reservoir has solved drinking water problem to some extent in urban areas. The greater part of the district is occupied by hard formations so the well yields are very poor. As such the depth of weathered zone is generally restricted up to 50m. The deep-seated fractures below 100 m are very rare. This causes reduction in the well yield drastically during the summers creating acute water shortage of domestic water supply. However, in selective areas located on structural weak planes which are connected to some recharge source wells continue to yield moderate quantity of water. The deeper levels are either devoid of ground water or of poor quality (brackish to saline). Alluvium occurs at limited places along the major drainage/ valley fills and has shallow thickness. The well yield varies considerably year to year in different parts of the district and over the season. Thus the availability of surface as well as ground water is very scarce in low rainfall years & especially in summer months.

7. Management Plan

In order to manage the ground water resources and to control further decline in water levels, a management plan has been proposed. The management plan comprises two components- supply side management and demand side management. Since there is very little surplus surface water available in this district, very little intervention in the form of supply side management could be proposed.

7.1. Supply Side Management

The supply side management of ground water resources can be done through the artificial recharge of surplus runoff available within river sub basins and micro watersheds. Also it is necessary to understand the unsaturated aquifer volume available for recharge. The unsaturated volume of aquifer for the Ajmer district is computed based on following; the area feasible for recharge, unsaturated depth below 5 m bgl and the specific yield of the aquifer. The block-wise volume available for the recharge is given below in table 6.

Block	Geographical Area	Area Feasible for	Unsaturated	
	(sq.km)	Recharge (sq.km)	Volume (MCM)	
Arain	1194.40	1064.01	135.34	
Bhinay	1216.19	1150.82	203.35	
Jawaja	674.51	484.33	60.30	
Kekri	985.92	889.67	185.68	
Kishangarh	1245.09	1012.88	265.88	
Masuda	891.99	817.00	165.44	
Peesangan	1239.91	1108.05	934.14	
Srinagar	1032.99	940.00	218.55	
Total	8481.00	7466.76	2169.00	

 Table 6: Area Feasible and Volume Available for Artificial Recharge

It can be seen that huge volume is available for artificial recharge in this district. The total unsaturated volume available is 2169 MCM and it ranges from 60.30 MCM in Jawaja block to 934.14 MCM in Peesangan block.

However, adequate surplus surface water is not available to recharge this volume. The basin wise and watershed wise surplus surface water availability at 75% dependability level was obtained from the Water Resources Department of Govt. of Rajasthan for calculation of surplus surface water. The available surplus runoff can be utilised for artificial recharge through construction of recharge shafts in existing ponds and Percolation tanks at suitable location. The number of Recharge Shaft is decided based on the number of suitable ponds available within the zone. If still some surplus remaines unallocated, than few Percolation tanks are proposed at suitable locations. Thus, the entire surplus available cannot be utilised in some areas where suitable ponds for recharge shaft of suitable locations for percolation tanks are not available. Besides, the areas with shallow water levels (less than 5 m bgl) are also to be excluded.

After taking into consideration all the factors, the surplus of 2.49 MCM has been calculated for Ajmer district which can be utilised for recharge. The usage of this surplus in various types of recharge structures is given in table 7. By taking surplus of 0.035 MCM for each recharge shaft,

80 No. of recharge shafts can be constructed in existing ponds. No Percolation tanks are proposed in this district due to non-availability of extra surplus water after allocation for recharge shafts. By considering 80% of the total recharge as effective recharge, these structures would lead to about 1.92 MCM/year effective recharge. The tentative location of these structures along with map are given in Part B.

Block	Usable Surplus Water (MCM)	Recharge Shafts proposed	Percolati on Tanks Proposed	Recharge from Recharge Shaft (MCM)	Recharge from Percolatio n Tanks (MCM)	Total Recharge (MCM)	Effective Recharge (MCM)	Remarks
Arain	0.61	21	0	0.63	0.00	0.63	0.50	
Bhinay	0.00	0	0	0.00	0.00	0.00	0.00	No surplus
Jawaja	0.11	3	0	0.09	0.00	0.09	0.07	
Kekri	0.87	29	0	0.87	0.00	0.87	0.70	
Kishangarh	0.32	8	0	0.24	0.00	0.24	0.19	
Masuda	0.04	1	0	0.03	0.00	0.03	0.02	
Peesangan	0.34	11	0	0.33	0.00	0.33	0.26	
Srinagar	0.20	7	0	0.21	0.00	0.21	0.17	
Total	2.49	80	0	2.40	0.00	2.40	1.92	

 Table 7: Recharge Structures Proposed

7.2. Demand Side Management

Though not much augmentation can be done through supply side management due to less availability of surplus water, applying the techniques of demand side management can save large amount of water. Demand side management has been proposed through two interventions – use of sprinkler irrigation in the areas where rabi crop is being irrigated through ground water and changing the more water intensive wheat crop to gram (chick pea).

7.2.1 Sprinkler Irrigation

Based on the data vailable by Agriculture Department, Government of Rajasthan, it has been worked out that about 43.75 MCM/year can be saved by application of Sprinkler Irrigation in about 50% of the area irrigated by ground water. This can be achieved by bringing 1795118 ha area under sprinkler irrigation. The district wise area, proposed to be brought under sprinkler irrigation, is given in table 8 below.

Block	Total Irrigated Area (ha)	Area proposed for Sprinkler irrigation (ha)	Water Saving (MCM)
Arain	9385	4693	3.75
Bhinay	13028	6514	5.21
Jawaja	4293	2146	1.72
Kekri	26101	13050	10.44
Kishangarh (Silora)	6413	3207	2.57

Table 8: Sprinkler Irrigation – Area proposed and Water Saving
Block	Total Irrigated Area (ha)	Area proposed for Sprinkler irrigation (ha)	Water Saving (MCM)
Masuda	16260	8130	6.5
Peesangan	23716	11858	9.49
Srinagar	10177	5088	4.07
Total	109373	54686	43.75

7.2.2 Change in Cropping Pattern

The major Rabi crop in this district is wheat. It is estimated that cultivating gram rather than wheat in these districts can save additional 46.55 MCM/year of water. The district wise saving, if crop is changed from wheat to gram, is given in table 9 below.

District	Irrigated Area (ha)	Area Proposed for Wheat to Gram (ha)	Water Saving (MCM)
Arain	9385	3648	3.65
Bhinay	13028	6268	6.27
Jawaja	4293	3200	3.2
Kekri	26101	8507	8.51
Kishangarh (Silora)	6413	2381	2.38
Masuda	16260	8722	8.72
Peesangan	23716	10042	10.04
Srinagar	10177	3782	3.78
Total	109373	46550	46.55

 Table 9: Change in Cropping Pattern- Area proposed and Water Saving

7.3. Water Saving

Considerable saving of ground water can be achieved if the proposed supply side and demand side management plans are implemented. With the implementation of supply side management, additional 1.92 MCM/year can be recharged. This would increase the replenishable recharge to ground water from 320.6615 MCM/year to 322.5815 MCM/year.

It can be seen that not much augmentation in ground water resources can be achieved through artificial recharge due to constraints of availability of surplus/non-committed surface water. However, considerable improvement in ground water situation can be achieved with implementation of demand side management plans.

With the proposed use of sprinkler irrigation in the areas where rabi crop is being irrigated through ground water it is expected that 46.55 MCM/year can be saved due to reduction in pumping and with changing the wheat crop to gram (chick pea) and additional 43.75 MCM/year can be saved due to reduction of pumping. With implementation of these two interventions, a total of 90.30 MCM/year can be saved. This may lead to a total reduction in ground water draft from 471.4042 MCM/year to 381.1042 MCM/Year. And with this the stage of ground water

development may come down from 147.01 to 118.142%. These interventions may progressively lead to further improvement in ground water situation over the years.

A table giving district wise details of ground water recharged and saved, along with expected improvement in stage of ground water development is given in table 10.

Block	Water	Water	Water	Total	Replenish	Total	Stage of	Ground	Ground	Expected
	Recharg	Saving	Savin g by	wate	able Bosourcos	Ground	Develop	water Bosourcos	water Droft	Stage of
	eu by sunnly	by snrinkl	g vy chang	r Savin	(as per	water Draft	ner	nesources after	ofter	ent
	suppry side	spi iliki er	e in	σ	GWRE.	(as ner	GWRE.	Supply	Deman	CIIt
	manage	CI .	cropp	5	2013)	GWRE	2013)	side	d Side	
	ment		ing			. 2013)		Managem	Manage	
			patter			,,		ent	ment	
			n							
	MCM/	MCM/	MCM/	MCM	MCM/	MCM/	%	MCM/	MCM/	%
	year	year	year	/ year	year	year		year	year	
Arain	0.50	3.75	3.65	7.4	40.9065	46.8328	114.49	41.4065	39.4328	95.23336
Bhinay	0.00	5.21	6.27	11.48	44.3863	50.1885	113.07	44.3863	38.7085	87.20822
Jawaja	0.07	1.72	3.2	4.92	19.6643	29.4158	149.59	19.7343	24.4958	124.128
Kekri	0.70	10.44	8.51	18.95	51.5717	89.0128	172.6	52.2717	70.0628	134.0358
Kishangarh (Silora)	0.19	2.57	2.38	4.95	44.2114	59.4325	134.43	44.4014	54.4825	122.7045
Masuda	0.02	6.5	8.72	15.22	32.2458	37.7293	117.01	32.2658	22.5093	69.7621
Peesangan	0.26	9.49	10.04	19.53	55.527	115.792	208.53	55.787	96.262	172.5527
Srinagar	0.17	4.07	3.78	7.85	32.1485	43.0006	133.76	32.3185	35.1506	108.7631
Total	1.92	43.75	46.55	90.3	320.6615	471.404 2	147.01	322.5815	381.104 2	118.142

 Table 10: Expected Stage of Development with water savings

PART B

Block wise Aquifer Maps and Management Plans of 8 Blocks of Ajmer District

1. Aquifer Management Plan of Block Arain, District Ajmer

Salient	Block	Arain
Information		
	Geographical Area (km2)	1194.4
	Hilly Area (Sq.km)	130.39
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	1064.01
Climate &	Climate	Semi Arid
Rainfall		
	Average Rainfall (1971-2014)	439.4
Ground	Aquifer Characteristics	Inadequate
Water Issues		space for
		groundwater
		recharge
	Main Aquifers in the area	Occupied by
		Hard Rocks
Aquifer	Aquiter Disposition	Alluvium
System		followed by
	Geology	Schist/ Gneiss
	Geology	Sellist/ Oliciss
	Maximum Depth of Aquifer in meter	80
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	5.54
	Hydraulic Characters (sp.yield%)	1.5
Water Level	Depth to Water Level (m BGL)	13.76
Behaviour,		
DTW (m)		
	Trend (m/yr)	0.4
Ground	General	Fresh to
Water		Saline
Quality		(10) (100
	Electrical Conductivity in microS/cm (Min/Max)	640 to 6400
	Chloride in mg/ litre (Min/Max)	28 to 1335

Salient	Block	Arain
Information		
	Nitrate in mg/litre (Min/Max)	0.87 to 111
	Fluoride in mg/litre (Min/Max)	0.05 to 2.41
Groundwate r Resources	Total annual ground water recharge(mcm)	45.45
	Natural discharge during non-monsoon season(mcm)	4.55
	Net ground water availability(mcm)	40.91
	Existing gross ground water draft for irrigation(mcm)	42.86
	Existing gross ground water draft for domestic & industrial uses(mcm)	3.97
	Existing gross ground water draft for all uses(mcm)	96.83
	Allocation for domestic & industrial requirement(mcm)	3.97
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	114.49
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	1064.01
0	Area of Block (Sq.km.)	1194.4
	Potential area suitable for recharge (Sq.km.)	1064.01
_	Type of Aquifer	hard rock
	Area feasible for artificial recharge (Sq km)	1064.01
	Sp Yield	0.015
	Average DTW (m bgl)	11.48
	Thickness of unsaturated zone 3 m below ground level (m)	8.48
	Volume of sub surface storage space available for artificial recharge (MCM)	135.34
	Surplus Runoff Availability	
	Surplus available (MCM)	0.65
	Surplus available in zone as per the water level (in Mm3)	0.65
	Recharge Shafts Proposed in existing water bodies	21
	Percolation Tanks Proposed	0

Salient Information	Block	Arain
Demand	Use of Advanced Irrigation Practices to be promoted	
Management		
	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	9385.32
	Irrigated Area (ha) proposed for irrigation through sprinkler	4692.66
	Water Saving by Use of Sprinklers	3.75
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	7452.92
	Irrigated Area (ha) under wheat proposed for Gram cultivation	3726.46
	Water Saving by change in cropping pattern	3.6
Expected Benefits	Net G.W. Availability (MCM)	40.91
	Additional Recharge from RWH & water conservation (MCM)	0.46
	Total Net G.W. Availability after intervention (MCM)	41.36
	Existing G.W Draft for all purpose (MCM)	46.83
	Saving of Ground water through demand side intervention (M CM)	7.40
	Net GW draft after interventions (MCM)	39.43
	Present stage of G.W. development (in %)	114.49
	Expected stage of G.W. Dev. (in %)	95.32
Other Intervention s proposed, if any	Alternate water Sources available	Drinking water supply from Bisalpur
	Regulation and Control measures to be implemented	To be notified



Map showing Tentative location of the Recharge Shaft

SN	Block	Village	Long	Lat	Pond area (ha)	Formation	No of Shafts	Unit cost (Rs in	Total cost (Rs
								lac)	in lac)
1	Arain	Ankauriya	75.0125	26.3558	14.722	Hard_rock	1	2.6	2.6
2	Arain	Balapura	75.0862	26.3733	15.7925	Hard_rock	1	2.6	2.6
3	Arain	Dadiya	74.9708	26.4167	4.0229	Hard_rock	1	2.6	2.6
4	Arain	Dadiya	74.9625	26.4338	4.5743	Hard_rock	1	2.6	2.6
5	Arain	Dadiya	74.9464	26.4313	7.0245	Hard_rock	1	2.6	2.6
6	Arain	Dadiya	74.9763	26.4472	7.5772	Hard_rock	1	2.6	2.6
7	Arain	Dadiya	74.9803	26.4165	16.2957	Hard_rock	1	2.6	2.6
8	Arain	Dadiya	74.9612	26.4301	17.0409	Hard_rock	1	2.6	2.6
9	Arain	Deopuri	74.9428	26.462	4.6738	Hard_rock	1	2.6	2.6
10	Arain	Kasheer	75.0442	26.2856	20.988	Hard_rock	1	2.6	2.6
11	Arain	Katsoora	74.9814	26.4557	6.2392	Hard_rock	1	2.6	2.6
12	Arain	Lamba	75.0134	26.4058	4.8515	Hard_rock	1	2.6	2.6
13	Arain	Lamba	74.9887	26.4122	4.8565	Hard_rock	1	2.6	2.6
14	Arain	Lamba	75.0297	26.4143	7.3638	Hard_rock	1	2.6	2.6
15	Arain	Lamba	75.02	26.3932	7.6214	Hard_rock	1	2.6	2.6
16	Arain	Lamba	75.0073	26.3989	16.8129	Hard_rock	1	2.6	2.6
17	Arain	Sandoliya	75.0409	26.3824	8.4119	Hard_rock	1	2.6	2.6
18	Arain	Sandoliya	75.0434	26.3954	10.4651	Hard_rock	1	2.6	2.6
19	Arain	Seel	75.0499	26.4204	3.988	Hard_rock	1	2.6	2.6
20	Arain	Seel	75.0713	26.4121	8.212	Hard_rock	1	2.6	2.6
21	Arain	Srirampura	75.0706	26.2731	19.2435	Hard_rock	1	2.6	2.6
Total	Arain						21		54.6

Tentative locations of village for village pond with recharge shaft of Arain Block

Salient	Block	Bhinay
Information	Concernships 1 Array (law2)	1216.10
	Geographical Area (km2)	1216.19
	Hilly Area (Sq.km)	65.37
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	1150.82
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	500.1
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	80
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	5.5
	Hydraulic Characters (sp.yield%)	1.5
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	16.52
	Trend (m/yr)	0.52
Ground Water Quality	General	Fresh
	Electrical Conductivity in microS/cm (Min/Max)	800 to 612
	Chloride in mg/ litre (Min/Max)	43 to1022
	Nitrate in mg/litre (Min/Max)	8 to 518
	Fluoride in mg/litre (Min/Max)	0.092 to 2.51
Groundwate r Resources	Total annual ground water recharge(mcm)	49.32
	Natural discharge during non-monsoon season(mcm)	4.93
	Net ground water availability(mcm)	44.39

2. Aquifer Management Plan of Block Bhinay, District Ajmer

Salient	Block	Bhinay
Information		
	Existing gross ground water draft for irrigation(mcm)	46.16
	Existing gross ground water draft for domestic & industrial uses(mcm)	4.05
	Existing gross ground water draft for all uses(mcm)	50.19
	Allocation for domestic & industrial requirement(mcm)	4.05
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	113.07
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	1150.82
	Area of Block (Sq.km.)	1216.19
	Potential area suitable for recharge (Sq.km.)	1150.82
	Type of Aquifer	hard rock
	Area feasible for artificial recharge (Sq km)	1150.82
	Sp Yield	0.015
	Average DTW (m bgl)	14.78
	Thickness of unsaturated zone 3 m below ground level (m)	11.78
	Thekness of unsaturated zone 5 in below ground level (in)	11.70
	Volume of sub surface storage space available for artificial recharge (MCM)	203.35
	Surplus Runoff Availability	
	Surplus available (MCM)	0
	Surplus available in zone as per the water level (in Mm3)	
	Recharge Shafts Proposed in existing water bodies	0
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	13028.30
	Irrigated Area (ha) proposed for irrigation through sprinkler	6514.15

Salient	Block	Bhinay
Information		
	Water Saving by Use of Sprinklers	5.21
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	10655.99
	Irrigated Area (ha) under wheat proposed for Gram cultivation	5327.99
	Water Saving by change in cropping pattern	6.26
Expected Benefits	Net G.W. Availability (MCM)	44.38
	Additional Recharge from RWH & water conservation (MCM)	0
	Total Net G.W. Availability after intervention (MCM)	44.39
	Existing G.W Draft for all purpose (MCM)	50.19
	Saving of Ground water through demand side intervention (MC M)	11.48
	Net GW draft after interventions (MCM)	38.71
	Present stage of G.W. development (in %)	113.07
	Expected stage of G.W. Dev. (in %)	87.21
Other	Alternate water Sources available	Drinking
Intervention		water supply
s proposed,		from
if any		Bisalpur
	Regulation and Control measures to be implemented	To be notified

Salient	Block	Jawaja
Information		
	Geographical Area (km2)	674.51
	Hilly Area (Sq.km)	190.18
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	484.33
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	451.1
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	85
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	5.16
	Hydraulic Characters (sp.yield%)	1.5 -2
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	14.56
	Trend (m/yr)	0.49
Ground Water Quality	General	Fresh
	Electrical Conductivity in microS/cm (Min/Max)	114 to 570
	Chloride in mg/ litre (Min/Max)	114 to 824
	Nitrate in mg/litre (Min/Max)	3 to 76
	Fluoride in mg/litre (Min/Max)	0.55 to 1.46
Groundwate r Resources	Total annual ground water recharge(mcm)	21.85
	Natural discharge during non-monsoon season(mcm)	2.18
	Net ground water availability(mcm)	19.66

3. Aquifer Management Plan of Block Jawaja, District Ajmer

Salient	Block	Jawaja
Information		
	Existing gross ground water draft for irrigation(mcm)	22.87
	Existing gross ground water draft for domestic & industrial uses(mcm)	6.54
	Existing gross ground water draft for all uses(mcm)	29.42
	Allocation for domestic & industrial requirement(mcm)	6.54
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	149.59
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	484.33
	Area of Block (Sq.km.)	674.51
	Potential area suitable for recharge (Sq.km.)	484.33
	Type of Aquifer	hard rock
	Area fassible for artificial reabarras (Salum)	100K
	Area leasible for artificial recharge (Sq km)	484.33
	Sp Yield	0.015
	Average DTW (m bgl)	11.48
	Thickness of unsaturated zone 3 m below ground level (m)	8.3
	Volume of sub surface storage space available for artificial recharge (MCM)	60.30
	Surplus Runoff Availability	
	Surplus available (MCM)	0.10
	Surplus available in zone as per the water level (in Mm3)	0.107
	Recharge Shafts Proposed in existing water bodies	3
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	4292.71
	Irrigated Area (ha) proposed for irrigation through sprinkler	2146.35

Salient	Block	Jawaja
Information		
	Water Saving by Use of Sprinklers	1.72
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	6818
	Irrigated Area (ha) under wheat proposed for Gram cultivation	3409
	Water Saving by change in cropping pattern	3.2
Expected Benefits	Net G.W. Availability (MCM)	19.66
	Additional Recharge from RWH & water conservation (MCM)	0.07
	Total Net G.W. Availability after intervention (MCM)	19.74
	Existing G.W Draft for all purpose (MCM)	29.42
	Saving of Ground water through demand side intervention (M CM)	4.92
	Net GW draft after interventions (MCM)	24.50
	Present stage of G.W. development (in %)	149.59
	Expected stage of G.W. Dev. (in %)	124.11
Other Intervention s proposed, if any	Alternate water Sources available	Drinking water supply from Bisalpur
	Regulation and Control measures to be implemented	To be notified



S No		Village	Long	Lat	Pond area (ha)	Formation	No of Shafts	Unit cost (Rs in lac)	Total cost (Rs in lac)
1	Jawaja	Khera Neemri	74.1623	25.9874	7.9806	Hard_rock	1	2.6	2.6
2	Jawaja	Nai Kalan	74.1866	25.9839	5.7482	Hard_rock	1	2.6	2.6
3	Jawaja	Nai Kalan	74.1823	26.0029	11.2235	Hard_rock	1	2.6	2.6
Total	Jawaja						3		7.8

Tentative locations of village for village pond with recharge shaft of Jawaja Block

Salient	Block	Kekri
Information		
	Geographical Area (km2)	985.92
	Hilly Area (Sq.km)	96.25
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	889.67
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	541.4
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	60
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	7.38
	Hydraulic Characters (sp.yield%)	1.5-8
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	12.42
	Trend (m/yr)	0.33
Ground Water Quality	General	Fresh to Saline
	Electrical Conductivity in microS/cm (Min/Max)	620 to 4700
	Chloride in mg/ litre (Min/Max)	21 to 880
	Nitrate in mg/litre (Min/Max)	0 to 260
	Fluoride in mg/litre (Min/Max)	0.88 to 7.88
Groundwate r Resources	Total annual ground water recharge(mcm)	55.45
	Natural discharge during non-monsoon season(mcm)	3.88
	Net ground water availability(mcm)	51.57

4. Aquifer Management Plan of Block Kekri, District Ajmer

Salient	Block	Kekri
Information	Evisting areas around water dust for invisation (man)	94.02
	Existing gross ground water draft for irrigation(mcm)	84.03
	Existing gross ground water draft for domestic & industrial uses(mcm)	4.98
	Existing gross ground water draft for all uses(mcm)	89.01
	Allocation for domestic & industrial requirement(mcm)	4.98
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	172.6
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	889.67
C	Area of Block (Sq.km.)	985.92
	Potential area suitable for recharge (Sq.km.)	889.67
	Type of Aquifer	Allu/Hard rock
	Area feasible for artificial recharge (Sq km)	889.67
	Sp Yield	0.12
	Average DTW (m bgl)	14.78
	Thickness of unsaturated zone 3 m below ground level (m)	8.135
	Volume of sub surface storage space available for artificial recharge (MCM)	185.68
	Surplus Runoff Availability	
	Surplus available (MCM)	1.24
	Surplus available in zone as per the water level (in Mm3)	1.25
	Recharge Shafts Proposed in existing water bodies	29
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
gunut	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	26100.55
<u> </u>	Irrigated Area (ha) proposed for irrigation through sprinkler	13050.27
	Contraction of the second	

Salient	Block	Kekri
Information		
	Water Saving by Use of Sprinklers	10.44
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	8940
	Irrigated Area (ha) under wheat proposed for Gram cultivation	4470
	Water Saving by change in cropping pattern	8.51
Expected Benefits	Net G.W. Availability (MCM)	51.57
	Additional Recharge from RWH & water conservation (MCM)	0.87
	Total Net G.W. Availability after intervention (MCM)	52.44
	Existing G.W Draft for all purpose (MCM)	89.01
	Saving of Ground water through demand side intervention (M CM)	18.95
	Net GW draft after interventions (MCM)	70.06
	Present stage of G.W. development (in %)	172.6
	Expected stage of G.W. Dev. (in %)	133.60
Other Intervention s proposed, if any	Alternate water Sources available	Drinking water supply from Bisalpur
v.	Regulation and Control measures to be implemented	To be notified



S No		Village	Long	Lat	Pond	Formation	No of	Unit	Total
					area		Shafts	cost (Ps in	cost (Ps in
					(IIa)			lac)	lac)
1	Kekri	Jaswantpura	75.243	25.749	2.239	Hard_rock	1	2.6	2.6
2	Kekri	Sawar	75.209	25.759	2.271	Hard_rock	1	2.6	2.6
3	Kekri	Girwarpura	75.275	25.762	2.486	Hard_rock	1	2.6	2.6
4	Kekri	Udaisagar	75.209	25.725	2.504	Hard_rock	1	2.6	2.6
5	Kekri	Sawar	75.211	25.737	2.57	Hard_rock	1	2.6	2.6
6	Kekri	Laxmipura	75.214	25.72	2.707		1	2.6	2.6
7	Kekri	Sawar	75.221	25.736	2.73		1	2.6	2.6
8	Kekri	Ghatiyali	75.264	25.794	3.14	Hard_rock	1	2.6	2.6
9	Kekri	Girwarpura	75.283	25.758	3.722	Hard_rock	1	2.6	2.6
10	Kekri	Sawar	75.228	25.741	3.837	Hard_rock	1	2.6	2.6
11	Kekri	Kushayata	75.188	25.74	4.063	Hard_rock	1	2.6	2.6
12	Kekri	Ghatiyali	75.261	25.767	4.13	Hard_rock	1	2.6	2.6
13	Kekri	Kushayata	75.183	25.733	4.204	Hard_rock	1	2.6	2.6
14	Kekri	Ghatiyali	75.247	25.768	4.209	Hard_rock	1	2.6	2.6
15	Kekri	Kushayata	75.184	25.722	4.981	Soft_rock	1	2.6	2.6
16	Kekri	Pratappura	75.24	25.709	4.997	Hard_rock	1	2.6	2.6
17	Kekri	Kushayata	75.182	25.726	5.107	Hard_rock	1	2.6	2.6
18	Kekri	Girwarpura	75.273	25.764	5.356	Hard_rock	1	2.6	2.6
19	Kekri	Peepaliya	75.219	25.694	5.416	Hard_rock	1	2.6	2.6
20	Kekri	Kushayata	75.185	25.731	6.127	Hard_rock	1	2.6	2.6
21	Kekri	Neemera (Sawar)	75.256	25.742	6.92	Hard_rock	1	2.6	2.6
22	Kekri	Sawar	75.222	25.759	7.576	Hard_rock	1	2.6	2.6
23	Kekri	Neemera (Sawar)	75.253	25.731	7.924	Hard_rock	1	2.6	2.6
24	Kekri	Jaswantpura	75.238	25.75	8.925	Hard_rock	1	2.6	2.6
25	Kekri	Sawar	75.201	25.743	9.448	Hard_rock	1	2.6	2.6
26	Kekri	Ghatiyali	75.249	25.75	10.108	Hard_rock	1	2.6	2.6
27	Kekri	Sawar	75.227	25.736	10.322	Hard_rock	1	2.6	2.6
28	Kekri	Sawar	75.204	25.75	11.023	Hard_rock	1	2.6	2.6
29	Kekri	Ghatiyali	75.27	25.775	20.262	Hard_rock	1	2.6	2.6
Total	Kekri						29		75.4

Tentative locations of village for village pond with recharge shaft of Kekri Block

5. Aquifer Management Plan of Block Kishangarh (Silora), Ajmer District

Salient	Block	Kishangarh
Information		(Silora)
	Geographical Area (km2)	1245.09
	Hilly Area (Sq.km)	232.21
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	1012.88
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	446
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	85
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	4.5
	Hydraulic Characters (sp.yield%)	1.5 -2
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	24.41
	Trend (m/yr)	0.79
Ground Water Quality	General	Fresh to Saline
	Electrical Conductivity in microS/cm (Min/Max)	2240 to 3900
	Chloride in mg/ litre (Min/Max)	234 to 795
	Nitrate in mg/litre (Min/Max)	70 to 120
	Fluoride in mg/litre (Min/Max)	1.55 to 3.34
Groundwate r Resources	Total annual ground water recharge(mcm)	49.12

Salient	Block	Kishangarh
Information		(Silora)
	Natural discharge during non-monsoon season(mcm)	4.91
	Net ground water availability(mcm)	44.21
	Existing gross ground water draft for irrigation(mcm)	54.70
	Existing gross ground water draft for domestic & industrial uses(mcm)	4.73
	Existing gross ground water draft for all uses(mcm)	59.43
	Allocation for domestic & industrial requirement(mcm)	4.73
	Net ground water availability for future irrigation	0
	development(mcm)	
	State of ground water development	134.43
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	1012.88
	Area of Block (Sq.km.)	1245.09
	Potential area suitable for recharge (Sq.km.)	1012.88
	Type of Aquifer	hard rock
	Area feasible for artificial recharge (Sq km)	1012.88
	Sp Yield	0.015
	Average DTW (m bgl)	11.3
	Thickness of unsaturated zone 3 m below ground level (m)	17.5
	Volume of sub surface storage space available for artificial recharge (MCM)	265.88
	Surplus Runoff Availability	
	Surplus available (MCM)	0
	Surplus available in zone as per the water level (in Mm3)	
	Recharge Shafts Proposed in existing water bodies	0
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
	(i)Use of Sprinklers	

Salient	Block	Kishangarh
Information		(Silora)
	Total Irrigated Area (ha)	6413.26
	Irrigated Area (ha) proposed for irrigation through sprinkler	3206.63
	Water Saving by Use of Sprinklers	2.56
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	5244.09
	Irrigated Area (ha) under wheat proposed for Gram cultivation	2622.05
	Water Saving by change in cropping pattern	2.38
Expected Benefits	Net G.W. Availability (MCM)	44.21
	Additional Recharge from RWH & water conservation (MCM)	0
	Total Net G.W. Availability after intervention (MCM)	44.21
	Existing G.W Draft for all purpose (MCM)	59.43
	Saving of Ground water through demand side intervention (M CM)	4.94
	Net GW draft after interventions (MCM)	54.48
	Present stage of G.W. development (in %)	134.43
	Expected stage of G.W. Dev. (in %)	169.49
Other	Alternate water Sources available	Drinking
Intervention		water supply
s proposed,		from Bisalpur
if any		
	Regulation and Control measures to be implemented	To be notified



SN	Village	Long	Lat	Watershed	No of Shafts	Unit cost (Rs in lac)	Total cost (Rs in lac)
1	Kardala	74.845	26.892	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
2	Kotri	74.883	26.894	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
3	Nosal	74.884	26.903	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
4	Nosal	74.894	26.905	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
5	Nosal	74.89	26.919	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
6	Nosal	74.915	26.91	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
7	Sinodiy a	74.925	26.921	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
8	Sinodiy a	74.972	26.932	Shekhawati_Mendha_025_RJ0105_AL	1	5	5
				Total	8		40

Tentative locations of village for watersheds of Kishangarh Block

Salient	Block	Masuda
Information		
	Geographical Area (km2)	891.99
	Hilly Area (Sq.km)	74.99
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	817
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	504.9
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	85
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	5.42
	Hydraulic Characters (sp.yield%)	1.5 -2
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	18.31
	Trend (m/yr)	0.32
Ground Water Quality	General	Fresh to Saline
	Electrical Conductivity in microS/cm (Min/Max)	900 to 5700
	Chloride in mg/ litre (Min/Max)	71 to 1207
	Nitrate in mg/litre (Min/Max)	0.87 to 135
	Fluoride in mg/litre (Min/Max)	0.07 to 2.3
Groundwate r Resources	Total annual ground water recharge(mcm)	35.83
	Natural discharge during non-monsoon season(mcm)	3.58
	Net ground water availability(mcm)	32.25

6. Aquifer Management Plan of Block Masuda, District Ajmer

Salient	Block	Masuda
Information		
	Existing gross ground water draft for irrigation(mcm)	33.97
	Existing gross ground water draft for domestic & industrial uses(mcm)	3.76
	Existing gross ground water draft for all uses(mcm)	37.73
	Allocation for domestic & industrial requirement(mcm)	3.76
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	117.01
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	817
	Area of Block (Sq.km.)	891.99
	Potential area suitable for recharge (Sq.km.)	817
	Type of Aquifer	hard rock
	Area feasible for artificial recharge (Sq km)	817
	Sp Yield	0.015
	Average DTW (m bgl)	16.5
	Thickness of unsaturated zone 3 m below ground level (m)	13.5
	Volume of sub surface storage space available for artificial recharge (MCM)	165.44
	Surplus Runoff Availability	
	Surplus available (MCM)	0.04
	Surplus available in zone as per the water level (in Mm3)	0.04
	Recharge Shafts Proposed in existing water bodies	1
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	16260.32
	Irrigated Area (ha) proposed for irrigation through sprinkler	8130.16

Salient	Block	Masuda
Information		
	Water Saving by Use of Sprinklers	6.51
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	10244
	Irrigated Area (ha) under wheat proposed for Gram cultivation	5122
	Water Saving by change in cropping pattern	8.72
Expected Benefits	Net G.W. Availability (MCM)	32.25
	Additional Recharge from RWH & water conservation (MCM)	0.03
	Total Net G.W. Availability after intervention (MCM)	32.28
	Existing G.W Draft for all purpose (MCM)	37.73
	Saving of Ground water through demand side intervention (M CM)	15.22
	Net GW draft after interventions (MCM)	22.50
	Present stage of G.W. development (in %)	117.01
	Expected stage of G.W. Dev. (in %)	69.72
Other Intervention s proposed, if any	Alternate water Sources available	Drinking water supply from Bisalpur
	Regulation and Control measures to be implemented	To be notified



Tentative locations of village for village pond with recharge shaft of Masuda Block

S No		Village	Long	Lat	Pond area (ha)	Formation	No of Shafts	Unit cost (Rs in lac)	Total cost (Rs in lac)
1	Masuda	Rani Sagar	74.4058	26.1847	5.2808	Hard_rock	1	2.6	2.6
Total	Masuda						1		2.6

Salient	Block	Peesangan
Information		
	Geographical Area (km2)	1239.91
	Hilly Area (Sq.km)	131.86
	Saline Area (Sq.km)	0
	Potential Area (Sq.km)	1108.05
Climate & Rainfall	Climate	Semi Arid
	Average Rainfall (1971-2014)	453.8
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge
	Main Aquifers in the area	Occupied by Hard Rocks
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks
	Geology	Schist/ Gneiss
	Maximum Depth of Aquifer in meter	83
	Type of Aquifer	Unconfined
	Thickness of Aquifer (Utilisable)	6.22
	Hydraulic Characters (sp.yield%)	1.0-1.5
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	25.18
	Trend (m/yr)	1.01
Ground Water Quality	General	Fresh to Saline
	Electrical Conductivity in microS/cm (Min/Max)	1000 to 5000
	Chloride in mg/ litre (Min/Max)	57 to 1065
	Nitrate in mg/litre (Min/Max)	1.0 to 920
	Fluoride in mg/litre (Min/Max)	0.58 to 2.38
Groundwate r Resources	Total annual ground water recharge(mcm)	61.35
	Natural discharge during non-monsoon season(mcm)	5.82
	Net ground water availability(mcm)	55.52

7. Aquifer Management Plan of Block Peesangan, District Ajmer

Salient	Block	Peesangan
Information	Evisting group anound motor draft for invigation (more)	106.27
	Existing gross ground water draft for imgation(inchi)	100.37
	Existing gross ground water draft for domestic & industrial	9.42
	uses(mcm)	
	Existing gross ground water draft for all uses(mcm)	115.79
	Allocation for domestic & industrial requirement(mcm)	9.42
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	208.53
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	1108.05
0	Area of Block (Sq.km.)	1239.91
	Potential area suitable for recharge (Sq.km.)	1108.05
	Type of Aquifer	Allu/Hard
	Area feasible for artificial recharge (Sq km)	1108.05
		1100102
	Sp Yield	0.12
	Average DTW (m bgl)	24.39
	Thickness of unsaturated zone 3 m below ground level (m)	21.39
	Volume of sub surface storage space available for artificial recharge (MCM)	934.14
	Surplus Runoff Availability	
	Surplus available (MCM)	0.34
	Surplus available in zone as per the water level (in Mm3)	0.34
	Recharge Shafts Proposed in existing water bodies	11
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
0	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	23716
	Irrigated Area (ha) proposed for irrigation through sprinkler	11858

Salient	Block	Peesangan
Information		
	Water Saving by Use of Sprinklers	9.49
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	9362.15
	Irrigated Area (ha) under wheat proposed for Gram cultivation	4681.07
	Water Saving by change in cropping pattern	10.04
Expected Benefits	Net G.W. Availability (MCM)	55.52
	Additional Recharge from RWH & water conservation (MCM)	0.24
	Total Net G.W. Availability after intervention (MCM)	55.76
	Existing G.W Draft for all purpose (MCM)	115.79
	Saving of Ground water through demand side intervention (M CM)	19.53
	Net GW draft after interventions (MCM)	96.26
	Present stage of G.W. development (in %)	208.53
	Expected stage of G.W. Dev. (in %)	172.63
Other Intervention s proposed, if any	Alternate water Sources available	Drinking water supply from Bisalpur
Ť	Regulation and Control measures to be implemented	Notified by CGWA on 13/8/2011



Map showing Tentative location of the Recharge Shaft

S No		Village	Long	Lat	Pond area (ha)	Formation	No of Shafts	Unit cost (Rs	Total cost (Rs
								in lac)	in lac)
1.	Pisangan	Naharpura	74.6047	26.3227	15.4756	Hard_rock	1	2.6	2.6
2.	Pisangan	Jethana	74.4988	26.294	16.9238	Hard_rock	1	2.6	2.6
3.	Pisangan	Jethana	74.4446	26.3036	21.5259	Hard_rock	1	2.6	2.6
4.	Pisangan	Makrera	74.5411	26.331	16.8854	Hard_rock	1	2.6	2.6
5.	Pisangan	Nagelao	74.4182	26.2899	16.4353	Hard_rock	1	2.6	2.6
6.	Pisangan	Bheempura	74.5879	26.2597	17.2352	Hard_rock	1	2.6	2.6
7.	Pisangan	Gola	74.4011	26.2254	20.6624	Hard_rock	1	2.6	2.6
8.	Pisangan	Hatoondi	74.6412	26.3595	21.369	Hard_rock	1	2.6	2.6
9.	Pisangan	Leeri	74.5257	26.2153	15.9852	Hard_rock	1	2.6	2.6
10.	Pisangan	Budhwara	74.4512	26.4012	23.2562	Soft_rock	1	5	5
11.	Pisangan	Dantra	74.4724	26.3407	23.0083	Soft_rock	1	5	5
Total							11		33.4

Tentative locations of village for village pond with recharge shaft of Peesangan Block

Salient	Block	Srinagar	
Information			
	Geographical Area (km2)	1032.99	
	Hilly Area (Sq.km)	92.99	
	Saline Area (Sq.km)	0	
	Potential Area (Sq.km)	940	
Climate & Rainfall	Climate	Semi Arid	
	Average Rainfall (1971-2014)	446	
Ground Water Issues	Aquifer Characteristics	Inadequate space for groundwater recharge	
	Main Aquifers in the area	Occupied by Hard Rocks	
Aquifer System	Aquifer Disposition	Alluvium followed by hard rocks	
	Geology	Schist/ Gneiss	
	Maximum Depth of Aquifer in meter	85	
	Type of Aquifer	Unconfined	
	Thickness of Aquifer (Utilisable)	4.93	
	Hydraulic Characters (sp.yield%)	1.5 -2	
Water Level Behaviour, DTW (m)	Depth to Water Level (m BGL)	20.48	
	Trend (m/yr)	0.62	
Ground Water Quality	General	Fresh to Saline	
	Electrical Conductivity in microS/cm (Min/Max)	910 to 3100	
	Chloride in mg/ litre (Min/Max)	28 to 497	
	Nitrate in mg/litre (Min/Max)	1.0to 170	
	Fluoride in mg/litre (Min/Max)	1.08 to 10.8	
Groundwate r Resources	Total annual ground water recharge(mcm)	35.36	
	Natural discharge during non-monsoon season(mcm)	3.21	
	Net ground water availability(mcm)	32.15	

8. Aquifer Management Plan of Block Srinagar, District Ajmer
Salient	Block	Srinagar
Information		
	Existing gross ground water draft for irrigation(mcm)	33.06
	Existing gross ground water draft for domestic & industrial uses(mcm)	9.94
	Existing gross ground water draft for all uses(mcm)	43.00
	Allocation for domestic & industrial requirement(mcm)	10.34
	Net ground water availability for future irrigation development(mcm)	0
	State of ground water development	133.76
	Category	OE
Supply Side Management	Space Available for Recharge (mcm)	940
	Area of Block (Sa.km.)	1032.99
	Potential area suitable for recharge (Sq km)	940
	rotonitur area saturoto for roonargo (oq.inii.)	210
	Type of Aquifer	hard rock
	Area feasible for artificial recharge (Sq km)	940
	Sp Yield	0.015
	Average DTW (m bgl)	18.5
	Thickness of unsaturated zone 3 m below ground level (m)	15.5
		10.0
	Volume of sub surface storage space available for artificial recharge (MCM)	218.55
	Surplus Runoff Availability	
	Surplus available (MCM)	0.20
	Surplus available in zone as per the water level (in Mm3)	0.19
	Recharge Shafts Proposed in existing water bodies	7
	Percolation Tanks Proposed	0
Demand side Management	Use of Advanced Irrigation Practices to be promoted	
management	(i)Use of Sprinklers	
	Total Irrigated Area (ha)	10176 75
	I unicated Area (ha) means and for invication through an initial	5000 20
	inigated Area (na) proposed for infigation through sprinkler	2000.30

Salient	Block	Srinagar
Information		
	Water Saving by Use of Sprinklers	4.07
	(ii)Change in Cropping pattern	
	Irrigated Area under wheat (ha)	5511.85
	Irrigated Area (ha) under wheat proposed for Gram cultivation	2755.92
	Water Saving by change in cropping pattern	3.78
Expected Benefits	Net G.W. Availability (MCM)	32.15
	Additional Recharge from RWH & water conservation (MCM)	0.14
	Total Net G.W. Availability after intervention (MCM)	32.28
	Existing G.W Draft for all purpose (MCM)	43.00
	Saving of Ground water through demand side intervention (MC M)	7.85
	Net GW draft after interventions (MCM)	35.14
	Present stage of G.W. development (in %)	133.76
	Expected stage of G.W. Dev. (in %)	108.85
Other	Alternate water Sources available	Drinking
Intervention		water supply
s proposed,		from
if any		Bisalpur
	Regulation and Control measures to be implemented	To be
		notified



Map showing Tentative location of the Recharge Shaft

S No		Village	Long	Lat	Pond area (ha)	Formation	No of Shafts	Unit cost (Rs in lac)	Total cost (Rs in lac)
1	Srinagar	Badlya	74.7119	26.4437	17.4781	Hard_rock	1	2.6	2.6
2	Srinagar	Ghooghra	74.6884	26.5039	16.0689	Hard_rock	1	2.6	2.6
3	Srinagar	Lohagal	74.639	26.523	16.54	Hard_rock	1	2.6	2.6
4	Srinagar	Makarwali	74.6391	26.5229	16.5395	Hard_rock	1	2.6	2.6
5	Srinagar	Ajmer (M Cl)	74.628	26.504	3.999	Hard_rock	1	2.6	2.6
6	Srinagar	Ajmer (M Cl)	74.67	26.447	3.674	Hard_rock	1	2.6	2.6
7	Srinagar	Bhoodol	74.748	26.486	16.436	Hard_rock	1	2.6	2.6
Total							7		18.2

Tentative locations of village for village pond with recharge shaft of Srinagar Block



Block Wise Aquifer Map Of Ajmer District

Annexure I

Existing data of Exploratory wells of CGWB (2013-14)

SN	Toposheet	Age	District	BLOCK	Location	Aq	Туре	Lat	Long	DepthDrilled	SWL_RLGL	Q	Т	AqI	AqII
1	45J/12-2C	CGWB	Ajmer	Bhinay	Bandanwara	BG01	EW	26.1333	74.7083	169.09	0	0		0	1
2	45J/08-2B	CGWB	Ajmer	Jawaja	Suhawa	QZ02	EW	26.1289	74.3919	172.4	9.2	0.5		0	1
3	45J/08-2B	CGWB	Ajmer	Jawaja	Suhawa	QZ02	ow	26.1286	74.3919	172.4	9	0.666667		1	0
4	45J/08-3A	CGWB	Ajmer	Jawaja	Singhariya	QZ02	EW	26.0506	74.31	203	17.1	3.03333		0	1
5	45J/08-3A	CGWB	Ajmer	Jawaja	Singhariya	QZ02	ow	26.0506	74.3097	35.1	17	6.86667		1	0
6	45J/08-3A	CGWB	Ajmer	JAWAJA	Kalinjar	QZ02	EW	26.0108	74.2791	165	0	0		0	1
7	45J/12-3A	CGWB	Ajmer	Masuda	Shergarh	BG01	EW	26.0531	74.5444	202.1	3.72	2.16667		0	1
8	45J/12-3A	CGWB	Ajmer	Masuda	Shergarh	BG01	ow	26.0531	74.5447	196.8	7.15	0.333333		0	1
9	45J/12-2A	CGWB	Ajmer	Masuda	Masuda I	BG01	EW	26.1	74.5083	146.34	0	0		1	0
10	45J/12-2B	CGWB	Ajmer	Masuda	Begliyawas	BG01	EW	26.1	74.6083	146.24	0	0		1	0
11	45J/12-2A	CGWB	Ajmer	Masuda	Masuda II	BG01	EW	26.0958	74.5083	128.05	0	0		1	0
12	45J/12-1C	CGWB	Ajmer	Pisangan	Jharwara	BG01	EW	26.2025	74.7178	181.5	3.65	3		1	0
13	45J/12-1A	CGWB	Ajmer	Pisangan	Liri	GN02	EW	26.2267	74.5344	202.9	9	3.5		0	1
14	45J/12-1A	CGWB	Ajmer	Pisangan	Liri	GN02	ow	26.2267	74.5347	202.9	6.16	3		0	1
15	45J/08-1C	CGWB	Ajmer	Pisangan	Lamana	QZ02	EW	26.2356	74.4736	203	6	2.83333		0	1
16	45J/12-1A	CGWB	Ajmer	Pisangan	Saradhawa	GN02	Pz	26.2467	74.5783	160.2	17.33	0.008333		0	1
17	45J/08-3B	CGWB	Ajner	Masuda	Amar Sing Ka Bariya (EW)	GN02	EW	26.0625	74.4075	202.9	9.4	0.666667		0	1
18	45J/08-3B	CGWB	Ajner	Masuda	Amar Sing Ka Bariya (OW)	GN02	ow	26.0625	74.4075	74.8	6.2	2.5		1	0

SN	Toposheet	Age	District	BLOCK	Location	Aq	Туре	Lat	Long	Depth	Q	Sp_	Т	S	Sy	AqI	AqII	AqIII
										Drilled		capacity						
1	45J/16-2C	RGWD	AJMER	Bhinay	Goyla	BG01	EW	26.129	74.942	105	0.9					1	0	0
2	45K/01- 1C	CGWB	Ajmer	JAWAJA	Jawaja	QZ02	EW	25.938	74.22	175						0	1	0
3	45K/05- 1C	CGWB	Ajmer	Masuda	Daulatpura II	BG01	Pz	25.995	74.449	197.4	1.66667					0	1	0
4	45J/16-3A	CGWB	Ajner	Bhinai	Kumahariya Kherar(EW)	CK01	EW	26.033	74.792	111.4	1.33333					1	0	0
5	45J/16-2B	CGWB	Ajner	Bhinai	Jawala	CK01	EW	26.121	74.891	203	1					0	1	0
6	45J/16-2B	CGWB	Ajner	Bhinai	Jawala	CK01	OW	26.121	74.891	117.5	4.16667					1	0	0
7	45J/16-3C	CGWB	Ajner	Bhinai	Bhagwanpura	BG01	EW	26.033	74.999	200	1.66667					0	1	0
8	45J/16-3C	CGWB	Ajner	Bhinai	Bhagwanpura	BG01	OW	26.032	74.993	200	0.666667					0	1	0
9	45K/13- 1B	CGWB	Ajner	Bhinai	Champaneri	BG01	EW	25.957	74.837	202.9	8.33333					0	1	0
10	45K/13- 1B	CGWB	Ajner	Bhinai	Champaneri	BG01	OW	25.957	74.837	105.3	10					1	0	0
11	45K/09- 1C	CGWB	Ajner	Bhinai	Nagar	BG01	EW	25.926	74.688	199.8	2.48333					0	1	0
12	45K/09- 1C	CGWB	Ajner	Bhinai	Nagar	BG01	OW	25.926	74.688	199.8	2.5					0	1	0

Existing data of Exploratory wells of CGWB (2014-15)

S.N.	Toposheet	Age	District	BLOCK	Location	Aq	Туре	Lat	Long	DepthDrilled	Q	Sp_ capacity	Т	Sy	AqI	AqII	AqIII
1	45J/15-3C	CGWB	Ajmer	Arain	Ghotiyana	BG01	EW	26.3	74.9916	146.24					1	0	0
4	45J/14-2C	CGWB	Ajmer	Kishangarh	Patan	BG01	Pz	26.6025	74.975	200					0	1	0
5	45J/14-2C	CGWB	Ajmer	Kishangarh	Patan	BG01	EW	26.6025	74.975	200					0	1	0
6	45J/14-1B	CGWB	Ajmer	Kishangarh	Khatoli	AL03	Pz	26.6722	74.8369	200					0	1	0
7	45J/14-1B	CGWB	Ajmer	Kishangarh	Sursura	AL03	EW	26.7275	74.8733	170.47					0	1	0
8	45J/14-2C	CGWB	Ajmer	Kishangarh	Tiloniya	BG01	EW	26.625	74.95	164.63					0	1	0
9	45J/14-1B	CGWB	Ajmer	Kishangarh	Ralawata	AL03	EW	26.6917	74.8541	155.49					0	1	0
10	45J/13-3B	CGWB	Ajmer	Kishangarh	Roopangarh	AL03	EW	26.7883	74.8633	155.1					0	1	0
11	45J/14-1A	CGWB	Ajmer	Kishangarh	Salimabad	AL03	EW	26.725	74.7833	137.1					1	0	0
12	45J/13-2B	CGWB	Ajmer	Kishangarh	Shokliya	AL03	EW	26.8833	74.9	137.1					1	0	0
13	45J/14-1C	CGWB	Ajmer	Kishangarh	Hathi Patta	GR02	Pz	26.6864	74.9236	117					1	0	0
14	45J/11-3C	CGWB	Ajmer	Peesangan	Bubania	BG01	EW	26.2528	74.6736	175			4.61		0	1	0
15	45J/11-3B	CGWB	Ajmer	PEESANGAN	Rajgarh	AL03	EW	26.2917	74.6292	175					0	1	0
16	45J/07-3C	CGWB	Ajmer	PEESANGAN	Jethana	AL03	EW	26.285	74.4733	170.47					0	1	0
17	45J/11-3C	CGWB	Ajmer	Peesangan	Nandla	BG01	EW	26.2694	74.7083	169.72					0	1	0
18	45J/11-3B	CGWB	Ajmer	Peesangan	Bithur	AL03	Pz	26.2678	74.6177	135					1	0	0
19	45J/11-2B	CGWB	Ajmer	Peesangan	Tabiji	AL03	EW	26.3625	74.625	128.05					1	0	0
20	45J/11-2A	CGWB	Ajmer	Peesangan	Saradhana	AL03	EW	26.3667	74.5583	128.05					0	1	0
21	45J/11-3C	CGWB	Ajmer	Peesangan	Nasirabd	BG01	Pz	26.3255	74.7258	124					1	0	0
23	45J/07-2B	CGWB	Ajmer	PISANGAN	Pisangan	AL03	EW	26.37	74.3867	175					0	1	0
24	45J/11-3C	CGWB	Ajmer	PISANGAN	Bhavani kheda	BG01	EW	26.2917	74.6722	175					0	1	0
25	45J/11-2A	CGWB	Ajmer	PISANGAN	Dumara	AL03	EW	26.375	74.5625	174.92					0	1	0
26	45J/07-2A	CGWB	Ajmer	PISANGAN	Pagara	GN01	EW	26.3667	74.3208	174.75					0	1	0

Existing data of Exploratory wells of CGWB (2016-17)

S.N.	Toposheet	Age	District	BLOCK	Location	Aq	Туре	Lat	Long	DepthDrilled	Q	Sp_ capacity	Т	Sy	AqI	AqII	AqIII
27	45J/10-3A	CGWB	Ajmer	PISANGAN	Tilora	AL03	EW	26.5375	74.5333	174.75					0	1	0
28	45J/10-3B	CGWB	Ajmer	PISANGAN	Kadel	AL03	EW	26.5833	74.5889	173.65					0	1	0
29	45J/10-2C	CGWB	Ajmer	PISANGAN	Baghpura	AL03	EW	26.5972	74.7	156.89					0	1	0
30	45J/13-3B	CGWB	Ajmer	RUPANGARH	Rupangarh	AL03	EW	26.8	74.8666	31			296.37		1	0	0
31	45J/10-2C	CGWB	Ajmer	Srinagar	Narwar	AL03	EW	26.59	74.6933	175					0	1	0
32	45J/10-3C	CGWB	Ajmer	Srinagar	Gagwana	AL03	EW	26.5236	74.7194	175					0	1	0
33	45J/11-2C	CGWB	Ajmer	SRINAGAR	Jetiya	SC01	EW	26.3569	74.7055	174.75					0	1	0
34	45J/10-3C	CGWB	Ajmer	Srinagar	Gagwana	AL03	EW	26.525	74.7361	173.78					0	1	0
35	45J/14-3A	CGWB	Ajmer	Srinagar	Kucheel	AL03	EW	26.575	74.7708	173.78					0	1	0
36	45J/14-3A	CGWB	Ajmer	Srinagar	Gegal	AL03	EW	26.575	74.7833	173.78					0	1	0
37	45J/10-3C	CGWB	Ajmer	Srinagar	Gangwana	AL03	Pz	26.5267	74.7211	166.3					0	1	0
38	45J/10-3C	CGWB	Ajmer	Srinagar	Ghugra	AL03	EW	26.5028	74.6917	137.1					1	0	0

Annexure II

Existing data of VES (2013-14)

S.N	Agency	Toposheet	District	Block	Location	Longitude	Latitude
1	GWD	45J/12-3C	AJMER	Bhinay	Gopalpura	74.718	26.0398
2	GWD	45J/12-3C	AJMER	Bhinay	Gowaliya	74.6897	26.0655
3	CGWB	45J/08-3B	Ajmer	Jawaja	Balad	74.3514	26.075
4	CGWB	45J/08-2A	Ajmer	Jawaja	Banewari	74.2583	26.0875
5	CGWB	45J/08-2A	Ajmer	Jawaja	Beawer	74.33	26.1019
6	CGWB	45J/08-2A	Ajmer	Jawaja	Bhagwanpura	74.3125	26.1708
7	CGWB	45J/08-2B	Ajmer	Jawaja	Dilawara	74.3681	26.1203
8	CGWB	45J/08-3A	Ajmer	Jawaja	Durgawas	74.2519	26.0583
9	CGWB	45J/08-2A	Ajmer	Jawaja	Fatehgarh	74.2978	26.1417
10	CGWB	45J/08-3A	Ajmer	Jawaja	Kalinjer EW	74.2694	26.0583
11	CGWB	45J/08-1B	Ajmer	Jawaja	Palani	74.35	26.1728
12	CGWB	45J/08-3B	Ajmer	Jawaja	Ramgarh	74.3472	26.0528
13	CGWB	45J/08-3A	Ajmer	Jawaja	Singharia EW/OW	74.31	26.0506
14	CGWB	45J/08-2B	Ajmer	Jawaja	Suhawa EW/OW	74.4	26.1289
15	CGWB	45J/08-3C	Ajmer	Masuda	Amarsingh Ka Bariya	74.4269	26.0625
16	CGWB	45J/08-2B	Ajmer	Masuda	Andheri Devri	74.3875	26.0894
17	CGWB	45J/08-3B	Ajmer	Masuda	Banola	74.3875	26.0269
18	CGWB	45J/08-1B	Ajmer	Masuda	Devgarh	74.4083	26.2103
19	CGWB	45J/08-3C	Ajmer	Masuda	Devipura	74.4375	26.0375
20	CGWB	45J/08-1C	Ajmer	Masuda	Kharba	74.4353	26.1911
21	CGWB	45J/08-2C	Ajmer	Masuda	Khetakhera	74.4417	26.1333
22	CGWB	45J/08-2C	Ajmer	Masuda	Lanadi	74.4875	26.1375
23	CGWB	45J/08-3B	Ajmer	Masuda	Lulawa	74.4042	26.0611
24	CGWB	45J/08-1C	Ajmer	Masuda	Madhogarh	74.4367	26.225
25	CGWB	45J/08-3C	Ajmer	Masuda	Nandwada	74.4833	26.025
26	CGWB	45J/08-2C	Ajmer	Masuda	Shyamgarh	74.4417	26.1103
27	CGWB	45J/08-1B	Ajmer	Peesangan	Gola	74.3939	26.2319
28	GWD	45J/12-1B	AJMER	Peesangan	Baghsuri	74.6499	26.22

Existing data of VES (2014-15)

Toposheet	Agency	District	Block	Location	Longitude	Latitude
45K/13-1A	GWD	AJMER	Bhinay	Ganahera	74.763	25.9433
45K/09-1A	GWD	AJMER	Masuda	Jaliya Ii	74.5433	25.9216

Annexure III

Location details of ground water monitoring stations and Water sampling Stations (2013-14)

SN	Agency	Toposheet	District	Block	Village	Longitude	Latitude	Forma	Туре	Aq1	Aq2
								tion	of		
									well		
1	CGWB	45J/12-2A	Ajmer	Baglias	Kushalpura	74.5506	26.1139	BG01		1	0
2	CGWB	45K/09-1B	Ajmer	Bari	Vijay nagar	74.6208	25.9303	BG01		1	0
3	CGWB	45J/12-2C	Ajmer	Benai	Amergarh	74.6667	26.1486	BG01		1	0
4	CGWB	45J/12-2C	Ajmer	Benai	Bandanwara	74.7075	26.125	BG01		1	0
5	CGWB	45J/12-3C	Ajmer	Benai	Chawandia	74.7347	26.0194	BG01		1	0
6	CGWB	45J/12-2B	Ajmer	Benai	Chawariya	74.6397	26.1654	BG01		1	0
7	CGWB	45J/12-2B	Ajmer	Benai	Devriya	74.6478	26.1106	BG01		1	0
8	CGWB	45K/09-1C	Ajmer	Benai	Dhani	74.7314	25.9989	BG01		1	0
9	CGWB	45J/12-3C	Ajmer	Benai	Gopalpura	74.7072	26.0369	BG01		1	0
10	CGWB	45J/16-2C	Ajmer	Benai	Joraopura	74.9814	26.1545	BG01		1	0
11	CGWB	45J/12-2C	Ajmer	Benai	Karanthi	74.7075	26.0842	BG01		1	0
12	CGWB	45J/12-2C	Ajmer	Benai	Kheri	74.6964	26.1003	BG01		1	0
13	CGWB	45J/16-2A	Ajmer	Benai	Kumhariya	74.8168	26.1573	BG01		1	0
14	CGWB	45J/12-3C	Ajmer	Benai	Sargaon	74.6694	26.0703	BG01		1	0
15	CGWB	45J/12-3C	Ajmer	Benai	Singawal	74.6783	26.0375	BG01		1	0
16	CGWB	45J/08-2A	Ajmer	Bewar	Rahmankhera	74.3297	26.1661	GN01		1	0
17	CGWB	45J/12-2C	Ajmer	Bhinay	Motipura	74.7	26.15	SST	DW	1	0
18	CGWB	45J/16-3A	Ajmer	Binai	Binai	74.75	26.0558	CK01		1	0
19	CGWB	45J/12-2B	Ajmer	Binai	Gepiya	74.6075	26.0936	BG01		1	0
20	CGWB	45J/08-2B	Ajmer	Delawara	Delawara	74.3653	26.1203	QZ02		1	0
21	CGWB	45J/12-3C	Ajmer	Ekalsinga	Hiyanlia	74.6667	26.0083	BG01		1	0
22	CGWB	45J/08-3B	Ajmer	Jawaja	Balad	74.3494	26.075	GN02		1	0
23	CGWB	45J/08-3B	Ajmer	Jawaja	Bayla	74.35	26.0333	Gr	DW	1	0
24	CGWB	45J/08-2A	Ajmer	Jawaja	Bewar khas	74.3256	26.1517	GN01		1	0
25	CGWB	45J/08-3A	Ajmer	Jawaja	Bhojpura	74.3014	26.0661	QZ02		1	0
26	CGWB	45J/04-3C	Ajmer	Jawaja	Durgawas	74.2492	26.0011	SC01		1	0
27	CGWB	45J/08-2B	Ajmer	Jawaja	Fatehpura	74.375	26.1431	QZ02		1	0
28	CGWB	45J/08-3A	Ajmer	Jawaja	Gohana	74.2972	26.0294	QZ02		1	0
29	CGWB	45J/12-1B	Ajmer	Jawaja	Jaliya I	74.605	26.1678	BG01		1	0
30	CGWB	45J/08-3A	Ajmer	Jawaja	Jethpur	74.3194	26.0259	QZ02		1	0

SN	Agency	Toposheet	District	Block	Village	Longitude	Latitude	Forma	Туре	Aq1	Aq2
31	CGWB	45J/08-2B	Ajmer	Jawaja	Lakhena	74.3994	26.1419	QZ02		1	0
32	CGWB	45J/08-3B	Ajmer	Jawaja	Mandera	74.3358	26.0303	GN02		1	0
33	CGWB	45J/08-3A	Ajmer	Jawaja	Narbad Khera	74.2833	26.05	Gr	DW	1	0
34	CGWB	45J/08-3A	Ajmer	Jawaja	Narbarkhera	74.2908	26.0508	QZ02		1	0
35	CGWB	45J/08-3A	Ajmer	Jawaja	Rajiawas	74.2778	26.0183	QZ02		1	0
36	CGWB	45J/08-3B	Ajmer	Jawaja	Ramgarh	74.3419	26.0397	GN02		1	0
37	CGWB	45J/08-3A	Ajmer	Jawaja	Rayatan khera	74.3089	26.0147	QZ02		1	0
38	CGWB	45J/08-3A	Ajmer	Jawaja	Sidariya	74.3058	26.0417	QZ02		1	0
39	CGWB	45J/08-3A	Ajmer	Jawaja	Singharia	74.2652	26.0599	QZ02		1	0
40	CGWB	45J/12-2A	Ajmer	Kirop	Kirop	74.5378	26.1611	BG01		1	0
41	CGWB	45J/08-2C	Ajmer	Masuda	Adwaniya	74.4764	26.0911	GN02		1	0
42	CGWB	45J/12-1B	Ajmer	Masuda	Ajba Ka Bariya	74.6472	26.2486	BG01		1	0
43	CGWB	45J/08-3B	Ajmer	Masuda	Andhi Deori	74.3761	26.0783	Gr	Pz	1	0
44	CGWB	45J/08-3B	Ajmer	Masuda	Barkhala	74.3781	26.0631	GN02		1	0
45	CGWB	45J/08-2C	Ajmer	Masuda	Bassi	74.4794	26.1142	GN02		1	0
46	CGWB	45J/08-1B	Ajmer	Masuda	Devgarh	74.4072	26.21	GN01		1	0
47	CGWB	45J/08-2C	Ajmer	Masuda	Dholdata	74.4503	26.09	GN02		1	0
48	CGWB	45J/12-3B	Ajmer	Masuda	FATHGARH	74.5835	26.0733	BG01		1	0
49	CGWB	45J/12-3B	Ajmer	Masuda	Ganeshpura	74.6583	26.025	Gr	DW	1	0
50	CGWB	45J/12-3C	Ajmer	Masuda	Gawaliya	74.6879	26.0721	BG01		1	0
51	CGWB	45J/12-2A	Ajmer	Masuda	Jamola	74.5028	26.0933	BG01		1	0
52	CGWB	45J/12-2A	Ajmer	Masuda	Jutha ka Bariya	74.5475	26.0892	BG01		1	0
53	CGWB	45J/12-1A	Ajmer	Masuda	KALAHERI	74.5824	26.1739	GN02		1	0
54	CGWB	45J/12-2A	Ajmer	Masuda	Kanpura	74.5775	26.1161	BG01		1	0
55	CGWB	45J/08-1C	Ajmer	Masuda	Kashipura	74.4917	26.1833	QZ02		1	0
56	CGWB	45J/08-1C	Ajmer	Masuda	Kharwa	74.4353	26.1939	QZ02		1	0
57	CGWB	45J/08-2C	Ajmer	Masuda	Khetakhera	74.4347	26.1342	GN02		1	0
58	CGWB	45J/12-3B	Ajmer	Masuda	Lamba	74.5858	26.0506	BG01		1	0
59	CGWB	45J/08-2C	Ajmer	Masuda	LANDI	74.4835	26.137	GN02		1	0
60	CGWB	45J/08-2B	Ajmer	Masuda	Lasariya	74.3717	26.0989	QZ02		1	0
61	CGWB	45J/08-1C	Ajmer	Masuda	MADHOGARH	74.4367	26.2214	QZ02		1	0
62	CGWB	45J/12-2A	Ajmer	Masuda	Masooda	74.5125	26.0917	Gr	DW	1	0
63	CGWB	45J/12-2B	Ajmer	Masuda	Masuda	74.6075	26.0936	BG01		1	0
64	CGWB	45J/12-1A	Ajmer	Masuda	MAYLU	74.5641	26.2006	GN02		1	0
65	CGWB	45J/12-1B	Ajmer	Masuda	Nasun	74.5989	26.2169	BG01		1	0
66	CGWB	45J/08-3C	Ajmer	Masuda	Pakhriawas	74.4726	26.0399	GN03		1	0

SN	Agency	Toposheet	District	Block	Village	Longitude	Latitude	Forma	Туре	Aq1	Aq2
67	CGWB	45J/08-1B	Ajmer	Masuda	PIPLAJ	74.3834	26.1787	GN01		1	0
68	CGWB	45J/08-3B	Ajmer	Masuda	Rawal ka Bariya	74.37	26.0436	GN02		1	0
69	CGWB	45J/12-2B	Ajmer	Masuda	RUPURA	74.6633	26.1352	BG01		1	0
70	CGWB	45J/12-2B	Ajmer	Masuda	Sattawatiya	74.6222	26.1261	BG01		1	0
71	CGWB	45J/12-3A	Ajmer	Masuda	Shergarh	74.545	26.0539	BG01		1	0
72	CGWB	45J/08-2C	Ajmer	Masuda	Shyam Garh	74.4167	26.1	Gr	DW	1	0
73	CGWB	45J/08-2C	Ajmer	Masuda	Shyamgarh	74.4378	26.1011	GN02		1	0
74	CGWB	45J/08-1C	Ajmer	Masuda	SURAJPURA	74.445	26.1803	QZ02		1	0
75	CGWB	45J/08-1C	Ajmer	Peesangan	Lamana	74.4917	26.2333	AL04	DW	1	0
76	CGWB	45J/12-1B	Ajmer	Pisangan	Bagsuri	74.6422	26.2172	BG01		1	0
77	CGWB	45J/12-2C	Ajmer	Pisangan	Danta	74.6933	26.1644	BG01		1	0
78	CGWB	45J/08-1C	Ajmer	Pisangan	DEVaRA	74.4353	26.2456	QZ02		1	0
79	CGWB	45J/08-1B	Ajmer	Pisangan	GOLA	74.3939	26.2319	GN01		1	0
80	CGWB	45J/12-1C	Ajmer	Pisangan	Jarwasa	74.7181	26.2017	BG01		1	0
81	CGWB	45J/08-1C	Ajmer	Pisangan	Kopura	74.4618	26.1913	QZ02		1	0
82	CGWB	45J/08-1C	Ajmer	Pisangan	LAMANA (R.S)	74.4745	26.2379	QZ02		1	0
83	CGWB	45J/12-1A	Ajmer	Pisangan	LIRI	74.5357	26.2197	GN02		1	0
84	CGWB	45J/12-1C	Ajmer	Pisangan	Nearn	74.6675	26.1786	BG01		1	0
85	CGWB	45J/12-1A	Ajmer	Pisangan	NIMARITHALA	74.5442	26.242	GN02		1	0
86	CGWB	45J/12-1C	Ajmer	Pisangan	RAMPURA	74.6766	26.1944	BG01		1	0
87	CGWB	45J/08-3A	Ajmer	Rajiyawas	Phatta ke pol	74.2631	26.0097	QZ02		1	0
88	CGWB	45J/16-2B	Ajmer	Sathana	Ganeshpura	74.9031	26.1486	CK01		1	0
89	CGWB	45J/08-3C	Ajmer	Sattawatiya	Nayagaon	74.4244	26.0622	GN03		1	0
90	CGWB	45J/08-1B	Ajmer	Sumer	Naya baria	74.3547	26.1944	GN01		1	0
91	CGWB	45J/12-3B	Ajmer	Vijay nagar	Bhagwanpura	74.6369	26.0067	BG01		1	0

SN	District	Block	Village	Longitude	Latitude
1	Ajmer	Bari	Vijay nagar	74.6208	25.9303
2	Ajmer	Benai	Joraopura	74.9814	26.1545
3	Ajmer	Benai	Kumhariya	74.8168	26.1573
4	Ajmer	Jawaja	Ratanpura	74.3906	25.9939
5	Ajmer	Sathana	Ganeshpura	74.9031	26.1486
6	Ajmer	Binay	Sarmalliya	74.8325	26.1008
7	Ajmer	Binay	Udaigarh Khera	74.7711	26.0778
8	Ajmer	Binay	Dantol	74.7803	26.1019
9	Ajmer	Binay	Tatoti	74.8156	26.1369
10	Ajmer	Binay	Kebaniya	74.7828	26.1658
11	Ajmer	Binay	Kitab	74.76	26.1456
12	Ajmer	Binay	Kesarpura	74.8508	26.1583
13	Ajmer	Binay	Kesarpura	74.8552	26.1
14	Ajmer	Binay	Jawala	74.8986	26.1219
15	Ajmer	Binay	Jotiyan	74.895	26.0933
16	Ajmer	Jawaja	Jawaja	74.2106	25.9447
17	Ajmer	Jawaja	Surajpura	74.1374	25.8833
18	Ajmer	Jawaja	Soniyana	74.1931	25.8914
19	Ajmer	Jawaja	Kheradanti	74.1642	25.8869
20	Ajmer	Jawaja	Shero ka Wala	74.1339	25.8597
21	Ajmer	Jawaja	Rawatmala	74.1675	25.9058
22	Ajmer	Jawaja	Barkochram	74.2297	25.9011

Location details of ground water monitoring stations and Water sampling Stations (2014-15)

SN	District	Block	Village	Longitude	Latitude
23	Ajmer	Jawaja	Paluna	74.2478	25.8892
24	Ajmer	Jawaja	Jagpura	74.2269	25.9447
25	Ajmer	Jawaja	Anakar	74.2556	25.9406
26	Ajmer	Jawaja	Suradiya	74.2803	25.9764
27	Ajmer	Jawaja	Hinautiya	74.5042	25.9569
28	Ajmer	Jawaja	Kampu ka Bariya	74.4747	25.9742
29	Ajmer	Jawaja	Rampura	74.4375	25.9503
30	Ajmer	Jawaja	Dewas	74.4194	25.9764
31	Ajmer	Jawaja	Bhairukhera	74.5381	25.9481
32	Ajmer	Jawaja	Jaliya II	74.5767	25.9319
33	Ajmer	Jawaja	Vijaynagar	74.6294	25.93
34	Ajmer	Jawaja	Lodiyana	74.5778	25.9772
35	Ajmer	Jawaja	Sathana	74.6258	25.9756
36	Ajmer	Jawaja	Mokhampura	74.6813	25.9262
37	Ajmer	Jawaja	Ekalsingha	74.7156	25.9933
38	Ajmer	Jawaja	Sikhraniya	74.6822	25.9644
39	Ajmer	Jawaja	Bagrai	74.8272	25.9204
40	Ajmer	Jawaja	Champaneri	74.8422	25.9644
41	Ajmer	Masuda	Parli	74.8953	25.9614
42	Ajmer	Masuda	Lamgara	74.8008	25.9425
43	Ajmer	Masuda	Ghana	74.7797	25.9933
44	Ajmer	Masuda	Nemera	74.7644	25.9572
45	Ajmer	Masuda	Barli	74.3322	25.95

SN	District	Block	Village	Longitude	Latitude
46	Ajmer	Masuda	Sutikhera	74.5914	25.92
47	Ajmer	Masuda	Khotiyan	74.5672	25.9489
48	Ajmer	Masuda	Kumaharuya Khera	74.8192	26.0275
49	Ajmer	Masuda	Nagola	74.875	26.0056
50	Ajmer	Masuda	Keriya	74.8972	26.0428
51	Ajmer	Masuda	Barla	74.8519	26.0439
52	Ajmer	Masuda	Raghunathgarh	74.8533	26.0792

Annexure IV

Location of Proposed Exploratory well (2013-14)

SN	Toposhee	District	Block	Village	Aq2 HR	Aq2SR	Aq3	Longitud	Latitude
	t							e	
1	45J/12-2C	AJMER	Bhinay	Bandanwa	1			74.694	26.1188
				ra					
2	45J/08-3C	AJMER	Masuda	Nandwara	1			74.4777	26.0333
3	45J/12-3B	AJMER	Masuda	Lamba	1			74.6093	26.0487
4	45J/12-2A	AJMER	Masuda	Masooda	1			74.5498	26.1332
5	45J/12-1B	AJMER	Peesangan	Baghsuri	1			74.6437	26.2228

Location of Proposed Exploratory well (2014-15)

SN	District	Block	Village	Longitude	Latitude	Pz_aq1	Aq2 HR	Aq2SR	Aq3
1	AJMER	Bhinay	Padaliya (Bhinay)	74.8863	25.9622		1		
2	AJMER	Bhinay	Bhinay	74.7741	26.0508		1		
3	AJMER	Jawaja	Dadola	74.1373	25.8667		1		
4	AJMER	Jawaja	Banjari	74.032	25.7844		1		
5	AJMER	Jawaja	Tatgarh	73.977	25.7125		1		
6	AJMER	Masuda	Jaliya Ii	74.5487	25.9395		1		

Location of Proposed Exploratory well (2016-17)

SN	Toposhee t	District	Block	Village	Longitud e	Latitude	Aq2 HR	Aq2SR	Aq3
1	450/01- 1A	AJMER	Arain	Beeliya	75.0534	25.9632	1		
2	45N/04- 3B	AJMER	Arain	Lallai	75.1003	26.0446	1		

SN	Toposhee t	District	Block	Village	Longitud e	Latitude	Aq2 HR	Aq2SR	Aq3
3	45N/04- 2A	AJMER	Arain	Fatehgarh	75.0225	26.1311	1		
4	45N/04- 1B	AJMER	Arain	Manoharp ura	75.1415	26.2012	1		
5	45N/03- 3A	AJMER	Arain	Kasheer	75.0408	26.2825	1		
6	45J/15-2C	AJMER	Arain	Jhadol	74.9515	26.3598	1		
7	45N/03- 2B	AJMER	Arain	Dhasook	75.1083	26.3618	1		
8	45N/03- 1A	AJMER	Arain	Arain	75.0534	26.4494	1		
9	45K/13- 2A	AJMER	Bhinay	Deoliya Kalan	74.793	25.8958	1		
10	45K/13- 2C	AJMER	Bhinay	Kerot	74.9481	25.8896	1		
11	45J/16-1C	AJMER	Bhinay	Shergarh	74.9756	26.196	1		
12	45O/01- 3A	AJMER	Kekri	Kadera	75.0511	25.7956	1		
13	45O/01- 3C	AJMER	Kekri	Sadara	75.1873	25.8018	1		
14	45O/01- 2B	AJMER	Kekri	Pranhera	75.1054	25.8906	1		
15	45O/01- 1C	AJMER	Kekri	Meoda Kalan	75.217	25.9828	1		
16	45N/08- 3A	AJMER	Kekri	Baghera	75.296	26.024	1		
17	45J/13-2C	AJMER	Kishangar h	Bhadoon	74.9469	26.8657	1		
18	45J/13-1B	AJMER	Kishangar h	Jhag	74.8886	26.9594	1		
19	45J/15-1B	AJMER	Kishangar h	Bhunwad a	74.884	26.4515	1		
20	45J/14-3C	AJMER	Kishangar h	Beeti	74.963	26.5452	1		

SN	Toposhee	District	Block	Village	Longitud	Latitude	Aq2 HR	Aq2SR	Aq3
	t				e				
21	45J/14-2B	AJMER	Kishangar h	Kishangar h (M)	74.8628	26.618	1		
22	45N/02- 2A	AJMER	Kishangar h	Bandar Seendri	75.0345	26.6262	1		
23	45J/14-1C	AJMER	Kishangar h	Rampura	74.9544	26.7153	1		
24	45J/14-1A	AJMER	Kishangar h	Motipura	74.7839	26.7107	1		
25	45J/16-1A	AJMER	Peesangan	Bhatiyani	74.7902	26.2176	1		
26	45J/11-3A	AJMER	Peesangan	Bidkachiy awas	74.5475	26.2722	1		
27	45J/07-2C	AJMER	Peesangan	Nooriyaw as	74.4743	26.3794	1		
28	45J/11-2B	AJMER	Peesangan	Saradhana	74.6082	26.3536	1		
29	45J/07-1B	AJMER	Peesangan	Govindga rh	74.3793	26.4463	1		
30	45J/11-1A	AJMER	Peesangan	Surajkund	74.5246	26.4463	1		
31	45J/15-3B	AJMER	Srinagar	Ramsar	74.8783	26.2897	1		
32	45J/15-2A	AJMER	Srinagar	Modi	74.7993	26.3691	1		
33	45J/11-1C	AJMER	Srinagar	Ajmer (M Cl)	74.6791	26.4566	1		
34	45J/10-3B	AJMER	Srinagar	Makarwal i	74.6437	26.5339	1		

Annexure V

Location of Proposed VES (2013-14)

SN	Toposheet	District	Block	Village	Formation	Longitude	Latitude
1	45J/12-2C	AJMER	Bhinay	Chhachhun dra	BG01	74.7385	26.1054
2	45J/12-2C	AJMER	Bhinay	Padanga	BG01	74.6766	26.0951
3	45J/12-2C	AJMER	Bhinay	Motipura	BG01	74.6903	26.1465
4	45J/12-2B	AJMER	Bhinay	Padanga	BG01	74.6548	26.093
5	45J/12-3B	AJMER	Bhinay	Sawaipura	BG01	74.6491	26.0694
6	45J/12-3C	AJMER	Bhinay	Hiyaliya	BG01	74.6777	26.0149
7	45J/12-1A	AJMER	Masuda	Kirap	GN02	74.5184	26.1815
8	45J/12-1A	AJMER	Masuda	Mayla	GN02	74.5648	26.1933
9	45J/12-1B	AJMER	Masuda	Nasoon	BG01	74.5946	26.2113
10	45J/12-1B	AJMER	Masuda	Chawadiya	BG01	74.6485	26.1738
11	45J/12-2B	AJMER	Masuda	Satawariya	BG01	74.6273	26.1229
12	45J/12-2B	AJMER	Masuda	Jamola	BG01	74.6009	26.1455
13	45J/12-2A	AJMER	Masuda	Ratanpura	BG01	74.5505	26.0992
14	45J/12-2A	AJMER	Masuda	Masooda	BG01	74.5184	26.0982
15	45J/12-2A	AJMER	Masuda	Kirap	BG01	74.5482	26.1568
16	45J/12-3A	AJMER	Masuda	Keloo	BG01	74.5276	26.0056
17	45J/12-3A	AJMER	Masuda	Lalawas	BG01	74.523	26.056
18	45J/12-3A	AJMER	Masuda	Shergarh	BG01	74.5631	26.054
19	45J/12-3B	AJMER	Masuda	Lamba	BG01	74.6101	26.055
20	45J/12-3B	AJMER	Masuda	Daulatpura (Santhana	BG01	74.6147	26.0159
21	45J/08-1C	AJMER	Peesangan	Amargarh	QZ02	74.484	26.2144
22	45J/12-1A	AJMER	Peesangan	Bidkachiya was	GN02	74.5488	26.2402
23	45J/12-1C	AJMER	Peesangan	Nyara	BG01	74.6835	26.1789
24	45J/12-1C	AJMER	Peesangan	Jharwasa	BG01	74.7322	26.2268
25	45J/12-1C	AJMER	Peesangan	Bubaniya	BG01	74.6943	26.2407

SN	Toposheet	District	Block	Village	Longitude	Latitude	Formation
1	45J/16-2C	AJMER	Arain	Kheeriya	74.978	26.1033	BG01
2	45J/16-3C	AJMER	Arain	Chakwa	74.978	26.019	BG01
3	45K/13-1C	AJMER	Arain	Soonpa	74.986	25.9388	BG01
4	45J/16-2C	AJMER	Bhinay	Goyla	74.9379	26.1229	BG01
5	45J/16-2C	AJMER	Bhinay	Arwar	74.9356	26.1548	BG01
6	45J/16-2B	AJMER	Bhinay	Jawla	74.9024	26.1188	CK01
7	45J/16-2B	AJMER	Bhinay	Reechhmal	74.8428	26.1023	CK01
			-	iya @			
				Ramma			
8	45J/16-2B	AJMER	Bhinay	Kesharpura	74.8646	26.1548	CK01
9	45J/16-2A	AJMER	Bhinay	Dhantol	74.7981	26.1044	BG01
10	45J/16-2A	AJMER	Bhinay	Keetap	74.7671	26.1445	BG01
11	45J/16-2A	AJMER	Bhinay	Tantoti	74.8267	26.1445	BG01
12	45J/16-3A	AJMER	Bhinay	Telara	74.7671	26.0138	CK01
13	45J/16-3A	AJMER	Bhinay	Bhinay	74.7717	26.0581	CK01
14	45J/16-3A	AJMER	Bhinay	Boobkiya	74.8199	26.0642	CK01
15	45J/16-3B	AJMER	Bhinay	Nagola	74.8714	26.0128	KH01
16	45J/16-3B	AJMER	Bhinay	Barla @	74.8554	26.0457	KH01
				Kala Talab			
17	45J/16-3B	AJMER	Bhinay	Keriya	74.8966	26.0519	KH01
				Khurd			
18	45J/16-3C	AJMER	Bhinay	Bargaon	74.9253	26.0128	BG01
				(Surkhand)			
19	45J/16-3C	AJMER	Bhinay	Jadana	74.9666	26.0498	BG01
20	45K/13-1C	AJMER	Bhinay	Jetpura	74.9413	25.9336	BG01
21	45K/13-1C	AJMER	Bhinay	Kanai	74.9413	25.983	BG01
				Kalan			
22	45K/13-1B	AJMER	Bhinay	Nandsi	74.8852	25.9357	BG01
23	45K/13-1B	AJMER	Bhinay	Padaliya	74.884	25.9665	BG01
				(Bhinay)			
24	45K/13-1B	AJMER	Bhinay	Chapaneri	74.8497	25.9737	BG01
25	45K/13-1A	AJMER	Bhinay	Ghana	74.7889	25.9871	BG01

Location of Proposed VES (2014-15)

SN	Toposheet	District	Block	Village	Longitude	Latitude	Formation
26	45K/13-1A	AJMER	Bhinay	Bagrai	74.8176	25.9274	BG01
27	45K/09-1C	AJMER	Bhinay	Mataji Ka Khera	74.7305	25.9274	BG01
28	45K/09-1C	AJMER	Bhinay	Ekalseenga	74.7224	25.982	BG01
29	45J/04-3C	AJMER	Jawaja	Kotra	74.2055	26.018	SC01
30	45J/04-3C	AJMER	Jawaja	Badiya Loomba	74.2044	26.0354	SC01
31	45K/05-1A	AJMER	Jawaja	Rayta Khera	74.2949	25.9922	GN01
32	45K/05-1A	AJMER	Jawaja	Suradiya	74.2743	25.9583	GN01
33	45K/05-1A	AJMER	Jawaja	Kalinjar	74.2628	25.983	GN01
34	45K/01-1C	AJMER	Jawaja	Chiliyabar	74.2067	25.9357	QZ02
35	45K/01-1C	AJMER	Jawaja	Kabra	74.2216	25.9799	QZ02
36	45K/01-2B	AJMER	Jawaja	Dadola	74.1287	25.8688	QZ02
37	45K/01-2B	AJMER	Jawaja	Naya Khera	74.1517	25.8935	QZ02
38	45K/01-2B	AJMER	Jawaja	Lasani	74.162	25.9007	QZ02
39	45K/01-2C	AJMER	Jawaja	Bihar Ratanpura	74.2044	25.9038	GN01
40	45G/13-1A	AJMER	Jawaja	Mediya	73.9649	25.8169	GN01
41	45G/13-1A	AJMER	Jawaja	Baghmal	73.9907	25.7992	GN01
42	45G/13-1A	AJMER	Jawaja	Mediya	73.96	25.7694	GN01
43	45G/14-1A	AJMER	Jawaja	Mediya	73.9526	25.733	GN01
44	45G/14-1A	AJMER	Jawaja	Malaton Kiber	73.9575	25.7054	GN01
45	45G/14-1A	AJMER	Jawaja	Tatgarh	73.9723	25.6987	GN01
46	45K/01-3A	AJMER	Jawaja	Dewal Fatehpura	74.0213	25.8157	GN01
47	45K/01-3A	AJMER	Jawaja	Mewasa	74.0532	25.7936	GN01
48	45K/01-3A	AJMER	Jawaja	Banjari	74.0361	25.7782	GN01
49	45K/09-1B	AJMER	Masuda	Sathana	74.6399	25.9789	BG01
50	45K/09-1C	AJMER	Masuda	Chosla @ Dulhe Nagar	74.6743	25.9439	BG01
51	45K/09-1B	AJMER	Masuda	Bari	74.6147	25.9336	BG01
52	45K/09-1A	AJMER	Masuda	Lodiyana	74.5711	25.9748	BG01
53	45K/09-1A	AJMER	Masuda	Hanootiya	74.5219	25.9624	BG01

SN	Toposheet	District	Block	Village	Longitude	Latitude	Formation
54	45K/05-1C	AJMER	Masuda	Shivpuri	74.4863	25.982	BG01
55	45K/05-1C	AJMER	Masuda	Ramgarh	74.4657	25.9562	BG01
56	45K/05-1B	AJMER	Masuda	Jeewaha	74.4072	25.984	BG01

Location of Proposed VES (2016-17)

SN	District	Block	Village	Longitude	Latitude	Formation
1	AJMER	Arain	Gothiyana	74.9855	26.307	BG01
2	AJMER	Arain	Srirampura	75.0734	26.2692	BG01
3	AJMER	Arain	Jorawarpura	75.0392	26.3192	BG01
4	AJMER	Arain	Pandarwara	75.1236	26.3111	BG01
5	AJMER	Arain	Goojarwara	75.1099	26.261	BG01
6	AJMER	Arain	Dadiya	74.965	26.404	BG01
7	AJMER	Arain	Keriya	74.9924	26.3519	BG01
8	AJMER	Arain	Ankauriya	75.0221	26.3519	BG01
9	AJMER	Arain	Sandoliya	75.0495	26.3948	BG01
10	AJMER	Arain	Dhasook	75.0928	26.3509	BG01
11	AJMER	Arain	Goondli	75.1054	26.3968	BG01
12	AJMER	Arain	Katsoora	74.9833	26.4826	BG01
13	AJMER	Arain	Dadiya	74.9639	26.4315	BG01
14	AJMER	Arain	Lamba	75.0095	26.4274	BG01
15	AJMER	Arain	Arain	75.0631	26.4356	BG01
16	AJMER	Arain	Raghunathpu	75.0255	26.4785	BG01
			ra			
17	AJMER	Arain	Sinroj	75.1054	26.4795	BG01
18	AJMER	Arain	Bhambholao	75.1522	26.4611	BG01
19	AJMER	Arain	Dang	75.0962	26.4325	BG01
20	AJMER	Arain	Bhogadeet	75.0746	26.5162	BG01
21	AJMER	Arain	Mala	75.0985	26.5479	QZ02
22	AJMER	Arain	Borada	75.056	26.1877	BG01
23	AJMER	Arain	Dantri	75.0732	26.2247	BG01
24	AJMER	Arain	Kharwar	75.1007	26.236	BG01
25	AJMER	Arain	Manoharpura	75.1396	26.1959	BG01
26	AJMER	Arain	Sadapur	75.0972	26.1835	BG01
27	AJMER	Arain	Sunariya	75.1499	26.1167	BG01

SN	District	Block	Village	Longitude	Latitude	Formation
28	AJMER	Arain	Hingoniyan	75.1259	26.0941	BG01
29	AJMER	Arain	Syar	75.0972	26.1023	BG01
30	AJMER	Arain	Syar	75.0732	26.1105	BG01
31	AJMER	Arain	Fatehgarh	75.0227	26.1229	BG01
32	AJMER	Arain	Dhanma	75.0307	26.1548	BG01
33	AJMER	Arain	Sarwar (M)	75.017	26.0653	BG01
34	AJMER	Arain	Heengtara	75.0732	26.0437	BG01
35	AJMER	Arain	Ajgara	75.0938	26.0221	BG01
36	AJMER	Arain	Hingoniyan	75.1179	26.0642	BG01
37	AJMER	Arain	Sapunda	75.1431	26.0354	BG01
38	AJMER	Arain	Jaliya	75.0342	25.9552	BG01
39	AJMER	Arain	Iraniyan	75.0227	25.984	BG01
40	AJMER	Arain	Sapla	74.9826	25.9038	BG01
41	AJMER	Bhinay	Barol	74.973	26.259	BG01
42	AJMER	Bhinay	Dhigariya	75.0084	26.2631	BG01
43	AJMER	Bhinay	Kumhariya	74.7591 26.1897		CK01
44	AJMER	Bhinay	Gudaliya	74.8199	26.1856	CK01
45	AJMER	Bhinay	Peeproli	74.8508	26.1805	BG01
46	AJMER	Bhinay	Sarana	74.8829	26.1794	BG01
47	AJMER	Bhinay	Bahera	74.9024	26.236	BG01
48	AJMER	Bhinay	Badla	74.9287	26.1784	BG01
49	AJMER	Bhinay	Shergarh	74.9792	26.1846	BG01
50	AJMER	Bhinay	Barol	74.9883	26.2411	BG01
51	AJMER	Bhinay	Dabrela	75.0078	26.2103	BG01
52	AJMER	Bhinay	Deoliya Kalan	74.7809	25.8986	BG01
53	AJMER	Bhinay	Gurha Kalan	74.8691	25.8935	BG01
54	AJMER	Bhinay	Jetpura	74.9448	25.9089	BG01
55	AJMER	Kekri	Naiki	75.182	26.0159	BG01
56	AJMER	Kekri	Jooniva	75.2061	26.0725	BG01
57	AJMER	Kekri	Chhabariya	75.2267	26.0334	BG01
58	AJMER	Kekri	Deoliya Khurd	75.26	26.0221	BG01
59	AJMER	Kekri	Baghera	75.3173	26.0169	BG01
60	AJMER	Kekri	Kanoj	75.2703	26.0632	BG01
61	AJMER	Kekri	Deogaon	75.2966	26.0941	BG01

SN	District	Block	Village	Longitude	Latitude	Formation
62	AJMER	Kekri	Dayalpura	75.3012	26.1404	BG01
63	AJMER	Kekri	Mankhand	75.2657	25.9861	BG01
64	AJMER	Kekri	Taswariya	75.2577	25.9511	BG01
65	AJMER	Kekri	Molkiya	75.2107	25.9274	BG01
66	AJMER	Kekri	Kekri (M)	75.182	25.9768	BG01
67	AJMER	Kekri	Meoda Kalan	75.2279	25.985	BG01
68	AJMER	Kekri	Kekri (Rural)	75.1557	25.9449	BG01
69	AJMER	Kekri	Pranhera	75.0961	25.9213	BG01
70	AJMER	Kekri	Sarsari	75.111	25.9634	BG01
71	AJMER	Kekri	Meoda Khurd	75.0686	25.9429	BG01
72	AJMER	Kekri	Bheemrawas	75.0399	25.8657	BG01
73	AJMER	Kekri	Pranhera	75.0651	25.8976	BG01
74	AJMER	Kekri	Pranhera	75.0972	25.9028	BG01
75	AJMER	Kekri	Sakariya	75.1431	25.8472	BG01
76	AJMER	Kekri	Khawas	75.0995	25.8524	BG01
77	AJMER	Kekri	Kohra	75.174	25.9089	BG01
78	AJMER	Kekri	Para	75.1809	25.8637	BG01
79	AJMER	Kekri	Bogla	75.2302	25.8812	BG01
80	AJMER	Kekri	Bajta	75.2783	25.8452	BG01
81	AJMER	Kekri	Chosla	75.3207	25.8369	BG01
82	AJMER	Kekri	Chosla	75.3242	25.8123	BG01
83	AJMER	Kekri	Ghatiyali	75.268	25.7814	BG01
84	AJMER	Kekri	Padaliya	75.2978	25.7629	BG01
			(Sawar)			
85	AJMER	Kekri	Sadara	75.1901	25.804	BG01
86	AJMER	Kekri	Tankawas	75.229	25.8225	BG01
87	AJMER	Kekri	Mehroo	75.1442	25.7752	BG01
			Kalan			
88	AJMER	Kekri	Sheshupra	75.0961	25.8133	BG01
89	AJMER	Kekri	Peeplaj	75.0984	25.7619	BG01
90	AJMER	Kekri	Kadera	75.0663	25.8174	BG01
91	AJMER	Kekri	Gordha	75.1293	25.7238	BG01
92	AJMER	Kekri	Kushayata	75.1786	25.7259	BG01
93	AJMER	Kekri	Cheetiwas	75.2313	25.695	BG01
94	AJMER	Kekri	Neemera (Sawar)	75.2714	25.7351	BG01

SN	District	Block	Village	Longitude	Latitude	Formation
95	AJMER	Kishangarh	Karkeri	74.7231	26.7306	QZ02
96	AJMER	Kishangarh	Kucheel	74.7721	26.6377	AL03
97	AJMER	Kishangarh	Khatoli	74.8486	26.653	QZ02
98	AJMER	Kishangarh	Kishangarh	74.8771	26.604	QZ02
			(M)			
99	AJMER	Kishangarh	Phaloda	74.9034	26.6377	QZ02
100	AJMER	Kishangarh	Ralawatan	74.8634	26.6816	AL03
101	AJMER	Kishangarh	Harmara	74.9022	26.6816	AL03
102	AJMER	Kishangarh	Sursura	74.884	26.7255	AL03
103	AJMER	Kishangarh	Peenglod	74.8086	26.6928	AL03
104	AJMER	Kishangarh	Rodawas	74.771	26.7102	AL03
105	AJMER	Kishangarh	Singara	74.7972	26.7378	AL03
106	AJMER	Kishangarh	Ramgarh	74.7755	26.7612	AL03
107	AJMER	Kishangarh	Nitooti	74.7961	26.8184	AL03
108	AJMER	Kishangarh	Karkeri	74.731	26.7623	AL04
109	AJMER	Kishangarh	Udaipur	74.8144	26.4846	QZ02
			Kalan			
110	AJMER	Kishangarh	Udaipur	74.8486	26.4897	BG01
			Kalan			
111	AJMER	Kishangarh	Bhunwada	74.8942	26.4591	BG01
112	AJMER	Kishangarh	Moondolao	74.9273	26.4315	BG01
113	AJMER	Kishangarh	Khandach	75.0221	26.5428	BG01
114	AJMER	Kishangarh	Bandar	75.0403	26.5714	BG01
			Seendri			
115	AJMER	Kishangarh	Bargaon	74.9639	26.5928	BG01
116	AJMER	Kishangarh	Tiloniya	74.9479	26.6347	BG01
117	AJMER	Kishangarh	Naloo	74.9776	26.6428	BG01
118	AJMER	Kishangarh	Kishangarh	74.884	26.5714	BG01
			(M)			
119	AJMER	Kishangarh	Silora	74.8623	26.5234	BG01
120	AJMER	Kishangarh	Barna	74.9342	26.5132	GN03
121	AJMER	Kishangarh	Sar Gaon	74.9353	26.552	GN03
122	AJMER	Kishangarh	Deendwara	74.9912	26.5581	GN03
123	AJMER	Kishangarh	Khera	75.0631	26.604	BG01
			Karmsotan			
124	AJMER	Kishangarh	Bandar	75.0243	26.5918	BG01

SN	District	Block	Village	Longitude Latitude		Formation
			Seendri			
125	AJMER	Kishangarh	Mundoti	75.0449	26.6469	BG01
126	AJMER	Kishangarh	Nosal	74.8908	26.9236	AL03
127	AJMER	Kishangarh	Gurha	74.8611	26.9582	AL03
128	AJMER	Kishangarh	Sinodiya	74.9547	26.9338	AL03
129	AJMER	Kishangarh	Sinodiya	74.9273	26.8992	AL03
130	AJMER	Kishangarh	Jakholai	74.9011	26.8666	AL03
131	AJMER	Kishangarh	Khajpura Bhairwai	74.8474	26.8534	AL03
132	AJMER	Kishangarh	Bhilawat 74.8497 26.9043		26.9043	AL03
133	AJMER	Kishangarh	Paner	74.8155	26.8442	AL04
134	AJMER	Kishangarh	Manpura	74.7858	26.8483	AL04
135	AJMER	Kishangarh	Jajota	74.8589	26.8218	AL03
136	AJMER	Kishangarh	Tyod	74.9068	26.7648	AL03
137	AJMER	Kishangarh	Roopangarh	74.8657	26.7832	AL03
138	AJMER	Kishangarh	Tyod	74.9273	26.7659	AL03
139	AJMER	Kishangarh	Narena	74.9798	26.7577	AL03
140	AJMER	Kishangarh	Harmara	74.933	26.6948	GR02
141	AJMER	Masuda	Jaliya Ii	74.5368	25.9048	BG01
142	AJMER	Peesangan	Reechhmaliy a	74.3065	26.4336	AL04
143	AJMER	Peesangan	Pisangan	74.3499	26.4233	AL03
144	AJMER	Peesangan	Jaswantpura	74.4035	26.4448	AL03
145	AJMER	Peesangan	Govindgarh	74.3807	26.4764	AL03
146	AJMER	Peesangan	Leswa	74.4297	26.4713	AL03
147	AJMER	Peesangan	Nand	74.4822	26.4805	AL03
148	AJMER	Peesangan	Picholiya	74.472	26.4285	AL03
149	AJMER	Peesangan	Surajkund	74.5153	26.4642	AL03
150	AJMER	Peesangan	Pushkar (M)	74.5701	26.4846	AL03
151	AJMER	Peesangan	Pisangan	74.3658	26.3948	AL03
152	AJMER	Peesangan	Nad	74.383	26.3601	AL03
153	AJMER	Peesangan	Pagara	74.3213	26.3988	GN01
154	AJMER	Peesangan	Kaisarpura	74.3133	26.3447	GN01
155	AJMER	Peesangan	Bhatsoori	74.3727	26.3192	GN02
156	AJMER	Peesangan	Nagelao	74.4069	26.3009	GN02
157	AJMER	Peesangan	Dhuwariya	74.3464	26.2937	GN02

SN	District	Block	Village	Longitude Latitude		Formation
158	AJMER	Peesangan	Shivpura	74.3247	26.2774	GN02
159	AJMER	Peesangan	Karnos	74.2882	26.2886	GN02
160	AJMER	Peesangan	Jethana	74.4571	26.2641	AL03
161	AJMER	Peesangan	Sarsari	74.4355	26.3223	AL03
162	AJMER	Peesangan	Mangaliyawa s	74.5153	26.2764	IN02
163	AJMER	Peesangan	Bidkachiyaw as	Bidkachiyaw 74.5564 as		IN02
164	AJMER	Peesangan	Arjunpura Khalsa	74.5507	26.306	IN02
165	AJMER	Peesangan	Rajgarh	74.6021	26.2978	AL03
166	AJMER	Peesangan	Chat Sardarpura	74.642	26.3131	AL03
167	AJMER	Peesangan	Pachmata	74.626	26.2651	AL03
168	AJMER	Peesangan	Bubaniya	74.6945	26.2641	BG01
169	AJMER	Peesangan	Nandla	74.6957	26.2968	BG01
170	AJMER	Peesangan	Nasirabad (Cb)	74.731	26.307	BG01
171	AJMER	Peesangan	Derathoo	74.7676	26.2906	BG01
172	AJMER	Peesangan	Rajosi	74.69	26.3417	SC01
173	AJMER	Peesangan	Hatoondi	74.6454	26.3611	AL03
174	AJMER	Peesangan	Saradhana	74.5929	26.3488	AL03
175	AJMER	Peesangan	Somalpur	74.6055	26.3988	AL03
176	AJMER	Peesangan	Saradhana	74.5678	26.357	AL03
177	AJMER	Peesangan	Bhanwta	74.5222	26.3815	AL03
178	AJMER	Peesangan	Dantra	74.464	26.3427	AL03
179	AJMER	Peesangan	Budhwara	74.4423	26.3876	AL03
180	AJMER	Peesangan	Nooriyawas	74.4822	26.3825	AL03
181	AJMER	Peesangan	Kanas	74.6089	26.5152	AL03
182	AJMER	Peesangan	Khori	74.6055	26.5622	AL03
183	AJMER	Peesangan	Kadel	74.5735	26.5703	AL03
184	AJMER	Peesangan	Bhatiyani	74.7843	26.2278	CK01
185	AJMER	Srinagar	Babayacha	74.7367	26.6806	QZ02
186	AJMER	Srinagar	Narwar	74.6991	26.5928	AL03
187	AJMER	Srinagar	Aradka	74.7265	26.6183	AL03
188	AJMER	Srinagar	Sarana	74.7801	26.5959	AL03

SN	District	Block	Village	Longitude	Latitude	Formation
189	AJMER	Srinagar	Kharekhari	74.5439	26.4325	AL03
190	AJMER	Srinagar	Ajmer (M Cl)	74.626	26.4836	AL03
191	AJMER	Srinagar	Boraj	74.6021	26.4376	AL03
			Kazipura			
192	AJMER	Srinagar	Dhal	74.8166	26.3223	BG01
193	AJMER	Srinagar	Sanod	74.8417	26.2906	BG01
194	AJMER	Srinagar	Lachhmipura	74.9102	26.2651	BG01
195	AJMER	Srinagar	Ramsar	74.9022	26.3131	BG01
196	AJMER	Srinagar	Morajhari	74.9387	26.308	BG01
197	AJMER	Srinagar	Gaderi	74.7721	26.356	GN03
198	AJMER	Srinagar	Ajmer (M Cl)	74.6808	26.3968	SC01
199	AJMER	Srinagar	Lavera	74.7744	26.3886	GN03
200	AJMER	Srinagar	Rampura	74.8178	26.3927	GN03
			Aheeran			
201	AJMER	Srinagar	Tihari	74.8931	26.3988	BG01
202	AJMER	Srinagar	Chandsen	74.8965	26.355	BG01
203	AJMER	Srinagar	Nawab	74.9216	26.3682	BG01
204	AJMER	Srinagar	Palra	74.7036	26.4244	AL03
205	AJMER	Srinagar	Nareli	74.7242	26.4642	AL03
206	AJMER	Srinagar	Ajmer (M Cl)	74.6785	26.4581	AL03
207	AJMER	Srinagar	Srinagar	74.7653	26.4581	QZ02
208	AJMER	Srinagar	Pharkiya	74.8235	26.4397	QZ02
209	AJMER	Srinagar	Banewari	74.8668	26.4305	BG01
210	AJMER	Srinagar	Khonda	74.8121	26.5142	AL03
211	AJMER	Srinagar	Bubani	74.7847	26.5224	AL03
212	AJMER	Srinagar	Gegal	74.7641	26.5469	AL03
213	AJMER	Srinagar	Bhoodol	74.739	26.5162	AL03

Annexure VI

SN	District	Block	Village	Longitud	Latitude	Pz_aq1	Aq2 HR	Aq2SR	Aq3
				e					
1	AJMER	Bhinay	Padaliya (Bhinay)	74.8863	25.9622		1		
2	AJMER	Bhinay	Bhinay	74.7741	26.0508		1		
3	AJMER	Jawaja	Dadola	74.1373	25.8667		1		
4	AJMER	Jawaja	Banjari	74.032	25.7844		1		
5	AJMER	Jawaja	Tatgarh	73.977	25.7125		1		
6	AJMER	Masuda	Jaliya Ii	74.5487	25.9395		1		

Analysis of Ground water for major anion , cations and heavy metals (2014-15)

Analysis of Ground water for major anion , cations and heavy metals (2016-17)

SN	Toposheet	District	Block	Village	Longitud	Latitude	Aq1	Aq2	Aq3
					e				
1	450/01-1A	AJMER	Arain	Beeliya	75.053	25.963		1	
2	45N/04-3B	AJMER	Arain	Lallai	75.1	26.045		1	
3	45N/04-2A	AJMER	Arain	Fatehgarh	75.023	26.131		1	
4	45N/04-1B	AJMER	Arain	Manohar pura	75.142	26.201		1	
5	45N/03-3A	AJMER	Arain	Kasheer	75.041	26.283		1	
6	45J/15-2C	AJMER	Arain	Jhadol	74.952	26.36		1	
7	45N/03-2B	AJMER	Arain	Dhasook	75.108	26.362		1	

SN	Toposheet	District	Block	Village	Longitud e	Latitude	Aq1	Aq2	Aq3
8	45N/03-1A	AJMER	Arain	Arain	75.053	26.449		1	
9	45K/13-2A	AJMER	Bhinay	Deoliya Kalan	74.793	25.896		1	
10	45K/13-2C	AJMER	Bhinay	Kerot	74.948	25.89		1	
11	45J/16-1C	AJMER	Bhinay	Shergarh	74.976	26.196		1	
12	450/01-3A	AJMER	Kekri	Kadera	75.051	25.796		1	
13	45O/01-3C	AJMER	Kekri	Sadara	75.187	25.802		1	
14	45O/01-2B	AJMER	Kekri	Pranhera	75.105	25.891		1	
15	450/01-1C	AJMER	Kekri	Meoda Kalan	75.217	25.983		1	
16	45N/08-3A	AJMER	Kekri	Baghera	75.296	26.024		1	
17	45J/13-2C	AJMER	Kishanga rh	Bhadoon	74.947	26.866		1	
18	45J/13-1B	AJMER	Kishanga rh	Jhag	74.889	26.959		1	
19	45J/15-1B	AJMER	Kishanga rh	Bhunwad a	74.884	26.452		1	
20	45J/14-3C	AJMER	Kishanga rh	Beeti	74.963	26.545		1	
21	45J/14-2B	AJMER	Kishanga rh	Kishanga rh (M)	74.863	26.618		1	
22	45N/02-2A	AJMER	Kishanga rh	Bandar Seendri	75.035	26.626		1	
23	45J/14-1C	AJMER	Kishanga rh	Rampura	74.954	26.715		1	

SN	Toposheet	District	Block	Village	Longitud	Latitude	Aq1	Aq2	Aq3
24	45J/14-1A	AJMER	Kishanga rh	Motipura	e 74.784	26.711		1	
25	45J/16-1A	AJMER	Peesanga n	Bhatiyani	74.79	26.218		1	
26	45J/11-3A	AJMER	Peesanga n	Bidkachi yawas	74.548	26.272		1	
27	45J/07-2C	AJMER	Peesanga n	Nooriyaw as	74.474	26.379		1	
28	45J/11-2B	AJMER	Peesanga n	Saradhan a	74.608	26.354		1	
29	45J/07-1B	AJMER	Peesanga n	Govindga rh	74.379	26.446		1	
30	45J/11-1A	AJMER	Peesanga n	Surajkun d	74.525	26.446		1	
31	45J/15-3B	AJMER	Srinagar	Ramsar	74.878	26.29		1	
32	45J/15-2A	AJMER	Srinagar	Modi	74.799	26.369		1	
33	45J/11-1C	AJMER	Srinagar	Ajmer (M Cl)	74.679	26.457		1	
34	45J/10-3B	AJMER	Srinagar	Makarwa li	74.644	26.534		1	

Annexure VII

Isotopic studies (2013-14)

SN	Toposheet	District	Block	Village	Formation	Longitud	Latitude
						e	
1	45J/12-2C	AJMER	Bhinay	Bandanwa	BG01	74.7127	26.1263
				ra			
2	45J/12-3C	AJMER	Bhinay	Singawal	BG01	74.6953	26.0338
3	45J/12-3B	AJMER	Bhinay	Ratakot	BG01	74.6361	26.0523
4	45J/08-2A	AJMER	Jawaja	Beawar	GN01	74.3196	26.1078
				(M Cl)			
5	45J/08-2B	AJMER	Jawaja	Suhawa	QZ02	74.3944	26.1263
6	45J/08-3A	AJMER	Jawaja	Gohana	QZ02	74.2987	26.026
7	45J/08-1C	AJMER	Masuda	Kharwa	QZ02	74.4431	26.208
8	45J/08-2C	AJMER	Masuda	Shyam	GN02	74.4414	26.1093
				Garh			
9	45J/12-2A	AJMER	Masuda	Masooda	BG01	74.5266	26.1062
10	45J/12-2B	AJMER	Masuda	Satawariya	BG01	74.6274	26.1201
11	45J/12-3A	AJMER	Masuda	Shergarh	BG01	74.5492	26.0368
12	45J/08-3C	AJMER	Masuda	Nandwara	GN03	74.4866	26.0291
13	45J/08-3B	AJMER	Masuda	Jhank	GN02	74.3735	26.0276
14	45J/08-1B	AJMER	Peesangan	Gola	GN01	74.3927	26.2188
15	45J/12-1A	AJMER	Peesangan	Leeri	GN02	74.53	26.2142
16	45J/12-1B	AJMER	Peesangan	Baghsuri	BG01	74.6448	26.2157
17	45J/12-1C	AJMER	Peesangan	Jharwasa	BG01	74.7353	26.2095

Isotopic studies (2014-15)

SN	Toposheet	District	Block	Village	Longitude	Latitude
1	45J/16-2A	AJMER	Bhinay	Kalyanpura	74.7961	26.134
2	45J/16-2B	AJMER	Bhinay	Chandma	74.8674	26.1216
3	45J/16-2C	AJMER	Bhinay	Goyla	74.937	26.1216
4	45J/16-3C	AJMER	Bhinay	Jadana	74.9666	26.0476
5	45J/16-3B	AJMER	Bhinay	Keriya	74.89	26.0476

				Khurd		
6	45J/16-3A	AJMER	Bhinay	Sobri	74.7979	26.0338
7	45K/13-1A	AJMER	Bhinay	Neemera (Barli)	74.7718	25.9628
8	45K/13-1B	AJMER	Bhinay	Padaliya (Bhinay)	74.8814	25.9613
9	45K/13-1C	AJMER	Bhinay	Neemra (Kerot)	74.9561	25.9505
10	45J/04-3C	AJMER	Jawaja	Kotra	74.2066	26.0137
11	45K/01-1C	AJMER	Jawaja	Nai Kalan	74.1857	25.9875
12	45K/05-1A	AJMER	Jawaja	Kalinjar	74.2657	25.9859
13	45K/01-2B	AJMER	Jawaja	Dadola	74.1492	25.8718
14	45K/01-2C	AJMER	Jawaja	Bihar Ratanpura	74.2083	25.9042
15	45K/01-3A	AJMER	Jawaja	Khera Kalan	74.0361	25.7947
16	45G/13-1A	AJMER	Jawaja	Mediya	73.9596	25.7701
17	45G/14-1A	AJMER	Jawaja	Mediya	73.9701	25.7346
18	45K/09-1A	AJMER	Masuda	Jaliya Ii	74.5631	25.9351
19	45K/09-1B	AJMER	Masuda	Sathana	74.6414	25.9736
20	45K/09-1C	AJMER	Masuda	Sikhrani	74.6918	25.9597
21	45K/05-1C	AJMER	Masuda	Ramgarh	74.4586	25.9426

Isotopic studies (2016-17)

SN	District	Block	Village	Formation	Longitude	Latitude
1	AJMER	Arain	Deopuri	BG01	74.937	26.4593
2	AJMER	Arain	Ankauriya	BG01	75.024	26.3622
3	AJMER	Arain	Jhadol	BG01	74.9405	26.356
4	AJMER	Arain	Kasheer	BG01	75.0396	26.2866
5	AJMER	Arain	Pandarwara	BG01	75.1144	26.3128
6	AJMER	Arain	Arain	BG01	75.0483	26.4485
7	AJMER	Arain	Bhambholao	BG01	75.1457	26.4455
8	AJMER	Arain	Dhasook	BG01	75.1074	26.3529
9	AJMER	Arain	Borada	BG01	75.0448	26.208
10	AJMER	Arain	Manoharpura	BG01	75.1387	26.2018
11	AJMER	Arain	Fatehgarh	BG01	75.0274	26.1278

SN	District	Block	Village	Formation	Longitude	Latitude
12	AJMER	Arain	Birla	BG01	75.1109	26.134
13	AJMER	Arain	Sapunda	BG01	75.144	26.0291
14	AJMER	Arain	Jagpura	BG01	75.0414	26.0384
15	AJMER	Arain	Jaliya	BG01	75.0361	25.9551
16	AJMER	Bhinay	Shokaliya	BG01	74.8779	26.2172
17	AJMER	Bhinay	Keriya Kalan	BG01	74.9614	26.2111
18	AJMER	Bhinay	Kerot	BG01	74.944	25.8811
19	AJMER	Bhinay	Deoliya Kalan	BG01	74.7909	25.8965
20	AJMER	Kekri	Deogaon	BG01	75.3005	26.1093
21	AJMER	Kekri	Baghera	BG01	75.3005	26.026
22	AJMER	Kekri	Naiki	BG01	75.1874	26.0214
23	AJMER	Kekri	Sarsari	BG01	75.1161	25.9582
24	AJMER	Kekri	Meoda Kalan	BG01	75.2118	25.9829
25	AJMER	Kekri	Salari	BG01	75.2848	25.9644
26	AJMER	Kekri	Chosla	BG01	75.3144	25.8133
27	AJMER	Kekri	Sawar	BG01	75.2222	25.7685
28	AJMER	Kekri	Mehroo Kalan	BG01	75.1387	25.7809
29	AJMER	Kekri	Para	BG01	75.1927	25.8765
30	AJMER	Kekri	Bharai	BG01	75.1161	25.8749
31	AJMER	Kekri	Bheemrawas	BG01	75.0448	25.8703
32	AJMER	Kekri	Kadera	BG01	75.05	25.7994
33	AJMER	Kekri	Shokya Khera	BG01	75.104	25.7115
34	AJMER	Kekri	Bajta	BG01	75.2761	25.8456
35	AJMER	Kishangarh	Nitooti	AL03	74.7892	26.8016
36	AJMER	Kishangarh	Roopangarh	AL03	74.8674	26.7908
37	AJMER	Kishangarh	Aau	AL03	74.937	26.9512
38	AJMER	Kishangarh	Jhag	AL03	74.8883	26.9574
39	AJMER	Kishangarh	Rodawas	AL03	74.7683	26.7091
40	AJMER	Kishangarh	Sursura	AL03	74.8866	26.7199
41	AJMER	Kishangarh	Tokra	QZ02	74.8848	26.6382
42	AJMER	Kishangarh	Kucheel	AL03	74.7822	26.6336
43	AJMER	Kishangarh	Kishangarh (M)	BG01	74.8674	26.5549
44	AJMER	Kishangarh	Sar Gaon	GN03	74.9318	26.5565
45	AJMER	Kishangarh	Churli	BG01	74.9596	26.6259
46	AJMER	Kishangarh	Bandar Seendri	BG01	75.0379	26.6166
47	AJMER	Kishangarh	Khandach	BG01	75.024	26.5426
SN	District	Block	Village	Formation	Longitude	Latitude
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48	AJMER	Kishangarh	Bhunwada	BG01	74.8813	26.4532
49	AJMER	Kishangarh	Kotri	AL03	74.8779	26.8757
50	AJMER	Kishangarh	Bhadoon	AL03	74.9457	26.8649
51	AJMER	Kishangarh	Karkeri	QZ02	74.7257	26.734
52	AJMER	Peesangan	Tilora	AL03	74.5318	26.5349
53	AJMER	Peesangan	Govindgarh	AL03	74.3753	26.4516
54	AJMER	Peesangan	Nand	AL03	74.464	26.4701
55	AJMER	Peesangan	Tabeeji (Rural)	AL03	74.6222	26.3699
56	AJMER	Peesangan	Amba Maseena	AL03	74.5422	26.3791
57	AJMER	Peesangan	Budhwara	AL03	74.4483	26.3761
58	AJMER	Peesangan	Pisangan	AL03	74.3787	26.3915
59	AJMER	Peesangan	Pagara	GN01	74.3196	26.3791
60	AJMER	Peesangan	Shivpura	GN02	74.3144	26.2789
61	AJMER	Peesangan	Nagelao	GN02	74.3944	26.2974
62	AJMER	Peesangan	Jethana	AL03	74.4622	26.2897
63	AJMER	Peesangan	Bidkachiyawas	IN02	74.5561	26.2728
64	AJMER	Peesangan	Rajgarh	AL03	74.6257	26.299
65	AJMER	Peesangan	Nandla	BG01	74.6935	26.2897
66	AJMER	Peesangan	Derathoo	BG01	74.7822	26.2897
67	AJMER	Peesangan	Bhatiyani	CK01	74.7927	26.2203
68	AJMER	Srinagar	Aradka	AL03	74.7109	26.6305
69	AJMER	Srinagar	Makarwali	AL03	74.6431	26.538
70	AJMER	Srinagar	Chandiyawas	AL03	74.7266	26.5472
71	AJMER	Srinagar	Bubani	AL03	74.7787	26.5241
72	AJMER	Srinagar	Kharekhari	AL03	74.5422	26.4362
73	AJMER	Srinagar	Ajmer (M Cl)	AL03	74.6344	26.4763
74	AJMER	Srinagar	Nareli	AL03	74.7109	26.4701
75	AJMER	Srinagar	Srinagar	QZ02	74.7805	26.4501
76	AJMER	Srinagar	Kanpura	BG01	74.8553	26.3807
77	AJMER	Srinagar	Modi	GN03	74.7927	26.3745
78	AJMER	Srinagar	Danta	SC01	74.7057	26.3807
79	AJMER	Srinagar	Ramsar	BG01	74.8935	26.2897
80	AJMER	Srinagar	Soorajpura	BG01	74.9596	26.3067

Annexure VIII

Details of wells established under NAQUIM in Ajmer district

Sr. No.	AAP	Block	Village	Typ e of well	Loca	tion w	ith coo	ordina	tes		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
					Latit	tude		Lon	gitud	e					From- To			
1	2011- 12	Salora	Patan	PZ	26	36	9	74	58	30	200	200			Naked hole	Granit e/gnei ss	8.4	300
2	2011- 12	Salora	Patan	EW	26	36	9	74	58	30	200	200			Naked hole	Granit e/gnei ss	8.55	60
3	2011- 12	kishangarh	Khatoli	PZ	26	40	20	74	50	13	200	200			Naked	Gneis s	20.8	60
4	2011- 12	Pishangan	Gangwa na	PZ	26	31	36	74	43	16	166.3	Naked			Naked hole	Gneis s	19.6 2	Meag re
5	2011- 12	kishangarh	Harmada	PZ	26	30	50	72	17	30	196.8	Naked			Naked hole	Gneis s/ Schist	6.09	205
6	2011- 12	kishangarh	Hathi Patta	PZ	26	41	11	74	55	25	117	Naked			Naked	Gneis s.	8.5	80
7	2011- 12	Nasirabad	Bithur	PZ	26	16	4	74	37	4	135	135			Naked	Schist /Gneis s	15	15

Sr. No.	AAP	Block	Village	Typ e of well	Loca	tion w	ith coo	ordina	tes		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
8	2011- 12	Nasirabad	Nasirabd	PZ	26	19	32	74	43	33	124	124			Naked	Gneis s	10.4	Meag re
9	2013- 14	Masuda	Shergarh	EW	26	3	11	74	32	40	202.1	202.1			Naked	Mica schist/ Gneis s	3.72	130
10	2013- 14	Masuda	Shergarh	OW	26	3	11	74	32	41	196.8	196.8			Naked	Gneis s/Schi st	7.15	20
11	2013- 14	Masuda	Daulatpu ra II	Pz	25	59	42	74	26	58	197.4	197.4			Naked	Mica Schist	17	100
12	2013- 14	Binai	Gopalpu ra	Pz	26	52	8	74	42	21	200	200			Naked	Schist /Gneis s	11.8 6	72
13	2013- 14	Pisangan	Jharwara	EW	26	12	9	74	43	4	181.5	181.5			Naked	Schist /Quart zite	3.65	180
14	2013- 14	Pisangan	Liri	EW	26	13	36. 5	74	32	4	202.9	202.9			Naked	Schist /Gneis s	9	210
15	2013- 14	Pisangan	Liri	OW	26	13	36. 7	74	32	5	202.9	202.9			Naked	Schist /Gneis s	6.16	180
16	2013- 14	Pisangan	Lamana	EW	26	14	8	74	28	25	203	203			Naked	Schist	6	170

Sr. No.	AAP	Block	Village	Typ e of well	Loca	ition w	ith coo	ordina	ites		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
17	2013- 14	Pisangan	Saradha wa	Pz	26	14	48	74	34	42	160.2	160.2			Naked	Schist	17.3 3	Meag re
18	2013- 14	Jawaja	Suhawa	EW	26	7	44	74	23	31 .7	172.4	172.4			Naked	Schist /Gneis s	9.2	50
19	2013- 14	Jawaja	Suhawa	OW	26	7	43	74	23	31	172.4	172.4			Naked	Schist /Gneis s	9	40
20	2013- 14	Jawaja	Singhari ya	EW	26	3	2	74	18	36	203	203			Naked	Gneis s	17.1	182
21	2013- 14	Jawaja	Singhari ya	OW	26	3	2	74	18	35	35.1	32			Naked	Gneis s	17	412
22	2014- 15	Masuda	Amar Sing Ka Bariya	EW	26	3	45. 7	74	24	27	203	202.9	12.2 m/17 7	12		Schist & Quart z Vain	9.4	40
23	2014- 15	Masuda	Amar Sing Ka Bariya	OW	26	3	45. 7	74	24	27	74.8	74.8	4m/2 54	3		Schist & Quart z Vain	6.2	150
24	2014- 15	Bhinai	Kumahar iya Kherar	EW	26	2	0	74	47	31	111	111.4	4.5m /177	4		Schist	6.22	80

Sr. No.	AAP	Block	Village	Typ e of well	Loca	ition w	ith coo	ordina	ites		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
25	2014- 15	Bhinai	Jawala	EW	26	7	17. 6	74	53	27 .7	203	203	10m/ 229	9		Gneis s	10.4	60
26	2014- 15	Bhinai	Jawala	OW	26	7	17. 6	74	53	27 .7	118	117.5	7.5m /228	7		Gneis s	5.3	250
27	2014- 15	Bhinai	Bhagwa npura	EW	26	2	0	74	59	57	200	200	9m/2 29	8		Mica Schist	3.2	100
28	2014- 15	Bhinai	Bhagwa npura	OW	26	2	0	74	59	57	200	200	9m/2 29	8		Mica Schist	4.5	40
29	2014- 15	Bhinai	Champa neri	EW	25	57	25. 9	74	50	13 .7	203	202.9	6m/2 29	7	102- 105	Granit ic gneiss	9.4	500
30	2014- 15	Bhinai	Champa neri	OW	25	57	25. 9	74	50	13 .7	105	105.3	6m/2 29	7	100- 105	Granit ic gneiss	10	600

Sr. No.	AAP	Block	Village	Typ e of well	Loca	ntion w	ith coo	ordina	tes		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
31	2014- 15	Bhinai	Nagar	EW	25	55	34. 8	74	41	18 .2	200	199.8	6.50 m 229	6		Fine graine d gneiss		149
32	2014- 15	Bhinai	Nagar	EW	25	55	34. 8	74	41	18 .2	200	199.8	7m 229	7		Fine graine d gneiss	10.3	150
33	2015- 16	Arain	Arain	EW	26	26	46. 6	75	1	59 .3	202.9	202.9		7		Gneis s	7.1	180
34	2015- 16	Arain	Arain	OW	26	26	46. 6	75	1	59 .3	202.9	202.9		7		Gneis s	7.4	20
35	2015- 16	Bhinai	Badanwa da	EW	26	7	40	74	42	12	202.9	202.9		5		schist	7.1	150
36	2015- 16	Bhinai	Badanwa da	OW	26	7	40	74	42	12	202.9	202.9		5		schist	3.1	120
37	2015- 16	Pisangan	Banewad a (Devra)	EW	26	13	13. 5	74	36	0	202.9	202.9		4		Mica schist	12.0 8	40
38	2015- 16	Masuda	Bhairu khera	EW	25	57	45. 12	74	32	1	202.9	202.9		3		Schist	15.1	Meag re
39	2015- 16	Arain	Bilra EW	EW	26	8	4	75	7	13	56.5	56.5		6		Gneis s	3.5	50

Sr. No.	AAP	Block	Village	Typ e of well	Loca	tion w	ith coo	ordina	tes		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
40	2015- 16	Arain	Bilra OW-II	OW	26	8	4	75	7	13	56.5	56.5		6		Gneis s	3.5	30
41	2015- 16	Arain	Bilra OW-III	OW	26	8	4	75	7	13	56.5	56.5		6		Gneis s	3.5	30
42	2015- 16	Jawaja	Devata	EW	26	3	45. 7	74	24	27	199.8	199.8		6		Schist	9.5	50
43	2015- 16	Kekri	Kadera	EW	25	59	26. 7	74	7	25	135.8	135.8		12		Gneis s	8	75
44	2015- 16	Arain	Kasheer	EW	26	2	10	74	4	12	202.9	202.9		2.5		Gneis s	10.3 3	15
45	2015- 16	Kekri	Kekri	EW	25	59	26. 7	74	7	25 .5	202.9	202.9		8		Gneis s	2.8	50
46	2015- 16	Pisangan	Kesharp ura	EW	26	18	43. 2	74	32	35 .6	202.9	202.9		4		Gneis s	11.8	100
47	2015- 16	Pisangan	Lamana	OW	26	14	8	74	28	25	199.8	199.8		13		Schist	7.1	230
48	2015- 16	srinagar	Ramwari	EW	26	19	20. 3	74	53	24 .3	202.9	202.9		6		Gneis s	4.2	130
49	2015- 16	Jawaja	Taragarh	EW	25	52	21. 63	74	8	49 .9 8	199.8	199.8		5		Schist & pegma tite	4.98	150

Sr. No.	AAP	Block	Village	Typ e of well	Loca	ation w	ith coo	ordina	ites		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
50	2015- 16	Jawaja	Taragarh	OW	25	52	21. 63	74	8	49 .9 8	199.8	199.8		5		Schist & pegma tite	4.3	200
51	2016- 17	Pishangan	Morema gri	EW	26	14	44. 7	74	33 4	29 .8	202.9	202.9	6.10 / 200 mm	5		Fractu red gniess	35	300
52	2016- 17	Pishangan	Morema gri	OW	26	14	44. 7	74	33 4	29 .8	111.4	111.4	6.10 / 200 mm	5		Gneis s	35.2	180
53	2016- 17	Pishangan	Bhatiyan i	EW	26	12	49. 5	74	46	24	202.9	202.9	3.00/ 225	2.5		Gnies s	12	230
54	2016- 17	Arain	Devpuri	EW	26	28	1	74	56	44	202.9	202.9	2.00/ 225 mm	2		Granit ic Gnies s	4.9	80
55	2016- 17	Kishangarh	Bandarsi ndri	EW	26	36	35	75	2	0	120	120	5.00/ 225	7		Gnies s	4.2	80
56	2016- 17	Kishangarh	Chausla	EW	26	30	32	74	57	10	202.9	202.9	9.00/ 200 mm	8		Mica schist	3.7	20
57	2016- 17	Kekri	Gulgaon	EW	25	49	0	74	12	10	202.9	202.9	14.2 0/20 0mm	13		Gnies s	4.2	30

Sr. No.	AAP	Block	Village	Typ e of well	Loca	ition w	ith coo	ordina	tes		Depth drilled (m)	Depth Constru cted(m)	Len gth of casi ng (dia. in mm)	Thic knes s of weat heri ng (mb gl)	Fractu re(mbg l)	Aquif er	SW L(m bgl)	Disch arge(l pm)
58	2016- 17	Bhinai	Guda Khurd	EW	25	53	45	74	51	28	202.9	202.9	6.30/ 200 mm	6		Gnies s/ Pegm atite	5	120
59	2016- 17	Bhinai	Guda Khurd	OW -I	25	53	45	74	51	28	202.9	202.9	6.30/ 200 mm	6		Gnies s/ Pegm atite	5.12	130
60	2016- 17	Bhinai	Guda Khurd	OW -II	25	53	45	74	51	28	112		6.30/ 200 mm	6		Gnies s	5.45	30
61	2016- 17	Bhinai	Nagelav	EW							2.2.90	202.9	6.3/2 00m m	6		Gnies s	18.2	110
62	2016- 17	Bhinai	Nagelav	OW							2.2.90	202.9	6.3/2 00m m	6		Gnies s	Not Recr ded	neglig ible

Annexure IX

Hydrochemsitry of wells established under NAQUIM

Sr.No.	AAP	District	Block	Village	Type of well	EC(ms/cm at 250C)	F(mg/l)	Nitrate(mg /l)	Iron(mg/l)
1	2011-12	Ajmer	Salora	Patan	PZ	2290	5.6	23	5.22
2	2011-12	Ajmer	Salora	Patan	EW	1640	605	17	4.9
3	2011-12	Ajmer	kishangarh	Khatoli	PZ	500	2.01	1.4	5.58
4	2011-12	Ajmer	Pishangan	Gangwana	PZ	2310	0.487	4	3.64
5	2011-12	Ajmer	kishangarh	Harmada	PZ	2240	0.62	28	
6	2011-12	Ajmer	kishangarh	Hathi Patta	PZ	3710	1.49	1	2.95
7	2011-12	Ajmer	Nasirabad	Bithur	PZ	570	0.71	30	0.05
8	2011-12	Ajmer	Nasirabad	Nasirabd	PZ	1350	0.7	23	0.06
9	2013-14	Ajmer	Masuda	Shergarh	EW	1410	0.95	9	0.42
10	2013-14	Ajmer	Masuda	Shergarh	OW	2310	1.86	2	0.46
11	2013-14	Ajmer	Masuda	Daulatpura II	Pz	7260	1.88	55	0.4
12	2013-14	Ajmer	Binai	Gopalpura	Pz	4750	0.85	500	0.3
13	2013-14	Ajmer	Pisangan	Jharwara	EW	4850	2.8	320	0.35
14	2013-14	Ajmer	Pisangan	Liri	EW	2760	2.65	19	0.34
15	2013-14	Ajmer	Pisangan	Liri	OW				
16	2013-14	Ajmer	Pisangan	Lamana	EW	1780	5	6	0.15

Sr.No.	AAP	District	Block	Village	Type of well	EC(ms/cm at 250C)	F(mg/l)	Nitrate(mg /l)	Iron(mg/l)
17	2013-14	Ajmer	Pisangan	Saradhawa	Pz	5300	0.95	870	0.4
18	2013-14	Ajmer	Jawaja	Suhawa	EW	3090	1.85	145	3.8
19	2013-14	Ajmer	Jawaja	Suhawa	OW	2110	1.42	30	7.3
20	2013-14	Ajmer	Jawaja	Singhariya	EW				
21	2013-14	Ajmer	Jawaja	Singhariya	OW				
22	2014-15	Ajmer	Masuda	Amar Sing Ka Bariya	EW	4450	4	4	
23	2014-15	Ajmer	Masuda	Amar Sing Ka Bariya	OW	2820	0.62	0	
24	2014-15	Ajmer	Bhinai	Kumahariy a Kherar	EW	4450	4	4	
25	2014-15	Ajmer	Bhinai	Jawala	EW	6750	3.4	15	1.65
26	2014-15	Ajmer	Bhinai	Jawala	OW	6750	3.4	15	1.65
27	2014-15	Ajmer	Bhinai	Bhagwanpu ra	EW	2820	0.62	0	
28	2014-15	Ajmer	Bhinai	Bhagwanpu ra	OW	7550	0.65	10	0.05
29	2014-15	Ajmer	Bhinai	Champaneri	EW	22470	1.62	44	1.32
30	2014-15	Ajmer	Bhinai	Champaneri	OW	34600	0.25	6	2.2
31	2014-15	Ajmer	Bhinai	Nagar	EW	12100	0.68	115	
32	2014-15	Ajmer	Bhinai	Nagar	EW	12100	0.65	115	
33	2015-16	Ajmer	Arain	Arain	EW	NA			0
34	2015-16	Ajmer	Arain	Arain	OW	NA			

Sr.No.	AAP	District	Block	Village	Type of well	EC(ms/cm at 250C)	F(mg/l)	Nitrate(mg /l)	Iron(mg/l)
35	2015-16	Ajmer	Bhinai	Badanwada	EW	7510	4.85	27.1	0
36	2015-16	Ajmer	Bhinai	Badanwada	OW	1980	2.45	19	0
37	2015-16	Ajmer	Pisangan	Banewada (Devra)	EW	2060	1.4	19.1	0
38	2015-16	Ajmer	Masuda	Bhairu khera	EW	1740	6.2	95	1.85
39	2015-16	Ajmer	Arain	Bilra EW	EW	1370	9.8	25	0
40	2015-16	Ajmer	Arain	Bilra OW- II	OW	1580	8.8	20	0
41	2015-16	Ajmer	Arain	Bilra OW- III	OW	1330	9.42	16	0
42	2015-16	Ajmer	Jawaja	Devata	EW	1620	2.2	16	0.05
43	2015-16	Ajmer	Kekri	Kadera	EW	1370	1.3	152	0
44	2015-16	Ajmer	Arain	Kasheer	EW	NA			
45	2015-16	Ajmer	Kekri	Kekri	EW	1920	6.25	10	0
46	2015-16	Ajmer	Pisangan	Kesharpura	EW	1150	1.26	104	0
47	2015-16	Ajmer	Pisangan	Lamana	OW	6410	0.75	14	0
48	2015-16	Ajmer	srinagar	Ramwari	EW	4340	3.5	70	0.05
49	2015-16	Ajmer	Jawaja	Taragarh	EW	890	1.2	18.2	0
50	2015-16	Ajmer	Jawaja	Taragarh	OW	850	2.35	10	
51	2016-17	Ajmer	Pishangan	Moremagri	EW				
52	2016-17	Ajmer	Pishangan	Moremagri	OW				

Sr.No.	AAP	District	Block	Village	Type of	EC(ms/cm	F(mg/l)	Nitrate(mg	Iron(mg/l)
					well	at 250C)		/I)	
53	2016-17	Ajmer	Pishangan	Bhatiyani	EW				
54	2016-17	Ajmer	Arain	Devpuri	EW				
55	2016-17	Ajmer	Kishangarh	Bandarsindr i	EW				
56	2016-17	Ajmer	Kishangarh	Chausla	EW				
57	2016-17	Ajmer	Kekri	Gulgaon	EW				
58	2016-17	Ajmer	Bhinai	Guda Khurd	EW				
59	2016-17	Ajmer	Bhinai	Guda Khurd	OW-I				
60	2016-17	Ajmer	Bhinai	Guda Khurd	OW-II				
61	2016-17	Ajmer	Bhinai	Nagelav	EW				
62	2016-17	Ajmer	Bhinai	Nagelav	OW				

Annexure X

Water samples collected for Stable isotops analysis in Ajmer district under NAQUIM study

SN	Block	Village	Longitude	Latitude	Source	Date of Collection	Temp(0C)
1	Arain	Deopuri	74.937	26.4593	Handpump	20/2/2016	26
2	Arain	Ankauriya	75.024	26.3622	Handpump	20/2/2016	25
3	Arain	Jhadol	74.9405	26.356	Handpump	20/2/2016	26
4	Arain	Pandarwara	75.1144	26.3128	Handpump	19/2/2016	26
5	Arain	Arain	75.0483	26.4485	Handpump	19/2/2016	26
6	Arain	Bhambholao	75.1457	26.4455	Handpump	19/2/2016	27
7	Arain	Dhasook	75.1074	26.3529	Handpump	15/2/2016	25
8	Arain	Borada	75.0448	26.208	Handpump	19/2/2016	26
9	Arain	Manoharpura	75.1387	26.2018	Handpump	15/2/2016	27
10	Arain	Fatehgarh	75.0274	26.1278	Handpump	15/2/2016	26
11	Arain	Birla	75.1109	26.134	Handpump	14/2/2016	27
12	Arain	Sapunda	75.144	26.0291	Handpump	21/2/2016	26
13	Arain	Jaliya	75.0361	25.9551	Handpump	16/2/2016	27
14	Bhinay	Chandma	74.8674	26.1216	Handpump	18/2/2016	26
15	Bhinay	Goyla	74.937	26.1216	Handpump	15/2/2016	28
16	Bhinay	Neemera (Barli)	74.7718	25.9628	Handpump	17/2/2016	27
17	Bhinay	Bandanwara	74.7127	26.1263	Handpump	17/2/2016	26
18	Bhinay	Singawal	74.6953	26.0338	Handpump	18/2/2016	27

SN	Block	Village	Longitude	Latitude	Source	Date of Collection	Temp(0C)
19	Bhinay	Ratakot	74.6361	26.0523	Handpump	18/2/2016	26
20	Bhinay	Padaliya (Bhinay)	74.8814	25.9613	Handpump	16/2/2016	27
21	Bhinay	Shokaliya	74.8779	26.2172	Handpump	21/2/2016	26
22	Bhinay	Kerot	74.944	25.8811	Handpump	16/2/2016	27
23	Bhinay	Deoliya Kalan	74.7909	25.8965	Handpump	16/2/2016	27
24	Bhinay	Neemra(Kerot	74.9561	25.9505	Handpump	16/2/2016	26
25	Jawaja	Kotra	74.2066	26.0137	Handpump	26/2/2016	25
26	Jawaja	Nai Kalan	74.1857	25.9875	Handpump	26/2/2016	27
27	Jawaja	Kalinjar	74.2657	25.9859	Handpump	26/2/2016	28
28	Jawaja	Gohana	74.2987	26.026	Handpump	26/2/2016	25
29	Masuda	Kharwa	74.4431	26.208	Handpump	5/3/2016	26
30	Masuda	Shyam Garh	74.4414	26.1093	Handpump	27/2/2016	26
31	Masuda	Masooda	74.5266	26.1062	Handpump	29/2/2016	27
32	Masuda	Shergarh	74.5492	26.0368	Handpump	29/2/2016	27
33	Masuda	Nandwara	74.4866	26.0291	Handpump	28/2/2016	27
34	Masuda	Jhank	74.3735	26.0276	Handpump	27/2/2016	28
35	Masuda	Jaliya Ii	74.5631	25.9351	Handpump	17/2/2016	28
36	Masuda	Sathana	74.6414	25.9736	Handpump	18/2/2016	27
37	Masuda	Ramgarh	74.4586	25.9426	Handpump	17/2/2016	27
38	Kekri	Deogaon	75.3005	26.1093	Handpump	16/2/2016	28

SN	Block	Village	Longitude	Latitude	Source	Date of Collection	Temp(0C)
39	Kekri	Baghera	75.3005	26.026	Handpump	19/2/2016	26
40	Kekri	Chosla	75.3144	25.8133	Handpump	14/2/2016	26
41	Kekri	Sawar	75.2222	25.7685	Handpump	13/2/2016	28
42	Kekri	Mehroo Kalan	75.1387	25.7809	Handpump	13/2/2016	27
43	Kekri	Para	75.1927	25.8765	Handpump	13/2/2016	26
44	Kekri	Bharai	75.1161	25.8749	Tube well	13/2/2016	25
45	Kekri	Kadera	75.05	25.7994	Handpump	13/2/2016	26
46	Kekri	Shokya Khera	75.104	25.7115	Handpump	13/2/2016	25
47	Kekri	Bajta	75.2761	25.8456	Handpump	14/2/2016	28
48	Kishangarh	Rodawas	74.7683	26.7091	Handpump	13/3/2016	26
49	Kishangarh	Bhadoon	74.9457	26.8649	Handpump	3/14/2016	26
50	Peesangan	Gola	74.3927	26.2188	Handpump	6/3/2016	27
51	Peesangan	Leeri	74.53	26.2142	Handpump	25/2/2016	28
52	Peesangan	Govindgarh	74.3753	26.4516	Handpump	7/3/2016	26
53	Peesangan	Nand	74.464	26.4701	Handpump	11/3/2016	26
54	Peesangan	Pisangan	74.3787	26.3915	Handpump	7/3/2016	27
55	Peesangan	Nagelao	74.3944	26.2974	Handpump	9/3/2016	26
56	Peesangan	Jethana	74.4622	26.2897	Handpump	6/3/2016	27
57	Peesangan	Bidkachiyawa s	74.5561	26.2728	Handpump	12/3/2016	26
58	Peesangan	Bhatiyani	74.7927	26.2203	Handpump	12/3/2016	25

SN	Block	Village	Longitude	Latitude	Source	Date of Collection	Temp(0C)
59	Srinagar	Aradka	74.7109	26.6305	Handpump	12/3/2016	26
60	Srinagar	Makarwali	74.6431	26.538	Handpump	12/3/2016	26
61	Srinagar	Chandiyawas	74.7266	26.5472	Handpump	12/3/2016	26
62	Srinagar	Bubani	74.7787	26.5241	Handpump	12/3/2016	27
63	Srinagar	Kanpura	74.8553	26.3807	Handpump	20/2/2016	27
64	Srinagar	Ramsar	74.8935	26.2897	Handpump	20/2/2016	24
65	Srinagar	Soorajpura	74.9596	26.3067	Handpump	20/2/2016	27

Annexure XI

Locations of VES under Mission Mode

SN	Location	Easting	Northing	Elevation	TotalDepth
1	Bhanwta	74.5204	26.3834	444.4	80
2	Chhachhundra	74.7400	26.0922	407	100
3	Kotra	74.2264	26.0169	481.3	100
4	Sangarwas	74.2684	25.9581	520.5	100
5	Dadola	74.1386	25.8765	534.1	100
6	Banjari	74.0330	25.7787	526.1	100
7	Dayalpura	75.2979	26.1370	336.1	100
8	Bajta	75.2844	25.8283	334.4	100
9	Chosla	75.3125	25.8206	313.8	100
10	Keloo	74.5430	25.9972	423	100
11	Nad	74.3821	26.3603	401.4	100
12	Karnos	74.2832	26.2831	381	100
13	Hatoondi	74.6399	26.3587	476.6	100
14	Saradhana	74.5726	26.3517	452.9	100
15	Majhewla	74.5693	26.5701	460.1	100
16	Dhigariya	74.9992	26.2548	387	130
17	Chhabariya	75.2268	26.0410	327	130
18	Sarsari	74.1068	25.9579	455.5	130
19	Bogla	75.2353	25.8806	325.4	130
20	Gordha	75.1308	25.7185	340.2	130
21	Jethana	74.4549	26.2726	430.8	130
22	Mangaliyawas	74.5153	26.2732	434.2	130
23	Kekri (M)	75.1707	25.9829	354.2	150
24	Nandla	74.6980	26.2966	431.3	160
25	Tantoti	74.8044	26.1376	389.6	170

SN	Location	Easting	Northing	Elevation	TotalDepth
26	Barla @ Kala Talab	74.8467	26.0391	374.1	170
27	Ekalseenga	74.7229	25.9827	406.4	170
28	Gurha Kalan	74.8707	25.8951	380	170
29	Sadara	75.1960	25.8098	329	170
30	Kirap	74.5408	26.1548	461.4	170
31	Picholiya	74.4684	26.4346	435.2	170
32	Ajmer (M Cl) (Somalpur)	74.6041	26.3965	461.9	170
33	Sakariya	75.1323	25.8458	335	180.1
34	Ratakot	74.6083	26.0414	431	200
35	Bhinay	74.7531	26.0701	415.1	200
36	Boobkiya	74.8108	26.0640	397.2	200
37	Jadana	74.9817	26.0649	353.1	200
38	Bagrai	74.8360	25.9263	384.4	200
39	Peeproli	74.8432	26.1868	393.8	200
40	Badla	74.9289	26.1770	383	200
41	Bhagwanpura (Jawaja)	74.2083	25.9352	487.7	200
42	Baghera	75.3257	26.0329	324	200
43	Taswariya	75.2637	25.9553	342.8	200
44	Bheemrawas	75.0369	25.9168	360.3	200
45	Kohra	75.1731	25.9057	339.2	200
46	Kadera	75.0676	25.8136	352.7	200
47	Kushayata	75.1931	25.7231	335.3	200
48	Peepaliya	75.2188	25.6979	327.4	200
49	Nasoon	74.6061	26.2175	442.6	200
50	Satawariya	74.6341	26.1322	422.2	200
51	Masooda	74.5191	26.0772	437.6	200
52	Lalawas	74.5942	26.0652	438	200

SN	Location	Easting	Northing	Elevation	TotalDepth
53	Sathana	74.6373	25.9875	414.8	200
54	Ramgarh	74.4756	25.9733	439.1	200
55	Nyara	74.6671	26.1854	421.5	200
56	Rasoolpura	74.6988	26.2131	420.4	200
57	Nand	74.4759	26.4863	425.5	200
58	Kaisarpura	74.3270	26.3376	414.7	200
59	Rajgarh	74.6428	26.2745	448.2	200
60	Dantra	74.4616	26.3404	410.5	200
61	Bhatiyani	74.7662	26.2270	403.7	200
62	Balwanta	74.6978	26.3380	453.5	200
63	Babayacha	74.7391	26.6814	439.3	200
64	Aradka	74.7175	26.6195	445.8	200
65	Kharekhari	74.5502	26.4322	529.3	200
66	Sanod	74.8357	26.2811	391	200
67	Soorajpura	74.9366	26.3045	389.7	200
68	Gaderi	74.7671	26.3447	427.7	200
69	Rampura Aheeran	74.8168	26.3972	420.7	200
70	Chandsen	74.8855	26.3583	398.3	200
71	Nareli	74.7150	26.4786	481.1	200
72	Pharkiya	74.8127	26.4420	435.3	200
73	Bubani	74.7948	26.5275	469.2	200
74	Chhatri	74.7028	26.5629	461	200
75	Jawla	74.8868	26.1229	366.8	250
76	Ghatiyali	75.2813	25.7809	323.5	250
77	Peeplaj	75.0904	25.7626	344	250
78	Padaliya (Bhinay)	74.8828	25.9608	399	300
79	Bahera	74.9131	26.2293	385.5	300
80	Nagelao	74.4079	26.3022	417	300

SN	Location	Easting	Northing	Elevation	TotalDepth
81	Derathoo	74.7665	26.2845	416.5	300
82	Baragaon	74.95544	26.58437		80
83	Naloo	74.99217	26.64833		100
84	Harmara	74.92339	26.68905		150
85	Sursura	74.87733	26.72382		150
86	Kankeri	74.70591	26.75721		150
87	Singara	74.80949	26.76377		150
88	Kalyanpura	74.78775	26.78183		150
89	Tyod	74.92041	26.77508		150
90	Kucheel	74.78017	26.64672		150
91	Peengold	74.80029	26.7061		150
92	Roopangarh	74.86453	26.78568		130
93	Gurha	74.87164	26.96749		150
94	Sinodiya	74.95334	26.91835		130
95	Jakholai	74.89938	26.87406		130
96	Paneer	74.84013	26.84365		150
97	Soonpa	75.00615	25.92971		150
98	Jaliya	75.02367	25.95575		150
99	Kheeriya	74.96976	26.10377		225
100	Heengtara	75.08602	26.06667		180
101	Sapunda	75.13729	26.02725		150
102	Sunariya	75.15142	26.11097		150
103	Jatipura	75.0637	26.11211		100
104	Monoharpura	75.14717	26.19253		150
105	Dantri	75.06964	26.21832		150
106	Goojarwara	75.10266	26.26459		150
107	Srirampura	75.0733	26.2675		80
108	Jorawarpura	75.04293	26.3186		150
109	Pandarwara	75.11039	26.31084		150

SN	Location	Easting	Northing	Elevation	TotalDepth
110	Dhasook	75.10625	26.3542		80
111	sandoliya	75.04692	26.39854		100
112	Bhambholao	75.12825	26.443		150
113	Bhogadeet	75.07796	26.50357		200
114	Ganeshpura	75.05299	26.56956		150
115	Mundoti	75.04477	26.64574		150
116	Katsoora	74.99397	26.47036		130
117	Arain	75.03178	26.43866		130
118	Dandiya	74.97655	26.42132		150
119	Bhunwala	74.88023	26.45641		150
120	Kishangarh(M)	74.871	26.59587		100
121	Kishangarh(M)	74.84133	26.62311		100
122	Barna	74.93375	26.51339		150