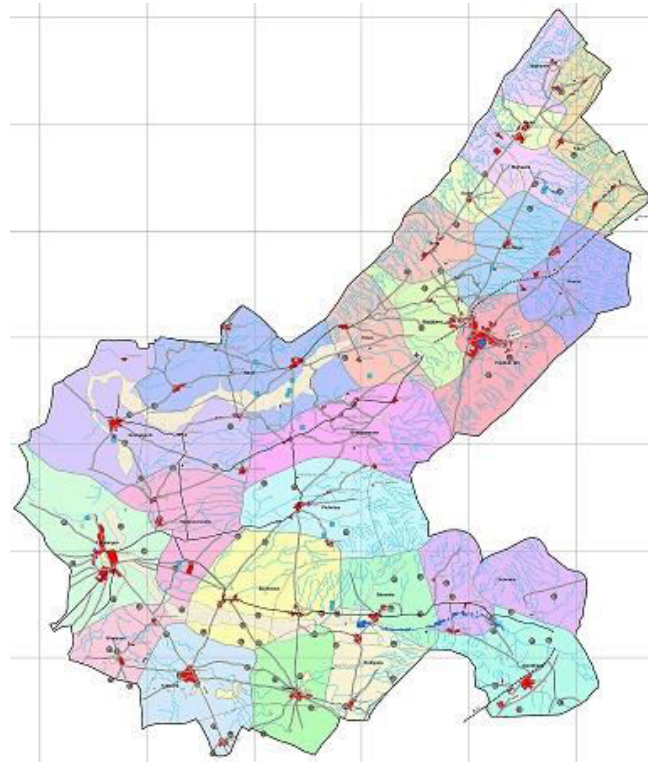




GOVERNMENT OF RAJASTHAN



ASSESSMENT REPORT 2018 – 19
PEESANGAN GROUND WATER CLUSTER UNDER RACP
DISTRICT – AJMER

OFFICE OF THE SENIOR HYDROGEOLOGIST
GROUND WATER DEPARTMENT
AJMER

AJMER

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The water resources on earth for consumption by living beings have become scarce, both in terms of quantity as well as in quality. Fresh water, the water that can be directly used for domestic and agricultural purposes, too is shrinking on earth. Presently, the demand for water has increased enormously.

Groundwater continues to be considered as a private and individual resource. Its extraction is mostly by individual with their own financial resources or with loans from financial institutions/banks and the Government provides financial support mainly through partially subsidized energy supply. Despite various efforts excessive withdrawal of groundwater continues which has resulted in regional imbalance and inequity amongst users. Indiscriminate ground water extraction has led to substantial ground water level declines both in hard rocks and alluvial areas threatening sustainability of this resource. This has destabilized the aquifer system and resulted in unsustainable extraction. The prevailing groundwater management system has failed to recognize Groundwater occurs in an aquifer which has its own natural boundaries and does not necessarily follow the geographical boundaries like an administrative unit. Groundwater occurrence and movement are not limited to individual land holdings. Since groundwater occurs in an aquifer and is not confined to the land holdings of the individual farmer, it is imperative that for sustainable use, groundwater resources are to be managed by communities in an aquifer instead of an individual well owner.

To achieve the objective of assignment all primary stakeholders in an aquifer have to collectively manage the groundwater resources through prioritize utilization of groundwater by different sectors like drinking water, agriculture, and industry, and allocate the available resources to each user sector for sustainable extraction. This requires regulating the demand particularly for agriculture sector. Participation of Stakeholder in ground water management is essential for management decision taken unilaterally, without social involvement. It is require implementing the management activities more effectively through cooperative efforts and Ground water management decisions, taken with the participation of stakeholders. It will help to bring social benefits, economic benefits and technical benefits, because they usually lead to better estimates of water abstraction.

The advent of Geographical Information System (GIS) has added new vistas in the field of ground water resources mapping and management. It helps in integrating remotely sensed and derived data with ancillary data to have more precise and correct information about various factors involved in the ground water resources management. GIS is one of the most important tools for integrating and analyzing spatial information from different sources or disciplines. It helps to integrate, analyze and represent spatial information and database of any resource, which can be appropriately used for planning of groundwater resource extraction, environmental protection and relevant scientific researches and investigations in cluster area as well.

PROJECT BACKGROUND

Rajasthan is the most water deficient state in the country following short spell of monsoon coupled with erratic behavior and scanty rainfall. Drought is the most frequent disaster recurring in the state. Years of years, drought has largely eroded coping capacity and economic potential of people. Most of the districts of the state have been declared drought affected having a serious impact on the bare survival needs of people, including safe drinking water and adequate nutrition.

Keeping in view, Government of Rajasthan approved a project “RAJASTHAN AGRICULTURE COMPETITIVENESS PROJECT” (RACP) for which the investigation has been carried out and prepared a compiled report of the project area. For Planning and Implementation of Activities of Ground Water Sub - component as Part of Cluster Agricultural Competitiveness Plan (CACP) in three Ground Water Clusters; Peesangan, Bonli & Sangod, the Rajasthan Agricultural Competitiveness Project Management & Implementation Society (RACP-MIS) has received credit from World Bank towards the cost of the Rajasthan Agricultural Competitiveness Project.

The Three Ground Water Cluster

S. No.	DISTRICT	CLUSTER	AREA (Ha.)	No. of Gram Panchayat	No. of Village
1	AJMER	PEESANGAN	31825	22	44
2	KOTA	SANGOD	24689	14	64
3	SWAI-MADHOPUR	BONLI	20979	17	47
TOTAL			77493	53	155

Peesangan Ground Water Cluster consist alluvium followed by Schist aquifer and covers an area of 31825 hectares in the Agro Ecological Zone (AEZ-III A) of Block Peesangan in Ajmer district. Project area falls within the 1:50,000 scale Survey of India topographic map-sheet 43G/6, 43G/7, 43G/10 and 43G/11 provided by the RACP and located in the NW of the district area and lies between 26°20'20" to 26°28'30" North Latitude and 74°17'20" to 74°31' East longitude. The Peesangan cluster covers 44 villages falling in 22 Gram Panchayats and one Town Pushkar. It is situated in the vicinity of Aravalli Mountain ranges and part of the Luni river basin and has seen to be at the verge of extinction under pressure of growing population & urbanization. The maximum length of the project area from SSW to NNE is about 30 km i.e. from Peesangan village to Gudha village while the breadth from north to south is about 15 km approximately. The undulating topography, high wind velocity & varying intensity of rainfall are causing moderate to severe erosion in the area. The area is located in a gap through the Aravalli hills. The significance of this is that surrounding land is susceptible to wind-blown sand, especially during the dry summer months when the vegetation (due to drought & grazing pressure) is least able to hold the sand against the drinking force of the strong summer winds. This has not threatened the area itself but they have rolled over vegetated land & there are, today, mobile dune fronts and a great requirement for soil and water conservation is generated. As far environment Protection are concern, the two key Problems in the area are the destruction of plant biomass because of uncontrolled grazing & the depletion of underground water by over-pumping. Henceforth the water table is declining rapidly. Therefore measures to control water demand need to be introduced or used more widely. The climate of the cluster area is semi-arid. The average annual rainfall (last 10 years from 2009-2018) is 530.46 mm and the main hydro-geological formations are alluvium followed by Schist & soil texture is Sandy loam & loam. Total population of the cluster is 78886. Out of the total population, 51.50% are male and female are 48.50%. Scheduled caste (SC) and scheduled tribes (ST) are 19% of total population as per census 2011.

The agriculture statistical data were collected from Agriculture Department & Panchayat Samitees and Tehsil offices, rainfall data from land record section of Collectorate, surface irrigation data from Irrigation Department and drinking water data from Public Health and Engineering Department, Ajmer.

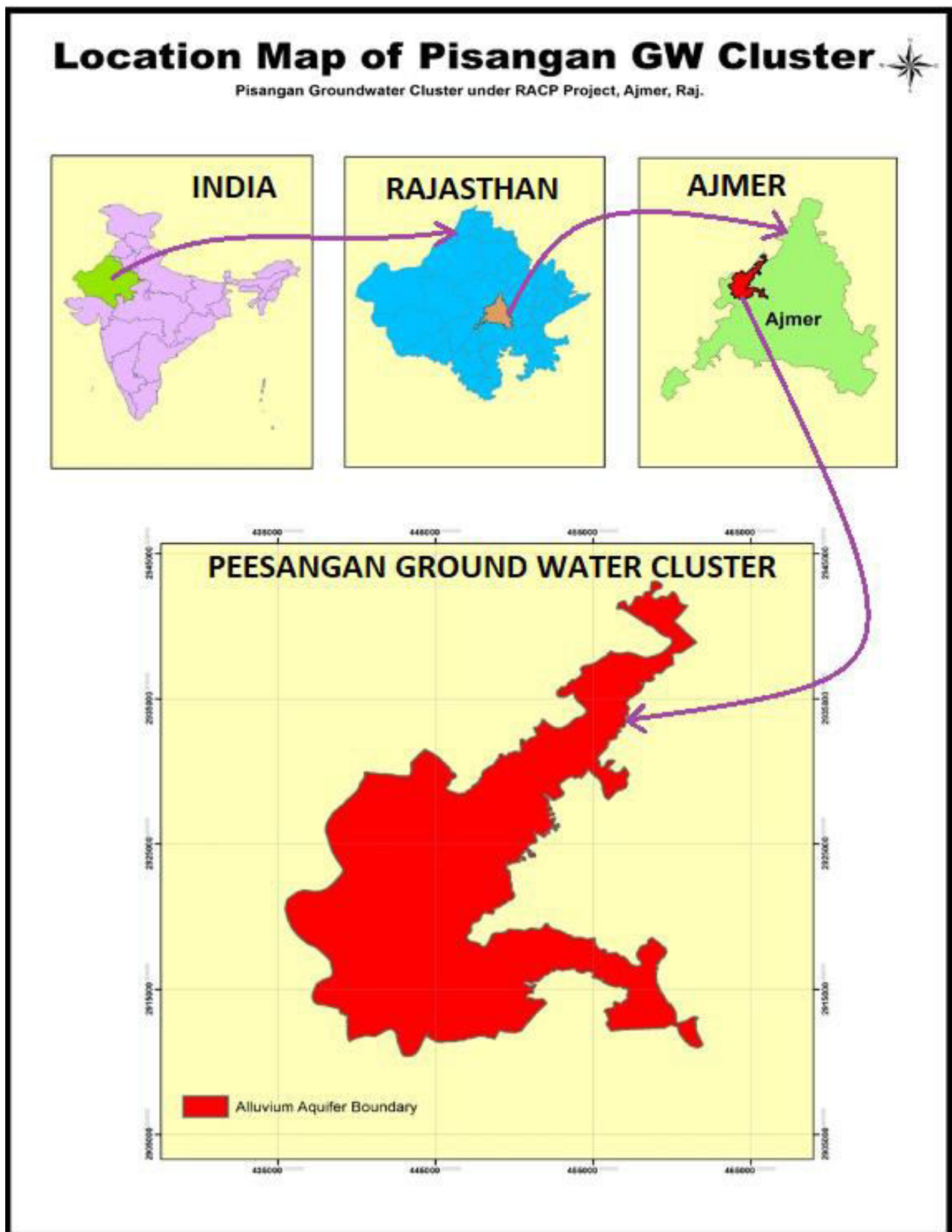
The report writing work is done by Shri Gurudutt Bohra, Senior Hydrogeologist and Shri Himanshu Kumavat, District Coordinator, Peesangan Ground Water Cluster RACP under the technical guidance of Dr.V.N.Bhave, Superintending Hydrogeologist, Ground Water Department, Udaipur.

PEESANGAN GROUND WATER CLUSTER AT A GLANCE

Particular	Description
Name of Cluster	Peesangan Ground Water Cluster
Name of District	Ajmer
Total Tehsil	3 (Ajmer, Pushkar, Peesangan)
Total Villages	44
Total Gram Panchayat	22
Total Blocks	01 (Peesangan Block)
Total Area of Cluster	31825 hectare
Pre Sanctioned Project Area	52100 hectare
Total Population	78883
Total house holds	14981
Agro climatic zone	Agro Ecological Zone (AEZ - III – A)
Aquifer System (Hydrogeological Formation)	The water bearing formation (Aquifer) of the Cluster area is Alluvium followed by Schist.
Average Rainfall (2009-2018)	530.46 mm(Last 10 Years)
Land use	84.32 % land is under agricultural 13.34 % waste land 2.05% land is built-up and 0.27 % land is covered by water bodies.
Soil Texture	Sandy Loam, Loam
River Basin	Luni River Basin
Major Streams	Sabarmati river, Bheruji Nala, Khari bhali, Ghodagarh Nala, Kundiya Nala, Baghriya Bhali, Bakya Nala etc
Major Road	NH-8, NH -116A, SH 59, MDR 39
Majority of caste	Gurjar, Rawat, Jat, Kumawat, Muslims, Cheeta, Dewasi
Major area affected by	Wind and water erosion, Scarcity of water for irrigation etc
Major option of livelihoods	Agriculture, Dairy, Daily Wages (labour)
Source of Irrigation	Mainly irrigation depends of Open well & Tube well (Diesel / Electric / Solar energized)
Source of drinking water	Hand pump, Open well, PHED Water supply scheme through Tube well / open well / some villages are feed by Bisalpur Water supply scheme.
Quality of drinking water	Likely to be Potable

LOCATION / INDEX MAP OF PEESANGAN GW CLUSTER

The Peesangan Ground Water Cluster, District - Ajmer is located in the heart of the Rajasthan.



LIST OF VILLAGE FALLS UNDER THE CLUSTER

The Peesangan ground water cluster has been divided into 22 Gram panchayat. These Gram Panchayats are covering by 3 Tehsil (Peesangan, Pushkar & Ajmer) and 44 villages.

S.N.	Name of Gram Panchayat	Name of Village Covered	Area of village (In Km ²)	Area of village (In Ha.)
1	Dantra	Dantra	12.1	1210.37
2	Rampura dabra	Fatehpura	1.9	189.54
3	Bhatsoori	Hanwantpura	1.41	141.27
4	Govindgarh	Jaswantpura	15.71	1570.7
5	Rampura dabra	Rampura Dabra	10.67	1067.32
6	Bhagwanpura	Bhagwanpura	9.56	956.2
7	Nand	Leswa	13.36	1336.2
8	Dantra	Lyali Khera	4.67	467.14
9	Nand	Rampura Nand	3.52	351.82
10	Rampura dabra	Sethan	8.3	830.44
11	Doomara	Amba Maseena	5.71	570.96
12	Deo nagar	Banseli	4.11	410.96
13	Bhanwta	Bhanwta	10.68	1068.45
14	Budhwara	Budhwara	21.01	2101.43
15	Ganahera	Chawandiya	4.29	429.25
16	Deo nagar	Deo Nagar	5.99	598.99
17	Dodiyana	Dodiyana	9.15	915.3
18	Doomara	Doomara	2.41	241.32
19	Kadel	Doongariya Khurd	4.32	432.04
20	Ganahera	Ganahera	5.95	594.65
21	Govindgarh	Govindgarh	6.38	638.46
22	Majhewla	Gudha	2.9	289.52
23	Kadel	Kadel	1.11	110.56
24	Kalesara	Kalesara	19.83	1982.93
25	Khori	Kawalai	2.34	234.33
26	Khori	Khori	3.19	319.39
27	Tilora	Kishanpura Goyla	11.91	1190.98
28	Majhewla	Majhewla	3.21	320.64
29	Bhatsoori	Nad	9.21	921.29
30	Nand	Nand	13.93	1392.75
31	Dodiyana	Nathuthala	4.38	437.93
32	Budhwara	Nooriyawas	6.08	608.07
33	Picholiya	Picholiya	16.8	1679.8
34	Peesangan	Peesangan	20.25	2025.33
35	Pushkar (m)	Pushkar (M)	2.16	215.65
36	Pushkar (m)	Pushkar (R)	2.19	218.89
37	Majhewla	Rewat	2.14	214.15
38	Saradhana	Saradhana	15.5	1549.78
39	Kalesara	Sarsari	3.41	341.04

S.N.	Name of Gram Panchayat	Name of Village Covered	Area of village (In Km ²)	Area of village (In Ha.)
40	Bhagwanpura	Sawaipura	0.62	61.58
41	Bhagwanpura	Surajkund,	6.5	650
42	Bhagwanpura	Motisar	2.83	283
43	Tilora	Tilora	4.52	452.24
44	Miyapur	Miyapur	2.02	202
TOTAL			318.25	31824.67

CLIMATE AND RAINFALL

The climate of the Peesangan Ground Water Cluster is semi-arid and is subject to extremes of both cold and hot. The minimum temperature falls below 5°C during the month of January whereas the mercury crosses 45°C during the months of May and June.

The monsoon usually sets between the months of June and September each year. The average annual rainfall in the cluster area is 530.46 mm (last 10 year from 2009 to 2018). 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 Ajmer district is 1565.6 mm and is the highest in the month of May (243 mm).

SOIL

The predominant Soil of the project area is classified mainly into dark brown. These soil having poor moisture retention capacity. The key types of soil can be classified as sandy loam. The types of soil are almost similar in the project area. It is brown colour and has characteristics of sandy loam soil.

The main type of soils found in study area as follows:

- I. *Lithosols and Regosols of hills:* These soils are shallow and very to surface, light texture, fairly drained, reddish brown to greyish brown in colour. Cultivation is restricted because of limited root zone.
- II. *Red and Yellow soils of foot hills:* These are reddish to yellowish red, sandy loam to sandy clay loam soils of varying depth and Aravalli.
- III. *Yellowish brown soils of foot hills:* These soils vary from fine to medium in texture, moderate to good drained and are yellowish brown in colour and drained.

Major Soil Class	Area in hectares
Loamy, Sandy-loam	13684.75
Sandy	14639.5
Black	3500.75
Total	31825.00

HYDROGEOLOGY

The main hydrogeological units in the cluster are Alluvium followed by Schist. The groundwater occurs under water table condition in the cluster. Depth to water and yield of well is generally controlled by physiographic location of wells and percentage of secondary openings encountered in well section. The cluster average depth to water ranges between 4.20 m to 61.50 m bgl (Pre-2018) & 3.7m to 57.63 m bgl (Pre-2019) and from 2.58 m to 49.79 m bgl (Post-2018) & 0.0 m to 46.54 m bgl (Post-2019) period. The average yield of wells ranges from 30,000 liters per day to 55,000 liters per day with pump sets whereas it is 35,000 liters per day without pump sets. The ground water is generally potable and suitable for irrigation with exception of few scattered patches where the chemical quality is unsuitable. The ground water availability depends on rainfall.

ACTIVITY PERFORMED IN THE AREA

The base data such as revenue records, Khasra Maps etc. from revenue department & other relevant data (Agriculture, Horticulture etc.) have been collected from different line departments. The collected data further classified on the basis of inputs received from line departments & field survey observations, and GIS data base created for data analysis and preparation of thematic maps.

The brief of major activities performed so far in the Peesangan Ground Water Cluster are tabulated below;

Sr. No.	Activities	Details
1.	Inception Report	Project Inception Report has been submitted by the consultancy agency.
2.	Collection of relevant revenue data	All the relevant revenue data has been collected from the revenue department and accordingly GIS layers have been prepared.
3.	Detailed Hydrogeological Investigation Survey (DHI)	DHI survey of 100% Water Extracting Units including dry wells has been completed. During DHI, data on yield of wells, area irrigated by the wells, cropping pattern, irrigation practices, water demand for agriculture, crop area and production, major crops during Rabi, Kharif & Zaid seasons etc. has been collected.
4.	Geophysical Investigation	Geophysical Survey carried out and with the help of DHI and Geophysical Survey, the new cluster boundary has been demarcated and delineated.
5.	Demarcation of Aquifer boundary	The New Aquifer boundary has been demarcated and accordingly the area of cluster has been computed (31825 hectare).
6.	Data Base Creation on GIS Platform & Thematic layers	All the collected data & field investigation data has been complied on GIS platform by which analysis of data and preparation work of different thematic layers & Maps has been done.
7.	GWMS Plan	Ground Water Management Sub Plan (GWMS Plan) has been prepared & submitted.
8.	Farmer	Department has organized training / capacity building program at

	organization& Capacity building	Gram Panchayat & Block level. So far 28 nos. of one day workshop at GP/ Village Level & 02 nos. at Panchayat Samiti level are organized. A five day exposure visit has been also organized with 50 farmers.
9.	Site Selection & Constructions of Piezometers	As per field investigation (DHI) the gaps has been identified and the location of proposed Piezometers sites has been finalized and 33 piezometers has been constructed.
10.	Site Selection & Constructions of Observation wells	Selection of Observation wells on the Grid basis by using geophysical technique has been carried out. Total 4 (four) numbers of Observation wells has been constructed.
11.	Installation of telemetric Digital water level recorders (DWLR)	Procurement has been completed and work order issued. Out of total 33 Nos. of TDWLR 32 Nos. of telemetric Digital water level recorders (DWLR) on selected Piezometers sites has been installed for continuous monitoring of water level and impact assessment of effective ground water management.
12.	Monthly Water Level Survey	It's a regular activity and data from selected monitoring stations are collected on monthly basis. The water sample collection from the selected key-wells during pre-monsoon and post-monsoon periods carried out regular, although it is an on-going process & completed regularly.
13.	Procurement of Water Meter & its Installation	100 Nos. of water meter in the cluster area have been installed.

Detailed descriptions of major activities performed so far in the cluster area areas below;

DETAILED HYDROGEOLOGICAL INVESTIGATION (DHI)

Detailed Hydrogeological survey of 100% of existing ground water extraction units has been completed and collected different relevant data in the format prepared by the Ground Water Department. It includes capturing of Latitude & Longitude; Collection of Water samples; Collection of data on yield of wells, area irrigated by the wells, cropping pattern, irrigation practices (flood irrigation, drip, sprinkler etc.), water demand for agriculture, crop area and production, major crops including Vegetables, Flowers and Fruits during Rabi, Kharif & Zaid seasons, scope and potential of crop diversification during different seasons i.e. Kharif, Rabi and Zaid, from 100% Ground Water extraction unit in the cluster area. The Detailed Hydrogeological survey of 6269 sites has been completed in 2017 by the consultancy agency in all initially provided 48 villages. After final Aquifer boundary there are 5140 wells have been fallen under 44 villages. A summary table of survey is tabulated below;

SUMMARY OF DETAILED HYDROGEOLOGICAL SURVEY				
Sr. No.	Ground Water extraction unit	Working	Dry	Total
1	Tube-wells	1495	517	2012
2	Dug Wells	1214	1278	2492
3	Dug cum Bore-well (DCB)	331	305	636
Grand Total		3040	2100	5140

DELINEATION & DEMARCATION OF AQUIFER BOUNDARY

As per the prime deliverables of the project was to delineate and demarcate the aquifer boundary by using the Detailed Hydrogeological Investigation and **Geophysical Resistivity Survey** data on the basis of single aquifer. Peesangan Ground Water Cluster consist alluvium followed by Schist aquifer. After the delineation and demarcation of aquifer boundary, the final area of the cluster is 31825 hectares in the Agro Ecological Zone (AEZ-III A) of Block Peesangan in Ajmer district and comprises of 44 villages which falls in 22 gram panchayat and 1 blocks of Ajmer district.

SUMMARY STATISTICS OF FINALIZED AQUIFER BOUNDARY	
Village added in new aquifer Boundary	1
Village completely covered by aquifer boundary	11
Village completely deducted from aquifer boundary	5
Partially deducted village from aquifer boundary	32
Grid area Added in Aquifer Boundary	3 grid
Grid area deducted from aquifer Boundary	82 grid
Total proposed Area of new aquifer Boundary	318.25 Sq.km.

FARMER ORGANISATION & CAPACITY BUILDING

Department has regular organizing training / capacity building programs at Village, Gram Panchayat & Block level under Information Education Communication (IEC). So far 22 nos. of one day workshop at GP Level & 02 nos. of one day workshop at Panchayat Samiti level and 4 nos. of one day workshop at village level are organized. A five day exposure visit has been also organized with 50 farmers.

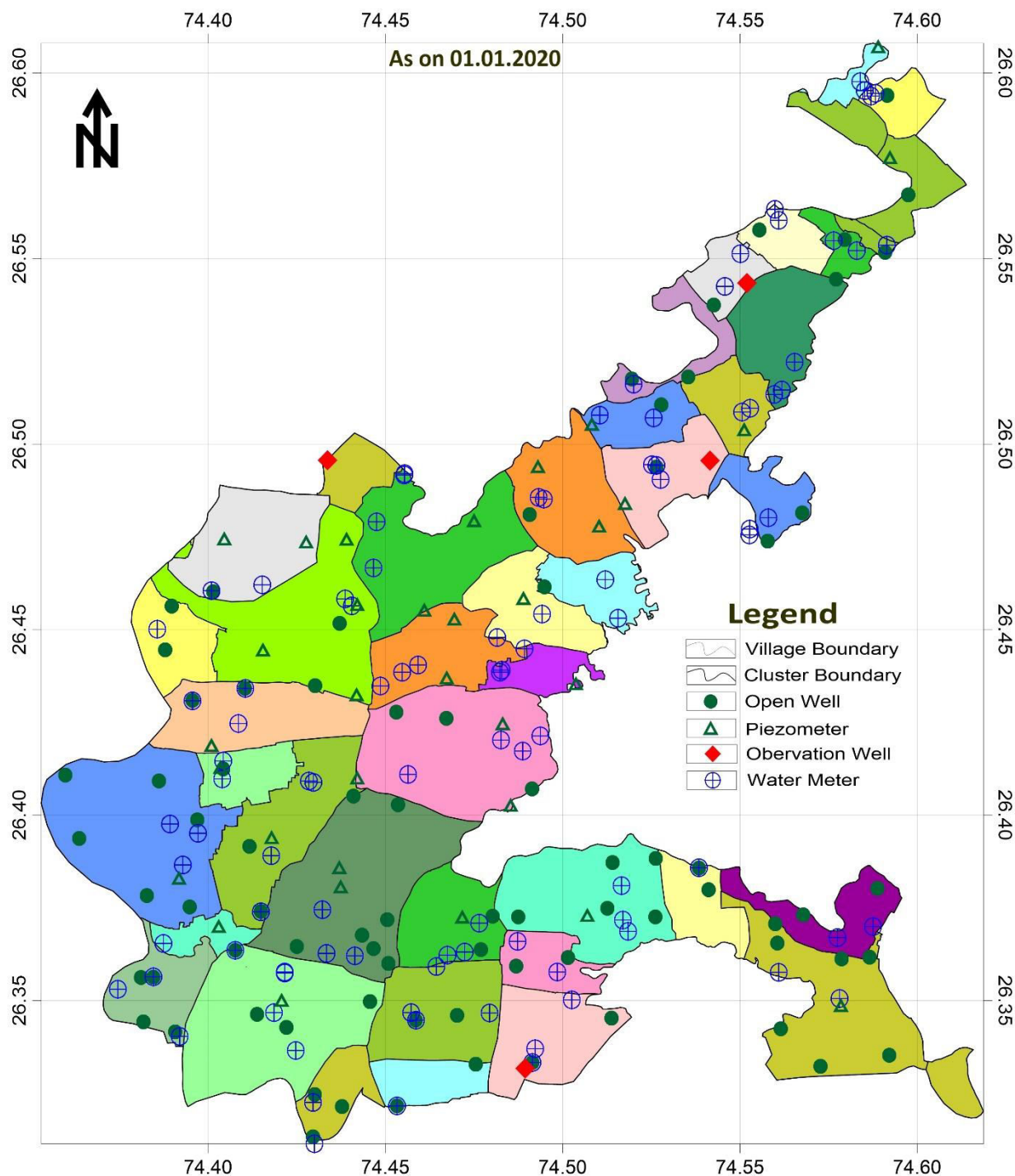
GROUND WATER MONITORING NETWORK ESTABLISHMENT IN THE AREA

Groundwater monitoring programs are generally designed to measure changes in groundwater level over time, in either single or multiple aquifers.

As per the Detailed Hydrogeological Survey, gaps and deficiencies have been identified on the basis of grid. There are total 78 nos. of Key-wells and 33 nos. of Piezometers have been finalized for regular monthly monitoring of water level and four observation wells have been constructed under RACP. The telemetric digital water level recorder (TDWLR) have been installed on all 32 nos. of piezometers sites constructed under RACP in the cluster area. Similarly, to measure & monitor the ground water withdrawal and to understand the crop water requirement on farmer's field, 100 nos. of Water meter have been installed.

LOCATION MAP OF MONITORING NETWORK

Peesangan Ground Water Cluster - Ajmer under RACP



Prepared By;
Office of the Sr. Hydrogeologist
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Submitted to;
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WATER RESOURCE ASSESSMENT OF THE PEESANGAN GROUND WATER CLUSTER

The Ground water resource availability of the cluster have been computed on the basis of water level data collected by the Ground Water Department during pre-monsoon and post-monsoon periods for last five years. The water level data of pre-monsoon 2018 have been used which were collected during Monthly Water level Monitoring. The rainfall data have also been collected and computed. The agriculture and domestic draft have been computed on the basis of actual field data collected during the field survey. The specific yield and rainfall infiltration factor use for computation of recharge estimation has been taken from the Ground Water Assessment report 2017 of Ajmer District. The water resource availability for Alluvium followed by Schist as an aquifer has been taken into consideration, as alluvium followed by Schist is the only water bearing formation in the Peesangan Ground Water Cluster area. The water resource availability has been assess as per the GEC 2015 guideline by using the water level data, collected by Ground Water department for the last five years and the agriculture & domestic draft data has been collected from revenue department. The specific yield & RI factor has been taken from ground water assessment report 2017. By using all these data, the computation of water resource availability of the cluster area has been made.

The estimation reveals that the Net Ground Water Availability for future Irrigation Extraction (ham) is -2296.3736 HaM while the Existing Gross Ground Water Draft for All Uses (ham) is 6031.1400HaM. The stage of ground water extraction is **138.04%** and has been categorized as “**Over Exploited**”. The given table reveals that maximum utilization of available water resource is for irrigation and domestic purposes. No industrial draft is available in the project area.

The details of the estimation have been given below as:

Ground Water Resource Availability & Utilization of Peesangan Ground Water Cluster (2018)

Water Bearing Formation	Potential Zone Area (Ha)	Net Annual Ground Water Availability (ham)	Existing Gross Ground Water Draft for Irrigation (ham)	Existing Gross Ground Water Draft for Dom.& Industrial Use (ham)	Existing Gross Ground Water Draft for All Uses (ham)	Allocation for Dom.& Industrial Requirement As Projected for the Next 25 Years (ham)	Net Ground Water Availability for future Irrigation Extraction (ham)	Stage of Ground Water Extraction (%)	Category
A/Schist	31825.0	4368.990	5238.36	792.78	6031.14	1427.00	-2296.3736	138.04	OVER EXPLO.

The village wise water resource estimation of the cluster area has also been computed by using rainfall infiltration factor, as village wise water level fluctuation data. The computed results of village wise resource estimation have also been attached in the report. The results of resource estimation by these two methods shown a considerable difference.

Rainfall and runoff available constitute the major sources of water for artificial recharge of ground water. Rainfall is the primary source of recharge into the ground water reservoir. Other important sources of recharge include seepage from tanks, canals and streams and the return flow from applied irrigation. For proper evaluation of source water availability, a thorough understanding of rainfall and runoff is essential. The monthly evapotranspiration rates have also been computed. The annual potential evapotranspiration of the Ajmer district is 1565.6 mm and is the highest in the month of May (243 mm). It shows that surface water may only be available in the month of May. In rest of the months the quantity of precipitation is either evaporated or percolates up to soil moisture zone, it is not available for storage or artificial recharge.

The computation of available water from the rainfall is as follows;

AVERAGE ANNUAL RAINFALL & SURFACE WATER AVAILABILITY

FOR LAST TEN YEARS (2009-2018)

S. No.	Area in Ha	Rainfall season	Ave. Rainfall in mm	Available Water (HaM)
1	31825	Monsoon	483.56	15389.297
2	31825	Non Monsoon	52.111	1658.433
Total			535.671	17047.730

**Available Water = Area X Avg. Rainfall*

The above table reveals that the average Annual Rainfall for last ten years (2009-2018) is 535.671 mm of Peesangan rain gauge station, the said rain fall is taken into consideration and the surface run off is available only during monsoon period, so the quantity available during this period has been used for calculating the availability.

The soil moisture index of the cluster area is @ 10% which indicates that during non-monsoon period the available water is generally reach up to upper layer of the soil.

The process to estimate runoff may be summarized on inputs received from Revenue Record, Field observations, land use land cover pattern, GIS data, and watershed expert exercise. The cluster area can be divided into three categories as Good Catchment, Average Catchment and Bad Catchment. The basis of the criteria is presented below:

Good Catchment – where maximum runoff & minimum infiltration like hillocks, Built-up etc.

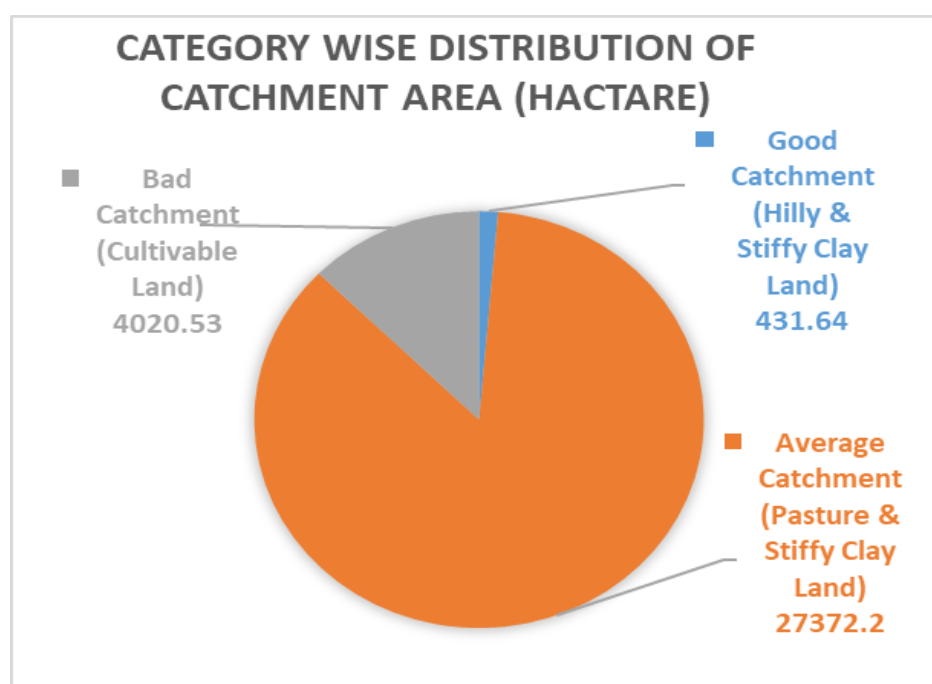
Average Catchment – cultivated land, forest land with vegetation.

Bad Catchment - where runoff is minimum and infiltration is maximum e.g. Sandy soil.

The table given below reveals that according to catchment area of the cluster, about 4020.53 hectare area is having a bad catchment and conserve a good infiltration while about 431.64 hectare of the area is falling under good catchment and about 27372.2 hectare area of the cluster is having an average catchment.

Sr. No.	Catchment	Area (Ha)
1	Good Catchment (Hilly & Stiffy Clay Land)	431.64
2	Average Catchment (Pasture & Stiffy Clay Land)	27372.2
3	Bad Catchment (Cultivable Land)	4020.53
	Total	31824.37

(i) **Average Annual Rainfall:** 535.671 mm (Avg. last 10 year 2009 to 2018)



Estimation of Runoff Yield (Expected Yield) based on the “Strange-Table”

Rating of Catchment	Characteristics	Coefficient in strange (% of runoff to rainfall)	Area (in Hac)	Expected Yield (in Ham)
Good	Runoff is maximum & infiltration is minimum like hillocks, plateau etc.	15.00%	431.64	35.15
Average	Runoff is medium like cultivated land, forest land with vegetation	11.25%	27372.2	1567.40
Bad	Runoff is minimum and infiltration is maximum e.g. Sandy soil	07.50%	4020.53	153.48
Total			31824.37	1756.03

{*Coefficient in strange(% of runoff to rainfall is taken from the strange table)}

(ii) Estimation of water-storage in existing water harvesting structures situated in Peesangan GW cluster area:-

S. No.	Type of Structure	Quantity(Nos.)	Storage Capacity (In Ham)
1	Farm Ponds	26	03.481686
2	Check dam	1	00.0120
3	Village ponds (Talab)	30	57.3800
4	Pushkar lake	1	94.5000
	TOTAL	58	155.373686 (HaM)

The above table reveals that a total of 155.3736 hectare meter water is already being harvested through Farm Ponds, Check dam, Village ponds and local depressions in the cluster. Presently, the balance runoff is to be harvested to cater to the requirement of crops to be grown in the area.

(iii) Calculation of the Balance surface Runoff:

Balance Runoff = Expected Yield (i) – Present Storage Capacity (ii)

Balanced Runoff = 1756.03709–155.3736 = **1600.6634**HaM

Details of Surface Water Balance of Peesangan Ground Water Cluster Area						
Sr. No.	Area of Cluster (Sq km)	Normal Monsoon Rain Fall	Water Availability as per normal monsoon Rain Fall (HaM)	Available Surface Runoff as per Strange Table (HaM)	Total Surface water Recharge & Water Accumulation (HaM)	Net Surface water available for harvesting (HaM)
1	31824.37	380.48	17047.73	1756.037098	1600.6570	155.3801

ESTIMATION OF GROUND WATER RECHARGE OF CLUSTER IN MONSOON PERIOD BY WATER TABLE FLUCTUATION METHOD

Year	Potential Zone Area (Ha)	Water Level Fluctuation (m)	Specific Yield	Gross Kharif Draft (Ag.+Dom.) (ham)	Monsoon Recharge from Ground Water Irrigation Rgw (ham)	Monsoon Recharge from Canal Rc (ham)	Monsoon Recharge from Surface Water Irrigation Rsw (ham)	Monsoon Recharge from Tank & Ponds Rt (ham)	Rainfall Recharge Ri (ham)	Gross Agriculture Draft (ham)	Gross Domestic Draft (ham)	Normal Monsoon Rainfall r (normal) (m)	Monsoon Rainfall ri (m)	(ri*ri) (Rainfall*Rainfall Monsoon)	(ri*Ri) (Monsoon Rainfall* Recharge)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PEESANGAN Ground Water Cluster Potential Zone : Schist followed by Alluvium															
2014	31825.00	1.62	0.12	1606.7226	211.9125			57.7200	7541.842	5651.000	590.000	0.3880	0.6340	0.4020	4781.5278
2015	31825.00	0.63	0.12	1639.3493	215.4750			31.9100	3807.482	5746.000	617.000	0.3876	0.3505	0.1229	1334.5224
2016	31825.00	1.95	0.12	1546.6683	200.6531			55.3100	8737.755	5350.750	635.650	0.3895	0.6075	0.3691	5308.1863
2017	31825.00	1.53	0.12	1558.4492	198.5458			33.1405	7152.474	5294.555	714.215	0.3901	0.3640	0.1325	2603.5005
2018	31825.00	1.67	0.12	1570.2300	196.4385			55.4379	7678.414	5238.360	792.780	0.3911	0.5101	0.2602	3916.7588

ESTIMATION OF GROUND WATER RECHARGE OF CLUSTER IN MONSOON PERIOD OF PEESANGAN GROUND WATER CLUSTER

Peesangan Ground Water Cluster	Type of Area	Potential Zone	S1 (Sum of Rainfall in Monsoon) (m)	S2 (Sum of Rainfall Recharge in Monsoon (ham)	S3 (Sum of Rainfall *Rainfall) Monsoon (m)	S4 (Sum of Monsoon Rainfall* Recharge)	(a) (Constant)	(b) (Constant)	Rrf normal (Linear regression method) (a*x+b)	R.I. Factor	Monsoon Recharge Rrf(normal, rifm) (ham)	(PD) (%)	Accepted value of Monsoon Rainfall Recharge Rrf(normal) (ham)	Total Recharge from other sources (ham)	Total Recharge during Monsoon Season R(normal)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Peesangan Ground Water Cluster	NC	A/Schist	2.4661	34917.9663	1.2866	17944.4958	10284.06	1911.29	5933.7868	0.08	995.8399	495.86	3916.7588	255.9631	4172.7219

NONMONSOONAL RECHARGE OF CLUSTER BY R.I.F. APPROACH, OTHER SOURCES & TOTAL ANNUAL RECHARGE

Peesangan Ground Water Cluster	Type of Area	Water Bearing Formation	Potential Zone area (Ha)	R.I. Factor	Normal Non- monsoon Rainfall (m)	Normal Annual Rainfall (m)	Recharge from Rainfall during Non-monsoon (ham)	Non Monsoon Recharge from Ground Water Irrigation Rgw (ham)	Non- monsoon Recharge from Canal Rc (ham)	Non- monsoon Recharge from SWI Rsw (ham)	Recharge from Tank & Ponds Rt (ham)	Recharge from other sources (Rc+Rsw+Rt) (ham)	Total Recharge in Non- monsoon (ham)	Total Annual Ground Water Recharge (ham)	Natural Discharge during Non- monsoon Season (ham)
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Peesangan Ground Water Cluster	NC	A/Schist	31825.00	0.08	0.0341	0.4252	0.0000	589.3155			92.3964	681.7119	681.7119	4854.4338	485.4434

GROUND WATER RECHARGE, EXTRACTION& STAGE OF GROUND WATER EXTRACTION

Block	Area of Block (Ha)	Type of area	Water Bearing Formation	Potential Zone Area (Ha)	Net Annual Ground Water Availability (ham)	Existing Gross Ground Water Draft for Irrigation (ham)	Existing Gross Ground Water Draft for Dom.& Industrial Use (ham)	Existing Gross Ground Water Draft for All Uses (ham)	Allocation for Dom.& Industrial Requirement As Projected for the Next 25 Years (ham)	Net Ground Water Availability for future Irrigation Extraction (ham)	Stage of Ground Water Extraction (%)	Whether Significant Decline in Pre- Monsoon Water Level (Yes/No)	Whether Significant Decline in Post- Monsoon Water Level (Yes/No)	Category	Annual Potential Recharge (ham)
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Peesangan Ground Water Cluster	31825.00	NC	A/Schist	31825.00	4368.9904	5238.3600	792.7800	6031.1400	1427.0040	-2296.3736	138.04	YES	YES	OVER EXPLO.	-

VILLAGE WISE ESTIMATION OF GROUND WATER RECHARGE IN MONSOON PERIOD BY WATER TABLE FLUCTUATION METHOD

Name of Village	Potential Zone Area (Sq.Ha.)	Water Level Fluctuation (m)	Specific Yield	Gross Kharif Draft (Ag.+Dom.) (HaM)	Monsoon Recharge from Ground Water Irrigation Rgw (HaM)	Monsoon Recharge from Canal Rc (HaM)	Monsoon Recharge from Surface Water Irrigation Rsw (HaM)	Monsoon Recharge from Tank & Ponds Rt (HaM)	Rainfall Recharge Ri (HaM)	Gross Agriculture Draft (HaM)	Gross Domestic Draft (HaM)	Normal Monsoon Rainfall r (normal) (m)	Monsoon Rainfall ri (m)	(ri*ri) (Rainfall*Rainfall Monsoon)	(ri*Ri) (Monsoon Rainfall* Recharge)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Amba Maseena	570.96	1.95	0.12	21.0000	2.5020			2.52000	149.5826	66.7200	13.1400	0.3911	0.5101	0.2602	76.3021
Banseli	410.96	2.20	0.12	52.5000	6.9750				154.0184	186.0000	18.2500	0.3911	0.5101	0.2602	78.5648
Bhagwanpura	956.20	1.00	0.12	68.0700	8.7345			0.76608	173.3134	232.9200	29.9300	0.3911	0.5101	0.2602	88.4072
Bhanwta	1068.45	3.44	0.12	94.4400	9.9180			0.16254	525.4156	264.4800	86.1400	0.3911	0.5101	0.2602	268.0145
Budhwara	2101.43	2.52	0.12	78.9900	9.7605				704.7019	260.2800	42.3400	0.3911	0.5101	0.2602	359.4684
Chawandiya	429.25	2.20	0.12	28.4700	2.9745			0.01008	138.8074	79.3200	26.2800	0.3911	0.5101	0.2602	70.8057
Dantra	1210.37	0.53	0.12	72.7500	9.2925			1.26000	139.1770	247.8000	32.8500	0.3911	0.5101	0.2602	70.9942
Deo Nagar	598.99	-1.30	0.12	89.9700	12.9915			0.02835	-16.4923	346.4400	10.2200	0.3911	0.5101	0.2602	-8.4127
Dodiyana	915.30	3.43	0.12	12.4500	1.5435			1.13400	386.5100	41.1600	6.5700	0.3911	0.5101	0.2602	197.1588
Doomara	241.32	3.90	0.12	30.7800	3.5730				140.1448	95.2800	21.1700	0.3911	0.5101	0.2602	71.4879
Doongariya Khurd	432.04	1.60	0.12	15.9600	1.7460			0.01008	97.1556	46.5600	13.1400	0.3911	0.5101	0.2602	49.5591
Fatehpura	189.54	1.90	0.12	9.9600	1.2420			0.00504	51.9281	33.1200	5.1100	0.3911	0.5101	0.2602	26.4885
Ganahera	594.65	4.30	0.12	100.0200	13.2030			2.64600	391.0104	352.0800	36.5000	0.3911	0.5101	0.2602	199.4544
Govindgarh	638.46	2.08	0.12	27.5400	3.2310			1.39860	182.2700	86.1600	18.2500	0.3911	0.5101	0.2602	92.9759
Gudha	289.52	3.60	0.12	12.1200	1.2060				135.9866	32.1600	12.4100	0.3911	0.5101	0.2602	69.3668
Hanwantpura	141.27	2.08	0.12	7.5000	0.7650			0.01008	41.9859	20.4000	7.3000	0.3911	0.5101	0.2602	21.4170
Jaswantpura	1570.70	1.38	0.12	36	4.1400			0.01008	291.9578	110.4000	25.5500	0.3911	0.5101	0.2602	148.9277
Kadel	110.56	-1.30	0.12	13.71	1.2645			6.81408	-11.6159	33.7200	16.0600	0.3911	0.5101	0.2602	-5.9253
Kalesara	1982.93	1.03	0.12	25.89	2.3715			1.26504	267.3436	63.2400	30.6600	0.3911	0.5101	0.2602	136.3720
Kawalai	234.33	3.60	0.12	13.2	1.7280				112.7026	46.0800	5.1100	0.3911	0.5101	0.2602	57.4896
Khori	319.39	10.40	0.12	27.36	3.4920			1.38600	421.0807	93.1200	12.4100	0.3911	0.5101	0.2602	214.7933
Kishanpura Goyla	1190.98	2.65	0.12	48.9300	6.5475			1.02110	420.0930	174.6000	16.0600	0.3911	0.5101	0.2602	214.2894
Leswa	1336.20	0.55	0.12	16.3800	1.6650			0.01008	102.8941	44.4000	16.0600	0.3911	0.5101	0.2602	52.4863
Lyali Khera	467.14	0.95	0.12	3.6300	0.3285				56.5555	8.7600	4.3800	0.3911	0.5101	0.2602	28.8490
Majhewla	320.64	0.90	0.12	22.9500	2.8305			0.15750	54.5911	75.4800	12.4100	0.3911	0.5101	0.2602	27.8469
Miyapur	202.00	0.35	0.12	9.4800	1.1340				16.8300	30.2400	5.8400	0.3911	0.5101	0.2602	8.5850
Motisar	283.00	2.65	0.12	47.85	6.9255				130.9185	184.6800	5.1100	0.3911	0.5101	0.2602	66.7815
Nad	921.29	-0.25	0.12	13.95	1.4085				-15.0972	37.5600	13.8700	0.3911	0.5101	0.2602	-7.7011
Nand	1392.75	2.65	0.12	44.52	6.0660			0.06854	481.2800	161.7600	12.4100	0.3911	0.5101	0.2602	245.5009
Nathuthala	437.93	10.00	0.12	41.67	5.2065			1.38600	560.5935	138.8400	21.1700	0.3911	0.5101	0.2602	285.9587
Nooriyawas	608.07	6.38	0.12	40.74	5.0310			1.38600	499.8614	134.1600	21.9000	0.3911	0.5101	0.2602	254.9793
Peesangan	2025.33	3.24	0.12	97.23	12.2805			1.33875	871.0591	327.4800	46.7200	0.3911	0.5101	0.2602	444.3272
Picholiya	1679.80	0.03	0.12	63.75	7.6545			1.28520	60.8576	204.1200	38.6900	0.3911	0.5101	0.2602	31.0435
Pushkar (M)	215.65	1.98	0.12	22.95	3.0105			19.84500	51.3329	80.2800	8.7600	0.3911	0.5101	0.2602	26.1849
Pushkar (R)	218.89	1.98	0.12	8.43	0.8685				59.5698	23.1600	8.0300	0.3911	0.5101	0.2602	30.3866
Rampura Dabla	1067.32	4.00	0.12	29.4	4.0140			2.33919	535.3604	107.0400	8.0300	0.3911	0.5101	0.2602	273.0873
Rampura Nand	351.82	1.60	0.12	10.65	1.2735				76.9259	33.9600	6.5700	0.3911	0.5101	0.2602	39.2399
Rewat	214.15	0.90	0.12	7.2600	0.6570				29.7312	17.5200	8.7600	0.3911	0.5101	0.2602	15.1659
Saradhana	1549.78	1.93	0.12	34.98	4.6350			2.39400	386.8800	123.6000	12.4100	0.3911	0.5101	0.2602	197.3475
Sarsari	341.04	-0.30	0.12	5.94	0.7470			1.00800	-8.0924	19.9200	2.9200	0.3911	0.5101	0.2602	-4.1279
Sawaipura	61.58	1.05	0.12	40.47	5.4585				42.7706	145.5600	12.4100	0.3911	0.5101	0.2602	21.8173
Sethan	830.44	1.90	0.12	16.08	1.8360			0.00504	203.5793	48.9600	11.6800	0.3911	0.5101	0.2602	103.8458
Surajkund	650.00	2.65	0.12	84.12	12.0060				278.8140	320.1600	12.4100	0.3911	0.5101	0.2602	142.2230
Tilora	452.24	0.85	0.12	20.1900	2.2005			3.76740	60.3506	58.6800	16.7900	0.3911	0.5101	0.2602	30.7848
				1570.2300	196.4385			55.4379	9434.6431	5238.3600	792.7800	0.3911	0.5101	0.2602	4812.6116

VILLAGE WISE ESTIMATION OF GROUND WATER RECHARGE IN MONSOON PERIOD

Name of village	Type of Area	Potential Zone	S1 (Sum of Rainfall in Monsoon) (m)	S2 (Sum of Rainfall Recharge in Monsoon (HaM)	S3 (Sum of Rainfall*Rainfall) Monsoon (m)	S4 (Sum of Monsoon Rainfall*Recharge)	(a) (Constant)	(b) (Constant)	Rrf normal (Linear regression method) (a*x+b)	R.I. Factor	Monsoon Recharge Rrf(normal, rirm) (HaM)	(PD) (%)	Accepted value of Monsoon Rainfall Recharge Rrf(normal) (HaM)	Total Recharge from other sources (HaM)	Total Recharge during Monsoon Season R(normal)
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Amba Maseena	NC	A/Schist								0.08	17.8660		76.3021	5.0220	81.3241
Banseli	NC	A/Schist								0.08	12.8594		78.5648	6.9750	85.5398
Bhagwanpura	NC	A/Schist								0.08	29.9206		88.4072	9.5006	97.9078
Bhanwta	NC	A/Schist								0.08	33.4330		268.0145	10.0805	278.0950
Budhwara	NC	A/Schist								0.08	65.7561		359.4684	9.7605	369.2289
Chawandiya	NC	A/Schist								0.08	13.4317		70.8057	2.9846	73.7903
Dantra	NC	A/Schist								0.08	37.8738		70.9942	10.5525	81.5467
Deo Nagar	NC	A/Schist								0.08	18.7431		18.7431	13.0199	31.7630
Dodiyana	NC	A/Schist								0.08	28.6408		197.1588	2.6775	199.8363
Doomara	NC	A/Schist								0.08	7.5512		71.4879	3.5730	75.0609
Doongariya Khurd	NC	A/Schist								0.08	13.5190		49.5591	1.7561	51.3152
Fatehpura	NC	A/Schist								0.08	5.9309		26.4885	1.2470	27.7355
Ganahera	NC	A/Schist								0.08	18.6073		199.4544	15.8490	215.3034
Govindgarh	NC	A/Schist								0.08	19.9781		92.9759	4.6296	97.6055
Gudha	NC	A/Schist								0.08	9.0594		69.3668	1.2060	70.5728
Hanwantpura	NC	A/Schist								0.08	4.4205		21.4170	0.7751	22.1921
Jaswantpura	NC	A/Schist								0.08	49.1490		148.9277	4.1501	153.0778
Kadel	NC	A/Schist								0.08	3.4595		3.4595	8.0786	11.5381
Kalesara	NC	A/Schist								0.08	62.0481		136.3720	3.6365	140.0085
Kawalai	NC	A/Schist								0.08	7.3324		57.4896	1.7280	59.2176
Khori	NC	A/Schist								0.08	9.9941		214.7933	4.8780	219.6713
Kishanpura Goyla	NC	A/Schist								0.08	37.2671		214.2894	7.5686	221.8580
Leswa	NC	A/Schist								0.08	41.8112		52.4863	1.6751	54.1614
Lyali Khera	NC	A/Schist								0.08	14.6173		28.8490	0.3285	29.1775
Majhewla	NC	A/Schist								0.08	10.0332		27.8469	2.9880	30.8349
Miyapur	NC	A/Schist								0.08	6.3208		8.5850	1.1340	9.7190
Motisar	NC	A/Schist								0.08	8.8554		66.7815	6.9255	73.7070
Nad	NC	A/Schist								0.08	28.8282		28.8282	1.4085	30.2367
Nand	NC	A/Schist								0.08	43.5807		245.5009	6.1345	251.6354
Nathuthala	NC	A/Schist								0.08	13.7033		285.9587	6.5925	292.5512
Nooriyawas	NC	A/Schist								0.08	19.0272		254.9793	6.4170	261.3963
Peesangan	NC	A/Schist								0.08	63.3748		444.3272	13.6193	457.9465
Picholiya	NC	A/Schist								0.08	52.5628		31.0435	8.9397	39.9832
Pushkar (M)	NC	A/Schist								0.08	6.7479		26.1849	22.8555	49.0404
Pushkar (R)	NC	A/Schist								0.08	6.8493		30.3866	0.8685	31.2551
Rampura Dabla	NC	A/Schist								0.08	33.3976		273.0873	6.3532	279.4405
Rampura Nand	NC	A/Schist								0.08	11.0088		39.2399	1.2735	40.5134
Rewat	NC	A/Schist								0.08	6.7010		15.1659	0.6570	15.8229
Saradhana	NC	A/Schist								0.08	48.4943		197.3475	7.0290	204.3765
Sarsari	NC	A/Schist								0.08	10.6715		10.6715	1.7550	12.4265
Sawaipura	NC	A/Schist								0.08	1.9269		21.8173	5.4585	27.2758
Sethan	NC	A/Schist								0.08	25.9854		103.8458	1.8410	105.6868
Surajkund,	NC	A/Schist								0.08	20.3392		142.2230	12.0060	154.2290
Tilora	NC	A/Schist								0.08	14.1511		30.7848	5.9679	36.7527

VILLAGE WISE NONMONSOONAL RECHARGE BY R.I.F. APPROACH, OTHER SOURCES & TOTAL ANNUAL RECHARGE

Name of village	Type of Area	Water Bearing Formation	Potential Zone area (Sq.Ha.)	R.I. Factor	Normal Non-monsoon Rainfall (m)	Normal Annual Rainfall (m)	Recharge from Rainfall during Non-monsoon (HaM)	Non Monsoon Recharge from Ground Water Irrigation Rgw (HaM)	Non-monsoon Recharge from Canal Rc (HaM)	Non-monsoon Recharge from SWI Rsw (HaM)	Recharge from Tank & Ponds Rt (HaM)	Recharge from other sources (Rc+Rsw+Rt) (HaM)	Total Recharge in Non-monsoon (HaM)	Total Annual Ground Water Recharge (HaM)	Environmental flows during non-monsoon season (HaM)
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Amba Maseena	NC	A/Schist	570.96	0.08	0.00597	0.0726	0.0000	7.5060			4.200000	11.7060	11.7060	93.0301	4.6515
Banseli	NC	A/Schist	410.96	0.08	0.00829	0.1009	0.0000	20.9250				20.9250	20.9250	106.4648	5.3232
Bhagwanpura	NC	A/Schist	956.20	0.08	0.00356	0.0434	0.0000	26.2035			1.276800	27.4803	27.4803	125.3881	6.2694
Bhanwta	NC	A/Schist	1068.45	0.08	0.00319	0.0388	0.0000	29.7540			0.270900	30.0249	30.0249	308.1199	15.4060
Budhwara	NC	A/Schist	2101.43	0.08	0.00162	0.0197	0.0000	29.2815				29.2815	29.2815	398.5104	19.9255
Chawandiya	NC	A/Schist	429.25	0.08	0.00793	0.0966	0.0000	8.9235			0.016800	8.9403	8.9403	82.7306	4.1365
Dantra	NC	A/Schist	1210.37	0.08	0.00281	0.0342	0.0000	27.8775			2.100000	29.9775	29.9775	111.5242	5.5762
Deo Nagar	NC	A/Schist	598.99	0.08	0.00569	0.0692	0.0000	38.9745			0.047250	39.0218	39.0218	70.7847	3.5392
Dodiyana	NC	A/Schist	915.30	0.08	0.00372	0.0453	0.0000	4.6305			1.890000	6.5205	6.5205	206.3568	10.3178
Doomara	NC	A/Schist	241.32	0.08	0.01411	0.1718	0.0000	10.7190				10.7190	10.7190	85.7799	4.2890
Doongariya Khurd	NC	A/Schist	432.04	0.08	0.00788	0.0959	0.0000	5.2380			0.016800	5.2548	5.2548	56.5700	2.8285
Fatehpura	NC	A/Schist	189.54	0.08	0.01797	0.2187	0.0000	3.7260			0.008400	3.7344	3.7344	31.4699	1.5735
Ganahera	NC	A/Schist	594.65	0.08	0.00573	0.0697	0.0000	39.6090			4.410000	44.0190	44.0190	259.3224	12.9661
Govindgarh	NC	A/Schist	638.46	0.08	0.00533	0.0649	0.0000	9.6930			2.331000	12.0240	12.0240	109.6295	5.4815
Gudha	NC	A/Schist	289.52	0.08	0.01176	0.1432	0.0000	3.6180				3.6180	3.6180	74.1908	3.7095
Hanwantpura	NC	A/Schist	141.27	0.08	0.02411	0.2934	0.0000	2.2950			0.016800	2.3118	2.3118	24.5039	1.2252
Jaswantpura	NC	A/Schist	1570.70	0.08	0.00217	0.0264	0.0000	12.4200			0.016800	12.4368	12.4368	165.5146	8.2757
Kadel	NC	A/Schist	110.56	0.08	0.03081	0.3749	0.0000	3.7935			11.356800	15.1503	15.1503	26.6884	1.3344
Kalesara	NC	A/Schist	1982.93	0.08	0.00172	0.0209	0.0000	7.1145			2.108400	9.2229	9.2229	149.2314	7.4616
Kawalai	NC	A/Schist	234.33	0.08	0.01454	0.1769	0.0000	5.1840				5.1840	5.1840	64.4016	3.2201
Khori	NC	A/Schist	319.39	0.08	0.01066	0.1298	0.0000	10.4760			2.310000	12.7860	12.7860	232.4573	11.6229
Kishanpura Goyla	NC	A/Schist	1190.98	0.08	0.00286	0.0348	0.0000	19.6425			1.701840	21.3443	21.3443	243.2023	12.1601
Leswa	NC	A/Schist	1336.20	0.08	0.00255	0.0310	0.0000	4.9950			0.016800	5.0118	5.0118	59.1732	2.9587
Lyali Khera	NC	A/Schist	467.14	0.08	0.00729	0.0887	0.0000	0.9855				0.9855	0.9855	30.1630	1.5082
Majhewla	NC	A/Schist	320.64	0.08	0.01062	0.1293	0.0000	8.4915			0.262500	8.7540	8.7540	39.5889	1.9794
Miyapur	NC	A/Schist	202.00	0.08	0.01686	0.2052	0.0000	3.4020				3.4020	3.4020	13.1210	0.6561
Motisar	NC	A/Schist	283.00	0.08	0.01204	0.1465	0.0000	20.7765				20.7765	20.7765	94.4835	4.7242
Nad	NC	A/Schist	921.29	0.08	0.00370	0.0450	0.0000	4.2255				4.2255	4.2255	34.4622	1.7231
Nand	NC	A/Schist	1392.75	0.08	0.00245	0.0298	0.0000	18.1980			0.114240	18.3122	18.3122	269.9477	13.4974
Nathuthala	NC	A/Schist	437.93	0.08	0.00778	0.0947	0.0000	15.6195			2.310000	17.9295	17.9295	310.4807	15.5240
Nooriyawas	NC	A/Schist	608.07	0.08	0.00560	0.0682	0.0000	15.0930			2.310000	17.4030	17.4030	278.7993	13.9400
Peesangan	NC	A/Schist	2025.33	0.08	0.00168	0.0205	0.0000	36.8415			2.231250	39.0728	39.0728	497.0192	24.8510
Picholiya	NC	A/Schist	1679.80	0.08	0.00203	0.0247	0.0000	22.9635			2.142000	25.1055	25.1055	65.0887	3.2544
Pushkar (M)	NC	A/Schist	215.65	0.08	0.01579	0.1922	0.0000	9.0315			33.075000	42.1065	42.1065	91.1469	4.5573
Pushkar (R)	NC	A/Schist	218.89	0.08	0.01556	0.1894	0.0000	2.6055				2.6055	2.6055	33.8606	1.6930
Rampura Dabla	NC	A/Schist	1067.32	0.08	0.00319	0.0388	0.0000	12.0420			3.898650	15.9407	15.9407	295.3811	14.7691
Rampura Nand	NC	A/Schist	351.82	0.08	0.00968	0.1178	0.0000	3.8205				3.8205	3.8205	44.3339	2.2167
Rewat	NC	A/Schist	214.15	0.08	0.01590	0.1936	0.0000	1.9710				1.9710	1.9710	17.7939	0.8897
Saradhana	NC	A/Schist	1549.78	0.08	0.00220	0.0267	0.0000	13.9050			3.990000	17.8950	17.8950	222.2715	11.1136
Sarsari	NC	A/Schist	341.04	0.08	0.00999	0.1216	0.0000	2.2410			1.680000	3.9210	3.9210	16.3475	0.8174
Sawaipura	NC	A/Schist	61.58	0.08	0.05531	0.6732	0.0000	16.3755				16.3755	16.3755	43.6513	2.1826
Sethan	NC	A/Schist	830.44	0.08	0.00410	0.0499	0.0000	5.5080			0.008400	5.5164	5.5164	111.2032	5.5602
Surajkund,	NC	A/Schist	650.00	0.08	0.00524	0.0638	0.0000	36.0180				36.0180	36.0180	190.2470	9.5124
Tilora	NC	A/Schist	452.24	0.08	0.00753	0.0917	0.0000	6.6015			6.279000	12.8805	12.8805	49.6332	2.4817

VILLAGE WISE GROUND WATER RECHARGE, EXTRACTION & STAGE OF GROUND WATER EXTRACTION

Name of village	Area of Cluster (Sq.Ha.)	Type of area	Water Bearing Formation	Potential Zone Area (Sq.Km.)	Net Annual Ground Water Availability (HaM)	Existing Gross Ground Water Draft for Irrigation (HaM))	Existing Gross Ground Water Draft for Dom.& Industrial Use (HaM)	Existing Gross Ground Water Draft for All Uses (HaM)	Allocation for Dom.& Industrial Requirement As Projected for the Year 2025 (HaM)	Net Ground Water Availability for future Irrigation Extraction (HaM)	Stage of Ground Water Extractopm (%)	Whether Significant Decline in Pre-Monsoon Water Level (Yes/No)	Whether Significant Decline in Post-Monsoon Water Level (Yes/No)	Category	Annual Potential Recharge (HaM)
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Amba Maseena	570.96	NC	A/Schist	570.96	88.3786	66.7200	13.1400	79.8600	23.6520	-1.9934	90.36	YES	YES	CRITICAL	
Banseli	410.96	NC	A/Schist	410.96	101.1416	186.0000	18.2500	204.2500	32.8500	-117.7084	201.94	YES	YES	OVER EXPLO.	
Bhagwanpura	956.2	NC	A/Schist	956.20	119.1187	232.9200	29.9300	262.8500	53.8740	-167.6753	220.66	YES	YES	OVER EXPLO.	
Bhanwta	1068.45	NC	A/Schist	1068.45	292.7139	264.4800	86.1400	350.6200	155.0520	-126.8181	119.78	YES	YES	OVER EXPLO.	
Budhwara	2101.43	NC	A/Schist	2101.43	378.5849	260.2800	42.3400	302.6200	76.2120	42.0929	79.93	YES	YES	SEMICRITICAL	
Chawandiya	429.25	NC	A/Schist	429.25	78.5941	79.3200	26.2800	105.6000	47.3040	-48.0299	134.36	YES	YES	OVER EXPLO.	
Dantra	1210.37	NC	A/Schist	1210.37	105.9480	247.8000	32.8500	280.6500	59.1300	-200.9820	264.89	YES	YES	OVER EXPLO.	
Deo Nagar	598.99	NC	A/Schist	598.99	67.2455	346.4400	10.2200	356.6600	18.3960	-297.5905	530.38	YES	YES	OVER EXPLO.	
Dodiyana	915.3	NC	A/Schist	915.30	196.0390	41.1600	6.5700	47.7300	11.8260	143.0530	24.35	YES	YES	SAFE	
Doomara	241.32	NC	A/Schist	241.32	81.4909	95.2800	21.1700	116.4500	38.1060	-51.8951	142.90	YES	YES	OVER EXPLO.	
Doongariya Khurd	432.04	NC	A/Schist	432.04	53.7415	46.5600	13.1400	59.7000	23.6520	-16.4705	111.09	YES	YES	OVER EXPLO.	
Fatehpura	189.54	NC	A/Schist	189.54	29.8964	33.1200	5.1100	38.2300	9.1980	-12.4216	127.87	YES	YES	OVER EXPLO.	
Ganahera	594.65	NC	A/Schist	594.65	246.3563	352.0800	36.5000	388.5800	65.7000	-171.4237	157.73	YES	YES	OVER EXPLO.	
Govindgarh	638.46	NC	A/Schist	638.46	104.1480	86.1600	18.2500	104.4100	32.8500	-14.8620	100.25	YES	YES	OVER EXPLO.	
Gudha	289.52	NC	A/Schist	289.52	70.4813	32.1600	12.4100	44.5700	22.3380	15.9833	63.24	YES	YES	SAFE	
Hanwantpura	141.27	NC	A/Schist	141.27	23.2787	20.4000	7.3000	27.7000	13.1400	-10.2613	118.99	YES	YES	OVER EXPLO.	
Jaswantpura	1570.7	NC	A/Schist	1570.70	157.2389	110.4000	25.5500	135.9500	45.9900	0.8489	86.46	YES	YES	SEMICRITICAL	
Kadel	110.56	NC	A/Schist	110.56	25.3540	33.7200	16.0600	49.7800	28.9080	-37.2740	196.34	YES	YES	OVER EXPLO.	
Kalesara	1982.93	NC	A/Schist	1982.93	141.7698	63.2400	30.6600	93.9000	55.1880	23.3418	66.23	YES	YES	SAFE	
Kawalai	234.33	NC	A/Schist	234.33	61.1815	46.0800	5.1100	51.1900	9.1980	5.9035	83.67	YES	YES	SEMICRITICAL	
Khori	319.39	NC	A/Schist	319.39	220.8344	93.1200	12.4100	105.5300	22.3380	105.3764	47.79	YES	YES	SAFE	
Kishanpura Goyla	1190.98	NC	A/Schist	1190.98	231.0422	174.6000	16.0600	190.6600	28.9080	27.5342	82.52	YES	YES	SEMICRITICAL	
Leswa	1336.2	NC	A/Schist	1336.20	56.2145	44.4000	16.0600	60.4600	28.9080	-17.0935	107.55	YES	YES	OVER EXPLO.	
Lyali Khera	467.14	NC	A/Schist	467.14	28.6548	8.7600	4.3800	13.1400	7.8840	12.0108	45.86	YES	YES	SAFE	
Majhewla	320.64	NC	A/Schist	320.64	37.6095	75.4800	12.4100	87.8900	22.3380	-60.2085	233.69	YES	YES	OVER EXPLO.	
Miyapur	202	NC	A/Schist	202.00	12.4649	30.2400	5.8400	36.0800	10.5120	-28.2871	289.45	YES	YES	OVER EXPLO.	
Motisar	283	NC	A/Schist	283.00	89.7593	184.6800	5.1100	189.7900	9.1980	-104.1187	211.44	YES	YES	OVER EXPLO.	
Nad	921.29	NC	A/Schist	921.29	32.7391	37.5600	13.8700	51.4300	24.9660	-29.7869	157.09	YES	YES	OVER EXPLO.	
Nand	1392.75	NC	A/Schist	1392.75	256.4503	161.7600	12.4100	174.1700	22.3380	72.3523	67.92	YES	YES	SAFE	
Nathuthala	437.93	NC	A/Schist	437.93	294.9567	138.8400	21.1700	160.0100	38.1060	118.0107	54.25	YES	YES	SAFE	
Nooriyawas	608.07	NC	A/Schist	608.07	264.8593	134.1600	21.9000	156.0600	39.4200	91.2793	58.92	YES	YES	SAFE	
Peesangan	2025.33	NC	A/Schist	2025.33	472.1682	327.4800	46.7200	374.2000	84.0960	60.5922	79.25	YES	YES	SEMICRITICAL	
Picholiya	1679.8	NC	A/Schist	1679.80	61.8343	204.1200	38.6900	242.8100	69.6420	-211.9277	392.68	YES	YES	OVER EXPLO.	
Pushkar (M)	215.65	NC	A/Schist	215.65	86.5896	80.2800	8.7600	89.0400	15.7680	-9.4584	102.83	YES	YES	OVER EXPLO.	
Pushkar (R)	218.89	NC	A/Schist	218.89	32.1676	23.1600	8.0300	31.1900	14.4540	-5.4464	96.96	YES	YES	CRITICAL	
Rampura Dabla	1067.32	NC	A/Schist	1067.32	280.6120	107.0400	8.0300	115.0700	14.4540	159.1180	41.01	YES	YES	SAFE	
Rampura Nand	351.82	NC	A/Schist	351.82	42.1172	33.9600	6.5700	40.5300	11.8260	-3.6688	96.23	YES	YES	CRITICAL	
Rewat	214.15	NC	A/Schist	214.15	16.9042	17.5200	8.7600	26.2800	15.7680	-16.3838	155.46	YES	YES	OVER EXPLO.	
Saradhana	1549.78	NC	A/Schist	1549.78	211.1579	123.6000	12.4100	136.0100	22.3380	65.2199	64.41	YES	YES	SAFE	
Sarsari	341.04	NC	A/Schist	341.04	15.5301	19.9200	2.9200	22.8400	5.2560	-9.6459	147.07	YES	YES	OVER EXPLO.	
Sawaipura	61.58	NC	A/Schist	61.58	41.4687	145.5600	12.4100	157.9700	22.3380	-126.4293	380.94	YES	YES	OVER EXPLO.	
Sethan	830.44	NC	A/Schist	830.44	105.6430	48.9600	11.6800	60.6400	21.0240	35.6590	57.40	YES	YES	SAFE	
Surajkund,	650	NC	A/Schist	650.00	180.7346	320.1600	12.4100	332.5700	22.3380	-161.7634	184.01	YES	YES	OVER EXPLO.	
Tilora	452.24	NC	A/Schist	452.24	47.1515	58.6800	16.7900	75.4700	30.2220	-41.7505	160.06	YES	YES	OVER EXPLO.	
				31824.66	5542.37	5238.36	792.78	6031.14	1427.00	-1123.00	141.73			OVER EXPLO.	

VILLAGE WISE GROUND WATER DRAFT BY IRRIGATION AND DOMESTIC WELLS OF PEESANGAN GW CLUSTER OF AJMER DISTRICT

S. No.	Name of Village	Hydrogeological Formation	No. of Wells in use for irri	Irrigation Draft					Domestic Draft					Grand Total
				No of Wells	Operational Days	Average Yield (lpd)	Draft (HaM)	Total Draft (HaM)	No of Wells	No. of Operational Days	Average Discharge of Wells (lpd)	Draft (HaM)	Total Draft (HaM)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Ambamassena	ALLUVIUM	Tube well	4	120	150000	7.2000	66.7200	1	365	100000	3.6500	13.1400	79.8600
			Dug cum Bore Well	1	120	150000	1.8000		1	365	100000	3.6500		
			Dug well	37	120	130000	57.7200		4	365	40000	5.8400		
2	Banseli	ALLUVIUM	Tube well	88	120	150000	158.4000	186.0000	1	365	100000	3.6500	18.2500	204.2500
			Dug cum Bore Well	11	120	150000	19.8000		0	365	100000	0.0000		
			Dug well	5	120	130000	7.8000		10	365	40000	14.6000		
3	Bhagwanpura	ALLUVIUM	Tube well	93	120	150000	167.4000	232.9200	2	365	100000	7.3000	29.9300	262.8500
			Dug cum Bore Well	26	120	150000	46.8000		1	365	100000	3.6500		
			Dug well	12	120	130000	18.7200		13	365	40000	18.9800		
4	Bhanwta	ALLUVIUM	Tube well	8	120	150000	14.4000	264.4800	1	365	100000	3.6500	86.1400	350.6200
			Dug cum Bore Well	2	120	150000	3.6000		1	365	100000	3.6500		
			Dug well	158	120	130000	246.4800		54	365	40000	78.8400		
5	Budhwara	ALLUVIUM	Tube well	59	120	150000	106.2000	260.2800	5	365	100000	18.2500	42.3400	302.6200
			Dug cum Bore Well	31	120	150000	55.8000		1	365	100000	3.6500		
			Dug well	63	120	130000	98.2800		14	365	40000	20.4400		
6	Chawandiya	ALLUVIUM	Tube well	32	120	150000	57.6000	79.3200	1	365	100000	3.6500	26.2800	105.6000
			Dug cum Bore Well	6	120	150000	10.8000		1	365	100000	3.6500		
			Dug well	7	120	130000	10.9200		13	365	40000	18.9800		
7	Dantra	ALLUVIUM	Tube well	29	120	150000	52.2000	247.8000	2	365	100000	7.3000	32.8500	280.6500
			Dug cum Bore Well	9	120	150000	16.2000		1	365	100000	3.6500		
			Dug well	115	120	130000	179.4000		15	365	40000	21.9000		
8	Deo Nagar	ALLUVIUM	Tube well	137	120	150000	246.6000	346.4400	2	365	100000	7.3000	10.2200	356.6600
			Dug cum Bore Well	52	120	150000	93.6000		0	365	100000	0.0000		
			Dug well	4	120	130000	6.2400		2	365	40000	2.9200		
9	Dodiyaana	ALLUVIUM	Tube well	6	120	150000	10.8000	41.1600	1	365	100000	3.6500	6.5700	47.7300
			Dug cum Bore Well	3	120	150000	5.4000		0	365	100000	0.0000		
			Dug well	16	120	130000	24.9600		2	365	40000	2.9200		
10	Doomara	ALLUVIUM	Tube well	7	120	150000	12.6000	95.2800	1	365	100000	3.6500	21.1700	116.4500
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	53	120	130000	82.6800		12	365	40000	17.5200		
11	Doongariya Khurd	ALLUVIUM	Tube well	23	120	150000	41.4000	46.5600	1	365	100000	3.6500	13.1400	59.7000
			Dug cum Bore Well	2	120	150000	3.6000		1	365	100000	3.6500		
			Dug well	1	120	130000	1.5600		4	365	40000	5.8400		
12	Fatehpura	ALLUVIUM	Tube well	7	120	150000	12.6000	33.1200	1	365	100000	3.6500	5.1100	38.2300
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	12	120	130000	18.7200		1	365	40000	1.4600		
13	Ganahera	ALLUVIUM	Tube well	167	120	150000	300.6000	352.0800	8	365	100000	29.2000	36.5000	388.5800
			Dug cum Bore Well	26	120	150000	46.8000		0	365	100000	0.0000		
			Dug well	3	120	130000	4.6800		5	365	40000	7.3000		
14	Govindgarh	ALLUVIUM	Tube well	23	120	150000	41.4000	86.1600	1	365	100000	3.6500	18.2500	104.4100
			Dug cum Bore Well	11	120	150000	19.8000		0	365	100000	0.0000		
			Dug well	16	120	130000	24.9600		10	365	40000	14.6000		

S. No.	Name of Village	Hydrogeological Formation	No. of Wells in use for irri	Irrigation Draft					Domestic Draft					Grand Total
				No of Wells	Operational Days	Average Yield (lpd)	Draft (HaM)	Total Draft (HaM)	No of Wells	No. of Operational Days	Average Discharge of Wells (lpd)	Draft (HaM)	Total Draft (HaM)	
15	Gudha	ALLUVIUM	Tube well	17	120	150000	30.6000	32.1600	3	365	100000	10.9500	12.4100	44.5700
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		1	365	40000	1.4600		
16	Hanwantpura	ALLUVIUM	Tube well	7	120	150000	12.6000	20.4000	0	365	100000	0.0000	7.3000	27.7000
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	5	120	130000	7.8000		5	365	40000	7.3000		
17	Jaswantpura	ALLUVIUM	Tube well	32	120	150000	57.6000	110.4000	0	365	100000	0.0000	25.5500	135.9500
			Dug cum Bore Well	25	120	150000	45.0000		3	365	100000	10.9500		
			Dug well	5	120	130000	7.8000		10	365	40000	14.6000		
24	Kadel	ALLUVIUM	Tube well	16	120	150000	28.8000	33.7200	4	365	100000	14.6000	16.0600	49.7800
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	2	120	130000	3.1200		1	365	40000	1.4600		
18	Kalesara	ALLUVIUM	Tube well	19	120	150000	34.2000	63.2400	2	365	100000	7.3000	30.6600	93.9000
			Dug cum Bore Well	4	120	150000	7.2000		0	365	100000	0.0000		
			Dug well	14	120	130000	21.8400		16	365	40000	23.3600		
19	Kawai	ALLUVIUM	Tube well	23	120	150000	41.4000	46.0800	1	365	100000	3.6500	5.1100	51.1900
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	3	120	130000	4.6800		1	365	40000	1.4600		
20	Khorl	ALLUVIUM	Tube well	39	120	150000	70.2000	93.1200	3	365	100000	10.9500	12.4100	105.5300
			Dug cum Bore Well	11	120	150000	19.8000		0	365	100000	0.0000		
			Dug well	2	120	130000	3.1200		1	365	40000	1.4600		
21	Kishanpura Goyla	ALLUVIUM	Tube well	87	120	150000	156.6000	174.6000	4	365	100000	14.6000	16.0600	190.6600
			Dug cum Bore Well	10	120	150000	18.0000		0	365	100000	0.0000		
			Dug well	0	120	130000	0.0000		1	365	40000	1.4600		
22	Leswa	ALLUVIUM	Tube well	11	120	150000	19.8000	44.4000	2	365	100000	7.3000	16.0600	60.4600
			Dug cum Bore Well	5	120	150000	9.0000		0	365	100000	0.0000		
			Dug well	10	120	130000	15.6000		6	365	40000	8.7600		
23	Laylikhera	ALLUVIUM	Tube well	4	120	150000	7.2000	8.7600		365	100000	0.0000	4.3800	13.1400
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		3	365	40000	4.3800		
25	Majhewla	ALLUVIUM	Tube well	31	120	150000	55.8000	75.4800	1	365	100000	3.6500	12.4100	87.8900
			Dug cum Bore Well	4	120	150000	7.2000		0	365	100000	0.0000		
			Dug well	8	120	130000	12.4800		6	365	40000	8.7600		
26	Miyapur	ALLUVIUM	Tube well	9	120	150000	16.2000	30.2400	0	365	100000	0.0000	5.8400	36.0800
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	9	120	130000	14.0400		4	365	40000	5.8400		
27	Motisar	ALLUVIUM	Tube well	87	120	150000	156.6000	184.6800	1	365	100000	3.6500	5.1100	189.7900
			Dug cum Bore Well	13	120	150000	23.4000		0	365	100000	0.0000		
			Dug well	3	120	130000	4.6800		1	365	40000	1.4600		
28	Nad	ALLUVIUM	Tube well	6	120	150000	10.8000	37.5600	1	365	100000	3.6500	13.8700	51.4300
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	16	120	130000	24.9600		7	365	40000	10.2200		
29	Nand	ALLUVIUM	Tube well	89	120	150000	160.2000	161.7600	3	365	100000	10.9500	12.4100	174.1700
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		1	365	40000	1.4600		
30	Nathuthala	ALLUVIUM	Tube well	11	120	150000	19.8000	138.8400	1	365	100000	3.6500	21.1700	160.0100
			Dug cum Bore Well	2	120	150000	3.6000		0	365	100000	0.0000		
			Dug well	74	120	130000	115.4400		12	365	40000	17.5200		
31	Nooriyawas	ALLUVIUM	Tube well	8	120	150000	14.4000	134.1600	1	365	100000	3.6500	21.9000	156.0600
			Dug cum Bore Well	5	120	150000	9.0000		1	365	100000	3.6500		

S. No.	Name of Village	Hydrogeological Formation	No. of Wells in use for irri	Irrigation Draft					Domestic Draft					Grand Total
				No of Wells	Operational Days	Average Yield (lpd)	Draft (HaM)	Total Draft (HaM)	No of Wells	No. of Operational Days	Average Discharge of Wells (lpd)	Draft (HaM)	Total Draft (HaM)	
			Dug well	71	120	130000	110.7600		10	365	40000	14.6000		
32	Picholiya	ALLUVIUM	Tube well	153	120	150000	275.4000	327.4800	12	365	100000	43.8000	46.7200	374.2000
			Dug cum Bore Well	22	120	150000	39.6000		0	365	100000	0.0000		
			Dug well	8	120	130000	12.4800		2	365	40000	2.9200		
33	Pisangan	ALLUVIUM	Tube well	71	120	150000	127.8000	204.1200	2	365	100000	7.3000	38.6900	242.8100
			Dug cum Bore Well	6	120	150000	10.8000		1	365	100000	3.6500		
			Dug well	42	120	130000	65.5200		19	365	40000	27.7400		
34	Pushkar (M)	ALLUVIUM	Tube well	39	120	150000	70.2000	80.2800	2	365	100000	7.3000	8.7600	89.0400
			Dug cum Bore Well	3	120	150000	5.4000		0	365	100000	0.0000		
			Dug well	3	120	130000	4.6800		1	365	40000	1.4600		
35	Pushkar (R)	ALLUVIUM	Tube well	11	120	150000	19.8000	23.1600	1	365	100000	3.6500	8.0300	31.1900
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		3	365	40000	4.3800		
36	Rampura Dabla	ALLUVIUM	Tube well	21	120	150000	37.8000	107.0400	1	365	100000	3.6500	8.0300	115.0700
			Dug cum Bore Well	9	120	150000	16.2000		0	365	100000	0.0000		
			Dug well	34	120	130000	53.0400		3	365	40000	4.3800		
37	Rampura Nand	ALLUVIUM	Tube well	17	120	150000	30.6000	33.9600	1	365	100000	3.6500	6.5700	40.5300
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		2	365	40000	2.9200		
38	Rewat	ALLUVIUM	Tube well	7	120	150000	12.6000	17.5200	1	365	100000	3.6500	8.7600	26.2800
			Dug cum Bore Well	1	120	150000	1.8000		1	365	100000	3.6500		
			Dug well	2	120	130000	3.1200		1	365	40000	1.4600		
39	Saradhana	ALLUVIUM	Tube well	17	120	150000	30.6000	123.6000	1	365	100000	3.6500	12.4100	136.0100
			Dug cum Bore Well	4	120	150000	7.2000		0	365	100000	0.0000		
			Dug well	55	120	130000	85.8000		6	365	40000	8.7600		
40	Sarasari	ALLUVIUM	Tube well	5	120	150000	9.0000	19.9200	0	365	100000	0.0000	2.9200	22.8400
			Dug cum Bore Well	0	120	150000	0.0000		0	365	100000	0.0000		
			Dug well	7	120	130000	10.9200		2	365	40000	2.9200		
41	Sawaipura	ALLUVIUM	Tube well	39	120	150000	70.2000	145.5600	3	365	100000	10.9500	12.4100	157.9700
			Dug cum Bore Well	41	120	150000	73.8000		0	365	100000	0.0000		
			Dug well	1	120	130000	1.5600		1	365	40000	1.4600		
42	Sethan	ALLUVIUM	Tube well	9	120	150000	16.2000	48.9600	1	365	100000	3.6500	11.6800	60.6400
			Dug cum Bore Well	0	120	150000	0.0000		1	365	100000	3.6500		
			Dug well	21	120	130000	32.7600		3	365	40000	4.3800		
43	Surajkund	ALLUVIUM	Tube well	132	120	150000	237.6000	320.1600	3	365	100000	10.9500	12.4100	332.5700
			Dug cum Bore Well	32	120	150000	57.6000		0	365	100000	0.0000		
			Dug well	16	120	130000	24.9600		1	365	40000	1.4600		
44	Tilora	ALLUVIUM	Tube well	29	120	150000	52.2000	58.6800	3	365	100000	10.9500	16.7900	75.4700
			Dug cum Bore Well	1	120	150000	1.8000		0	365	100000	0.0000		
			Dug well	3	120	130000	4.6800		4	365	40000	5.8400		
				3033				5238.3600	393			792.7800	792.7800	6031.1400

Source: Data is taken from Tehsil (Ajmer, Pisangan & Pushkar) and from the Detailed Hydrogeological Investigation Survey conducted by CA Arpan Seva Sansthan in March-2017.

NORMAL MONSOON & NORMAL NONMONSOON RAINFALL DATA FROM 2014 TO 2018
PEESANGAN GROUND WATER CLUSTER

Cluster	2014				2015				2016			
Peesangan G.W. Cluster	Normal Monsoon Rainfall (mm)	Normal Non Monsoon Rainfall (mm)	Monsoon Rainfall (mm)	Non-Monsoon Rainfall (mm)	Normal Monsoon Rainfall (mm)	Normal Non Monsoon Rainfall (mm)	Monsoon Rainfall (mm)	Non-Monsoon Rainfall (mm)	Normal Monsoon Rainfall (mm)	Normal Non Monsoon Rainfall (mm)	Monsoon Rainfall (mm)	Non-Monsoon Rainfall (mm)
	387.95	33.15	634.00	42.00	387.62	33.59	350.50	84.00	389.52	33.82	607.50	60.00

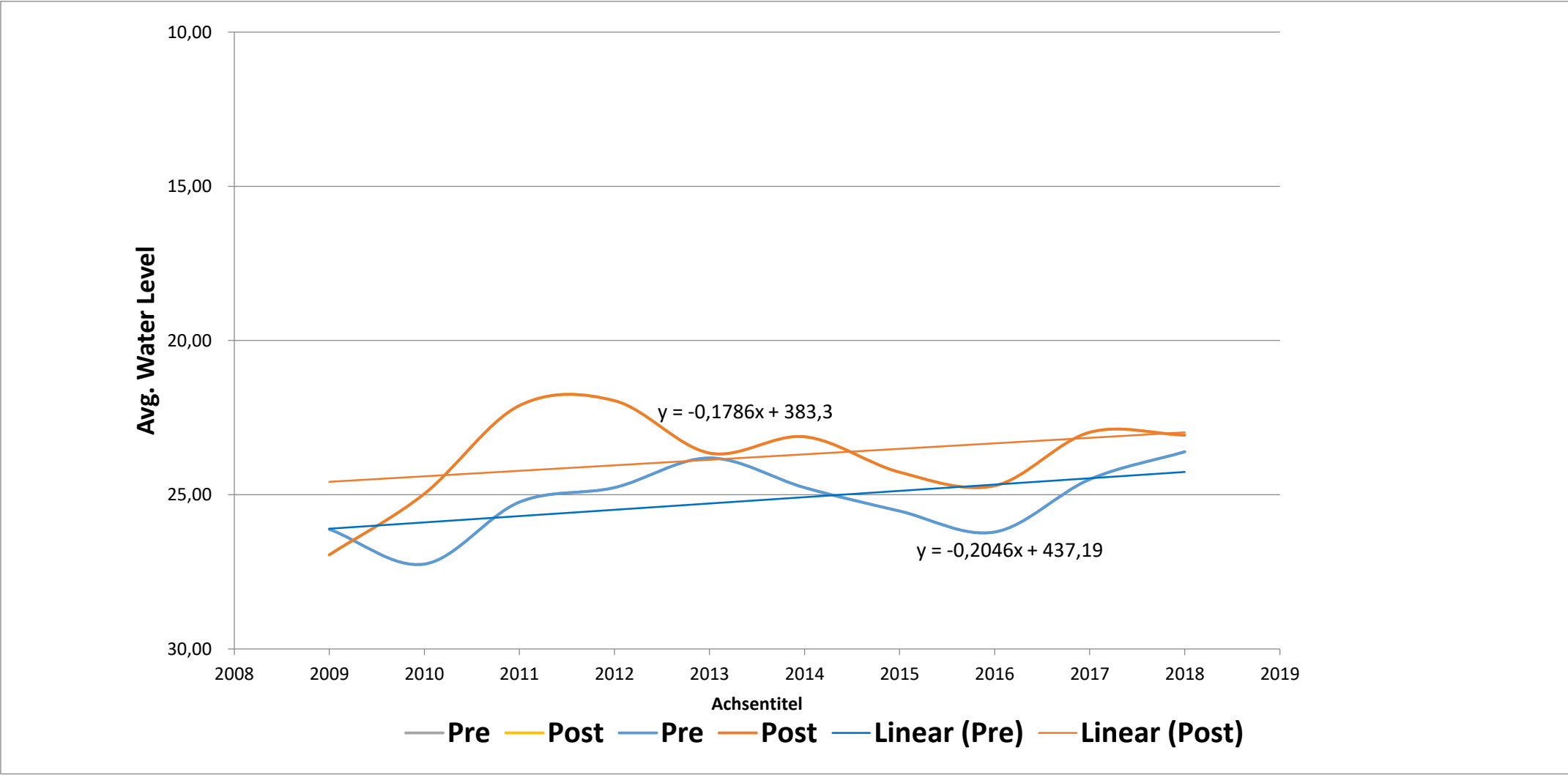
Cluster	2017				2018			
Peesangan G.W. Cluster	Normal Monsoon Rainfall (mm)	Normal Non Monsoon Rainfall (mm)	Monsoon Rainfall (mm)	Non-Monsoon Rainfall (mm)	Normal Monsoon Rainfall (mm)	Normal Non Monsoon Rainfall (mm)	Monsoon Rainfall (mm)	Non-Monsoon Rainfall (mm)
	390.12	34.35	460.00	96.00	391.14	34.06	510.10	0.00

**MONTHLY RAINFALL (mm) FOR MONSOON AND NON-MONSOON CYCLE FROM 2009 TO 2018 OF PEESANGAN
G.W. Cluster**

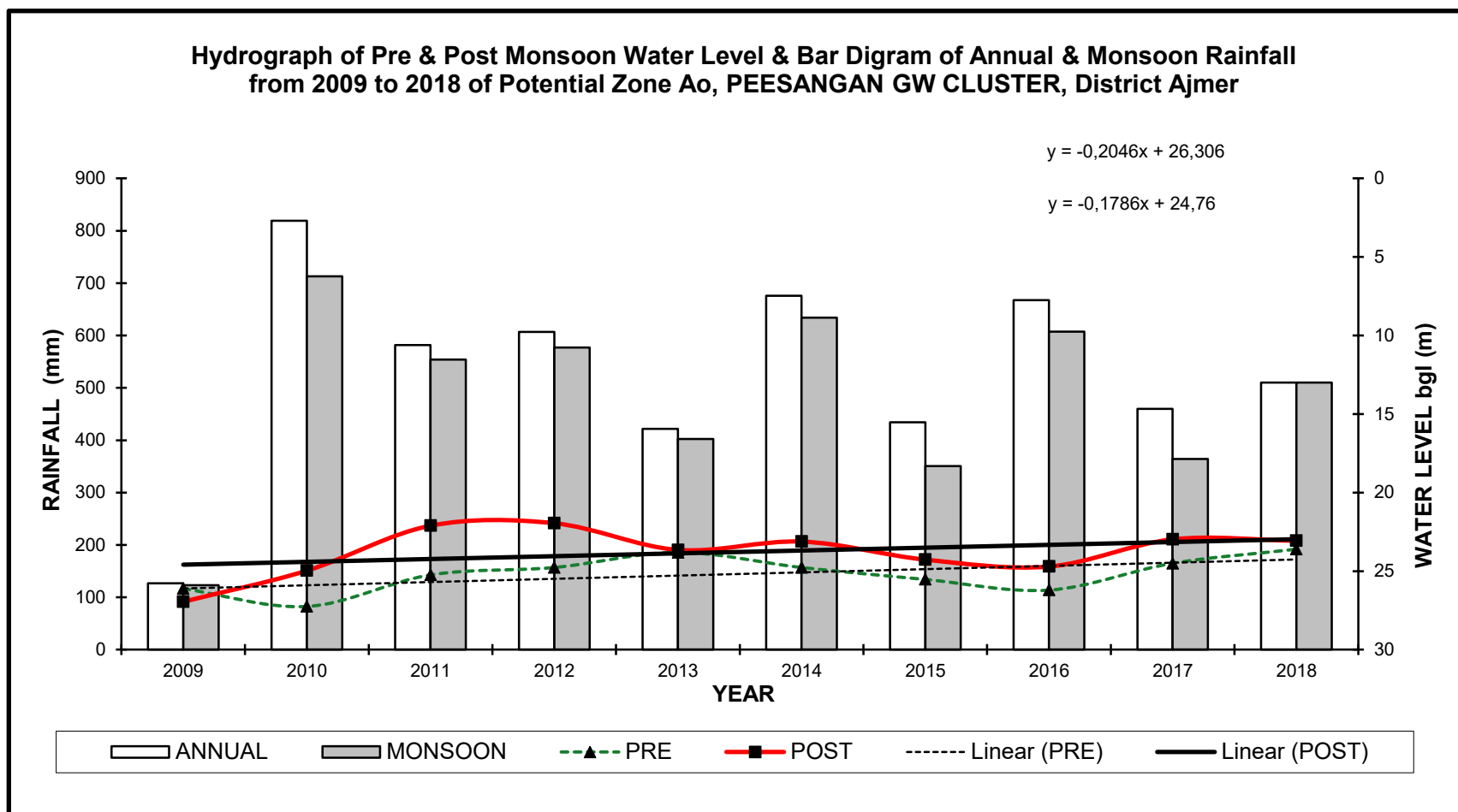
Months / Years	MONSOON PERIOD					NON-MONSOON PERIOD										TOTAL	
	June	July	August	Sept.	Total	Oct.	Nov.	Dec.	Jan	Feb.	March	April	May	Total	Annual		
1996	124.00	144.00	339.00	73.00	680.00	-	-	-	-	-	-	-	-	-	680.00		
1997	149.00	104.00	231.00	63.00	547.00	40.00	13.00	-	-	-	-	43.00	40.00	136.00	683.00		
1998	33.00	153.00	89.00	156.00	431.00	28.00	-	-	-	-	7.00	-	-	35.00	466.00		
1999	46.00	101.00	84.00	41.00	272.00	5.00	-	-	-	8.00	-	-	-	13.00	285.00		
2000	-	264.00	31.00	91.00	386.00	-	-	-	-	-	-	-	17.00	17.00	403.00		
2001	71.00	421.00	177.00	-	669.00	-	-	-	-	-	-	-	-	-	669.00		
2002	13.00	-	41.00	49.00	103.00	-	-	-	-	30.00	-	-	9.00	39.00	142.00		
2003	56.00	182.00	102.00	33.00	373.00	-	-	-	-	20.00	-	-	-	20.00	393.00		
2004	-	92.00	159.00	17.00	268.00	26.00	-	-	-	-	-	-	12.00	38.00	306.00		
2005	14.00	172.00	55.00	240.00	481.00	-	-	-	-	-	11.00	15.00	-	26.00	507.00		
2006	57.00	76.00	126.00	39.00	298.00	-	-	-	-	-	-	-	2.50	2.50	300.50		
2007	54.00	196.00	92.00	35.00	377.00	-	-	-	-	-	16.00	-	-	16.00	393.00		
2008	48.00	114.00	140.00	6.00	308.00	1.00	-	-	-	-	-	26.00	26.00	53.00	361.00		
2009	10	76	29	8	123.00	-	-	-	-	-	2	-	2	4.00	127.00		
2010	1	85	349	278	713.00	-	85	9	-	2	-	10	-	106.00	819.00		
2011	66	86	193	209	554.00	-	-	-	-	28	-	-	-	28.00	582.00		
2012	-	126	391.5	59.5	577.00	-	-	-	-	-	-	-	30	30.00	607.00		
2013	6	81.5	116	199	402.50	-	-	-	4	15	-	-	-	19.00	421.50		
2014	3	92	429	110	634.00	-	-	-	3	3	6	13	17	42.00	676.00		
2015	114	186.5	42	8	350.50	-	-	-	15	5	42	22	-	84.00	434.50		
2016	63	99	420.5	25	607.50	58	-	-	-	-	2	-	-	60.00	667.50		
2017	75	169	120	-	364.00	-	-	-	7	-	10	-	79	96.00	460.00		
2018	80	204.1	50	176	510.10	-	-	-	-	-	-	-	-	-	510.10		
Average(2009-2018)	46.44	120.51	214.00	119.17	483.56	58.00	85.00	9.00	7.25	10.60	12.40	15.00	32.00	52.11	535.67		
Normal (1901-2018)					391.14											34.06	425.20

PRE & POST MONSOON TREND OF WATER LEVELS IN PEESANGAN GROUND WATER CLUSTER

Peesangan Ground Water Cluster	PREMONSOON												POSTMONSOON											
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(SUM)		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(SUM)
	X1	1	2	3	4	5	6	7	8	9	10	55	X2	1	2	3	4	5	6	7	8	9	10	55
	Y1	26.12	27.25	25.24	24.77	23.81	24.77	25.53	26.21	24.50	23.61	251.81	Y2	26.95	24.97	22.11	21.95	23.65	23.12	24.27	24.71	22.98	23.07	237.77
	X1*X1	1	4	9	16	25	36	49	64	81	100	385	X2*X2	1	4	9	16	25	36	49	64	81	100	385
	X1*Y1	26.12	54.50	75.72	99.08	119.05	148.62	178.71	209.68	220.52	236.06	1368.07	X2*Y2	26.95	49.94	66.33	87.80	118.25	138.72	169.89	197.68	206.80	230.67	1293.03
	a=	-0.20	NO										a=	-0.18	YES									



HYDROGRAPH OF PRE & POST MONSOON WATER LEVEL & BAR DIAGRAM OF ANNUAL & MONSOON RAINFALL FROM 2009 TO 2018 OF PEESANGAN GW CLUSTER, DISTRICT AJMER



WATER LEVEL DATA (m) OF PEESANGAN GROUND CLUSTER FROM THE YEAR 2014 TO 2017 (RACP WELLS)

S.No.	Village	Owner's Name	Co-ordinates		TotalDepth (m) b.g.l.	2014			2015			2016			2017		
			Longitude	Latitude		PRE	POST	FLU	PRE	POST	FLU	PRE	POST	FLU	PRE	POST	FLU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Bhagwanpura	G.W.D.	26°26'56.52"	74°27'55.2"	50.00	28.00	26.90	1.10	28.50	27.90	0.60	29.75	28.40	1.35	31.55	30.25	1.30
2	Bhanwta	PRAHLAD PATWARI	26°26'46.77"	74°27'54.73"	31	17.25	16.25	1.00	19.02	18.05	0.97	19.10	17.10	2.00	3.80	4.40	-0.60
3	Budhwara	CHATARBHUJ S/O BARDAJI	26°16'8.64"	74°37'22.35"	33.50	31.47	29.95	1.52	32.01	30.15	1.86	-	dry		dry	dry	-
4	Ganahera	G.W.D.	26°22'22"	74°26'7.55"	36.00	29.13	27.50	1.63	31.75	32.15	-0.40	-	dry		dry	dry	-
5	Leswa	G.W.D.	26°28'19.13"	74°25'33.58"	80.00	38.13	37.10	1.03	40.13	39.60	0.53	43.25	42.10	1.15	56.00	50.20	5.80
6	Pushkar (Rural)	G.W.D.	26°24'27.43"	74°28'10.24"	50.00	29.36	28.10	1.26	30.36	28.90	1.46	29.20	29.10	0.10	29.95	30.20	-0.25
7	KAWALAI	NANU RAM HAMIRA RAWAT	26°17'23.3"	74°17'18.34"	33.50	31.70	29.35	2.35	32.70	29.35	3.35	33.60	32.90	0.70	29.00	28.95	0.05
8	GOVINDGARH	LAXMAN NATHU YADAV	26°13'54.69"	74°23'38.1"	26.15	18.70	17.50	1.20	19.10	18.70	0.40	18.40	19.20	-0.80	18.00	17.20	0.80
9	Nad	RAMJI S/O KASTUR JI	26°28'2.69"	74°30'30"	21.00	12.10	10.70	1.40	13.25	12.70	0.55	17.90	17.65	0.25	10.50	12.00	-1.50
10	PEESANGAN	G.W.D.	26°21'22.35"	74°22'51.85"	30.00	19.26	17.90	1.36	19.90	17.74	2.16	21.80	20.90	0.90	20.06	17.78	2.28
11	PEESANGAN	NAURATMAL SONI	26°24'3.97"	74°22'52.47"	25.00	18.60	17.60	1.00	18.60	20.10	-1.50	23.10	21.60	1.50	19.75	16.20	3.55
12	Saradhana	SWAJ KARAN KAJJA CHANGAL (JAT)	26°24'55.65"	74°18'44.43"	36.50	23.86	20.60	3.26	23.86	20.60	3.26	25.40	23.36	2.04	36.62	28.07	8.55
13	Kalesara	Jameel Chhipa	26°20'7.5"	74°19'21.46"	27.00	17.90	17.10	0.80	15.90	12.30	3.60	13.00	12.70	0.30			
14	Sarsari	Ranjeet Ji Jat	26°21'9.44"	74°35'18.66"	37.50	18.80	16.35	2.45	17.95	17.25	0.70	18.80	16.70	2.10	14.30	17.50	-3.20
15	AMBAMASEENA	Sh.Panchu singh ji /deva ji	26 22 21.1	74 32 26.4	30.00				3.95	4.30	-0.35	6.3	3.55	2.75			
17	Budhwara	Shri Harkaran Ji/Balu ji Jat	26 21 50.5	74 26 47.7	40				14.84	16	-1.16	30.6	28.25	2.35			
18	Dodiyana	Shri Babulal Ji /Heeralal ji Mali	26 20 00.0	74 29 29.0	30.00				26.85	27.70	-0.85	28.10	26.70	1.40			
19	Doomara	Sh. Girdhari lal/Poosa ji	26 22 0.09	74 34 49.1	30.00				4.85	5.90	-1.05	7.6	4.35	3.25			
20	Fatehpur	In front of primary school (Budha ji,Ratna ji,Mithuji)	26 24 45.2	74 24 75.1	30.00				22.90	20.10	2.80	20.1	19.6	0.50			
21	Jaswantpura	Sh. Bheekaram /Jawahar lal ji Raigar	26 27 21.2	74 25 56.7	31.50				24.10	30.00	-5.90			0.00			
22	khori	Sh. Sravan ji /Heera ji Rawat	26 34 00.9	74 35 46.9	52.00				47.34	46.50	0.84	51.2	44.3	6.90			
23	Kishanpura	Sh. Mahesh ji/Omprakash ji Khateek	26 29 22.4	74 29 01.3	33.00				21.10	26.50	-5.40	27.4	25.6	1.80			
24	Nathuthala	Sh.Kalu Ji /Mishri ji Raigar	26 22 00.4	74 30 02.6	20.00				8.00	2.25	5.75	5.30	1.10	4.20			
25	Nooriyawas	Shri Bhenru lal Ji /Deva Ji Gurjar	26 21 01.4	74 29 11.6	30				9.20	4.9	4.30	18.4	12.5	5.90			
26	Rampura Dabla	Sh Kana ji/Mishri ji Jat	26 23 33.5	74 24 59.6	31.00				27.00	27.90	-0.90	27.8	25.6	2.20			
28	Sethan	Sh. Babu lal ji/Bodu ji Raigar	26 25 25.5	74 24 40.3	21.00				19.90	16.20	3.70	16.85	15.45	1.40			
29	Soorajkund	Shri Hagam Ji /Heera Ji	26 27 39.5	74 28 36.5	18.00				17.40	18.00	-0.60			0.00			
30	Doongriya Khurd	Sh. Ramswoop /Rodu lal ji Raigar	26 33 04.2	74 33 02.7	31.50				30.70	28.60	2.10	29.95	25.5	4.45			
31	Kalesara	Public well	26 20 34.1	74 25 19.2	13.50				7.90	10.00	-2.10	12.9	8.6	4.30			
32	Dantra	Shri Harji /Lala ji Jat	26 20 14.1	74 28 30.9	30.00				8.24	10.00	-1.76	9.95	7	2.95			
33	GOVINDGARH	Sh.Naina ji/Ganesh ji Kumawat	26 27 22.9	74 23 22.9	18.00				13.70	13.90	-0.20	13.8	12.9	0.90			
34	Lyali khera	Shri Balu ji/Laxman ji Rawat	26 19 05.9	74 27 09.2	16.80				11.50	8.60	2.90	13.95	12.75	1.20			
35	Saradhana	Sh.Ganpat ji/Suraj ji	26 21 54.7	74 35 14.6	30.00				25.85	28.20	-2.35	29.4	25.2	4.20			
37	PEESANGAN	PREME KISHORE S/O SANKERLAL 8875324092	26.42168177	74.33511447	33.15							25.7	17.6	8.10			
38	GOVINDGARH	SHARAN SINGH 9413692988	26.4689894	74.36088975	23.4							14.9	14.65	0.25			
39	GOVINDGARH	HARI SINGH S/O RAJU PANNA	26.44954716	74.3543247	24.7							16.25	12.5	3.75			
40	GOVINDGARH	HAJISARWER S/O SULAIMAN 8414668615	26.44872221	74.35524998	23.7							15.45	14.4	1.05			
41	PEESANGAN	MANISH JI	26.4260811	74.35306029	28.6							28.4	19.6	8.80			
42	PEESANGAN	PUDHU JI	26.36769377	74.36015063	35							23.9	21.2	2.70			
43	GOVINDGARH	RAJU LAL S/O MULARAM JI 9282888575	26.4684191	74.37705542	22.85							13.6	12	1.60			
44	GOVINDGARH	BEEKA JI S/O KOLA JI 8058939537	26.4618357	74.38038915	16.75							13.6	12.75	0.85			
45	GOVINDGARH	BABU LAL	26.44948714	74.37666859	15.6							5.6	4.7	0.90			
46	SETHAN	OM JI S/O PHAGU JI 9983442434	26.42280805	74.38101503	24.2							18.55	18.2	0.35			
47	PEESANGAN	PANALAL S/O MAYWADIYA 9983481539	26.3785024	74.36929596	23							21.85	19.15	2.70			
48	GOVINDGARH	PERULAL KUMAWAT S/O MADU JI 7597521502	26.45713672	74.393377	9.5							8.4	6.6	1.80			
49	GOVINDGARH	PUBLIC WELL	26.44448181	74.38785031	13.3							4.3	3.7	0.60			
50	GOVINDGARH	RAJU JI 7725925171	26.43217751	74.38393394	15.15							13.3	8.8	4.50			
51	SETHAN	MALARAM S/O YADHAM JI 9799175460	26.43130554	74.39544439	11.8							9.9	9.25	0.65			
52	LESWA	LAL MOHMED S/O MOHMED HUSEEN 9828788325	26.46023341	74.4013704	21							14.3	14.2	0.10			
53	HANUWANTPURA	JANDMAL S/O BHODHURAM 9799310495	26.36352637	74.40772036	21.1							8.75	7.4	1.35			

S.No.	Village	Owner's Name	Co-ordinates		TotalDepth (m) b.g.l.	2014			2015			2016			2017		
			Longitude	Latitude		PRE	POST	FLU	PRE	POST	FLU	PRE	POST	FLU	PRE	POST	FLU
54	BUDHWARA	RAMDEVE S/O GANA JI 9785087621	26.36306754	74.42704618	28.4							26.05	22.25	3.80			
55	RAMPURADBLA	CHANDRA JI S/O SUAJI 9982936300	26.40503841	74.44034432	46.9							34.5	33.3	1.20			
56	DANTRA	Ram lal s/o Bhola ji 9660615122	26.34982732	74.44563179	34.35							30.15	29.65	0.50			
57	BHANWTA	BHUDHARAM JI S/O CHOTHARAM 9982882580	26.4028618	74.45361002	43.2							33.3	32.3	1.00			
58	NOORIYAWAS	PUBLIC WELL	26.37294947	74.46637876	25.9							17.5	14.5	3.00			
59	DANTRA	MAN SINGH 9784906990	26.3563927	74.45389995	37.6							31.6	29.7	1.90			
60	DANTRA	SHIVAKARAN S/O BHAWERJI 9887321822	26.34467798	74.45854043	24.5							18.1	15.45	2.65			
61	NATHOOTHALA	SUVA S/O KISHNARAM	26.35625892	74.48301416	30.6							25.7	25.4	0.30			
62	NOORIYAWAS	BHAGIRANG SINGH S/O PERU SINGH 9572832139	26.36375788	74.47692286	36.2							18.5	10.8	7.70			
63	BHANWTA	MITHU PRAKASH 9799979598	26.37176704	74.49282233	15.2							6.5	3.8	2.70			
64	NATHOOTHALA	PUPLIC WELL	26.35922511	74.49808256	28.5							17.5	16.5	1.00			
65	DODIYANA	Raman dave s/o Narayanan	26.34576998	74.49706424	27.8							24.95	24.5	0.45			
66	DODIYANA	HARGIRAM JI S/O JAGANLAL 9784713600	26.34527452	74.51369519	44.85							33	32.6	0.40			
67	GANAHERA	GOPAL JI S/O BHAIKU JI 9928718512	26.49731923	74.53168653	40.75							37.15	36.65	0.50			
68	BHANWTA	RAHUG SINGH S/O SWANNI SINGH 8890480240	26.38844971	74.52608348	27.7							25.1	21.6	3.50			
70	TILORA	KULAP JI S/O JODHA JI	26.51754535	74.51950796	26.4							25.15	21.9	3.25			
71	AMBAMASEENA	NARAYANLAL S/O JEEVAN JI 7073205821	26.39021611	74.54063379	34.95							24.4	22.8	1.60			
72	DOONGARIYA KHURD	BHANWER SINGH S/O LALSINGH 9414991262	26.53754742	74.54261838	35.95							32.85	31.8	1.05			
73	BANSELI	SHATHAWANI	26.52335937	74.54808002	34.05							32.25	31.7	0.55			
74	NALA PUSHKER	RATHANA JI S/O DALAJI 9828939651	26.48502457	74.5645404	32.4	29.36	28.1	1.26	29.36	29.1	0.26	28.8	25.95	2.85			
75	NALA PUSHKER	PATHERI S/O GOPALJI 8094381083	26.47381662	74.55784762	39.9							37.05	36.5	0.55			
76	SARADHANA	Amersenji s/o Mangilal 9414931534	26.34256717	74.56151898	26.4							18.65	17.7	0.95			
77	DEONAGER	HARAJI KADRI S/O GOPALJI 9460090280	26.54284587	74.56592116	37.35							35.2	35.1	0.10			
78	NALA PUSHKER	Sugah chand	26.48147567	74.56753182	21.35							18.75	18.3	0.45			
79	DOOMARA	DINESH 9166609129	26.3650248	74.57526715	24							5.7	3.1	2.60			
80	SARADHANA	SANKER JI S/O LATHU JI 9929373507 9924593468	26.35884181	74.57714561	8.35							4.2	3.5	0.70			
81	SARADHANA	DINESH S/O RAM CHADHER	26.34499063	74.57851815	17.4							13.3	12.1	1.20			
82	KADEL	Ramesh Guptha S/O Surajpan Guptha 9414007375	26.5723749	74.57090118	28.3							27.2	24	3.20			
83	DEONAGER	GOPAL S/O RAMLALJI 9928724099	26.53756343	74.57341609	28.4							27.7	27	0.70			
84	REWAT	SKUMAR S/O GIRIRAJ 9828642597	26.54621305	74.57184222	40.15							37.65	36.4	1.25			
85	SARADHANA	HARI JI S/O GOPAL JI 7742950059	26.326345	74.58808333	32.3							29	28.5	0.50			
86	KAWALAI	CHODUSINGH S/O UMA SINGH	26.59471485	74.59261559	35.5	32.8	31.15	1.65	34.95	33.1	1.85	34.1	32.4	1.70			
87	KHORI	Kasher davi w/o RATHANLALA 8290789091	26.5709524	74.59691073	33.4							32.3	31.25	1.05			
88	KAWALAI	GANDER SINGH S/O BAJRAN SINGH 9660088501	26.59490428	74.5997641	36.8	32.7	29.35	3.35	32.7	29.35	3.35	28.5	26.6	1.90			
						24.77	23.12	1.62	25.53	24.27	0.63	26.21	24.71	1.50	24.50	22.98	1.53

WATER LEVEL DATA (m) OF PEESANGAN GROUND CLUSTER FOR YEAR 2018 (RACP WELLS)

S. No.	GP	Village	Well No.	Lat	Long	Owner of Well	Type of Well	Total Depth (mts)	Diameter of well (Mts.)	(Pre-18) (bgl) (mts.)	(Post-18) (bgl) (mts.)	FLU-18
1_KW	Bhagwanpura	Motisar	48/151	26.46153	74.49481	Chitar singh/ guman singh	DCB	21.34/80	2.60	Dry	Dry	-
2_KW	Bhanwta	Bhanwta	4/249	26.38833	74.52619	Raghunath/ Sawatsar singh	DW	27.40	2.10	25.90	24.25	1.65
3_KW	Bhanwta	Bhanwta	4/156	26.37256	74.52617	Raghuveer / Dayal ji	DW	20.40	3.20	11.85	10.60	1.25
4_KW	Bhanwta	Bhanwta	4\262	26.38725	74.51406	Prathvi Singh/ Kant Singh	DW	38.00	3.30	27.10	26.00	1.10
5_KW	Bhanwta	Bhanwta	4\203	26.37489	74.51261	Bhawani Singh / Laxman Singh	DW	22.86	3.60	5.00	3.15	1.85
6_KW	Bhanwta	Bhanwta	4\5	26.37258	74.48744	Jadesh ji / Mangu	DW	13.97	3.25	5.55	5.80	-0.25
7_KW	Bhanwta	Bhanwta	4\82	26.36161	74.50148	Kaluram/Bheruji	DW	35.50	3.25	29.20	14.15	15.05*
8_KW	Bhatsoori	Hanwantpura	47/12	26.36358	74.40769	Chand mal s/o boduram	DW	21.22	3.45	13.73	11.65	2.08
9_KW	Bhatsoori	Nad	46/37	26.34161	74.39067	Pappu ji s/o ugma ji	DW	17.20	5.20	13.95	13.95	0.00
10_KW	Bhatsoori	Nad	46/40	26.35636	74.38453	Randev ji s/o bhawar lal	DW	23.30	4.26	15.10	15.60	-0.50
11_KW	Bhatsoori	Nad	46/22	26.35624	74.38108	Harji/ Goma Redasi	DW	21.34	3.80	13.95	14.50	-0.55
12_KW	Bhatsoori	Nad	46/30	26.34425	74.38169	Amara ji s/o ram	DW	18.20	3.30	14.65	14.35	0.30
13_KW	Budhwara	Budhwara	05/287	26.40283	74.45356	Budharam / Chautharam Jat	DW	51.00	3.40	34.20	30.50	3.70
14_KW	Budhwara	Budhwara	005/32	26.36764	74.44336	Khuddev ji/ Chitar	DW	41.20	3.20	24.80	20.65	4.15
15_KW	Budhwara	Budhwara	005/98	26.37183	74.45047	Ramswarup/ Geeda Ji Choudhary	DW	42.00	3.70	23.85	20.50	3.35
16_KW	Budhwara	Budhwara	005/177	26.36461	74.42500	Shankarji/Jivanji/Kishanaji Choudhary	DW	28.40	2.50	21.05	19.75	1.30
17_KW	Budhwara	Budhwara	005/80	26.36405	74.44660	Baldev Shivnarayan/Harkaran Prabhu	DW	39.75	4.30	30.90	30.80	0.10
18_KW	Budhwara	Budhwara	005/85	26.36003	74.45078	Abdul Sattar	DW	30.00	3.10	Dry	26.35	-
19_KW	Budhwara	Nooriyawas	006/63	26.36378	74.47694	Bheru Singh / Jowas Singh	DW	40.50	2.30	19.05	18.10	0.95
20_KW	Budhwara	Nooriyawas	006/85	26.37278	74.48019	Bhawara Gujar	DW	32.00	2.75	30.65	18.85	11.80*
21_KW	Dantra	Dantra	7/133	26.34469	74.45856	Babulal / Bhanwarlal Kumawat	DW	26.20	4.40	19.75	19.95	-0.20
22_KW	Dantra	Dantra	7/65	26.34603	74.47022	Uma ram Jaat	DW	27.73	4.50	24.10	22.00	2.10
23_KW	Dantra	Dantra	7/187	26.33283	74.47542	Afrik miya	DW	33.00	3.60	16.60	16.90	-0.30
24_KW	Dantra	Lyali khera	08/9	26.32167	74.45322	Prabhuji Rawal	DW	29.20	2.70	23.80	22.85	0.95
25_KW	Deo Nagar	Banseli	9/193	26.51811	74.53536	Kalu / Ladu Singh Rawat	DW	50.20	4.50	Dry	29.65	-
26_KW	Deo Nagar	Deo Nagar	10/422	26.54442	74.57706	Hanuman/ Ganeshji Gurjar	DW	23.00	2.20	22.65	Dry	-
27_KW	Dodiyana	Dodiyana	11/55	26.34528	74.51372	Harji S/o Jaganlal 9784713600	DW	45.72	3.10	43.50	37.80	5.70
28_KW	Dodiyana	Dodiyana	11/56	26.33331	74.49142	Babulal s/o turaji mali	DW	31.60	1.95	28.30	27.15	1.15
29_KW	Dodiyana	Nathoothala	12/74	26.35928	74.48686	Murad ji s/o Rusal bag	DW	45.00	2.24	40.65	30.65	10.0*
30_KW	Doomara	Amba Maseena	13/18	26.38578	74.53839	Kasar / Magan Singh	DW	36.58	2.40	28.75	27.75	1.00
31_KW	Doomara	Amba Maseena	13/10	26.37989	74.54117	Meethu/ Laxminarayan Mali	DW	27.44	2.30	17.10	14.20	2.90
32_KW	Doomara	Doomara	14/69	26.38025	74.58881	Mulchand s/o Tejaji Gurjar	DW	26.50	4.50	22.20	18.60	3.60
33_KW	Doomara	Doomara	14/8	26.37309	74.56783	Ratanlal/Jivan Gurjar	DW	19.30	3.00	18.30	14.10	4.20
34_KW	Ganahera	Chawandiya	15/123	26.51056	74.52781	Bhawar lal/Sehdev Rajput	DW	33.50	2.90	31.15	28.95	2.20
35_KW	Ganahera	Ganahera	16/99	26.49381	74.52642	Narayan Nath/ Santoshji	DW	40.75	2.60	36.05	31.75	4.30
36_KW	Govindgarh	Govindgarh	17/91	26.45633	74.38975	Ganesh/Baktha Kumawat	DW	18.85	2.20	18.00	16.70	1.30
37_KW	Govindgarh	Govindgarh	17/128	26.44453	74.38783	Public well	DW	13.33	3.24	9.45	6.60	2.85
38_KW	Jaswantpura	Jaswantpura	18/3	26.45169	74.43711	Mulchand / Sumerdan Sarana	DW	33.85	2.55	27.85	26.25	1.60

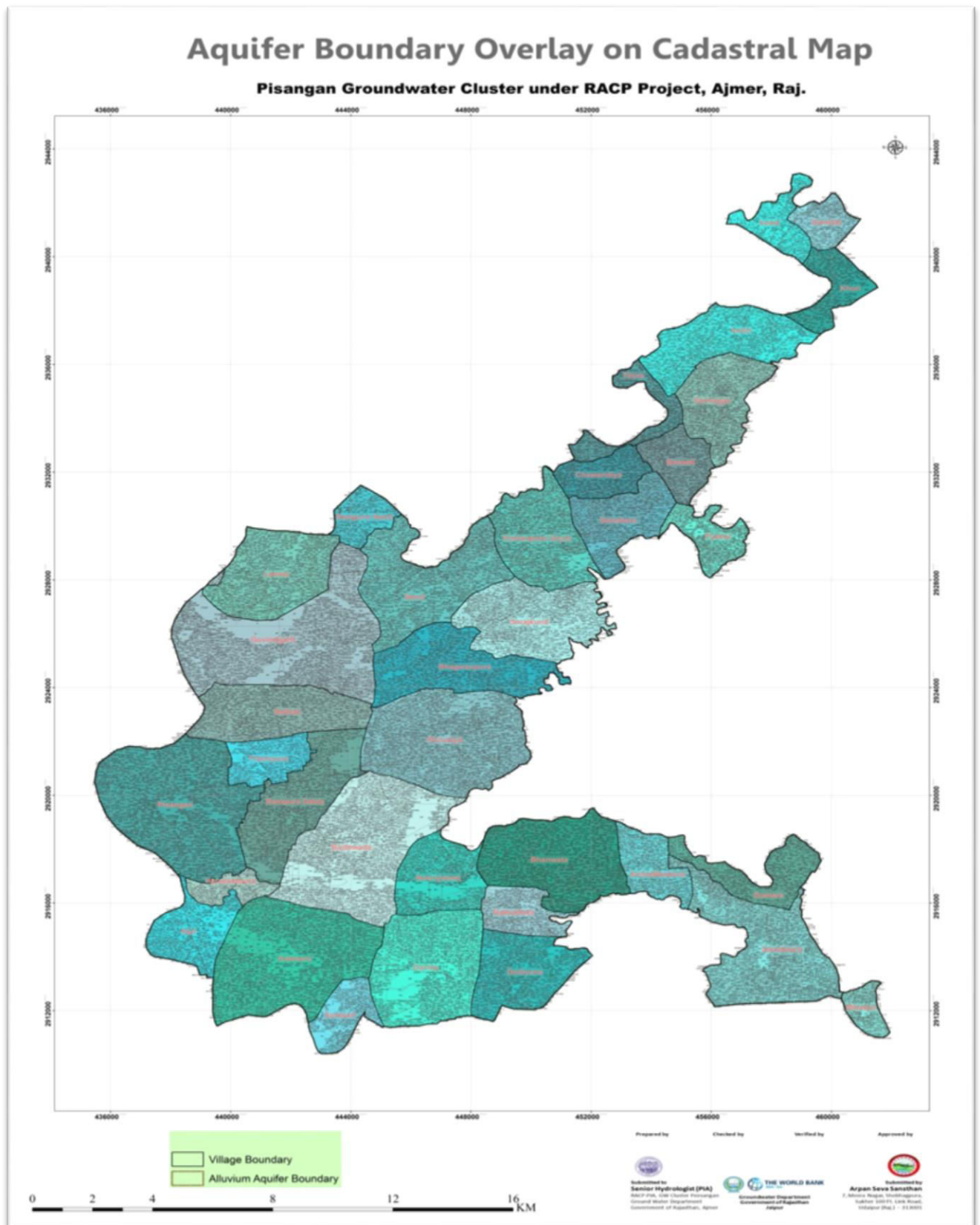
S. No.	GP	Village	Well No.	Lat	Long	Owner of Well	Type of Well	Total Depth (mts)	Diameter of well (Mts.)	(Pre-18) (bgl) (mts.)	(Post-18) (bgl) (mts.)	FLU-18
39_KW	Jaswantpura	Jaswantpura	18/10	26.43489	74.43014	Gena s/o hari rawat	DW	32.10	3.85	31.50	30.35	1.15
40_KW	Kadel	Doongariya Khurd	19/42	26.53753	74.54261	Bhanwar singh s/o lal singh	DW	35.95	3.15	34.20	32.60	1.60
41_KW	Kalesara	Kalesara	21/59	26.34972	74.44561	Kalu ji s/o chotu ji	DW	36.70	3.10	32.40	32.15	0.25
42_KW	Kalesara	Kalesara	21/28	26.34275	74.42203	Govt. well	DW	14.05	3.60	12.90	10.10	2.80
43_KW	Kalesara	Kalesara	21/21	26.34628	74.41381	Gram panchayat D/W	DW	10.00	3.10	6.30	6.25	0.05
44_KW	Kalesara	Sarsari	22/06	26.32467	74.43008	Ranjeet / Girdhari jat	DW	23.00	4.10	16.20	15.55	0.65
45_KW	Kalesara	Sarsari	22/09	26.32144	74.43775	Hema / Laduji Gurjar	DW	22.50	4.00	10.60	12.95	-2.35
46_KW	Kalesara	Sarsari	22/01	26.31333	74.42958	Bherulal Gurjar	DW	33.60	3.10	30.35	29.55	0.80
47_KW	Khori	Kawalai	27/10	26.59400	74.59147	Nanu/hamera	DW	33.53	2.10	32.70	29.10	3.60
48_KW	Khori	Khori	28/93	26.56717	74.59744	Prakash/ Chitar ji Gurjar	DW	45.00	2.65	43.60	33.20	10.40*
49_KW	Majhewla	Kadel	30/44	26.55172	74.59092	Ramsingh / Ranjeet Singh	DW	38.80	2.40	30.90	32.20	-1.30
50_KW	Majhewla	Majhewla	30/73	26.55511	74.57950	Shyamnath ji / Bodunath	DW	38.70	2.00	Dry	33.65	-
51_KW	Majhewla	Rewat	31/17	26.55767	74.55550	Santosh Varma HP Gas Agency	DW	35.50	2.80	32.05	31.15	0.90
52_KW	Nand	Leswa	32/11	26.46025	74.40139	Lal Mohammad/ Hussain Taili	DW	21.00	2.80	18.20	17.65	0.55
53_KW	Picholiya	Picholiya	36/91	26.40711	74.49139	Ram Dev / Amba Gurjar	DW	26.53	2.40	25.70	24.65	1.05
54_KW	Picholiya	Picholiya	37/75	26.42608	74.46717	Ranjeet/Lalla	DCB	21.80 /100	2.25	61.50	20.65	40.85*
55_KW	Picholiya	Picholiya	37/87	26.42772	74.45306	Chitra Ram/Pachu Ram	DW	37.00	2.36	34.60	35.60	-1.00
56_KW	Pisangan	Pisangan	35/180	26.37833	74.38272	Meena devi w/o ratan lal	DW	27.00	3.10	24.70	15.60	9.10*
57_KW	Pisangan	Pisangan	35/184	26.41081	74.35967	Ratan lal s/o Bansidas	DW	27.55	3.20	19.00	15.85	3.15
58_KW	Pisangan	Pisangan	35/163	26.39872	74.39697	Ramniwas ji s/o pokhar ji	DW	19.65	2.60	18.85	17.65	1.20
59_KW	Pisangan	Pisangan	35/77	26.40917	74.38608	Gopal ji	DW	19.81	3.40	14.05	12.95	1.10
60_KW	Pisangan	Pisangan	35/87	26.39369	74.36359	Chhitarji/ Kaluramji Khatwal	DW	32.00	2.35	29.50	27.25	2.25
61_KW	Pisangan	Pisangan	35/144	26.37522	74.39478	Bhanwarlal / Budhaji Kumawat	DW	23.00	1.70	22.00	19.35	2.65
62_KW	Pushkar (M)	Pushkar (M)	38/85	26.48144	74.56753	Sugan chand / Rajendra	DW	22.10	2.30	20.75	19.60	1.15
63_KW	Pushkar (M)	Pushkar (M)	38/28	26.47383	74.55783	Badri / Gopal Ji	DW	48.00	1.80	42.40	39.60	2.80
64_KW	Rampura dabra	Fatehpura	40\1	26.41247	74.40422	Chanda ram s/o Meti Jaat	DW	25.00	2.90	24.05	22.15	1.90
65_KW	Rampura Dabra	Rampura Dabra	41/81	26.39161	74.41167	Ramash jat	DW	18.50	2.10	18.20	17.70	0.50
66_KW	Rampura Dabra	Rampura Dabra	41/71	26.40517	74.44094	Harkaran / Chandra Jat	DW	50.00	2.10	47.80	39.95	7.85
67_KW	Rampura Dabra	Rampura Dabra	41/18	26.37403	74.41483	Balaram / Ugma Ji Jat	DW	28.10	3.05	23.30	19.65	3.65
68_KW	Rampura Dabra	Sethan	42/1	26.43419	74.41042	Uda/Ladu Kumawat	DW	16.15	3.10	11.90	10.10	1.80
69_KW	Rampura Dabra	Sethan	42/36	26.43090	74.39560	Mala Singh/Ayadan Rawana	DW	15.00	1.45	11.05	9.05	2.00
70_KW	Saradhana	Saradhana	43/94	26.36556	74.56056	Bhawar lal s/o Devi lal	DW	26.40	2.40	13.20	10.45	2.75
71_KW	Saradhana	Saradhana	43/100	26.37069	74.55994	Shankarlal / Devilal	DW	18.29	2.00	4.20	2.90	1.30
72_KW	Saradhana	Saradhana	43/105	26.36125	74.57861	Govind/Jeevan Jat	DW	7.70	2.10	4.60	2.80	1.80
73_KW	Saradhana	Saradhana	43/52	26.36175	74.58653	Hanumna ji s/o gabru ji	DW	8.10	3.20	6.70	3.15	3.55
74_KW	Saradhana	Saradhana	43/32	26.33531	74.59211	Harkan / Magnalal Jaat	DW	30.00	5.50	22.30	21.95	0.35
75_KW	Saradhana	Saradhana	43/101	26.34244	74.56147	Bholaram / Mangilal Jat	DW	25.91	3.10	21.95	21.60	0.35
76_KW	Saradhana	Saradhana	43/22	26.33233	74.57267	Shankar ji jat/khadiya	DW	41.00	3.70	37.55	34.15	3.40
77_KW	Tilora	Kishanpura Goyla	44/118	26.48103	74.49067	Kelash ji s/o gomaji	DW	45.00	2.20	41.65	39.00	2.65
78_KW	Tilora	Tilora	45/50	26.51756	74.51953	Gulab chand rawat s/o Jodha ji	DW	27.50	2.20	24.80	23.95	0.85

S. No.	GP	Village	Well No.	Lat	Long	Owner of Well	Type of Well	Total Depth (mts)	Diameter of well (Mts.)	(Pre-18) (bgl) (mts.)	(Post-18) (bgl) (mts.)	FLU-18
Pz1	Nand	Nand	Pz1	26.47385	74.43900	Road side near Tri junction (Ghanaheda to Govindgarh & Rampura Nand) Rampura Chouraha	Pz	102.00	0.125		34.24	
Pz2	Bhagwanpura	Sawaipura	Pz2	26.43490	74.50376	Near Govt. School & Overhead Water Tank at Sawaipura	Pz	84.00	0.125		40.66	
Pz3	Tilora	Kishanpura Goyla	Pz3	26.47739	74.51029	Baori Jhopra Village, Inside Govt. Primary School	Pz	102.00	0.125		38.27	
Pz4	Nand	Leswa-I	Pz4	26.47391	74.40451	Leswa to Ladpura, LHS of road at about 800 mtr from leswa village NW of village	Pz	105.00	0.125		6.43	
Pz5	Nand	Nand	Pz5	26.47883	74.47500	East of village, at about 600 mtr at Rajput Samaj Shamshan Ghat	Pz	102.00	0.125		36.89	
Pz6	Ganahera	Chawandiya	Pz6	26.50486	74.50824	On RHS of road at about 3.15 km from Tilora to Kishanpura & 1 km before Kishanpura	Pz	95.00	0.125		38.46	
Pz7	Nand	Leswa-II	Pz7	26.47312	74.42765	Near Bhenru ji ka Khejra, RHS of road from Nand to Leswa at about 1500 mtr before the village	Pz	100.00	0.125		31.82	
Pz8	Bhagwanpura	Bhagwanpura	Pz8	26.45231	74.46943	at New Khadyan Bhandar Godown Campus	Pz	100.00	0.125		29.64	
Pz9	Budhwara	Budhwara	Pz9	26.38538	74.43694	Inside Govt. Primary Health Center	Pz	105.00	0.125		22.57	
Pz10	Ganahera	Ganahera	Pz10	26.48349	74.51757	Kaharo ka Chouraha, Inside Govt. School campus	Pz	102.00	0.125		45.16	
Pz11	Tilora	Kishanpura Goyla	Pz11	26.49343	74.49298	Inside Govt. Secondary School Campus, Kishanpura Goyla	Pz	100.00	0.125		90.55*	
Pz12	Jaswantpura	Jaswantpura	Pz12	26.45477	74.46091	Near Gopal Phagodiya House, Road from Bhagwanpura near Atal Sewa kendra to Shamshan Bhumi to Gopalji House	Pz	102.00	0.125		35.68	
Pz13	Surajkund	Surajkund	Pz13	26.45791	74.48891	Near Govt. School & infront of Tejaji Temple	Pz	105.00	0.125		46.05	
Pz14	Rampura dabra	Sethan	Pz14	26.41833	74.40089	In side Sr. Sec. School Campus	Pz	100.00	0.125		13.08	
Pz15	Picholiya	Picholiya (Rawaton ki Dhani)	Pz15	26.42412	74.48302	Infront of School at Rawaton ki Dhani	Pz	107.00	0.125		47.82	
Pz16	Saradhana	Saradhana	Pz16	26.34815	74.57849	In Atal Seva kendra campus, on the way to Ajmer to Beawar RHS	Pz	100.00	0.125		15.65	
Pz17	Kawalai	Gudha	Pz17	26.60660	74.58893	Near Govt. middle school & Sarvjanik Bhawan at Bus stand	Pz	100.00	0.125		49.79	
Pz18	Khori	Khori	Pz18	26.57671	74.59225	In side Sr. Sec. School Campus	Pz	100.00	0.125		41.19	
Pz19	Kalesara	Kalesara	Pz19	26.34955	74.42069	Inside Shamshan Bhumi, Near PHC & Anganwadi, Towards Kalesara to Dodiya Road	Pz	100.00	0.125		10.33	
Pz20	Bhanwta	Bhanwta	Pz20	26.37250	74.50690	In side Govt. Adarsh Sr. Sec. School Campus	Pz	100.00	0.125		2.58	
Pz21	Rampura dabra	Rampur Dabra (Budhwara)	Pz21	26.3934	74.41792	Inside Govt. School Campus / Atalsewa Kendra	Pz	92.00	0.125			
Pz22	Budhwara	Budhwara	Pz22	26.38019	74.43741	NE of village, inside boundary of PHED Overhead tank	Pz	100.00	0.125			
Pz23	Bhagwanpura	Bhagwanpura (GSS)	Pz23	26.43645	74.46729	South of village, Inside GSS Boundary	Pz	85.00	0.125			
Pz24	Jaswantpura	Samarthpura	Pz24	26.43189	74.44182	Outside of Govt. Primary School	Pz	100.00	0.125			
Pz25	Jaswantpura	Jaswantpura (Bhagwanpura)	Pz25	26.45624	74.44203	Primary Health Center Campus	Pz	91.00	0.125			
Pz26	Jaswantpura	Akhepura (Jaswantpura)	Pz26	26.44395	74.41545	Govt. Primary School Akhepura	Pz	85.00	0.125			
Pz27	Rampura dabra	Fatehpura	Pz27	26.41235	74.4035	Outside of Govt. Primary School Fatehpura	Pz	85.00	0.125			
Pz28	Picholiya	Picholiya (Kali Mata Temple)	Pz28	26.40948	74.44205	RHS of road Picholiya to Peesangan, Near Kali Mata/Tejaji Temple	Pz	85.00	0.125			
Pz29	Budhwara	Nooriyawas (Budhwara)	Pz29	26.37205	74.47171	Near Samudayik Bhawan, Nooriyawas	Pz	91.00	0.125			
Pz30	Deo Nagar	Banseli	Pz30	26.50338	74.55114	Opposite to GSS Banseli, Near Helipad	Pz	50.00	0.125			
Pz31	Peesangan	Hanwantpura (Peesangan)	Pz31	26.36948	74.40294	Near Govt. School on the way of Peesangan to Hanwanpura	Pz	92.00	0.125			
Pz32	Peesangan	Forest Chowki (Peesangan)	Pz32	26.38246	74.39181	Inside forest chowki, RHS of road from Peesangan to Hanwanpura	Pz	86.00	0.125			
Pz33	Picholiya	Garhi (Picholiya)	Pz33	26.40213	74.48534	Inside Anganwadi Kendra & Tejaji Temple, East of village	Pz	85.00	0.125			
										23.61	23.07	1.67

METHODOLOGY

One of the essential elements in preparation of ground water management strategy of an area with focus on sustainability is in depth understanding of the underlying aquifer system their mapping which inter alia requires establishing the dimensions, boundary conditions, their characteristics and the stresses imposed on the aquifer in terms of various processes of recharge and discharge. Aquifer mapping can be defined as a multidisciplinary scientific process, wherein a combination of geologic, geophysical, hydrologic and chemical field and laboratory analyses are applied to characterize the quantity, quality and sustainability of ground water in aquifers. Systematic aquifer mapping is expected to improve our understanding of the geologic framework of aquifers, their hydrologic characteristics, water levels in the aquifers and how they change over time, and the occurrence of natural and anthropogenic contaminants that affect the potability of ground water. Results of these studies will contribute significantly to resource management tools such as long-term aquifer monitoring networks and conceptual and quantitative regional groundwater-flow models used planners, policy makers and other stakeholders. Aquifer mapping at the appropriate scale can help prepare, implement and monitor the efficacy of various management interventions aimed at long-term sustainability of our precious ground water resources, which, in turn, will help achieve drinking water security, improved irrigation facilities and sustainability in water resources extraction in the country as a whole. In the present context, the proposed methodology takes in to account all the above aspects while planning the activities. Systematic mapping of an aquifer and developing a management plan encompasses a host of activities such as collection and compilation of available information on aquifer systems, demarcation of their extents and their characterization, analysis of data gaps, generation of additional data for filling the identified data gaps ,preparation of aquifer maps by defining the extent and boundaries of aquifer, integrating the ground water utilization data and other thematic information for water budgeting and preparation of optimal ground water management plan.

FINAL AQUIFER BOUNDARY OVERLAY ON CADASTRAL MAP



CONCLUSION

The Rajasthan Agriculture Competitiveness Project is headed by the Project Director & PMU, RACP, Durgapura. There are other departments like Ground Water Department, Watershed, Agriculture, Horticulture, Livestock etc. are working as line department. The main objective of Peesangan Ground Water Cluster is to achieve sustainability of groundwater sources (i.e. aquifers) of this cluster. Achieving sustainability of groundwater sources in this cluster is envisaged to take place through community-based approaches with public support striving to reach a situation over a meaningful period of time in which the annual water extraction from this aquifer is limited to the annual ground water recharge.

The previous Ground Water Resources Estimation, 2017 for Peesangan Block was done on the basis of GEC-2015 Guidelines. As per the Assessment Report, 2017 the Stage of Ground Water extraction is 177.55% and entire Peesangan Block was classified under “OVER EXPLOITED” category. Now the Ground Water Resources Estimation 2018 for Peesangan Ground Water Cluster is also done on the basis of GEC-2015 Guidelines. Aquifer and other parameters were considered as per the Guidelines, Ground Water Resources Assessment, 2017 of Ajmer district and actual field conditions. As per the Assessment Report, 2018 the Stage of Ground Water Extraction is **138.04 %** and entire Peesangan GW Cluster was classified under “OVER EXPLOITED” category.

In comparison between Resource Estimation of year 2017 and 2018 of the Cluster area, it shows significant rise in Ground Water Scenario. During the entire project period all the departments sensitized stakeholder through capacity building and Information Education Communication (IEC) activities carried out on different levels in the Cluster area regarding the optimal utilization of ground water by judicious use and Ground Water Management related issues. Therefore, the mindset of the stakeholder changed and now they are utilizing the Ground Water Resources more judiciously and transferred on low water consumption crops by using Pressure Irrigation Techniques such as Drip, Sprinklers etc. and the balance ground water is now utilizing in unused cultivable land which help farmers to get more rupees per unit of water in compensation for farmers using fewer units of water.

Now it can be summarized that after the implementation of RACP Project and Execution of the activities assigned under this Project there is drastic Change in the improvement of Ground Water Resources in the Peesangan Ground Water Cluster area.

“Save Every Drop of Water for Future Generation”