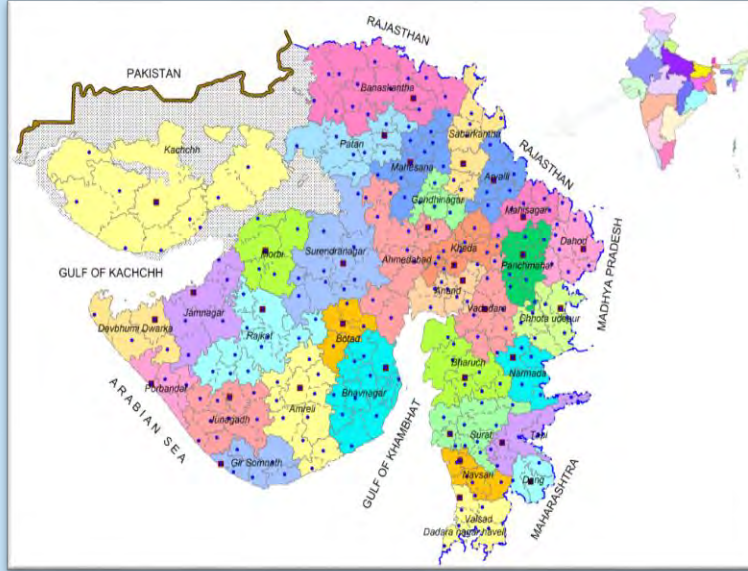




केंद्रीय भूमि जल बोर्ड
CENTRAL GROUND WATER BOARD
भारत सरकार/GOVERNMENT OF INDIA
जल शक्ति मंत्रालय/MINISTRY OF JAL SHAKTI
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT AND
GANGA REJUVENATION

वार्षिक भूजल पुस्तिका 2023-24 गुजरात राज्य GROUND WATER YEAR BOOK 2023-24 Gujarat State



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वार्षिक भूजल पुस्तिका
2023-24
गुजरात राज्य

GROUND WATER
YEAR BOOK
2023-24
Gujarat State

GROUND WATER YEAR BOOK 2023--24
Gujarat State

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Forward

Central Ground Water Board, West Central Region, has been issuing Ground Water Year Book annually for Gujarat state, by compiling the hydrogeological and groundwater level data collected from the Groundwater Monitoring Wells established by the Board in Gujarat State.

Monitoring of groundwater level furnish valuable information on the groundwater regime characteristics of the different hydrogeological units moreover, analysis of these valuable data collected from existing observation wells during May, August, November and January in each ground water year (June to May) indicate the pattern of ground water movement, changes in recharge-discharge relationship, behaviour of water level and quantitative changes of groundwater regime in time and space. It also helps in identifying and delineating areas prone to decline of water table and piezometric surface due to large scale withdrawal of groundwater for industrial, agricultural and urban water supply requirement.

Further water logging prone areas can also be identified with historical water level data analysis. This year book contains the data and analysis of groundwater regime monitoring for the year 2023-24. The scientific officers of the regional office have systematically collected field data from the Groundwater Monitoring Network Wells four times during the viz., May, August, and November and January and the analysis of same has been presented in this report along with changes in different seasons and long-term changes in water level. The behaviour of groundwater levels as analysed from the existing Ground Water Monitoring Wells data is discussed in details in this report along with the thematic maps depicting the groundwater scenario for different periods of measurements. The depth to water level, water level fluctuations, and water table maps have been prepared and presented in this report along with detailed discussion on each map. I hope the report would be extremely useful to various agencies engaged in groundwater development and management for fruitful planning in time and space.

Date: 14/10/2024
Place: Ahmedabad

Regional Director
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EXECUTIVE SUMMARY

- Central Ground Water Board, Western Central Region has set up a network of 1293 Groundwater monitoring wells. Initially, the monitoring commenced in the year 1969 with the establishment of 82 observation wells spread uniformly over the entire state, and since then, the number of stations were added regularly so as to get proper hydro-logical information of different hydrogeological and geo-morphological units.
- In year 2023, annual rainfall varies from about 601 mm in Surendranagar to about 2328 mm in Valsad. The average rainfall for 2023 is 1022 mm, against the long term average of 911 mm. District of northern region- Ahmedabad, Anand, and Bharuch, Surat, Dangs and Vadodara districts in southern region has received less rainfall than the long term average rainfall.
- Groundwater levels are being monitored four times in a year: May, August November and January.
- About 40 % of the wells have depth to water levels in the range of 5 to 20 m bgl (meter below ground level) during pre-monsoon 2023. The water levels were deeper in Amreli, Gandhinagar, Junagarh, and Sabarkantha districts. Deeper water levels were observed mainly in the Over Exploited and Critical talukas and in some parts of North Gujarat and Saurashtra area.
- The shallow water levels of less than 2 m bgl were observed in 17% of wells of all well analysed.
- The long-term groundwater scenario in comparison to pre-monsoon 2023 indicates that 73% wells show rise whereas in post monsoon rise is observed in 60% of wells.
- The water table in different parts of the state ranges between 7.6 m bmsl and 591 m amsl.
- Alarming declines in groundwater levels of Central Gujarat plains and in select areas of Saurashtra and Kachchh warrant immediate attention for taking-up of recharge schemes to arrest further declines and augment the groundwater resources.
- Pointed attention of the administrators and policy makers is drawn towards adoption of artificial recharge, public awareness and other appropriate measures for ensuring adequate groundwater availability and sustainability.

GROUND WATER YEAR BOOK OF GUJARAT (Year 2023-24)

1. INTRODUCTION

The Gujarat is one of India's most prosperous states is situated along the western coast of india between North latitudes 20° 06' 00" to 24° 42' 00" and East longitudes 68° 10' 00" to 74° 28' 00" (Figure. 1). It has nearly 1600 km long coastline, which is the longest as compared to any other state in the country. It is extending from Lakhpat in north to Daman in south. The State has common boundaries with the states of Rajasthan, Madhya Pradesh and Maharashtra and shares international border with Pakistan in northwest.

Gujarat is fifth largest state in india by area, covering about 1,96,024 km². There are 18,225 villages and 348 towns in Gujarat including 16 towns with more than 1,00,000 populations. The total population is 60,383,628 the state has a sex ratio of 918 females for every 1000 males of which 31,482,282 are males and 28,901,349 are females (2011 census).

Administratively, Gujarat currently has 33 districts. The capital of Gujarat is Gandhinagar, with Ahmedabad as its largest city. Kutch is the largest district of Gujarat while Dang is the smallest. Ahmedabad is the most populated district while Dang is the least. There are 252 Talukas (subdivisions of districts) in Gujarat.

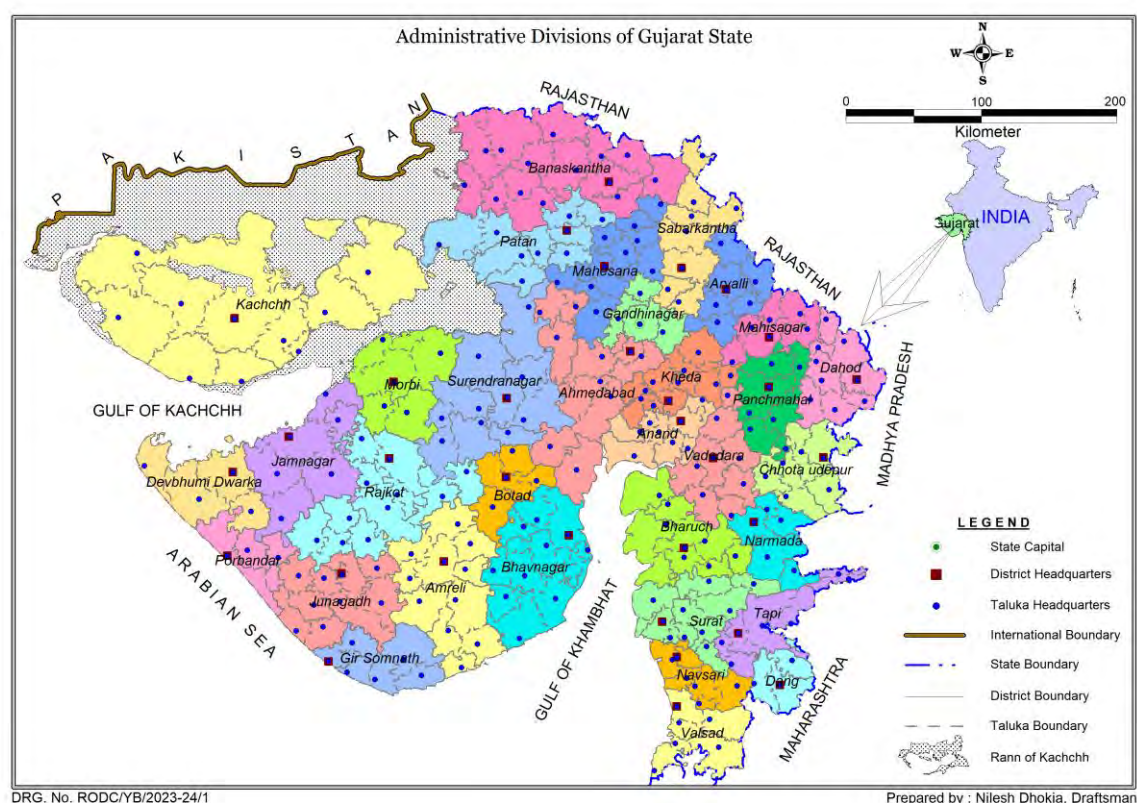


Figure 1: Administrative divisions of Gujarat State

2. PHYSIOGRAPHY AND DRAINAGE

The diverse physiographic, climatic, topographic and geologic conditions have given rise to diversified groundwater situations in different parts of the state. Occurrence and movement of groundwater is controlled by rock formations of varied composition and structure and range in age from Archean to Recent.

Droughts are frequent in north Gujarat, Saurashtra and Kachchh regions due to poor and Similarly, the landform varies from the hilly tract to the uplands of Kachchh and Saurashtra, the alluvial plains extend from Banaskantha in the north to Valsad in the south, the low lying coastal tract surrounding the Kachchh and Saurashtra uplands and the marshy to saline tracts of the Rann of Kachchh and little Rann of Kachchh.

The topography and rainfall virtually control the runoff and groundwater recharge. The climate varies from humid in the south through sub-humid in the central part to semi-arid and arid in the northern and western parts. The state receives rainfall mainly during southwest monsoon period. The normal rainfall shows an erratic rainfall pattern during 2023 which shows high rainfall 2328 mm in south (Valsad District) to 602 mm in Surendranagar district.

During 2023 Gujarat received 25.12 % more rainfall than the average rainfall. About 80% of the area received more rainfall than annual average (1992-2023). Ahmedabad, Bhavnagar, botad, dahod, Arvali, Gir Somnath, Tapi districts received rainfall below normal. While remaining districts has received more annual rainfall as compared to long term average annual rainfall (1992-2023) Figure 2.

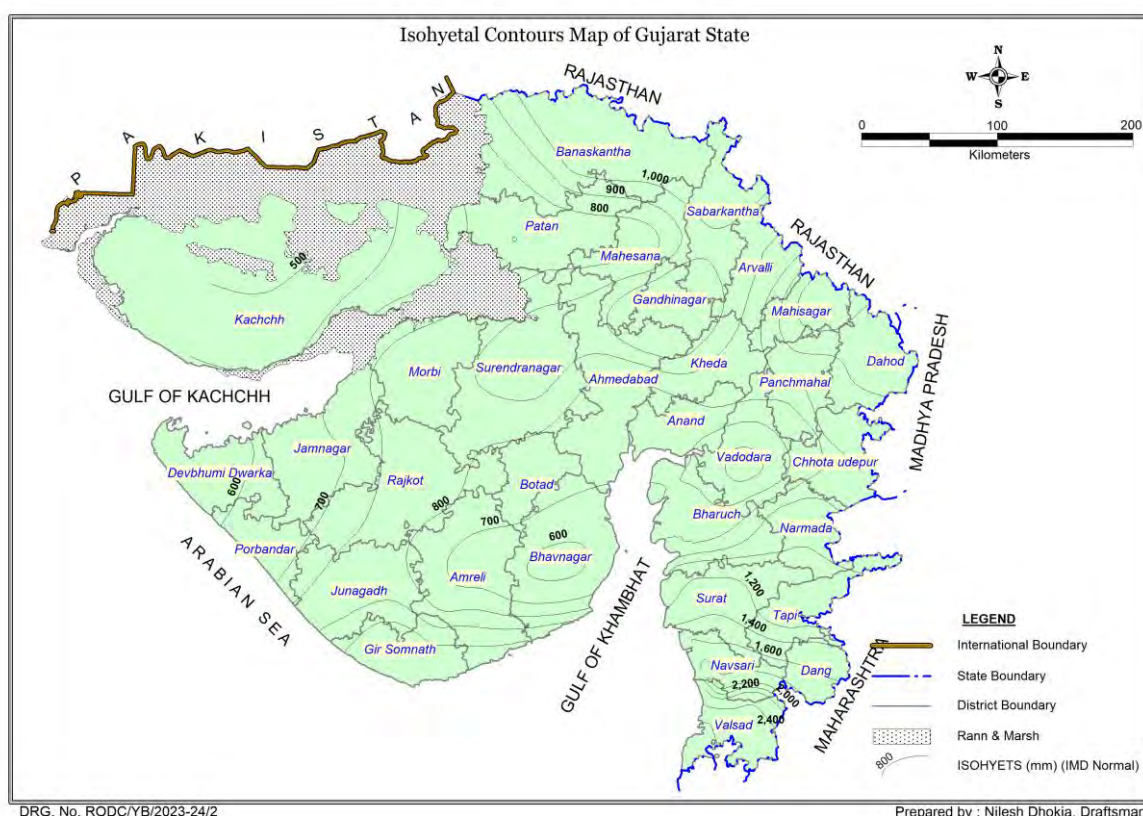


Figure 2: Isohyetal contours of Gujarat State

Annual rainfall during 2023, Average rainfall and its departure from average annual rainfall in the Gujarat state is presented in Table 1 and map representing distribution of rainfall station wise in bars is presented as Figure. 3

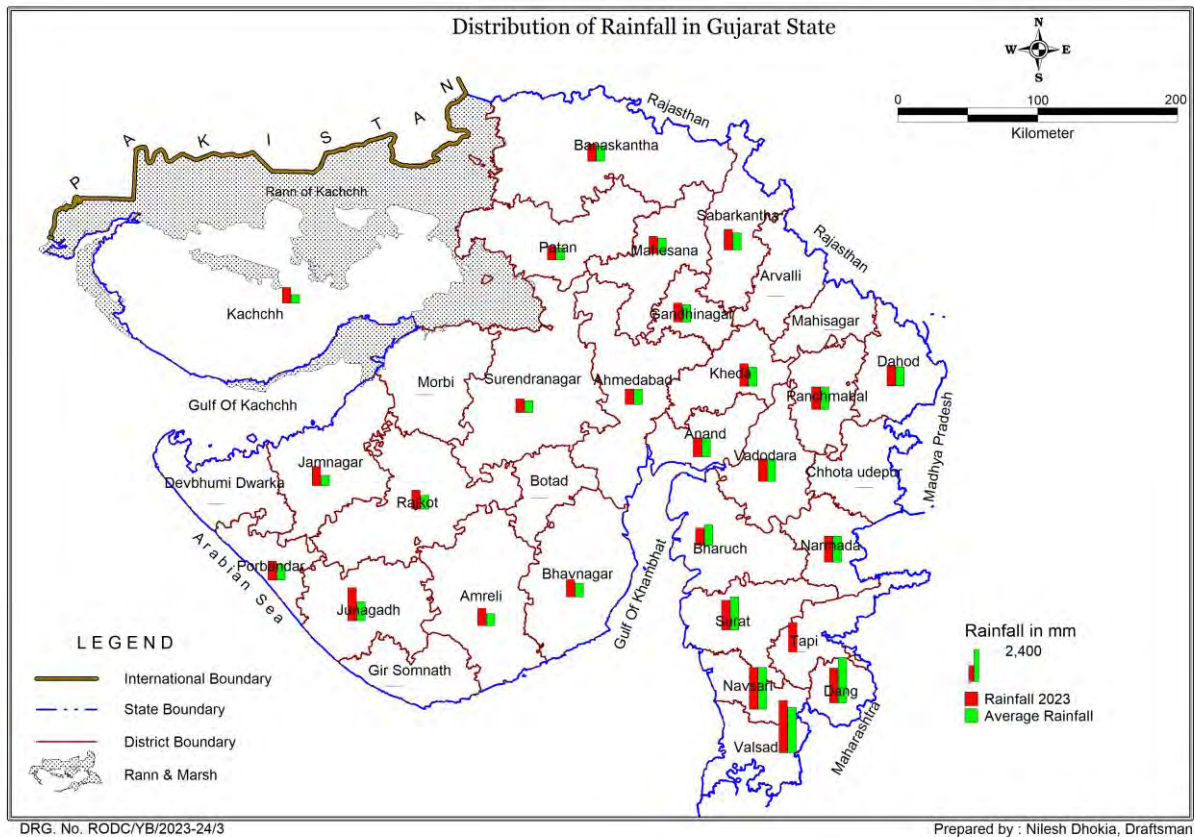


Figure 3: Distribution of rainfall in Gujarat state

Central Ground Water Board, as a part of its national program, has established a network of observation wells in the state of Gujarat for periodic monitoring of groundwater levels and to study its quality variation in time and space. WCR, has set up a network of observation wells known as the Ground Water Monitoring Wells (GWMW's) located all over Gujarat which comprises 1293 GWMWs. The distributions of monitoring wells in different districts are given in Table 2.

Table 1: District wise Average Annual Rainfall in the Gujarat state

District	Rainfall 2023, mm	Average Rainfall, mm	Departure % (Year 2023)
Ahmadabad	693	694.9	-0.27
Amreli	776.2	566.9	36.91
Anand	848.1	860.4	-1.42
Banas Kantha	788.5	666.8	18.25
Bharuch	764.5	905.4	-15.57
Bhavnagar	757.2	608	24.54
Dohad	957.8	879	8.96
Gandhinagar	875.1	763.7	14.59
Jamnagar	883	500.3	76.5
Junagadh	1461.7	835	75.06
Kachchh	707.6	405.3	74.58
Kheda	970.3	869.6	11.58
Mahesana	780.5	716.8	8.88
Narmada	1158.1	1154.7	0.29
Navsari	1887.3	1852.8	1.86
Panch Mahals	1003.5	996.2	0.73
Patan	655.5	579.7	13.07
Porbandar	877.6	671.9	30.61
Rajkot	850.4	613.6	38.58
Sabar Kantha	903.8	793	13.98
Surat	1291.9	1449.8	-10.89
Surendranagar	601.1	531.3	13.13
Tapi	1312	-	-
Dangs	1575.2	2046.9	-23.05
Vadodara	1004.6	1015.5	-1.08
Valsad	2328.1	2012.6	15.68
Total	889.5	710.9	25.12

Large rivers like Narmada, Mahi, Tapi, and Sabarmati flow through the state and form their own basins. Other minor rivers have been grouped together to form river basins. In all, eight river basins have been identified by the All India Soil Survey & Land Use Department as listed below:

1. Sabarmati river basin
2. Mahi river basin
3. Narmada river basin
4. Tapi river basin
5. Luni and other drainage in the Great Rann of Kachchh
6. Draining in to Gulf of Kachchh
7. Southern Kathiawar
8. Sharavati to Tapi

The sub basins of these major river basins and the distribution of groundwater monitoring wells in these different river basins are given in Annexure I.

Map showing hydrograph stations monitored during the year and their distribution in different basin and the district is presented as Fig. 4

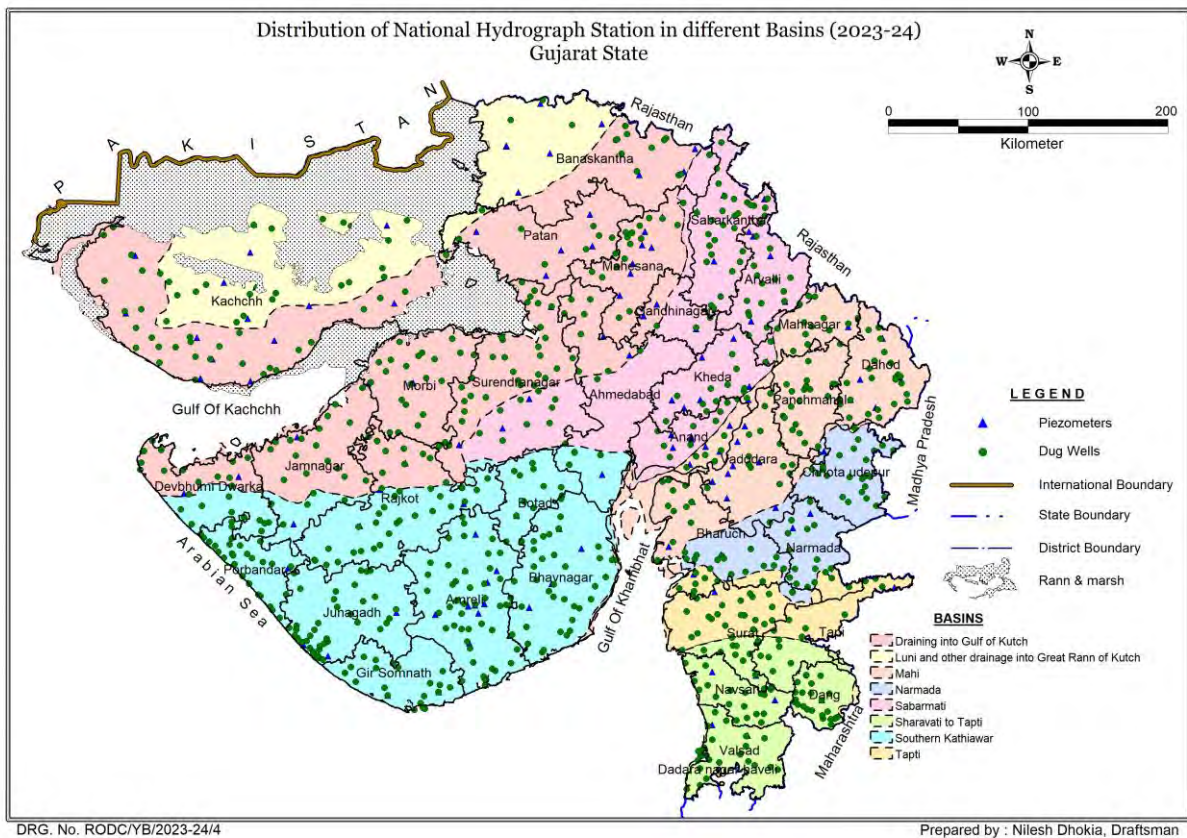


Figure 4: Distribution of Groundwater monitoring wells in the districts and major river basins.

Table 2: Distribution of monitoring wells in different districts of Gujarat State

District	Monitored in May 2023			Monitored in August 2023			Monitored in Nov 2023			Monitored in Jan 2024		
	Pz	DW	Total	Pz	DW	Total	Pz	DW	Total	Pz	DW	Total
Ahmedabad	20	6	26	12	7	19	15	8	23	22	9	31
Amreli	8	30	38	12	33	45	10	43	53	11	49	60
Anand	17	12	29	17	11	28	17	14	31	14	14	28
Aravalli	4	14	18	2	7	9	5	16	21	4	11	15
Banaskantha	14	18	32	25	19	44	40	24	64	39	18	57
Bharuch	5	30	35	6	25	31	5	31	36	6	28	34
Bhavnagar	8	30	38	5	28	33	11	35	46	12	39	51
Botad	1	9	10		7	7	1	7	8	1	8	9
Chhotaudepur	7	18	25	9	17	26	11	21	32	7	10	17
Dahod	6	19	25	9	21	30	7	24	31	4	22	26
Devbhoomi Dwarka		40	40		34	34		42	42		43	43
Gandhinagar	24	1	25	20		20	23	1	24	11	1	12
Gir Somnath	2	12	14		8	8	1	12	13	2	11	13
Jamnagar	2	35	37	4	24	28	4	33	37	8	36	44
Junagadh	6	42	48	7	44	51	4	46	50	9	42	51
Kachchh	15	37	52	43	45	88	35	36	71	34	32	66
Kheda	10	8	18	8	7	15	5	8	13	6	5	11
Mahesana		4	4	4	4	8	4	4	8	3	4	7
Mahisagar	2	9	11	4	14	18	4	11	15	4	12	16
Mehsana	13	17	30	31	19	50	33	17	50	19	18	37
Morbi		12	12		14	14		17	17	1	12	13
Narmada	7	17	24	8	11	19	9	1	10	3	17	20
Navsari	1	18	19	1	19	20	1	22	23	2	22	24
Panchmahal	8	19	27	13	20	33	11	19	30	13	19	32
Patan	12	10	22	21	9	30	19	8	27	23	11	34
Porbandar	3	32	35	3	25	28	3	31	34	5	30	35
Rajkot	2	28	30	16	31	47	13	35	48	8	33	41
Sabarkantha	6	25	31	6	22	28	10	32	42	7	22	29
Surat	3	18	21	5	40	45	5	37	42	5	38	43
Surendranagar	2	28	30	10	48	58	11	50	61	9	49	58
Tapi	1	12	13		17	17		15	15		16	16
Dangs	1	22	23	1	23	24	1	8	9	1	23	24
Vadodara	3	10	13	10	10	20	12	1	13	7	1	8
Valsad	1	27	28		17	17	1	20	21	1	37	38
Gujarat Total	214	669	883	312	680	992	331	729	1060	301	742	1043

3. HYDROGEOLOGY

The high relief areas in the eastern and north-eastern parts of the Gujarat state occupied by the Deccan Traps and the Archeans respectively have steep topographic gradients resulting in high run-off, and therefore, provide little scope for groundwater recharge. The groundwater potential in this terrain is limited. The large alluvial tract extending from Banaskantha district in the north to Surat and Valsad districts in the south constitutes the largest and most potential groundwater reservoir in the state. The aquifers are extensive, thick, hydraulically connected and are moderate to high yielding. To the west of this alluvial tract, especially around the discharge areas, characteristic artesian free flow conditions are observed. Almost the entire Saurashtra and Kachchh regions are occupied by a variety of hard and fissured formations which include basalt and consolidated sedimentary formations with semi- consolidated sediments along the low-lying coastal areas. The compact and fissured nature of rocks gives rise to discontinuous aquifers with moderate yield potential. The friable semi- consolidated sandstone forms an aquifer with moderate yield potential. The coastal and deltaic areas in the state form a narrow linear strip and are underlain by Tertiary sediments and Alluvium. Though highly potential aquifers occur in these areas, salinity is a constraint for groundwater development. Groundwater withdrawal requires to be strictly regulated so that it does not exceed the annual recharge and also that it does not disturb the hydro- chemical balance leading to seawater ingress. The quality of groundwater in both hard rock and alluvial terrain is, by and large suitable except, in the coastal areas, estuarine tract and the Rann where the degree of mineralisation in groundwater is rather high and salinity is common. Salinity in groundwater is also noticed in the arid and semi-arid tract. The different conditions of groundwater occurrence in the state have led to divergent groundwater situations in the areas occupied by different geological formations (Fig. 5). The formation- wise hydrogeological characteristics in the state of Gujarat has been broadly summarised in the Table 3.

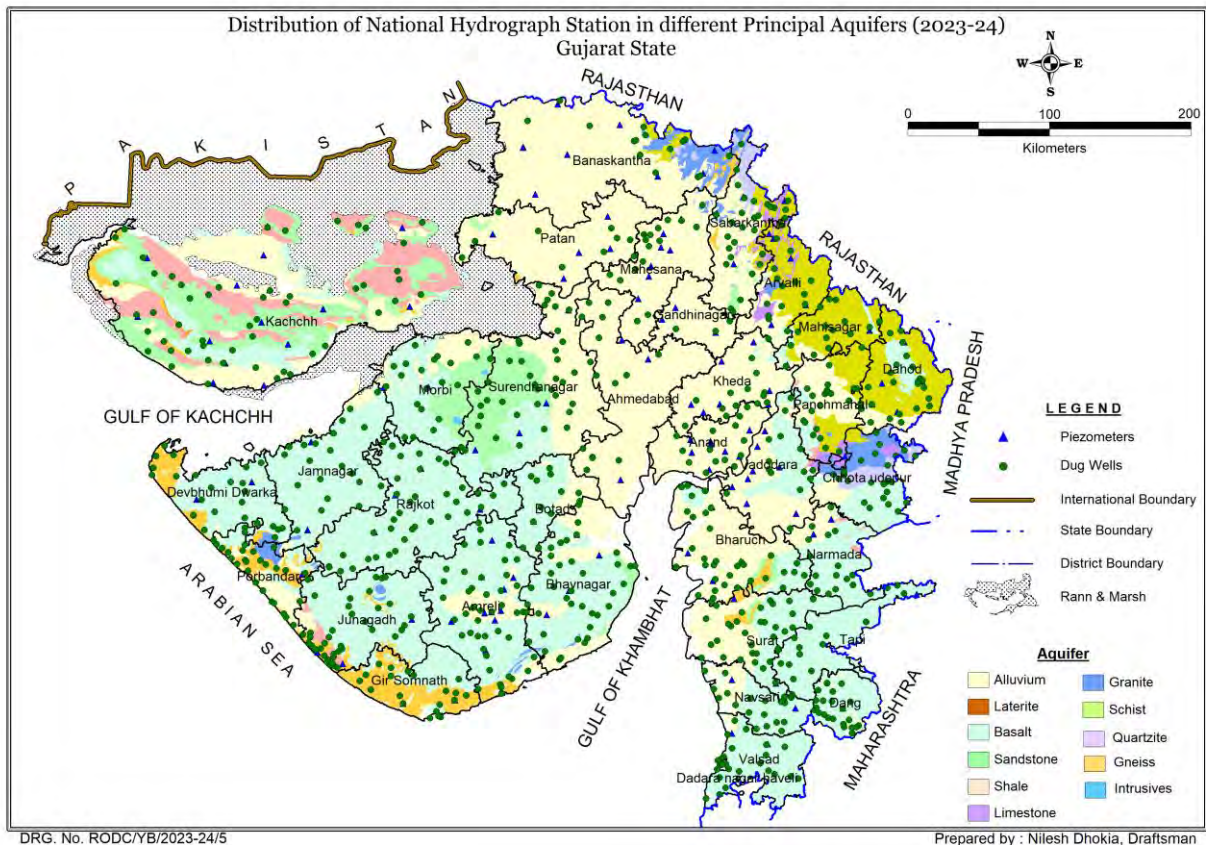


Figure 5: Hydrogeological units and distribution of Groundwater Monitoring Well

Achaean and Proterozoic Formation: Rocks of Archaean and Proterozoic age occupy the north-eastern and eastern parts of the state and cover extensive areas in parts of Vadodara, Kheda, Panchmahals, Sabarkantha, Mahesana and Banaskantha districts. These rocks, which include gneiss, schist, phyllite, quartzite and metamorphosed igneous intrusives, do not form good aquifers due to their poor porosity and permeability. Dug wells, dug-cum-bore wells and bore wells are feasible only in favourable sites where sufficient weathered mantle and/or fractures and joints occur. The wells tapping these aquifers have maximum depth of 30 to 40 mbgl beyond which groundwater occurrence is not common. The yield of wells in these rocks varies from a few cubic meters to 100 cubic meters per day at minimal drawdown.

Mesozoic Formation: Jurassic and Cretaceous formations include Pachchham, Chari, Katrol and Bhuj Series in Kachchh, Dhrangadhra and Wadhwan sandstones in northeastern part of Saurashtra, Bagh beds along the Narmada River and Himmatnagar sandstones in Sabarkantha district. Pachchham and Chari Series are predominantly calcareous while Wadhwan sandstones and Bagh beds include some limestone. The rest are arenaceous and consist of inter-bedded sandstone and shale sequences. The most important and productive aquifer among these formations occurs in the Bhuj Series consisting of predominantly friable, soft, medium to coarse grained sandstone occurring at depths of few meters to as much as 300 meters. Tube wells constructed up to 200 mbgl in this formation yield 70 to 170 m³/hour for drawdown of about 10 m. The salinity distribution in groundwater in Upper Bhuj aquifers is generally uniform with low concentration of dissolved solids in the upland and non-irrigated areas. Salinity gradually increases towards area of intensive irrigation and discharge area.

The Dhrangadhra sandstones comprise of about 400 m thick, fine to coarse grained sandstones

inter-bedded occasionally with carbonaceous shale. Tubewells tapping about 100m of aquifer thickness in this formation within a depth of 212 mbgl yield limited to moderatedischarge of the order 14 to 80 m³/hour. Basic sills of 30 to 50 m thickness are found intruded in the Lower Dhrangadhra formation in the northern part of Surendranagar and Rajkot districts at Gala, Sathapur and Chuli villages. Normally, the sills mark the lower limit of fresh groundwater occurrence. In the northern part of Rajkot district and eastern part of Jamnagar districts, these sandstones have been encountered at depths of 200 – 250 mbgl below Traps, in semi- confined conditions. The Himmatnagar sandstones are exposed in a narrow belt between Eklara and Ranasan villages in Sabarkantha district. They also occur below the traps near Dhansura (23°24': 75°15') at depths of 60 to 100 mbgl. Patches of these sandstones occur under the alluvial cover near Sanseli (22°42'; 75°25'), Madhwas (23°24'; 73°27') and Gugalpur (22°15':73°28') and on the northern bank of Goma River. Although these sandstones are generally fine grained, hard and compact, coarse friable sandstones are observed at places near Kapadvanj. These sandstones, when saturated to moderate depths, form potential aquifers. Tubewells tapping these aquifers yield up to 50 m³/hour.

Deccan Trap: These are essentially basaltic lava flows with a general horizontal to near horizontal disposition over a very wide area. From groundwater potential point of view, these rocks constitute moderately promising aquifers. The jointed and fractured basalts hold and transmit water in moderate quantities. The thickness of traps ranges from 100 to 150 m in Kachchh to more than 1000 m in Cambay basin.

Tertiary Formation: These rocks are exposed between Narmada and Tapi rivers in parts of Bharuch and Surat districts. They also occur in the coastal tracts of Saurashtra and Kachchh. Gaj beds belonging to Miocene occur all along the Saurashtra coast. These consist of limestone, clay and grit mostly gypsiferous with thin sand layers. Drilling at Okha (22°28': 69°16') and Veraval (20°54':70°25') has shown that locally, the Gaj beds extend beyond 300m depth and the deeper zones yield meagre quantities of saline groundwater. The quality of groundwater in Gaj beds along Saurashtra coast is slightly inferior on account of intercalated clay bands and inherent salinity of Gaj beds, which were deposited under marine conditions. However, the quality of groundwater in the upper Gaj limestone is better. The chloride content in groundwater ranges from 100 to 200 mg/l between Veraval, Sil (21° 11': 70° 03') and around Porbandar. Dwarka beds, comprising of gypsiferous and calcareous red colour clays and sandy limestone are about 150 m thick. Groundwater in the Dwarka beds is of poor quality with chloride content ranging from 500 to 700 mg/l. Yield of dug wells are of the order of 37 m³/day and tube wells yield about 22 m³/day for a drawdown of about 4 m. In the Kachchh region, the sandstones of Manchhar series form good aquifers. Tubewells, ranging in depth from 116 to 169 m bgl, yield between 68 to 136 m³/hour and the chloride content ranges between 96 and 612 mg/l. However, the Tertiary rocks, in general, do not form promising aquifers for groundwater development because of the inferior quality of groundwater. In southern Gujarat (Narmada-Tapti area), the tertiary rocks comprises of sandstone, shale and limestone intercalated with gravel which locally exceed 100 m in thickness. Groundwater in these rocks is mostly brackish to saline and yields are in shallow tube wells.

Quaternary Formation: The Quaternary formations include milliolite limestone, alluvium and aeolian deposits. The milliolite limestone is of limited thickness and its occurrence is confined to the coastal tract of Saurashtra. The alluvial and aeolian deposits extend as one continuous plain, from north to south and also as valley-fills in the hard rock terrain. Highly cavernous milliolite limestone is locally a very productive aquifer. Dug wells tapping these limestones are capable of yielding up to 200 m³/day. These are the repositories of potable groundwater in an otherwise saline

coastal belt of Saurashtra. Quaternary sediments occupy an area of about 86,680 km². Their thickness in the Cambay Basin is estimated to be of the order of 500 m. However, towards north in the districts of Mahesana Banaskantha and Sabarkantha, the thickness reduces to less than 50 m near the hilly tract. In general, the thickness of the alluvium in north Gujarat ranges from 40 to 500 m. In the southern Gujarat plains, the alluvium mostly overlies the basalts and the tertiary sediments. Its thickness ranges from a few meters near the rock outcrops to over 75 m in the lower reaches. The Quaternary sediments vary in character and composition. In the Cambay basin, these are predominantly composed of clay, silt and sand with “kankar”. The proportion of gravels, pebbles and boulders, etc., increases towards the hilly tracts. Such areas, forming the piedmont terrain, extend for 10 to 20 km from the hills into the plains. A number of abandoned river channels and valley fills occur in the rocky areas. These are of great significance for the development of groundwater in an otherwise less promising terrain. Groundwater in the alluvium occurs under unconfined conditions at shallow depths. In deeper horizons, it occurs under semi-confined to confined and artesian conditions. Detailed study in Mahesana, Banaskantha, Rajkot, Surendranagar, Kheda, Sabarkantha, Kachchh and Ahmedabad districts has revealed that multiple aquifers exist in major part of the alluvial plains of Gujarat up to a depth of 500 m.

These aquifers have their areas of recharge in the piedmont terrain and the hilly areas towards the east and northeast. Most of the aquifers coalesce into one phreatic aquifer in the recharge area but are identified as separate aquifers occurring under artesian conditions in the central part of the basin and in the discharge areas towards west and southwest. In parts of Mahesana and Banaskantha districts, the quaternary sediments are up to 600 m thick, comprising of 10 to 125 m thick younger alluvial deposits (Pleistocene to Recent) and 100 to 475 m thick older alluvial deposits (Pliocene to Pleistocene). The entire alluvial sequence has been divided into five major aquifers viz., A (up to 125 m) or phreatic aquifer and B, C, D and E (between 125 and 600 m depth) or confined aquifers.

Due to over-exploitation, the water levels in the phreatic aquifer have declined alarmingly rendering them almost dry. Presently, first and second confined aquifers are the most exploited. The decline of water level in these aquifers is more than 40 m since 1961 at most of the area. The yield of tube wells tapping users confined aquifer vary from 20 to 40 lps.

Table 3: Distribution of hydrogeological formations in Gujarat and their Potential

Age	Rock Formation	Distribution	Hydrogeological Characteristics
Porous Formation			
Quaternary to upper Tertiary	Impure limestones, sandstones, conglomerates, pebble beds, silt stones, sands, pebbles, gravels etc.	Ahmedabad, Amreli, Banaskantha, Bhavnagar, Bharuch, Kachchh, Kheda, Jamnagar, Junagadh, Rajkot, Mahesana, Surendranagar and Valsad Districts	Unconfined shallow aquifer, leaky confined/ confined and deeper Aquifer. Large to moderate yield prospects: 10 to 40 lps, Storativity: 1.6×10^{-4} to 7.3×10^{-4} , Hydraulic Conductivity: 5 to 20 m/day, Transmissivity: 50 to 2000 m ² /day

Mesozoic	Sandstones, Shales, Limestones and Grits	Kachchh, Surendranagar, Sabarkantha and Vado-daradistricts	Discontinuous aquifers with limited thickness of 50 to 300meters. Limited yield prospects <15 lps, Hydraulic Conductivity: 2 to 10m/day, Transmissivity: 50 to 1000m ² /day
Fissured formation			
Mesozoic to Palaeozoic	Basalt with intertrappean clays	Uplands of saurashtra, Kachchh Region, scattered patches in Panchmahals, Sabarkantha and Vadodara districts, Continuous belt in eastern part of Bharuch,	Mesozoic to Palaeozoic
Archaean and Pre- Cambrian	Granites, Gneiss, Marbles, Schists, Phyllites and Slate	Banaskantha, Sabarkantha, Panchmahals, vadodara and Kheda districts.	Groundwater occurrence restricted to weathered and fractured zones having secondary porosity, limited yield prospects of 2 to 5 lps.

4. GROUNDWATER SCENARIO

Systematic and regular monitoring of groundwater levels brings out the changes taking place in the groundwater regime. The maps so generated are of immense help for regional groundwater flow modelling which serves as a groundwater management tool to provide the necessary advance information to the user agencies to prepare contingency plans in case of unfavourable groundwater recharge situation. The data also has immense utility in deciding the legal issues arising out of conflicting interests of groundwater users.

The monitoring of groundwater levels has been carried out at groundwater monitoring wells four times in a year simultaneously throughout the State.

Water level data of the groundwater monitoring wells collected during the year 2023 - 2024 has been utilized to prepare various maps showing depth to water level and fluctuation of water level. Depth to water level maps is useful in dealing with problems of water logging and artificial recharge, where the relative position of water level with reference to the ground surface is of critical importance. Water level fluctuation maps (rise or fall) are indispensable for estimation of change in storage in the aquifer.

For the purpose of presentation, Gujarat state has been divided into three regions, namely,

- the *Kachchh* region comprising Kachchh district,
- the *Saurashtra* region comprising Amreli, Bhavnagar, Botad, Devbhumi Dwarka, Gir Somnath, Jamnagar, Junagadh, Morbi, Porbandar Rajkot and Surendranagar districts; and
- the mainland Gujarat. it has been further subdivided into two regions, namely,
 - *North Gujarat* comprising, Ahmedabad, Anand, Aravalli, Banaskantha, Dahod, Gandhinagar, Kheda, Mahesana, Mahisagar, Panchmahals, Patan and Sabarkantha districts;
 - *South Gujarat* comprising Bharuch, Chhotaudepur, Narmada, Navsari, Surat, Tapi, Dangs Vadodara and Valsad districts.

The Union Territory of Daman and Diu and Dadra and Nagar Haveli has been described separately.

The water level data of these open wells and piezometers are presented in the Annexure II. The data is analysed for each set of measurement, and report prepared which include following maps to understand the groundwater regime in the state.

1. Depth to water level
2. Seasonal fluctuation - water level fluctuation in comparison to pre- monsoon.
3. Annual fluctuation - water level fluctuation in comparison to same month in the previous year.
4. Decadal fluctuation - water level fluctuation in the month of measurement with reference to the decadal average for the same month.

4.1 Groundwater Scenario in Unconfined Aquifer

4.1.1 Depth to Water Level

A graphical analysis was done to understand the water level behaviours of the groundwater monitoring wells of unconfined aquifers in the different categories of the water levels during every monitoring period and the same is depicted in Fig. 6 (a, b, c, d)

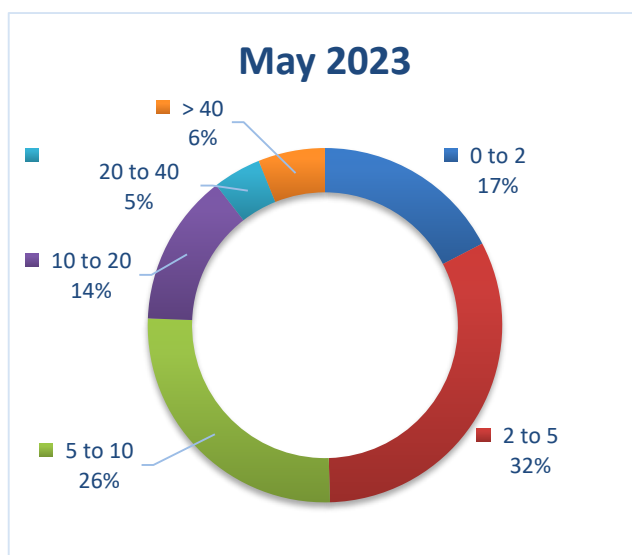


Figure 6 (a)

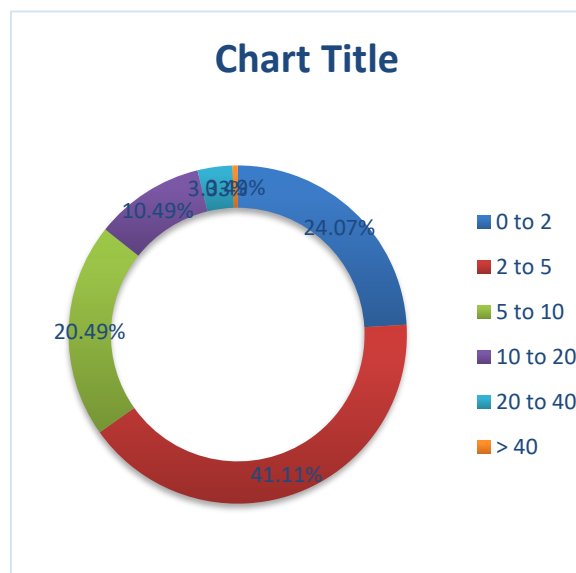


Figure 6 (b)

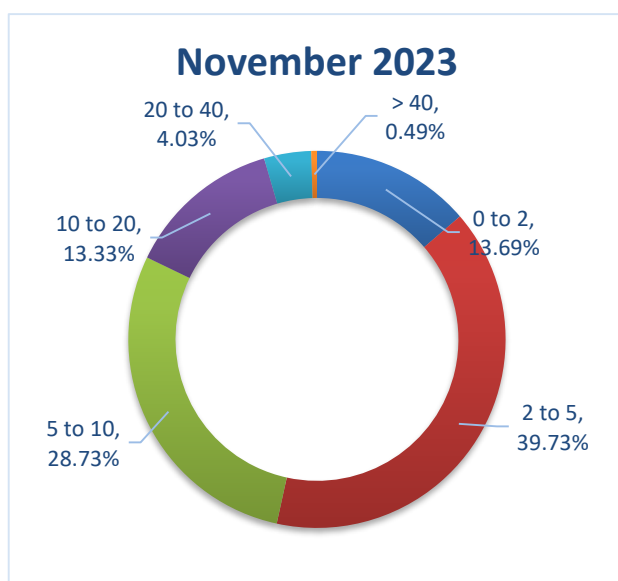


Fig. 6 (c)

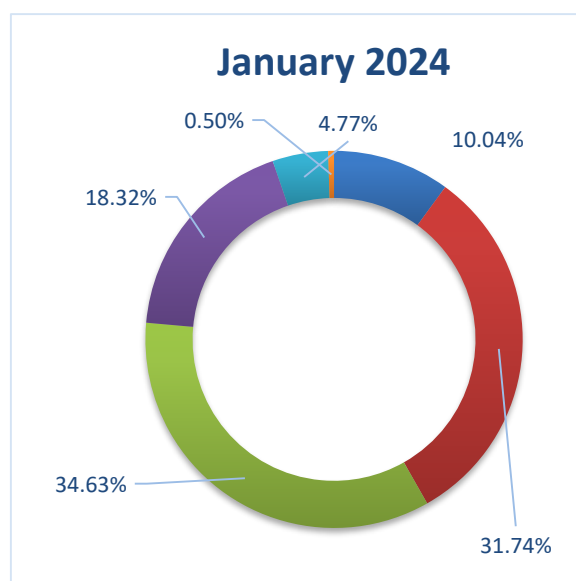


Fig. 6 (d)

Figure 6: Graph showing Distribution of depth to water level in Gujarat State

Depth to Water Level (May 2023)

During May 2023, in the pursuance of Figure 7 and Table 4 reveals that the depth to water level of unconfined aquifer ranges from 0.5 m bgl at Mundra in Kachchh district to 48.63 m bgl at Himatnagar in Sabarkantha district during May 2023. Details of depth to water level in different range, i.e. from 0 to 2 m, 2 to 5 m, 5 to 10 m, 10 to 20 m, 20 to 40 m and more than 40 m bgl is presented in table 7. The perusal of the depth to water map reveals that about 26% of the total wells analysed falls in the water level range of 0 to 5 m bgl where as water level of 5 to 20 m bgl is observed in 67% of Gujarat state. Water levels of 20 to 40 m bgl are observed in Anand, Aravalli, Banaskantha, Junagadh, Kheda, Gandhinagar, Sabarkantha, Narmada and Vadodara districts in isolated patches. The deepest water level more than 40 m bgl is recorded in Sabarkantha district of Gujarat State.

In North Gujarat, about 55% of the total well analysed falls with in the water level range of 0-10 m bgl and out of which alone 20% represent the water level range of 0-5 m bgl. Deeper water levels ranges 20 to 40 mbgl are experienced in major part of Anand, Banaskantha, Gandhinagar, Kheda, Mahesana and Sabarkantha districts. The deepest water level of 48.63 m bgl bgl in Sabarkantha district whereas shallowest water level of 1.23 m bgl has been recorded at Mahesana district.

In South Gujarat, about 78% of the total wells has recorded water level less than 10 m bgl and out of which 30% alone has the water level in the range of 0-5 m bgl. Deeper water levels of 20 to 40 m bgl mainly observed in isolated patch in major parts of Narmada and Vadodara district. The deepest water level of 23.63 m bgl is recorded at Vadodara district whereas the shallowest water level of 0.89 m bgl bgl has been recorded at Bharuch district.

In Saurashtra region, about 53% of the total well shows water levels 0-10 m bgl and water levels of 10 to 40 mbgl are sporadically disbursed in isolated patches. The shallowest water level of 0.50 m bgl has been recorded at Morbi district. The deepest water level of 39.40 m bgl recorded in Junagadh district.

In Kachchh region, more than 93% of the total well analysed, the water level ranges in less than 20 mbgl in major part of the district. In central and eastern part of Kachchh, the water level ranges 20 to 40 m bgl in isolated patches. The deepest water level of 30.87 m bgl is recorded at Rapar and the shallowest water level of 0.50 m bgl at Mundra.

Depth to Water Level in Gujarat State Pre-Monsoon (May 2023)

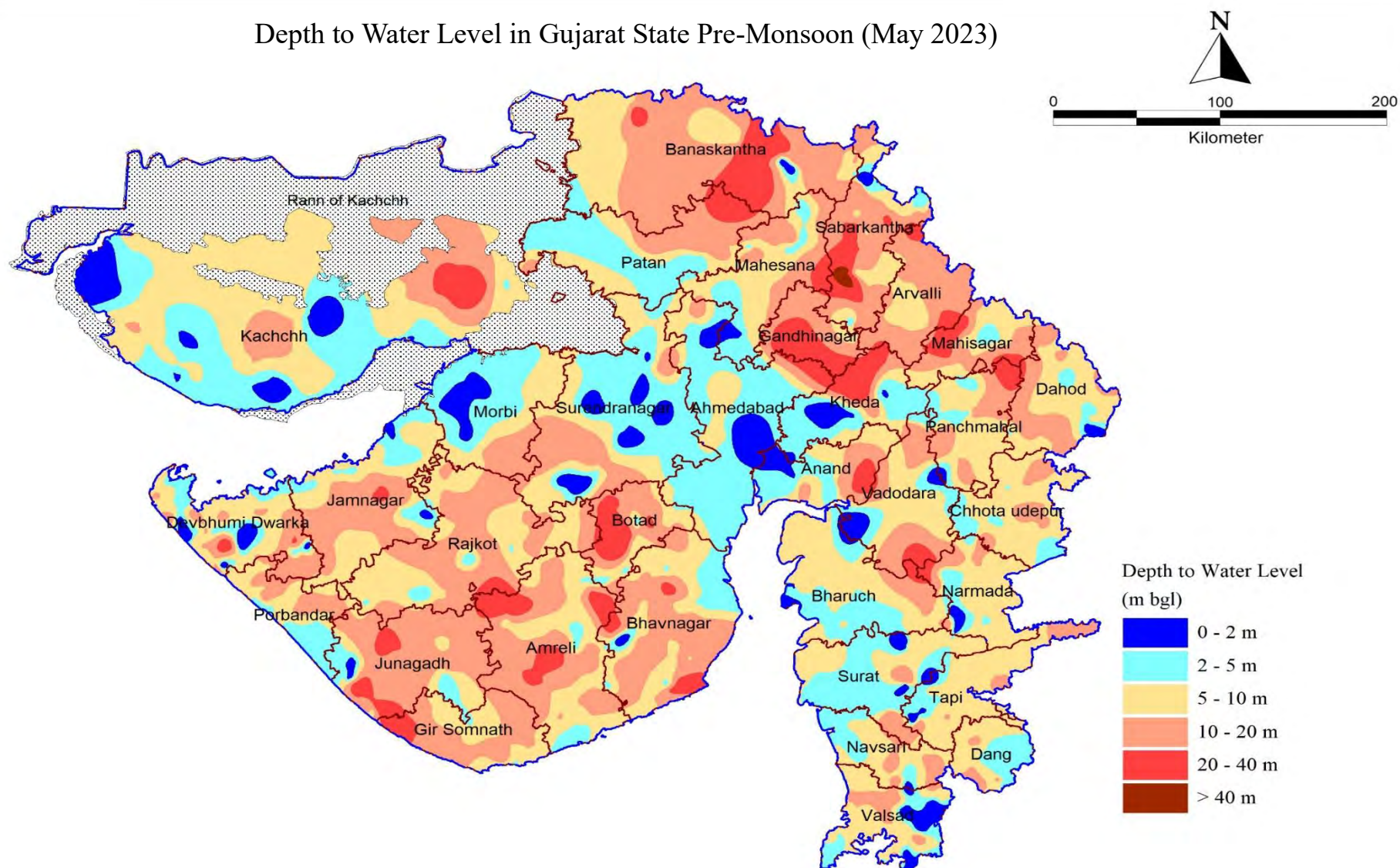


Figure 7: Depth to water level map of Gujarat (May 2023)

Table 4: Well wise categorisation of depth to water level May 2023 (Unconfined)

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	12	2.63	13.48	0	6	5	1	0	0
					0.0%	50.0%	41.7%	8.3%	0.0%	0.0%
2	Anand	14	1.93	25.58	2	3	4	3	2	0
					14.3%	21.4%	28.6%	21.4%	14.3%	0.0%
3	Aravalli	15	5.75	25.08	0	0	4	10	1	0
					0.0%	0.0%	26.7%	66.7%	6.7%	0.0%
4	Banas Kantha	21	6.24	28.93	0	0	5	10	6	0
					0.0%	0.0%	23.8%	47.6%	28.6%	0.0%
5	Dahod	24	1.74	16.88	1	3	12	8	0	0
					4.2%	12.5%	50.0%	33.3%	0.0%	0.0%
6	Gandhinagar	2	19.35	34.14	0	0	0	1	1	0
					0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
7	Kheda	12	1.8	37.32	2	3	2	2	3	0
					16.7%	25.0%	16.7%	16.7%	25.0%	0.0%
8	Mahesana	27	1.23	20.56	1	7	9	9	1	0
					3.7%	25.9%	33.3%	33.3%	3.7%	0.0%
9	Mahisagar	11	2.8	31.66	0	1	4	4	2	0
					0.0%	9.1%	36.4%	36.4%	18.2%	0.0%
10	Panch Mahals	22	2.08	24.7	0	4	10	7	1	0
					0.0%	18.2%	45.5%	31.8%	4.5%	0.0%
11	Patan	12	2.05	19.15	0	7	2	3	0	0
					0.0%	58.3%	16.7%	25.0%	0.0%	0.0%
12	Sabar Kantha	28	3.5	48.63	0	2	10	12	3	1
					0.0%	7.1%	35.7%	42.9%	10.7%	3.6%
	North Gujarat	200	1.23	48.63	6	36	67	70	20	1
					3.0%	18.0%	33.5%	35.0%	10.0%	0.5%
13	Bharuch	32	0.89	13.1	1	11	19	1	0	0
					3.1%	34.4%	59.4%	3.1%	0.0%	0.0%
14	Chhotaudepur	21	3.18	13	0	3	12	6	0	0
					0.0%	14.3%	57.1%	28.6%	0.0%	0.0%
15	Narmada	17	1.98	20.06	1	3	8	4	1	0
					5.9%	17.6%	47.1%	23.5%	5.9%	0.0%
16	Navsari	19	2.15	13.5	0	7	8	4	0	0
					0.0%	36.8%	42.1%	21.1%	0.0%	0.0%
17	Surat	19	2.34	17.75	0	9	7	3	0	0
					0.0%	47.4%	36.8%	15.8%	0.0%	0.0%
18	Tapi	13	1.75	15.01	1	3	4	5	0	0
					7.7%	23.1%	30.8%	38.5%	0.0%	0.0%
19	Dangs	23	2.58	13.05	0	7	11	5	0	0
					0.0%	30.4%	47.8%	21.7%	0.0%	0.0%
20	Vadodara	10	2.02	23.63	0	2	5	2	1	0
					0.0%	20.0%	50.0%	20.0%	10.0%	0.0%
21	Valsad	28	3	13.92	0	6	14	8	0	0
					0.0%	21.4%	50.0%	28.6%	0.0%	0.0%
	South Gujarat	182	0.89	23.63	3	51	88	38	2	0
					1.6%	28.0%	48.4%	20.9%	1.1%	0.0%
22	Amreli	35	4.02	33.17	0	5	9	14	7	0
					0.0%	14.3%	25.7%	40.0%	20.0%	0.0%
23	Bhavnagar	34	3.12	24.54	0	6	9	15	4	0
					0.0%	17.6%	26.5%	44.1%	11.8%	0.0%
24	Botad	10	3.67	35.8	0	3	2	2	3	0
					0.0%	30.0%	20.0%	20.0%	30.0%	0.0%
25	Devbhumi Dwarka	47	1.7	26.07	1	10	16	17	3	0
					2.1%	21.3%	34.0%	36.2%	6.4%	0.0%
26	Gir Somnath	18	2.6	27.17	0	3	5	9	1	0
					0.0%	16.7%	27.8%	50.0%	5.6%	0.0%
27	Jamnagar	30	1.42	23.25	2	9	8	10	1	0
					6.7%	30.0%	26.7%	33.3%	3.3%	0.0%

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in diffrent depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
28	Junagadh	43	3.37	39.4	0	3	9	25	6	0
					0.0%	7.0%	20.9%	58.1%	14.0%	0.0%
29	Morbi	14	0.5	18.02	3	7	2	2	0	0
					21.4%	50.0%	14.3%	14.3%	0.0%	0.0%
30	Porbandar	31	2.04	15.6	0	10	11	10	0	0
					0.0%	32.3%	35.5%	32.3%	0.0%	0.0%
31	Rajkot	27	2.25	19.6	0	4	9	14	0	0
					0.0%	14.8%	33.3%	51.9%	0.0%	0.0%
32	Surendranagar	34	0.95	19.38	4	14	7	9	0	0
					11.8%	41.2%	20.6%	26.5%	0.0%	0.0%
	Saurashtra	323	0.50	39.40	10	74	87	127	25	0
					3.1%	22.9%	26.9%	39.3%	7.7%	0.0%
33	Kachchh	40	0.5	30.87	5	13	11	8	3	0
					12.5%	32.5%	27.5%	20.0%	7.5%	0.0%
	Kachchh	40	0.50	30.87	5	13	11	8	3	0
					12.5%	32.5%	27.5%	20.0%	7.5%	0.0%
	Gujarat State	745	0.50	48.63	24	174	253	243	50	1
					3.2%	23.4%	34.0%	32.6%	6.7%	0.1%

Depth to Water Level (August 2023)

During August 2023, in the pursuance of Figure. 8 and Table 5 reveals that the depth to water level of unconfined aquifer ranges from 0.1 m bgl at Mahegam in Bharuch district to 63.71 m bgl at Kuchwada, Banaskatha district during August 2023. Details of depth to water level in different range, i.e. from 0 to 2 m, 2 to 5 m, 5 to 10 m, 10 to 20 m, 20 to 40 m and more than 40 m bgl is presented in table 8.

The perusal of the depth to water map reveals that about 64.2% of the total wells analysed falls in the water level range of 0 to 5 m bgl where as water level of 5 to 20 m bgl is observed in 31.8% of Gujarat state. Water levels of 20 to 40 m bgl are observed in Anand, Banaskantha, Kheda, Mahesana, Gandhinagar, Narmada, Vadodara, Amreli, Kachch districts in isolated patches. The deepest water level more than 40 m bgl is recorded in Banaskantha, Sabarkantha, Amreli, Kachch districts of Gujarat State.

In North Gujarat, about 93.1% of the total well analysed falls with in the water level range of 20 m bgl and out of which alone 70.4% represent the water level range of 0-10 m bgl. Deeper water levels ranges 20 to 40 mbgl are experienced in major part of Anand, Banaskantha, Kheda, Mahesana, Gandhinagar districts. The deepest water level of 63.71 m bgl at Kuchawada, Dantiwada in Banaskantha district whereas shallowest water level of 0.13 m bgl has been recorded at Kapadvanj in Kheda district.

In South Gujarat, about 92.9% of the total wells has recorded water level less than 10 m bgl and out of which 76.6% alone has the water level in the range of 0-5 m bgl. Deeper water levels of 20 to 40 m bgl mainly observed in isolated patch in major parts of Narmada, Vadodara district. The deepest water level of 18.17 m bgl is recorded at Baman Phalia in Narmada district whereas the shallowest water level of 0.1 mbgl has been recorded at Mahegam in Bharuch district.

In Saurashtra region, about 98.5% of the total well shows water levels less than 20 m bgl and water levels of 20 to 40 mbgl are sporadically disbursed in isolated patches scattered in all areas of Amreli districts. The shallowest water level of 0.2 m bgl has been recorded at Falla, Jamnagar district. The deepest water level of 30.27 m bgl recorded at Dharangani, Dhari, Amreli district.

In Kachchh region, more than 84.3% of the total well analysed, the water level ranges in 0-20 mbgl in major part of the district. In central and eastern part of Kachchh, the water level ranges 20 to 40 m bgl in isolated patches. The deepest water level of 38.27 m bgl is recorded at Lakhpat and the shallowest water level of 0.48 m bgl at Bhuj.

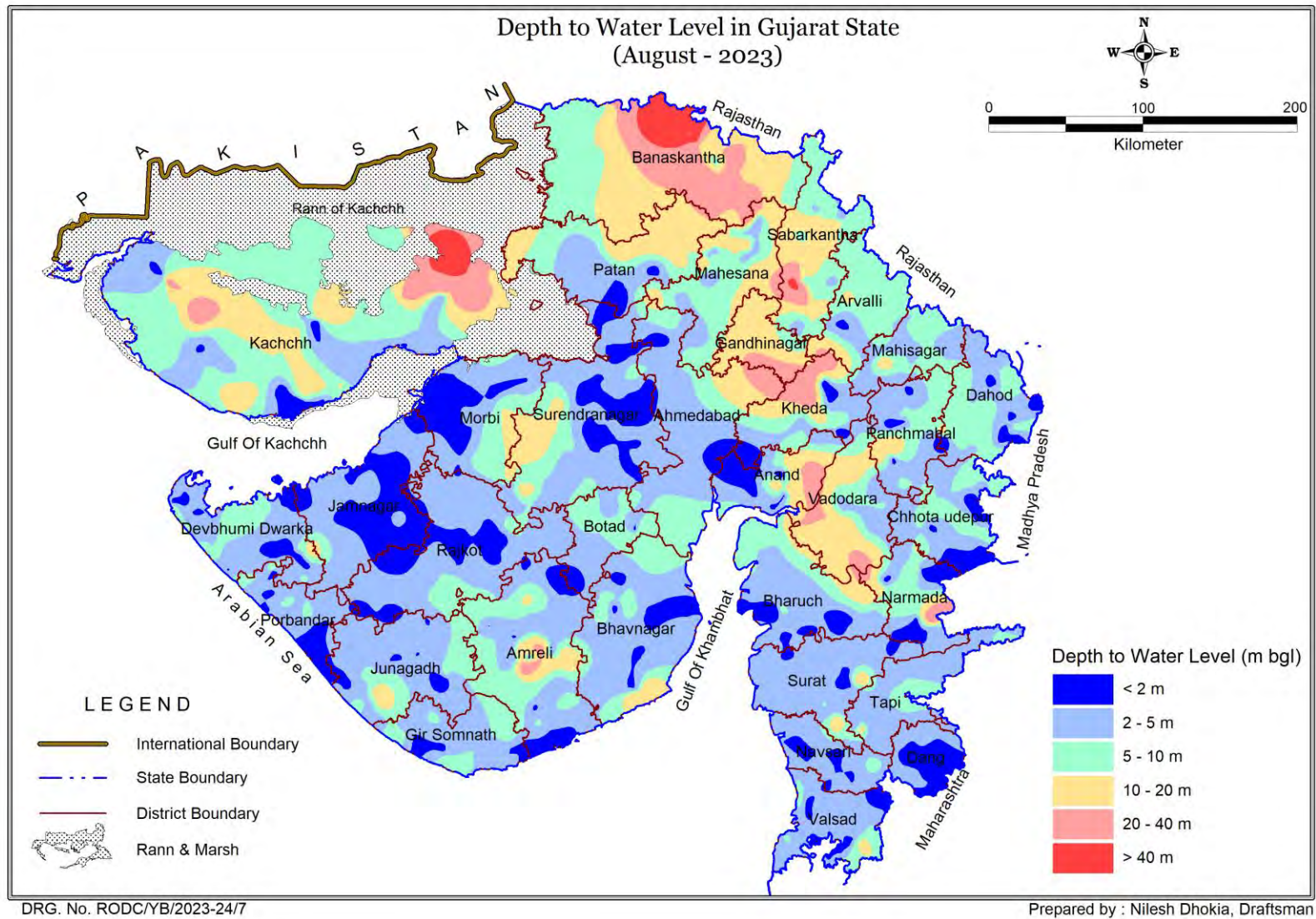


Figure 8: Depth to water level map of Gujarat (August 2023)

Table 5: Well wise categorisation of depth to water level August 2023

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	9	0.89	7.01	1	5	3	0	0	0
					11.1%	55.6%	33.3%	0.0%	0.0%	0.0%
2	Anand	14	0.5	23.8	6	2	1	3	2	0
					42.9%	14.3%	7.1%	21.4%	14.3%	0.0%
3	Aravalli	8	1.6	12.1	1	0	5	2	0	0
					12.5%	0.0%	62.5%	25.0%	0.0%	0.0%
4	Banaskantha	26	6.07	63.71	0	0	7	12	6	1
					0.0%	0.0%	26.9%	46.2%	23.1%	3.8%
5	Dahod	28	0.5	11.5	6	8	13	1	0	0.00
					21.4%	28.6%	46.4%	3.6%	0.0%	0.0%
6	Gandhinagar	2	0.6	5.15	0	0	0	1	1	0
					0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
7	Kheda	9	0.13	8.8	3	1	2	1	2	0
					33.3%	11.1%	22.2%	11.1%	22.2%	0.0%
8	Mehsana	30	1.89	34	1	9	10	9	1	0
					3.3%	30.0%	33.3%	30.0%	3.3%	0.0%
9	Mahisagar	18	0.48	13.84	2	10	5	1	0	0
					11.1%	55.6%	27.8%	5.6%	0.0%	0.0%
10	Panchmahal	23	0.84	10.2	4	7	8	4	0	0
					17.4%	30.4%	34.8%	17.4%	0.0%	0.0%
11	Patan	10	0.26	29.55	3	2	2	3	0	0
					30.0%	20.0%	20.0%	30.0%	0.0%	0.0%
12	Sabarkantha	26	0.97	16.04	1	4	11	9	0	1
					3.8%	15.4%	42.3%	34.6%	0.0%	3.8%
	North Gujarat	203	0.13	63.71	28	48	67	46	12	2
					13.8%	23.6%	33.0%	22.7%	5.9%	1.0%
13	Bharuch	27	0.1	7.6	6	14	7	0	0	0
					22.2%	51.9%	25.9%	0.0%	0.0%	0.0%
14	Chhota Udaipur	19	0.6	9.3	5	7	7	0	0	0
					26.3%	36.8%	36.8%	0.0%	0.0%	0.0%
15	Narmada	15	1.3	18.17	6	3	3	2	1	0
					40.0%	20.0%	20.0%	13.3%	6.7%	0.0%
16	Navsari	21	1.89	5.83	7	13	1	0	0	0
					33.3%	61.9%	4.8%	0.0%	0.0%	0.0%
17	Surat	43	0.7	9.55	6	33	2	2	0	0
					14.0%	76.7%	4.7%	4.7%	0.0%	0.0%
18	Tapi	17	1.94	12.55	2	9	5	1	0	0
					11.8%	52.9%	29.4%	5.9%	0.0%	0.0%
19	Dangs	24	1.3	3.4	12	11	1	0	0	0
					50.0%	45.8%	4.2%	0.0%	0.0%	0.0%
20	Vadodara	15	0.2	13.7	0	5	3	4	3	0
					0.0%	33.3%	20.0%	26.7%	20.0%	0.0%
21	Valsad	16	0.4	11.1	6	6	3	1	0	0
					37.5%	37.5%	18.8%	6.3%	0.0%	0.0%
	South Gujarat	197	0.10	18.17	50	101	32	10	4	0
					25.4%	51.3%	16.2%	5.1%	2.0%	0.0%
22	Amreli	41	0.79	30.27	9	15	7	5	4	1
					22.0%	36.6%	17.1%	12.2%	9.8%	2.4%
23	Bhavnagar	29	1.3	12.89	6	16	4	3	0	0
					20.7%	55.2%	13.8%	10.3%	0.0%	0.0%
24	Botad	7	1.22	8.94	2	3	1	1	0	0
					28.6%	42.9%	14.3%	14.3%	0.0%	0.0%
25	Devbhoomi Dwarka	35	0	12.15	14	12	7	2	0	0
					40.0%	34.3%	20.0%	5.7%	0.0%	0.0%
26	Gir Somnath	8	13.96	24.77	1	4	3	0	0	0
					12.5%	50.0%	37.5%	0.0%	0.0%	0.0%
27	Jamnagar	27	2.04	22.7	9	18	0	0	0	0
					33.3%	66.7%	0.0%	0.0%	0.0%	0.0%

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
28	Junagadh	47	1.64	7.72	10	27	9	1	0	0
					21.3%	57.4%	19.1%	2.1%	0.0%	0.0%
29	Morbi	14	1	11.1	8	5	0	1	0	0
					57.1%	35.7%	0.0%	7.1%	0.0%	0.0%
30	Porbandar	26	0.7	5.83	8	13	5	0	0	0
					30.8%	50.0%	19.2%	0.0%	0.0%	0.0%
31	Rajkot	35	0.45	16.79	10	19	5	1	0	0
					28.6%	54.3%	14.3%	2.9%	0.0%	0.0%
32	Surendranagar	54	0.57	10.29	21	21	8	4	0	0
					38.9%	38.9%	14.8%	7.4%	0.0%	0.0%
	Saurashtra	323	0.00	30.27	98	153	49	18	4	1
					30.3%	47.4%	15.2%	5.6%	1.2%	0.3%
33	Kachchh	51	0	4.12	6	13	13	11	7	1
					11.8%	25.5%	25.5%	21.6%	13.7%	2.0%
	Kachchh	51	0.00	4.12	6	13	13	11	7	1
					11.8%	25.5%	25.5%	21.6%	13.7%	2.0%
	Gujarat State	774	0.00	63.71	182	315	161	85	27	4
					23.5%	40.7%	20.8%	11.0%	3.5%	0.5%

Depth to Water Level November 2023

During August 2023, details of depth to water level in different range, from 0-2 m, 2 to 5 m, 5 to 10m, 10 to 20 m, 20 to 40 m and more than 40 m bgl are presented in Figure 9 and Table 6. The perusal of the depth to water level reveals that 53.4% of the monitoring stations fall in the ranges of 0 to 5 mbgl whereas 5 to 20 mbgl water levels are observed in 42% of the stations in Gujarat state. Water levels of 20 to 40 mbgl are observed in 4%. Deeper water levels more than 40 m bgl are observed in Banaskantha, Mahesana and Sabarkantha the districts of Gujarat State during November 2023.

In North Gujarat, about 90% of the monitoring stations fall within the water level of 20 m bgl. Shallow water levels (lesser than 5 m bgl) are observed in the northern and eastern part of north Gujarat region falling in Ahmedabad, Anand, Aravalli, Dahod, Kheda, Mehsana, Panchmahals, Mahisagar and Sabarkantha districts. Deeper water levels range from 20 to 40 mbgl in major part of Anand, Banaskantha, Gandhinagar, Mahesana, and Sabarkantha districts. The deepest water level of 52.42 m bgl Gandhinagar district whereas the shallowest water level 0.43 m bgl has been recorded at Mahesana district.

In South Gujarat, 98% of the monitoring stations have recorded water level below 20 m bgl of which 80% alone has the water level in the range of 0–5 m bgl. Deeper water levels of 20 to 40 m bgl are mainly observed as isolated patch in parts of Narmada and Vadodara district. The deepest water level of 30.41 mbgl recorded in Narmada district whereas the shallowest water level of 0.42 m bgl at Bharuch district.

In Saurashtra region, about 98% of the monitoring stations show water levels in less than 20 m bgl and water levels of 20 to 40 m are found as isolated patch only in Amreli district. The shallowest water level 0.50 m bgl has been recorded at Surendranagar district and the deepest water level of 44.60 m bgl recorded in Junagarh district.

In Kachchh region, in about 87% of the monitoring stations, the water level ranges less than 20 m bgl. Isolated patches of water level ranges between 20 to 40 mbgl are found in central and eastern part of the area. The deepest water level of 34.4 m bgl is recorded at Lakhpat and the shallowest water level of 1.0 m bgl has been recorded at Moti cher, Lakhpat in unconfined aquifer.

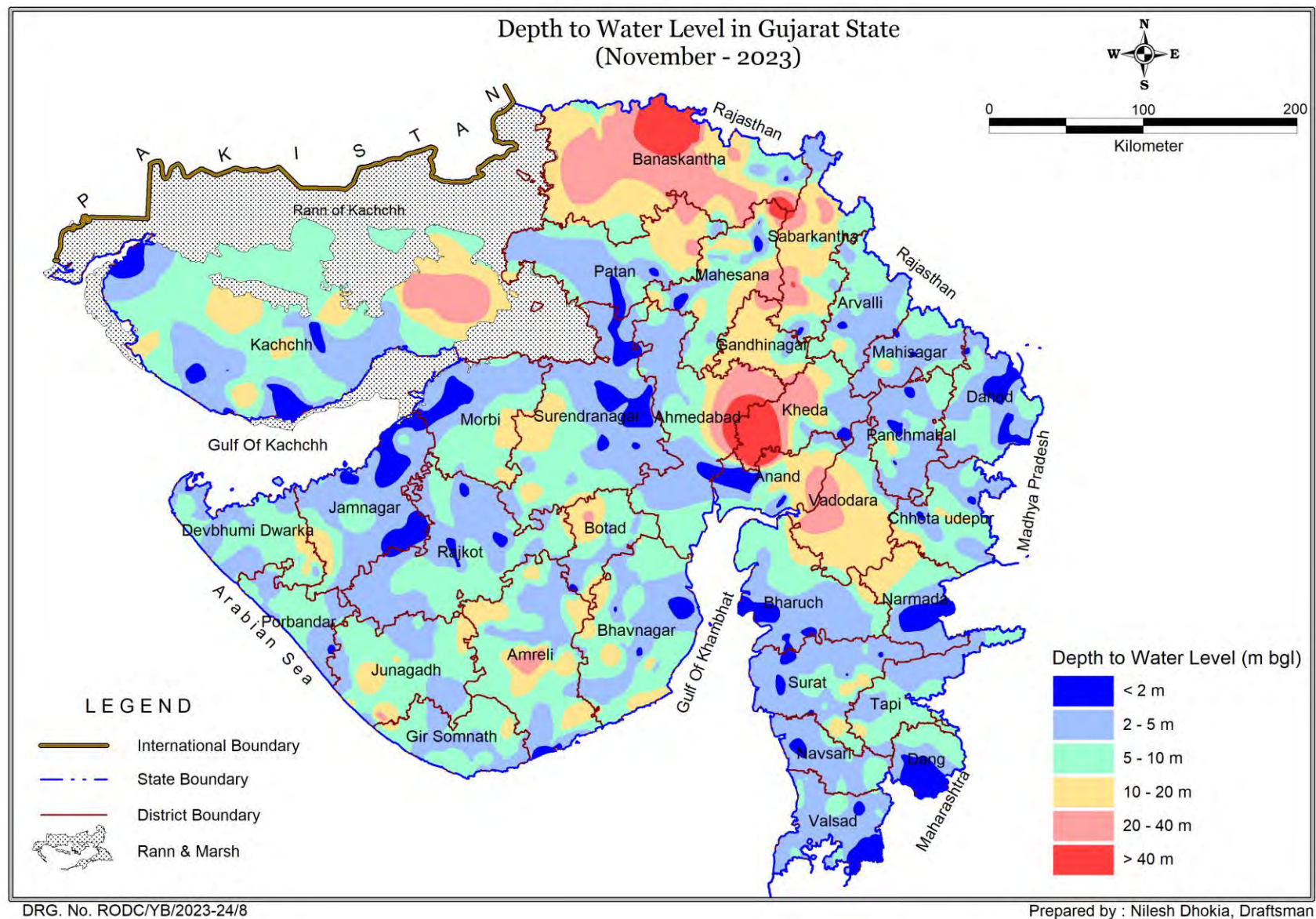


Figure 9: Depth to water level map of Gujarat (November 2023)

Table 6. Well wise categorisation of depth to water level November 2023

Sr. No .	District Name	No of well analysed	DTWL, mbgl		No. of wells in diffrent depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	10	2.75	7.3	0	7	3	0	0	0
					0.0%	70.0%	30.0%	0.0%	0.0%	0.0%
2	Anand	17	0.2	24.54	6	2	2	5	2	0
					35.3%	11.8%	11.8%	29.4%	11.8%	0.0%
3	Arvali	20	1.64	14.34	1	10	8	1	0	0
					5.0%	50.0%	40.0%	5.0%	0.0%	0.0%
4	Banas Kantha	32	1.53	63.67	1	2	9	10	9	1
					3.1%	6.3%	28.1%	31.3%	28.1%	3.1%
5	Dahod	29	0.4	11.2	9	9	10	1	0	0
					31.0%	31.0%	34.5%	3.4%	0.0%	0.0%
6	Gandhinagar	4	1.7	24.31	1	1	0	1	1	0
					25.0%	25.0%	0.0%	25.0%	25.0%	0.0%
7	Kheda	10	1.1	90.95	1	3	2	2	1	1
					10.0%	30.0%	20.0%	20.0%	10.0%	10.0%
8	Mahesana	29	0.19	57.58	5	9	4	9	1	1
					17.2%	31.0%	13.8%	31.0%	3.4%	3.4%
9	Mahisagar	15	1.7	13.49	2	11	1	1	0	0
					13.3%	73.3%	6.7%	6.7%	0.0%	0.0%
10	Panch Mahals	21	0.78	15.4	5	9	4	3	0	0
					23.8%	42.9%	19.0%	14.3%	0.0%	0.0%
11	Patan	10	1.3	23.65	3	3	1	2	1	0
					30.0%	30.0%	10.0%	20.0%	10.0%	0.0%
12	Sabar Kantha	28	1.51	41.06	1	5	8	11	2	1
					3.6%	17.9%	28.6%	39.3%	7.1%	3.6%
	North Gujarat	225	0.19	90.95	35	71	52	46	17	4
					15.6%	31.6%	23.1%	20.4%	7.6%	1.8%
13	Bharuch	33	0.11	8.89	4	19	10	0	0	0
					12.1%	57.6%	30.3%	0.0%	0.0%	0.0%
14	Chhotaudepur	24	1.5	11.15	2	9	10	3	0	0
					8.3%	37.5%	41.7%	12.5%	0.0%	0.0%
15	Narmada	5	1.69	17.62	1	0	2	2	0	0
					20.0%	0.0%	40.0%	40.0%	0.0%	0.0%
16	Navsari	22	0.7	6.52	1	18	3	0	0	0
					4.5%	81.8%	13.6%	0.0%	0.0%	0.0%
17	Surat	39	0.17	15	6	20	8	5	0	0
					15.4%	51.3%	20.5%	12.8%	0.0%	0.0%
18	Tapi	15	2.2	14.1	0	8	5	2	0	0
					0.0%	53.3%	33.3%	13.3%	0.0%	0.0%
19	Dangs	9	0.4	9.11	6	2	1	0	0	0
					66.7%	22.2%	11.1%	0.0%	0.0%	0.0%
20	Vadodara	5	2.22	21.6	0	1	0	1	3	0
					0.0%	20.0%	0.0%	20.0%	60.0%	0.0%
21	Valsad	21	0.49	9.48	4	12	5	0	0	0
					19.0%	57.1%	23.8%	0.0%	0.0%	0.0%
	South Gujarat	173	0.11	21.60	24	89	44	13	3	0
					13.9%	51.4%	25.4%	7.5%	1.7%	0.0%
22	Amreli	49	1.16	32.05	3	18	14	8	6	0
					6.1%	36.7%	28.6%	16.3%	12.2%	0.0%
23	Bhavnagar	40	1.1	17.39	4	16	13	7	0	0
					10.0%	40.0%	32.5%	17.5%	0.0%	0.0%
24	Botad	7	1.39	22.56	1	3	0	1	2	0
					14.3%	42.9%	0.0%	14.3%	28.6%	0.0%
25	Devbhumi Dwarka	50	1.09	17	5	17	20	8	0	0
					10.0%	34.0%	40.0%	16.0%	0.0%	0.0%

26	Gir Somnath	20	2.41	16.2	0	11	7	2	0	0
					0.0%	55.0%	35.0%	10.0%	0.0%	0.0%
27	Jamnagar	28	0.64	15.5	9	12	5	2	0	0
					32.1%	42.9%	17.9%	7.1%	0.0%	0.0%
28	Junagadh	42	2.28	22.79	0	14	22	5	1	0
					0.0%	33.3%	52.4%	11.9%	2.4%	0.0%
29	Morbi	16	0.97	13.7	3	7	4	2	0	0
					18.8%	43.8%	25.0%	12.5%	0.0%	0.0%
30	Porbandar	33	1.84	10.47	1	14	17	1	0	0
					3.0%	42.4%	51.5%	3.0%	0.0%	0.0%
31	Rajkot	36	0.92	10.1	4	18	13	1	0	0
					11.1%	50.0%	36.1%	2.8%	0.0%	0.0%
32	Surendranagar	56	0.54	16.6	15	23	14	4	0	0
					26.8%	41.1%	25.0%	7.1%	0.0%	0.0%
	Saurashtra	377	0.54	32.05	45	153	129	41	9	0
					11.9%	40.6%	34.2%	10.9%	2.4%	0.0%
33	Kachchh	43	0.25	37.01	8	12	10	9	4	0
					18.6%	27.9%	23.3%	20.9%	9.3%	0.0%
	Kachchh	43	0.25	37.01	8	12	10	9	4	0
					18.6%	27.9%	23.3%	20.9%	9.3%	0.0%
	Gujarat State	818	0.11	90.95	112	325	235	109	33	4
					13.7%	39.7%	28.7%	13.3%	4.0%	0.5%

Depth to Water Level January 2024

During January 2024, in the pursuance of Figure 10 and Table 7 reveals that the depth to water level of unconfined aquifer ranges from 0.33 m bgl at Mahegam in Bharuch district to 63.73 m bgl at Kuchawada EW I Dantiwada in Banaskantha district during January 2024. Details of depth to water level in different range, i.e. from 0 to 2 m, 2 to 5 m, 5 to 10 m, 10 to 20 m, 20 to 40 m and more than 40 m bgl is presented in table 7. The perusal of the depth to water map reveals that about 41.7% of the total wells analysed falls in the water level range of 0 to 5 m bgl where as water level of 5 to 20 m bgl is observed in 52.9% of Gujarat state. Water levels of 20 to 40 m bgl are observed in Anand, Banaskantha, Junagadh, Kheda, Panchmahal, Sabarkantha, Amreli, Bhavnagar, Botad, Narmada, Kachch, Gandhinagar Devbhoomi Dwarka and Vadodara districts in isolated patches. The deepest water level more than 40 m bgl is recorded in Banaskantha and Sabarkantha districts of Gujarat State.

In North Gujarat, about 91.9% of the total well analysed falls with in the water level range of 20 m bgl and out of which alone 69.5% represent the water level range of 0-10 m bgl.. Deeper water levels ranges 20 to 40 mbgl are experienced in major part of Anand, Banaskantha, Kheda, Gandhinagar, Panchmahal, Sabarkantha districts. The deepest water level of 63.73 m bgl at Kuchawada EW I Dantiwada in Banaskantha district whereas shallowest water level of 0.35 m bgl has been recorded at Shekhupura, Matar in Kheda district.

In South Gujarat, about 88.8% of the total wells has recorded water level less than 10 m bgl and out of which 48.4% alone has the water level in the range of 0-5 m bgl. Deeper water levels of 20 to 40 m bgl mainly observed in isolated patch in major parts of Vadodara district. The deepest water level of 25.35 m bgl is recorded at Chhaliyar in Vadodara district whereas the shallowest water level of 0.33 m bgl has been recorded at Mahegam in Bharuch district.

In Saurashtra region, about 95.3% of the total well shows water levels less than 20 m bgl and water levels of 20 to 40 mbgl are sporadically disbursed in isolated patches scattered in all areas of Amreli, Bhavnagar, Botad, Devbhoomi Dwarka and Junagadh districts. The shallowest water level of 0.69 m bgl has been recorded at Jamnagar village in Jamnagar district. The deepest water level of 34.04 m bgl recorded at Tatam, Gadhada in Amreli district.

In Kachchh region, more than 88.1% of the total well analysed, the water level ranges in less than 20 mbgl in major part of the district. In central and eastern part of Kachchh, the water level ranges 20 to 40 m bgl in isolated patches. The deepest water level of 37.40 m bgl is recorded at Kotada and the shallowest water level of 0.50 m bgl at Kotaya.

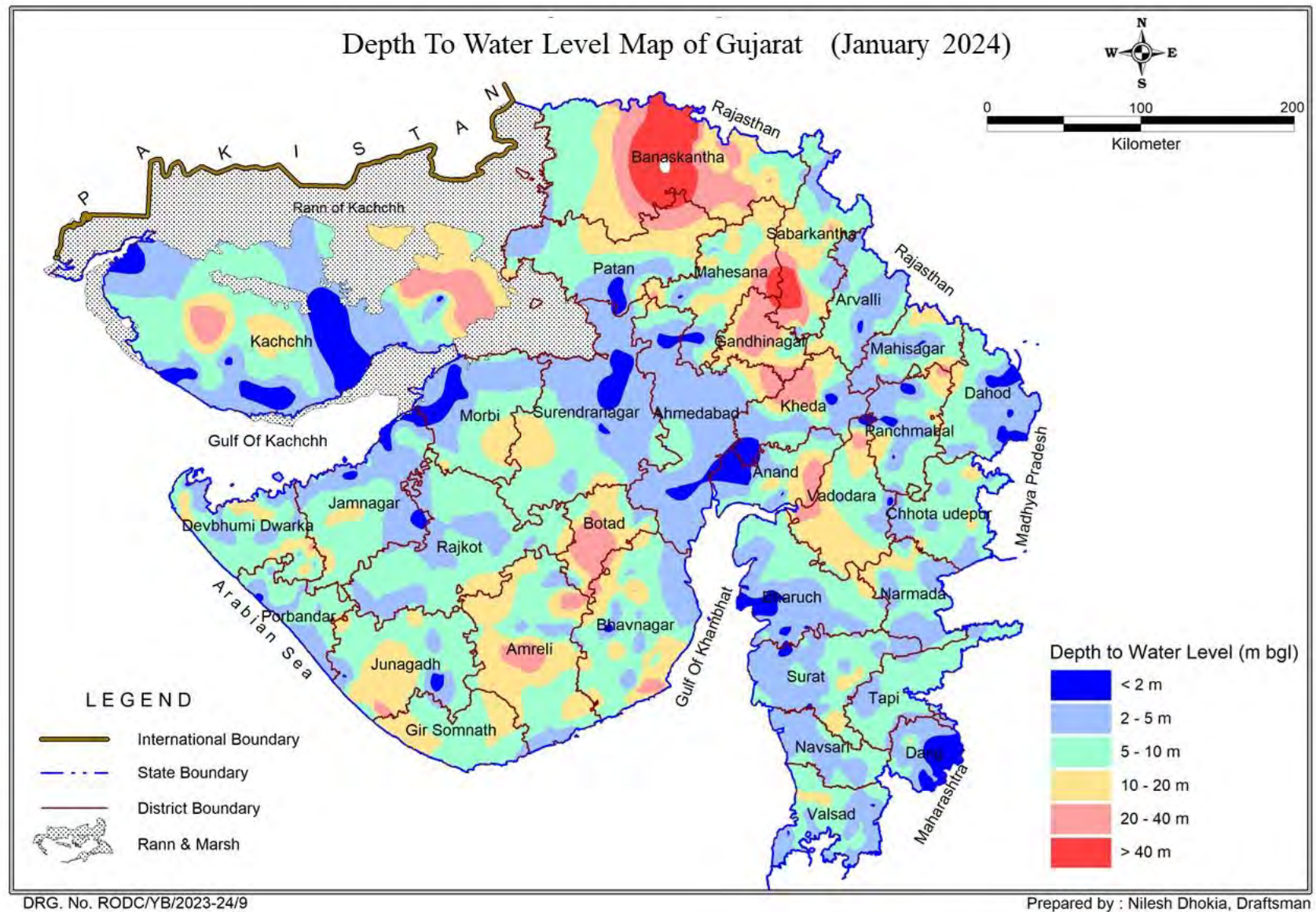


Figure 10:: Depth to water level map of Gujarat (January 2024)

Table 7: Well wise categorisation of depth to water level January 2024

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in diffrent depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	18	1.73	13.17	2 11.1%	11 61.1%	4 22.2%	1 5.6%	0 0.0%	0 0.0%
2	Anand	16	1.2	26.13	3 18.8%	5 31.3%	3 18.8%	3 18.8%	2 12.5%	0 0.0%
3	Aravalli	16	1.38	14.74	2 12.5%	8 50.0%	5 31.3%	1 6.3%	0 0.0%	0 0.0%
4	Banaskantha	29	4.97	63.73	0 0.0%	1 3.4%	8 27.6%	12 41.4%	6 20.7%	2 6.9%
5	Dahod	28	0.98	11.17	5 17.9%	8 28.6%	14 50.0%	1 3.6%	0 0.0%	0.00 0.0%
6	Gandhinagar	4	6.91	35	0 0.0%	0 0.0%	1 25.0%	1 25.0%	2 50.0%	0 0.0%
7	Kheda	15	0.35	35.38	4 26.7%	2 13.3%	4 26.7%	3 20.0%	2 13.3%	0 0.0%
8	Mehsana	27	0.56	16.31	4 14.8%	6 22.2%	5 18.5%	12 44.4%	0 0.0%	0 0.0%
9	Mahisagar	18	1.89	13.8	1 5.6%	9 50.0%	6 33.3%	2 11.1%	0 0.0%	0 0.0%
10	Panchmahal	23	0.7	21.78	4 17.4%	7 30.4%	6 26.1%	5 21.7%	1 4.3%	0 0.0%
11	Patan	8	0.85	17.03	2 25.0%	2 25.0%	1 12.5%	3 37.5%	0 0.0%	0 0.0%
12	Sabarkantha	21	1.76	54.49	1 4.8%	2 9.5%	9 42.9%	6 28.6%	1 4.8%	2 9.5%
	North Gujarat	223	0.35	63.73	28 12.6%	61 27.4%	66 29.6%	50 22.4%	14 6.3%	4 1.8%
13	Bharuch	33	0.33	8.65	6 18.2%	15 45.5%	12 36.4%	0 0.0%	0 0.0%	0 0.0%
14	Chhotaudepur	23	3.57	12.9	0 0.0%	5 21.7%	13 56.5%	5 21.7%	0 0.0%	0 0.0%
15	Narmada	19	1.35	14.14	3 15.8%	8 42.1%	4 21.1%	4 21.1%	0 0.0%	0 0.0%
16	Navsari	16	2.1	9.24	0 0.0%	11 68.8%	5 31.3%	0 0.0%	0 0.0%	0 0.0%
17	Surat	37	0.91	17.27	2 5.4%	12 32.4%	20 54.1%	3 8.1%	0 0.0%	0 0.0%
18	Tapi	13	2.68	8.93	0 0.0%	5 38.5%	8 61.5%	0 0.0%	0 0.0%	0 0.0%
19	Dangs	23	0.78	10.84	6 26.1%	11 47.8%	5 21.7%	1 4.3%	0 0.0%	0 0.0%
20	Vadodara	17	1.61	25.35	2 11.8%	3 17.6%	5 29.4%	3 17.6%	4 23.5%	0 0.0%
21	Valsad	34	1.48	12.52	3 8.8%	12 35.3%	15 44.1%	4 11.8%	0 0.0%	0 0.0%
	South Gujarat	215	0.33	25.35	22 10.2%	82 38.1%	87 40.5%	20 9.3%	4 1.9%	0 0.0%
22	Amreli	35	2.58	33.35	0 0.0%	7 20.0%	8 22.9%	14 40.0%	6 17.1%	0 0.0%
23	Bhavnagar	35	1.2	21.98	2 5.7%	10 28.6%	12 34.3%	8 22.9%	3 8.6%	0 0.0%
24	Botad	8	1.91	34.04	1 12.5%	0 0.0%	2 25.0%	2 25.0%	3 37.5%	0 0.0%
25	Devbhoomi Dwarka	29	1	22.5	1 3.4%	6 20.7%	13 44.8%	8 27.6%	1 3.4%	0 0.0%
26	Gir Somnath	7	1.1	12.74	1 14.3%	1 14.3%	2 28.6%	3 42.9%	0 0.0%	0 0.0%
27	Jamnagar	45	0.69	19.25	4 8.9%	16 35.6%	17 37.8%	8 17.8%	0 0.0%	0 0.0%
28	Junagadh	52	1.75	26.6	2 3.8%	7 13.5%	21 40.4%	20 38.5%	2 3.8%	0 0.0%

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in diffrent depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
29	Morbi	9	1.32	8.82	4	4	1	0	0	0
					44.4%	44.4%	11.1%	0.0%	0.0%	0.0%
30	Porbandar	32	0.94	10.63	2	15	12	3	0	0
					6.3%	46.9%	37.5%	9.4%	0.0%	0.0%
31	Rajkot	36	2.16	11.19	0	16	19	1	0	0
					0.0%	44.4%	52.8%	2.8%	0.0%	0.0%
32	Surendranagar	29	0.79	15.95	4	17	6	2	0	0
					13.8%	58.6%	20.7%	6.9%	0.0%	0.0%
	Saurashtra	317	0.69	34.04	21	99	113	69	15	0
					6.6%	31.2%	35.6%	21.8%	4.7%	0.0%
33	Kachchh	42	0.5	37.4	9	11	10	7	5	0
					21.4%	26.2%	23.8%	16.7%	11.9%	0.0%
	Kachchh	42	0.50	37.40	9	11	10	7	5	0
					21.4%	26.2%	23.8%	16.7%	11.9%	0.0%
	Gujarat State	797	0.33	63.73	80	253	276	146	38	4
					10.0%	31.7%	34.6%	18.3%	4.8%	0.5%

4.1.2 Seasonal Water Level Fluctuation

To study the effect of monsoon on the groundwater regime and subsequent utilization of groundwater for various needs like agriculture, irrigation, domestic, etc., changes in depth to water levels with respect to pre-monsoon (May) data are studied. The change in groundwater levels in the region over different periods is presented in Figure. 11(a, b and c) and a summary of each observation is discussed below.

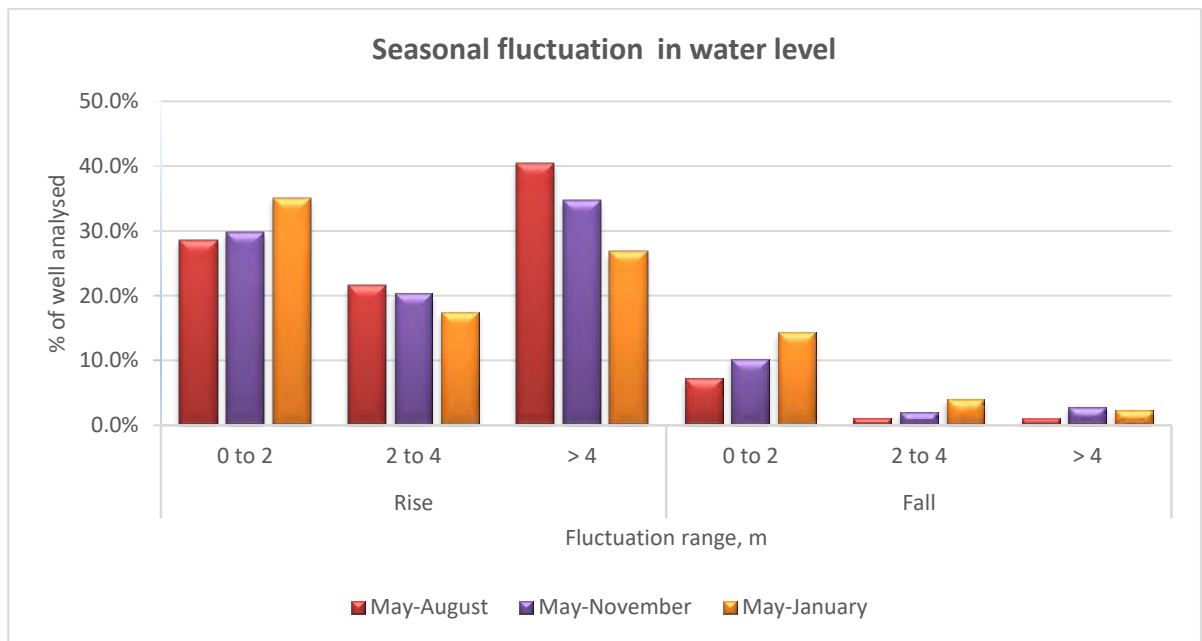


Figure 11: Distribution of seasonal fluctuation of water level

Seasonal Water Level Fluctuation (May 2023 to August 2023)

A perusal of Figure 12 and Table 8 reveals that about 90.3% of the total well in the Gujarat state area have recorded the rise and 9.1% have recorded fall in water level between May 2023 and August 2023. In the state, the maximum rise of 19.95 m is at Junagarh district whereas the maximum decline of 15.66 m is observed at banaskatha district.

In *North Gujarat* region, water level rises mainly observed in 82% of the total well analysed and maximum rises are in the range of 0 to 2 m. The fall of water level observed in alldistricts of the north Gujarat state and constitute 17% of wells analysed.

The 92% of the total wells in the area of *south Gujarat* have recorded fall and maximum in the range of 0 to 2 m of rise in the region in May as compared to January 2024. The rise is 7% of total well and maximum (6%) in the range of 0 to 2 m.

Over all 97% of total well analysed are shown rise in water level in the entire Saurashtra region. About 17% of areas have shown rise of water level between 0 to 2 m all the districts of *Saurashtra* region. Fall of water level is observed in 3% of wells analysed all over the region.

In *Kachchh*, 90% of the total well analysed recorded fall in water level. The fall is mostly in the range of 0 to 2 m and is observed in 28% of the total well. The total rise of water level has been observed in 10% of the total well in the region.

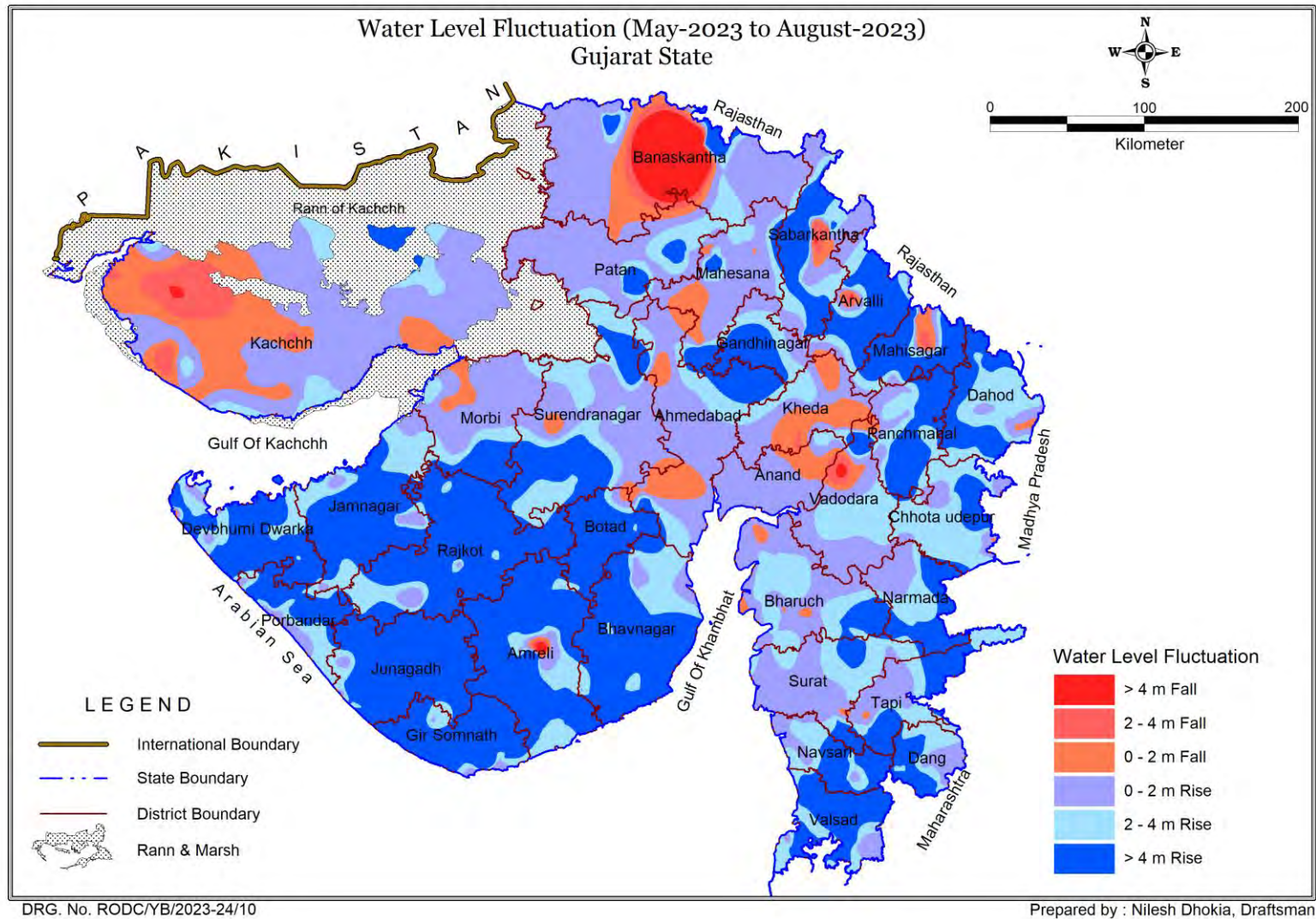


Figure 12: Map showing seasonal fluctuation of water level Gujarat (May 2023 to August 2023)

Table 8: Categorisation of changes in water level between May 2023 to August 2023

S r . N o .	District Name	No of well ana- lysed			Fluctuation range, m				No. of wells in difrent depth range					
		To- tal	Ris e	Fal l	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	7	3	4	0.57	6.94	0.59	0.59	2	0	1	4	0	0
									28.6 %	0.0%	14.3%	57.1 %	0.0%	0.0 %
2	Anand	11	10	1	0.06	2.29	0.15	0.15	7	3	0	1	0	0
									63.6 %	27.3 %	0.0%	9.1%	0.0%	0.0 %
3	Arvali	6	5	1	1.09	14.55	0.05	4.45	2	0	3	0	0	1
									33.3 %	0.0%	50.0%	0.0%	0.0%	16. 7 %
4	Banas Kantha	20	18	2	0.47	9.96	0.6	15.66	15	1	2	1	0	1
									75.0 %	5.0%	10.0%	5.0%	0.0%	5.0 %
5	Dahod	21	18	3	0.1	6.02	0.63	6	2	7	9	3	0	0
									9.5%	33.3 %	42.9%	14.3 %	0.0%	0.0 %
6	Gandhinagar	2	2	0	2.15	4.71	0	0	0	0	2	0	0	0
									0.0%	0.0%	100.0 %	0.0%	0.0%	0.0 %
7	Kheda	8	3	5	2.43	11.84	1.25	8.18	1	2	0	4	1	0
									12.5 %	25.0 %	0.0%	50.0 %	12.5 %	0.0 %
8	Mahesana	25	20	5	0.52	8.38	0.12	2.7	15	4	1	5	0	0
									60.0 %	16.0 %	4.0%	20.0 %	0.0%	0.0 %
9	Mahisagar	10	8	2	0.24	9.2	0.2	1.1	1	1	6	1	1	0
									10.0 %	10.0 %	60.0%	10.0 %	10.0 %	0.0 %
10	Panch Mahals	20	19	1	0.7	11.2	0	0	7	6	6	1	0	0
									35.0 %	30.0 %	30.0%	5.0%	0.0%	0.0 %
11	Patan	10	10	0	0.17	8	0.29	2.4	8	1	1	0	0	0
									80.0 %	10.0 %	10.0%	0.0%	0.0%	0.0 %
12	Sabar Kantha	22	18	4	1.15	20.5	2.4	12.8	4	5	9	1	2	1
									18.2 %	22.7 %	40.9%	4.5%	9.1%	4.5 %
	North Guja- rat	162	134	28	0.06	2.43	0	15.66	64	30	40	21	4	3
									39.5 %	18.5 %	24.7%	13.0 %	2.5%	1.9 %
13	Bharuch	27	23	4	0.04	6.9	0.05	1.42	13	8	2	4	0	0
									48.1 %	29.6 %	7.4%	14.8 %	0.0%	0.0 %
14	Chhotaudepur	15	14	1	0.5	6.56	0	0	4	4	6	1	0	0
									26.7 %	26.7 %	40.0%	6.7%	0.0%	0.0 %
15	Narmada	12	12	0	0.33	8.11	0	0	4	3	5	0	0	0
									33.3 %	25.0 %	41.7%	0.0%	0.0%	0.0 %
16	Navsari	18	18	0	0.35	7.92	0.5	1.85	6	3	9	0	0	0
									33.3 %	16.7 %	50.0%	0.0%	0.0%	0.0 %
17	Surat	17	16	1	0.24	3.19	0.56	3.9	7	3	6	1	0	0

S r . N o . 7	District Name	No of well ana- lysed			Fluctuation range, m				No. of wells in difrent depth range					
		To- tal	Ris e	Fal l	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1									41.2 %	17.6 %	35.3%	5.9%	0.0%	0.0 %
8	Tapi	11	10	1	0.32	3.99	0.37	1.32	3	3	4	1	0	0
9	Dangs	21	21	0	0.27	9.7	0.47		27.3 %	27.3 %	36.4%	9.1%	0.0%	0.0 %
1								0.47	4	6	11	0	0	0
2	Vadodara	9	6	3	0.82	2.64	1.53		19.0 %	28.6 %	52.4%	0.0%	0.0%	0.0 %
0								7.46	2	3	1	1	1	1
2	Valsad	12	11	1	0.08	11.08	2.45		22.2 %	33.3 %	11.1%	11.1 %	11.1 %	11. 1 %
1								2.45	1	3	7	1	0	0
	South Gujarat	142	131	11	0.04	11.08	0		8.3%	25.0 %	58.3%	8.3%	0.0%	0.0 %
2								7.46	44	36	51	9	1	1
2	Amreli	27	26	1	0.27	17.82	0.14		31.0 %	25.4 %	35.9%	6.3%	0.7%	0.7 %
2								2.49	4	6	16	0	0	1
3	Bhavnagar	24	24	0	0.06	17.5	0.39		14.8 %	22.2 %	59.3%	0.0%	0.0%	3.7 %
4	Botad	5	5	0	0	18.4	0	14.24	5	3	16	0	0	0
5	Devbhumi Dwarka	34	33	1	0.05	16	0.47		20.8 %	12.5 %	66.7%	0.0%	0.0%	0.0 %
6	Gir Somnath	11	11	0	1.22	10.82	0.38	0	0	2	3	0	0	0
7	Jamnagar	21	21	0	0.39	14.06	0.24		0.0%	40.0 %	60.0%	0.0%	0.0%	0.0 %
8	Junagadh	36	35	1	0.05	19.95	0.03	8.42	3	10	20	1	0	0
9	Morbi	12	9	3	0.13	6.8	0.86		8.8%	29.4 %	58.8%	2.9%	0.0%	0.0 %
3	Porbandar	24	24	0	0.05	8.17	0.1	1.97	1	1	9	0	0	0
1	Rajkot	24	24	0	0.5	12.75	0		9.1%	9.1%	81.8%	0.0%	0.0%	0.0 %
3	Surendranagar	26	25	1	0.22	16.23	0.07	3.59	5	6	10	0	0	0
									23.8 %	28.6 %	47.6%	0.0%	0.0%	0.0 %
3	Saurashtra	244	237	7	0	19.95	0	2.62	3	2	30	1	0	0
3	Kachchh	37	26	11	0.16	7.45	0.04		8.3%	5.6%	83.3%	2.8%	0.0%	0.0 %
								7.36	4	1	4	3	0	0
									33.3 %	8.3%	33.3%	25.0 %	0.0%	0.0 %
								2.65	5	5	14	0	0	0
									20.8 %	20.8 %	58.3%	0.0%	0.0%	0.0 %
								0	3	5	16	0	0	0
									12.5 %	20.8 %	66.7%	0.0%	0.0%	0.0 %
								3.92	9	9	7	1	0	0
									34.6 %	34.6 %	26.9%	3.8%	0.0%	0.0 %
								14.24	42	50	145	6	0	1
									17.2 %	20.5 %	59.4%	2.5%	0.0%	0.4 %

S r . N o . 3	District Name	No of well ana- lysed			Fluctuation range, m				No. of wells in difrent depth range					
		To- tal	Ris e	Fal l	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
									45.9 %	21.6 %	2.7%	21.6 %	5.4%	2.7 %
	Kachchh	37	26	11	0.16	7.45	0.04	2.81	17	8	1	8	2	1
									45.9 %	21.6 %	2.7%	21.6 %	5.4%	2.7 %
	Gujarat State	585	528	57	0	19.95	0	14.24	167	124	237	44	7	6
									28.5 %	21.2 %	40.5%	7.5%	1.2%	1.0 %

Seasonal Water Level Fluctuation (May 2023 to November 2023)

A perusal of Figure 13 and Table 9 reveals that more than 83% of the total wells in Gujarat state shows a rise in water level. Rise in water level are observed in the range of 0 to 2 m in 30% of wells, 2 to 4 m in 20% of well and more than 4m in 35% of wells monitored in the state of Gujarat. Fall in water level is mainly observed in parts of North Gujarat region and Saurashtra in small isolated patches scattered in the area. Fall is mainly in the range of 0 to 2 m and recorded in 10.2% of wells in the state. The maximum rise of 41.43 m is recorded in Junagarh district whereas the maximum decline of 20.92 m is recorded in Tharad Banaskatha District.

About 82% of the total wells observed rise of water level in the *North Gujarat* and most of which (31% wells) is in the range more than 4m of fluctuation of water level. Fall of 0 – 2 m range is observed in 8% of wells.

In *South Gujarat* region, 96% of total wells shows rise in water level and in the range more than 4m in 46% of wells in the region. Rise of water level in 0 to 4m experience in about 31% of wells in the region. Fall in water level is observed maximum in the range of 0 – 2 m in 2% of wells in the South Gujarat area.

About 82% of total well in the *Saurashtra* region has experienced rise of water level and in the range of 0 – 2 m experienced in about 22% of wells. Rise of water level more than 4 m is predominantly found in 42% of of wells in Saurashtra area. Fall of 0 to 2m is observed in 14.2% of wells, and only Amreli, Junagarh and Morbi shows water level fall more than 4m.

In *Kachchh* region, 87% of the total wells shows rise in water level in range of 0-2 m (45%). Fall is shown only in range of 0-2m is observed in 19 % of the wells.

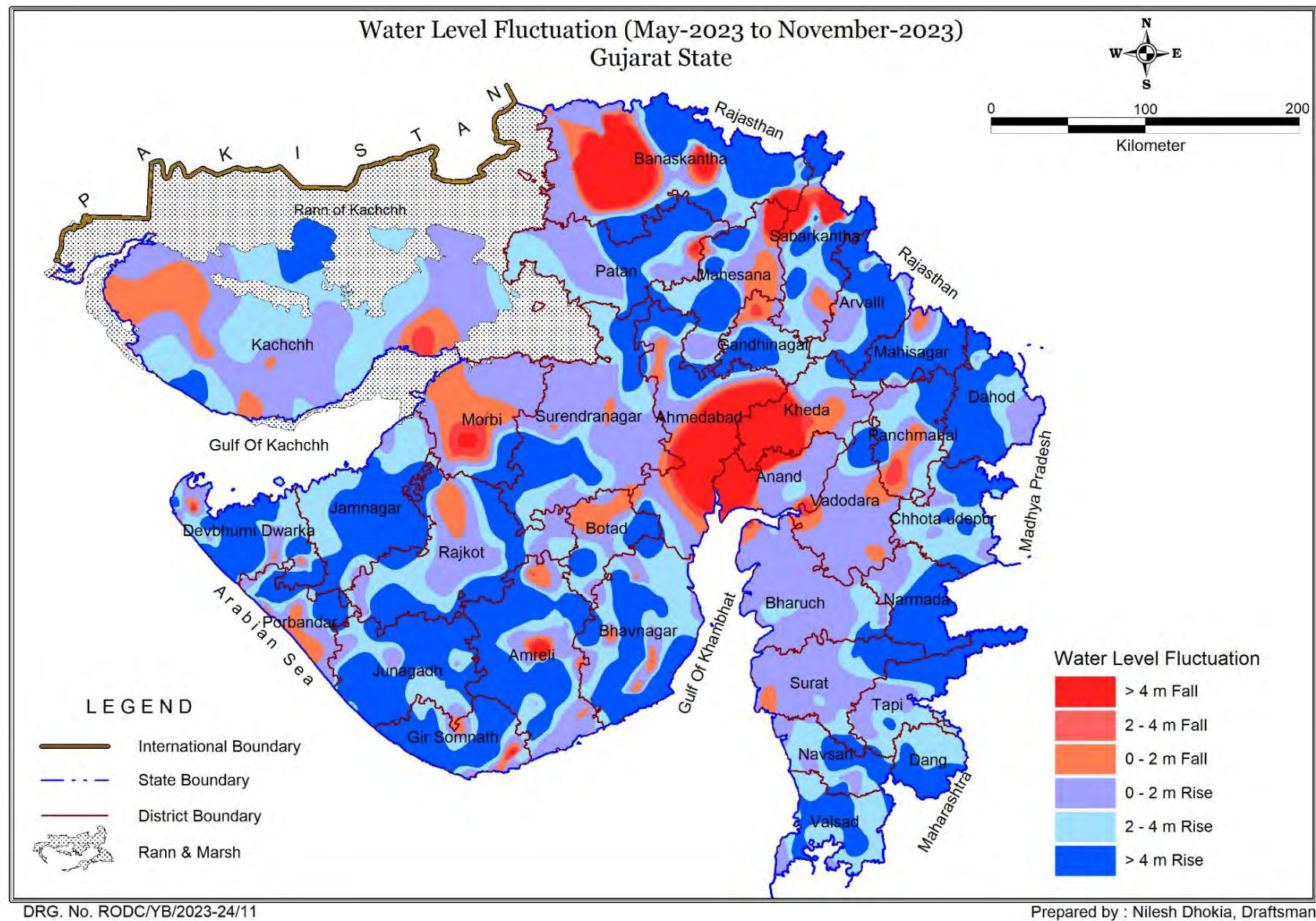


Figure 13: Map showing seasonal fluctuation of water level Gujarat (May 2023 to November 2023)

Table 9: Categorisation of changes in water level between May to November 2023

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	11	4	7	0.56	14.67	0.67	62.62	2	0	5	3	0	1
									18.2%	0.0%	45.5%	27.3%	0.0%	9.1%
2	Anand	18	1	17	0.5	3.1	2.95	2.95	16	1	0	0	1	0
									88.9%	5.6%	0.0%	0.0%	5.6%	0.0%
3	Aravalli	13	0	13	0.77	16.78	0	0	3	3	7	0	0	0
									23.1%	23.1%	53.8%	0.0%	0.0%	0.0%
4	Banaskantha	32	8	24	0.17	11.63	0.05	190.58	8	3	13	2	0	6
									25.0%	9.4%	40.6%	6.3%	0.0%	18.8%
5	Dahod	14	0	14	0.95	11.05	0	0	3	2	9	0	0	0
									21.4%	14.3%	64.3%	0.0%	0.0%	0.0%
6	Gandhinagar	12	4	8	0.66	10.1	0.37	15.41	1	1	6	2	1	1
									8.3%	8.3%	50.0%	16.7%	8.3%	8.3%
7	Kheda	5	4	1	2.48	2.48	0.28	86	0	1	0	2	1	1
									0.0%	20.0%	0.0%	40.0%	20.0%	20.0%
8	Mahesana	17	6	22	0.13	18.26	0.69	46.44	5	5	4	2	0	1
									29.4%	29.4%	23.5%	11.8%	0.0%	5.9%
9	Mahisagar	6	1	5	1.2	8.17	0.65	0.65	1	2	2	1	0	0
									16.7%	33.3%	33.3%	16.7%	0.0%	0.0%
10	Panchmahal	15	2	13	0.94	17.01	0.59	3.3	6	4	3	1	1	0
									40.0%	26.7%	20.0%	6.7%	6.7%	0.0%
11	Patan	10	2	8	0.37	7.6	0.74	4.5	6	1	1	1	0	1
									60.0%	10.0%	10.0%	10.0%	0.0%	10.0%
12	Sabarkantha	18	1	17	0.06	4.57	0.35	0.35	9	4	4	1	0	0
									50.0%	22.2%	22.2%	5.6%	0.0%	0.0%
	North Gujarat	171	33	149	0.06	2.48	0	190.58	60	27	54	15	4	11
									35.1%	15.8%	31.6%	8.8%	2.3%	6.4%
13	Bharuch	20	1	19	0.15	4.62	2.16	2.16	13	5	1	0	1	0
									65.0%	25.0%	5.0%	0.0%	5.0%	0.0%
14	Chhotaudepur	19	1	18	0.23	51.46	27.09	27.09	4	8	6	0	0	1
								0	21.1%	42.1%	31.6%	0.0%	0.0%	5.3%
15	Narmada	6	0	6	0.98	21.89	0	0	1	2	3	0	0	0
									16.7%	33.3%	50.0%	0.0%	0.0%	0.0%
16	Navsari	14	0	14	0.16	7.65	0	0	5	2	7	0	0	0
									35.7%	14.3%	50.0%	0.0%	0.0%	0.0%
17	Surat	18	1	17	0.06	4.57	0.35	0.35	9	4	4	1	0	0
									50.0%	22.2%	22.2%	5.6%	0.0%	0.0%
18	Tapi	6	0	6	3	12.35	0	0	0	3	3	0	0	0
									0.0%	50.0%	50.0%	0.0%	0.0%	0.0%
19	Dangs	6	0	6	3	12.35	0	0	0	3	3	0	0	0
									0.0%	50.0%	50.0%	0.0%	0.0%	0.0%
20	Vadodara	2	1	1	1.21	1.21	0.27	0.27	1	0	0	1	0	0
									50.0%	0.0%	0.0%	50.0%	0.0%	0.0%
21	Valsad	12	0	12	1.59	7.27	0	0	1	6	5	0	0	0
									8.3%	50.0%	41.7%	0.0%	0.0%	0.0%
	South Gujarat	103	4	99	0.06	51.46	0	27.09	34	33	32	2	1	1
									33.0%	32.0%	31.1%	1.9%	1.0%	1.0%
22	Amreli	35	7	28	0.04	35.7	0.16	7.7	10	6	12	5	1	1
									28.6%	17.1%	34.3%	14.3%	2.9%	2.9%
23	Bhavnagar	30	4	26	0.39	17.8	0.29	2.21	3	7	16	2	2	0
									10.0%	23.3%	53.3%	6.7%	6.7%	0.0%
24	Botad	6	2	4	0.53	5.35	0.26	1.49	2	1	1	2	0	0
									33.3%	16.7%	16.7%	33.3%	0.0%	0.0%
25	Devbhumi Dwarka	36	5	31	0.61	19.92	0.05	1.15	10	5	16	5	0	0
									27.8%	13.9%	44.4%	13.9%	0.0%	0.0%
26	Gir Somnath	11	1	10	1.15	18.6	0.96	0.96	1	2	7	1	0	0
									9.1%	18.2%	63.6%	9.1%	0.0%	0.0%
27	Jamnagar	23	1	22	0.41	20.37	0.31	0.31	4	8	10	1	0	0
									17.4%	34.8%	43.5%	4.3%	0.0%	0.0%
28	Junagadh	23	2	21	1.8	31.9	0.07	4.86	1	4	16	1	0	1
									4.3%	17.4%	69.6%	4.3%	0.0%	4.3%

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
29	Morbi	10	7	3	0.6	2.77	0.11	4.63	2	1	0	5	1	1
									20.0%	10.0%	0.0%	50.0%	10.0%	10.0%
30	Porbandar	24	8	16	0.2	11.6	0.05	2.29	5	3	8	7	1	0
									20.8%	12.5%	33.3%	29.2%	4.2%	0.0%
31	Rajkot	13	1	12	0.19	10.08	1.33	1.33	5	1	6	1	0	0
									38.5%	7.7%	46.2%	7.7%	0.0%	0.0%
32	Surendranagar	21	3	18	0	16.16	0.3	0.38	9	2	7	3	0	0
									42.9%	9.5%	33.3%	14.3%	0.0%	0.0%
	Saurashtra	232	41	191	0	35.7	0.05	7.7	52	40	99	33	5	3
									22.4%	17.2%	42.7%	14.2%	2.2%	1.3%
33	Kachchh	31	6	25	0.39	4.55	0.42	2.5	14	9	2	5	1	0
									45.2%	29.0%	6.5%	16.1%	3.2%	0.0%
	Kachchh	31	6	25	0.39	4.55	0.42	2.5	14	9	2	5	1	0
									45.2%	29.0%	6.5%	16.1%	3.2%	0.0%
	Gujarat State	537	84	464	0	35.7	0.05	7.7	160	109	187	55	11	15
									29.8%	20.3%	34.8%	10.2%	2.0%	2.8%

Seasonal Water Level Fluctuation (May 2023 to January 2024)

The seasonal water level fluctuation shows rise in 88% of the total wells monitored in the Gujarat state area during the May 2023 to January 2024. The maximum rise of 20.5 m is recorded at S district whereas the maximum decline of 16 m is observed in Banaskatha district. The seasonal water level fluctuations are shown in Fig. 14 and placed at Table 10.

In *North Gujarat* region, 77% of the total well analysed shows rise in water level. Maximum rise observed 20.5 m at Sabarkatha district. Out of the total well analysed, maximum rise (30%) is observed in 0-2 m. Fall is observed in 23% mainly in 0-2 meter (13%).

In *South Gujarat*, about 84 % of the well in the area have recorded the rise. The rise of 0 to 2 m and more than 4 m is observed in 41% and 14%, respectively. The maximum rise is observed 11 m at Valsad district. The fall is 16% of total well and maximum categorised in the range of 0 to 2 m.

Over all 77% of total well analysed shows the rise in water level in the entire *Saurashtra*. Fall is mainly in the range of 0 to 2 m and is found in isolated patches and cover 16% of the total area of region.

In Kachchh 80% of the total well analysed recorded rise in water level. The fall is mostly in the range of 0 to 2 m recorded in about 12.9% of the total wells and rise observed in 0-2meter in 54% of wells analysed.

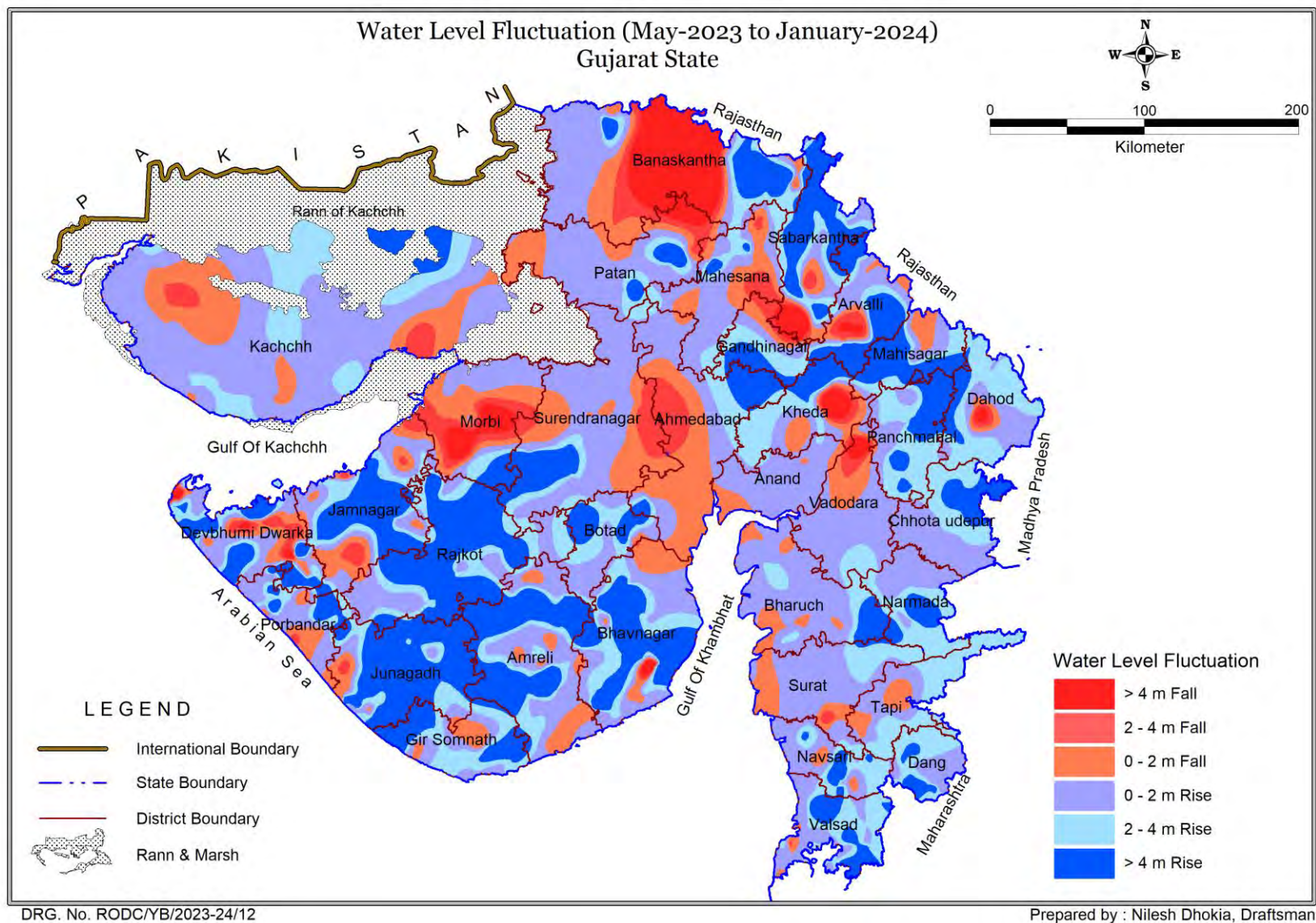


Figure 14: Map showing seasonal fluctuation of water level of Gujarat (May 2023 to January 2024)

Table 10: Categorisation of changes in water level between May 2023 to January 2024

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	4	3	1	0.57	6.94	0.59	0.59	2	0	1	1	0	0
									50.0%	0.0%	25.0%	25.0%	0.0%	0.0%
2	Anand	14	13	1	0.06	2.29	0.15	0.15	12	1	0	1	0	0
									85.7%	7.1%	0.0%	7.1%	0.0%	0.0%
3	Arvali	13	8	5	1.09	14.55	0.05	4.45	1	0	7	2	1	2
									7.7%	0.0%	53.8%	15.4%	7.7%	15.4%
4	Banas Kan-tha	17	12	5	0.47	9.96	0.6	15.66	3	1	8	3	1	1
									17.6%	5.9%	47.1%	17.6%	5.9%	5.9%
5	Dahod	19	15	4	0.1	6.02	0.63	6	5	6	4	2	1	1
									26.3%	31.6%	21.1%	10.5%	5.3%	5.3%
6	Gandhina-gar	2	2	0	2.15	4.71	0	0	0	1	1	0	0	0
									0.0%	50.0%	50.0%	0.0%	0.0%	0.0%
7	Kheda	6	4	2	2.43	11.84	1.25	8.18	0	2	2	1	0	1
									0.0%	33.3%	33.3%	16.7%	0.0%	16.7%
8	Mahesana	21	13	8	0.52	8.38	0.12	2.7	7	4	2	6	2	0
									33.3%	19.0%	9.5%	28.6%	9.5%	0.0%
9	Mahisagar	8	6	2	0.24	9.2	0.2	1.1	1	1	4	2	0	0
									12.5%	12.5%	50.0%	25.0%	0.0%	0.0%
10	Panch Ma-hals	18	18	0	0.7	11.2	0	0	6	6	6	0	0	0
									33.3%	33.3%	33.3%	0.0%	0.0%	0.0%
11	Patan	9	6	3	0.17	8	0.29	2.4	5	0	1	2	1	0
									55.6%	0.0%	11.1%	22.2%	11.1%	0.0%
12	Sabar Kan-tha	19	16	3	1.15	20.5	2.4	12.8	4	4	8	0	2	1
									21.1%	21.1%	42.1%	0.0%	10.5%	5.3%
	North Gu-jarat	150	116	34	0.06	2.43	0	15.66	46	26	44	20	8	6
									30.7%	17.3%	29.3%	13.3%	5.3%	4.0%
13	Bharuch	28	20	8	0.04	6.9	0.05	1.42	15	3	2	8	0	0
									53.6%	10.7%	7.1%	28.6%	0.0%	0.0%
14	Chhotaud-epur	10	10	0	0.5	6.56	0	0	2	5	3	0	0	0
									20.0%	50.0%	30.0%	0.0%	0.0%	0.0%
15	Narmada	14	14	0	0.33	8.11	0	0	6	6	2	0	0	0
									42.9%	42.9%	14.3%	0.0%	0.0%	0.0%
16	Navsari	19	16	3	0.35	7.92	0.5	1.85	7	4	5	3	0	0
									36.8%	21.1%	26.3%	15.8%	0.0%	0.0%
17	Surat	16	13	3	0.24	3.19	0.56	3.9	8	5	0	2	1	0
									50.0%	31.3%	0.0%	12.5%	6.3%	0.0%
18	Tapi	13	7	5	0.32	3.99	0.37	1.32	2	5	0	5	0	1
									15.4%	38.5%	0.0%	38.5%	0.0%	7.7%
19	Dangs	22	21	1	0.27	9.7	0.47	0.47	7	8	6	1	0	0
									31.8%	36.4%	27.3%	4.5%	0.0%	0.0%
20	Vadodara	9	6	3	0.82	2.64	1.53	7.46	5	1	0	2	0	1
									55.6%	11.1%	0.0%	22.2%	0.0%	11.1%
21	Valsad	26	25	1	0.08	11.08	2.45	2.45	13	7	5	0	1	0
									50.0%	26.9%	19.2%	0.0%	3.8%	0.0%
	South Gu-jarat	157	132	24	0.04	11.08	0	7.46	65	44	23	21	2	2
									41.4%	28.0%	14.6%	13.4%	1.3%	1.3%
22	Amreli	35	27	8	0.27	17.82	0.14	2.49	12	3	12	7	1	0
									34.3%	8.6%	34.3%	20.0%	2.9%	0.0%
23	Bhavnagar	31	25	6	0.06	17.5	0.39	14.24	7	5	13	3	2	1
									22.6%	16.1%	41.9%	9.7%	6.5%	3.2%
24	Botad	6	6	0	0	18.4	0	0	2	1	3	0	0	0
									33.3%	16.7%	50.0%	0.0%	0.0%	0.0%
25	Devbhumi Dwarka	43	29	14	0.05	16	0.47	8.42	13	5	11	8	2	4
									30.2%	11.6%	25.6%	18.6%	4.7%	9.3%
26	Gir Som-nath	11	8	3	1.22	10.82	0.38	1.97	2	2	4	3	0	0
									18.2%	18.2%	36.4%	27.3%	0.0%	0.0%
27	Jamnagar	28	19	9	0.39	14.06	0.24	3.59	6	5	8	4	5	0
									21.4%	17.9%	28.6%	14.3%	17.9%	0.0%
28	Junagadh	42	36	6	0.05	19.95	0.03	2.62	9	2	25	5	1	0
									21.4%	4.8%	59.5%	11.9%	2.4%	0.0%

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
29	Morbi	12	6	6	0.13	6.8	0.86	7.36	4	1	1	4	0	2
									33.3%	8.3%	8.3%	33.3%	0.0%	16.7%
30	Porbandar	29	22	7	0.05	8.17	0.1	2.65	11	4	7	6	1	0
									37.9%	13.8%	24.1%	20.7%	3.4%	0.0%
31	Rajkot	24	24	0	0.5	12.75	0	0	8	5	11	0	0	0
									33.3%	20.8%	45.8%	0.0%	0.0%	0.0%
32	Suren- dranagar	28	22	6	0.22	16.23	0.07	3.92	18	0	4	5	1	0
									64.3%	0.0%	14.3%	17.9%	3.6%	0.0%
	Saurashtra	289	224	65	0	19.95	0	14.24	92	33	99	45	13	7
									31.8%	11.4%	34.3%	15.6%	4.5%	2.4%
33	Kachchh	31	25	6	0.16	7.45	0.04	2.81	17	6	2	4	2	0
									54.8%	19.4%	6.5%	12.9%	6.5%	0.0%
	Kachchh	31	25	6	0.16	7.45	0.04	2.81	17	6	2	4	2	0
									54.8%	19.4%	6.5%	12.9%	6.5%	0.0%
	Gujarat State	627	497	129	0	19.95	0	14.24	220	109	168	90	25	15
									35.1%	17.4%	26.8%	14.4%	4.0%	2.4%

4.1.3 Annual Water Level Fluctuation

Annual Fluctuation in the water levels of the groundwater monitoring wells during different monitoring periods were analyzed graphically and depicted in Fig. 15).

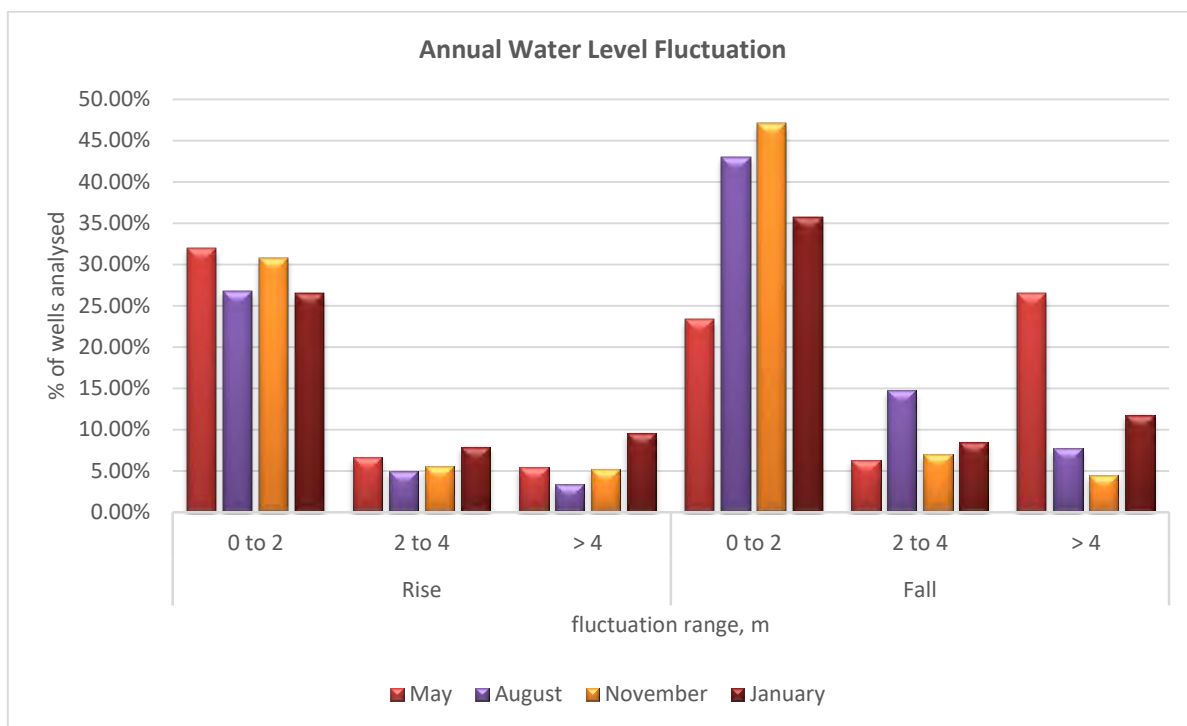


Figure 15: Graph showing Annual fluctuation of water levels for May August November from 2022 to 2023 and January 2023 to 2024

Annual Water Level Fluctuation (May 2022 to May 2023)

A perusal of Figure 16 and Table 11 reveals that out of total monitoring wells, 56.1% shows a fall where as 43.9% shows rise in water level of the Gujarat state. Fall in water level mainly more than 4 m is observed in about 26.5% of the total well in the state. Rise mainly observed in the range of 0 to 2 m covers about 31.9 % of the total well in state. The maximum rise of 29.68 m is recorded in Gandhinagar district whereas the maximum decline of 14.4 m is recorded in Tapi district.

About 65% of the total well shows the fall of water level in the North Gujarat and most of which (30%) shows fall in >4 m. Rise of 2-4 m is seen in all districts except Mahisagar and Panchmahal. Fall of > 4 m range is observed in 30% of the total well observed in almost all area of the region except Aravalli district.

In South Gujarat region, 43% of total well analysed shows rise in water level and 32.5% represents in the range of 0 to 2 m of total well in the region. Fall of water level observed in the range of 2 to 4 m in isolated patches distributed sporadically in South Gujarat region Bharuch, Narmada, Navsari, Vadodara and Valsad district shows more than 4 m rise in the region. Fall in water level observed in the range of 0 to 2 m in 26% of the total well analyzed lying mainly in Bharuch, Chhotaudepur, Navsari, Narmada Surat, Tapi, Dangs, Vadodara and Valsad districts in the South Gujarat region.

About 57% of the Saurashtra region has experienced the rise in water level and in the range of

0 to 2 m observed in 41% of the total well analysed. The fall in water level also found in 43% of total well distributed all over the Saurashtra region. Out of these 4% of well observed in 2-4 m is predominantly found in Bhavnagar, Junagarh, Morbi, Porbandar and Surendranagar district in the region. About 18.2% area of the region observed fall of 0 to 2 m. Fall of more than 4 m is observed in all districts of the region except Botad and Surendranagar districts in isolated patches.

In Kachchh region, fall in water level experienced in 74% of total well equally distributed in the region. Fall of water level mainly ranges in 0 to 2 m is observed in 26.3 % of total well of the region. Rise in water level experienced in 26 % of the region.

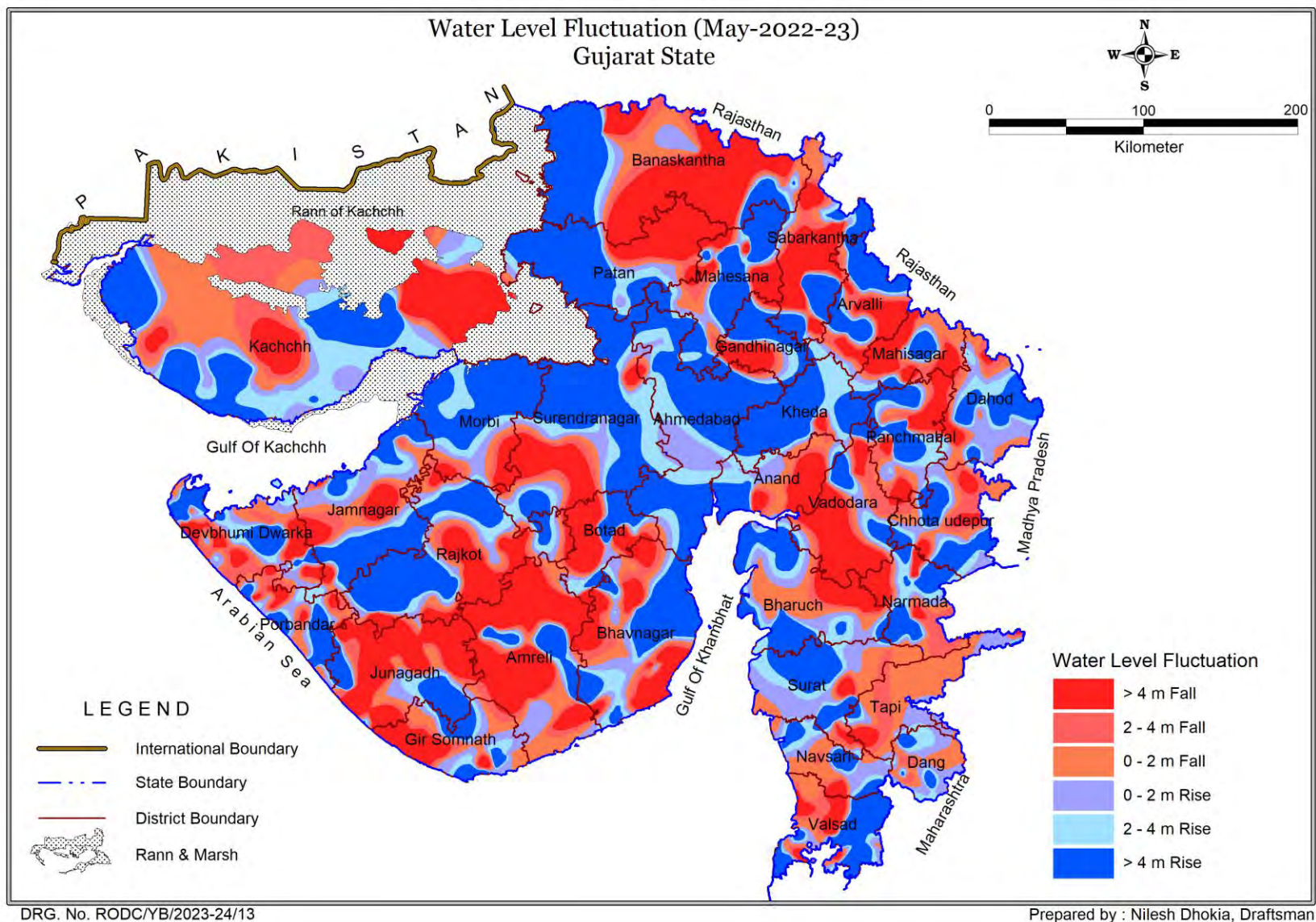


Figure 16: Annual fluctuation of water level of Gujarat (May 2022 to May 2023)

Table 11: Categorisation of changes in water level between May 2022 to May 2023

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in different depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	22	8	14	0	2.7	0.33	2.37	7	1	0	6	1	7
									31.8%	4.5%	0.0%	27.3%	4.5%	31.8%
2	Anand	20	14	4	0.1	13.56	0.37	5.98	11	1	2	3	0	3
									55.0%	5.0%	10.0%	15.0%	0.0%	15.0%
3	Aravalli	9	2	8	0.14	7.77	0.04	4.22	1	1	0	6	1	0
									11.1%	11.1%	0.0%	66.7%	11.1%	0.0%
4	Banaskantha	31	5	16	0.91	3.25	0.23	8.72	1	1	3	8	5	13
									3.2%	3.2%	9.7%	25.8%	16.1%	41.9%
5	Dahod	31	11	12	0.1	27.01	0.26	11.13	10	1	0	10	0	10
									32.3%	3.2%	0.0%	32.3%	0.0%	32.3%
6	Gandhinagar	11	9	1	0.1	3.46	0.1	3.62	3	2	4	0	1	1
									27.3%	18.2%	36.4%	0.0%	9.1%	9.1%
7	Kheda	21	13	5	0.18	8.45	0.01	2.9	12	1	0	2	2	4
									57.1%	4.8%	0.0%	9.5%	9.5%	19.0%
8	Mahesana	43	13	16	0.22	2.25	0	0	7	2	4	8	7	15
									16.3%	4.7%	9.3%	18.6%	16.3%	34.9%
9	Mahisagar	24	0	12	0	7.18	0.76	1.83	0	0	0	9	3	12
									0.0%	0.0%	0.0%	37.5%	12.5%	50.0%
10	Panchmahals	22	10	9	0	0	0.2	0.2	7	0	3	5	1	6
									31.8%	0.0%	13.6%	22.7%	4.5%	27.3%
11	Patan	12	4	5	0.15	6.07	0.23	0.6	3	1	0	4	0	4
									25.0%	8.3%	0.0%	33.3%	0.0%	33.3%
12	Sabarkantha	31	7	24	0.05	2.19	0.6	11.34	5	2	0	11	5	8
									16.1%	6.5%	0.0%	35.5%	16.1%	25.8%
	North Gujarat	277	96	181	0.00	27.01	0.00	11.34	67	13	16	72	26	83
									24.2%	4.7%	5.8%	26.0%	9.4%	30.0%
13	Bharuch	46	21	12	0	2.05	0.04	5.95	18	3	0	9	4	12
									39.1%	6.5%	0.0%	19.6%	8.7%	26.1%
14	Chhotaudepur	17	13	2	0.16	29.68	3.12	3.12	10	0	3	2	0	2
									58.8%	0.0%	17.6%	11.8%	0.0%	11.8%
15	Narmada	22	8	7	0.07	13.49	0.37	4.65	7	1	0	5	2	7
									31.8%	4.5%	0.0%	22.7%	9.1%	31.8%
16	Navsari	29	9	10	0.03	4.19	0.14	1.2	5	4	0	9	1	10
									17.2%	13.8%	0.0%	31.0%	3.4%	34.5%
17	Surat	37	15	11	0	8.46	0.7	11.1	10	4	1	11	0	11
									27.0%	10.8%	2.7%	29.7%	0.0%	29.7%
18	Tapi	13	7	3	0.23	2.98	0.02	14.4	6	1	0	2	1	3
									46.2%	7.7%	0.0%	15.4%	7.7%	23.1%
19	Dangs	35	7	14	0.01	2.23	0.13	5.15	6	1	0	12	2	14
									17.1%	2.9%	0.0%	34.3%	5.7%	40.0%
20	Vadodara	17	7	7	0	14.68	0.07	7.28	4	0	3	5	0	5
									23.5%	0.0%	17.6%	29.4%	0.0%	29.4%
21	Valsad	18	12	5	0.2	0	0.12	3.11	10	1	2	5	0	0
									55.6%	5.6%	11.1%	27.8%	0.0%	0.0%
	South Gujarat	234	100	134	0.00	29.68	0.02	14.40	76	15	9	60	10	64
									32.5%	6.4%	3.8%	25.6%	4.3%	27.4%
22	Amreli	47	33	9	0.01	4.83	0.05	2.76	19	10	4	7	0	7
									40.4%	21.3%	8.5%	14.9%	0.0%	14.9%
23	Bhavnagar	47	27	10	0.04	2.06	0.34	2.46	18	5	4	8	2	10
									38.3%	10.6%	8.5%	17.0%	4.3%	21.3%
24	Botad	4	4	0	0.44	3.72	0.04	2.18	3	1	0	0	0	0
									75.0%	25.0%	0.0%	0.0%	0.0%	0.0%
25	Devbhumi Dwarka	23	15	4	0.06	6	0.56	8.6	13	0	2	4	0	4
									56.5%	0.0%	8.7%	17.4%	0.0%	17.4%
26	Gir Somnath	22	10	7	0.39	2.26	0.21	6.3	4	2	4	6	0	6
									18.2%	9.1%	18.2%	27.3%	0.0%	27.3%
27	Jamnagar	24	14	5	0.2	3.55	0.02	13.5	12	1	1	5	0	5
									50.0%	4.2%	4.2%	20.8%	0.0%	20.8%

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in different depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
28	Junagadh	41	26	8	0.18	5.85	0.16	8.3	20	2	4	4	4	7
									48.8%	4.9%	9.8%	9.8%	9.8%	17.1%
29	Morbi	20	4	8	0.02	2.4	0.02	11.34	3	0	1	7	1	8
									15.0%	0.0%	5.0%	35.0%	5.0%	40.0%
30	Porbandar	36	18	10	0.07	11.48	0.28	1.92	16	2	0	8	1	9
									44.4%	5.6%	0.0%	22.2%	2.8%	25.0%
31	Rajkot	28	18	7	0.03	1.66	0.05	3.6	13	3	2	5	0	5
									46.4%	10.7%	7.1%	17.9%	0.0%	17.9%
32	Surendranagar	4	9	18	0	3.62	0.44	3.92	0	0	0	0	4	0
									0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	Saurashtra	296	169	127	0.00	11.48	0.02	13.50	121	26	22	54	12	61
									40.9%	8.8%	7.4%	18.2%	4.1%	20.6%
33	Kachchh	57	15	23	0.07	2.57	0.05	2.98	12	3	0	15	6	21
									21.1%	5.3%	0.0%	26.3%	10.5%	36.8%
	Kachchh	57	15	42	0.07	2.57	0.05	2.98	12	3	0	15	6	21
									21.1%	5.3%	0.0%	26.3%	10.5%	36.8%
	Gujarat State	864	380	484	0.00	29.68	0.00	14.40	276	57	47	201	54	229
									31.9%	6.6%	5.4%	23.3%	6.3%	26.5%

Annual Water Level Fluctuation (August 2022 to August 2023)

A perusal of Figure 17 and Table 12 reveals that 35 % of the total monitoring stations of state show a rise in water level. Rise of 0 to 2 m is observed in about 27% of total well of the state. More than 2 m rise is observed in 4% of total well. Fall is mainly in the range of 0 to 2 m and covers about 43% of total wells of the state. The maximum rise of 24.1 m is recorded in Junagadh district, whereas the maximum decline of 19.49 m bgl is recorded in Amreli district.

About 29% of the total wells observed the rise of water level in the North Gujarat and most of which (23% of wells) is in the range of 0 to 2 m. Rise of more than 4 m is mostly seen in the Anand, Banaskatha, Gandhinagar, Mahesana and Panchmahal district.. Fall of water level mostly observed in 57% of total well in range of 0-4 m of North Gujarat, and rest in >4 m (13.6%).

South Gujarat region shows fall in water level covers an area by 71% of well in the region. Rise in water level is observed in 29% of wells. Rise and fall of more than 0-2 m has observed in all over the region. Rise of more than 4 m is observed all districts except in Narmada, Navsari, Tapi and Dangs districts and fall in Chota udepur, Vadodara and Valsad districts.

About 42% of total well in Saurashtra region has experienced rise where as 58% shows fall. In 0 to 2 m range, 33% of well shows rise where as 41% shows fall. Fall of more than 4 m is observed in 6 % in scattered patched in all over the region except Botad, Somnath and Jamnagar districts.

In Kachchh region, 36% of total well is experienced rise in water level where as 64% shows fall. Rise and Fall mostly ranges in 0 to 2 m in Kachchh region. Overall Kachchh region shows fall.

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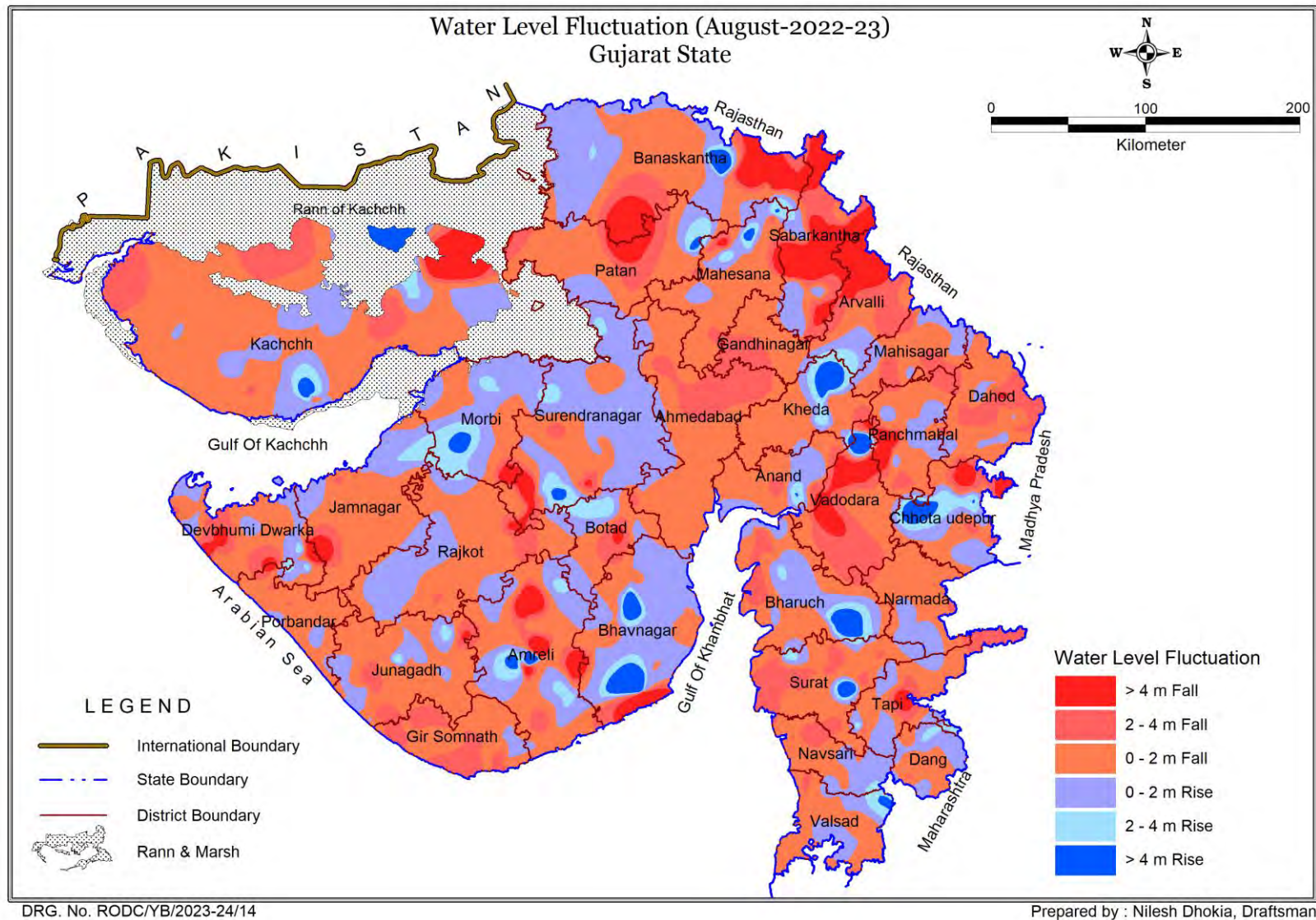


Figure 17: Annual fluctuation of water level of Gujarat (August 2022 to August 2023)

Table 12: Categorisation of changes in water level between August 2022 to August 2023

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		To-tal	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	6	0	6	0.08	0	0	3.34	0	0	0	3	3	0
									0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
2	Anand	12	3	9	0.24	4.16	0.97	3.82	2	0	1	7	2	0
									16.7%	0.0%	8.3%	58.3%	16.7%	0.0%
3	Arvalli	4	0	4	0.61	0	0	5.3	0	0	0	1	1	2
									0.0%	0.0%	0.0%	25.0%	25.0%	50.0%
4	Banas Kantha	19	6	13	0.04	9.73	0.08	12.04	4	1	1	4	2	7
									21.1%	5.3%	5.3%	21.1%	10.5%	36.8%
5	Dahod	28	9	19	0.04	1.53	0	4.51	9	0	0	12	5	2
									32.1%	0.0%	0.0%	42.9%	17.9%	7.1%
6	Gandhinagar	2	0	2	2.41	0	0	2.55	0	0	0	0	2	0
									0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
7	Kheda	7	4	3	0.68	6.07	0.38	1.6	2	1	1	3	0	0
									28.6%	14.3%	14.3%	42.9%	0.0%	0.0%
8	Mahešana	27	11	16	0.06	9.04	0.21	4.95	6	3	2	11	4	1
									22.2%	11.1%	7.4%	40.7%	14.8%	3.7%
9	Mahisagar	14	5	9	0.41	1.45	0.21	3.95	5	0	0	5	4	0
									35.7%	0.0%	0.0%	35.7%	28.6%	0.0%
10	Panch Mahals	20	5	15	0.55	1.92	0.66	16.38	5	0	0	10	3	2
									25.0%	0.0%	0.0%	50.0%	15.0%	10.0%
11	Patan	7	2	5	0.42	5.19	0.04	2.4	1	0	1	3	2	0
									14.3%	0.0%	14.3%	42.9%	28.6%	0.0%
12	Sabar Kantha	23	4	19	0.95	1.78	0.38	19	4	0	0	3	7	9
									17.4%	0.0%	0.0%	13.0%	30.4%	39.1%
	North Gujarat	169	49	120	0.04	2.41	0	19	38	5	6	62	35	23
									22.5%	3.0%	3.6%	36.7%	20.7%	13.6%
13	Bharuch	24	9	15	0.26	6.42	0.25	3.95	6	1	2	11	4	0
									25.0%	4.2%	8.3%	45.8%	16.7%	0.0%
14	Chhotaudepur	13	7	6	1.56	6.15	0.84	6.08	4	1	2	1	3	2
									30.8%	7.7%	15.4%	7.7%	23.1%	15.4%
15	Narmada	7	2	5	0.1	1.22	1.12	1.87	2	0	0	5	0	0
									28.6%	0.0%	0.0%	71.4%	0.0%	0.0%
16	Navsari	16	5	11	0.05	1.65	0.1	2.79	5	0	0	10	1	0
									31.3%	0.0%	0.0%	62.5%	6.3%	0.0%
17	Surat	35	4	31	0.2	8.55	0	3.3	2	1	1	22	9	0
									5.7%	2.9%	2.9%	62.9%	25.7%	0.0%
18	Tapi	13	5	8	0.07	2.7	0.05	5.45	4	1	0	3	4	1
									30.8%	7.7%	0.0%	23.1%	30.8%	7.7%
19	Dangs	22	6	16	0.09	2.95	0.05	2.65	4	2	0	14	2	0
									18.2%	9.1%	0.0%	63.6%	9.1%	0.0%
20	Vadodara	12	2	10	0.58	13.88	0.58	6.69	1	0	1	5	1	4
									8.3%	0.0%	8.3%	41.7%	8.3%	33.3%
21	Valsad	15	5	10	0.35	4.2	0.52	2.2	4	0	1	9	1	0
									26.7%	0.0%	6.7%	60.0%	6.7%	0.0%
	South Gujarat	157	45	112	0.05	13.88	0	6.69	32	6	7	80	25	7
									20.4%	3.8%	4.5%	51.0%	15.9%	4.5%
22	Amreli	29	11	18	0.09	19.49	0.01	11.65	6	3	2	9	4	5
									20.7%	10.3%	6.9%	31.0%	13.8%	17.2%
23	Bhavnagar	26	16	10	0.04	10.82	0.02	6.78	15	0	1	8	1	1
									57.7%	0.0%	3.8%	30.8%	3.8%	3.8%
24	Botad	3	3	0	0	9.22	1.13	0	1	1	1	0	0	0
									33.3%	33.3%	33.3%	0.0%	0.0%	0.0%
25	Devbhumi Dwarka	33	13	20	0.1	3.52	0.13	7.4	10	3	0	13	4	3
									30.3%	9.1%	0.0%	39.4%	12.1%	9.1%
26	Gir Somnath	13	2	11	0.42	2.07	0.67	3.84	1	1	0	6	5	0
									7.7%	7.7%	0.0%	46.2%	38.5%	0.0%
27	Jamnagar	12	4	8	0.16	3.36	0.29	2.59	3	1	0	7	1	0
									25.0%	8.3%	0.0%	58.3%	8.3%	0.0%
28	Junagadh	38	13	25	0.01	2.88	0	4.37	12	1	0	20	4	1
									31.6%	2.6%	0.0%	52.6%	10.5%	2.6%
29	Morbi	14	8	6	0.6	4.57	0.19	8.49	5	2	1	5	0	1

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		To-tal	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
									35.7%	14.3%	7.1%	35.7%	0.0%	7.1%
30	Porbandar	26	5	21	0.03	2.94	0	4.85	4	1	0	17	3	1
									15.4%	3.8%	0.0%	65.4%	11.5%	3.8%
31	Rajkot	24	7	17	0.07	2.28	0.01	4.39	6	1	0	13	3	1
									25.0%	4.2%	0.0%	54.2%	12.5%	4.2%
32	Surendranagar	41	28	13	0.2	8.25	0.08	8.07	23	4	1	8	1	4
									56.1%	9.8%	2.4%	19.5%	2.4%	9.8%
	Saurashtra	259	110	149	0	19.49	0	11.65	86	18	6	106	26	17
									33.2%	6.9%	2.3%	40.9%	10.0%	6.6%
33	Kachchh	42	15	27	0.05	7.52	0.08	11.13	11	2	2	20	6	1
									26.2%	4.8%	4.8%	47.6%	14.3%	2.4%
	Kachchh	42	15	27	0.05	7.52	0.08	11.13	11	2	2	20	6	1
									26.2%	4.8%	4.8%	47.6%	14.3%	2.4%
	Gujarat State	627	219	408	0	19.49	0	11.65	167	31	21	268	92	48
									26.6%	4.9%	3.3%	42.7%	14.7%	7.7%

Annual Water Level Fluctuation (November 2022 to November 2023)

A perusal of Figure 18 and Table 13 reveals that 41.5 % of the total monitoring stations of state show a rise in water level. Rise of 0 to 2 m is observed in about 31 % of total well of the state. More than 2 m rise is observed in 11% of total well. Fall is mainly in the range of 0 to 2 m and covers about 47% of total wells of the state. The maximum rise of 24.1 m is recorded in Junagadh district, whereas the maximum decline of 19.49 m bgl is recorded in Amreli district

About 43 % of the total well shows rise of water level in the *North Gujarat* and most of which (27 % of well) is in the range of 0 to 2 m of fluctuation of water level. Rise of more than 4 m is seen 9.2% of wells. Fall of 0 to 4 m and more than 4 m is observed in 50 % and 6% of well of the region, respectively.

In South Gujarat region, 38% of the total well shows rise in water level and out of which, 34 % are in the range of 0 to 2 m in the region. Similarly, 15% of total well shows fall in water level and a maximum of 56% of well are in the range of 0 to 4 m and more than 4% shown in 5 % of wells.

About 39 % of the total well in the Saurashtra region experienced the rise of water level and out of which, 29 % of well are in the range of 0 to 2 m and > 4 m rise in 4 %. The fall of water level experienced in 60% of wells. More than 4 m of fall is observed in almost 2.9 % of the total number of wells analysed is predominantly observed in, Morbi, Junagarh, and devbhumi Dwarka districts.

In Kachchh region, 63% of the total well in the area is experienced by a rise in water level where as 37 % shows fall. Water level in range of less than 4 m, about 57% of well shows rise while 34% shows fall. More than 4 m is observed in 5.7 % show rise. Fall > 4 m observed in 2.9% of the wells analysed Kachchh region.

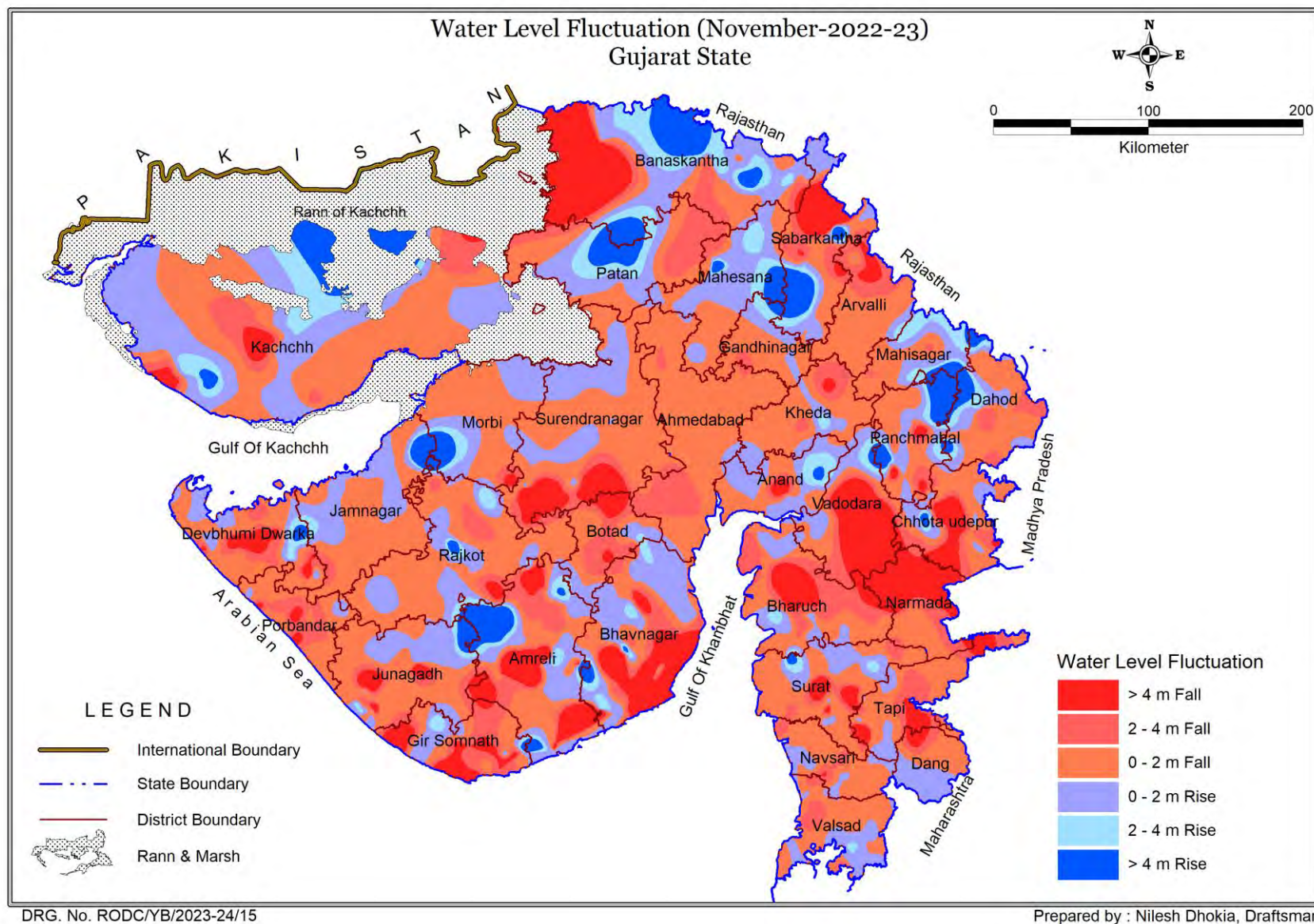


Figure 18: Annual fluctuation of water level of Gujarat (November 2022 to November 2023)

Table 13.: Categorisation of changes in water level between November 2022 to November 2023

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	8	0	8	0.28	0	0	4.03	0	0	0	4	3	1
									0.0%	0.0%	0.0%	50.0%	37.5%	12.5%
2	Anand	15	8	7	0.13	4.35	0.15	6.63	7	0	1	6	0	1
									46.7%	0.0%	6.7%	40.0%	0.0%	6.7%
3	Arvali	14	1	13	0.54	0.08	0.08	4.65	1	0	0	9	1	3
									7.1%	0.0%	0.0%	64.3%	7.1%	21.4%
4	Banas Kantha	21	14	7	0.2	7.06	1.22	21.32	7	2	5	4	2	1
									33.3%	9.5%	23.8%	19.0%	9.5%	4.8%
5	Dahod	26	10	16	0.04	5.43	0.02	3.61	5	3	2	13	3	0
									19.2%	11.5%	7.7%	50.0%	11.5%	0.0%
6	Gandhinagar	4	2	2	1.74	0.99	0.06	2.53	2	0	0	1	1	0
									50.0%	0.0%	0.0%	25.0%	25.0%	0.0%
7	Kheda	9	4	5	0.43	2.84	0.16	86.22	3	1	0	2	1	2
									33.3%	11.1%	0.0%	22.2%	11.1%	22.2%
8	Mahesana	20	11	9	0.17	8.73	0.21	2.62	9	0	2	8	1	0
									45.0%	0.0%	10.0%	40.0%	5.0%	0.0%
9	Mahisagar	15	7	8	0.04	3.09	0.25	2.25	3	4	0	6	2	0
									20.0%	26.7%	0.0%	40.0%	13.3%	0.0%
10	Panch Mahals	19	10	9	0.01	14.46	0	6.9	6	1	3	6	2	1
									31.6%	5.3%	15.8%	31.6%	10.5%	5.3%
11	Patan	5	0	5	0.03	0	0	3.41	0	0	0	4	1	0
									0.0%	0.0%	0.0%	80.0%	20.0%	0.0%
12	Sabar Kantha	18	8	10	0.08	9.4	0.34	23.3	4	1	3	7	1	2
									22.2%	5.6%	16.7%	38.9%	5.6%	11.1%
	North Gujarat	174	75	99	0.01	1.74	0	86.22	47	12	16	70	18	11
									27.0%	6.9%	9.2%	40.2%	10.3%	6.3%
13	Bharuch	28	11	17	0.1	3.2	0.12	4.2	10	1	0	14	2	1
									35.7%	3.6%	0.0%	50.0%	7.1%	3.6%
14	Chhotaudepur	19	8	11	0.05	6.87	0.05	7.55	7	0	1	8	0	3
									36.8%	0.0%	5.3%	42.1%	0.0%	15.8%
15	Narmada	2	0	2	3.68	0	0	6.02	0	0	0	0	1	1
									0.0%	0.0%	0.0%	0.0%	50.0%	50.0%
16	Navsari	20	10	10	0.05	0.85	0.03	2.77	10	0	0	9	1	0
									50.0%	0.0%	0.0%	45.0%	5.0%	0.0%
17	Surat	33	10	23	0.27	5.26	0	2.2	7	1	2	21	2	0
									21.2%	3.0%	6.1%	63.6%	6.1%	0.0%
18	Tapi	11	3	8	0.22	0.6	0.14	4.06	3	0	0	6	1	1
									27.3%	0.0%	0.0%	54.5%	9.1%	9.1%
19	Dangs	9	7	2	0.61	0.65	0.12	5.8	7	0	0	1	0	1
									77.8%	0.0%	0.0%	11.1%	0.0%	11.1%
20	Vadodara	5	2	3	0.07	0.8	0.06	13.76	2	0	0	2	0	1
									40.0%	0.0%	0.0%	40.0%	0.0%	20.0%
21	Valsad	19	5	14	0.03	2.37	0.19	3.35	4	1	0	13	1	0
									21.1%	5.3%	0.0%	68.4%	5.3%	0.0%
	South Gujarat	146	56	90	0.03	6.87	0	13.76	50	3	3	74	8	8
									34.2%	2.1%	2.1%	50.7%	5.5%	5.5%
22	Amreli	29	21	8	0.01	11.35	0.02	1.88	12	3	6	8	0	0
									41.4%	10.3%	20.7%	27.6%	0.0%	0.0%
23	Bhavnagar	24	19	5	0.02	5.88	0.25	3.73	15	3	1	3	2	0
									62.5%	12.5%	4.2%	12.5%	8.3%	0.0%
24	Botad	3	3	0	0.26	5.65	0.1	0.79	2	0	1	0	0	0
									66.7%	0.0%	33.3%	0.0%	0.0%	0.0%
25	Devbhumi Dwarka	43	12	31	0.02	4.92	0.01	7.25	8	3	1	25	3	3
									18.6%	7.0%	2.3%	58.1%	7.0%	7.0%
26	Gir Somnath	12	7	5	0.06	3.43	0.18	9.03	6	1	0	4	0	1
									50.0%	8.3%	0.0%	33.3%	0.0%	8.3%
27	Jamnagar	27	10	17	0.01	13.1	0	2.93	8	1	1	15	2	0
									29.6%	3.7%	3.7%	55.6%	7.4%	0.0%
28	Junagadh	40	16	24	0.28	6.9	0.02	7.41	11	4	1	22	1	1

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		To- tal	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
									27.5%	10.0%	2.5%	55.0%	2.5%	2.5%
29	Morbi	14	4	10	0.05	2.12	0.03	5.72	3	1	0	9	0	1
									21.4%	7.1%	0.0%	64.3%	0.0%	7.1%
30	Porbandar	31	1	30	0.12	0.7	0.7	6.15	1	0	0	23	5	2
									3.2%	0.0%	0.0%	74.2%	16.1%	6.5%
31	Rajkot	27	7	20	0.05	6.9	0.2	2.72	5	1	1	18	2	0
									18.5%	3.7%	3.7%	66.7%	7.4%	0.0%
32	Surendranagar	26	9	17	0.04	1.86	0.23	1.5	9	0	0	17	0	0
									34.6%	0.0%	0.0%	65.4%	0.0%	0.0%
	Saurashtra	276	109	167	0.01	13.1	0	9.03	80	17	12	144	15	8
									29.0%	6.2%	4.3%	52.2%	5.4%	2.9%
33	Kachchh	35	22	13	0.11	9	0.17	6.24	17	3	2	9	3	1
									48.6%	8.6%	5.7%	25.7%	8.6%	2.9%
	Kachchh	35	22	13	0.11	9	0.17	6.24	17	3	2	9	3	1
									48.6%	8.6%	5.7%	25.7%	8.6%	2.9%
	Gujarat State	631	262	369	0.01	13.1	0	9.03	194	35	33	297	44	28
									30.7%	5.5%	5.2%	47.1%	7.0%	4.4%

Annual Water Level Fluctuation (January 2023 to January 2024)

A perusal of Figure 19 and Table 14 reveals that 56% of total monitoring wells show fall and 44% shows rise in water level of the Gujarat state. Rise in water level within the range of 0 to 2 m is observed in about 26.5 %, 2 to 4 m in 7% and more than 4 m in 9% of the total well in the state. Fall in the water level is in the range of less than 2 m and is about 36 % of the total wells. The maximum decline of 23.3 m and the maximum rise of 14.46 m.

About 43% of the total well shows rise of water level in the North Gujarat and most of which(27%) shows fluctuation in the range of 0 to 2 m of water level. Fall of more than 2 m in the north region. Fall is observed in 57% of the total well analysed.

In South Gujarat region, 53% of total well analyzed shows rise in water level and in the range of 0 to 2 m represents 31% of well in the region. Rise of water level in 2 to 4 m is observed in 11%. Fall in water level is observed maximum in the range of 0 to 2 m in 28 % of the total well analyzed.

About 63% of total well in Saurashtra region has experienced fall in water level and mostly in the range of 0- 2 m represents about 40% of the total well analysed and > 4 m is observed in 15%.

In Kachchh region, 64% of the total well analysed shows rise in water level and 47 % is in the range of 0 to 2 m. Fall of more than 4 m is observed in western part of the region near Chhota rann. Fall is observed in 36% mostly in 25% in 0-2 m range of total well in Kachchh district.

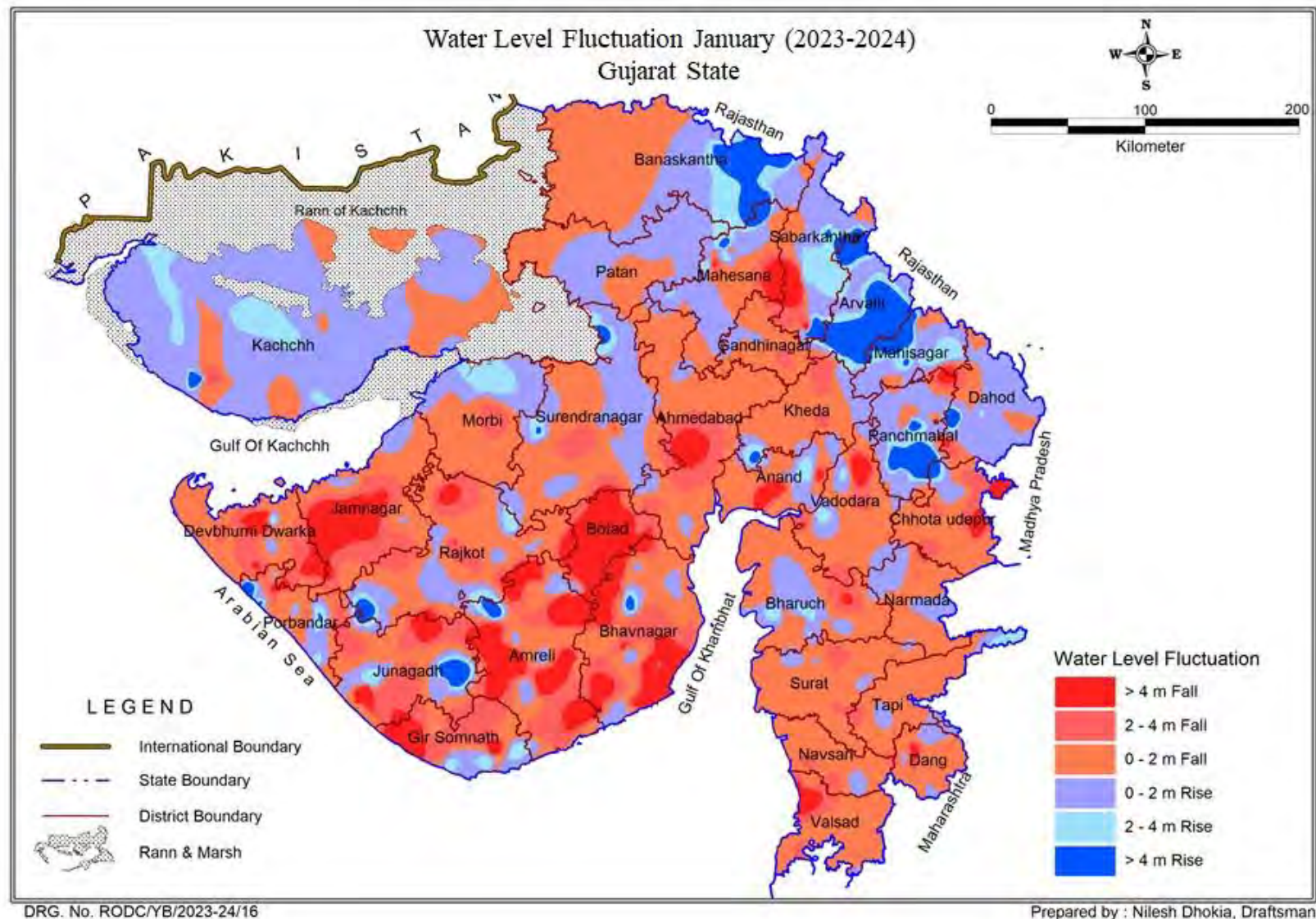


figure 19: Annual fluctuation of water level of Gujarat (January 2023 to January 2024)

Table 14: Categorisation of changes in water level between January 2023 to January 2024

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		Total	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
1	Ahmedabad	10	1	9	0.28	0	0	4.03	1	0	0	4	4	1
									10.0%	0.0%	0.0%	40.0%	40.0%	10.0%
2	Anand	15	8	7	0.13	4.35	0.15	6.63	7	0	1	6	0	1
									46.7%	0.0%	6.7%	40.0%	0.0%	6.7%
3	Arvali	14	1	13	0.54	0.08	0.08	4.65	1	0	0	9	1	3
									7.1%	0.0%	0.0%	64.3%	7.1%	21.4%
4	Banas Kantha	21	14	7	0.2	7.06	1.22	21.32	7	2	5	4	2	1
									33.3%	9.5%	23.8%	19.0%	9.5%	4.8%
5	Dahod	26	10	16	0.04	5.43	0.02	3.61	5	3	2	13	3	0
									19.2%	11.5%	7.7%	50.0%	11.5%	0.0%
6	Gandhinagar	4	2	2	1.74	0.99	0.06	2.53	2	0	0	1	1	0
									50.0%	0.0%	0.0%	25.0%	25.0%	0.0%
7	Kheda	9	4	5	0.43	2.84	0.16	86.22	3	1	0	2	1	2
									33.3%	11.1%	0.0%	22.2%	11.1%	22.2%
8	Mahesana	20	11	9	0.17	8.73	0.21	2.62	9	0	2	8	1	0
									45.0%	0.0%	10.0%	40.0%	5.0%	0.0%
9	Mahisagar	15	7	8	0.04	3.09	0.25	2.25	3	4	0	6	2	0
									20.0%	26.7%	0.0%	40.0%	13.3%	0.0%
10	Panch Mahals	21	11	10	0.01	14.46	0	6.9	6	1	4	6	2	2
									28.6%	4.8%	19.0%	28.6%	9.5%	9.5%
11	Patan	5	0	5	0.03	0	0	3.41	0	0	0	4	1	0
									0.0%	0.0%	0.0%	80.0%	20.0%	0.0%
12	Sabar Kantha	18	8	10	0.08	9.4	0.34	23.3	4	1	3	7	1	2
									22.2%	5.6%	16.7%	38.9%	5.6%	11.1%
	North Gujarat	178	77	101	0.01	1.74	0	86.22	48	12	17	70	19	12
									27.0%	6.7%	9.6%	39.3%	10.7%	6.7%
13	Bharuch	34	12	22	0.1	3.2	0.12	4.2	10	1	1	14	5	3
									29.4%	2.9%	2.9%	41.2%	14.7%	8.8%
14	Chhotaudepur	27	11	16	0.05	6.87	0.05	7.55	7	1	3	8	0	8
									25.9%	3.7%	11.1%	29.6%	0.0%	29.6%
15	Narmada	20	15	5	3.68	0	0	6.02	6	6	3	1	1	3
									30.0%	30.0%	15.0%	5.0%	5.0%	15.0%
16	Navsari	22	10	12	0.05	0.85	0.03	2.77	10	0	0	9	2	1
									45.5%	0.0%	0.0%	40.9%	9.1%	4.5%
17	Surat	43	13	30	0.27	5.26	0	2.2	9	1	3	22	3	5
									20.9%	2.3%	7.0%	51.2%	7.0%	11.6%
18	Tapi	18	6	12	0.22	0.6	0.14	4.06	4	1	1	6	2	4
									22.2%	5.6%	5.6%	33.3%	11.1%	22.2%
19	Dangs	25	23	2	0.61	0.65	0.12	5.8	15	6	2	1	0	1
									60.0%	24.0%	8.0%	4.0%	0.0%	4.0%
20	Vadodara	12	9	3	0.07	0.8	0.06	13.76	2	1	6	2	0	1
									16.7%	8.3%	50.0%	16.7%	0.0%	8.3%
21	Valsad	23	20	3	0.03	2.37	0.19	3.35	6	7	7	0	3	0
									26.1%	30.4%	30.4%	0.0%	13.0%	0.0%
	South Gujarat	224	119	105	0.03	6.87	0	13.76	69	24	26	63	16	26
									30.8%	10.7%	11.6%	28.1%	7.1%	11.6%
22	Amreli	54	26	28	0.01	11.35	0.02	1.88	12	4	10	10	4	14
									22.2%	7.4%	18.5%	18.5%	7.4%	25.9%
23	Bhavnagar	45	24	21	0.02	5.88	0.25	3.73	15	5	4	4	7	10
									33.3%	11.1%	8.9%	8.9%	15.6%	22.2%
24	Botad	10	6	4	0.26	5.65	0.1	0.79	2	0	4	2	1	1
									20.0%	0.0%	40.0%	20.0%	10.0%	10.0%
25	Devbhumi Dwarka	54	16	38	0.02	4.92	0.01	7.25	10	3	3	25	5	8
									18.5%	5.6%	5.6%	46.3%	9.3%	14.8%
26	Gir Somnath	21	8	13	0.06	3.43	0.18	9.03	6	1	1	4	1	8
									28.6%	4.8%	4.8%	19.0%	4.8%	38.1%
27	Jamnagar	30	13	17	0.01	13.1	0	2.93	9	2	2	15	2	0
									30.0%	6.7%	6.7%	50.0%	6.7%	0.0%
28	Junagadh	50	24	26	0.28	6.9	0.02	7.41	11	6	7	22	1	3

Sr. No.	District Name	No of well analysed			Fluctuation range, m				No. of wells in difrent depth range					
		To-tal	Rise	Fall	Rise		Fall		Rise			Fall		
					Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4
									22.0%	12.0%	14.0%	44.0%	2.0%	6.0%
29	Morbi	14	4	10	0.05	2.12	0.03	5.72	3	1	0	9	0	1
									21.4%	7.1%	0.0%	64.3%	0.0%	7.1%
30	Porbandar	35	3	32	0.12	0.7	0.7	6.15	2	1	0	24	5	3
									5.7%	2.9%	0.0%	68.6%	14.3%	8.6%
31	Rajkot	38	10	28	0.05	6.9	0.2	2.72	5	3	2	20	5	3
									13.2%	7.9%	5.3%	52.6%	13.2%	7.9%
32	Surendranagar	34	9	25	0.04	1.86	0.23	1.5	9	0	0	17	1	7
									26.5%	0.0%	0.0%	50.0%	2.9%	20.6%
	Saurashtra	385	143	242	0.01	13.1	0	9.03	84	26	33	152	32	58
									21.8%	6.8%	8.6%	39.5%	8.3%	15.1%
33	Kachchh	36	23	13	0.11	9	0.17	6.24	17	3	3	9	3	1
									47.2%	8.3%	8.3%	25.0%	8.3%	2.8%
	Kachchh	36	23	13	0.11	9	0.17	6.24	17	3	3	9	3	1
									47.2%	8.3%	8.3%	25.0%	8.3%	2.8%
	Gujarat State	823	362	461	0.01	13.1	0	9.03	218	65	79	294	70	97
									26.5%	7.9%	9.6%	35.7%	8.5%	11.8%

4.1.4 Decadal Water Level Fluctuation

Long-term behaviour of water levels was studied by analysing the data for decadal average water levels and fluctuation of present year water level with respect to decadal average waterlevels. Maps showing variation in water level scenario as comparison of May, August, and November 2023 against decadal average of 2013-2022 and January, 2023 to decadal average of 2014-2023 have been prepared to evaluate the long-term changes in the ground-water regime. Fig. 20 illustrates a comparison of the changes of the water levels during different seasons with their respective decadal averages.

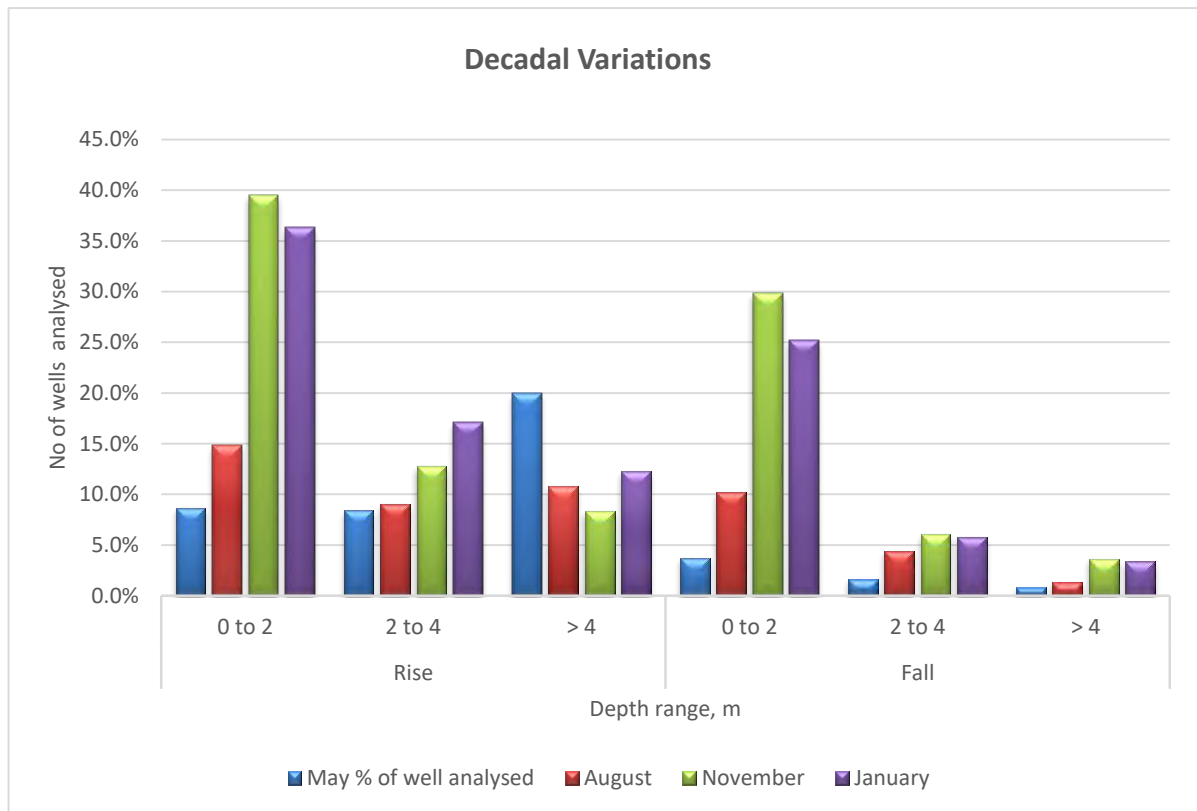


Figure 20: Graph showing Distribution of Decadal Water Level Fluctuation of water level to decadal Average

Decadal Water Level Fluctuation: Decadal average of May (2013-2022) to May 2023

A comparison of the water level of the May 2023 with the average water level of the May for last one decade (2013-2022) reveals that there is the rise of 66 % of the wells monitored. Rise and fall is mostly in the range of 0 to 2 m. Fall of more than 4 m is observed in all parts Gujarat region. The maximum rise of 17.67m is recorded at Porbandar district whereas the maximum fall of 12.33 m is recorded at Botad district (Fig. 21 and table 15).

In *North Gujarat* 58% of wells show the rise and mostly are in range of 0 to 2 m (36 % of wells) in entire North Gujarat. The fall of water level is mostly less than 2 m and in about 25% of the total wells analyzed. The fall of more than 4 m is mostly observed in Mahesana and Gandhinagar district.

In *South Gujarat*, the major part has experienced rise, 59 % of wells analyzed. The fall is mainly 35% of wells in the range of 0 to 2 m. About 48% of wells recorded rise of decadal fluctuation of water level in the range of 0 to 2 m. Chhotaudepur and Dangs districts showed more than 4 m fall in water levels.

In *Saurashtra* region about 73.4% of wells observed the rise in water level and out of which 35% wells shows the rise in the range of 0 to 2 m. The fall is observed in 27% of the well analysed 14% in less than 2 meter, in whole region. Rise of more than 4m water level is observed in 20% of the wells analysed in Saurashtra region.

In *Kachchh*, region about 88% of wells observed the rise in water level and out of which 69% wells shows the rise in the range of 0 to 4 m. The fall is observed in 10% of the well analysed only in less than 2 m in whole region. Rise of more than 4 m water level is observed in 21 % of the wells analysed in region

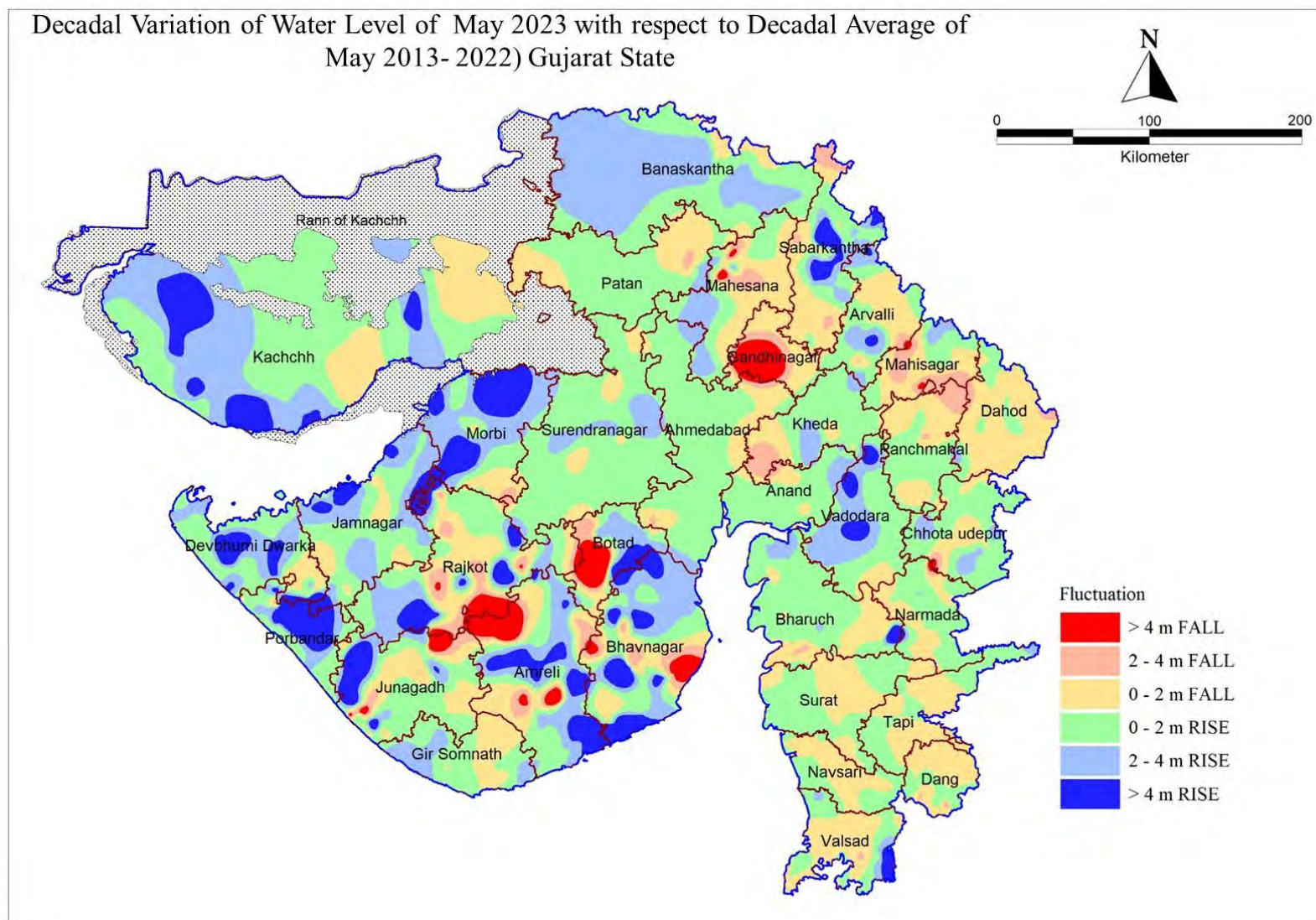


Figure 21: Decadal Variation of water level of Gujarat (May 2023 to decadal average of May 2013- 2022)

Table 15: Well wise categorisation of changes in water level during May 2023 with respect to decadal average of May (2013-2022)

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
1	Ahmedabad	9	0.04	1.28	2.90	2.90	8	0	0	0	1	0	8	1
							88.9 %	0.0%	0.0%	0.0%	11.1 %	0.0%		
2	Anand	11	0.03	2.36	0.20	0.63	8	1	0	2	0	0	9	2
							72.7 %	9.1%	0.0%	18.2 %	0.0%	0.0%		
3	Aravalli	14	0.22	4.47	0.19	2.50	2	4	2	5	1	0	8	6
							14.3 %	28.6 %	14.3 %	35.7 %	7.1%	0.0%		
4	Banas Kantha	12	0.52	4.01	0.74	0.96	4	5	1	2	0	0	10	2
							33.3 %	41.7 %	8.3%	16.7 %	0.0%	0.0%		
5	Dahod	22	0.00	3.21	0.19	3.87	6	2	0	10	4	0	8	14
							27.3 %	9.1%	0.0%	45.5 %	18.2 %	0.0%		
6	Gandhinagar	2	0.00	0.00	5.60	10.34	0	0	0	0	0	2	0	2
							0.0%	0.0%	0.0%	0.0%	0.0%	100.0 %		
7	Kheda	11	0.51	3.22	0.18	3.54	4	3	0	2	2	0	7	4
							36.4 %	27.3 %	0.0%	18.2 %	18.2 %	0.0%		
8	Mahesana	17	0.53	3.97	0.77	6.04	5	6	0	2	2	2	11	6
							29.4 %	35.3 %	0.0%	11.8 %	11.8 %	11.8 %		
9	Mahisagar	11	1.31	2.64	0.22	4.36	1	1	0	6	1	2	2	9
							9.1%	9.1%	0.0%	54.5 %	9.1%	18.2 %		
10	Panch Mahals	16	0.05	1.87	0.04	3.93	8	0	0	6	2	0	8	8
							50.0 %	0.0%	0.0%	37.5 %	12.5 %	0.0%		
11	Patan	6	0.07	3.06	2.75	2.75	3	2	0	0	1	0	5	1
							50.0 %	33.3 %	0.0%	0.0%	16.7 %	0.0%		
12	Sabar Kantha	24	0.02	12.70	0.20	2.91	7	2	6	5	4	0	15	9
							29.2 %	8.3%	25.0 %	20.8 %	16.7 %	0.0%		
	North Gujarat	155	0.00	12.70	0.04	10.34	56	26	9	40	18	6	91	64
							36.1 %	16.8 %	5.8 %	25.8 %	11.6 %	3.9%		
13	Bharuch	32	0.06	15.60	0.05	2.97	17	4	1	7	3	0	22	10
							53.1 %	12.5 %	3.1%	21.9 %	9.4%	0.0%		
14	Chhotau depur	19	0.37	2.92	0.24	1.69	10	4	0	5	0	0.00	14	5
							52.6 %	21.1 %	0.0%	26.3 %	0.0%	0.0%		
15	Narmada	15	0.04	2.05	0.04	4.88	6	1	0	7	0	1	7	8
							40.0 %	6.7%	0.0%	46.7 %	0.0%	6.7%		
16	Navsari	16	0.13	0.90	0.31	2.40	7	0	0	8	1	0	7	9
							43.8 %	0.0%	0.0%	50.0 %	6.3%	0.0%		
17	Surat	11	0.18	1.70	0.37	1.36	7	0	0	4	0	0	7	4
							63.6 %	0.0%	0.0%	36.4 %	0.0%	0.0%		
18	Tapi	10	0.10	2.33	0.17	1.99	6	1	0	3	0	0	7	3

Sr N o.	District Name	No of well ana- lysed	Fluctuation range, m		Fluctuation range, m		No. of wells in diffrent depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Ris e	Fa ll
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
							60.0 %	10.0 %	0.0%	30.0 %	0.0%	0.0%		
19	Dangs	21	0.16	2.48	0.14	4.35	9	1	0	8	2	1	10	11
							42.9 %	4.8%	0.0%	38.1 %	9.5%	4.8%		
20	Vado- dara	9	0.20	6.59	0.74	0.74	5	0	3	1	0	0	8	1
							55.6 %	0.0%	33.3 %	11.1 %	0.0%	0.0%		
21	Valsad	14	0.07	6.63	0.14	2.49	3	1	1	8	1	0	5	9
							21.4 %	7.1%	7.1%	57.1 %	7.1%	0.0%		
	South Gujarat	147	0.04	15.60	0.04	4.88	70	12	5	51	7	2	87	60
							47.6	8.2	3.4	34.7	4.8	1.4%		
							%	%	%	%	%	%		
22	Amreli	27	0.01	8.01	0.35	10.94	7	4	9	3	1	3	20	7
							25.9 %	14.8 %	33.3 %	11.1 %	3.7%	11.1 %		
23	Bhavna- gar	27	0.10	9.47	0.36	7.48	10	5	4	1	4	3	19	8
							37.0 %	18.5 %	14.8 %	3.7%	14.8 %	11.1 %		
24	Botad	6	1.80	5.56	12.33	12.33	1	2	2	0	0	1	5	1
							16.7 %	33.3 %	33.3 %	0.0%	0.0%	16.7 %		
25	Devbhu mi Dwarka	20	0.07	11.86	0.12	4.21	9	4	4	1	1	1	17	3
							45.0 %	20.0 %	20.0 %	5.0%	5.0%	5.0%		
26	Gir Som- nath	14	0.47	3.60	0.12	1.10	5	5	0	4	0	0	10	4
							35.7 %	35.7 %	0.0%	28.6 %	0.0%	0.0%		
27	Jamna- gar	22	0.36	8.04	0.21	2.32	7	5	5	4	1	0	17	5
							31.8 %	22.7 %	22.7 %	18.2 %	4.5%	0.0%		
28	Juna- gadh	31	0.01	9.02	0.04	8.45	11	2	5	8	2	3	18	13
							35.5 %	6.5%	16.1 %	25.8 %	6.5%	9.7%		
29	Morbi	13	0.68	6.79	0.11	2.88	2	4	3	3	1	0	9	4
							15.4 %	30.8 %	23.1 %	23.1 %	7.7%	0.0%		
30	Porban- dar	25	0.04	17.67	0.17	2.96	10	4	8	2	1	0	22	3
							40.0 %	16.0 %	32.0 %	8.0%	4.0%	0.0%		
31	Rajkot	24	0.44	8.05	0.52	7.82	6	3	6	4	2	3	15	9
							25.0 %	12.5 %	25.0 %	16.7 %	8.3%	12.5 %		
32	Suren- dranagar	20	0.38	3.40	0.47	3.76	12	4	0	3	1	0	16	4
							60.0 %	20.0 %	0.0%	15.0 %	5.0%	0.0%		
	Saurash tra	229	4.35	17.67	14.79	12.33	80	42	46	33	14	14	16	61
							34.9	18.3	20.1	14.4	6.1	6.1%		
							%	%	%	%	%	%		
33	Ka- chchh	29	0.03	6.36	0.29	1.54	11	9	6	3	0	0	26	3
							37.9 %	31.0 %	20.7 %	10.3 %	0.0%	0.0%		
	Ka- chchh	29	0.03	6.36	0.29	1.54	11	9	6	3	0	0	26	3
							37.9	31.0	20.7	10.3	0.0	0.0%		
							%	%	%	%	%	%		
	Gujarat State	560	0.	17.67	0.04	12.33	217	89	66	127	39	22	37	18
							38.8	15.9	11.8	22.7	7.0%	3.9%	2	8
							%	%	%	%	%	%		

Decadal Water Level Fluctuation: Decadal average of August (2013 to 2022) to August 2023

A comparison of the water level of the August 2023 with the average water level of the August for last one decade (2013-2022) Figure 22 and Table 16 reveals that there is the rise in 65% of well analysed. Rise is mostly in the range of 0 to 2 m (36% of total wells). Fall in water levels is observed in 35% of well analysed. The maximum rise of 35.58 m is recorded in Amreli district whereas the maximum decline of 9.87 m is recorded in Bnaskantha district.

In *North Gujarat*, 40.7% of wells have shown rise and mostly in range of 0 to 2 m (31.4% of wells). Rise of more than 4 m is prominently observed in, Banaskatha, Mahisagar, Kheda, and Mahesana, districts. The fall of 59% in water level is observed in the almost all area of north Gujarat where > 4m observed in all except Aravali, Banaskatha, Kheda, Mahesana and Sabarkantha districts.

South Gujarat has experienced the rise in 54% of wells analysed whereas 46% shows fall. In the range of 2 to 4 m, 45.3% of well shows the fall while 50.4 % of wells shows the rise. More than 4 m of fall in water level shows only in all Chotaudepur district of South Gujarat region.

In *Saurashtra* region, 87% of total well shows the rise in water level where as 18% shows the fall. The fall of water level mainly observed in 12% in range of 0-2 m . The rise in water level is observed in all districts of the Saurashtra region and rise of more than 4 m in water level is observed 27% wells of Saurashtra region.

In *Kachchh*, 65% of the wells analysed have recorded the rise in water levels in the district. Fall is mostly (26.5% of wells) in the range of 0 to 2 m. Rise is observed in 20 % wells in the district mostly in the range of 0-2 meter and more than 4 meter rise is shown in 23% wells analysed.

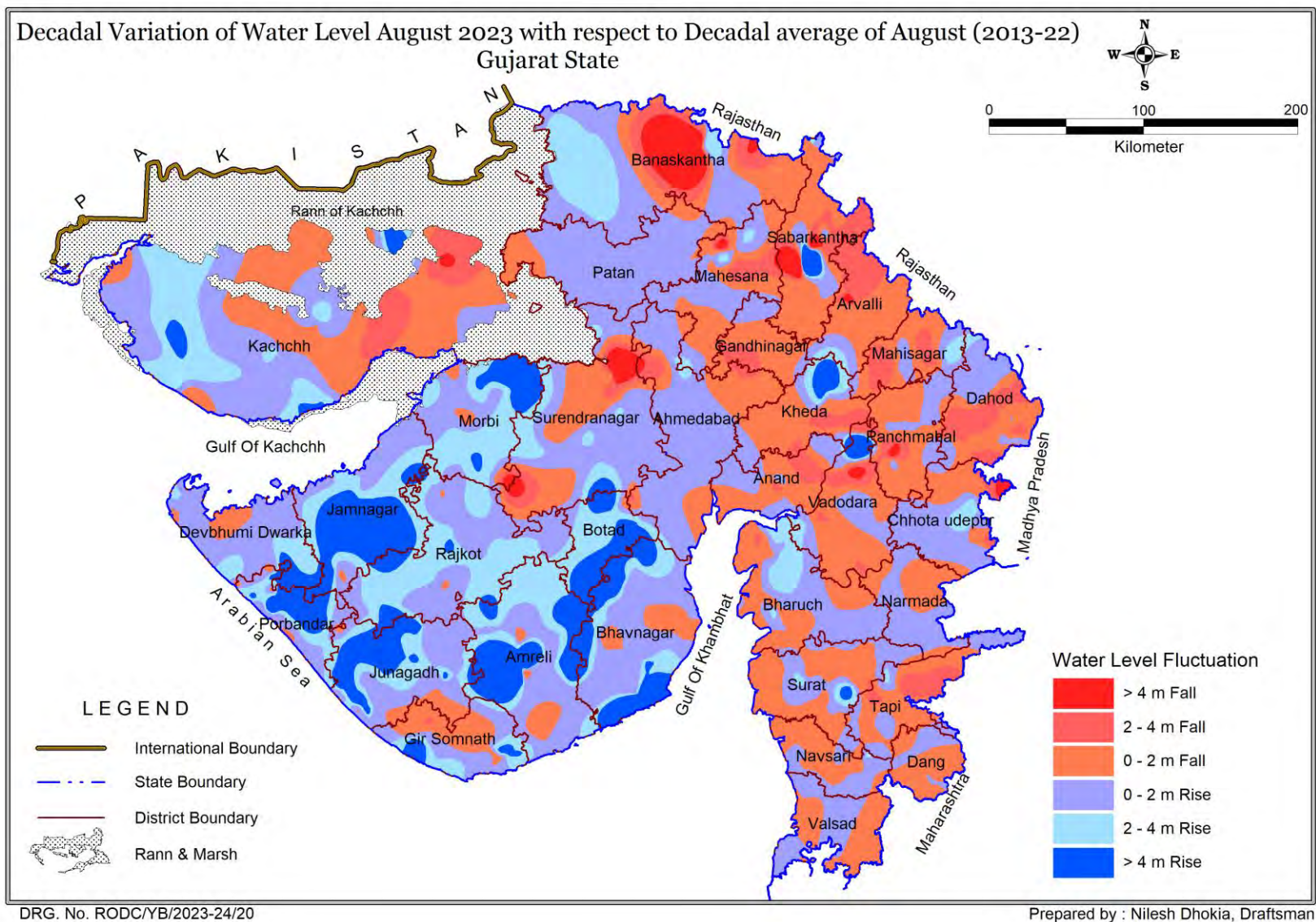


Figure 22: Variation of water level of Gujarat (August 2023 to decadal average of August 2013-2022)

Table 16: Well wise categorisation of changes in water level during August 2023 with respect to decadal average of August (2013 to 2022)

Sr No	District Name	No of well an- alysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
1	Ahmedabad	7	0.41	0.92	0.88	2.99	3.00	0.00	0.00	2.00	2.00	0.00	3	4
							42.9 %	0.0%	0.0%	28.6 %	28.6 %	0.0%		
2	Anand	10	0.14	2.16	0.19	2.71	5.00	1.00	0.00	2.00	2.00	0.00	6	4
							50.0 %	10.0 %	0.0%	20.0 %	20.0 %	0.0%		
3	Arvalli	6	1.34	1.34	0.46	6.16	1.00	0.00	0.00	2.00	2.00	1.00	1	5
							16.7 %	0.0%	0.0%	33.3 %	33.3 %	16%		
4	Banas Kan- tha	13	0.25	4.08	0.21	9.87	3	1	1	6	1	1	5	8
							23.1 %	7.7%	7.7%	46.2 %	7.7%	7.7%		
5	Dahod	22	0.24	1.85	0.75	3.66	8	0	0	5	9	0	8	14
							36.4 %	0.0%	0.0%	22.7 %	40.9 %	0.0%		
6	Gandhinagar	2	1.06	1.06	0.43	0.43	1	0	0	1	0	0	1	1
							50.0 %	0.0%	0.0%	50.0 %	0.0%	0.0%		
7	Kheda	7	0.47	6.63	0.70	6.86	1	0	1	3	1	1	2	5
							14.3 %	0.0%	14.3 %	42.9 %	14.3 %	14.3 %		
8	Mahesana	18	0.46	4.04	0.16	5.37	9	2	1	4	1	1	12	6
							50.0 %	11.1 %	5.6%	22.2 %	5.6%	5.6%		
9	Mahisagar	17	0.29	5.01	0.18	2.99	3	2	1	8	3	0	6	11
							17.6 %	11.8 %	5.9%	47.1 %	17.6 %	0.0%		
10	Panch Ma- hals	17	0.36	2.42	0.04	2.62	6	1	0	8	2	0	7	10
							35.3 %	5.9%	0.0%	47.1 %	11.8 %	0.0%		
11	Patan	3	0.74	2.75	0.00	0.00	2	1	0	0	0	0	3	0
							66.7 %	33.3 %	0.0%	0.0%	0.0%	0.0%		
12	Sabar Kan- tha	18	0.21	3.98	0.11	8.83	2	1	0	12	0	3	3	15
							11.1 %	5.6%	0.0%	66.7 %	0.0%	16.7 %		
	North Gu- jarat	140	0.14	6.63	0.00	9.87	44	9	4	53	23	7	57	83
							31.4 %	6.4%	2.9%	37.9 %	16.4 %	5.0 %		
13	Bharuch	21	0.12	4.48	0.08	2.21	9	2	1	8	1	0	12	9
							42.9 %	9.5%	4.8%	38.1 %	4.8%	0.0%		
14	Chhotaud- epur	16	0.34	5.01	0.21	4.70	4	2	1	7	1	1	7	9
							25.0 %	12.5 %	6.3%	43.8 %	6.3%	6.3%		
15	Narmada	10	0.08	1.90	3.42	3.42	9	0	0	0	1	0	9	1
							90.0 %	0.0%	0.0%	0.0%	10.0 %	0.0%		
16	Navsari	17	0.01	2.28	0.11	1.18	8	2	0	7	0	0	10	7
							47.1 %	11.8 %	0.0%	41.2 %	0.0%	0.0%		
17	Surat	30	0.08	5.08	0.05	2.07	12	0	2	15	1	0	14	16
							40.0 %	0.0%	6.7%	50.0 %	3.3%	0.0%		
18	Tapi	11	0.17	2.34	0.49	2.62	4	2	0	3	2	0	6	5

Sr No	District Name	No of well an- alys ed	Fluctuation range, m		Fluctuation range, m		No. of wells in diffrent depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Ris e	Fal l
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
							36.4 %	18.2 %	0.0%	27.3 %	18.2 %	0.0%		
19	Dangs	23	0.07	1.11	0.22	2.57	12	0	0	9	2	0	12	11
							52.2 %	0.0%	0.0%	39.1 %	8.7%	0.0%		
20	Vadodara	11	0.46	16.08	0.32	3.70	3	1	1	2	4	0	5	6
							27.3 %	9.1%	9.1%	18.2 %	36.4 %	0.0%		
	South Gu- jarat	139	0.01	16.08	0.05	1.18	61.00	9.00	5.00	51.00	12.00	1.00	75	64
							43.9 %	6.5%	3.6%	36.7 %	8.6%	0.7 %		
21	Amreli	31	0.15	35.58	0.18	1.95	8	9	11	3	0	0	28	3
							25.8 %	29.0 %	35.5 %	9.7%	0.0%	0.0%		
23	Bhavnagar	23	0.31	11.10	0.14	1.58	10	4	5	4	0	0	19	4
							43.5 %	17.4 %	21.7 %	17.4 %	0.0%	0.0%		
24	Botad	4	3.74	11.63	0.00	0.00	0	1	3	0	0	0	4	0
							0.0%	25.0 %	75.0 %	0.0%	0.0%	0.0%		
25	Devbhumi Dwarka	13	0.54	6.78	1.12	2.87	6	3	2	1	1	0	11	2
							46.2 %	23.1 %	15.4 %	7.7%	7.7%	0.0%		
26	Gir Somnath	13	0.21	5.87	0.25	1.84	3	2	3	5	0	0	8	5
							23.1 %	15.4 %	23.1 %	38.5 %	0.0%	0.0%		
27	Jamnagar	16	0.47	8.30	0.24	0.29	6	4	4	2	0	0	14	2
							37.5 %	25.0 %	25.0 %	12.5 %	0.0%	0.0%		
28	Junagadh	29	0.12	10.07	0.10	0.86	11	5	10	3	0	0	26	3
							37.9 %	17.2 %	34.5 %	10.3 %	0.0%	0.0%		
29	Morbi	14	0.09	8.59	1.08	5.00	6	3	3	1	0	1	12	2
							42.9 %	21.4 %	21.4 %	7.1%	0.0%	7.1%		
30	Porbandar	24	0.26	13.37	0.36	1.04	7	2	11	4	0	0	20	4
							29.2 %	8.3%	45.8 %	16.7 %	0.0%	0.0%		
31	Rajkot	21	0.17	6.04	0.00	0.00	9	9	3	0	0	0	21	0
							42.9 %	42.9 %	14.3 %	0.0%	0.0%	0.0%		
32	Surendrana- gar	19	0.11	4.81	0.40	0.57	11	5	1	2	0	0	17	2
							57.9 %	26.3 %	5.3%	10.5 %	0.0%	0.0%		
	Saurashtra	207	0.09	35.58	0.00	5.00	77	47	56	25	1	1	180	27
							37.2 %	22.7 %	27.1 %	12.1 %	0.5%	0.5 %		
33	Kachchh	35	0.02	8.66	0.13	2.94	7	9	8	9	2	0	24	11
							20.0 %	25.7 %	22.9 %	25.7 %	5.7%	0.0%		
	Kachchh	35	0.02	8.66	0.13	2.94	7	9	8	9	2	0	24	11
							20.0 %	25.7 %	22.9 %	25.7 %	5.7%	0.0 %		
	Gujarat State	521	0.01	35.58	0.00	9.87	189.2 0	74.26	73.23	138.2 6	38.06	9.00	336	18 5
							36.3 %	14.3 %	14.1 %	26.5 %	7.3%	1.7 %		

Decadal Water Level Fluctuation: Decadal average of November (2013-2022) to November 2023

A comparison of the water level of the November 2023 with the average water level of the November for last one decade (2013-2022) Figure 23 & Table 17 reveals that there is the rise in water level in the state (61.5% of total well analysed). Rise and fall is mostly in the range of 0 to 2. The fall of more than 4 m is observed mostly in Saurashtra region of Gujarat State. The maximum rise of 13.10 m is recorded at Amreli district whereas the maximum fall of 21.67 m is recorded at Sabar Kantha district.

In *North Gujarat* 60.8% of wells are shown rise and mostly well are in range of 0 to 2 m (36.7% of wells) in entire North Gujarat. The fall of water level found in 39% of the wells of which 26% of wells were found in the range of 0 to 2 m. Fall of more than 4 m is mainly observed in Banaskantha, Mahesana, Panchmahal, and Sabarkantha districts.

In *South Gujarat*, 50.4% of total well analysed shows the rise where as 49.6% shows the fall. In the range of 0 to 2 m, 40.5 % shows the rise and 27.1% shows the fall scattered in whole South Gujarat region. Fall of more than 4 m is predominantly observed in Chotaudepur Surat and Vadodara districts.

In *Saurashtra* region about 64 % of wells analysed show rise in water level and out of which 23% wells in more than 2 m. Fall of water level are experienced in 35% of the well and 27% are in the 0 to 2 m. More than 4 m rise in water level is observed in all ditriacts of Saurashtra except gir Somnath and Surendranagar district.

In *Kachchh*, 21% of the total wells analysed are recorded fall in water level in the district. Fall is mostly (19.4% of wells) in the range of 0 to 2 m. Rise in water level is observed in 71% of the wells analysed in distributed all over the Kachchh region. Rise of more than 4 m is witnessed in isolated pockets in the region.

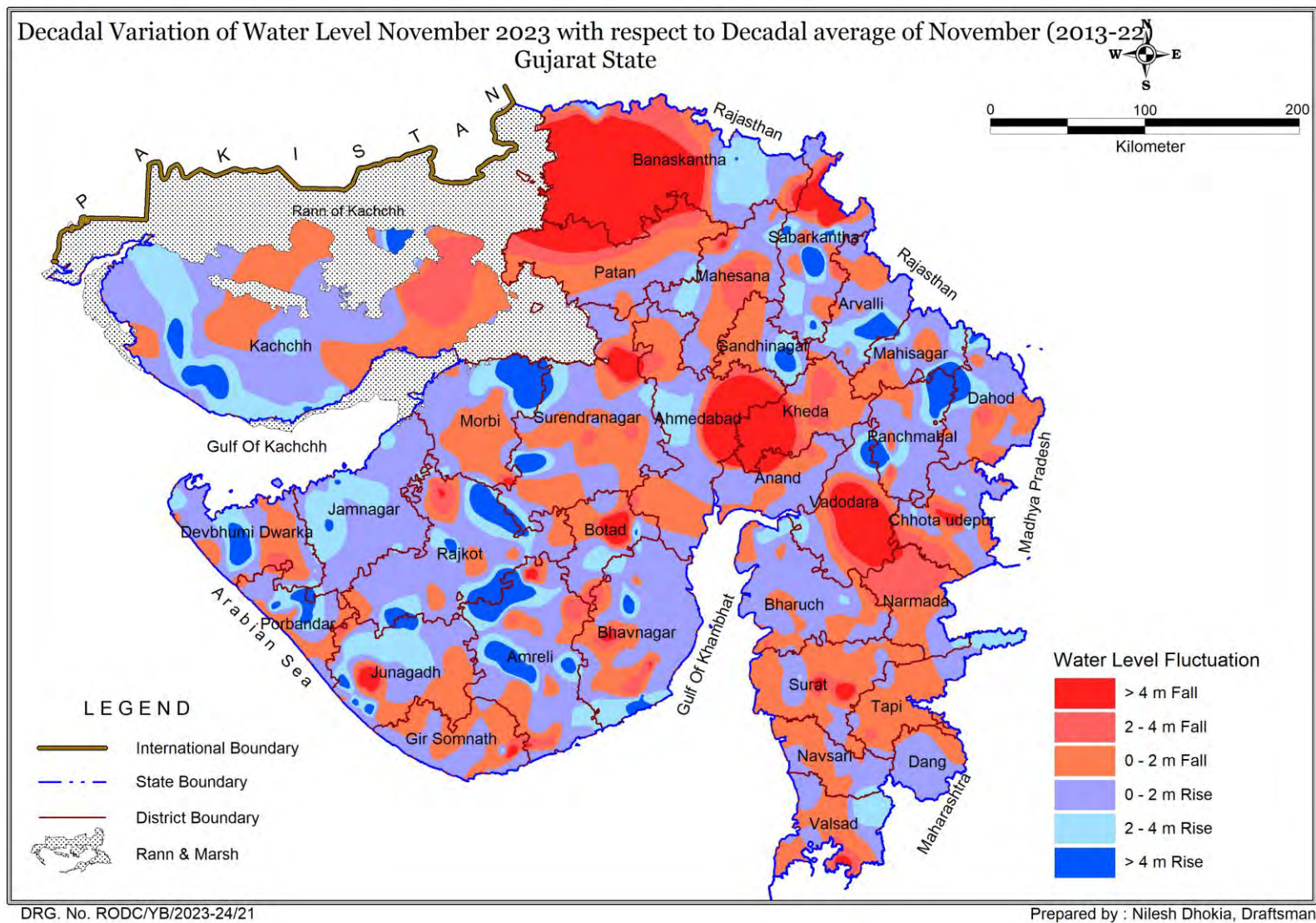


Figure 23: Decadal Variation of water level of Gujarat (November 2023 to decadal average of November 2013-2022)

Table 17: Well wise categorisation of changes in water level during November 2023 with respect to decadal average of November (2013 to 2022)

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
1	Ahmedabad	7	2.24	2.24	0.40	2.62	0.00	1.00	0.00	4.00	2.00	0.00	1	6
							0.0%	14.3%	0.0%	57.1%	28.6%	0.0%		
2	Anand	13	0.27	1.98	1.19	2.45	9.00	0.00	0.00	3.00	1.00	0.00	9	4
							69.2%	0.0%	0.0%	23.1%	7.7%	0.0%		
3	Arvali	16	0.48	4.59	0.30	3.37	7.00	3.00	2.00	3.00	1.00	0.00	12	4
							43.8%	18.8%	12.5%	18.8%	6.3%	0.0%		
4	Banas Kantha	14	0.00	4.10	2.60	19.83	4	5	1	0	2	2	10	4
							28.6%	35.7%	7.1%	0.0%	14.3%	14.3%		
5	Dahod	26	0.07	4.22	0.38	3.02	14	2	1	6	3	0	17	9
							53.8%	7.7%	3.8%	23.1%	11.5%	0.0%		
6	Gandhinagar	3	2.23	5.47	2.89	2.89	0	1	1	0	1	0	2	1
							0.0%	33.3%	33.3%	0.0%	33.3%	0.0%		
7	Kheda	7	0.81	0.81	0.49	3.67	1	0	0	4	2	0	1	6
							14.3%	0.0%	0.0%	57.1%	28.6%	0.0%		
8	Mahesana	15	0.56	2.95	0.25	4.87	5	5	0	3	1	1	10	5
							33.3%	33.3%	0.0%	20.0%	6.7%	6.7%		
9	Mahisagar	14	0.96	4.27	0.05	2.29	3	2	1	7	1	0	6	8
							21.4%	14.3%	7.1%	50.0%	7.1%	0.0%		
10	Panch Mahals	18	0.13	12.13	0.16	4.08	9	2	3	3	0	1	14	4
							50.0%	11.1%	16.7%	16.7%	0.0%	5.6%		
11	Patan	5	0.06	3.19	0.56	0.57	2	1	0	2	0	0	3	2
							40.0%	20.0%	0.0%	40.0%	0.0%	0.0%		
12	Sabar Kantha	20	0.77	4.60	0.01	21.67	4	4	3	6	1	2	11	9
							20.0%	20.0%	15.0%	30.0%	5.0%	10.0%		
	North Gujarat	158	0.00	12.13	0.01	21.67	58	26	12	41	15	6	96	62
							36.7%	16.5%	7.6%	25.9%	9.5%	3.8%		
13	Bharuch	31	0.01	3.06	0.03	2.11	14	4	0	12	1	0	18	13
							45.2%	12.9%	0.0%	38.7%	3.2%	0.0%		
14	Chhotaudpur	18	0.12	4.76	0.03	4.64	11	2	1	2	0	2	14	4
							61.1%	11.1%	5.6%	11.1%	0.0%	11.1%		
15	Narmada	2	0.00	0.00	2.83	3.95	0	0	0	0	2	0	0	2
							0.0%	0.0%	0.0%	0.0%	100.0%	0.0%		
16	Navsari	19	0.04	1.72	0.03	1.72	8	0	0	11	0	0	8	11
							42.1%	0.0%	0.0%	57.9%	0.0%	0.0%		
17	Surat	29	0.02	2.44	0.07	8.18	8	1	0	18	0	2	9	20
							27.6%	3.4%	0.0%	62.1%	0.0%	6.9%		

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
18	Tapi	11	0.24	2.43	0.31	2.45	3	1	0	6	1	0	4	7
							27.3%	9.1%	0.0%	54.5%	9.1%	0.0%		
19	Dangs	8	0.00	0.82	0.00	0.00	8	0	0	0	0	0	8	0
							100.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
20	Vadodara	4	2.70	2.70	0.28	12.31	0	1	0	2	0	1	1	3
							0.0%	25.0%	0.0%	50.0%	0.0%	25.0%		
21	Valsad	7	0.03	3.75	0.42	1.75	2.00	1.00	0.00	4.00	0.00	0.00	3	4
							28.6%	14.3%	0.0%	57.1%	0.0%	0.0%		
	South Gujarat	129	0.00	4.76	0.00	12.31	54	10	1	55	4	5	65	64
							41.9%	7.8%	0.8%	42.6%	3.1%	3.9%		
22	Amreli	37	0.07	13.10	0.39	8.19	15.00	4.00	7.00	6.00	3.00	2.00	26	11
							40.5%	10.8%	18.9%	16.2%	8.1%	5.4%		
23	Bhavnagar	30	0.10	6.25	0.04	5.43	14	3	2	6	3	2	19	11
							46.7%	10.0%	6.7%	20.0%	10.0%	6.7%		
24	Botad	6	0.61	4.59	1.73	12.87	2	1	1	1	0	1	4	2
							33.3%	16.7%	16.7%	16.7%	0.0%	16.7%		
25	Devbhumi Dwarka	21	0.06	4.72	0.38	2.60	7	3	3	6	2	0	13	8
							33.3%	14.3%	14.3%	28.6%	9.5%	0.0%		
26	Gir Somnath	16	0.42	2.40	0.16	8.39	6	1	0	8	0	1	7	9
							37.5%	6.3%	0.0%	50.0%	0.0%	6.3%		
27	Jamnagar	21	0.13	4.53	0.03	0.03	11	7	2	1	0	0	20	1
							52.4%	33.3%	9.5%	4.8%	0.0%	0.0%		
28	Junagadh	35	0.47	12.75	0.03	9.25	11	6	5	10	1	2	22	13
							31.4%	17.1%	14.3%	28.6%	2.9%	5.7%		
29	Morbi	14	0.09	6.73	0.02	5.84	5	0	1	7	0	1	6	8
							35.7%	0.0%	7.1%	50.0%	0.0%	7.1%		
30	Porbandar	30	0.13	7.04	0.53	3.24	11	4	3	10	2	0	18	12
							36.7%	13.3%	10.0%	33.3%	6.7%	0.0%		
31	Rajkot	26	0.08	5.98	0.21	4.10	10	4	5	5	1	1	19	7
							38.5%	15.4%	19.2%	19.2%	3.8%	3.8%		
32	Surendranagar	26	0.04	1.86	0.09	3.41	14	0	0	11	1	0	14	12
							53.8%	0.0%	0.0%	42.3%	3.8%	0.0%		
	Saurashtra	262	0.04	13.10	0.02	12.87	106	33	29	71	13	10	168	94
							40.5%	12.6%	11.1%	27.1%	5.0%	3.8%		
33	Kachchh	31	0.01	8.08	0.26	3.64	11	5	6	6	3	0	22	9
							35.5%	16.1%	19.4%	19.4%	9.7%	0.0%		
	Kachchh	31	0.01	8.08	0.26	3.64	11	5	6	6	3	0	22	9
							35.5%	16.1%	19.4%	19.4%	9.7%	0.0%		

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
	Gujarat State	580	0.00	13.10	0.00	21.67	229	74	48	173	35	21	351	229
							39.5 %	12.8 %	8.3 %	29.8 %	6.0 %	3.6 %		

Decadal Water Level Fluctuation: Decadal average of January (2014-2023) to January 2024)

A comparison of the water level of the January 2024 with the average water level of the January for last one decade (2014-2023) Figure 21 and Table 15 reveals that there is a rise in water level in the state (65.6 % of total well analysed). Rise and fall is mostly in the range of 0 to 2 m. Fall of more than 4 m is observed mostly in Northern, Saurashtra and Southern region. The maximum rise of 48 m is recorded in Banaskath district whereas the maximum fall of 16.7 m is recorded at Gir Somnath district.

In *North Gujarat* 58% of wells are shown the rise with mostly well are in range of 0 to 2 m (32% of wells), 41% of total well shows fall with 28% in the range of 0 to 2 m. Fall of more than 4 m in waterlevel is obsdved in 5.8% of wells whereas rise is shown in 9.75 of wells..

In *South Gujarat*, 49% of total well analysed shows rise whereas 50.6% shows fall for this decadal variation. The rise and fall mainly in the range of 0 to 2 m (41% rise and 46% fall). Few patches show fall of >4 m in Surat districts.

In *Saurashtra* region, about 23% of wells observed fall in water level and out of which 13% wells shows fall in the range of 0 to 2 m. The rise of water level is observed in 76% wells in the region. The rise of more than 4 m is experienced in 18% of the total well in region distributed all over the region. Rise of the water level in the range 0 to 2 m is observed in 34.3% wells of the region.

In *Kachchh*, 16% of the total wells analysed are recorded fall in water level in the district. Fall is mostly (12% of wells) in the range of 0 to 2 m. The fall mainly observed in the in central and western part of Kachchh. The rise of 87% of the total wells analysed is recorded in Kachchh region.

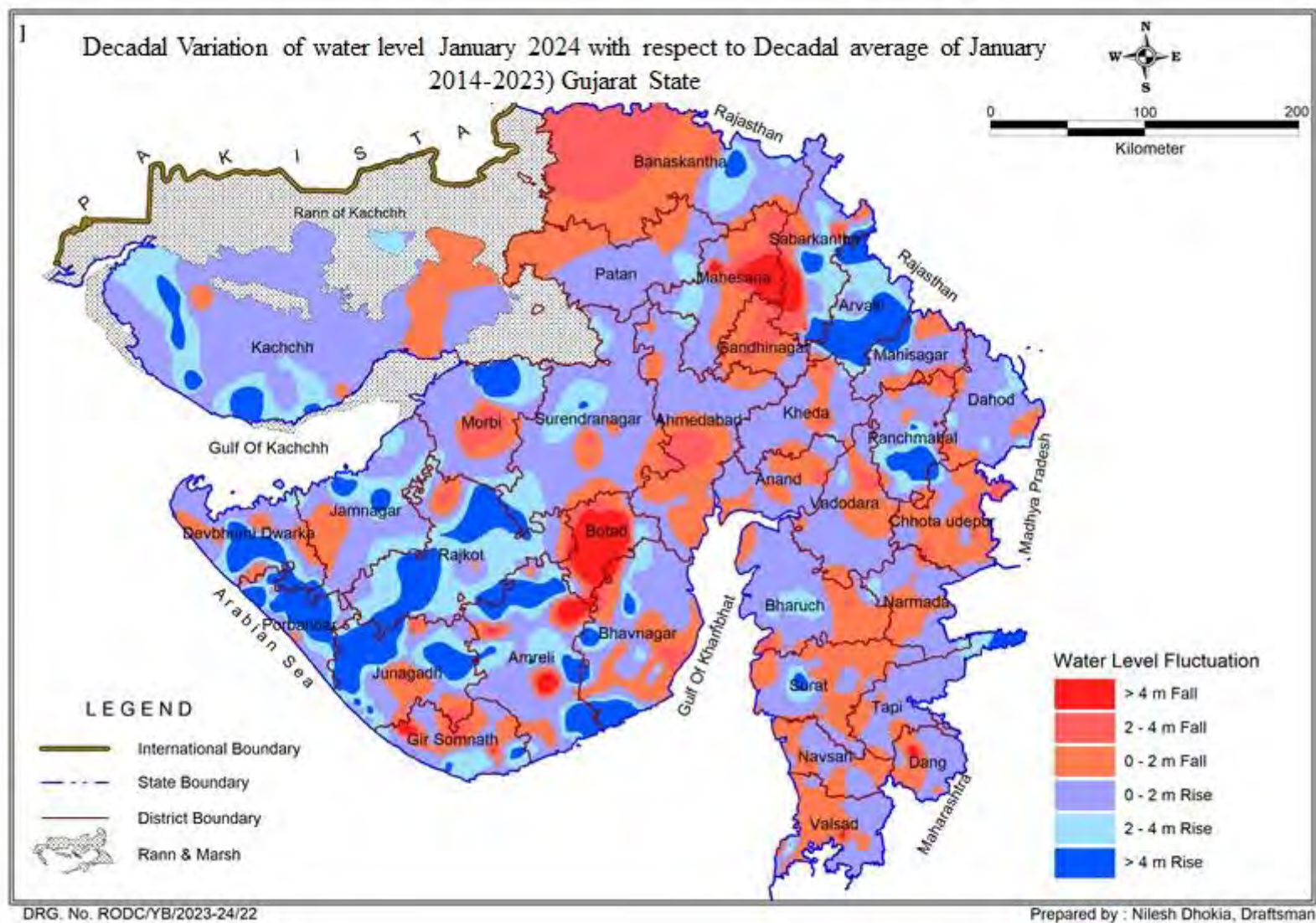


Figure 24: Decadal Variation of water level of Gujarat (January 2024 to decadal average of January 2014-2023)

Table 18: Well wise categorisation of changes in water level during January 2024 with respect to decadal average of January (2014 to 2023)

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in diffrent depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
1	Ahmedabad	7	0.06	2.05	0.28	1.22	4.00	1.00	0.00	2.00	0.00	0.00	5	2
							57.1%	14.3%	0.0%	28.6%	0.0%	0.0%		
2	Anand	16	0.07	2.81	0.39	2.09	8.00	2.00	0.00	5.00	1.00	0.00	10	6
							50.0%	12.5%	0.0%	31.3%	6.3%	0.0%		
3	Arvalli	14	0.60	10.87	0.26	4.64	1.00	3.00	1.00	3.00	4.00	1.00	5	8
							7.1%	21.4%	7.1%	21.4%	28.6%	7.1%		
4	Banas Kantha	12	0.79	48.06	0.78	12.41	4	2	3	2	0	1	9	3
							33.3%	16.7%	25.0%	16.7%	0.0%	8.3%		
5	Dahod	24	0.11	5.00	0.08	9.73	7	4	1	8	3	1	12	12
							29.2%	16.7%	4.2%	33.3%	12.5%	4.2%		
6	Gandhinagar	3	0.83	3.05	1.26	1.26	1	1	0	1	0	0	2	1
							33.3%	33.3%	0.0%	33.3%	0.0%	0.0%		
7	Kheda	6	6.09	6.09	0.08	8.69	0	0	1	4	0	1	1	5
							0.0%	0.0%	16.7%	66.7%	0.0%	16.7%		
8	Mahesana	16	0.00	2.72	0.21	9.66	6	1	0	6	1	2	7	9
							37.5%	6.3%	0.0%	37.5%	6.3%	12.5%		
9	Mahisagar	14	0.00	2.79	0.42	2.13	6	3	0	4	1	0	9	5
							42.9%	21.4%	0.0%	28.6%	7.1%	0.0%		
10	Panch Mahals	19	0.23	6.05	0.67	1.84	8	4	2	5	0	0	14	5
							42.1%	21.1%	10.5%	26.3%	0.0%	0.0%		
11	Patan	6	0.60	7.62	0.32	1.18	1	2	1	2	0	0	4	2
							16.7%	33.3%	16.7%	33.3%	0.0%	0.0%		
12	Sabar Kantha	18	0.20	17.67	0.34	13.87	4	2	6	2	1	3	12	6
							22.2%	11.1%	33.3%	11.1%	5.6%	16.7%		
	North Gujarat	155	0.00	48.06	0.08	13.87	50	25	15	44	11	9	90	64
							32.3%	16.1%	9.7%	28.4%	7.1%	5.8%		
13	Bharuch	29	0.02	2.26	0.06	3.27	11	2	0	14	2	0	13	16
							37.9%	6.9%	0.0%	48.3%	6.9%	0.0%		
14	Chhotaudpur	11	0.09	3.80	0.05	1.27	6	2	0	3	0	0	8	3
							54.5%	18.2%	0.0%	27.3%	0.0%	0.0%		
15	Narmada	16	0.06	5.80	0.15	1.68	9	1	1	5	0	0	11	5
							56.3%	6.3%	6.3%	31.3%	0.0%	0.0%		
16	Navsari	20	0.08	4.91	0.12	1.86	8	1	1	10	0	0	10	10
							40.0%	5.0%	5.0%	50.0%	0.0%	0.0%		
17	Surat	25	0.01	3.54	0.06	4.54	10	2	0	10	1	2	12	13
							40.0%	8.0%	0.0%	40.0%	4.0%	8.0%		
18	Tapi	10	0.09	2.39	0.33	1.14	7	1	0	2	0	0	8	2
							70.0%	10.0%	0.0%	20.0%	0.0%	0.0%		
19	Dangs	22	0.02	0.70	0.17	2.37	7	0	0	14	1	0	7	15
							31.8%	0.0%	0.0%	63.6%	4.5%	0.0%		
20	Vadodara	4	0.37	4.60	0.22	1.90	1	0	1	2	0	0	2	2
							25.0%	0.0%	25.0%	50.0%	0.0%	0.0%		
21	Valsad	17	0.33	1.39	0.02	2.20	5	0	0	11	1	0	5	12
							29.4%	0.0%	0.0%	64.7%	5.9%	0.0%		
	South Gujarat	154	0.01	5.80	0.02	4.54	64	9	3	71	5	2	76	78
							41.6%	5.8%	1.9%	46.1%	3.2%	1.3%		
22	Amreli	46	0.02	14.03	0.08	4.35	16.00	10.00	12.00	4.00	2.00	2.00	38	8
							34.8%	21.7%	26.1%	8.7%	4.3%	4.3%		
23	Bhavnagar	36	0.06	16.22	0.18	13.62	15	6	6	4	4	1	27	9
							41.7%	16.7%	16.7%	11.1%	11.1%	2.8%		
24	Botad	7	1.38	7.69	0.00	0.00	1	4	2	0	0	0	7	0

Sr. No.	District Name	No of well analysed	Fluctuation range, m		Fluctuation range, m		No. of wells in different depth range						Total No. of wells	
			Rise		Fall		Rise			Fall			Rise	Fall
			Min	Max	Min	Max	0 to 2	2 to 4	> 4	0 to 2	2 to 4	> 4		
							14.3%	57.1%	28.6%	0.0%	0.0%	0.0%		
25	Devbhumi Dwarka	25	0.12	6.34	0.67	8.36	9	6	1	4	2	3	16	9
							36.0%	24.0%	4.0%	16.0%	8.0%	12.0%		
26	Gir Somnath	9	0.38	4.92	0.75	16.70	3	0	2	1	1	2	5	4
							33.3%	0.0%	22.2%	11.1%	11.1%	22.2%		
27	Jamnagar	24	0.09	7.50	0.45	3.95	5	5	5	3	6	0	15	9
							20.8%	20.8%	20.8%	12.5%	25.0%	0.0%		
28	Junagadh	39	0.28	8.18	0.18	13.25	11	13	8	5	1	1	32	7
							28.2%	33.3%	20.5%	12.8%	2.6%	2.6%		
29	Morbi	13	0.08	7.27	0.03	2.82	6	0	2	3	2	0	8	5
							46.2%	0.0%	15.4%	23.1%	15.4%	0.0%		
30	Porbandar	29	0.24	7.90	0.15	2.92	8	8	6	6	1	0	22	7
							27.6%	27.6%	20.7%	20.7%	3.4%	0.0%		
31	Rajkot	26	0.01	7.33	0.84	4.78	9	10	5	1	0	1	24	2
							34.6%	38.5%	19.2%	3.8%	0.0%	3.8%		
32	Surendranagar	26	0.01	10.12	0.04	1.87	13	4	3	6	0	0	20	6
							50.0%	15.4%	11.5%	23.1%	0.0%	0.0%		
	Saurashtra	280	0.01	16.22	0.00	16.70	96	66	52	37	19	10	214	66
							34.3%	23.6%	18.6%	13.2%	6.8%	3.6%		
33	Kachchh	31	0.00	9.57	0.14	2.67	15	6	6	4	1	0	27	5
							48.4%	19.4%	19.4%	12.9%	3.2%	0.0%		
	Kachchh	31	0.00	9.57	0.14	2.67	15	6	6	4	1	0	27	5
							48.4%	19.4%	19.4%	12.9%	3.2%	0.0%		
	Gujarat State	620	0.00	48.06	0.00	16.70	225	106	76	156	36	21	407	213
							36.3%	17.1%	12.3%	25.2%	5.8%	3.4%		

4.2 Water Table Scenario

The water table map for pre-monsoon period (Figure 26) reveals that the water table in different parts of the Gujarat state ranges between 10.72 m bmsl and 579.18 m amsl (Annexure III). The water table mostly follows the topography of the area. Water table is highest along the eastern hilly tract of the eastern side and gradually reduces towards west/south west. Groundwater flow direction is southwest in north Gujarat and it turns to west in south Gujarat. Flow directions in Kachchh and Saurashtra are divergent in all directions from the centre of the regions where the height of the water table is 100 m amsl, thus making groundwater mound in the central parts of both the Regions. The elevation of the water table is more than 300 m amsl in the Dahod, Valsad, Dangs, and Sabarkatha more than 400 m amsl Valsad, Dangs, Sabarkatha and Banaskantha. Water table below mean sea level is observed in coastal Bharuch, Devbhumi Dwarka, Gir Somnath, Jamnagar, Junagadh, Kachchh, Porbandar, Surat, Navsari and Valsad districts of Gujarat.

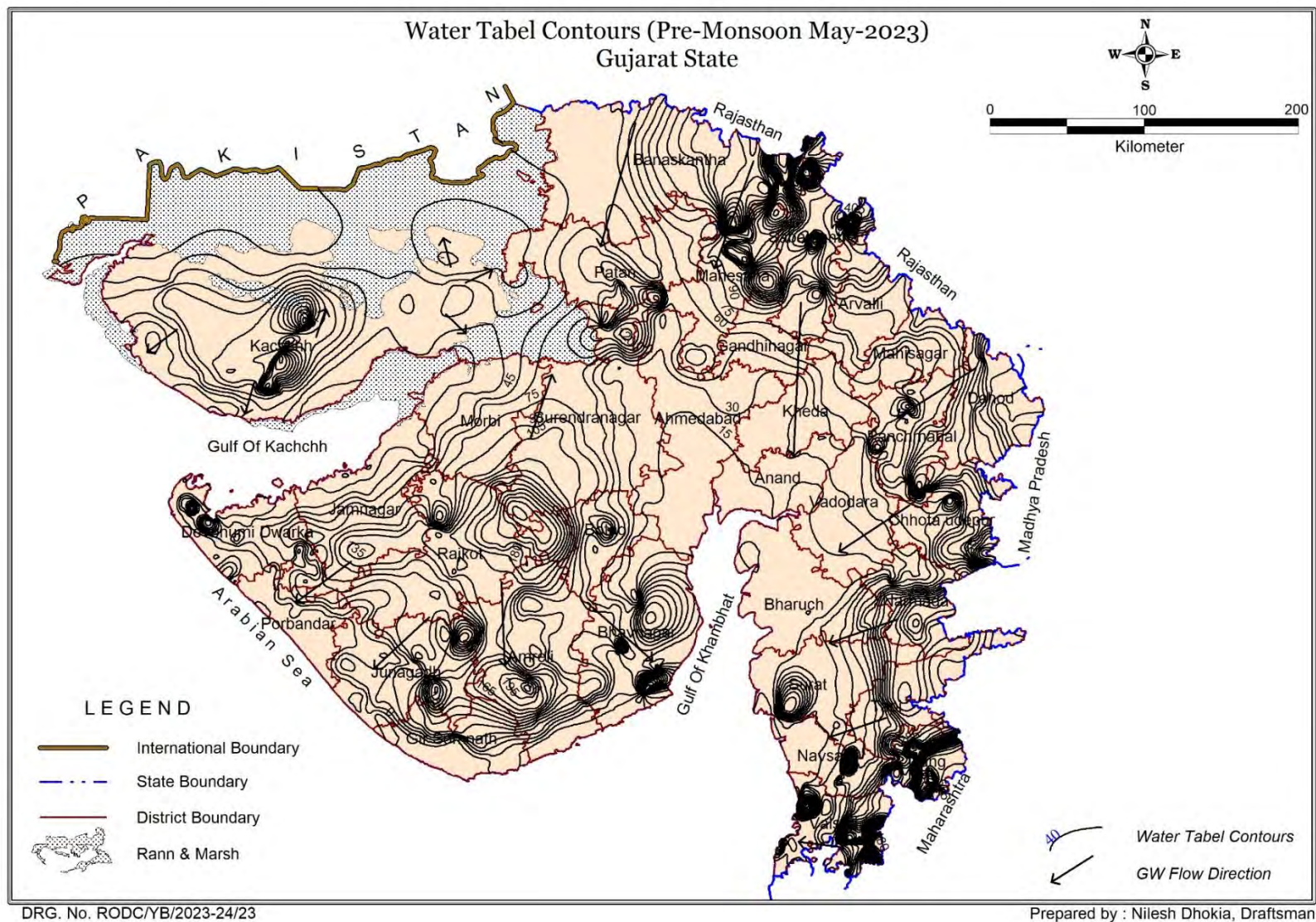


Figure 25: Groundwater table contours of Gujarat (May 2023)

4.3 Groundwater Scenario in Confined Aquifer

Northern part of the north Gujarat is underlain by the unconsolidated alluvial deposits of post Miocene age and semi consolidated Mesozoic and Tertiary sediments. These sedimentary formations form the most prolific multi-aquifer system comprising several confined aquifers. Confined aquifers in this area are extending from the foothill of the Aravalli in the northeast to the little Rann of Kachchh in the west. Shallow water level is recorded in Anand district and deeper water level in Gandhinagar district. The data of the depth to water level in is given in Annexure I. A graphical analysis was done to understand the water level behaviours of the groundwater monitoring wells of unconfined aquifers in the different categories of the water levels during every Premonsoon and post monsoon period Figure 27.

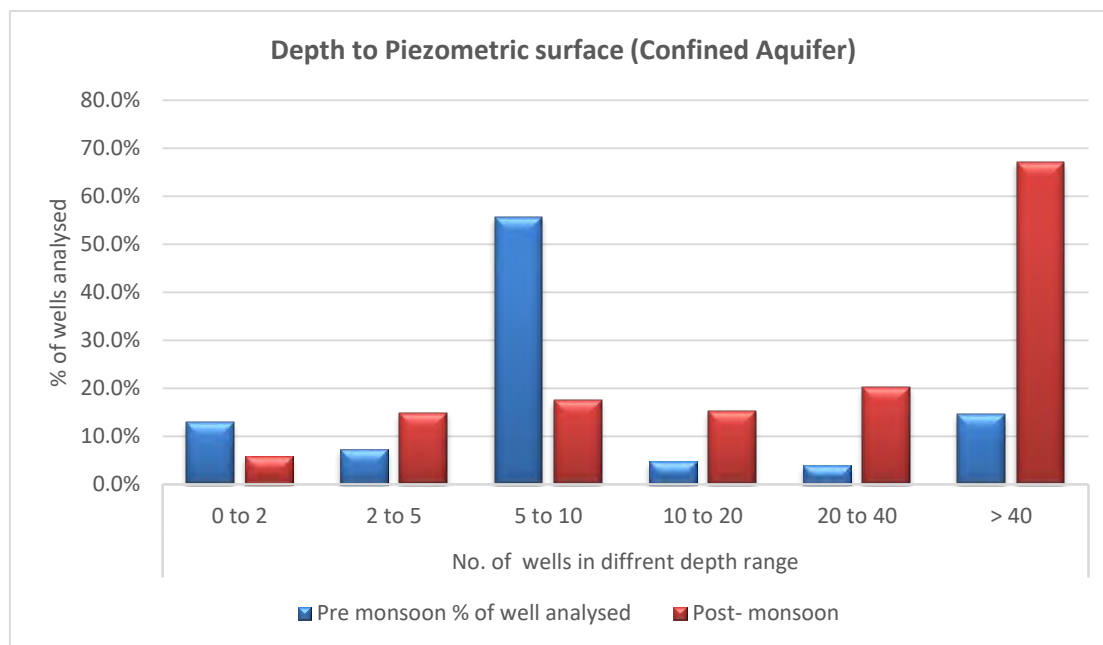


Figure 26: Graph showing Depth to Water Level (mbgl) during Pre-monsoon and post- monsoon 2023 in Confined Aquifer

4.3.1 Depth to Piezometric surface (Confined Aquifer)

Depth to Piezometric surface (Confined Aquifer): Pre-Monsoon 2023

Piezometers tapping confined aquifer were monitored and analysed during May 2023. Based on the water levels measured, piezometric surface map has been prepared (Figure 28). The depth to piezometric surface ranges between 2.76 m bgl at Tarapur in Anand district to 197.30 m bgl at Charada in Gandhinagar district. Deeper water levels are observed in isolated patches located in Banaskantha, Patan, Mahesana and Gandhinagar districts. Shallow piezometric surface are close to Kachchh and Gulf of Khambat Table 18.

Depth to Piezometric surface (Confined Aquifer): Post-Monsoon 2023

Piezometers tapping confined aquifer were monitored and analysed during Post-monsoon, November 2023. Based on the water levels measured, piezometric surface map has been prepared (Figure 29). The depth to piezometric surface of 200 m bgl was observed at Tharad, Banaskantha. About 47.7% of total well records lie in range of the water level more than 40 m bgl for confined aquifer. Banaskantha, Gandhinagar, Mahesana, Kachch and Patan district show water level of more than 100 m bgl, Table 19.

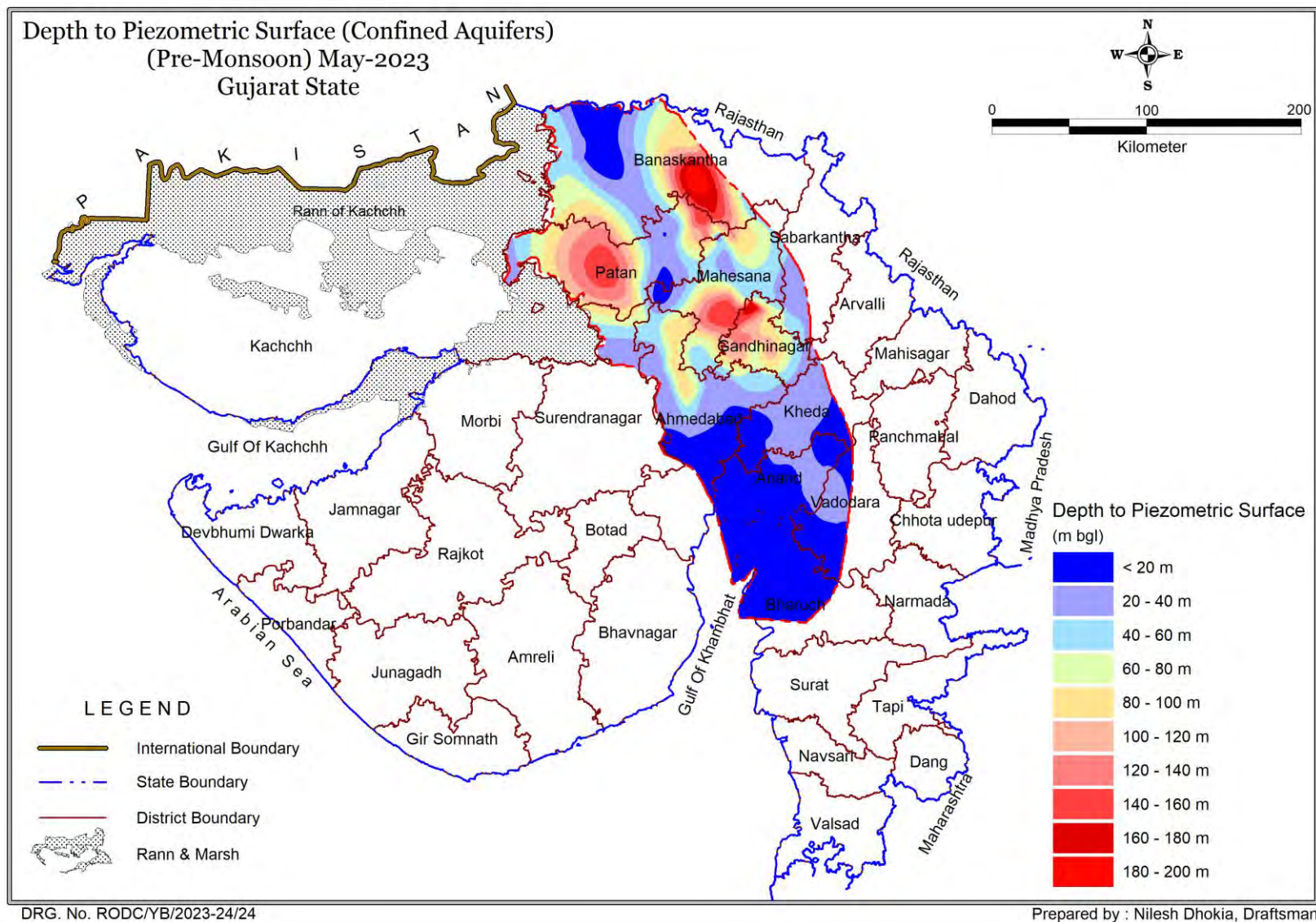


Figure 27: Depth to Piezometric surface (Confined Aquifer): Pre-Monsoon 2024

Table 19: Well wise categorisation of depth to water level (Confined) May 2023

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	14	9.56	99	0	0	1	0	7	6
					0.0%	0.0%	7.1%	0.0%	50.0%	42.9%
2	Anand	15	2.76	29.11	0	2	0	8	5	0
					0.0%	13.3%	0.0%	53.3%	33.3%	0.0%
3	Aravalli	2	9.86	17.6	0	0	1	1	0	0
					0.0%	0.0%	50.0%	50.0%	0.0%	0.0%
4	Banaskantha	11	5.54	160.58	0	0	4	1	2	4
					0.0%	0.0%	36.4%	9.1%	18.2%	36.4%
5	Dahod	1	20.28	20.28	0	0	0	0	1	0
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
6	Gandhinagar	21	64.88	197.3	0	0	0	0	0	21
					0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
7	Kheda	5	11.02	35.21	0	0	0	2	3	0
					0.0%	0.0%	0.0%	40.0%	60.0%	0.0%
8	Mahesana	8	6.72	169	0	0	1	0	0	7
					0.0%	0.0%	12.5%	0.0%	0.0%	87.5%
9	Panchmahal	6	3.2	9.55	0	1	5	0	0	0
					0.0%	16.7%	83.3%	0.0%	0.0%	0.0%
10	Patan	9	21.07	151.8	0	0	0	0	2	7
					0.0%	0.0%	0.0%	0.0%	22.2%	77.8%
11	Sabarkantha	4	15.15	58.05	0	0	0	1	2	1
					0.0%	0.0%	0.0%	25.0%	50.0%	25.0%
	North Gujarat	96	2.76	197.30	0	3	12	13	22	46
					0.0%	3.1%	12.5%	13.5%	22.9%	47.9%
12	Bharuch	2	6.55	8.9	0	0	2	0	0	0
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
13	Chhotaudepur	6	3.35	52.52	0	2	0	2	1	1
					0.0%	33.3%	0.0%	33.3%	16.7%	16.7%
14	Narmada	2	15.39	31.59	0	0	0	1	1	0
					0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
15	Surat	2	10.9	12.96	0	0	0	2	0	0
					0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
16	Vadodara	3	18.46	35.58	0	0	0	1	2	0
					0.0%	0.0%	0.0%	33.3%	66.7%	0.0%
	South Gujarat	15	3.35	52.52	0	2	2	6	4	1
					0.0%	13.3%	13.3%	40.0%	26.7%	6.7%
17	Amreli	4	5.07	55.88	0	0	3	0	0	1
					0.0%	0.0%	75.0%	0.0%	0.0%	25.0%
18	Bhavnagar	6	9.13	58.73	0	0	1	3	0	2
					0.0%	0.0%	16.7%	50.0%	0.0%	33.3%
19	Botad	1	7.37	7.37	0	0	1	0	0	0
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
20	Junagadh	1	4.65	4.65	0	1	0	0	0	0
					0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	Saurashtra	12	4.65	58.73	0	1	5	3	0	3
					0.0%	8.3%	41.7%	25.0%	0.0%	25.0%
23	Kachchh	12	2.9	103.62	0	4	2	1	0	5
					0.0%	33.3%	16.7%	8.3%	0.0%	41.7%
	Kachchh	12	2.90	103.62	0	4	2	1	0	5
					0.0%	33.3%	16.7%	8.3%	0.0%	41.7%
	Gujarat State	135	2.76	197.30	0	10	21	23	26	55
					0.0%	7.4%	15.6%	17.0%	19.3%	40.7%

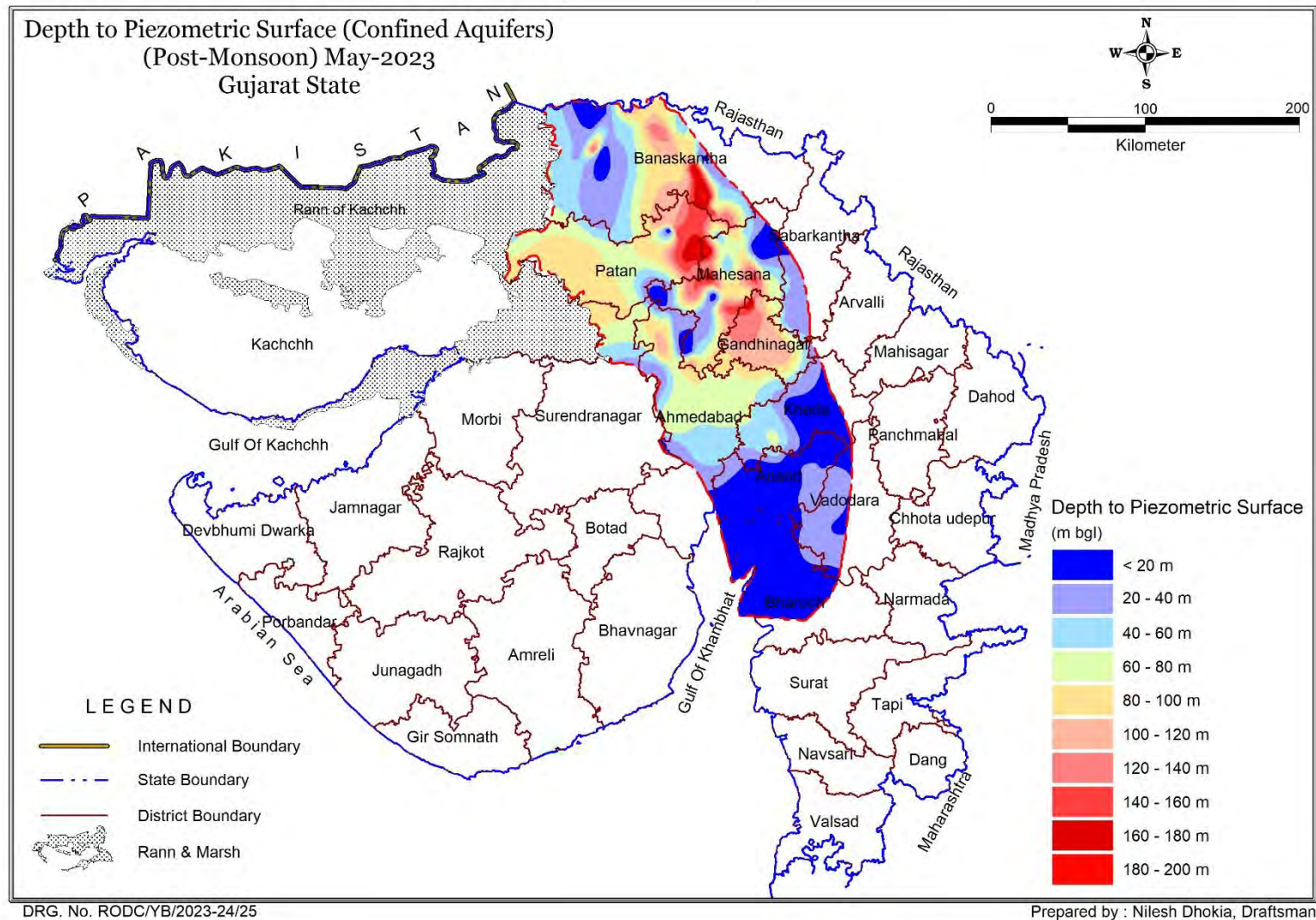


Figure 28: Depth to Piezometric surface (Confined Aquifer): Post-Monsoon 2023

Table 20: Well wise categorisation of depth to water level (Confined) November 2023

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in diffrent depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	> 40
1	Ahmedabad	13	22.2	97.6	0	0	0	0	5	8
					0.0%	0.0%	0.0%	0%	38.5%	61.5%
2	Anand	14	1.37	23.61	1	1	0	7	5	0
					7.1%	7.1%	0.0%	50%	35.7%	0.0%
3	Aravalli	2	5.97	9.09	0	0	2	0	0	0
					0.0%	0.0%	100%	0.0%	0.0%	0.0%
4	Banaskantha	32	4.4	200	0	1	1	3	7	20
					0.0%	3.1%	3.1%	9.4%	21.9%	62.5%
5	Dahod	1	14.4	14.4	0	0	0	1	0	0
					0.0%	0.0%	0.0%	100%	0.0%	0.0%
6	Gandhinagar	21	72.45	185.1	0	0	0	0	0	21
					0.0%	0.0%	0.0%	0.0%	0.0%	100%
7	Kheda	2	8.7	22.79	0	0	1	0	1	0
					0.0%	0.0%	50.0%	0.0%	50.0%	0.0%
8	Mahesana	30	0.78	189.16	1	0	0	1	2	26
					3.3%	0.0%	0.0%	3.3%	6.7%	86%
9	Panchmahal	8	2.05	15.99	0	2	5	1	0	0
					0.0%	25.0%	62.5%	12.5%	0.0%	0.0%
10	Patan	17	7.95	163.59	0	0	1	0	1	15
					0.0%	0.0%	5.9%	0.0%	5.9%	88%
11	Sabarkantha	4	1.02	34.54	1	0	1	1	1	0
					25.0%	0.0%	25.0%	25.0%	25.0%	0.0%
	North Gujarat	144	0.78	200.00	3.00	4.00	11.00	14.00	22.00	90.00
					2.1%	2.8%	7.6%	9.7%	15.3%	62%
12	Bharuch	2	3.68	7.18	0	1	1	0	0	0
					0.0%	50.0%	50.0%	0.0%	0.0%	0.0%
13	Chhotaudepur	7	1.06	30.44	3	1	0	2	1	0
					42.9%	14.3%	0.0%	28.6%	14.3%	0.0%
14	Narmada	5	2.02	29.37	0	1	2	0	2	0
					0.0%	20.0%	40.0%	0.0%	40.0%	0.0%
15	Surat	2	9.95	10.3	0	0	1	1	0	0
					0.0%	0.0%	50.0%	50.0%	0.0%	0.0%
16	Vadodara	8	17.25	35.85	0	0	0	2	6	0
					0.0%	0.0%	0.0%	25.0%	75.0%	0.0%
	South Gujarat	24	1.06	35.85	3.00	3.00	4.00	5.00	9.00	0.00
					12.5%	12.5%	16.7%	20.8%	37.5%	0.0%
17	Amreli	4	3.63	20.18	0	1	2	0	1	0
					0.0%	25.0%	50.0%	0.0%	25.0%	0.0%
18	Bhavnagar	6	1.92	8.19	1	2	3	0	0	0
					16.7%	33.3%	50.0%	0.0%	0.0%	0.0%
19	Botad	1	2.02	2.02	0	1	0	0	0	0
					0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
20	Junagadh	1	1.49	1.49	1	0	0	0	0	0
					100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	Rajkot	8	1.66	36.7	1	5	1	0	1	0
					12.5%	62.5%	12.5%	0.0%	12.5%	0.0%
22	Surendranagar	4	1.02	34.54	1	0	1	1	1	0
					25.0%	0.0%	25.0%	25.0%	25.0%	0.0%
	Saurashtra	24	1.02	36.70	4.00	9.00	7.00	1.00	3.00	0.00
					16.7%	37.5%	29.2%	4.2%	12.5%	0.0%
23	Kachchh	30	1.95	173	1	5	5	3	0	16
					3.3%	16.7%	16.7%	10.0%	0.0%	53.3%
	Kachchh	30	1.95	173.00	1	5	5	3	0	16
					3.3%	16.7%	16.7%	10.0%	0.0%	53.3%
	Gujarat State	222	0.78	200.00	11	21	27	23	34	106
					5.0%	9.5%	12.2%	10.4%	15.3%	47.7%

4.3.2 Decadal Average (Confined Aquifer)

Long-term behaviour of water levels was studied by analysing the data for decadal average water levels. Maps showing variation in water level scenario in decadal average of 2014-2024 have been prepared to evaluate the long-term changes in the groundwater regime in confined aquifers.

4.3.2.1 Pre- monsoon Depth to piezometric surface of Decadal Average in Confined Aquifer

The pursuance of Figure 31 and Table 20 reveals that the decadal average of piezometric surface of confined aquifer ranges from 3.63 m bgl at Pachcham in Ahmedabad district to 190.97 m bgl at Charada in Gandhinagar district. Details of depth to water level in different range, i.e. from 0 to 2 m, 2 to 5 m, 5 to 10 m, 10 to 20 m, 20 to 40 m and more than 40 m bgl is presented below. The perusal of the depth to piezometric surface map reveals that about 1.5% of the total wells analysed falls in the water level range of 0 to 5 m bgl where as water level of 5 to 20 m bgl is observed in 18% of Gujarat state. Water levels of 20 to 40 m bgl are observed mainly in Narmada, Vadodara, Bhavnagar, Kachchh and North Gujarat districts.

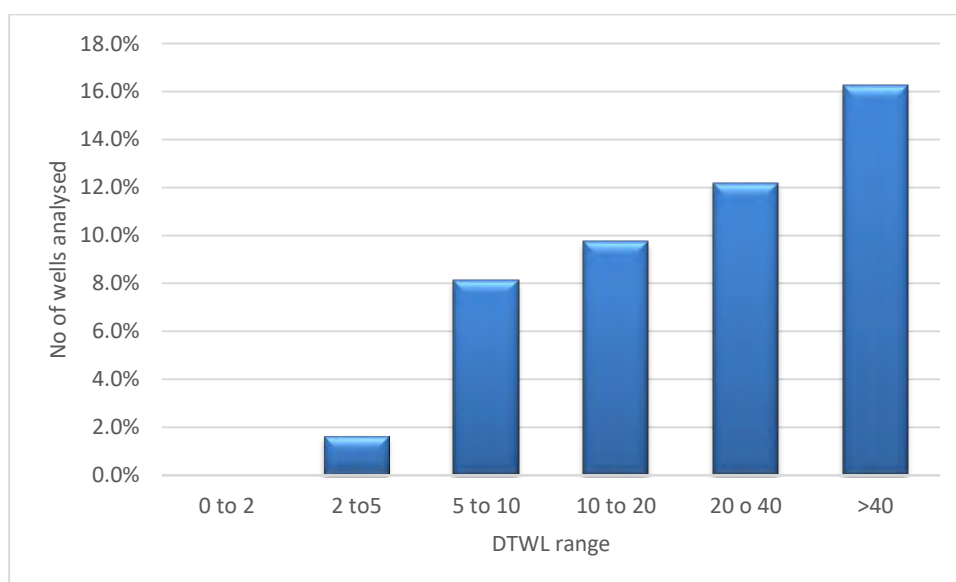


Figure 29: Graph showing Fluctuation of Water Level May 2023 to Decadal mean of May (2014-2023) in different depth range to percent of well analysed in Confined Aquifer

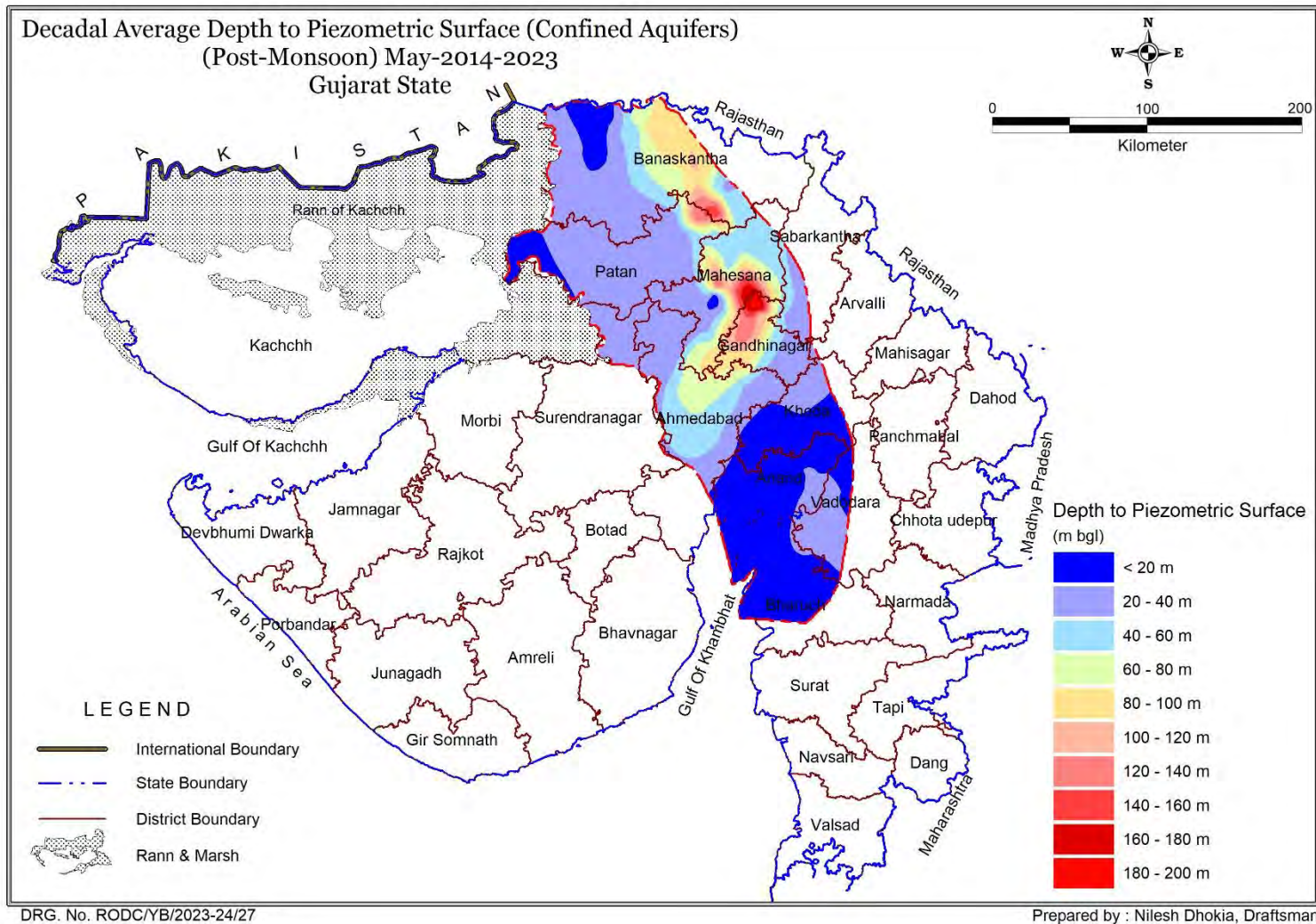


Figure 30: Decadal average of Depth to piezometric surface of May (2014-2023) in Confined Aquifer

Table 21: Well wise categorisation of changes in water level decadal average of May (2014-2023) in Confined Aquifer

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 o 40	>40
1	Ahmedabad	9	3.63	97.06	0.00	1.00	1.00	1.00	2.00	4.00
					0.0%	11.1%	11.1%	11.1%	22.2%	44.4%
2	Anand	11	4.47	25.05	0.00	1.00	1.00	5.00	4.00	0.00
					0.0%	9.1%	9.1%	45.5%	36.4%	0.0%
3	Banas Kantha	21	7.44	175.84	0.00	0.00	1.00	3.00	4.00	13.00
					0.0%	0.0%	5.6%	16.7%	22.2%	61.9%
4	Gandhinagar	17	66.81	190.97	0.00	0.00	0.00	0.00	0.00	17.00
					0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
6	Kheda	6	7.51	34.33	0.00	0.00	2.00	2.00	2.00	0.00
					0.0%	0.0%	33.3%	33.3%	33.3%	0.0%
7	Mahesana	18	12.44	155.11	0.00	0.00	0.00	1.00	2.00	15.00
					0.0%	0.0%	0.0%	5.6%	11.1%	83.3%
8	Patan	8	24.24	154.52	0.00	0.00	0.00	0.00	1.00	7.00
					0.0%	0.0%	0.0%	0.0%	12.5%	87.5%
9	Sabar Kantha	2	34.65	35.03	0.00	0.00	0.00	0.00	2.00	0.00
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	North Gujarat	92	3.63	190.97	0.00	1.00	2.00	5.00	4.00	17.00
					0.0%	1.1%	2.2%	5.4%	4.3%	18.5%
10	Bharuch	4	5.28	12.43	0.00	0.00	2.00	2.00	0.00	0.00
					0.0%	0.0%	25.0%	25.0%	0.0%	0.0%
11	Narmada	2	27.69	41.26	0.00	0.00	0.00	0.00	1.00	1.00
					0.0%	0.0%	0.0%	0.0%	12.5%	12.5%
12	Vadodara	8	24.01	39.62	0.00	0.00	0.00	0.00	8.00	0.00
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	South Gujarat	14	5.28	41.26	0	0	2	2	9	1
					0.0%	0.0%	14.3%	14.3%	64.3%	7.1%
13	Amreli	3	7.69	11.17	0.00	0.00	1.00	2.00	0.00	0.00
					0.0%	0.0%	33.3%	66.7%	0.0%	0.0%
14	Bhavnagar	1	25.89	25.89	0.00	0.00	0.00	0.00	1.00	0.00
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
15	Botad	1	9.13	9.13	0.00	0.00	1.00	0.00	0.00	0.00
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
16	Gir Somnath	1	12.36	12.36	0.00	0.00	0.00	1.00	0.00	0.00
					0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
17	Morbi	1	4.96	4.96	0.00	1.00	0.00	0.00	0.00	0.00
					0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
18	Porbandar	1	6.46	6.46	0.00	0.00	1.00	0.00	0.00	0.00

Sr. No.	District Name	No of well analysed	DTWL, mbgl		No. of wells in different depth range					
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
19	Rajkot	3	9.06	14.30	0.00	0.00	1.00	2.00	0.00	0.00
					0.0%	0.0%	33.3%	66.7%	0.0%	0.0%
	Saurashtra	11	4.96	25.89	0	1	4	4	1	0
					0.0%	9.1%	36.4%	36.4%	9.1%	0.0%
20	Kachchh	6	6.36	64.95	0.00	0.00	2.00	1.00	1.00	2.00
					0.0%	0.0%	33.3%	16.7%	16.7%	33.3%
	Kachchh	6	6.36	64.95	0	0	2	1	1	2
					0.0%	0.0%	33.3%	16.7%	16.7%	33.3%
	Gujarat State	123	3.63	190.97	0	2	10	12	15	20
					0.0%	1.6%	8.1%	9.8%	12.2%	16.3%

4.3.2.2 Post- monsoon Depth to piezometric surface of Decadal Average in Confined Aquifer

The decadal mean of November (2014-2023) indicates that, out of total wells analysed 22% of wells are showing in range of 0-10 m, among which 11% wells are in range of 5 to 10 m. 10% in range of 10-20 m and 37% are showing in range of more than 40 m. The shallowest water level is 2.33 m observed at Tarapur Anand and deepest water level more than 40 m bgl is recorded in Charada, Gandhinagar district of Gujarat State. (Figure 33, Table 21).

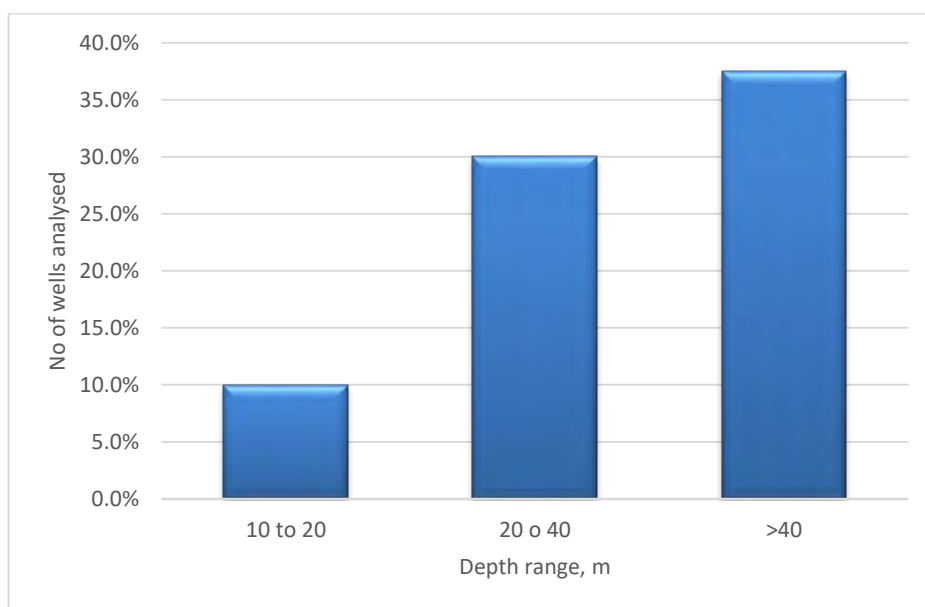


Figure 31: Graph showing Decadal Average of November (2013-2022) in different depth in Confined Aquifer

Table 22: Well wise categorisation of changes in water level during November 2023 with respect to decadal average of November (2014-2023) in Confined Aquifer

Sr. No.	District Name	No of well analysed	No. of wells in different depth range							
			Min	Max	0 to 2	2 to 5	5 to 10	10 to 20	20 to 40	>40
1	Ahmedabad	3	25.55	68.98	0	0	0	0	2	1
					0.0%	0.0%	0.0%	0.0%	66.7%	33.3%
2	Anand	9	2.34	23.58	0.00	2.00	0.00	3.00	4.00	0.00
					0.0%	22.2%	0.0%	33.3%	44.4%	0.0%
3	Banas Kantha	16	6.01	153.05	0	0	2	1	6	7
					0.0%	0.0%	12.5%	6.3%	37.5%	43.8%
4	Gandhinagar	8	69.80	177.82	0	0	0	0	0	8
					0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
5	Arvali	1	5.97	5.97	0	0	1	0	0	0
					0.0%	0.0%	8.3%	0.0%	0.0%	0.0%
6	Kheda	1	4.28	4.28	0	1	0	0	0	0
					0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
7	Mahesana	12	11.28	149.00	0	0	0	1	1	10
					0.0%	0.0%	0.0%	8.3%	8.3%	83.3%
8	Patan	4	21.30	139.43	0	0	0	0	1	3
					0.0%	0.0%	0.0%	0.0%	25.0%	75.0%
9	Sabar Kantha	2	36.80	37.36	0	0	0	0	2	0
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	North Gujarat	56	2.34	177.82	0.00	3	3	5	16	29
					0.0%	5.4%	5.4%	8.9%	28.6%	51.8%
10	Bharuch	3	3.08	7.18	0	2	1	0	0	0
					0.0%	50.0%	25.0%	0.0%	0.0%	0.0%
11	Narmada	2	21.90	28.14	0	0	0	0	2	0
					0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
12	Vadodara	6	11.78	37.10	0	0	0	1	5	0
					0.0%	0.0%	0.0%	16.7%	83.3%	0.0%
	South Gujarat	11	3.08	37.10	0	2	1	1	7	0
					0.0%	18.2%	9.1%	9.1%	63.6%	0.0%
13	Amreli	3	3.13	6.44	0	2	1	0	0	0
					0.0%	66.7%	33.3%	0.0%	0.0%	0.0%
14	Bhavnagar	1	18.67	18.67	0	0	0	1	0	0
					0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
15	Botad	1	5.76	5.76	0	0	1	0	0	0
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
16	Porbandar	1	2.56	2.56	0	1	0	0	0	0
					0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
17	Rajkot	2	5.22	5.65	0	0	2	0	0	0
					0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
	Saurashtra	8	2.56	18.67	0	3	4	1	0	0
					0.0%	37.5%	50.0%	12.5%	0.0%	0.0%
18	Kachchh	5	4.97	48.50	0	1	1	1	1	1
					0.0%	20.0%	20.0%	20.0%	20.0%	20.0%
	Kachchh	5	4.97	48.50	0	1	1	1	1	1
					0.0%	20.0%	20.0%	20.0%	20.0%	20.0%
	Gujarat State	80	2.34	177.82	0	9	9	8	24	30
					0.0%	11.3%	11.3%	10.0%	30.0%	37.5%

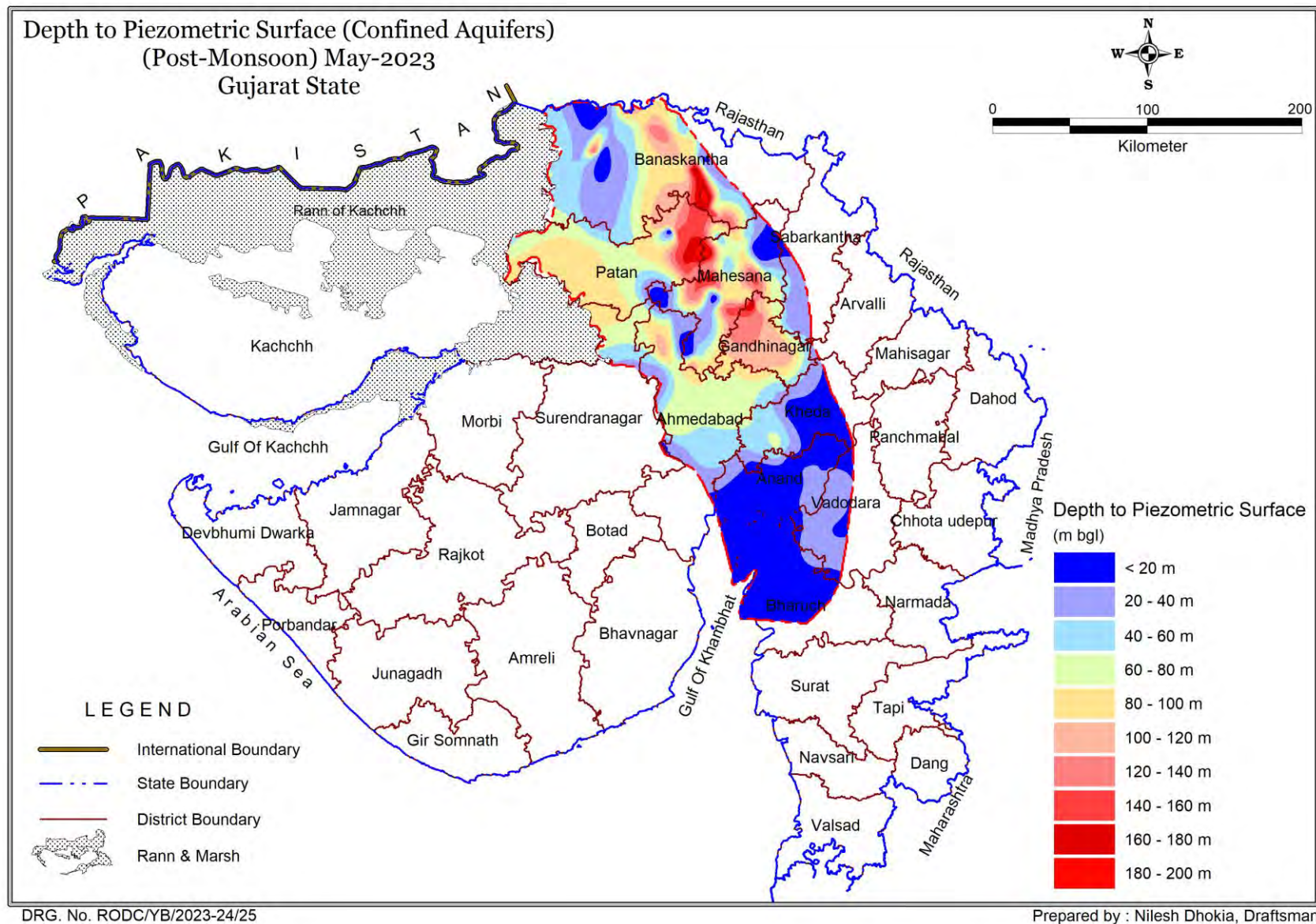


Figure 32: Decadal variation of water level map of decadal average of November (2015-2024) in Confined Aquifer

Annexure I: Water level of the National Hydrograph Stations in Gujarat, 2023

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Ahmedabad	Ahmadabad City	Saher Kotda PzI	23.045935	72.628033	Tube Well	49.66			52.63
Ahmedabad	Ahmadabad City	Sola(HC)_Pz_I	23.081110	72.513610	Tube Well	68.96			
Ahmedabad	Ahmadabad City	Vatwa Pz-II	22.671783	72.774500	Tube Well			27.8	28.25
Ahmedabad	Ahmadabad City	Vatwa Pz-III	22.953611	72.616389	Tube Well	34.98		97.6	7.83
Ahmedabad	Bavla	Bagodara_Pz_I	22.652860	72.212030	Tube Well	9.56			
Ahmedabad	Bavla	Bagodara_Pz_II	22.652860	72.212030	Tube Well	5.26			
Ahmedabad	Bavla	Dhanwada OW	22.726830	72.319220	Tube Well				19.87
Ahmedabad	Bavla	Kochariya	22.329361	73.859465	Tube Well				14.32
Ahmedabad	Bavla	Meni OW	22.800083	72.085556	Tube Well		70.5	71.9	43
Ahmedabad	Bavla	Metal EW	22.799306	72.199194	Tube Well	39.92			38.09
Ahmedabad	Bavla	Mithapur	22.616194	72.126639	Tube Well		21.23	22.2	20.92
Ahmedabad	Bavla	Rajoda	22.849880	72.392700	Tube Well		137.56		
Ahmedabad	Daskroi	Gatrad	22.452186	73.054509	Tube Well				97.52
Ahmedabad	Daskroi	Kujad OW	23.003399	72.747590	Tube Well				61.64
Ahmedabad	Daskroi	Ranodra	22.953060	72.789470	Tube Well			36.2	36.78
Ahmedabad	Detroj Rampura	Boska DW	23.239610	72.122060	Dug Well			2.75	2.3
Ahmedabad	Detroj Rampura	Umedpura	23.364833	72.130417	Tube Well		21.7	26.6	
Ahmedabad	DHANDHUKA	Dhanala OW	22.452080	72.206690	Tube Well				0.75
Ahmedabad	DHANDHUKA	DhandhukaI	22.376058	71.987742	Dug Well	3.56	4.88	3	4.15
Ahmedabad	DHANDHUKA	Pachcham_Pz	22.399120	72.179940	Tube Well	5.71			
Ahmedabad	DHANDHUKA	TagadiI	22.297095	71.946725	Dug Well	9.51	2.08	3.5	2.57
Ahmedabad	DHANDHUKA	Vagad	22.297095	71.946725	Dug Well		6.51	6.8	
Ahmedabad	DHANDHUKA	Vagad(Repl)_Pz	22.360050	71.869970	Tube Well	5.75	7.01	7.3	
Ahmedabad	Dholera	Dholera Pz	22.250087	72.192315	Tube Well	4.12			
Ahmedabad	Dholka	Chandisar OW	22.583333	73.904167	Tube Well	33.48			
Ahmedabad	Dholka	Kharanti	22.627940	72.373830	Tube Well				11.85
Ahmedabad	Dholka	Koth I	22.631000	72.297000	Tube Well		53	53.3	
Ahmedabad	Mandal	Dalod	23.206389	72.279722	Dug Well	6.7			6.1
Ahmedabad	Mandal	Jhanjharwa_Pz_II	23.414722	72.058333	Tube Well	13.48			
Ahmedabad	Mandal	Ughrajl	23.363551	72.097717	Dug Well		6.05		7.23
Ahmedabad	Sanand	Bopal_Pz_I	23.038611	72.457778	Tube Well	34.38			
Ahmedabad	Sanand	Bopal_Pz_III	23.038611	72.457778	Tube Well	3.22			
Ahmedabad	Sanand	Jholapur_Pz_I	22.988000	72.204000	Tube Well	89.65	73	74.98	91.46
Ahmedabad	Sanand	Kundal	22.901000	72.224000	Dug Well	6.1	4.5	4.89	
Ahmedabad	Sanand	Narainpura	23.050577	72.288423	Tube Well		86.5	86.98	87.95

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Ahmedabad	Sanand	Sanand II	23.003000	72.374000	Tube Well	25.05	26.89		15.75
Ahmedabad	Sanand	Zholapur	22.990304	72.205152	Tube Well				63.08
Ahmedabad	Viramgam	Endla	23.272000	72.058000	Dug Well	2.63	0.89	3.3	2.06
Ahmedabad	Viramgam	Goraiya	22.452186	73.054509	Tube Well				7.08
Ahmedabad	Viramgam	Hansalpur_Pz-I	23.088889	72.016667	Tube Well	25.1			
Ahmedabad	Viramgam	Hansalpur_Pz-II	23.089000	72.017000	Tube Well		25.63	25.7	
Ahmedabad	Viramgam	Hansalpur_Pz-III	23.089000	72.017000	Tube Well	3.02	4.27	4.78	
Ahmedabad	Viramgam	Jetapur OW	22.896200	72.124900	Tube Well				54.69
Ahmedabad	Viramgam	Jhund OW I	23.165540	71.932180	Tube Well				13.7
Ahmedabad	Viramgam	Jhund OW II	23.165540	71.932180	Tube Well				11.22
Ahmedabad	Viramgam	Moti kumad OW I	23.132786	72.127058	Tube Well	99		94.94	
Ahmedabad	Viramgam	Moti Kumad OW II	23.132786	72.127058	Tube Well	69.96		60.89	
Ahmedabad	Viramgam	Sanathal EW	22.967280	72.473080	Tube Well				98.38
Ahmedabad	Viramgam	Ukhlod OWI	23.222020	72.039560	Tube Well	87.27	86.35	80.1	
Ahmedabad	Viramgam	Vasveliia	22.671783	72.774500	Tube Well	39.6			
Ahmedabad	Viramgam	Viramgam2	23.136690	72.038360	Dug Well	3.24	4.57	4.5	
Amreli	Amreli	Amreli	21.608000	71.225000	Dug Well	9.54	2.16	6.47	7.78
Amreli	Amreli	Amreli_Pz	20.819369	70.847198	Bore Well		5.31	6.52	7.3
Amreli	Amreli	Ankadia mota	20.849463	71.055315	Dug Well		3.88	8.93	5.93
Amreli	Amreli	Gokharwala	21.500000	71.258000	Dug Well			2	2.29
Amreli	Amreli	Govadka	21.541667	71.158333	Dug Well		3.15		4.82
Amreli	Amreli	Jaswantgadh	21.729134	71.206648	Dug Well	16.22	10.8	3.15	3.48
Amreli	Amreli	Manila Pz	21.433000	71.167000	Tube Well	18.45	17.22	17.24	17.44
Amreli	Amreli	Mota Devaliya	21.820830	71.108330	Dug Well		3	7.62	10.41
Amreli	Amreli	Vankiya	21.521000	71.136000	Dug Well	5.27	1.9	4.75	5
Amreli	Babra	Babra_Pz	21.847000	71.296000	Bore Well	5.07	5.22	6.53	
Amreli	Babra	Devaliya	21.821000	71.108000	Dug Well	11.86	3.02	5.25	10.65
Amreli	Babra	Dhrai Balmukand	21.834167	71.217222	Dug Well			4.5	14.19
Amreli	Babra	Kotadapitha	21.958000	71.204000	Dug Well	5.36	0.96	2.81	1.21
Amreli	Babra	Untvad	21.917000	71.217000	Dug Well	14.95	2.15	17.1	16.57
Amreli	Bagasara	Bagasara	21.479000	70.963000	Dug Well	11.88	5.55	7.7	10.35
Amreli	Bagasara	Vaghania juna	21.583000	70.967000	Dug Well	9.01	1.96	3.12	3.58
Amreli	Dhari	Boradi	21.288725	70.927033	Dug Well	13.1		5.39	6.16
Amreli	Dhari	Chalala	21.417000	71.167000	Dug Well	22.4	20.3	20.73	24.89
Amreli	Dhari	Dharangani	21.333333	71.200000	Dug Well		30.27	22.75	24.57
Amreli	Dhari	Dhari	21.338000	71.042000	Dug Well	14.53	2.33	6.45	9.05
Amreli	Dhari	Dhari_Pz	21.326000	71.018000	Bore Well	19.17	6.57	7.07	9.67
Amreli	Dhari	Kerala	21.397000	71.217000	Dug Well	33.17	2.78	32.05	31.81
Amreli	Dhari	Morjhar	21.380000	71.120000	Dug Well		3.12	21.95	20.85
Amreli	Dhari	Virpur	21.254000	71.150000	Dug Well	22.35			14.6

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Amreli	Jafrabad	Jafrabad	20.867000	71.363000	Dug Well			2.07	1.87
Amreli	Jafrabad	Kadiyali	20.908000	71.360000	Dug Well			7.5	8.65
Amreli	Jafrabad	Nageshri	20.930000	71.350000	Dug Well	4.14	1.61	3.57	4.47
Amreli	Jafrabad	Timbi2	20.895833	71.204167	Dug Well		1.83	2.47	2.89
Amreli	Khambha	Bhavardi1	21.108333	71.258333	Dug Well		1.44		1.4
Amreli	Khambha	Ingorala	21.233000	71.200000	Dug Well	16.62	8.89	11.78	11.82
Amreli	Khambha	Khamba	21.150000	71.239000	Dug Well			3.31	3.96
Amreli	Khambha	Khamba_Pz	21.142000	71.254000	Bore Well	8.74	4.59	6.9	7.8
Amreli	Khambha	Trakuda	21.017000	71.281000	Dug Well	10.11	5.31	3.5	7.25
Amreli	Khambha	Vankiya1	21.521000	71.136000	Dug Well			3.2	6.84
Amreli	Kunkavav -Vadia	Kunkavav	21.663000	70.983000	Dug Well	29.51	5.66	13.8	11.69
Amreli	Lathi	Chavand	21.811050	71.405740	Dug Well	4.92	1.53	2.72	3.95
Amreli	Lathi	Lathi	21.720000	71.380000	Dug Well			2.35	2.1
Amreli	Lathi	Luvariya	21.625000	71.396000	Dug Well	6.14		3.45	1.5
Amreli	Lathi	Tajpur	21.725000	71.467000	Dug Well	24.16	2.41	11.1	12.05
Amreli	Lilia	Haripur_Pz_I	21.610000	71.443000	Bore Well	6.82	2.94	5.08	5.89
Amreli	Lilia	Liliya_Pz_I	21.535000	71.379000	Bore Well	5.2	2.22	3.63	4.5
Amreli	Lilia	Punjabadar	21.525000	71.358000	Dug Well	4.02	3	4.68	5.6
Amreli	Lilia	Sanaria	21.550060	71.431920	Dug Well	5.59		3.35	3.68
Amreli	Rajula	Bherai	20.870000	71.360000	Dug Well		1.11	1.21	1.36
Amreli	Rajula	Mandal	21.100000	71.583000	Dug Well	17.57		17.8	19.51
Amreli	Saverkundla	Amritvel_Pz	20.851642	71.120666	Tube Well		0.79	1.16	0.85
Amreli	Saverkundla	Badhda	21.266000	71.339000	Dug Well	17.25		7.12	0.75
Amreli	Saverkundla	Bhuva	21.433000	71.364000	Dug Well	4.04	3.16	4	3.72
Amreli	Saverkundla	Charkhadia_Pz	21.389200	71.292380	Tube Well	20.55	20.16	20.71	21.36
Amreli	Saverkundla	Charkhadia1	23.206389	72.279722	Dug Well		15.74	17.3	16.15
Amreli	Saverkundla	Fifad	21.436000	71.540000	Dug Well	4.46		3.45	4.6
Amreli	Saverkundla	Gopalpura Vanda Pz	21.375000	71.492000	Tube Well		12.89		14.72
Amreli	Saverkundla	Goradka	21.225000	71.411000	Dug Well	6.45	2.52		5.17
Amreli	Saverkundla	Piyava	21.383000	71.467000	Dug Well	20.02	16.79	17.6	17.86
Amreli	Saverkundla	Salena	21.386111	71.533333	Dug Well			7.57	9.07
Amreli	Saverkundla	Savar Kundla	21.336000	71.318000	Bore Well	55.88	20.63	20.18	22.5
Amreli	Saverkundla	Simiran	21.437500	71.291667	Dug Well	16.12	23.09	23.82	13.17
Amreli	Saverkundla	Vanda	21.390000	71.508000	Dug Well	5.75		6.9	6.9
Amreli	Saverkundla	Vanot	21.170000	71.484000	Dug Well	11.88	6.21		11.17
Anand	Anand	Adas_DW	22.478611	73.030278	Dug Well	22.3	23.3	21.45	20.6
Anand	Anand	Anand	22.575000	72.972000	Dug Well	14.64		13.52	14.79
Anand	Anand	Boriyani	22.632000	73.004000	Dug Well	9.4		7.86	7.99
Anand	Anand	Ghuntei OW I	22.569169	72.848870	Tube Well		14.64	13.92	
Anand	Anand	GHUNTEI OW II	22.566583	72.849917	Tube Well		15.79	14.94	14.57

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Anand	Anand	Kanbhaipura	22.626092	73.084776	Tube Well	14.38	13.96	13.38	13.25
Anand	Anand	Sarsa_Pz_I	22.544000	73.071000	Tube Well	19.41	18.22	18.32	16.36
Anand	Anand	Valasan	21.901939	70.128338	Tube Well	14.95	14.38	13.51	13.76
Anand	Anand	Vasad	22.452472	73.054111	Tube Well	29.11	27.2		22.76
Anand	Anand	Walmi_I	22.511000	72.982000	Tube Well	23.55	22.26	22.02	22.2
Anand	Anand	Walmi_II	22.508000	72.982000	Tube Well	23.22	22.81	21.55	21.77
Anand	Anklav	Anklav_Pz_I	22.376000	72.997000	Tube Well	24.36		23.24	21.79
Anand	Anklav	Anklav_Pz_II	22.376000	72.997000	Tube Well	24.58		23.61	
Anand	Anklav	Anklav2	22.383000	73.008000	Dug Well	25.58	23.8	24.54	23.73
Anand	Borsad	Bhadran	22.355556	72.897222	Dug Well	17.75	16.66	14.65	15.95
Anand	Borsad	Borsad I	22.409700	72.901000	Tube Well	19.34			
Anand	Borsad	Borsad_Pz_II	22.409700	72.901400	Bore Well		3.39		
Anand	Borsad	Kathana_Pz_I	22.294000	72.790000	Tube Well	11.9	12.81	10.3	10.12
Anand	Borsad	Kothiya Khad EW	22.315960	72.955310	Tube Well	19.4	20.76	22.35	19.75
Anand	Borsad	Ras	22.345833	72.833333	Dug Well	2.47	1.8	1	1.93
Anand	Khambhat	Dali	22.275000	72.766667	Dug Cum Bore Well		1.86	2.02	2.61
Anand	Khambhat	Hariyan_Pz	22.404000	72.672000	Tube Well	4.42	3.75	3.26	2.73
Anand	Khambhat	Kansari I	22.341667	72.650000	Dug Well	11.5		10.15	10.13
Anand	Khambhat	Laxmipura	22.416667	72.608333	Dug Well	1.93	1.3	0.2	1.13
Anand	Petlad	Bandhani	22.542000	72.817000	Dug Well	6.55	6.33	6.05	6.06
Anand	Petlad	Davalpura_Pz	21.633333	73.583333	Tube Well	3.28	0.5	1.15	2.12
Anand	Petlad	Dharmaj	22.420833	72.794444	Dug Cum Bore Well		12.79	12	12.3
Anand	Petlad	Petlad_Pz_I	22.475000	72.800000	Tube Well	13.65	13.58	12.1	11.83
Anand	Petlad	Petlad_Pz_II	22.475000	72.800000	Tube Well	13.16	14.61	11.9	
Anand	Tarapur	Tarapur Pz-I	22.486000	72.661000	Tube Well	2.76	1.2	1.37	
Anand	Tarapur	Tarapur Pz-II	22.486000	72.661000	Tube Well	2.69	1.66	1.55	2.63
Anand	Tarapur	Tol	22.510833	72.566667	Dug Well	1.95	0.7	0.45	1.42
Anand	Umreth	Ghora	22.691667	73.054167	Dug Well	5.26	2.48	1.94	2.97
Anand	Umreth	Parvata	22.713611	73.126667	Dug Well	6.4	3.8	4.2	4.9
Arvali	Bayad	Alwakampa	23.276999	73.210617	Dug Well	10.8		4.33	13.6
Arvali	Bayad	Bayad_Pz	23.216667	73.229167	Tube Well	13.08		9.74	
Arvali	Bayad	Bibipur I	23.252778	73.212500	Dug Well	18.3		14.34	13.3
Arvali	Bayad	Boral	23.129060	73.215027	Dug Well	12.9		7.3	5.4
Arvali	Bayad	Sathamba	23.173370	73.330404	Dug Well	19.83		3.35	6.8
Arvali	Bhiloda	Bhiloda_Pz	23.770000	73.250000	Bore Well				58.42
Arvali	Bhiloda	Bhiloda2	23.762321	73.267779	Dug Cum Bore Well			3.55	4.8
Arvali	Bhiloda	Kuski_Pz	23.638239	73.369882	Tube Well	17.6	7.77	5.97	13.25
Arvali	Bhiloda	Punasan	23.669000	73.174000	Dug Well	7.15	5.48	8.05	
Arvali	Bhiloda	Shamlaji	23.686111	73.366667	Dug Well	11.05		9.65	11.1

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Arvalli	Bhiloda	Takatuka_1	23.851000	73.305000	Dug Well	25.08		8.3	14.6
Arvalli	Bhiloda	Vejpur_Pz	23.797000	73.221000	Bore Well	14.1		3.72	5.5
Arvalli	Dhansura	Dhansura	23.347187	73.199478	Dug Well			1.64	2.8
Arvalli	Dhansura	Dhansura1	23.350000	73.200000	Dug Well	6.38	1.6		10.8
Arvalli	Dhansura	Karanpur	23.332410	73.326940	Dug Well	5.75		2.5	10.2
Arvalli	Dhansura	Kheda EW I	23.294444	73.206389	Bore Well	9.86		8.975	10.6
Arvalli	Malpur	Hamirpur	23.408000	73.458000	Dug Well	17.35	8.31	4.2	2.8
Arvalli	Malpur	Malpur_1	23.344722	73.450000	Dug Well		6.21	3.51	
Arvalli	Malpur	Malpur_Pz	23.340000	73.470000	Bore Well		11.2		9.5
Arvalli	Meghraj	Meghraj_1	23.495833	73.500000	Bore Well			4.2	9.5
Arvalli	Modasa	Dawali EW II	23.606389	73.231111	Bore Well			9.96	
Arvalli	Modasa	Gadada	23.575000	73.253000	Dug Well	11.55	6.76	4.8	
Arvalli	Modasa	Medasana	23.512000	73.274000	Dug Well	7.69	12.1	5.4	6.6
Arvalli	Modasa	Modasa	23.461136	73.302663	Dug Well	7.38	6.69	6.48	9.3
Arvalli	Modasa	Seenawad	23.476345	73.395600	Dug Well	12.5		3.2	7.4
Banas Kantha	Amirgadh	Amirgadh	24.400970	72.647650	Dug Well	13.82	13.75	9.25	9.9
Banas Kantha	Amirgadh	Iqbalgarh	24.346000	72.538000	Dug Well	28.93	27.71	22.45	24.08
Banas Kantha	Amirgadh	Kidotar	24.394444	72.627778	Dug Well			10.2	11.18
Banas Kantha	Amirgadh	Rampura Vadla	23.879000	71.766000	Dug Well	17.45	17.5	6.83	19.1
Banas Kantha	Amirgadh	Virampur	24.266400	72.652330	Dug Well	15.06	14.59	3.43	5.1
Banas Kantha	Bhabhar	Beda OW	24.039167	71.598333	Tube Well		13.48		10.4
Banas Kantha	Bhabhar	Bhabhar iii	24.060000	71.600000	Tube Well		24.6	24.13	24.29
Banas Kantha	Bhabhar	Bhim bordi	24.114167	71.614170	Tube Well				7.42
Banas Kantha	Danta	Ambaji_Pz	24.340000	72.850000	Bore Well	12.2	10.66	5.63	
Banas Kantha	Danta	Beda	24.201000	72.907000	Dug Well	7.42	7.19	5.02	9.61
Banas Kantha	Danta	Danta	24.188889	72.765278	Bore Well		9.04	5.98	
Banas Kantha	Danta	Danta_DW	24.188990	72.760880	Dug Well	15.57	14.99	6.22	7.1
Banas Kantha	Danta	Ganapipli	24.297000	72.947000	Dug Well	9.26	8.86	7.82	10.6
Banas Kantha	Danta	Hadad	24.262780	72.980000	Dug Well	10.37	9.75	3.38	4.75
Banas Kantha	Danta	Kunvarsi	24.211920	72.860020	Dug Well	11.83	11.33	1.53	3.15
Banas Kantha	Danta	Mohabbat gadh	24.167000	72.728000	Dug Well	20.56	19.8	14.51	16.3
Banas Kantha	Danta	Paniyari OW	24.145844	72.768105	Tube Well	12.58	11.73	11.03	12.58
Banas Kantha	Danta	Ratanpur2	24.175000	72.746000	Dug Well	16.88	16.34	12.35	12.87
Banas Kantha	Danta	Vasi EW	24.231456	72.774732	Tube Well			27.6	30.51
Banas Kantha	Dantivada	Dantiwada	24.188889	72.760556	Tube Well				34.46
Banas Kantha	Dantivada	Gangodra	24.436000	72.365000	Dug Well	23.38	12.26	16.01	
Banas Kantha	Dantivada	Kuchawada EW I	24.463333	72.254444	Tube Well		63.71	63.67	68.96
Banas Kantha	Dantivada	Kuchawada EW IV	24.463333	72.254444	Bore Well				21.46
Banas Kantha	Dantivada	Nandotra Brahmanvas Pz (OW II)	24.340833	72.314167	Bore Well			18.59	
Banas Kantha	Dantivada		24.314570	72.326700	Dug Cum Bore	26.52		33.68	

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
					Well				
Banas Kantha	Deesa	Balodhar_Pz-I	24.230000	71.910000	Tube Well		179.01		179.16
Banas Kantha	Deesa	Deesa Pzi	24.256667	72.187500	Tube Well			98.07	
Banas Kantha	Deesa	Deesa Pzii	24.256667	72.187500	Tube Well				9.73
Banas Kantha	Deesa	Fagudara Pz	24.430000	72.234000	Bore Well	93.92		90.97	93.67
Banas Kantha	Deesa	Meda	24.397000	72.285000	Dug Well	6.24	20.72	11.59	21.9
Banas Kantha	Deesa	Rampura	24.276638	72.067700	Tube Well				3.56
Banas Kantha	Dhanera	Dhanera Pz- II	24.502778	72.186111	Tube Well			48.94	
Banas Kantha	Dhanera	Dhanera Pz-I	24.506111	72.029167	Tube Well			139.07	142.1
Banas Kantha	Dhanera	Kumar Pz	24.478670	72.153960	Tube Well	98.87	92.84	90.18	90.43
Banas Kantha	Dhanera	Nenava OW I	24.655556	71.879722	Tube Well		77.85	112.48	113.86
Banas Kantha	Dhanera	Vinchivadi Pz-II	24.586111	71.933333	Tube Well			91.13	
Banas Kantha	Kankrej	Sohanpura OW I	23.877222	71.839170	Tube Well			55.46	
Banas Kantha	Kankrej	Sohanpura OW II	23.877222	71.839170	Tube Well				79.86
Banas Kantha	Palanpur	Bhatamal Nani	24.303480	72.410870	Dug Well		8.07	6.42	8.12
Banas Kantha	Palanpur	Palanpur_Pz	24.172222	72.450000	Tube Well			39.75	
Banas Kantha	Palanpur	Palanpur2	24.194000	72.433000	Dug Well	26.47	24.42	23.3	
Banas Kantha	Palanpur	Takarwada Pz-I	24.108333	72.331389	Tube Well			187.95	189.23
Banas Kantha	Tharad	Dantiya	24.547130	71.719430	Dug Well	27.2	18.54	38.97	17.42
Banas Kantha	Tharad	Dantiya EW	24.546944	71.720556	Tube Well		28.56	38.67	
Banas Kantha	Tharad	Dodiya II	24.405278	71.883590	Tube Well				5.2
Banas Kantha	Tharad	Dudhva	24.479400	71.669020	Dug Well	17.46	16.87	15.88	16.3
Banas Kantha	Tharad	Khoda	24.660000	71.770000	Dug Well		24.24	24.75	22.18
Banas Kantha	Tharad	Mallupur OW I	24.373611	71.660556	Tube Well		15.35	14.54	11.07
Banas Kantha	Tharad	Mallupur OW II	24.373611	71.660560	Tube Well				173.17
Banas Kantha	Tharad	Miyal	24.617000	71.748000	Dug Well	13.49	12.91	13.32	14.09
Banas Kantha	Tharad	Naroli OW II	24.627437	71.633160	Tube Well				85.16
Banas Kantha	Tharad	Naroli Pzi	24.620000	71.640000	Bore Well	6.27	6.03	5.06	5.78
Banas Kantha	Tharad	Naroli Pzii	24.620000	71.640000	Tube Well	5.54	5.21	4.4	5.11
Banas Kantha	Tharad	Naroli Pzii	24.620000	71.640000	Tube Well	6.34	6.07	5.11	5.81
Banas Kantha	Tharad	Rah Pz-III	24.495800	71.836100	Tube Well			57.77	
Banas Kantha	Tharad	Rah_Pz I	24.495800	71.836100	Tube Well			59.44	
Banas Kantha	Tharad	Rah_Pz II	24.495800	71.836100	Tube Well			47.2	
Banas Kantha	Tharad	Tharad Pzi	24.385000	71.619000	Tube Well	9.42	8.42	200	8.85
Banas Kantha	Tharad	Tharad Pzii	24.385000	71.619000	Tube Well	9.02	8.13	65	8.65
Banas Kantha	Tharad	Tharad Pzii	24.385000	71.619000	Tube Well	9.08	8.22	30	8.61
Banas Kantha	Vadgam	Bharkawal	24.049316	72.390120	Tube Well		79.84	79.82	
Banas Kantha	Vadgam	Dhanali EW II	24.093611	72.633060	Tube Well		25.31	24.75	25.94
Banas Kantha	Vadgam	Jalotra Pz-II	24.140000	72.580000	Tube Well			23.01	

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Banas Kantha	Vadgam	Juni Sundheni EW	24.001111	72.620278	Tube Well		29.73	30.04	30.57
Banas Kantha	Vadgam	Mahi_Pz	24.029000	72.381000	Tube Well	160.58	158.68	149.29	159.39
Banas Kantha	Vav	Bhatvar vas OW	24.287500	71.446667	Bore Well	58.89	56.31	57.58	59.6
Banas Kantha	Vav	Biyok_Pz-II	21.439000	70.600000	Tube Well		28.75	27.62	27.97
Banas Kantha	Vav	Vav ii	24.361000	71.511000	Tube Well	34.29		35.83	36.08
Banas Kantha	Vav	Vav i	24.358000	71.508000	Tube Well	24.02		24.07	24.7
Bharuch	Amod	Roja tankaria	21.916667	72.791667	Dug Well	7.57	3.9	7.05	4.95
Bharuch	Anklesvar	Juna borbhata	21.675000	72.975000	Dug Well	4.5	5	4.35	
Bharuch	Anklesvar	Motwan	21.555556	72.887500	Dug Well	5.25		2.15	2.8
Bharuch	Anklesvar	Panoli	21.537500	72.975000	Dug Well	3.05	1.28	1.4	2.33
Bharuch	Anklesvar	Sajod	21.616667	72.923611	Dug Well	3.89		3.43	4.12
Bharuch	Bharuch	Bharuch	21.700000	73.004000	Dug Well	4.71	2.88	3.91	4.67
Bharuch	Bharuch	Bharuch I	21.708000	73.000000	Tube Well	6.55	3.6	3.68	4.9
Bharuch	Bharuch	Bharuch li	21.708000	73.000000	Tube Well		2.72		17.01
Bharuch	Bharuch	Kaswa	21.683000	72.817000	Dug Well	6.23	6.65	3.15	4.45
Bharuch	Bharuch	Mahegam1	21.683000	72.758000	Dug Well	3.95	0.1	0.35	4.95
Bharuch	Bharuch	Navetha	21.707778	72.830556	Dug Well	5.6	3.8	4.3	4.46
Bharuch	Hansot	Hansot	21.583000	72.808000	Tube Well	3.65	1.02	3.48	2.22
Bharuch	Hansot	Ilav	21.450000	72.800000	Dug Well	5.68	3.12	4.09	4.7
Bharuch	Hansot	Jetpur1	21.491667	72.708333	Dug Well	5.6	3.7	4.92	5.95
Bharuch	Hansot	Raymal	21.520833	72.820833	Dug Well	4.27	1.54	1.72	1.77
Bharuch	Hansot	Sahol	21.472778	72.809722	Dug Well	4.75	2	2.53	3.3
Bharuch	Hansot	Utraj	21.591667	72.825000	Dug Well	4.6	3.4	3.45	4.65
Bharuch	Jambusar	Chhindra	22.126667	72.669722	Dug Well	6.5	7.6	5.14	6.63
Bharuch	Jambusar	Dahegam	22.184722	72.597222	Dug Well	6.73	6.5	8.89	8.15
Bharuch	Jambusar	Jambusar	22.052778	72.805556	Tube Well	6.73	5.12	7.55	6.95
Bharuch	Jambusar	Jambusar2	22.050000	72.800000	Dug Well	5.13		4.62	
Bharuch	Jambusar	Kalak1	22.018611	72.763056	Dug Well	6.3	4.6	5.45	5.1
Bharuch	Jambusar	Kavi	22.193611	72.639444	Dug Well	7	6.8	6.6	6.95
Bharuch	Jambusar	Sarod	22.158000	72.758000	Dug Well	7.6	6.5	5.25	6.5
Bharuch	Jambusar	Sindhav	22.027000	72.636000	Dug Well	7.71	6.8	5.76	6.18
Bharuch	Jambusar	Tankari	21.991667	72.675000	Dug Well	5.93	3.3	2.8	3.97
Bharuch	Jhagadia	Simodra	21.741667	73.208333	Dug Well			2.55	3.01
Bharuch	Vagra	Bhensli	21.725000	72.750000	Dug Well	3.2	2.6	2.38	2.8
Bharuch	Vagra	Kadodara	21.762500	72.638889	Tube Well	8.9	4.77	7.18	6.2
Bharuch	Vagra	Luhara	21.675000	72.558000	Dug Well	0.89	1.2	0.11	0.39
Bharuch	Vagra	Nirnavi	21.791667	72.668056	Dug Well	7.32	3.89	4.28	5.9
Bharuch	Valia	Arethi	21.613000	73.435000	Dug Well	6.93		6.1	
Bharuch	Valia	Jokhla	21.595833	73.169167	Dug Well	4.3	0.28	3.75	4.45
Bharuch	Valia	Kondh	21.580556	73.068056	Dug Well	4.3	2.31	2.5	3.02

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Bharuch	Valia	Mokhdi	21.533000	73.288000	Dug Well	8.46	4.8	3.84	3.44
Bharuch	Valia	Netrang	21.641667	73.366667	Bore Well			5.54	
Bharuch	Valia	Netrang(Rep)_Pz	21.640000	73.370000	Bore Well	13.1	4.4		6.2
Bharuch	Valia	Netrang1	21.633000	73.367000	Dug Well	8.2		4.23	
Bhavnagar	Bhavnagar	Bhavnagar1	21.916667	70.748611	Dug Well	4.31	2.92	3.92	4.7
Bhavnagar	Bhavnagar	Bhudel	21.916000	69.858000	Dug Well	3.74	2.1	1.15	2.61
Bhavnagar	Bhavnagar	Bhumbhali	21.680000	72.240000	Dug Well		1.6	1.1	2.7
Bhavnagar	Bhavnagar	Kamlej OW	21.775200	72.040661	Tube Well	9.13	7.84	6.7	6.57
Bhavnagar	Bhavnagar	Kardej	21.751944	72.031111	Tube Well	15.75		8.19	9.07
Bhavnagar	Gariadhar	Gariyadhar	21.543000	71.565000	Dug Well	24.54	4.26	11.6	13.01
Bhavnagar	Ghogha	Chhaya OW	21.510403	72.205668	Bore Well	58.73	11.85		13.2
Bhavnagar	Ghogha	Ghogha	21.681000	72.277000	Dug Well		1.86	2.9	2.31
Bhavnagar	Ghogha	Kharakadi	21.619090	72.050012	Tube Well			3.54	5.62
Bhavnagar	Ghogha	Vavdi	21.568056	72.198056	Dug Well		2.66		0.7
Bhavnagar	Jesar	Jesar_Pz	21.371389	71.670278	Tube Well		3.57		5.55
Bhavnagar	Mahuva	Bora	21.191000	71.929000	Dug Well	22.1	12.89	14.9	22.52
Bhavnagar	Mahuva	Dudhala	21.138000	71.658000	Dug Cum Bore Well	13.7	3.58	4.49	5.02
Bhavnagar	Mahuva	Khari	21.268889	71.778889	Dug Well	10.03		4.2	4.83
Bhavnagar	Mahuva	Longadi	21.214000	71.883000	Dug Well	4.37	1.94	5.5	6.41
Bhavnagar	Mahuva	Mahuva	21.095833	71.766667	Dug Cum Bore Well	8.3		5.97	6.21
Bhavnagar	Mahuva	Malvav_Pz	21.161000	71.908000	Tube Well			17.39	19.85
Bhavnagar	Mahuva	Motivadal	21.197000	71.550000	Dug Well	4.44	2.51	2.13	3.57
Bhavnagar	Mahuva	Shantinagar	21.245833	71.650000	Dug Well	14.6		4.43	10.7
Bhavnagar	Mahuva		22.741436	73.674358	Dug Well		5.45	6.55	0.45
Bhavnagar	Palitana	Chowk Pz	21.429000	71.764000	Tube Well	16.7		12.93	14.09
Bhavnagar	Palitana	Khijadiya	21.637500	71.700000	Dug Well	10.4	5.92	7.45	10.9
Bhavnagar	Palitana	Palitana1	21.525000	71.824000	Bore Well	7.96		5.86	
Bhavnagar	Palitana	Palitana2	21.522000	71.839000	Dug Well	20.55	3.88	7.7	9.29
Bhavnagar	Palitana	Panchpipla	21.550000	71.721000	Dug Well	5.37	2.28	7.45	2.02
Bhavnagar	Palitana	Sajnasar	21.425000	71.912500	Dug Well	7.9	1.75	1.5	2.85
Bhavnagar	Palitana	Satanes	21.441667	71.837500	Dug Well	16.57		4.57	10.57
Bhavnagar	Palitana	Vadal	21.476944	71.806111	Dug Well	13.5	2.89	4.35	8.05
Bhavnagar	Sihor	Ambala	21.711111	71.841667	Dug Well	15.74	12.26	6.9	8.26
Bhavnagar	Sihor	Kajavadar	21.651111	71.973333	Dug Well	5.72	1.71	3.5	3.92
Bhavnagar	Sihor	Piparla	21.636389	71.918889	Dug Well			2.6	2.85
Bhavnagar	Sihor	Sandhida	21.687500	71.758333	Dug Well	9.6	1.3	1.7	2
Bhavnagar	Sihor	Tana	22.269933	69.373260	Dug Well	18.57	8.22	3.3	18.03
Bhavnagar	Sihor	Ukharala	21.770000	71.887000	Dug Well	24.16		6.36	6.66
Bhavnagar	Sihor	Wadia Pz	21.778000	71.933000	Tube Well	49.27	12.88		0.7

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Bhavnagar	Talaja	Datha	21.220833	71.950000	Dug Well			3.84	4.94
Bhavnagar	Talaja	Fulsar	21.286322	72.040018	Bore Well	10.4		1.92	7.18
Bhavnagar	Talaja	Kundheli	21.379000	71.981000	Dug Well	12.39	3.82	14.6	26.63
Bhavnagar	Talaja	Piparala EW	21.382745	72.105543	Tube Well			3.04	5.24
Bhavnagar	Talaja	Samadiyala OW	23.521520	72.029980	Tube Well	14.11	10.28	8.05	16.79
Bhavnagar	Talaja	Talaja2	21.366667	72.016667	Dug Well	9.14	2.99	3.73	5.24
Bhavnagar	Talaja	Trapaj	21.425000	72.096000	Dug Well	20	3.41	7.1	10.1
Bhavnagar	Umralla	Bhutia	21.747000	71.700000	Dug Well	12.77	6.82		1.7
Bhavnagar	Umralla	Jalia	21.800000	71.617000	Dug Well	17.79	2.68	17.3	17.21
Bhavnagar	Umralla	Umralla	21.847000	71.808000	Dug Well	9.72		5.5	5.59
Bhavnagar	Vallabhipur	Ayodhayapuram	21.960278	71.886389	Dug Well	6.46	4.96	5.8	6.4
Bhavnagar	Vallabhipur	Kanpar	23.271750	69.492694	Tube Well			6.81	6.94
Bhavnagar	Vallabhipur	Lonjdihara	22.097222	71.897222	Dug Well	16.99	10.05	10.78	19.22
Bhavnagar	Vallabhipur	Panvi1	22.072222	71.888889	Dug Well			3.25	4.39
Bhavnagar	Vallabhipur	Vallabhipur1	21.883330	71.877780	Tube Well		4.19	3.71	0.8
Bhavnagar	Vallabhipur	Vallbhipur	21.883000	71.875000	Dug Well	4.42	3.74	4.71	4.2
Botad	Barvala	Barvala	22.150000	71.890000	Dug Well	5.39	1.75	2.9	3.75
Botad	Barvala	Salangpor	22.158000	71.771000	Dug Well	22.3		22.56	3.9
Botad	Botad	Senthali	22.168333	71.726667	Dug Well	3.67		3.14	3.67
Botad	Botad	Tardhera	22.229000	71.604000	Dug Cum Bore Well	19.3	8.94	20.79	12.7
Botad	Gadhada	Dhasa	21.800000	71.508000	Dug Well	3.83	1.22	1.39	1.75
Botad	Gadhada	Gadhada1	21.968000	71.582000	Bore Well	7.37		2.02	6.78
Botad	Gadhada	Ningala	22.018000	71.700000	Dug Well	5.99		4.17	
Botad	Gadhada	Tatam	22.058000	71.633000	Dug Well	35.8	2.94		
Botad	Ranpur	Kundali	22.269444	71.700000	Dug Well		3.12		0.7
Botad	Ranpur	Rajpada	21.711111	71.841667	Dug Well	17.07	3.61	11.9	11.95
Chhotaudepur	Bodeli	Jivanpura	22.303144	73.758316	Tube Well			1.48	5.6
Chhotaudepur	Bodeli	Makni EW I	22.225000	73.679167	Tube Well		0.95		10.15
Chhotaudepur	Chhota Udepur	Asala	22.383000	73.933000	Dug Well	11.1	5.7	3.56	4.54
Chhotaudepur	Chhota Udepur	Asar	22.203611	74.010556	Dug Well	12.88		10.45	
Chhotaudepur	Chhota Udepur	Bodgam	22.341873	74.171671	Bore Well	3.35	1.78	1.25	
Chhotaudepur	Chhota Udepur	Chhota udepur	22.307105	74.017062	Dug Well	7.94	0.7	1.63	1.6
Chhotaudepur	Chhota Udepur	Ferkuva	22.366667	74.208333	Dug Well	7.2	6.85	2.29	2.16
Chhotaudepur	Chhota Udepur	Ghamodi	22.367000	74.075000	Dug Well		4.26	3.33	5.65
Chhotaudepur	Chhota Udepur	Jojh	22.441667	73.962500	Dug Well	11.8	7.68	8	8.7
Chhotaudepur	Chhota Udepur	Kevadi	22.516667	73.941667	Dug Well	7.57	4.48	3.7	5
Chhotaudepur	Chhota Udepur	Koli EW	22.443456	74.050036	Bore Well	20.25	14.88	12.87	13.51
Chhotaudepur	Jetpur Pavi	Bhindol	22.200000	73.900000	Dug Well	11.4		10.3	8.5
Chhotaudepur	Jetpur Pavi	Kalarani	22.219735	73.870770	Bore Well	11.19	3.88	2.99	4.72
Chhotaudepur	Jetpur Pavi	Pavi	22.341667	73.833333	Dug Well	4.9	4.19		

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Chhotaudepur	Jetpur Pavi	Vadtalav Pz	22.258610	73.783890	Bore Well		7.9	11.15	
Chhotaudepur	Jetpur Pavi	Vankol	22.327163	73.863760	Tube Well	6.57	4.64	5.8	
Chhotaudepur	Kawant	Baladgam	22.137500	74.008333	Dug Well	13	8.8	9.77	9.28
Chhotaudepur	Kawant	Chavaria	21.220833	71.950000	Dug Well	12.3	4.26	6.77	8.7
Chhotaudepur	Kawant	Devat (thadgam)	22.100000	73.983000	Dug Well	8.28		5.05	
Chhotaudepur	Kawant	Khatiyavant EW	22.161889	73.970389	Bore Well	52.52	0.62	1.06	1.67
Chhotaudepur	Kawant	Moti chikhali	22.011000	74.083000	Dug Well	3.18	1.47	2.95	
Chhotaudepur	Kawant	Panwad	22.200000	74.041667	Dug Well	9.3	0.6	5.5	
Chhotaudepur	Kawant	Saividvasana	22.058000	74.017000	Dug Well	5.6	2.64	2.6	
Chhotaudepur	Kawant	Tokri	22.147222	74.027778	Bore Well			8.16	
Chhotaudepur	Kawant	Vagudan	22.066667	74.141667	Dug Well	6.34	6.44	7.27	
Chhotaudepur	Naswadi	Chatiamli EW	23.206389	72.279722	Bore Well	3.35	14.9	30.44	16.69
Chhotaudepur	Naswadi	Sengpur	22.038000	73.888000	Dug Well	7.1			6.6
Chhotaudepur	Sankheda	Govindpura	22.211000	73.741000	Dug Well	5.7		3.2	
Chhotaudepur	Sankheda	Kosindra Pz-I	22.146667	73.755556	Bore Well	4.33	1.75	2.54	2.82
Chhotaudepur	Sankheda	Makni	22.230000	73.680000	Dug Cum Bore Well		9.3	1.5	
Chhotaudepur	Sankheda	Pitha	22.254000	73.642000	Dug Well	6.31	3.08	2.52	
Chhotaudepur	Sankheda	Timba	22.133840	73.628150	Tube Well		11.1	11.15	10.79
Dahod	Dahod	Dahod	22.840278	74.262500	Bore Well	1.74	1.74	1.55	2.43
Dahod	Dahod	Dahod2	22.825000	74.233333	Dug Well	5.27	5.85		5.9
Dahod	Dahod	Dohad_Urban1	20.806667	73.227500	Dug Well	6.5	3.4	5.55	3.5
Dahod	Dahod	Dohad_Urban2	22.844722	74.266667	Dug Well	11.5	7.4	7.38	7.1
Dahod	Dahod	Dohad_Urban3	22.839722	74.233889	Dug Well	8.02	3.26	2.22	4.9
Dahod	Dahod	Kharod EW	22.879488	74.217567	Tube Well			29.35	
Dahod	Dahod	Mahudi EW	23.151571	74.223303	Tube Well	20.28		14.4	
Dahod	Dahod	Varamkheda	22.800000	74.275000	Dug Well	2.9	0.5	1.15	2.8
Dahod	Devgadh Bariya	Bapda	22.670000	73.841667	Dug Well	4.87	0.6	2.45	3.4
Dahod	Devgadh Bariya	Devgadh Baria	22.700000	73.914000	Dug Well	11	7.28	6.96	6.7
Dahod	Devgadh Bariya	Devgadh bariya	22.700000	73.916667	Bore Well	16.88	8.9	7.23	
Dahod	Devgadh Bariya	Khandania	22.704167	73.837500	Dug Well		11.5	11.2	11.5
Dahod	Devgadh Bariya	Salaya 1	22.158000	71.771000	Dug Well	15.52	7.46	4.82	9.5
Dahod	Dhanpur	Ambakatch	22.666667	74.220278	Dug Well		1.05	1.2	5.6
Dahod	Dhanpur	Dhanpur	22.633000	74.104000	Dug Well	14.85	9.21	7.35	
Dahod	Dhanpur	Kanjetha	22.580556	74.113889	Dug Well		8.68	8.53	5.2
Dahod	Dhanpur	Pipero	22.647000	74.090000	Bore Well	12.89	7.33	5.62	
Dahod	Dhanpur	Tokarba	22.604000	74.038000	Dug Well	8.05	4.25	3.75	4.3
Dahod	Fatepura	Fatepura(Karodia)	23.254167	74.029167	Bore Well		4.5	4.2	
Dahod	Fatepura	Sarsava	23.186000	74.000274	Dug Well	11.45		0.4	7.4
Dahod	Fatepura	Sukhsar	23.150000	74.050000	Dug Well	8.55	4.7	6.85	5.6
Dahod	Garbada	Garbara	22.680556	74.312500	Dug Well		1.79	1.35	5.3

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Dahod	Garbada	Navagam Faliya	22.686775	74.306084	Dug Well			1.1	1.2
Dahod	Garbada	Panchwada	22.729000	74.308000	Dug Well	6	6.35	5.05	5.3
Dahod	Garbada	Patiya Zol EW	22.654147	74.323586	Tube Well		6.93		3.3
Dahod	Jhalod	Chitrodiya EW	23.099139	74.210194	Tube Well		1.88		
Dahod	Jhalod	Jhalod	23.093000	74.147000	Bore Well	8.86	4.14		6.9
Dahod	Jhalod	Jhalod1	23.092000	74.133000	Dug Well	13.1		4.48	
Dahod	Jhalod	Limbdi2	23.004000	74.158000	Dug Well	4.1	0.98	0.93	1.2
Dahod	Jhalod	Mirakhedi	22.930000	74.200000	Dug Well		4.65	1.15	2.2
Dahod	Jhalod	Raliyati Gujjar EW	22.991083	74.256667	Bore Well		6.94		
Dahod	Jhalod	Rupakheda EW	22.995056	74.195333	Tube Well		8.7		
Dahod	Jhalod	Thada	23.283000	68.947000	Dug Well			2.8	2.6
Dahod	Limkheda	Dadhela	22.837500	74.066667	Dug Well	8.4	6.71	6.55	14.4
Dahod	Limkheda	Dhabhada OW	22.838876	74.054733	Tube Well				14.4
Dahod	Limkheda	Limkheda	22.830556	73.986111	Bore Well	7.78	5.52	3.9	5.83
Dahod	Limkheda	Nava Vadiya	22.894760	74.045213	Dug Well	6.12	7.02	3.2	9.9
Dahod	Limkheda	Wadia	22.900000	74.050000	Dug Well	8.34	2.54	1.79	5.5
Dangs	Ahwa	Ahwa_Pz	20.758889	73.686111	Bore Well	2.58	2.15	2.21	3.05
Dangs	Ahwa	Ahwa1	20.758000	73.683000	Dug Well	3.9	1	0.4	1.58
Dangs	Ahwa	Bari Pada	20.640000	73.691000	Dug Well	13.05	2.8	0.7	
Dangs	Ahwa	Chinchpada	20.637500	73.775000	Dug Well	3.62	0.6	0.93	2.62
Dangs	Ahwa	Dhumkal	20.645833	73.791667	Dug Well	3.02	1.15		1.45
Dangs	Ahwa	Gadad	20.637500	73.775000	Dug Well	5.15	2.8		2.05
Dangs	Ahwa	Ghubita	20.800000	73.737500	Dug Well	3.06	1.35		1.16
Dangs	Ahwa	Jakana	20.633000	73.746000	Dug Well	11.55	1.5		1.85
Dangs	Ahwa	Jamalpada	20.732000	73.521000	Dug Well	6.7	2.85		5.38
Dangs	Ahwa	Malegaon	20.600000	73.745833	Dug Well	5.15	1.05		2.1
Dangs	Ahwa	Nadak khadi	20.804000	73.613000	Dug Well	5.71	1.1		3.65
Dangs	Ahwa	Nana pada	20.700000	73.580000	Dug Well	10.76	3.68		6.13
Dangs	Ahwa	Umberpada	20.683000	73.725000	Dug Well	4.65	0.8		3.35
Dangs	Subir	Bardipada	20.974881	73.615465	Dug Well	12.11		9.11	9.33
Dangs	Subir	Chikhli	20.658000	73.688000	Dug Well	6	1.6	0.92	1.3
Dangs	Subir	Mahal	20.916667	73.679167	Dug Well	6.6	2.5		3.35
Dangs	Subir	Subir	20.922000	73.581000	Dug Well	8.8	3.75		2.36
Dangs	Waghai	Aherdi	20.690000	73.620000	Dug Well		2.3	1.25	5.3
Dangs	Waghai	Bori Gaotha 1	20.811000	73.503000	Dug Well	7.1		4.05	5.39
Dangs	Waghai	Chinchnogaatha	20.808000	73.553000	Dug Well	7.56	1.5	1.69	3.21
Dangs	Waghai	Kalibel	20.920833	73.580556	Dug Well	3	1.3		2.73
Dangs	Waghai	Sakarpatal	20.719000	73.557000	Dug Well	5.42	2.2		2.82
Dangs	Waghai	Sodmal	20.866667	73.616667	Dug Well	12.15	1.8		6.65
Dangs	Waghai	Vaghai	22.360000	71.868000	Dug Well		5.15		9.46

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Dangs	Waghai	Vazat Amba	20.878000	73.518000	Dug Well	7.92	2.7		4.8
Devbhumi Dwarka	Bhanvad	Ambardi	21.916000	69.858000	Dug Well	12.61	3.5	4.56	6.08
Devbhumi Dwarka	Bhanvad	Fotdi	22.022390	69.851150	Dug Well		12.15	13.95	15.49
Devbhumi Dwarka	Bhanvad	Jampar	22.036360	69.761230	Dug Well	21.8	5.32	12.66	9.52
Devbhumi Dwarka	Bhanvad	Mewasha	21.925606	69.815931	Dug Well	15.6	0.95	13.7	
Devbhumi Dwarka	Bhanvad	Modpar	21.858000	69.808000	Dug Well	17.4	5.25	9.15	11.26
Devbhumi Dwarka	Bhanvad	Mota gunda	22.011530	69.718960	Dug Well	11.2	1.02	5.1	16.75
Devbhumi Dwarka	Bhanvad	Mota kalawad	21.908000	69.829000	Dug Well	20.45		17	22.39
Devbhumi Dwarka	Bhanvad	Nawagam	21.976340	69.765640	Dug Well	3.55	1.02	4.7	4.02
Devbhumi Dwarka	Kalyanpur	Asota mota	22.269930	69.373260	Dug Well	7.25	2.49	1.45	3.31
Devbhumi Dwarka	Kalyanpur	Bhatia	22.091667	69.301389	Dug Well	3.53			2.35
Devbhumi Dwarka	Kalyanpur	Bhatiya	22.094440	69.266670	Bore Well				2.85
Devbhumi Dwarka	Kalyanpur	Bhogat	22.090900	69.268830	Dug Well	10.44	7.35		9.4
Devbhumi Dwarka	Kalyanpur	Bhogat1	21.990490	69.244280	Dug Well	10.15	3.65	5.72	10.1
Devbhumi Dwarka	Kalyanpur	Gandhvi	21.855673	69.359204	Dug Well	10.2		5.1	4.12
Devbhumi Dwarka	Kalyanpur	Gojines	22.024550	69.204243	Dug Well	8.97	6.35	2.7	7.15
Devbhumi Dwarka	Kalyanpur	Gurgadh	22.194701	69.190933	Dug Well	12.08	3.8	5.15	3.19
Devbhumi Dwarka	Kalyanpur	Haripar	22.016674	69.454409	Dug Well			3.55	2.62
Devbhumi Dwarka	Kalyanpur	Juvanpur	22.170833	69.366667	Dug Well	11.5		5.56	15.47
Devbhumi Dwarka	Kalyanpur	Kalyanpur	22.307580	69.054212	Dug Well	4.6	1.45	3.9	5.85
Devbhumi Dwarka	Kalyanpur	Kalyanpur2	22.017000	69.392000	Dug Well	26.07		6.15	17.92
Devbhumi Dwarka	Kalyanpur	Kanakpar	22.098410	69.515530	Dug Well			8.33	12.41
Devbhumi Dwarka	Kalyanpur	Khakharda	22.104767	69.372104	Dug Well	8.13		6.48	7.11
Devbhumi Dwarka	Kalyanpur	Khirsara	21.979000	69.600000	Dug Well	6.72	1.55	7.04	7.3
Devbhumi Dwarka	Kalyanpur	Lamba	21.893020	69.324290	Dug Well	14.5	2.9	5.3	4.24
Devbhumi Dwarka	Kalyanpur	Lambha 1	21.898889	69.323611	Dug Well	5.78	1	1.9	4.84
Devbhumi Dwarka	Kalyanpur	Nagadiya	21.390469	70.374770	Dug Well	11.15	1.5	11.2	
Devbhumi Dwarka	Kalyanpur	Navadra	22.686775	69.286489	Dug Well	6.7	1.15	4.72	2.82
Devbhumi Dwarka	Kalyanpur	Pindara1	22.247000	69.258000	Dug Well	5.82	4.05	1.45	2.82
Devbhumi Dwarka	Kalyanpur	Raval	21.929722	69.491944	Dug Well	5.7		3.2	4.75
Devbhumi Dwarka	Kalyanpur	Vamansa	22.084000	69.188700	Dug Well	4.43	3.83	2.85	5.92
Devbhumi Dwarka	Khambhalia	Bajana	22.135630	69.755950	Dug Well	11.9	8.8	10.58	14.79
Devbhumi Dwarka	Khambhalia	Beh	22.263888	69.464444	Dug Well	18.6	2.9	6.88	2.6

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Devbhumi Dwarka	Khambhalia	Bhadthar	22.080000	69.580000	Dug Well			7.05	15.01
Devbhumi Dwarka	Khambhalia	Bhandaria	22.261934	69.464247	Dug Well			12.75	15.24
Devbhumi Dwarka	Khambhalia	Hanzdapur	22.188850	69.436812	Dug Well	7.4	0.01	3.22	12.36
Devbhumi Dwarka	Khambhalia	Kajuda	22.333000	69.708000	Dug Well	4.6	1	2.12	3.12
Devbhumi Dwarka	Khambhalia	Khambhaliya	22.209722	69.645833	Bore Well		3.99	6.03	5.09
Devbhumi Dwarka	Khambhalia	Kuvadia	22.201000	69.583000	Dug Well	11.1	4.07	6.9	15.15
Devbhumi Dwarka	Khambhalia	Salaya	22.158000	71.771000	Dug Well	3.01		3.32	4.11
Devbhumi Dwarka	Khambhalia	Vadtara	22.208000	69.500000	Dug Well	9.6		5.59	11.26
Devbhumi Dwarka	Khambhalia	Vinjalpur	22.148290	69.599640	Dug Well	5.76	2.5	5.35	5.4
Devbhumi Dwarka	Okhamandal	Amaliya Chokri	22.240000	69.125000	Dug Well	3.75	1.2	2.18	1.85
Devbhumi Dwarka	Okhamandal	Aramda	22.433000	69.042000	Dug Well	5.35	3	4.37	1.42
Devbhumi Dwarka	Okhamandal	Drasan Vel	22.290410	69.039520	Dug Well	13.8		14.9	3.68
Devbhumi Dwarka	Okhamandal	Dwarka	22.245833	68.958333	Dug Well	7.97	9.75	8.2	6.05
Devbhumi Dwarka	Okhamandal	Gorinja	22.159000	69.065000	Dug Well	13	6.35	9.8	6.31
Devbhumi Dwarka	Okhamandal	Hambusar	22.384000	69.054000	Dug Well	1.7	0.01	1.09	3.13
Devbhumi Dwarka	Okhamandal	Korada	22.223806	69.047915	Dug Well	7.6	2.62	5.09	3.62
Devbhumi Dwarka	Okhamandal	Kurunga vadivistar	22.053401	69.170499	Dug Well			4.38	8.18
Devbhumi Dwarka	Okhamandal	Mojap	22.366667	68.983333	Dug Well	7.47	2.9	4.64	15.89
Devbhumi Dwarka	Okhamandal	Mulvasar	22.265690	69.089510	Dug Well	3.875	0.95	1.75	2.46
Devbhumi Dwarka	Okhamandal	Samrasar I	22.375000	69.104000	Dug Well	3.53		2.3	3.29
Devbhumi Dwarka	Okhamandal	Varwada	22.292000	68.967000	Dug Cum Bore Well	10.6	1.65	4.29	6.54
Gandhinagar	Dehgam	Dahegam I	23.033889	72.449722	Tube Well			72.45	
Gandhinagar	Dehgam	Nandol	23.210701	72.819289	Tube Well			115.62	
Gandhinagar	Dehgam	Paliya	23.179170	72.841670	Dug Cum Bore Well			4.46	7.6
Gandhinagar	Gandhinagar	Adalaj_Pz_I	23.175000	72.558000	Tube Well	119.4	108.46	109.3	111.5
Gandhinagar	Gandhinagar	Adalaj_Pz_II	23.175000	72.558000	Tube Well	92.18	93.06	92.55	
Gandhinagar	Gandhinagar	Adalaj_Pz_III	23.175000	72.558000	Tube Well	34.14	24.77	24.31	
Gandhinagar	Gandhinagar	Chiloda_Pz_I	23.227000	72.739000	Tube Well	109.4			
Gandhinagar	Gandhinagar	Gandhinagar II	23.234722	72.641667	Tube Well	64.88			61.52
Gandhinagar	Gandhinagar	Pethapur_Pz-I	23.267000	72.673000	Tube Well	113			
Gandhinagar	Gandhinagar	Pethapur_Pz-II	23.267000	72.673000	Tube Well	88.03			4.63
Gandhinagar	Gandhinagar	Piplaj	23.314528	72.688472	Tube Well		118.54	118.21	119.5
Gandhinagar	Gandhinagar	Sardhav Pz -I	23.297000	72.574000	Tube Well	126.16	122.42	121.75	123.8
Gandhinagar	Gandhinagar	Sardhav Pz-II	23.297000	72.574000	Tube Well	155.65	146.97	146.4	148.5

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Gandhinagar	Gandhinagar	Sughad	23.116694	72.627389	Tube Well			101	
Gandhinagar	Kalol	Kalol(Nest)_Pz_II	23.258000	72.472000	Tube Well	149.67	120.09		
Gandhinagar	Kalol	Kalol(Nest)_Pz_III	23.258000	72.472000	Tube Well	84.39	126.66		
Gandhinagar	Kalol	Kasturinagar(IFFCO)	23.190000	72.553000	Tube Well	19.35	13.96	14.5	14.64
Gandhinagar	Kalol	Kharoj Dabhi Pz I	23.380000	72.520000	Tube Well	136.45	136.36	151.86	
Gandhinagar	Kalol	Kharoj Dabhi Pz II	23.380000	72.520000	Tube Well	161.1		151.73	
Gandhinagar	Kalol	Kharoj Dabhi Pz III	23.380000	72.520000	Tube Well	141.76	151.66	138.15	
Gandhinagar	Kalol	Khoraj Dabhi OW IV	23.384260	72.522190	Tube Well		84.24	88.62	
Gandhinagar	Kalol	Nardipur i	23.330000	72.570000	Tube Well	113.97			
Gandhinagar	Kalol	Vejalpur	22.694732	73.559758	Dug Well	5.45		1.7	3.3
Gandhinagar	Mansa	Amrapur Pzi	23.374000	72.705000	Tube Well	110.95			
Gandhinagar	Mansa	Amrapur Pzii	23.374000	72.705000	Tube Well	84			
Gandhinagar	Mansa	Bilodara EW	23.522111	72.649417	Tube Well		126.5	124.45	127.9
Gandhinagar	Mansa	Charada Pz -II	24.277500	72.261389	Bore Well		177.46	181.55	102.38
Gandhinagar	Mansa	Charada_Pz_I	23.481667	72.651667	Tube Well	197.3	101.77	102.1	
Gandhinagar	Mansa	Kherwa OW	23.546540	72.444650	Tube Well		72.8	96.34	
Gandhinagar	Mansa	Lakroda Pz	23.430000	72.790000	Tube Well	74.42	37.02	73.5	
Gandhinagar	Mansa	Magroda OW	23.609444	72.500833	Tube Well		172.34		
Gandhinagar	Mansa	Mansa	23.423000	72.665000	Tube Well	123.25		125.75	
Gandhinagar	Mansa	Padusma EW I	23.494167	72.621667	Tube Well	183.18	186.8	185.1	182.1
Gandhinagar	Mansa	Padusma Pz	23.494262	72.621795	Tube Well			184.1	
Gandhinagar	Mansa	Rangpur	23.222000	72.039500	Tube Well		108.36	108.6	104.74
Gir Somnath	Kodinar	Dolasa	20.819369	70.847198	Dug Well	11.8		3.34	8.1
Gir Somnath	Kodinar	Ghotwad	20.927120	70.760480	Dug Well	6.5		4.46	5.13
Gir Somnath	Kodinar	Kodinar	20.800000	70.691667	Tube Well	5.71			5.11
Gir Somnath	Kodinar	Kodinar1	20.800000	70.691667	Dug Well	13.12	6.02	7.8	9.94
Gir Somnath	Kodinar	Prasli	20.850833	70.669167	Dug Well	16.56	1.58	4.84	
Gir Somnath	Patan Veraval	Ajotha	20.901944	70.518056	Dug Well	16.24	1.64	4.77	16.62
Gir Somnath	Patan Veraval	Govindpura2	20.945833	70.395833	Dug Well	27.17	7.72	8.57	16.35
Gir Somnath	Patan Veraval	Moraj	20.980000	70.440000	Dug Well		3.57	6.9	
Gir Somnath	Talala	Bhim Deval	20.977500	70.609167	Dug Well		3.58	4.95	
Gir Somnath	Talala	Jambur[madhapar	21.029000	70.608000	Dug Well	7.38	5.51	3.01	3.11
Gir Somnath	Talala	Talala_Pz	21.063889	70.538333	Bore Well	10.56	4.32		
Gir Somnath	Talala	Talala1	21.051000	70.525000	Dug Well	10.3		6.44	
Gir Somnath	Una	Dhokadva	20.958333	71.070833	Dug Well			11.72	28.75
Gir Somnath	Una	Gangda_Pz	20.858000	71.167000	Tube Well	5.82		2.41	0.6
Gir Somnath	Una	Girgadhada	20.925000	70.916667	Dug Well	9.73	3.85	4.52	11.7

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Gir Somnath	Una	Jamvala1	20.983000	70.763000	Dug Well	4.74		5.7	5.8
Gir Somnath	Una	Jargla Jargali	20.880833	70.984167	Dug Well	11.38	2.04	4.65	4.9
Gir Somnath	Una	Kansari	20.870000	71.051000	Dug Well		2.09	5.15	
Gir Somnath	Una	Kesariya1	20.796000	70.942000	Dug Well	16.3	2.46	5.55	
Gir Somnath	Una	Nadiya Mandavi	20.742540	71.012070	Dug Well	4.88		3.73	3.66
Gir Somnath	Una	Sametar	20.854000	71.121000	Dug Well	11.34	2.85	16.2	
Gir Somnath	Una	Una2	20.825000	71.041667	Dug Well	6.27	3.81	4.62	
Jamnagar	Dhrol	Dhrol2	22.566667	70.416667	Dug Well	4.04		1.52	6.49
Jamnagar	Dhrol	Latipur	22.618780	70.539820	Dug Well	6.57	3.47	4.35	4.47
Jamnagar	Dhrol	Nana Garediya	22.620755	70.406219	Tube Well				3.72
Jamnagar	Jamjodhpur	Balwa	21.904000	69.958000	Dug Well	17.52	3.35	11.47	18.62
Jamnagar	Jamjodhpur	Jamjodhpur	21.905556	70.030556	Bore Well	6.74	3.67	4.16	6.35
Jamnagar	Jamjodhpur	Motagop	22.037500	69.875000	Dug Well	10.12			11.16
Jamnagar	Jamjodhpur	Satapar	21.811204	69.921972	Dug Well	16.2		8.06	6.47
Jamnagar	Jamjodhpur	Seth vadala	22.033000	70.125000	Dug Well	8.07		3.55	11.41
Jamnagar	Jamjodhpur	Valasan EW	21.901940	70.128340	Bore Well				3.44
Jamnagar	Jamnagar	Bed1	22.437500	69.900000	Dug Well	7.89	3.45	5.34	5.79
Jamnagar	Jamnagar	Changa	20.258333	72.883333	Dug Cum Bore Well	12.45	2.15	7.43	14.79
Jamnagar	Jamnagar	Falla	22.529167	70.308333	Dug Well	3.55	0.2	0.64	1.26
Jamnagar	Jamnagar	Gordhanpur	22.450000	70.001000	Dug Well	4.4	3.85	2.05	1.82
Jamnagar	Jamnagar	Jambuda	22.525000	70.204000	Dug Well	8.84	1.45	3.44	2.89
Jamnagar	Jamnagar	Jamnagar1	22.470833	70.050000	Bore Well	6.05	2.14	1.83	9.11
Jamnagar	Jamnagar	Jamnagar2	22.458000	70.079000	Dug Well	3.67	0.95	1.43	1.75
Jamnagar	Jamnagar	Khambhalida Moto-vas	22.618780	70.539820	Dug Well		3.69		2.51
Jamnagar	Jamnagar	Moti khavdi	22.387500	69.866667	Dug Well	4.57	2.15	4.38	4.81
Jamnagar	Jamnagar	Vijarkha	22.416667	70.183333	Dug Well	10.2	4.12	2.52	2.4
Jamnagar	Jodiya	Amran_Pz	22.822222	70.545833	Bore Well			1.36	2.55
Jamnagar	Jodiya	Bedanpur	22.683000	70.317000	Dug Well	1.65		0.96	1.2
Jamnagar	Jodiya	Dudhai2	22.791667	70.504167	Dug Well	2.23	0.7	0.81	5.82
Jamnagar	Jodiya	Kesiya	22.697000	70.397000	Dug Well	9.3		5.96	8.9
Jamnagar	Jodiya	Pithad	21.811347	69.922101	Dug Well	3.6	2.13	2.55	
Jamnagar	Jodiya	Pithad_1	21.811000	69.922000	Dug Well	4.1			2.75
Jamnagar	Kalavad	Haripur2	22.271000	70.333000	Dug Cum Bore Well	16.71	1	4.06	6.28
Jamnagar	Kalavad	Kalawad	22.216667	70.383333	Dug Well	3.46	2.9	2.53	2.81
Jamnagar	Kalavad	Moti matli	22.316667	70.263889	Dug Well	23.25	0.01	2.88	9.19
Jamnagar	Kalavad	Nikava	22.191667	70.533333	Dug Well	1.42	0.4	1.25	1.85
Jamnagar	Kalavad	Toda	22.062500	70.383333	Dug Well	12.76	0.31	1.13	2.85
Jamnagar	Lalpur	Bangour	22.096400	69.879000	Dug Well	17.7		15.5	13.74
Jamnagar	Lalpur	Govana	22.160319	69.881592	Bore Well		0.95		

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Jamnagar	Lalpur	Lalpur	22.133000	71.304000	Bore Well				9.53
Jamnagar	Lalpur	Lalpur I	22.191667	69.961111	Dug Well	11.7	2.02	4.43	4.47
Jamnagar	Lalpur	Vad panchasara	22.233000	70.117000	Dug Well	15.55	1.58	6.85	11.09
Junagadh	Bhesan	Bhesan	21.549542	70.706109	Dug Well	12.9	4.25	7.24	7.74
Junagadh	Bhesan	Bilkha	21.438889	70.600000	Dug Well	8.7	3.62		7.79
Junagadh	Bhesan	Juni Dhari Gundali	21.532885	70.797274	Dug Well	18.72	7.2	11.62	9.36
Junagadh	Bhesan	Patla	21.604000	70.569000	Dug Well	19.7	1.8	2.28	4.72
Junagadh	Junagadh	Anandpur	21.410000	70.518000	Dug Well	21	1.9	3.2	5.69
Junagadh	Junagadh	Chokli	21.601944	70.541667	Dug Well	16.27	3.75	6.34	7.39
Junagadh	Junagadh	Junagadh	21.509000	70.462000	Bore Well	13.09	8.38		10.72
Junagadh	Junagadh	Junagadh I	21.516667	70.458333	Dug Well	12.65	1.65	2.76	7.39
Junagadh	Keshod	Bhatsimroli	21.220000	70.180000	Dug Well		3.5	11.63	13.72
Junagadh	Keshod	Kewarda	21.267000	70.208000	Dug Well	17	5.75	18.54	10.35
Junagadh	Keshod	Panchala EW	21.326940	70.093060	Bore Well		4.07		9.7
Junagadh	Malia	Budhecha	21.095833	70.216667	Dug Well		1.83	5.57	9.86
Junagadh	Malia	Chorwad	21.041667	70.216667	Dug Well	6.97	2.5	4.31	5.27
Junagadh	Malia	Gadu	21.054000	70.279000	Tube Well	36.77	15	22.79	26.56
Junagadh	Malia	Galodar	21.147000	70.275000	Dug Well	15.76	4.15	9.66	9.01
Junagadh	Malia	Kanek	21.030556	70.241667	Dug Well		2.25	4.4	8.69
Junagadh	Malia	Kukaswada	21.054000	70.208000	Dug Well	13.37		4.27	6.85
Junagadh	Manavadar	Bantva	21.487500	70.083333	Dug Well	10.3	4	6.3	9.4
Junagadh	Manavadar	Indra	21.588560	70.117180	Bore Well		1.67		3.81
Junagadh	Mangrol	Arena	21.080556	70.176389	Dug Well	12.63	4.6	7.02	5.34
Junagadh	Mangrol	Bamanwara	21.220833	70.055556	Dug Well	7.51	1.17	3.43	7.46
Junagadh	Mangrol	Goraj I	21.183000	70.154000	Dug Well	39.4	3.05	7.5	34.96
Junagadh	Mangrol	Juthal	21.166667	70.266667	Dug Well	6.58	6.6	7.3	6.61
Junagadh	Mangrol	Kalej	21.248611	70.058333	Dug Well	5	1	2.98	6.11
Junagadh	Mangrol	Kalej EW II	21.251110	70.083610	Bore Well		1		16.61
Junagadh	Mangrol	Khorada I	21.063889	70.173611	Dug Well	7.65		2.77	7.16
Junagadh	Mangrol	Lohej	21.167000	70.067000	Dug Well	16		9.63	8.68
Junagadh	Mangrol	Maktupur I	21.143000	70.096000	Dug Well	8.1	3.9	8.17	7.55
Junagadh	Mangrol	Mangrol	21.125000	70.108000	Tube Well	17.3		13.95	16.97
Junagadh	Mangrol	Manketara	21.150000	70.129000	Dug Well	32.4		9.14	12.45
Junagadh	Mangrol	Osa	21.372894	70.064164	Dug Well	4.15	2.88	4.57	6.77
Junagadh	Mangrol	Sepa	21.116667	70.219444	Dug Well	20.68	2.25	6.84	20.98
Junagadh	Mangrol	Seriakhan	21.133333	70.248611	Dug Well		6.3	8.61	12.18
Junagadh	Mangrol	Shardagram	21.104000	70.153000	Dug Well	11.8	8.8	8.55	11.02
Junagadh	Mangrol	Sil	21.185556	70.046389	Dug Well	5.04	3.35	4.61	5.6
Junagadh	Mangrol	Sil bandar	21.223611	70.055556	Dug Well	3.37	1.65	3.83	4.24
Junagadh	Mendarda	Bagadi	21.373585	70.508591	Dug Well	15	2.75	9.21	5.73

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Junagadh	Mendarda	Dantrana	21.376888	70.464501	Dug Well	16.9	2.5	4.76	5.69
Junagadh	Mendarda	Kanadipur	21.272000	70.480000	Bore Well	4.65		1.49	4.74
Junagadh	Mendarda	Khadiya	21.422986	70.518089	Dug Well	13.65	1.45		12.4
Junagadh	Mendarda	Mendarda	21.325000	70.440278	Bore Well				12
Junagadh	Mendarda	Mendarda1	21.325000	70.433000	Dug Well	16.73	4.3	8.87	10.82
Junagadh	Mendarda	Moti Kodyar	23.588322	71.861259	Dug Well	14.8	2.82	7.13	9.33
Junagadh	Vanthali	Khokharda	21.420833	70.316667	Dug Well	23.44	4.05	6.06	11.8
Junagadh	Vanthali	Khoras ahir	21.370833	70.338889	Dug Well	14.65	2	6.65	8.9
Junagadh	Vanthali	Saradiya	21.588611	70.037500	Dug Well	15.3	3.2	7.05	7.6
Junagadh	Visavadar	Kasia Naka Check Post	21.270000	70.681000	Dug Well	6.55	1.3	2.6	2.98
Junagadh	Visavadar	Mandawad	21.358000	70.746000	Dug Well	14.51	5.12	12.71	5.96
Junagadh	Visavadar	Prempara	21.300000	70.700000	Dug Well	19	6.68	9.22	12.81
Junagadh	Visavadar	Sobhavadla Gir	21.346970	70.587451	Dug Well	14.3			5.21
Junagadh	Visavadar	Visavadar	21.338889	70.748611	Bore Well	15.51	7.2	6.48	7.7
Kachchh	Abdasa	Kharua EWII	23.142505	69.123066	Tube Well				1.71
Kachchh	Abdasa	Kotaya	23.042000	69.075000	Dug Well	4.8	2.88	0.25	0.78
Kachchh	Abdasa	Kothara	23.161944	68.911944	Dug Well	4.86	8.5		
Kachchh	Abdasa	Mothala	23.208000	69.125000	Dug Well	1.62	1.86	2.48	
Kachchh	Abdasa	Naliya	23.255833	68.840000	Tube Well	10.62	9.71	10.2	9.67
Kachchh	Abdasa	Naliya (Bus S)	23.266667	68.833333	Dug Well	10.95	9.13		
Kachchh	Abdasa	Sujapar EW II	23.359123	68.875809	Tube Well				5.94
Kachchh	Abdasa	Suthri	23.033889	68.915278	Dug Well		3.98	6.5	6.7
Kachchh	Abdasa	Tera	23.283000	68.947000	Dug Well	7.37	6.74	5.37	5.67
Kachchh	Abdasa	Vinjhan1	23.100000	69.025000	Dug Well	6.01	2.9	2.42	5.65
Kachchh	Anjar	Ambapar	23.242389	70.055611	Tube Well		88.5	89.8	90.35
Kachchh	Anjar	Bhimsar EW	23.187917	70.152472	Tube Well		6.5	6.74	5.2
Kachchh	Anjar	Dhamadka	23.336110	70.165310	Tube Well				82.7
Kachchh	Anjar	Lohariya	23.093000	69.884000	Tube Well	55.51	53.5	54.81	
Kachchh	Anjar	Mathak1	22.997222	70.025000	Dug Well		10.47	7.02	
Kachchh	Anjar	Ratnal	23.195889	69.902917	Tube Well		154.36	134.68	148.09
Kachchh	Anjar	Tappar	23.238972	70.133694	Tube Well		82.98		
Kachchh	Anjar	Tuna	23.019178	70.050570	Dug Well	3.42	2.93	2.06	2.7
Kachchh	Anjar	Varsamedi	23.131028	70.098194	Tube Well		12.72	13.65	11.9
Kachchh	Bhachau	Chhadavada OW	23.280500	70.456056	Tube Well		4.86	5.27	4.91
Kachchh	Bhachau	Chobari EW	23.498306	70.357639	Tube Well		108.295	112.6	
Kachchh	Bhachau	Chopadva EW	23.277972	70.286417	Tube Well			106.94	
Kachchh	Bhachau	Dholavira	20.958333	71.070833	Dug Well		8.85	10.15	10.3
Kachchh	Bhachau	Kadol EW	23.478917	70.293944	Tube Well		3.63	3.29	
Kachchh	Bhachau	Kakarwa	23.475000	70.404167	Dug Well	10.45	10.04		

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Kachchh	Bhachau	Kharoi	23.454000	70.350000	Dug Well	7.61	7.39	4	5.72
Kachchh	Bhachau	Rajansar	23.317944	70.595250	Tube Well		2.45		
Kachchh	Bhachau	Ratanpur KhadirI	23.860833	70.363056	Dug Well	13.6	5.88	5.9	6.15
Kachchh	Bhachau	Samkhiari	23.300000	70.508000	Dug Well	4.57	4.91	7.07	7.38
Kachchh	Bhachau	Shikra EW	23.327750	70.304472	Tube Well		112.5		
Kachchh	Bhuj	Bhuj (Circuit House)	23.250000	69.666667	Dug Well	14.32	17.46	11.73	10.52
Kachchh	Bhuj	Haboi	23.358000	69.867000	Dug Well	0.66	0.48	0.27	0.5
Kachchh	Bhuj	Khavada	23.838889	69.730556	Dug Well	6.98	5.33		4.49
Kachchh	Bhuj	Khavda	23.844000	69.732000	Tube Well	9.28	4.8	4.95	6.35
Kachchh	Bhuj	Kotay	23.384678	69.784695	Dug Well	6.45	4.7	3.02	
Kachchh	Bhuj	Kukma Ler EW	23.220253	69.762529	Tube Well		169.41	173	170.97
Kachchh	Bhuj	Lodai	23.400000	69.890000	Dug Cum Bore Well		12.82	13.3	13.3
Kachchh	Bhuj	Madhapar	23.230000	69.700000	Tube Well	46.13	45.6	45.05	45.44
Kachchh	Bhuj	Meghpar EW	23.120649	69.561349	Bore Well	75.98	74.28	76.4	76.48
Kachchh	Bhuj	Nagor	23.310750	69.738111	Tube Well		13.7	14.11	
Kachchh	Bhuj	Nani Virani	23.123056	69.370583	Tube Well		95.4	96.2	
Kachchh	Bhuj	Sedat	23.171000	69.638000	Dug Well	11.03	9.49	10.03	11.35
Kachchh	Bhuj	Sukhpar	23.208000	69.617000	Dug Well	12.89	11.64	12.15	12.18
Kachchh	Gandhidham	Shinaya	23.033000	70.054000	Dug Well	6.03	3.2	2.95	2.11
Kachchh	Lakhpat	Dolatpar	21.693591	70.004462	Dug Well	3.76	3.34	2.41	3
Kachchh	Lakhpat	Dolatpar EW II	23.579596	68.924152	Tube Well		38.27		
Kachchh	Lakhpat	Dolatpar OW I	23.579596	68.924152	Tube Well		118.5		
Kachchh	Lakhpat	Lakhpat	23.823000	68.775000	Dug Well	6.37	3.4		3.7
Kachchh	Lakhpat	Mata no madh	23.533000	68.950000	Dug Well	6	10.14	7.02	8.43
Kachchh	Lakhpat	Moti cher	23.758000	68.675000	Dug Well	1.83	2.72	0.87	0.93
Kachchh	Mandvi	Asambia mota_Pz	22.968000	69.451000	Tube Well	2.15	2.38		
Kachchh	Mandvi	Bada EW	22.899454	69.137093	Tube Well				6.15
Kachchh	Mandvi	Bambhdai	22.938889	69.082778	Dug Well	4.56	5.2	4.39	4.6
Kachchh	Mandvi	Bhojay EW	22.999611	69.169222	Tube Well		2.54	2.36	2.36
Kachchh	Mandvi	Dunai	23.050000	69.500000	Dug Well	9.87	8.02	8.56	8.76
Kachchh	Mandvi	Koday EW	22.903444	69.386667	Tube Well		69.68		
Kachchh	Mandvi	Kokaliya OW	22.903444	69.386667	Tube Well		15.55	17.6	15.82
Kachchh	Mandvi	Kotadi	23.041667	69.191667	Dug Well	5.54	6.3	2.31	3.12
Kachchh	Mandvi	Mandvi	22.842000	69.371000	Tube Well	17.85	15.35	19.25	15.33
Kachchh	Mandvi	Mandvi (Shitla Mata)	22.833000	69.333000	Dug Well	4.69		1.21	1.64
Kachchh	Mandvi	Mau Moti_1	23.076000	69.299000	Dug Well	2.85	4.37	1.99	2.39
Kachchh	Mandvi	Rajada (Don)	22.941139	69.325417	Tube Well		58.5	52.9	
Kachchh	Mandvi	Shirva EW	22.866083	69.284556	Tube Well		48.68	49.5	49.78
Kachchh	Mandvi	Ushker	21.340556	73.097778	Dug Well	6.83	4	5.8	6.49

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Kachchh	Mundra	Bhadreshwar	22.900000	69.900000	Dug Well	4.36	1.72	3.3	2.98
Kachchh	Mundra	Bhujpar Moti EW I	22.896300	69.641800	Tube Well				64.39
Kachchh	Mundra	Karagoga	22.941667	69.662500	Dug Well	0.5	0.9	0.7	0.9
Kachchh	Mundra	Luni	22.873000	69.812000	Dug Well	3.87	0.8	1.69	2.15
Kachchh	Mundra	Mokha	22.950000	69.800000	Dug Cum Bore Well		12.43		
Kachchh	Mundra	Mundra	22.265686	69.089507	Tube Well			2.18	2.63
Kachchh	Mundra	Nani Tumbdi	22.996284	69.548968	Dug Well	3.55		1.88	2.38
Kachchh	Mundra	Vadala	22.916000	69.856000	Dug Well	7.4	4.7	6.67	
Kachchh	Nakhatrana	Chandranagar	20.258333	72.883333	Dug Well		7.74	8.3	
Kachchh	Nakhatrana	Devisar	23.402778	69.329167	Dug Well		11.22	12.8	9.52
Kachchh	Nakhatrana	Kharadiya	23.515750	69.427528	Tube Well		5.62	6.7	5.72
Kachchh	Nakhatrana	Mangwana EW	23.217432	69.344510	Tube Well	89.75	88.8	86.54	84.22
Kachchh	Nakhatrana	Nirona	23.465278	69.525000	Tube Well		9.51	10	10.36
Kachchh	Nakhatrana	Todiya OW II	23.402022	69.160203	Tube Well		38.5		
Kachchh	Nakhatrana	Ugedi OW	23.471556	69.132292	Tube Well		45.35	47.55	49.3
Kachchh	Rapar	Adesar	23.554899	70.959666	Dug Well	4.73	2.8	2.7	3.6
Kachchh	Rapar	Adesar EW II	23.570500	70.976800	Tube Well		38.12	37.01	36.85
Kachchh	Rapar	Balasar	23.844000	70.669000	Tube Well	6.97	3.98	5.32	5.13
Kachchh	Rapar	Desalpar EW	23.741950	70.678198	Tube Well		83.32	106.94	83.74
Kachchh	Rapar	Deshalpar Rapar Pz	23.741944	70.678056	Tube Well	4.48	2.69	2.88	14.16
Kachchh	Rapar	Deshalpur rapar	23.747000	70.679000	Dug Well	15.45	14.43	14.92	
Kachchh	Rapar	Fatehgadh EW I	23.689822	70.838340	Tube Well		20.79		
Kachchh	Rapar	Kuda	23.530000	70.440000	Dug Well		24.9	26.89	25.2
Kachchh	Rapar	Palaswa Pz II	23.472000	70.921000	Tube Well	3.19	3.2		2.95
Kachchh	Rapar	Panchasar Pz I	23.548000	70.770000	Tube Well	103.62	101.56	100.5	102.08
Kachchh	Rapar	Panchasar Pz II	23.548000	70.770000	Tube Well	30.87	29.33	31.8	31.21
Kachchh	Rapar	Rapar	23.570259	70.647984	Tube Well	23.98			
Kachchh	Rapar	Rapar2	23.566667	70.637500	Dug Well	27.46	25.24	26.46	25.86
Kachchh	Rapar	Sudana Vandh Pz I	23.653889	70.538889	Tube Well	2.9	3.72	2.11	2.83
Kachchh	Rapar	Sudana Vandh Pz II	23.653889	70.538889	Tube Well	2.99	3.07	1.95	2.7
Kheda	Kapadvanj	Kapadvanj	23.004167	73.091667	Dug Well		0.13	10.9	11.12
Kheda	Kapadvanj	Vyas vasna	23.105556	73.104167	Bore Well	23.45	24.7		11.61
Kheda	Kathlal	Kaniyel EW	22.949640	72.965130	Tube Well	37.32	34	34.84	32.84
Kheda	Kathlal	Ladvel	22.908000	73.121000	Dug Well	1.8	1.68	2.08	9.98
Kheda	Kathlal	Sarkhej _ I	22.986000	72.881000	Tube Well	33.88	141.76		35.39
Kheda	Kathlal	Sarkhej _ II	22.986000	72.881000	Tube Well	35.21			22.4
Kheda	Kathlal	Sarkhej _ Pz-III	22.986000	72.881000	Tube Well	37.1			
Kheda	Mahudha	Alina	22.808000	73.058000	Dug Well	12.41	12.89	13.94	9.98
Kheda	Mahudha	Mahudha	22.783000	72.942000	Dug Well	1.85	3.8	4.67	3.1

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Kheda	Matar	Matar I	22.709722	72.668056	Tube Well	16.76	49.3		
Kheda	Matar	Matar II	22.709722	72.668056	Tube Well	11.02	78.2		3.76
Kheda	Matar	Shekhupura	22.575000	72.625000	Dug Well	4.95		90.95	1.97
Kheda	Mehmedabad	Aklacha OW I	22.863256	72.848695	Tube Well			22.79	
Kheda	Mehmedabad	Aklacha OW II	22.863256	72.848695	Tube Well			8.7	
Kheda	Mehmedabad	Vadadla EW	22.817060	72.721600	Tube Well		25.1		
Kheda	Nadiad	Boriyavi	22.635556	72.909167	Dug Well	6.66	8.8	7.9	
Kheda	Nadiad	Nadiad Pz-I	22.710000	72.870000	Tube Well	28.15	28.65		
Kheda	Nadiad	Vaso	22.661111	72.754167	Tube Well	7.37	5	5.65	4.26
Kheda	Thasra	Dakor	22.762500	73.169444	Dug Well	5.18	6.83	5.9	
Kheda	Thasra	Kalesar	22.720833	73.191667	Dug Well	2.6	0.16	1.1	
Kheda	Thasra	Nes_Pz	22.710000	73.200000	Tube Well	11.79			
Kheda	Thasra	Thasra	22.796692	73.225123	Tube Well			3.1	
Mahesana	Bechraji	Asjol	23.508000	72.183000	Dug Well	2.86	4.66	0.19	3.45
Mahesana	Bechraji	Dharpura	23.545833	72.112500	Dug Well	6.31	5.22	4.29	5.2
Mahesana	Bechraji	Edala	23.546750	72.060778	Tube Well		111.28		
Mahesana	Bechraji	Sankhalpur	23.521520	72.029980	Dug Well	6.13	5.35	3.32	3.9
Mahesana	Kadi	Balasar	23.303833	72.292500	Tube Well				5.16
Mahesana	Kadi	Budasan	23.287500	72.375000	Dug Well	6.64	5.16	4.25	5.13
Mahesana	Kadi	Daran_Pz-I	23.206389	72.279722	Tube Well	101.36	103.6	83.1	
Mahesana	Kadi	Daran_Pz-II	23.206389	72.279722	Tube Well		44.05	43.06	
Mahesana	Kadi	Daran_Pz-III	23.206389	72.279722	Tube Well	3.2	1.89	1.14	
Mahesana	Kadi	Dharampur OW I	23.217700	72.213400	Tube Well		44.32		
Mahesana	Kadi	Ganeshpura	23.404444	72.391528	Tube Well		138.75		146.36
Mahesana	Kadi	Jesangpura	23.140444	72.238222	Tube Well		98.45	105.6	104.83
Mahesana	Kadi	Suraj	23.389722	72.306667	Tube Well		21.65	20.82	
Mahesana	Kadi	Thol Pz -V	23.130556	72.376111	Tube Well			115.3	117.08
Mahesana	Kadi	Thol Pz-I	23.297222	72.376111	Tube Well		109.06		79.07
Mahesana	Kadi	Thol Pz-IV	23.130556	72.376111	Tube Well			12.44	13.61
Mahesana	Kadi	Thol_I	23.130556	72.376111	Tube Well			72.62	
Mahesana	Kadi	Vidaj	23.247000	72.300000	Dug Cum Bore Well	1.23	2.12		
Mahesana	Kadi	Yashvantpura_Pz	23.063325	72.316835	Tube Well		62.57	67.65	67.08
Mahesana	Kheralu	Jaska(Sy_4'')Pz_II	23.823611	72.534722	Tube Well		14.62	13.88	24.7
Mahesana	Kheralu	Jaska(Sy_8'')Pz_I	23.823611	72.534722	Tube Well		59.15	58.72	59.98
Mahesana	Kheralu	Kheralu (deep)	23.900000	72.610000	Tube Well		45.11	44.96	
Mahesana	Kheralu	Kheralu(shallow	23.900000	72.610000	Tube Well		2.16	1.82	
Mahesana	Kheralu	KheraluI	23.887500	72.612500	Dug Well	10.08	6.17	7.8	9.48
Mahesana	Kheralu	Nani Hirvani Pz	23.881389	72.533333	Tube Well	96.43	89.94	87.71	
Mahesana	Kheralu	RampuraI	23.891667	72.516667	Dug Well	11.74	8.32	8.79	9.23

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Mahesana	Kheralu	Varetha	23.967080	72.684600	Dug Well	3.77	2.7	1.83	6.4
Mahesana	Mahesana	Baliyasan EW I	23.457444	72.457421	Tube Well		153.76	142	145.36
Mahesana	Mahesana	Baliyasan OW II	23.457444	72.457421	Tube Well	157.65	154.33	140.83	148.25
Mahesana	Mahesana	Deloli	23.569917	72.263194	Tube Well		136.83	140.56	142.03
Mahesana	Mahesana	Jotana Pzii	23.473889	72.287778	Tube Well			12.42	
Mahesana	Mahesana	Kherwa OW II	23.546540	72.444700	Tube Well		93.3	73	74.26
Mahesana	Mahesana	Maguna	23.577778	72.288889	Dug Well	5.17	5.69	4.03	5.32
Mahesana	Mahesana	Mau	23.510000	72.519000	Tube Well	10.14	9.62		
Mahesana	Mahesana	Mehsana I	23.600000	72.400000	Bore Well			150.66	152.18
Mahesana	Mahesana	Mehsana II	23.600000	72.400000	Bore Well			150.35	
Mahesana	Mahesana	Mehsana III	23.600000	72.400000	Bore Well		95.52	97.3	151.27
Mahesana	Mahesana	Mewad	23.530000	72.380000	Tube Well		14.27	12.02	
Mahesana	Mahesana	Padhadya	23.522500	72.533333	Tube Well	11.27	10.59		
Mahesana	Mahesana	Palodar	23.642861	72.360833	Tube Well		158.8	166.47	168.21
Mahesana	Mahesana	Panchot	23.629000	72.342000	Dug Well	5.48	3.04	2.42	3.56
Mahesana	Mahesana	Ramvijaynagar Pz I	23.710000	72.340000	Tube Well	169	172	171.21	
Mahesana	Mahesana	Ramvijaynagar Pz II	23.710000	72.340000	Tube Well	81	85.01	84.64	
Mahesana	Mahesana	Ramvijaynagar Pz III	23.710000	72.340000	Tube Well		17.03	16.66	
Mahesana	Satlasna	Bhalu Moti Pz I	24.040000	72.700000	Bore Well		20.52	11.68	
Mahesana	Satlasna	Timba_1	23.987222	72.758889	Dug Well		14.86	12.3	14.7
Mahesana	Satlasna	Vav	24.015480	72.782470	Dug Well	11.14	10.06	57.58	8.4
Mahesana	Unjha	Dosaj	23.841667	72.450000	Dug Well	15.19	14.76	13.09	14.16
Mahesana	Unjha	Hajipur EW	23.792111	72.465639	Tube Well		62.76	62.32	
Mahesana	Unjha	Karalli (iii)	23.804167	72.486111	Tube Well	12.17			
Mahesana	Unjha	Sihi	23.800000	72.350000	Dug Well	9.64	10.87	10.33	11.47
Mahesana	Unjha	Surajnagar	23.790583	72.323750	Tube Well		182.24	189.16	190.54
Mahesana	Unjha	Unawa	23.766667	72.362500	Dug Well	3.28	3.23	2.92	3.85
Mahesana	Unjha	Unjha	23.797778	72.394444	Dug Well	7.22	3.82		6.7
Mahesana	Vadnagar	Champa	23.813150	72.662730	Dug Well		0.84	0.78	1.5
Mahesana	Vadnagar	Champa Pz	23.331940	72.566670	Tube Well	3.95			
Mahesana	Vadnagar	Kesimpa	23.824840	72.615710	Dug Well	16.68	15.33	14.94	11.45
Mahesana	Vadnagar	Sundhia OW	23.843624	72.564850	Tube Well		82.19	79.19	
Mahesana	Vadnagar	Vadnagar (M)	23.789280	72.646100	Dug Well	3.98	4.04	3.85	4.1
Mahesana	Vijapur	Dhanpura(Ghatu)	23.551056	72.781500	Tube Well		70.7	70.1	71.86
Mahesana	Vijapur	Ladol	23.621510	72.732700	Dug Well	20.56	19.27	22.29	23.26
Mahesana	Vijapur	Motipura_Pz_I	21.210000	73.360000	Bore Well			39.5	41.08
Mahesana	Vijapur	Motipura_Pz_II	23.533889	72.604167	Tube Well	49.87			
Mahesana	Vijapur	Motipura_Pz_III	23.534000	72.604000	Tube Well			84.15	85.16

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Mahesana	Visnagar	Bhandupara	23.725000	72.383333	Dug Well	16.55	8.24	7.59	8.17
Mahesana	Visnagar	Gunja	23.745740	72.590520	Dug Well	4.15	3.81	2.69	3.2
Mahesana	Visnagar	Magroda Pz	20.565900	72.904854	Tube Well		167.75	172.73	173.43
Mahesana	Visnagar	Modhera II	23.716667	72.466667	Tube Well	53.72		51.12	53.16
Mahesana	Visnagar	Modhera i	23.716667	72.466667	Tube Well	6.72			
Mahesana	Visnagar	Rangakui	23.632444	72.639500	Tube Well		130.21	145.8	146.88
Mahesana	Visnagar	Tarabh	23.758000	72.458000	Dug Well	6.67	5.22	4.27	4.25
Mahesana	Visnagar	Umta	23.783194	72.558417	Tube Well		85.43	84.39	85.17
Mahesana	Visnagar	Visnagar iv	23.700000	72.533000	Tube Well	6.99	6.12	6.63	7.2
Mahisagar	Balasinor	Balasinor	22.958333	73.336111	Bore Well		3.6		3.26
Mahisagar	Balasinor	BalasinorI	22.950000	73.325000	Dug Well		2.6	3.47	
Mahisagar	Balasinor	Juna vasadra	23.083330	73.362500	Dug Well		4.17	3.65	4.6
Mahisagar	Khanpur	Bavaliya	23.330000	73.570000	Dug Well		4		4.9
Mahisagar	Khanpur	Bavaliya_Pz	23.306667	73.555000	Bore Well	31.66		1.77	
Mahisagar	Khanpur	Khanpur	23.370000	73.677000	Dug Well	8.4	9.71	9.05	9.5
Mahisagar	Khanpur	Pandarvada	23.375000	73.633000	Dug Well	15.56	3.96		
Mahisagar	Lunawada	Jokha	23.061944	73.620278	Dug Well	12.77	5.08	4.38	4.8
Mahisagar	Lunawada	Kantha	23.178000	73.652000	Dug Well	5.24	2	1.7	5
Mahisagar	Lunawada	Kothamba	23.019000	73.519000	Dug Well	5.05	3.96	3.85	3
Mahisagar	Lunawada	Limbadiya peti	23.204000	73.600000	Dug Well	6.6	2.4	2.9	1.4
Mahisagar	Lunawada	Lunawada	23.129000	73.608000	Dug Well	11.41	5.76	3.71	6.4
Mahisagar	Lunawada	MalekpurI	23.230556	73.736111	Dug Well	2.8	5.6	3.7	3
Mahisagar	Lunawada	Ucharpi Pz	23.119000	73.472000	Bore Well	21.66	13.84	13.49	12.46
Mahisagar	Santrampur	Gadhar	23.150000	73.775000	Dug Well		8.45	4.55	6.9
Mahisagar	Santrampur	Santrampur	23.170833	73.908333	Bore Well		3.33	4.26	4.2
Mahisagar	Santrampur	SantrampurI	23.191667	73.908333	Dug Well	11.32	1.3	3.1	
Mahisagar	Virpur	Bar	23.168056	73.411111	Dug Well		4		4.9
Mahisagar	Virpur	Virpur_Pz	23.193056	73.485278	Bore Well		4.71	4.5	4.1
Morbi	Halvad	Halvad2	23.021000	71.188000	Dug Well		1.97	2.36	2.41
Morbi	Halvad	Juna Devaliya I	22.979000	71.009000	Dug Well		1.17	4.43	4.49
Morbi	Halvad	Mathak	22.840000	71.050000	Dug Well		10.2	10.5	10.52
Morbi	Maliya	Malia	23.091667	70.762500	Dug Well	2.3	2.63	2.41	1.98
Morbi	Maliya	Mota dhansura	22.958000	70.617000	Dug Well	3.82	1.25	4.2	4.78
Morbi	Maliya	Sarvad	23.006000	70.707000	Dug Well	2.25	0.9	1.05	1.61
Morbi	Morvi	Amar nagar	22.933000	70.808000	Dug Well	0.5	1.1	1.5	1.73
Morbi	Morvi	ModparI	22.900000	70.666667	Dug Well	0.68	0.84	0.97	1.54
Morbi	Morvi	Morbi	22.830000	70.860000	Tube Well				3.66
Morbi	Morvi	Morvi	22.816667	70.841667	Dug Well	3.7	2.7	4.19	3.57
Morbi	Morvi	Nichi mandal	22.858000	70.950000	Dug Well	3.15	2.3	5.16	8.7

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Morbi	Tankara	Chhatar	22.504000	70.754000	Dug Well	6.47	1.79	3.7	5.57
Morbi	Tankara	Hadmatia	22.683000	70.808000	Dug Well	2.45	1.33	7.08	9.81
Morbi	Tankara	Kalyanpur2	22.017000	69.392000	Dug Well	1.6		3.71	
Morbi	Tankara	Neknam	22.500000	70.700000	Dug Well	9.65	4.4	9.05	11.05
Morbi	Wankaner	Bhalgam	22.441667	71.083333	Dug Well	18.02	10.29	13.7	11.22
Morbi	Wankaner	Sindhavadar	22.550000	70.891667	Dug Well	12.95	5.89	9.53	9.52
Narmada	Dediyapada	Chikada	21.520833	73.645833	Dug Well	5.45	1.2		3.6
Narmada	Dediyapada	Chuli	21.554722	73.475556	Dug Well	12.23	4.18		4.33
Narmada	Dediyapada	Jankh	21.492000	73.597000	Dug Well	5.45			2.2
Narmada	Dediyapada	Kanbi pitha	21.520833	73.645833	Dug Well	4.18			1.45
Narmada	Dediyapada	Khaidipada	21.513889	73.519444	Dug Well		0.26		1.25
Narmada	Dediyapada	Mulkapada OW	21.492000	73.553000	Tube Well	31.59	4.03	9.7	19.7
Narmada	Dediyapada	Nani singlot	21.657610	73.646310	Dug Well	9.73	6.56		1.62
Narmada	Dediyapada	Ralda	21.610000	73.653000	Dug Well	5.5	1.52		2.15
Narmada	Dediyapada	Umran OW	21.491000	73.546000	Bore Well	15.39	2.55	2.02	5.85
Narmada	Garudeshwar	Suka OW	21.947477	73.728576	Tube Well			7.26	
Narmada	Nandod	Baman Phalia_Pz	21.798000	73.379000	Bore Well	20.06	18.17	17.62	
Narmada	Nandod	Gadit Pz	21.765888	73.494982	Bore Well		8.36	8.6	
Narmada	Nandod	Garudeshwar	21.891667	73.650000	Dug Well	11.48	9.62		11
Narmada	Nandod	Hirapura	21.868000	73.600000	Dug Well	5.45			4.12
Narmada	Nandod	Kewadia_Pz	21.882778	73.700556	Bore Well	5.88	1.36		
Narmada	Nandod	Khota amba	21.733000	73.475000	Dug Well	3.81			1.64
Narmada	Nandod	Rajpipla	21.875000	73.500000	Tube Well	30.35	29.5	29.37	
Narmada	Nandod	Rasela	21.925000	73.491667	Dug Well	15.83			14.7
Narmada	Nandod	Ringani	21.841667	73.466667	Dug Well	1.98	1.4		1.65
Narmada	Sagbara	Amayar	21.547000	73.767000	Dug Well	6.85	2.4		3.47
Narmada	Sagbara	Bhadod OW	21.479640	73.841680	Tube Well	11.96			2.17
Narmada	Sagbara	Umran	21.847000	71.808000	Dug Well	7.9	1.55	1.69	5.25
Narmada	Tilakwada	Agar(Rep)_Pz	22.031000	73.657000	Bore Well	14.82	10.9	12.58	
Narmada	Tilakwada	Namaria	22.040000	73.620000	Dug Well	3.64	2.11		3.2
Narmada	Tilakwada	Rasulpura_Pz	21.966667	73.625000	Tube Well	21.64	21.65	22.31	
Navsari	Chikhali	Hond	20.738890	73.045830	Dug Well		3.4	4.15	6.9
Navsari	Chikhali	Kaliyari	20.725000	73.150000	Dug Well	12.3	1.9	2.5	4.38
Navsari	Chikhali	Khergam	20.633000	73.096000	Dug Well	7.3	1.75	3.21	4.1
Navsari	Chikhali	Manav Khadak	20.674000	73.233000	Dug Well	3.15	1.85	2.9	3.65
Navsari	Chikhali	Panikhadak	20.649000	73.167000	Dug Well	13.5	4.4	6.02	8.65
Navsari	Chikhali	Rankuva	20.813000	73.158000	Dug Well	10.3	1.2	2.65	3.8
Navsari	Chikhali	Rumla	20.680271	73.171668	Dug Well	7.2		5.52	5.6
Navsari	Gandevi	Duvada	20.828611	73.057500	Dug Well	6.22	2.05	4.02	7.05
Navsari	Gandevi	Sari_khurd	20.787500	72.954167	Dug Well	3	1.95	2.22	2.65

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Navsari	Jalalpore	Abrama	20.862500	72.900000	Dug Well	2.15	0.7	0.7	1.27
Navsari	Jalalpore	Chinam	20.991667	72.886111	Dug Well	4.85	2.68	3.18	3.33
Navsari	Jalalpore	Dandi	20.891667	72.808333	Dug Well	3.65	2	2.38	3.15
Navsari	Jalalpore	Onjal	20.833000	72.842000	Dug Well	5.7	2.75	3.18	4.6
Navsari	Jalalpore	Parjan	20.023132	72.836253	Dug Well	4.8	4.3	4.05	6.65
Navsari	Jalalpore	Ubhrat	21.008000	72.746000	Dug Well	4.38	3.15	4.22	3.85
Navsari	Navsari	Navsari	20.950000	72.930000	Bore Well				4.31
Navsari	Navsari	Navsari 1	20.958000	72.935000	Dug Well	5.72	2.8	2.72	1.27
Navsari	Vandsa	Chadav	20.831000	73.334000	Dug Well	9.85	2.3	3.53	5.68
Navsari	Vandsa	Kantasvel	20.797000	73.292000	Dug Well	9.25	2.9	3.85	5.75
Navsari	Vandsa	Moti Valzar	20.805000	73.267000	Dug Well	8.35	3	3.35	5.2
Navsari	Vandsa	Pipalkhed	22.247000	69.258000	Dug Well			3.68	4.35
Navsari	Vandsa	Unai	20.850000	73.341667	Dug Well		5	4.4	6.6
Navsari	Vandsa	Vandsa	20.764000	73.363000	Bore Well	11.6	5.83	6.52	7.74
Panch Mahals	Ghoghamba	Goya Sundal	22.638958	73.688604	Bore Well		13		
Panch Mahals	Ghoghamba	Kharkhadi	21.619090	72.050012	Bore Well		60.14	15.99	19.4
Panch Mahals	Ghoghamba	Ranipura	22.725000	73.758333	Dug Well	8.4	4.99	3.1	3.7
Panch Mahals	Godhra	Chhabanpur	22.827778	73.612500	Dug Well	9.87	8.49	7.8	6.8
Panch Mahals	Godhra	Dhanol	22.758611	73.506667	Dug Well	2.08	0.64	0.9	1.2
Panch Mahals	Godhra	Godhra_UR1	22.792778	73.606667	Dug Well	5.48	2.88	3.18	3.3
Panch Mahals	Godhra	Godhra_UR3	22.780000	73.606944	Dug Well	2.23	0.45	1.01	0.5
Panch Mahals	Godhra	Godhra2	22.770833	73.633333	Dug Well	10.44	6.09	4.94	5
Panch Mahals	Godhra	Lileshra	22.747500	73.614722	Bore Well		13.31		
Panch Mahals	Godhra	Mahuliya EW	22.741436	73.674358	Bore Well	9	3.94	9.59	
Panch Mahals	Godhra	Moti Kanadi EW	21.324754	70.528850	Tube Well	7.8	4.79	6.86	7.3
Panch Mahals	Godhra	Orwada OW	22.481590	73.470010	Tube Well				11.2
Panch Mahals	Godhra	Sankali	22.776349	73.720966	Tube Well	8.29			4.7
Panch Mahals	Godhra	Tarbordi	22.712983	73.497655	Bore Well		4.78	8.51	5.5
Panch Mahals	Godhra	Tuwa	22.804000	73.471000	Dug Well	5.4	2.78	2.3	3
Panch Mahals	Halol	Baska EW	24.200600	72.906890	Tube Well	8.22	6.02	6.04	
Panch Mahals	Halol	Bhat OW	22.412833	73.630440	Bore Well		2.75	2.53	6.3
Panch Mahals	Halol	Pavagadh	22.487500	73.555556	Dug Well	10.84	4.16	3.81	7.4
Panch Mahals	Halol	Pratap Pura EW	22.518442	73.487799	Tube Well	9.55			4.2
Panch Mahals	Halol	Shivrajpur	22.425000	73.591667	Dug Well	12.5	5.35	4.95	6.5
Panch Mahals	Halol	Tarkanda	22.545833	73.529167	Dug Well	8.9	1.08	0.9	2.3
Panch Mahals	Halol	Timbi2	22.508000	73.508000	Dug Well	5.9		9.2	
Panch Mahals	Jambughoda	Jambughoda	22.369000	73.725000	Bore Well	7.05	5.37	5.78	
Panch Mahals	Jambughoda	Jambughoda1	22.373000	73.723000	Dug Well	4.5	6		
Panch Mahals	Jambughoda	Javan	22.401000	73.685000	Dug Well	8.64	4.79	4.9	6.5
Panch Mahals	Kalol	Kalol_UR1	22.600278	73.443333	Dug Well	13.1	12.9	11.2	11.5

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Panch Mahals	Kalol	Kalol_UR2	22.590000	73.451000	Dug Well	17.79	16.79	0.78	16.1
Panch Mahals	Kalol	Khadki_Vadiya	22.662000	73.500000	Dug Well	16.3	12.59	14.3	15.6
Panch Mahals	Kalol	Rabod	22.613855	73.544356	Bore Well		30.74	8.55	8.9
Panch Mahals	Kalol	Sama OW	22.630920	73.423463	Bore Well	6.46	6.7		4.57
Panch Mahals	Kalol	Tarvada	22.605556	73.522222	Tube Well		15.94	15.4	15.5
Panch Mahals	Morvahadaf	Morwa (Hadaf) Pz-I	22.918056	73.844444	Bore Well				8.6
Panch Mahals	Morvahadaf	Natapur	22.857222	73.820556	Dug Well		5.9		6.9
Panch Mahals	Morvahadaf	Santroad I	22.803000	73.793000	Dug Well	16.75	8.05	4.93	9.5
Panch Mahals	Morvahadaf	Suliyat	23.062000	73.851000	Dug Well	24.7	8.8	8.25	13.5
Panch Mahals	Shehera	Bhurkhal EW	22.892077	73.459034	Tube Well	3.2		2.05	2.5
Panch Mahals	Shehera	Shehra	22.954000	73.625000	Dug Well	3.5	1.65	1.5	2.7
Panch Mahals	Shehera	Umarpur	22.873056	73.615833	Bore Well	6.6	3.16	3.26	4.5
Patan	Chanasma	Chanasma i	23.711111	72.115000	Tube Well				5.58
Patan	Chanasma	Chanasma II	23.711111	72.115000	Tube Well				19.06
Patan	Chanasma	Dharmoda	23.697000	72.069000	Dug Well	3.32			3.15
Patan	Chanasma	Dhinoj I	23.663000	72.279000	Dug Well	9.5	8.72	7.7	8.1
Patan	Chanasma	Finchal	23.744806	72.213056	Tube Well		162.99	163.59	165.74
Patan	Chanasma	Kamboi	23.677606	72.016650	Dug Well	2.81	1.3	1.55	1.75
Patan	Chanasma	Lanwa Pz-I	23.690000	72.250000	Bore Well		131.16	135.95	
Patan	Harij	Jamanpur	23.719080	72.964310	Tube Well				168.45
Patan	Harij	Mujpur	20.742537	71.012074	Dug Well	3.16	2.9	3.9	3.45
Patan	Harij	Piplana	23.749944	72.057972	Tube Well				129.73
Patan	Harij	Roda	23.853194	71.886250	Bore Well			85.36	
Patan	Harij		23.749944	72.057972	Tube Well				167.64
Patan	Patan	Balisana	23.814391	72.254161	Dug Well	19.15	16.04	23.65	21.55
Patan	Patan	Jangral Pzi	23.694722	71.693889	Tube Well	151.8			
Patan	Patan	Sander	23.767000	72.254000	Dug Cum Bore Well	9.5	8.65		
Patan	Patan	Shankhari	23.779000	72.163000	Dug Well	18.41	13.29	15.9	10.41
Patan	Radhanpur	Gochanad	23.771261	71.624568	Dug Well	4.09	3.27	2.97	3.08
Patan	Sami	Dhadhana	23.808861	71.809194	Tube Well		68.85	61.05	62.97
Patan	Sami	Kukrana	23.633361	71.888611	Bore Well		106.14		114.14
Patan	Sami	Moti chander	23.594000	71.781000	Dug Well	2.05	1.92	1.68	1.74
Patan	Sami	Rampura	23.716861	71.552806	Bore Well		98	96.99	97.23
Patan	Sami	Sankheshwar	23.521944	71.790833	Tube Well	2.09	0.97	1.3	
Patan	Sami	Sonar Pz_I	23.667797	71.737962	Tube Well	2.62			
Patan	Sami	Sonar Pz_II(6")	23.667797	71.737962	Tube Well	4.63			
Patan	Sami	Upliyasra	23.634194	71.618389	Tube Well		96.5	96.58	97.15
Patan	Sami	Zilvana	23.725528	71.813889	Tube Well				162.42

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Patan	Sankheshwar	Jesda	23.580889	71.796750	Bore Well		78.02	78.51	
Patan	Santalpur	PIPRALA OW	23.645417	71.094167	Bore Well		9.67		
Patan	Santalpur	Piprala_1	23.654722	71.085833	Dug Well	11.32	10.61	10.63	11.75
Patan	Santalpur	Vauva(Repl)_Pz	23.798611	71.090278	Tube Well	2.69		2.09	
Patan	Saraswati	Bhutia vasna i	23.916667	72.100000	Tube Well	21.07	18.31	7.95	15
Patan	Saraswati	Jaleswar Paldi	23.887417	72.157278	Bore Well		152.55	153.35	152.55
Patan	Saraswati	Mota Nayta	23.969028	72.081333	Bore Well		114.46	114.11	116.87
Patan	Sidhpur	Biliya(Temple)_Pz_I	23.888000	72.399000	Tube Well	30.5	44.77	22.9	45.7
Patan	Sidhpur	Biliya(Temple)_Pz_II	23.888000	72.399000	Tube Well		29.27	44.4	28.91
Patan	Sidhpur	Kakosi Pz-I	24.001667	72.305833	Tube Well	150.7		149.44	
Patan	Sidhpur	Kakosi Pz-II	24.001670	72.305830	Tube Well		148.58		
Patan	Sidhpur	Kanesara Pz	23.890000	72.340000	Tube Well	126.1			126.24
Patan	Sidhpur	Kot EW	23.899722	72.400000	Tube Well			83.65	85.25
Patan	Sidhpur	Kot Pz	23.899722	72.400000	Tube Well		84.36		
Patan	Sidhpur	Lukhasan	23.960000	72.470000	Tube Well	140.56	139	139.42	140.43
Patan	Sidhpur	Nagwasan	23.947778	72.450000	Tube Well	102.02	102.27	101.1	128.7
Patan	Sidhpur	Sidhpur Naditat Pz I	23.924722	72.398333	Tube Well	87.79	86.15	86.3	86.71
Patan	Sidhpur	Vanasan Pz	23.897500	72.263333	Tube Well	105.05	100.24		104.93
Porbandar	Kutiyana	Dhruvala	21.693591	70.004462	Dug Well	12.8	1.5	2.74	4.63
Porbandar	Kutiyana	Kadegi	21.451000	69.983000	Dug Well	2.04		1.84	0.19
Porbandar	Kutiyana	Kutiyana_Pz	21.622000	69.997000	Bore Well	11.55	1.7	3.88	8.92
Porbandar	Kutiyana	Kutiyana I	21.630556	70.016667	Dug Well	10.43	2.4	4.86	5.94
Porbandar	Kutiyana	Mocha	21.348000	69.889000	Dug Well	4.2	1.27	3.28	2.48
Porbandar	Porbandar	Adwana2	21.916667	69.600000	Dug Well	13.92	9.55	10.47	6.24
Porbandar	Porbandar	Babda	21.770000	69.588000	Dug Well	9.6	0.9	3.42	7.49
Porbandar	Porbandar	Bakharla	21.765000	69.661000	Dug Well	11.23	2.9	5.44	7.66
Porbandar	Porbandar	Balej	21.370833	69.875000	Dug Well	3.05		3.12	2.75
Porbandar	Porbandar	Bhavpura	21.810000	69.410000	Dug Well		2.55	5.06	5.83
Porbandar	Porbandar	Degam	21.710000	69.606000	Dug Well	12.45	5.6	8.62	4.66
Porbandar	Porbandar	Khambodar	21.808000	69.601000	Dug Well	14.1	4.15	2.5	7.95
Porbandar	Porbandar	Kolikhada	21.699722	69.614167	Dug Well		3	8.25	16.73
Porbandar	Porbandar	Kuchhadi	21.683000	69.550000	Dug Well	2.9	1.27	3.37	3.81
Porbandar	Porbandar	Miyani	21.833000	69.389000	Dug Well	7.75	6.75	8.05	7.25
Porbandar	Porbandar	Modhwada EW	21.821940	69.507780	Tube Well				7.36
Porbandar	Porbandar	Mojiwana	21.886000	69.600000	Dug Well	7.55	0.7	3.17	7.65
Porbandar	Porbandar	Nagka	21.821389	69.633333	Bore Well	14.75	0.49		10.02
Porbandar	Porbandar	Navibandar	21.445833	69.791667	Dug Well	2.33	1.7	4.62	3.55
Porbandar	Porbandar	Oddar	21.566667	69.680556	Dug Well	6.15		6.2	6.1

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Porbandar	Porbandar	Palkhada1	21.758000	69.488000	Dug Well	9.63	2.35	5.13	9.45
Porbandar	Porbandar	Pata	21.297000	69.942000	Dug Well	4.25		3.55	5.45
Porbandar	Porbandar	Porbandar	21.645000	69.642500	Tube Well	4.77	1.68	1.82	3.07
Porbandar	Porbandar	Porbandar1	21.641667	69.625000	Dug Well	4.19	2.7	4.64	2.81
Porbandar	Porbandar	Ratadi	21.720000	69.512000	Dug Well	6.69	3.2	5.96	4.13
Porbandar	Porbandar	Ratia	21.438000	69.806000	Dug Well	4.8		5.6	4.45
Porbandar	Porbandar	Simar	21.946944	69.685833	Dug Well	15.6	4.45	9.2	7.66
Porbandar	Porbandar	Tukda	21.516000	69.729000	Dug Well	3.06	2.1	3.32	5.71
Porbandar	Porbandar	Tukda Gosa EW III	21.521940	69.728060	Bore Well			8.83	7.64
Porbandar	Porbandar	Visavada Mul Dwarka	21.786000	69.446000	Dug Well	8.9		6.45	
Porbandar	Ranavav	Adityana	21.708611	69.710833	Dug Well	9.65	6.55	8.47	8.9
Porbandar	Ranavav	Bhod	21.658889	69.821111	Dug Well	14.54	6.05	8.84	12.69
Porbandar	Ranavav	Bhoddar	21.575482	69.894917	Dug Well	5	1.71	4.25	5.53
Porbandar	Ranavav	Hanumangadh1	21.793000	69.803000	Dug Well	8.5	4.5	5.1	9.85
Porbandar	Ranavav	Kandorna	21.648000	69.883000	Dug Well	12.78	4.05	7.68	7.62
Porbandar	Ranavav	Ranavav2	21.683000	69.746000	Dug Well	8.2	2.45	9	7.37
Rajkot	Dhoraji	Bhada jodiya	21.662500	70.341667	Dug Well		1.02	2.61	2.97
Rajkot	Dhoraji	Dhoraji	20.958333	71.070833	Dug Well		5.32	9.6	10.97
Rajkot	Dhoraji	Patan Vav	21.639537	70.260234	Bore Well		5.02		
Rajkot	Dhoraji	Patanvav	21.644000	70.261000	Dug Well	14.65	1.95	4.57	9.64
Rajkot	Gondal	Chordi	21.916667	70.748611	Dug Well		3.75	4.47	4.9
Rajkot	Gondal	Dadia	22.091667	70.733333	Dug Well	14.55	0.57	1.27	8.37
Rajkot	Gondal	Dadwa Hamirpur OW	22.006355	71.042166	Bore Well		2.25	2.26	
Rajkot	Gondal	Dharala	21.788356	71.006733	Bore Well			5.57	
Rajkot	Gondal	Gogavadar	21.966667	70.875000	Dug Well	15.55	2.28	7.2	13.1
Rajkot	Gondal	Jamwali	21.933000	70.767000	Dug Well	2.25	1.94	1.67	1.75
Rajkot	Gondal	Kalithad1	22.019000	70.660000	Dug Well		2.51	3.2	8.46
Rajkot	Gondal	MandanKundala	21.851465	70.870064	Bore Well		3.17		
Rajkot	Gondal	Mota Dadwa	21.998000	70.994000	Dug Well	4.81	1.52	3.76	4.23
Rajkot	Gondal	Ribda	22.125000	70.766667	Dug Well	11.9	1.69	4.99	4.79
Rajkot	Jamkandorna	Jamkandorna	21.897222	70.491667	Bore Well		7.73		
Rajkot	Jamkandorna	Jasapur	21.891667	70.483333	Dug Well	10.14		7.95	
Rajkot	Jamkandorna	Khajurda	21.887145	70.401316	Bore Well		1.29	1.66	4.16
Rajkot	Jasdan	Bhadla	22.183000	71.092000	Dug Well	11.66	6.14	5.51	8.05
Rajkot	Jasdan	Jasdan	22.044000	71.214000	Bore Well	6.79	3.43	5.01	
Rajkot	Jasdan	Kamlapur	22.145833	71.200000	Dug Well	12.05		5.78	8.68
Rajkot	Jasdan	Kharachiya Jas	22.247676	71.360671	Bore Well		6.05	6.22	
Rajkot	Jasdan	Lalavadar	22.133000	71.304000	Dug Well	7.03	2.89	5.05	5.38
Rajkot	Jasdan	Viranagar	22.025000	71.125000	Dug Well	14.79	3.9	6.4	6.78
Rajkot	Jetpur	Jetpur	21.756000	70.619000	Bore Well	8.3	3.97	6.15	5.66

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Rajkot	Jetpur	Jetpur Pithad	23.021944	70.918056	Dug Well	4.12	3.32	2.6	3.36
Rajkot	Jetpur	Jetpur pithad.	21.775000	70.633000	Dug Well	15.96	7.73	7.53	8.07
Rajkot	Jetpur	Motagundala	21.734722	70.501389	Dug Well	3.54	3.28	2.9	2.79
Rajkot	Jetpur	Umralli	21.847000	71.808000	Dug Well	13.6	3.3	4.6	4.65
Rajkot	Jetpur	Virpur1	21.850000	70.695833	Dug Well	12.83	6.37	7.33	7.53
Rajkot	Kotda Sangani	Rajpara EW	22.114576	70.880501	Bore Well		36.15	36.7	38.05
Rajkot	Lodhika	Khirsara1	22.241667	70.645833	Dug Well	19.6	4.77	5.5	6.85
Rajkot	Lodhika	Lodhika	22.130000	70.630000	Bore Well		2.95	2.83	3.75
Rajkot	Lodhika	Lodhika1	22.141667	70.641667	Dug Well	8.45	1.35	2.8	
Rajkot	Paddhari	Khamta	22.475000	70.550000	Dug Well	6.15	2.75	3.35	3.26
Rajkot	Paddhari	Metoda	22.377575	70.615646	Bore Well		0.3		
Rajkot	Paddhari	Movaiya	22.450000	70.608000	Dug Well	18.75	4.02	10.1	7.92
Rajkot	Paddhari	Padadhari	22.447222	70.608333	Dug Well		4.12	4.95	8.5
Rajkot	Paddhari	Targhari	22.383000	70.667000	Dug Well	6.27	2.98	7.6	4.5
Rajkot	Rajkot	Gavridad	22.400000	70.796000	Dug Well			1.65	2
Rajkot	Rajkot	Halenda	22.091667	71.050000	Dug Well	6.79	0.59	0.92	2.03
Rajkot	Rajkot	Nagalpar OW	22.393931	70.862581	Bore Well		3.35		59.45
Rajkot	Rajkot	Raj Samadhiyala	22.188639	70.941403	Bore Well		2.48	2.83	4.61
Rajkot	Rajkot	Ranpur1	22.366667	70.929167	Dug Well	12.85	2.9	3.54	7.48
Rajkot	Rajkot	Sardhar2	22.146000	70.989000	Dug Well		0.9	2.03	2.26
Rajkot	Rajkot	Vadali Pz	22.197883	70.883117	Bore Well		2.52	3.47	
Rajkot	Upleta	Ganod	21.675000	70.179000	Dug Well	4.86	1.62	4.67	4.32
Rajkot	Upleta	Upleta1	21.748611	70.275000	Dug Well	6.11	3.11	4.61	4.76
Rajkot	Vinchhiya	Devdhari Pz	22.116853	71.481150	Bore Well		2.96	2.42	5.57
Rajkot	Vinchhiya	Mota Hadmatiya	22.244157	71.299833	Bore Well		2.57	3.39	4.24
Sabar Kantha	Himatnagar	Derol Pz-II	23.599000	72.903000	Tube Well	48.63	43.39	41.06	40.87
Sabar Kantha	Himatnagar	Gadha	23.708333	72.941667	Dug Well		20	18.5	1
Sabar Kantha	Himatnagar	Himmatnagar_Pz	23.608000	72.971000	Tube Well	8.93	8.2		12
Sabar Kantha	Himatnagar	Mathasuliya	23.603000	73.154000	Dug Well	7.43	4.45	3.88	
Sabar Kantha	Himatnagar	Sakrodiya	23.545419	73.047996	Dug Well	9.28	6.18	10	
Sabar Kantha	Idar	Bhadreshwar(Daramli)	23.745197	72.983200	Dug Well	20.16		17.4	
Sabar Kantha	Idar	Chandap_DW	21.916667	70.748611	Dug Well	18.48	13.57	9.06	9.9
Sabar Kantha	Idar	Idar	23.841667	73.037500	Dug Well	9.59	13.93	4.8	7.9
Sabar Kantha	Idar	Revas	23.820833	73.116667	Dug Well	13.7	14.35	11.5	
Sabar Kantha	Idar	Sabalwad	23.874000	72.963000	Dug Well	22.65	7.38	14.5	17.3
Sabar Kantha	Idar	Virpur (Idar)	23.783330	72.933330	Dug Well			17.15	9.15
Sabar Kantha	Khedbrahma	Khedbrahma_Pz	24.036110	73.044440	Bore Well		1.94		
Sabar Kantha	Khedbrahma	Khedbrahma_1	24.029000	73.050000	Dug Well	13.8	5.2	12.25	10
Sabar Kantha	Khedbrahma	Matoda	24.111000	73.008000	Dug Well	15.7	8.8	18.2	8.2
Sabar Kantha	Khedbrahma	Poshina2	24.375000	73.033000	Dug Well	10.74		2.2	3.8

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Sabar Kantha	Khedbrahma	Silwad	24.008000	73.117000	Dug Well	11.22	7.68	27.65	6.2
Sabar Kantha	Prantij	Anwarpura Pz	23.405556	72.845556	Tube Well	33.57	38.85	34.23	31.7
Sabar Kantha	Prantij	Karol OW	23.371504	72.841918	Bore Well	58.05		84	
Sabar Kantha	Prantij	Piludra	23.483075	72.865791	Tube Well	30.31		26.62	
Sabar Kantha	Talod	Boriya	23.242778	72.940833	Dug Well	8.1	7.5	6.7	6.8
Sabar Kantha	Talod	Harsol1	23.377778	73.016667	Dug Well	17.92	10.22	5.7	
Sabar Kantha	Talod	Kesharpura_Mayal	23.322000	72.949000	Dug Well	4.18	2.9	1.51	16.98
Sabar Kantha	Talod	Umadpura	23.303611	72.964444	Dug Well	12.3	7.05	4.7	14.7
Sabar Kantha	Talod	Varvada	23.441944	73.056667	Dug Well	18.7	12.52	12.48	13.1
Sabar Kantha	Talod	Waliampura Pz	23.324723	72.908794	Bore Well		39.28	37.77	36.9
Sabar Kantha	Vadali	Choriwad	23.900000	73.119000	Dug Well	15.36	18.2	12.26	14.21
Sabar Kantha	Vadali	Hatharva	22.265686	69.089507	Dug Well	9.19	6.2	20.4	7
Sabar Kantha	Vadali	Kesharpura	23.915000	73.145000	Dug Well	22.25	17.73	11.8	1.75
Sabar Kantha	Vadali	Vivav EW	23.982222	73.040278	Bore Well	15.15		10.42	13.13
Sabar Kantha	Vadali	Wadali	23.933000	73.033000	Dug Well	16.67	19.7	17.2	
Sabar Kantha	Vijaynagar	Abhapur	23.964000	73.258000	Dug Well	7.45	7.32	6.9	6.1
Sabar Kantha	Vijaynagar	Atarsumba	23.986000	73.208000	Dug Well	7.68		9.9	4.2
Sabar Kantha	Vijaynagar	Kherwada	23.969000	73.234000	Dug Well	6.9	3.9	3.85	4.6
Sabar Kantha	Vijaynagar	Vijaynagar_Pz	24.006944	73.333333	Bore Well		6.1	5.3	
Surat	Bardoli	Allu	21.062500	73.191667	Dug Well	2.7	3.15	1.98	3.26
Surat	Bardoli	Bardoli	21.120000	73.100000	Tube Well		3.13	2.85	5.92
Surat	Bardoli	Bedkuva	21.185060	73.288145	Dug Well	4.31	2.3	3.35	2.75
Surat	Bardoli	Kadod 1	21.221390	73.218890	Dug Well		0.45	14.05	
Surat	Bardoli	Madhi 1	21.133611	73.248611	Dug Well		4	5.05	6.92
Surat	Bardoli	Mota	21.170000	73.069000	Dug Well	3.71	3	2.63	3.47
Surat	Bardoli	Sarbhon	21.058333	73.091667	Dug Well	3.7	2.6	2.8	7.6
Surat	Bardoli	Songadh	21.194384	73.224391	Dug Well		3.8		3.64
Surat	Bardoli	Surali	21.145903	73.252555	Dug Well	4.1	1.7		
Surat	Bardoli	Ten-bardoli	21.116667	73.100000	Dug Well		3	3.32	5
Surat	Chorasi	Sultanabad	21.091667	72.725000	Dug Well	4.51	4.4	4.86	5.43
Surat	Kamrej	Dhoran Pardi OW	21.313061	72.963636	Tube Well	10.9	9.87	9.95	10.32
Surat	Kamrej	Digas	21.248333	73.025556	Dug Well		2.2	10.37	11.5
Surat	Kamrej	Kathor	21.291667	72.929167	Dug Well		4.55	6.18	7.65
Surat	Kamrej	Navi pardi	21.322222	72.970833	Dug Well		3	3.15	3.77
Surat	Kamrej	Sayan	21.305556	72.910833	Dug Well		2.85	3.9	
Surat	Kamrej	Segva OW	23.925200	72.398300	Dug Well	3.56		3.5	
Surat	Mahuva	Mahuva2	21.020833	73.145833	Dug Well	17.75	13.7	15	15.85
Surat	Mahuva	Puna	20.923611	73.233333	Bore Well	12.74	7.3	8.17	
Surat	Mahuva	Puna1	20.929000	73.229000	Dug Well	9.4	3.2	5.38	7.62
Surat	Mahuva	Vaheval	20.837000	73.288000	Dug Well	9.54	2.95	5.1	6.35

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Surat	Mandvi	Katradevi	21.414722	73.427778	Dug Well		2.6	1.7	1.8
Surat	Mandvi	Malda	21.370000	73.350000	Dug Well		3.7	4.8	6.3
Surat	Mandvi	Mandvi2	21.250000	73.300000	Dug Well		13	12.53	13.12
Surat	Mandvi	Miyawadi	21.224117	73.227235	Dug Well	15.15		14.05	14.5
Surat	Mandvi	Moti Sarkui	22.420000	71.110000	Dug Well		4.6	4.45	4.15
Surat	Mandvi	Nogama	21.290833	73.214444	Dug Well		1.4	1.84	1.91
Surat	Mandvi	Ognisa	21.405687	73.256352	Dug Well	8.28	2.1	4.05	5.52
Surat	Mandvi	Parvat	21.369649	73.250554	Dug Well	7.6	2.6	5.1	5.41
Surat	Mandvi	Raghipura	21.362921	73.264168	Dug Well	7.26	3.5	4	4.42
Surat	Mangrol	Bhatkol	21.380000	73.004000	Dug Well	4.45	2.9	3.7	4.13
Surat	Mangrol	Dungri	21.408333	73.133333	Dug Well		4.05	2.9	7.7
Surat	Mangrol	Gangtha (Rep)	(blank)	(blank)	Dug Well		4.55		3.05
Surat	Mangrol	Jhankhavav	21.450000	73.329167	Dug Well		4.35	5.25	1.96
Surat	Mangrol	Jhankhvav	21.466667	72.952778	Bore Well		4.17	4.88	3.7
Surat	Olpad	Olpad2	21.341667	72.758333	Dug Well		2.65	2.5	2.45
Surat	Olpad	Wadoli	21.430000	72.830000	Dug Well		1.2	0.17	1.35
Surat	Palsana	Gangadhra	21.118611	73.075278	Dug Well		5.55	6.75	7.3
Surat	Palsana	Kareli OW	21.147028	73.041748	Bore Well	12.96	8.93	10.3	11.23
Surat	Palsana	Palsana	21.077778	72.991667	Dug Well	2.34	2	1.93	1.84
Surat	Suratcity	Jiav	21.115073	72.835349	Dug Well	4.36	3.1	2.88	3.6
Surat	Suratcity	Surat	21.175000	72.805556	Tube Well				11.22
Surat	Suratcity	Surat_DW	21.245556	72.785556	Dug Well			1.15	1.6
Surat	Umarpada	Chavada	21.474722	73.595000	Dug Well		2.2	2.6	3.6
Surat	Umarpada	Juna umarpada	21.458330	73.491670	Dug Well		0.2	4.05	
Surat	Umarpada	Pinpur	21.447738	73.481512	Dug Well	5.06	3.1		2.95
Surendranagar	Chotila	Anandpur EW	22.220400	71.169000	Bore Well		6.53	8.02	36.18
Surendranagar	Chotila	Bamanbor	22.416667	71.041667	Dug Well	13.47	4.79	6.05	5.78
Surendranagar	Chotila	Chotila	22.405000	71.197778	Dug Well		18.9	16.6	16.12
Surendranagar	Chotila	Chotila1	22.430000	71.180000	Bore Well		6.58	7.71	
Surendranagar	Chotila	Gunda	22.270818	71.138580	Dug Well	6.9	3.56	3.32	5.21
Surendranagar	Chotila	Kalasar	22.380889	71.715069	Dug Well		3.75	8.21	8.26
Surendranagar	Chotila	Lakhanka	22.310266	71.230197	Dug Well	7.52	5.16		5.98
Surendranagar	Chotila	Moti Moladi	22.421000	71.110000	Dug Well	10.2		5.4	
Surendranagar	Chotila	Moti Moldi OW II	22.417900	71.101900	Bore Well		34.11	34.54	74.6
Surendranagar	Chotila	Parabadi	22.242227	71.191334	Dug Well		5.18	5.5	10.3
Surendranagar	Chotila	Tarnetar	22.641667	71.216667	Dug Well	16.25	11.95	15.2	15.65
Surendranagar	Chotila	Than	22.579000	71.200000	Dug Well	19.38		3.22	3.15

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Surendranagar	Chuda	Vanala	22.433000	71.921000	Dug Well	3.18	1.78	2.72	4.46
Surendranagar	Dasada	Dasada	23.320000	71.824167	Tube Well	5.1		3.35	3.56
Surendranagar	Dasada	Dhama	22.380694	71.397985	Dug Well	6.75	3.47	4.9	5.17
Surendranagar	Dasada	Gavana	23.340917	71.863150	Dug Well		3.25	2.85	
Surendranagar	Dasada	Jarvala	23.196113	71.855627	Dug Well		1.53	1.16	3.11
Surendranagar	Dasada	Jhinjhuwada	23.350000	71.658000	Dug Well	5.97	1.96	4.71	3.98
Surendranagar	Dasada	Kherwa	23.004000	71.746000	Dug Well	1.72			1.18
Surendranagar	Dasada	Malvan	23.061393	71.750383	Dug Well		2.88	2.48	2.84
Surendranagar	Dasada	Moti majethi	23.086599	71.885255	Dug Well	14.7	6	5.76	
Surendranagar	Dasada	Pipli	23.060000	71.734000	Dug Well	2.75	1.25	1.75	2.28
Surendranagar	Dasada	Visawadi	23.341667	71.733333	Dug Well		2.21	1.35	1.07
Surendranagar	Dhrangadhra	Gamda	22.898000	71.557000	Dug Well	3.66	1.1	2.48	2.75
Surendranagar	Dhrangadhra	Jiva	22.957107	71.324146	Dug Well		6.55	10.1	10.47
Surendranagar	Dhrangadhra	Kukavati	23.122778	71.466667	Dug Well	4.9	2.6	2.2	4.11
Surendranagar	Dhrangadhra	Manpur	23.013823	71.653063	Tube Well		1.91	1.97	2.12
Surendranagar	Dhrangadhra	Mota Ankevaliya	22.849460	71.454231	Dug Well		5.1	6.7	6.45
Surendranagar	Dhrangadhra	Narichana	22.864574	71.406739	Dug Well		14.38	14.5	11.14
Surendranagar	Dhrangadhra	Rajsitapur	22.841667	71.591667	Dug Well	5.09	4.15	4.44	5.38
Surendranagar	Lakhtar	Devaliya	22.789640	71.843881	Dug Well		0.4	0.54	0.01
Surendranagar	Lakhtar	Gangad	22.949258	71.973338	Dug Well		1.34	1.94	
Surendranagar	Lakhtar	Lakhtar	22.858000	71.783000	Dug Well	3.9	1.17	2.46	2.27
Surendranagar	Lakhtar	Modhvana	22.881000	71.736000	Dug Well	0.95	0.8	1.33	1.35
Surendranagar	Lakhtar	Olak	22.918611	71.863333	Dug Well	2.79	1.55	1.98	2.52
Surendranagar	Lakhtar	Tavi 1	22.720278	71.851667	Dug Well		3.7	4	4.93
Surendranagar	Lakhtar	Vitthalgarh	22.990000	71.980000	Dug Well		0.69	1.71	1.75
Surendranagar	Limbdi	Baldana	22.570900	71.699342	Dug Well		4.45	3.75	4.33
Surendranagar	Limbdi	Bhalgamda	22.591387	71.819319	Dug Well		1.44	2.32	2.79
Surendranagar	Limbdi	Ghagoshar OW	22.604431	71.891810	Tube Well		2.84	3.4	
Surendranagar	Limbdi	Limbdi-Pz	22.570000	71.810000	Bore Well				1.57
Surendranagar	Limbdi	Moti kathechi	22.890957	71.980441	Dug Well	3.28			7.2
Surendranagar	Limbdi	Parali	22.705579	71.976975	Bore Well		9.68	10.3	10.3
Surendranagar	Limbdi	Parnala	22.664874	71.968451	Dug Well		2.93	3.95	4.84
Surendranagar	Limbdi	Ramrajpar	22.646809	71.897181	Dug Well		0.9	1.16	1.53

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Surendranagar	Limbdi	Ranagarh	22.778950	71.988462	Dug Well		2.02	1.85	4.01
Surendranagar	Limbdi	Shiyani	22.666667	71.829167	Dug Well	3.19	1.98	2.8	3.26
Surendranagar	Muli	Muli	22.650000	71.466667	Dug Well	10.4	5.72	5.33	5.9
Surendranagar	Muli	Sarla	22.733000	71.367000	Dug Well	10.02	10.51	10	10.64
Surendranagar	Sayla	Dhajala	22.380694	71.397985	Dug Well		3.95	9.95	10.92
Surendranagar	Sayla	Nagadka	22.426879	71.579134	Dug Well	12.1	5.5	7.93	11.46
Surendranagar	Sayla	Piprali	22.395309	71.311662	Dug Well		4.86	9.85	10.46
Surendranagar	Sayla	Sayala	22.533000	71.483000	Bore Well	13.65	2.9	5.85	7.85
Surendranagar	Sayla	Sudamda	22.454000	71.485000	Dug Well	4.6	2.3	3.25	4.38
Surendranagar	Wadhwan	Anindra	22.810000	71.706000	Dug Well	2.75	0.89	3.05	2.41
Surendranagar	Wadhwan	Anindra EW	22.812993	71.680232	Bore Well		4.87	4.7	4.87
Surendranagar	Wadhwan	Dedadra	22.775000	71.733000	Dug Well	4.66	2.67	4.19	3.6
Surendranagar	Wadhwan	Khajeli	22.708943	71.797447	Bore Well		0.82	1.02	1.05
Surendranagar	Wadhwan	Latuda	22.813000	71.608000	Dug Well	4.06	1.62	1.9	2.35
Surendranagar	Wadhwan	Surendranagar	22.724000	71.671000	Tube Well	2	0.4	2	
Surendranagar	Wadhwan	Surendranagar2	22.716667	71.608333	Dug Well	4.3	0.6	8.56	3.24
Surendranagar	Wadhwan	Timba	22.629639	71.651095	Dug Well		1.4	1.99	2.42
Surendranagar	Wadhwan	Vadod	22.559223	71.652381	Dug Well		3.45	4.15	3.53
Surendranagar	Wadhwan	Vaghela	22.657737	71.657178	Dug Well		0.95	0.73	1.69
Tapi	Nizar	Aarda Boratha(Rep)	21.466450	74.086914	Dug Well			5	6.81
Tapi	Nizar	Nizar	21.480556	74.200000	Bore Well	13.88			
Tapi	Nizar	Nizar1	21.477000	74.191000	Dug Well	10.48	7.7	5.57	6.65
Tapi	Songadh	Bhurvel (ukai)_Rep	21.220960	73.579010	Dug Well			3.57	4.2
Tapi	Songadh	Jesingpura[sg]	21.170833	73.554167	Dug Well	7.4	6.4	6.7	8.42
Tapi	Songadh	Khedwada (Ashram Falia)	21.280000	73.470000	Dug Well		2.2	5	
Tapi	Uchchhal	Tokarwa 1	21.310000	73.851000	Dug Well	8.1	2.2	3.65	5.51
Tapi	Uchchhal	Uchchhal	21.171944	73.769167	Dug Well	11.85	6.5	7.71	7.86
Tapi	Valod	Buhari	20.967474	73.308166	Dug Well	15.01	12.5	14.1	15.8
Tapi	Valod	Hathuka	2.992915	73.273582	Dug Well		3.5	11.4	
Tapi	Valod	Kelkui	21.041944	73.323333	Dug Well	1.75	2	3.5	2.12
Tapi	Valod	Valod	21.050000	73.266667	Dug Well	2.9	2.5	2.2	3.81
Tapi	Vyara	Bedchit	20.950000	73.351000	Dug Well	8.72	4.05	7.42	7.15
Tapi	Vyara	Chapawadi	20.258333	72.883333	Dug Well	7.7	5.4	3.15	4.16
Tapi	Vyara	Karanjvel	21.012778	73.458056	Dug Well	10.1	2.4	5.85	6.82
Tapi	Vyara	Motichher	20.810000	73.270000	Dug Well	0.01			1.33

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Tapi	Vyara	Vyara I	21.108000	73.396000	Dug Well	4.1	3.37	3.88	3.78
Vadodara	Dabhoi	Vega	22.159000	73.413000	Dug Well	5.8	3.07		
Vadodara	KARJAN	Handod I	22.074000	73.046000	Tube Well			26.69	25.29
Vadodara	Padra	Chitral PZ_II	22.180000	72.950000	Tube Well		20.15	20.6	18.78
Vadodara	Padra	Chitral Pz-I	22.180000	72.950000	Tube Well		20.22	20.47	18.66
Vadodara	Padra	Ghayaj ii	22.233000	73.054000	Tube Well		21.08	21.6	
Vadodara	Savli	Chhaliyar	22.666667	73.316667	Dug Well	16.49	5.94		
Vadodara	Savli	Juna samalya	22.504000	73.283000	Dug Well	12.5	12.71		
Vadodara	Savli	Sankheda	23.521520	72.029980	Dug Well		19.44	20.42	
Vadodara	Savli	Tundav	22.483000	73.203000	Dug Well	7.45	12.06		
Vadodara	Savli	Vejpur2	22.747000	73.356000	Dug Well	2.3	4.33		
Vadodara	Shinor	Segwa chouki ii	22.008000	73.383000	Tube Well	35.58	34.2	35.85	
Vadodara	Shinor	Segwa chowki I	22.008000	73.383000	Tube Well		35.38	34.2	35.13
Vadodara	Shinor	Sinor	21.912500	73.341667	Dug Well	23.63	22.7		
Vadodara	Vadodara(City And Rural)	Raypura i	22.281944	73.090278	Tube Well	28.39	26.13	26.65	
Vadodara	Vadodara(City And Rural)	Sankarda	22.438889	73.122222	Tube Well			24.66	
Vadodara	Vadodara(City And Rural)	Vadodara I	22.304722	73.271667	Tube Well		16.42	18.6	17.23
Vadodara	Vadodara(City And Rural)	Vadodara Ii	22.304722	73.271667	Tube Well		5.5	19.08	8.23
Vadodara	Vadodara(City And Rural)	Vadodara_Kevada Bag	22.293000	73.198000	Dug Well	5.82	3.9		
Vadodara	Vadodara(City And Rural)	Vadodara_ONGC	22.269000	73.213000	Dug Well	6.29	3.58		
Vadodara	Vadodara(City And Rural)	Vadshala Pzi	22.163000	73.169000	Tube Well	18.46		17.25	
Vadodara	Vadodara(City And Rural)	Vadshala Pz-II	22.163000	73.169000	Tube Well		17		
Vadodara	Waghodia	Chella Karamsiya Pz	22.400000	73.430000	Tube Well		2.04	2.22	1.79
Vadodara	Waghodia	Patiyapura	22.275000	73.441667	Dug Well	8.28	5.14		
Valsad	Dharampur	Awadha	20.516667	73.287500	Dug Well	3.93		1.03	2.13
Valsad	Dharampur	Chasmandava	23.206389	72.279722	Dug Well	11.22	1.8	3.95	8
Valsad	Dharampur	Dharampur 3	20.530833	73.162500	Dug Well	13.92		9.48	10.1
Valsad	Dharampur	Dharampur I	20.536000	73.171000	Bore Well	10.9		4.87	6.78
Valsad	Dharampur	Kosimpada	20.549908	73.422516	Dug Well	7.45	1.3		3.44
Valsad	Dharampur	Phulwari	20.461518	73.209140	Dug Well			2.82	3.97
Valsad	Dharampur	Ulaspedhi	20.490261	73.382508	Dug Well			5.02	6.63
Valsad	Kaprada	Bhavada Jagiri	20.360393	73.308969	Dug Well		4.9	3.3	5.1
Valsad	Kaprada	Chavshala	20.328000	73.326000	Dug Well	3		1.24	1.4
Valsad	Kaprada	Fali	20.313000	73.376000	Dug Well	4.7		0.92	2.18
Valsad	Kaprada	Ghandevi	20.191702	73.224293	Dug Well		0.75	0.49	0.93
Valsad	Kaprada	Kaparda	20.341667	73.216667	Dug Well	8.25			2.7
Valsad	Kaprada	Khadakval	20.307513	73.212246	Dug Well	7.69	1	2.93	6.3
Valsad	Kaprada	Kistoniya	20.253276	73.154226	Dug Well	9.33	1.45	5.78	7.85

District Name	BLOCK NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WELL SITE TYPE	May-23	Aug-23	Nov-23	Jan-24
Valsad	Kaprada	Mata faliya(Amba Jungle)	20.300033	73.300273	Dug Well	12.2	11.1		6.95
Valsad	Kaprada	Motaponda	20.358333	73.033333	Dug Well	5.7	2.8		5.26
Valsad	Kaprada	Nanaponda	20.410000	73.120000	Dug Well	10.8			8.25
Valsad	Pardi	Karwad	20.362500	72.975000	Dug Well	6.3			4.73
Valsad	Pardi	Ozar	20.533571	73.069575	Dug Well	11.78	2.75		0.7
Valsad	Pardi	Rentlav	20.463350	72.920540	Dug Well	7.3		3.15	7.03
Valsad	Pardi	Vapi Balitha	20.380000	72.904000	Dug Well	9.7			9.55
Valsad	Umbergaon	Dahli (bhilad)	20.258333	72.883333	Dug Well			4.29	5.33
Valsad	Umbergaon	Kanadu	20.325000	72.841667	Dug Well	4.9			7.35
Valsad	Umbergaon	Malgalwad Fansa	20.344796	72.786512	Dug Well	5.63	2.4	4.04	3.15
Valsad	Umbergaon	Malwan Kakwadi	20.329282	72.814599	Dug Well	5.55	6	2.66	3.3
Valsad	Umbergaon	Tumb	20.216667	72.841667	Dug Well	4.48			4.23
Valsad	Valsad	Amba Talat	20.589064	73.231095	Dug Well		2.7	4.04	5.16
Valsad	Valsad	Atul	20.541667	72.966667	Dug Well		1.75	3.28	5.68
Valsad	Valsad	Dungri	20.688611	72.949444	Dug Well	7.42	3.3	5.03	
Valsad	Valsad	Magod	20.565900	72.904854	Dug Well	11.63	7.35	7.2	11.55
Valsad	Valsad	Pariya	20.447564	72.964167	Dug Well	5.2	1.9		3
Valsad	Valsad	Valsad(Lilapore)	20.633727	72.936728	Dug Well	7.06		4.85	5.87

Annexure II : Groundwater Table of Gujarat state , during May 2023 (Phreatic)

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
1	Ahmedabad	Bagodara_Pz_II	22.642000	72.214000	5.26	152.00	146.74
2	Ahmedabad	Bopal_Pz_III	23.039000	72.458000	3.22	44.90	41.68
3	Ahmedabad	Dalod	23.366667	71.966667	6.70	31.60	24.90
4	Ahmedabad	Dhandhuka1	22.376058	71.987742	3.56	22.40	18.84
5	Ahmedabad	Endla	23.272000	72.058000	2.63	34.00	31.37
6	Ahmedabad	Hansalpur_Pz-III	23.089000	72.017000	3.02	24.60	21.58
7	Ahmedabad	Jhanjharwa_Pz_II	23.415000	72.058000	13.48	42.20	28.72
8	Ahmedabad	Kundal	22.901000	72.224000	6.10	22.00	15.90
9	Ahmedabad	Tagadi1	22.297095	71.946725	9.51	22.40	12.89
10	Ahmedabad	Vagad(Repl)_Pz	22.360000	71.868000	5.75	40.20	34.45
11	Ahmedabad	Viramgam2	23.142000	72.033000	3.24	28.90	25.66
12	Amreli	Amreli	21.608000	71.225000	9.54	127.00	117.46
13	Amreli	Badhda	21.266000	71.339000	17.25	176.00	158.75
14	Amreli	Bagasara	21.479000	70.963000	11.88	150.70	138.82
15	Amreli	Bhuva	21.433000	71.364000	4.04	86.30	82.26
16	Amreli	Chalala	21.417000	71.167000	22.40	134.10	111.70
17	Amreli	Charkhadia_Pz	21.389200	71.292380	20.55	113.30	92.75
18	Amreli	Chavand	21.811050	71.405740	4.92	117.80	112.88
19	Amreli	Devaliya	21.821000	71.108000	11.86	153.60	141.74
20	Amreli	Dhari	21.338000	71.042000	14.53	204.40	189.87
21	Amreli	Dhari_Pz	21.326000	71.018000	19.17	211.40	192.23
22	Amreli	Fifad	21.436000	71.540000	4.46	67.00	62.54
23	Amreli	Goradka	21.225000	71.411000	6.45	134.20	127.75
24	Amreli	Ingorala	21.233000	71.200000	16.62	263.40	246.78
25	Amreli	Jaswantgadh	21.729134	71.206648	16.22	78.50	62.28
26	Amreli	Kerala	21.397000	71.217000	33.17	127.80	94.63
27	Amreli	Khamba_Pz	21.142000	71.254000	8.74	201.70	192.96
28	Amreli	Kotadapitha	21.958000	71.204000	5.36	201.60	196.24
29	Amreli	Kunkavav	21.663000	70.983000	29.51	173.30	143.79
30	Amreli	Luvariya	21.625000	71.396000	6.14	100.40	94.26
31	Amreli	Mandal	21.100000	71.583000	17.57	46.80	29.23
32	Amreli	Manila Pz	21.433000	71.167000	18.45	128.60	110.15
33	Amreli	Nageshri	20.930000	71.350000	4.14	15.00	10.86
34	Amreli	Piyava	21.383000	71.467000	20.02	97.40	77.38
35	Amreli	Punjabadar	21.525000	71.358000	4.02	91.80	87.78
36	Amreli	Sanaria	21.558000	71.468000	5.59	85.30	79.71
37	Amreli	Simiran	21.437500	71.291667	16.12	54.60	38.48
38	Amreli	Tajpur	21.725000	71.467000	24.16	112.80	88.64

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
39	Amreli	Trakuda	21.017000	71.281000	10.11	80.80	70.69
40	Amreli	Untvad	21.917000	71.217000	14.95	192.70	177.75
41	Amreli	Vaghania juna	21.583000	70.967000	9.01	152.10	143.09
42	Amreli	Vanda	21.390000	71.508000	5.75	87.20	81.45
43	Amreli	Vankiya	21.521000	71.136000	5.27	120.10	114.83
44	Amreli	Vanot	21.170000	71.484000	11.88	105.80	93.92
45	Amreli	Virpur	21.254000	71.150000	22.35	242.00	219.65
46	Anand	Adas_DW	22.4786111	73.0302778	22.30	41.80	19.50
47	Anand	Anand	22.5750000	72.9720000	14.64	41.80	27.16
48	Anand	Anklav2	22.3830000	73.0080000	25.58	36.80	11.22
49	Anand	Bandhani	22.5420000	72.8170000	6.55	35.40	28.85
50	Anand	Bhadran	22.3555556	72.8972222	17.75	27.90	10.15
51	Anand	Boriyani	22.6320000	73.0040000	9.40	42.50	33.10
52	Anand	Davalpura_Pz	23.6305556	68.9000000	3.28	28.40	25.12
53	Anand	Ghora	22.6920000	73.0540000	5.26	50.60	45.34
54	Anand	Kansari l	22.3420000	72.6500000	11.50	14.40	2.90
55	Anand	Laxmipura	22.4170000	72.6080000	1.93	14.20	12.27
56	Anand	Parvata	22.7140000	73.1270000	6.40	51.20	44.80
57	Anand	Ras	22.3460000	72.8330000	2.47	22.80	20.33
58	Anand	Tarapur Pz-II	22.4860000	72.6610000	2.69	24.80	22.11
59	Anand	Tol	22.5110000	72.5670000	1.95	12.80	10.85
60	Aravalli	Alwakampa	23.2769990	73.2106170	10.80	104.00	93.20
61	Aravalli	Bayad_Pz	23.2166667	73.2291667	13.08	103.60	90.52
62	Aravalli	Bibipur l	23.2540330	73.2149980	18.30	105.40	87.10
63	Aravalli	Boral	23.1290600	73.2150270	12.90	104.80	91.90
64	Aravalli	Dhansura l	23.3500000	73.2000000	6.38	131.00	124.62
65	Aravalli	Gadada	23.5750000	73.2530000	11.55	170.20	158.65
66	Aravalli	Hamirpur	23.4080000	73.4580000	17.35	147.90	130.55
67	Aravalli	Karanpur	23.3324100	73.3269400	5.75	133.60	127.85
68	Aravalli	Medasana	23.5120000	73.2740000	7.69	156.10	148.41
69	Aravalli	Modasa	23.4611360	73.3026630	7.38	144.90	137.52
70	Aravalli	Punasan	23.6690000	73.1740000	7.15	230.80	223.65
71	Aravalli	Sathamba	23.1733700	73.3304040	19.83	146.80	126.97
72	Aravalli	Seenawad	23.4763450	73.3956000	12.50	163.60	151.10
73	Aravalli	Shamlaji	23.6861111	73.3666667	11.05	223.80	212.75
74	Aravalli	Takatuka_1	23.8510000	73.3050000	25.08	267.00	241.92
75	Aravalli	Vejpur_Pz	23.7972222	73.2208333	14.10	216.50	202.40
76	Banaskantha	Ambaji_Pz	24.340000	72.850000	12.2	454.30	442.10
77	Banaskantha	Amirgadh	24.400970	72.647650	13.82	226.80	212.98
78	Banaskantha	Beda	24.201000	72.907000	7.42	239.90	232.48

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
79	Banaskantha	Danta_DW	24.188990	72.760880	15.57	272.50	256.93
80	Banaskantha	Dantiwada	24.314570	72.326700	26.52	157.50	130.98
81	Banaskantha	Dantiya	24.54713	71.71943	27.20	61.8	34.60
82	Banaskantha	Dudhva	24.4794	71.66902	17.46	51.6	34.14
83	Banaskantha	Ganapipli	24.297000	72.947000	9.26	259.20	249.94
84	Banaskantha	Gangodra	24.436000	72.365000	23.38	195.60	172.22
85	Banaskantha	Hadad	24.26278	72.98	10.37	24.4	14.03
86	Banaskantha	Iqbalgarh	24.346000	72.538000	28.93	210.50	181.57
87	Banaskantha	Kunvarsi	24.211920	72.860020	11.83	29.6	17.77
88	Banaskantha	Meda	24.397000	72.285000	6.24	174.00	167.76
89	Banaskantha	Miyal	24.617000	71.748000	13.49	58.60	45.11
90	Banaskantha	Mohabbat gadh	24.167000	72.728000	20.56	252.60	232.04
91	Banaskantha	Naroli Pzii	24.620000	71.640000	6.34	46.00	39.66
92	Banaskantha	Palanpur2	24.194000	72.433000	26.47	215.60	189.13
93	Banaskantha	Rampura Vadla	23.879000	71.766000	17.45	41.30	23.85
94	Banaskantha	Ratanpur2	24.175000	72.746000	16.88	262.20	245.32
95	Banaskantha	Tharad Pzii	24.385000	71.619000	9.08	46.20	37.12
96	Banaskantha	Virampur	24.266400	72.652330	15.06	219.50	204.44
97	Bharuch	Arethi	21.6130000	73.4350000	6.93	157.40	150.47
98	Bharuch	Bharuch	21.7000000	73.0040000	4.71	6.20	1.49
99	Bharuch	Bhensli	21.7250000	72.7500000	3.20	8.00	4.80
100	Bharuch	Chhindra	22.1266667	72.6697222	6.50	12.00	5.50
101	Bharuch	Dahegam	22.1850000	72.5970000	6.73	11.00	4.27
102	Bharuch	Ilav	21.4500000	72.8000000	5.68	13.00	7.32
103	Bharuch	Jambusar2	22.0500000	72.8000000	5.13	12.00	6.87
104	Bharuch	Jetpur1	21.4916667	72.7083333	5.60	8.00	2.40
105	Bharuch	Jokhla	21.5958333	73.1691667	4.30	45.80	41.50
106	Bharuch	Juna borbhata	21.6750000	72.9750000	4.50	4.00	-0.50
107	Bharuch	Kalak1	22.0190000	72.7630000	6.30	8.50	2.20
108	Bharuch	Kaswa	21.6830000	72.8170000	6.23	11.10	4.87
109	Bharuch	Kavi	22.1940000	72.6390000	7.00	16.00	9.00
110	Bharuch	Kondh	21.5810000	73.0680000	4.30	35.10	30.80
111	Bharuch	Luhara	21.6750000	72.5580000	0.89	10.00	9.11
112	Bharuch	Mahegam1	21.6830000	72.7580000	3.95	6.80	2.85
113	Bharuch	Mokhdi	21.5330000	73.2880000	8.46	77.40	68.94
114	Bharuch	Motwan	21.5560000	72.8880000	5.25	13.60	8.35
115	Bharuch	Navetha	21.7080000	72.8310000	5.60	9.20	3.60
116	Bharuch	Netrang(Rep)_Pz	21.6420000	73.3670000	13.10	125.00	111.90
117	Bharuch	Netrang1	21.6330000	73.3670000	8.20	128.10	119.90
118	Bharuch	Nirnavi	21.7920000	72.6680000	7.32	8.10	0.78

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
119	Bharuch	Panoli	21.5380000	72.9750000	3.05	26.00	22.95
120	Bharuch	Raymal	21.5210000	72.8210000	4.27	12.30	8.03
121	Bharuch	Roja tankaria	21.9170000	72.7920000	7.57	8.70	1.13
122	Bharuch	Sahol	21.4730000	72.8100000	4.75	11.80	7.05
123	Bharuch	Sajod	21.6170000	72.9240000	3.89	9.20	5.31
124	Bharuch	Sarod	22.1580000	72.7580000	7.60	20.40	12.80
125	Bharuch	Sindhav	22.0270000	72.6360000	7.71	6.00	-1.71
126	Bharuch	Tankari	21.9920000	72.6750000	5.93	7.20	1.27
127	Bharuch	Utraj	21.5920000	72.8250000	4.60	5.60	1.00
128	Bhavnagar	Ambala	21.7111111	71.841667	15.74	55.50	39.76
129	Bhavnagar	Ayodhayapuram	21.960278	71.886389	6.46	17.80	11.34
130	Bhavnagar	Bhavnagar1	21.916667	70.748611	4.31	24.20	19.89
131	Bhavnagar	Bhudel	21.916000	69.858000	3.74	34.60	30.86
132	Bhavnagar	Bhutia	21.747000	71.700000	12.77	59.00	46.23
133	Bhavnagar	Bora	21.191000	71.929000	22.10	18.40	-3.70
134	Bhavnagar	Chowk Pz	21.429000	71.764000	16.70	55.00	38.30
135	Bhavnagar	Dudhala	21.138000	71.658000	13.70	53.50	39.80
136	Bhavnagar	Gariyadhar	21.543000	71.565000	24.54	98.40	73.86
137	Bhavnagar	Ghogha1	21.683000	72.279000	3.12	12.30	9.18
138	Bhavnagar	Jalia	21.800000	71.617000	17.79	69.60	51.81
139	Bhavnagar	Kajavadar	21.651111	71.973333	5.72	160.30	154.58
140	Bhavnagar	Khari	21.268889	71.778889	10.03	45.80	35.77
141	Bhavnagar	Khijadiya	21.637500	71.700000	10.40	96.00	85.60
142	Bhavnagar	Kundheli	21.379000	71.981000	12.39	40.80	28.41
143	Bhavnagar	Longadi	21.214000	71.883000	4.37	39.60	35.23
144	Bhavnagar	Lonjdhara	22.097222	71.897222	16.99	23.40	6.41
145	Bhavnagar	Mahuva4	21.095833	71.766667	8.30	20.80	12.50
146	Bhavnagar	Motivadal	21.197000	71.550000	4.44	114.40	109.96
147	Bhavnagar	Palitana1	21.525000	71.824000	7.96	68.60	60.64
148	Bhavnagar	Palitana2	21.522000	71.839000	20.55	59.30	38.75
149	Bhavnagar	Panchpipla	21.550000	71.721000	5.37	81.80	76.43
150	Bhavnagar	Sajnasar	21.425000	71.912500	7.90	64.80	56.90
151	Bhavnagar	Sandhida	21.688000	71.758000	9.60	82.60	73.00
152	Bhavnagar	Satanes	21.441667	71.837500	16.57	83.20	66.63
153	Bhavnagar	Shantinagar	21.246000	71.650000	14.60	123.20	108.60
154	Bhavnagar	Tana	22.269933	69.373260	18.57	27.30	8.73
155	Bhavnagar	Timbi2	21.832000	71.766000	11.02	29.40	18.38
156	Bhavnagar	Ukharala	21.770000	71.887000	24.16	17.60	-6.56
157	Bhavnagar	Umrالا	21.847000	71.808000	9.72	23.70	13.98
158	Bhavnagar	Vadal	21.476944	71.806111	13.50	259.20	245.70

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
159	Bhavnagar	Vallbhipur	21.883000	71.875000	4.42	16.00	11.58
160	Botad	Barvala	22.150000	71.892000	5.39	28.00	22.61
161	Botad	Dhasa	21.800000	71.508000	3.83	90.40	86.57
162	Botad	Ningala	22.018000	71.700000	5.99	56.40	50.41
163	Botad	Paliyad2	22.256000	71.564000	23.61	109.80	86.19
164	Botad	Rajpada	22.308000	71.692000	17.07	81.00	63.93
165	Botad	Salangpor	22.158000	71.771000	22.30	58.10	35.80
166	Botad	Senthali	22.168333	71.726667	3.67	140.10	136.43
167	Botad	Tardhera	22.229000	71.604000	19.30	111.80	92.50
168	Botad	Tatam	22.058000	71.633000	35.80	80.00	44.20
169	Chhotaudepur	Alladpur	22.250000	73.717000	7.73	82.60	74.87
170	Chhotaudepur	Asala	22.383000	73.933000	11.10	135.60	124.50
171	Chhotaudepur	Asar	22.204000	74.011000	12.88	175.80	162.92
172	Chhotaudepur	Baladgam	22.137500	74.008333	13.00	159.10	146.10
173	Chhotaudepur	Bhindol	22.200000	73.900000	11.40	109.00	97.60
174	Chhotaudepur	Chavaria	23.320000	71.824167	12.30	152.10	139.80
175	Chhotaudepur	Chhota udepur	22.307105	74.017062	7.94	154.90	146.96
176	Chhotaudepur	Devat (thadgam)	22.100000	73.983333	8.28	160.20	151.92
177	Chhotaudepur	Ferkuva	22.366667	74.208333	7.20	241.20	234.00
178	Chhotaudepur	Govindpura	22.211000	73.741000	5.70	78.90	73.20
179	Chhotaudepur	Jojh	22.442000	73.963000	11.80	163.60	151.80
180	Chhotaudepur	Kevadi	22.517000	73.942000	7.57	201.40	193.83
181	Chhotaudepur	Kosindra Pz-I	22.147000	73.756000	4.33	83.40	79.07
182	Chhotaudepur	Moti chikhali	22.011000	74.083000	3.18	296.20	293.02
183	Chhotaudepur	Panwad	22.200000	74.042000	9.30	174.40	165.10
184	Chhotaudepur	Pavi	22.342000	73.833000	4.90	101.80	96.90
185	Chhotaudepur	Pitha	22.254000	73.642000	6.31	70.90	64.59
186	Chhotaudepur	Saidivasana	22.058333	74.016667	5.60	215.80	210.20
187	Chhotaudepur	Vagudan	22.067000	74.142000	6.34	260.40	254.06
188	Dahod	Bapda	22.670000	73.842000	4.87	190.60	185.73
189	Dahod	Dadhela	22.838000	74.067000	8.40	263.60	255.20
190	Dahod	Dahod	23.957222	72.500000	1.74	302.20	300.46
191	Dahod	Dahod2	24.188889	72.765278	5.27	310.40	305.13
192	Dahod	Devgadh Baria	22.700000	73.914000	11.00	200.80	189.80
193	Dahod	Devgadh bariya	22.700000	73.917000	16.88	207.00	190.12
194	Dahod	Dhanpur	22.633000	74.104000	14.85	256.90	242.05
195	Dahod	Dohad_Urban1	20.806667	73.227500	6.50	318.20	311.70
196	Dahod	Dohad_Urban2	22.844722	74.266667	11.50	301.40	289.90
197	Dahod	Dohad_Urban3	22.839722	74.233889	8.02	321.60	313.58
198	Dahod	Garada	23.165000	74.123000	9.60	279.20	269.60

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
199	Dahod	Jhalod	23.093000	74.147000	8.86	270.80	261.94
200	Dahod	Jhalod1	23.092000	74.133000	13.10	274.60	261.50
201	Dahod	Limbd12	23.004000	74.158000	4.10	276.80	272.70
202	Dahod	Limkheda	22.831000	73.986000	7.78	204.70	196.92
203	Dahod	Nava Vadiya	22.89476	74.045213	6.12	254	247.88
204	Dahod	Panchwada	22.729000	74.308000	6.00	327.40	321.40
205	Dahod	Pipero	22.647000	74.090000	12.89	244.00	231.11
206	Dahod	Salaya1	22.158000	71.771000	15.52	202.30	186.78
207	Dahod	Sarsava	23.228000	73.977000	11.45	178.00	166.55
208	Dahod	Sukhsar	23.150000	74.050000	8.55	196.00	187.45
209	Dahod	Tokarba	22.604000	74.038000	8.05	232.50	224.45
210	Dahod	Varamkheda	22.800000	74.275000	2.90	298.00	295.10
211	Dahod	Wadia	22.900000	74.050000	8.34	229.00	220.66
212	Devbhoomi Dwarka	Amaliya Chokri	22.240000	69.125000	3.75	42.00	38.25
213	Devbhoomi Dwarka	Ambardi	21.916000	69.858000	12.61	82.20	69.59
214	Devbhoomi Dwarka	Aramda	22.433000	69.042000	5.35	5.20	-0.15
215	Devbhoomi Dwarka	Asota mota	22.135626	69.755954	7.25	100.30	93.05
216	Devbhoomi Dwarka	Bajana	22.261934	69.464247	11.90	16.40	4.50
217	Devbhoomi Dwarka	Beh	22.136000	69.756000	18.60	100.40	81.80
218	Devbhoomi Dwarka	Bhatia	22.092000	69.301000	3.53	35.20	31.67
219	Devbhoomi Dwarka	Bhogat	21.990491	69.244275	10.44	9.10	-1.34
220	Devbhoomi Dwarka	Bhogat1	21.992000	69.246000	10.15	9.40	-0.75
221	Devbhoomi Dwarka	Danta	22.272262	69.679897	7.83	33.30	25.47
222	Devbhoomi Dwarka	Drasan Vel	22.290413	69.039519	13.80	62.00	48.20
223	Devbhoomi Dwarka	Dwarka	22.246000	68.958000	7.97	12.10	4.13
224	Devbhoomi Dwarka	Gandhvi	21.856000	69.359000	10.20	9.50	-0.70
225	Devbhoomi Dwarka	Gojines	22.024550	69.204243	8.97	13.20	4.23
226	Devbhoomi Dwarka	Gorinja	22.159000	69.065000	13.00	26.80	13.80
227	Devbhoomi Dwarka	Gurgadh	22.194701	69.190933	12.08	141.80	129.72
228	Devbhoomi Dwarka	Hambusar	22.384000	69.054000	1.70	7.90	6.20
229	Devbhoomi Dwarka	Hanzdapur	22.189000	69.437000	7.40	34.70	27.30
230	Devbhoomi Dwarka	Jampar	22.036355	69.761227	21.80	34.30	12.50

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
231	Devbhoomi Dwarka	Juvanpur	22.171000	69.367000	11.50	44.90	33.40
232	Devbhoomi Dwarka	Kajuda	22.333000	69.708000	4.60	22.40	17.80
233	Devbhoomi Dwarka	Kalyanpur	22.307580	69.054212	4.60	106.50	101.90
234	Devbhoomi Dwarka	Kalyanpur2	22.017000	69.392000	26.07	37.80	11.73
235	Devbhoomi Dwarka	Khirsara	21.979000	69.600000	6.72	40.00	33.28
236	Devbhoomi Dwarka	Korada	22.224000	69.048000	7.60	24.90	17.30
237	Devbhoomi Dwarka	Kuvadla	22.201000	69.583000	11.10	44.30	33.20
238	Devbhoomi Dwarka	Lamba	21.893019	69.324286	14.50	113.70	99.20
239	Devbhoomi Dwarka	Lambha 1	21.899000	69.324000	5.78	18.40	12.62
240	Devbhoomi Dwarka	Mewasha	21.925606	69.815931	15.60	34.50	18.90
241	Devbhoomi Dwarka	Modpar	21.858000	69.808000	17.40	93.50	76.10
242	Devbhoomi Dwarka	Mojap	22.367000	68.983000	7.47	9.40	1.93
243	Devbhoomi Dwarka	Mota gunda	22.011529	69.718961	11.20	69.70	58.50
244	Devbhoomi Dwarka	Mota kalawad	21.908000	69.829000	20.45	69.20	48.75
245	Devbhoomi Dwarka	Mulvasar	22.266000	69.089000	4.00	209.00	205.00
246	Devbhoomi Dwarka	Mulvasar	22.265686	69.089507	3.75	209.00	205.25
247	Devbhoomi Dwarka	Nagadiya	21.390469	70.374770	11.15	35.20	24.05
248	Devbhoomi Dwarka	Navadra	22.686775	69.286489	6.70	80.60	73.90
249	Devbhoomi Dwarka	Nawagam	21.976344	69.765637	3.55	23.70	20.15
250	Devbhoomi Dwarka	Samrasar1	22.375000	69.104000	3.53	9.20	5.67
251	Devbhoomi Dwarka	Vamansa	22.084000	69.188700	4.43	19.00	14.57
252	Devbhoomi Dwarka	Varwada	22.292000	68.967000	10.60	14.10	3.50
253	Gandhinagar	Adalaj_Pz_III	23.175000	72.558000	34.14	64.80	30.66
254	Gandhinagar	Kasturinagar(IFFCO)	23.190000	72.553000	19.35	74.20	54.85
255	Gandhinagar	Sama OW	22.630920	73.423463	6.46	150.70	144.24
256	Gandhinagar	Vejalpur	22.696000	73.558000	5.45	104.40	98.95
257	Gir Somnath	Ajotha	20.902000	70.518000	16.24	28.80	12.56
258	Gir Somnath	Alwani	21.231000	70.638000	2.60	216.00	213.40
259	Gir Somnath	Dolasa	20.819369	70.847198	11.80	21.80	10.00
260	Gir Somnath	Gangda_Pz	20.858000	71.167000	5.82	20.60	14.78
261	Gir Somnath	Ghotwad	20.927120	70.760480	6.50	19.60	13.10

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
262	Gir Somnath	Girgadhada	20.925000	70.917000	9.73	84.00	74.27
263	Gir Somnath	Govindpura2	20.946000	70.396000	27.17	27.00	-0.17
264	Gir Somnath	Jambur[madhapar	21.029000	70.608000	7.38	112.60	105.22
265	Gir Somnath	Jamvala1	20.983000	70.763000	4.74	98.40	93.66
266	Gir Somnath	Jargla Jargali	20.881000	70.984000	11.38	55.40	44.02
267	Gir Somnath	Kesariya1	20.796000	70.942000	16.30	28.10	11.80
268	Gir Somnath	Kodinar1	20.800000	70.692000	13.12	15.40	2.28
269	Gir Somnath	Nadiya Mandavi	21.940849	69.562182	4.88	34.30	29.42
270	Jamnagar	Balwa	21.904000	69.958000	17.52	116.10	98.58
271	Jamnagar	Bangour	22.096400	69.879000	17.70	115.50	97.80
272	Jamnagar	Bed1	22.438000	69.900000	7.89	16.60	8.71
273	Jamnagar	Bedanpur	22.683000	70.317000	1.65	13.10	11.45
274	Jamnagar	Changa	20.258333	72.883333	12.45	41.40	28.95
275	Jamnagar	Dhrol2	22.567000	70.417000	4.04	34.20	30.16
276	Jamnagar	Dudhai2	22.792000	70.504000	2.23	14.20	11.97
277	Jamnagar	Falla	22.533600	70.314100	3.55	31.70	28.15
278	Jamnagar	Gordhanpur	22.450000	70.001000	4.40	13.20	8.80
279	Jamnagar	Haripur2	22.271000	70.333000	16.71	86.80	70.09
280	Jamnagar	Jambuda	22.525000	70.204000	8.84	8.40	-0.44
281	Jamnagar	Jamjodhpur	21.906000	70.031000	6.74	101.20	94.46
282	Jamnagar	Jamnagar1	22.471000	70.050000	6.05	22.00	15.95
283	Jamnagar	Jamnagar2	22.458000	70.079000	3.67	16.40	12.73
284	Jamnagar	Kalawad	22.217000	70.383000	3.46	86.40	82.94
285	Jamnagar	Kesiya	22.697000	70.397000	9.30	17.10	7.80
286	Jamnagar	Lalpur1	22.192000	69.961000	11.70	74.50	62.80
287	Jamnagar	Latipur	22.618780	70.539820	6.57	16.30	9.73
288	Jamnagar	Latipur_1	22.689000	70.559000	7.02	26.20	19.18
289	Jamnagar	Motagop	22.038000	69.875000	10.12	69.50	59.38
290	Jamnagar	Moti khavdi	22.388000	69.867000	4.57	21.60	17.03
291	Jamnagar	Moti matli	22.316667	70.263889	23.25	73.90	50.65
292	Jamnagar	Nikava	22.192000	70.533000	1.42	125.70	124.28
293	Jamnagar	Pindara1	22.247000	69.258000	5.82	14.20	8.38
294	Jamnagar	Pithad	21.811347	69.922101	3.60	122.70	119.10
295	Jamnagar	Pithad_1	21.811000	69.922000	4.10	72.30	68.20
296	Jamnagar	Raval	21.930000	69.492000	5.70	7.80	2.10
297	Jamnagar	Salaya	22.158000	71.771000	3.01	6.70	3.69
298	Jamnagar	Satapar	21.811204	69.921972	16.20	46.20	30.00
299	Jamnagar	Seth vadala	22.033000	70.125000	8.07	148.20	140.13
300	Jamnagar	Toda	22.063000	70.383000	12.76	145.00	132.24
301	Jamnagar	Vad panchasara	22.233000	70.117000	15.55	96.10	80.55

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
302	Jamnagar	Vadtara	22.208000	69.500000	9.60	44.20	34.60
303	Jamnagar	Vamansa	22.084000	69.188700	4.43	11.00	6.57
304	Jamnagar	Vijarkha	22.417000	70.183000	10.20	30.80	20.60
305	Jamnagar	Vinjalpur	22.150000	69.600000	5.76	61.00	55.24
306	Junagadh	Anandpur	21.410000	70.518000	21.00	69.40	48.40
307	Junagadh	Arena	21.081000	70.176000	12.63	12.00	-0.63
308	Junagadh	Bagadi	21.373585	70.508591	15.00	71.80	56.80
309	Junagadh	Bamanwara	21.221000	70.056000	7.51	12.30	4.79
310	Junagadh	Bantva	21.488000	70.083000	10.30	23.00	12.70
311	Junagadh	Bhesan	21.549542	70.706109	12.90	142.40	129.50
312	Junagadh	Bilkha	21.439000	70.600000	8.70	95.60	86.90
313	Junagadh	Chokli	21.602000	70.542000	16.27	98.00	81.73
314	Junagadh	Chorwad	21.042000	70.217000	6.97	18.20	11.23
315	Junagadh	Dantrana	21.376888	70.464501	16.90	61.80	44.90
316	Junagadh	Galodar	21.147000	70.275000	15.76	53.20	37.44
317	Junagadh	Gorajl	21.183000	70.154000	39.40	36.80	-2.60
318	Junagadh	Junagadh	21.509000	70.462000	13.09	100.60	87.51
319	Junagadh	Junagadh I	21.517000	70.458000	12.65	90.40	77.75
320	Junagadh	Juni Dhari Gundali	21.532885	70.797274	18.72	8.00	-10.72
321	Junagadh	Juthal	21.167000	70.267000	6.58	61.40	54.82
322	Junagadh	Kalej	21.249000	70.058000	5.00	13.50	8.50
323	Junagadh	Kasia Naka Check Post	21.270000	70.681000	6.55	169.40	162.85
324	Junagadh	Khadiya	21.422986	70.518089	13.65	189.30	175.65
325	Junagadh	Khambalia I	21.044000	70.192000	8.83	10.40	1.57
326	Junagadh	Khokharda	21.421000	70.317000	23.44	37.80	14.36
327	Junagadh	Khorada I	21.064000	70.174000	7.65	11.20	3.55
328	Junagadh	Khoras ahir	21.371000	70.339000	14.65	46.60	31.95
329	Junagadh	Kukaswada	21.054000	70.208000	13.37	14.00	0.63
330	Junagadh	Lohej	21.167000	70.067000	16.00	16.40	0.40
331	Junagadh	Maktupur I	21.143000	70.096000	8.10	15.50	7.40
332	Junagadh	Mandawad	21.358000	70.746000	14.51	131.20	116.69
333	Junagadh	Manketara	21.150000	70.129000	32.40	25.80	-6.60
334	Junagadh	Mendarda I	21.325000	70.433000	16.73	86.40	69.67
335	Junagadh	Moti Kodyar	23.588322	71.861259	14.80	105.20	90.40
336	Junagadh	Osa	21.372894	70.064164	4.15	55.30	51.15
337	Junagadh	Patla	21.604000	70.569000	19.70	105.70	86.00
338	Junagadh	Prasli	20.851000	70.669000	16.56	23.40	6.84
339	Junagadh	Prempara	21.300000	70.700000	19.00	146.00	127.00
340	Junagadh	Sametar	20.854000	71.121000	11.34	30.80	19.46
341	Junagadh	Saradiya	21.589000	70.038000	15.30	15.70	0.40

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342	Junagadh	Sepa	21.117000	70.219000	20.68	40.50	19.82
343	Junagadh	Shardagram	21.104000	70.153000	11.80	10.60	-1.20
344	Junagadh	Sil	21.186000	70.046000	5.04	11.90	6.86
345	Junagadh	Sil bandar	21.224000	70.056000	3.37	13.60	10.23
346	Junagadh	Sobhavadla Gir	21.346970	70.587451	14.30	110.10	95.80
347	Junagadh	Talala_Pz	21.064000	70.538000	10.56	95.10	84.54
348	Junagadh	Talala1	21.051000	70.525000	10.30	87.80	77.50
349	Junagadh	Una2	20.825000	71.042000	6.27	30.60	24.33
350	Junagadh	Visavadar	21.339000	70.749000	15.51	136.00	120.49
351	Kachchh	Adesar	23.554899	70.959666	4.73	35.50	30.77
352	Kachchh	Bambhdai	22.939000	69.083000	4.56	7.60	3.04
353	Kachchh	Bhadreshwar	22.900000	69.900000	4.36	10.00	5.64
354	Kachchh	Bhuj (Circuit House)	23.250000	69.667000	14.32	105.40	91.08
355	Kachchh	Deshalpur rapar	23.747000	70.679000	15.45	14.00	-1.45
356	Kachchh	Dolatpar	21.693591	70.004462	3.76	53.10	49.34
357	Kachchh	Dunai	23.050000	69.500000	9.87	108.00	98.13
358	Kachchh	Haboi	23.358000	69.867000	0.66	107.00	106.34
359	Kachchh	Kakarwa	23.475000	70.404000	10.45	58.60	48.15
360	Kachchh	Karagoga	22.942000	69.663000	0.50	50.30	49.80
361	Kachchh	Kharai_1	23.463000	68.686000	1.59	52.80	51.21
362	Kachchh	Kharoi	23.454000	70.350000	7.61	38.60	30.99
363	Kachchh	Khavada	23.839000	69.731000	6.98	16.80	9.82
364	Kachchh	Kotadi	23.042000	69.192000	5.54	77.20	71.66
365	Kachchh	Kotay	23.384678	69.784695	6.45	237.30	230.85
366	Kachchh	Kotaya	23.042000	69.075000	4.80	36.60	31.80
367	Kachchh	Kothara	23.162000	68.912000	4.86	30.60	25.74
368	Kachchh	Lakhpat	23.823000	68.775000	6.37	14.20	7.83
369	Kachchh	Luni	22.873000	69.812000	3.87	12.60	8.73
370	Kachchh	Mandvi (Shitla Mata)	22.833000	69.333000	4.69	13.20	8.51
371	Kachchh	Mata no madh	23.533000	68.950000	6.00	91.80	85.80
372	Kachchh	Mau Moti_1	23.076000	69.299000	2.85	108.00	105.15
373	Kachchh	Mothala	23.208000	69.125000	1.62	82.60	80.98
374	Kachchh	Moti cher	23.758000	68.675000	1.83	16.40	14.57
375	Kachchh	Naliya	23.256000	68.840000	10.62	24.20	13.58
376	Kachchh	Naliya (Bus S)	23.267000	68.833000	10.95	19.30	8.35
377	Kachchh	Nani Tumbdi	22.996284	69.548968	3.55	205.30	201.75
378	Kachchh	Panchasar Pz II	23.548000	70.770000	30.87	87.80	56.93
379	Kachchh	Rapar2	23.567000	70.638000	27.46	61.40	33.94
380	Kachchh	Ratanpur Khadir1	23.861000	70.363000	13.60	36.70	23.10
381	Kachchh	Samkhiari	23.300000	70.508000	4.57	40.80	36.23

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382	Kachchh	Sedat	23.171000	69.638000	11.03	225.30	214.27
383	Kachchh	Shinaya	23.033000	70.054000	6.03	39.70	33.67
384	Kachchh	Sukhpar	23.208000	69.617000	12.89	121.00	108.11
385	Kachchh	Tera	23.283000	68.947000	7.37	46.90	39.53
386	Kachchh	Tuna	23.019178	70.05057	3.42	67.00	63.58
387	Kachchh	Vadala	22.916000	69.856000	7.40	18.40	11.00
388	Kachchh	Vinjhanl	23.100000	69.025000	6.01	47.00	40.99
389	Kheda	Alina	22.808000	73.058000	12.41	48.40	35.99
390	Kheda	Boriyavi	22.636000	72.909000	6.66	39.10	32.44
391	Kheda	Dakor	24.188889	72.760556	5.18	59.20	54.02
392	Kheda	Kalesar	22.721000	73.192000	2.60	59.40	56.80
393	Kheda	Ladvel	22.908000	73.121000	1.80	69.10	67.30
394	Kheda	Mahudha	22.783000	72.942000	1.85	40.10	38.25
395	Kheda	Muliyad	22.783000	73.177000	2.20	58.30	56.10
396	Kheda	Nes_Pz	22.710000	73.200000	11.79	62.00	50.21
397	Kheda	Shekhupura	22.575000	72.625000	4.95	24.00	19.05
398	Kheda	Vyas vasna	23.106000	73.104000	23.45	86.40	62.95
399	Mahisagar	Bavaliya_Pz	23.307000	73.555000	31.66	167.20	135.54
400	Mahisagar	Jokha	23.062000	73.620000	12.77	95.20	82.43
401	Mahisagar	Kantha	23.178000	73.652000	5.24	108.50	103.26
402	Mahisagar	Khanpur	23.370000	73.677000	8.40	180.00	171.60
403	Mahisagar	Kothamba	23.019000	73.519000	5.05	94.00	88.95
404	Mahisagar	Limbadia peti	23.204000	73.600000	6.60	91.00	84.40
405	Mahisagar	Lunawada	23.129000	73.608000	11.41	101.10	89.69
406	Mahisagar	Malekpur1	23.231000	73.736000	2.80	111.00	108.20
407	Mahisagar	Pandarvada	23.375000	73.633000	15.56	158.80	143.24
408	Mahisagar	Santrampur1	23.192000	73.908000	11.32	143.80	132.48
409	Mahisagar	Ucharpi Pz	23.119000	73.472000	21.66	104.40	82.74
410	Mehsana	Asjol	23.508000	72.183000	2.86	55.30	52.44
411	Mehsana	Bhandupara	23.725000	72.383000	16.55	101.00	84.45
412	Mehsana	Budasan	23.288000	72.375000	6.64	62.60	55.96
413	Mehsana	Daran_Pz-III	23.206389	72.279722	3.20	61.80	58.60
414	Mehsana	Dharpura	23.546000	72.113000	6.31	51.70	45.39
415	Mehsana	Dosaj	23.842000	72.450000	15.19	131.00	115.81
416	Mehsana	Gunja	23.745740	72.590520	4.15	26.80	22.65
417	Mehsana	Karalli (iii)	23.804167	72.486111	12.17	50.30	38.13
418	Mehsana	Kesimpa	23.824840	72.615710	16.68	107.10	90.42
419	Mehsana	Kheralu1	23.888000	72.613000	10.08	175.00	164.92
420	Mehsana	Ladol	23.621510	72.732700	20.56	275.50	254.94
421	Mehsana	Maguna	23.578000	72.289000	5.17	72.80	67.63

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422	Mehsana	Mau	23.510000	72.519000	10.14	100.80	90.66
423	Mehsana	Padhadya	23.523000	72.533000	11.27	106.00	94.73
424	Mehsana	Panchot	23.629000	72.342000	5.48	82.00	76.52
425	Mehsana	Rampura 1	23.892000	72.517000	11.74	160.00	148.26
426	Mehsana	Sankhalpur	23.521520	72.029980	6.13	160.10	153.97
427	Mehsana	Sihi	23.800000	72.350000	9.64	111.00	101.36
428	Mehsana	Tarabh	23.758000	72.458000	6.67	123.20	116.53
429	Mehsana	Unawa	23.767000	72.363000	3.28	109.50	106.22
430	Mehsana	Unjha	23.798000	72.394000	7.22	116.60	109.38
431	Mehsana	Vadnagar (M)	23.789280	72.646100	3.98	119.00	115.02
432	Mehsana	Varetha	23.967080	72.684600	3.77	105.10	101.33
433	Mehsana	Vav	24.015480	72.782470	11.14	23.00	11.86
434	Mehsana	Vidaj	23.247000	72.300000	1.23	56.40	55.17
435	Mehsana	Visnagar iv	23.700000	72.533000	6.99	124.20	117.21
436	Morbi	Amar nagar	22.933000	70.808000	0.50	33.10	32.60
437	Morbi	Chhatar	22.504000	70.754000	6.47	96.70	90.23
438	Morbi	Hadmatia	22.683000	70.808000	2.45	79.90	77.45
439	Morbi	Jetpur Pithad	23.022000	70.918000	4.12	26.50	22.38
440	Morbi	Kalyanpur2	22.658000	70.733000	1.60	64.80	63.20
441	Morbi	Malia	23.092000	70.763000	2.30	6.50	4.20
442	Morbi	Modpar 1	22.900000	70.667000	0.68	23.20	22.52
443	Morbi	Morvi	22.817000	70.842000	3.70	43.80	40.10
444	Morbi	Mota dhansura	22.958000	70.617000	3.82	11.90	8.08
445	Morbi	Neknam	22.504000	70.696000	9.65	86.30	76.65
446	Morbi	Nichi mandal	22.858000	70.950000	3.15	72.40	69.25
447	Morbi	Sarvad	23.006000	70.707000	2.25	17.40	15.15
448	Narmada	Agar(Rep)_Pz	22.031000	73.657000	14.82	59.50	44.68
449	Narmada	Amayar	21.547000	73.767000	6.85	192.70	185.85
450	Narmada	Baman Phalia_Pz	21.798000	73.379000	20.06	90.00	69.94
451	Narmada	Chikada	21.521000	73.646000	5.45	239.20	233.75
452	Narmada	Chuli	21.555000	73.476000	12.23	197.00	184.77
453	Narmada	Garudeshwar	21.892000	73.650000	11.48	41.60	30.12
454	Narmada	Hirapura	21.868000	73.600000	5.45	65.00	59.55
455	Narmada	Jankh	21.492000	73.597000	5.45	207.40	201.95
456	Narmada	Kanbi pitha	21.521000	73.646000	4.18	239.20	235.02
457	Narmada	Kewadia_Pz	21.883000	73.701000	5.88	61.30	55.42
458	Narmada	Kewarda	21.267000	70.208000	17.00	53.10	36.10
459	Narmada	Khakharda	22.104767	69.372104	7.63	76.00	68.37
460	Narmada	Khota amba	21.733000	73.475000	3.81	156.60	152.79
461	Narmada	Namaria	22.044000	73.622000	3.64	61.20	57.56

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
462	Narmada	Nani singlot	21.657610	73.646310	9.73	247.60	237.87
463	Narmada	Ralda	21.610000	73.653000	5.50	264.40	258.90
464	Narmada	Rasela	21.925000	73.492000	15.83	30.20	14.37
465	Narmada	Ringani	21.842000	73.467000	1.98	73.20	71.22
466	Narmada	Sengpur	22.038000	73.888000	7.10	161.80	154.70
467	Narmada	Umran	21.847000	71.808000	7.90	23.70	15.80
468	Navsari	Abrama	20.863000	72.900000	2.15	5.80	3.65
469	Navsari	Chadav	20.831000	73.334000	9.85	71.80	61.95
470	Navsari	Chinam	20.992000	72.886000	4.85	9.40	4.55
471	Navsari	Dandi	20.892000	72.808000	3.65	3.80	0.15
472	Navsari	Duvada	20.829000	73.058000	6.22	22.20	15.98
473	Navsari	Kaliyari	20.725000	73.150000	12.30	47.00	34.70
474	Navsari	Kantasvel	20.797000	73.292000	9.25	70.00	60.75
475	Navsari	Khergam	20.633000	73.096000	7.30	42.00	34.70
476	Navsari	Manav Khadak	20.674000	73.233000	3.15	80.90	77.75
477	Navsari	Moti Valzar	20.805000	73.267000	8.35	71.60	63.25
478	Navsari	Navsari 1	20.958000	72.935000	5.72	7.20	1.48
479	Navsari	Onjal	20.833000	72.842000	5.70	9.60	3.90
480	Navsari	Panikhadak	20.649000	73.167000	13.50	62.70	49.20
481	Navsari	Parjan	20.023132	72.836253	4.80	25.90	21.10
482	Navsari	Rankuva	20.813000	73.158000	10.30	40.80	30.50
483	Navsari	Rumla	20.689167	73.158889	7.20	105.20	98.00
484	Navsari	Sari_khurd	20.788000	72.954000	3.00	7.20	4.20
485	Navsari	Ubhrat	21.008000	72.746000	4.38	2.90	-1.48
486	Navsari	Vansda	20.764000	73.363000	11.60	109.40	97.80
487	Panchmahal	Chhabanpur	22.828000	73.613000	9.87	127.50	117.63
488	Panchmahal	Dhanol	22.759000	73.507000	2.08	103.90	101.82
489	Panchmahal	Godhra_UR1	22.793000	73.607000	5.48	126.60	121.12
490	Panchmahal	Godhra_UR3	22.780000	73.607000	2.23	123.00	120.77
491	Panchmahal	Godhra2	22.771000	73.633000	10.44	127.10	116.66
492	Panchmahal	Jambughoda	22.369000	73.725000	7.05	107.00	99.95
493	Panchmahal	Jambughoda1	22.373000	73.723000	4.50	105.40	100.90
494	Panchmahal	Javan	22.401000	73.685000	8.64	260.80	252.16
495	Panchmahal	Kalol_UR1	22.600278	73.443333	13.10	82.80	69.70
496	Panchmahal	Kalol_UR2	22.590000	73.451000	17.79	85.00	67.21
497	Panchmahal	Khadki_Vadiya	22.662000	73.500000	16.30	95.00	78.70
498	Panchmahal	Khageshri	21.751614	69.984198	8.10	76.50	68.40
499	Panchmahal	Pavagadh	22.488000	73.556000	10.84	127.20	116.36
500	Panchmahal	Ranipura	22.725000	73.758000	8.40	174.00	165.60
501	Panchmahal	Santroad1	22.803000	73.793000	16.75	152.60	135.85

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
502	Panchmahal	Shehra	22.954000	73.625000	3.50	126.00	122.50
503	Panchmahal	Shivrajpur	22.425000	73.592000	12.50	99.60	87.10
504	Panchmahal	Suliyat	23.062000	73.851000	24.70	149.40	124.70
505	Panchmahal	Tarkanda	22.546000	73.529000	8.90	103.40	94.50
506	Panchmahal	Timbi2	22.508000	73.508000	5.90	126.00	120.10
507	Panchmahal	Tuwa	22.804000	73.471000	5.40	82.50	77.10
508	Panchmahal	Umarpur	22.873056	73.615833	6.60	29.7	23.10
509	Patan	Balisana	23.814391	72.254161	19.15	97.00	77.85
510	Patan	Dharmoda	23.697000	72.069000	3.32	60.20	56.88
511	Patan	Dhinoj1	23.663000	72.279000	9.50	79.30	69.80
512	Patan	Gochanad	23.771261	71.624568	4.09	69.90	65.81
513	Patan	Kamboi	23.677606	72.016650	2.81	19.80	16.99
514	Patan	Moti chander	23.594000	71.781000	2.05	28.10	26.05
515	Patan	Mujpur	20.742537	71.012074	3.16	29.50	26.34
516	Patan	Piprala_1	23.655000	71.086000	11.32	22.60	11.28
517	Patan	Sander	23.767000	72.254000	9.50	89.10	79.60
518	Patan	Sankheshwar	23.522000	71.791000	2.09	25.80	23.71
519	Patan	Shankhari	23.779000	72.163000	18.41	79.10	60.69
520	Patan	Vauva(Repl)_Pz	23.799000	71.090000	2.69	15.00	12.31
521	Porbandar	Adityana	21.709000	69.711000	9.65	20.60	10.95
522	Porbandar	Adwana2	21.917000	69.600000	13.92	19.60	5.68
523	Porbandar	Babda	21.770000	69.588000	9.60	15.40	5.80
524	Porbandar	Bakharla	21.765000	69.661000	11.23	46.40	35.17
525	Porbandar	Balej	21.370833	69.875000	3.05	6.00	2.95
526	Porbandar	Bhod	21.659000	69.821000	14.54	22.00	7.46
527	Porbandar	Bhoddar	21.575482	69.894917	5.00	10.80	5.80
528	Porbandar	Degam	21.710000	69.606000	12.45	18.20	5.75
529	Porbandar	Dhruvala	21.693591	70.004462	12.80	50.80	38.00
530	Porbandar	Hanumangadh1	21.793000	69.803000	8.50	72.50	64.00
531	Porbandar	Kadegi	21.451000	69.983000	2.04	9.50	7.46
532	Porbandar	Kandorna	21.648000	69.883000	12.78	22.40	9.62
533	Porbandar	Khambodar	21.808000	69.601000	14.10	21.80	7.70
534	Porbandar	Kuchhadi	21.683333	69.550000	2.90	0.80	-2.10
535	Porbandar	Kutiyana_Pz	21.622000	69.997000	11.55	11.20	-0.35
536	Porbandar	Kutiyana1	21.631000	70.017000	10.43	21.30	10.87
537	Porbandar	Miyani	21.833000	69.389000	7.75	9.80	2.05
538	Porbandar	Mocha	21.348000	69.889000	4.20	15.10	10.90
539	Porbandar	Mojiwana	21.886000	69.600000	7.55	20.60	13.05
540	Porbandar	Navibandar	21.446000	69.792000	2.33	8.10	5.77
541	Porbandar	Oddar	21.566667	69.680556	6.15	9.50	3.35

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
542	Porbandar	Palkhada1	21.758000	69.488000	9.63	12.60	2.97
543	Porbandar	Pata	21.297222	69.941667	4.25	5.10	0.85
544	Porbandar	Porbandar1	21.642000	69.625000	4.19	7.60	3.41
545	Porbandar	Ranavav2	21.683000	69.746000	8.20	28.70	20.50
546	Porbandar	Ratadi	21.720000	69.512000	6.69	6.00	-0.69
547	Porbandar	Ratia	21.438000	69.806000	4.80	6.50	1.70
548	Porbandar	Simar	21.947000	69.686000	15.60	54.60	39.00
549	Porbandar	Talaja2	21.367000	72.017000	9.14	21.20	12.06
550	Porbandar	Trapaj	21.425000	72.096000	20.00	54.00	34.00
551	Porbandar	Tukda	21.516000	69.729000	3.06	7.00	3.94
552	Porbandar	Visavada Mul Dwarka	21.786000	69.446000	8.90	17.60	8.70
553	Rajkot	Bhadla	22.183000	71.092000	11.66	230.70	219.04
554	Rajkot	Bhalgam	22.441667	71.083333	18.02	179.00	160.98
555	Rajkot	Dadia	22.092000	70.733000	14.55	154.70	140.15
556	Rajkot	Ganod	21.675000	70.179000	4.86	30.80	25.94
557	Rajkot	Gogavadar	21.967000	70.875000	15.55	154.20	138.65
558	Rajkot	Halenda	22.092000	71.050000	6.79	211.60	204.81
559	Rajkot	Jamwali	21.933000	70.767000	2.25	130.90	128.65
560	Rajkot	Jasapur	21.892000	70.483000	10.14	99.00	88.86
561	Rajkot	Jetpur	21.756000	70.619000	8.30	89.80	81.50
562	Rajkot	Jetpur pithad.	21.775000	70.633000	15.96	84.00	68.04
563	Rajkot	Kamlapur	22.146000	71.200000	12.05	243.20	231.15
564	Rajkot	Khamta	22.475000	70.550000	6.15	73.00	66.85
565	Rajkot	Khirsara1	22.242000	70.646000	19.60	41.00	21.40
566	Rajkot	Lalavadar	22.133000	71.304000	7.03	254.70	247.67
567	Rajkot	Lodhika1	22.142000	70.642000	8.45	159.50	151.05
568	Rajkot	Mota Dadwa	21.998000	70.994000	4.81	164.30	159.49
569	Rajkot	Motagundala	21.735000	70.501000	3.54	81.20	77.66
570	Rajkot	Movaiya	22.450000	70.608000	18.75	70.80	52.05
571	Rajkot	Padadhari1	22.447000	70.608000	6.89	70.50	63.61
572	Rajkot	Patanvav	21.644000	70.261000	14.65	82.40	67.75
573	Rajkot	Ranpur1	22.367000	70.929000	12.85	164.00	151.15
574	Rajkot	Ribda	22.125000	70.767000	11.90	173.00	161.10
575	Rajkot	Sardhar1	22.146000	70.989000	5.61	213.80	208.19
576	Rajkot	Sindhavadar	22.550000	70.892000	12.95	104.00	91.05
577	Rajkot	Targhari	22.383000	70.667000	6.27	85.20	78.93
578	Rajkot	Umrli	21.847000	71.808000	13.60	23.70	10.10
579	Rajkot	Upleta1	21.749000	70.275000	6.11	46.60	40.49
580	Rajkot	Viranagar	22.025000	71.125000	14.79	181.00	166.21
581	Rajkot	Virpur1	21.850000	70.696000	12.83	114.60	101.77

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
582	Sabarkantha	Abhapur	23.964000	73.258056	7.45	487.40	479.95
583	Sabarkantha	Atarsumba	23.986000	73.208000	7.68	273.00	265.32
584	Sabarkantha	Bhadreshwar(Daramli)	23.745197	72.983200	20.16	167.00	146.84
585	Sabarkantha	Boriya	23.243000	72.941000	8.10	81.60	73.50
586	Sabarkantha	Chandap_DW	23.923333	72.853333	18.48	174.60	156.12
587	Sabarkantha	Choriwad	23.900000	73.119000	15.36	218.20	202.84
588	Sabarkantha	Derol Pz-II	23.599000	72.903000	48.63	141.50	92.87
589	Sabarkantha	Harsol1	23.378000	73.017000	17.92	115.70	97.78
590	Sabarkantha	Hatharva	22.265686	69.089507	9.19	238.70	229.51
591	Sabarkantha	Himmatnagar_Pz	23.608000	72.971000	8.93	137.20	128.27
592	Sabarkantha	Idar	23.842000	73.038000	9.59	65.00	55.41
593	Sabarkantha	Jhaloti	23.950000	73.338000	11.50	318.20	306.70
594	Sabarkantha	Kesharpura	23.915000	73.145000	22.25	247.00	224.75
595	Sabarkantha	Kesharpura_Mayal	23.322000	72.949000	4.18	104.10	99.92
596	Sabarkantha	Khedbramha_1	24.029000	73.050000	13.80	213.20	199.40
597	Sabarkantha	Kherwada	23.969000	73.234000	6.90	37.00	30.10
598	Sabarkantha	Mathasuliya	23.603000	73.154000	7.43	191.60	184.17
599	Sabarkantha	Matoda	24.111000	73.008000	15.70	208.30	192.60
600	Sabarkantha	Poshina2	24.375000	73.033000	10.74	286.80	276.06
601	Sabarkantha	Revas	23.821000	73.117000	13.70	199.20	185.50
602	Sabarkantha	Sabalwad	23.874000	72.963000	22.65	241.50	218.85
603	Sabarkantha	Sakrodiya	23.545419	73.047996	9.28	54.60	45.32
604	Sabarkantha	Silwad	24.008000	73.117000	11.22	223.80	212.58
605	Sabarkantha	Umadpura	23.304000	72.964000	12.30	97.60	85.30
606	Sabarkantha	Varvada	23.442000	73.057000	18.70	119.80	101.10
607	Sabarkantha	Vijaynagar	24.008000	73.354000	3.50	359.00	355.50
608	Sabarkantha	Wadali	23.933000	73.033000	16.67	216.40	199.73
609	Surat	Allu	21.063000	73.192000	2.70	41.90	39.20
610	Surat	Bedkuva	21.185060	73.288145	4.31	51.00	46.69
611	Surat	Bhatkol	21.380000	73.004000	4.45	26.80	22.35
612	Surat	Jiav	21.115073	72.835349	4.36	153.90	149.54
613	Surat	Mahuva2	21.020833	73.145833	17.75	31.10	13.35
614	Surat	Miyawadi	21.224117	73.227235	15.15	57	41.85
615	Surat	Mota	21.170278	73.068611	3.71	26.80	23.09
616	Surat	Ognisa	21.405687	73.256352	8.28	117	108.72
617	Surat	Palsana	21.078000	72.992000	2.34	16.00	13.66
618	Surat	Parvat	21.369649	73.250554	7.6	108	100.40
619	Surat	Pinpur	21.447738	73.481512	5.06	243	237.94
620	Surat	Puna	20.924000	73.233000	12.74	50.40	37.66
621	Surat	Puna1	20.929167	73.229167	9.40	52.90	43.50

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
622	Surat	Raghipura	21.362921	73.264168	7.26	94	86.74
623	Surat	Sarbhon	21.058333	73.091667	3.70	83.00	79.30
624	Surat	Segva OW	23.925200	72.398300	3.56	72.20	68.64
625	Surat	Sultanabad	21.092000	72.725000	4.51	2.40	-2.11
626	Surat	Surali	21.145903	73.252555	4.1	65	60.90
627	Surat	Vaheval	20.837000	73.288000	9.54	68.00	58.46
628	Surendranagar	Anindra	22.810000	71.706000	2.75	58.00	55.25
629	Surendranagar	Bajana	23.116667	71.783333	1.71	16.40	14.69
630	Surendranagar	Bamanbor	22.416667	71.041667	13.47	201.00	187.53
631	Surendranagar	Dedadra	22.775	71.733	4.66	51.40	46.74
632	Surendranagar	Dhama	22.380694	71.397985	6.75	19.30	12.55
633	Surendranagar	Gamda	22.898000	71.557000	3.66	74.90	71.24
634	Surendranagar	Gunda	22.270818	71.138580	6.90	267.00	260.10
635	Surendranagar	Jhinjhuwada	23.350000	71.658333	5.97	116.00	110.03
636	Surendranagar	Kherwa	23.004000	71.746000	1.72	37.00	35.28
637	Surendranagar	Kukavati	23.122778	71.479722	4.90	72.00	67.10
638	Surendranagar	Lakhtar	22.858000	71.783000	3.90	41.60	37.70
639	Surendranagar	Latuda	22.813000	71.608000	4.06	72.30	68.24
640	Surendranagar	Modhvana	22.881000	71.736000	0.95	44.60	43.65
641	Surendranagar	Moti majethi	23.086599	71.885255	14.70	38.00	23.30
642	Surendranagar	Moti Moladi	22.421000	71.110000	10.20	194.20	184.00
643	Surendranagar	Muli	22.650000	71.466667	10.40	110.00	99.60
644	Surendranagar	Nagadka	22.426879	71.579134	12.10	112.00	99.90
645	Surendranagar	Olak	22.919000	71.863000	2.79	25.00	22.21
646	Surendranagar	Pipli	23.060000	71.734000	2.75	26.00	23.25
647	Surendranagar	Rajsitapur	22.842000	71.592000	5.09	71.80	66.71
648	Surendranagar	Ratanpur1	22.858000	71.271000	7.50	85.60	78.10
649	Surendranagar	Sarla	22.733000	71.367000	10.02	118.10	108.08
650	Surendranagar	Sayala	22.533000	71.483000	13.65	122.40	108.75
651	Surendranagar	Shiyani	22.667000	71.829000	3.19	35.30	32.11
652	Surendranagar	Sudamda	22.454000	71.485000	4.60	114.00	109.40
653	Surendranagar	Surendranagar	22.724000	71.671000	2.00	65.60	63.60
654	Surendranagar	Surendranagar2	22.717000	71.608000	4.30	74.80	70.50
655	Surendranagar	Tarnetar	22.642000	71.217000	16.25	124.50	108.25
656	Surendranagar	Than	22.579000	71.200000	19.38	139.80	120.42
657	Surendranagar	Ushker	21.341000	73.098000	6.83	34.00	27.17
658	Surendranagar	Vanala	22.433000	71.921000	3.18	27.40	24.22
659	Tapi	Bedchit	20.950000	73.351000	8.72	74.60	65.88
660	Tapi	Buhari	20.967474	73.308166	15.01	71.80	56.79
661	Tapi	Chapawadi	24.188889	72.765278	7.70	84.50	76.80

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662	Tapi	Jesingpura[sg]	21.171000	73.554000	7.40	260.80	253.40
663	Tapi	Karanjvel	21.0127778	73.4580556	10.10	112.30	102.20
664	Tapi	Kelkui	21.042000	73.323000	1.75	62.40	60.65
665	Tapi	Motichher	20.810000	73.270000	0.00	58.00	58.00
666	Tapi	Nizar	21.481000	74.200000	13.88	118.00	104.12
667	Tapi	Nizarl	21.477000	74.191000	10.48	119.90	109.42
668	Tapi	Tokarwa l	21.310000	73.851000	8.10	152.80	144.70
669	Tapi	Uchchhal	21.171944	73.769167	11.85	104.40	92.55
670	Tapi	Valod	21.050000	73.267000	2.90	54.80	51.90
671	Tapi	Vyara l	21.108000	73.396000	4.10	79.20	75.10
672	Dangs	Ahwa_Pz	20.759000	73.686000	2.58	470.00	467.42
673	Dangs	Ahwa l	20.758000	73.683000	3.90	462.30	458.40
674	Dangs	Bardipada	20.974881	73.615465	12.11	175.60	163.49
675	Dangs	Bari Pada	20.640000	73.691000	13.05	441.60	428.55
676	Dangs	Bori Gaotha l	20.811000	73.503000	7.10	124.90	117.80
677	Dangs	Chikhli	20.658000	73.688000	6.00	404.20	398.20
678	Dangs	Chinchnogaotha	20.808000	73.553000	7.56	171.10	163.54
679	Dangs	Chinchpada	20.638000	73.775000	3.62	582.80	579.18
680	Dangs	Dhumkal	20.6458333	73.7916667	3.02	483.90	480.88
681	Dangs	Gadad	20.638000	73.775000	5.15	582.80	577.65
682	Dangs	Ghubita	20.800000	73.738000	3.06	462.60	459.54
683	Dangs	Jakana	20.633000	73.746000	11.55	463.50	451.95
684	Dangs	Jamalpada	20.732000	73.521000	6.70	290.10	283.40
685	Dangs	Kalibel	20.921000	73.581000	3.00	172.00	169.00
686	Dangs	Mahal	20.917000	73.679000	6.60	213.50	206.90
687	Dangs	Malegaon	20.600000	73.746000	5.15	553.80	548.65
688	Dangs	Nadak khadi	20.804000	73.613000	5.71	205.00	199.29
689	Dangs	Nana pada	20.700000	73.583000	10.76	244.00	233.24
690	Dangs	Sakarpatal	20.719000	73.557000	5.42	226.20	220.78
691	Dangs	Sodmal	20.867000	73.617000	12.15	345.50	333.35
692	Dangs	Subir	20.922000	73.581000	8.80	170.30	161.50
693	Dangs	Umberpada	20.683000	73.725000	4.65	363.40	358.75
694	Dangs	Vazat Amba	20.878000	73.518000	7.92	223.20	215.28
695	Vadodara	Chhaliyar	22.6670000	73.3170000	16.49	50.60	34.11
696	Vadodara	Juna samalya	22.5040000	73.2830000	12.50	55.20	42.70
697	Vadodara	Patiyapura	22.2750000	73.4420000	8.28	60.00	51.72
698	Vadodara	Saidal	22.2830000	73.5030000	2.02	65.00	62.98
699	Vadodara	Sinor	21.9130000	73.3420000	23.63	34.50	10.87
700	Vadodara	Tundav	22.4830000	73.2030000	7.45	44.70	37.25
701	Vadodara	Vadodara_Kevada Bag	22.2930000	73.1980000	5.82	32.40	26.58

S. N.	DISTRICT NAME	SITE NAME	LATI-TUDE	LONGI-TUDE	WATER LEVEL (metre bgl)	Eleva-tion, m	WT May, m MSL
702	Vadodara	Vadodara_ONGC	22.2690000	73.2130000	6.29	36.70	30.41
703	Vadodara	Vega	22.1590000	73.4130000	5.80	46.60	40.80
704	Vadodara	Vejpur2	22.7470000	73.3560000	2.30	71.00	68.70
705	Valsad	Awadha	20.517000	73.288000	3.93	155.90	151.97
706	Valsad	Chasmandava	23.206389	72.279722	11.22	208.30	197.08
707	Valsad	Chavshala	21.220833	71.950000	3.00	256.60	253.60
708	Valsad	Dharampur 3	20.531000	73.163000	13.92	68.60	54.68
709	Valsad	Dharampur1	20.536000	73.171000	10.90	79.00	68.10
710	Valsad	Dungri	20.688611	72.949444	7.42	15.80	8.38
711	Valsad	Fali	20.313000	73.376000	4.70	499.50	494.80
712	Valsad	Kanadu	20.325000	72.842000	4.90	43.80	38.90
713	valsad	Kaparda	20.342000	73.217000	8.25	337.10	328.85
714	Valsad	Karwad	20.362500	72.975000	6.30	26.20	19.90
715	valsad	Khadakval	20.307513	73.212246	7.69	152.70	145.01
716	Valsad	Kistoniya	20.253276	73.154226	9.33	86.80	77.47
717	Valsad	Kosimpada	20.549908	73.422516	7.45	204.80	197.35
718	Valsad	Magod	20.565900	72.904854	11.63	150.10	138.47
719	Valsad	Malgalwad Fansa	20.344796	72.786512	5.63	144.40	138.77
720	Valsad	Malwan Kakwadi	20.329282	72.814599	5.55	10.50	4.95
721	Valsad	Mata faliya(Amba Jungle)	20.300033	73.300273	12.20	181.30	169.10
722	Valsad	Motaponda	20.358333	73.033333	5.70	81.20	75.50
723	Valsad	Nanaponda	20.413889	73.120833	10.80	64.20	53.40
724	Valsad	Ozar	20.533571	73.069575	11.78	12.50	0.72
725	Valsad	Pardi	20.524805	72.959341	12.95	259.20	246.25
726	Valsad	Pariya	20.447564	72.964167	5.20	23.60	18.40
727	Valsad	Rentlav	20.46335	72.92054	7.3	41	33.70
728	Valsad	Tithal	20.600000	72.900000	7.80	6.00	-1.80
729	Valsad	Tumb	20.216667	72.841667	4.48	20.50	16.02
730	Valsad	Umargaon	20.192000	72.750000	4.12	10.40	6.28
731	Valsad	Valsad(Lilapore)	20.633727	72.936728	7.06	80.70	73.64
732	Valsad	Vapi Balitha	20.380000	72.904000	9.70	25.40	15.70

