



**GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT AND
GANGA REJUVENATION
CENTRAL GROUND WATER BOARD**

GROUND WATER YEAR BOOK

**HARYANA STATE
2023-24**

**CENTRAL GROUND WATER BOARD
NORTH WESTERN REGION
CHANDIGARH**

DECEMBER 2024

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA
REJUVENATION
CENTRAL GROUND WATER BOARD

GROUND WATER YEAR BOOK
HARYANA STATE
2023-24

| PRINCIPAL CONTRIBUTORS | |
|-------------------------------|---|
| HYDROGEOLOGY | Ayush Kesharwani Scientist 'B' (Hydrogeology) Gargi Walia Scientist 'C' (Hydrogeology) |
| HYDROMETEOROLOGY | Aditya Sharma Scientist 'B' (Hydrometeorology) |

CENTRAL GROUND WATER BOARD
NORTH WESTERN REGION
CHANDIGARH

DECEMBER 2024

FOREWORD

Central Ground Water Board has been monitoring ground water levels and ground water quality of the country since 1968 to depict the spatial and temporal variation of ground water regime. The changes in water levels and quality are result of the development pattern of the ground water resources for irrigation and drinking water needs. Analyses of water level fluctuations are aimed at observing seasonal, annual and decadal variations. Therefore, the accurate monitoring of the ground water levels and its quality both in time and space are the main pre-requisites for assessment, scientific development and planning of this vital resource.

Central Ground Water Board, North Western Region, Chandigarh has established Ground Water Observation Wells (GWOW) in Haryana State for monitoring the ground water levels. As on 31.3.2024 there were 538 Ground Water Observation Wells in Haryana State which include 155 dug wells and 383 piezometers for monitoring shallow & deeper aquifers. These observation wells are being monitored four times a year in the months of Jan, June, August and November being undertaken simultaneously throughout the country. This report presents the observations and findings for the period from June 2023 to January 2024.

Mr. Ayush Kesharwani, Scientist 'B' (Hydrogeology) has made concerted efforts to compile and analyse the data and prepare the report in the present form. The chapter on hydrometeorology has been compiled and contributed by Sh Aditya Sharma, Scientist 'B' (Hydrometeorology).

This report incorporates all the analytical data on ground water monitoring done in Haryana State and provides valuable information on prevailing ground water regime to the user agencies and other stakeholders as well.



(Vidya Nand Negi)
Head of Office

CONTENTS

| | | |
|------------|--|-----------|
| 1.0 | INTRODUCTION | 1 |
| 1.1 | PHYSIOGRAPHY | 1 |
| 1.2 | GEOHYDROLOGICAL CONDITIONS | 1 |
| 1.3 | RIVERS OF HARYANA | 2 |
| 2.0 | HYDROMETEOROLOGY | 3 |
| 2.1 | CLIMATE:..... | 3 |
| 2.2 | TEMPERATURE: | 3 |
| 2.3 | HUMIDITY: | 3 |
| 2.4 | WINDS: | 3 |
| 2.5 | RAINFALL:..... | 3 |
| 2.5.1 | SEASONAL & ANNUAL RAINFALL ANALYSIS: | 4 |
| 3.0 | HYDROGEOLOGICAL SETUP | 6 |
| 4.0 | GROUND WATER MONITORING REGIME | 8 |
| 5.0 | BEHAVIOUR OF GROUND WATER LEVEL OF UNCONFINED AQUIFER | 12 |
| 5.1 | DEPTH TO WATER LEVEL..... | 12 |
| 5.1.1 | JUNE 2023..... | 13 |
| 5.1.2 | AUGUST 2023 | 15 |
| 5.1.3 | NOVEMBER 2023 | 17 |
| 5.1.4 | JANUARY 2024..... | 19 |
| 5.2 | SEASONAL FLUCTUATIONS..... | 21 |
| 5.2.1 | JUNE 2023 - JANUARY 2023 | 21 |
| 5.2.2 | JUNE 2023 - AUGUST 2023 | 23 |
| 5.2.3 | JUNE 2023 - NOVEMBER 2023 | 25 |
| 5.2.3 | NOVEMBR 2023 - JANUARY 2024..... | 27 |
| 5.3 | ANNUAL WATER LEVEL FLUCTUATIONS | 29 |
| 5.3.1 | JUNE 2022 – JUNE 2023 | 29 |
| 5.3.2 | AUGUST 2022 – AUGUST 2023 | 31 |
| 5.3.3 | NOVEMBER 2022– NOVEMBER 2023 | 33 |
| 5.3.4 | JANUARY 2023 - JANUARY 2024..... | 35 |
| 5.4. | DECADAL MEAN WATER LEVEL FLUCTUATION | 37 |
| 5.4.1 | JUNE (2013:2022) & JUNE 2023 | 37 |
| 5.4.2 | MEAN AUGUST (2013:2022) & AUGUST 2023..... | 39 |
| 5.4.3 | Mean November (2013:2022) & November 2023 | 41 |

| | |
|---|-----------|
| 5.4.4 JANUARY (2014-2023) & JANUARY 2024 | 43 |
| 6. BEHAVIOUR OF WATER LEVEL OF CONFINED AQUIFER..... | 45 |
| 6.1 JUNE 2023..... | 45 |
| 6.2 AUGUST 2023 | 47 |
| 6.3 NOVEMBER 2023 | 48 |
| 6.4 JANUARY 2024..... | 51 |
| 7. Long term hydrographs | 53 |

LIST OF FIGURES

| Figure No. | Description | Page No. |
|-------------------|--|-----------------|
| 1 | Isohyetal normal rainfall map of Haryana State | 1 |
| 2 | Departure in South Western Monsoon Rainfall of Haryana State (2023) | 5 |
| 3 | District Wise Number and type of Ground Water Observation Well | 8 |
| 4 | District Wise Area Represented By Single Ground Water Observation Well | 8 |
| 5 | Location of Monitoring stations in Haryana State | 10 |
| 6 | Depth to Water Level Map of Haryana State June 2023 | 14 |
| 7 | Depth to Water Level Map of Haryana State Aug 2023 | 16 |
| 8 | Depth to water level map of Haryana State, November 2023 | 18 |
| 9 | Depth to Water Level Map of Haryana State, January 2024 | 20 |
| 10 | Seasonal Water Level Fluctuation Map of Haryana State (January 2024 vs June 2023) | 22 |
| 11 | Seasonal Water Level Fluctuation Map of Haryana State (June 2023 vs August 2023) | 24 |
| 12 | Seasonal Water level fluctuation map of Haryana State, June, 2023-vs-Nov 2023 | 26 |
| 13 | Seasonal Water Level Fluctuation Map of Haryana State (November 2023 vs Jan 2024) | 28 |
| 14 | Annual Water Level Fluctuation Map of Haryana State (June 2022 vs June 2023) | 30 |
| 15 | Annual Water Level Fluctuation Map of Haryana State (August 2022 vs August 2023) | 32 |
| 16 | Annual Water Level Fluctuation Map of Haryana State (Nov 2022 vs Nov 2023) | 34 |
| 17 | Annual Water level Fluctuation Map of Haryana State (Jan 2023 vs Jan 2024) | 36 |
| 18 | Decadal Water Level Fluctuation Map of Haryana State (June 2013-2022 vs June 2023) | 38 |
| 19 | Decadal Water Level Fluctuation Map of Haryana State (Aug 2013-2022 vs Aug 2023) | 40 |
| 20 | Decadal Water Level Fluctuation Map of Haryana State (Nov 2013-2022 vs Nov 2023) | 42 |

| | | |
|-----------|---|----|
| 21 | Decadal Water Level Fluctuation Map of Haryana State (UT) (Jan 2014-2023 vs Jan 2024) | 44 |
| 22 | Depth to Water Level Map of Haryana State June 2023 | 46 |
| 23 | Depth to Water Level Map of Haryana State Aug 2023 | 48 |
| 24 | Depth to Water Level Map of Haryana State Nov 2023 | 50 |
| 25 | Depth to Water Level Map of Haryana State Jan 2024 | 52 |
| 26 | Long Term Hydrograph - Site Adampur pz, District Hisar, Haryana | 53 |
| 27 | Long Term Hydrograph - Site Balsamand, District Hisar, Haryana | 53 |
| 28 | Long Term Hydrograph - Site Gondar pz, District Karnal, Haryana | 54 |
| 29 | Long Term Hydrograph - Site Majra roran, District Karnal, Haryana | 54 |
| 30 | Long Term Hydrograph - Site Mound S, District Karnal, Haryana | 55 |
| 31 | Long Term Hydrograph - Pehowa D, District Kurukshetra, Haryana | 55 |

LIST OF TABLES

| Table No. | Description | Page No. |
|------------------|---|-----------------|
| 1 | Generalized Stratigraphy of Haryana State (after GSI, 2012) | 6 |
| 2 | District wise ground water observation wells in Haryana State | 9 |
| 3 | Area represented by single ground water observation well | 11 |
| 4 | The maximum and minimum water levels during all four seasons | 12 |
| 5 | Depth to water level, June 2023 | 13 |
| 6 | Depth to water level, August 2023 | 15 |
| 7 | Depth to water level, November 2023 | 17 |
| 8 | Depth to water level, January 2024 | 19 |
| 9 | Seasonal water level fluctuation, January 2024 – June 2023 | 21 |
| 10 | Seasonal water level fluctuation, June 2023 – August 2023 | 23 |
| 11 | Seasonal water level fluctuation, June 2023 – November 2023 | 25 |

| | | |
|-----------|---|----|
| 12 | Seasonal water level fluctuation, November 2023 – January 2024 | 27 |
| 13 | Annual water level fluctuation, June 2022 – June 2023 | 29 |
| 14 | Annual water level fluctuation, August 2022 – August 2023 | 31 |
| 15 | Annual water level fluctuation, November 2022 – November 2023 | 33 |
| 16 | Annual water level fluctuation, January 2023 – January 2024 | 35 |
| 17 | Decadal water level fluctuation, June (2013:2022) & June 2023 | 37 |
| 18 | Decadal water level fluctuation, August (2013:2022) & August 2023 | 39 |
| 19 | Decadal water level fluctuation, November (2013:2022) & November 2023 | 41 |
| 20 | Decadal water level fluctuation, January (2014:2023) & January 2024 | 43 |
| 21 | Depth to water level of confined aquifers, June 2023 | 45 |
| 22 | Depth to water level of confined aquifers, August 2023 | 47 |
| 23 | Depth to water level of confined aquifers, November 2023 | 49 |
| 24 | Depth to water level of confined aquifers, January 2024 | 51 |

1.0 INTRODUCTION

The State of Haryana is in North India with its capital at Chandigarh a landlocked state in northern India. The Haryana State is located between 27°39' to 30°35' N latitude and between 74°28' and 77°36' E longitude covering an area of 44,212 sq. km. The state is sub-divided into nine physiographic units and is drained by two major rivers Ghaggar and Yamuna. It was carved out of the former state of Punjab on 1 October 1966 on the basis of language distribution. The name Haryana is found in the works of the 12th century AD Apabhramsha writer Vibudh Shridhar (VS 1189–1230). It is bordered by Punjab and Himachal Pradesh to the north and by Rajasthan to the west and south. The river Yamuna defines its eastern border with Uttar Pradesh. Haryana surrounds the country's capital Delhi on three sides, forming the northern, western and southern borders of Delhi. Consequently, a large area of south Haryana is included in the National Capital Region for purposes of planning for development.

The state was home to prominent sites of the Indus Valley and Vedic Civilizations. Several decisive battles were also fought in the area, which shaped much of the history of India. These include the epic battle of Mahabharata at Kurukshetra mentioned in Hindu mythology (including the recital of the Bhagavad Gita by Lord Krishna), Banganga or the Bhishma Kund, a legend attached to this water tank says that, when Bhishma lay on his bed of arrows, he felt thirsty and asked for water. To fulfill his desire, Arjuna immediately shot an arrow into the ground and let loose a stream of gushing water. This is how the BhishmaKund is believed to come into existence and the three battles of Panipat. Haryana was administered as part of the Punjab province of British India, and was carved out on linguistic lines as India's 17th state in 1966. Haryana is now a leading contributor to the country's production of food grains and milk. Agriculture is the leading occupation for residents of the state with the flat arable land irrigated by submersible pumps and an extensive canal system. There are four irrigation systems in the state namely

1. Western Yamuna canal,
2. Bhakra canal,
3. Agra canal and
4. Ghaggar canal

Haryana contributed heavily to the Green Revolution that made India self-sufficient in food production in the 1960s.

1.1 PHYSIOGRAPHY

The altitude of Haryana varies between 700 and 3600 ft (200 meters to 1200 meters) above sea level. An area of 1,553 km² is covered by forest. Haryana has four main geographical features.

1. The Yamuna-Ghaggar plain forming the largest part of the state
2. The Shivalik Hills to the northeast
3. Semi-desert sandy plain to the southwest
4. The Aravalli Range in the south

1.2 GEOHYDROLOGICAL CONDITIONS

On the basis of Geohydrological conditions as well as groundwater movement and surface drainage pattern, the entire state is divided into the following basins: -

1. Yamuna Basin; (a) Upper, (b) Lower

2. Ghaggar Basin; (a) Upper, (b) Lower
3. Inland Alluvial Basin (Chautang and others)
4. Krishnawati Basin
5. Sahibi Basin
6. Landoh Nala Basin
7. Kanti Sub Basin (LoharuSatnali area)

Ground water occurs both under confined and unconfined conditions in the alluvial formation whereas it is mostly under un-confined conditions in Siwaliks and piedmont deposits and semi-confined conditions in hard rocks.

1.3 RIVERS OF HARYANA

The Yamuna flows along the state's eastern boundary while the ancient Sarasvati River is said to have flowed from Yamuna Nagar, but has now disappeared. Haryana's main seasonal river, the Ghaggar rises in the outer Himalayas, between the Yamuna and the Sutlej and enters the state near Pinjore in the Panchkula district. Passing through Ambala and Hissar, it reaches Bikaner in Rajasthan and runs for 460 km before disappearing into the deserts of Rajasthan. Important tributaries include the Chautang and Tangri. The seasonal Markanda River is a stream, which in ancient times was known as the Aruna. It originates from the lower Siwaliks Hills and enters Haryana west of Ambala. During monsoons, this stream swells into a raging torrent notorious for its devastating power. The surplus water is carried on to the Sanisar Lake where the Markanda joins the Sarasvati and later the Ghaggar. Shahbad Markanda town is situated on its bank. Mentioned in the epic Shatapatha Brahmana as the Drishadwati, the Sahibi River originates in the Jaipur district in Rajasthan. However, before seismic activities some 7,500 years ago in the Aravalli Hills, the river brought water from as far as the Ajmer district. Gathering volume from about a hundred tributaries in Rajasthan and the Mewat areas, it reaches voluminous proportions, forming a broad stream around Alwar and Patan. Further flowing via Rewari District and Dharuhera, it reaches Jhajjar then splits into two smaller streams, finally reaching the outskirts of Delhi and flowing into the Najafgarh Lake that flows into the Yamuna through the Najafgarh drain. Recently hardly any water flows in Sahibi as most of the water is impounded in small check dams upstream in the Alwar district of Rajasthan and the Masani barrage in Rewari district, built on this river on NH 8 (Delhi-Jaipur highway). Three other rivulets in and around the Mewat hills, the Indori, Dohan and Kasavati all flow from East to West.

2.0 HYDROMETEOROLOGY

2.1 CLIMATE:

The Climate of the Haryana State is subtropical, semi-arid to sub-humid, continental and monsoon type. The average rainfall varies from less than 300 mm in south-western parts to over 1000 mm in the hilly tracks of Shivalik hills. Entire Haryana State experiences four seasons in the year namely cold season from November to March, hot season from April to June, southwest monsoon season from last week of June to mid of September and post monsoon season from September to beginning of November. During cold weather season, seasons of western disturbances affect the climate of the state and bring rainfall of light intensity.

2.2 TEMPERATURE:

Most of the year, the climate of the state is of a pronounced continental character, very hot in summer and markedly cold in winter. In between are the pleasant months of spring. Haryana is extremely hot in summer at around 45°C and mild in winter. The hottest months are May and June and the coldest are December and January. The hot weather season commences in the month of March and continues through April to June. In the month of May the diurnal range of temperature increases more and the day become hotter. During June the mean maximum temperature reaches as high as 45°C. January is the coldest month. The normal minimum temperature ranges from 3°C to 9°C. Temperature dips to freezing point during the month of December/January.

2.3 HUMIDITY:

The air over the entire state is dry during the greater part of the year. Humidity is high in the monsoon months. April and May are the driest months with relative humidity of about 30% in the morning and less than 20% in the afternoons.

2.4 WINDS:

Winds are generally light during the post monsoon and winter months. They strengthen during the summer and monsoon months. Except during the monsoon months, winds are predominantly from a westerly or northwesterly direction and tend to be more northerly in the afternoon. Easterly and southeasterly winds are more common in the monsoon months.

2.5 RAINFALL:

There are two seasons of rainfall in the state. The south-west monsoon season, the principal source of ground water sets in last week of June and withdraws towards end of September and contributes about 80% of annual average rainfall. Another period of rainfall is winter rain from December to March is about 20% of total rainfall which is mostly absorbed into the soil. More than 50% of the annual rainfall received in the four rainy months for June to September, only there by leading to large variations on temporal scale. Rainfall is highly variable in time and space. The Normal Rainfall for the State of Haryana is 558 mm, but it has great spatial variations. Rainfall Normals computed using rainfall records of 50 years (1951-2000) as per latest updates of IMD. The statistics is provided on 4 seasons i.e. Winter (Jan-Feb), Pre-Monsoon (Mar-May), Southwest (SW) Monsoon (Jun-Sep) and Post-Monsoon (Oct-Dec), and on annual basis.

2.5.1 SEASONAL & ANNUAL RAINFALL ANALYSIS:

1. Normal Rainfall for the State of Haryana is 588 mm.
2. Entire Haryana State received Actual Annual Rainfall of 681 mm in 2021 and 678 mm in 2022.
3. In SW monsoon season, the normal rainfall of entire State is 460 mm (82% of normal annual rainfall).
4. In 2021, during SW monsoon season, state received rainfall 564 mm and in 2022 during SW monsoon season, state received 501 mm rainfall.

Fig 1: Isohyetal normal rainfall map of Haryana State

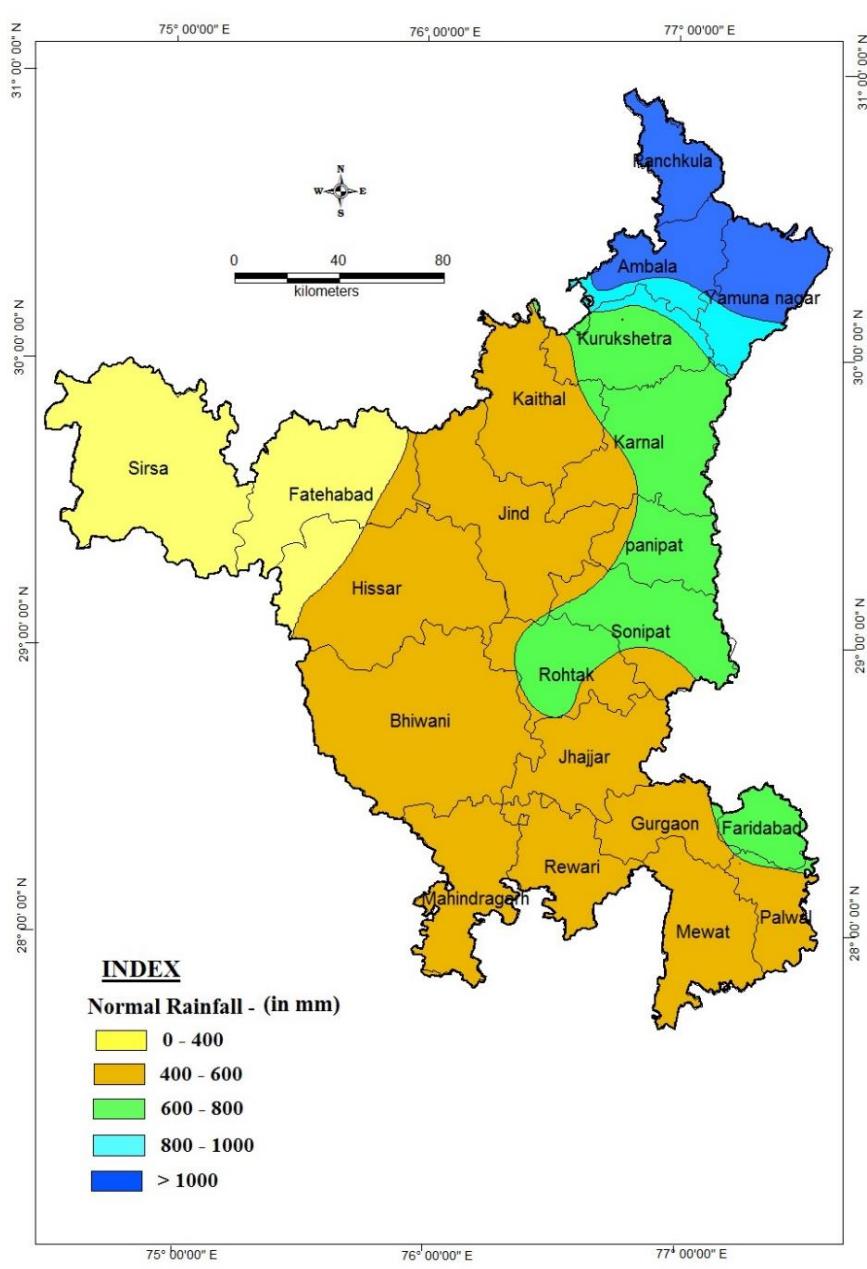
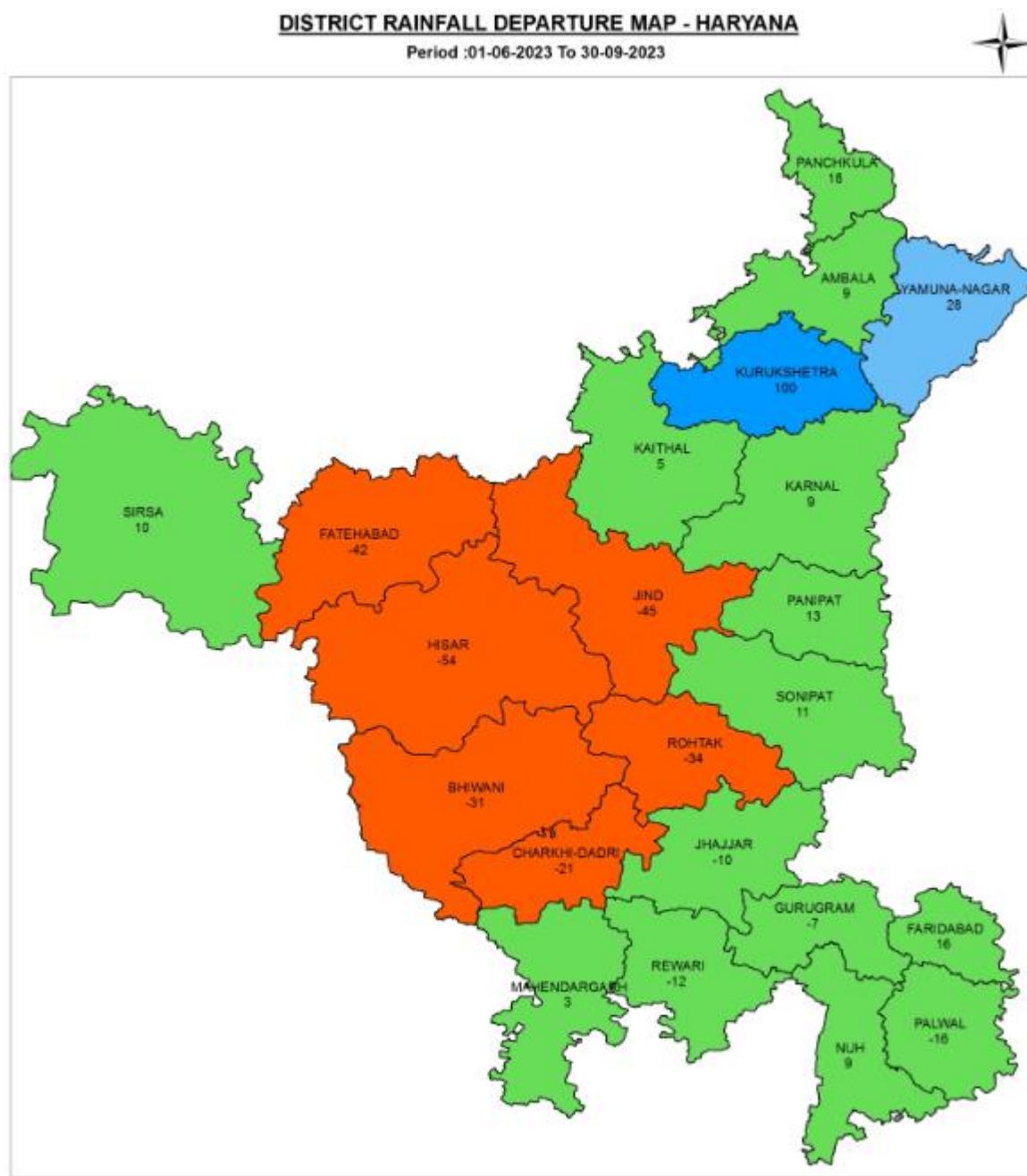


Fig 2: Departure in South Western Monsoon Rainfall of Haryana State (2023)



Legend

Large Excess [60% or more] Excess [20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-99% to -60%] No Rain [-100%] No Data

References:

1. [http://hydro.imd.gov.in/hydrometweb/\(S\(osdeiu45tfdt1vesfkqaypze\)\)/DistrictRaifall.aspx](http://hydro.imd.gov.in/hydrometweb/(S(osdeiu45tfdt1vesfkqaypze))/DistrictRaifall.aspx) (**Indian Meteorological Department**)
2. <https://indiawris.gov.in/wris/#/> (**India WRIS**)

3.0 HYDROGEOLOGICAL SETUP

Three geological groups are represented in the state viz. Pre-Cambrian, Tertiary and Quaternary. The Quaternary group comprises of Alluvium which occupies 98% of the area of the state. The tertiary group is represented by the outermost zone of the Siwalik system composed mainly of sandstones, clay and boulders. The rocks of Pre-Cambrian age which form part of the Aravalli hill ranges are exposed in Gurgaon, Mewat and Faridabad districts and as small outcrops in other Southern districts. The thickness of alluvium deposits decreases from North to South. All the three major physiographic units viz. Peninsula, Extra-Peninsula and Indo-Gangetic areas, terminating in the hard rock formations of Delhi systems (Pre-Cambrian age) towards South, Siwaliks system (Tertiary age) in the North and in between the alluvial formations (Recent to sub recent age) are observed in the state. The general geological succession of the various units of the Peninsula and Indo-Gangetic plains traversing the Haryana state are given below (table-3.1).

Table- 1 Generalized Stratigraphy of Haryana State (after GSI, 2012)

| Age | Super Group | Group/Formation | Lithology |
|-------------------------|---------------------|---|--|
| Quaternary | | Older and Newer Alluvium and Aeolian Deposits | Grey and brown sand, silt, silt-clay, clay with calcrete, limestone and gypsum. |
| Tertiary | Siwalik Super Group | Upper Siwalik | Boulder conglomerate, sandstones, clay/ mudstone and pebble beds. |
| | | Middle Siwalik | Sandstone with variegated clay/mudstone. |
| | | Lower Siwalik | Sandstone, mudstone/ shale |
| | | Sabathu | Fine-grained sandstone, clay and limestone. |
| Pre-Tertiary (?) | | Tundapathar 'Series' Lower (Paleozoic Unconformity) | Stromalitic limestone, Tosham rhyolite, Granite (Erinpura), migmatite, ultramafic and pegmatite. |
| Proterozoic | Delhi Super Group | Ajabgarh Group (Divided into 5 Formations) | Quartzite and basic flows, mica-schist, carbonaceous phyllites and slates, calc-schist, dolomite, marble, calc-silicate, amphibolite, hornblende-schist, phyllite. |
| | | Alwar Group | Quartzite, conglomerate, amphibolite, mica-schist and arkosic quartzite. |

In the extra peninsular region (northern part of Panchkula district) Siwalik System (Upper Tertiary) and Sabathu Series (Lower Tertiary) are exposed. Sabathu comprises of greenish grey and red gypseous shales with thin bands of sand stones and limestone. Shales and limestone are richly fossiliferous. Siwaliks system comprises of mainly greywacke, sandstones, grits, clays, siltstones, conglomerates and pseudo-conglomerates. These are fluviatile deposits and are rich in mammalian fossils.

The area in Panchkula, Ambala & Yamunanagar is underlain by the 'Kandi, Sirowal and the Alluvium. The Kandi belt which forms the upper higher portions of the composite fan deposits is 2 to 4 kms wide running more or less parallel to the Shivalik foothills. The sediments comprise boulders, pebbles, gravel and sand with clays mixed in varying proportions. Sirowal belt and the adjoining Gangetic plain on the south of the Kandi belt are underlain by silt, fine to medium sand and clays. Gravel and pebbles also occur occasionally. The area in Gurgaon district is underlain by the rocks of Delhi system and by Quaternary alluvium. The Ajabgarh shales and quartzite form the basement in the western part of the area where the thickness of alluvium is very less. In Hissar and Bhiwani districts area is underlain by unconsolidated sediments of Quaternary age. The sediments comprise sand, silt clay and kankar. In Sonipat, Jind, Karnal and Kurukshetra districts the area is underlain by alluvium deposits of Quaternary age. Alluvium comprises clay, silt, sands of various grades, kankar, gravel and pebbles. The alluvium deposits are generally lenticular in shape. In Mohindergarh and part of Bhiwani districts the following geological succession is met. Recent to sub Recent- Alluvium and windblown sands etc, Post Delhi intrusive- Pegmatite, quartz veins, granites etc. Algonquian Delhi system-Ajabgarh Series Kushalgarh Limestone, Alwar Series. The alluvium in the area belonging to the Older Alluvium comprises of sand, silt, clay loam and kankar. Newer alluvium is mainly confined to the sides of the river natural water courses. The alluvium is the fresh water deposit of the Indo-Gangetic river system. The sub-aerial deposits are represented by the talus material on the hill slopes and windblown sands. Rohtak district is underlain by alluvium deposits of Quaternary age. The alluvium overlies the rocks of Algonquians system outcrops of which are seen outside the district. The alluvium consists of clay, silt and various grades of sand. Windblown sand occurring as sand dunes is often seen overlaying the alluvium in various parts of the district.

The unconsolidated alluvial sediments cover around 98% of the state while hard rock's cover just around 2% area of the state. Alluvial deposits are of older and newer types and consist chiefly of clay, silt and fine to medium sand. Other deposits are piedmont deposits, which are confined to a narrow zone, about 2 to 4 kms wide, between Siwalik Hills and alluvial plains. Sand-dunes are found in the districts of Bhiwani, Mohindergarh, Hissar and Sirsa Coarse sand, gravels and boulders are found to occur in piedmont areas and in the adjacent alluvial tracts. These deposits have developed in the north part of Ambala district. The thickness of alluvial sediments is more than 600 m. and along Yamunanagar-Karnal stretch it is reported to be more than 3000 m. However, the thickness of sediments progressively decreases towards Delhi and hard rock areas of Bhiwani, Gurgaon, Faridabad and Mahendergarh districts.

4.0 GROUND WATER MONITORING REGIME

Central Ground Water Board, North Western Region, Chandigarh has established Ground Water Observation Wells (G WOW) in Haryana State for monitoring the water levels. As on 31.03.2024, there were 538 Ground Water Observation Wells which included 155 dug wells and 383 piezometers for monitoring unconfined, semi- confined & confined aquifers.

The district wise Ground Water Observation Wells are shown in Figure 4.1, Figure 4.3 and detail is given in Table 4.1. The density of the observation wells being monitored in the state of Haryana is given in Table 4.2 and shown in Figure 4.2.

Fig 3: District Wise Number and type of Ground Water Observation Well

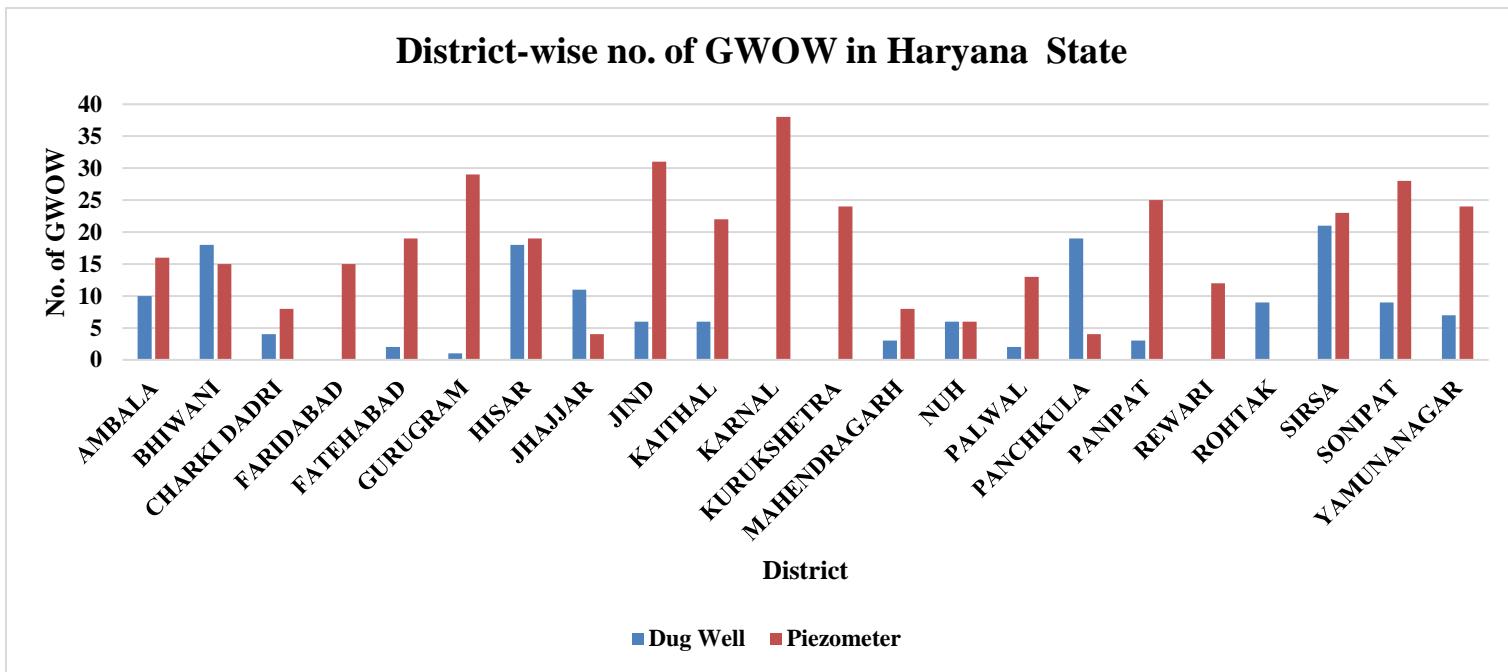


Fig 4: District Wise Area Represented By Single Ground Water Observation Well

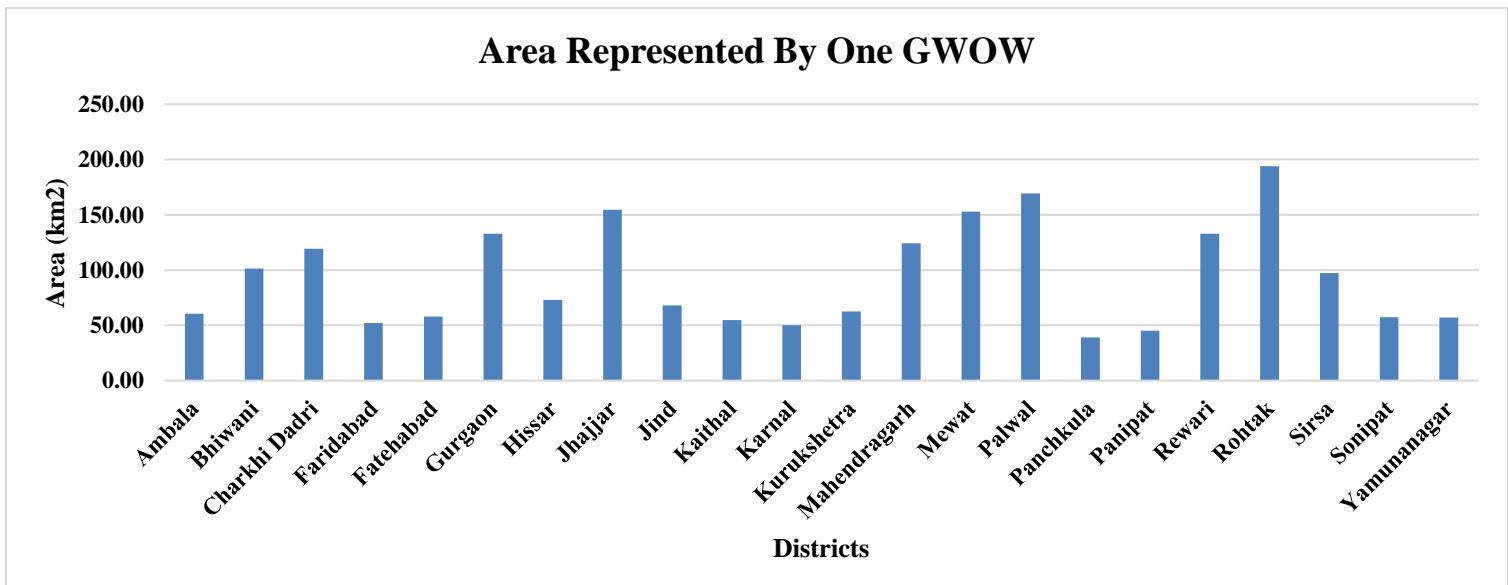


Table 2 District wise ground water observation wells in Haryana State

| S no. | DISTRICT | Total no. of GWOW (As per 31.07.2023) | | | | | |
|-------|--------------|---------------------------------------|-------|----------|-------|-------|-------|
| | | Dug Well | | Tubewell | | Total | |
| | | CGWB | State | CGWB | State | CGWB | State |
| 1 | AMBALA | 10 | 34 | 16 | 15 | 26 | 49 |
| 2 | BHIWANI | 18 | 16 | 15 | 141 | 33 | 157 |
| 3 | CHARKI DADRI | 4 | 0 | 8 | 0 | 12 | 0 |
| 4 | FARIDABAD | | 15 | 15 | 0 | 15 | 15 |
| 5 | FATEHABAD | 2 | 13 | 19 | 10 | 21 | 23 |
| 6 | GURUGRAM | 1 | 9 | 29 | 12 | 30 | 21 |
| 7 | HISAR | 18 | 20 | 19 | 3 | 37 | 23 |
| 8 | JHAJJAR | 11 | 16 | 4 | 7 | 15 | 23 |
| 9 | JIND | 6 | 31 | 31 | 16 | 37 | 47 |
| 10 | KAITHAL | 6 | 11 | 22 | 10 | 28 | 21 |
| 11 | KARNAL | | 6 | 38 | 90 | 38 | 96 |
| 12 | KURUKSHETRA | | 2 | 24 | 69 | 24 | 71 |
| 13 | MAHENDRAGARH | 3 | 18 | 8 | 8 | 11 | 26 |
| 14 | NUH | 6 | 15 | 6 | 6 | 12 | 21 |
| 15 | PALWAL | 2 | 17 | 13 | 0 | 15 | 17 |
| 16 | PANCHKULA | 19 | 18 | 4 | 1 | 23 | 19 |
| 17 | PANIPAT | 3 | 6 | 25 | 10 | 28 | 16 |
| 18 | REWARI | | 21 | 12 | 2 | 12 | 23 |
| 19 | ROHTAK | 9 | 18 | | 5 | 9 | 23 |
| 20 | SIRSA | 21 | 17 | 23 | 4 | 44 | 21 |
| 21 | SONIPAT | 9 | 17 | 28 | 8 | 37 | 25 |

| | | | | | | | |
|----|-------------|-----|-----|-----|-----|-----|-----|
| 22 | YAMUNANAGAR | 7 | 7 | 24 | 15 | 31 | 22 |
| | Grand Total | 155 | 327 | 383 | 432 | 538 | 759 |

Fig 5: Location of Monitoring stations in Haryana State

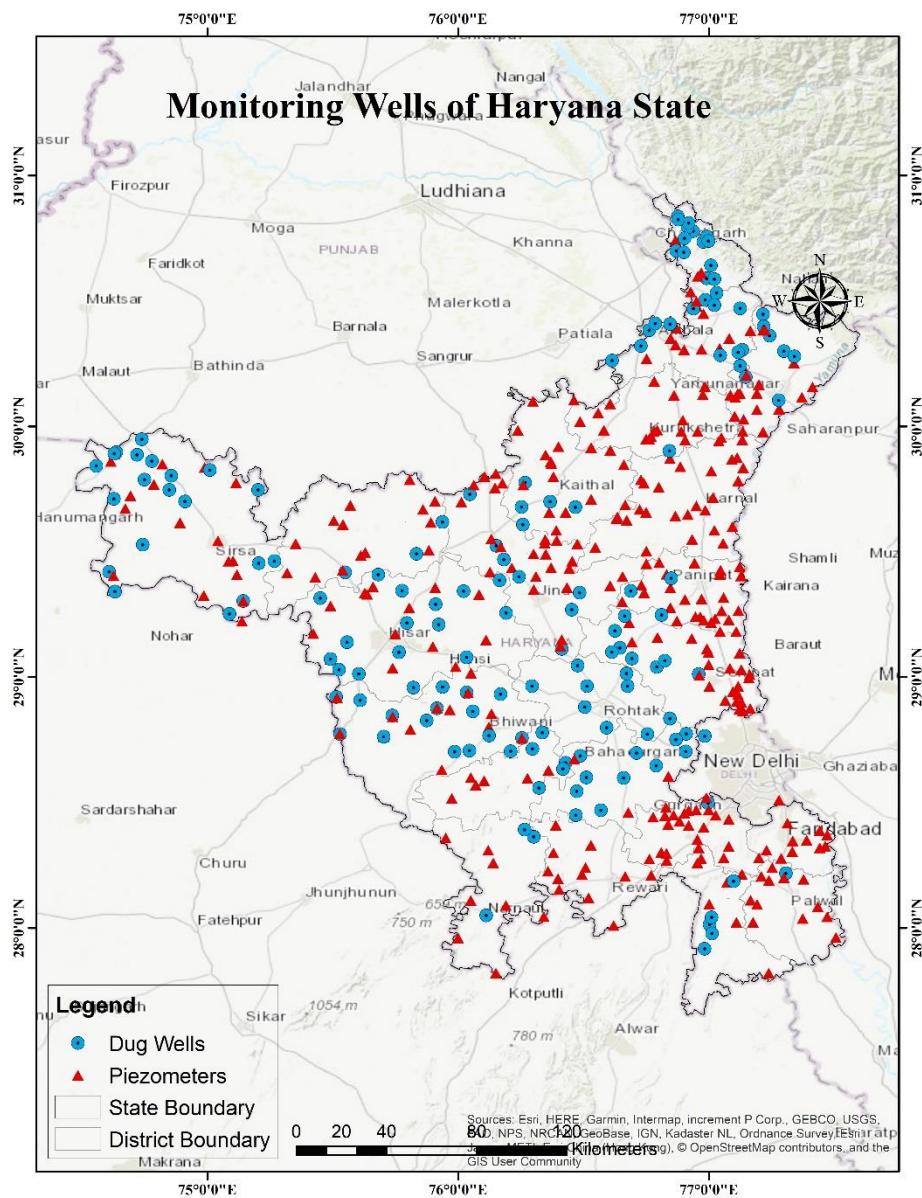


Table 3. Area represented by single ground water observation well

| District | Area (Sq Km) | No. of GWOW | Area Represented By One GWOW |
|------------------------|---------------------|--------------------|-------------------------------------|
| Ambala | 1574 | 26 | 60.54 |
| Bhiwani | 3348 | 33 | 101.45 |
| Charkhi Dadri | 1430 | 12 | 119.17 |
| Faridabad | 782 | 15 | 52.13 |
| Fatehabad | 1215 | 21 | 57.86 |
| Gurgaon | 3983 | 30 | 132.77 |
| Hissar | 2702 | 37 | 73.03 |
| Jhajjar | 2317 | 15 | 154.47 |
| Jind | 2520 | 37 | 68.11 |
| Kaithal | 1530 | 28 | 54.64 |
| Karnal | 1900 | 38 | 50.00 |
| Kurukshetra | 1499 | 24 | 62.46 |
| Mahendragarh | 1367 | 11 | 124.27 |
| Mewat | 1834 | 12 | 152.83 |
| Palwal | 2538 | 15 | 169.20 |
| Panchkula | 898 | 23 | 39.04 |
| Panipat | 1268 | 28 | 45.29 |
| Rewari | 1595 | 12 | 132.92 |
| Rohtak | 1745 | 9 | 193.89 |
| Sirsia | 4277 | 44 | 97.20 |
| Sonipat | 2122 | 37 | 57.35 |
| Yamunanagar | 1768 | 31 | 57.03 |
| Grand Total/Avg | 44212 | 538 | 95.17 |

5.0 BEHAVIOUR OF GROUND WATER LEVEL OF UNCONFINED AQUIFER

In order to assess the quantitative change in ground water resources, water levels as a routine were monitored four times June 2023, August 2023, November 2023 and January 2024 and compared with previous water level records to ascertain the change in ground water level scenario.

5.1 DEPTH TO WATER LEVEL

The behaviour of water level in all four seasons June 2023, August 2023, November 2023 and January 2024 along with maps is discussed in following paragraphs. The maximum and minimum water levels recorded in four seasons is given below Table 5.1.

Table 4 The maximum and minimum water levels during all four seasons

| Range | June 2023 | August 2023 | November 2023 | January 2024 |
|----------------|--|--|---|--|
| Minimum | 0.35mbgl Baroda mor (Sonipat district) | 0.10 mbgl Kulasi (Jhajjar district) | 0.09 mbgl Mulana (Ambala district) | 0.35 mbgl Majri (Kaithal district) |
| Maximum | 90.84 mbgl Gopalwas PZ (Charkhi Dadri district) | 57.37 mbgl Ratia-PZ (Fatehabad district) | 57.64 mbgl Ratia-PZ (Fatehabad district) | 99.3 mbgl Satnali (Mahendragarh district) |

5.1.1 JUNE 2023

The behavioral pattern of water level in June 2023 along with depth to water level map (Fig.1) is discussed as follows: The depth to water level during June 2023 varies from 0.35 mbgl at Baroda Mor DW in Sonipat district to 90.84 mbgl at Gopalwas pz in Charkhi dadri District. Very shallow (0-2m) water levels conditions are observed in isolated patches in Ambala, Rohtak, Jhajjar & Hisar districts. Around 7% wells and 2% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 17% wells and 15% area in Sirsa, Fatehabad, Hisar, Bhiwani, Charkhi dadri, Jhajjar, Rohtak, Jind, Sonipat, Panipat, Nuh, Palwal, Ambala, Panchkula & Yamunanagar districts. Moderate water levels (5-10m) occur in 18% wells covering 20% of area of the state in almost all the districts except Mahendragarh & Kurukshetra. Moderately deep-water levels of 10-20m are observed in nearly 23% wells and 27% of the area falling in almost all the districts except Mahendragarh & Kurukshetra. Deep water levels of (20-40m) have been recorded in 25% of wells and about 25% area in Kurukshetra, Kaithal, Karnal, Panipat, Panchkula, Ambala, Yamunanagar, Sonipat, Jind, Fatehabad, Sirsa, Bhiwani, Rewari, Charkhi Dadri, Mahendragarh, Faridabad and Gurugram districts. Very Deep-water levels (>40m) also occur in 10% of the wells and 11% area as isolated patches falling in Kurukshetra, Kaithal, Panipat, Fatehabad, Sirsa, Bhiwani, Charkhi dadri, Rewari, Mahendragarh & Gurugram districts.

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 60 | 7 | 792 | 2 |
| 2-5 | 138 | 17 | 6652 | 15 |
| 5-10 | 145 | 18 | 8840 | 20 |
| 10-20 | 186 | 23 | 11922 | 27 |
| 20-40 | 201 | 25 | 11095 | 25 |
| >40 | 84 | 10 | 4911 | 11 |

Table 5 Depth to water level, June 2023

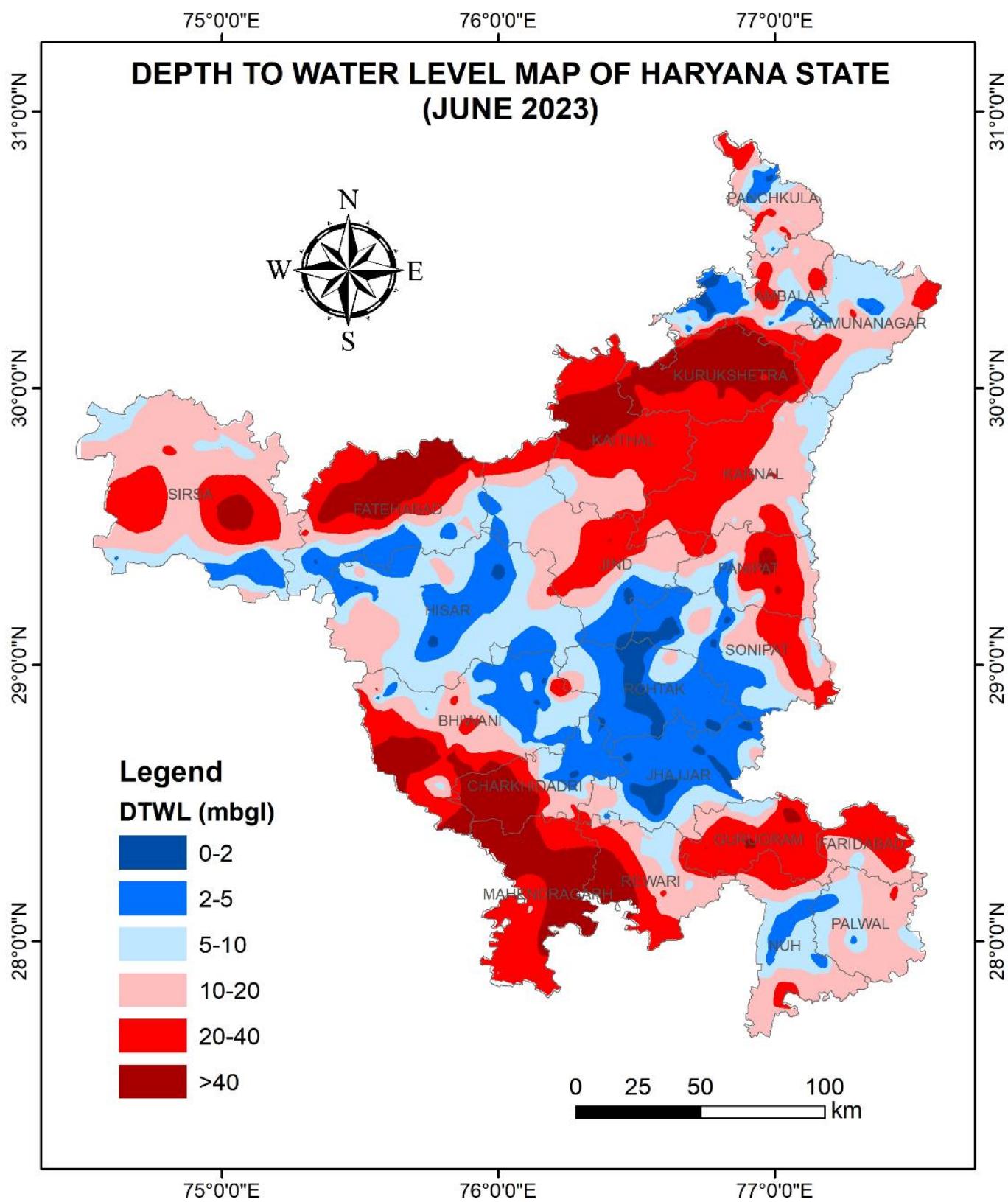


Fig. 6 Depth to Water Level Map of Haryana State June 2023

5.1.2 AUGUST 2023

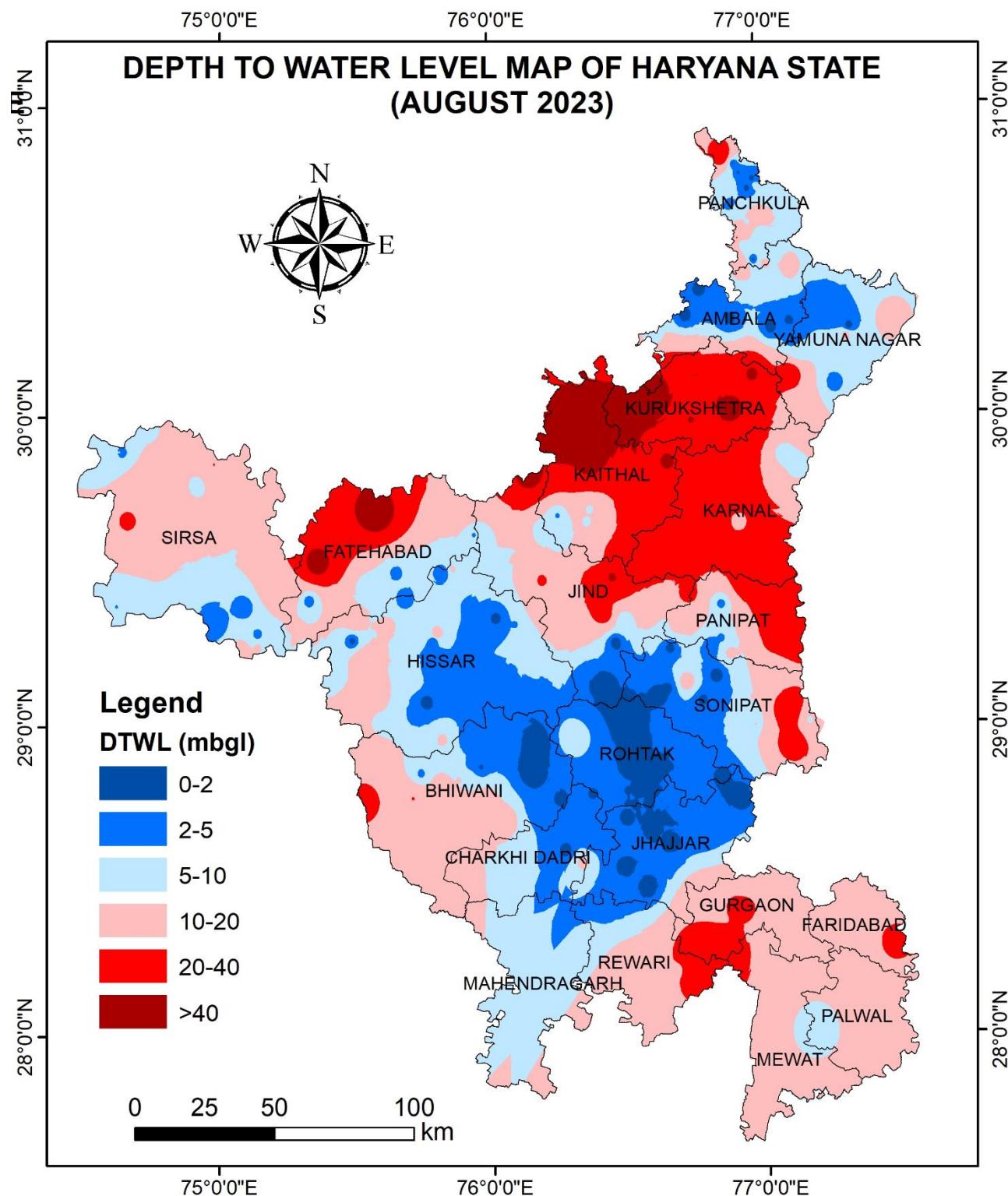
The behavioral pattern of water level in August 2023 along with depth to water level map (Fig.1) is discussed below.

The depth to water level during August 2023 varies from 0.10 mbgl at Kulasi in Jhajjar district to 57.37 mbgl at Ratia Pz in Fatehabad district. Very shallow (0-2m) water levels conditions are observed in small pockets in state majorly in Rohtak, Jhajjar, Jind, Bhiwani & Sonipat districts. Around 17% wells and 6% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 21% wells and 15% area mainly in the central part and in few isolated patches in Yamunanagar, Ambala, Panchkula, Sirsa & Fatehabad districts. Moderate water levels (5-10m) occur in 15% wells covering 23% of area of the state. Moderately deep-water levels of 10-20m are observed in nearly 25% wells and 34% of the area falling in Ambala, Yamunanagar, Panchkula, Kaithal, Karnal, Sirsa, Sonipat, Panipat, Jind, Fatehabad, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon, Palwal, Mewat and Faridabad districts. Deep water levels of 20-40m have been registered in 15% of wells and about 18% area reported from Kurukshetra, Kaithal, Karnal, Sonipat, Panipat Jind, Fatehabad, Rewari, Faridabad & Gurgaon districts. Very Deep-water levels (>40m) also occur in 6% of the wells and 5% area falling in Kaithal, Kurukshetra & Fatehabad districts.

Table 6 Depth to water level, August 2023

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 40 | 17 | 2435 | 6 |
| 2-5 | 49 | 21 | 6679 | 15 |
| 5-10 | 35 | 15 | 9988 | 23 |
| 10-20 | 59 | 25 | 14983 | 34 |
| 20-40 | 35 | 15 | 8122 | 18 |
| >40 | 14 | 6 | 2005 | 5 |

Fig. 7 Depth to Water Level Map of Haryana State Aug 2023



5.1.3 NOVEMBER 2023

The behavioral pattern of water level in November 2023 along with depth to water level map (Fig.1) is discussed below.

The depth to water level during November 2023 varies from 0.09 mbgl at Mulana in Amabala district to 57.64 mbgl at Ratia Pz in Fatehabad District. Very shallow (0-2m) water levels conditions are observed in isolated patches in Rohtak, Sonipat & Jhajjar districts. More than 6% wells and 3.4% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 15% wells and 17% area in Rohtak, Jhajjar, Sonipat, Jind, Bhiwani, Hissar, Fatehabad, Sirsa districts. Moderate water levels (5-10m) occur in 15% wells covering 20% of area in Hissar, Fatehabad, Sirsa, Bhiwani, Rohtak, Jhajjar, Sonipat, Panipat, Jind, Nuh, Palwal, Yamunanagar & Panchkula districts. Moderately deep-water levels of 10-20m are observed in nearly 20% wells and 25.3% of the area falling in Sirsa, Fatehabad, Jind, Kaithal, Ambala, Panchkula, Yamunanagar, Karnal, Panipat, Sonipat, Bhiwani and Hisar districts. Deep water levels of (20-40m) have been recorded in 27% of wells and about 23.6% area in Sirsa, Fatehabad, Jind, Kaithal, Karnal, Kurukshetra, Ambala, Panipat, Sonipat, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurugram, Nuh and Faridabad districts. Ground Water Trough has been created in Panipat and Sonipat districts along Ambala Delhi National Highway. Very Deep-water levels (>40m) also occur in 17% of the wells and 10.6% area in Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Kaithal, Kurukshetra, Fatehabad and Sirsa districts.

Table 7 Depth to water level, November 2023

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 74 | 6 | 1436.5 | 3.4 |
| 2-5 | 173 | 15 | 7237.2 | 17.0 |
| 5-10 | 171 | 15 | 8529.0 | 20.0 |
| 10-20 | 230 | 20 | 10782.7 | 25.3 |
| 20-40 | 305 | 27 | 10060.3 | 23.6 |
| >40 | 189 | 17 | 4498.0 | 10.6 |

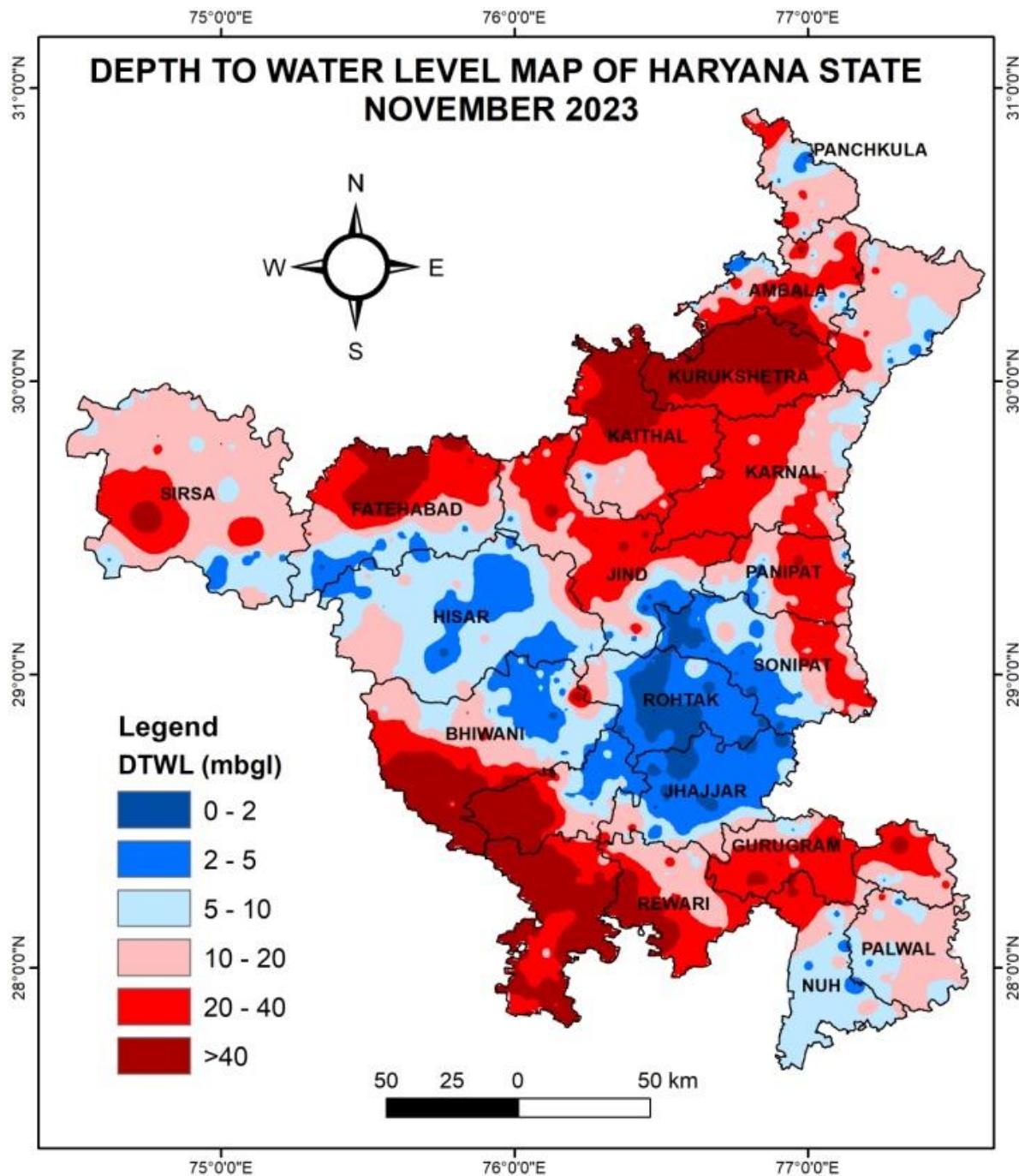


Fig 8 Depth to water level map of Haryana State, November 2023

5.1.4 JANUARY 2024

The behavioral pattern of water level in January 2024 along with depth to water level map (Fig.1) is discussed below.

The depth to water level during January 2024 varies from 0.35 mbgl at Majri in Kaithal district to 99.3 mbgl at Satnali Pz in Mahendragarh District. Very shallow (0-2m) water levels conditions are observed in isolated patches in Rohtak, Sonipat & Jhajjar districts. More than 10% wells and 2.58% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 25% wells and 17.96% area in Rohtak, Jhajjar, Sonipat, Jind, Bhiwani, Hissar, Fatehabad, Sirsa districts. Moderate water levels (5-10m) occur in 15% wells covering 23.37% of area in Hissar, Fatehabad, Sirsa, Bhiwani, Rohtak, Jhajjar, Sonipat, Panipat, Jind, Nuh, Palwal, Yamunanagar & Panchkula districts. Moderately deep-water levels of 10-20m are observed in nearly 26% wells and 26.43% of the area falling in Sirsa, Fatehabad, Jind, Kaithal, Ambala, Panchkula, Yamunanagar, Karnal, Panipat, Sonipat, Bhiwani and Hisar districts. Deep water levels of (20-40m) have been recorded in 20% of wells and about 24.46% area in Sirsa, Fatehabad, Jind, Kaithal, Karnal, Kurukshetra, Ambala, Panipat, Sonipat, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurugram, Nuh and Faridabad districts. Ground Water Trough has been created in Panipat and Sonipat districts along Ambala Delhi National Highway. Very Deep-water levels (>40m) also occur in 5% of the wells and 5.20% area in Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Kaithal, Kurukshetra, Fatehabad and Sirsa district.

Table 8 Depth to water level, January 2024

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|-------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 27 | 10 | 1100.41 | 2.58 |
| 2-5 | 67 | 25 | 7650.25 | 17.96 |
| 5-10 | 40 | 15 | 9953 | 23.37 |
| 10-20 | 70 | 26 | 11256 | 26.43 |
| 20-40 | 54 | 20 | 10418.23 | 24.46 |
| >40 | 14 | 5 | 2213.33 | 5.20 |

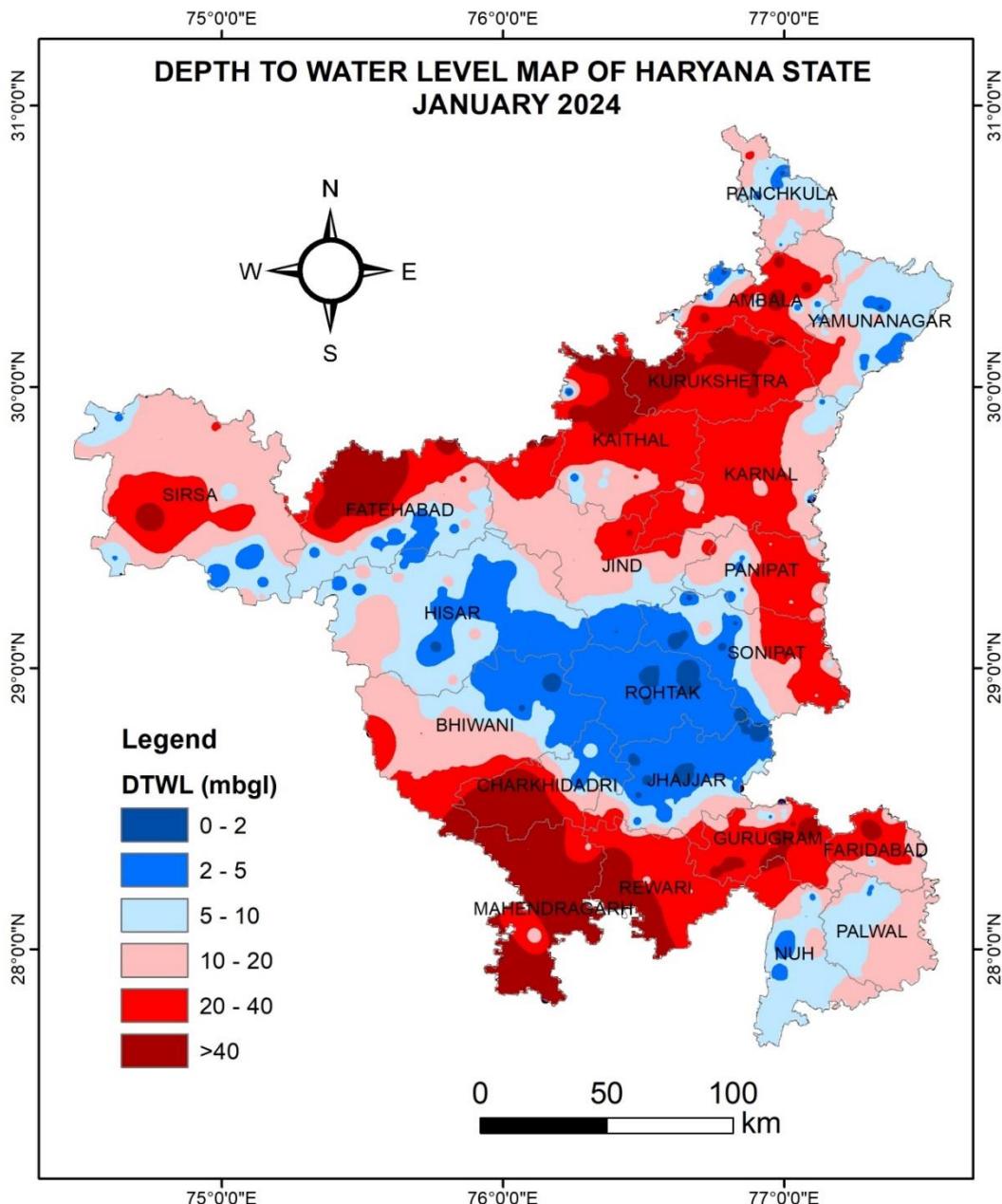


Fig 9 Depth to Water Level Map of Haryana State, January 2024

5.2 SEASONAL FLUCTUATIONS

The water level data of current month or monitoring period is compared with water level data of monitoring period and seasonal water level fluctuation is determined.

5.2.1 JUNE 2023 - JANUARY 2023

Water level data of June 2023 when compared with previous measurement data i.e. January 2023 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.2.

The interpretation of seasonal fluctuations indicates a general decline in 55% of the wells monitored covering an area of 54% of the State. The water level decline in the range of 0-2m has been observed in 46% wells and 47% of the area in all districts except Rewari. Water level decline in range of 2-4m has been observed in 5% wells and 5% of the area covering isolated patches in Panchkula, Ambala, Yamunanagar, Panipat, Karnal, Kaithal, Sirsa & Fatehabad districts. Water level decline >4m is recorded in 4% wells and 2% of the area in isolated patches in Sirsa, Ambala & Karnal districts.

The water level rise has been observed in 45% of the wells and 46% of the area of the state. The water level rise of 0-2m has been observed in 39% of wells and 42% of area in parts of all districts of the state. The water level Rise of 2-4m has been observed in 5% of wells and 3% of area of the state in isolated parts in Sirsa, Bhiwani, Hisar, Jind, Rohtak, Gurugram, Faridabad & Palwal districts. Water level rise >4m is recorded in 1% wells and 2% of the area in the state.

Table 9 Seasonal water level fluctuation, January 2024 – June 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|----------------|-----------------|------|--------------|------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4.0 | 8 | 4 | 882 | 2 |
| | 2-4 | 11 | 5 | 2149 | 5 |
| | 0-2 | 105 | 46 | 20825 | 47 |
| Rise | 0-2 | 87 | 39 | 18500 | 42 |
| | 2-4 | 11 | 5 | 1174 | 3 |
| | >4.0 | 3 | 1 | 682 | 2 |

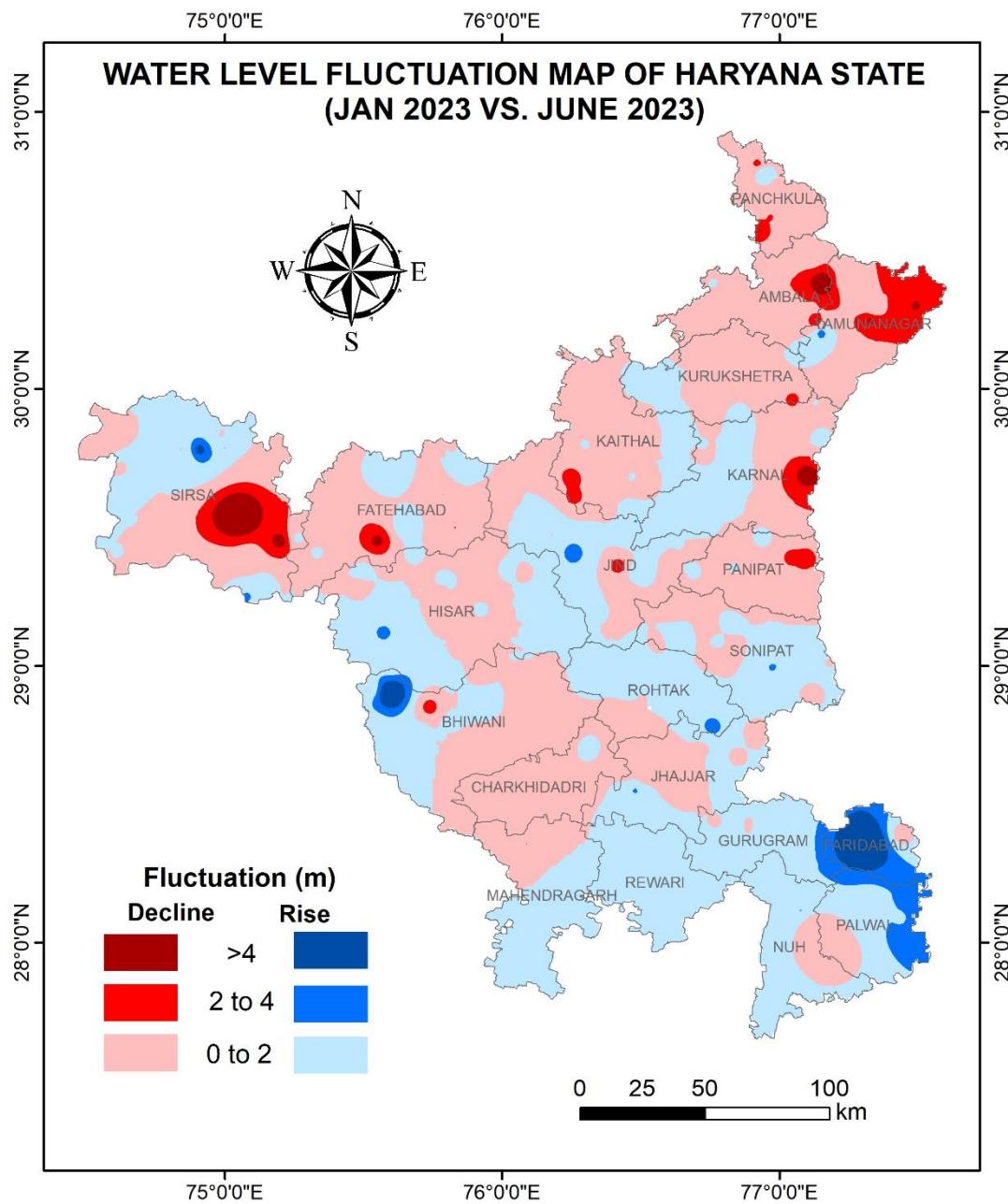


Fig. 10 Seasonal Water Level Fluctuation Map of Haryana State (January 2023 vs June 2023)

5.2.2 JUNE 2023 - AUGUST 2023

Water level data of August 2023 when compared with previous measurement data i.e. June 2023 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.2.

The interpretation of seasonal fluctuations indicates a general decline in 47% of the wells monitored covering an area of 46% of the State. The water level decline in the range of 0-2m has been observed in 38% wells and 39% of the area in Sirsa, Fatehabad, Hissar, Bhiwani, Jind, Kaithal, Kurukshetra, Karnal, Panipat, Sonipat, Rohtak, Jhajjar, Gurgaon, Rewari, Faridabad & Palwal districts. Water level decline in range of 2-4m has been observed in 6% wells and 7% of the area in parts of Kaithal, Kurukshetra, Karnal, Jind, Fatehabad and Bhiwani districts. Water level decline >4m is recorded in 3% wells and 1% of the area in isolated patches in Bhiwani, Fatehabad, Jind districts.

The water level Rise has been observed in 53% of the wells and 54% of the area of the state. The water level rise of 0-2m has been observed in 44% of wells and 45% of area rising in all the districts. The water level rise of 2-4m has been observed in 7% of wells and 7% of area covering major part of Yamunanagar & in isolated patches in Ambala, Panchkula, Palwal & Sirsa districts. The water level rise of >4m is recorded in 2% wells and 1% of the area in Yamunanagar & Panchkula districts. Summarised details of seasonal water level fluctuation are given in table below;

Table 10 Seasonal water level fluctuation, June 2023 – August 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|----------------|-----------------|------|--------------|------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4.0 | 7 | 3 | 528 | 1 |
| | 2-4 | 12 | 6 | 2919 | 7 |
| | 0-2 | 77 | 38 | 17111 | 39 |
| Rise | 0-2 | 90 | 44 | 20103 | 45 |
| | 2-4 | 14 | 7 | 2958 | 7 |
| | >4.0 | 5 | 2 | 593 | 1 |

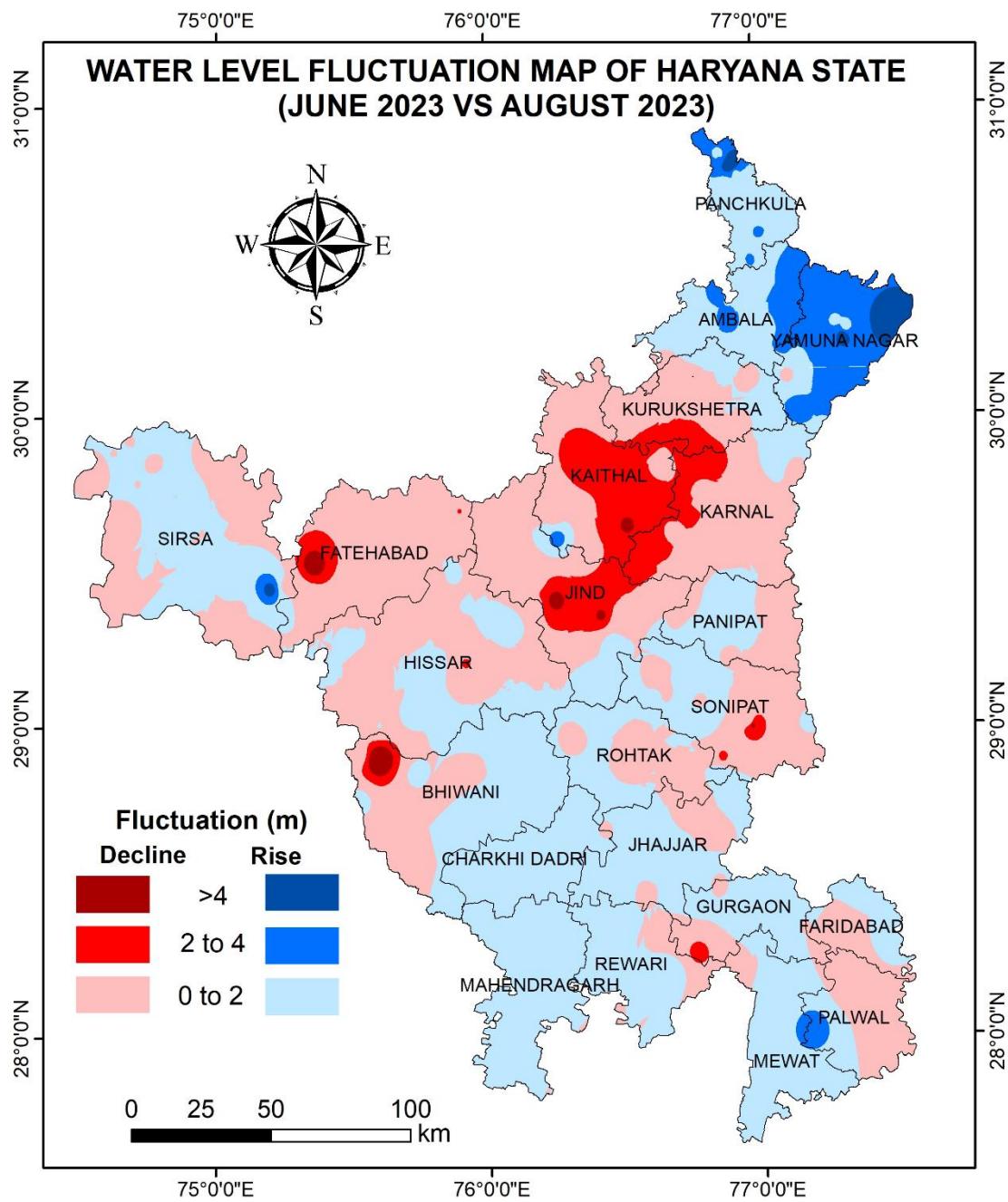


Fig. 11 Seasonal Water Level Fluctuation Map of Haryana State (June 2023 vs August 2023)

5.2.3 JUNE 2023 - NOVEMBER 2023

Water level data of November 2023 when compared with previous measurement data i.e. June 2023 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.2.

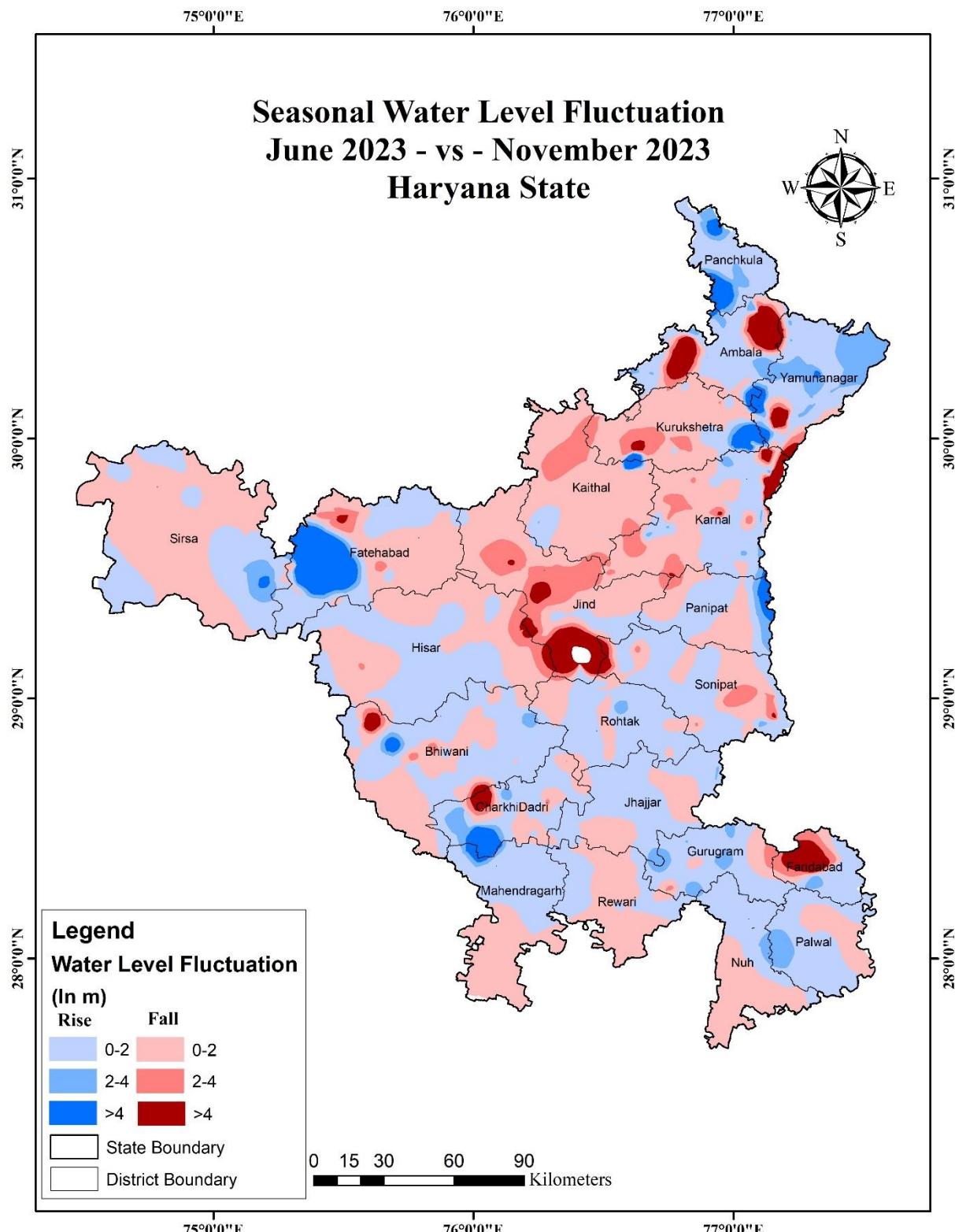
The interpretation of seasonal fluctuations indicates a general decline in 46% of the wells monitored covering an area of 51.44% of the State. The water level decline in the range of 0-2m has been observed in 37% wells and 3.01% of the state area, dominantly in Kurukshetra, Kaithal, Karnal, Jind, Panipat, Sonipat and as isolated patches in Nuh, Palwal, Bhiwani, Sirsa and Fatehabad districts. Water level decline in range of 2-4m has been observed in 5% wells and 5.61% of the area covering isolated patches in Kurukshetra, Kaithal, Karnal, Jind, Panipat, Nuh, Palwal, Bhiwani, Sirsa and Fatehabad districts. Water level decline >4m is recorded in 4% wells and 42.83% of the area in the state in Palwal and Kaithal district.

The water level rise has been observed in 53% of the wells and 48.56% of the area of the state. The water level rise of 0-2m has been observed in all the districts covering 43% of wells and 41.89% of area. The water level rise of 2-4m has been observed in 8% of wells and 4.12% of area of the state. Water level rise >4m is recorded in 2% wells and 2.54% of the area in the state.

Table 11 Seasonal water level fluctuation, June 2023 – November 2023

| Water Level Fluctuation Range | Wells Monitored | | Area Covered | |
|-------------------------------|-----------------|------|--------------|---------|
| | No. | %Age | Km2 | %Age |
| Decline | >4 | 23 | 4 | 1313.2 |
| | 4--2 | 34 | 5 | 2447 |
| | 2--0 | 239 | 37 | 18689.2 |
| Rise | 0--2 | 278 | 43 | 18282.2 |
| | 2--4 | 53 | 8 | 1796.6 |
| | >4 | 15 | 2 | 1110.6 |

Fig 12 Seasonal Water level fluctuation map of Haryana State, June, 2023-vs-Nov 2023



5.2.3 NOVEMBER 2023 - JANUARY 2024

Water level data of JANUARY2024 when compared with previous measurement data i.e. November 2023 is termed as seasonal water level fluctuations. The behavioral pattern of this seasonal fluctuation is discussed below. The map depicting seasonal water level fluctuations is shown in Fig.2.

The interpretation of seasonal fluctuations indicates a general decline in 44% of the wells monitored covering an area of 52.31% of the State. The water level decline in the range of 0-2m has been observed in 38% wells and 6.51% of the state area, dominantly in Southern, North Eastern and North Western parts of the State. Water level decline in range of 2-4m has been observed in 3% wells and 6.63% of the area covering isolated patches in Sirsa, Fatehabad, Kurukshetra, Kaithal, Ambala, Panchkula, Yamunanagar, Panipat, Sonipat, Charkhidadri, Mahendragarh, Gurugram and Palwal districts. Water level decline >4m is recorded in 3% wells and 39.16% of the area in the state in Sirsa, Fatehabad, Mahendragarh, Kaithal, Kurukshetra, Ambala, Panchkula and Yamunanagar districts.

The water level Rise has been observed in 56% of the wells and 47.69% of the area of the state. The water level Rise of 0-2m has been observed in all the districts except Mahendragarh, Rewari, Charkhidadri, Panchkula and Palwal covering 51% of wells and 41.90% of area. The water level Rise of 2-4m has been observed in 3% of wells and 1.72% of area of the state covering isolated patches in Hisar, Jind, Sonipat, Rohtak, Kaithal, Ambala, Yamunanagar and Karnal districts. Water level rise >4m is recorded in 2% wells and 4.07% of the area covering isolated patches in Hisar, Jind, Sonipat, Rohtak, Kaithal, Ambala and Yamunanagar districts of the state.

Table 12 Seasonal water level fluctuation, November 2023 – January 2024

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|--------------|-----------------|------|--------------|-------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4 | 8 | 3 | 2838.3 | 6.51 |
| | 4--2 | 6 | 3 | 2889.8 | 6.63 |
| | 2--0 | 90 | 38 | 17062.7 | 39.16 |
| Rise | 0--2 | 123 | 51 | 18258.4 | 41.90 |
| | 2--4 | 7 | 3 | 750.3 | 1.72 |
| | >4 | 4 | 2 | 1773.2 | 4.07 |

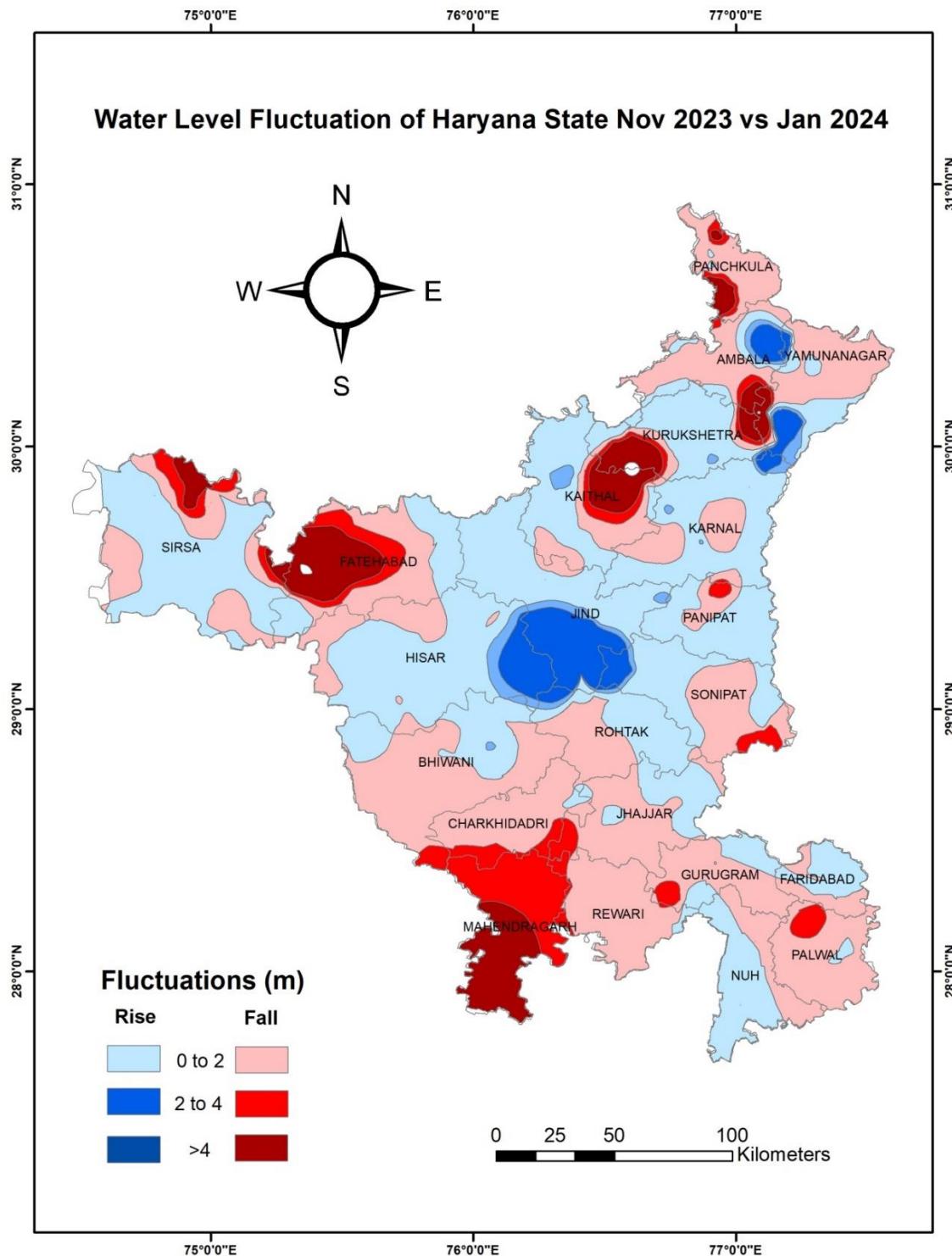


Fig 13 Seasonal Water Level Fluctuation Map of Haryana State (November 2023 vs Jan 2024)

5.3 ANNUAL WATER LEVEL FLUCTUATIONS

In order to know the impact of rainfall and ground water withdrawal during last one-year, annual water level data for given period in current year is compared with water level data of corresponding period of last year and annual water level fluctuations are determined.

5.3.1 JUNE 2022 – JUNE 2023

In order to know the impact of rainfall and ground water withdrawal during last one year, annual water level fluctuations for period June 2022 and June 2023 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.3.

The interpretations of annual water level fluctuation depicts water level decline in about 47% of wells monitored and 45% of the area in parts of all districts of the state. Water level Decline (0-2m) has been recorded in 40% of wells and 39% of area. Water level decline (2-4m) has recorded in 4% of wells and 4% of area in isolated patches in Sirsa, Kaithal, Karnal, Panipat, Ambala, Bhiwani, Charkhi Dadri, Mahedragarh & Rewari districts. Water level decline of more than 4m is observed in 2% of wells and 2% of area in isolated patches in Sirsa, Bhiwani, Mahendragarh, Rewari, Panipat, Ambala & Panchkula districts.

Water level rise has recorded in 53% of the wells and 55% of the area in parts of all districts of the state. Water level Rise (0-2m) has been recorded in 42% of the wells and 49% area. Water level Rise of 2-4m has been observed in small patches in 9% of wells and 5% of area. Water level rise of more than 4m observed in 3% of wells and 1% of area in isolated patches in Ambala, Panchkula, Karnal, Jind, Sonipat, Bhiwani & Sirsa districts.

Table 13 Annual water level fluctuation, June 2022 – June 2023

| Water Level Fluctuation Range | Wells Monitored | | Area Covered | | |
|-------------------------------|-----------------|------|--------------|-------|----|
| | No. | %Age | Km2 | %Age | |
| Decline | >4 | 16 | 2 | 881 | 2 |
| | 4--2 | 30 | 4 | 1863 | 4 |
| | 2--0 | 290 | 40 | 17125 | 39 |
| Rise | 0--2 | 300 | 42 | 21720 | 49 |
| | 2--4 | 63 | 9 | 2071 | 5 |
| | >4 | 19 | 3 | 552 | 1 |

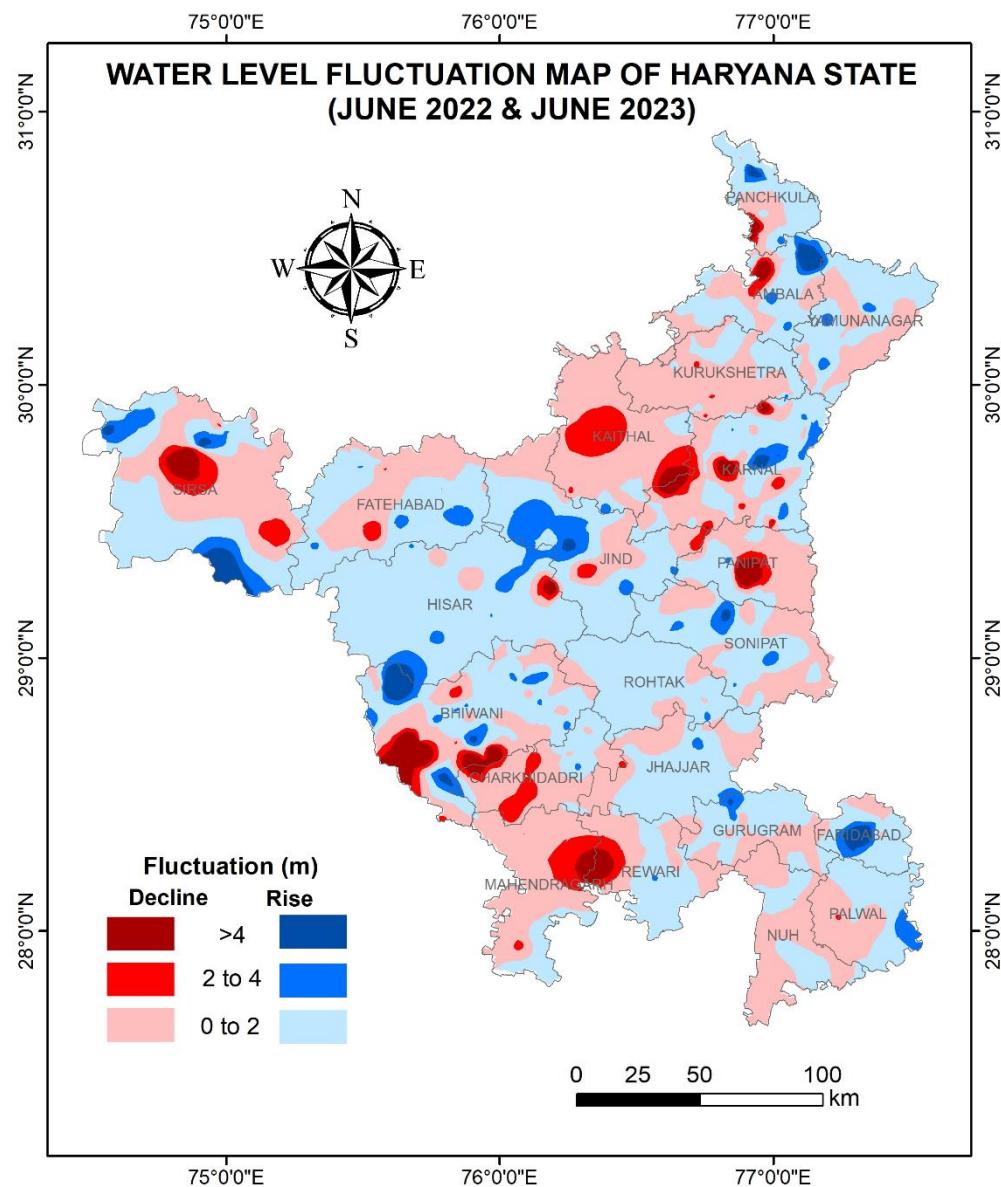


Fig. 14 Annual Water Level Fluctuation Map of Haryana State (June 2022 vs June 2023)

5.3.2 AUGUST 2022 – AUGUST 2023

In order to know the impact of rainfall and ground water withdrawal during last one-year, annual water level fluctuations for period August 2022 and August 2023 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.3.

The interpretations of annual water level fluctuations depict water level decline in about 43% of wells monitored and 46% of the area. Water level decline (0-2m) has been recorded in 34% of wells and 41% of area covering parts of Kaithal, Karnal, Kurukshetra, Sirsa, Fatehabad, Hisar, Bhiwani, Jind, Charkhi dadri, Mahendragarh, Jhajjar, Rohtak, Panipat, Sonipat, Gurgaon & Palwal districts. Water level Decline (2-4m) has recorded in 7% of wells and 5% of area covering parts of Kaithal, Karnal, Kurukshetra, Sirsa, Fatehabad, Hisar, Bhiwani & Jind districts. Water level decline of more than 4m has recorded in 3% of wells and 1% of area as isolated patches in Kurukshetra, Kaithal, Fatehabad & Bhiwani districts during the period.

The water level rise has been recorded remaining 57% of the wells and 54% of the area. Water level Rise (0-2m) has been recorded in 47% of the wells and 46% area majorly in eastern part of the state. Water level Rise of 2-4m has been observed in small patches in 7% of wells and 5% of area of the state in Yamunanagar, Panchkula, Kurukshetra, Karnal & Charkhi dadri districts. Water level rise of more than 4m has been recorded in 3% of the wells and 2% area of the state in patches of Yamunanagar, Panchkula & Charkhi dadri districts. Summarised details of annual water level fluctuation are given in table below;

Table 14 Annual water level fluctuation, August 2022 – August 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|--------------|-----------------|------|--------------|------|
| | | No. | %Age | Sq. Km. | %Age |
| Rise | >4 | 6 | 3 | 859 | 2 |
| | 4--2 | 12 | 7 | 2416 | 5 |
| | 2--0 | 85 | 47 | 20436 | 46 |
| Decline | >4 | 5 | 3 | 401 | 1 |
| | 4--2 | 12 | 7 | 2132 | 5 |
| | 2--0 | 61 | 34 | 17968 | 41 |

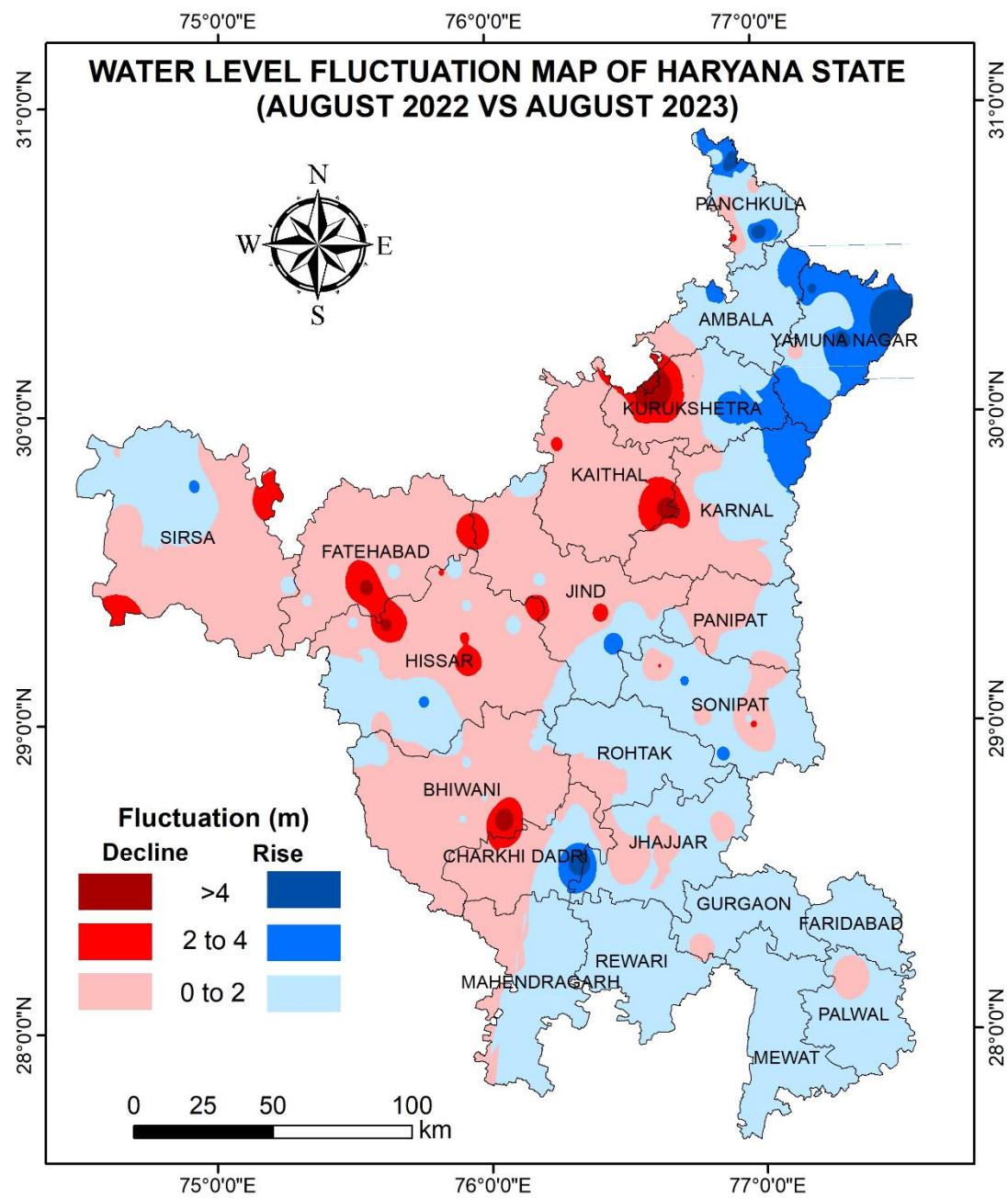


Fig. 15 Annual Water Level Fluctuation Map of Haryana State (August 2022 vs August 2023)

5.3.3 NOVEMBER 2022– NOVEMBER 2023

In order to know the impact of rainfall and ground water withdrawal during last one-year, annual water level fluctuations for period November 2022 and November 2023 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.3. The interpretation of seasonal fluctuations indicates a general Decline in 60 % of the wells monitored covering an area of 68% of the State. The water level decline in the range of 0-2m has been observed in 49% wells and 59% of the area falling in almost all districts. Water level decline in range of 2-4m has been observed in 7% wells and 6% of the area as isolated patches in Fatehabad, Jind, Kurukshetra, Karnal, Bhiwani, Mahendragarh, Sonipat, Panipat, Ambala, Gurugram and Palwal districts of the state. Water level decline >4m is recorded in 4% wells and 3% of the area covering isolated patches in Bhiwani, Hisar, Gurugram, Sonipat, Panipat, Ambala and Karnal districts.

The water level Rise has been observed in 39% of the wells and 32% of the area of the state. The water level Rise of 0-2m has been observed in 31% of wells and 27% of area rising in almost all the districts. The water level Rise of 2-4m has been observed in 5% of wells and 2% of area as isolated patches in Bhiwani, Mahendragarh, Charkhi dadri, Sirsa, Fatehabad, Panchkula, Kurukshetra, Ambala and Yamunanagar districts. The water level Rise of >4m is recorded in 3% wells and 2% of the area as isolated patches in Sirsa, Fatehabad, Bhiwani, Charkhi Dadri, Mahendragarh, Panchkula, Kurukshetra and Yamunanagar districts. Summarised details of seasonal water level fluctuation are given in table below;

Table 15 Annual water level fluctuation, November 2022 – November 2023

| Water Level Fluctuation Range | Wells Monitored | | Area Covered | | |
|-------------------------------|-----------------|------|--------------|-------|----|
| | No. | %Age | Km2 | %Age | |
| Decline | >4 | 30 | 4 | 1453 | 3 |
| | 4--2 | 51 | 7 | 2519 | 6 |
| | 2--0 | 356 | 49 | 26217 | 59 |
| Rise | 0--2 | 225 | 31 | 12147 | 27 |
| | 2--4 | 35 | 5 | 1053 | 2 |
| | >4 | 19 | 3 | 823 | 2 |

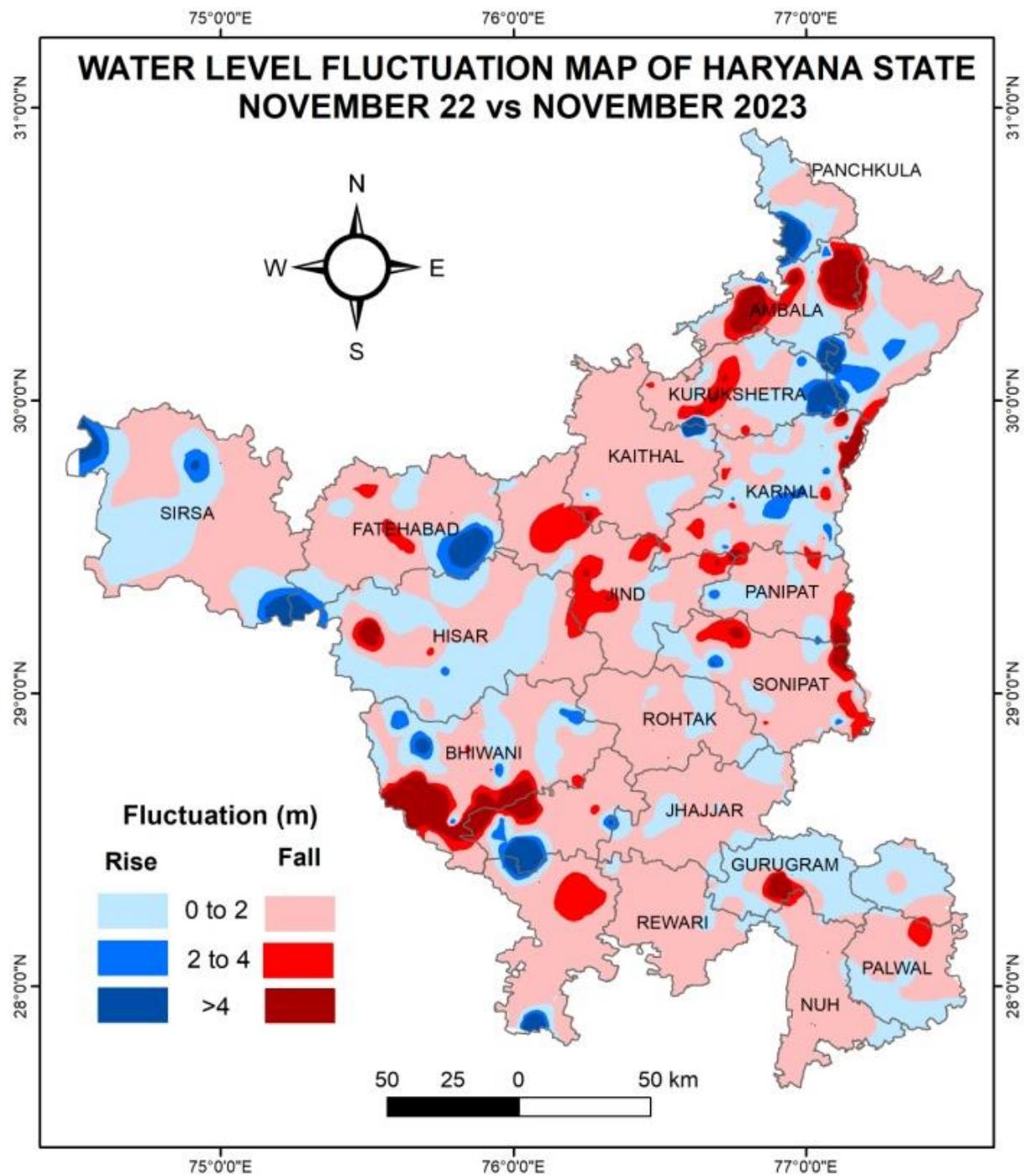


Fig. 16 Annual Water Level Fluctuation Map of Haryana State (Nov 2022 vs Nov 2023)

5.3.4 JANUARY 2023 - JANUARY 2024

In order to know the impact of rainfall and ground water withdrawal during last one-year, annual water level fluctuations for period JANUARY2023 and JANUARY2024 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.3.

The interpretation of seasonal fluctuations indicates a general Decline in 61% of the wells monitored covering an area of 65.93% of the State. The water level decline in the range of 0-2m has been observed in 54% wells and 2.53% of the area falling in almost all districts. Water level decline in range of 2-4m has been observed in 5% wells and 5.96% of the area as isolated patches in Sirsa, Fatehabad, Hisar, Jind, Kaithal, Karnal, Mahendragarh, Sonipat, Panipat, Gurugram and Palwal districts of the state. Water level decline >4m is recorded in 2% wells and 57.45% of the area covering isolated patches in Sirsa, Hisar, Gurugram and Mahendragarh districts.

The water level Rise has been observed in 37% of the wells and 34.07% of the area of the state. The water level Rise of 0-2m has been observed in 35% of wells and 32.28% of area rising in almost all the districts. The water level Rise of 2-4m has been observed in 2% of wells and 1.02% of area as isolated patches in Sirsa and Palwal districts. The water level Rise of >4m is recorded in 0% wells and less than 1% of the area as isolated patches in Sirsa district. Summarised details of seasonal water level fluctuation are given in table below;

Table 16 Annual water level fluctuation, January 2023 – January 2024

| Water Level Fluctuation Range | Wells Monitored | | Area Covered | | |
|-------------------------------|-----------------|------|--------------|---------|-------|
| | No. | %Age | Km2 | %Age | |
| Decline | >4 | 5 | 2 | 1101.6 | 2.53 |
| | 4--2 | 12 | 5 | 2595.4 | 5.96 |
| | 2--0 | 123 | 54 | 25028.6 | 57.45 |
| Rise | 0--2 | 78 | 35 | 14064.8 | 32.28 |
| | 2--4 | 4 | 2 | 444.1 | 1.02 |
| | >4 | 1 | 0 | 334.7 | 0.77 |

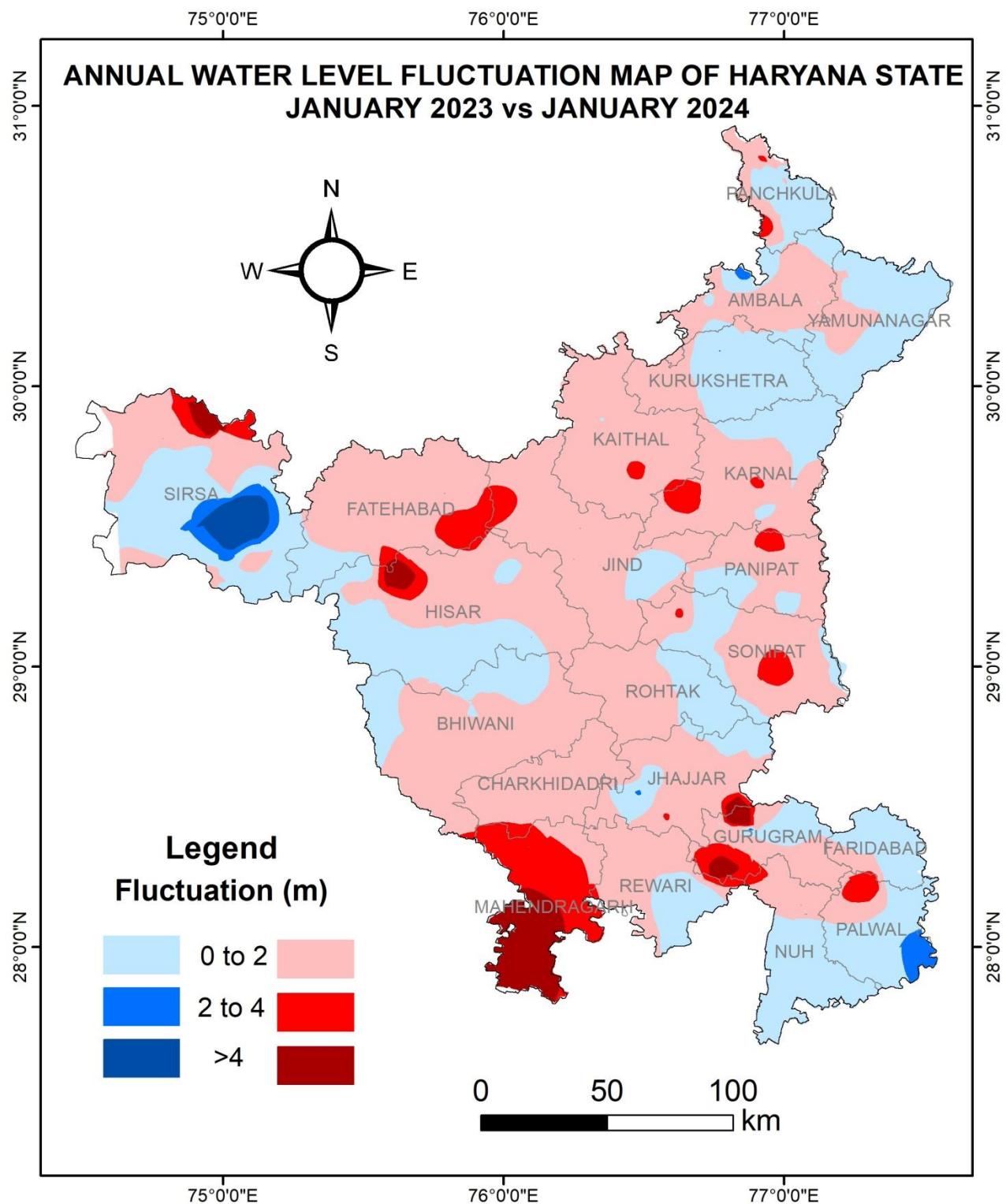


Fig 17 Annual Water level Fluctuation Map of Haryana State (Jan 2023 vs Jan 2024)

5.4. DECADAL MEAN WATER LEVEL FLUCTUATION

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade for each ground water observation well is computed and compared with the respective water level data of the given monitoring to determine the decadal mean water level fluctuation.

5.4.1 JUNE (2013:2022) & JUNE 2023

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2013-2022) for each ground water observation well is computed and compared with the respective water level data of June 2023. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.4.

The interpretations of decadal mean fluctuations indicate water level decline in 46% of wells which covers about 57% area in parts of all districts of the State. Water level decline in the range of 0-2m has been reported from 32% of the wells covering 32% of area of the state. Water level decline between 2-4 m has been reported from 10% of wells covering 13% area of the state. Water level decline of more than 4m has been observed in 4% wells and 11% of the area of state in isolated patches in Sirsa, Fatehabad, Kaithal, Kurukshetra, Bhiwani, Charkhi dadri, Mahendragarh, Rewari, Ambala, Panchkula, Panipat, Faridabad & Gurugram districts.

The water level rise has been observed in 54% of wells and 43% area in parts of all the districts. Water level rise in the range of 0-2m has been observed in 38% wells covering 39% area of the state. Water level rise between 2-4 m has been observed in small patches in 12% wells and 9% area of the state. Water level rise of more than 4m has been observed in 4% wells and 1% of the area of state. Summarised details of Decadal Mean water level fluctuation is given in table below;

Table 17 Decadal water level fluctuation, June (2013:2022) & June 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|--------------|-----------------|------|-----------------|------|
| | | No. | %Age | Km ² | %Age |
| Decline | >4 | 31 | 4 | 4746 | 11 |
| | 4--2 | 78 | 10 | 5950 | 13 |
| | 2--0 | 250 | 32 | 14290 | 32 |
| Rise | 0--2 | 301 | 38 | 14890 | 39 |
| | 2--4 | 97 | 12 | 3821 | 9 |
| | >4 | 29 | 4 | 515 | 1 |

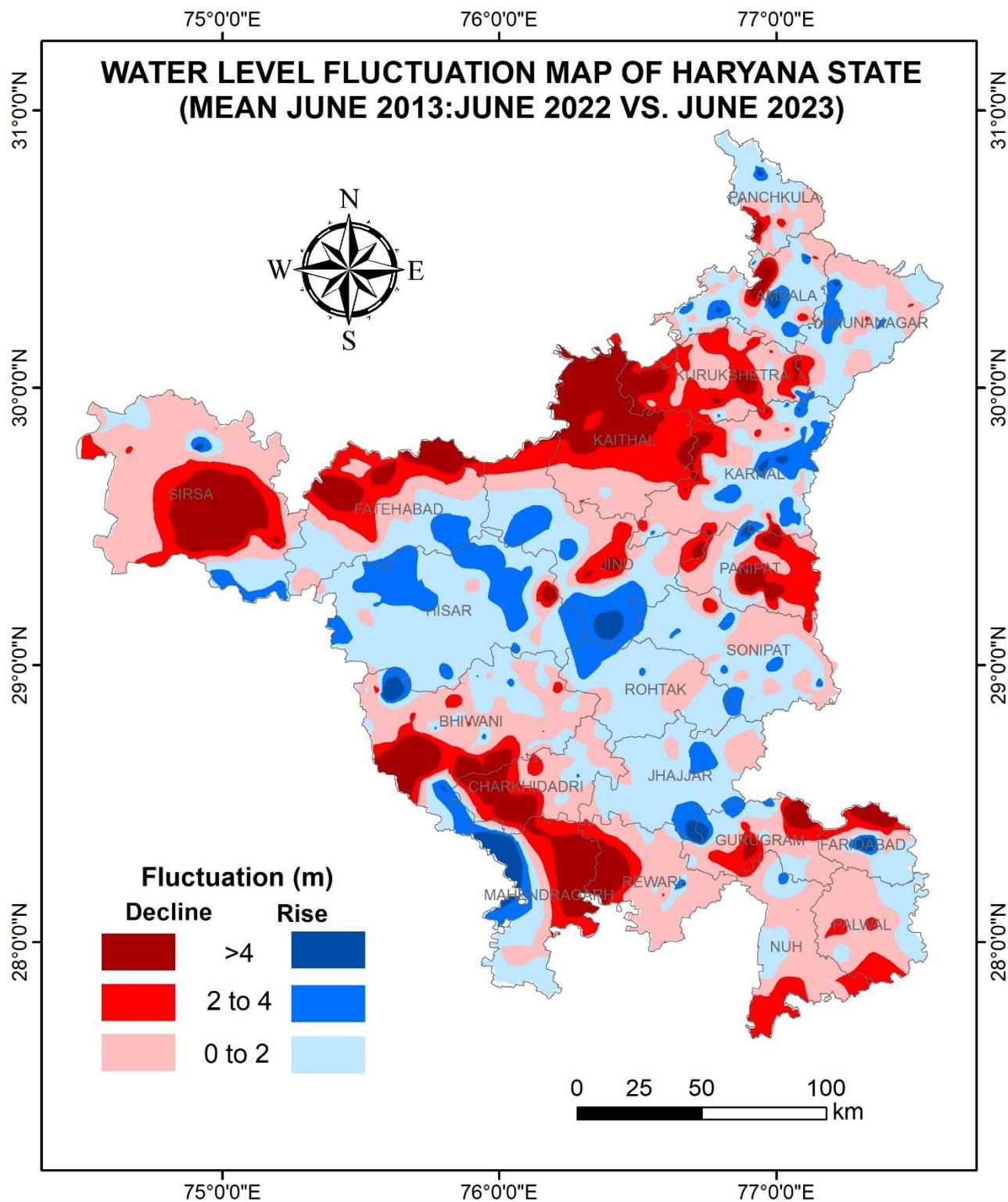


Fig. 18 Decadal Water Level Fluctuation Map of Haryana State (June 2013-2022 vs June 2023)

5.4.2 MEAN AUGUST (2013:2022) & AUGUST 2023

In order to know the impact of rainfall and ground water withdrawal during last one-year, annual water level fluctuations for period August 2022 and August 2023 are calculated. The behaviour of annual fluctuations is discussed in the following paragraph and depicted in Fig.3.

The interpretations of annual water level fluctuations depict water level decline in about 43% of wells monitored and 46% of the area. Water level decline (0-2m) has been recorded in 34% of wells and 41% of area covering parts of Kaithal, Karnal, Kurukshetra, Sirsa, Fatehabad, Hisar, Bhiwani, Jind, Charkhi dadri, Mahendragarh, Jhajjar, Rohtak, Panipat, Sonipat, Gurgaon & Palwal districts. Water level Decline (2-4m) has recorded in 7% of wells and 5% of area covering parts of Kaithal, Karnal, Kurukshetra, Sirsa, Fatehabad, Hisar, Bhiwani & Jind districts. Water level decline of more than 4m has recorded in 3% of wells and 1% of area as isolated patches in Kurukshetra, Kaithal, Fatehabad & Bhiwani districts during the period.

The water level rise has been recorded remaining 57% of the wells and 54% of the area. Water level Rise (0-2m) has been recorded in 47% of the wells and 46% area majorly in eastern part of the state. Water level Rise of 2-4m has been observed in small patches in 7% of wells and 5% of area of the state in Yamunanagar, Panchkula, Kurukshetra, Karnal & Charkhi dadri districts. Water level rise of more than 4m has been recorded in 3% of the wells and 2% area of the state in patches of Yamunanagar, Panchkula & Charkhi dadri districts. Summarised details of annual water level fluctuation are given in table below;

Table 18 Decadal water level fluctuation, August (2013:2022) & August 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|--------------|-----------------|------|--------------|------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4 | 6 | 3 | 859 | 2 |
| | 4--2 | 12 | 7 | 2416 | 5 |
| | 2--0 | 85 | 47 | 20436 | 46 |
| Rise | 0--2 | 5 | 3 | 401 | 1 |
| | 2--4 | 12 | 7 | 2132 | 5 |
| | >4 | 61 | 34 | 17968 | 41 |

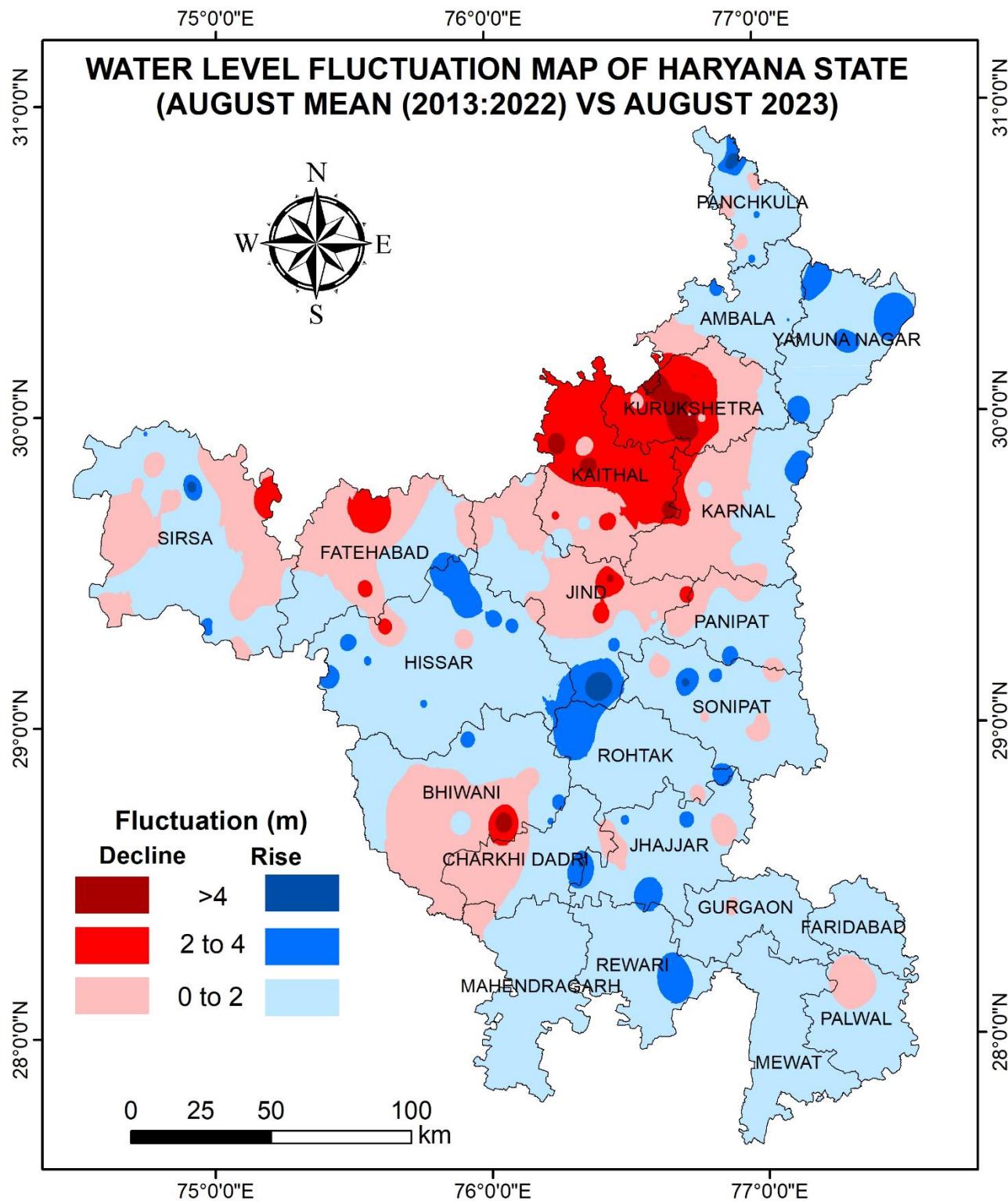


Fig. 19 Decadal Water Level Fluctuation Map of Haryana State (Aug 2013-2022 vs Aug 2023)

5.4.3 Mean November (2013:2022) & November 2023

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2013-2022) for each ground water observation well is computed and compared with the respective water level data of November 2023. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.4.

The interpretations of decadal mean fluctuations so arrived at indicate general water level decline in 60% of wells and 60% area covering all Districts of the State. Water level decline in the range of 0-2m has been reported from 38% of the wells covering 40% of area of the state. Water level decline between 2-4 m has been reported from 12% of wells covering 13% area of the state falling in Sirsa, Fatehabad, Jind, Kaithal, Kurukshetra, Karnal, Ambala, Yamunanagar, Panipat, Bhiwani, Mahendragarh, Rewari, Gurugram, Sonipat and Palwal districts. Water level decline of more than 4m has been observed in 9% wells and 7% of the area of state falling in Sirsa, Fatehabad, Ambala, Kurukshetra, Kaithal, Karnal, Rewari, Bhiwani, Panipat, Jind Yamunanagar and Gurugram districts. The water level rise has been observed in 40% of wells and 40% area falling majorly in central districts. Water level rise in the range of 0-2m has been observed in 27% wells covering 32% area of the state. Water level rise of 2-4m has been observed in 9% wells and 6% area of the state falling in Sirsa, Fatehabad, Jind, Hisar, Bhiwani, Mahendragarh, Jind, Panchkula, Ambala, Yamunanagar, Karnal, Panipat, Sonipat, Rohtak, Jhajjar, Gurugram Nuh and Faridabad districts. Water level rise of >4m has been observed in more than 4% wells and more than 2% area of the state as isolated patches in Panchkula, Ambala, Sirsa, Hisar, Bhiwani, Charki dadri, Mahendargarh, Gurugram and Nuh districts. Summarised details of Decadal Mean water level fluctuation given in table below;

Table 19 Decadal water level fluctuation, November (2013:2022) & November 2023

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|--------------|-----------------|------|--------------|------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4 | 75 | 9 | 2919 | 7 |
| | 4--2 | 99 | 12 | 5721 | 13 |
| | 2--0 | 309 | 38 | 17780 | 40 |
| Rise | 0--2 | 225 | 27 | 14227 | 32 |
| | 2--4 | 77 | 9 | 2571 | 6 |
| | >4 | 37 | 4 | 994 | 2 |

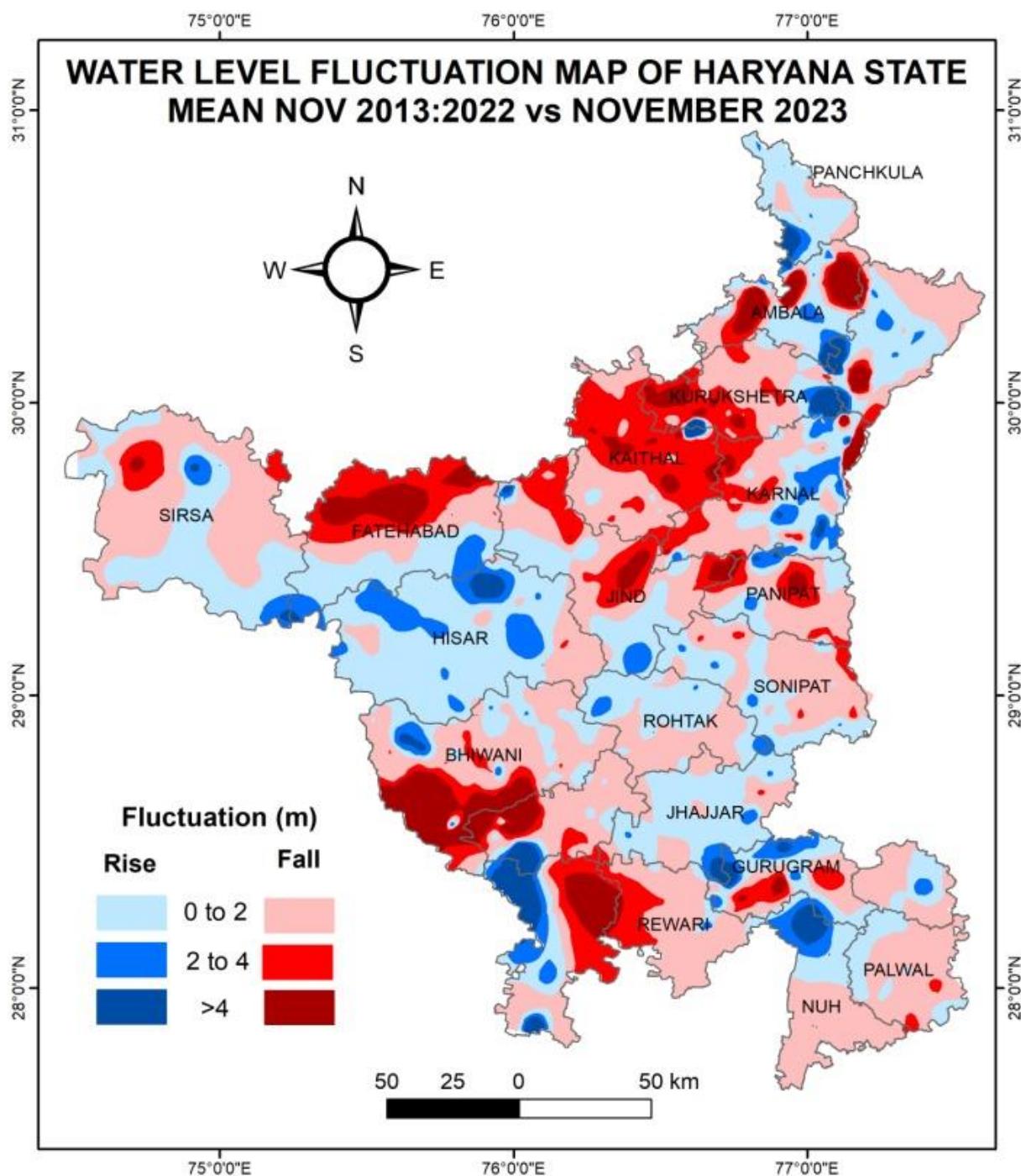


Fig. 20 Decadal Water Level Fluctuation Map of Haryana State (Nov 2013-2022 vs Nov 2023)

5.4.4 JANUARY (2014-2023) & JANUARY 2024

Changes in water level behaviour since last one decade are determined using decadal mean data. Water level mean of past one decade (2014-2023) for each ground water observation well is computed and compared with the respective water level data of JANUARY 2024. The behaviour of water level over the period under reference is discussed in paragraph below along with Fig.4.

The interpretations of decadal mean fluctuations so arrived at indicate general water level decline in 49% of wells and 45.44% area covering all Districts of the State. Water level decline in the range of 0-2m has been reported from 34% of the wells covering 2.88% of the area of state falling in almost all of the districts. Water level decline between 2-4 m has been reported from 10% of wells covering 9.45% area of the state falling in Sirsa, Jind, Kaithal, Kurukshetra, Karnal, Panipat, Mahendragarh, Rewari, Gurugram and Faridabad districts and few patches in Fatehabad, Hisar, Bhiwani, Palwal, Sonipat, Jhajjar, Ambala and Panchukula districts. Water level decline of more than 4m has been observed in 5% wells and 33.11% of the area of state falling in Sirsa, Kurukshetra, Kaithal, Karnal, Panipat, Mahendragarh, Rewari, Gurugram and Faridabad districts.

The water level rise has been observed in 51% of wells and 54.56% area falling majorly in central districts. Water level rise in the range of 0-2m has been observed in 41% wells covering 44.65% area of the state falling in almost all of the districts. Water level rise of 2-4m has been observed in 8% wells and 7.35% area of the state falling in Sirsa, Jind, Hisar, Bhiwani, Mahendragarh, Rewari, Ambala, Kurukshetra Charkhadri, Gurugram, Nuh and Palwal districts and few patches in Kurukshetra, Ambala, Sonipat, Rohtak and Jhajjar districts. Water level rise of >4m has been observed in more than 2% wells and more than 2.56% area of the state as isolated patches in Sirsa, Charkhadri, Mahendragarh and Gurugram districts. Summarised details of Decadal Mean water level fluctuation given in table below;

Table 20 Decadal water level fluctuation, January (2014:2023) & January 2024

| Water Level Fluctuation Range | | Wells Monitored | | Area Covered | |
|-------------------------------|------|-----------------|------|--------------|-------|
| | | No. | %Age | Km2 | %Age |
| Decline | >4 | 12 | 5 | 1259.5 | 2.88 |
| | 4--2 | 26 | 10 | 4137.2 | 9.45 |
| | 2--0 | 90 | 34 | 14491.3 | 33.11 |
| Rise | 0--2 | 107 | 41 | 19541.2 | 44.65 |
| | 2--4 | 21 | 8 | 3214.7 | 7.35 |
| | >4 | 6 | 2 | 1122.5 | 2.56 |

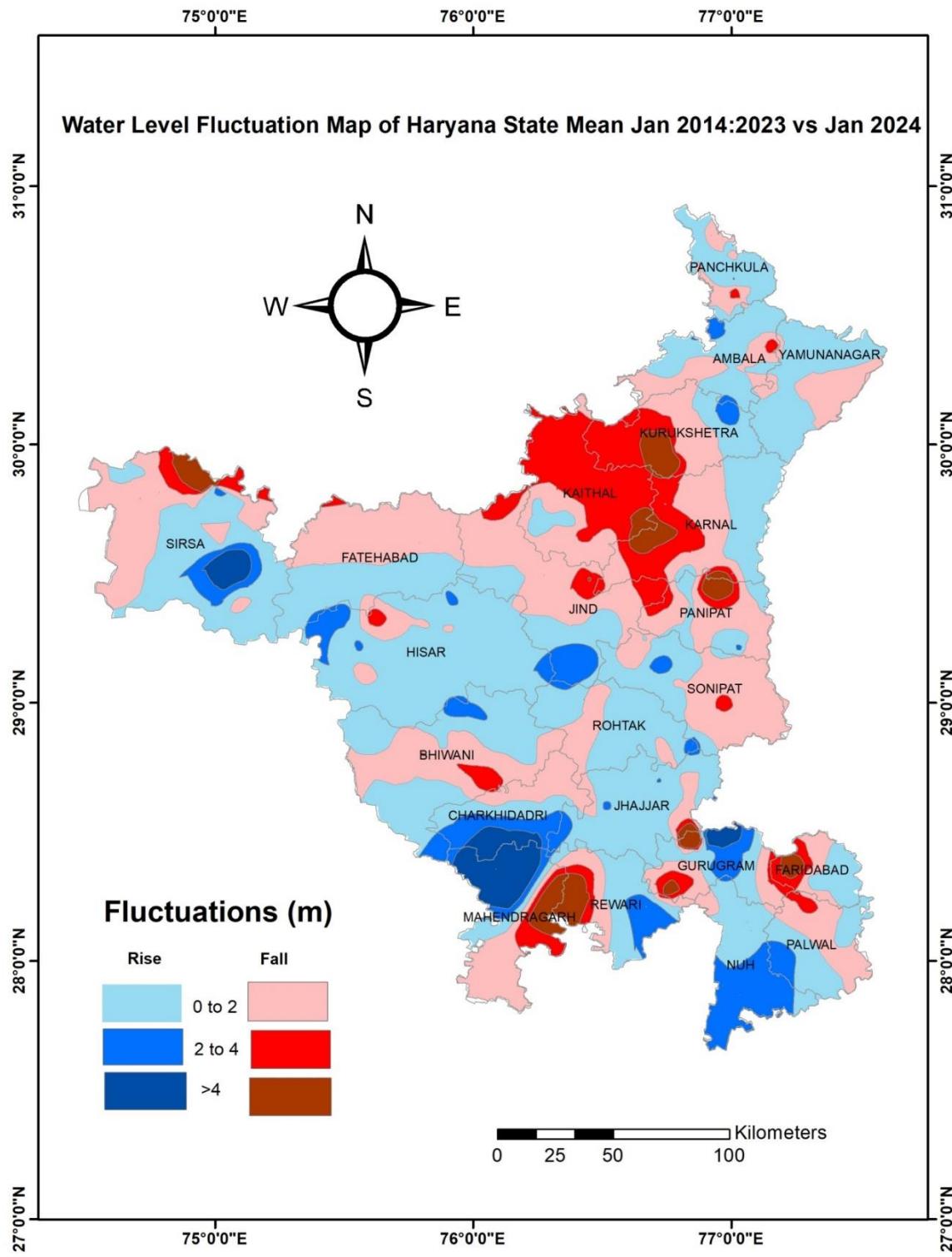


Fig 21 Decadal Water Level Fluctuation Map of Haryana State (UT) (Jan 2014-2023 vs Jan 2024)

6. BEHAVIOUR OF WATER LEVEL OF CONFINED AQUIFER

6.1 JUNE 2023

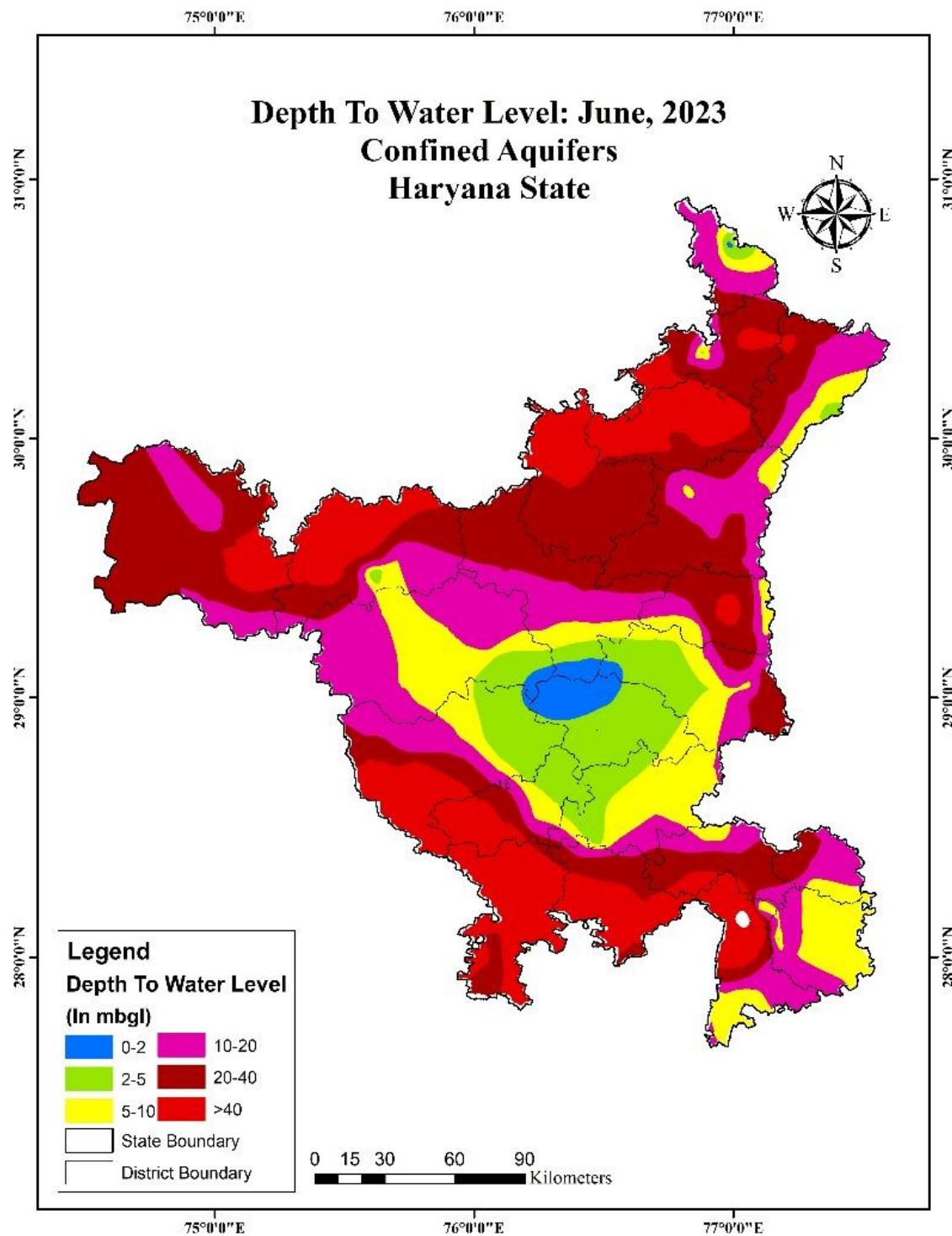
The behavioral pattern of water level in June 2023 is discussed as follows:

The depth to water level during June 2023 varies from 0.79 mbgl in Jind district to 135.00 mbgl in Mewat district. Very shallow (0-2m) water levels conditions are observed in around 2.1% wells covering 1.8% of the area of state. Shallow water levels (2-5m) observed in 8.6% wells and covers 9.4% of state's area. Moderate water levels (5-10m) occur in 11.4% wells covering 14.3% of the area. Moderately deep-water levels of 10-20m are observed in nearly 15.0% wells and covers 23.6% of the state's area. Deep water levels of (20-40m) have been recorded in 31.4% of wells covering same percentage of the area. Very Deep-water levels (>40m) occur in 31.4% of the wells and cover 19.4% of the state's area.

Table 21 Depth to water level of confined aquifers, June 2023

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 3.0 | 2.1 | 785.8 | 1.8 |
| 2-5 | 12.0 | 8.6 | 4034.0 | 9.4 |
| 5-10 | 16.0 | 11.4 | 6150.0 | 14.3 |
| 10-20 | 21.0 | 15.0 | 10119.0 | 23.6 |
| 20-40 | 44.0 | 31.4 | 13467.0 | 31.4 |
| >40 | 44.0 | 31.4 | 8310.0 | 19.4 |

Fig. 22 Depth to Water Level Map of Haryana State June 2023



6.2 AUGUST 2023

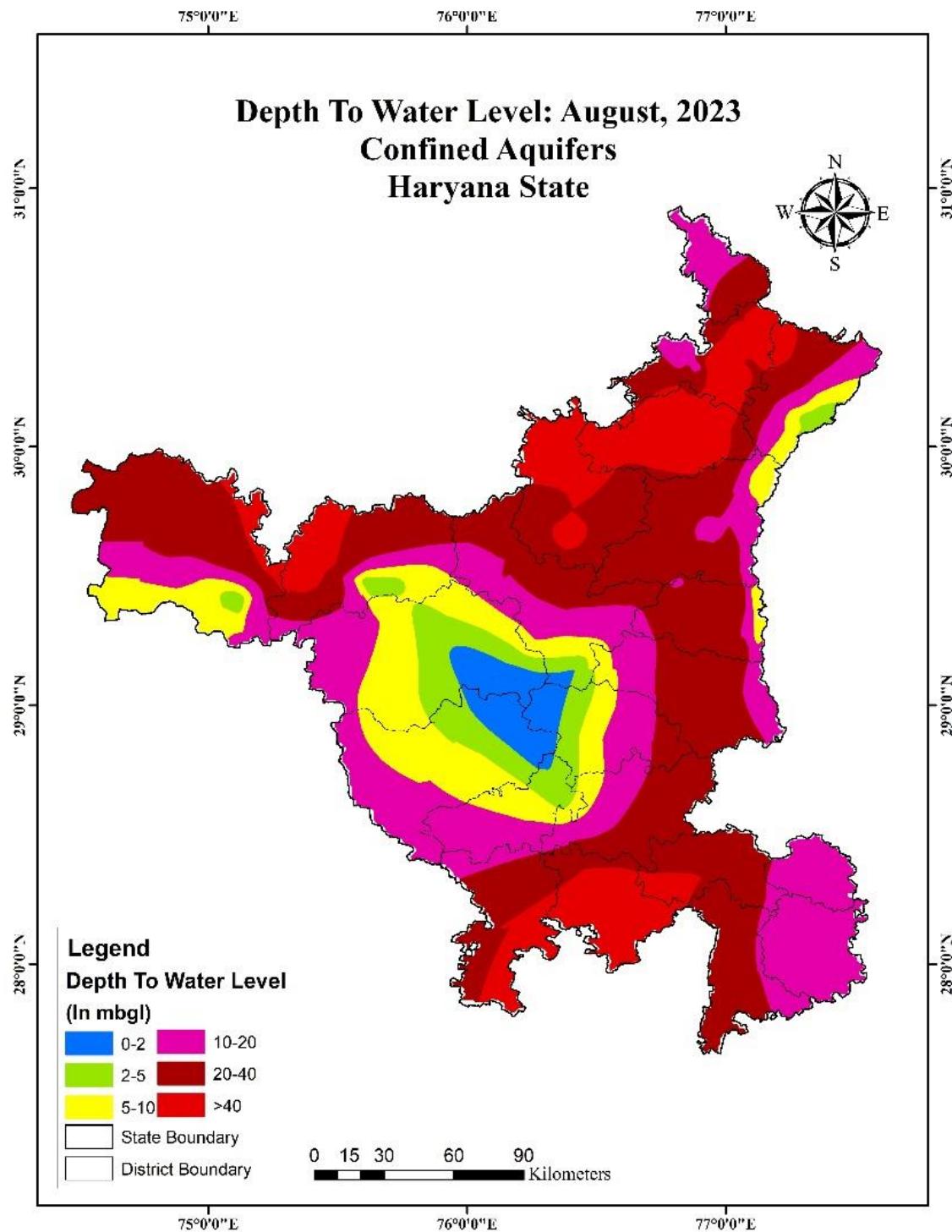
The behavioral pattern of water level in August 2023 is discussed below.

The depth to water level during August 2023 varies from 1.18 mbgl in Hisar district to 84.55 mbgl in Ambala district. Very shallow (0-2m) water levels conditions are observed in around 5.3% wells which indicates water logging conditions and covers 3.3% of the state's area. Shallow water levels (2-5m) observed in 12.3% wells covering 5.7% of the state's area. Moderate water levels (5-10m) occur in 8.8% wells covering 12.6% of the state's area. Moderately deep-water levels of 10-20m are observed in nearly 29.8% of the wells covering 26% of the area of state. Deep water levels of 20-40m have been registered in 29.8% of wells covering 38.4% of the area. Very Deep-water levels (>40m) also occur in 14% of the wells covering same percentage of the states area.

Table 22 Depth to water level of confined aquifers, August 2023

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 3.0 | 5.3 | 1397.4 | 3.3 |
| 2-5 | 7.0 | 12.3 | 2457.9 | 5.7 |
| 5-10 | 5.0 | 8.8 | 5401.3 | 12.6 |
| 10-20 | 17.0 | 29.8 | 11134.1 | 26.0 |
| 20-40 | 17.0 | 29.8 | 16466.4 | 38.4 |
| >40 | 8.0 | 14.0 | 5990.4 | 14.0 |

Fig. 23 Depth to Water Level Map of Haryana State Aug 2023



6.3 NOVEMBER 2023

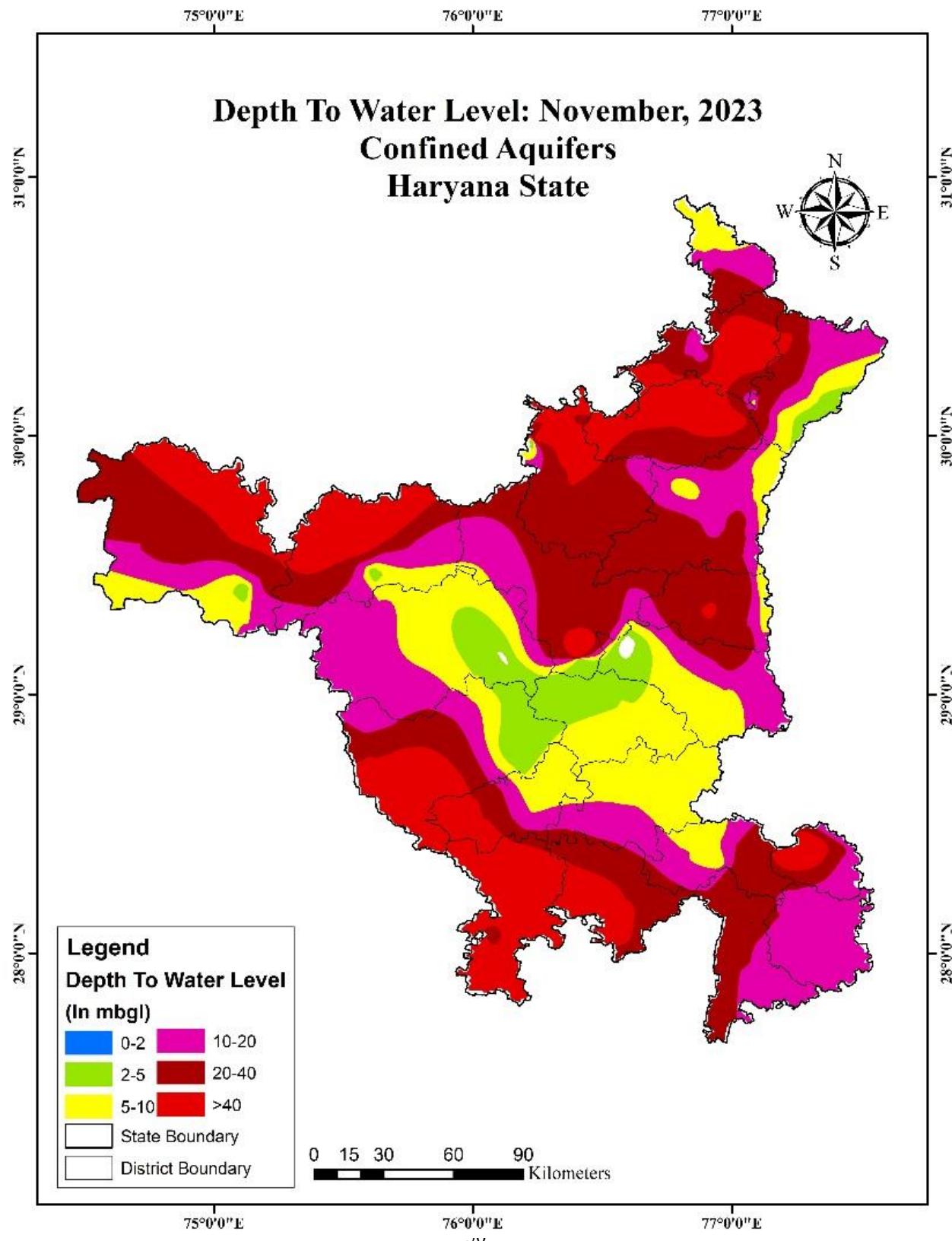
The behavioral pattern of water level in November 2023 is discussed below.

The depth to water level during November 2023 varies from 0.34 mbgl in Kaithal district to 87.60 mbgl in Bhiwani district. Very shallow (0-2m) water level conditions are observed in 2.5% wells which indicates water logging conditions over less than 1% of the state's area. Shallow water levels (2-5m) observed in 7.4% wells covering 5.8% of the state's area. Moderate water levels (5-10m) occur in 9.8% wells and 17.5% of the state's area. Moderately deep-water levels of 10-20m are observed in nearly 21.3% wells and one forth of the state's area. Deep water levels of (20-40m) have been recorded in 29.5% of wells and cover approximately 31.7% of the state's area. Very Deep-water levels (>40m) also occur in 29.5% of the wells covering 19.5% of the states area.

Table 23 Depth to water level of confined aquifers, November 2023

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 3.0 | 2.5 | 56.2 | 0.1 |
| 2-5 | 9.0 | 7.4 | 2466.8 | 5.8 |
| 5-10 | 12.0 | 9.8 | 7481.6 | 17.5 |
| 10-20 | 26.0 | 21.3 | 10880.6 | 25.5 |
| 20-40 | 36.0 | 29.5 | 13523.2 | 31.7 |
| >40 | 36.0 | 29.5 | 8310.2 | 19.5 |

Fig. 24 Depth to Water Level Map of Haryana State Nov 2023



6.4 JANUARY 2024

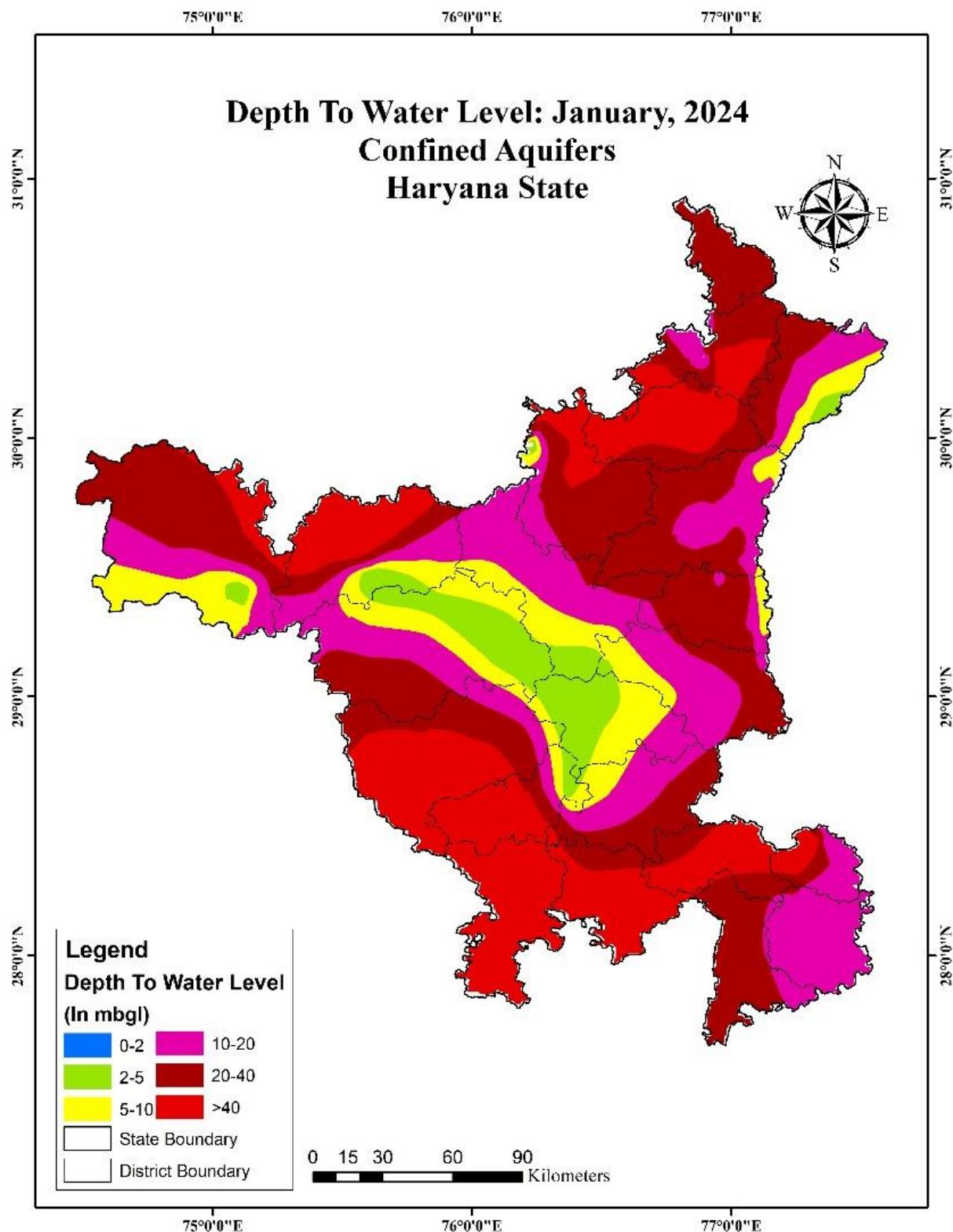
The behavioral pattern of water level in January 2024 is discussed as follows:

The depth to water level during January 2024 varies from 0.35 mbgl in Kaithal district to 99.30 mbgl in Mahendragarh district. Very shallow (0-2m) water levels conditions are observed in around 3.7% wells covering less than 1% of the state's area. Shallow water levels (2-5m) observed in 9.8% wells covering 6.2% of the state's area. Moderate water levels (5-10m) occur in 7.3% wells covering 10.9% of the state's area. Moderately deep-water levels of 10-20m are observed in nearly 23.2% wells covering 24.4% of the state's area. Deep water levels of (20-40m) have been recorded in 24.4% of wells and covers 34.9% of the state's area. Very Deep-water levels (>40m) occur in 31.7% of the wells covering 23.6% of the state's area.

Table 24 Depth to water level of confined aquifers, January 2024

| Depth to water level range | Wells monitored | | Area covered | |
|----------------------------|-----------------|------|--------------|------|
| | No. | %age | Sq. Km. | %age |
| 0-2 | 3.0 | 3.7 | 3.6 | 0.0 |
| 2-5 | 8.0 | 9.8 | 2647.4 | 6.2 |
| 5-10 | 6.0 | 7.3 | 4680.7 | 10.9 |
| 10-20 | 19.0 | 23.2 | 10474.6 | 24.4 |
| 20-40 | 20.0 | 24.4 | 14982.2 | 34.9 |
| >40 | 26.0 | 31.7 | 10148.0 | 23.6 |

Fig. 25 Depth To Water Level Map of Haryana State Jan 2024



7. Long term hydrographs

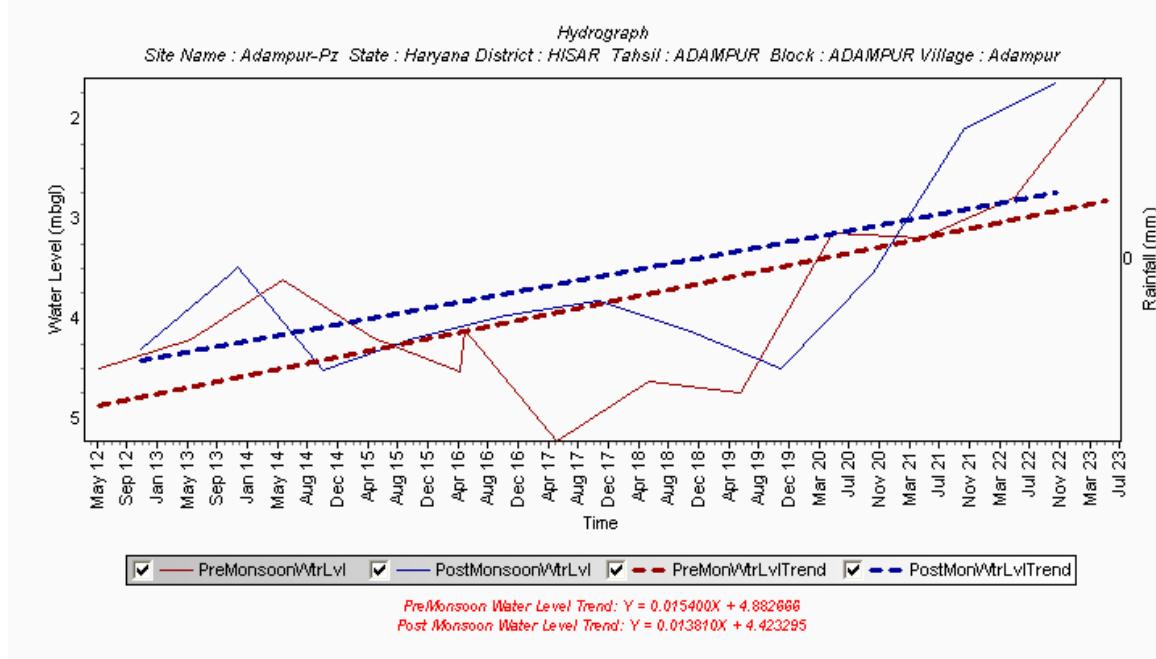


Figure 26 Site Adampur pz, District Hisar, Haryana

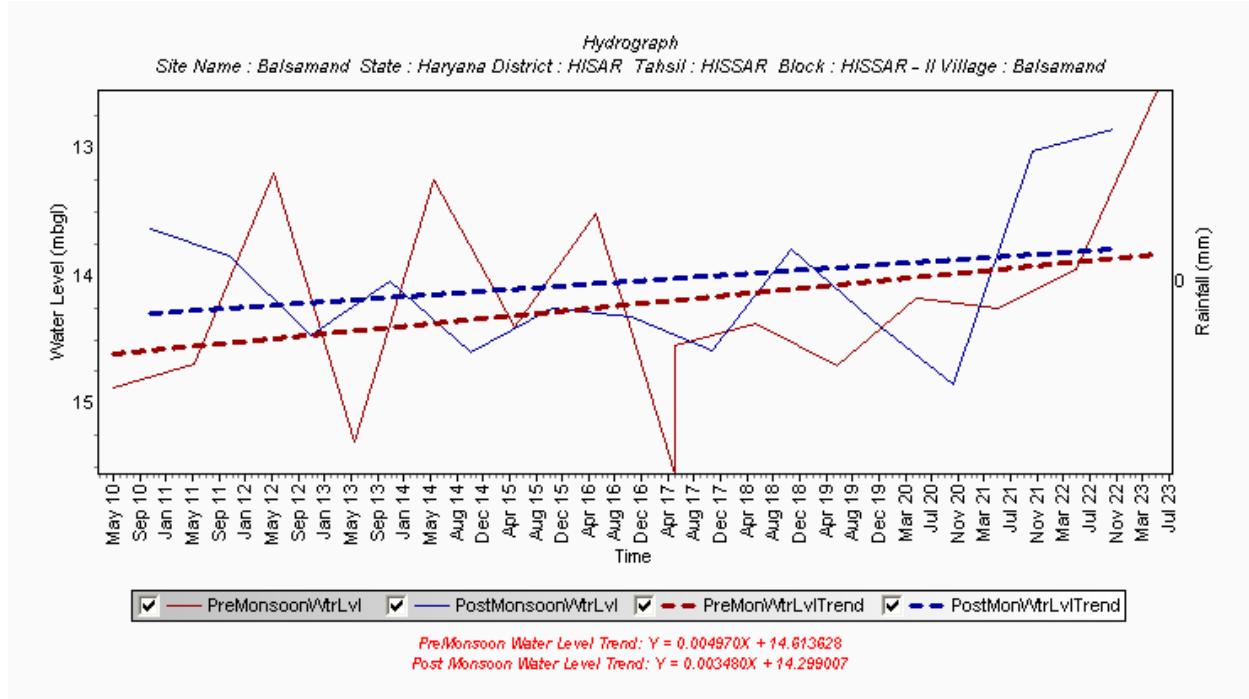


Figure 27 Site Balsamand, District Hisar, Haryana

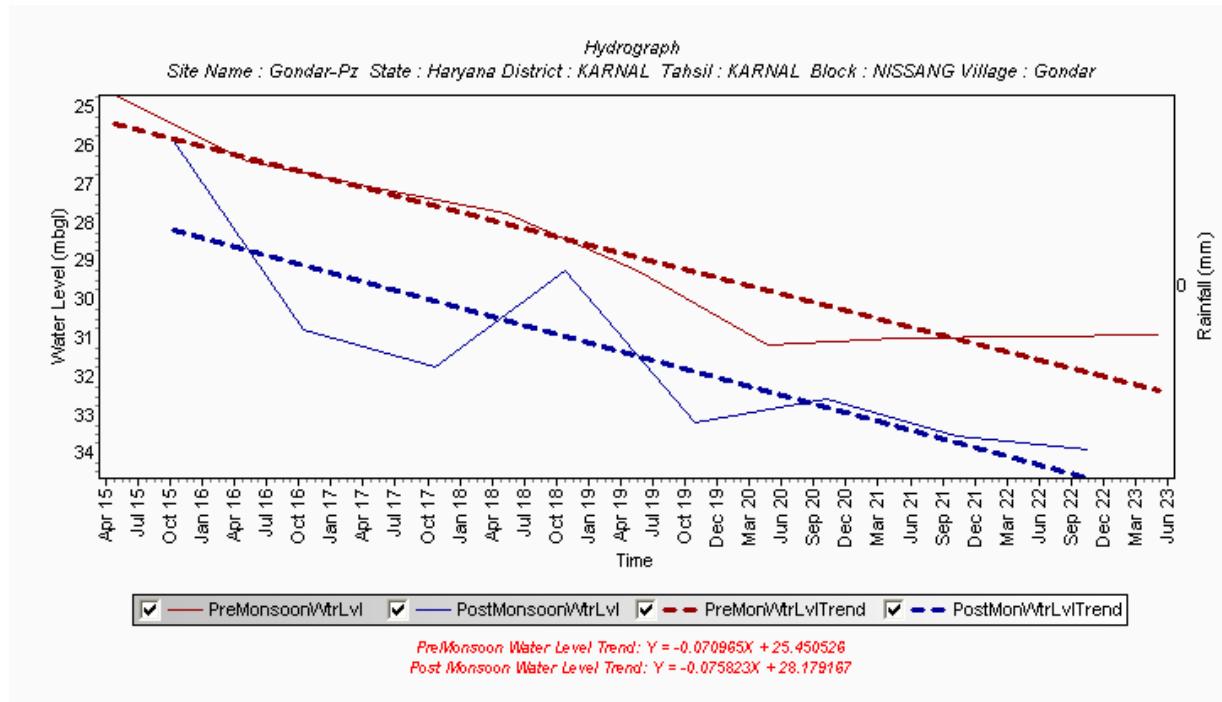


Figure 28 Site Gondar pz, District Karnal, Haryana

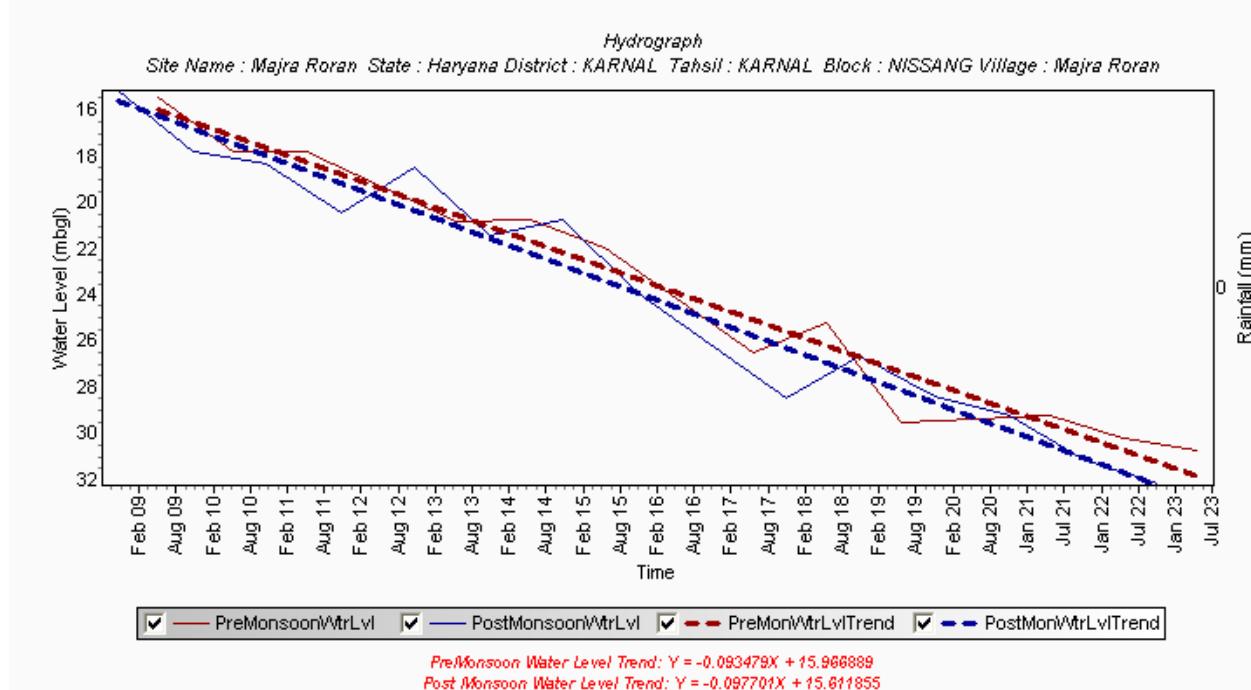


Figure 29 Site Majra roran, District Karnal, Haryana

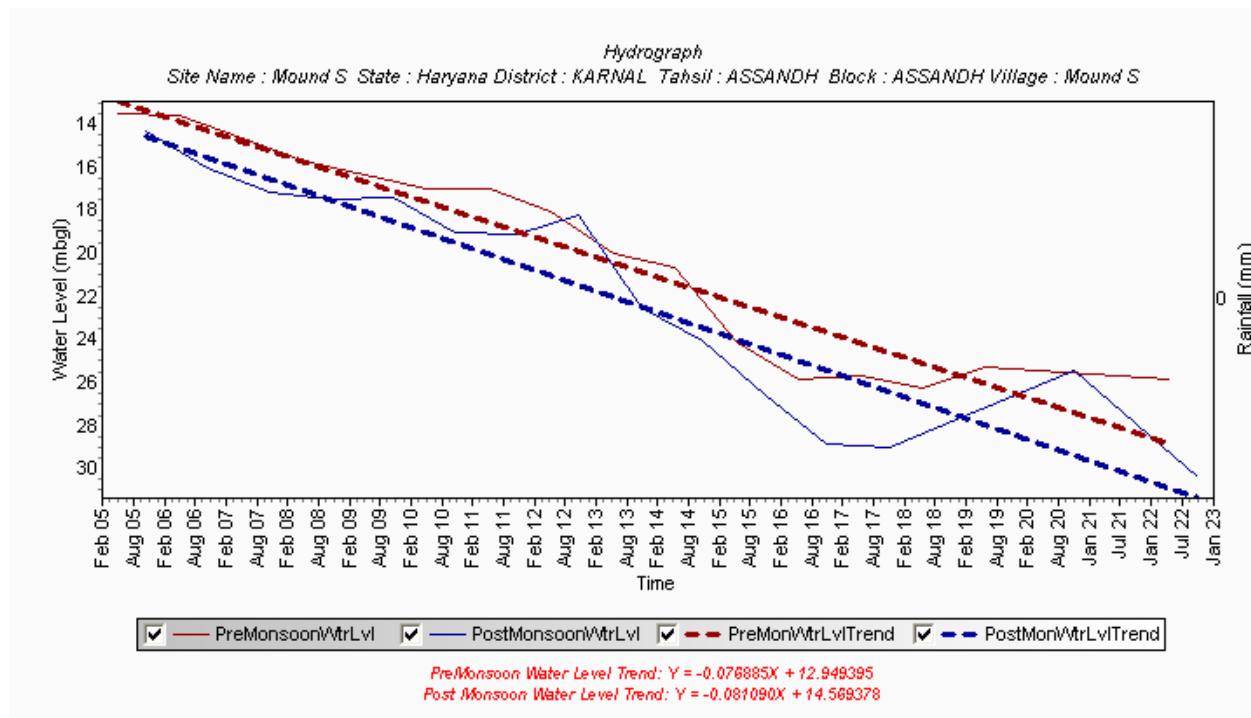


Figure 30 Site Mound S, District Karnal, Haryana

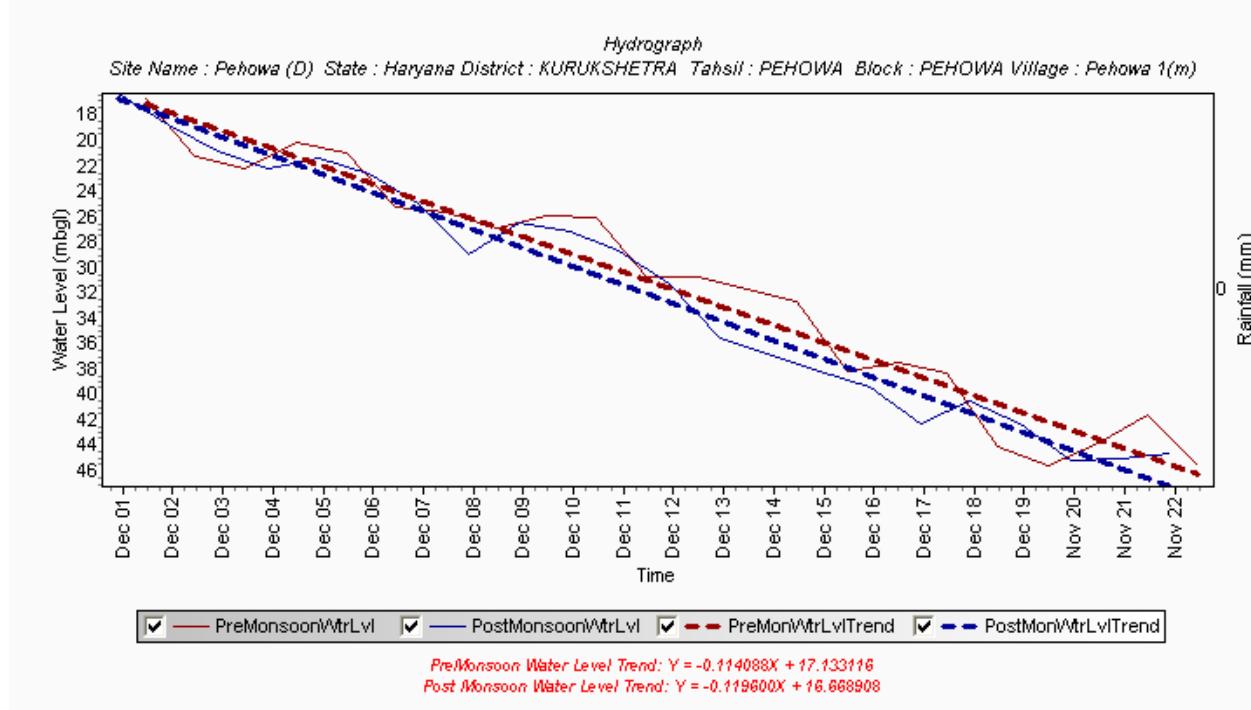


Figure 31 Pehowa D, District Kurukshetra, Haryana

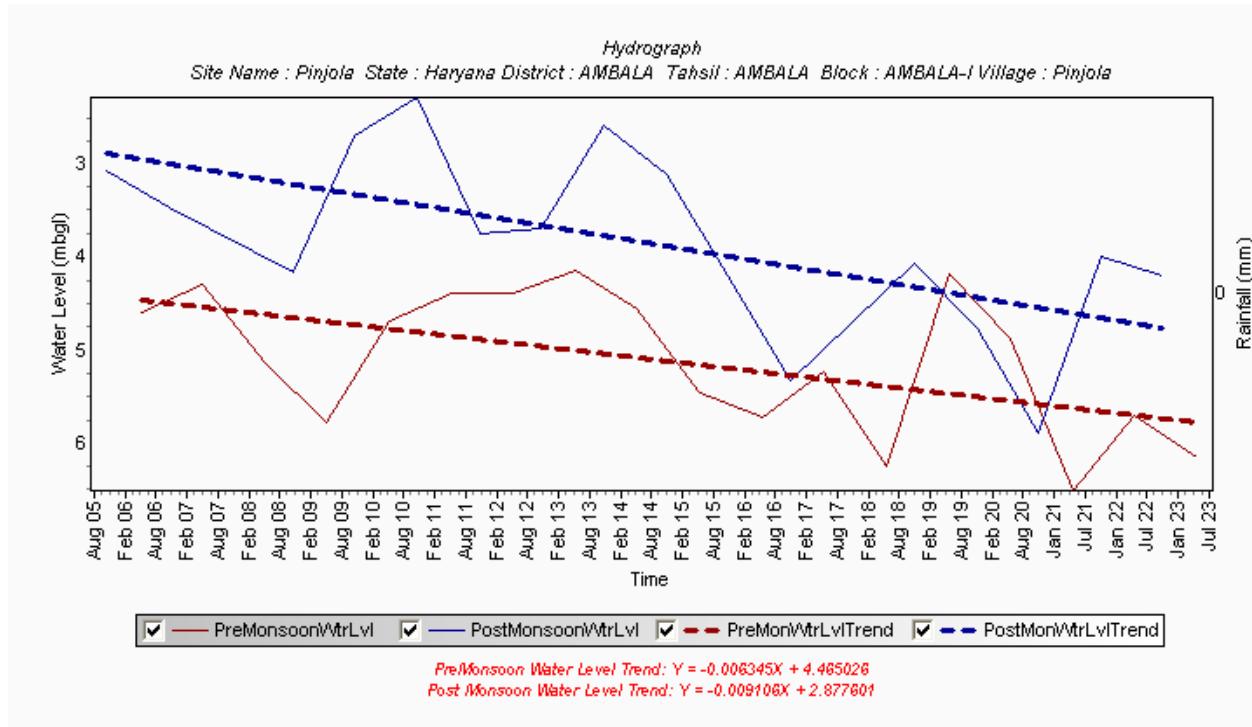


Figure 32 Site Pinjola, District Ambala, Haryana

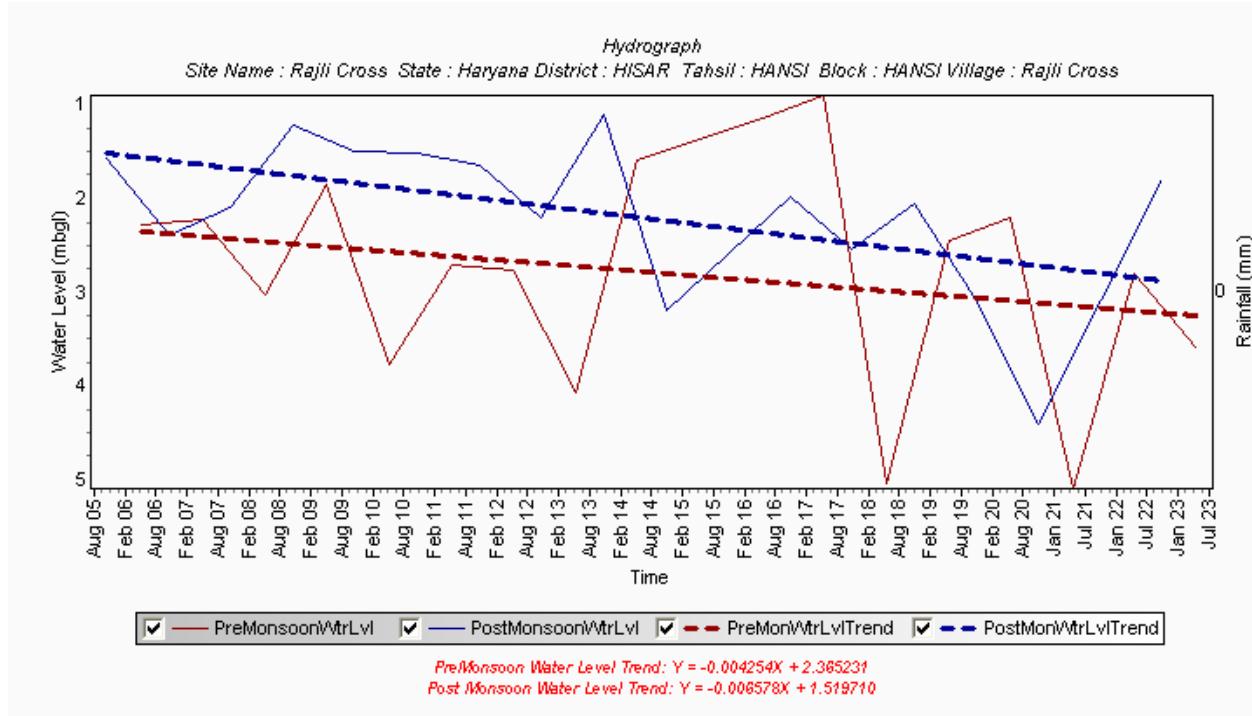


Figure 33 Site Rajli Cross, District Hisar, Haryana

Discussion

Above 8 nos. of water level hydrographs of the Punjab State are representatives of the typical long-term depth to water level trend of the state's aquifers. Except Balsamand-PZ and Adampur-PZ of Hisar district, all the rest of 6 hydrographs are showing the declining trend of depth to water level. The decline in depth to water level is attributed to the extraction of groundwater specially for irrigation purposes as evident from GWRE 2022-23 (CGWB, NWR, Chandigarh, 2023). Although groundwater extraction for domestic and industrial purposes is also increasing due to the increase in population, urban settlements and industrialization respectively, irrigation-led groundwater extraction is exceeded by multiple folds. Typical Kharif cropping pattern of the state is Paddy (Rice) which is water intensive crop and requires multiple cycles of irrigation as well throughout the cropping period from sowing to harvesting.

Concerned state government departments are dissemination the information pertaining to the sowing of DSR variety of paddy (Direct Seeded Rice) which is less water intensive and increases the irrigation return flow.

Apart from the groundwater extraction, declining depth to water level trend may also be attributed to the decreased rainfall through previous years and also, less rainfall intensity as compared to previous years.

However, the rising trend of depth to water level in Balsamand-PZ and Adampur-PZ of Hisar district shows the effect of artificial recharge interventions recommended by CGWB and State government departments.

Water level data of unconfined aquifer

Annexure-I

| S. No. | District | Well Name | Jun-23 | Aug-23 | Nov-23 | Jan-24 |
|--------|----------|-----------------------|--------|--------|--------|--------|
| 1 | AMBALA | Ambala Cantt | 1.28 | | 1.83 | 1.72 |
| 2 | AMBALA | Ambala Cantt-Pz | 4.8 | | 16.53 | |
| 3 | AMBALA | Ambala City-DW | 2 | | 1.37 | |
| 4 | AMBALA | Baknaur-DW | 11.15 | | 9.1 | |
| 5 | AMBALA | Balana | 1.14 | 1.09 | 0.71 | 0.84 |
| 6 | AMBALA | Barakhuda | 6.73 | | 6.68 | |
| 7 | AMBALA | Barara-Pz | 15.02 | | 15.93 | |
| 8 | AMBALA | Bararara pz S | 5.6 | | | |
| 9 | AMBALA | Bari Bassi-DW | 10.75 | | | |
| 10 | AMBALA | Bhurewala-Pz | 8.73 | | 5.55 | |
| 11 | AMBALA | Bichali Dhamouli-Pz | 6.2 | | 5 | |
| 12 | AMBALA | Binjal Pur-DW | 4.11 | | | |
| 13 | AMBALA | Boh-DW | 3.45 | | 3.45 | |
| 14 | AMBALA | Budhha Khera-DW | 6.2 | | | |
| 15 | AMBALA | Bullana- DW | 1.2 | | | |
| 16 | AMBALA | Churmastpur-DW | 4 | | | |
| 17 | AMBALA | Dhanaura | 4.92 | 1.45 | 1.9 | 3.05 |
| 18 | AMBALA | Gadauli-Pz-D | 41.02 | 48.55 | 45.93 | 38.52 |
| 19 | AMBALA | Gadauli-Pz-M | 42.87 | 49.6 | 45.45 | 41.3 |
| 20 | AMBALA | Gadauli-Pz-S | 31.16 | | 44.98 | 22.94 |
| 21 | AMBALA | Jandheri Pz-D | 43.5 | 45.7 | 43.96 | 42.62 |
| 22 | AMBALA | Jandheri Pz-M | 44.6 | 46.05 | 44.69 | 43.79 |
| 23 | AMBALA | Jansui-DW | 1.5 | | | |
| 24 | AMBALA | Jeoly Ow | 54.52 | 61.8 | 57.29 | 48.82 |
| 25 | AMBALA | Kakkar Majra-DW | 12.05 | | 10.35 | |
| 26 | AMBALA | Kakru | 1.05 | 0.9 | 0.75 | 0.76 |
| 27 | AMBALA | Kalumazra-DW | 1.5 | | | |
| 28 | AMBALA | Kapoori At Saphera-PZ | 21.6 | | 21.52 | |
| 29 | AMBALA | Keshopur-M | 8.57 | 16.3 | 14.46 | 8.98 |
| 30 | AMBALA | Keshopur-S | 3.68 | 1.25 | 1.66 | 2.38 |
| 31 | AMBALA | Khanahmadpur | 6.26 | 1.82 | 2.54 | 3.8 |
| 32 | AMBALA | Khojkipur | 3.45 | | | |
| 33 | AMBALA | Mohra-DW | 2 | | | |
| 34 | AMBALA | Mulana | 1.59 | 0.68 | 0.09 | 1.91 |
| 35 | AMBALA | Nagal (D) | 45.78 | | | |
| 36 | AMBALA | Naraingarh | 16.19 | 13.09 | | 13.32 |
| 37 | AMBALA | Naraingarh-Pz | 16.19 | | 35.82 | |
| 38 | AMBALA | Nasirpur-Pz | 2.5 | | 9.22 | |
| 39 | AMBALA | Panjokhra | 7.06 | 3.53 | 3.83 | 3.75 |
| 40 | AMBALA | Patvi | 29.61 | | 27.52 | |
| 41 | AMBALA | Pinjola | 6.15 | 5.95 | 4.06 | 4.89 |
| 42 | AMBALA | Saha Pz Deep | 74.87 | | | |
| 43 | AMBALA | Saha-Pz | 33.79 | | 33.09 | |
| 44 | AMBALA | Salehpur-DW | 8.59 | | 8.08 | |

| | | | | | | |
|----|---------|-------------------|-------|-------|-------|-------|
| 45 | AMBALA | Samru-Pz | 9.89 | | 10.19 | |
| 46 | AMBALA | Sohana-DW | 3.75 | | 1.8 | |
| 47 | AMBALA | Tandwal-DW | 3.35 | | | |
| 48 | AMBALA | Tharwa-DW | 2 | | 13.9 | |
| 49 | AMBALA | Ugala S | 35.48 | | 35.44 | |
| 50 | BHIWANI | Badala | 3.1 | 1.29 | 2.19 | 2.83 |
| 51 | BHIWANI | Badeshra-PZ | 4.4 | | 4.5 | |
| 52 | BHIWANI | Baganwala-PZ | 12 | | 10.63 | |
| 53 | BHIWANI | Bajina | 13.68 | 13.47 | 13.55 | 13.87 |
| 54 | BHIWANI | Barsi-PZ | 5.8 | | 5.6 | |
| 55 | BHIWANI | Bawani Khera-PZ | 3.12 | 2.6 | 3.8 | |
| 56 | BHIWANI | Behl | 81.75 | | 81.9 | |
| 57 | BHIWANI | Bhawani khera DW | 3.12 | | 2.73 | 2.46 |
| 58 | BHIWANI | Bhawani Khera Pz | 3.12 | | | |
| 59 | BHIWANI | Bhera-PZ | 12.5 | | 5.3 | |
| 60 | BHIWANI | Bhiwani | 4.5 | | 2.9 | |
| 61 | BHIWANI | Bhiwani1 | 2.85 | | 2.9 | |
| 62 | BHIWANI | Bhutana-PZ | 7.4 | | 7.3 | |
| 63 | BHIWANI | Biran--PZ | 3.8 | | 3.7 | |
| 64 | BHIWANI | Bohal | 3 | 2.06 | 2.07 | 2.02 |
| 65 | BHIWANI | Budh Shelly-PZ | 24 | | 24 | |
| 66 | BHIWANI | Budhera | 80.5 | | 80.15 | |
| 67 | BHIWANI | Busan-PZ | 14.5 | | 18.56 | |
| 68 | BHIWANI | Chappar Rangar-PZ | 14.3 | | 10.94 | |
| 69 | BHIWANI | Dadam-PZ | 22.6 | | 21.26 | |
| 70 | BHIWANI | Dang-PZ | 2.6 | | | |
| 71 | BHIWANI | Devsar-PZ | 3.85 | | 3.9 | |
| 72 | BHIWANI | Dhana Ladanpur-PZ | 9.1 | | 9.35 | |
| 73 | BHIWANI | Dhanana | 1.12 | 0.2 | 0.68 | 0.82 |
| 74 | BHIWANI | Dhani Ramjas-PZ | 14 | | 13.75 | |
| 75 | BHIWANI | Dhani Shelwal-PZ | 24.5 | | 24.2 | |
| 76 | BHIWANI | Dhanimahu-PZ | 14 | | 12.92 | |
| 77 | BHIWANI | Dinod-PZ | 4.5 | | 4.35 | |
| 78 | BHIWANI | Dulheri-PZ | 28 | | 27.41 | |
| 79 | BHIWANI | Garanpura-PZ | 5.7 | | 5.06 | |
| 80 | BHIWANI | Golagarh-PZ | 41.54 | | 41.78 | |
| 81 | BHIWANI | Gopalwas-PZ | 47.1 | | 47.2 | |
| 82 | BHIWANI | Gujrani-PZ | 3.8 | | 0 | |
| 83 | BHIWANI | Gurera | 15.34 | 15.37 | 15.47 | 15.44 |
| 84 | BHIWANI | Gurera PZ | 14.26 | 14.28 | | |
| 85 | BHIWANI | Haluwas | 3.59 | 2.5 | 3.04 | 3.4 |

| | | | | | | |
|-----|---------|---------------------|-------|-------|-------|-------|
| 86 | BHIWANI | Hetampur | 13.17 | 12.07 | 12.23 | |
| 87 | BHIWANI | Indiwal-PZ | 43.2 | | 42.8 | |
| 88 | BHIWANI | Isharwal | 19.6 | 20.12 | 19.47 | 20.04 |
| 89 | BHIWANI | Jamalpur-PZ | 3.9 | | 3.7 | |
| 90 | BHIWANI | Jatai-PZ | 3.8 | | 3.95 | |
| 91 | BHIWANI | Jhanwari-PZ | 10.4 | | 10.15 | |
| 92 | BHIWANI | Jharwai-PZ | 12.9 | | 12.7 | |
| 93 | BHIWANI | Jhully-PZ | 8.1 | | 7.64 | |
| 94 | BHIWANI | Jhumpa | 27.07 | 26.43 | 27.05 | 27.14 |
| 95 | BHIWANI | Jhumpa Kalan | 26.76 | 26.67 | 27.22 | 27.32 |
| 96 | BHIWANI | Jita Kheri-PZ | 5.25 | | 4.4 | |
| 97 | BHIWANI | Juikalan Pz | 36.65 | | | |
| 98 | BHIWANI | Jui-PZ | 37.7 | | 38.16 | |
| 99 | BHIWANI | Kairu-Pz | 18 | | 17.8 | |
| 100 | BHIWANI | Kalinga-PZ | 5.9 | | 5.75 | |
| 101 | BHIWANI | Kaloud | 28.5 | | 28.3 | |
| 102 | BHIWANI | Kaluwas-PZ | 6.2 | | 6 | |
| 103 | BHIWANI | Kasni kalan | 71.1 | | 71.4 | |
| 104 | BHIWANI | Katwar-PZ | 23.5 | | 23.1 | |
| 105 | BHIWANI | Khakari Sohan-PZ | 5.6 | | 6.52 | |
| 106 | BHIWANI | Khanak-PZ | 18 | | 16.83 | |
| 107 | BHIWANI | Khaparwas-PZ | 41.1 | | | |
| 108 | BHIWANI | Kharak Kalan-PZ | 6 | | 5.9 | |
| 109 | BHIWANI | Khariawas-PZ | 18.65 | | 19.78 | |
| 110 | BHIWANI | Khera-PZ | 14.5 | | 14.1 | |
| 111 | BHIWANI | Kheri Dalautpura-PZ | 4.2 | | 4.35 | |
| 112 | BHIWANI | Kikral-PZ | 21.5 | | 21.2 | |
| 113 | BHIWANI | Kural-PZ | 46.19 | | 45.7 | |
| 114 | BHIWANI | Lachhmanpur | 10.01 | 10.13 | 10.32 | 10.16 |
| 115 | BHIWANI | Lalawas-PZ | 35.9 | | 35.75 | |
| 116 | BHIWANI | Leghan Hetwan-PZ | 12.94 | | 12.27 | |
| 117 | BHIWANI | Lohani | 14.73 | 14.6 | 14.64 | 14.85 |
| 118 | BHIWANI | Loharu-pz | 87.3 | | 87.6 | |
| 119 | BHIWANI | Mandhana-PZ | 4.5 | | 4.3 | |
| 120 | BHIWANI | Mandhan-PZ | 7.3 | | 7.25 | |
| 121 | BHIWANI | Manhairu | 5.63 | 4.96 | 5.16 | 5.72 |
| 122 | BHIWANI | Matani-PZ | 33.2 | | 33 | |
| 123 | BHIWANI | Miran abd | 4.48 | | | |
| 124 | BHIWANI | Miran-Pz | 5.4 | 4.24 | 4.67 | 4.72 |
| 125 | BHIWANI | Mitathal-PZ | 4.2 | | 4.05 | |
| 126 | BHIWANI | Mithi-PZ | 43.2 | | 43 | |

| | | | | | | |
|-----|---------------|-------------------|-------|-------|-------|-------|
| 127 | BHIWANI | Mohila-PZ | 19.6 | | 20.1 | |
| 128 | BHIWANI | Morka-PZ | 39.6 | | 39.5 | |
| 129 | BHIWANI | Motipura | 24.5 | | 24.3 | |
| 130 | BHIWANI | Mundhal Kalan-PZ | 3.2 | | 3.15 | |
| 131 | BHIWANI | Naloi-PZ | 17 | | 16.9 | |
| 132 | BHIWANI | Naraungabad-PZ | 7.7 | | 7.55 | |
| 133 | BHIWANI | Nathuwash-PZ | 7.1 | | 6.9 | |
| 134 | BHIWANI | Nigana Kalan-PZ | 21 | | 20.38 | |
| 135 | BHIWANI | Nigana Khurd-PZ | 21 | | 22.19 | |
| 136 | BHIWANI | Nimriwali-PZ | 4.65 | | 4.2 | |
| 137 | BHIWANI | Ninan-PZ | 7.9 | | 7.65 | |
| 138 | BHIWANI | Pataudi Kalan PZM | 16.5 | | 39.2 | |
| 139 | BHIWANI | Pataudi Khurd | 13.2 | 14.21 | 14.08 | 15.2 |
| 140 | BHIWANI | Patwan-PZ | 74.54 | | 75 | |
| 141 | BHIWANI | Phokarwas-PZ | 46.03 | | 45.84 | |
| 142 | BHIWANI | Prem Nagar-PZ | 3.25 | | 2.1 | |
| 143 | BHIWANI | Pur-PZ | 5.5 | | 5.35 | |
| 144 | BHIWANI | Rajgarh-PZ | 4.6 | | 4.45 | |
| 145 | BHIWANI | Ratera-PZ | 9.6 | | 9.5 | |
| 146 | BHIWANI | Rewari-PZ | 5.9 | | 5.8 | |
| 147 | BHIWANI | Rodha | 22 | | | |
| 148 | BHIWANI | Rupgarh-PZ | 13.4 | | 12.1 | |
| 149 | BHIWANI | Sagban | 1.62 | 1.65 | 2.58 | 2.12 |
| 150 | BHIWANI | Sangwan | 4.3 | | | |
| 151 | BHIWANI | Siwach-PZ | 42.5 | | 42 | |
| 152 | BHIWANI | Siwani | 1.92 | 10.72 | 11.64 | 10.81 |
| 153 | BHIWANI | Siwani1 | 14.4 | | 13.8 | |
| 154 | BHIWANI | Sui | 1.97 | | 3.8 | 1.51 |
| 155 | BHIWANI | Sungarpur | 12.94 | 12.85 | 14.83 | |
| 156 | BHIWANI | Talu-PZ | 4.45 | | 4.3 | |
| 157 | BHIWANI | Talwani-PZ | 26.5 | | 26.1 | |
| 158 | BHIWANI | Thillor-PZ | 12 | | 16.2 | |
| 159 | BHIWANI | Tigrana Gp | 9.61 | 8.55 | | |
| 160 | BHIWANI | Tigrana S | 1.22 | 0.52 | 1.13 | 0.92 |
| 161 | BHIWANI | Tigrana-DW | 1.21 | 0.54 | | |
| 162 | BHIWANI | Tosham | 5.81 | 4.29 | 5.19 | 4.98 |
| 163 | BHIWANI | Tosham-Pz | 4.6 | 5.68 | 4.02 | 5.74 |
| 164 | CHARKHI DADRI | Achina-PZ | 3.35 | | 3.3 | |
| 165 | CHARKHI DADRI | Adampur | 16.2 | | 17.3 | |
| 166 | CHARKHI DADRI | Atela-PZ | 27.56 | | 27.88 | |
| 167 | CHARKHI DADRI | Atela-PZ | 27.56 | | 27.88 | |

| | | | | | | |
|-----|---------------|------------------|-------|------|-------|------|
| 168 | CHARKHI DADRI | Badesara-PZ | 78 | | 70.02 | |
| 169 | CHARKHI DADRI | Badhwana-PZ | 13.71 | | 14.54 | |
| 170 | CHARKHI DADRI | Baundkalan | 1.91 | 1.81 | 2.22 | 2.41 |
| 171 | CHARKHI DADRI | Bigowa-PZ | 2.1 | | 2.7 | |
| 172 | CHARKHI DADRI | Birhi Kalan-PZ | 3.58 | | 3.6 | |
| 173 | CHARKHI DADRI | Bound-PZ | 1.91 | | 4.13 | |
| 174 | CHARKHI DADRI | Chandawas-PZ | 72.88 | | 70.6 | |
| 175 | CHARKHI DADRI | Changeroad-PZ | 14.31 | | 14.37 | |
| 176 | CHARKHI DADRI | Chirya | 18.28 | | 18.98 | |
| 177 | CHARKHI DADRI | Dadri | 1.41 | | 4.1 | |
| 178 | CHARKHI DADRI | Dadri-Pz | 1.41 | 0.89 | 1.37 | 1.52 |
| 179 | CHARKHI DADRI | Dudhwa-PZ | 13.87 | | 13.56 | |
| 180 | CHARKHI DADRI | Dudiwala-PZ | 39.87 | | 53.8 | |
| 181 | CHARKHI DADRI | Ghasola-PZ | 4.58 | | 4.3 | |
| 182 | CHARKHI DADRI | Gopalwas-PZ | 90.84 | | 47.2 | |
| 183 | CHARKHI DADRI | Gopi | 73.3 | | 71.25 | |
| 184 | CHARKHI DADRI | Hui-PZ | 64 | | 64.97 | |
| 185 | CHARKHI DADRI | Imlota | 3.36 | 3.36 | 3.08 | 4.17 |
| 186 | CHARKHI DADRI | Jhinjar-PZ | 3.6 | | 3.43 | |
| 187 | CHARKHI DADRI | Kadma-PZ | 84.13 | | 64.63 | |
| 188 | CHARKHI DADRI | Kakroli Hukmi1 | 70.92 | | 67.8 | |
| 189 | CHARKHI DADRI | Kakroli Sardh-PZ | 66 | | 67.58 | |
| 190 | CHARKHI DADRI | Kanheti-pz | 3.89 | | 3.68 | |
| 191 | CHARKHI DADRI | Kapoori-PZ | 6.1 | | 5.7 | |
| 192 | CHARKHI DADRI | Kari Mod-PZ | 73 | | 69.6 | |
| 193 | CHARKHI DADRI | Kheri Bura-PZ | 4.15 | | 4.22 | |
| 194 | CHARKHI DADRI | Loharwala-D | 3.95 | 3 | 13.93 | 3.87 |
| 195 | CHARKHI DADRI | Loharwala-M | 3.55 | 2.56 | 3.3 | 3.55 |
| 196 | CHARKHI DADRI | Loharwala-S | 3.54 | 3.28 | 3.48 | 3.28 |
| 197 | CHARKHI DADRI | Makrana-PZ | 21.18 | | 21.24 | |
| 198 | CHARKHI DADRI | Mandola | 10.88 | | 10.79 | |
| 199 | CHARKHI DADRI | Mandoli-PZ | 9.93 | | 9.85 | |
| 200 | CHARKHI DADRI | Mehrana | 12.28 | 12 | 9.59 | 12.6 |
| 201 | CHARKHI DADRI | Mirch-PZ | 3.55 | | 3.38 | |
| 202 | CHARKHI DADRI | Misri-PZ | 3.45 | | 3.15 | |
| 203 | CHARKHI DADRI | Nandha-PZ | 83 | | | |
| 204 | CHARKHI DADRI | Paintawas-PZ | 6.34 | | 6.13 | |
| 205 | CHARKHI DADRI | Patuwash-PZ | 13.95 | | 12.65 | |
| 206 | CHARKHI DADRI | Ranila-PZ | 4.1 | | 3.97 | |
| 207 | CHARKHI DADRI | Sanjarwas-PZ | 6.09 | | 5.87 | |
| 208 | CHARKHI DADRI | Sankrod-PZ | 4.23 | | 4.13 | |

| | | | | | | |
|-----|---------------|-------------------|-------|-------|-------|-------|
| 209 | CHARKHI DADRI | Sanwar | 4.75 | 3.64 | 4.69 | 5.78 |
| 210 | CHARKHI DADRI | Sarangpur-PZ | 25.24 | | 24.97 | |
| 211 | CHARKHI DADRI | Saroop Garh-PZ | 2.1 | | 2.1 | |
| 212 | CHARKHI DADRI | Todi-PZ | 79.93 | | | |
| 213 | FARIDABAD | Ballabgharh | 20.2 | | 30 | 30.05 |
| 214 | FARIDABAD | Bhopani | 27.65 | | | |
| 215 | FARIDABAD | Chandpur | 20.45 | | | 16.97 |
| 216 | FARIDABAD | Chhainsa | 17.9 | | | |
| 217 | FARIDABAD | Dayalpur | 20.95 | | | |
| 218 | FARIDABAD | Dodasia-i | 14.9 | | 14 | 13.13 |
| 219 | FARIDABAD | Faridabad | 26.65 | | | |
| 220 | FARIDABAD | Immamudipur | 22.45 | 22.07 | 20.7 | 20.98 |
| 221 | FARIDABAD | Kabulpur | 19.7 | | 18.4 | |
| 222 | FARIDABAD | Pali(shallow) | 28.3 | | | |
| 223 | FARIDABAD | Paota | 17.95 | | | |
| 224 | FARIDABAD | Samaipur-DW | 3.65 | | 3.05 | |
| 225 | FARIDABAD | Sikri1 | 7.65 | | 4.76 | 4.28 |
| 226 | FARIDABAD | Sotai | 18.7 | | | |
| 227 | FARIDABAD | Tigaon-Pz | 27 | | 26.5 | 25.6 |
| 228 | FATEHABAD | Aharwan M | 70.12 | | 79.69 | 78.59 |
| 229 | FATEHABAD | Alalwas-Pz | 34 | | 38.85 | |
| 230 | FATEHABAD | Ayalki 1(m) | 64.02 | | | |
| 231 | FATEHABAD | Badopal | 5.01 | 5.07 | 1.3 | 2.16 |
| 232 | FATEHABAD | Bannawali-M | 2.43 | | | |
| 233 | FATEHABAD | Bhattukalan-Pz | 1.7 | | 1.3 | |
| 234 | FATEHABAD | Bhuna | 16.35 | | 17.4 | |
| 235 | FATEHABAD | Bhuna S | 16.8 | | | |
| 236 | FATEHABAD | Bhuthan Kalan- Pz | 60.5 | | 61.5 | |
| 237 | FATEHABAD | Bodiwali-DW | 22.95 | | 21.9 | |
| 238 | FATEHABAD | Chindhar-DW | 3.96 | | 4.95 | |
| 239 | FATEHABAD | Dariyapur-M | 45.99 | 54.05 | 51.83 | 52.6 |
| 240 | FATEHABAD | Dariyapur-S | 47.61 | 53.4 | 15.17 | 44.16 |
| 241 | FATEHABAD | Dayar1 | 9.14 | | | |
| 242 | FATEHABAD | Dhangar-DW | 10.67 | | 12.6 | |
| 243 | FATEHABAD | Dhingsara | 9.04 | | | |
| 244 | FATEHABAD | Fatehabad S | 53.96 | | | |
| 245 | FATEHABAD | Hukmawali-Pz | 24.8 | | 26.8 | |
| 246 | FATEHABAD | Jandli Kalan | 3.81 | 4.07 | 6.7 | |
| 247 | FATEHABAD | Kajal Heri-DW | 3.04 | | 3.04 | |
| 248 | FATEHABAD | Kanhari-Pz | 22.56 | | 21.56 | |
| 249 | FATEHABAD | Khajuri Jatti-Pz | 1.69 | 2.44 | 2.4 | 1.95 |

| | | | | | | |
|-----|-----------|---------------------|-------|-------|-------|-------|
| 250 | FATEHABAD | Khara Kheri-DW | 1.22 | | | |
| 251 | FATEHABAD | Lahrian | 41.15 | | | |
| 252 | FATEHABAD | Machiwali-DW | 4.57 | | 3.96 | |
| 253 | FATEHABAD | Mehu Wala Pz | 2.95 | 3.1 | 3.22 | 2.97 |
| 254 | FATEHABAD | Munshiwali-Pz | 59.75 | | 59 | |
| 255 | FATEHABAD | Nagpur- Pz | 41.15 | | 39.15 | |
| 256 | FATEHABAD | Nangla-DW | 9.04 | | | |
| 257 | FATEHABAD | Nangla-Pz-M | 10.4 | | 12.86 | 12.13 |
| 258 | FATEHABAD | Nikuwana-Pz | 44.51 | | 44 | |
| 259 | FATEHABAD | Pilimudari | 6.09 | | | |
| 260 | FATEHABAD | Ratia -Pz | 56.45 | 57.37 | | |
| 261 | FATEHABAD | Ratta Khera-Pz | 44.2 | | 43.59 | |
| 262 | FATEHABAD | Samain | 3.83 | 4.86 | 5.34 | 5.08 |
| 263 | FATEHABAD | Shekhpur Daroli-DW | 4.57 | | 3.67 | |
| 264 | FATEHABAD | Suniyana | 12.19 | | | |
| 265 | FATEHABAD | Talwara D | 47.09 | | 46.88 | 47.66 |
| 266 | FATEHABAD | Talwara S | 47.17 | | | 49.9 |
| 267 | FATEHABAD | Tohana | 17.5 | 19.52 | 19.39 | 18.87 |
| 268 | GURGAON | Badsahapur Ew | 28.85 | | | |
| 269 | GURGAON | Bhondsi Ew | 31.85 | | 31.65 | |
| 270 | GURGAON | Bilaspur-Pz | 27.9 | | 28.55 | |
| 271 | GURGAON | Chandu | 5.6 | | | |
| 272 | GURGAON | Chandu2 | 6.85 | | 6.35 | |
| 273 | GURGAON | Daultabad-Pz | 7.25 | | 4.95 | 4.04 |
| 274 | GURGAON | Farrukh Nagar-Pz | 21.65 | | 19.55 | |
| 275 | GURGAON | Fazilpur Badli-Pz | 28.1 | | 27 | 28.22 |
| 276 | GURGAON | Gudhana-Pz | 33.15 | | 32 | |
| 277 | GURGAON | Gudhana-Pz | 33.15 | | 32 | |
| 278 | GURGAON | Gurgaon Pz | 47.95 | | | |
| 279 | GURGAON | Haila Mandi | 34.2 | | 34.1 | |
| 280 | GURGAON | Harchandpur Pz | 26.65 | | 25.45 | |
| 281 | GURGAON | Haryahera | 31.35 | | 28.95 | |
| 282 | GURGAON | Jamalpur | 33.6 | | | |
| 283 | GURGAON | Jaraon Pz | 14.3 | | | |
| 284 | GURGAON | Jhandu Sarai-Pz | 26.8 | | 26 | |
| 285 | GURGAON | Jhandu Sarai-Pz | 26.8 | | 26 | |
| 286 | GURGAON | Kadipur | 28.9 | | | |
| 287 | GURGAON | Kasan | 44.65 | | 44.05 | |
| 288 | GURGAON | Khera Khurrampur-Pz | 17.7 | 17 | 17.18 | 17.61 |
| 289 | GURGAON | Kherla | 35.85 | | | |
| 290 | GURGAON | Lokra-Pz | 36.7 | 39.4 | 39.4 | 43.1 |

| | | | | | | |
|-----|---------|------------------|-------|-------|-------|-------|
| 291 | GURGAON | Manesar-Pzm | 33.5 | | | |
| 292 | GURGAON | Meoka-Pz | 21.4 | 21.1 | 21.39 | 21.34 |
| 293 | GURGAON | Mouzabad | 36.3 | | 35.15 | |
| 294 | GURGAON | Mubarakpur | 9.9 | 10.2 | | 29.79 |
| 295 | GURGAON | Pataudi-Pz | 40.8 | | | |
| 296 | GURGAON | Raisina | 37.65 | | 35.85 | |
| 297 | GURGAON | Rajpura1 | 29.65 | | | |
| 298 | GURGAON | Sadhrana-Pz | 20.05 | | 16.45 | 17.2 |
| 299 | GURGAON | Shikohpur | 39.4 | | | |
| 300 | GURGAON | Sidrawali-Pz | 34.95 | | 32.43 | 31.17 |
| 301 | GURGAON | Sohna | 30.6 | | 30.08 | |
| 302 | GURGAON | Wazirpur-Pz | 23.6 | 22.75 | | 20.6 |
| 303 | HISAR | Adampur-Pz | 1.6 | 0.98 | 1.7 | 1.82 |
| 304 | HISAR | Agroha1 | 9.98 | 10.8 | 10.96 | |
| 305 | HISAR | Balawas1 | 11.14 | 10.95 | 10.88 | 10.78 |
| 306 | HISAR | Balsamand | 12.55 | 12.86 | | 12.61 |
| 307 | HISAR | Balsamand-Pz | 14.63 | 14.66 | 12.7 | 13.24 |
| 308 | HISAR | Barwala S | 4.34 | | | |
| 309 | HISAR | Barwala-Pz | 4.84 | 20.17 | 3.58 | 20.04 |
| 310 | HISAR | Basra | 16.93 | 17.18 | 18.13 | 16.56 |
| 311 | HISAR | Behbalpur-Pz | 2.09 | 1.89 | 2.1 | 1.91 |
| 312 | HISAR | Bhana-DW | 2.43 | | 1.82 | |
| 313 | HISAR | Bhotal Jattan-DW | 3.04 | | 3.05 | |
| 314 | HISAR | Bithmara-DW | 10.35 | | 11.1 | |
| 315 | HISAR | Chanaut | 2.01 | 4.25 | 2.73 | 2.33 |
| 316 | HISAR | Chaudhriwali | 13.11 | | | |
| 317 | HISAR | Chawdhariwas | 8.7 | 8.65 | 8.58 | 8.35 |
| 318 | HISAR | Datta-DW | 3 | | 3.6 | |
| 319 | HISAR | Dhansu | 3.6 | 2.26 | 2.67 | 2.54 |
| 320 | HISAR | Durjanpur-Pz | 6.25 | | 5.8 | |
| 321 | HISAR | Gain Pura | 1.99 | 1.19 | 2.37 | 2.03 |
| 322 | HISAR | Ghaibipur | 5.15 | | | |
| 323 | HISAR | Ghursal-Pz | 6.17 | 6.02 | 5.98 | 6.14 |
| 324 | HISAR | Hansi S | 6.09 | | | |
| 325 | HISAR | Hissar | 6.37 | | 6.4 | |
| 326 | HISAR | Jaga Bara-DW | 9.14 | | 8.14 | |
| 327 | HISAR | Kabrer | 18.5 | | | |
| 328 | HISAR | Kaliravan | 5.48 | | | |
| 329 | HISAR | Kanoh-Pz | 10.7 | | | |
| 330 | HISAR | Khanda Kheri-Pz | 6.09 | | | |
| 331 | HISAR | Kharakpunia | 1.1 | | | |

| | | | | | | |
|-----|---------|-----------------------|-------|-------|-------|-------|
| 332 | HISAR | Kherijalab | 5.92 | 4.88 | | |
| 333 | HISAR | Kherijalab-Pz | 6.42 | | 5.97 | 6.12 |
| 334 | HISAR | Khotkalan | 11.49 | 12.89 | | 12.81 |
| 335 | HISAR | Kirori | 13.17 | 14.35 | 13.83 | 14.7 |
| 336 | HISAR | Kirtan | 9.8 | 9.9 | 10.78 | 9.9 |
| 337 | HISAR | Ladwi-DW | 3.96 | | 4.15 | |
| 338 | HISAR | Litani-DW | 3.15 | | 3.35 | |
| 339 | HISAR | Madha | 10.67 | | | |
| 340 | HISAR | Mangali-Pz | 4.31 | 3.77 | 3.75 | 3.76 |
| 341 | HISAR | Mayar | 6.4 | | | |
| 342 | HISAR | Mehanda-DW | 2.8 | | 2.8 | |
| 343 | HISAR | Mirka | 1.21 | 0.61 | 0.82 | 0.74 |
| 344 | HISAR | Moda Khera-DW | 4.57 | | 5.18 | |
| 345 | HISAR | Narnaud S | 14.45 | 15.22 | 16.6 | 16.58 |
| 346 | HISAR | Pali-DW | 9.14 | | 8.85 | |
| 347 | HISAR | Petwar-DW | 6.7 | | 7.72 | |
| 348 | HISAR | Rajli Cross | 3.6 | 3.95 | 2.82 | 2.74 |
| 349 | HISAR | Rajthal1 | 21.84 | | | |
| 350 | HISAR | Samani | 2.26 | 3.84 | 3.04 | 3.25 |
| 351 | HISAR | Sohu | 2.11 | 2.37 | 2.73 | 3.07 |
| 352 | HISAR | Talwani Badshahpur-DW | 6.55 | | 6.35 | |
| 353 | HISAR | Talwani Rana-DW | 4.57 | | 3.96 | |
| 354 | HISAR | Thurana | 2.63 | 1.18 | 1.75 | 2.24 |
| 355 | HISAR | Uklana | 10.75 | | | |
| 356 | HISAR | Uklana Mandi-Pz | 11.21 | 10.78 | 12.36 | 11.9 |
| 357 | HISAR | Umra | 6.5 | | | |
| 358 | JHAJJAR | Asanda-DW | 3.8 | | 2.26 | |
| 359 | JHAJJAR | BabraDW | 1.72 | | 1.14 | |
| 360 | JHAJJAR | Bagoa | 2.45 | 2.83 | 3 | 2.52 |
| 361 | JHAJJAR | Bahadurgarh | 12 | | 10 | |
| 362 | JHAJJAR | Bamroli- DW | 5.78 | | 3.11 | |
| 363 | JHAJJAR | Beri | 2.17 | | 1 | |
| 364 | JHAJJAR | Chamanpura | 3 | | | |
| 365 | JHAJJAR | Chhara | 1.7 | 2.21 | 2.68 | 2.15 |
| 366 | JHAJJAR | Chuchakwas | 2.76 | | 1.71 | 1.4 |
| 367 | JHAJJAR | Dehkora-DW | 2.2 | | 1.6 | |
| 368 | JHAJJAR | Dubhaldhan | 2.83 | 1.61 | 2.15 | 2.9 |
| 369 | JHAJJAR | Dulhera | 1.9 | 2.04 | 2.71 | 2.85 |
| 370 | JHAJJAR | Gabhana | 0.9 | | 2.6 | 2.05 |
| 371 | JHAJJAR | Goria-DW | 2.3 | | 1.82 | |
| 372 | JHAJJAR | Jhajjar | 3.02 | 1.4 | 1.42 | 1.48 |

| | | | | | | |
|-----|---------|----------------|-------|-------|-------|-------|
| 373 | JHAJJAR | Kaliawas- DW | 2.05 | | 2.11 | |
| 374 | JHAJJAR | Kamalgarh-DW | 3.5 | | 2.84 | |
| 375 | JHAJJAR | Kulasi | 1.6 | 0.1 | 0.35 | 0.47 |
| 376 | JHAJJAR | Lakeria- DW | 2.65 | | 1.2 | |
| 377 | JHAJJAR | Lohari- Pz | 14 | | 10 | |
| 378 | JHAJJAR | Machhrauli | 5.94 | | | |
| 379 | JHAJJAR | Majra Deswal | 1.57 | | | |
| 380 | JHAJJAR | Matanhail-Pz | 1.56 | | 1.98 | |
| 381 | JHAJJAR | Mudsa | 1.5 | 1.14 | 1.5 | 1.55 |
| 382 | JHAJJAR | Sankol | 3.36 | 3.86 | 3.96 | 3.21 |
| 383 | JHAJJAR | Sasroli-DW | 16.75 | | 16.74 | |
| 384 | JHAJJAR | Subnah | 0.79 | 0.94 | 2.08 | 2.99 |
| 385 | JIND | Alewa Pz | 39.39 | 42.76 | 43.3 | 42.21 |
| 386 | JIND | Alewa-Ew | 45.7 | | 42.3 | |
| 387 | JIND | Baroda | 17.11 | | | 17.76 |
| 388 | JIND | Bhuslana-Pz | 23.35 | 25.17 | 25.36 | 23.08 |
| 389 | JIND | Bibipur-OW | 15.6 | | 16.9 | |
| 390 | JIND | Brahmanwas | 1.63 | 0.71 | 1.95 | 1.38 |
| 391 | JIND | Chhabri | 1.58 | 0.53 | 1.27 | |
| 392 | JIND | Dorana Pz | 27.41 | 31.26 | 31.4 | 30.37 |
| 393 | JIND | Ghaso | 10.75 | | 15.1 | 14.05 |
| 394 | JIND | Hasanpur-Pz | 40.5 | | | |
| 395 | JIND | Igra | 11.75 | | | |
| 396 | JIND | Jind-Pz | 30.6 | | 30.2 | |
| 397 | JIND | Julana Pz | 3.13 | 2.3 | 2.77 | |
| 398 | JIND | Kandela-Pz | 34.5 | | 37.4 | |
| 399 | JIND | Karsola D | 2.92 | 3.28 | 55.44 | 3.64 |
| 400 | JIND | Karsola-M | 0.79 | 1.82 | 2.67 | 2.69 |
| 401 | JIND | Karsola-S | 2.7 | 1.79 | 48.89 | 2.54 |
| 402 | JIND | Khatkaran | 11.65 | 16.8 | 17.22 | |
| 403 | JIND | Lochap Pz | 20.93 | 25.42 | 20.95 | 18.57 |
| 404 | JIND | Pillukhera | 5.47 | 5.55 | 5.82 | 5.57 |
| 405 | JIND | Pokerikheri-Pz | 23.3 | | 29.2 | |
| 406 | JIND | Rajpura-Pz | 22.2 | | 26.7 | |
| 407 | JIND | Rojhala-Pz-D | 17.18 | 18.97 | 17.57 | 13.54 |
| 408 | JIND | Rojhala-Pz-M | 13.2 | 14.88 | 15.12 | |
| 409 | JIND | Rojhala-Pz-S | 12.75 | 13.67 | 13.9 | 12.4 |
| 410 | JIND | Safidon 2(m) | 19.74 | | | |
| 411 | JIND | Uchana | 18.42 | | 18.85 | 18.48 |
| 412 | JIND | Uchana Pz | 19.41 | 21.17 | 20.8 | 20.42 |
| 413 | KAITHAL | Balbehra-Pz | 39.85 | 41.1 | | |

| | | | | | | |
|-----|---------|------------------|-------|-------|-------|-------|
| 414 | KAITHAL | Balu-Pz-D | 35.48 | 57.05 | | 29.58 |
| 415 | KAITHAL | Balu-Pz-M | 21.14 | 28.6 | | 13.34 |
| 416 | KAITHAL | Bhana-Pz | 19.62 | 23.97 | | 19.46 |
| 417 | KAITHAL | Dhandh-Pz | 35.85 | | 36.8 | |
| 418 | KAITHAL | Guhna pz | 24.87 | 29.84 | 27.65 | |
| 419 | KAITHAL | Jajanpur-Pz-D | 36.93 | 39.05 | 17.22 | 36.55 |
| 420 | KAITHAL | Jajanpur-Pz-M | 35.84 | 38.75 | 16.61 | 36.68 |
| 421 | KAITHAL | Jajanpur-Pz-S | 35.67 | 37.85 | 5.15 | 36.84 |
| 422 | KAITHAL | Jandaula-Pz | 37.8 | | 38.9 | |
| 423 | KAITHAL | Kalayat | 3.95 | 4.55 | 1.9 | 2.02 |
| 424 | KAITHAL | Kalayat S | 7 | | | |
| 425 | KAITHAL | Kalesar-DW | 16.22 | | 16.05 | |
| 426 | KAITHAL | Kamalpur-DW | 15.42 | | 16.6 | |
| 427 | KAITHAL | Kathana-Pz | 15.6 | 16.3 | 16.7 | 17.2 |
| 428 | KAITHAL | Kaul-Pz | 32.87 | | 34 | 33.98 |
| 429 | KAITHAL | Kaurtan-Pz | 45.81 | | 47.7 | |
| 430 | KAITHAL | Khanpur | 43.85 | | | 43.35 |
| 431 | KAITHAL | Khanpur-Pz | 44.56 | 47.72 | 45.45 | 43.65 |
| 432 | KAITHAL | Kheri Lamba-DW | 6.85 | | 6.9 | |
| 433 | KAITHAL | Kheri Raowali-DW | 16.55 | | 17.2 | |
| 434 | KAITHAL | Majri-Pz-D | 56.15 | 57.08 | 52.6 | |
| 435 | KAITHAL | Mataur | 9.3 | 6.16 | 8.14 | 8.41 |
| 436 | KAITHAL | Padla 1(s) | 45.78 | | | |
| 437 | KAITHAL | Pundri(d) | 29.7 | | | |
| 438 | KAITHAL | Pundri(d) | 29.7 | | | |
| 439 | KAITHAL | Rajaund-Pz | 16.23 | | 17.7 | |
| 440 | KAITHAL | Rasulpur pz | 47.24 | | 48.9 | |
| 441 | KAITHAL | Serdha-DW | 19.09 | | 19.05 | |
| 442 | KAITHAL | Siwan-Pz | 48.15 | | 50.8 | 47.71 |
| 443 | KAITHAL | Solu Majra-Pz | 36.25 | | 38.1 | |
| 444 | KAITHAL | Songal | 17.4 | | 19.15 | 20.13 |
| 445 | KAITHAL | Songri-DW | 15.53 | | 16.9 | |
| 446 | KARNAL | Ajanthali-Pz | 25.79 | | 26.45 | |
| 447 | KARNAL | Alipur-PZ | 38.8 | | 38.05 | |
| 448 | KARNAL | Amin S | 34.5 | 37.06 | 35.83 | 35.04 |
| 449 | KARNAL | Amupur Chakda | 33.1 | | 36.13 | 33.16 |
| 450 | KARNAL | Amupur-PZ | 30.8 | | 32.93 | |
| 451 | KARNAL | Anchla-Pz | 12.25 | | 13.1 | |
| 452 | KARNAL | Andhera-PZ | 13.65 | | 12.55 | |
| 453 | KARNAL | Ardana-PZ | 17.5 | | 19.49 | |
| 454 | KARNAL | Assandh-Pz | 19.65 | | 21.36 | |

| | | | | | | |
|-----|--------|------------------|-------|-------|-------|-------|
| 455 | KARNAL | Badson- PZ | 39.25 | | 35.4 | |
| 456 | KARNAL | Bahri-PZ | 32.75 | | 34.84 | |
| 457 | KARNAL | Bala | 20.15 | | 21.95 | |
| 458 | KARNAL | Balhera-m | 13.16 | 13.47 | | |
| 459 | KARNAL | Balu-PZ | 29.15 | | 30.62 | |
| 460 | KARNAL | Bansa-PZ | 21.27 | | 23.21 | |
| 461 | KARNAL | Baragaon-Pz | 15.05 | | 13.12 | |
| 462 | KARNAL | Barsat | 21.68 | | 23 | |
| 463 | KARNAL | Barthal-PZ | 31.88 | | 32.18 | |
| 464 | KARNAL | Bastali-PZ | 32.65 | | 33.15 | |
| 465 | KARNAL | Beholpur-PZ | 28.8 | | 30.91 | |
| 466 | KARNAL | Biana-PZ | 9.65 | | 7.8 | |
| 467 | KARNAL | Bijna-PZ | 14.6 | | 17.5 | |
| 468 | KARNAL | Brass-Pz | 30.7 | | 32.56 | |
| 469 | KARNAL | Budanpur-Pz | 8.64 | | 6.67 | |
| 470 | KARNAL | Chandsamand-PZ | 9.32 | | 7.63 | |
| 471 | KARNAL | Chaura-PZ | 17.78 | | 15.27 | |
| 472 | KARNAL | Chirao-PZ | 21.65 | | 19.82 | |
| 473 | KARNAL | Chochra-PZ | 28.82 | 32.17 | 32 | 33.11 |
| 474 | KARNAL | Choor Karsa-PZ | 33.26 | 34.7 | 30.72 | |
| 475 | KARNAL | Dabarthala-PZ | 25.85 | | 28.45 | |
| 476 | KARNAL | Dachar-PZ | 32 | | 31.18 | |
| 477 | KARNAL | Dadupur-PZ | 18.55 | | 20.62 | |
| 478 | KARNAL | Darar | 13.07 | | | |
| 479 | KARNAL | Dhanaura--PZ | 8.35 | | 6.23 | |
| 480 | KARNAL | Faridpur-Pz | 28.25 | | 28.33 | |
| 481 | KARNAL | Gagsina-PZ | 12.7 | | 12 | |
| 482 | KARNAL | Gangateri-Pz | 27.6 | | 29.55 | |
| 483 | KARNAL | Garhi Khajur M | 16.91 | 19.46 | 16.78 | 18.62 |
| 484 | KARNAL | Gharaunda-Pz | 32.15 | | 32.23 | |
| 485 | KARNAL | Ghiar-Pz | 7.9 | | 5.94 | |
| 486 | KARNAL | Gholpura-PZ | 28.65 | | 28.95 | |
| 487 | KARNAL | Gogripur-PZ | 7.4 | | 7.31 | |
| 488 | KARNAL | Gohida -PZ | 31.55 | | 31.7 | |
| 489 | KARNAL | Goli-PZ | 20.3 | | 24.65 | |
| 490 | KARNAL | Gondar-Pz | 30.9 | | 31.72 | 33.56 |
| 491 | KARNAL | Gudha-PZ | 9.4 | | 7.83 | |
| 492 | KARNAL | Indri | 11.8 | | 1.18 | 2.15 |
| 493 | KARNAL | Islam Nagar-Pz-M | 8.5 | 7.08 | 5.95 | 5.72 |
| 494 | KARNAL | Islam Nagar-Pz-S | 8.05 | | 6.73 | 6.28 |
| 495 | KARNAL | Jainpur-PZ | 7.68 | | 8.16 | |

| | | | | | | |
|-----|--------|-----------------|-------|-------|-------|-------|
| 496 | KARNAL | Jaisinghpura | 20.5 | | 22.42 | |
| 497 | KARNAL | Jalmana PZ | 31.25 | | 29.65 | |
| 498 | KARNAL | Janesron--PZ | 15.85 | | 15.84 | |
| 499 | KARNAL | Jhanjari-Pz | 14.95 | | 14.47 | |
| 500 | KARNAL | Jundla(shallow) | 22.7 | | 23.9 | |
| 501 | KARNAL | Kachhwa Pz | 23.05 | | 24.45 | |
| 502 | KARNAL | Kalampura-PZ | 19.4 | | 21.5 | |
| 503 | KARNAL | Kalheri-PZ | 29.95 | | 31.28 | |
| 504 | KARNAL | Kalri Jagir S | 4.75 | | 19.95 | 3.73 |
| 505 | KARNAL | Kalsi | 28.74 | | 28.48 | |
| 506 | KARNAL | Kalsora-PZ | 8.32 | | 5.73 | |
| 507 | KARNAL | Khanpur-PZ | 19.08 | 47.72 | 45.45 | 43.65 |
| 508 | KARNAL | KheriNaru-Pz-D | 15.16 | | 15.29 | 12.55 |
| 509 | KARNAL | Khizrabad-PZ | 29.65 | | 31.62 | |
| 510 | KARNAL | Kohnd S | 34.75 | | | |
| 511 | KARNAL | Kurlan-Pz | 25.35 | | 26.9 | |
| 512 | KARNAL | Kutail(deep) | 28.05 | 27.84 | 26.22 | |
| 513 | KARNAL | Majra Roran | 30.71 | | 32.02 | 31.79 |
| 514 | KARNAL | Manak Majra-Pz | 27.35 | | 27.77 | |
| 515 | KARNAL | Mehmadpur-Pz | 10.95 | | 9.42 | |
| 516 | KARNAL | Mormazra-PZ | 18.75 | | 22.5 | |
| 517 | KARNAL | Munak | 9.21 | | 10.05 | |
| 518 | KARNAL | Mundh (m) | 29.38 | | 31.56 | |
| 519 | KARNAL | Mundi Garhi--PZ | 5.9 | | 5.6 | |
| 520 | KARNAL | Musepur-PZ | 5.95 | | 5.62 | |
| 521 | KARNAL | Mustafabad-PZ | 6.6 | 12.6 | 9.99 | 11.94 |
| 522 | KARNAL | Nabipur-PZ | 8.95 | | 6.73 | |
| 523 | KARNAL | Nalvi Kalan-Pz | 15.85 | | | |
| 524 | KARNAL | Nanhera | 8.17 | 7.3 | 6.54 | 6.34 |
| 525 | KARNAL | Naru Kheri-PZ | 20.35 | | 18.43 | |
| 526 | KARNAL | Newal 1(m) | 15.55 | | 12.67 | |
| 527 | KARNAL | Nilokheri-Pz | 25.27 | | 24.56 | |
| 528 | KARNAL | Nisang-Pz | 33.8 | | 36.14 | |
| 529 | KARNAL | Paccakhera-dw | 25.6 | | 27.51 | |
| 530 | KARNAL | Padhana-DW | 24.45 | | 24.82 | |
| 531 | KARNAL | Pewant | 26.53 | | 28.72 | |
| 532 | KARNAL | Phurlak M | 25.18 | 26.6 | 24.61 | 22.85 |
| 533 | KARNAL | Phusgarh-Pz | 19.7 | | 19.47 | |
| 534 | KARNAL | Popra-PZ | 28.6 | | 30.55 | |
| 535 | KARNAL | Pundrak-PZ | 14.85 | | 20.05 | |
| 536 | KARNAL | Rambha M | 8.2 | | 6.26 | |

| | | | | | | |
|-----|-------------|---------------------|-------|-------|-------|-------|
| 537 | KARNAL | Randauli-Pz | 7.65 | 8.04 | 26.21 | |
| 538 | KARNAL | Ranwar-Pz | 19.75 | | 19.35 | |
| 539 | KARNAL | Rasin-PZ | 18.65 | | 18.58 | |
| 540 | KARNAL | Rattak-Pz | 27.15 | | 30.8 | |
| 541 | KARNAL | Rindal-PZ | 12.15 | | 10.55 | |
| 542 | KARNAL | Risalwa-PZ | 23.4 | | 25.35 | |
| 543 | KARNAL | Sadarpur-PZ | 7.35 | | 6.03 | |
| 544 | KARNAL | Sagga-Pz | 26.7 | | 27.23 | |
| 545 | KARNAL | Salwan-B | 23.25 | | 25.22 | |
| 546 | KARNAL | Sambli-Pz-S | 28.05 | 29.86 | 31.22 | 30.02 |
| 547 | KARNAL | Samora1 | 7.09 | | 6.79 | |
| 548 | KARNAL | Shekhpura(shallowa) | 27.85 | | 29.77 | |
| 549 | KARNAL | Subri-PZ | 17.25 | | 20.75 | |
| 550 | KARNAL | Taprana-PZ | 14.95 | | 14.25 | |
| 551 | KARNAL | Taraori-Pz | 23.1 | | 23.59 | |
| 552 | KARNAL | Udana-Pz | 34.55 | | 34.64 | |
| 553 | KARNAL | Uplani-PZ | 28.6 | | 30.42 | |
| 554 | KURUKSHETRA | Adhoya-Pz | 42.16 | | 34.16 | |
| 555 | KURUKSHETRA | Ajrana Kalan S | 46.2 | | | |
| 556 | KURUKSHETRA | Ajrawer-PZ | 45.12 | | 46.6 | |
| 557 | KURUKSHETRA | Babain-PZ | 42.85 | | 43.2 | |
| 558 | KURUKSHETRA | Badarpur-PZ | 14.67 | | 15.9 | |
| 559 | KURUKSHETRA | Bakali-PZ | 43.46 | | 33.25 | |
| 560 | KURUKSHETRA | Bapda-PZ | 37.32 | | 23.5 | |
| 561 | KURUKSHETRA | Barhan-PZ | 44.28 | | 33 | |
| 562 | KURUKSHETRA | Barna-PZ | 32.2 | | 34 | |
| 563 | KURUKSHETRA | Baronda-Pz | 21.63 | | 19.15 | 18.06 |
| 564 | KURUKSHETRA | Barshami-PZ | 34.65 | | 23.23 | |
| 565 | KURUKSHETRA | Batheri-PZ | 39.51 | | 42.17 | |
| 566 | KURUKSHETRA | Berthala S | 42.02 | 42.69 | 40.33 | 38.66 |
| 567 | KURUKSHETRA | Bhor (saidan) | 45.55 | | | |
| 568 | KURUKSHETRA | Bodhni (m) | 46.85 | 48.8 | 45.03 | 44.8 |
| 569 | KURUKSHETRA | Bodhni (s) | 42.9 | 44.45 | 44.21 | 43.73 |
| 570 | KURUKSHETRA | Budha-PZ | 24.46 | | 23.5 | |
| 571 | KURUKSHETRA | Busthala-PZ | 43.5 | | 44 | |
| 572 | KURUKSHETRA | Chanalheri-PZ | 43.02 | | 45.8 | |
| 573 | KURUKSHETRA | Chhapra-Pz | 40.35 | | 42.3 | |
| 574 | KURUKSHETRA | Dabkheri | 35.3 | | 37.1 | |
| 575 | KURUKSHETRA | Dhir Pur-PZ | 45.12 | | 46.85 | |
| 576 | KURUKSHETRA | Dhurala-PZ | 41.15 | | 42.2 | |
| 577 | KURUKSHETRA | Diwana-PZ | 39.25 | | 42.17 | |

| | | | | | | |
|-----|-------------|--------------------|-------|-------|-------|-------|
| 578 | KURUKSHETRA | Garhi Roran-PZ | 33.58 | | 35.2 | |
| 579 | KURUKSHETRA | Ghararsi-PZ | 34 | | 35.9 | |
| 580 | KURUKSHETRA | Gobind Garh-PZ | 28.55 | | 28.7 | |
| 581 | KURUKSHETRA | Gol Pura-PZ | 51.16 | | 50.51 | |
| 582 | KURUKSHETRA | Gumthala Garhu-PZ | 37.8 | | 39 | |
| 583 | KURUKSHETRA | Hathira-PZ | 31.25 | 35.11 | 33.1 | |
| 584 | KURUKSHETRA | Hatira (m) | 32.05 | | | |
| 585 | KURUKSHETRA | Helwa-PZ | 39.25 | | 42.9 | |
| 586 | KURUKSHETRA | Ishaque S | 40.38 | 41.63 | 41.69 | 41.39 |
| 587 | KURUKSHETRA | Ismailabad(deep) | 43.44 | | | |
| 588 | KURUKSHETRA | Ismailpur-PZ | 44.85 | | 45.2 | |
| 589 | KURUKSHETRA | Jalbehra-PZ | 45.35 | | 46 | |
| 590 | KURUKSHETRA | Jhansa-PZ | 43.89 | | 44 | |
| 591 | KURUKSHETRA | Jogna Khera | 38.12 | | | |
| 592 | KURUKSHETRA | Jogna Khera | 34.08 | | | |
| 593 | KURUKSHETRA | Kalsani-PZ | 50.48 | | 52.1 | |
| 594 | KURUKSHETRA | Karaha Sahib-PZ | 40.65 | | 41.9 | |
| 595 | KURUKSHETRA | Kaulapur S | 43.75 | 43.7 | 41.73 | 40.23 |
| 596 | KURUKSHETRA | Kheri Ran Nagar-PZ | 36.13 | | 38 | |
| 597 | KURUKSHETRA | Kirmach-St-Pz | 31.8 | | 33.05 | |
| 598 | KURUKSHETRA | Lakhmari-PZ | 42.08 | | 43.2 | |
| 599 | KURUKSHETRA | Landi-PZ | 52.35 | | 53.2 | |
| 600 | KURUKSHETRA | Lohar Majra-PZ | 34.2 | | 36 | |
| 601 | KURUKSHETRA | Lohara-Pz | 41.4 | | 39.28 | |
| 602 | KURUKSHETRA | Lukhi-Pz | 39.7 | | 41.6 | |
| 603 | KURUKSHETRA | Malikpur(shallow) | 45.22 | | | |
| 604 | KURUKSHETRA | Mangana-PZ | 40.85 | | 41.8 | |
| 605 | KURUKSHETRA | Mangoli Jattan-PZ | 38.95 | | 39.9 | |
| 606 | KURUKSHETRA | Mathana 1(m) | 39.72 | 45.72 | 37.9 | 38.53 |
| 607 | KURUKSHETRA | Mathana 2(d) | 39.1 | | | |
| 608 | KURUKSHETRA | Mirzapur-PZ | 35.72 | | 36.5 | |
| 609 | KURUKSHETRA | Mohri-Pz | 32.18 | | 32.4 | |
| 610 | KURUKSHETRA | Morthala-PZ | 43.7 | | 43.85 | |
| 611 | KURUKSHETRA | Naisi-Pz | 44.35 | | 45.1 | |
| 612 | KURUKSHETRA | Padlu-PZ | 47.99 | | 48.82 | |
| 613 | KURUKSHETRA | Pehowa (D) | 45.55 | | 34.96 | 42.9 |
| 614 | KURUKSHETRA | Pipli | 41.6 | 46.25 | | 42.44 |
| 615 | KURUKSHETRA | Ramnagar | 45.24 | | 46.6 | |
| 616 | KURUKSHETRA | Rao Garh-PZ | 34.52 | | 33.1 | |
| 617 | KURUKSHETRA | Rawa-PZ | 47.45 | | 47.5 | |
| 618 | KURUKSHETRA | Rohit-PZ | 44.2 | | 44.9 | |

| | | | | | | |
|-----|--------------|---------------------|-------|--|-------|------|
| 619 | KURUKSHETRA | SandholaPZ | 38.63 | | 44.3 | |
| 620 | KURUKSHETRA | Sarai Sukhi-PZ | 46.65 | | 47.85 | |
| 621 | KURUKSHETRA | Sarsa-PZ | 37.32 | | 39.2 | |
| 622 | KURUKSHETRA | Shahbad 1(d) | 50.15 | | 48.6 | |
| 623 | KURUKSHETRA | Shanti Nagar-PZ | 46.3 | | | |
| 624 | KURUKSHETRA | Sirsala-Pz | 39.41 | | | |
| 625 | KURUKSHETRA | Sunarain Dhanani-PZ | 43.02 | | 44.9 | |
| 626 | KURUKSHETRA | Surmi-PZ | 40.8 | | 44.7 | |
| 627 | KURUKSHETRA | Tangore-Pz | 46.11 | | 47.8 | |
| 628 | KURUKSHETRA | Tatka-PZ | 38.94 | | 39.6 | |
| 629 | KURUKSHETRA | Teokar-PZ | 41.55 | | 42.8 | |
| 630 | KURUKSHETRA | Teora-PZ | 46.57 | | 47.2 | |
| 631 | KURUKSHETRA | Thana (m) | 39.28 | | 41 | |
| 632 | KURUKSHETRA | Thol-PZ | 45.9 | | 46.4 | |
| 633 | KURUKSHETRA | Tigri-PZ | 47.25 | | 48.6 | |
| 634 | KURUKSHETRA | Umri-Pz | 39.72 | | 41.5 | |
| 635 | KURUKSHETRA | Yara-PZ | 45.55 | | 47.8 | |
| 636 | MAHENDRAGARH | Akoda | 61.5 | | 61 | |
| 637 | MAHENDRAGARH | Ateli1 | 81 | | 77 | |
| 638 | MAHENDRAGARH | Barda-DW | 63 | | 62.5 | |
| 639 | MAHENDRAGARH | Basirpur | 24.8 | | 25.15 | |
| 640 | MAHENDRAGARH | Berundla-DW | 35.05 | | 35.6 | |
| 641 | MAHENDRAGARH | Bhojwas-DW | 39 | | 39.15 | |
| 642 | MAHENDRAGARH | Dalanwas | 73 | | 72.5 | |
| 643 | MAHENDRAGARH | Dhancholi-DW | 36 | | 36.8 | |
| 644 | MAHENDRAGARH | Faizabad-DW | 18.7 | | 19 | |
| 645 | MAHENDRAGARH | Goad | 78 | | 79 | |
| 646 | MAHENDRAGARH | Kalba-DW | 28.83 | | 30.2 | |
| 647 | MAHENDRAGARH | Khodana-DW | 45.5 | | 45 | |
| 648 | MAHENDRAGARH | Kultajpur | 51.2 | | 50.8 | |
| 649 | MAHENDRAGARH | Meghot | 22.55 | | | |
| 650 | MAHENDRAGARH | Nangal Kalial-ii | 47.82 | | 47.25 | |
| 651 | MAHENDRAGARH | Nangalmala | 70 | | 69.5 | |
| 652 | MAHENDRAGARH | Pachnota-DW | 19.9 | | | |
| 653 | MAHENDRAGARH | Raghunathpura | 29.9 | | 26.8 | |
| 654 | MAHENDRAGARH | Satnali1 | 92.9 | | | 99.3 |
| 655 | MAHENDRAGARH | Tazpur-Pz | 73 | | 73 | |
| 656 | MEWAT | Agaon-Pz | 17.35 | | | |
| 657 | MEWAT | Akaira | 4.1 | | 4.6 | 2.9 |
| 658 | MEWAT | Bhadas-DW | 5.85 | | | |
| 659 | MEWAT | Chhapar | 3.45 | | | |

| | | | | | | |
|-----|-----------|----------------------|-------|-------|-------|-------|
| 660 | MEWAT | Gulaltha | 2.65 | | | |
| 661 | MEWAT | Indri1 | 5.6 | | | |
| 662 | MEWAT | Malab | 3.95 | | | 3.23 |
| 663 | MEWAT | Nagina | 4.35 | | | 4.33 |
| 664 | MEWAT | Naharika-Pz | 24.65 | | | |
| 665 | MEWAT | Nasirbas | 7.65 | | | |
| 666 | MEWAT | Nuh | 5.2 | | | |
| 667 | MEWAT | Pipaka-Shashola | 27.9 | | | |
| 668 | MEWAT | Punhana | 14.45 | | | |
| 669 | MEWAT | Punhana-Pz | 14.6 | | 14.95 | |
| 670 | MEWAT | Rathiwas | 18.9 | | | |
| 671 | MEWAT | Rithuria | 1.35 | | | |
| 672 | PALWAL | Bahin | 11.95 | | 11.25 | |
| 673 | PALWAL | Bamnikhera | 12.7 | | 10.75 | |
| 674 | PALWAL | Barauli-Pz | 12.63 | | 13.37 | 13.14 |
| 675 | PALWAL | Bazida Pahar-DW | 6 | | 5.55 | |
| 676 | PALWAL | Chhaensa | 2.85 | | | |
| 677 | PALWAL | Dighaut | 13.33 | 13.4 | 13.16 | 12.98 |
| 678 | PALWAL | Gharraut | 19.95 | | 17 | |
| 679 | PALWAL | Hasan pur | 17.86 | | | |
| 680 | PALWAL | Hathin | 13.45 | | | |
| 681 | PALWAL | Hodel1 | 16.97 | | 16.5 | |
| 682 | PALWAL | Jaindpur Borehole | 14.03 | 14.25 | 13.93 | 14.88 |
| 683 | PALWAL | Kondal | 5.6 | | | |
| 684 | PALWAL | Mandkola | 2.7 | | | |
| 685 | PALWAL | Palwal-Pz | 10.1 | 11.47 | 11.47 | |
| 686 | PALWAL | Pehladpur-Pz | 8.95 | 6.03 | 5.37 | 6.52 |
| 687 | PALWAL | Pelak-Pz | 20.85 | | | |
| 688 | PALWAL | Pirgarhi- Pz | 8.86 | 10.82 | 9.43 | 10.44 |
| 689 | PALWAL | Pirthla | 6.65 | | | |
| 690 | PALWAL | Utarwar | 13.45 | | | |
| 691 | PANCHKULA | Abdullapur | 4.98 | | | 5.38 |
| 692 | PANCHKULA | Bahoriyan-Dw | 2.97 | 1.73 | | 4.85 |
| 693 | PANCHKULA | Barwala Pz S | 20.81 | | | |
| 694 | PANCHKULA | Barwala-Pz | 20.81 | 20.17 | 3.58 | 20.04 |
| 695 | PANCHKULA | Batour | 9.9 | 7.97 | | |
| 696 | PANCHKULA | Batwal | 11.47 | 10.1 | 5.35 | |
| 697 | PANCHKULA | Bunga At Dabkhori-DW | 36.35 | | | |
| 698 | PANCHKULA | Chandi Mandir-DW | 6.56 | 5.88 | 6.22 | 6.15 |
| 699 | PANCHKULA | Devnagar(Panchkula) | 9.29 | 8.9 | 8.8 | 9.06 |
| 700 | PANCHKULA | Dhakwala-Dw | 2.02 | 1.05 | 1.35 | 1.58 |

| | | | | | | |
|-----|-----------|------------------|-------|-------|-------|-------|
| 701 | PANCHKULA | Dharampur | 12.88 | 1.56 | 6.5 | 12.42 |
| 702 | PANCHKULA | Garriran | 32.66 | 31.65 | 31.27 | |
| 703 | PANCHKULA | Garriran-DW | 32.6 | | | |
| 704 | PANCHKULA | Golpura-DW | 4.39 | 1.45 | 2.09 | 3.71 |
| 705 | PANCHKULA | Hangola | 5.48 | 5.07 | 4.61 | 4.81 |
| 706 | PANCHKULA | Jaspur-Pz | 16.99 | 16.6 | 15.62 | 15.23 |
| 707 | PANCHKULA | Jaswant Garh-DW | 7.6 | | | |
| 708 | PANCHKULA | Kakar Majra | 11.99 | 11.16 | 11.22 | 11.23 |
| 709 | PANCHKULA | Khera | 29.35 | 27.16 | 26.86 | 27.75 |
| 710 | PANCHKULA | Kheri-DW | 9.88 | | | |
| 711 | PANCHKULA | Kiratpur-DW | 36.72 | | 35.5 | |
| 712 | PANCHKULA | Kundi-DW | 19.75 | | 17.95 | |
| 713 | PANCHKULA | Nadha-DW | 3.16 | 3.04 | 3.05 | 2.98 |
| 714 | PANCHKULA | Nandpur | 1.2 | | | |
| 715 | PANCHKULA | Nandpur-Dw | 1.2 | 1.1 | 0.5 | 0.46 |
| 716 | PANCHKULA | Parwala | 18.13 | 16.65 | 15.49 | 15.62 |
| 717 | PANCHKULA | Patwi | 10.39 | 10.28 | 6.5 | 8.72 |
| 718 | PANCHKULA | Piare Wala-DW | 25.99 | | 24.3 | |
| 719 | PANCHKULA | Raipur Rani-Pz | 23.7 | | | |
| 720 | PANCHKULA | Raipurrani | 11.28 | 8.78 | 9.03 | 9.68 |
| 721 | PANCHKULA | Ram Nagar-DW | 18.7 | | 16.9 | |
| 722 | PANCHKULA | Ramgarh-DW | 16.1 | | 13.9 | |
| 723 | PANCHKULA | Rampur-DW | 9.04 | | 6.04 | |
| 724 | PANCHKULA | Rattewali-DW | 29.55 | | 29.1 | |
| 725 | PANCHKULA | Rehna-DW | 17.03 | | 15.7 | |
| 726 | PANCHKULA | Shahjahan Pur-DW | 21.46 | | 20.25 | |
| 727 | PANCHKULA | Shahpur-DW | 20.65 | | 18.9 | |
| 728 | PANCHKULA | Thapli-Dw | 7.24 | 6.18 | 6.36 | 6.98 |
| 729 | PANCHKULA | Toka-DW | 10.98 | 9.8 | 8.64 | |
| 730 | PANIPAT | Babail M-Pz | 30.07 | 29.7 | 29.7 | 27.33 |
| 731 | PANIPAT | Baholi-Pz | 15.65 | | 15.84 | |
| 732 | PANIPAT | Bandh-Dw | 5.5 | | 6.55 | |
| 733 | PANIPAT | Dadola-Pz | 37.8 | | 39.82 | |
| 734 | PANIPAT | Dharamgarh S | 18.4 | | 19.3 | 18.37 |
| 735 | PANIPAT | Diwana | 39.05 | | | |
| 736 | PANIPAT | Dumiana-Dw | 7 | | 7.85 | |
| 737 | PANIPAT | Garhi Chhaju | 33.88 | 34.03 | 34.17 | 32.87 |
| 738 | PANIPAT | Hathwala-Pz | 14.79 | | | |
| 739 | PANIPAT | Israna Pz | 6.45 | 4.53 | 4.58 | 4.36 |
| 740 | PANIPAT | Israna(m) | 5.67 | | | |
| 741 | PANIPAT | Kaith-Dw | 3.95 | | 2.88 | |

| | | | | | | |
|-----|---------|------------------|-------|-------|-------|-------|
| 742 | PANIPAT | Karhansh Pz | 41.38 | | | |
| 743 | PANIPAT | Khanda | 13.95 | | | |
| 744 | PANIPAT | Khojkinpur | 8.39 | 8.02 | 8.44 | 8.32 |
| 745 | PANIPAT | Kiwana | 36.03 | | | |
| 746 | PANIPAT | Lohari (s) | 1.76 | | 1.36 | 2.44 |
| 747 | PANIPAT | Mehmadpur | 29.28 | 29.24 | 29.29 | 33.02 |
| 748 | PANIPAT | Mohali | 31.2 | 31.61 | 32.31 | 30.5 |
| 749 | PANIPAT | Namunda | 28.15 | 29.39 | 30.35 | 31.48 |
| 750 | PANIPAT | Nara | 23.74 | | | |
| 751 | PANIPAT | Nariana-PZ | 28.8 | | | |
| 752 | PANIPAT | Naulatha | 36.08 | 39.72 | 42.2 | 40.23 |
| 753 | PANIPAT | Naultha | 36.08 | | | |
| 754 | PANIPAT | Nizampur | 35.5 | | | |
| 755 | PANIPAT | Panipat-Pz | 47.55 | | 46.54 | |
| 756 | PANIPAT | Pathargarh | 9.13 | 8.94 | 8.99 | 7.61 |
| 757 | PANIPAT | Patti Kalyana | 38.36 | | 32.53 | |
| 758 | PANIPAT | Patti Kalyana M | 38.52 | 37.27 | 37.03 | 36.58 |
| 759 | PANIPAT | Puther Pz | 10.4 | 11.41 | 11.53 | 10.97 |
| 760 | PANIPAT | Rakshera | 16.15 | 15.9 | 14.84 | 14.47 |
| 761 | PANIPAT | Samalkha-Pz | 36.88 | | 37.02 | |
| 762 | PANIPAT | Sanauli Khurd-Pz | 17.8 | | | |
| 763 | PANIPAT | Sewah | 51.4 | | | |
| 764 | PANIPAT | Shahpur | 3.2 | 2.13 | 3.43 | 2.82 |
| 765 | PANIPAT | Sink | 7.45 | 6.56 | 6.61 | 6.43 |
| 766 | PANIPAT | Tamsabad | 7.9 | | 1.67 | |
| 767 | PANIPAT | Untilya | 5.47 | 3.8 | 4.45 | 3.97 |
| 768 | PANIPAT | Urlana Kalan | 17.16 | 17.66 | 18.07 | 17.98 |
| 769 | REWARI | Bawal DW | 22.58 | | | |
| 770 | REWARI | Bawal Pz | 29.6 | | | |
| 771 | REWARI | Berli Khurd-DW | 18.74 | | 18.94 | |
| 772 | REWARI | Bhakli-DW | 11.85 | | 12 | |
| 773 | REWARI | Bharangi-DW | 20.1 | | 20.4 | |
| 774 | REWARI | Chimnawas | 56.9 | 57.13 | 53.45 | 60.7 |
| 775 | REWARI | Garhi-DW | 19.5 | | 18.16 | |
| 776 | REWARI | Gurkawas-DW | 7.65 | | 7.85 | |
| 777 | REWARI | Hansaka-DW | 7.35 | | 7.2 | |
| 778 | REWARI | Harinagar-DW | 15.1 | | 15.05 | |
| 779 | REWARI | Jatusana1 | 26.5 | | 26.03 | |
| 780 | REWARI | Jatuwas-DW | 21.9 | | 22.15 | |
| 781 | REWARI | Jhabwa | 37.2 | | 36.25 | |
| 782 | REWARI | Karnawas | 11.52 | | | |

| | | | | | | |
|-----|--------|-------------------|-------|------|-------|-------|
| 783 | REWARI | Khera Bahu-DW | 24.68 | | 24.83 | |
| 784 | REWARI | Mandola-Pz | 78.9 | | | 79.46 |
| 785 | REWARI | Massani | 20.21 | 19.6 | 19.16 | 19.65 |
| 786 | REWARI | Palhawas-DW | 6.2 | | 6.4 | |
| 787 | REWARI | Pali-Pz | 54.35 | | | 40.6 |
| 788 | REWARI | Piragpura | 58.5 | | 60.26 | |
| 789 | REWARI | Rantanthal-DW | 9.05 | | 9.2 | |
| 790 | REWARI | Rohrai-DW | 6.84 | | 6.94 | |
| 791 | REWARI | Shadipur-DW | 10.11 | | | |
| 792 | REWARI | Sudharana-DW | 8.02 | | 8.22 | |
| 793 | ROHTAK | Ajaib-DW | 2.28 | | 1.58 | |
| 794 | ROHTAK | Assan-DW | 1.98 | | 2.64 | |
| 795 | ROHTAK | Atail-DW | 3.76 | | 3.19 | |
| 796 | ROHTAK | Baland | 1.78 | | | |
| 797 | ROHTAK | Baliana-DW | 3.22 | | 2.51 | |
| 798 | ROHTAK | Bhal Anandpur | 1.07 | 1.49 | 1.86 | 1.94 |
| 799 | ROHTAK | Hassangarh | 2.85 | 0.95 | 1.23 | 1.32 |
| 800 | ROHTAK | Kalanaur Pz | 2.07 | | | |
| 801 | ROHTAK | Kanheli-DW | 2.57 | | 1.33 | |
| 802 | ROHTAK | Kansala | 2.5 | | | |
| 803 | ROHTAK | Kharawar | 5 | | | |
| 804 | ROHTAK | Kherari-DW | 1.99 | | 0.87 | |
| 805 | ROHTAK | Kiloi-DW | 2.58 | | 2.1 | |
| 806 | ROHTAK | Lahli-DW | 1.98 | | 1.15 | |
| 807 | ROHTAK | Lakhan Majara | 1.7 | 1 | 2.6 | 2.67 |
| 808 | ROHTAK | Lakhan Majra Pz | 0.76 | | 0.11 | |
| 809 | ROHTAK | Mahem | 8.95 | 9.55 | 9.89 | |
| 810 | ROHTAK | Mahem1 | 12 | | | |
| 811 | ROHTAK | Muradpur Tekna-DW | 1.98 | | 0.99 | |
| 812 | ROHTAK | Nandal-DW | 2 | | 0.1 | |
| 813 | ROHTAK | Ritoli-DW | 1.2 | | 0.52 | |
| 814 | ROHTAK | Rohtak Pz | 3.53 | | | |
| 815 | ROHTAK | Samargopalpur | 0.87 | 1.41 | 1.89 | 1.79 |
| 816 | ROHTAK | Sampla | 0.96 | 2.26 | 2.26 | 2.16 |
| 817 | ROHTAK | Sampla-Pz | 1.58 | | 0.42 | |
| 818 | ROHTAK | Sanghi-DW | 12.6 | | 11 | |
| 819 | ROHTAK | Sundana-DW | 2.54 | | 2.84 | |
| 820 | ROHTAK | Tiloli-DW | 5.8 | | 3.27 | |
| 821 | SIRSA | Abholi | 10.75 | | | |
| 822 | SIRSA | Ali Mohammad | 29.9 | | | |
| 823 | SIRSA | Alikan | 14.4 | | | |

| | | | | | | |
|-----|-------|--------------------|-------|-------|-------|-------|
| 824 | SIRSA | Bahauddin | 78.7 | | | |
| 825 | SIRSA | Bhuratwala-Pz | 13.1 | | | |
| 826 | SIRSA | Chaharwala | 4.5 | | | |
| 827 | SIRSA | Chilkani Dhab | 8.5 | | | |
| 828 | SIRSA | Chormar | 18.9 | 18.1 | 19.18 | 18.95 |
| 829 | SIRSA | Chotala-Pz | 13.1 | | | |
| 830 | SIRSA | Dabwali Dw | 10.23 | 8.9 | 9.38 | 10.55 |
| 831 | SIRSA | Darba Kalan-Pz | 2.14 | 2.25 | 1.97 | 2.15 |
| 832 | SIRSA | Dariyawala-D | 33 | 32.58 | 33.56 | 33.27 |
| 833 | SIRSA | Ding | 16.64 | 17.39 | 17.23 | 16.97 |
| 834 | SIRSA | Ellenabed | 25.6 | | | |
| 835 | SIRSA | Ganga | 15.4 | | | |
| 836 | SIRSA | Ghushiana | 12.08 | 13.59 | 13.43 | 13.22 |
| 837 | SIRSA | Gigorani | 3.2 | 3.71 | | 3.42 |
| 838 | SIRSA | Goriwala | 17.38 | 17.39 | 17.81 | 17.44 |
| 839 | SIRSA | Hasu | 18.5 | | | |
| 840 | SIRSA | Jamal | 3 | 3.02 | 3.97 | 3.9 |
| 841 | SIRSA | Kairanwali-DW | | | 2.8 | |
| 842 | SIRSA | Kalanwali Mandi-Pz | 10.27 | 10.69 | 10.67 | 10.72 |
| 843 | SIRSA | Kaluwana | 12.76 | | | 12.92 |
| 844 | SIRSA | Kash Ram Dhab | 9.8 | | 8.92 | 9.78 |
| 845 | SIRSA | Khuiyan | 17.82 | 18.09 | 18.69 | 18 |
| 846 | SIRSA | Kumahria-M | 10.5 | 10.72 | 10.42 | 10.46 |
| 847 | SIRSA | Kumahria-S | 10.35 | 10.57 | 10.4 | 10.44 |
| 848 | SIRSA | Kurangwali | 8.4 | | | |
| 849 | SIRSA | Lohgarh | 8.7 | | | |
| 850 | SIRSA | Mammer Khera-Pz | 21.55 | 21.78 | 21.73 | 21.76 |
| 851 | SIRSA | Mastian | 15.17 | | | 15.59 |
| 852 | SIRSA | Mithri | 20.4 | 20.78 | 20.71 | 26.9 |
| 853 | SIRSA | Najadiala Kalan | 41.5 | | | |
| 854 | SIRSA | Nuhian Wali | 15.45 | 15.46 | 15.83 | 15.11 |
| 855 | SIRSA | Odhan Pz | 16.1 | | | |
| 856 | SIRSA | Panniwala Mota | 6.13 | 5.39 | 5.75 | 10.94 |
| 857 | SIRSA | Phulka | 56.5 | | | |
| 858 | SIRSA | Rori -DW | 12.03 | 13.7 | 13.27 | 12.45 |
| 859 | SIRSA | Rupana | 2.7 | | | |
| 860 | SIRSA | Sadewala | 27.4 | | | |
| 861 | SIRSA | Sahuwala1 | 12.6 | | | |
| 862 | SIRSA | Sainpal-Pz | 37.8 | | 38.2 | |
| 863 | SIRSA | Saktakhera | 4.72 | 3.71 | 4.03 | 3.96 |
| 864 | SIRSA | Saktakhera-E1W | 11.47 | | | |

| | | | | | | |
|-----|---------|-------------------|-------|-------|-------|-------|
| 865 | SIRSA | Saktakhera-EW | 4.62 | 5.07 | | |
| 866 | SIRSA | Salemkhera | 21.4 | | | |
| 867 | SIRSA | Sherawali Dhani-M | 4.01 | 3.95 | 4.99 | 4.08 |
| 868 | SIRSA | Sherawalidhani-S | 4.82 | 4.95 | 3.97 | 2.15 |
| 869 | SIRSA | Shergarh-DW | 7.26 | 7.51 | 8.12 | 7.73 |
| 870 | SIRSA | Sherpura | 20 | 14.82 | 15.14 | 14.82 |
| 871 | SIRSA | Sirsa-Pz | 59.5 | | | 35.15 |
| 872 | SIRSA | Taruwana | 9.89 | 10.42 | 10.77 | 10.82 |
| 873 | SIRSA | Tejakhera | 7.66 | 7.94 | 8.07 | 7.72 |
| 874 | SIRSA | Thiraj | 13 | | | |
| 875 | SONIPAT | Ahulana | 0.69 | 1.27 | 1.27 | 1.2 |
| 876 | SONIPAT | Anandpur-Jarot-DW | 4.77 | | 4.22 | |
| 877 | SONIPAT | Asadpur | 5.3 | | | |
| 878 | SONIPAT | Banwasa-DW | 2.6 | | 0.67 | |
| 879 | SONIPAT | Barauli | 9.9 | 9.43 | 9.25 | 9.24 |
| 880 | SONIPAT | Baroda Mor-DW | 0.35 | | 0.95 | |
| 881 | SONIPAT | Barona-DW | 2.3 | | 1.2 | |
| 882 | SONIPAT | Barswani- DW | 5.4 | 5.45 | 5.45 | |
| 883 | SONIPAT | Barwasani(medium) | 8.45 | | | |
| 884 | SONIPAT | Barwasni Pz (d) | 9.3 | | 8.9 | 10.4 |
| 885 | SONIPAT | Barwasni Pz (s) | 5.4 | 10.24 | 9.51 | 11.28 |
| 886 | SONIPAT | Bhainswal | 4.2 | 2.86 | 2.89 | 2.76 |
| 887 | SONIPAT | Bhakhpur | 37.15 | | 37.77 | 36.1 |
| 888 | SONIPAT | Bhunderi | 1.07 | 0.87 | 1.11 | 1.01 |
| 889 | SONIPAT | Bidhlan-DW | 3.55 | | 2.86 | |
| 890 | SONIPAT | Butana | 2.71 | 4.24 | 5.43 | 4.92 |
| 891 | SONIPAT | Datauli-Pz | 27.07 | | 27.1 | |
| 892 | SONIPAT | Farmana | 4.7 | | 3.61 | |
| 893 | SONIPAT | Ganaur-Pz | 33.54 | | 34.47 | |
| 894 | SONIPAT | Gangana-DW | 3.56 | | 2.01 | |
| 895 | SONIPAT | Gohana | 16.75 | | 15.41 | |
| 896 | SONIPAT | Gohana Pz | 16.75 | 15.31 | | 15.06 |
| 897 | SONIPAT | Gorar-DW | 2 | | 1 | |
| 898 | SONIPAT | Jagsi | 2.23 | 0.51 | 1.32 | 1.02 |
| 899 | SONIPAT | Jhakauli- Pz | 18.68 | | 23.58 | |
| 900 | SONIPAT | Kathura Pz | 1.44 | | 2 | |
| 901 | SONIPAT | Khanpur Kalan-Pz | 0.85 | 0.4 | 1.7 | 1.58 |
| 902 | SONIPAT | Kharkhauda | 10 | | 8 | |
| 903 | SONIPAT | Kheaora | 30.5 | | | 29.08 |
| 904 | SONIPAT | Kheri Gujjar-Pz | 30.34 | | | |
| 905 | SONIPAT | Khijarpur | 5 | | | |

| | | | | | | |
|-----|-------------|-------------------|-------|-------|-------|-------|
| 906 | SONIPAT | Kundli 1(s) | 25.09 | | | |
| 907 | SONIPAT | Ladpur-Pz | 10.05 | | 10 | |
| 908 | SONIPAT | Larsauli-Pz | 32 | | | |
| 909 | SONIPAT | Lath | 0.5 | 1 | 1.42 | 1.25 |
| 910 | SONIPAT | Mahara | 7 | | 5 | |
| 911 | SONIPAT | Mohana Pzm | 7 | | 6 | |
| 912 | SONIPAT | Mundlana- Pz | 10 | | 8 | |
| 913 | SONIPAT | Murthal-Pz | 32.28 | 33.57 | 34.27 | 33.85 |
| 914 | SONIPAT | Palra | 5.3 | | 7.5 | 6.32 |
| 915 | SONIPAT | Pinana | 5.66 | 4.96 | 5.22 | 5.38 |
| 916 | SONIPAT | Pipli-DW | 5.9 | | 5.45 | |
| 917 | SONIPAT | Pugthala-Pz | 10 | | 9 | |
| 918 | SONIPAT | Purkhas-Pz | 19.32 | | | |
| 919 | SONIPAT | Rai(Bahalgarh) | 27.28 | 28.12 | 28.23 | 27.18 |
| 920 | SONIPAT | Rasoi Pz | 19.1 | | 15.88 | 19.8 |
| 921 | SONIPAT | Rathdhana-Pz | 25 | | 24 | |
| 922 | SONIPAT | Rohat | 5 | | 4 | |
| 923 | SONIPAT | Safiabad-Pz | 8.56 | | 9.06 | |
| 924 | SONIPAT | Sisnah | 2.55 | 4.93 | 4.94 | 4.67 |
| 925 | SONIPAT | Tihar Malikpur-DW | 5.51 | | 5.5 | |
| 926 | YAMUNANAGAR | Antawa-Pz | 32.35 | | 29.4 | |
| 927 | YAMUNANAGAR | Bakarwala-Pz | 7.07 | | | |
| 928 | YAMUNANAGAR | Bari Kanari-Pz | 26.4 | | | |
| 929 | YAMUNANAGAR | Bhambauli-2 (d) | 20.75 | 19.25 | 19.62 | 19.41 |
| 930 | YAMUNANAGAR | Bilaspur DW | 4.47 | 2.86 | 3.31 | 3.04 |
| 931 | YAMUNANAGAR | Chamrori-Pz | 25.56 | | 24.13 | |
| 932 | YAMUNANAGAR | Chaneti-Pz | 12.98 | | 11.2 | |
| 933 | YAMUNANAGAR | Chhachhrauli | 7.6 | | 7.09 | |
| 934 | YAMUNANAGAR | Chhachrauli S | 17.93 | 12.37 | 13.12 | 13.5 |
| 935 | YAMUNANAGAR | Choli | 1.45 | 0.41 | | 0.8 |
| 936 | YAMUNANAGAR | Damla-Pz | 11.83 | | 9.85 | |
| 937 | YAMUNANAGAR | Dhaurang S | 16.35 | | 38.66 | 14.69 |
| 938 | YAMUNANAGAR | Fatehpur-Pz | 13.61 | | 13.06 | |
| 939 | YAMUNANAGAR | Harewa-DW | 6.36 | | 5.06 | |
| 940 | YAMUNANAGAR | Jagadhri-Pz | 17.43 | | 15.39 | |
| 941 | YAMUNANAGAR | Jhiwarheri M | 37 | | 5.84 | 32.65 |
| 942 | YAMUNANAGAR | Jhiwarheri S | 33.3 | | 5.92 | 33.69 |
| 943 | YAMUNANAGAR | Kail-Pz | 19.7 | | 18.1 | |
| 944 | YAMUNANAGAR | Khizrabad | 19.78 | 14 | 16.8 | |
| 945 | YAMUNANAGAR | Kotla D | 22.83 | | 20.25 | |
| 946 | YAMUNANAGAR | Mandebri-Pz | 19.55 | | 19.2 | |

| | | | | | | |
|------------|-------------|------------------|-------|-------|-------|-------|
| 947 | YAMUNANAGAR | Masana Jattan-Pz | 29.72 | 30.4 | 29.75 | 29.38 |
| 948 | YAMUNANAGAR | Mustafabad DW | 7.6 | 6.35 | 4.38 | 5.32 |
| 949 | YAMUNANAGAR | Mustafabad-Pz | 8.29 | 12.6 | 9.99 | 11.94 |
| 950 | YAMUNANAGAR | Nagal Patti-DW | 25.48 | | | |
| 951 | YAMUNANAGAR | Naggal M | 7.8 | 5.34 | 3.62 | 5.6 |
| 952 | YAMUNANAGAR | Radaur S | 16.27 | 13.46 | 13.36 | 13.36 |
| 953 | YAMUNANAGAR | Rasulpur | 8.94 | | | |
| 954 | YAMUNANAGAR | Rasulpur DW | 8.94 | 5.86 | 5.93 | 6.6 |
| 955 | YAMUNANAGAR | Sabapur-Pz-M | 4.15 | 1.43 | 2.07 | 2.3 |
| 956 | YAMUNANAGAR | Sabri | 6.46 | 4.1 | | 5.18 |
| 957 | YAMUNANAGAR | Sadhaura | 3.5 | | 2 | |
| 958 | YAMUNANAGAR | Sadhaura DW | 6.21 | 3.39 | 5.52 | 5.42 |
| 959 | YAMUNANAGAR | Sadhaura M | 45.05 | | 43 | 24.2 |
| 960 | YAMUNANAGAR | Sadhaura S | 5.17 | | 3.04 | 3.47 |
| 961 | YAMUNANAGAR | Salehpur-DW | 8.83 | | 8.08 | |
| 962 | YAMUNANAGAR | Shadipur | 6.26 | 3.65 | 4.13 | 3.59 |
| 963 | YAMUNANAGAR | Tala Kaur S | 4.22 | | | |
| 964 | YAMUNANAGAR | Tehi-Pz | 21.64 | | 19.54 | |