



CENTRAL GROUND WATER BOARD
MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT
AND GANGA REJUVINATION
GOVERNMENT OF INDIA

GROUND WATER YEAR BOOK
OF
HARYANA STATE
(2017-2018)

North Western Region
Chandigarh
September 2018

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North Western Region
Chandigarh
September 2018

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 water levels. As on 31.03.2017, there were 1190 Ground Water Observation Wells which included 521 dug wells and 669 piezometers for monitoring phreatic and deeper aquifers. In order to strengthen the ground water monitoring mechanism for better insight into ground water development scenario, additional ground water observation wells were established and integrated with ground water monitoring database. As a result, total number of ground water observation wells as on 31.03.2018, has reached 1227 Ground Water Observation Wells which include 521 dug wells and 653 piezometers for monitoring phreatic aquifers besides 47 deep piezometers for monitoring confined/ semi- confined aquifers. These observation wells are being monitored four times a year in the months of May, August, November and January, being undertaken simultaneously throughout the country. This report presents the observations and findings for the period from May 2017 to January 2018.

Shri **M. L Angurala, Scientist 'D'** and Ms **Amandeep Kaur, Scientist 'B'** have made concerted efforts to compile and analyse the data and prepare the report in the present form. The chapter on Hydrometeorology in Haryana State compiled and contributed by **Sh. Aditya Sharma, STA (HM)** and the chapter on Chemical quality of ground water has been compiled and contributed by **Mrs. B. P. Singh, Scientist 'D'** and **Shri K. S. Rawat Scientist 'B'**.

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.

(Anoop Nagar)
Regional Director

GROUND WATER YEAR BOOK
HARYANA STATE
2017-2018

CONTENTS	Page
1.0 INTRODUCTION	1-4
1.1 Physiography	
1.2 Geohydrological Conditions	
1.3 Rivers of Haryana	
1.4 Hydrometeorology	10-
16	
1.4.1 Climate	10
1.4.2 Rainfall Analysis of Haryana	10
1.4.3 District Wise and Month Wise Normal Rainfall Data (in mm)	12
1.4.4 Deviation of 2017 Rainfall from 2016 Rainfall and Normal Rainfall	
2.0 HYDROGEOLOGICAL SETUP	16
3.0 GROUND WATER REGIME MONITORING	6
3.1 Depth to Water Level	6
3.1.1 May 2017	6
3.1.2 August 2017	7
3.1.3 November 2017	9
3.1.4 January 2018	10
3.2 Ground Water Elevation and Flow Directions	
3.2.1 May 2017	12
3.3 Seasonal Water Level Fluctuations	13
3.3.1 January 2017-May 2017	13
3.3.2 May 2017- August 2017	14
3.3.3 May 2017- November 2017	16
3.3.4 May 2017- January 2018	17
3.4 Annual Water Level Fluctuations	18
3.4.1 May 2016-May 2017	18
3.4.2 August 2016- August 2017	19

3.4.3	November 2016- November 2017	20
3.4.4	January 2017- January 2018	21
3.5	Water Level Fluctuations from the Decadal Mean	22
3.5.1	May (2007-2016) – May 2017	22
3.5.2	August (2007-2016) – August 2017	23
3.5.3	November (2007-2016) – November 2017	24
3.5.4	January (2007-2017) – January 2018	25
4.0	GROUND WATER QUALITY IN HARYANA- May 2017	26
4.1	Sampling and Analysis	26
4.2	Composition of Water	27
4.3	Distribution of Electrical Conductance	29
4.4	Distribution of Chloride	29
4.5	Distribution of Nitrate	33
4.6	Distribution of Fluoride	33
4.7	Types of Waters	36
4.8	Suitability for Drinking	36
4.9	Suitability for Irrigation	37
4.10	Suitability for Industries	38
4.11	Temporal Variation	38
4.12	Conclusions on Ground Water Quality	40

FIGURES

Depth to Water Level Maps

1. May 2017
2. August 2017
3. November 2017
4. January 2018

Ground Water Elevation and Flow Direction Map

5. May 2017

Seasonal Water Level Fluctuation Maps

6. Jan. 2017- May 2017
7. May 2017- August 2017
8. May 2017- November 2017

9. May 2017– January 2018

Annual Water Level Fluctuation Maps

10. May 2016– May 2017
11. August 2016– August 2017
12. November 2016– November 2017
13. January 2017– January 2018

Decadal Mean Water Level Fluctuation Maps

14. Decadal Mean May (2007:2016) -May 2017
15. Decadal Mean August (2007:2016) –August 2017
16. Decadal Mean November (2007:2016) –November 2017
17. Decadal Mean January (2007:2017) -January 2018

Chemical Quality of Ground Water May 2017

18. Distribution of Electrical Conductance in ground water
19. Distribution of Chlorides in shallow ground water
20. Distribution of Nitrates in shallow ground water
21. Distribution of Fluorides in shallow ground water

TABLES

1. Generalized Stratigraphy of Haryana State (after GSI, 2012)
2. District wise ground water observation wells in Haryana State.
3. Density of ground water observation wells in Haryana State.
4. Range of depth to water levels in May 2017, August 2017, November 2017 and January 2018 in Haryana State.
5. District wise distribution of chemical quality of ground waters District wise distribution of ground waters in different classes of drinking water suitability.
6. District wise irrigation rating of ground waters
7. Periodic variations in suitability classes of ground waters

ANNEXURES

- I. Depth to Water Levels in Haryana State.
- II. Seasonal Water Level Fluctuations in Haryana State.
- III. Annual Water Level Fluctuations in Haryana State.

- IV. Water Level Fluctuations from the Decadal Mean in Haryana State.
- V. Results of Chemical Analysis of Ground Water Samples (May 2017).

PLATES

- 1. Locations of National Hydrograph Observation Stations
- 2. Density of ground water observation wells in Haryana State

GROUND WATER YEAR BOOK HARYANA STATE 2017 – 2018

1 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 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 November 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 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 Bhisma Kund, a legend attached to this water tank says that, when Bhisma 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 BhismaKund 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.

- The Yamuna-Ghaggar plain forming the largest part of the state
- The Shivalik Hills to the northeast
- Semi-desert sandy plain to the southwest
- 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. Landoha Nala Basin
7. Kanti Sub Basin (Loharu Satnali 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.

1.4 HYDROMETEOROLOGY:

1.4.1 CLIMATE:

Most of the year, the climate of Haryana 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 climate is arid to semi-arid. Around 29% of rainfall is received during the months from July to September, and the remaining rainfall is received during the period from December to February.

1.4.2 RAINFALL ANALYSIS OF HARYANA

The annual rainfall in 2017 over the state of Haryana is quite uneven which increases from 169 mm at Fatehabad to 1016 mm at Yamunanagar. The lowest rainfall of 54% less than their corresponding normals of IMD are recorded at Fatehabad & Panchkula and the highest rainfall of 2% more than the IMD annual normal is received at Kaithal during 2017.

The annual rainfall of 2017 when analysed and compared to the rainfall of 2016, it is observed that out of all districts, Kurukshetra District shows maximum rise in rainfall which is 125% more than the rainfall of 2016 and other districts showing rise as Rohtak

(+5%), Jind (+8%), Sirsa (+10%), Yamunanagar (+11%), Panchkula (+11%), Panipat (+17%), Karnal (+41%), Ambala (+50%), Sonipat (+53%), Kaithal (+74%).

Similarly it is observed that out of all districts, maximum fall in rainfall observed at Gurugram district which is 31% less than the rainfall of last year 2016 and the remaining districts show fall as Mahendragarh (-2%), Hisar (-2%), Faridabad (-5%), Jhajjar (-9%), Mewat (-10%), Bhiwani (-19%), Fatehabad (-20%), Palwal (-26%), Rewari (-28%).

The mean annual rainfall of Haryana state during 2017 is 450 mm which is almost 8% more than mean annual rainfall (418 mm) during 2016.

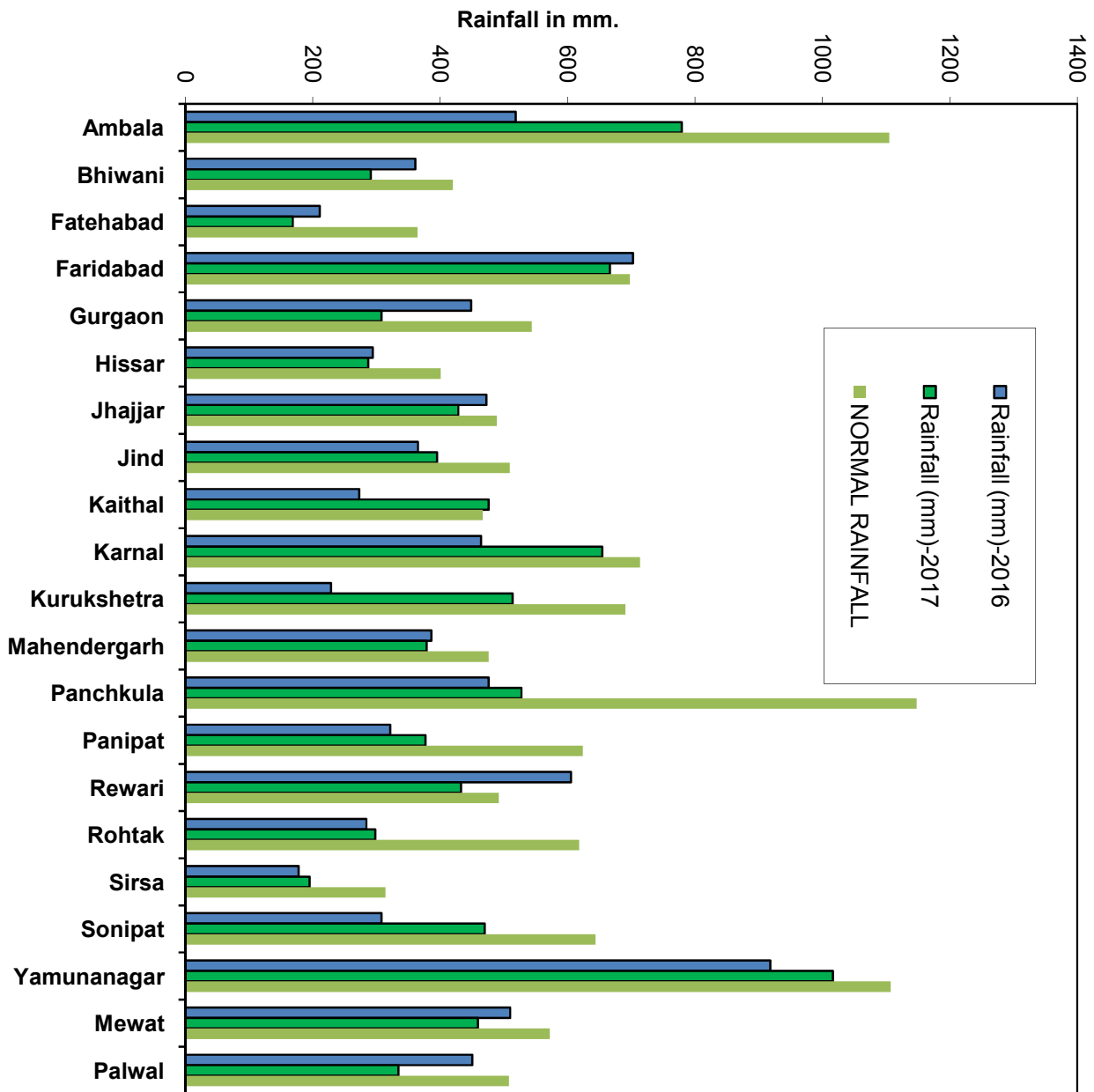
1.4.3 DISTRICT-WISE AND MONTH WISE NORMAL RAINFALL (in mm):

S. N	DISTRICT	JAN	FEB	MAR	AP R	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1	AMBALA	38.9	31.6	25.3	7.7	20.5	105.2	307.8	326	177.6	34.4	8.8	20.9	1104.7
2	GURGAON	10.2	11.7	7	6.4	13.9	38	169	185.2	80.1	12.7	5.5	4.3	544
3	HISAR	11	12.2	9.7	7.4	14.5	35.1	118.8	113.8	57.4	13	4.5	4	401.4
4	JIND	16.4	18.7	12.4	5.4	14.9	40.7	142.3	147	85.6	15.8	5.1	4.8	509.1
5	KARNAL	30.3	21.4	19.4	8.9	13.1	60.3	197.8	224.3	94.6	26.2	5.9	12.2	714.4
6	MAHENDRAGARH	11.8	10.9	9.4	5.3	18.9	43.5	154.3	144.4	53.2	14.1	3.5	6.9	476.2
7	ROHTAK	19.3	16.8	17.7	9.3	19.8	49.5	194.1	195.8	68.6	13.4	5.8	7.9	618
8	BHIWANI	14.6	10.4	8.1	5.5	11.2	32.3	128.2	132	56	13.4	4.2	3.6	419.5
9	FARIDABAD	16.5	12.3	10.4	10.7	16.1	42.2	201.6	234.7	121.7	18.7	6	6.7	697.6
10	KURUKSHETRA	28.7	19.4	21.5	9.8	10.2	66.3	202.3	203.3	91.1	23.5	5.2	10.1	691.4
11	SIRSA	11	11.6	10.1	5.5	12.1	23	99.8	81.7	37.6	13.4	4.9	2.8	313.5
12	SONEPAT	19.4	15.6	14.4	9.6	16.7	46.2	194.4	208.5	85.2	20.4	5.9	7.9	644.2
13	YAMUNANAGAR	42.5	34.9	31.9	15.1	26.4	117.8	304.4	325.4	144.5	36	6.8	21.3	1107
14	KAITHAL	17.7	15.2	12.5	5.6	8.5	42.2	128.3	140.1	73.4	14.2	3.9	4.9	466.5
15	PANIPAT	20.6	15.8	12.6	9.5	9.9	55.1	176.2	203.9	86.5	21.8	4.7	7.5	624.1
16	REWARI	9.1	8.7	5.2	3	9.9	33.1	150.1	183.5	69.1	13.2	3.5	3.8	492.2
17	FATEHABAD	16.7	11	11.2	6.8	14.9	31.3	104.3	95.9	51.5	12.4	3.6	5	364.6
18	JHAJJAR	12.4	12.5	9.7	7.5	10.6	34.4	159.3	151.2	72.4	11	3.4	4.6	489
19	PANCHKULA	43.6	37.4	27.8	11.5	27.9	105.6	327	346.6	171.2	18.7	12.2	18.7	1148.2
20	MEWAT	9.4	9.6	6.3	5.2	9.8	41.3	167.2	194	99.3	20.7	4.1	5.1	572
21	PALWAL	9.1	7.9	5.9	4.3	7.7	28.1	160.4	171.8	86.6	20	3.1	3.2	508.1

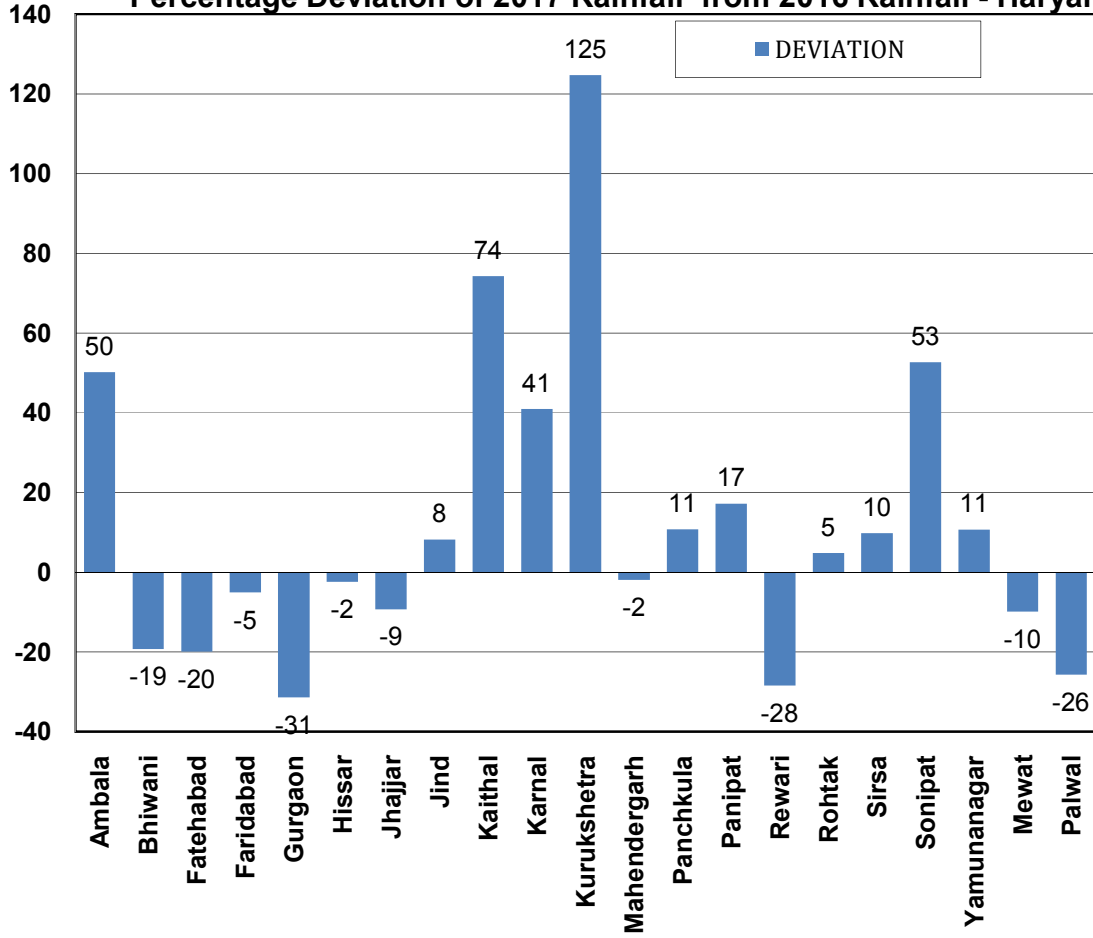
1.4.4 DEVIATION OF 2017 RAINFALL FROM 2016 RAINFALL AND NORMAL RAINFALL

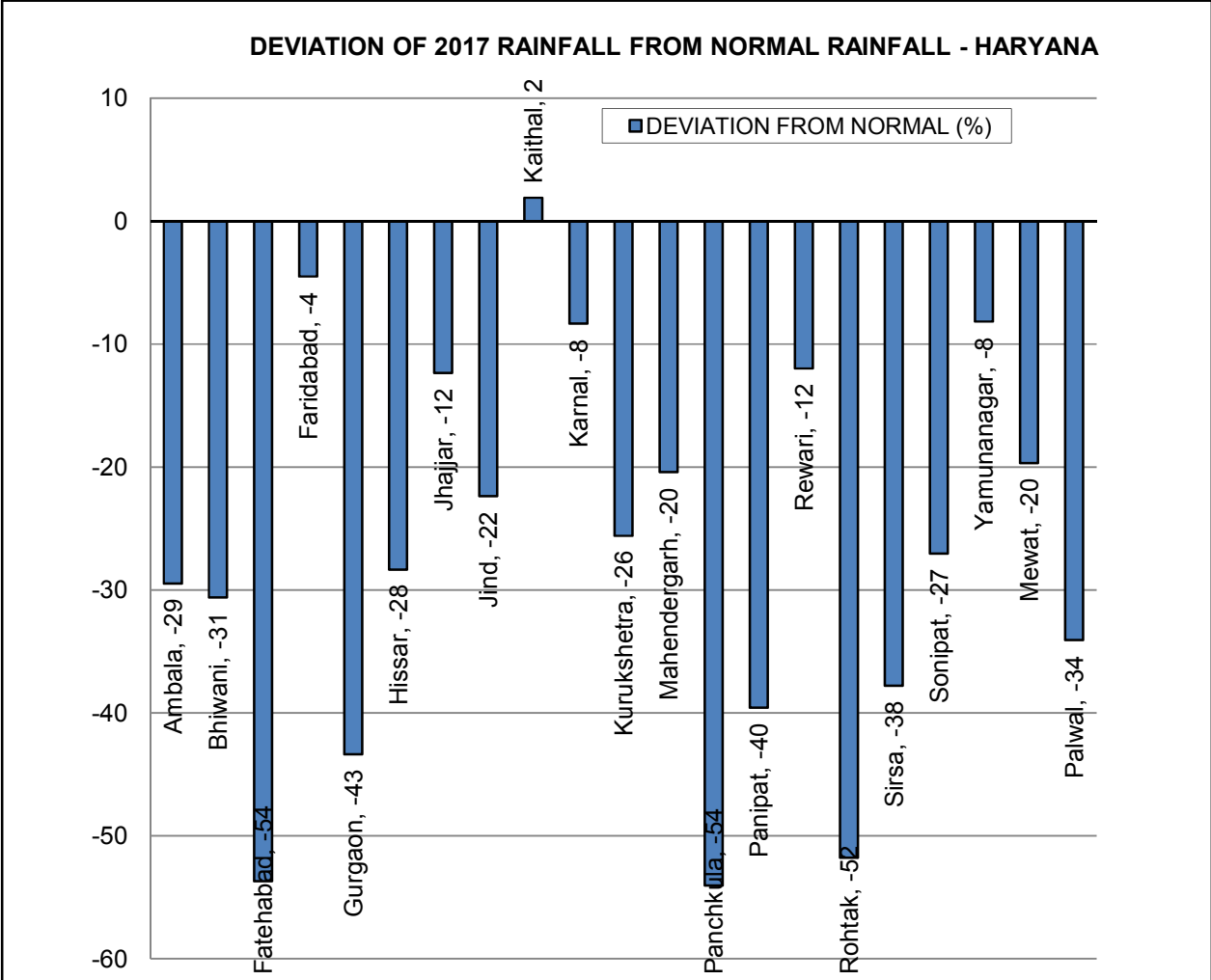
Deviation of 2017 rainfall from 2016 rainfall and Normal rainfall - Haryana						
S.N	District	Rainfall (mm)-2017	Rainfall (mm)-2016	Deviation From 2016 (%)	Normal Rainfall (in mm)	Deviation From Normal (%)
1	Ambala	779.1	518.8	50	1105	-29
2	Bhiwani	291.4	361.1	-19	420	-31
3	Fatehabad	169	211.1	-20	365	-54
4	Faridabad	666.6	702.4	-5	698	-4
5	Gurgaon	308	449	-31	544	-43
6	Hissar	287.4	294.4	-2	401	-28
7	Jhajjar	428.6	472.5	-9	489	-12
8	Jind	395.1	365.1	8	509	-22
9	Kaithal	475.9	273.1	74	467	2
10	Karnal	654.4	464.3	41	714	-8
11	Kurukshetra	514.1	228.8	125	691	-26
12	Mahendergarh	378.8	386.4	-2	476	-20
13	Panchkula	527.7	476.2	11	1148	-54
14	Panipat	377	321.6	17	624	-40
15	Rewari	433.1	605.4	-28	492	-12
16	Rohtak	297.9	284.1	5	618	-52
17	Sirsa	195.3	177.9	10	314	-38
18	Sonapat	469.9	307.8	53	644	-27
19	Yamunanagar	1016.5	918.6	11	1107	-8
20	Mewat	459.4	510	-10	572	-20
21	Palwal	334.9	450.8	-26	508	-34

Rainfall comparison of 2016 Vs 2017 Vs Normals - Haryana



Percentage Deviation of 2017 Rainfall from 2016 Rainfall - Haryana





REFERENCE:

<https://data.gov.in/node/87154/download>, <https://data.gov.in/catalog/district-rainfall-normal-mm-monthly-seasonal-and-annual-data-period-1951-2000>,
[http://hydro.imd.gov.in/hydrometweb/\(S\(osdeiu45tfdt1vesfkqaypze\)\)/DistrictRaifall.aspx](http://hydro.imd.gov.in/hydrometweb/(S(osdeiu45tfdt1vesfkqaypze))/DistrictRaifall.aspx)

2.0 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-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 Sonapat, 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 Mohindergarh districts.

3.0 GROUND WATER REGIME MONITORING

Central Ground Water Board, North Western Region, Chandigarh has established Ground Water Observation Wells (GWOW) in Haryana State for monitoring the water levels. As on 31.03.2017, there were 1190 Ground Water Observation Wells which included 521 dug wells and 669 piezometers for monitoring phreatic and deeper aquifers. However, with establishment of new ground water observation wells including dug wells and piezometers, and reconciliation of ground water observation wells, total number of ground water observation wells as on 31.03.2018, has reached 1190 ground water observation wells which include 521 dug wells and 653 piezometers for monitoring phreatic aquifers besides 53 deep piezometers for monitoring confined/ semi- confined aquifers.

The district wise Ground Water Observation Wells are shown in Plate-1 and split is given in Table 2. The density of the observation wells being monitored in the state of Haryana is given in Table 3 and depicted in Plate 2.

Table: 2. District wise ground water observation wells in Haryana State.

S. No.	Districts	No. of GWOW as on 31.3.2017			No. of GWOW established during 2017-2018			Total no. GWOW as on 31.3.2018		
		DW	PZ	Total	DW	PZ	Total	DW	PZ	Total
		1	Ambala	44	20	64	0	4	4	44
2	Bhiwani	27	40	67	0	8	8	27	48	75
3	Charkhi Dadri	11	29	40	0	5	5	11	34	45
4	Faridabad	14	22	36	0	0	0	14	22	36
5	Fatehabad	19	17	36	0	2	2	19	19	38
6	Gurgaon	9	45	54	0	0	0	9	45	54
7	Hissar	38	18	56	0	0	0	38	18	56
8	Jhajjar	29	9	38	0	0	0	29	9	38
9	Jind	38	27	65	0	3	3	38	30	68
10	Kaithal	17	31	48	0	4	4	17	35	52
11	Karnal	8	103	111	0	5	5	8	108	116
12	Kurukshetra	1	96	97	0	0	0	1	96	97
13	Mahendragarh	21	12	33	0	0	0	21	12	33
14	MEWAT	24	18	42	0	0	0	24	18	42
15	PALWAL	26	19	45	0	0	0	26	19	45
16	Panchkula	37	7	44	0	0	0	37	7	44
17	Panipat	10	40	50	0	3	3	10	43	53
18	Rewari	28	19	47	0	0	0	28	19	47
19	Rohtak	29	5	34	0	0	0	29	5	34
20	Sirsa	40	18	58	0	0	0	40	18	58
21	Sonipat	35	39	74	0	0	0	35	39	74
22	Yamunanagar	16	35	51	0	3	3	16	38	54
Haryana State		521	669	1190	0	37	37	521	706	1227

Plate-1: Locations of National Hydrograph Observation Stations

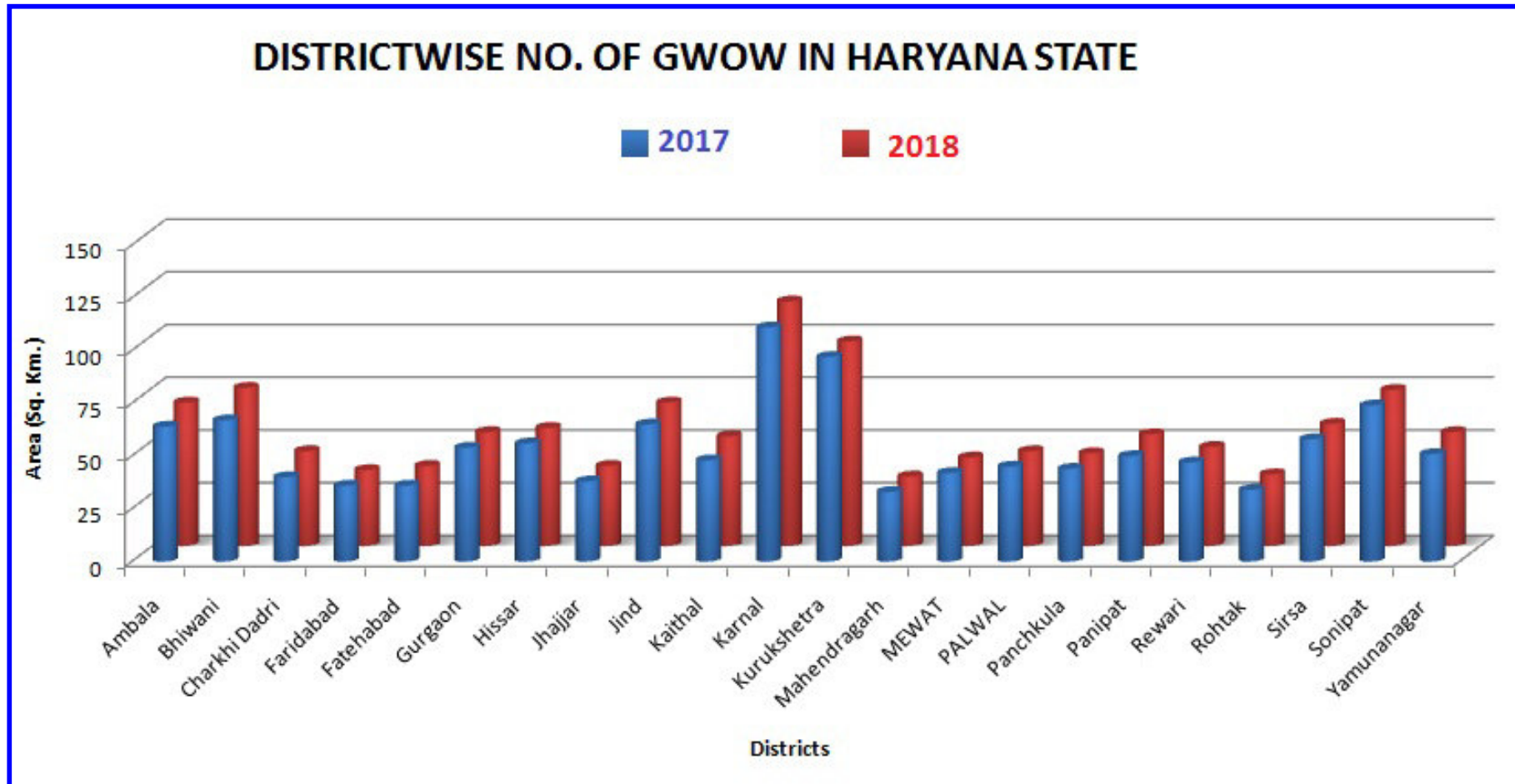
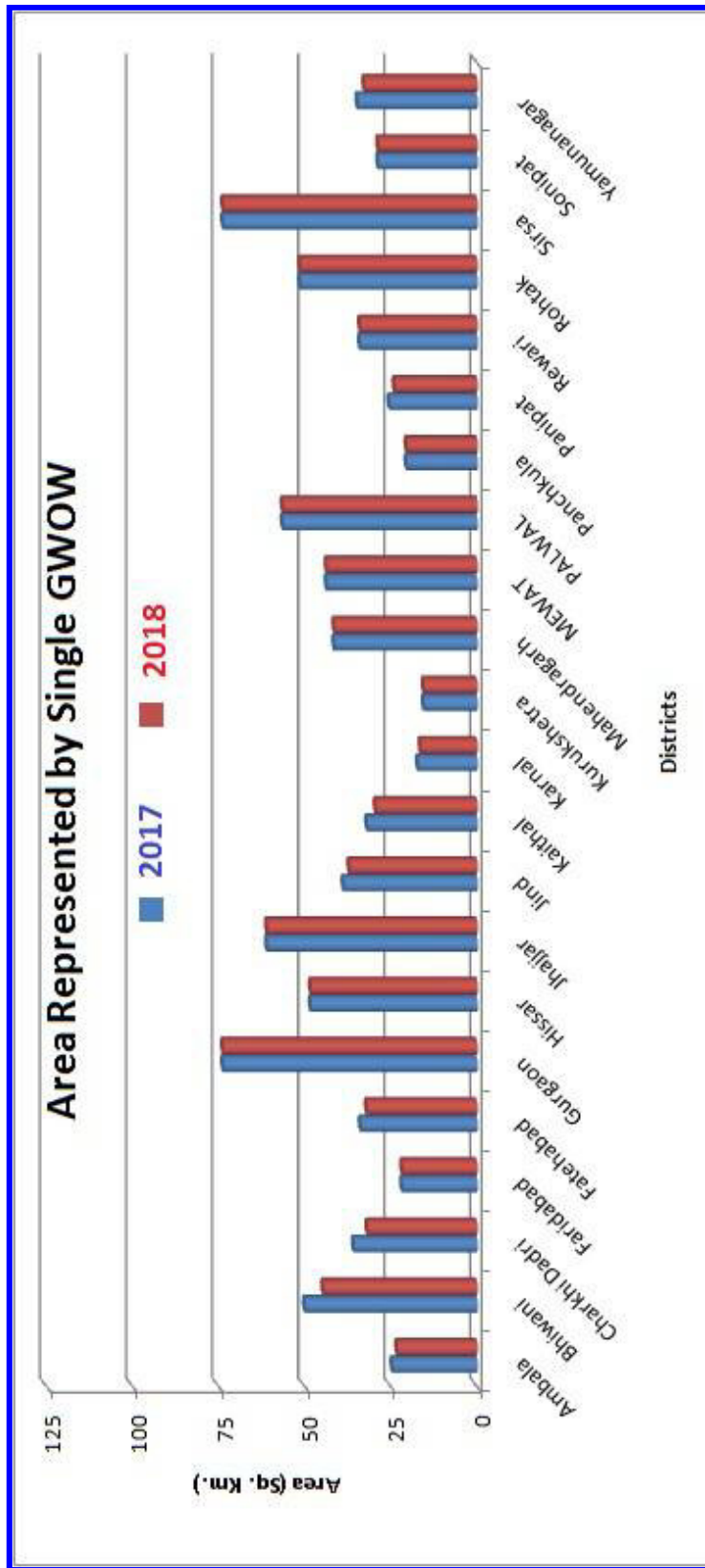


Table 3 Density of shallow ground water observation wells in Haryana State.

S. No.	District	Area (Km ²)	No. of Shallow GWOWs		Density represented by one GWOW (area/no. of well)	
			As on			
			31-3-2017	31-3-2018	31-3-2017	31-3-2018
1.	Ambala	1574	64	68	25	23
2.	Bhiwani	3348	67	75	50	45
3.	Charkhi Dadri	1430	40	45	36	32
4.	Faridabad	782	36	36	22	22
5.	Fatehabad	1215	36	38	34	32
6.	Gurgaon	3983	54	54	74	74
7.	Hissar	2702	56	56	48	48
8.	Jhajjar	2317	38	38	61	61
9.	Jind	2520	65	68	39	37
10.	Kaithal	1530	48	52	32	29
11.	Karnal	1900	111	116	17	16
12.	Kurukshetra	1499	97	97	15	15
13.	Mahendragarh	1367	33	33	41	41
14.	MEWAT	1834	42	42	44	44
15.	PALWAL	2538	45	45	56	56
16.	Panchkula	898	44	44	20	20
17.	Panipat	1268	50	53	25	24
18.	Rewari	1595	47	47	34	34
19.	Rohtak	1745	34	34	51	51
20.	Sirsa	4277	58	58	74	74
21.	Sonapat	2122	74	74	29	29
22.	Yamunanagar	1768	51	54	35	33
	Haryana State	44212	1190	1227	37	36

Plate 2: Density of ground water observation wells in Haryana State.



3.0 BEHAVIOUR OF GROUND WATER LEVEL

In order to assess the quantitative change in ground water resources, water levels as a routine were monitored four times May 2017, August 2017, November 2017 and January 2018 and compared with previous water level records to ascertain the change in ground water level scenario.

3.1 DEPTH TO WATER LEVEL

The behaviour of water level in all four seasons May 2017, August 2017, November 2017 and January 2018 along with maps is discussed in following paragraphs and data is presented in annexure-I. The maximum and minimum water levels recorded in four seasons is given below Table 4.

Table 4 Range of depth to water levels during the period

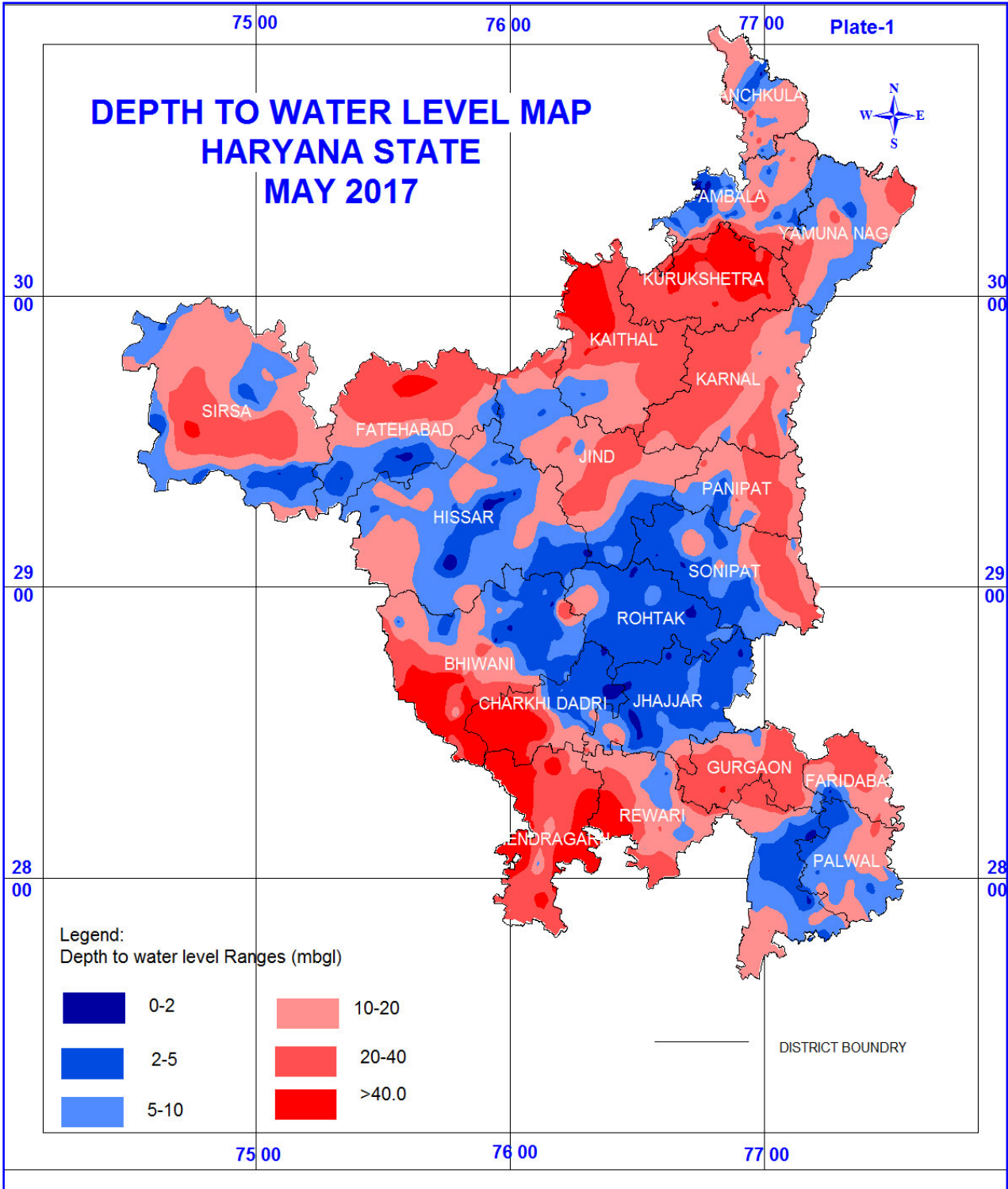
Range	May 2017	August 2017	November 2017	January 2018
Minimum	0.51 m bgl Sankol (Jhajjar district)	0.14 m bgl Dhanana (Bhiwani district)	0.18 m bgl Subnah (Jhajjar district)	0.89 m bgl Dhanana (Bhiwani district)
Maximum	99.50 m bgl Kultajpur-DW (Mahendragarh)	71.30 m bgl Mangala (Sirsa)	98.50 m bgl Kultajpur-DW (Mahendragarh)	50.86 m bgl Landi-PZ (Kurukshetra)

3.1.1 MAY 2017

The behavioral pattern of depth to water level data of May 2017 is discussed below along with depth to water level map (Fig.1) and data are presented in Annexure-1 (Col-4).

The depth to water level during May 2017 varies from 0.51 m bgl at Sankol in Jhajjar district to 99.50m bgl at Kultajpur-DW in Mahendragarh district. Very shallow (0-2m) water levels conditions are observed in isolated patches in Jhajjar, Sonipat and Rohtak districts. More than 5% wells and <1% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 25% wells and 16% area mainly in the central part and in few isolated patches in Sonipat, Rohtak, Jhajjar, Charkhi Dadri, Bhiwani, Hissar, Sirsa, Fatehabad, Palwal, Mewat districts. Moderate water levels (5-10m) occur in 1% wells covering 22% of area of the state. Moderately deep water levels of 10-20m are observed in nearly 59% wells and 29.02% of the area falling in Panchkula, Ambala, Yamunanagar, Karnal, Panipat, Sonipat, Kaithal, Jind, Fatehabad, Sirsa Hissar, Bhiwani, Rewari, Mahendragarh, Gurgaon and Faridabad districts. Deep water levels of (20-40m) have been recorded in 8% of wells and about 25% area in Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Bhiwani, Rewari, Mahendragarh and Gurgaon districts. **Ground Water Trough has been created in in Karnal Panipat and Sonipat districts along Ambala Delhi National Highway.** Very Deep water levels (>40m) also occur in less than 2% of the wells and 7% area falling in Kurukshetra, Kaithal, Bhiwani and Mahendragarh districts & isolated patches in Fatehabad and Sirsa districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	41	5	265	1
2-5	191	25	7137	16
5-10	7	1	9653	22
10-20	459	59	12843	29
20-40	60	8	11098	25
>40	15	2	3218	7

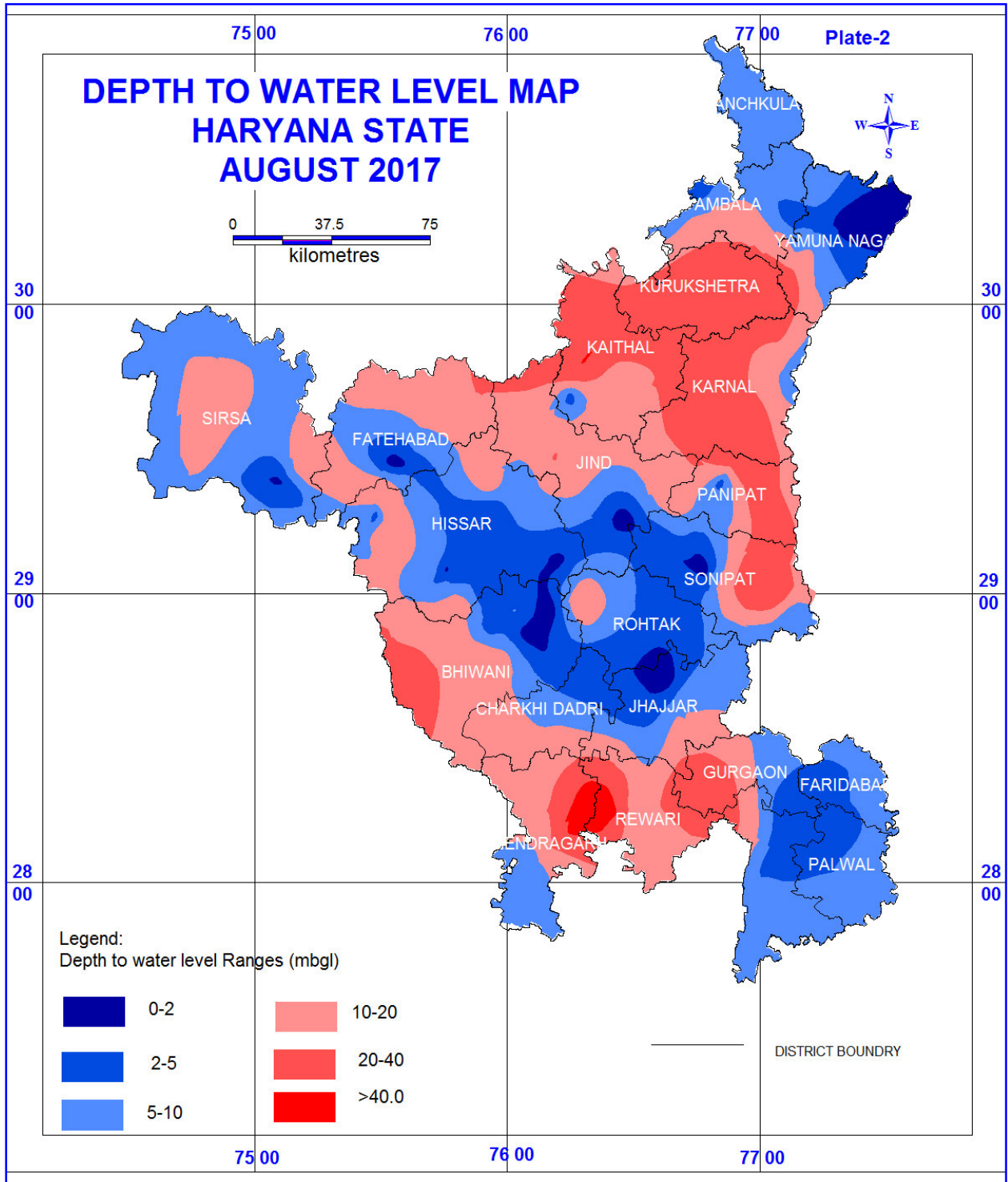


3.1.2 AUGUST 2017

The behavioral pattern of depth to water level data of August 2017 discussed below along with depth to water level map (Fig.2) and data are presented in Annexure-1 (Col-5).

The depth to water level during August 2017 varies from 0.14m bgl at Dhanana in Bhiwani district to 71.30 m bgl at Mangala in Sirsa district. Very shallow (0-2m) water levels conditions are observed in small pockets in the central part of the state comprising Jhajjar Sonipat and Rohtak districts. More than 13% wells and 3% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 22% wells and 17% area mainly in the central part and in few isolated patches in Sonipat Rohtak, Jhajjar, Charkhi Dadri, Bhiwani, Hissar, Fatehabad and Mewat districts. Moderate water levels (5-10m) occur in 28% wells covering 30% of area covering south and south central parts of the state. Moderately deep water levels of 10-20m are observed in nearly 21% wells and 31% of the area falling in Ambala, Yamunanagar, Sonipat, Panipat, Jind, Fatehabad, Sirsa Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon and Faridabad districts. Deep water levels of 20-40m have been registered in 13% of wells and about 18% area reported from Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Jind, Bhiwani, Rewari, Mahendragarh and Gurgaon districts. Very Deep water levels (>40m) also occur in less than 3% of the wells and 1% area falling in Sirsa and Mahendragarh districts.

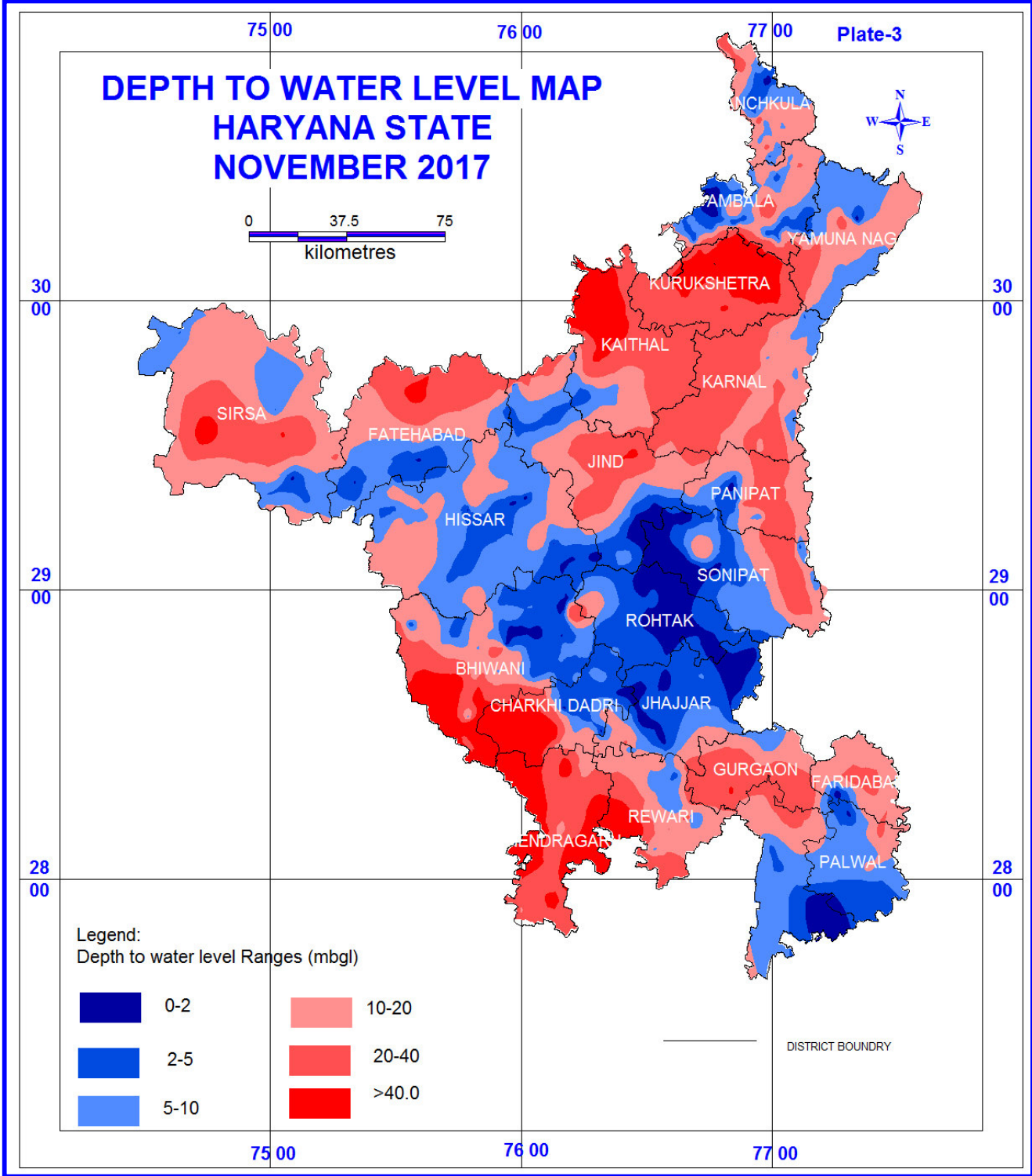
Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	12	13	1165	3
2-5	21	22	7512	17
5-10	26	28	13409	30
10-20	20	21	13697	31
20-40	12	13	8138	18
>40	3	3	293	1



3.1.3 NOVEMBER 2017

The depth to water level during November 2017 varies from 0.18m bgl at Subnah in Jhajjar district to 98.50m bgl at Kultajpur-DW in Mahendragarh district. The distribution of water level in various ranges is discussed below along with depth water level map for November 2017 (Fig.3). The water level data are presented in Annexure-1 (Col-6). Very shallow (0-2m) water levels conditions are observed in small pockets in the central part of the state comprising Sonipat, Rohtak, Jhajjar and Mewat districts. 7% wells and 5% area of state fall in this group which indicates water logging conditions. Shallow water levels (2-5m) observed in 15% wells and 14% area mainly in the central part and in few isolated patches in Fatehabad, Palwal Mewat, Jind and Fatehabad districts. Moderate water levels (5-10m) occur in 19% wells covering 21% of area covering parts of Sonipat, Panipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Mewat, Palwal, Ambala and Yamuna Nagar districts of the state. Moderately deep water levels of 10-20m are observed in nearly 24% wells and 28% of the area falling in Panchkula, Ambala, Yamuna Nagar, Karnal, Kurukshetra, Kaithal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Rewari, Mahendragarh, Gurgaon and Faridabad Districts Deep water levels of 20-40m have been registered in 26% of wells and about 24% area reported from Ambala, Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Bhiwani, Rewari, Mahendragarh, Gurgaon and Faridabad districts. **Ground Water Trough has been created in in Karnal Panipat and Sonipat districts along Ambala Delhi National Highway.** Very Deep water levels (>40m) also occur in less than 9% of the wells and 8% area falling in Bhiwani and Mahendragarh districts & isolated patches in Kurukshetra, Kaithal, Fatehabad and Sirsa districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	60	7	1934	5
2-5	125	15	6352	14
5-10	153	19	9378	21
10-20	195	24	12647	28
20-40	215	26	10457	24
>40	75	9	3446	8

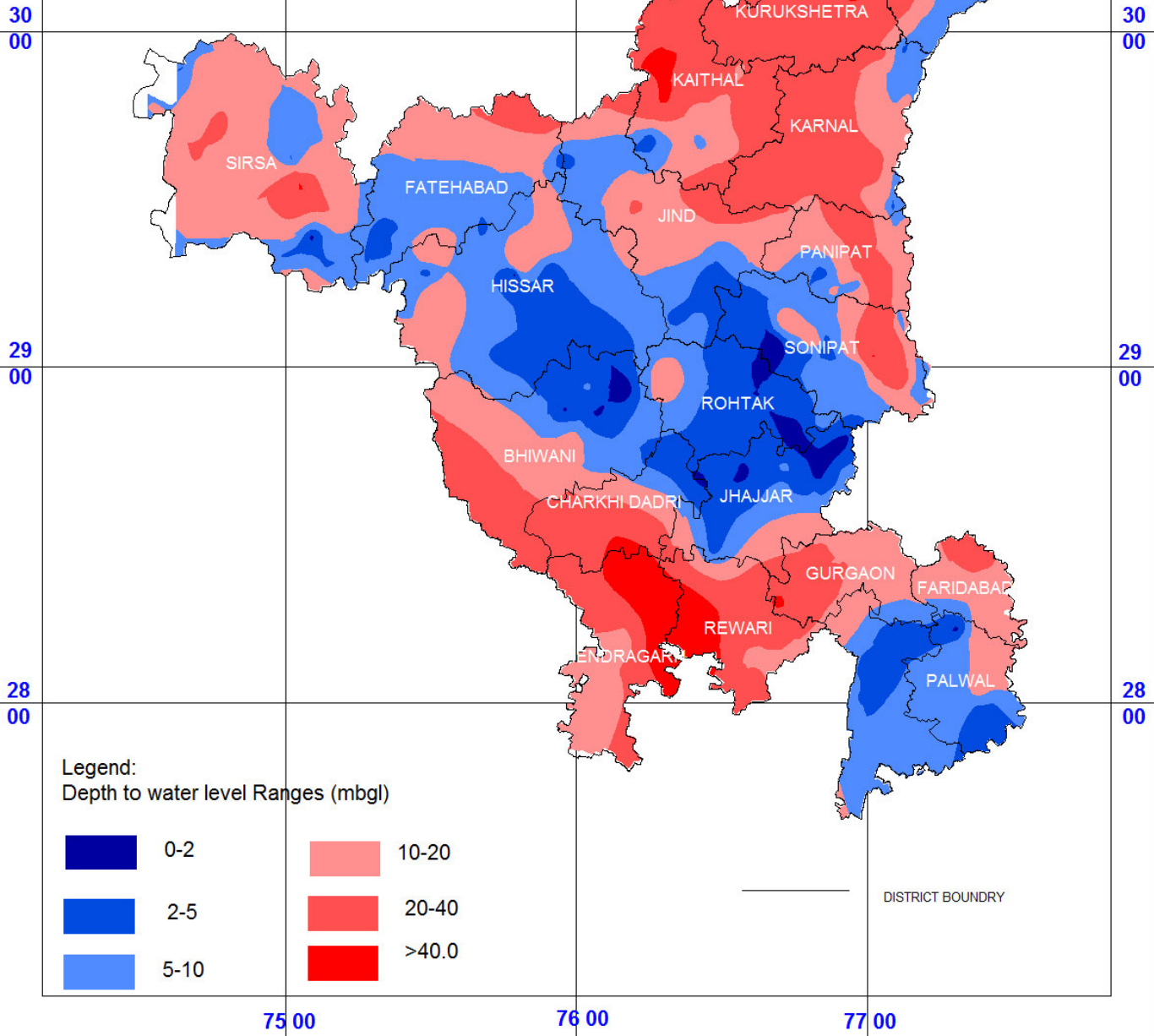
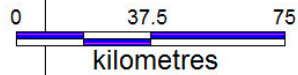


3.1.4 JANUARY 2018

The behavioral pattern of depth to water level data of January 2018 discussed below along with depth to water level map (Fig.4) and data are presented in Annexure-1 (Col-7). The depth to water level during January 2018 varies from 0.89 m bgl at Dhanana in Bhiwani district to 50.86 m bgl at Landi in Kurukshetra district. Very shallow (0-2m) water levels conditions are observed in 5% wells and 1% area of state fall in this group which indicates water logging conditions. It is observed in central parts, Sonipat and Rohtak districts of the state. Shallow water levels (2-5m) observed in 22% wells and 14% area mainly in the central Haryana covering parts of Sonipat, Rohtak and Jhajjar districts, western haryana in parts of Hisaar and sirsa districts Sirsa and Hissar and in the south, Faridabad, Palwal and Mewat districts. Moderate water levels (5-10m) occur in 22% wells covering 27% of area of the state covering parts of Sonipat, Jind, Jhajjar, Rohtak, Rewari, Bhiwani, Hissar, Fatehabad, Sirsa, Mohindergarh, Mewat and Palwal districts. Moderately deep water levels of 10-20m are observed in nearly 29% wells and 31% of the area falling in Karnal, Jind, Fatehabad, Sirsa Hissar, Bhiwani, Charkhi Dadri, Mahendragarh and Rewari districts. Deep water levels of 20-40m have been registered in 19% of wells and about 24% area reported from Karnal, Kurukshetra, Kaithal, Fatehabad, Sirsa, Bhiwani districts. Very Deep water levels (>40m) also occur in less than 4% of the wells and 3% area falling in Bhiwani and Mahendragarh districts & isolated patches in Kurukshetra, of Fatehabad and Sirsa districts.

Depth to water level range	Wells monitored		Area covered	
	No.	%age	Sq. Km.	%age
0-2	13	5	467	1
2-5	56	22	6237	14
5-10	55	22	11923	27
10-20	73	29	13643	31
20-40	48	19	10738	24
>40	9	4	1206	3

DEPTH TO WATER LEVEL MAP HARYANA STATE JANUARY 2018



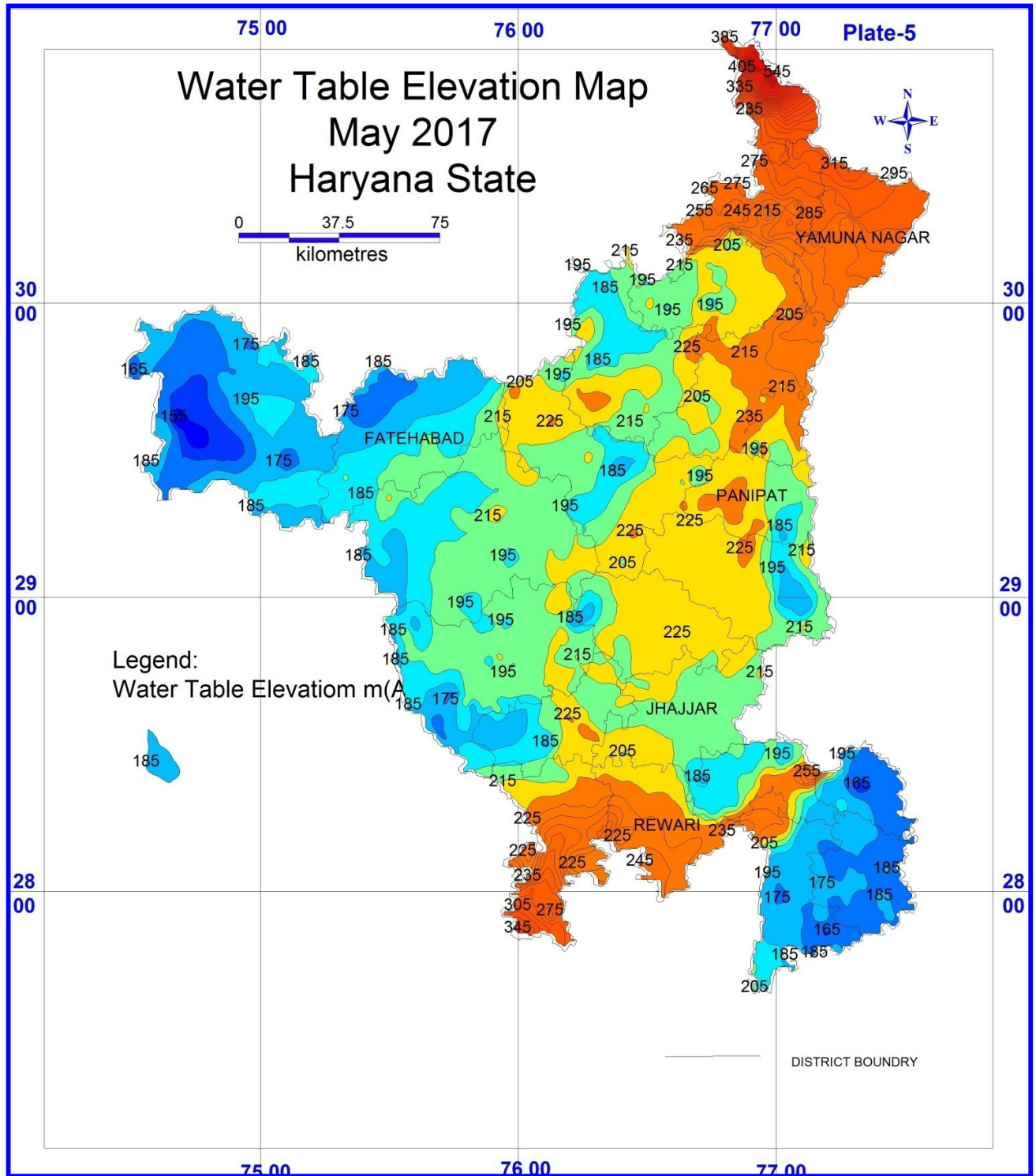
3.2 GROUND WATER ELEVATION AND FLOW DIRECTIONS

Ground water flows from areas of high hydraulic head (high water-level elevation) to areas of low head (low water level elevation). Because hydraulic heads vary laterally and vertically in a ground-water system, ground-water movements generally have a vertical as well as a horizontal component. Contour maps of heads in aquifers are constructed to determine the horizontal direction of flow. A contour map of the water table represents the elevation of the top of the saturated part of the uppermost unconfined aquifer.

The horizontal direction of ground-water flow is generally perpendicular to the contour lines and water flows down the slope of the contours in a manner analogous to the flow of water down the slope of the land surface. Water-table maps are prepared from water levels measured in ground water observation wells the elevation of the water-table surface.

3.2.1 MAY 2017

The water table elevation map helps in determining the hydraulic gradient and ground water flow direction. The water table elevation contours in the area follows the topography and it varies from 562.65m AMSL in northeastern part in Panchkula district to 142.31m AMSL in southeastern part in Palwal district. The general ground water flow is from Northeast to Southwest direction. However, in the southern part it is towards central part thus creating a closed basin causing water logging conditions in the central Haryana in parts of Rohtak, Bhiwani and Hissar districts. The hydraulic gradient is steep in the northern, eastern and southwestern parts of the State, whereas, it is gentle in the southeastern part. The major part of the state has moderate water table gradients. The sluggish ground water movement (0.07 m/km) observed in central part results in water logging on regional scale besides it, a major ground water troughs have created one in Karnal, Panipat and Sonipat districts along Ambala- Delhi National Highway (NH-1) and another in Sirsa District as depicted in (Fig.5).



3.3 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.

3.3.1 JANUARY 2017 - MAY 2017

The behavioral pattern of seasonal water level fluctuation is discussed below along with map (Fig. 6) and data are presented in Annexure-2 (Col-4).

The interpretation of seasonal fluctuations indicates a general decline in 70% of the wells monitored covering an area of 82% of the State. The water level decline in the range of 0-2m has been observed in 64% wells and 79% of the area in all districts. Water level decline in range of 2-4m has been observed in 5% wells and 2% of the area covering parts of Karnal and Kurukshetra along with isolated patches in Hissar, Mahendragarh, Jind, Palwal and Rewari districts. Water level decline >4m is recorded in 1% wells and <1% of the area in Karnal districts. T

The water level Rise has been observed in 30% of the wells and 18% of the area depict Rise in water levels. The water level Rise of 0-2m has been observed in 26% of wells and 17% of area falling in Sirsa, Hissar, Bhiwani, Fatehabad, Jind, Kaithal and isolated patches in Jhajjar, Rohtak, Mewat and Palwal districts. The water level Rise of 2-4m has been observed in 3% of wells and 1% of area of the state. Water level rise >4m is recorded in 1% wells and >1% of the area in the state. Summarised details of water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range	Wells Monitored		Area Covered		Change in Ground water Storage (MCM)		
	No.	%Age	Km ²	%Age	Ground water Loss	Ground water Recharge	
Decline	0-2	230	64	35129	79	-4215	
	2-4	18	5	857	2	-309	
	>4.0	2	1	75	<1	-45	
Rise	0-2	93	26	7715	17		926
	2-4	11	3	430	1		155
	>4.0	2	1	8	<1		5
		356					-3483

WATER LEVEL FLUCTUATION MAP HARYANA STATE JANUARY 2017- MAY 2017

Plate-6

75 00

76 00

77 00

0 37.5 75
kilometres



30
00

30
00

29
00

29
00

28
00

28
00

Legend:

Water Level Fluctuation (m)

Rise

Decline

>4.0

< 2.0

4-2

2-4

<2.0

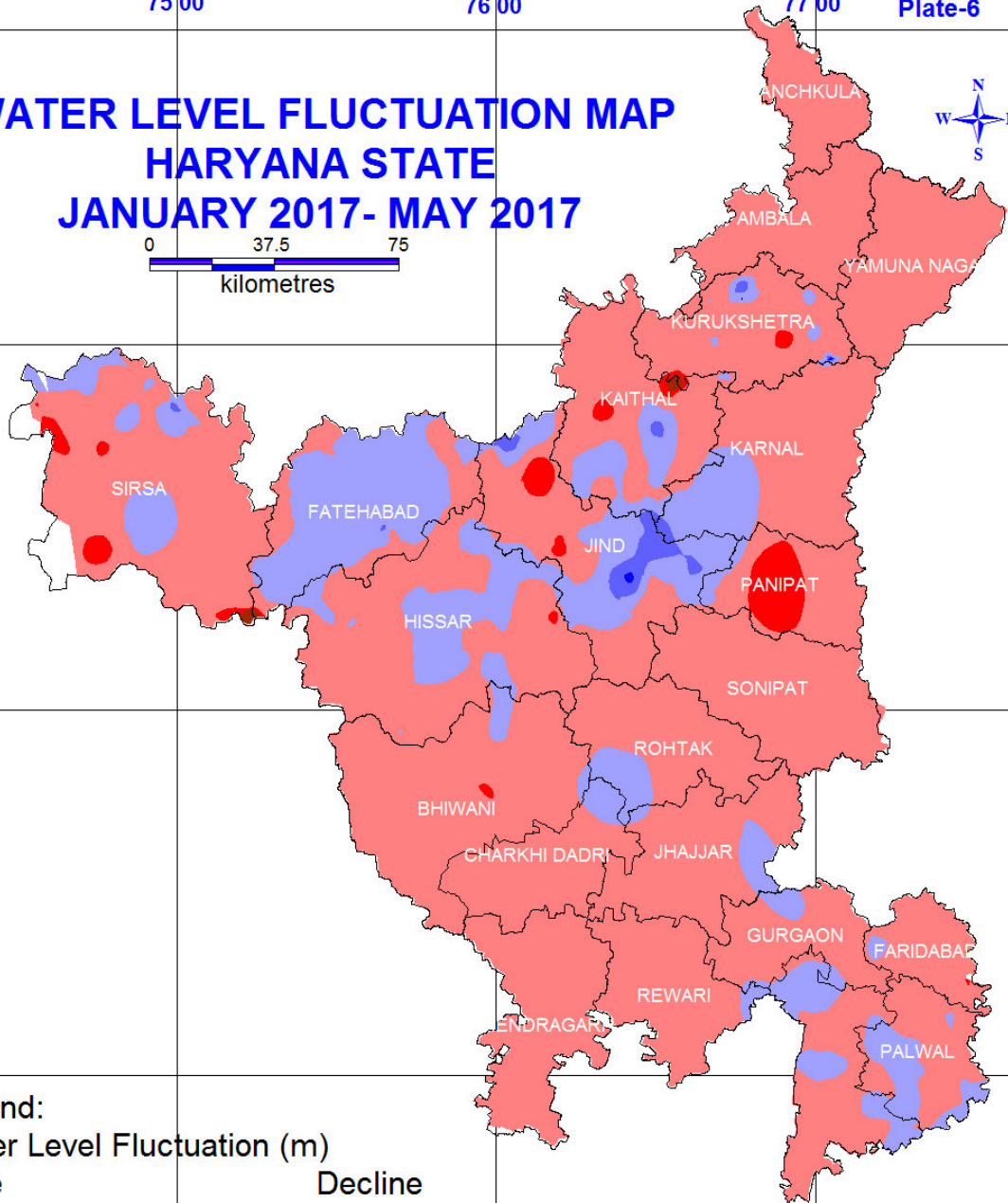
>4.0

— DISTRICT BOUNDARY

75 00

76 00

77 00



3.3.2 MAY 2017 - AUGUST 2017

The behavioral pattern of seasonal fluctuations is discussed below along with seasonal water level fluctuation map (Fig. 7).and data are presented in Annexure-2 (Col-5). The interpretation of seasonal fluctuations indicates a general decline in 39% of the wells monitored covering an area of 36% of the State. The water level decline in the range of 0-2m has been observed in 32% wells and 28% of the area in Panchkula, Ambala, Yamunanagar, Kurukshetra, Karnal, Kaithal, Jind, Fatehabad, Sirsa, Hissar, Palwal and Faridabad districts. Water level decline in range of 2-4m has been observed in 5% wells and 8% of the area covering parts of Ambala, Kurukshetra, Kaithal, Karnal, Panipat, Sonipat and Sirsa districts. Water level decline >4m is recorded in 1% wells and <1% of the area in Kaithal, Karnal and Kurukshetra districts.

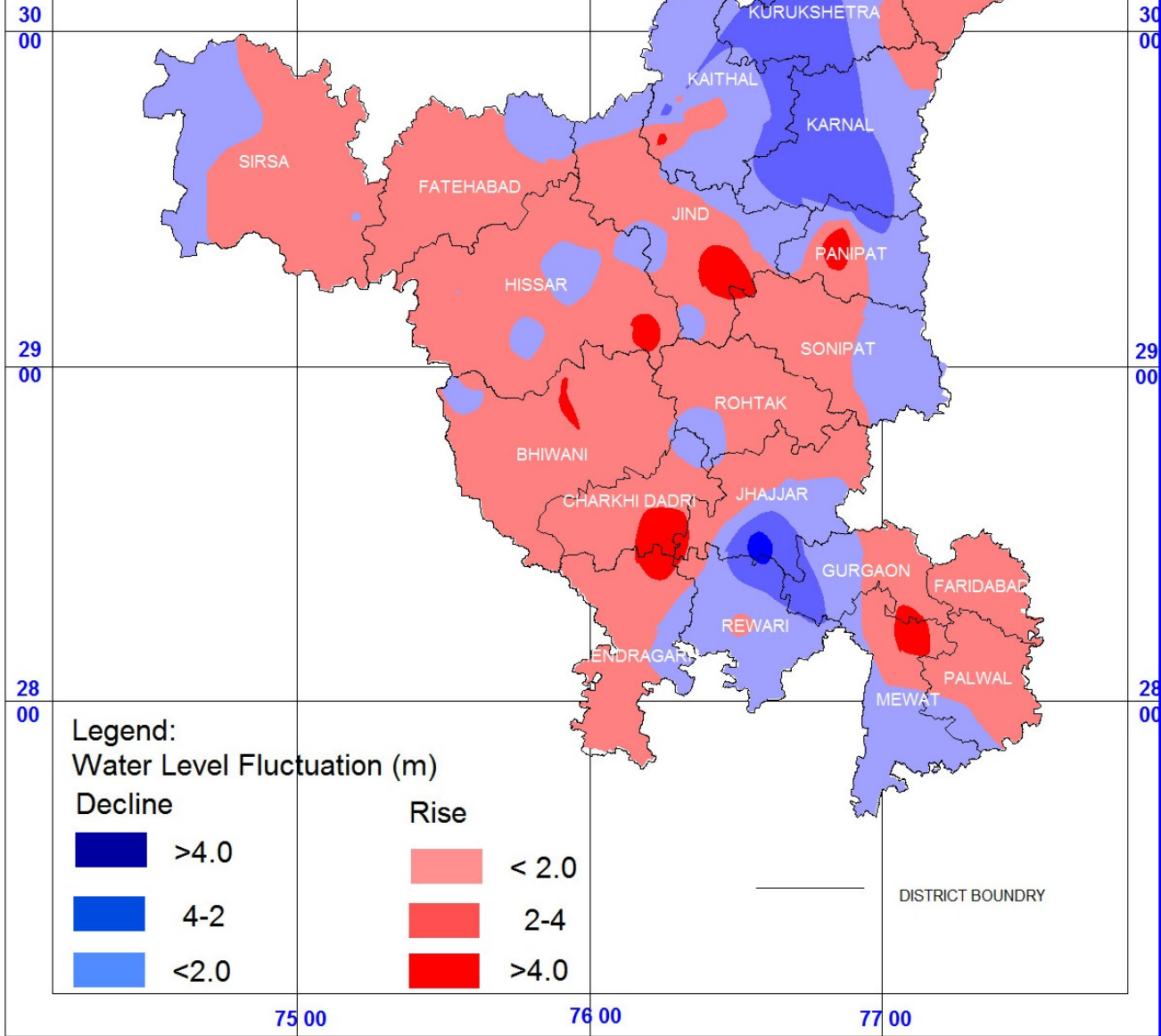
The water level Rise has been observed in 61% of the wells and 63% of the area of the state. The water level Rise of 0-2m has been observed in 52% of wells and 61% of area rising in Panchkula, Ambala, Yamunanagar, Faridabad, Palwal, Mewat, Gurgaon, Mahendragarh, Bhiwani, Sirsa, Fatehabad, Jind, Jhajjar, Rohtak and Sonipat districts. The water level Rise of 2-4m has been observed in 9% of wells and 2% of area rising in Panchkula and Ambala districts. The water level Rise of >4m is not recorded. Summarised details of seasonal water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage	
		No.	%Age	Km ²	%Age	Ground water Loss	Ground water Recharge
Decline	0-2	29	32	12543	28	-1505	
	2-4	5	5	3549	8	-1278	
	>4.0	1	1	82	<1	-49	
Rise	0-2	47	52	26945	61		3233
	2-4	8	9	1095	2		394
	>4.0	0	0	0	0		796

WATER LEVEL FLUCTUATION MAP HARYANA STATE MAY 2017- AUGUST 2017

Plate-7

0 37.5 75
kilometres



Legend:

Water Level Fluctuation (m)

Decline

- >4.0
- 4-2
- <2.0

Rise

- < 2.0
- 2-4
- >4.0

— DISTRICT BOUNDRY

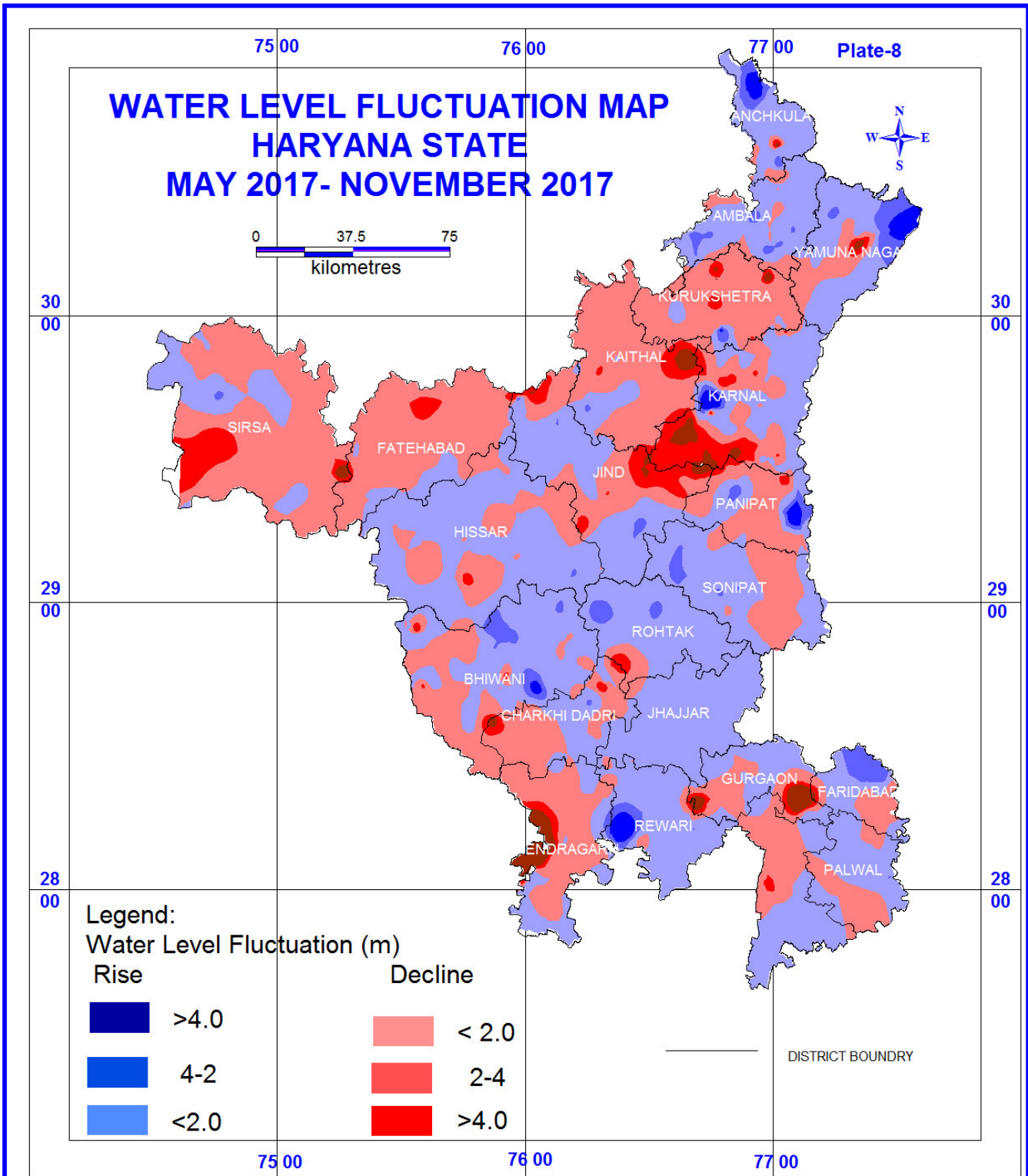
3.3.3 MAY 2017 - NOVEMBER 2017

The behavioral pattern of seasonal fluctuations is discussed below along with seasonal water level fluctuation map (Fig. 8).and data are presented in Annexure-2 (Col-6).

The interpretation of seasonal fluctuations indicates a general decline in 45% of the wells monitored covering an area of 47% of the State. The water level decline in the range of 0-2m has been observed in 37% wells and 42% of the area covering parts of Kaithal, Karnal, Kurukshetra, Jind, Panipat, Sonapat Sirsa, Bhiwani, Rewari, Gurgaon and Faridabad districts. Water level decline in range of 2-4m has been observed in 5% wells and 4% of the area. Water level decline more than 4m is recorded in 3% wells and 1% of the area in isolated patches.

The water level rise has been observed in 53% of the wells and 52% of the area depict Rise in water levels covering parts Panchkula, Ambala, Yamuna Nagar, Karnal, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Rewari, Jhajjar, Rohtak, Sonipat and Palwal districts. The water level Rise of 0-2m has been observed in 47% of wells and 48% of area. The water level Rise of 2-4m has been observed in 5% of wells and 3% of area. Water level decline more than 4m is recorded in 1% wells and 1% of the area in isolated patches. Summarised details of seasonal water level fluctuation and change in Ground Water storage are given in table below;

water level fluctuation range		Wells monitored		Area covered		Change in Ground water Storage (MCM)	
		No.	%age	Km ²	%age	Groun Water Loss	Groun Water Recharge
Decline	0-2	299	37	18413	42	-2210	
	2-4	43	5	1973	4	-710	
	>4.0	24	3	649	1	-1972	
Rise	0-2	379	47	21573	48		2589
	2-4	38	5	1239	3		446
	>4.0	8	1	367	1		220
Total		356	100	44214	100	-54	



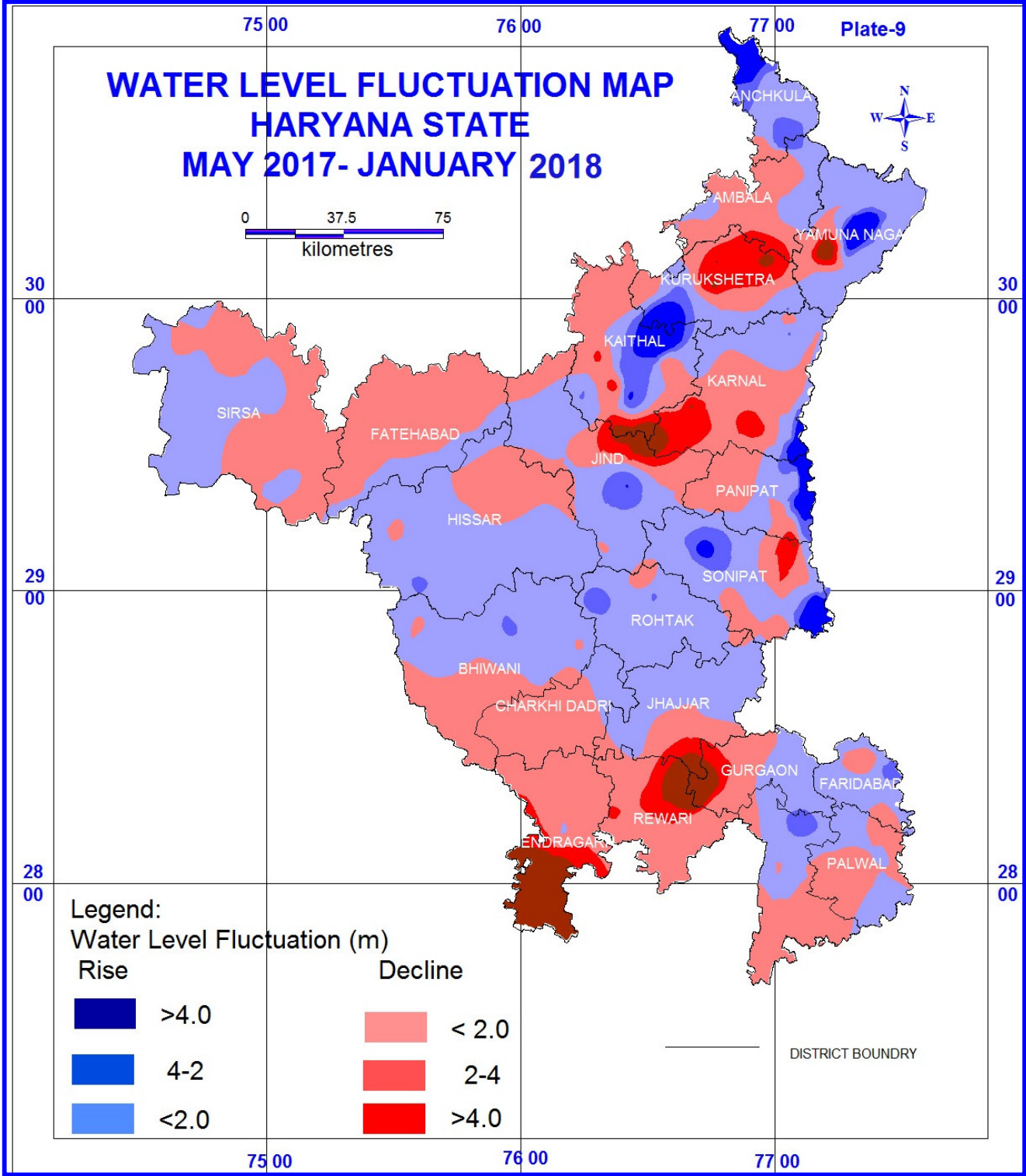
3.3.4 MAY 2017 – JANUARY 2018

The behavioral pattern of seasonal fluctuations is discussed below along with seasonal water level fluctuation map (Fig. 9).and data are presented in Annexure-2 (Col-7).

The interpretation of seasonal fluctuations indicates a general decline in 47% of the wells monitored covering an area of 50% of the State. The water level decline in the range of 0-2m has been observed in 40% wells and 42% of the area in Ambala, Yamunanagr, Kurukshetra, Kaithal, Karnal, Panipat, Sonipat, Faridabad, Palwal, Gurgaon, Mewat, Rewari, Mahindragarh, Bhiwani, Charkhi Dadri, Jind, Fatehabad, Sirsa and Hissar districts. Water level decline in range of 2-4m has been observed in 3% wells and 5% of the area. Water level decline more than 4m is recorded in 4% wells and 3% of the area in isolated patches.

The water level Rise has been observed in 53% of the wells and 50% of the area. The water level rise has been observed in Sonipat, Jhajjar, Rohtak, Bhiwani, Hissar, Sirs and isolated patches in all other districts in state. The water level Rise of 0-2m has been observed in 41% of wells and 44% of area. The water level Rise of 2-4m has been observed in 7% of wells and 4% of area. Water level rise more than 4m is recorded in 5% wells and 2% of the area in isolated patches. Summarised details of seasonal water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Groun Water Loss	Groun Water Recharge
Decline	0-2	95	40	18392	42	-2207	
	2-4	4	3	2038	5	-734	
	>4.0	9	4	1451	3	-87	
Rise	0-2	98	41	19810	44		2377
	2-4	16	7	1553	4		559
	>4.0	12	5	970	2		582
		234	100	44214	100	-293	



3.4 ANNUAL WATER LEVEL FLUCTUATIONS

The water level data of current season (i.e. May 2016) when compared with water level data of corresponding period of previous year (i.e. May 2017) annual water level fluctuations is determined.

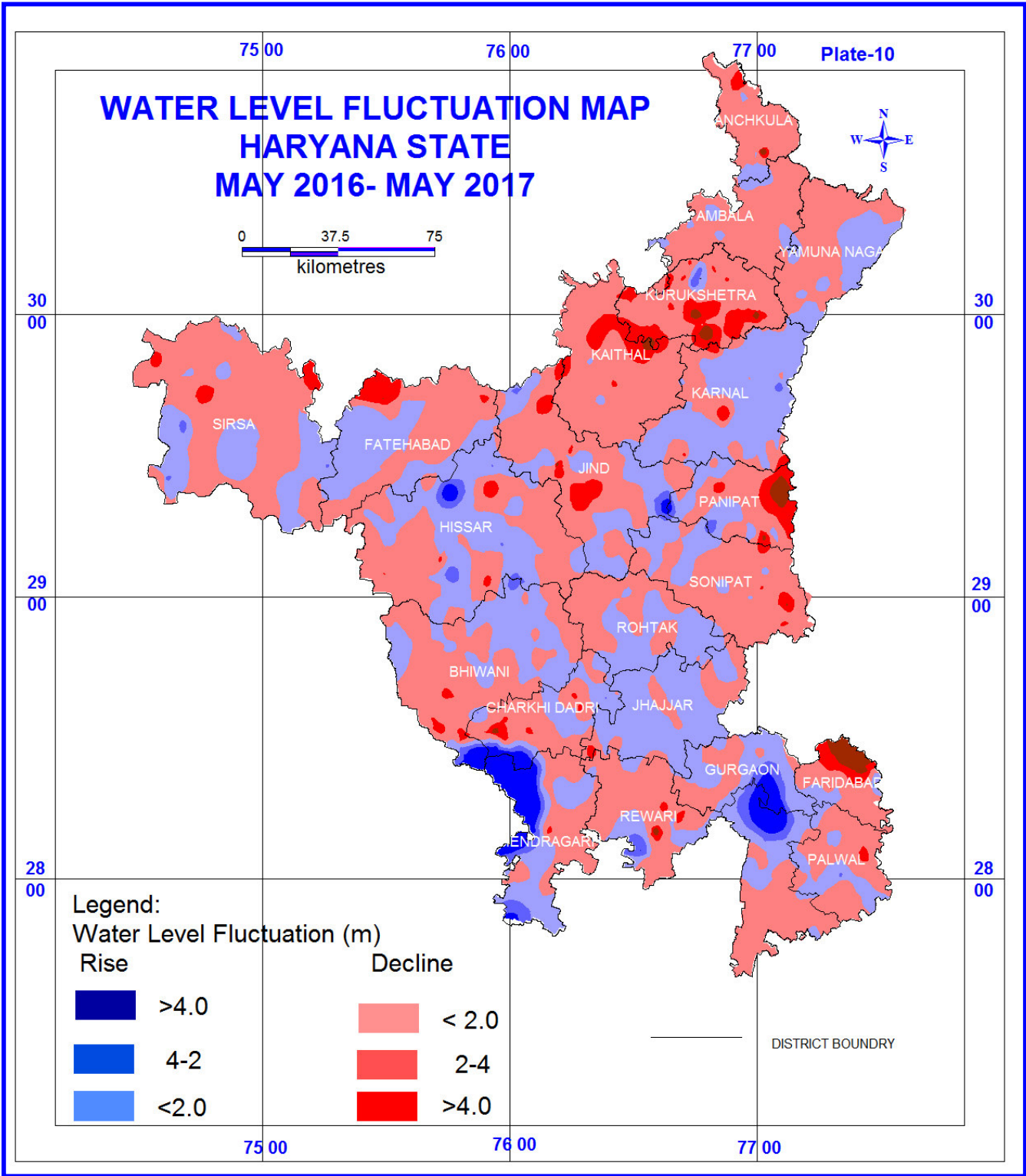
3.4.1 MAY 2016 – MAY 2017

The behavioral pattern of annual fluctuations is discussed along with (Fig. 10) and data are presented in Annexure-3 (Col-4).

The interpretations of annual water level fluctuation depicts water level decline in about 60% of wells monitored and 62% of the area in all districts of the state. Water level Decline (0-2m) has been recorded in 51% of wells and 57% of area. Water level decline (2-4m) has recorded in 7% of wells and 4% of area. Water level decline of more than 4m is observed in 2% of wells and 1% of area.

Water level rise has recorded in 40% of the wells and 38% of the area Water level Rise (0-2m) has been recorded in 37% of the wells and 34% area covering central parts of the state. Water level Rise of 2-4m has been observed in small patches in 2% of wells and 2% of area. Water level Rise of more than 4m observed in 1% of wells and 2% of area. Summarised details of annual water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	459	51	25535	57	-3064	
	2-4	60	7	1867	4	-672	
	>4.0	15	2	317	1	-190	
Rise	0-2	326	37	14837	34		1780
	2-4	17	2	817	2		294
	>4.0	7	1	841	2		505
Total		884	100	44214	100	-1349	



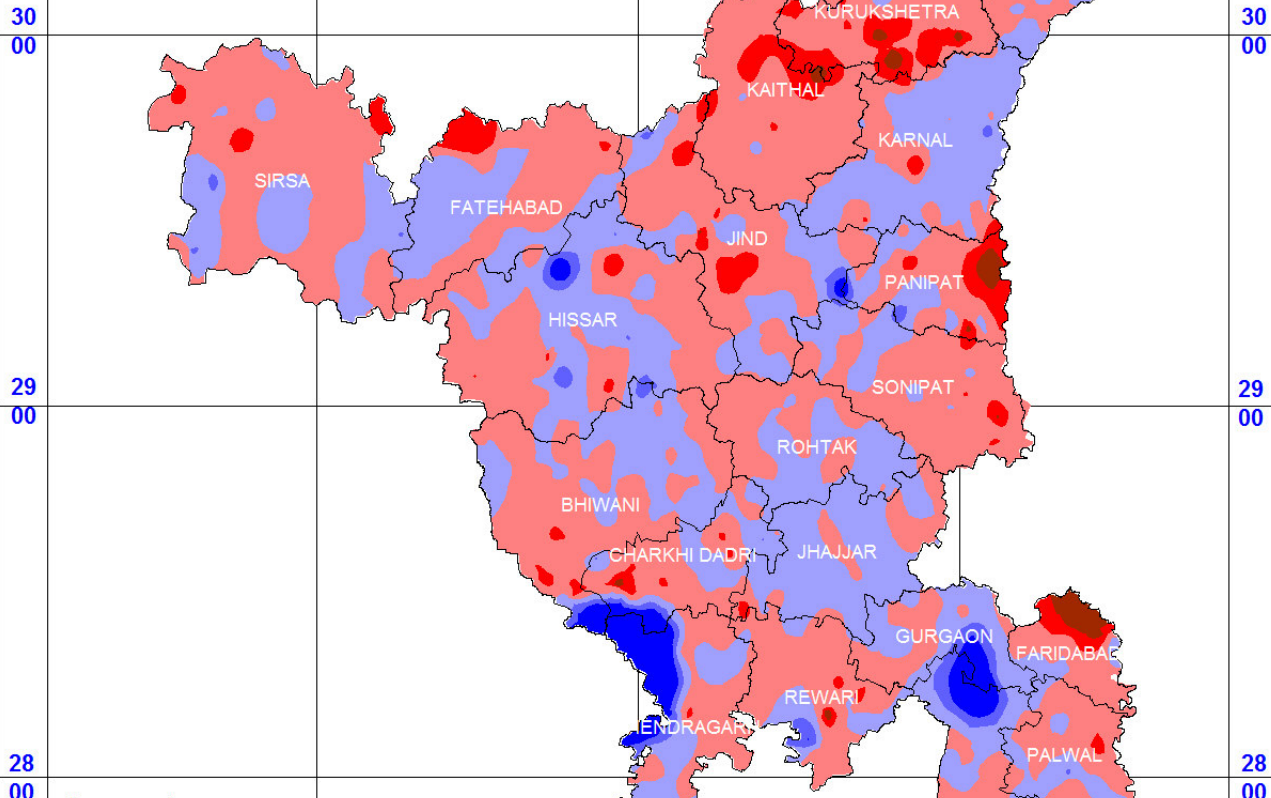
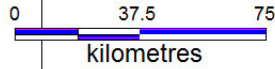
3.4.2 August 2016 – August 2017

The behavioral pattern of annual fluctuations is discussed along with (Fig.11) below and data are presented in Annexure-3 (Col-5). The interpretations of annual water level fluctuations depicts water level decline in about 59% of wells monitored and 59% of the area in Panchkula, Ambala, Yamunanagar, Kurukshetra, Karnal, Kaithal, Jind, Panipat, Sonipat, Fatehabad, sirsa, Bhiwani, Charkhi, Dadri and Mahendragarh districts of the state. Water level decline (0-2m) has been recorded in 55% of wells and 58% of area. Water level Decline (2-4m) has recorded in 3% of wells and 1% of area. Water level decline of more than 4m has recorded in 1% of wells and <1% of area during the period. The water level rise has been recorded remaining 39% of the wells and 41% of the area Fatehabad, Hissar, Bhiwani, Rohtak, Jhajjar, Gurgaon, Rewari, Mewat, Palwal and Faridabad districts. Water level Rise (0-2m) has been recorded in 36% of the wells and 37% area. Water level Rise of 2-4m has been observed in small patches in 3% of wells and 4% of area of the state in parts of Bhiwani, Gurgaon, Rewari, Jhajjar and Ambala districts. Water level rise of more than 4m was not observed during the period. Water level rise of more than 4m has not been recorded in the state during the period. Summarised details of annual water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Sq. Km.	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	42	55	25436	58	-3052	
	2-4	2	3	417	1	-150	
	>4.0	1	1	149	<1	-89	
Rise	0-2	28	36	16374	37		1965
	2-4	2	3	1838	4		662
	>4.0	0	0	0	0		0
						-665	







**WATER LEVEL FLUCTUATION MAP
HARYANA STATE
AUGUST 2016 - AUGUST 2017**

Plate-11



Legend:

Water Level Fluctuation (m)

Rise		Decline	
	>4.0		< 2.0
	4-2		2-4
	<2.0		>4.0

DISTRICT BOUNDRY

75 00

76 00

77 00

30 00

30 00

29 00

29 00

28 00

28 00

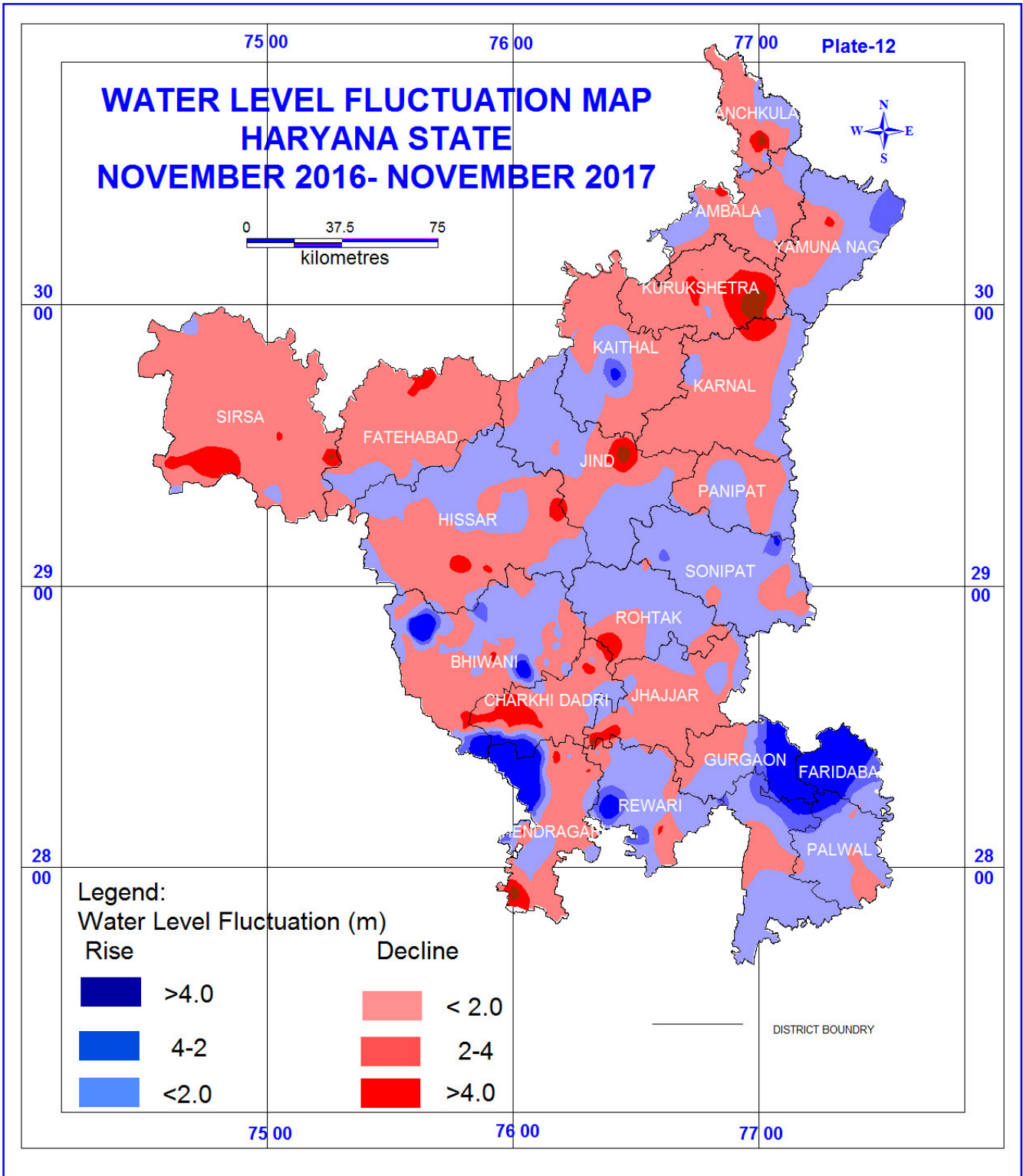
3.4.3 NOVEMBER 2016 – NOVEMBER 2017

The behavioral pattern of annual fluctuations is discussed along with (Fig.12) below and data are presented in Annexure-3 (Col-6).

The interpretations of annual water level depicts water level Decline in about 57% of wells monitored and 56% of the area covering all districts in the state. Water level decline (0-2m) has been recorded in 49% of wells and 53% of area in all districts in the state. Water level Decline (2-4m) has recorded in 6% of wells and 3% of area. Water level Decline of >4m recorded in 2% of wells and <1% of area of the state.

Water level Rise recorded in 41% of the wells and 44% of the area. Water level Rise (0-2m) has been recorded in 39% of the wells and 37% area in parts along the Yamuna river Yamunanagar, Karnal, Panipat and Sonipat besides Parts of Kaithal Fatehabad, Hissar, Bhiwani, Rohtak, Jhajjar, Rewari, and Palwal districts. Water level Rise of 2-4m has been observed in small patches in <1% of wells and 3% of area and water level Rise of >4m recorded in 2% of wells and 4% of area of the state. Summarised details of annual water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	234	49	23395	53	-2807	
	2-4	27	6	1493	3	-537	
	>4.0	9	2	178	0	-107	
Rise	0-2	187	39	16223	37		1947
	2-4	2	<1	1252	3		451
	>4.0	8	2	1673	4		1004
TOTAL		467	100	44214	100	-50	



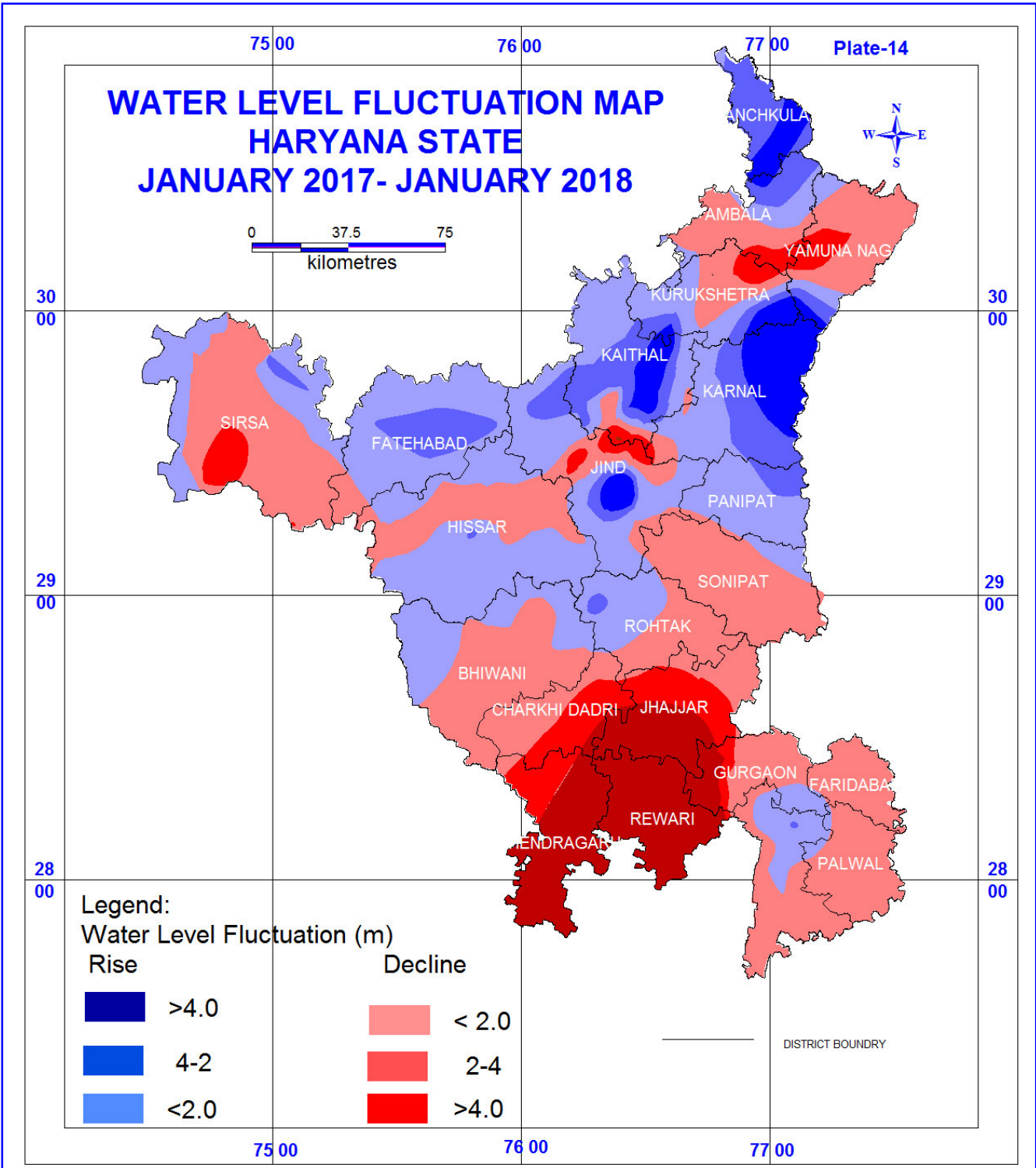
3.4.4 JANUARY 2017 – JANUARY 2018

The behavioral pattern of annual fluctuations is discussed along with (Fig. 13) below and data are presented in Annexure-3 (Col-7).

The interpretations of annual water level fluctuations depicts water level decline in about 56% of wells monitored and 54% of the area in Panchkula, Ambala, Yamunanagar, Kurukshetra, Kaithal, Karnal, Panipat, Sonipat Jind, Fatehabad, Hissar, Mewat, Palwal and Faridabad districts of the state. Water level decline (0-2m) has been recorded in 45% of wells and 38% of area. Water level decline (2-4m) has recorded in 8% of wells and 7% of area. Water level decline of more than 4m was observed in 3% of wells and 9% of area of the state.

Water level rise has been recorded in 43% of the wells and 46% of the area Sirsa, Fatehabad, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh Jhajjar, Rohtak, Rewari, Gurgaon, Mewat, Palwal, and Faridabad districts of the state. Water level Rise (0-2m) has been recorded in 23% of the wells and 32% area. Water level Rise of 2-4m has been observed in small patches in 13% of wells and 9% of area. Water level rise of (>4m) was observed in 7% of wells and 5% of area of the state. Summarised details of annual water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	39	45	17002	38	-2040	
	2-4	7	8	2937	7	-1057	
	>4.0	3	3	3987	9	-2392	
Rise	0-2	20	23	14238	32		1709
	2-4	11	13	4018	9		1446
	>4.0	6	7	2032	5		1219
Total		86	100	44214	100	-1116	



3.5 DECADAL MEAN WATER LEVEL FLUCTUATION

To determine the changes in water level behaviour since last one decade have been observed using decadal mean data. Mean of Water level data of all ground water observation wells for past one decade, (May 2007:2016) are computed and compared with the water level data of May 2017.

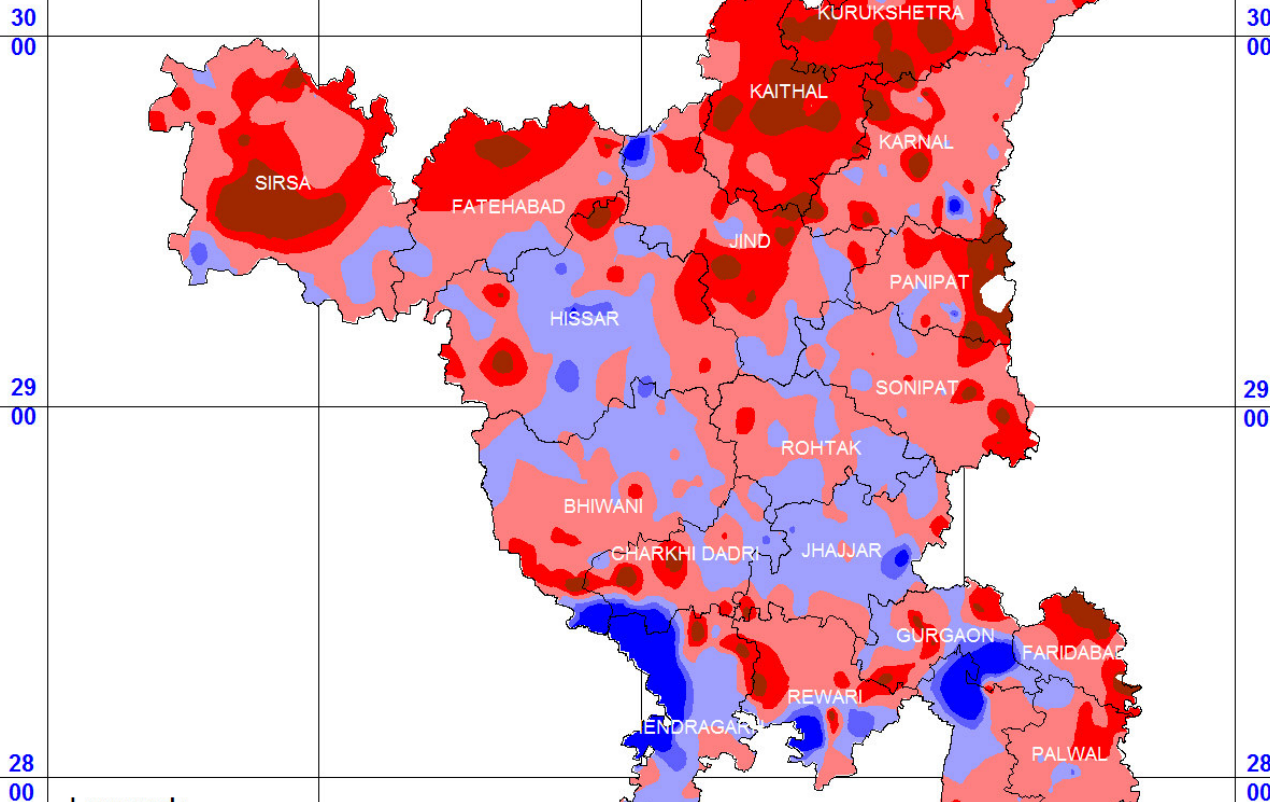
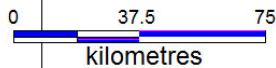
3.5.1 MAY (2007:2016) & MAY 2017

The behaviour of water level over the period under reference is discussed in following paragraph along with map (Fig. 14) and data are given in (Annexure-IV Col-4). The interpretations of decadal mean fluctuations so arrived at indicate water level decline in 72% of wells which covers about 74% area in all districts of the State. Water level decline in the range of 0-2m has been reported from 47% of the wells covering 48% of area of the state, Water level decline between 2-4 m has been reported from 17% of wells covering 20% area of the state. Water level decline of more than 4m has been observed in 8% wells and 6% of the area of state. The water level rise has been observed in 29% of wells and 26% area in Panchkula, Ambala, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Jhajjar, Rohtak, Mahendragarh and Rewari districts. Water level rise in the range of 0-2m has been observed in 25% wells covering 22% area of the state. Water level rise between 2-4 m has been observed patches in small patches in 2% wells and 2% area of the state. Water level decline of more than 4m has been observed in 2% wells and 2% of the area of state. Summarised details of Decadal Mean water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	450	47	21137	48	-2536	
	2-4	160	17	8823	20	-3176	
	>4.0	74	8	2592	6	-1555	
Rise	0-2	246	25	9715	22		1166
	2-4	18	2	823	2		296
	>4.0	15	2	1124	2		674
Total		963	100	44214	100		-5131

Plate-15

WATER LEVEL FLUCTUATION MAP HARYANA STATE DECADAL MEAN (2007-2016) AND MAY 2017



Legend:
Water Level Fluctuation (m)

Rise		Decline	
	>4.0		< 2.0
	4-2		2-4
	<2.0		>4.0

— DISTRICT BOUNDARY

75 00 76 00 77 00

30 00
29 00
28 00

30 00
29 00
28 00

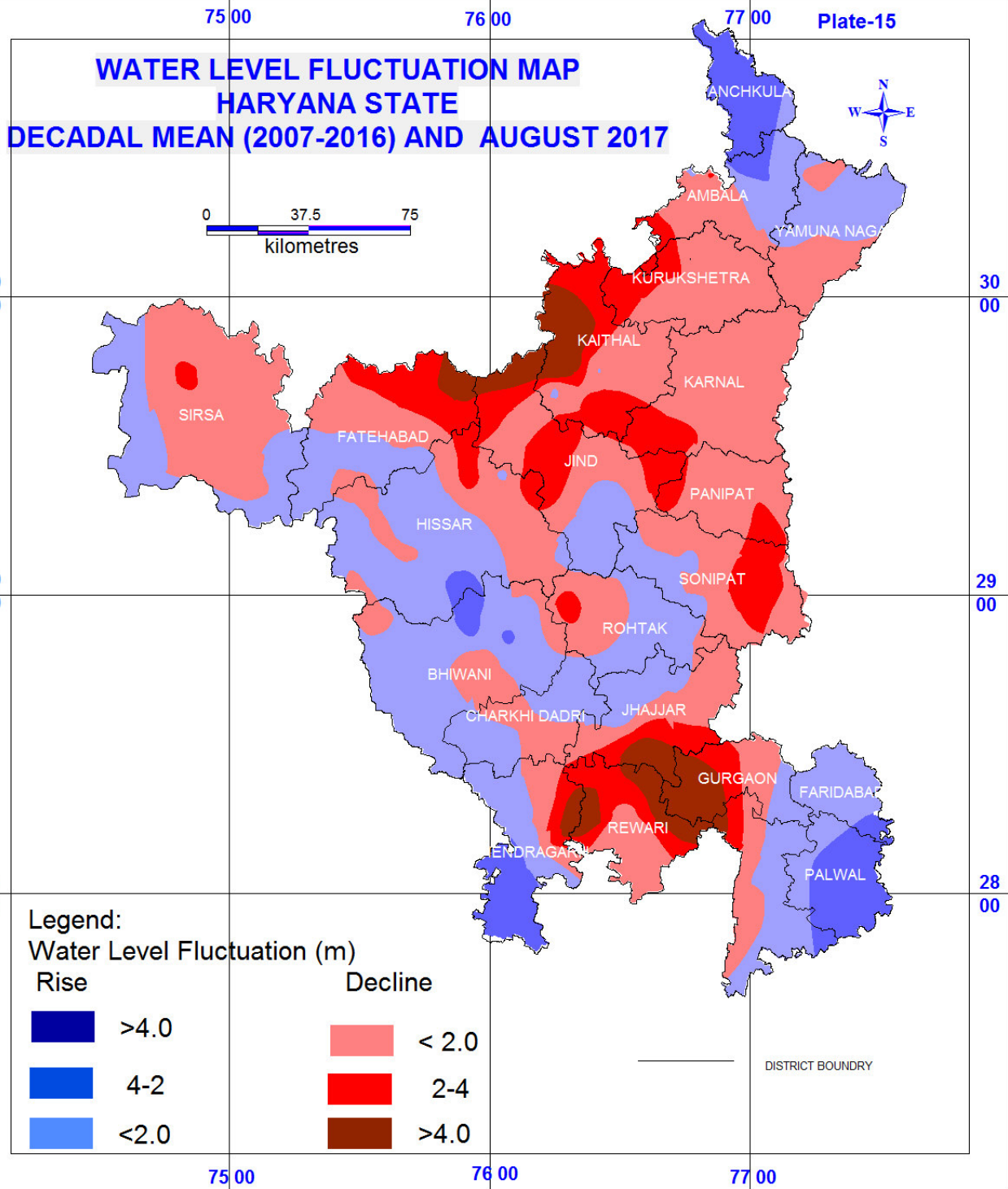
3.5.2 MEAN AUGUST (2007:2016) & AUGUST 2017

The behaviour of water level over the period under reference is discussed in following paragraph alongwith map (Fig.15) and data are given in (Annexure-IV- Col. 5).

The interpretations of decadal mean fluctuations indicate water level decline in 52% of wells monitored and about 60% area of the State falling in Yamunanagar, Ambala, Kurukshetra, Kaithal Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon, Faridabad and Palwal districts. Water level decline in the range of 0-2m has been reported from 31% of the wells covering 42% of area. Water level decline between 2-4 m has been reported from 13% of wells covering 13% area of the state. Water level decline of more than 4m has been observed in 8% wells and 5% of the area of state.

The water level rise has been observed in 48% of wells and 40% area Panchkula, Ambala, Yamunanagar, Sirsa, Fatehabad, Hissar, Bhiwani, Charkhi Dadri, Jhajjar, Rohtak, Mahendragarh, Rewari and Palwal districts. Water level rise in the range of 0-2m has been observed in 39% wells covering 32% area of the state. Water level rise 2-4m has been observed small patches in small patches in 9% wells and 8% area of the state. Water level rise >4m has not been observed in the state. Summarised details of Decadal Mean water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	29	31	18742	42	-2249	
	2-4	12	13	5834	13	-2100	
	>4.0	7	8	2161	5	-1291	
Rise	0-2	36	39	14369	32		1724
	2-4	8	9	3108	8		1119
	>4.0	0	0	0	0		0
Total		92	100	44214	100	-2803	



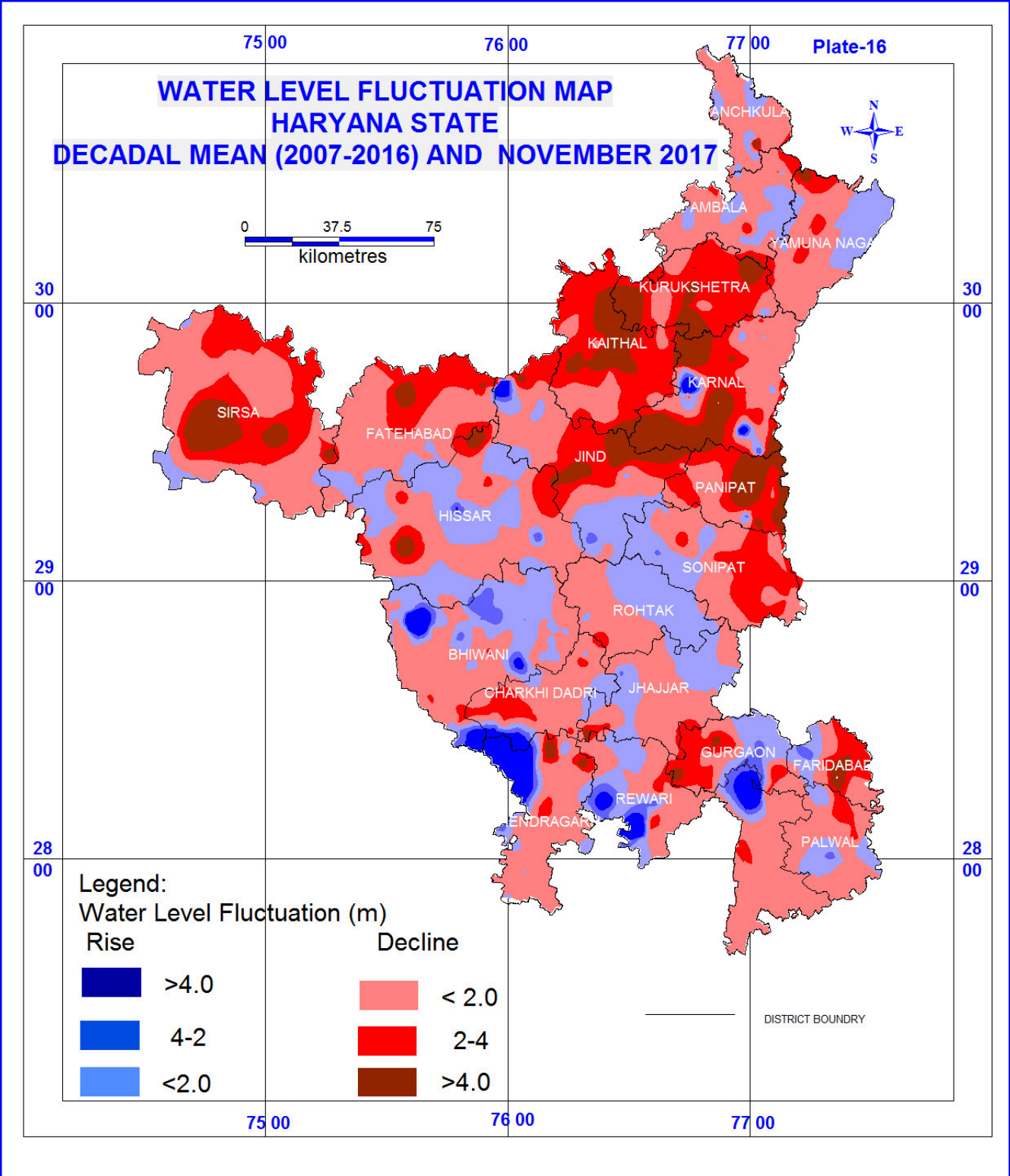
3.5.3 Mean November (2007:2016) & November 2017

The behaviour of water level over the period under reference is discussed in following paragraph along alongwith map (Fig.16) and data are given in (Annexure-IV- Col. 6).

The interpretations of decadal mean fluctuations so arrived at indicate general water level decline in 69% of wells and 76% area covering all Districts of the State. Water level decline in the range of 0-2m has been reported from 43% of the wells covering 49% of area of the state. Water level decline between 2-4 m has been reported from 18% of wells covering 20% area. Water level decline of more than 4m has been observed in 8% wells and 7% of the area of state falling in Kurukshetra, Kaithal Karnal, Panipat, Jind, Fatehabad and Sirsa districts.

The water level rise has been observed in 31% of wells and 24% area falling in Hissar, Bhiwani, Rohtak, Jhajjar and a few isolated patches in other districts. Water level rise in the range of 0-2m has been observed in 26% wells covering 20% area of the state. Water level rise of 2-4m has been observed in 3% wells and 2% area of the state. Water level rise of >4m has been observed in 2% wells and 2% area of the state. Summarised details of Decadal Mean water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	289	43	21483	49	-2578	
	2-4	118	18	8947	20	-3221	
	>4.0	54	8	3286	7	-1972	
Rise	0-2	173	26	8839	20		1061
	2-4	20	3	817	2		294
	>4.0	11	2	852	2		511
total		665	100	44214	100	-5904	

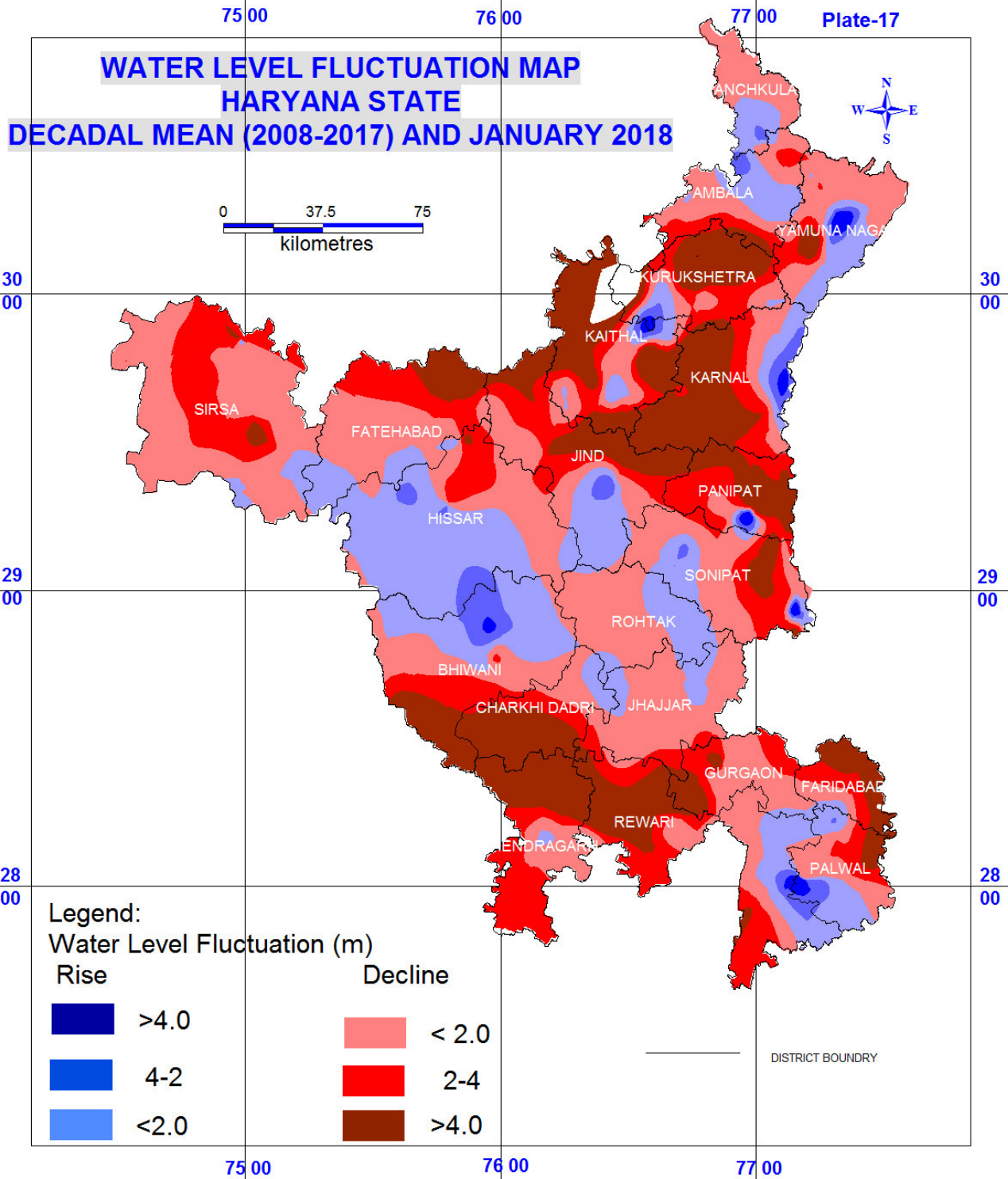


3.5.4 Mean January (2008:2017) & January 2018

The behaviour of water level over the period under reference is discussed in following paragraph along alongwith map (Fig.17) and data are given in (Annexure-IV- Col. 7). The interpretations of decadal mean fluctuations so arrived at indicate water level decline in 70% of wells which covers about 76% area of the State falling in falling in Panchkula, Ambala, Yamunanagar, Kurukshetra, Kaithal Karnal, Panipat, Sonipat, Jind, Fatehabad, Sirsa, Hissar, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon, Mewat, Faridabad and Palwal districts. Water level decline in the range of 0-2m has been reported from 36% of the wells covering 36% of area of the State. Water level decline between 2-4 m has been reported from 15% of wells covering 20% area of the state. Water level decline of more than 4m has been observed in 18% wells and 20% of the area of state covering parts of Kurukshetra, Kaithal Karnal, Panipat, Jind, Fatehabad, Bhiwani, Charkhi Dadri, Mahendragarh, Rewari, Gurgaon, Faridabad and Palwal districts.

The water level rise has been observed in 31% of wells and 24% area falling in Hissar, Bhiwani, Rohtak, Jhajjar and a few isolated patches in other districts. Water level rise in the range of 0-2m has been observed in 22% wells covering 21% area of the state. Water level rise of 2-4m has been observed in 6% wells and 3% area of the state. Water level rise of >4m has been observed in 3% wells and 1% area of the state. Summarised details of Decadal Mean water level fluctuation and change in Ground Water storage are given in table below;

Water Level Fluctuation Range		Wells Monitored		Area Covered		Change in Ground water Storage (MCM)	
		No.	%Age	Km ²	%Age	Ground Water Loss	Ground Water Recharge
Decline	0-2	89	36	15817	36	-1818	
	2-4	37	15	8793	20	-3165	
	>4.0	45	18	8879	20	-5327	
Rise	0-2	54	22	9253	21		1110
	2-4	14	6	1209	3		435
	>4.0	8	3	263	1		158
Total		247	100	44214	100	-8688	



Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Ambala	Ambala Cantt	2.32			
2	Ambala	Ambala Cantt-Pz	4.90		4.40	
3	Ambala	Ambala City-DW	1.29		1.67	
4	Ambala	Baknaur-DW	9.53		6.21	
5	Ambala	Balana	2.14		1.44	1.46
6	Ambala	Bara Garh-DW	9.93		9.13	
7	Ambala	Barara S			4.65	
8	Ambala	Barara-Pz	19.19		19.15	
9	Ambala	Bari Bassi-DW	10.85		10.20	
10	Ambala	Behalpur-DW	2.22		1.25	
11	Ambala	Bhuragnpur-DW	5.58		4.08	
12	Ambala	Bhurewala-Pz	9.40		9.20	
13	Ambala	Bichali Dhamouli-Pz	8.25		8.55	
14	Ambala	Binjal Pur-DW	5.94		4.09	
15	Ambala	Boh-DW	4.47		3.85	
16	Ambala	Budhha Khera-DW	7.71		7.31	
17	Ambala	Bullana- DW	1.32		1.15	
18	Ambala	Chhapra-DW	10.89		11.00	
19	Ambala	Chotta Korwa-DW	10.78		9.88	
20	Ambala	Churmastpur-DW	8.56		6.19	
21	Ambala	Dhanaura	4.70	3.20	4.30	3.27
22	Ambala	Dukheri-DW	2.60		2.65	
23	Ambala	Hasanpur-DW	7.51		6.51	
24	Ambala	Jansui-DW	4.70		2.53	
25	Ambala	Jauli-DW	19.90		19.40	
26	Ambala	Kakkar Majra-DW	11.62		11.40	
27	Ambala	Kakru	2.59	1.95	3.35	3.53
28	Ambala	Kalumazra-DW	4.17		3.50	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
29	Ambala	Kapoori At Saphera-PZ	11.97		9.15	
30	Ambala	Khanahmadpur	3.71		2.63	
31	Ambala	Khanna Majra	3.18		2.40	
32	Ambala	Khera Jattan-DW	8.95		8.80	
33	Ambala	Mohra-DW	3.02		1.74	
34	Ambala	Mulana	3.02		2.49	2.60
35	Ambala	Nanhera-DW	19.17		18.22	
36	Ambala	Naraingarh-DW	14.79		13.89	15.95
37	Ambala	Naraingarh-Pz	23.93		23.83	
38	Ambala	Nasirpur-Pz	1.80		1.10	
39	Ambala	Nikuwana-DW	18.10		17.75	
40	Ambala	Panjokhra	6.80	7.43	7.68	
41	Ambala	Patvi	14.30		13.60	
42	Ambala	Pinjola	5.23	6.62		
43	Ambala	Saha-Pz	35.87		35.90	5.23
44	Ambala	Salehpur-DW	4.91		3.20	
45	Ambala	Shahpur-DW	9.50		7.12	
46	Ambala	Shahzadpur	3.86		4.21	
47	Ambala	Shahzadpur-Pz	3.55		2.90	
48	Ambala	Sohana-DW	5.82		3.32	
49	Ambala	Tandwal-DW	5.95		2.75	
50	Ambala	Tejan-DW	4.73		2.33	
51	Ambala	Tharwa-DW	3.95		3.25	
52	Ambala	Ugala S	35.67		35.50	
53	BHIWANI	Alak Pura-DW	3.40		2.80	
54	BHIWANI	Alampur-DW	10.20		9.00	
55	BHIWANI	Badala	4.00		3.00	3.23
56	BHIWANI	Badeshra-PZ	2.25		1.45	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
57	BHIWANI	Baganwala-PZ	12.30		10.15	
58	BHIWANI	Bajina	14.63	12.67	12.97	13.87
59	BHIWANI	Baliyali-PZ	4.54		3.80	
60	BHIWANI	Bamla	7.14		7.17	7.28
61	BHIWANI	Baralu-PZ	74.30		74.60	
62	BHIWANI	Bardu Mugal-PZ	58.50		59.10	
63	BHIWANI	Barsi-PZ	9.25		7.60	
64	BHIWANI	Bawani Khera.-PZ	4.70		5.20	
65	BHIWANI	Bawani Khera-PZ	5.50	5.09	4.90	4.55
66	BHIWANI	Bhawani khera DW	5.03		5.18	5.93
67	BHIWANI	Bhawani Khera Pz	5.58		5.15	
68	BHIWANI	Bhera-PZ	8.30		8.60	
69	BHIWANI	Bhiwani	2.68		2.50	
70	BHIWANI	Bhutana-PZ	11.22		9.41	
71	BHIWANI	Bidhnoi-PZ	57.50		58.00	
72	BHIWANI	Biran--PZ	2.90		2.40	
73	BHIWANI	Bohal	5.50	3.45	3.95	3.60
74	BHIWANI	Budh Shelly-PZ	20.25		20.85	
75	BHIWANI	Budheri-PZ	67.95		68.45	
76	BHIWANI	Busan-PZ	15.20		15.08	
77	BHIWANI	Chappar Rangar-PZ	10.70		9.70	
78	BHIWANI	Dadam-PZ	18.65		18.55	
79	BHIWANI	Dang-PZ	1.50		1.30	
80	BHIWANI	Devsar-PZ	4.05		2.60	
81	BHIWANI	Dhana Ladanpur-PZ	6.21		5.88	
82	BHIWANI	Dhanana	1.52	0.59	0.59	0.67
83	BHIWANI	Dhani Ramjas-PZ	13.15		12.95	
84	BHIWANI	Dhani Shelwal-PZ	21.50		21.40	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
85	BHIWANI	Dhanimahu-PZ	17.10		16.80	
86	BHIWANI	Dighawa Shyam--PZ	55.40		60.70	
87	BHIWANI	Dinod-PZ	3.45		2.56	
88	BHIWANI	Dulheri-PZ	25.65		23.75	
89	BHIWANI	Dwvrala-PZ	47.10			
90	BHIWANI	Garanpura-PZ	4.10		4.60	
91	BHIWANI	Gignow-PZ	61.10		62.05	
92	BHIWANI	Golagarh-PZ	27.90		28.00	
93	BHIWANI	Gothra-Pz	31.40		31.42	
94	BHIWANI	Gujrani-PZ	2.05		1.78	
95	BHIWANI	Gurera			15.37	16.10
96	BHIWANI	Gurera PZ			14.94	
97	BHIWANI	Gurera-pz	15.53	15.99		
98	BHIWANI	Haluwas	2.80	2.30	2.39	
99	BHIWANI	Hetampur	11.15		11.19	12.02
100	BHIWANI	Indiwali-PZ	38.40		39.05	
101	BHIWANI	Isharwal	19.48		18.52	18.80
102	BHIWANI	Jamalpur-PZ	3.70		2.74	
103	BHIWANI	Jatai-PZ	2.85		1.87	
104	BHIWANI	Jhanwari-PZ	9.30		7.00	
105	BHIWANI	Jharwai-PZ	10.00		9.80	
106	BHIWANI	Jhully-PZ	6.20		6.80	
107	BHIWANI	Jhumpa	26.34	25.69	26.47	
108	BHIWANI	Jhumpa Kalan	26.95		27.10	26.93
109	BHIWANI	Jitwanwas-DW	9.70		9.50	
110	BHIWANI	Juikalan Pz	31.24			31.85
111	BHIWANI	Jui-PZ	32.80		31.41	
112	BHIWANI	Kairu-PZ	14.90		14.40	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
113	BHIWANI	Kairu-Pz	14.69		14.45	
114	BHIWANI	Kalinga-PZ	3.97		3.01	
115	BHIWANI	Kaloud PZM	26.45		24.50	
116	BHIWANI	Kaluwas-PZ	4.45		3.30	
117	BHIWANI	Kasni kalan	46.50		46.90	
118	BHIWANI	Katwar-PZ	21.12		20.98	
119	BHIWANI	Khakari Sohan-PZ	8.85		8.55	
120	BHIWANI	Khanak-PZ	19.22		15.40	
121	BHIWANI	Khaparwas-PZ	34.95		35.05	
122	BHIWANI	Kharak Kalan-PZ	4.20		3.90	
123	BHIWANI	Khariawas-PZ	17.80		17.70	
124	BHIWANI	Khera-PZ	13.40		13.45	
125	BHIWANI	Kheri Dalautpura-PZ	3.42		2.03	
126	BHIWANI	Kikral-PZ	12.50		17.10	
127	BHIWANI	Kitlana-PZ	3.29		3.18	
128	BHIWANI	Kural-PZ	36.50		37.00	
129	BHIWANI	Lachhmanpur	10.34		9.79	
130	BHIWANI	Lalawas-PZ	24.50		24.60	
131	BHIWANI	Leghan Hetwan-PZ	11.60		11.45	
132	BHIWANI	Lohani	9.20	8.90	3.81	9.10
133	BHIWANI	Mandhana-PZ	3.53		3.80	
134	BHIWANI	Mandhan-PZ	6.05		3.85	
135	BHIWANI	Manhairu	5.22	4.42	5.52	5.47
136	BHIWANI	Matani-PZ	30.46		30.30	
137	BHIWANI	Miran	1.38		1.73	
138	BHIWANI	Miran-Pz	4.07		3.89	
139	BHIWANI	Mitathal-PZ	2.02		2.15	
140	BHIWANI	Mithi-PZ	39.82		42.20	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
141	BHIWANI	Mohila-PZ	19.23		19.38	
142	BHIWANI	Morka-PZ	34.70		34.65	
143	BHIWANI	Mundhal Kalan-PZ	4.05		2.15	
144	BHIWANI	Naloi-PZ	15.25		14.85	
145	BHIWANI	Naraungabad-PZ	5.00		5.47	
146	BHIWANI	Nathuwas-PZ	7.11		6.79	
147	BHIWANI	Nigana Kalan-PZ	19.30		19.10	
148	BHIWANI	Nigana Khurd-PZ	21.17		20.90	
149	BHIWANI	Nimriwali-PZ	4.30		3.60	
150	BHIWANI	Ninan-PZ	6.90		6.40	
151	BHIWANI	Noon Sar-PZ	54.40		55.10	
152	BHIWANI	Paju	83.04		83.94	
153	BHIWANI	Pataudi Khurd	11.45		11.40	11.29
154	BHIWANI	Patwan-PZ	57.20		58.00	
155	BHIWANI	Pehladgarh-DW	5.17		4.65	
156	BHIWANI	Phokarwas-PZ	32.00		32.50	
157	BHIWANI	Prem Nagar-PZ	4.50		2.70	
158	BHIWANI	Pur-PZ	3.40		2.80	
159	BHIWANI	Rajgarh-PZ	2.88		2.06	
160	BHIWANI	Ratera-PZ	10.30		7.75	
161	BHIWANI	Rewari-PZ	7.05		6.60	
162	BHIWANI	Riwasa-DW	1.40		1.40	
163	BHIWANI	Runhat-DW	4.25		4.07	
164	BHIWANI	Rupgarh-PZ	16.96		16.36	
165	BHIWANI	Sagban	4.20		1.70	1.87
166	BHIWANI	Sangwan	3.33			
167	BHIWANI	Serla-PZ	57.80		58.40	
168	BHIWANI	Sighani-PZ	64.40		65.20	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
169	BHIWANI	Singhani-pz	78.43			
170	BHIWANI	Sirsa-DW	7.30		8.50	
171	BHIWANI	Siwach-PZ	40.63		39.26	
172	BHIWANI	Siwani	13.11	13.40	12.73	13.22
173	BHIWANI	Sui	3.18	1.30	1.50	1.77
174	BHIWANI	Sungarpur	12.46		16.36	12.34
175	BHIWANI	Talu-PZ	5.30		2.85	
176	BHIWANI	Talwani-PZ	21.20		22.13	
177	BHIWANI	Thillor-PZ	13.00		11.70	
178	BHIWANI	Tigrana-DW	2.20		3.10	
179	BHIWANI	Tosham	5.91	3.80	2.03	
180	BHIWANI	Tosham-Pz	6.35		5.40	
181	CHARKHI DADRI	Achina-PZ	2.25			
182	CHARKHI DADRI	Atela-PZ	26.60		27.10	
183	CHARKHI DADRI	Badesara-PZ	71.70		71.90	
184	CHARKHI DADRI	Badhwana-PZ	12.70		12.71	
185	CHARKHI DADRI	Baundkalan	1.50	2.46	5.47	
186	CHARKHI DADRI	Bigowa-PZ	1.85		0.87	
187	CHARKHI DADRI	Bijna-PZ	17.21		16.26	
188	CHARKHI DADRI	Birhi Kalan-PZ	2.40		1.50	
189	CHARKHI DADRI	Bound-PZ	2.10		2.62	
190	CHARKHI DADRI	Chandawas-PZ	67.30		68.05	
191	CHARKHI DADRI	Chirya	18.27	15.01	16.36	
192	CHARKHI DADRI	Dadri	5.10		5.41	
193	CHARKHI DADRI	Dadri-Pz	2.24		2.24	
194	CHARKHI DADRI	Dudhwa-PZ	12.07		11.56	
195	CHARKHI DADRI	Dudiwala-PZ	34.70		35.60	
196	CHARKHI DADRI	Ghasola-PZ	4.18		4.32	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
197	CHARKHI DADRI	Gopalwas-PZ	40.80			
198	CHARKHI DADRI	Gopi	61.77			
199	CHARKHI DADRI	Hui-PZ	57.83		59.00	
200	CHARKHI DADRI	Imlota	2.41		1.63	
201	CHARKHI DADRI	Jhinjjar-PZ	2.45		3.35	
202	CHARKHI DADRI	Kakroli Hatti-PZ	66.30			
203	CHARKHI DADRI	Kakroli Sardh-PZ	59.10		60.90	
204	CHARKHI DADRI	Kalali-DW	24.65			
205	CHARKHI DADRI	Kanheti-DW	3.10		1.27	
206	CHARKHI DADRI	Kapoori-PZ	4.17		4.44	
207	CHARKHI DADRI	Kari Adu-DW	63.05			
208	CHARKHI DADRI	Kari Mod-PZ	68.20		69.30	
209	CHARKHI DADRI	Kari Pura-PZ	64.50		65.60	
210	CHARKHI DADRI	Kheri Bura-PZ	2.96		2.83	
211	CHARKHI DADRI	Makrana-PZ	20.04		19.09	
212	CHARKHI DADRI	Mandoli-PZ	7.70		6.85	
213	CHARKHI DADRI	Mehrana	13.16		14.02	
214	CHARKHI DADRI	Mirch-PZ	4.55		2.12	
215	CHARKHI DADRI	Misri-PZ	4.32		2.79	
216	CHARKHI DADRI	Nayaatela	27.11			
217	CHARKHI DADRI	Paintawas-PZ	5.05		5.00	
218	CHARKHI DADRI	Patuwas-PZ	11.90		10.50	
219	CHARKHI DADRI	Pichopa Kalan-PZ	72.30		73.60	
220	CHARKHI DADRI	Ranila-PZ	3.91		3.84	
221	CHARKHI DADRI	Sanjarwas-PZ	4.10		3.40	
222	CHARKHI DADRI	Sankrod-PZ	2.94		2.94	
223	CHARKHI DADRI	Sanwar	4.06		7.96	
224	CHARKHI DADRI	Sarangpur-PZ	24.42		22.90	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
225	CHARKHI DADRI	Saroop Garh-PZ	1.37		1.14	
226	CHARKHI DADRI	Todi-PZ	71.90		73.05	
227	CHARKHI DADRI	Unn-DW	0.75		1.53	
228	FARIDABAD	Ballabgarh	29.25		29.10	
229	FARIDABAD	Bhopani	22.40			22.85
230	FARIDABAD	Chhainsa	19.70		19.80	
231	FARIDABAD	Kabulpur	21.45		17.78	18.90
232	FARIDABAD	Kheri Jamalpur-DW	12.30		12.20	
233	FARIDABAD	Manjhawali-DW	12.25		12.75	
234	FARIDABAD	Pali2	17.90		16.00	
235	FARIDABAD	Paota	15.80		16.25	
236	FARIDABAD	Sakrana-DW	1.70		1.10	
237	FARIDABAD	Sanped-DW	10.50		10.63	
238	FARIDABAD	Sikri1	5.60		5.35	
239	FARIDABAD	Sotai	18.80		19.00	
240	FARIDABAD	Tigaon-Pz	23.85		23.93	
241	FATEHABAD	Alalwas-Pz	31.43			
242	FATEHABAD	Badopal	1.97	0.93	2.62	
243	FATEHABAD	Bhattukalan-Pz	1.83		1.85	
244	FATEHABAD	Bhuna	16.70			
245	FATEHABAD	Chindhar-DW	5.30		5.20	
246	FATEHABAD	Dayar1	6.00		6.50	
247	FATEHABAD	Dhangar-DW	10.95		10.90	
248	FATEHABAD	Gorakhpur-DW	2.36		2.33	
249	FATEHABAD	Hukmawali-Pz	21.18		21.42	
250	FATEHABAD	Jandli Kalan	5.33		5.40	5.50
251	FATEHABAD	Kajal Heri-DW	1.90		1.85	
252	FATEHABAD	Kanhari-Pz	19.74		19.79	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
253	FATEHABAD	Khara Kheri-DW	0.75			
254	FATEHABAD	Machiwali-DW	3.50		3.20	
255	FATEHABAD	Mehu Wala Pz	3.18		3.55	3.73
256	FATEHABAD	Nagpur- Pz	30.40			
257	FATEHABAD	Nahla	7.45	5.73	7.47	7.17
258	FATEHABAD	Nangla-DW	8.22		8.32	
259	FATEHABAD	Nikuwana-Pz			40.00	
260	FATEHABAD	Pilimudari	5.50		5.50	
261	FATEHABAD	Ratia -Pz	46.70		49.38	
262	FATEHABAD	Ratta Khera-Pz	36.70		37.00	
263	FATEHABAD	Sadalpur	6.01		5.41	5.72
264	FATEHABAD	Samain	3.99		4.00	3.81
265	FATEHABAD	Shekhpur Daroli-DW	6.50		6.50	
266	FATEHABAD	Suniyana	8.60		8.60	
267	FATEHABAD	Tohana	19.88	20.28	21.45	20.38
268	GURGAON	Bandhwari	22.25			
269	GURGAON	Basonda Tripati-Pz	27.00		26.40	
270	GURGAON	Bhondsi Ew	25.25		25.70	
271	GURGAON	Bhora Kalan-Pz	41.82		42.20	
272	GURGAON	Bilaspur-Pz	26.50		26.85	
273	GURGAON	Budehra-DW	8.10		7.25	
274	GURGAON	Chandu Tikly	11.00		10.32	
275	GURGAON	Daultabad-Pz	9.35			
276	GURGAON	Farrukh Nagar-Pz	23.30		22.20	
277	GURGAON	Fazilpur Badli-Pz	29.55		30.32	30.60
278	GURGAON	Gangola-DW	6.05		5.45	
279	GURGAON	Gudhana-Pz	30.30		30.33	
280	GURGAON	Gurgaon Pz	40.15			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
281	GURGAON	Haila Mandi	30.00		30.10	
282	GURGAON	Harchandpur Pz	25.00		24.50	
283	GURGAON	Jamalpur-Pz	33.95		35.85	35.10
284	GURGAON	Jaraon Pz	14.03		13.80	14.74
285	GURGAON	Jhandu Sarai-Pz	25.40		24.85	
286	GURGAON	Kadipur	25.50			
287	GURGAON	Kasan	38.40			
288	GURGAON	Khera Khurrampur-Pz			20.23	20.50
289	GURGAON	Kherla	22.40		37.70	
290	GURGAON	Kohar			36.73	
291	GURGAON	Lokra-Pz	36.00	38.46		36.80
292	GURGAON	Meoka-Pz	20.27		20.98	20.40
293	GURGAON	Mouzabad	31.40		39.68	42.10
294	GURGAON	Mubarakpur	13.10		13.10	
295	GURGAON	Pataudi-Pz	39.00		39.73	
296	GURGAON	Sadhrana-Pz	21.40		20.55	
297	GURGAON	Sidrawali-Pz			30.63	
298	GURGAON	Sohna	31.38		31.50	
299	GURGAON	Wazirpur-Pz	18.70			19.68
300	HISAR	Adampur S	4.15	3.65	4.25	
301	HISAR	Adampur-Pz	5.23		3.82	3.98
302	HISAR	Agroha abd	11.70		11.65	
303	HISAR	Agroha-Pz	8.00		7.71	7.62
304	HISAR	Badchappar	1.15		1.25	
305	HISAR	Balawas1	14.50	13.10	14.13	
306	HISAR	Balsamand	15.55		14.59	14.73
307	HISAR	Balsamand-Pz	17.67	16.80	16.11	16.26
308	HISAR	Banbhauri-Pz	6.00	5.40	5.70	6.45

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
309	HISAR	Barwala abd		12.46		
310	HISAR	Barwala S	5.40		5.30	14.21
311	HISAR	Barwala1	13.80		13.36	
312	HISAR	Barwala-Pz	9.04		8.80	
313	HISAR	Bas	4.04	1.29	1.93	17.98
314	HISAR	Basra	16.85	16.44	17.96	1.72
315	HISAR	Behbalpur-Pz	3.50		1.66	
316	HISAR	Bhana-DW	4.75		4.70	
317	HISAR	Bhotal Jattan-DW	2.65		2.15	
318	HISAR	Bithmara-DW	8.35		8.40	3.54
319	HISAR	Chanaut	3.83		3.58	
320	HISAR	Chann-DW	6.63		6.50	
321	HISAR	Chaudhriwali	16.00		15.50	8.14
322	HISAR	Chawdhariwas	10.55	9.03	9.50	
323	HISAR	Datta-DW	7.30		6.20	
324	HISAR	Deva-DW	5.50			
325	HISAR	Dhand-DW	1.45		1.25	3.92
326	HISAR	Dhansu	4.76	3.81	3.90	
327	HISAR	Dobi-DW	14.45			
328	HISAR	Durjanpur-Pz	9.40		9.35	
329	HISAR	Ghaibipur	4.35			8.79
330	HISAR	Ghursal-Pz	9.80	8.50	8.57	
331	HISAR	Gurana	1.55		1.45	
332	HISAR	Hansi S	4.90		4.80	
333	HISAR	Hissar	5.40			7.24
334	HISAR	Hissar-Pz	7.85	7.10	7.47	
335	HISAR	Jaga Bara-DW	9.10		9.15	
336	HISAR	Juglan	2.05		1.95	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
337	HISAR	Kabrer	16.50		16.50	
338	HISAR	Kaliravan	11.50		11.45	
339	HISAR	Kanoh-Pz	9.90		9.80	9.34
340	HISAR	Khanda Kheri-Pz	9.39		9.41	
341	HISAR	Kharakpunia	6.70		7.40	8.90
342	HISAR	Kherijalab-Pz	8.80	8.80	8.87	12.14
343	HISAR	Khotkalan	11.67	12.83	12.30	16.27
344	HISAR	Kirori	14.50		14.15	12.45
345	HISAR	Kirtan	12.97	13.00	12.22	
346	HISAR	Ladwi-DW	4.80		4.85	
347	HISAR	Litani-DW	4.41			4.41
348	HISAR	Mangali-Pz	5.15	4.70	4.35	
349	HISAR	Mehanda-DW	4.85		4.75	
350	HISAR	Mirka	0.15	1.76	2.74	
351	HISAR	Moda Khera-DW	5.85		5.20	
352	HISAR	Narnaud S	16.01		17.65	
353	HISAR	Pali-DW	12.50		12.50	
354	HISAR	Petwar-DW	6.20		6.05	2.83
355	HISAR	Rajli Cross	0.90	2.00	2.54	
356	HISAR	Rajthal1	15.24		15.95	4.41
357	HISAR	Samani	5.06	3.99	3.89	4.91
358	HISAR	Sorkhi-Pz	3.59	2.15	2.00	2.05
359	HISAR	Talwani Badshahpur-DW	7.89		7.85	
360	HISAR	Talwani Rana-DW	8.15		8.20	
361	HISAR	Thurana-DW	2.52		1.83	
362	HISAR	Uklana	11.95		12.00	
363	HISAR	Uklana Mandi-Pz				13.68
364	HISAR	Umra	8.62		8.55	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
365	JHAJJAR	Asanda-DW	5.16			
366	JHAJJAR	BabraDW	3.42			
367	JHAJJAR	Badli	5.44			
368	JHAJJAR	Bagoa	2.33		2.74	1.70
369	JHAJJAR	Bahadurgarh	9.75			
370	JHAJJAR	Bamroli- DW	6.61			
371	JHAJJAR	Beri	2.69			
372	JHAJJAR	Bhurawas-Pz	1.86			
373	JHAJJAR	Chamanpura	2.77	0.85		
374	JHAJJAR	Chhara	5.55	5.21	5.24	5.46
375	JHAJJAR	Chuchakwas	4.14	3.26	3.66	
376	JHAJJAR	Dehkora-DW	2.79			
377	JHAJJAR	Dighal	1.89			
378	JHAJJAR	Dubhaldhan	4.77		4.55	4.72
379	JHAJJAR	Dulhera	4.29		3.01	2.76
380	JHAJJAR	Gabhana	2.43		1.99	
381	JHAJJAR	Goria-DW	2.86			
382	JHAJJAR	Hasanpur	6.11			
383	JHAJJAR	Jakhoda-DW	4.18			
384	JHAJJAR	Jhajjar	2.13			
385	JHAJJAR	Jhajjar1	3.22			
386	JHAJJAR	Jharli	11.27			
387	JHAJJAR	Kaliawas- DW	2.53			
388	JHAJJAR	Kamalgarh-DW	5.78			
389	JHAJJAR	Kheri Asra DW	5.19			
390	JHAJJAR	Kherka Gujjar- DW	3.52			
391	JHAJJAR	Kulasi	1.45		1.10	0.99
392	JHAJJAR	Lakeria- DW	2.34			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
393	JHAJJAR	Lohari- Pz	29.67			
394	JHAJJAR	Majra Deswal	1.55		0.44	
395	JHAJJAR	Matanhail-Pz	1.94			
396	JHAJJAR	Mudsa	1.14		0.39	
397	JHAJJAR	Salhawas	4.06			3.86
398	JHAJJAR	Sankol	2.19		1.25	1.86
399	JHAJJAR	Silana-DW	2.04			
400	JHAJJAR	Subnah	2.14	6.91	1.54	
401	JHAJJAR	Wazirpur	2.01		1.50	1.56
402	JHAJJAR	Yaqubpur	5.39			
403	JIND	Alewa	39.60		43.55	
404	JIND	Alewa Pz	34.60			
405	JIND	Anta-Pz	16.00		17.10	
406	JIND	ATI Krishna1(s)	24.33			
407	JIND	Baroda	18.25		18.37	17.99
408	JIND	Belrakha	7.35		7.15	
409	JIND	Bhana Barahman-DW	8.60		8.30	
410	JIND	Bhuslana-Pz	17.42		18.52	
411	JIND	Bibipur-OW	19.40			
412	JIND	Brahmanwas	8.92		8.43	6.75
413	JIND	Chhabri	4.58	1.07	2.13	2.93
414	JIND	Danaudakalan	8.50		7.85	
415	JIND	Danoda Khurd-Pz	5.70		4.80	
416	JIND	Dhigana-DW	3.50		1.50	
417	JIND	Dorana Pz	26.60		30.13	34.03
418	JIND	Ganda Khera-DW	18.65			
419	JIND	Gangoli-DW	3.50		1.95	
420	JIND	Gurusar-DW	8.50		8.50	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
421	JIND	Hasanpur-Pz	39.24		39.94	
422	JIND	Igra	15.25		15.05	
423	JIND	Jamni-DW	13.26		14.61	
424	JIND	Jhamula	4.17	4.79	2.55	4.31
425	JIND	Jhanj Kalan	18.95		18.43	
426	JIND	Jind-Pz	27.50		27.90	
427	JIND	Julana Pz	6.94		6.42	5.40
428	JIND	Julana-DW	5.97			
429	JIND	Kakrod-DW	16.10		15.70	
430	JIND	Kalwan	5.40		2.40	
431	JIND	Kalwan-Pz	24.83		27.68	
432	JIND	Kandela-Pz	30.90		33.00	
433	JIND	Karela-DW	4.60		3.20	
434	JIND	Karsindhu-Dw	25.30		24.55	
435	JIND	Karsola-DW	4.50		2.50	
436	JIND	Koel-DW	29.90			
437	JIND	Korar	13.26		17.23	14.56
438	JIND	Lajwana Kalan	2.60		2.00	
439	JIND	Lochap Pz	15.95		17.00	11.83
440	JIND	Ludhana	2.58		1.28	
441	JIND	Mandi Kalan-DW	15.90		15.55	
442	JIND	Mohal Khera Pz	7.65		5.50	6.00
443	JIND	Narwana S	4.30		2.40	
444	JIND	Pega-DW	24.65			
445	JIND	Pillukhera			6.50	5.73
446	JIND	Pillukhera-Pz	7.50		6.68	
447	JIND	Pipaltha-Pz	32.50		36.00	
448	JIND	Pokerikheri-Pz	23.40		26.80	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
449	JIND	Rajpura-Pz	22.60			
450	JIND	Rasidan Pz	30.30		34.90	
451	JIND	Ratta Khera-DW	16.62		19.62	
452	JIND	Safidon (s)	17.07		17.58	18.00
453	JIND	Safidon 1(s)	17.40			
454	JIND	Sahanpur-Pz	18.77		23.27	
455	JIND	Sanchakhera	5.40		4.76	
456	JIND	Uchana	19.44		19.62	19.44
457	JIND	Uchana Pz	21.50	20.65		22.42
458	JIND	Bakal-DW	20.85			
459	JIND	Balbehra-Pz	35.95		45.60	30.48
460	JIND	Balu-DW	8.70		9.10	
461	JIND	Barsana-Pz	26.50		26.95	
462	JIND	Chika-Pz	43.99		45.98	15.70
463	JIND	Dhons-Pz	29.94		31.60	
464	JIND	Dhunderheri-DW	17.98			
465	JIND	Guhna	28.18	31.03	29.26	
466	JIND	Harigarh Kingan-Pz	36.92		38.80	28.75
467	JIND	Jakhauli-Pz	13.30	15.00	13.79	
468	JIND	Jandaula-Pz	33.50			8.96
469	JIND	Kaithal S	28.32		29.62	18.70
470	JIND	Kalayath	4.98		2.31	
471	JIND	Kalayath S	5.55	3.00	3.62	2.93
472	JIND	Kalesar-DW	13.90		14.20	
473	JIND	Kamalpur-DW	13.43		14.10	
474	JIND	Kathana-Pz	16.35		16.45	
475	JIND	Kaul-Pz	27.30		29.68	21.29
476	JIND	Kelaram	9.06		8.68	29.08

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
477	JIND	Khanpur-Pz	39.35		39.10	11.74
478	JIND	Kheorak-Pz	36.87		37.80	38.20
479	JIND	Kheri Lamba-DW	5.92		6.04	
480	JIND	Kheri Raowali-DW	13.87		13.92	
481	JIND	Manas	40.64		41.49	
482	JIND	Manaspatti-Pz	38.40	40.45	40.25	
483	JIND	Mataur	8.41	8.96	7.71	39.84
484	JIND	Mundri	19.90		21.13	6.51
485	JIND	Padla 1(s)	42.17	41.54	44.45	17.44
486	JIND	Pai-DW	22.96		23.60	44.63
487	JIND	Peoda	16.07	15.02	16.92	
488	JIND	Peoda_Pz	16.30		13.40	
489	JIND	Pundri(s)	26.56			12.76
490	JIND	Rajaund-Pz	16.55		16.60	27.72
491	JIND	Ram Garh-DW	4.72			
492	JIND	Rasulpur Ghamri-Pz	40.95		42.67	
493	JIND	Serdha-DW	18.60		19.20	41.90
494	JIND	Sirsal-Pz	27.50		29.16	
495	JIND	Siwan-Pz	44.80		45.80	27.88
496	JIND	Solu Majra-Pz	30.20			
497	JIND	Songri-DW	16.60			
498	JIND	Tik	33.70			
499	KARNAL	Ajanthali-Pz	26.03			
500	KARNAL	Alipur-PZ	31.39		30.90	
501	KARNAL	Amin S	34.07		33.47	33.34
502	KARNAL	Amupur Chakda			27.65	27.78
503	KARNAL	Amupur-PZ	27.85		25.90	
504	KARNAL	Anchla-Pz	13.27			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
505	KARNAL	Andhera-PZ	11.07		10.56	
506	KARNAL	Anjanthali-Pz	27.90		25.88	
507	KARNAL	Ardana-PZ	14.14		17.09	
508	KARNAL	Assandh-Pz	17.53		20.10	
509	KARNAL	Badson- PZ	32.95		32.50	
510	KARNAL	Bahri-PZ	25.24		28.70	
511	KARNAL	Balhera-s	13.69		12.82	4.29
512	KARNAL	Balla- Pz	19.43		23.40	
513	KARNAL	Bansa-PZ	25.16		24.25	
514	KARNAL	Barthal-PZ	29.59		29.38	
515	KARNAL	Bastali-PZ	29.32			
516	KARNAL	Beholpur-PZ	24.82		24.45	
517	KARNAL	Bijna-PZ	14.24		13.66	
518	KARNAL	Budanpur-Pz	10.04		9.90	
519	KARNAL	Chandsamand-PZ	11.19		10.72	
520	KARNAL	Chaura-Pz	21.48			
521	KARNAL	Chirao-PZ	20.35		20.30	
522	KARNAL	Chochra-PZ	25.72		29.02	27.43
523	KARNAL	Choor Karsa-PZ	26.94		31.40	
524	KARNAL	Chorkharsa-Pz	27.80		33.25	32.03
525	KARNAL	Dabarthala-PZ	24.64		26.20	
526	KARNAL	Dachar-PZ	30.84		29.95	
527	KARNAL	Dadupur Khurd-Pz	17.08		16.82	
528	KARNAL	Dadupur-PZ	19.89		19.43	
529	KARNAL	Darar	14.97		13.65	
530	KARNAL	Dhanaura--PZ	12.22		11.98	
531	KARNAL	Dingar Majra-Pz	35.60	39.45	38.05	36.70
532	KARNAL	Domsid	21.99		24.84	23.59

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
533	KARNAL	Faridpur-Pz	25.76		24.98	
534	KARNAL	Gagsina-PZ	10.39		13.04	
535	KARNAL	Gangateri-Pz	27.17		31.10	
536	KARNAL	Garhi Khajur S	17.25		16.79	16.09
537	KARNAL	Gharaunda-Pz	22.05		23.45	
538	KARNAL	Ghiar-Pz	12.22		10.37	
539	KARNAL	Gholpura-PZ	22.29		21.84	
540	KARNAL	Gogripur-PZ	10.11		9.50	
541	KARNAL	Gohida -PZ	25.01		24.75	
542	KARNAL	Goli-PZ	14.99		20.40	
543	KARNAL	Gondar-Pz	27.10		31.75	28.17
544	KARNAL	Gondhar	25.99		25.40	
545	KARNAL	Gudha-PZ	11.55		11.22	
546	KARNAL	Indri	12.85		11.03	10.70
547	KARNAL	Jainpur-PZ	12.33		11.81	
548	KARNAL	Jalmana PZ	26.11			27.02
549	KARNAL	Janesron--PZ	10.87		10.75	
550	KARNAL	Jani-PZ	10.98		10.65	
551	KARNAL	Jaroli Khurd-Pz	8.00	8.20	7.15	
552	KARNAL	Jhanjari-Pz	16.94		17.65	
553	KARNAL	Jundla1	25.03		25.98	
554	KARNAL	Kachhwa Pz	21.27		20.80	
555	KARNAL	Kalampura-PZ	19.18		18.71	
556	KARNAL	Kalheri-PZ	33.98		36.25	
557	KARNAL	Kalri Jagir S	4.90		4.40	4.26
558	KARNAL	Kalsi	25.66		25.94	
559	KARNAL	Kalsora-PZ	11.04		10.66	
560	KARNAL	Kambopura-PZ	19.35		18.90	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
561	KARNAL	Khanpur-PZ	19.38		18.88	
562	KARNAL	Khizrabad-PZ	27.75		31.70	
563	KARNAL	Kohnd S	29.92		29.98	
564	KARNAL	Kurlan-Pz	21.57		26.29	
565	KARNAL	Kutail S	25.27		27.27	25.22
566	KARNAL	Majra Roran	26.48		28.48	25.72
567	KARNAL	Makhala S	8.56			
568	KARNAL	Manak Mazra-PZ	26.92		26.90	
569	KARNAL	Mehmadpur-Pz	14.62		13.92	
570	KARNAL	Mohidinpur-Pz	16.25		16.30	16.25
571	KARNAL	Mormazra-PZ	17.14		20.10	
572	KARNAL	Mound S	25.70		28.98	
573	KARNAL	Munak	6.01		11.08	
574	KARNAL	Mundh-dw	23.55		27.50	
575	KARNAL	Mundi Garhi--PZ	8.76		8.27	
576	KARNAL	Musepur-PZ	7.45		6.88	
577	KARNAL	Mustafabad-PZ	9.75		9.86	
578	KARNAL	Nabipur-PZ	12.16		11.95	
579	KARNAL	Nalipur-Pz	15.95		15.55	
580	KARNAL	Nalvi Kalan-Pz	12.98		12.69	13.63
581	KARNAL	Nanhera	9.03		8.52	8.41
582	KARNAL	Naru Kheri-PZ	17.76		17.55	
583	KARNAL	Nasirpur-Pz	13.04		12.67	
584	KARNAL	Nisang-Pz	33.05		20.95	
585	KARNAL	Padhana-DW	24.18		26.20	
586	KARNAL	Phurlak S	22.12		24.35	24.97
587	KARNAL	Phusgarh-Pz	23.02		22.78	
588	KARNAL	Popra-PZ	26.12		30.30	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
589	KARNAL	Pundrak-PZ	16.35		15.60	
590	KARNAL	Rambha-Pz	9.47		9.45	
591	KARNAL	Randauli-Pz	10.25		9.88	
592	KARNAL	Ranwar-Pz	21.32		20.57	
593	KARNAL	Rasin-PZ	20.88		19.90	
594	KARNAL	Rattak-Pz	25.97		31.43	
595	KARNAL	Rindal-PZ	14.36		13.82	
596	KARNAL	Risalwa-PZ	20.05		27.50	
597	KARNAL	Sadarpur-PZ	6.55		5.87	
598	KARNAL	Sagga-Pz	24.35		26.75	
599	KARNAL	Salwan-B	20.18		27.20	
600	KARNAL	Sambli-Pz-M	24.84		27.92	26.34
601	KARNAL	Sambli-Pz-S	24.86		27.90	
602	KARNAL	Subri-PZ	20.07		19.72	
603	KARNAL	Taprana-PZ	18.85		19.57	
604	KARNAL	Taraori-Pz	24.27		26.60	
605	KARNAL	Udana-Pz	35.82		35.15	
606	KARNAL	Uplani-PZ	24.23		28.70	
607	KURUKSHETRA	Adhoya-Pz	39.10		39.84	
608	KURUKSHETRA	Ajrawer-PZ	41.34		42.00	
609	KURUKSHETRA	Bachki-Pz	34.36		37.30	38.64
610	KURUKSHETRA	Badarpur-PZ	20.18		21.10	
611	KURUKSHETRA	Bakali-PZ	37.96	37.00	38.89	
612	KURUKSHETRA	Bapda-PZ	29.52		30.58	
613	KURUKSHETRA	Barhan-PZ	40.64		40.27	
614	KURUKSHETRA	Barna-PZ	28.02		29.00	
615	KURUKSHETRA	Baronda-Pz	21.75		20.23	19.60
616	KURUKSHETRA	Barshami-PZ	31.50		32.42	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
617	KURUKSHETRA	Batheri-PZ	35.53		36.08	
618	KURUKSHETRA	Berthala S	38.33		45.43	42.73
619	KURUKSHETRA	Bhore Saidan S	33.03		33.95	
620	KURUKSHETRA	Bodhni (s)	36.09			
621	KURUKSHETRA	Budha-PZ	29.76		30.89	
622	KURUKSHETRA	Busthala-PZ	41.07		41.87	
623	KURUKSHETRA	Chanalheri-PZ	40.90		41.54	
624	KURUKSHETRA	Chhapra-Pz	37.12		37.95	
625	KURUKSHETRA	Dabkhera-Pz	35.65	39.45	36.30	36.00
626	KURUKSHETRA	Dhir Pur-PZ	40.10		41.16	
627	KURUKSHETRA	Diwana-PZ	31.89		32.45	
628	KURUKSHETRA	Garhi Roran-PZ	31.15		31.85	
629	KURUKSHETRA	Ghararsi-PZ	29.83		29.94	
630	KURUKSHETRA	Gobind Garh-PZ	28.98		29.96	
631	KURUKSHETRA	Gol Pura-PZ	46.56		47.23	
632	KURUKSHETRA	Gumthala Garhu-PZ	35.98		36.54	
633	KURUKSHETRA	Hathira-PZ	27.60			
634	KURUKSHETRA	Hatira (s)	27.60		28.57	
635	KURUKSHETRA	Helwa-PZ	35.39		35.85	
636	KURUKSHETRA	Ishaque S	33.63		35.22	35.03
637	KURUKSHETRA	Ismailpur-PZ	41.13		41.97	
638	KURUKSHETRA	Ismilabad-St-Pz	41.02		41.93	
639	KURUKSHETRA	Jalbehra-PZ	41.94		42.65	
640	KURUKSHETRA	Jansa-Pz	42.67		43.25	
641	KURUKSHETRA	Jhansa-PZ	38.19			
642	KURUKSHETRA	Jogna Khera-Pz	33.28		34.13	33.50
643	KURUKSHETRA	Kalsani-PZ	46.20		46.87	
644	KURUKSHETRA	Karaha Sahib-PZ	34.10		34.58	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
645	KURUKSHETRA	Kaulapur S	42.58			
646	KURUKSHETRA	Kharindwa	42.93		43.57	
647	KURUKSHETRA	Kheri Ran Nagar-PZ	35.97		36.92	
648	KURUKSHETRA	Lakhmari-PZ	42.65		43.27	
649	KURUKSHETRA	Landi-PZ	51.47		52.43	
650	KURUKSHETRA	Lohar Majra-PZ	27.90		28.76	
651	KURUKSHETRA	Lohara-Pz	40.78		41.84	
652	KURUKSHETRA	Lukhi-Pz	34.50		35.12	
653	KURUKSHETRA	Malikpur-Singhpura-Pz	42.28		42.89	
654	KURUKSHETRA	Mangana-PZ	35.12		35.68	
655	KURUKSHETRA	Mangoli Jattan-PZ	39.43		40.15	
656	KURUKSHETRA	Mirzapur-PZ	32.58		27.93	
657	KURUKSHETRA	Mohri-Dw	8.97		9.45	
658	KURUKSHETRA	Mohri-Pz	33.30		33.96	
659	KURUKSHETRA	Morthala-PZ	40.25		41.18	
660	KURUKSHETRA	Murtzapur-Pz		27.80	33.00	
661	KURUKSHETRA	Naisi-Pz	42.26		42.86	
662	KURUKSHETRA	Padlu-PZ	44.07		44.65	
663	KURUKSHETRA	Ram Sharan Majra-Pz	39.51		40.35	
664	KURUKSHETRA	Rao Garh-PZ	27.83		29.15	
665	KURUKSHETRA	Rawa-PZ	43.50		43.95	
666	KURUKSHETRA	Rohit-PZ	42.39		43.00	
667	KURUKSHETRA	Samalkhi-Pz	48.28			
668	KURUKSHETRA	SandholaPZ	36.66		36.95	
669	KURUKSHETRA	Sarai Sukhi-PZ	41.60		42.38	
670	KURUKSHETRA	Sarsa-PZ	34.67		35.21	
671	KURUKSHETRA	Shanti Nagar-PZ	42.76		43.16	
672	KURUKSHETRA	Sirsala-Pz	37.98			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
673	KURUKSHETRA	Sunarain Dhanani-PZ	41.25		41.86	
674	KURUKSHETRA	Sunder Pur-PZ	37.74		37.85	
675	KURUKSHETRA	Surmi-PZ	36.62		37.12	
676	KURUKSHETRA	Tangore-Pz	39.28		43.85	
677	KURUKSHETRA	Tatka-PZ	39.54			
678	KURUKSHETRA	Teokar-PZ	36.50		36.89	
679	KURUKSHETRA	Teora-PZ	43.90		44.53	
680	KURUKSHETRA	Thol-PZ	43.37		44.26	
681	KURUKSHETRA	Tigri-PZ	43.50		43.86	
682	KURUKSHETRA	Umri-Pz	37.18		39.34	
683	KURUKSHETRA	Urmai-PZ	40.31		39.35	37.48
684	KURUKSHETRA	Yara-PZ	42.80		43.58	
685	MAHENDRAGARH	Atali-DW	24.30		25.05	
686	MAHENDRAGARH	Barda-DW	55.50		56.00	
687	MAHENDRAGARH	Basirpur	25.20		25.30	
688	MAHENDRAGARH	Bayal	21.80		21.35	
689	MAHENDRAGARH	Berundla-DW	34.15		34.45	
690	MAHENDRAGARH	Bhojawas-DW	38.40		38.40	
691	MAHENDRAGARH	Buwana-Pz	52.69		53.84	
692	MAHENDRAGARH	Chandpura-Pz	68.60		69.10	
693	MAHENDRAGARH	Chelawas-DW	37.60		38.10	
694	MAHENDRAGARH	Deroli Ahir	14.78		14.44	
695	MAHENDRAGARH	Deroli Ahir1	9.70			
696	MAHENDRAGARH	Dhancholi-DW	36.55		36.55	
697	MAHENDRAGARH	Faizabad-DW	20.50		20.95	53.36
698	MAHENDRAGARH	Kalba-DW	31.00		30.30	
699	MAHENDRAGARH	Kaninakhas1	27.52		28.90	
700	MAHENDRAGARH	Kharkara Bas-DW	18.65		17.10	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
701	MAHENDRAGARH	Kheri	19.80		19.65	
702	MAHENDRAGARH	Kheri-Pz	55.80		55.10	
703	MAHENDRAGARH	Khodana-DW	38.00			16.34
704	MAHENDRAGARH	Khodma-DW	72.50		94.30	
705	MAHENDRAGARH	Kultajpur-DW	100.00		98.00	7.93
706	MAHENDRAGARH	Nagal Kalia-DW	51.56		53.15	
707	MAHENDRAGARH	Narnaul	8.27	7.90		
708	MAHENDRAGARH	Pachnota-DW	19.50		18.80	
709	MAHENDRAGARH	Pali-Pz	35.80		36.30	
710	MAHENDRAGARH	Pathera-DW	30.30		30.80	
711	MAHENDRAGARH	Shelang-DW	33.50		33.70	
712	MAHENDRAGARH	Tazpur-Pz	67.30		67.60	
713	MEWAT	Agaon-Pz	14.30			
714	MEWAT	Akaira	4.47	5.30	7.73	3.73
715	MEWAT	Aminabad-DW	2.93			
716	MEWAT	Bhadas-DW	6.35		6.22	
717	MEWAT	Firozepur Jhirka	14.50			
718	MEWAT	Gulaltha	0.87		0.70	
719	MEWAT	Indri	4.80	2.18		2.16
720	MEWAT	Kheri1	5.20		5.94	3.48
721	MEWAT	Luhingakalan	5.80			
722	MEWAT	Malab	4.12	4.18	4.34	4.33
723	MEWAT	Nagina	7.91			8.47
724	MEWAT	Naharika-Pz	20.25			
725	MEWAT	Nuh	3.43		3.84	3.30
726	MEWAT	Nuh1	3.09			2.64
727	MEWAT	Pipaka	20.35		20.63	
728	MEWAT	Punhana	14.60			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
729	MEWAT	Punhana-Pz	12.10			
730	MEWAT	Rangla Dhani-Pz	25.82		26.12	
731	MEWAT	Rathiwas	13.35		13.37	
732	MEWAT	Sarauli-DW	1.93			
733	MEWAT	Sikarwa	4.60			
734	PALWAL	Badraun	8.85		9.25	
735	PALWAL	Baghaura	2.45		1.63	1.60
736	PALWAL	Bahin-DW	6.95			
737	PALWAL	Bamnikhera	10.00			
738	PALWAL	Banchari-DW	9.57			
739	PALWAL	Barauli-Pz	12.80		11.49	12.59
740	PALWAL	Bazida Pahar-DW	6.10			
741	PALWAL	Bhiduki-DW	6.20			
742	PALWAL	Bibipur-DW	3.75			
743	PALWAL	Chhaensa-DW	2.90			
744	PALWAL	Dighaut	12.06		11.38	12.30
745	PALWAL	Gulawad-DW	11.30			
746	PALWAL	Hasan pur	19.40			
747	PALWAL	Hathin	10.05			
748	PALWAL	Hodel1	12.57			
749	PALWAL	Jawan- Pz	18.13		18.36	18.82
750	PALWAL	Khambi	3.45		3.75	2.49
751	PALWAL	Kot	9.26			
752	PALWAL	Lakhnaka	8.10		8.42	9.13
753	PALWAL	Mandkola	1.40			
754	PALWAL	Nangal Jat-DW	10.30			
755	PALWAL	Palwal	7.64		6.82	7.92
756	PALWAL	Palwal-Pz	9.74			9.10

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
757	PALWAL	Pehladpur-Pz	7.47		6.95	7.82
758	PALWAL	Pelak-Pz	21.92		22.23	
759	PALWAL	Phulwari-DW	10.70			
760	PALWAL	Pirgarhi- Pz	9.92		7.88	10.20
761	PALWAL	Rasul Pur			7.14	
762	PALWAL	Sarai-DW	11.05			
763	PALWAL	Tumsara	5.42	5.38	5.43	7.27
764	PANCHKULA	Bahoriyan-Dw	9.10		3.59	
765	PANCHKULA	Barwala-Pz	12.25		12.75	
766	PANCHKULA	Batour	9.07		8.35	
767	PANCHKULA	Bunga At Dabkhori-DW	36.25		35.25	
768	PANCHKULA	Devnagar(Panchkula)			9.34	
769	PANCHKULA	Dhakwala-Dw	2.70		2.22	2.05
770	PANCHKULA	Dharampur	16.60		9.53	10.77
771	PANCHKULA	Golpura-DW	3.45		4.15	4.53
772	PANCHKULA	Hangola	8.41		4.72	4.35
773	PANCHKULA	Jaspur-DW	16.64		16.35	17.75
774	PANCHKULA	Jaswant Garh-DW	5.36		5.14	
775	PANCHKULA	Kakar Majra	9.83		11.58	11.73
776	PANCHKULA	Khera			28.78	29.01
777	PANCHKULA	Kheri-DW	10.50		9.88	
778	PANCHKULA	Kona	6.13			
779	PANCHKULA	Kundi-DW	19.40		18.90	
780	PANCHKULA	Maranwala	21.00		20.50	
781	PANCHKULA	Mauli-DW	24.20		23.70	
782	PANCHKULA	Nadha-DW	3.10		2.32	
783	PANCHKULA	Nandpur-Dw	1.35		0.68	
784	PANCHKULA	Parwala	18.92		18.00	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
785	PANCHKULA	Patwi		9.78		9.99
786	PANCHKULA	Raipur Rani-Pz	19.65		17.80	
787	PANCHKULA	Raipurrani	5.78		11.23	
788	PANCHKULA	Ram Nagar-DW	18.50		16.80	
789	PANCHKULA	Ramgarh-DW	12.95		11.50	
790	PANCHKULA	Rampur-DW	8.40		8.20	
791	PANCHKULA	Rehna-DW	17.19		16.15	
792	PANCHKULA	Shahjahan Pur-DW	21.47		21.16	
793	PANCHKULA	Thapli-Dw	7.65		5.70	
794	PANCHKULA	Toka-DW	8.90		8.17	
795	PANIPAT	Babail Pz S	21.80		25.04	18.43
796	PANIPAT	Baholi-Pz	18.32		19.44	
797	PANIPAT	Bandh-Dw	5.42		6.40	
798	PANIPAT	Bhallour Pz	24.55		14.59	18.43
799	PANIPAT	Brahman Majra-Dw	4.42		4.70	
800	PANIPAT	Dakadla S	23.72		25.42	24.84
801	PANIPAT	Dharamgarh S	16.56		18.09	17.73
802	PANIPAT	Dumiana-Dw	5.88		6.84	
803	PANIPAT	Hathwala-Pz	14.75		15.28	
804	PANIPAT	Israna Pz	3.47		4.14	3.70
805	PANIPAT	Kaith-Dw	3.37		4.65	
806	PANIPAT	Karhansh Pz	34.15		35.88	36.00
807	PANIPAT	Khalila Manjran	6.08		5.19	6.65
808	PANIPAT	Khandra	16.81		17.08	
809	PANIPAT	Khelalla Pehl S			29.53	23.25
810	PANIPAT	Kiwana	29.13		30.89	
811	PANIPAT	Lohari (s)	3.36		1.10	
812	PANIPAT	Mehmadpur	22.12		22.97	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
813	PANIPAT	Nara	21.36			
814	PANIPAT	Nariana-PZ	8.92			8.00
815	PANIPAT	Naultha	21.08		22.04	
816	PANIPAT	Nizampur	27.55		28.08	
817	PANIPAT	Patti Kalyana S	34.00		34.31	
818	PANIPAT	Puther Pz	11.78		11.64	10.57
819	PANIPAT	Samalkha-Pz	36.37		37.10	
820	PANIPAT	Sanauli Khurd-Pz	14.00		13.40	14.12
821	PANIPAT	Shahpur			4.14	4.91
822	PANIPAT	Sink	5.29		5.23	
823	PANIPAT	Untilya	7.35	4.15	3.81	
824	PANIPAT	Urlana Kalan	13.99	15.41	15.38	15.00
825	REWARI	Bahu	18.30		19.40	
826	REWARI	Balawas	9.71		9.01	
827	REWARI	Bawal DW	19.40		18.98	
828	REWARI	Bawal Pz	27.70		27.28	28.08
829	REWARI	Berli Khurd-DW	16.39		15.99	
830	REWARI	Bhakli-DW	12.20		12.10	
831	REWARI	Bharangi-DW	18.60		18.00	
832	REWARI	Garhi-DW	16.21		15.96	
833	REWARI	Guriani	18.60			
834	REWARI	Gurkawas-DW	7.50		6.70	
835	REWARI	Hansaka-DW	7.50		5.40	
836	REWARI	Harinagar-DW	14.15		13.40	
837	REWARI	Jatuwas-DW	21.60		20.50	
838	REWARI	Karnawas	14.18		14.04	14.95
839	REWARI	Karoli-DW	14.25		14.60	
840	REWARI	Khera Bahu-DW	20.68		20.28	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
841	REWARI	Khol	64.85		56.73	
842	REWARI	Kumbhawas-DW	17.50			
843	REWARI	Mandola-Pz	66.70	68.49		68.91
844	REWARI	Massani	25.00		24.66	25.22
845	REWARI	Mubarikpur-DW	17.75		17.75	
846	REWARI	Nahar	22.10		21.10	
847	REWARI	Nangal Jamalpur-Pz	67.50			67.90
848	REWARI	Nangal Mundi-DW	17.10		16.60	
849	REWARI	Palhawas-DW	4.50		3.85	
850	REWARI	Pali-Pz	50.75		51.25	
851	REWARI	Ratanthal-DW	8.00		7.90	
852	REWARI	Rewari	14.18		13.18	
853	REWARI	Rholiawas-Pz	12.20	11.90	11.85	
854	REWARI	Rohrai-DW	6.74		5.44	
855	REWARI	Sangwari	7.26			
856	REWARI	Shadipur-DW	10.36		9.66	
857	REWARI	Sudharana-DW	7.47		7.52	
858	ROHTAK	Ajaib-DW	2.53			
859	ROHTAK	Assan-DW	3.22			
860	ROHTAK	Atail-DW	4.49			
861	ROHTAK	Baland	2.62		1.85	2.18
862	ROHTAK	Bhal Anandpur	3.15		1.71	2.11
863	ROHTAK	Bhalaut	1.43			
864	ROHTAK	Bharain-DW	2.88			
865	ROHTAK	Giji-DW	5.33			
866	ROHTAK	Hassangarh	5.81	5.25	4.80	6.14
867	ROHTAK	Kalanaur	3.70			
868	ROHTAK	Kanheli-DW	2.37			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
869	ROHTAK	Kansala	3.13		2.21	2.43
870	ROHTAK	Kharawar	4.35			
871	ROHTAK	Kherari-DW	2.43			
872	ROHTAK	Kiloi-DW	1.99			
873	ROHTAK	Lahli-DW	2.03			
874	ROHTAK	Lakhan Majara	1.75		1.00	3.02
875	ROHTAK	Lakhan Majra Pz	1.84			
876	ROHTAK	Madina	2.91			
877	ROHTAK	Mahem	16.00	15.05	13.39	13.44
878	ROHTAK	Makhrauli Khurd	3.00			
879	ROHTAK	Meham	13.22			
880	ROHTAK	Muradpur Tekna-DW	3.24			
881	ROHTAK	Nandal-DW	2.35			
882	ROHTAK	Nidhana	3.31			
883	ROHTAK	Ritoli-DW	2.05			
884	ROHTAK	Rohtak	2.87			
885	ROHTAK	Samargopalpur	4.43		2.17	2.29
886	ROHTAK	Sampla	1.82			1.13
887	ROHTAK	Sampla-Pz	1.66		1.12	
888	ROHTAK	Sundana-DW	2.12			
889	ROHTAK	Tiloli-DW	6.33			
890	SIRSA	Ali Mohmmad	29.90			
891	SIRSA	Alikan	12.19			
892	SIRSA	Bharu Khera-DW	11.07			
893	SIRSA	Bhuratwala-Pz	11.70	10.30	11.80	11.61
894	SIRSA	Chaharwala	9.53			
895	SIRSA	Chilkani Dhab	2.40			
896	SIRSA	Chormar	16.48		17.65	17.80

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
897	SIRSA	Chotala	12.00			8.71
898	SIRSA	Chotala-Pz	9.64		9.94	11.15
899	SIRSA	Dabwali Dw	9.91		10.17	8.94
900	SIRSA	Dabwali -Pz S	9.20		9.38	
901	SIRSA	Darba Kalan-Pz	1.90	1.48	1.67	1.66
902	SIRSA	Desu Jodha-DW	12.98			
903	SIRSA	Desu Malkana-DW	14.90			
904	SIRSA	Dholpalia-DW	8.50			
905	SIRSA	Ding	14.94		21.89	
906	SIRSA	Ganga	12.00			
907	SIRSA	Ghushiana	14.10		14.80	14.75
908	SIRSA	Gigorani	4.55		4.85	4.74
909	SIRSA	Goriwala	16.63		16.76	
910	SIRSA	Govindgarh-DW	13.00			
911	SIRSA	Gudia Khera-DW	2.56			
912	SIRSA	Hasu	16.63			
913	SIRSA	Jagiwala-DW	11.99			
914	SIRSA	Jamal	5.32		5.85	5.49
915	SIRSA	Jamal- Pz	5.26		4.72	4.52
916	SIRSA	Kairanwali-DW	2.37			
917	SIRSA	Kalanwali Mandi-Pz	8.64		8.87	8.89
918	SIRSA	Kaluwana	11.20		10.93	11.13
919	SIRSA	Karamsana	8.51	8.74	8.37	8.32
920	SIRSA	Kariwala1	2.37			
921	SIRSA	Kash Ram Dhab	6.91	7.20	10.70	
922	SIRSA	Khuiyan	16.70		17.02	16.80
923	SIRSA	Kurangwali	6.54			
924	SIRSA	Lohgarh	5.18			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
925	SIRSA	Makhu Shorani	3.75			
926	SIRSA	Maltar-DW	12.40			
927	SIRSA	Mammer Khera-Pz	19.90		19.90	19.95
928	SIRSA	Manjiyana	15.37		15.87	15.80
929	SIRSA	Mastian	14.97		14.92	15.06
930	SIRSA	Mithri	18.60		19.20	19.12
931	SIRSA	Nuhian Wali	16.27	16.48	16.44	16.47
932	SIRSA	Odhan Pz	16.44			
933	SIRSA	Ottu 1(s)	31.70			
934	SIRSA	Panniwala Mota	11.01	10.83	10.67	11.04
935	SIRSA	Phaggu-Pz	5.01		4.88	4.79
936	SIRSA	Rasalia Khera	22.55		20.13	21.76
937	SIRSA	Rori -DW	10.67	9.04	10.96	
938	SIRSA	Rupana	2.17			
939	SIRSA	Sadewala	22.45			
940	SIRSA	Sahuwala	2.67			
941	SIRSA	Sainpal-Pz	38.15			
942	SIRSA	Saktakhera	4.16	4.73	4.80	4.71
943	SIRSA	Shergarh-DW	8.77		8.69	8.60
944	SIRSA	Sherpura	14.74	14.79	15.52	14.98
945	SIRSA	Sirsa-Pz	39.90		41.47	41.56
946	SIRSA	Sri Jiwan Nagar-B	45.40		49.30	
947	SIRSA	Sukhchain-DW	9.14			
948	SIRSA	Taruwana	8.93		9.05	8.97
949	SIRSA	Tejakhera	8.10		6.87	7.00
950	SIRSA	Thiraj	10.67			
951	SIRSA	Tigri-DW	6.65			
952	SONIPAT	Ahmadpur Majra-DW	7.41			

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
953	SONIPAT	Ahulana	3.39	2.32	1.97	2.06
954	SONIPAT	Anandpur-Jarot-DW	5.78			
955	SONIPAT	Anwali-Pz	3.62			
956	SONIPAT	Bagru-DW	3.03			
957	SONIPAT	Banwasa-DW	4.41			
958	SONIPAT	Barauli	10.18	10.48	9.07	9.86
959	SONIPAT	Baroda Mor-DW	3.35			
960	SONIPAT	Barona-DW	3.21			
961	SONIPAT	Barswani- DW	7.16		7.04	
962	SONIPAT	Barwasni Pz (s)	6.88		8.02	6.23
963	SONIPAT	Bega Pz	11.32			12.30
964	SONIPAT	Bhainswal	5.10	3.60	2.76	3.80
965	SONIPAT	Bhunderi	4.13		0.62	3.35
966	SONIPAT	Bidhlan-DW	3.78			5.38
967	SONIPAT	Bohela	4.97		4.57	
968	SONIPAT	Butana	5.11	3.38	3.03	3.94
969	SONIPAT	Chhapra-DW	3.35			3.37
970	SONIPAT	Chitana-DW	4.48			
971	SONIPAT	Datauli-Pz	25.85	27.68	27.85	5.00
972	SONIPAT	Farmana	7.90	7.13	8.10	
973	SONIPAT	Ganaur-Pz	31.62			30.17
974	SONIPAT	Gangana-DW	3.10			8.88
975	SONIPAT	Garhwal	2.82		1.69	
976	SONIPAT	Gohana Pz	18.95		18.55	
977	SONIPAT	Gorar-DW	3.17			2.27
978	SONIPAT	Jagsi	2.31		0.95	13.95
979	SONIPAT	Janti Khurd-Pz			14.34	
980	SONIPAT	Jhakauli- Pz	22.40		20.96	

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
981	SONIPAT	Juan-DW	9.72			14.43
982	SONIPAT	Kami- PZ	38.40	40.00		8.50
983	SONIPAT	Kathura	1.87			
984	SONIPAT	Kathura Pz	2.14		1.28	40.40
985	SONIPAT	Khanda-DW	4.04			
986	SONIPAT	Khanpur Kalan-Pz	3.70		2.69	
987	SONIPAT	KheoraPz	31.00		29.06	
988	SONIPAT	Kheri Gujjar-Pz	25.87			
989	SONIPAT	Ladpur-Pz	11.44			28.88
990	SONIPAT	Larsauli-Pz	32.56			
991	SONIPAT	Lath	2.35	0.65	1.10	
992	SONIPAT	Machhri	5.08		2.82	
993	SONIPAT	Mattand-DW	5.84			
994	SONIPAT	Mohana Pzm	5.28		3.75	3.32
995	SONIPAT	Mundlana DW	5.62		4.50	8.90
996	SONIPAT	Mundlana- Pz	4.20		6.40	
997	SONIPAT	Murthal-Pz	34.35	35.40	35.60	3.90
998	SONIPAT	Nahri	6.04	6.46	6.21	
999	SONIPAT	Nizaimpur	2.06			
1000	SONIPAT	Pinana	6.22		5.60	34.96
1001	SONIPAT	Pipli-DW	7.91			6.45
1002	SONIPAT	Pugthala-Pz	6.99			
1003	SONIPAT	Purkhas-Pz	16.69			5.96
1004	SONIPAT	Rai-Bahalgarh-Pz	26.05		27.29	
1005	SONIPAT	RasoI Pz	18.58		17.96	
1006	SONIPAT	Rathdhana-Pz	23.78			14.88
1007	SONIPAT	Rohat	3.69			
1008	SONIPAT	Rukhi-Pz	1.70		0.57	13.52

Annexure-I

S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1009	SONIPAT	Sisnah			6.92	
1010	SONIPAT	Sonepat	28.15			
1011	SONIPAT	Tihar Malikpur-DW	6.18			0.60
1012	YAMUNANAGAR	Amadalpur	7.96			
1013	YAMUNANAGAR	Antawa-Pz	28.51		29.42	
1014	YAMUNANAGAR	Bari Kanari-Pz	29.40		28.40	
1015	YAMUNANAGAR	Bhambauli-1 (s)	18.12		19.19	25.29
1016	YAMUNANAGAR	Bilaspur DW	5.16		6.51	4.94
1017	YAMUNANAGAR	Chamrori-Pz	24.44		24.90	
1018	YAMUNANAGAR	Chhachhrauli	7.75		13.40	
1019	YAMUNANAGAR	Chhachrauli S	16.50			3.40
1020	YAMUNANAGAR	Choli	1.76	0.89	1.09	
1021	YAMUNANAGAR	Damla-Pz	13.65		12.20	
1022	YAMUNANAGAR	Dhaurang S	16.15		15.42	15.26
1023	YAMUNANAGAR	Fatehpur-Pz	17.85		17.45	
1024	YAMUNANAGAR	Jagadhri-Pz	18.63		19.13	
1025	YAMUNANAGAR	Jhiwarheri S	32.36		33.81	
1026	YAMUNANAGAR	Khizrabad	17.02		12.53	16.70
1027	YAMUNANAGAR	Masana Jattan-Pz	28.45		30.25	29.54
1028	YAMUNANAGAR	Mustafabad DW	7.43	7.65	6.70	
1029	YAMUNANAGAR	Mustafabad-Pz	12.13		12.90	12.32
1030	YAMUNANAGAR	Nagal Patti-DW	26.97			
1031	YAMUNANAGAR	Naggal-S	5.90		5.50	
1032	YAMUNANAGAR	Radaur S	16.28		15.18	15.18
1033	YAMUNANAGAR	Ramgarh-DW	8.80		8.35	
1034	YAMUNANAGAR	Rasulpur			8.44	8.13
1035	YAMUNANAGAR	Rasulpur DW	9.40			8.13
1036	YAMUNANAGAR	Sabri	8.28		5.81	8.21

Annexure-I						
S. No	District	Location	Depth to Water Level m (bgl)			
			May-17	Aug-17	Nov-17	Jan-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1037	YAMUNANAGAR	Sadhaura DW	7.55	7.05	6.82	6.75
1038	YAMUNANAGAR	Sadhaura S	8.30			
1039	YAMUNANAGAR	Salehpur-DW	8.12		7.12	
1040	YAMUNANAGAR	Shadipur	5.78		5.36	5.54
1041	YAMUNANAGAR	Tala Kaur S	8.81		7.65	
1042	YAMUNANAGAR	Tehi-Pz	23.62		23.75	
					Page -1 of 1	27-August-2018

Annexure-IA							
S. No.	Water table Elevation m (AMSL)	Latitude			Longitude		
		D	M	S	D	M	S
1.	142.3	28	55	29	76	12	32
2.	153.85	29	36	40	74	41	0
3.	159.6	29	32	15	74	44	30
4.	169.3	29	30	0	74	54	0
5.	170.43	28	20	45	77	19	15
6.	170.44	29	38	40	74	43	15
7.	171.21	29	43	0	74	46	0
8.	173.02	27	51	45	77	12	15
9.	173.1	29	40	20	74	39	25
10.	174.66	29	46	30	74	31	0
11.	175.08	28	9	20	77	25	35
12.	175.1	29	27	45	75	6	18
13.	175.43	27	56	3	77	30	0
14.	175.48	29	39	0	75	25	30
15.	176.03	27	53	0	77	21	0
16.	176.15	28	20	50	77	23	23
17.	178.05	28	23	30	77	28	10
18.	178.37	29	47	30	74	42	30
19.	178.55	29	42	45	74	38	5
20.	178.6	27	57	30	77	13	45
21.	178.9	27	51	40	77	12	20
22.	179.05	29	20	25	74	37	48
23.	179.51	29	51	0	74	59	0
24.	179.57	29	53	10	74	43	12
25.	179.7	27	52	40	77	17	0
26.	179.74	28	25	45	77	23	30
27.	179.95	27	59	10	77	20	10

28.	180.3	29	51	30	74	46	10
29.	180.56	29	47	0	74	40	20
30.	180.57	28	32	0	75	48	0
31.	180.6	28	25	30	77	18	15
32.	180.98	27	57	30	77	13	45
33.	181.08	28	2	40	77	28	20
34.	181.12	29	42	3	75	29	30
35.	181.36	27	49	55	77	8	15
36.	181.7	28	0	35	77	26	45
37.	181.87	28	13	40	77	25	0
38.	181.96	28	34	10	75	40	36
39.	181.96	29	51	22	74	58	0
40.	182.3	29	25	30	74	46	15
41.	182.34	28	2	45	77	14	30
42.	182.55	28	23	40	77	26	20
43.	182.6	28	40	26	75	44	22
44.	182.78	29	47	0	74	50	30
45.	182.87	29	45	0	74	36	58
46.	182.94	28	2	15	77	22	30
47.	183.33	29	55	15	74	48	15
48.	183.5	28	39	8	75	43	21
49.	183.52	28	15	34	77	28	38
50.	183.56	29	46	0	74	53	50
51.	183.6	27	58	40	77	0	45
52.	183.6	28	8	57	77	11	7
53.	183.61	29	57	15	74	44	15
54.	183.7	29	51	20	74	41	5
55.	183.75	28	22	10	77	28	39
56.	184.09	28	9	0	77	19	30
57.	184.3	28	4	20	77	19	30

58.	184.53	28	0	30	77	0	15
59.	184.53	28	1	21	77	10	36
60.	184.69	29	25	20	74	36	45
61.	184.7	28	31	20	75	43	28
62.	184.7	28	34	28	75	58	44
63.	184.7	29	41	30	75	26	45
64.	184.75	27	57	15	77	8	40
65.	184.99	29	41	15	75	34	40
66.	185.06	29	46	30	75	4	10
67.	185.07	28	3	45	77	20	30
68.	185.18	28	2	30	77	0	40
69.	185.2	28	17	30	77	21	40
70.	185.57	28	46	0	75	32	0
71.	185.7	28	19	5	77	18	10
72.	185.82	29	50	0	74	31	0
73.	185.9	28	2	5	77	11	15
74.	186.05	27	57	30	77	16	0
75.	186.2	28	4	40	77	26	20
76.	186.23	29	55	35	74	40	35
77.	186.31	27	55	0	76	59	0
78.	186.49	28	9	0	77	19	30
79.	186.49	28	22	5	77	14	55
80.	186.65	27	56	30	77	1	0
81.	186.72	28	0	30	77	20	30
82.	186.8	27	55	0	77	27	0
83.	186.8	28	31	26	75	56	26
84.	186.8	29	57	15	74	44	15
85.	186.86	28	6	15	77	0	15
86.	186.9	29	15	10	75	5	0
87.	186.99	28	6	15	77	4	15

88.	187.07	27	47	50	77	12	55
89.	187.15	28	11	40	77	22	40
90.	187.36	29	46	25	74	31	30
91.	187.46	29	55	4	74	54	20
92.	187.5	28	31	25	75	54	31
93.	187.63	28	11	10	77	5	55
94.	187.68	29	25	15	74	36	0
95.	187.78	28	57	50	76	17	30
96.	187.9	28	3	0	77	17	20
97.	187.9	29	50	40	74	33	20
98.	188	28	58	0	77	7	15
99.	188.08	29	47	5	74	54	45
100.	188.47	29	56	10	74	51	1
101.	188.55	27	58	15	77	25	0
102.	188.55	29	27	0	76	24	0
103.	188.57	29	53	55	74	56	5
104.	188.6	28	35	15	75	51	59
105.	188.63	28	18	45	77	18	45
106.	188.73	29	45	15	74	51	0
107.	188.9	28	34	47	75	58	29
108.	189.13	27	55	0	77	10	45
109.	189.31	29	0	5	77	1	15
110.	189.35	29	53	30	74	38	10
111.	189.35	30	0	2	76	45	13
112.	189.73	29	27	45	75	15	50
113.	189.8	28	37	35	75	36	54
114.	189.84	29	33	30	74	38	30
115.	190	28	16	0	77	8	20
116.	190.06	29	36	28	75	32	30
117.	190.09	29	11	0	75	30	55

118.	190.11	29	9	0	75	23	50
119.	190.2	28	38	14	75	41	16
120.	190.47	29	4	30	75	29	30
121.	190.5	28	38	1	75	49	7
122.	190.65	29	16	0	75	14	5
123.	190.72	29	13	0	75	31	30
124.	190.88	29	41	59	75	11	3
125.	191	29	12	35	77	1	40
126.	191.07	27	56	10	77	10	10
127.	191.1	28	4	10	77	7	30
128.	191.3	29	43	45	75	51	10
129.	191.33	29	43	40	75	2	20
130.	191.5	28	17	10	77	20	30
131.	191.59	28	13	15	77	18	30
132.	192.02	28	53	45	75	36	15
133.	192.1	28	30	15	76	6	21
134.	192.2	28	22	22	77	11	41
135.	192.44	29	5	33	77	2	5
136.	192.47	28	56	45	75	31	0
137.	192.9	29	12	35	77	1	40
138.	192.95	28	15	40	77	12	20
139.	193.01	29	30	20	75	18	30
140.	193.05	28	30	34	75	56	15
141.	193.26	29	27	15	75	12	15
142.	193.33	28	22	52	76	42	55
143.	193.6	29	1	45	77	1	0
144.	193.65	29	2	26	77	5	28
145.	193.67	29	21	10	75	23	30
146.	193.75	28	56	42	75	31	50
147.	193.83	29	48	0	76	18	0

148.	193.94	29	14	10	77	0	50
149.	193.95	28	56	30	77	5	45
150.	194.2	28	42	11	75	42	26
151.	194.25	28	1	5	77	12	40
152.	194.4	29	28	15	76	27	15
153.	194.5	28	52	2	75	31	19
154.	194.54	30	2	55	76	20	38
155.	194.6	29	23	30	74	48	0
156.	194.62	29	46	40	75	2	10
157.	194.7	28	26	50	76	49	30
158.	194.75	27	49	0	77	1	15
159.	194.81	29	40	30	75	9	0
160.	194.88	29	24	56	76	43	15
161.	194.94	29	18	0	75	8	40
162.	194.99	29	7	0	75	34	0
163.	195	28	23	5	76	40	35
164.	195.1	29	32	9	75	2	58
165.	195.17	28	31	44	76	1	28
166.	195.3	28	37	49	76	2	7
167.	195.32	29	13	15	75	32	50
168.	195.36	29	50	20	74	59	20
169.	195.37	28	43	32	75	36	59
170.	195.38	29	8	0	77	0	52
171.	195.45	28	32	38	75	47	50
172.	195.5	28	27	10	77	1	12
173.	195.62	30	2	25	76	18	0
174.	195.68	29	19	50	74	58	50
175.	195.7	28	29	21	75	58	36
176.	195.7	29	23	2	75	0	2
177.	195.85	28	27	50	77	2	15

178.	195.89	29	40	0	74	57	0
179.	196.05	28	46	0	75	31	45
180.	196.18	28	42	23	75	35	20
181.	196.3	28	42	30	75	33	14
182.	196.48	29	15	5	75	35	40
183.	196.6	29	49	45	76	19	45
184.	196.72	29	0	30	75	36	0
185.	197.29	29	44	30	75	11	45
186.	197.3	28	18	0	77	15	30
187.	197.36	29	49	5	76	20	15
188.	197.6	28	28	49	75	46	37
189.	197.6	28	31	36	75	47	45
190.	197.7	28	31	57	76	4	35
191.	197.74	28	22	15	76	50	10
192.	197.78	28	54	34	75	51	54
193.	197.94	29	17	50	75	34	15
194.	198.1	29	12	55	75	25	30
195.	198.1	29	22	53	76	20	3
196.	198.13	29	52	12	76	28	20
197.	198.2	29	10	15	75	25	22
198.	198.34	29	34	24	76	18	50
199.	198.4	29	17	39	76	13	27
200.	198.5	28	54	45	75	33	48
201.	198.54	27	47	30	76	57	0
202.	198.7	28	21	10	76	41	20
203.	198.89	28	35	0	76	6	30
204.	199	28	28	30	76	55	0
205.	199.1	29	22	22	75	45	25
206.	199.1	29	23	30	75	5	20
207.	199.15	28	33	19	75	47	23

208.	199.3	28	25	30	76	53	0
209.	199.4	29	28	50	76	27	0
210.	199.4	29	30	10	76	55	15
211.	199.49	29	7	11	75	28	30
212.	199.5	28	57	30	75	49	20
213.	199.5	29	18	0	75	48	0
214.	199.5	29	19	17	76	18	25
215.	199.52	29	32	0	75	42	15
216.	199.56	29	18	30	75	39	0
217.	199.65	29	51	5	76	22	20
218.	199.7	27	43	50	76	57	55
219.	199.75	29	24	30	75	8	40
220.	199.92	29	23	15	75	15	30
221.	200	28	20	15	76	45	15
222.	200.08	29	22	48	75	10	7
223.	200.2	28	38	9	75	56	36
224.	200.24	29	51	14	76	22	14
225.	200.5	29	45	26	76	6	37
226.	200.58	28	57	48	76	18	0
227.	200.64	29	45	6	76	11	2
228.	200.7	28	47	49	75	55	44
229.	200.74	29	19	40	74	59	10
230.	200.77	28	50	54	75	37	20
231.	200.85	29	15	21	77	0	36
232.	200.86	29	23	58	75	12	30
233.	200.9	28	29	23	75	47	55
234.	200.92	30	4	5	76	29	20
235.	200.99	29	59	0	76	34	50
236.	201	28	18	47	76	46	15
237.	201	29	17	0	75	16	0

238.	201.18	28	18	0	76	50	10
239.	201.2	29	53	0	76	21	14
240.	201.45	29	48	0	76	22	48
241.	201.5	27	47	30	76	57	0
242.	201.5	29	53	20	76	34	22
243.	201.57	29	28	40	76	30	14
244.	201.76	28	38	0	75	36	30
245.	201.86	29	30	32	76	24	25
246.	201.92	29	49	30	75	0	30
247.	202	28	16	15	76	45	20
248.	202.16	29	42	15	75	53	45
249.	202.21	29	13	30	76	59	15
250.	202.34	29	18	15	75	25	0
251.	202.35	28	47	36	75	53	39
252.	202.35	29	13	15	75	45	30
253.	202.4	29	9	30	75	58	0
254.	202.45	28	25	30	76	51	30
255.	202.6	28	17	48	76	41	25
256.	202.6	28	18	50	77	6	55
257.	202.78	28	55	23	75	57	39
258.	202.85	28	54	55	75	32	42
259.	202.99	29	37	20	75	1	20
260.	203.25	29	57	20	77	3	8
261.	203.28	29	13	25	77	4	0
262.	203.45	29	18	36	77	5	54
263.	203.54	28	43	51	75	33	51
264.	203.75	28	25	0	75	49	0
265.	203.88	29	26	11	76	29	7
266.	203.96	29	13	55	75	33	10
267.	204	28	37	22	75	53	41

268.	204.05	29	22	0	75	20	30
269.	204.1	28	38	53	75	58	18
270.	204.29	29	22	15	75	55	15
271.	204.34	29	13	15	76	14	55
272.	204.37	28	45	55	75	58	59
273.	204.4	29	31	7	76	28	55
274.	204.48	28	52	30	75	55	0
275.	204.53	29	46	30	76	16	0
276.	204.58	28	38	24	76	5	39
277.	204.6	28	23	57	76	52	35
278.	204.6	28	56	2	75	31	19
279.	204.6	29	15	28	76	14	2
280.	204.65	29	28	32	75	36	40
281.	204.88	28	44	44	75	45	58
282.	204.9	28	44	28	75	56	26
283.	204.91	29	13	0	75	47	45
284.	205.08	28	44	30	75	55	30
285.	205.12	29	0	2	75	56	20
286.	205.5	28	37	6	75	51	33
287.	205.56	29	59	0	76	34	50
288.	205.6	29	14	49	76	16	33
289.	205.66	29	28	0	76	11	0
290.	205.7	29	30	9	76	13	36
291.	205.72	29	17	15	76	20	20
292.	205.72	29	59	10	76	47	39
293.	205.73	28	24	32	76	55	9
294.	205.82	29	24	48	75	19	40
295.	206.11	29	39	15	76	34	50
296.	206.24	29	27	40	77	2	15
297.	206.24	29	30	48	76	14	36

298.	206.27	29	16	42	75	29	31
299.	206.27	29	26	45	76	59	15
300.	206.35	28	27	0	76	6	50
301.	206.35	28	52	6	75	50	28
302.	206.38	29	3	10	75	54	45
303.	206.45	29	22	45	75	28	45
304.	206.5	29	28	10	76	11	10
305.	206.5	29	55	12	76	30	5
306.	206.65	29	32	45	76	23	35
307.	206.75	29	26	20	76	11	20
308.	206.76	29	29	9	76	31	12
309.	206.8	28	21	30	76	31	45
310.	206.8	28	52	20	75	57	30
311.	206.82	29	0	28	77	10	13
312.	206.83	29	26	15	75	44	30
313.	206.85	29	16	15	75	28	45
314.	206.9	29	30	30	75	52	45
315.	206.98	30	4	40	76	38	35
316.	207.01	28	48	0	75	49	58
317.	207.02	29	30	44	77	1	24
318.	207.05	29	22	30	76	16	30
319.	207.09	29	4	10	75	40	30
320.	207.13	29	9	46	76	58	17
321.	207.15	29	8	24	75	43	20
322.	207.15	29	15	30	76	11	15
323.	207.27	29	26	55	75	40	15
324.	207.43	29	30	4	76	30	15
325.	207.54	28	46	0	75	42	30
326.	207.55	28	47	50	75	48	30
327.	207.56	28	54	52	77	2	22

328.	207.56	29	48	42	76	31	52
329.	207.61	29	29	50	77	0	6
330.	207.61	29	58	26	76	47	17
331.	207.65	28	29	58	76	59	35
332.	207.65	28	52	30	75	55	0
333.	207.7	28	52	10	75	53	7
334.	208	29	19	30	75	37	22
335.	208.05	28	41	38	75	50	41
336.	208.08	29	30	30	76	59	0
337.	208.1	28	33	47	76	19	50
338.	208.15	28	50	55	75	44	30
339.	208.25	28	41	30	76	56	0
340.	208.25	29	33	43	76	35	6
341.	208.45	29	34	40	76	30	35
342.	208.5	28	57	40	75	55	17
343.	208.57	29	30	10	76	45	2
344.	208.67	30	1	0	76	29	30
345.	208.68	29	48	0	76	24	0
346.	208.7	28	57	36	75	52	46
347.	208.72	30	0	0	76	45	5
348.	208.75	28	48	48	75	34	38
349.	208.75	29	2	51	76	1	24
350.	208.75	29	27	21	76	5	14
351.	208.8	28	35	30	76	49	0
352.	208.8	28	46	2	75	46	14
353.	208.82	29	9	15	75	43	0
354.	208.85	29	24	30	75	41	0
355.	208.88	29	57	21	76	29	33
356.	208.89	29	31	5	76	32	50
357.	208.89	29	40	10	76	43	25

358.	208.9	28	28	20	76	50	30
359.	208.93	29	46	0	76	15	36
360.	208.99	28	35	45	76	16	30
361.	209	28	41	9	76	6	55
362.	209.01	29	0	5	76	5	2
363.	209.04	28	41	50	76	6	26
364.	209.08	30	3	40	76	24	0
365.	209.1	29	16	0	75	59	50
366.	209.16	29	26	45	75	33	0
367.	209.17	29	42	22	75	57	51
368.	209.25	29	21	55	75	30	30
369.	209.3	29	31	5	76	32	50
370.	209.39	28	44	1	76	56	28
371.	209.45	28	38	58	76	15	37
372.	209.45	29	31	3	76	32	45
373.	209.46	28	53	45	76	0	52
374.	209.47	28	36	14	76	22	20
375.	209.5	28	37	28	75	55	2
376.	209.5	28	56	42	76	2	0
377.	209.5	29	10	15	76	4	50
378.	209.5	30	3	55	76	33	6
379.	209.55	28	38	25	75	47	45
380.	209.55	28	38	46	76	20	47
381.	209.6	28	40	26	75	49	46
382.	209.69	30	0	23	76	37	31
383.	209.7	28	49	27	75	41	21
384.	209.7	29	39	30	76	25	45
385.	209.75	29	28	55	75	40	3
386.	209.82	28	28	45	76	46	15
387.	209.83	29	38	54	76	45	17

388.	209.85	29	2	30	75	43	20
389.	209.9	28	27	40	76	59	5
390.	209.9	28	41	10	75	48	41
391.	209.95	28	48	30	76	14	40
392.	209.95	28	54	58	76	6	42
393.	209.98	29	31	45	75	40	20
394.	209.99	28	33	18	76	19	34
395.	210	28	24	17	76	7	16
396.	210.1	28	47	11	76	10	53
397.	210.15	29	9	35	77	4	50
398.	210.2	28	42	0	76	43	0
399.	210.3	28	56	42	76	2	0
400.	210.3	28	57	50	75	57	23
401.	210.35	29	3	15	76	3	22
402.	210.42	28	56	10	76	2	30
403.	210.47	28	54	58	76	6	42
404.	210.6	28	48	25	75	56	25
405.	210.6	29	8	0	76	24	30
406.	210.63	28	36	30	76	27	10
407.	210.66	29	27	15	75	35	10
408.	210.67	29	30	15	75	38	45
409.	210.68	28	40	10	76	16	52
410.	210.7	28	50	22	75	52	40
411.	210.73	29	12	30	75	55	15
412.	210.76	28	56	30	75	41	50
413.	210.78	28	36	45	76	39	15
414.	210.8	28	45	38	75	40	50
415.	210.84	28	50	55	75	44	30
416.	210.89	28	48	28	76	10	58
417.	210.91	30	3	15	76	33	30

418.	210.96	29	23	12	75	55	0
419.	211	29	10	10	76	9	50
420.	211.1	28	49	47	76	0	31
421.	211.1	30	1	20	76	39	49
422.	211.2	28	43	23	75	51	2
423.	211.2	29	37	36	76	40	22
424.	211.22	28	37	12	76	41	35
425.	211.22	28	54	30	77	10	50
426.	211.24	29	57	58	76	48	0
427.	211.25	28	39	0	76	47	0
428.	211.26	29	41	10	75	55	0
429.	211.3	28	37	59	76	7	29
430.	211.31	28	23	10	76	10	40
431.	211.5	28	51	41	76	0	11
432.	211.56	28	43	20	75	54	20
433.	211.57	28	51	25	76	4	0
434.	211.58	30	3	15	76	33	30
435.	211.63	28	40	30	76	50	30
436.	211.66	28	49	36	75	52	37
437.	211.8	28	49	45	76	23	45
438.	211.81	28	42	0	76	2	45
439.	211.82	28	42	10	76	13	0
440.	211.82	29	29	57	76	42	47
441.	211.88	30	5	45	76	46	15
442.	211.95	28	50	47	76	15	8
443.	212	29	27	5	75	35	30
444.	212.03	29	34	57	76	37	32
445.	212.05	29	21	30	76	25	20
446.	212.19	28	37	0	76	39	20
447.	212.19	29	11	18	77	6	25

448.	212.2	29	20	30	76	5	0
449.	212.28	30	7	0	76	44	33
450.	212.3	29	50	50	76	37	0
451.	212.33	29	23	15	76	10	30
452.	212.41	28	36	0	76	30	30
453.	212.41	29	19	12	76	0	57
454.	212.41	29	36	50	75	53	15
455.	212.47	29	56	21	76	35	32
456.	212.5	28	52	26	76	6	16
457.	212.5	29	42	55	76	35	50
458.	212.51	30	7	0	76	40	10
459.	212.59	28	14	40	77	4	10
460.	212.6	28	55	55	77	9	50
461.	212.6	28	57	8	76	5	24
462.	212.75	28	40	28	76	22	14
463.	212.75	29	30	8	77	0	5
464.	212.84	29	20	40	76	0	30
465.	212.87	30	7	55	76	39	15
466.	212.9	30	2	38	76	29	39
467.	212.93	29	25	30	75	55	45
468.	212.95	28	52	57	75	33	24
469.	212.97	28	56	10	76	2	30
470.	212.98	29	37	20	76	22	40
471.	213	28	48	36	75	50	9
472.	213.06	30	4	44	76	40	7
473.	213.09	28	51	52	76	56	35
474.	213.16	29	15	25	75	47	40
475.	213.34	29	57	19	76	37	31
476.	213.44	30	12	4	76	48	36
477.	213.48	28	38	20	76	47	12

478.	213.5	28	22	10	76	51	45
479.	213.5	29	17	0	75	47	22
480.	213.52	29	27	30	75	55	50
481.	213.53	30	13	14	76	51	43
482.	213.55	28	47	38	76	2	58
483.	213.58	28	34	8	76	38	16
484.	213.6	28	21	25	76	54	30
485.	213.66	28	46	20	76	54	45
486.	213.69	28	46	50	76	22	0
487.	213.71	28	28	25	76	25	0
488.	213.72	28	47	0	76	45	45
489.	213.8	28	47	31	76	18	28
490.	213.8	28	48	59	75	45	48
491.	213.81	28	39	39	76	43	39
492.	213.82	28	43	35	76	52	1
493.	213.84	28	45	16	76	45	4
494.	213.84	29	46	40	76	34	30
495.	213.85	28	42	12	75	54	12
496.	213.85	29	4	30	75	45	30
497.	213.89	28	32	30	76	36	45
498.	213.89	29	25	45	77	3	0
499.	213.9	28	54	14	75	47	5
500.	213.9	29	39	30	76	45	0
501.	214	29	22	55	77	5	28
502.	214.02	29	56	11	76	33	1
503.	214.06	28	34	12	76	50	32
504.	214.1	28	41	58	75	52	15
505.	214.1	29	51	55	76	34	45
506.	214.12	28	42	57	76	5	34
507.	214.12	29	18	0	75	58	0

508.	214.15	28	52	0	77	2	50
509.	214.15	29	23	11	76	38	7
510.	214.2	29	25	45	77	3	0
511.	214.3	30	7	30	76	51	39
512.	214.31	28	41	52	75	49	20
513.	214.33	29	55	53	76	39	55
514.	214.4	28	42	7	75	57	53
515.	214.4	28	56	15	76	10	5
516.	214.4	29	31	20	76	0	5
517.	214.41	29	3	30	76	6	32
518.	214.44	28	42	0	76	29	40
519.	214.55	28	28	25	76	24	0
520.	214.55	28	48	54	76	10	53
521.	214.57	28	34	15	76	50	30
522.	214.58	28	59	44	76	4	0
523.	214.64	29	25	0	76	45	30
524.	214.66	30	8	55	76	41	10
525.	214.7	28	41	45	76	38	0
526.	214.95	28	50	39	76	9	40
527.	214.95	29	1	59	76	8	58
528.	214.96	28	33	16	76	40	17
529.	214.99	28	42	30	76	18	40
530.	215	28	45	25	76	15	15
531.	215.09	28	42	41	76	21	23
532.	215.1	28	46	30	76	15	0
533.	215.1	29	11	0	75	57	57
534.	215.13	29	45	28	76	18	0
535.	215.25	29	13	35	77	7	5
536.	215.26	28	45	45	76	37	50
537.	215.29	29	24	15	76	39	20

538.	215.32	28	26	28	76	18	18
539.	215.32	28	47	0	76	8	0
540.	215.36	28	42	40	76	34	55
541.	215.38	30	0	37	76	40	44
542.	215.4	29	37	45	76	29	55
543.	215.42	30	1	30	76	53	45
544.	215.51	28	50	30	76	45	7
545.	215.56	29	27	17	76	42	9
546.	215.6	28	35	25	76	10	19
547.	215.6	29	9	30	76	7	45
548.	215.6	29	11	0	75	57	57
549.	215.61	29	12	32	76	14	0
550.	215.61	29	25	2	76	4	1
551.	215.63	29	35	15	76	25	58
552.	215.67	28	40	20	76	25	50
553.	215.67	28	49	7	76	46	30
554.	215.71	28	40	45	76	10	29
555.	215.72	28	46	30	76	46	30
556.	215.73	28	53	0	76	35	0
557.	215.86	28	32	45	76	28	45
558.	215.9	28	45	42	76	21	29
559.	215.9	30	2	33	76	51	17
560.	215.95	29	41	40	76	45	15
561.	215.96	30	1	45	76	43	30
562.	216	28	48	15	76	13	45
563.	216	29	24	0	76	3	0
564.	216.2	29	26	32	76	37	36
565.	216.21	28	44	50	76	48	20
566.	216.29	29	6	30	76	12	0
567.	216.32	29	57	45	76	42	15

568.	216.39	29	6	20	76	7	25
569.	216.39	29	35	10	77	1	20
570.	216.42	28	54	10	77	6	50
571.	216.45	28	40	10	76	28	15
572.	216.5	29	41	15	76	40	0
573.	216.55	29	0	45	76	23	15
574.	216.57	28	48	35	76	21	30
575.	216.6	29	42	59	76	31	40
576.	216.61	30	7	32	76	42	46
577.	216.63	30	9	59	76	42	35
578.	216.64	30	2	22	76	45	20
579.	216.67	28	58	13	76	33	5
580.	216.73	29	35	10	77	1	20
581.	216.77	29	35	35	76	40	54
582.	216.78	28	53	48	76	45	40
583.	216.79	28	27	49	76	8	32
584.	216.79	28	45	24	76	9	47
585.	216.79	28	49	56	76	54	30
586.	216.8	28	50	32	76	9	0
587.	216.8	30	9	18	76	49	6
588.	216.81	28	53	30	76	46	30
589.	216.82	29	30	0	76	44	5
590.	216.9	28	15	36	76	39	44
591.	216.93	29	36	2	76	19	40
592.	216.93	30	4	34	76	43	18
593.	216.95	29	28	58	76	42	30
594.	216.98	28	53	0	76	10	53
595.	216.99	28	41	0	76	34	20
596.	217.06	28	45	19	76	16	52
597.	217.08	29	14	45	76	58	30

598.	217.1	30	7	24	76	52	56
599.	217.11	30	3	36	76	27	57
600.	217.11	30	18	30	76	58	15
601.	217.15	28	39	21	76	25	44
602.	217.24	29	0	0	76	58	0
603.	217.28	28	56	18	76	26	0
604.	217.3	28	56	0	76	58	30
605.	217.31	28	58	45	76	31	0
606.	217.33	29	8	20	76	20	20
607.	217.33	29	20	20	75	30	0
608.	217.4	28	25	6	76	22	42
609.	217.4	30	3	25	76	51	28
610.	217.5	30	7	30	76	51	46
611.	217.56	28	38	40	76	23	20
612.	217.68	29	28	37	76	16	19
613.	217.76	28	35	45	76	16	0
614.	217.76	28	52	24	76	27	42
615.	217.78	29	22	37	76	29	33
616.	217.86	28	28	10	76	34	20
617.	217.9	28	43	40	76	19	8
618.	217.92	29	45	57	76	58	20
619.	217.93	29	52	20	76	50	40
620.	217.97	28	51	15	76	27	30
621.	218.02	29	33	15	76	3	0
622.	218.03	28	52	11	76	19	34
623.	218.05	29	8	22	76	42	55
624.	218.06	29	7	30	76	24	30
625.	218.2	29	25	40	76	50	50
626.	218.2	29	35	28	76	17	17
627.	218.28	29	37	56	76	37	52

628.	218.42	29	46	30	76	30	20
629.	218.49	29	27	15	75	59	15
630.	218.5	28	14	56	76	39	40
631.	218.5	30	7	59	76	50	31
632.	218.65	28	58	20	76	41	0
633.	218.68	29	6	0	76	36	55
634.	218.7	29	44	50	76	25	0
635.	218.72	30	14	6	76	49	40
636.	218.73	29	43	45	76	2	30
637.	218.84	29	28	45	76	53	57
638.	218.89	29	31	22	76	36	15
639.	218.93	29	24	0	76	39	0
640.	218.95	28	38	18	76	12	0
641.	218.95	28	46	29	76	34	13
642.	218.96	28	55	12	76	54	0
643.	219	29	41	0	76	57	0
644.	219.02	30	0	1	76	30	7
645.	219.03	29	49	0	76	12	30
646.	219.06	29	37	41	76	40	28
647.	219.1	29	17	20	75	54	25
648.	219.12	28	57	51	76	26	29
649.	219.23	29	44	45	76	25	15
650.	219.26	29	57	36	76	51	51
651.	219.32	29	33	0	76	56	0
652.	219.38	28	48	0	76	35	0
653.	219.47	28	58	30	76	25	19
654.	219.6	29	7	0	76	18	20
655.	219.61	29	37	10	75	56	15
656.	219.64	29	0	0	76	58	0
657.	219.65	29	8	5	76	33	32

658.	219.67	30	7	37	76	50	27
659.	219.72	29	8	10	76	19	30
660.	219.82	29	2	50	76	49	25
661.	219.82	29	8	21	76	24	51
662.	219.83	28	56	52	76	48	45
663.	219.85	28	52	50	76	30	45
664.	219.85	29	57	49	76	43	49
665.	219.88	28	46	50	76	31	40
666.	219.97	28	40	25	76	8	40
667.	219.97	29	38	35	76	52	0
668.	220.01	28	56	39	76	42	55
669.	220.03	29	6	30	76	35	0
670.	220.03	29	56	16	76	51	28
671.	220.07	30	1	8	76	59	15
672.	220.09	29	2	0	76	47	30
673.	220.15	28	57	55	76	11	8
674.	220.15	29	7	10	76	38	45
675.	220.15	29	45	36	76	43	33
676.	220.2	30	10	56	76	43	45
677.	220.25	28	24	12	76	32	46
678.	220.35	29	38	10	76	7	50
679.	220.44	29	28	10	76	49	20
680.	220.5	28	21	28	76	37	16
681.	220.52	29	2	16	76	56	31
682.	220.52	29	33	30	77	2	15
683.	220.52	29	47	15	76	43	45
684.	220.54	29	2	50	76	29	0
685.	220.57	28	54	20	76	43	0
686.	220.58	29	36	30	76	15	30
687.	220.65	29	0	57	76	29	5

688.	220.65	29	8	48	76	37	43
689.	220.7	28	42	57	76	8	29
690.	220.74	28	27	15	76	28	30
691.	220.78	29	3	40	76	50	0
692.	220.81	30	6	52	76	44	27
693.	220.88	29	33	0	76	56	0
694.	220.9	29	14	34	76	36	43
695.	220.96	28	29	32	76	16	5
696.	221	28	23	20	76	35	40
697.	221	28	56	0	76	38	30
698.	221.13	29	43	0	77	1	0
699.	221.2	28	44	0	76	10	0
700.	221.3	29	31	55	75	59	15
701.	221.38	29	0	10	76	45	30
702.	221.38	29	12	45	76	46	15
703.	221.42	30	9	42	76	46	0
704.	221.46	30	2	24	76	57	26
705.	221.5	28	20	0	76	0	12
706.	221.53	28	27	10	76	25	42
707.	221.58	29	25	17	76	44	3
708.	221.68	29	44	14	76	43	17
709.	221.72	29	16	0	76	27	30
710.	221.73	28	27	30	76	15	30
711.	221.79	28	24	48	76	20	24
712.	221.86	29	4	30	76	33	30
713.	221.86	29	28	13	76	47	18
714.	221.9	29	18	9	76	53	36
715.	221.93	28	28	52	76	13	45
716.	221.93	29	18	0	76	31	41
717.	222	29	11	0	76	32	20

718.	222.01	29	20	30	76	40	45
719.	222.06	29	8	50	76	28	0
720.	222.08	30	6	30	76	56	20
721.	222.1	28	59	5	76	48	45
722.	222.14	29	45	30	76	48	0
723.	222.16	29	15	16	76	42	3
724.	222.16	29	45	30	76	48	0
725.	222.17	29	54	38	76	42	7
726.	222.19	28	50	30	76	51	0
727.	222.2	28	20	20	76	8	10
728.	222.22	28	54	59	76	56	13
729.	222.22	28	57	13	76	51	48
730.	222.28	29	3	45	76	54	2
731.	222.3	28	28	2	76	10	17
732.	222.3	29	9	35	76	49	40
733.	222.31	29	3	55	76	49	55
734.	222.42	29	57	16	76	47	37
735.	222.46	28	44	5	76	56	28
736.	222.49	30	0	6	77	0	1
737.	222.5	30	10	0	76	55	57
738.	222.59	29	9	30	76	33	56
739.	222.59	29	13	4	76	41	31
740.	222.65	29	39	0	76	7	45
741.	222.7	28	26	10	76	19	0
742.	222.73	28	30	10	76	22	50
743.	222.75	29	32	0	77	3	25
744.	222.8	28	25	0	76	28	40
745.	222.82	29	55	0	76	55	0
746.	222.84	29	0	45	76	57	45
747.	222.84	29	36	13	76	49	39

748.	222.86	29	28	34	76	33	11
749.	222.89	29	11	15	76	37	30
750.	222.92	29	3	15	76	51	30
751.	222.94	28	27	17	76	28	36
752.	223.01	29	29	1	76	45	32
753.	223.1	29	57	10	76	43	30
754.	223.12	29	34	42	76	56	44
755.	223.13	29	14	25	76	30	35
756.	223.14	28	27	10	76	23	13
757.	223.15	29	32	0	77	3	25
758.	223.16	29	38	36	76	42	40
759.	223.22	29	14	0	76	52	40
760.	223.3	28	32	8	76	13	21
761.	223.31	29	28	30	77	5	15
762.	223.35	29	59	0	76	58	0
763.	223.48	29	54	51	76	15	38
764.	223.56	29	4	50	76	51	22
765.	223.6	28	27	15	76	28	30
766.	223.63	28	41	50	76	6	26
767.	223.64	28	22	12	76	33	12
768.	223.68	29	9	15	77	6	45
769.	223.68	29	38	7	77	1	7
770.	223.7	28	58	41	76	8	42
771.	223.75	30	3	27	76	54	53
772.	223.89	29	43	0	77	1	0
773.	223.92	29	17	40	76	46	28
774.	223.97	28	59	24	76	56	8
775.	223.99	29	45	52	76	41	55
776.	224.07	29	42	0	76	22	0
777.	224.15	29	39	5	76	22	10

778.	224.2	29	28	30	77	5	15
779.	224.3	29	5	2	76	40	30
780.	224.49	29	13	45	76	30	20
781.	224.5	29	21	26	76	29	36
782.	224.5	29	45	26	76	6	37
783.	224.61	28	18	16	76	30	22
784.	224.68	29	27	20	76	56	35
785.	224.7	28	5	12	76	14	0
786.	224.75	30	6	10	76	59	20
787.	224.82	29	4	30	76	46	45
788.	224.9	28	23	15	76	13	50
789.	224.9	28	30	40	76	19	20
790.	224.93	29	14	57	76	48	48
791.	224.93	30	10	50	76	56	34
792.	224.95	29	32	10	76	58	10
793.	224.97	29	49	32	76	52	28
794.	224.98	29	41	49	77	1	50
795.	225.17	29	57	24	76	46	41
796.	225.2	29	15	0	76	39	40
797.	225.2	30	8	30	76	57	5
798.	225.25	29	2	35	76	28	35
799.	225.25	29	40	45	76	15	10
800.	225.39	29	50	35	76	53	0
801.	225.4	28	7	54	76	19	16
802.	225.4	28	21	30	76	31	45
803.	225.4	29	57	0	76	45	45
804.	225.55	29	40	45	76	15	10
805.	225.63	28	52	27	76	36	20
806.	225.65	29	46	10	76	50	30
807.	225.66	29	42	25	76	13	45

808.	225.71	29	19	7	76	38	25
809.	225.73	29	47	54	76	55	46
810.	225.87	29	13	25	76	26	36
811.	225.95	28	11	45	76	24	0
812.	226.04	28	35	21	76	11	40
813.	226.04	30	0	55	77	3	54
814.	226.18	29	43	47	76	50	38
815.	226.18	29	56	30	76	59	10
816.	226.32	29	43	30	76	53	40
817.	226.36	29	59	38	77	1	8
818.	226.4	28	19	0	76	17	18
819.	226.4	29	53	10	76	45	9
820.	226.41	29	52	1	76	52	25
821.	226.48	28	20	15	76	18	30
822.	226.5	28	19	48	76	13	16
823.	226.5	29	41	45	77	6	48
824.	226.66	29	44	0	77	3	0
825.	226.7	29	36	0	76	7	30
826.	226.98	29	54	33	76	43	56
827.	227.05	29	55	14	76	58	2
828.	227.08	29	19	0	76	52	0
829.	227.49	29	12	45	76	46	15
830.	227.65	29	40	31	76	55	0
831.	227.69	29	16	40	76	51	0
832.	227.75	28	23	8	76	20	20
833.	227.83	28	31	37	76	18	0
834.	227.93	29	41	27	77	3	34
835.	228.12	29	19	57	76	42	58
836.	228.22	29	14	47	76	56	56
837.	228.26	28	19	12	76	31	0

838.	228.3	29	57	0	76	45	45
839.	228.35	28	21	32	76	14	56
840.	228.35	30	8	40	77	1	14
841.	228.36	29	50	27	76	50	44
842.	228.4	28	34	42	76	6	21
843.	228.48	29	50	50	76	39	41
844.	228.5	28	7	54	76	2	32
845.	228.55	28	21	9	76	57	17
846.	228.65	29	23	30	76	51	0
847.	228.71	29	50	6	76	47	39
848.	228.82	28	33	11	76	15	39
849.	229.4	28	10	22	76	35	34
850.	229.6	28	22	30	76	56	45
851.	229.63	29	52	0	76	57	30
852.	229.64	29	21	30	76	50	20
853.	229.65	29	38	8	76	58	56
854.	229.7	28	19	48	76	13	16
855.	229.73	29	34	22	76	50	58
856.	229.87	29	39	25	76	17	25
857.	229.88	30	5	7	77	4	4
858.	230.15	29	44	10	77	1	8
859.	230.24	29	31	50	77	5	3
860.	230.47	28	11	45	76	36	30
861.	230.5	28	15	10	76	37	52
862.	230.82	29	42	29	76	54	37
863.	231.02	29	57	13	77	1	45
864.	231.08	29	51	54	76	55	34
865.	231.67	30	7	45	76	59	0
866.	231.75	28	55	29	76	12	32
867.	231.96	29	40	20	77	7	40

868.	232.01	29	10	3	76	53	15
869.	232.05	30	39	0	76	53	0
870.	232.07	29	31	5	76	51	5
871.	232.57	30	7	41	77	2	16
872.	232.6	29	42	20	75	58	20
873.	232.89	29	35	39	77	2	54
874.	232.93	29	38	14	77	5	38
875.	233	28	12	20	76	40	0
876.	233.06	29	45	25	76	58	10
877.	233.45	29	29	56	76	57	6
878.	233.5	28	12	24	76	40	52
879.	233.65	30	11	30	76	59	0
880.	233.75	28	22	36	77	2	17
881.	233.8	30	14	30	76	51	10
882.	234.24	29	58	54	77	4	28
883.	234.31	29	51	15	77	6	0
884.	234.38	29	43	30	77	6	40
885.	234.45	29	33	51	77	4	25
886.	234.5	30	0	40	77	6	25
887.	234.65	29	42	49	76	56	59
888.	234.76	29	35	56	76	55	50
889.	234.85	28	11	40	76	34	30
890.	235.11	29	46	3	76	58	23
891.	235.48	29	58	22	77	3	26
892.	235.61	29	33	18	76	52	56
893.	235.65	28	13	35	77	1	45
894.	236.29	29	47	0	77	7	0
895.	236.33	28	9	45	76	40	5
896.	236.56	29	56	30	77	3	0
897.	236.83	28	47	49	75	55	44

898.	236.84	29	43	28	77	6	40
899.	237.02	29	37	10	76	53	58
900.	237.13	29	50	50	76	39	41
901.	237.78	29	46	41	77	5	49
902.	237.8	28	14	30	76	30	30
903.	238.02	29	41	38	77	5	55
904.	238.24	29	41	35	76	58	59
905.	238.31	28	7	45	76	36	15
906.	239.25	29	41	8	76	56	59
907.	239.64	29	47	38	77	4	23
908.	239.75	29	50	2	77	8	10
909.	239.82	29	57	37	77	5	43
910.	240	29	44	25	77	6	15
911.	240.53	29	47	47	76	58	36
912.	240.69	30	6	0	77	7	0
913.	241	28	3	8	76	1	44
914.	241.04	30	7	30	77	5	10
915.	241.2	28	2	46	76	20	30
916.	241.64	30	7	30	77	5	10
917.	241.81	29	48	33	77	6	19
918.	242.13	29	50	45	77	2	30
919.	242.3	28	4	15	76	34	45
920.	242.62	29	56	1	77	3	17
921.	243.25	28	9	56	76	27	22
922.	243.56	30	3	0	77	8	0
923.	243.65	28	14	25	76	52	10
924.	243.7	29	56	0	77	9	15
925.	244.24	30	1	30	77	9	0
926.	244.54	30	7	51	77	6	46
927.	244.97	29	52	10	77	5	30

928.	245.1	30	7	37	77	6	54
929.	245.96	29	51	56	77	8	39
930.	246.15	29	52	50	77	3	45
931.	246.18	28	13	40	76	52	15
932.	246.23	29	53	25	77	1	0
933.	246.67	29	55	17	77	4	31
934.	246.78	29	58	25	77	7	35
935.	247.13	30	19	0	76	59	0
936.	247.18	30	20	14	77	4	52
937.	248.24	30	17	0	76	40	0
938.	248.55	30	7	55	77	7	26
939.	249.2	30	11	0	77	11	0
940.	249.55	29	53	6	77	9	1
941.	249.6	28	4	15	76	34	45
942.	249.9	30	17	0	76	39	0
943.	250.28	30	15	45	76	36	50
944.	251.47	30	14	59	76	41	25
945.	251.7	28	6	15	76	31	45
946.	252.1	29	56	50	77	8	0
947.	252.82	30	14	52	76	39	26
948.	252.83	30	18	40	76	50	46
949.	254.03	30	14	30	76	51	10
950.	254.3	30	12	27	76	41	7
951.	254.49	30	14	19	76	42	22
952.	254.55	30	4	0	77	11	30
953.	254.57	30	13	0	77	3	0
954.	254.99	30	10	0	77	12	0
955.	255.38	30	14	55	76	43	0
956.	255.83	30	14	55	76	45	45
957.	255.85	30	17	0	76	45	0

958.	256.35	30	5	0	77	13	0
959.	256.88	30	17	0	77	17	0
960.	257.85	30	4	0	77	11	30
961.	259.29	30	23	0	77	13	30
962.	259.95	30	13	0	77	7	0
963.	261.07	30	4	10	77	16	51
964.	261.61	30	10	0	77	12	0
965.	261.7	28	10	8	76	11	40
966.	262.1	30	4	10	77	16	51
967.	262.37	30	10	0	77	18	0
968.	262.5	30	19	15	76	43	45
969.	263.05	30	16	48	76	47	11
970.	263.12	30	18	0	77	5	0
971.	264.62	30	21	5	76	50	50
972.	265.67	30	16	0	76	51	0
973.	265.85	30	17	49	76	46	42
974.	266.11	30	15	42	76	59	20
975.	266.22	30	6	0	77	16	45
976.	266.68	30	23	0	76	45	45
977.	266.87	30	12	15	77	9	0
978.	267.4	30	16	50	76	52	51
979.	267.42	30	21	0	76	46	0
980.	267.5	28	10	45	76	20	5
981.	267.97	28	13	40	76	52	15
982.	268.3	28	13	40	76	21	20
983.	269.03	30	20	26	76	55	42
984.	269.05	30	14	4	76	59	4
985.	269.1	30	22	0	76	50	0
986.	269.48	30	23	0	76	44	0
987.	269.71	30	24	30	76	47	15

988.	270.75	28	23	50	77	9	15
989.	271.22	28	10	24	76	9	23
990.	271.57	30	11	45	77	8	45
991.	271.7	30	8	15	77	22	0
992.	272.18	30	15	14	77	1	35
993.	272.6	30	21	0	77	5	0
994.	272.68	30	22	39	76	46	31
995.	273.05	30	15	0	77	20	0
996.	273.33	30	14	30	77	12	15
997.	276.2	30	24	30	76	50	45
998.	276.3	28	10	24	76	9	23
999.	276.53	30	22	13	76	52	23
1000.	277.09	30	15	16	77	5	20
1001.	277.29	30	17	0	77	2	45
1002.	277.44	27	55	19	76	7	30
1003.	278.42	30	14	30	77	7	30
1004.	280.5	28	7	18	76	7	18
1005.	280.72	30	24	0	76	58	0
1006.	281.7	30	26	4	76	57	18
1007.	282.05	30	27	0	76	55	0
1008.	282.4	30	23	0	77	5	0
1009.	283.56	30	29	0	76	57	0
1010.	285.06	30	18	24	77	8	0
1011.	285.3	30	17	45	77	7	0
1012.	286	30	14	45	77	21	0
1013.	286.29	30	20	52	77	5	2
1014.	286.31	30	19	0	77	31	0
1015.	288.98	30	18	0	77	29	15
1016.	292.45	30	23	0	77	1	0
1017.	293.24	30	16	45	77	20	30

1018.	293.72	30	21	30	77	14	45
1019.	293.8	30	31	43	76	58	36
1020.	294.04	30	23	0	77	13	0
1021.	294.6	30	39	53	76	51	6
1022.	294.66	28	3	0	76	6	45
1023.	297.81	30	26	30	77	1	15
1024.	298.78	30	28	0	77	7	0
1025.	299.84	30	18	0	77	18	0
1026.	299.98	30	34	0	76	56	0
1027.	301.38	30	27	16	77	1	20
1028.	301.59	30	31	58	77	1	52
1029.	301.6	27	57	34	76	8	28
1030.	302.45	27	59	36	75	58	17
1031.	302.59	30	23	0	77	21	0
1032.	303.45	30	24	0	77	13	15
1033.	303.45	30	26	0	77	1	0
1034.	303.55	30	30	18	76	59	10
1035.	303.75	30	37	40	76	56	59
1036.	303.85	27	57	8	76	4	4
1037.	304.07	30	27	33	77	3	59
1038.	305.6	30	26	50	77	13	0
1039.	305.8	28	0	20	76	2	45
1040.	306.71	30	29	30	77	1	30
1041.	307.15	30	27	46	77	4	20
1042.	310.31	30	28	15	77	7	30
1043.	311.53	30	32	39	77	2	49
1044.	311.93	30	33	10	76	56	59
1045.	313	27	52	24	76	8	19
1046.	314.9	30	27	0	77	14	0
1047.	319.22	30	30	0	77	5	0

1048.	319.31	30	35	0	77	4	0
1049.	320.5	30	33	56	76	59	51
1050.	324.31	30	35	0	77	1	0
1051.	325.73	30	27	0	77	17	0
1052.	326.49	30	37	0	76	58	0
1053.	332.69	30	35	15	77	1	20
1054.	334.64	30	38	17	76	56	32
1055.	341.5	27	53	36	76	0	18
1056.	343.6	30	36	11	77	2	52
1057.	344.71	30	41	0	76	54	0
1058.	353.08	30	38	30	77	0	30
1059.	360.69	27	52	15	75	59	45
1060.	408	30	53	29	76	49	44
1061.	418.87	30	53	27	76	49	56
1062.	461.32	30	51	0	76	52	0
1063.	489.9	30	46	44	76	56	17
1064.	496.3	30	43	56	76	58	30
1065.	507.35	30	44	21	76	59	55
1066.	553.98	30	48	40	76	55	10
1067.	562.65	30	45	26	76	59	35
1068.							

Annexure-II

Annexure-II						
Sl No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Ambala	Ambala Cantt			-0.50	
2	Ambala	Ambala Cantt-Pz			0.38	
3	Ambala	Ambala City-Dw			-3.32	
4	Ambala	Baknaur-Dw			-0.70	
5	Ambala	Balana			-0.80	-0.68
6	Ambala	Barara-Pz			-0.04	
7	Ambala	Bari Bassi-Dw			-0.65	
8	Ambala	Behbalpur-Dw			-0.97	
9	Ambala	Bhuragnpur-Dw			-1.50	
10	Ambala	Bhurewala-Pz			-0.20	
11	Ambala	Bichali Dhamouli-Pz			0.30	
12	Ambala	Binjal Pur-Dw			-1.85	
13	Ambala	Boh-Dw			-0.62	
14	Ambala	Budhha Khera-Dw			-0.40	
15	Ambala	Bullana- Dw			-0.17	
16	Ambala	Chhapra-Dw			0.11	
17	Ambala	Chotta Korwa-Dw			-0.90	
18	Ambala	Churmastpur-Dw			-2.37	
19	Ambala	Dhanaura	1.40	-1.50	-0.40	-1.43
20	Ambala	Dukheri-Dw			0.05	
21	Ambala	Hasanpur-Dw			-1.00	
22	Ambala	Jansui-Dw			-2.17	
23	Ambala	Jauli-Dw			-0.50	
24	Ambala	Kakkar Majra-Dw			-0.22	
25	Ambala	Kakru	0.17	-0.64	0.76	0.94
26	Ambala	Kalumazra-Dw			-0.67	
27	Ambala	Kapoori At Saphera-Pz			-2.82	
28	Ambala	Khanahmadpur			-1.08	
29	Ambala	Khanna Majra			-0.78	
30	Ambala	Khera Jattan-Dw			-0.15	
31	Ambala	Mohra-Dw			-1.28	
32	Ambala	Mulana			-0.53	-0.42
33	Ambala	Nanhera-Dw			-0.95	
34	Ambala	Naraingarh-Dw			-0.90	
35	Ambala	Naraingarh-Pz			-0.10	
36	Ambala	Nasirpur-Pz			-0.70	

Annexure-II

		Seasonal Fluctuation(M)				
SI No.	District	Location	Jan. 2017	May-17	May-17	May-17
(1)	(2)	(3)	May-17	Aug. 2017	Nov. 2017	Jan. 2018
			(4)	(5)	(6)	(7)
37	Ambala	Nikuwana-Dw			-0.35	
38	Ambala	Panjokhra		0.63	0.88	
39	Ambala	Patvi			-0.70	
40	Ambala	Pinjola		1.39		0.00
41	Ambala	Saha-Pz			0.03	
42	Ambala	Salehpur-Dw			-1.71	
43	Ambala	Shahpur-Dw			-2.38	
44	Ambala	Shahzadpur			0.35	
45	Ambala	Shahzadpur-Pz			-0.65	
46	Ambala	Sohana-Dw			-2.50	
47	Ambala	Tandwal-Dw			-3.20	
48	Ambala	Tejan-Dw			-2.40	
49	Ambala	Tharwa-Dw			-0.70	
50	Ambala	Ugala S			-0.17	
51	Bhiwani	Alak Pura-Dw			-0.60	
52	Bhiwani	Alampur-Dw			-1.20	
53	Bhiwani	Badala			-1.00	-0.77
54	Bhiwani	Badeshra-Pz			-0.80	
55	Bhiwani	Baganwala-Pz			-2.15	
56	Bhiwani	Bajina	2.16	-1.96	-1.66	-0.76
57	Bhiwani	Baliyali-Pz			-0.74	
58	Bhiwani	Bamla			0.03	0.14
59	Bhiwani	Baralu-Pz			0.30	
60	Bhiwani	Bardu Mugal-Pz			0.60	
61	Bhiwani	Barsi-Pz			-1.65	
62	Bhiwani	Bawani Khera.-Pz	-0.70		0.50	
63	Bhiwani	Bawani Khera-Pz		-0.41	-0.60	
64	Bhiwani	Behal-Pz				-0.48
65	Bhiwani	Bhawani Khera Dw			0.15	0.35
66	Bhiwani	Bhawani Khera Pz	0.26		-0.43	
67	Bhiwani	Bhera-Pz			0.30	
68	Bhiwani	Bhiwani			-0.18	
69	Bhiwani	Bhutana-Pz			-1.81	
70	Bhiwani	Bidhnoi-Pz			0.50	
71	Bhiwani	Biran--Pz			-0.50	-1.90
72	Bhiwani	Bohal	0.90	-2.05	-1.55	
73	Bhiwani	Budh Shelly-Pz			0.60	
74	Bhiwani	Budheri-Pz			0.50	
75	Bhiwani	Busan-Pz			-0.12	
76	Bhiwani	Chappar Rangar-Pz			-1.00	
77	Bhiwani	Dadam-Pz			-0.10	

Annexure-II

		Seasonal Fluctuation(M)				
		Jan. 2017	May-17	May-17	May-17	
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
78	Bhiwani	Dang-Pz			-0.20	
79	Bhiwani	Devsar-Pz			-1.45	
80	Bhiwani	Dhana Ladanpur-Pz			-0.33	-0.85
81	Bhiwani	Dhanana	0.63	-0.93	-0.93	
82	Bhiwani	Dhani Ramjas-Pz			-0.20	
83	Bhiwani	Dhani Shelwal-Pz			-0.10	
84	Bhiwani	Dhanimahu-Pz			-0.30	
85	Bhiwani	Dighawa Shyam--Pz			5.30	
86	Bhiwani	Dinod-Pz			-0.89	
87	Bhiwani	Dulheri-Pz			-1.90	
88	Bhiwani	Dwvrala-Pz				
89	Bhiwani	Garanpura-Pz			0.50	
90	Bhiwani	Gignow-Pz			0.95	
91	Bhiwani	Golagarh-Pz			0.10	
92	Bhiwani	Gothra-Pz			0.02	
93	Bhiwani	Gujrani-Pz			-0.27	
94	Bhiwani	Gurera-Pz		0.46		
95	Bhiwani	Haluwas	0.30	-0.50	-0.41	
96	Bhiwani	Hetampur			0.04	0.87
97	Bhiwani	Indiwali-Pz			0.65	
98	Bhiwani	Isharwal			-0.96	-0.68
99	Bhiwani	Jamalpur-Pz			-0.96	
100	Bhiwani	Jatai-Pz			-0.98	
101	Bhiwani	Jhanwari-Pz			-2.30	
102	Bhiwani	Jharwai-Pz			-0.20	
103	Bhiwani	Jhully-Pz			0.60	
104	Bhiwani	Jhumpa	0.85	-0.65	0.13	
105	Bhiwani	Jhumpa Kalan			0.15	-0.02
106	Bhiwani	Jitwanwas-Dw			-0.20	
107	Bhiwani	Juikalan Pz				0.61
108	Bhiwani	Jui-Pz			-1.39	
109	Bhiwani	Kairu-Pz			-0.50	
110	Bhiwani	Kairu-Pz			-0.24	
111	Bhiwani	Kalinga-Pz			-0.96	
112	Bhiwani	Kaloud Pzm			-1.95	
113	Bhiwani	Kaluwas-Pz			-1.15	
114	Bhiwani	Kasni Kalan			0.40	
115	Bhiwani	Katwar-Pz			-0.14	
116	Bhiwani	Khakari Sohan-Pz			-0.30	
117	Bhiwani	Khanak-Pz			-3.82	
118	Bhiwani	Khaparwas-Pz			0.10	

Annexure-II

Sl No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
119	Bhiwani	Kharak Kalan-Pz			-0.30	
120	Bhiwani	Khariawas-Pz			-0.10	
121	Bhiwani	Khera-Pz			0.05	
122	Bhiwani	Kheri Dalautpura-Pz			-1.39	
123	Bhiwani	Kikral-Pz			4.60	
124	Bhiwani	Kitlana-Pz			-0.11	
125	Bhiwani	Kural-Pz			0.50	
126	Bhiwani	Lachhmanpur			-0.55	
127	Bhiwani	Lalawas-Pz			0.10	
128	Bhiwani	Leghan Hetwan-Pz			-0.15	
129	Bhiwani	Lohani	0.70	-0.30	-5.39	-0.10
130	Bhiwani	Mandhana-Pz			0.27	
131	Bhiwani	Mandhan-Pz			-2.20	
132	Bhiwani	Manhairu		-0.80	0.30	0.25
133	Bhiwani	Matani-Pz			-0.16	
134	Bhiwani	Miran			0.35	
135	Bhiwani	Miran-Pz			-0.18	
136	Bhiwani	Mitathal-Pz			0.13	
137	Bhiwani	Mithi-Pz			2.38	
138	Bhiwani	Mohila-Pz			0.15	
139	Bhiwani	Morka-Pz			-0.05	
140	Bhiwani	Mundhal Kalan-Pz			-1.90	
141	Bhiwani	Naloi-Pz			-0.40	
142	Bhiwani	Naraungabad-Pz			0.47	
143	Bhiwani	Nathuwas-Pz			-0.32	
144	Bhiwani	Nigana Kalan-Pz			-0.20	
145	Bhiwani	Nigana Khurd-Pz			-0.27	
146	Bhiwani	Nimriwali-Pz			-0.70	
147	Bhiwani	Ninan-Pz			-0.50	
148	Bhiwani	Noon Sar-Pz			0.70	
149	Bhiwani	Paju			0.90	
150	Bhiwani	Pataudi Khurd			-0.05	-0.16
151	Bhiwani	Patwan-Pz			0.80	
152	Bhiwani	Pehladgarh-Dw			-0.52	
153	Bhiwani	Phokarwas-Pz			0.50	
154	Bhiwani	Prem Nagar-Pz			-1.80	
155	Bhiwani	Pur-Pz			-0.60	
156	Bhiwani	Rajgarh-Pz			-0.82	
157	Bhiwani	Ratera-Pz			-2.55	
158	Bhiwani	Rewari-Pz			-0.45	
159	Bhiwani	Riwasa-Dw			0.00	

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
160	Bhiwani	Runhat-Dw			-0.18	
161	Bhiwani	Rupgarh-Pz			-0.60	
162	Bhiwani	Sagban			-2.50	-2.33
163	Bhiwani	Serla-Pz			0.60	
164	Bhiwani	Sighani-Pz			0.80	
165	Bhiwani	Sirsa-Dw			1.20	
166	Bhiwani	Siwach-Pz			-1.37	
167	Bhiwani	Siwani		0.29	-0.38	0.11
168	Bhiwani	Sui		-1.88	-1.68	-1.41
169	Bhiwani	Sungarpur			3.90	-0.12
170	Bhiwani	Talu-Pz			-2.45	
171	Bhiwani	Talwani-Pz			0.93	
172	Bhiwani	Thillor-Pz			-1.30	
173	Bhiwani	Tigrana-Dw			0.90	
174	Bhiwani	Tosham	1.36	-2.11	-3.88	
175	Bhiwani	Tosham-Pz			-0.95	
176	Charkhi Dadri					
177	Charkhi Dadri	Atela-Pz			0.50	
178	Charkhi Dadri	Badesara-Pz			0.20	
179	Charkhi Dadri	Badhwana-Pz			0.01	
180	Charkhi Dadri	Baundkalan	-0.51	0.96	3.97	
181	Charkhi Dadri	Bigowa-Pz			-0.98	
182	Charkhi Dadri	Bijna-Pz			-0.95	
183	Charkhi Dadri	Birhi Kalan-Pz			-0.90	
184	Charkhi Dadri	Bound-Pz			0.52	
185	Charkhi Dadri	Chandawas-Pz			0.75	
186	Charkhi Dadri	Chirya	1.56	-3.26	-1.91	
187	Charkhi Dadri	Dadri			0.31	
188	Charkhi Dadri	Dadri-Pz			0.00	
189	Charkhi Dadri	Dudhwa-Pz			-0.51	
190	Charkhi Dadri	Dudiwala-Pz			0.90	
191	Charkhi Dadri	Ghasola-Pz			0.14	
192	Charkhi Dadri	Gopalwas-Pz			1.17	
193	Charkhi Dadri	Gopi			-0.78	
194	Charkhi Dadri	Hui-Pz			0.90	
195	Charkhi Dadri	Jhinjjar-Pz			1.80	
196	Charkhi Dadri	Kakroli Sardh-Pz			-1.83	
197	Charkhi Dadri	Kalali-Dw			0.27	
198	Charkhi Dadri	Kari Mod-Pz			1.10	
199	Charkhi Dadri	Kari Pura-Pz			1.10	
200	Charkhi Dadri	Kheri Bura-Pz			-0.13	

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
201	Charkhi Dadri	Makrana-Pz			-0.95	
202	Charkhi Dadri	Mandoli-Pz			-0.85	
203	Charkhi Dadri	Mehrana			0.86	
204	Charkhi Dadri	Mirch-Pz			-2.43	
205	Charkhi Dadri	Misri-Pz			-1.53	
206	Charkhi Dadri	Paintawas-Pz			-0.05	
207	Charkhi Dadri	Patuwas-Pz			-1.40	
208	Charkhi Dadri	Pichopa Kalan-Pz			1.30	
209	Charkhi Dadri	Ranila-Pz			-0.07	
210	Charkhi Dadri	Sanjarwas-Pz			-0.70	
211	Charkhi Dadri	Sankrod-Pz			0.00	
212	Charkhi Dadri	Sanwar			3.90	
213	Charkhi Dadri	Sarangpur-Pz			-1.52	
214	Charkhi Dadri	Saroop Garh-Pz			-0.23	
215	Charkhi Dadri	Todi-Pz			1.15	
216	Charkhi Dadri	Unn-Dw			0.78	
217	Faridabad	Ballabgarh	1.30		-0.15	
218	Faridabad	Bhopani	1.40			0.45
219	Faridabad	Chhainsa	2.10		0.10	
220	Faridabad	Kabulpur			-3.67	-2.55
221	Faridabad	Kheri Jamalpur-Dw	0.20		-0.10	
222	Faridabad	Manjhawali-Dw	0.45		0.50	
223	Faridabad	Pali2	0.45		-1.90	
224	Faridabad	Paota	-0.85		0.45	
225	Faridabad	Sakrana-Dw	0.85		-0.60	
226	Faridabad	Sanped-Dw	0.40		0.13	
227	Faridabad	Sikri1	1.21		-0.25	
228	Faridabad	Sotai	0.15		0.20	
229	Fatehabad	Alalwas-Pz	0.08			
230	Fatehabad	Badopal		-1.04	0.65	
231	Fatehabad	Bhattukalan-Pz	-0.49		0.02	
232	Fatehabad	Bhuna	-0.45			
233	Fatehabad	Chindhar-Dw	-0.05		-0.10	
234	Fatehabad	Dayar1	0.11		0.50	
235	Fatehabad	Dhangar-Dw	0.13		-0.05	
236	Fatehabad	Gorakhpur-Dw	0.06		-0.03	
237	Fatehabad	Hukmawali-Pz	-0.90		0.24	
238	Fatehabad	Jandli Kalan	-2.37		0.07	0.17
239	Fatehabad	Kajal Heri-Dw	-0.08		-0.05	
240	Fatehabad	Kanhari-Pz	-0.10		0.05	
241	Fatehabad	Khara Kheri-Dw	-0.05			

Annexure-II

			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
242	Fatehabad	Machiwali-Dw	0.25		-0.30	
243	Fatehabad	Mehu Wala Pz			0.37	0.55
244	Fatehabad	Nagpur- Pz	-0.40			
245	Fatehabad	Nahla		-1.72	0.02	-0.28
246	Fatehabad	Nangla-Dw	0.10		0.10	
247	Fatehabad	Nikuwana-Pz				
248	Fatehabad	Pilimudari	-0.50		0.00	
249	Fatehabad	Ratia -Pz	-1.63		2.68	
250	Fatehabad	Ratta Khera-Pz	0.20		0.30	
251	Fatehabad	Sadalpur			-0.60	-0.29
252	Fatehabad	Samain			0.01	-0.18
253	Fatehabad	Shekhpur Daroli-Dw	-0.60		0.00	
254	Fatehabad	Suniyana	0.10		0.00	
255	Fatehabad	Tohana		0.40	1.57	0.50
256	Gurgaon	Bandhwari	1.85			
257	Gurgaon	Basonda Tripati-Pz	0.75		-0.60	
258	Gurgaon	Bhondsi Ew	0.60		0.45	
259	Gurgaon	Bhora Kalan-Pz	1.67		0.38	
260	Gurgaon	Bilaspur-Pz	0.30		0.35	
261	Gurgaon	Budehra-Dw	0.20		-0.85	
262	Gurgaon	Chandu Tikly	-2.05		-0.68	
263	Gurgaon	Daultabad-Pz	1.50			
264	Gurgaon	Farrukh Nagar-Pz	0.15		-1.10	
265	Gurgaon	Fazilpur Badli-Pz			0.77	1.05
266	Gurgaon	Gangola-Dw	0.95		-0.60	
267	Gurgaon	Gudhana-Pz			0.03	
268	Gurgaon	Gurgaon Pz	0.45			
269	Gurgaon	Haila Mandi	0.35		0.10	
270	Gurgaon	Harchandpur Pz	0.20		-0.50	
271	Gurgaon	Jamalpur-Pz	0.40		1.90	1.15
272	Gurgaon	Jaraon Pz	-0.32		-0.23	0.71
273	Gurgaon	Jhandu Sarai-Pz	1.80		-0.55	
274	Gurgaon	Kadipur	0.45			
275	Gurgaon	Kasan	0.40			
276	Gurgaon	Kherla			15.30	
277	Gurgaon	Lokra-Pz		2.46		0.80
278	Gurgaon	Meoka-Pz			0.71	0.13
279	Gurgaon	Mouzabad	0.45		8.28	10.70
280	Gurgaon	Mubarakpur	0.15		0.00	
281	Gurgaon	Pataudi-Pz	0.10		0.73	
282	Gurgaon	Sadhrana-Pz	0.40		-0.85	

Annexure-II

SI No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
283	Gurgaon	Sohna			0.12	
284	Gurgaon	Wazirpur-Pz	0.60			0.98
285	Hisar	Adampur S	-0.53	-0.50	0.10	
286	Hisar	Adampur-Pz	1.06		-1.41	-1.25
287	Hisar	Agroha Abd	0.08		-0.05	
288	Hisar	Agroha-Pz			-0.29	-0.38
289	Hisar	Badchappar	0.00		0.10	
290	Hisar	Balawas1		-1.40	-0.37	
291	Hisar	Balsamand	0.25		-0.96	-0.82
292	Hisar	Balsamand-Pz		-0.87	-1.56	-1.41
293	Hisar	Banbhauri-Pz		-0.60	-0.30	0.45
294	Hisar	Barwala S	0.50		-0.10	
295	Hisar	Barwala1			-0.44	0.41
296	Hisar	Barwala-Pz	1.84		-0.24	
297	Hisar	Bas	0.77	-2.75	-2.11	
298	Hisar	Basra	0.05	-0.41	1.11	1.13
299	Hisar	Behbalpur-Pz			-1.84	-1.78
300	Hisar	Bhana-Dw	0.03		-0.05	
301	Hisar	Bhotal Jattan-Dw	0.97		-0.50	
302	Hisar	Bithmara-Dw	-2.05		0.05	
303	Hisar	Chanaut	0.39		-0.25	-0.29
304	Hisar	Chann-Dw	-0.77		-0.13	
305	Hisar	Chaudhriwali	0.20		-0.50	
306	Hisar	Chawdhariwas	1.42	-1.52	-1.05	-2.41
307	Hisar	Datta-Dw	-0.18		-1.10	
308	Hisar	Deva-Dw	0.05			
309	Hisar	Dhand-Dw	-0.64		-0.20	
310	Hisar	Dhansu	-1.66	-0.95	-0.86	-0.84
311	Hisar	Dobi-Dw	0.57			
312	Hisar	Durjanpur-Pz	0.35		-0.05	
313	Hisar	Ghursal-Pz	1.33	-1.30	-1.23	-1.01
314	Hisar	Gurana	-0.10		-0.10	
315	Hisar	Hansi S	-0.10		-0.10	
316	Hisar	Hissar-Pz	0.35	-0.75	-0.38	-0.61
317	Hisar	Jaga Bara-Dw	0.00		0.05	
318	Hisar	Juglan	-0.71		-0.10	
319	Hisar	Kabrer	0.50		0.00	
320	Hisar	Kaliravan	0.00		-0.05	
321	Hisar	Kanoh-Pz	0.05		-0.10	
322	Hisar	Khanda Kheri-Pz	0.19		0.02	-0.05
323	Hisar	Kharakpunia	-0.80		0.70	

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
324	Hisar	Kherijalab-Pz	0.10	0.00	0.07	0.10
325	Hisar	Khotkalan	-0.31	1.16	0.63	0.47
326	Hisar	Kirori	-0.06		-0.35	1.77
327	Hisar	Kirtan	0.77	0.03	-0.75	-0.52
328	Hisar	Ladwi-Dw	-0.15		0.05	
329	Hisar	Litani-Dw	-0.19			
330	Hisar	Mangali-Pz	0.45	-0.45	-0.80	-0.74
331	Hisar	Mehanda-Dw	-0.06		-0.10	
332	Hisar	Mirka	-0.05	1.61	2.59	
333	Hisar	Moda Khera-Dw	0.70		-0.65	
334	Hisar	Narnaud S	1.70		1.64	
335	Hisar	Pali-Dw	0.20		0.00	
336	Hisar	Petwar-Dw	1.40		-0.15	1.93
337	Hisar	Rajli Cross	-1.30	1.10	1.64	
338	Hisar	Rajthal1	2.34		0.71	-0.65
339	Hisar	Samani	0.57	-1.07	-1.17	
340	Hisar	Sorkhi-Pz	0.84	-1.44	-1.59	-1.54
341	Hisar	Talwani Badshahpur-Dw	-0.03		-0.04	
342	Hisar	Talwani Rana-Dw	-0.10		0.05	
343	Hisar	Thurana-Dw	0.92		-0.69	
344	Hisar	Uklana	0.23		0.05	
345	Hisar	Umra	0.20		-0.07	
346	Jhajjar	Bagoa			0.41	-0.63
347	Jhajjar	Chamanpura	0.52	-1.92		
348	Jhajjar	Chhara		-0.34	-0.31	-0.09
349	Jhajjar	Chuchakwas	0.43	-0.88	-0.48	
350	Jhajjar	Dubhaldhan			-0.22	-0.05
351	Jhajjar	Dulhera			-1.28	-1.53
352	Jhajjar	Gabhana			-0.44	
353	Jhajjar	Kulasi			-0.35	-0.46
354	Jhajjar	Majra Deswal			-1.11	
355	Jhajjar	Mudsa			-0.75	
356	Jhajjar	Salhawas				-0.20
357	Jhajjar	Sankol			-0.94	-0.33
358	Jhajjar	Subnah		4.77	-0.60	
359	Jhajjar	Wazirpur			-0.51	-0.45
360	Jind	Alewa	-2.00		3.95	
361	Jind	Alewa Pz	0.00			
362	Jind	Anta-Pz	-0.50		1.10	
363	Jind	Baroda	3.15		0.12	-0.26

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
364	Jind	Belrakha	3.65		-0.20	
365	Jind	Bhana Barahman-Dw	0.30		-0.30	
366	Jind	Bhuslana-Pz	-1.23		1.10	
367	Jind	Brahmanwas			-0.49	-2.17
368	Jind	Chhabri	1.64	-3.51	-2.45	-1.65
369	Jind	Dalamwala-Dw			-0.65	
370	Jind	Danaudakalan	1.00			
371	Jind	Danoda Khurd-Pz	0.50		-0.90	
372	Jind	Dhigana-Dw	0.30		-2.00	
373	Jind	Dorana Pz	-3.45		3.53	7.43
374	Jind	Ganda Khera-Dw	1.40			
375	Jind	Gangoli-Dw	1.20		-1.55	
376	Jind	Gurusar-Dw	0.50		0.00	
377	Jind	Hasanpur-Pz	-0.15		0.70	
378	Jind	Igra	0.40		-0.20	
379	Jind	Jamni-Dw	-1.30		1.35	
380	Jind	Jhamula		0.62	-1.62	0.14
381	Jind	Jhanj Kalan	0.80		-0.52	
382	Jind	Jind-Pz			0.40	
383	Jind	Julana Pz	1.27		-0.52	-1.54
384	Jind	Julana-Dw	-0.35			
385	Jind	Kakrod-Dw	0.10		-0.40	
386	Jind	Kalwan	2.20		-3.00	
387	Jind	Kalwan-Pz	-2.15		2.85	
388	Jind	Kandela-Pz			2.10	
389	Jind	Karela-Dw	0.55		-1.40	
390	Jind	Karsindhu-Dw	0.20		-0.75	
391	Jind	Karsola-Dw	0.60		-2.00	
392	Jind	Korar			3.97	1.30
393	Jind	Lajwana Kalan	0.40		-0.60	
394	Jind	Lochap Pz	-4.55		1.05	-4.12
395	Jind	Ludhana	0.80		-1.30	
396	Jind	Mandi Kalan-Dw	0.80		-0.35	
397	Jind	Mohal Khera Pz			-2.15	-1.65
398	Jind	Narwana S			-1.90	
399	Jind	Pega-Dw	-0.30			
400	Jind	Pillukhera-Pz	0.50		-0.82	
401	Jind	Pipaltha-Pz	-3.05		3.50	
402	Jind	Pokerikheri-Pz	-1.90		3.40	
403	Jind	Rajpura-Pz	-1.10			
404	Jind	Rasidan Pz	-3.50		4.60	

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
Sl No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
405	Jind	Ratta Khera-Dw	-2.60		3.00	
406	Jind	Safidon (S)	-1.23		0.51	0.93
407	Jind	Safidon 1(S)	-0.67			
408	Jind	Sahanpur-Pz	-2.00		4.50	
409	Jind	Sanchakhera	0.50		-0.64	
410	Jind	Uchana	0.24		0.18	0.00
411	Jind	Uchana Pz	3.00	-0.85		0.92
412	Kaithal	Bakal-Dw	0.43			
413	Kaithal	Balbehra-Pz	3.41		9.65	-5.47
414	Kaithal	Balu-Dw	-0.20		0.40	
415	Kaithal	Barsana-Pz	0.70		0.45	
416	Kaithal	Chika-Pz	0.24		1.99	
417	Kaithal	Dhandh-Pz				
418	Kaithal	Dhons-Pz	-0.21		1.66	
419	Kaithal	Dhunderheri-Dw	1.26			
420	Kaithal	Guhna		2.85	1.08	0.57
421	Kaithal	Harigarh Kingan-Pz	0.69		1.88	
422	Kaithal	Jakhauli-Pz	0.34	1.70	0.49	-4.34
423	Kaithal	Jandaula-Pz	7.40			-14.80
424	Kaithal	Kaithal S	1.32		1.30	
425	Kaithal	Kalayat	-0.27		-2.67	-2.05
426	Kaithal	Kalayat S	-0.05	-2.55	-1.93	
427	Kaithal	Kalesar-Dw	-0.30		0.30	
428	Kaithal	Kamalpur-Dw	1.85		0.67	
429	Kaithal	Kathana-Pz	-0.75		0.10	4.94
430	Kaithal	Kaul-Pz	-1.60		2.38	1.78
431	Kaithal	Kelaram	-1.19		-0.38	2.68
432	Kaithal	Khanpur-Pz			-0.25	-1.15
433	Kaithal	Kheorak-Pz	0.15		0.93	
434	Kaithal	Kheri Lamba-Dw	0.52		0.12	
435	Kaithal	Kheri Raowali-Dw	0.77		0.05	
436	Kaithal	Manas	2.84		0.85	
437	Kaithal	Manaspatti-Pz		2.05	1.85	1.44
438	Kaithal	Mataur	-0.69	0.55	-0.70	-1.90
439	Kaithal	Mundri	-3.10		1.23	-2.46
440	Kaithal	Padla 1(S)		-0.63	2.28	2.46
441	Kaithal	Pai-Dw	-0.84		0.64	
442	Kaithal	Peoda	1.67	-1.05	0.85	
443	Kaithal	Peoda_Pz	0.60		-2.90	-3.54
444	Kaithal	Pundri(S)				1.16
445	Kaithal	Rajaund-Pz	0.25		0.05	

Annexure-II

		Seasonal Fluctuation(M)				
		Jan. 2017	May-17	May-17	May-17	
Sl No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
446	Kaithal	Ram Garh-Dw	-1.46			
447	Kaithal	Rasulpur Ghamri-Pz			1.72	0.95
448	Kaithal	Serdha-Dw	-0.30		0.60	
449	Kaithal	Sirsal-Pz	-0.10		1.66	0.38
450	Kaithal	Siwan-Pz	1.70		1.00	
451	Kaithal	Solu Majra-Pz	0.74			
452	Kaithal	Songri-Dw	-0.20			
453	Kaithal	Tik	0.82			
454	Karnal	Alipur-Pz			-0.49	
455	Karnal	Amin S			-0.60	-0.73
456	Karnal	Amupur-Pz			-1.95	
457	Karnal	Andhera-Pz			-0.51	
458	Karnal	Anjanthali-Pz			-2.02	
459	Karnal	Ardana-Pz			2.95	
460	Karnal	Assandh-Pz			2.57	
461	Karnal	Badson- Pz			-0.45	
462	Karnal	Bahri-Pz			3.46	
463	Karnal	Balhera-S			-0.87	-9.40
464	Karnal	Balla- Pz			3.97	
465	Karnal	Bansa-Pz			-0.91	
466	Karnal	Barthal-Pz			-0.21	
467	Karnal	Beholpur-Pz			-0.37	
468	Karnal	Bijna-Pz			-0.58	
469	Karnal	Budanpur-Pz			-0.14	
470	Karnal	Chandsamand-Pz			-0.47	
471	Karnal	Chirao-Pz			-0.05	
472	Karnal	Chochra-Pz			3.30	1.71
473	Karnal	Choor Karsa-Pz			4.46	
474	Karnal	Chorkharsa-Pz			5.45	4.23
475	Karnal	Dabarthala-Pz			1.56	
476	Karnal	Dachar-Pz			-0.89	
477	Karnal	Dadupur Khurd-Pz			-0.26	
478	Karnal	Dadupur-Pz			-0.46	
479	Karnal	Darar			-1.32	
480	Karnal	Dhanaura--Pz			-0.24	
481	Karnal	Dingar Majra-Pz		3.85	2.45	1.10
482	Karnal	Domsi D			2.85	1.60
483	Karnal	Faridpur-Pz			-0.78	
484	Karnal	Gagsina-Pz			2.65	
485	Karnal	Gangateri-Pz			3.93	
486	Karnal	Garhi Khajur S			-0.46	-1.16

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
487	Karnal	Gharaunda-Pz	0.95		1.40	
488	Karnal	Ghiar-Pz			-1.85	
489	Karnal	Gholpura-Pz			-0.45	
490	Karnal	Gogripur-Pz			-0.61	
491	Karnal	Gohida -Pz			-0.26	
492	Karnal	Goli-Pz			5.41	
493	Karnal	Gondar-Pz			4.65	
494	Karnal	Gondhar			-0.59	1.07
495	Karnal	Gudha-Pz			-0.33	
496	Karnal	Indri			-1.82	-2.15
497	Karnal	Jainpur-Pz			-0.52	
498	Karnal	Jalmana Pz				0.91
499	Karnal	Janesron--Pz			-0.12	
500	Karnal	Jani-Pz			-0.33	
501	Karnal	Jaroli Khurd-Pz		0.20	-0.85	
502	Karnal	Jhanjari-Pz			0.71	
503	Karnal	Jundla1			0.95	
504	Karnal	Kachhwa Pz			-0.47	
505	Karnal	Kalampura-Pz			-0.47	
506	Karnal	Kalheri-Pz			2.27	
507	Karnal	Kalri Jagir S			-0.50	-0.64
508	Karnal	Kalsi			0.28	
509	Karnal	Kalsora-Pz			-0.38	
510	Karnal	Kambopura-Pz			-0.45	
511	Karnal	Khanpur-Pz			-0.50	
512	Karnal	Khizrabad-Pz			3.95	
513	Karnal	Kohnd S			0.06	
514	Karnal	Kurlan-Pz			4.72	
515	Karnal	Kutail S			2.00	-0.05
516	Karnal	Majra Roran			2.00	-0.76
517	Karnal	Manak Mazra-Pz			-0.02	
518	Karnal	Mehmadpur-Pz			-0.70	
519	Karnal	Mohidinpur-Pz			0.05	0.00
520	Karnal	Mormazra-Pz			2.96	
521	Karnal	Mound S			3.28	
522	Karnal	Munak			5.07	
523	Karnal	Mundh-Dw			3.95	
524	Karnal	Mundi Garhi--Pz			-0.49	
525	Karnal	Musepur-Pz			-0.57	
526	Karnal	Mustafabad-Pz			0.11	
527	Karnal	Nabipur-Pz			-0.21	

Annexure-II

Sl No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
528	Karnal	Nalipur-Pz			-0.40	
529	Karnal	Nalvi Kalan-Pz			-0.29	0.65
530	Karnal	Nanhera			-0.51	-0.62
531	Karnal	Naru Kheri-Pz			-0.21	
532	Karnal	Nasirpur-Pz			-0.37	
533	Karnal	Nisang-Pz			-12.10	
534	Karnal	Padhana-Dw			2.02	
535	Karnal	Phurlak S			2.23	2.85
536	Karnal	Phusgarh-Pz			-0.24	
537	Karnal	Popra-Pz			4.18	
538	Karnal	Pundrak-Pz			-0.75	
539	Karnal	Rambha-Pz			-0.02	
540	Karnal	Randauli-Pz			-0.37	
541	Karnal	Ranwar-Pz			-0.75	
542	Karnal	Rasin-Pz			-0.98	
543	Karnal	Rattak-Pz			5.46	
544	Karnal	Rindal-Pz			-0.54	
545	Karnal	Risalwa-Pz			7.45	
546	Karnal	Sadarpur-Pz			-0.68	
547	Karnal	Sagga-Pz			2.40	
548	Karnal	Salwan-B			7.02	
549	Karnal	Sambli-Pz-M			3.08	1.50
550	Karnal	Sambli-Pz-S			3.04	
551	Karnal	Subri-Pz			-0.35	
552	Karnal	Taprana-Pz			0.72	
553	Karnal	Taraori-Pz			2.33	
554	Karnal	Udana-Pz			-0.67	
555	Karnal	Uplani-Pz			4.47	
556	Kurukshetra	Adhoya-Pz	1.00		0.74	
557	Kurukshetra	Ajraver-Pz	0.29		0.66	
558	Kurukshetra	Bachki-Pz			2.94	4.28
559	Kurukshetra	Badarpur-Pz	1.13		0.92	
560	Kurukshetra	Bakali-Pz	0.74	-0.96	0.93	
561	Kurukshetra	Bapda-Pz	0.66		1.06	
562	Kurukshetra	Barhan-Pz	1.72		-0.37	
563	Kurukshetra	Barna-Pz	-0.21		0.98	
564	Kurukshetra	Baronda-Pz	-5.79		-1.52	-2.15
565	Kurukshetra	Barshami-Pz	0.57		0.92	
566	Kurukshetra	Batheri-Pz	0.67		0.55	
567	Kurukshetra	Berthala S	-1.35		7.10	4.40
568	Kurukshetra	Bhore Saidan S	0.23		0.92	

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
Sl No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
569	Kurukshetra	Budha-Pz	0.78		1.13	
570	Kurukshetra	Busthala-Pz	0.27		0.80	
571	Kurukshetra	Chanalheri-Pz	0.80		0.64	
572	Kurukshetra	Chhapra-Pz	0.65		0.83	
573	Kurukshetra	Dabkhera-Pz	0.65	3.80	0.65	0.35
574	Kurukshetra	Dhir Pur-Pz	0.49		1.06	
575	Kurukshetra	Diwana-Pz	0.94		0.56	
576	Kurukshetra	Garhi Roran-Pz	0.55		0.70	
577	Kurukshetra	Ghararsi-Pz	-0.07		0.11	
578	Kurukshetra	Gobind Garh-Pz	-0.12		0.98	
579	Kurukshetra	Gol Pura-Pz	0.60		0.67	
580	Kurukshetra	Gumthala Garhu-Pz	0.78		0.56	
581	Kurukshetra	Hathira-Pz	0.51			
582	Kurukshetra	Hatira (S)	2.03		0.97	
583	Kurukshetra	Helwa-Pz	0.49		0.46	
584	Kurukshetra	Ishaque S			1.59	1.40
585	Kurukshetra	Ismailpur-Pz	0.28		0.84	
586	Kurukshetra	Ismilabad-St-Pz	-0.08		0.91	
587	Kurukshetra	Jalbehra-Pz	0.79		0.71	
588	Kurukshetra	Jansa-Pz	-0.53		0.58	
589	Kurukshetra	Jhansa-Pz	0.74			
590	Kurukshetra	Jogna Khera-Pz	0.05		0.85	0.22
591	Kurukshetra	Kalsani-Pz	0.20		0.67	
592	Kurukshetra	Karaha Sahib-Pz	0.60		0.48	
593	Kurukshetra	Kaulapur S	3.46			
594	Kurukshetra	Kharindwa	1.43		0.64	
595	Kurukshetra	Kheri Ran Nagar-Pz	0.65		0.95	
596	Kurukshetra	Lakhmari-Pz	0.55		0.62	
597	Kurukshetra	Landi-Pz	0.61		0.96	
598	Kurukshetra	Lohar Majra-Pz	0.34		0.86	
599	Kurukshetra	Lohara-Pz	-0.77		1.06	
600	Kurukshetra	Lukhi-Pz	0.86		0.62	
601	Kurukshetra	Malikpur-Singhpura-Pz	0.98		0.61	
602	Kurukshetra	Mangana-Pz	1.02		0.56	
603	Kurukshetra	Mangoli Jattan-Pz	0.81		0.72	
604	Kurukshetra	Mirzapur-Pz	2.03		-4.65	
605	Kurukshetra	Mohri-Dw	0.37		0.48	
606	Kurukshetra	Mohri-Pz	-0.10		0.66	
607	Kurukshetra	Morthala-Pz	0.13		0.93	
608	Kurukshetra	Naisi-Pz	1.56		0.60	
609	Kurukshetra	Padlu-Pz	0.57		0.58	

Annexure-II

Sl No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
610	Kurukshetra	Ram Sharan Majra-Pz	0.59		0.84	
611	Kurukshetra	Rao Garh-Pz	0.23		1.32	
612	Kurukshetra	Rawa-Pz	1.40		0.45	
613	Kurukshetra	Rohit-Pz	1.29		0.61	
614	Kurukshetra	Sandholapz			0.29	
615	Kurukshetra	Sarai Sukhi-Pz	0.50		0.78	
616	Kurukshetra	Sarsa-Pz	0.67		0.54	
617	Kurukshetra	Shanti Nagar-Pz	1.26		0.40	
618	Kurukshetra	Sirsala-Pz	0.30			
619	Kurukshetra	Sunarain Dhanani-Pz	0.39		0.61	
620	Kurukshetra	Sunder Pur-Pz	0.34		0.11	
621	Kurukshetra	Surmi-Pz	-0.18		0.50	
622	Kurukshetra	Tangore-Pz	-3.54		4.57	
623	Kurukshetra	Tatka-Pz	0.78			
624	Kurukshetra	Teokar-Pz	0.80		0.39	
625	Kurukshetra	Teora-Pz	0.90		0.63	
626	Kurukshetra	Thol-Pz	0.27		0.89	
627	Kurukshetra	Tigri-Pz	0.20		0.36	
628	Kurukshetra	Umri-Pz			2.16	
629	Kurukshetra	Urnai-Pz	1.22		-0.96	-2.83
630	Kurukshetra	Yara-Pz	0.95		0.78	
631	Mahendragar h	Atali-Dw			0.75	
632	Mahendragar h	Barda-Dw			0.50	
633	Mahendragar h	Basirpur			0.10	
634	Mahendragar h	Bayal			-0.45	
635	Mahendragar h	Berundla-Dw			0.30	
636	Mahendragar h	Bhojawas-Dw			0.00	
637	Mahendragar h	Buwana-Pz			1.15	0.67
638	Mahendragar h	Chandpura-Pz			0.50	
639	Mahendragar h	Chelawas-Dw			0.50	
640	Mahendragar h	Deroli Ahir			-0.34	1.56
641	Mahendragar	Deroli Ahir1				-1.77

Annexure-II

Annexure-II						
SI No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
(1)	(2)	(3)	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	h					
642	Mahendragar h	Dhancholi-Dw			0.00	
643	Mahendragar h	Faizabad-Dw			0.45	
644	Mahendragar h	Kalba-Dw			-0.70	
645	Mahendragar h	Kaninakhas1			1.38	
646	Mahendragar h	Kharkara Bas-Dw			-1.55	
647	Mahendragar h	Kheri			-0.15	
648	Mahendragar h	Kheri-Pz			-0.70	
649	Mahendragar h	Khodma-Dw			21.80	
650	Mahendragar h	Kultajpur-Dw			-2.00	
651	Mahendragar h	Nagal Kalia-Dw			1.59	
652	Mahendragar h	Narnaul		-0.37		5.63
653	Mahendragar h	Pachnota-Dw			-0.70	
654	Mahendragar h	Pali-Pz			0.50	
655	Mahendragar h	Pathera-Dw			0.50	
656	Mahendragar h	Shelang-Dw			0.20	
657	Mahendragar h	Tazpur-Pz			0.30	
658	Mewat	Agaon-Pz	0.50			
659	Mewat	Akaira		0.83	3.26	-0.74
660	Mewat	Aminabad-Dw	-0.07			
661	Mewat	Bhadas-Dw	0.30		-0.13	
662	Mewat	Firozepur Jhirka	0.70			
663	Mewat	Gulaltha	-1.03		-0.17	
664	Mewat	Indri	0.50	-2.62		-2.64
665	Mewat	Kheri1			0.74	-1.72
666	Mewat	Luhingakalan	0.90			

Annexure-II

		Seasonal Fluctuation(M)				
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
667	Mewat	Malab	-0.38	0.06	0.22	0.21
668	Mewat	Nagina				0.56
669	Mewat	Naharika-Pz	0.25			
670	Mewat	Nuh	0.73		0.41	-0.13
671	Mewat	Nuh1				-0.45
672	Mewat	Pipaka	-0.70		0.28	
673	Mewat	Punhana	0.50			
674	Mewat	Punhana-Pz	0.15			
675	Mewat	Rangla Dhani-Pz	-0.68		0.30	
676	Mewat	Rathiwas	-0.15		0.02	
677	Mewat	Sarauli-Dw	-0.07			
678	Mewat	Sikarwa	0.10			
679	Palwal	Badraun			0.40	
680	Palwal	Baghaura			-0.82	-0.85
681	Palwal	Bahin-Dw	-0.20			
682	Palwal	Bamnikhera	0.20			
683	Palwal	Banchari-Dw	-0.28			
684	Palwal	Barauli-Pz			-1.31	-0.21
685	Palwal	Bazida Pahar-Dw	-0.05			
686	Palwal	Bhiduki-Dw	0.05			
687	Palwal	Bibipur-Dw	0.05			
688	Palwal	Chhaensa-Dw	0.05			
689	Palwal	Dighaut	0.71		-0.68	0.24
690	Palwal	Gulawad-Dw	0.05			
691	Palwal	Hasan Pur	0.25			
692	Palwal	Hathin	-0.45			
693	Palwal	Hodel1	0.07			
694	Palwal	Jawan- Pz			0.23	0.69
695	Palwal	Khambi			0.30	-0.96
696	Palwal	Lakhnaka			0.32	1.03
697	Palwal	Mandkola	-0.10			
698	Palwal	Nangal Jat-Dw	-0.20			
699	Palwal	Palwal	0.50		-0.82	0.28
700	Palwal	Palwal-Pz				-0.64
701	Palwal	Pehladpur-Pz			-0.52	0.35
702	Palwal	Pelak-Pz	-0.08		0.31	
703	Palwal	Phulwari-Dw	-0.30			
704	Palwal	Pirgarhi- Pz			-2.04	0.28
705	Palwal	Sarai-Dw	0.05			
706	Palwal	Tumsara	-0.06	-0.04	0.01	1.85
707	Panchkula	Bahoriyan-Dw			-5.51	

Annexure-II

			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
708	Panchkula	Barwala-Pz			0.50	
709	Panchkula	Batour			-0.72	
710	Panchkula	Bunga At Dabkhor-Dw			-1.00	
711	Panchkula	Dhakwala-Dw			-0.48	-0.65
712	Panchkula	Dharampur			-7.07	-5.83
713	Panchkula	Golpura-Dw			0.70	1.08
714	Panchkula	Hangola			-3.69	-4.06
715	Panchkula	Jaspur-Dw			-0.29	1.11
716	Panchkula	Jaswant Garh-Dw			-0.22	
717	Panchkula	Kakar Majra			1.75	1.90
718	Panchkula	Kheri-Dw			-0.62	
719	Panchkula	Kundi-Dw			-0.50	
720	Panchkula	Maranwala			-0.50	
721	Panchkula	Mauli-Dw			-0.50	
722	Panchkula	Nadha-Dw			-0.78	
723	Panchkula	Nandpur-Dw			-0.67	
724	Panchkula	Parwala			-0.92	
725	Panchkula	Raipur Rani-Pz			-1.85	
726	Panchkula	Raipurrani			5.45	
727	Panchkula	Ram Nagar-Dw			-1.70	
728	Panchkula	Ramgarh-Dw			-1.45	
729	Panchkula	Rampur-Dw			-0.20	
730	Panchkula	Rehna-Dw			-1.04	
731	Panchkula	Shahjahan Pur-Dw			-0.31	
732	Panchkula	Thapli-Dw			-1.95	
733	Panchkula	Toka-Dw			-0.73	
734	Panipat	Babail Pz S			3.24	-3.37
735	Panipat	Baholi-Pz			1.12	
736	Panipat	Bandh-Dw			0.98	
737	Panipat	Bhallour Pz			-9.96	-6.12
738	Panipat	Brahman Majra-Dw			0.28	
739	Panipat	Dakadla S			1.70	1.12
740	Panipat	Dharamgarh S			1.53	1.17
741	Panipat	Dumiana-Dw			0.96	
742	Panipat	Hathwala-Pz			0.53	
743	Panipat	Israna Pz			0.67	0.23
744	Panipat	Kaith-Dw			1.28	
745	Panipat	Karhansh Pz			1.73	1.85
746	Panipat	Khalila Manjran			-0.89	0.57
747	Panipat	Khandra			0.27	
748	Panipat	Kiwana			1.76	

Annexure-II

			Seasonal Fluctuation(M)			
SI No.	District	Location	Jan. 2017	May-17	May-17	May-17
(1)	(2)	(3)	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
749	Panipat	Lohari (S)			-2.26	
750	Panipat	Mehmadpur			0.85	
751	Panipat	Nariana-Pz				-0.92
752	Panipat	Naultha			0.96	
753	Panipat	Nizampur			0.53	
754	Panipat	Patti Kalyana S			0.31	
755	Panipat	Puther Pz			-0.14	-1.21
756	Panipat	Samalkha-Pz			0.73	
757	Panipat	Sanauli Khurd-Pz			-0.60	0.12
758	Panipat	Sink			-0.06	
759	Panipat	Untilya	3.40	-3.20	-3.54	
760	Panipat	Urlana Kalan		1.42	1.39	1.01
761	Rewari	Bahu			1.10	
762	Rewari	Balawas			-0.70	
763	Rewari	Bawal Dw			-0.42	
764	Rewari	Bawal Pz			-0.42	0.38
765	Rewari	Berli Khurd-Dw			-0.40	
766	Rewari	Bhakli-Dw			-0.10	
767	Rewari	Bharangi-Dw			-0.60	
768	Rewari	Garhi-Dw			-0.25	
769	Rewari	Gurkawas-Dw			-0.80	
770	Rewari	Hansaka-Dw			-2.10	
771	Rewari	Harinagar-Dw			-0.75	
772	Rewari	Jatuwas-Dw			-1.10	
773	Rewari	Karnawas			-0.14	0.77
774	Rewari	Karoli-Dw			0.35	
775	Rewari	Khera Bahu-Dw			-0.40	
776	Rewari	Khol			-8.12	
777	Rewari	Mandola-Pz		1.79		2.21
778	Rewari	Massani			-0.34	0.22
779	Rewari	Mubarikpur-Dw			0.00	
780	Rewari	Nahar			-1.00	
781	Rewari	Nangal Jamalpur-Pz				0.40
782	Rewari	Nangal Mundi-Dw			-0.50	
783	Rewari	Palhawas-Dw			-0.65	
784	Rewari	Pali-Pz			0.50	
785	Rewari	Ratanthal-Dw			-0.10	
786	Rewari	Rewari			-1.00	
787	Rewari	Rholiawas-Pz	0.30	-0.30	-0.35	
788	Rewari	Rohrai-Dw			-1.30	
789	Rewari	Shadipur-Dw			-0.70	

Annexure-II

SI No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
790	Rewari	Sudharana-Dw			0.05	
791	Rohtak	Baland			-0.77	-0.44
792	Rohtak	Bhal Anandpur			-1.44	-1.04
793	Rohtak	Hassangarh	0.41	-0.56	-1.01	0.33
794	Rohtak	Kansala			-0.92	-0.70
795	Rohtak	Lakhan Majara			-0.75	1.27
796	Rohtak	Mahem	0.25	-0.95	-2.61	-2.56
797	Rohtak	Samargopalpur			-2.26	-2.14
798	Rohtak	Sampla				-0.69
799	Rohtak	Sampla-Pz			-0.54	
800	Sirsa	Ali Mohmmad	0.50			
801	Sirsa	Alikan	0.87			
802	Sirsa	Bharu Khera-Dw	3.40			
803	Sirsa	Bhuratwala-Pz	2.96	-1.40	0.10	-0.09
804	Sirsa	Chaharwala	0.99			
805	Sirsa	Chilkani Dhab	0.55			
806	Sirsa	Chormar	-0.74		1.17	1.32
807	Sirsa	Chotala	0.00			-3.29
808	Sirsa	Chotala-Pz			0.30	1.51
809	Sirsa	Dabwali Dw	0.21		0.26	-0.97
810	Sirsa	Dabwali -Pz S	-0.47		0.18	
811	Sirsa	Darba Kalan-Pz	0.25	-0.42	-0.23	-0.24
812	Sirsa	Desu Jodha-Dw	0.00			
813	Sirsa	Desu Malkana-Dw	0.60			
814	Sirsa	Dholpalia-Dw	0.55			
815	Sirsa	Ding	0.85		6.95	
816	Sirsa	Ganga	0.00			
817	Sirsa	Ghushiana	1.39		0.70	0.65
818	Sirsa	Gigorani			0.30	0.19
819	Sirsa	Goriwala	0.10		0.13	
820	Sirsa	Govindgarh-Dw	1.00			
821	Sirsa	Gudia Khera-Dw	0.73			
822	Sirsa	Hasu	-0.05			
823	Sirsa	Jagiwala-Dw	6.99			
824	Sirsa	Jamal			0.53	0.17
825	Sirsa	Jamal- Pz	1.00		-0.54	-0.74
826	Sirsa	Kairanwali-Dw	0.50			
827	Sirsa	Kalanwali Mandi-Pz	-2.96		0.23	0.25
828	Sirsa	Kaluwana			-0.27	-0.07
829	Sirsa	Karamsana	-0.58	0.23	-0.14	-0.19
830	Sirsa	Kariwala1				

Annexure-II

Annexure-II						
			Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
SI No.	District	Location	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
831	Sirsa	Kash Ram Dhab		0.29	3.79	
832	Sirsa	Khuiyan	1.70		0.32	0.10
833	Sirsa	Kurangwali	0.30			
834	Sirsa	Lohgarh	0.00			
835	Sirsa	Mammer Khera-Pz			0.00	0.05
836	Sirsa	Manjiyana			0.50	0.43
837	Sirsa	Mastian	-1.83		-0.05	0.09
838	Sirsa	Mithri	0.95		0.60	0.52
839	Sirsa	Nuhian Wali		0.21	0.17	0.20
840	Sirsa	Odhan Pz	0.90			
841	Sirsa	Ottu 1(S)	-0.93			
842	Sirsa	Panniwala Mota	0.15	-0.18	-0.34	0.03
843	Sirsa	Phaggu-Pz			-0.13	-0.22
844	Sirsa	Rasalia Khera	3.32		-2.42	-0.79
845	Sirsa	Rori -Dw	0.87	-1.63	0.29	
846	Sirsa	Sadewala	0.79			
847	Sirsa	Sahuwala	0.25			
848	Sirsa	Sainpal-Pz	0.45			
849	Sirsa	Saktakhera	-1.95	0.57	0.64	0.55
850	Sirsa	Shergarh-Dw			-0.08	-0.17
851	Sirsa	Sherpura	-0.12	0.05	0.78	0.24
852	Sirsa	Sirsa-Pz	0.20		1.57	1.66
853	Sirsa	Sri Jiwan Nagar-B			3.90	
854	Sirsa	Sukhchain-Dw	0.00			
855	Sirsa	Taruwana			0.12	0.04
856	Sirsa	Tejakhhera	2.07		-1.23	-1.10
857	Sirsa	Thiraj	0.00			
858	Sirsa	Tigri-Dw	0.10			
859	Sonipat	Ahulana		-1.07	-1.42	-1.33
860	Sonipat	Barauli	0.44	0.30	-1.11	-0.32
861	Sonipat	Barswani- Dw			-0.12	
862	Sonipat	Barwasni Pz (S)			1.14	-0.65
863	Sonipat	Bega Pz				0.98
864	Sonipat	Bhainswal		-1.50	-2.34	-1.30
865	Sonipat	Bhunderi			-3.51	-0.78
866	Sonipat	Bohela			-0.40	-1.03
867	Sonipat	Butana		-1.73	-2.08	-1.74
868	Sonipat	Datauli-Pz		1.83	2.00	4.32
869	Sonipat	Farmana	0.65	-0.77	0.20	0.98
870	Sonipat	Garhwal			-1.13	-0.55
871	Sonipat	Gohana Pz			-0.40	-5.00

Annexure-II

Annexure-II						
SI No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
			May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
872	Sonipat	Jagsi			-1.36	
873	Sonipat	Jhakauli- Pz			-1.44	-13.90
874	Sonipat	Kami- Pz		1.60		2.00
875	Sonipat	Kathura Pz			-0.86	
876	Sonipat	Khanpur Kalan-Pz			-1.01	
877	Sonipat	Kheorapz			-1.94	-2.12
878	Sonipat	Lath		-1.70	-1.25	
879	Sonipat	Machhri			-2.26	-1.76
880	Sonipat	Mohana Pzm			-1.53	-1.38
881	Sonipat	Mundlana Dw			-1.12	
882	Sonipat	Mundlana- Pz			2.20	
883	Sonipat	Murthal-Pz		1.05	1.25	0.61
884	Sonipat	Nahri		0.42	0.17	0.41
885	Sonipat	Pinana			-0.62	-0.26
886	Sonipat	Purkhas-Pz				-1.81
887	Sonipat	Rai-Bahalgarh-Pz			1.24	
888	Sonipat	RasoI Pz			-0.62	-5.06
889	Sonipat	Rukhi-Pz			-1.13	-1.10
890	Yamunanagar	Antawa-Pz			0.91	
891	Yamunanagar	Bari Kanari-Pz			-1.00	
892	Yamunanagar	Bhambauli-1 (S)			1.07	7.17
893	Yamunanagar	Bilaspur Dw			1.35	-0.22
894	Yamunanagar	Chamrori-Pz			0.46	
895	Yamunanagar	Chhachhrauli			5.65	
896	Yamunanagar	Chhachhrauli S				-13.10
897	Yamunanagar	Choli		-0.87	-0.67	
898	Yamunanagar	Damla-Pz			-1.45	
899	Yamunanagar	Dhaurang S			-0.73	-0.89
900	Yamunanagar	Fatehpur-Pz			-0.40	
901	Yamunanagar	Jagadhri-Pz			0.50	

Annexure-II						
SI No.	District	Location	Seasonal Fluctuation(M)			
			Jan. 2017	May-17	May-17	May-17
(1)	(2)	(3)	May-17	Aug. 2017	Nov. 2017	Jan. 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
902	Yamunanagar	Jhiwarheri S			1.45	
903	Yamunanagar	Khizrabad			-4.49	-0.32
904	Yamunanagar	Masana Jattan-Pz			1.80	1.09
905	Yamunanagar	Mustafabad Dw	-1.07	0.22	-0.73	
906	Yamunanagar	Mustafabad-Pz	3.93		0.77	0.19
907	Yamunanagar	Naggal-S			-0.40	
908	Yamunanagar	Radaur S			-1.10	-1.10
909	Yamunanagar	Ramgarh-Dw			-0.45	
910	Yamunanagar	Rasulpur Dw				-1.27
911	Yamunanagar	Sabri			-2.47	-0.07
912	Yamunanagar	Sadhaura Dw		-0.50	-0.73	-0.80
913	Yamunanagar	Salehpur-Dw			-1.00	
914	Yamunanagar	Shadipur			-0.42	-0.24
915	Yamunanagar	Tala Kaur S			-1.16	
916	Yamunanagar	Tehi-Pz			0.13	

Annexure-III						
Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Ambala	Ambala Cantt	-0.21			
1	Ambala	Ambala Cantt-Pz	0.41			
2	Ambala	Ambala City-Dw	-0.11			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Ambala	Baknaur-Dw	-0.18			
4	Ambala	Balana	0.05		1.00	
5	Ambala	Bara Garh-Dw	-0.14			
6	Ambala	Barara-Pz	-0.12			
7	Ambala	Bari Bassi-Dw	-0.03			
8	Ambala	Behbalpur-Dw	-0.08			
9	Ambala	Bhuragnpur-Dw	-0.50			
10	Ambala	Bhurewala-Pz	-0.35			
11	Ambala	Bichali Dhamouli-Pz	-0.35			
12	Ambala	Binjal Pur-Dw	-0.10			
13	Ambala	Boh-Dw	-0.19			
14	Ambala	Budhha Khera-Dw	-0.04			
15	Ambala	Bullana- Dw	-0.10			
16	Ambala	Chhapra-Dw	-0.12			
17	Ambala	Chotta Korwa-Dw	-0.14			
18	Ambala	Churmastpur-Dw	-0.16			
19	Ambala	Dhanaura	0.75	1.00	-1.13	0.03
20	Ambala	Dukheri-Dw	-0.06			
21	Ambala	Hasanpur-Dw	-0.50			
22	Ambala	Jansui-Dw	-0.08			
23	Ambala	Jauli-Dw	-0.45			
24	Ambala	Kakkar Majra-Dw	-0.06			
25	Ambala	Kakru	-0.14	0.06	-1.13	-1.11
26	Ambala	Kalumazra-Dw	-0.16			
27	Ambala	Kapoori At Saphera-Pz	-0.31			
28	Ambala	Khanahmadpur	0.50		-0.75	
29	Ambala	Khanna Majra	-0.09			
30	Ambala	Khera Jattan-Dw	-0.18			
31	Ambala	Mohra-Dw	0.42			
32	Ambala	Mulana			0.46	
33	Ambala	Nanhera-Dw	-0.15			
34	Ambala	Naraingarh-Dw	-0.10		0.38	
35	Ambala	Naraingarh-Pz	-0.26			
36	Ambala	Nasirpur-Pz	-0.20			
37	Ambala	Nikuwana-Dw	-0.14			
38	Ambala	Panjokhra	-1.39	-1.50	-2.59	
39	Ambala	Patvi	-0.13			
40	Ambala	Pinjola	0.49	-1.28		
41	Ambala	Saha-Pz				
42	Ambala	Salehpur-Dw	-0.06			
43	Ambala	Shahpur-Dw	-0.13			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August- 2016 August- 2017	Novenber- 2016- Novenber 2017	January- 2017- January- 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
44	Ambala	Shahzadpur	-0.20			
45	Ambala	Shahzadpur-Pz	-0.60			
46	Ambala	Sohana-Dw	-0.05			
47	Ambala	Tandwal-Dw	-0.04			
48	Ambala	Tejan-Dw	-0.10			
49	Ambala	Tharwa-Dw	-0.15			
50	Ambala	Ugala S	-0.16			
51	Bhiwani	Alak Pura-Dw	0.92		-0.17	
52	Bhiwani	Alampur-Dw	0.55		1.56	
53	Bhiwani	Badala	0.18		-0.60	
54	Bhiwani	Badeshra-Pz	0.55		0.20	
55	Bhiwani	Baganwala-Pz	-1.10		2.00	
56	Bhiwani	Bajina	-1.26	-0.15	-0.36	-1.40
57	Bhiwani	Baliyali-Pz	0.61		0.63	
58	Bhiwani	Bamla	-0.23		-0.45	
59	Bhiwani	Baralu-Pz	-2.20		-1.40	
60	Bhiwani	Bardu Mugal-Pz	-2.00		-1.70	
61	Bhiwani	Barsi-Pz	2.85		-1.10	
62	Bhiwani	Bawani Khera.-Pz	1.53	0.21		-0.61
63	Bhiwani	Bawani Khera-Pz	0.70			
64	Bhiwani	Bhawani Khera Dw			-0.06	
65	Bhiwani	Bhawani Khera Pz			0.15	
66	Bhiwani	Bhera-Pz			-0.25	
67	Bhiwani	Bhiwani	-0.66		0.00	
68	Bhiwani	Bhutana-Pz			1.29	
69	Bhiwani	Bidhnoi-Pz			-1.20	
70	Bhiwani	Biran--Pz	0.20		0.06	
71	Bhiwani	Bohal	0.32	1.50	0.90	1.00
72	Bhiwani	Budh Shelly-Pz			-0.90	
73	Bhiwani	Budheri-Pz	-1.93		-1.47	
74	Bhiwani	Busan-Pz			0.22	
75	Bhiwani	Chappar Rangar-Pz			0.10	
76	Bhiwani	Dadam-Pz	0.10		-0.15	
77	Bhiwani	Damkora-Pz				
78	Bhiwani	Dang-Pz	1.30		0.40	
79	Bhiwani	Devsar-Pz	0.25		0.30	
80	Bhiwani	Dhana Ladanpur-Pz	0.67		-0.16	
81	Bhiwani	Dhanana	-0.46	-0.45	0.81	0.22
82	Bhiwani	Dhani Ramjas-Pz			-0.30	
83	Bhiwani	Dhani Shelwal-Pz			0.05	
84	Bhiwani	Dhanimahu-Pz	-0.10		0.00	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
85	Bhiwani	Dighawa Shyam--Pz	2.18			
86	Bhiwani	Dinod-Pz	0.45		0.74	
87	Bhiwani	Dulheri-Pz	-0.30		-0.10	
88	Bhiwani	Dwvrala-Pz				
89	Bhiwani	Garanpura-Pz	-0.68		-1.27	
90	Bhiwani	Gignow-Pz	-2.28		-2.15	
91	Bhiwani	Golagarh-Pz				
92	Bhiwani	Gothra-Pz	0.70		0.38	
93	Bhiwani	Gujrani-Pz	0.62		0.07	
94	Bhiwani	Gurera Pz			-0.10	
95	Bhiwani	Gurera-Pz	-0.16	-0.88	-0.10	
96	Bhiwani	Haluwas	1.58	-0.60	-0.19	
97	Bhiwani	Hetampur	0.47		-0.68	
98	Bhiwani	Indiwali-Pz			-0.95	
99	Bhiwani	Isharwal	-0.31		0.31	
100	Bhiwani	Jamalpur-Pz	1.42		1.31	
101	Bhiwani	Jatai-Pz	-0.05		0.13	
102	Bhiwani	Jhanwari-Pz	-0.25		1.90	
103	Bhiwani	Jharwai-Pz	-0.17			
104	Bhiwani	Jhopha Kalan-Pz				
105	Bhiwani	Jhully-Pz	0.20		-1.00	
106	Bhiwani	Jhumpa	0.59	0.90	-0.24	
107	Bhiwani	Jhumpa Kalan	-0.25		3.18	
108	Bhiwani	Jitwanwas-Dw			-0.72	
109	Bhiwani	Juikalan Pz	-0.61			
110	Bhiwani	Kairu-Pz			-0.70	
111	Bhiwani	Kairu-Pz			0.35	
112	Bhiwani	Kalinga-Pz	-0.58		0.18	
113	Bhiwani	Kaluwas-Pz	0.45		0.20	
114	Bhiwani	Kasni Kalan	-0.68		-0.90	
115	Bhiwani	Katwar-Pz			-0.48	
116	Bhiwani	Khanak-Pz	0.81		3.55	
117	Bhiwani	Khaparwas-Pz			1.45	
118	Bhiwani	Kharak Kalan-Pz	-0.48		-0.40	
119	Bhiwani	Khariawas-Pz			-0.17	
120	Bhiwani	Khera-Pz			0.48	
121	Bhiwani	Kheri Dalautpura-Pz	-1.02		-0.48	
122	Bhiwani	Kikral-Pz				
123	Bhiwani	Kitlana-Pz	0.57		-1.03	
124	Bhiwani	Kural-Pz	-1.86		-1.20	
125	Bhiwani	Lachhmanpur	-0.19		0.07	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
126	Bhiwani	Lalawas-Pz			-0.70	
127	Bhiwani	Leghan Hetwan-Pz			-0.75	
128	Bhiwani	Lohani	0.22	-0.03	7.76	-0.60
129	Bhiwani	Mandhana-Pz	0.67		-0.18	
130	Bhiwani	Mandhan-Pz			2.00	
131	Bhiwani	Manhairu	0.55	1.00	0.40	
132	Bhiwani	Matani-Pz			0.00	
133	Bhiwani	Miran	0.06		2.07	
134	Bhiwani	Miran-Pz	-0.03		-0.11	
135	Bhiwani	Mitathal-Pz	0.38		0.02	
136	Bhiwani	Mithi-Pz			-0.40	
137	Bhiwani	Mohila-Pz	-0.03		21.27	
138	Bhiwani	Morka-Pz			-0.59	
139	Bhiwani	Mundhal Kalan-Pz	-0.95		0.45	
140	Bhiwani	Naloi-Pz			0.50	
141	Bhiwani	Naraungabad-Pz	0.55		-0.37	
142	Bhiwani	Nathuwas-Pz	-0.25		-0.07	
143	Bhiwani	Nigana Kalan-Pz	0.25		0.40	
144	Bhiwani	Nigana Khurd-Pz	-0.07		0.40	
145	Bhiwani	Nimriwali-Pz	0.30		0.10	
146	Bhiwani	Ninan-Pz	-0.10		0.20	
147	Bhiwani	Noon Sar-Pz	-2.08		-1.80	
148	Bhiwani	Paju	-2.00		-2.00	
149	Bhiwani	Pataudi Khurd	-0.27		-0.04	
150	Bhiwani	Patwan-Pz	-0.22		-0.90	
151	Bhiwani	Pehladgarh-Dw	0.18		-0.20	
152	Bhiwani	Prem Nagar-Pz	-0.45		1.50	
153	Bhiwani	Pur-Pz	0.57		1.55	
154	Bhiwani	Rajgarh-Pz	0.23		-0.20	
155	Bhiwani	Ratera-Pz	0.80		1.35	
156	Bhiwani	Rewari-Pz	-0.65		-0.38	
157	Bhiwani	Riwasa-Dw	0.10		-0.10	
158	Bhiwani	Runhat-Dw	-0.18		0.35	
159	Bhiwani	Rupgarh-Pz	-0.55		-0.19	
160	Bhiwani	Sagban			1.44	
161	Bhiwani	Sangwan	1.35			
162	Bhiwani	Sangwan Pzm				
163	Bhiwani	Serla-Pz	-1.95		-1.50	
164	Bhiwani	Sighani-Pz			-2.10	
165	Bhiwani	Singhani-Pz	-2.39			
166	Bhiwani	Sirsa-Dw	-0.38		-1.98	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016-May 2017	August-2016-August-2017	Novenber-2016-November 2017	January-2017-January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
167	Bhiwani	Siwach-Pz				
168	Bhiwani	Siwani	-1.78	-0.35	0.30	
169	Bhiwani	Sui	0.39	1.25	0.70	
170	Bhiwani	Sungarpur	0.27		-4.73	
171	Bhiwani	Talu-Pz	0.12		0.95	
172	Bhiwani	Talwani-Pz			-1.20	
173	Bhiwani	Thillor-Pz	-0.45		0.30	
174	Bhiwani	Tigrana-Dw	0.88		-1.20	
175	Bhiwani	Tosham	-1.01	0.30	2.17	
176	Bhiwani	Tosham-Pz	0.32		0.55	
177	Charkhi Dadri	Achina-Pz	1.48			
178	Charkhi Dadri	Badesara-Pz	-1.97		-1.30	
179	Charkhi Dadri	Badhwana-Pz	-0.48		-1.16	
180	Charkhi Dadri	Baundkalan	0.63		-4.25	
181	Charkhi Dadri	Bigowa-Pz	-0.18		0.05	
182	Charkhi Dadri	Bijna-Pz	-0.96		-0.65	
183	Charkhi Dadri	Birhi Kalan-Pz	0.36		-0.65	
184	Charkhi Dadri	Bound-Pz	0.47		-1.02	
185	Charkhi Dadri	Chandawas-Pz	-2.10		-1.95	
186	Charkhi Dadri	Chirya	-0.76	0.10	-0.99	
187	Charkhi Dadri	Dadri	-2.54		-0.59	
188	Charkhi Dadri	Dadri-Pz	0.20		-0.02	
189	Charkhi Dadri	Dudhwa-Pz	-0.07		-0.21	
190	Charkhi Dadri	Dudiwala-Pz	-1.60		-1.70	
191	Charkhi Dadri	Ghasola-Pz	0.77		-0.69	
192	Charkhi Dadri	Gopalwas-Pz	-0.98			
193	Charkhi Dadri	Gopi	-2.08			
194	Charkhi Dadri	Hui-Pz	-1.63		-2.77	
195	Charkhi Dadri	Imlota	0.34		0.00	
196	Charkhi Dadri	Jhinjar-Pz	0.97		-0.10	
197	Charkhi Dadri	Kakroli Hatti-Pz	-2.10			
198	Charkhi Dadri	Kakroli Sardh-Pz	-1.60		-2.77	
199	Charkhi Dadri	Kanheti-Dw	-1.53		0.61	
200	Charkhi Dadri	Kapoori-Pz	1.05		-0.47	
201	Charkhi Dadri	Kari Adu-Dw	-1.40			
202	Charkhi Dadri	Kari Mod-Pz	-6.40			
203	Charkhi Dadri	Kari Pura-Pz	-2.10		-2.20	
204	Charkhi Dadri	Kheri Bura-Pz	0.50		-1.47	
205	Charkhi Dadri	Makrana-Pz	-0.49		-0.17	
206	Charkhi Dadri	Mandoli-Pz	0.33		-0.15	
207	Charkhi Dadri	Mehrana	0.58		3.42	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016-May 2017	August-2016-August-2017	November-2016-November 2017	January-2017-January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
208	Charkhi Dadri	Mirch-Pz	-2.32		-0.50	
209	Charkhi Dadri	Misri-Pz	-1.40		-0.47	
210	Charkhi Dadri	Nayaatela	-0.47			
211	Charkhi Dadri	Paintawas-Pz			-0.65	
212	Charkhi Dadri	Patuwas-Pz	-0.28		0.47	
213	Charkhi Dadri	Pichopa Kalan-Pz	-2.12		-2.45	
214	Charkhi Dadri	Ranila-Pz	-0.85		-1.61	
215	Charkhi Dadri	Sanjarwas-Pz	-0.14		0.30	
216	Charkhi Dadri	Sankrod-Pz	0.23		-0.73	
217	Charkhi Dadri	Sanwar	0.26		-3.53	
218	Charkhi Dadri	Sarangpur-Pz			1.13	
219	Charkhi Dadri	Saroop Garh-Pz	-0.53		-0.72	
220	Charkhi Dadri	Todi-Pz	-1.93		-2.20	
221	Charkhi Dadri	Unn-Dw	2.06		0.97	
222	Faridabad	Ballabhgarh	0.07			
223	Faridabad	Bhopani	-6.03			
224	Faridabad	Kabulpur	-4.81			
225	Faridabad	Kheri Jamalpur-Dw	-2.15			
226	Faridabad	Manjhawali-Dw	0.40			
227	Faridabad	Pali2	-0.85		15.00	
228	Faridabad	Paota	-0.65			
229	Faridabad	Sakrana-Dw	1.05			
230	Faridabad	Sanped-Dw	0.15			
231	Faridabad	Sikri1	0.46			
232	Faridabad	Sotai	-0.80			
233	Fatehabad	Aharwan S				
234	Fatehabad	Alalwas-Pz	-4.06			
235	Fatehabad	Badopal	-0.54	0.00	-1.44	
236	Fatehabad	Bhattukalan-Pz	0.21			
237	Fatehabad	Bhuna	-0.38			
238	Fatehabad	Chindhar-Dw	-0.30		1.30	
239	Fatehabad	Dayar1	-0.40		-0.70	
240	Fatehabad	Dhangar-Dw			-0.10	
241	Fatehabad	Gorakhpur-Dw	0.52		-1.05	
242	Fatehabad	Hukmawali-Pz	-2.20		-0.09	
243	Fatehabad	Jandli Kalan	-0.26		-0.24	
244	Fatehabad	Kajal Heri-Dw	0.25		0.05	
245	Fatehabad	Kanhari-Pz	-1.50		-0.65	
246	Fatehabad	Khara Kheri-Dw	0.55			
247	Fatehabad	Machiwali-Dw	-0.35		0.00	
248	Fatehabad	Mehu Wala Pz	0.42		-0.39	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
249	Fatehabad	Nagpur- Pz	1.60			
250	Fatehabad	Nahla	0.33	-0.02	-0.34	
251	Fatehabad	Nangla-Dw	0.25		-0.45	
252	Fatehabad	Nikuwana-Pz			-2.25	
253	Fatehabad	Pilimudari	0.30		0.40	
254	Fatehabad	Ratia -Pz	-2.81		-2.08	
255	Fatehabad	Ratta Khera-Pz	-1.30		-1.00	
256	Fatehabad	Sadalpur	0.07		0.60	
257	Fatehabad	Samain	0.14		-0.84	
258	Fatehabad	Shekhpur Daroli-Dw	-0.45		0.60	
259	Fatehabad	Suniyana	-0.40		-0.60	
260	Fatehabad	Tohana	-1.71	0.32	-1.87	
261	Gurgaon	Bandhwari	-0.25			
262	Gurgaon	Basonda Tripati-Pz	0.40			
263	Gurgaon	Bhondsi Ew	4.10			
264	Gurgaon	Bhora Kalan-Pz	-0.60			
265	Gurgaon	Bilaspur-Pz	-0.10			
266	Gurgaon	Budehra-Dw	0.45			
267	Gurgaon	Chandu Tikly	-0.70		-1.22	
268	Gurgaon	Daultabad-Pz	2.00			
269	Gurgaon	Farrukh Nagar-Pz	-1.25			
270	Gurgaon	Fazilpur Badli-Pz	-1.65		-1.65	
271	Gurgaon	Gangola-Dw	0.85			
272	Gurgaon	Gudhana-Pz	-0.30			
273	Gurgaon	Gurgaon Pz	0.83			
274	Gurgaon	Haila Mandi	-0.15			
275	Gurgaon	Harchandpur Pz	0.35			
276	Gurgaon	Jamalpur-Pz	1.44		0.52	-1.55
277	Gurgaon	Jaraon Pz	0.49		2.21	-0.39
278	Gurgaon	Jhandu Sarai-Pz	-0.30			
279	Gurgaon	Kadipur	-1.25			
280	Gurgaon	Kasan	-1.55			
281	Gurgaon	Khera Khurrampur-Pz			-0.98	
282	Gurgaon	Lokra-Pz	-1.28			
283	Gurgaon	Meoka-Pz			-0.68	
284	Gurgaon	Mouzabad	-0.05		-0.29	-11.15
285	Gurgaon	Mubarakpur	0.50			
286	Gurgaon	Pataudi-Pz	0.00			
287	Gurgaon	Sadhrana-Pz	0.55			
288	Gurgaon	Sohna	10.12			
289	Gurgaon	Wazirpur-Pz	-0.53			-1.58

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
290	Hisar	Adampur S	0.45		0.40	
291	Hisar	Adampur-Pz	-0.91		0.15	0.19
292	Hisar	Agroha Abd	-0.22		-0.05	
293	Hisar	Agroha-Pz	0.91		0.25	
294	Hisar	Badchappar	0.33		0.25	
295	Hisar	Balawas1	0.02	-8.39	0.21	
296	Hisar	Balsamand	-2.03		-0.27	0.57
297	Hisar	Balsamand-Pz	-0.12	-1.30	1.39	
298	Hisar	Banbhauri-Pz	-0.53	-0.09	0.05	
299	Hisar	Barwala Abd		-0.75		
300	Hisar	Barwala S	2.45		-0.25	
301	Hisar	Barwala-Pz	-1.42		0.13	
302	Hisar	Bas	-0.30	0.00	1.64	
303	Hisar	Basra	1.03	0.56	-0.30	-1.18
304	Hisar	Behbalpur-Pz	0.48		1.35	
305	Hisar	Bhana-Dw	0.17		0.15	
306	Hisar	Bhotal Jattan-Dw	-0.55		-0.50	
307	Hisar	Bithmara-Dw	2.10		1.95	
308	Hisar	Chanaut	1.30		0.26	-0.10
309	Hisar	Chann-Dw	0.72		0.85	
310	Hisar	Chaudhriwali	-0.70		0.30	
311	Hisar	Chawdhariwas	-1.25	-0.20	-0.31	0.99
312	Hisar	Datta-Dw	-0.23		1.20	
313	Hisar	Deva-Dw	0.10			
314	Hisar	Dhand-Dw	0.70		0.80	
315	Hisar	Dhansu	-0.04	0.50	0.41	2.50
316	Hisar	Dobi-Dw	-0.95			
317	Hisar	Durjanpur-Pz	-0.15		-0.33	
318	Hisar	Ghursal-Pz	-1.38	0.60	-0.17	-0.32
319	Hisar	Gurana	-0.05		0.15	
320	Hisar	Hansi S	1.20		0.12	
321	Hisar	Hissar	0.21			
322	Hisar	Hissar-Pz	-1.62	0.20	0.00	0.26
323	Hisar	Jaga Bara-Dw	0.05		-0.15	
324	Hisar	Juglan	1.35		0.81	
325	Hisar	Kabrer				
326	Hisar	Kaliravan	0.50		0.05	
327	Hisar	Kanoh-Pz	6.30		1.45	
328	Hisar	Khanda Kheri-Pz	-0.21		-0.71	-0.14
329	Hisar	Kharakpunia			-0.10	
330	Hisar	Kherijalab		-0.10		

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016-May 2017	August-2016-August-2017	November-2016-November 2017	January-2017-January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
331	Hisar	Kherijalab-Pz	-0.34		-0.53	-0.20
332	Hisar	Khotkalan	-0.29	-1.10	-0.90	-0.16
333	Hisar	Kirori	0.40		0.40	-1.71
334	Hisar	Kirtan	-0.77	0.40	-0.47	-0.25
335	Hisar	Ladwi-Dw	0.00		0.05	
336	Hisar	Litani-Dw	0.62			
337	Hisar	Mangali-Pz	-0.04	-0.50	-0.92	0.29
338	Hisar	Mehanda-Dw	2.02		0.10	
339	Hisar	Mirka	3.19		-2.59	
340	Hisar	Moda Khera-Dw	-0.70		-0.20	
341	Hisar	Mothmajri				
342	Hisar	Narnaud S	-1.76		-0.99	
343	Hisar	Pali-Dw	0.30		-0.35	
344	Hisar	Petwar-Dw	-0.45		-0.65	
345	Hisar	Rajli Cross	0.25	-1.30	-0.55	-0.63
346	Hisar	Rajthal1	-1.64		-2.70	
347	Hisar	Samani	-1.00	0.52	0.76	0.08
348	Hisar	Sorkhi-Pz	0.32	-0.05	0.46	0.70
349	Hisar	Talwani Badshahpur-Dw	0.36		-0.05	
350	Hisar	Talwani Rana-Dw	0.10		-0.05	
351	Hisar	Thurana-Dw	0.09		-0.18	
352	Hisar	Uklana				
353	Hisar	Umra	-2.40		-2.08	
354	Jhajjar	Asanda-Dw	0.16			
355	Jhajjar	Babradw	0.09			
356	Jhajjar	Badli	0.56			
357	Jhajjar	Bagoa	0.55		-1.04	
358	Jhajjar	Bahadurgarh	-0.30			
359	Jhajjar	Bamroli- Dw	-0.31			
360	Jhajjar	Beri	-0.03			
361	Jhajjar	Bhurawas-Pz	0.33			
362	Jhajjar	Chamanpura	0.08	0.05		
363	Jhajjar	Chhara	0.74	0.40	0.05	
364	Jhajjar	Chuchakwas	0.50	0.20	-0.20	
365	Jhajjar	Dehkora-Dw	-0.30			
366	Jhajjar	Dighal	0.49			
367	Jhajjar	Dubhaldhan	0.13		-0.18	
368	Jhajjar	Dulhera	0.22		-0.06	
369	Jhajjar	Gabhana	0.68		-0.21	
370	Jhajjar	Goria-Dw	0.46			
371	Jhajjar	Hasanpur	0.77			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
372	Jhajjar	Jakhoda-Dw	1.80			
373	Jhajjar	Jhajjar	0.75			
374	Jhajjar	Jhajjar1	-0.77			
375	Jhajjar	Jharli	0.84			
376	Jhajjar	Kaliawas- Dw	0.83			
377	Jhajjar	Kamalgarh-Dw	0.26			
378	Jhajjar	Kheri Asra Dw	0.48			
379	Jhajjar	Kherka Gujjar- Dw	0.17			
380	Jhajjar	Kulasi	-0.24		-0.20	
381	Jhajjar	Lakeria- Dw	-0.56			
382	Jhajjar	Lohari- Pz	0.98			
383	Jhajjar	Majra Deswal	0.61		0.29	
384	Jhajjar	Matanhail-Pz	0.57			
385	Jhajjar	Mudsa	0.27		0.11	
386	Jhajjar	Salhawas	0.62			
387	Jhajjar	Sankol	-1.68		0.36	
388	Jhajjar	Silana-Dw	-0.10			
389	Jhajjar	Subnah	0.13		-1.36	
390	Jhajjar	Wazirpur	-0.03		-0.15	
391	Jhajjar	Yaqubpur	0.26			
392	Jind	Alewa	-0.20		-5.35	
393	Jind	Alewa Pz	-1.10			
394	Jind	Anta-Pz	-0.80			
395	Jind	Ati Krishna1(S)	0.15			
396	Jind	Baroda	-2.80		1.60	-2.89
397	Jind	Belrakha	-3.80			
398	Jind	Bhambewa-Dw				
399	Jind	Bhana Barahman-Dw	-2.80			
400	Jind	Bhongra-Dw				
401	Jind	Bhuslana-Pz	-1.31		-0.73	
402	Jind	Bibipur-Ow	-1.20			
403	Jind	Brahmanwas	0.48		-0.08	
404	Jind	Chhabri	0.85	1.86	1.40	0.01
405	Jind	Dalamwala-Dw				
406	Jind	Danaudakalan				
407	Jind	Danoda Khurd-Pz	-1.40			
408	Jind	Dhandauli Pz				
409	Jind	Dhigana-Dw	-0.20			
410	Jind	Dorana Pz	1.45			-3.98
411	Jind	Ganda Khera-Dw	-2.50			
412	Jind	Gangoli-Dw	-1.00			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
413	Jind	Gurusar-Dw	-1.00			
414	Jind	Hasanpur-Pz	-1.00			
415	Jind	Igra	-0.90			
416	Jind	Jamni-Dw				
417	Jind	Jhamula	0.75		1.67	
418	Jind	Jhanj Kalan	-2.60			
419	Jind	Jind-Pz	-2.30		-0.50	
420	Jind	Julana Pz	1.22		0.68	0.27
421	Jind	Julana-Dw	1.80			
422	Jind	Kakrod-Dw	0.10			
423	Jind	Kalwan-Pz	-1.25			
424	Jind	Kandela-Pz	-3.20			
425	Jind	Karela-Dw	0.80			
426	Jind	Karsindhu-Dw	0.20			
427	Jind	Karsola-Dw	-0.60			
428	Jind	Khatkaran				
429	Jind	Koel-Dw	-1.90			
430	Jind	Korar	2.00		0.03	
431	Jind	Lajwana Kalan	-0.30			
432	Jind	Lochap Pz	-1.10		0.13	8.67
433	Jind	Ludhana	-0.20			
434	Jind	Mandi Kalan-Dw	-1.90			
435	Jind	Mohal Khera Pz	-0.35		1.90	
436	Jind	Narwana S			0.40	
437	Jind	Pega-Dw	-0.60			
438	Jind	Pillukhera			0.40	0.67
439	Jind	Pillukhera-Pz	-1.00		-0.10	
440	Jind	Pipaltha-Pz	1.55			
441	Jind	Pokerikheri-Pz	-1.50			
442	Jind	Rajpura-Pz	-1.70			
443	Jind	Rasidan Pz	2.80			
444	Jind	Ratta Khera-Dw	1.58			
445	Jind	Safidon (S)	-1.10		0.06	0.30
446	Jind	Safidon 1(S)	-0.88			
447	Jind	Sahanpur-Pz	-0.80			
448	Jind	Sanchakhera				
449	Jind	Shanpur-Pz				
450	Jind	Uchana	0.02		-0.20	-0.24
451	Jind	Uchana Pz	-4.75			-3.92
452	Kaithal	Bakal-Dw	-1.75			
453	Kaithal	Balbehra-Pz				2.06

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
454	Kaithal	Balu-Dw	-0.50			
455	Kaithal	Barsana-Pz	-1.93			
456	Kaithal	Bhana-Pz				4.60
457	Kaithal	Chika-Pz	-1.82			
458	Kaithal	Dhons-Pz	-1.74			
459	Kaithal	Dhunderheri-Dw	-1.33			
460	Kaithal	Guhna			0.10	
461	Kaithal	Harigarh Kingan-Pz	-1.90			
462	Kaithal	Jakhauli-Pz	-0.54	-0.87	-0.13	4.00
463	Kaithal	Jandaula-Pz	-6.20			7.40
464	Kaithal	Kaithal S	-1.62			
465	Kaithal	Kalayat	0.65		0.94	2.32
466	Kaithal	Kalayat S	-0.75		0.98	
467	Kaithal	Kalesar-Dw	-1.56			
468	Kaithal	Kamalpur-Dw	-1.95			
469	Kaithal	Kathana-Pz	-0.95		-0.37	-4.19
470	Kaithal	Kaul-Pz	-1.80		-1.02	-0.18
471	Kaithal	Kelaram	0.32		0.00	-1.49
472	Kaithal	Khanpur-Pz	-0.15		0.85	
473	Kaithal	Kheri Lamba-Dw	-0.44			
474	Kaithal	Kheri Raowali-Dw	-1.37			
475	Kaithal	Manas	-1.64			
476	Kaithal	Manaspatti-Pz	0.40	-2.05	-0.83	
477	Kaithal	Mataur	-0.20	-0.35	0.82	2.59
478	Kaithal	Mundri	-1.10		-0.58	5.56
479	Kaithal	Padla 1(S)			-0.68	
480	Kaithal	Pai-Dw	-1.12			
481	Kaithal	Peoda				
482	Kaithal	Peoda_Pz	-2.15		5.10	2.94
483	Kaithal	Pharal				
484	Kaithal	Pundri(S)	-1.46			
485	Kaithal	Rajaund-Pz	-0.75			
486	Kaithal	Ram Garh-Dw				
487	Kaithal	Rasulpur Ghamri-Pz	-1.75		0.01	
488	Kaithal	Serdha-Dw	-1.18			
489	Kaithal	Sirsal-Pz	-1.67		-1.05	-0.28
490	Kaithal	Siwan-Pz	-2.35			
491	Kaithal	Solu Majra-Pz	-2.06			
492	Kaithal	Songri-Dw	-0.84			
493	Kaithal	Tik	-1.80			
494	Karnal	Ajanthali-Pz	0.59			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
495	Karnal	Alipur-Pz	0.49			
496	Karnal	Amin S	-2.58		-0.03	
497	Karnal	Amupur-Pz	-1.18		1.12	
498	Karnal	Anchla-Pz	0.72			
499	Karnal	Andhera-Pz	0.66			
500	Karnal	Anjanthali-Pz				
501	Karnal	Ardana-Pz	0.71			
502	Karnal	Assandh-Pz	0.49			
503	Karnal	Badson- Pz	0.63			
504	Karnal	Bahri-Pz				
505	Karnal	Balhera-S	-2.11		0.36	
506	Karnal	Balla- Pz	0.65			
507	Karnal	Bansa-Pz	0.67			
508	Karnal	Barthal-Pz	0.21			
509	Karnal	Bastali-Pz	-0.60			
510	Karnal	Beholpur-Pz	0.46			
511	Karnal	Bijna-Pz	0.79			
512	Karnal	Budanpur-Pz	0.52			
513	Karnal	Chandsamand-Pz	0.56			
514	Karnal	Chaura-Pz				
515	Karnal	Chaura-Pz				
516	Karnal	Chirao-Pz	0.51			
517	Karnal	Chochra-Pz	0.45		-0.30	
518	Karnal	Choor Karsa-Pz	1.66			
519	Karnal	Chorkharsa-Pz	1.86		-0.18	
520	Karnal	Dabarthala-Pz	0.58			
521	Karnal	Dachar-Pz	0.18			
522	Karnal	Dadupur Khurd-Pz	-0.68		-1.07	
523	Karnal	Dadupur-Pz	0.47			
524	Karnal	Darar	0.35			
525	Karnal	Dhanaura--Pz	0.87			
526	Karnal	Dingar Majra-Pz	-1.93	-0.15	-0.65	
527	Karnal	Domsi D	0.25		-3.33	
528	Karnal	Faridpur-Pz	0.61			
529	Karnal	Gagsina-Pz	0.48			
530	Karnal	Garhi Khajur S	-2.04		1.10	
531	Karnal	Gharaunda-Pz				
532	Karnal	Ghiar-Pz	-0.60			
533	Karnal	Gholpura-Pz	0.52			
534	Karnal	Gogripur-Pz	0.66			
535	Karnal	Gohida -Pz	0.31			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May-2017	August-2016 August-2017	November-2016- November-2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
536	Karnal	Goli-Pz	0.69			
537	Karnal	Gondar-Pz	-0.69		-0.97	
538	Karnal	Gondhar	0.42			
539	Karnal	Gudha-Pz	0.48			
540	Karnal	Indri	0.22			
541	Karnal	Jainpur-Pz	0.82			
542	Karnal	Jalmana Pz	0.57			
543	Karnal	Janesron--Pz	0.62			
544	Karnal	Jani-Pz	0.59			
545	Karnal	Jaroli Khurd-Pz	3.07			
546	Karnal	Jhanjari-Pz	0.54			
547	Karnal	Jundla1	-3.75		-1.03	
548	Karnal	Kachhwa Pz	0.81			
549	Karnal	Kalampura-Pz	0.61			
550	Karnal	Kalheri-Pz	0.98			
551	Karnal	Kalri Jagir S	0.61		-0.02	
552	Karnal	Kalsi	0.55			
553	Karnal	Kalsora-Pz	0.90			
554	Karnal	Kambopura-Pz	0.77			
555	Karnal	Khanpur-Pz	0.85			
556	Karnal	Khizrabad-Pz	0.93			
557	Karnal	Kohnd S	0.96			
558	Karnal	Kurlan-Pz				
559	Karnal	Kutail S			-0.37	
560	Karnal	Majra Roran				
561	Karnal	Makhala S	0.72			
562	Karnal	Manak Mazra-Pz	0.46			
563	Karnal	Mehmadpur-Pz	0.87			
564	Karnal	Mohidinpur-Pz	-0.66		0.16	
565	Karnal	Mormazra-Pz	0.83			
566	Karnal	Mound S	0.12		-0.16	
567	Karnal	Munak	0.73			
568	Karnal	Mundi Garhi--Pz	0.49			
569	Karnal	Musepur-Pz	0.66			
570	Karnal	Mustafabad-Pz	0.61			
571	Karnal	Nabipur-Pz	0.46			
572	Karnal	Nalipur-Pz	0.62			
573	Karnal	Nalvi Kalan-Pz	0.06		0.41	
574	Karnal	Nanhera	0.73		-0.13	
575	Karnal	Naru Kheri-Pz	0.39			
576	Karnal	Nasirpur-Pz	0.82			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
577	Karnal	Nisang-Pz	-0.17			
578	Karnal	Padhana-Dw	-2.51			
579	Karnal	Phurlak S			-0.85	
580	Karnal	Phusgarh-Pz	0.65			
581	Karnal	Popra-Pz	0.73			
582	Karnal	Pundrak-Pz	0.83			
583	Karnal	Rambha-Pz	0.75			
584	Karnal	Ranwar-Pz	0.91			
585	Karnal	Rasin-Pz	0.75			
586	Karnal	Rattak-Pz	0.91			
587	Karnal	Rindal-Pz	0.75			
588	Karnal	Risalwa-Pz	0.84			
589	Karnal	Sadarpur-Pz	0.56			
590	Karnal	Sagga-Pz	0.55			
591	Karnal	Salwan-B	0.68			
592	Karnal	Sambli-Pz-M			-0.49	
593	Karnal	Sambli-Pz-S			-0.67	
594	Karnal	Subri-Pz	0.58			
595	Karnal	Taprana-Pz	0.72			
596	Karnal	Taraori-Pz	0.68			
597	Karnal	Udana-Pz	0.85			
598	Karnal	Uplani-Pz	0.70			
599	Kurukshetra	Adhoya-Pz	-2.52			
600	Kurukshetra	Ajrawer-Pz	-1.34			
601	Kurukshetra	Bachki-Pz	-1.98		-2.13	
602	Kurukshetra	Badarpur-Pz	-1.68			
603	Kurukshetra	Bakali-Pz	-1.76			
604	Kurukshetra	Bapda-Pz	-1.62			
605	Kurukshetra	Barhan-Pz	-2.24			
606	Kurukshetra	Baronda-Pz	-1.10		0.32	7.94
607	Kurukshetra	Barshami-Pz	-1.40			
608	Kurukshetra	Batheri-Pz	-2.29			
609	Kurukshetra	Berthala S	-1.64			-3.05
610	Kurukshetra	Bhore Saidan S				
611	Kurukshetra	Bodhni (S)	-0.61			
612	Kurukshetra	Budha-Pz	-1.76			
613	Kurukshetra	Busthala-Pz	-1.97		-2.24	
614	Kurukshetra	Chanalheri-Pz	-2.13			
615	Kurukshetra	Chhapra-Pz	-1.72			
616	Kurukshetra	Dabkhera-Pz	-2.35	-1.35	-0.40	-1.00
617	Kurukshetra	Dhir Pur-Pz	-2.03			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May-2017	August-2016 August-2017	November-2016- November-2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
618	Kurukshetra	Diwana-Pz	-2.12			
619	Kurukshetra	Garhi Roran-Pz	-1.65			
620	Kurukshetra	Ghararsi-Pz	-1.43			
621	Kurukshetra	Gobind Garh-Pz	-0.50			
622	Kurukshetra	Gol Pura-Pz	-1.88			
623	Kurukshetra	Gumthala Garhu-Pz	-2.18			
624	Kurukshetra	Hathira-Pz	-2.03			
625	Kurukshetra	Helwa-Pz	-1.99			
626	Kurukshetra	Ishaque S	-1.41		-1.24	
627	Kurukshetra	Ismailpur-Pz	-2.23			
628	Kurukshetra	Ismilabad-St-Pz	-1.90			
629	Kurukshetra	Jalbehra-Pz	-1.36			
630	Kurukshetra	Jansa-Pz				
631	Kurukshetra	Jhansa-Pz	3.39			
632	Kurukshetra	Jogna Khera-Pz	-3.58		0.29	-0.27
633	Kurukshetra	Kalsani-Pz	-2.10			
634	Kurukshetra	Karaha Sahib-Pz	-2.00			
635	Kurukshetra	Kharindwa	-1.73			
636	Kurukshetra	Kheri Ran Nagar-Pz	-1.90			
637	Kurukshetra	Lakhmari-Pz	-1.50			
638	Kurukshetra	Lohar Majra-Pz	-1.72			
639	Kurukshetra	Lohara-Pz	-0.22			
640	Kurukshetra	Lukhi-Pz	-2.35			
641	Kurukshetra	Malikpur-Singhpura-Pz	-8.18		-4.59	
642	Kurukshetra	Mangana-Pz	-2.22			
643	Kurukshetra	Mangoli Jattan-Pz	-1.43			
644	Kurukshetra	Mirzapur-Pz	-6.88			
645	Kurukshetra	Mohri-Dw	-0.77			
646	Kurukshetra	Mohri-Pz	-0.70			
647	Kurukshetra	Morthala-Pz	-1.31			
648	Kurukshetra	Murtzapur-Pz		2.80	-1.55	
649	Kurukshetra	Naisi-Pz	-2.06			
650	Kurukshetra	Padlu-Pz	-1.37			
651	Kurukshetra	Ram Sharan Majra-Pz	-6.51		-5.89	
652	Kurukshetra	Rao Garh-Pz	-1.86			
653	Kurukshetra	Rawa-Pz	-1.70			
654	Kurukshetra	Rohit-Pz	-2.19			
655	Kurukshetra	Samalkhi-Pz	-1.98			
656	Kurukshetra	Sandholapz	-1.46			
657	Kurukshetra	Sarai Sukhi-Pz	-1.56			
658	Kurukshetra	Sarsa-Pz	-1.97			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May-2017	August-2016- August-2017	November-2016- November-2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
659	Kurukshetra	Shanti Nagar-Pz	-1.26			
660	Kurukshetra	Sirsala-Pz	-1.22			
661	Kurukshetra	Sunarain Dhanani-Pz	-1.07			
662	Kurukshetra	Sunder Pur-Pz	-1.84			
663	Kurukshetra	Surmi-Pz	-1.43			
664	Kurukshetra	Tangore-Pz	2.47			
665	Kurukshetra	Tatka-Pz	-1.55			
666	Kurukshetra	Teokar-Pz	-1.40			
667	Kurukshetra	Teora-Pz	-2.03			
668	Kurukshetra	Thol-Pz	-1.23			
669	Kurukshetra	Tigri-Pz	-1.90			
670	Kurukshetra	Umri-Pz	-2.50			
671	Kurukshetra	Urnai-Pz	-1.91		-0.25	1.61
672	Mahendragarh	Atali-Dw	-0.55		-1.05	
673	Mahendragarh	Barda-Dw	29.20		30.00	
674	Mahendragarh	Basirpur	-0.35		0.20	
675	Mahendragarh	Bayal	4.95		-2.85	
676	Mahendragarh	Berundla-Dw	1.05		0.05	
677	Mahendragarh	Bhojawas-Dw	-0.20		-0.30	
678	Mahendragarh	Buwana-Pz	-0.89		-2.59	
679	Mahendragarh	Chandpura-Pz			-1.00	
680	Mahendragarh	Chelawas-Dw	0.90		-1.00	
681	Mahendragarh	Deroli Ahir	-2.66		-1.59	
682	Mahendragarh	Deroli Ahir1				
683	Mahendragarh	Dhancholi-Dw	-0.25		-0.40	
684	Mahendragarh	Faizabad-Dw	1.85		0.95	
685	Mahendragarh	Kalba-Dw	0.70		-0.80	
686	Mahendragarh	Kaninakhas1			-2.20	
687	Mahendragarh	Kharkara Bas-Dw	-1.00		-1.45	
688	Mahendragarh	Kheri	-0.83		0.19	
689	Mahendragarh	Kheri-Pz	-0.30		0.50	
690	Mahendragarh	Khodana-Dw				
691	Mahendragarh	Khodma-Dw			-2.30	
692	Mahendragarh	Kultajpur-Dw	-0.50		0.50	
693	Mahendragarh	Nagal Kalia-Dw	0.16		-1.57	
694	Mahendragarh	Narnaul	0.36	0.70		
695	Mahendragarh	Pachnota-Dw	3.00		-6.50	
696	Mahendragarh	Pali-Pz	-0.72		-0.80	
697	Mahendragarh	Pathera-Dw	1.80		-1.00	
698	Mahendragarh	Said Alipur-Dw				
699	Mahendragarh	Shelang-Dw	1.00		-0.70	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May-2017	August-2016- August-2017	November-2016- November-2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
700	Mahendragarh	Tazpur-Pz			-0.60	
701	Mewat	Agaon-Pz	-1.85			
702	Mewat	Akaira	1.09	-1.23	-1.73	
703	Mewat	Aminabad-Dw	0.32			
704	Mewat	Bhadas-Dw	-0.25			
705	Mewat	Firozpur Jhirka	-0.70			
706	Mewat	Gulaltha	-0.07		0.80	
707	Mewat	Indri				2.14
708	Mewat	Kheri1			0.14	
709	Mewat	Luhingakalan	-1.27			
710	Mewat	Malab	-0.19	-0.60	-0.66	0.17
711	Mewat	Nagina	-1.20			
712	Mewat	Naharika-Pz	-0.45			
713	Mewat	Nuh	-0.63		-1.56	-0.60
714	Mewat	Nuh1	0.39			
715	Mewat	Punhana	-0.55			
716	Mewat	Punhana-Pz	-0.32			
717	Mewat	Rathiwasi	1.20			
718	Mewat	Sarauli-Dw	0.47			
719	Mewat	Sikarwa	-0.45			
720	Palwal	Badraun	-0.31		-0.07	
721	Palwal	Baghaura	-0.50			
722	Palwal	Bahin-Dw	0.05			
723	Palwal	Bamnikhera	0.10			
724	Palwal	Banchari-Dw	0.08			
725	Palwal	Barauli-Pz	-2.90			
726	Palwal	Bhiduki-Dw	0.35			
727	Palwal	Bibipur-Dw	0.05			
728	Palwal	Chhaensa-Dw	0.00			
729	Palwal	Dighaut	-0.11		-0.58	-0.95
730	Palwal	Gulawad-Dw				
731	Palwal	Hathin	-0.50			
732	Palwal	Hodel1	-1.92			
733	Palwal	Jawan- Pz	-0.23		-0.01	
734	Palwal	Khambi	0.29		-0.44	
735	Palwal	Kot	0.11			
736	Palwal	Lakhnaka	0.73		1.31	
737	Palwal	Mandkola	-0.14			
738	Palwal	Nangal Jat-Dw	-0.30			
739	Palwal	Palwal	-0.89			-0.78
740	Palwal	Palwal-Pz	1.25		0.31	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
741	Palwal	Pehladpur-Pz	-0.32		-0.71	
742	Palwal	Pelak-Pz	-1.27			
743	Palwal	Phulwari-Dw	-0.25			
744	Palwal	Pirgarhi- Pz	-0.47		1.06	
745	Palwal	Rasul Pur			0.35	
746	Palwal	Sarai-Dw	-0.45			
747	Palwal	Tumsara	2.38	3.30	1.29	-1.79
748	Panchkula	Bahoriyan-Dw	0.49		-0.54	
749	Panchkula	Batour	-0.62			
750	Panchkula	Bunga At Dabkhori-Dw	-0.50			
751	Panchkula	Dhakwala-Dw	-0.70		-0.39	
752	Panchkula	Dharampur	-3.76			
753	Panchkula	Golpura-Dw	0.36		-1.22	
754	Panchkula	Hangola	-0.04		1.46	
755	Panchkula	Jaspur-Dw	1.74		0.66	
756	Panchkula	Jaspur-Pz				
757	Panchkula	Jaswant Garh-Dw	-0.35			
758	Panchkula	Kakar Majra	1.00		-0.88	
759	Panchkula	Khera				
760	Panchkula	Kheri-Dw	0.05			
761	Panchkula	Kundi-Dw	-0.50			
762	Panchkula	Maranwala	-0.50			
763	Panchkula	Mauli-Dw	-0.03			
764	Panchkula	Mehranwali				
765	Panchkula	Nadha-Dw	-0.45		-0.16	
766	Panchkula	Nandpur-Dw			0.13	
767	Panchkula	Patwi				4.56
768	Panchkula	Parwala	-0.62		0.00	
769	Panchkula	Raipur Rani-Pz	-7.32			
770	Panchkula	Raipurrani	-0.47		-5.67	
771	Panchkula	Ram Nagar-Dw	-0.15			
772	Panchkula	Ramgarh-Dw	-0.08			
773	Panchkula	Rampur-Dw	-0.08			
774	Panchkula	Rehna-Dw	-0.12			
775	Panchkula	Shahjahan Pur-Dw	-0.28			
776	Panchkula	Thapli-Dw	-0.58		0.97	
777	Panchkula	Toka-Dw	-0.41			
778	Panipat	Babail Pz S			-0.94	
779	Panipat	Baholi-Pz	0.80			
780	Panipat	Bandh-Dw	-0.31			
781	Panipat	Baupur				

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
782	Panipat	Bhallour Pz			0.41	
783	Panipat	Brahman Majra-Dw	1.46			
784	Panipat	Dakadla S	0.74			
785	Panipat	Dharamgarh S	-0.63			
786	Panipat	Dumiana-Dw	0.46			
787	Panipat	Etola-Pz-M				
788	Panipat	Israna Pz	1.72			
789	Panipat	Kaith-Dw	3.25			
790	Panipat	Karhansh Pz	-1.05		-0.88	
791	Panipat	Khalila Manjran	-0.58		-0.61	
792	Panipat	Khandra	1.16			
793	Panipat	Kiwana	0.81			
794	Panipat	Mehmadpur	-1.26			
795	Panipat	Nara	0.93			
796	Panipat	Nariana-Pz	0.49			
797	Panipat	Naultha	0.75			
798	Panipat	Nizampur	-1.03			
799	Panipat	Patti Kalyana S	-4.55		-1.06	
800	Panipat	Puther Pz	-0.81		1.73	
801	Panipat	Samalkha-Pz	-1.67			
802	Panipat	Sanauli Khurd-Pz	-5.40		-1.00	
803	Panipat	Sink	5.89		0.03	
804	Panipat	Untilya	-3.18	0.70	1.00	
805	Panipat	Urlana Kalan	-0.08	-0.85		
806	Rewari	Bahu	-4.03		-5.64	
807	Rewari	Balawas	4.08		4.07	
808	Rewari	Bawal Dw	-1.42		-0.50	
809	Rewari	Bawal Pz	-0.73		0.42	
810	Rewari	Berli Khurd-Dw	-0.65		0.15	
811	Rewari	Bhakli-Dw	0.40		0.70	
812	Rewari	Bharangi-Dw	-0.80			
813	Rewari	Garhi-Dw	-0.20		0.25	
814	Rewari	Gurkawas-Dw	-2.40			
815	Rewari	Hansaka-Dw	-2.90		1.40	
816	Rewari	Harinagar-Dw	-0.70		0.30	
817	Rewari	Jatusana				
818	Rewari	Jatuwas-Dw	-5.72		0.60	
819	Rewari	Juddi-Dw				
820	Rewari	Karnawas	-1.80		-2.73	
821	Rewari	Karoli-Dw	0.15		-0.35	
822	Rewari	Khera Bahu-Dw	-0.60		-0.10	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016-May 2017	August-2016-August-2017	Novenber-2016-November 2017	January-2017-January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
823	Rewari	Khol			7.02	
824	Rewari	Kumbhawas-Dw	-1.00			
825	Rewari	Mandola-Pz	-1.50	-2.84		
826	Rewari	Massani	0.18		0.14	
827	Rewari	Mubarikpur-Dw	-0.15		0.00	
828	Rewari	Nahar	-0.80		-3.30	
829	Rewari	Nangal Mundi-Dw	-1.25		-0.30	
830	Rewari	Palhawas-Dw	-0.85		0.20	
831	Rewari	Pali-Pz			0.25	
832	Rewari	Ratanthal-Dw	-1.20		0.75	
833	Rewari	Rewari	-0.23			
834	Rewari	Rholiawas-Pz	0.10	0.35	0.35	
835	Rewari	Rohrai-Dw	-0.25		1.15	
836	Rewari	Sangwari	0.39			
837	Rewari	Shadipur-Dw	-0.40		0.55	
838	Rewari	Sudharana-Dw	-0.05		0.30	
839	Rohtak	Ajaib-Dw	0.40			
840	Rohtak	Assan-Dw	0.71			
841	Rohtak	Atail-Dw	1.08			
842	Rohtak	Baland	-0.05		0.27	
843	Rohtak	Bhal Anandpur	-0.16		-0.26	
844	Rohtak	Bhalaut	0.22			
845	Rohtak	Bharain-Dw	-0.68			
846	Rohtak	Giji-Dw	0.12			
847	Rohtak	Hassangarh	0.03	-1.05	-0.36	-0.74
848	Rohtak	Kalanaur	-0.59			
849	Rohtak	Kanheli-Dw	-1.12			
850	Rohtak	Kansala	1.08		0.32	
851	Rohtak	Kharawar	-0.53			
852	Rohtak	Kiloi-Dw	0.27			
853	Rohtak	Lahli-Dw	0.39			
854	Rohtak	Lakhan Majara	-0.10		0.27	
855	Rohtak	Lakhan Majra Pz				
856	Rohtak	Madina	1.16			
857	Rohtak	Mahem	-0.93	-0.60	1.69	2.31
858	Rohtak	Makhrauli Khurd	0.19			
859	Rohtak	Meham	-0.18			
860	Rohtak	Nandal-Dw	0.37			
861	Rohtak	Nidhana	-1.95			
862	Rohtak	Ritoli-Dw	0.04			
863	Rohtak	Rohtak	0.31			

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
864	Rohtak	Samargopalpur	-1.11		0.35	
865	Rohtak	Sampla	-0.09			
866	Rohtak	Sampla-Pz	0.13		-0.28	
867	Rohtak	Sundana-Dw	0.63			
868	Rohtak	Tiloli-Dw	0.35			
869	Sirsa	Ali Mohmmad				
870	Sirsa	Alikan	0.00			
871	Sirsa	Bharu Khera-Dw				
872	Sirsa	Bhuratwala-Pz	-1.14	-0.81	-2.70	-2.87
873	Sirsa	Chaharwala	-0.05			
874	Sirsa	Chilkani Dhab	-0.70			
875	Sirsa	Chormar	0.57		-0.39	-0.58
876	Sirsa	Chotala	0.00			3.29
877	Sirsa	Chotala-Pz	-0.79		-0.72	
878	Sirsa	Dabwali Dw	-0.63		-0.21	0.76
879	Sirsa	Dabwali -Pz S	-0.35		-0.31	
880	Sirsa	Darba Kalan-Pz	0.50	0.02	-1.04	-0.01
881	Sirsa	Desu Jodha-Dw	0.06			
882	Sirsa	Dholpalia-Dw	-0.35			
883	Sirsa	Ding	2.07		-4.53	
884	Sirsa	Ganga	0.00			
885	Sirsa	Ghushiana	0.10		-0.61	-2.04
886	Sirsa	Gigorani	0.00		-0.37	
887	Sirsa	Goriwala	0.22		-0.23	
888	Sirsa	Govindgarh-Dw	-1.00			
889	Sirsa	Gudia Khera-Dw	-1.08			
890	Sirsa	Hasu				
891	Sirsa	Jagiwala-Dw	-0.05			
892	Sirsa	Jamal	-0.72		-1.31	
893	Sirsa	Jamal- Pz	-0.61		1.40	-0.26
894	Sirsa	Kairanwali-Dw	-0.45			
895	Sirsa	Kalanwali Mandi-Pz	-0.54		-0.69	2.71
896	Sirsa	Kaluwana	-0.74		-0.17	
897	Sirsa	Karamsana	-0.02	-0.09	0.36	0.77
898	Sirsa	Kariwala1				
899	Sirsa	Kash Ram Dhab	2.36	1.70	-2.11	
900	Sirsa	Khuiyan	-1.14		-0.73	-1.80
901	Sirsa	Kurangwali	-0.30			
902	Sirsa	Lohgarh	0.00			
903	Sirsa	Makhu Shorani				
904	Sirsa	Mammer Khera-Pz	-0.38		-0.25	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	Novenber-2016- Novenber 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
905	Sirsa	Manjiyana	-1.02			
906	Sirsa	Mastian	-0.80		-0.04	1.74
907	Sirsa	Mithri	-0.95		-0.88	-1.47
908	Sirsa	Nuhian Wali	-0.79	-0.73	-0.17	
909	Sirsa	Odhan Pz	-0.94			
910	Sirsa	Ottu 1(S)	1.83			
911	Sirsa	Panniwala Mota	-0.57	-0.93	-0.35	-0.18
912	Sirsa	Phaggu-Pz	-0.31		-0.09	
913	Sirsa	Rasalia Khera	-3.06		-0.49	-2.53
914	Sirsa	Rori -Dw	-2.21	-0.65	-0.29	
915	Sirsa	Rupana				
916	Sirsa	Sadewala	-0.70			
917	Sirsa	Sahuwala				
918	Sirsa	Sainpal-Pz	2.60			
919	Sirsa	Saktakhera	-0.28	-0.25	-0.21	1.40
920	Sirsa	Shergarh-Dw	-0.48		0.56	
921	Sirsa	Sherpura	0.43	-0.16	-0.97	-0.12
922	Sirsa	Sirsa-Pz	-1.68		-2.10	-1.86
923	Sirsa	Sri Jivan Nagar-B	-1.40		-1.60	
924	Sirsa	Sukhchain-Dw	0.00			
925	Sirsa	Taruwana	0.58		-0.44	
926	Sirsa	Tejakhera	-2.78		-1.18	-0.97
927	Sirsa	Thiraj	0.00			
928	Sirsa	Tigri-Dw	0.05			
929	Sonipat	Ahmadpur Majra-Dw	0.00			
930	Sonipat	Ahulana	-0.17	-0.50	0.79	
931	Sonipat	Anandpur-Jarot-Dw	-0.04			
932	Sonipat	Anwali-Pz	-0.40			
933	Sonipat	Bagru-Dw	-0.22			
934	Sonipat	Banwasa-Dw	0.20			
935	Sonipat	Barauli	-1.02	-0.28	0.43	-0.12
936	Sonipat	Baroda Mor-Dw	-0.08			
937	Sonipat	Barona-Dw	-0.09			
938	Sonipat	Barswani- Dw	-1.11		0.58	
939	Sonipat	Barwasni Pz (S)	0.15		0.31	
940	Sonipat	Bega Pz	-0.10			
941	Sonipat	Bhainswal	-0.40	-0.60	1.91	
942	Sonipat	Bhunderi	-0.40		2.96	
943	Sonipat	Bichpuri1				
944	Sonipat	Bidhlan-Dw	-0.58			
945	Sonipat	Bohela			1.63	

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May-2017	August-2016 August-2017	November-2016- November-2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
946	Sonipat	Butana	0.00	0.59	1.38	
947	Sonipat	Chhapra-Dw	-0.73			
948	Sonipat	Chitana-Dw	0.04			
949	Sonipat	Datauli-Pz		-1.28	5.25	
950	Sonipat	Farmana	-0.55	0.09	-0.70	-1.63
951	Sonipat	Ganaur-Pz	-1.56			
952	Sonipat	Gangana-Dw	0.33			
953	Sonipat	Garhwal	0.05		0.28	
954	Sonipat	Gohana Pz	0.05		0.20	
955	Sonipat	Gorar-Dw	-0.75			
956	Sonipat	Jagsi	0.59		0.40	
957	Sonipat	Jhakauli- Pz	-1.05		-0.96	
958	Sonipat	Juan-Dw	-0.49			
959	Sonipat	Kami- Pz	-2.20	0.05		
960	Sonipat	Kathura	0.97			
961	Sonipat	Kathura Pz	0.03		-0.14	
962	Sonipat	Khanda-Dw	-0.03			
963	Sonipat	Khanpur Kalan-Pz	-0.10		0.73	
964	Sonipat	Kheorapz	-4.20		0.39	
965	Sonipat	Kheri Gujjar-Pz	-0.14			
966	Sonipat	Ladpur-Pz	-0.70			
967	Sonipat	Larsauli-Pz	0.35			
968	Sonipat	Lath	-0.17		0.50	
969	Sonipat	Machhri	0.52		1.45	
970	Sonipat	Mattand-Dw	-0.36			
971	Sonipat	Mohana Pzm	-1.33		0.25	
972	Sonipat	Mundlana Dw	0.18		0.76	
973	Sonipat	Mundlana- Pz	0.71		0.50	
974	Sonipat	Murthal-Pz	-1.33	-1.55	-0.73	
975	Sonipat	Nahri	-0.53			
976	Sonipat	Nizaimpur	0.94			
977	Sonipat	Pinana	-0.47		1.20	
978	Sonipat	Pipli-Dw	-1.02			
979	Sonipat	Pugthala-Pz	0.00			
980	Sonipat	Purkhas-Pz	-0.89			
981	Sonipat	Rai-Bahalgarh-Pz	-0.50		-1.69	
982	Sonipat	Rasoi Pz	-2.38		0.94	
983	Sonipat	Rathdhana-Pz	-0.68			
984	Sonipat	Rohat	-1.35			
985	Sonipat	Rukhi-Pz	0.36		0.27	
986	Sonipat	Safiabad-Pz				

Annexure-III

Sl. No.	District	Location	Annual Fluctuation(m)			
			May-2016- May 2017	August-2016 August-2017	November-2016- November 2017	January-2017- January-2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
987	Sonipat	Sisnah			0.48	
988	Sonipat	Sonepat	0.00			
989	Sonipat	Tihar Malikpur-Dw	-0.22			
990	Yamunanagar	Antawa-Pz	-0.06			
991	Yamunanagar	Bari Kanari-Pz	-0.50			
992	Yamunanagar	Bhambauli-1 (S)	-0.53		-0.70	
993	Yamunanagar	Bilaspur Dw	-0.35		-2.60	
994	Yamunanagar	Chamrori-Pz	-0.12			
995	Yamunanagar	Chhachhrauli			0.20	
996	Yamunanagar	Chhachrauli S	0.00			
997	Yamunanagar	Choli	0.25	-0.10	-0.03	
998	Yamunanagar	Damla-Pz	-0.08			
999	Yamunanagar	Dhaurang S	0.09		-0.02	
1000	Yamunanagar	Fatehpur-Pz	-0.07			
1001	Yamunanagar	Jagadhri-Pz	-0.50			
1002	Yamunanagar	Jhiwarheri S	-1.10		-0.80	
1003	Yamunanagar	Khizrabad	1.17		2.30	
1004	Yamunanagar	Masana Jattan-Pz	-0.77		-0.85	
1005	Yamunanagar	Mustafabad Dw	0.32	-0.35	0.23	
1006	Yamunanagar	Mustafabad-Pz	0.90		-0.40	-4.12
1007	Yamunanagar	Nagal Patti-Dw	-0.08			
1008	Yamunanagar	Naggal-S	-0.16			
1009	Yamunanagar	Radaur S	-0.19		0.50	
1010	Yamunanagar	Ramgarh-Dw	-0.45			
1011	Yamunanagar	Rasulpur Dw	-1.21			
1012	Yamunanagar	Sabri	-1.90		0.15	
1013	Yamunanagar	Sadhaura Dw	-1.08			
1014	Yamunanagar	Sadhaura S	-1.00			
1015	Yamunanagar	Salehpur-Dw	-0.50			
1016	Yamunanagar	Shadipur	0.42		0.36	
1017	Yamunanagar	Tala Kaur S	-0.10			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Ambala	Ambala Cantt	-0.12			
2	Ambala	Ambala Cantt-Pz	-0.51		0.90	
3	Ambala	Ambala City-DW	0.16		0.68	
4	Ambala	Baknaur-Dw	0.18			
5	Ambala	Balana	-0.12		-0.24	-0.24
6	Ambala	Bara Garh-Dw	0.14			
7	Ambala	Barara S			-0.25	
8	Ambala	Barara-Pz	-0.43		0.00	
9	Ambala	Bari Bassi-Dw	0.03		0.45	
10	Ambala	Behbalpur-Dw	0.08			
11	Ambala	Bhuragnpur-Dw	0.75		0.00	
12	Ambala	Bhurewala-Pz	0.39		1.50	
13	Ambala	Bichali Dhamouli-Pz	0.43		1.40	
14	Ambala	Binjal Pur-Dw	0.10		-1.43	
15	Ambala	Boh-Dw	0.19		1.94	
16	Ambala	Budhha Khera-Dw	0.04		0.53	
17	Ambala	Bullana- DW	0.10		0.45	
18	Ambala	Chhapra-Dw	0.12		4.00	
19	Ambala	Chotta Korwa-Dw	0.14			
20	Ambala	Churmastpur-Dw	0.26		1.90	
21	Ambala	Dhanaura	-1.36	-1.88	-0.02	-1.46
22	Ambala	Dukheri-Dw	0.06		0.05	
23	Ambala	Hasanpur-Dw	0.50		0.50	
24	Ambala	Jansui-Dw	0.08		1.21	
25	Ambala	Jauli-Dw	0.10		1.00	
26	Ambala	Kakkar Majra-Dw	0.06		0.70	
27	Ambala	Kakru	-0.24	-0.12	1.17	1.15
28	Ambala	Kalumazra-Dw	0.16		1.15	
29	Ambala	Kapoori At Saphera-Pz	0.31		-2.05	
30	Ambala	Khanahmadpur	-0.61		-0.33	
31	Ambala	Khanna Majra	0.09		0.80	
32	Ambala	Khera Jattan-Dw	0.18			
33	Ambala	Mohra-Dw	-0.50		-0.01	
34	Ambala	Mulana	-0.62		-0.54	-1.32
35	Ambala	Nanhera-Dw	0.15		0.65	
36	Ambala	Naraingarh-Dw	0.10		-0.38	
37	Ambala	Naraingarh-Pz	7.37		2.15	3.28
38	Ambala	Nasirpur-Pz	0.40		0.00	
39	Ambala	Nikuwana-Dw	0.18		-0.65	
40	Ambala	Panjokhra	1.26	2.29	2.42	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
41	Ambala	Patvi	0.13		0.25	
42	Ambala	Pinjola	0.34	2.25		1.76
43	Ambala	Saha-Pz	0.18		0.23	
44	Ambala	Salehpur-Dw	0.06		0.21	
45	Ambala	Shahpur-Dw	-0.52		-1.60	
46	Ambala	Shahzadpur	0.08		1.00	
47	Ambala	Shahzadpur-Pz	0.30		0.43	
48	Ambala	Sohana-Dw	0.05		-0.65	
49	Ambala	Tandwal-Dw	0.04		-1.05	
50	Ambala	Tejan-Dw	0.18		-1.00	
51	Ambala	Tharwa-Dw	0.15		0.65	
52	Ambala	Ugala S	0.77		1.30	
53	Bhiwani	Alak Pura-Dw	-0.57		-0.03	
54	Bhiwani	Alampur-Dw	-0.08		-0.93	
55	Bhiwani	Badala	0.64		0.35	0.65
56	Bhiwani	Badeshra-Pz	-0.55		-0.20	
57	Bhiwani	Baganwala-Pz	1.10		-2.00	
58	Bhiwani	Bajina	3.17	1.45	1.69	2.54
59	Bhiwani	Baliyali-Pz	-0.61		-0.63	
60	Bhiwani	Bamla	-0.44		-0.28	-0.65
61	Bhiwani	Baralu-Pz	2.20		1.40	
62	Bhiwani	Bardu Mugal-Pz	2.00		1.70	
63	Bhiwani	Barsi-Pz	-2.85		1.10	
64	Bhiwani	Bawani Khera.-Pz	-1.53	-0.21	-1.64	-0.75
65	Bhiwani	Bawani Khera-Pz	-0.70			
66	Bhiwani	Bhawani Khera DW	-2.48			-2.49
67	Bhiwani	Bhawani Khera Pz	-1.62		-1.35	
68	Bhiwani	Bhera-Pz			0.25	
69	Bhiwani	Bhiwani	0.29		0.13	
70	Bhiwani	Bhutana-Pz			-1.29	
71	Bhiwani	Bidhnoi-Pz			1.20	
72	Bhiwani	Biran--Pz	-0.20		-0.06	
73	Bhiwani	Bohal	-1.94	-3.51	-3.06	-3.36
74	Bhiwani	Budh Shelly-Pz			0.90	
75	Bhiwani	Budheri-Pz	1.93		1.47	
76	Bhiwani	Busan-Pz			-0.22	
77	Bhiwani	Chappar Rangar-Pz			-0.10	
78	Bhiwani	Dadam-Pz	-0.10		0.15	
79	Bhiwani	Dang-Pz	-1.30		-0.40	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
80	Bhiwani	Devsar-Pz	-0.25		-0.30	
81	Bhiwani	Dhana Ladanpur-Pz	-0.67		0.16	
82	Bhiwani	Dhanana	0.01	-0.34	-0.37	-0.51
83	Bhiwani	Dhani Ramjas-Pz			0.30	
84	Bhiwani	Dhani Shelwal-Pz			-0.05	
85	Bhiwani	Dhanimahu-Pz	0.10		0.00	
86	Bhiwani	Dighawa Shyam--Pz	-2.18			
87	Bhiwani	Dinod-Pz	-0.45		-0.74	
88	Bhiwani	Dulheri-Pz	0.30		0.10	
89	Bhiwani	Garanpura-Pz	0.68		1.27	
90	Bhiwani	Gignow-Pz	2.28		2.15	
91	Bhiwani	Gothra-Pz	-0.70		-0.38	
92	Bhiwani	Gujrani-Pz	-0.62		-0.07	
93	Bhiwani	Gurera			-0.11	
94	Bhiwani	Gurera-Pz	0.49	1.16	0.16	0.05
95	Bhiwani	Haluwas	-0.66	-0.44	-0.45	
96	Bhiwani	Hetampur	0.42		0.96	2.18
97	Bhiwani	Indiwali-Pz			0.95	
98	Bhiwani	Isharwal	1.08		0.33	0.86
99	Bhiwani	Jalampur-Pz	-1.42		-1.31	
100	Bhiwani	Jatai-Pz	0.05		-0.13	
101	Bhiwani	Jhanwari-Pz	0.25		-1.90	
102	Bhiwani	Jharwai-Pz	0.17			
103	Bhiwani	Jhully-Pz	-0.20		1.00	
104	Bhiwani	Jhumpa	-1.01	-1.38	-0.01	
105	Bhiwani	Jhumpa Kalan	-0.13		-0.01	0.22
106	Bhiwani	Jitwanwas-Dw	0.68		0.71	
107	Bhiwani	Juikalan Pz	4.16			4.64
108	Bhiwani	Kairu-Pz	0.72		0.70	
109	Bhiwani	Kairu-Pz			-0.35	
110	Bhiwani	Kalinga-Pz	0.58		-0.18	
111	Bhiwani	Kaloud Pzm	2.10			
112	Bhiwani	Kaluwas-Pz	-0.45		-0.20	
113	Bhiwani	Kasni Kalan	0.98		0.60	
114	Bhiwani	Katwar-Pz			0.48	
115	Bhiwani	Khanak-Pz	-0.81		-3.55	
116	Bhiwani	Khaparwas-Pz			-1.45	
117	Bhiwani	Kharak Kalan-Pz	0.48		0.40	
118	Bhiwani	Khariawas-Pz			0.17	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
119	Bhiwani	Khera-Pz			-0.48	
120	Bhiwani	Kheri Dalautpura-Pz	1.02		0.48	
121	Bhiwani	Kitlana-Pz	-0.57		1.03	
122	Bhiwani	Kural-Pz	1.86		1.20	
123	Bhiwani	Lachhmanpur	1.85		1.37	
124	Bhiwani	Lalawas-Pz			0.70	
125	Bhiwani	Leghan Hetwan-Pz			0.75	
126	Bhiwani	Lohani	-0.22	0.44	-5.80	0.93
127	Bhiwani	Mandhana-Pz	-0.67		0.18	
128	Bhiwani	Mandhana-Pz			-2.00	
129	Bhiwani	Manhairu	-0.61	-1.19	0.03	0.60
130	Bhiwani	Matani-Pz			0.00	
131	Bhiwani	Miran	-1.63		-0.71	
132	Bhiwani	Miran-Pz	-0.52		-0.29	
133	Bhiwani	Mitathal-Pz	-0.38		-0.02	
134	Bhiwani	Mithi-Pz			0.40	
135	Bhiwani	Mohila-Pz	0.03		-21.27	
136	Bhiwani	Morka-Pz			0.59	
137	Bhiwani	Mundhal Kalan-Pz	0.95		-0.45	
138	Bhiwani	Naloi-Pz			-0.50	
139	Bhiwani	Naraungabad-Pz	-0.55		0.37	
140	Bhiwani	Nathuwas-Pz	0.25		0.07	
141	Bhiwani	Nigana Kalan-Pz	-0.25		-0.40	
142	Bhiwani	Nigana Khurd-Pz	0.07		-0.40	
143	Bhiwani	Nimriwali-Pz	-0.30		-0.10	
144	Bhiwani	Ninan-Pz	0.10		-0.20	
145	Bhiwani	Noon Sar-Pz	2.08		1.80	
146	Bhiwani	Paju	2.00		2.17	
147	Bhiwani	Pataudi Khurd	-0.05		-3.27	-0.43
148	Bhiwani	Patwan-Pz	0.22		0.90	
149	Bhiwani	Pehladgarh-Dw	-0.13		-0.14	
150	Bhiwani	Prem Nagar-Pz	0.45		-1.50	
151	Bhiwani	Pur-Pz	-0.57		-1.55	
152	Bhiwani	Rajgarh-Pz	-0.23		0.20	
153	Bhiwani	Ratera-Pz	-0.80		-1.35	
154	Bhiwani	Rewari-Pz	0.65		0.38	
155	Bhiwani	Riwasa-Dw	-0.10		-0.55	
156	Bhiwani	Runhat-Dw	0.23		-0.05	
157	Bhiwani	Rupgarh-Pz	0.55		0.19	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
158	Bhiwani	Sagban	-1.89		-3.63	-4.60
159	Bhiwani	Sangwan	-1.35			
160	Bhiwani	Serla-Pz	1.95		1.50	
161	Bhiwani	Singhani-Pz	12.64		2.10	
162	Bhiwani	Sirsa-Dw	0.34		1.72	
163	Bhiwani	Siwani	-0.18	0.24	-0.64	-0.31
164	Bhiwani	Sui	-1.04	-2.38	-2.05	-1.74
165	Bhiwani	Sungarpur	-0.94		3.43	-1.29
166	Bhiwani	Talu-Pz	-0.12		-0.95	
167	Bhiwani	Talwani-Pz			1.20	
168	Bhiwani	Thillor-Pz	0.45		-0.30	
169	Bhiwani	Tigrana-Dw	-0.97		0.55	
170	Bhiwani	Tosham	-0.66	-2.53	-3.78	
171	Bhiwani	Tosham-Pz	-2.20		-2.20	
172	Charkhi Dadri	Achina-Pz	-0.74			
173	Charkhi Dadri	Badesara-Pz	1.97		1.30	
174	Charkhi Dadri	Badhwana-Pz	0.48		1.16	
175	Charkhi Dadri	Baundkalan	-1.60	-0.09	2.87	
176	Charkhi Dadri	Bigowa-Pz	0.18		-0.05	
177	Charkhi Dadri	Bijna-Pz	0.96		0.65	
178	Charkhi Dadri	Birhi Kalan-Pz	-0.36		0.65	
179	Charkhi Dadri	Bound-Pz	-0.47		1.02	
180	Charkhi Dadri	Chandawas-Pz	2.10		1.95	
181	Charkhi Dadri	Chirya	4.00	1.30	2.90	
182	Charkhi Dadri	Dadri	0.97		1.89	
183	Charkhi Dadri	Dadri-Pz	-0.22		0.02	
184	Charkhi Dadri	Dudhwa-Pz	0.07		0.21	
185	Charkhi Dadri	Dudiwala-Pz	1.60		1.70	
186	Charkhi Dadri	Ghasola-Pz	-0.77		0.69	
187	Charkhi Dadri	Gopalwas-Pz	0.98			
188	Charkhi Dadri	Gopi	8.09			
189	Charkhi Dadri	Hui-Pz	1.63		2.77	
190	Charkhi Dadri	Imlota	-0.61		-0.51	
191	Charkhi Dadri	Jhinjar-Pz	-0.97		0.10	
192	Charkhi Dadri	Kakroli Hatti-Pz	2.10		2.77	
193	Charkhi Dadri	Kakroli Sardh-Pz	1.60		-0.61	
194	Charkhi Dadri	Kanheti-Dw	1.53		0.47	
195	Charkhi Dadri	Kapoori-Pz	-1.05			
196	Charkhi Dadri	Kari Adu-Dw	1.40			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
197	Charkhi Dadri	Kari Mod-Pz	6.40			
198	Charkhi Dadri	Kari Pura-Pz	2.10		2.20	
199	Charkhi Dadri	Kheri Bura-Pz	-0.50		1.47	
200	Charkhi Dadri	Makrana-Pz	0.49		0.17	
201	Charkhi Dadri	Mandoli-Pz	-0.33		0.15	
202	Charkhi Dadri	Mehrana	-2.20		-1.42	
203	Charkhi Dadri	Mirch-Pz	2.32		0.50	
204	Charkhi Dadri	Misri-Pz	1.40		0.47	
205	Charkhi Dadri	Nayaatela	6.09			
206	Charkhi Dadri	Paintawas-Pz			0.65	
207	Charkhi Dadri	Patuwas-Pz	0.28		-0.47	
208	Charkhi Dadri	Pichopa Kalan-Pz	2.12		2.45	
209	Charkhi Dadri	Ranila-Pz	0.85		1.61	
210	Charkhi Dadri	Sanjarwas-Pz	0.14		-0.30	
211	Charkhi Dadri	Sankrod-Pz	-0.23		0.73	
212	Charkhi Dadri	Sanwar	-1.01		3.15	
213	Charkhi Dadri	Sarangpur-Pz			-1.13	
214	Charkhi Dadri	Saroop Garh-Pz	0.53		0.72	
215	Charkhi Dadri	Todi-Pz	1.93		2.20	
216	Charkhi Dadri	Unn-Dw	-2.51		-1.02	
217	Faridabad	Ballabgarh	2.52		3.39	
218	Faridabad	Bhopani	4.80			
219	Faridabad	Chhainsa	4.70			
220	Faridabad	Kabulpur	6.75		3.68	
221	Faridabad	Kheri Jamalpur-Dw	2.43			
222	Faridabad	Manjhawali-Dw	0.18			
223	Faridabad	Pali2	0.77		-2.45	
224	Faridabad	Paota	0.65			
225	Faridabad	Sakrana-Dw	-1.05			
226	Faridabad	Sanped-Dw	0.13			
227	Faridabad	Sikri1	0.78		1.15	
228	Faridabad	Sotai	0.80		7.37	
229	Faridabad	Tigaon-Pz	0.75		4.83	
230	Fatehabad	Alalwas-Pz	4.06			
231	Fatehabad	Badopal	0.11	-0.70	1.37	
232	Fatehabad	Bhattukalan-Pz	-0.21		-0.45	
233	Fatehabad	Bhuna	0.45			
234	Fatehabad	Chindhar-Dw	1.23		-0.35	
235	Fatehabad	Dayar1	0.76		0.60	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
236	Fatehabad	Dhangar-Dw	1.85		0.10	
237	Fatehabad	Gorakhpur-Dw	-0.50		1.05	
238	Fatehabad	Hukmawali-Pz	2.09		0.09	
239	Fatehabad	Jandli Kalan	0.90		1.14	0.06
240	Fatehabad	Kajal Heri-Dw	-0.48		-0.45	
241	Fatehabad	Kanhari-Pz	1.17		0.65	
242	Fatehabad	Khara Kheri-Dw	-1.03			
243	Fatehabad	Machiwali-Dw	-0.25		-1.45	
244	Fatehabad	Mehu Wala Pz	-0.40		0.45	-0.01
245	Fatehabad	Nagpur- Pz	3.63			
246	Fatehabad	Nahla	-0.03	-0.83	0.19	0.30
247	Fatehabad	Nangla-Dw	-0.62		0.18	
248	Fatehabad	Nikuwana-Pz			2.53	
249	Fatehabad	Pilimudari	-0.14		-0.35	
250	Fatehabad	Ratia -Pz	4.78		5.96	
251	Fatehabad	Ratta Khera-Pz	1.93		2.33	
252	Fatehabad	Sadalpur	-0.93		-1.42	-1.41
253	Fatehabad	Samain	0.54		1.24	0.51
254	Fatehabad	Shekhpur Daroli-Dw	0.74		0.20	
255	Fatehabad	Suniyana	0.40		0.60	
256	Fatehabad	Tohana	4.55	4.49	4.56	5.27
257	Gurgaon	Bandhwari	1.20			
258	Gurgaon	Basonda Tripati-Pz	1.70		1.61	
259	Gurgaon	Bhondsi Ew	-1.93		-2.32	
260	Gurgaon	Bhora Kalan-Pz	2.19		2.40	
261	Gurgaon	Bilaspur-Pz	0.75		1.80	
262	Gurgaon	Budehra-Dw	-0.55		-1.65	
263	Gurgaon	Chandu Tikly	0.35		0.52	
264	Gurgaon	Daultabad-Pz	-1.60			
265	Gurgaon	Farrukh Nagar-Pz	1.73		1.15	
266	Gurgaon	Fazilpur Badli-Pz	5.74		5.68	7.12
267	Gurgaon	Gangola-Dw	-0.25		0.10	
268	Gurgaon	Gudhana-Pz	0.03		2.03	
269	Gurgaon	Gurgaon Pz	4.71			
270	Gurgaon	Haila Mandi	1.25		2.12	
271	Gurgaon	Harchandpur Pz	0.20		0.15	
272	Gurgaon	Jamalpur-Pz	-1.25		1.60	0.98
273	Gurgaon	Jaraon Pz	1.10		1.43	1.18
274	Gurgaon	Jhandu Sarai-Pz	4.18		2.12	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
275	Gurgaon	Kadipur	1.47			
276	Gurgaon	Kasan	4.25			
277	Gurgaon	Khera Khurrampur-Pz			3.26	2.26
278	Gurgaon	Kherla	-11.99		3.92	
279	Gurgaon	Lokra-Pz	4.65	8.16		6.96
280	Gurgaon	Meoka-Pz	1.64		2.96	1.33
281	Gurgaon	Mouzabad	-0.69		6.29	10.53
282	Gurgaon	Mubarakpur	0.31		1.12	
283	Gurgaon	Pataudi-Pz	0.28		2.63	
284	Gurgaon	Sadhrana-Pz	-0.55			
285	Gurgaon	Sidrawali-Pz			2.86	
286	Gurgaon	Sohna	2.91		2.25	
287	Gurgaon	Wazirpur-Pz	1.50			0.71
288	Hisar	Adampur S	-0.70	-1.13	-0.37	
289	Hisar	Adampur-Pz	1.03		-0.19	-0.26
290	Hisar	Agroha Abd	-0.68		0.20	
291	Hisar	Agroha-Pz	-1.10		-0.76	-2.53
292	Hisar	Badchappar	-0.19		-0.08	
293	Hisar	Balawas1	-0.99	-1.28	-0.92	
294	Hisar	Balsamand	1.41	1.30	0.46	-0.06
295	Hisar	Balsamand-Pz	1.44		0.04	0.46
296	Hisar	Banbhauri-Pz	0.23	-0.32	-0.45	0.55
297	Hisar	Barwala Abd		2.45		
298	Hisar	Barwala S	-0.29		0.63	
299	Hisar	Barwala1	3.55		2.82	3.64
300	Hisar	Barwala-Pz	-0.13	0.36	-0.81	
301	Hisar	Bas	2.31	-1.87	0.95	
302	Hisar	Basra	-1.70		-0.58	-0.44
303	Hisar	Behbalpur-Pz	-0.62		-2.18	-2.25
304	Hisar	Bhana-Dw	-0.17		-0.15	
305	Hisar	Bhotal Jattan-Dw	0.65		0.48	
306	Hisar	Bithmara-Dw	-1.54		-1.95	
307	Hisar	Chanaut	-1.16		-1.45	-1.34
308	Hisar	Chann-Dw	-0.62		-0.49	
309	Hisar	Chaudhriwali	3.19		3.28	
310	Hisar	Chawdhariwas	0.39	-0.61	-0.15	-1.55
311	Hisar	Datta-Dw	-0.26		-1.03	
312	Hisar	Deva-Dw	1.00			
313	Hisar	Dhand-Dw	-0.64		-0.80	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
314	Hisar	Dhansu	-0.79	-1.84	-1.38	-1.94
315	Hisar	Dobi-Dw	0.95			
316	Hisar	Durjanpur-Pz	0.54		0.68	
317	Hisar	Ghaibipur	0.01			
318	Hisar	Ghursal-Pz	1.34	-0.51	-0.68	-0.11
319	Hisar	Gurana	0.05		-0.05	
320	Hisar	Hansi S	-1.20		-0.12	
321	Hisar	Hissar	-2.04		0.23	
322	Hisar	Hissar-Pz	1.08	0.10	0.10	-0.26
323	Hisar	Jaga Bara-Dw	0.03		-4.96	
324	Hisar	Juglan	-5.46		3.27	
325	Hisar	Kaliravan	4.38		-1.15	
326	Hisar	Kanoh-Pz	-2.42		1.05	
327	Hisar	Khanda Kheri-Pz	1.16		0.10	0.45
328	Hisar	Kherijalab-Pz	1.42	1.00	1.40	1.04
329	Hisar	Khotkalan	3.10	3.90	3.82	3.10
330	Hisar	Kirori	0.74		0.53	2.71
331	Hisar	Kirtan	0.44	0.33	0.57	-0.09
332	Hisar	Ladwi-Dw	-0.08		0.00	
333	Hisar	Litani-Dw	-0.62			
334	Hisar	Mangali-Pz	-0.20	-0.37	-0.44	-0.72
335	Hisar	Mehanda-Dw	-1.51		-0.54	
336	Hisar	Mirka	-3.42	-1.00	0.37	
337	Hisar	Moda Khera-Dw	1.00		0.08	
338	Hisar	Narnaud S	5.30		5.98	
339	Hisar	Pali-Dw	0.10		0.23	
340	Hisar	Petwar-Dw	0.88		0.95	
341	Hisar	Rajli Cross	-1.68	0.11	0.71	0.63
342	Hisar	Rajthal1	2.95		2.98	
343	Hisar	Samani	-0.71	-2.01	-1.45	-0.93
344	Hisar	Sohu				-0.49
345	Hisar	Sorkhi-Pz	0.86	0.33	-0.42	-0.05
346	Hisar	Talwani Badshahpur-Dw	-0.31		-0.04	
347	Hisar	Talwani Rana-Dw	-1.98		-0.38	
348	Hisar	Thurana-Dw	0.29		-4.25	
349	Hisar	Uklana	5.62		5.93	
350	Hisar	Uklana Mandi-Pz				4.54
351	Hisar	Umra	1.27		1.42	
352	Jhajjar	Asanda-Dw	0.35			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
353	Jhajjar	Babradw	-0.09			
354	Jhajjar	Badli	-6.37			
355	Jhajjar	Bagoa	-1.27		0.40	-0.99
356	Jhajjar	Bahadurgarh	2.89			
357	Jhajjar	Bamroli- Dw	0.31			
358	Jhajjar	Beri	0.17			
359	Jhajjar	Bhurawas-Pz	-0.33			
360	Jhajjar	Chamanpura	0.11	-1.07		
361	Jhajjar	Chhara	-0.68	-0.34	-0.07	0.07
362	Jhajjar	Chuchakwas	-0.71	-1.22	-0.36	
363	Jhajjar	Dehkora-Dw	0.30			
364	Jhajjar	Dighal	-0.40			
365	Jhajjar	Dubhaldhan	-0.64		-0.00	0.02
366	Jhajjar	Dulhera	-0.06		-0.65	-0.88
367	Jhajjar	Gabhana	0.07		0.17	
368	Jhajjar	Goria-Dw	0.01			
369	Jhajjar	Hasanpur	-1.35			
370	Jhajjar	Jakhoda-Dw	-1.80			
371	Jhajjar	Jhajjar	-1.35			
372	Jhajjar	Jhajjar1	0.63			
373	Jhajjar	Jharli	-0.63			
374	Jhajjar	Kaliawas- Dw	-0.72			
375	Jhajjar	Kamalgarh-Dw	0.03			
376	Jhajjar	Kheri Asra Dw	-0.29			
377	Jhajjar	Kherka Gujjar- Dw	-0.04			
378	Jhajjar	Kulasi	-0.20		0.39	0.38
379	Jhajjar	Lakeria- Dw	0.76			
380	Jhajjar	Lohari- Pz	-0.98			
381	Jhajjar	Majra Deswal	-2.28		-2.33	
382	Jhajjar	Matanhail-Pz	-0.50			
383	Jhajjar	Mudsa	-0.60		-0.25	
384	Jhajjar	Salhawas	0.07			0.57
385	Jhajjar	Sankol	0.63		-0.17	0.49
386	Jhajjar	Silana-Dw	-1.17			
387	Jhajjar	Subnah	0.64	5.22	0.45	
388	Jhajjar	Wazirpur	-0.33		0.31	0.59
389	Jhajjar	Yaqubpur	-0.50			
390	Jind	Alewa	11.00		14.35	
391	Jind	Alewa Pz	2.72			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
392	Jind	Anta-Pz	1.20		1.70	
393	Jind	Ati Krishna1(S)	4.33			
394	Jind	Baroda	2.34		1.49	3.21
395	Jind	Belrakha	3.85			
396	Jind	Bhana Barahman-Dw	2.65		2.80	
397	Jind	Bhuslana-Pz	2.30		1.96	
398	Jind	Bibipur-Ow	1.35			
399	Jind	Brahmanwas	-0.57		0.50	-2.22
400	Jind	Chhabri	-0.34	-1.83	-1.19	-0.36
401	Jind	Danoda Khurd-Pz	1.50		0.70	
402	Jind	Dhigana-Dw	0.25		-0.70	
403	Jind	Dorana Pz	6.09		8.16	12.01
404	Jind	Ganda Khera-Dw	3.05			
405	Jind	Gangoli-Dw	0.90		-0.05	
406	Jind	Gurusar-Dw	1.50		1.50	
407	Jind	Hasanpur-Pz	2.18		2.60	
408	Jind	Igra	1.05		0.30	
409	Jind	Jamni-Dw	1.20		-0.49	
410	Jind	Jhamula	-1.60	-1.45	-2.84	-1.45
411	Jind	Jhanj Kalan	5.66		5.23	
412	Jind	Jind-Pz	3.00		0.50	
413	Jind	Julana Pz	-0.13		0.23	-0.37
414	Jind	Julana-Dw	-1.80			
415	Jind	Kakrod-Dw	-0.10			
416	Jind	Kalwan	-14.78		-18.75	
417	Jind	Kalwan-Pz	1.75		4.50	
418	Jind	Kandela-Pz	3.40		4.30	
419	Jind	Karela-Dw	-0.60		-1.70	
420	Jind	Karsindhu-Dw	-0.20			
421	Jind	Karsola-Dw	0.70		-0.90	
422	Jind	Koel-Dw	1.90			
423	Jind	Korar	2.50		5.74	4.69
424	Jind	Lajwana Kalan	-0.30		-0.44	
425	Jind	Lochap Pz	3.47		2.88	-3.65
426	Jind	Ludhana	0.33		-0.70	
427	Jind	Mandi Kalan-Dw	2.15		2.35	
428	Jind	Mohal Khera Pz	1.97		-0.25	4.10
429	Jind	Narwana S	1.38		-0.18	
430	Jind	Pega-Dw	4.05			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
431	Jind	Pillukhera			1.26	
432	Jind	Pillukhera-Pz	0.85		0.19	0.69
433	Jind	Pipaltha-Pz	-0.55		2.95	
434	Jind	Pokerikheri-Pz	2.05			
435	Jind	Rajpura-Pz	1.95			
436	Jind	Rasidan Pz	-2.05		2.40	
437	Jind	Ratta Khera-Dw	-1.58			
438	Jind	Safidon (S)	3.50		3.49	4.38
439	Jind	Safidon 1(S)	4.06			
440	Jind	Sahanpur-Pz	1.15		5.10	
441	Jind	Uchana	1.64		1.80	2.18
442	Jind	Uchana Pz	3.16			4.74
443	Kaithal	Bakal-Dw	2.30			
444	Kaithal	Balbehra-Pz	4.06			-2.06
445	Kaithal	Balu-Dw	0.80		1.20	
446	Kaithal	Barsana-Pz	2.92		3.15	
447	Kaithal	Bhana-Pz				0.29
448	Kaithal	Chika-Pz	2.78		3.68	
449	Kaithal	Dhons-Pz	1.89		2.70	
450	Kaithal	Dhunderheri-Dw	2.01			
451	Kaithal	Guhna	7.17	8.13	4.80	5.25
452	Kaithal	Harigarh Kingan-Pz	2.86		3.55	
453	Kaithal	Jakhauli-Pz	2.57	2.56	1.49	-1.75
454	Kaithal	Jandaula-Pz	6.09			-5.81
455	Kaithal	Kaithal S	11.34		11.56	
456	Kaithal	Kalayath	0.79		-0.11	-0.27
457	Kaithal	Kalayath S	1.08	-0.57	0.33	
458	Kaithal	Kalesar-Dw	2.55		3.20	
459	Kaithal	Kamalpur-Dw	2.94			
460	Kaithal	Kathana-Pz	3.12		2.29	7.71
461	Kaithal	Kaul-Pz	0.50		1.80	0.18
462	Kaithal	Kelaram	2.30		2.07	5.10
463	Kaithal	Khanpur-Pz	1.89		0.47	
464	Kaithal	Kheorak-Pz	7.81		5.94	
465	Kaithal	Kheri Lamba-Dw	1.42		2.89	
466	Kaithal	Kheri Raowali-Dw	1.70		1.27	
467	Kaithal	Manas	2.59		2.39	
468	Kaithal	Manaspatti-Pz	3.04	4.73	3.66	4.67
469	Kaithal	Mataur	1.73	1.91	1.35	-0.13

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
470	Kaithal	Mundri	4.37		6.04	1.70
471	Kaithal	Padla 1(S)	5.69	9.32	4.43	9.44
472	Kaithal	Pai-Dw	2.12		2.45	
473	Kaithal	Peoda	5.92	-0.14	2.67	
474	Kaithal	Peoda Pz	3.64		0.64	0.66
475	Kaithal	Pundri(S)	6.94			10.44
476	Kaithal	Rajaund-Pz	4.00		3.81	
477	Kaithal	Ram Garh-Dw	2.42			
478	Kaithal	Rasulpur Ghamri-Pz	0.80		1.09	
479	Kaithal	Serdha-Dw	2.17		3.20	
480	Kaithal	Sirsal-Pz	4.54		3.39	4.31
481	Kaithal	Siwan-Pz	3.34		3.87	
482	Kaithal	Solu Majra-Pz	2.68			
483	Kaithal	Songri-Dw	1.82			
484	Kaithal	Tik	2.70			
485	Karnal	Ajanthali-Pz	-0.59			
486	Karnal	Alipur-Pz	-0.30			
487	Karnal	Amin S	5.75		4.15	5.68
488	Karnal	Amupur-Pz	2.03		-1.12	
489	Karnal	Anchla-Pz	0.30			
490	Karnal	Andhera-Pz	0.30		0.97	
491	Karnal	Anjanthali-Pz	5.02		2.84	
492	Karnal	Ardana-Pz	-0.10			
493	Karnal	Assandh-Pz	0.71			
494	Karnal	Badson- Pz	0.17		0.02	
495	Karnal	Balhera-S	6.47		6.51	1.54
496	Karnal	Balla- Pz	0.16		5.76	
497	Karnal	Bansa-Pz	0.64			
498	Karnal	Barthal-Pz	0.46			
499	Karnal	Bastali-Pz	1.72			
500	Karnal	Beholpur-Pz	0.52			
501	Karnal	Bijna-Pz	0.04			
502	Karnal	Budanpur-Pz	0.33			
503	Karnal	Chandsamand-Pz	0.31			
504	Karnal	Chirao-Pz	0.49			
505	Karnal	Chochra-Pz	-0.20		0.30	
506	Karnal	Choor Karsa-Pz	-1.66			
507	Karnal	Chorkharsa-Pz	-1.10		0.84	4.82
508	Karnal	Dabarthala-Pz	0.12			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
509	Karnal	Dachar-Pz	1.28			
510	Karnal	Dadupur Khurd-Pz	2.71		2.22	
511	Karnal	Dadupur-Pz	0.95			
512	Karnal	Darar	0.37		-0.07	
513	Karnal	Dhanaura--Pz	-0.22			
514	Karnal	Dingar Majra-Pz	2.98	1.92	2.95	3.99
515	Karnal	Domsi D	0.05		2.27	2.01
516	Karnal	Faridpur-Pz	0.30		-3.48	
517	Karnal	Gagsina-Pz	0.07			
518	Karnal	Gangateri-Pz			6.81	
519	Karnal	Garhi Khajur S	2.32		0.73	1.78
520	Karnal	Gharaunda-Pz	-7.04		-8.08	
521	Karnal	Ghiar-Pz	2.82		1.03	
522	Karnal	Gholpura-Pz	0.75			
523	Karnal	Gogripur-Pz	0.45			
524	Karnal	Gohida -Pz	1.12			
525	Karnal	Goli-Pz	0.29			
526	Karnal	Gondar-Pz	1.55		3.42	4.68
527	Karnal	Gondhar	-0.42		-2.04	
528	Karnal	Gudha-Pz	0.32		-0.10	
529	Karnal	Indri	1.10			0.51
530	Karnal	Jainpur-Pz	-0.04			
531	Karnal	Jalmana Pz	0.65			2.88
532	Karnal	Janesron--Pz	0.06			
533	Karnal	Jani-Pz	0.36			
534	Karnal	Jaroli Khurd-Pz	-0.01		-0.07	
535	Karnal	Jhanjari-Pz	1.20		1.47	
536	Karnal	Jundla1	7.98		7.22	
537	Karnal	Kachhwa Pz	2.30		2.45	
538	Karnal	Kalampura-Pz	0.32			
539	Karnal	Kalheri-Pz	-0.49			
540	Karnal	Kalri Jagir S	0.02		0.26	0.11
541	Karnal	Kalsi	0.64		-0.28	
542	Karnal	Kalsora-Pz	-0.14			
543	Karnal	Kambopura-Pz	0.26			
544	Karnal	Khanpur-Pz	-0.02			
545	Karnal	Khizrabad-Pz	0.69			
546	Karnal	Kohnd S	-0.69		0.56	
547	Karnal	Kurlan-Pz	2.54		6.74	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
548	Karnal	Kutail S	3.42		4.14	4.19
549	Karnal	Majra Roran	9.16		9.73	10.97
550	Karnal	Makhala S	1.24			
551	Karnal	Manak Mazra-Pz	0.89			
552	Karnal	Mehmadpur-Pz	0.60		1.74	
553	Karnal	Mohidinpur-Pz	1.18		0.28	2.35
554	Karnal	Mormazra-Pz	-0.29			
555	Karnal	Mound S	6.48		7.95	
556	Karnal	Munak	-0.29		5.54	
557	Karnal	Mundi Garhi--Pz	-0.49			
558	Karnal	Musepur-Pz	-0.10			
559	Karnal	Mustafabad-Pz	0.20			
560	Karnal	Nabipur-Pz	0.26			
561	Karnal	Nalipur-Pz	0.72		1.78	
562	Karnal	Nalvi Kalan-Pz	-0.60		-0.74	-4.77
563	Karnal	Nanhera	0.69		0.90	0.13
564	Karnal	Naru Kheri-Pz	0.58			
565	Karnal	Nasirpur-Pz	0.55		2.29	
566	Karnal	Nisang-Pz	0.17		-10.81	
567	Karnal	Padhana-Dw	5.53		7.70	
568	Karnal	Phurlak S	3.40		2.71	5.50
569	Karnal	Phusgarh-Pz	1.34		1.75	
570	Karnal	Popra-Pz	-0.05			
571	Karnal	Pundrak-Pz	-0.22			
572	Karnal	Rambha-Pz	0.74		2.20	
573	Karnal	Randauli-Pz	0.74		1.61	
574	Karnal	Ranwar-Pz	0.28		0.90	
575	Karnal	Rasin-Pz	-0.46			
576	Karnal	Rattak-Pz	1.95		7.00	
577	Karnal	Rindal-Pz	0.13			
578	Karnal	Risalwa-Pz	0.27			
579	Karnal	Sadarpur-Pz	-0.47			
580	Karnal	Sagga-Pz	2.49		3.97	
581	Karnal	Salwan-B	3.84		10.78	
582	Karnal	Sambli-Pz-M	3.09		3.34	
583	Karnal	Sambli-Pz-S	3.07		3.55	
584	Karnal	Subri-Pz	0.23			
585	Karnal	Taprana-Pz	0.67			
586	Karnal	Taraori-Pz	2.28		4.36	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
587	Karnal	Udana-Pz	2.62		2.45	
588	Karnal	Uplani-Pz	0.09			
589	Kurukshetra	Adhoya-Pz	3.51		3.34	
590	Kurukshetra	Ajrawer-Pz	1.84			
591	Kurukshetra	Bachki-Pz	4.06		5.09	9.87
592	Kurukshetra	Badarpur-Pz	2.43			
593	Kurukshetra	Bakali-Pz	2.51			
594	Kurukshetra	Bapda-Pz	2.07			
595	Kurukshetra	Barhan-Pz	2.79			
596	Kurukshetra	Baronda-Pz	1.31		-0.68	-0.40
597	Kurukshetra	Barshami-Pz	1.75			
598	Kurukshetra	Batheri-Pz	3.29			
599	Kurukshetra	Berthala S	4.21		10.39	7.79
600	Kurukshetra	Bodhni (S)	7.08			
601	Kurukshetra	Budha-Pz	2.71			
602	Kurukshetra	Busthala-Pz	1.77		2.24	
603	Kurukshetra	Chanalheri-Pz	3.12			
604	Kurukshetra	Chhapra-Pz	2.42		2.85	
605	Kurukshetra	Dabkhera-Pz	2.11	1.93	0.83	3.06
606	Kurukshetra	Dhir Pur-Pz	3.02			
607	Kurukshetra	Diwana-Pz	3.11			
608	Kurukshetra	Garhi Roran-Pz	1.95			
609	Kurukshetra	Ghararsi-Pz	2.23			
610	Kurukshetra	Gobind Garh-Pz	1.49			
611	Kurukshetra	Gol Pura-Pz	2.87			
612	Kurukshetra	Gumthala Garhu-Pz	2.73			
613	Kurukshetra	Hathira-Pz	3.02			
614	Kurukshetra	Hatira (S)	8.14		7.76	
615	Kurukshetra	Helwa-Pz	2.94			
616	Kurukshetra	Ishaque S	8.61		9.15	12.09
617	Kurukshetra	Ismailpur-Pz	2.68		1.73	
618	Kurukshetra	Ismilabad-St-Pz	2.41			
619	Kurukshetra	Jalbehra-Pz	2.35			
620	Kurukshetra	Jansa-Pz	3.07			
621	Kurukshetra	Jhansa-Pz	-2.40			
622	Kurukshetra	Jogna Khera-Pz	3.63		1.32	0.27
623	Kurukshetra	Kalsani-Pz	2.90			
624	Kurukshetra	Karaha Sahib-Pz	2.65			
625	Kurukshetra	Kaulapur S	10.12			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
626	Kurukshetra	Kharindwa	2.33		2.67	
627	Kurukshetra	Kheri Ran Nagar-Pz	2.89			
628	Kurukshetra	Lakhmari-Pz	2.43			
629	Kurukshetra	Lohar Majra-Pz	2.71			
630	Kurukshetra	Lohara-Pz	1.20		2.54	
631	Kurukshetra	Lukhi-Pz	1.83		0.52	
632	Kurukshetra	Malikpur-Singhpura-Pz	10.20		9.77	
633	Kurukshetra	Mangana-Pz	2.97			
634	Kurukshetra	Mangoli Jattan-Pz	1.93			
635	Kurukshetra	Mirzapur-Pz	7.88			
636	Kurukshetra	Mohri-Dw	1.64		2.60	
637	Kurukshetra	Mohri-Pz	1.00		1.26	
638	Kurukshetra	Morthala-Pz	2.28			
639	Kurukshetra	Murtzapur-Pz		0.64	3.53	
640	Kurukshetra	Naisi-Pz	3.04		2.71	
641	Kurukshetra	Padlu-Pz	1.42			
642	Kurukshetra	Ram Sharan Majra-Pz	4.16		3.90	
643	Kurukshetra	Rao Garh-Pz	2.85			
644	Kurukshetra	Rawa-Pz	1.95			
645	Kurukshetra	Rohit-Pz	2.69			
646	Kurukshetra	Samalkhi-Pz	6.85			
647	Kurukshetra	Sandholapz	2.36			
648	Kurukshetra	Sarai Sukhi-Pz	1.88			
649	Kurukshetra	Sarsa-Pz	2.67			
650	Kurukshetra	Shanti Nagar-Pz	1.96			
651	Kurukshetra	Sirsala-Pz	3.92			
652	Kurukshetra	Sunarain Dhanani-Pz	1.56			
653	Kurukshetra	Sunder Pur-Pz	2.04			
654	Kurukshetra	Surmi-Pz	2.43			
655	Kurukshetra	Tangore-Pz	-1.47		2.80	
656	Kurukshetra	Tatka-Pz	2.55			
657	Kurukshetra	Teokar-Pz	1.70			
658	Kurukshetra	Teora-Pz	3.02			
659	Kurukshetra	Thol-Pz	2.23			
660	Kurukshetra	Tigri-Pz	2.50			
661	Kurukshetra	Umri-Pz	2.71		2.85	
662	Kurukshetra	Urna-Pz	2.56		0.25	-1.61
663	Kurukshetra	Yara-Pz	1.80			
664	Mahendragarh	Atali-Dw	-0.70		1.75	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
665	Mahendragarh	Barda-Dw	-28.55		-29.00	
666	Mahendragarh	Basirpur	0.30		0.25	
667	Mahendragarh	Bayal	-4.93		-0.10	
668	Mahendragarh	Berundla-Dw	-1.05		-0.05	
669	Mahendragarh	Bhojawas-Dw	0.20		0.30	
670	Mahendragarh	Buwana-Pz	6.49		7.64	10.81
671	Mahendragarh	Chelawas-Dw	-0.90		1.00	
672	Mahendragarh	Deroli Ahir	2.38		1.00	4.53
673	Mahendragarh	Deroli Ahir1	-6.19		3.31	-5.73
674	Mahendragarh	Dhancholi-Dw	1.10		0.90	
675	Mahendragarh	Faizabad-Dw	0.05		0.53	
676	Mahendragarh	Kalba-Dw	-0.70		0.80	
677	Mahendragarh	Kaninakhas1	5.26		5.88	
678	Mahendragarh	Kharkara Bas-Dw	2.63		1.45	
679	Mahendragarh	Kheri	-1.12		-1.73	
680	Mahendragarh	Kheri-Pz	0.30		-0.50	
681	Mahendragarh	Khodma-Dw	-20.00		2.00	
682	Mahendragarh	Kultajpur-Dw	0.50		-0.50	
683	Mahendragarh	Nagal Kalia-Dw	-0.35		1.56	
684	Mahendragarh	Narnaul	-3.49	-2.71		2.22
685	Mahendragarh	Pachnota-Dw	-3.05		1.95	
686	Mahendragarh	Pali-Pz	1.14		1.40	
687	Mahendragarh	Pathera-Dw	-1.80		1.00	
688	Mahendragarh	Shelang-Dw	-1.00		0.70	
689	Mahendragarh	Tazpur-Pz	1.25		0.60	
690	Mewat	Agaon-Pz	2.25			
691	Mewat	Akaira	-1.62	0.37	3.14	0.11
692	Mewat	Aminabad-Dw	-0.20			
693	Mewat	Bhadas-Dw	0.40		0.62	
694	Mewat	Firozpur Jhirka	2.01			
695	Mewat	Gulaltha	0.17		0.19	
696	Mewat	Indri	1.25	-0.61		-0.72
697	Mewat	Kheri1	1.29		1.99	1.33
698	Mewat	Luhingakalan	1.33			
699	Mewat	Malab	-0.53	-0.13	0.53	-0.27
700	Mewat	Nagina	2.54			4.18
701	Mewat	Naharika-Pz	-0.78			
702	Mewat	Nuh	-0.09		1.12	0.27
703	Mewat	Nuh1	-0.31			-0.39

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
704	Mewat	Pipaka	-12.52		-9.87	
705	Mewat	Punhana	0.90			
706	Mewat	Punhana-Pz	0.64			
707	Mewat	Rangla Dhani-Pz	-0.93		0.33	
708	Mewat	Rathiwat	-0.73		-0.35	
709	Mewat	Sarauli-Dw	-0.12			
710	Mewat	Sikarwa	1.02			
711	Palwal	Badraun	2.41		4.08	
712	Palwal	Baghaura	-1.31		-1.39	-2.28
713	Palwal	Bahin-Dw	-0.05			
714	Palwal	Bamnikhera	3.26			
715	Palwal	Banchari-Dw	1.10			
716	Palwal	Barauli-Pz	3.34		2.73	4.59
717	Palwal	Bazida Pahar-Dw	0.35			
718	Palwal	Bhiduki-Dw	0.10			
719	Palwal	Bibipur-Dw	0.23			
720	Palwal	Chhaensa-Dw	0.00			
721	Palwal	Dighaut	1.50		1.05	2.12
722	Palwal	Gulawad-Dw	1.20			
723	Palwal	Hasan Pur	0.40			
724	Palwal	Hathin	-0.07			
725	Palwal	Hodel1	2.44			
726	Palwal	Jawan- Pz	0.69		0.21	
727	Palwal	Khambi	0.06		1.44	0.05
728	Palwal	Kot	0.93			
729	Palwal	Lakhnaka	0.83		0.58	2.00
730	Palwal	Mandkola	0.26			
731	Palwal	Nangal Jat-Dw	0.58			
732	Palwal	Palwal	1.78		1.49	2.65
733	Palwal	Palwal-Pz	1.65			1.75
734	Palwal	Pehladpur-Pz	1.00		0.67	-6.98
735	Palwal	Pelak-Pz	1.59		2.01	
736	Palwal	Phulwari-Dw	0.55			
737	Palwal	Pirgarhi- Pz	0.35		-1.35	
738	Palwal	Rasul Pur			1.65	
739	Palwal	Sarai-Dw	0.90			
740	Palwal	Tumsara	-2.66	-2.82	-2.47	-0.39
741	Panchkula	Bahoriyan-Dw	-0.49		0.54	
742	Panchkula	Batour	0.62		1.42	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
743	Panchkula	Bunga At Dabkhori-Dw	0.50		0.50	
744	Panchkula	Devnagar(Panchkula)			-0.23	
745	Panchkula	Dhakwala-Dw	0.70		0.39	
746	Panchkula	Dharampur	3.27		0.34	1.98
747	Panchkula	Golpura-Dw	-0.36		1.18	
748	Panchkula	Hangola	0.10		-1.12	-2.88
749	Panchkula	Jaspur-Dw	-0.30		-0.66	0.09
750	Panchkula	Jaswant Garh-Dw	0.35		1.25	
751	Panchkula	Kakar Majra	-1.11		1.04	1.49
752	Panchkula	Khera			0.23	-0.01
753	Panchkula	Kheri-Dw	0.13		-0.94	
754	Panchkula	Kundi-Dw	0.50		0.00	
755	Panchkula	Maranwala	0.50		0.00	
756	Panchkula	Mauli-Dw	0.03		0.55	
757	Panchkula	Nadha-Dw	-0.53		0.16	
758	Panchkula	Nandpur-Dw			-0.13	
759	Panchkula	Parwala	0.19		0.15	
760	Panchkula	Patwi		-3.71		-3.70
761	Panchkula	Raipur Rani-Pz	11.50		10.97	
762	Panchkula	Raipurrani	-4.48		-0.25	
763	Panchkula	Ram Nagar-Dw	0.33			
764	Panchkula	Ramgarh-Dw	0.16			
765	Panchkula	Rampur-Dw	0.08		1.06	
766	Panchkula	Rehna-Dw	0.12			
767	Panchkula	Shahjahan Pur-Dw	0.28		1.15	
768	Panchkula	Thapli-Dw	0.58		-0.97	
769	Panchkula	Toka-Dw	0.47			
770	Panipat	Babail Pz S	8.43		10.05	
771	Panipat	Baholi-Pz	0.61		3.58	
772	Panipat	Bandh-Dw	0.40		2.23	
773	Panipat	Bhallour Pz	13.14		1.71	7.72
774	Panipat	Brahman Majra-Dw	-0.81		0.47	
775	Panipat	Dakadla S	2.35		3.02	2.97
776	Panipat	Dharamgarh S	2.67		4.35	4.81
777	Panipat	Dumiana-Dw	0.55		2.92	
778	Panipat	Hathwala-Pz	5.39		6.29	
779	Panipat	Israna Pz	-0.47		1.41	0.71
780	Panipat	Kaith-Dw	-2.11		1.01	
781	Panipat	Karhansh Pz	2.41		2.86	4.38

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
782	Panipat	Khalila Manjran	1.25		2.44	2.99
783	Panipat	Khandra	3.05		1.97	
784	Panipat	Khelalla Pehl S			8.82	5.30
785	Panipat	Kiwana	-0.03		-2.67	
786	Panipat	Lohari (S)	1.40		0.15	
787	Panipat	Mehmadpur	2.23		3.65	
788	Panipat	Nara	0.25			
789	Panipat	Nariana-Pz	-4.45			-7.78
790	Panipat	Naultha	0.05		2.47	
791	Panipat	Nizampur	2.05		4.17	
792	Panipat	Patti Kalyana S	7.70		5.43	
793	Panipat	Puther Pz	2.60		1.59	2.54
794	Panipat	Samalkha-Pz	2.58		2.46	
795	Panipat	Sanauli Khurd-Pz	2.52		2.13	3.59
796	Panipat	Shahpur			2.36	3.00
797	Panipat	Sink	-1.07		-0.05	
798	Panipat	Untilya	3.19	0.67	0.70	
799	Panipat	Urlana Kalan	1.97	2.68	2.65	3.03
800	Rewari	Bahu	5.82		7.29	
801	Rewari	Balawas	-11.27		-12.71	
802	Rewari	Bawal Dw	-0.25		-1.05	
803	Rewari	Bawal Pz	0.68		1.29	2.49
804	Rewari	Berli Khurd-Dw	0.95		0.45	
805	Rewari	Bhakli-Dw	0.25		-0.70	
806	Rewari	Bharangi-Dw	0.80			
807	Rewari	Garhi-Dw	0.71		0.25	
808	Rewari	Guriani	1.37			
809	Rewari	Gurkawas-Dw	2.80		3.00	
810	Rewari	Hansaka-Dw	3.55		0.20	
811	Rewari	Harinagar-Dw	-1.48		-2.40	
812	Rewari	Jatuwas-Dw	5.72		-0.60	
813	Rewari	Karnawas	2.86		3.84	4.28
814	Rewari	Karoli-Dw	1.08		1.05	
815	Rewari	Khera Bahu-Dw	0.60		0.10	
816	Rewari	Khol	3.00		-6.30	
817	Rewari	Kumbhawas-Dw	1.70			
818	Rewari	Mandola-Pz	4.91	6.45		7.97
819	Rewari	Massani	0.29		0.29	0.46
820	Rewari	Mubarikpur-Dw	0.15		0.00	

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
821	Rewari	Nahar	2.00		2.38	
822	Rewari	Nangal Jamalpur-Pz	-2.21			0.03
823	Rewari	Nangal Mundi-Dw	1.48		0.85	
824	Rewari	Palhawas-Dw	0.90		0.50	
825	Rewari	Pali-Pz			-0.25	
826	Rewari	Ratanthal-Dw	0.20		0.08	
827	Rewari	Rewari	-1.83		-2.92	
828	Rewari	Rholiawas-Pz	1.02	0.60	0.70	
829	Rewari	Rohrai-Dw	0.28		-0.73	
830	Rewari	Sangwari	-3.96			
831	Rewari	Shadipur-Dw	0.58		-0.20	
832	Rewari	Sudharana-Dw	0.41		-1.15	
833	Rohtak	Ajaib-Dw	0.28			
834	Rohtak	Assan-Dw	-0.09			
835	Rohtak	Atail-Dw	-0.95			
836	Rohtak	Baland	0.19		0.14	0.84
837	Rohtak	Bhal Anandpur	0.24		0.14	0.30
838	Rohtak	Bhalaut	-1.32			
839	Rohtak	Bharain-Dw	1.00			
840	Rohtak	Giji-Dw	-0.04			
841	Rohtak	Hassangarh	-0.79	0.59	-0.36	0.03
842	Rohtak	Kalanaur	0.68			
843	Rohtak	Kanheli-Dw	1.36			
844	Rohtak	Kansala	-0.72		-0.08	-0.73
845	Rohtak	Kharawar	1.16			
846	Rohtak	Kherari-Dw	0.56			
847	Rohtak	Kiloi-Dw	-0.14			
848	Rohtak	Lahli-Dw	-0.02			
849	Rohtak	Lakhan Majara	-0.45		-0.87	1.15
850	Rohtak	Lakhan Majra Pz	-1.28			
851	Rohtak	Madina	-0.91			
852	Rohtak	Mahem	4.04	2.87	1.57	1.53
853	Rohtak	Makhrauli Khurd	0.03			
854	Rohtak	Meham	-0.04			
855	Rohtak	Muradpur Tekna-Dw	0.45			
856	Rohtak	Nandal-Dw	0.18			
857	Rohtak	Nidhana	0.90			
858	Rohtak	Ritoli-Dw	0.40			
859	Rohtak	Rohtak	0.03			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
860	Rohtak	Samargopalpur	1.44		-0.29	0.18
861	Rohtak	Sampla	0.11			-0.76
862	Rohtak	Sampla-Pz	-0.81		-0.78	
863	Rohtak	Sundana-Dw	-1.51			
864	Rohtak	Tiloli-Dw	-0.50			
865	Sirsa	Ali Mohmmad	0.70			
866	Sirsa	Alikan	2.27			
867	Sirsa	Bharu Khera-Dw	1.70			
868	Sirsa	Bhuratwala-Pz	0.92	0.07	1.38	1.85
869	Sirsa	Chaharwala	0.25			
870	Sirsa	Chilkani Dhab	0.98			
871	Sirsa	Chormar	0.80		1.49	2.39
872	Sirsa	Chotala	3.33			-0.33
873	Sirsa	Chotala-Pz	0.32		0.84	2.09
874	Sirsa	Dabwali Dw	0.18		0.95	-0.85
875	Sirsa	Dabwali -Pz S	0.10		0.52	
876	Sirsa	Darba Kalan-Pz	-0.16	0.21	0.31	0.07
877	Sirsa	Desu Jodha-Dw	0.17			
878	Sirsa	Desu Malkana-Dw	0.80			
879	Sirsa	Dholpalia-Dw	0.43			
880	Sirsa	Ding	-0.87		6.23	
881	Sirsa	Ganga	2.37			
882	Sirsa	Ghushiana	0.18		0.79	0.80
883	Sirsa	Gigorani	-0.21		0.11	0.21
884	Sirsa	Goriwala	0.76		0.06	
885	Sirsa	Govindgarh-Dw	-0.05			
886	Sirsa	Gudia Khera-Dw	1.01			
887	Sirsa	Hasu	9.31			
888	Sirsa	Jagiwala-Dw	0.30			
889	Sirsa	Jamal	-1.14		-0.32	-1.21
890	Sirsa	Jamal- Pz	0.47		0.00	0.26
891	Sirsa	Kairanwali-Dw	0.40			
892	Sirsa	Kalanwali Mandi-Pz	-0.58		1.09	-2.70
893	Sirsa	Kaluwana	0.52		0.23	0.55
894	Sirsa	Karamsana	-1.28	-0.74	-1.09	-1.31
895	Sirsa	Kash Ram Dhab	-3.90	-3.21	-0.22	
896	Sirsa	Khuiyan	3.71		3.94	3.79
897	Sirsa	Kurangwali	0.48			
898	Sirsa	Lohgarh	0.00			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
899	Sirsa	Mammer Khera-Pz	0.83		0.59	1.06
900	Sirsa	Manjiyana	1.88		2.43	3.01
901	Sirsa	Mastian	0.96		0.97	1.03
902	Sirsa	Mithri	3.56		3.73	4.28
903	Sirsa	Nuhian Wali	2.26	2.55	2.01	3.07
904	Sirsa	Odhan Pz	2.03			
905	Sirsa	Ottu 1(S)	6.11			
906	Sirsa	Panniwala Mota	0.58	0.94	0.64	0.85
907	Sirsa	Phaggu-Pz	0.26		0.20	0.44
908	Sirsa	Rasalia Khera	4.53		1.35	2.91
909	Sirsa	Rori -Dw	2.98	1.39	2.79	
910	Sirsa	Rupana	-0.28			
911	Sirsa	Sadewala	0.90			
912	Sirsa	Sainpal-Pz	2.10			
913	Sirsa	Saktakhera	-0.69	0.14	0.16	-0.58
914	Sirsa	Shergarh-Dw	0.48		-0.22	-0.29
915	Sirsa	Sherpura	-0.61	-0.47	0.37	-0.22
916	Sirsa	Sirsa-Pz	5.58		5.30	5.64
917	Sirsa	Sri Jiwan Nagar-B	9.11		9.68	
918	Sirsa	Sukhchain-Dw	0.00			
919	Sirsa	Taruwana	1.40		1.55	1.70
920	Sirsa	Tejakhara	2.80		2.06	1.31
921	Sirsa	Thiraj	0.65			
922	Sirsa	Tigri-Dw	0.03			
923	Sonipat	Ahmadpur Majra-Dw	1.36			
924	Sonipat	Ahulana	0.49	-0.28	-0.40	-0.42
925	Sonipat	Anandpur-Jarot-Dw	0.27			
926	Sonipat	Anwali-Pz	0.80			
927	Sonipat	Bagru-Dw	0.07			
928	Sonipat	Banwasa-Dw	-0.09			
929	Sonipat	Barauli	1.58	0.50	2.15	1.50
930	Sonipat	Baroda Mor-Dw	0.08			
931	Sonipat	Barona-Dw	-0.17			
932	Sonipat	Barswani- Dw	2.09		2.20	
933	Sonipat	Barwasni Pz (S)	1.33		3.02	2.94
934	Sonipat	Bega Pz	-0.58			2.00
935	Sonipat	Bhainswal	0.80	0.85	-0.19	0.40
936	Sonipat	Bhunderi	0.66		-2.35	0.02
937	Sonipat	Bichpuri1				1.11

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
938	Sonipat	Bidhlan-Dw	0.90			
939	Sonipat	Bohela	1.34		2.45	1.45
940	Sonipat	Butana	1.07	0.74	0.59	0.56
941	Sonipat	Chhapra-Dw	0.90			
942	Sonipat	Chirana				1.78
943	Sonipat	Chitana-Dw	-0.32			
944	Sonipat	Datauli-Pz	3.45	2.65	1.77	7.04
945	Sonipat	Farmana	-0.32	-0.37	0.50	0.93
946	Sonipat	Ganaur-Pz	3.37			
947	Sonipat	Gangana-Dw	-0.18			
948	Sonipat	Garhwal	-0.12		-0.51	0.14
949	Sonipat	Gohana Pz	2.06		2.76	-2.50
950	Sonipat	Gorar-Dw	0.57			
951	Sonipat	Jagsi	-0.00		-0.09	
952	Sonipat	Jhakauli- Pz	2.54		1.94	-8.48
953	Sonipat	Juan-Dw	1.27			
954	Sonipat	Kami- Pz	6.15	3.65		7.00
955	Sonipat	Kathura	-1.21			
956	Sonipat	Kathura Pz	-0.26		-0.18	
957	Sonipat	Khanda-Dw	0.36			
958	Sonipat	Khanpur Kalan-Pz	-0.62		-1.45	
959	Sonipat	Kheorapz	5.54		2.46	2.83
960	Sonipat	Kheri Gujjar-Pz	1.29			
961	Sonipat	Janti Khurd-Pz				5.51
962	Sonipat	Ladpur-Pz	1.75			
963	Sonipat	Larsauli-Pz	1.04			
964	Sonipat	Lath	0.57	-0.22	-0.04	
965	Sonipat	Machhri	1.30		0.58	0.63
966	Sonipat	Mattand-Dw	1.02			
967	Sonipat	Mohana Pzm	1.59		0.14	-0.16
968	Sonipat	Manauli-Pz				-2.47
969	Sonipat	Mundlana Dw	-0.01		0.55	
970	Sonipat	Mundlana- Pz	0.18		1.93	
971	Sonipat	Murthal-Pz	1.17	3.33	2.77	2.38
972	Sonipat	Nahri	1.27	2.01	2.49	2.48
973	Sonipat	Nizaimpur	-0.95			
974	Sonipat	Pinana	0.31		0.19	0.54
975	Sonipat	Pipli-Dw	1.21			
976	Sonipat	Pugthala-Pz	0.45			

Annexure-IV

Sl. No	District	Location	Decadal Mean Fluctuation(M)			
			Decadal Mean Years			
			May (2007-16)	August (2007-16)	November (2007-16)	January (2008-17)
			May 2017	August 2017	November 2017	January 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)
977	Sonipat	Purkhas-Pz	2.77			1.32
978	Sonipat	Rai-Bahalgarh-Pz	1.39		0.82	
979	Sonipat	Rasoi Pz	4.19		3.05	2.40
980	Sonipat	Rathdhana-Pz	2.27			
981	Sonipat	Rohat	1.33			
982	Sonipat	Rukhi-Pz	-0.65		-1.13	-2.01
983	Sonipat	Sisnah			1.10	
984	Sonipat	Sonepat	0.28			
985	Sonipat	Tihar Malikpur-Dw	0.60			
986	Yamunanagar	Amadalpur	3.58			
987	Yamunanagar	Antawa-Pz	0.16			
988	Yamunanagar	Bari Kanari-Pz	0.75			
989	Yamunanagar	Bhambauli-1 (S)	2.72		2.58	9.72
990	Yamunanagar	Bilaspur Dw	0.22		2.97	0.05
991	Yamunanagar	Chamrori-Pz	0.21			
992	Yamunanagar	Chhachhrauli	-4.77		0.37	
993	Yamunanagar	Chhachhrauli S	1.19			-7.56
994	Yamunanagar	Choli	-0.77	-0.15	-0.02	
995	Yamunanagar	Damla-Pz	0.24			
996	Yamunanagar	Dhaurang S	0.79		0.60	0.69
997	Yamunanagar	Fatehpur-Pz	5.82			
998	Yamunanagar	Jagadhri-Pz	0.75			
999	Yamunanagar	Jhiwarheri S	2.95		3.36	
1000	Yamunanagar	Khizrabad	0.38		-1.74	1.21
1001	Yamunanagar	Masana Jattan-Pz	0.77		0.85	
1002	Yamunanagar	Mustafabad Dw	-0.93	-0.18	-0.70	
1003	Yamunanagar	Mustafabad-Pz	-1.55		-0.07	1.40
1004	Yamunanagar	Nagal Patti-Dw	0.13			
1005	Yamunanagar	Naggal-S	0.37		0.44	
1006	Yamunanagar	Radaur S	1.23		0.65	0.14
1007	Yamunanagar	Ramgarh-Dw	0.70			
1008	Yamunanagar	Rasulpur Dw	2.22		4.57	1.91
1009	Yamunanagar	Sabri	1.80		0.14	2.20
1010	Yamunanagar	Sadhaura Dw	0.30	0.15	0.15	-0.14
1011	Yamunanagar	Sadhaura S	1.51			
1012	Yamunanagar	Salehpur-Dw	0.60			
1013	Yamunanagar	Shadipur	-0.37		0.19	-0.44
1014	Yamunanagar	Tala Kaur S	-0.43			
1015	Yamunanagar	Tehi-Pz	0.35			

Ground Water Quality in Haryana

Character of ground water quality is dependent on geological characteristics and climatic conditions. It is further influenced and generally degraded by human activities. Indiscriminate extraction of groundwater for day to day uses, application of fertilizers in agriculture and unscientific disposal of industrial waste have great impact on ground water quality. The quality of ground water is normally ascertained through concentration values of number of physical, chemical and biological parameters present in it. Concentration of these parameters affects its acceptability and usefulness for domestic, agriculture, industrial and other purposes. It is, therefore, essential to know the chemical composition of ground water to determine its suitability for the intended use. Knowledge of quality of ground water not only helps in finding its suitability for various purposes, but it also helps in taking effective remedial measures for its improvement on scientific lines. In rural as well as in urban area of Haryana State, ground water is a major resource for drinking and other uses. Wherever surface water is inadequate or unavailable, ground water is exploited for drinking and irrigation purposes.

In the backdrop of various uses of ground water, its quality is monitored annually by CGWB, NWR Chandigarh through dedicated ground water monitoring stations (GWMS) of dug wells and/or hand pumps of shallow depth.

Sampling & Analysis

842 (421 for each BA & HM) water samples were collected in 1-liter capacity good quality polyethylene bottle from national ground water monitoring stations distributed over 21 districts of Haryana during May 2017. Sampling points are mostly open dug wells and hand pumps, which are fully or at least are partially in use. Chemical analysis was carried out for major cations (Ca, Mg, Na, K) and anions (CO_3 , HCO_3 , Cl, SO_4 , NO_3 , F) in addition to pH, EC, PO_4 , SiO_2 , TH as CaCO_3 , in the Chemical Laboratory at Chandigarh. Standard analytical procedures as given in APHA 2012 were followed. Results of chemical analysis of water samples are placed in Annexure I.

Composition of waters

Chemical analysis shows that ground water is slightly to moderate alkaline with pH ranging between 7.19 (Dobaldhan , Beri,district Jhajjar) and 9.94 pH units (Jowan, Palwal district Palwal). EC (salinity) is found to vary widely with a minimum value of $125\mu\text{S}/\text{cm}$ at Roliawas, Khol in district Rewari and a maximum value of $23906\mu\text{S}/\text{cm}$ at 25°C at Phaggu, Baragudha in district Sirsa.

Among anions, carbonate though generally absent in ground water samples is found in significant number of water samples and it varies from nil to 132 mg/l. Bicarbonate varies from 37 to 1001 mg/l, chloride varies from 3.0 mg/l to 4885 mg/l (Phaggu) and sulphate varies from nil to 2022 mg/l. However, exceptionally high concentrations of 4611mg/l of sulphate are also encountered in Sirsa district (Phagu). Nitrate, an indicator of domestic, irrigation and industrial contamination, is found at

many locations. Its concentration in State varies from nil to 1600 mg/l. Fluoride is found to be present in almost all the water samples and it varies from nil to 11.61 mg/l at Kheritalwana in Mahendragarhi district. In about 21.38% of the samples, it is found more than the drinking water limit of 1.5 mg/l F (BIS 2012). Phosphate has not been detected in most of the locations but the highest concentration of 1.06/l has been observed in well water of Gubhana in Jhajjar district.

Among cations, calcium is found to vary from 4 mg/l to 566 mg/l whereas magnesium generally varies from 2 to 1134 mg/l. Sodium is found to range between 4 mg/l and 3450 mg/l. at Phagu in district Sirsa. Potassium in ground waters is normally below 10 mg/l and its higher concentration indicates contamination from point as well as non-point sources. In Haryana, potassium in shallow waters is found to range from traces to as high as 538 mg/l. Very high potassium concentrations of 538mg/l is observed at Kansal in Rohtak district and . Hardness reported as CaCO_3 varies between 30 mg/l and 5850 mg/l indicating wide variation. However, very hard water with concentration as high as of wells are also encountered more than 2000 mg/l. The district-wise concentration range of various chemical constituents in ground water is given in Table .

Table 1. District wise distribution of chemical constituents in groundwater of Haryana State (GWMS 2017)

Sr. No	DISTRICT	No. of Samples	Conc Range	pH	EC in $\mu\text{S/cm}$ at 25°C	CO ₃	HCO ₃	Cl	SO ₄	NO ₃	F	PO ₄	Ca	Mg	Na	K	SiO ₂	TH as CaCO ₃	SAR	RSC in meq/l
						(<-----mg/l----->)														
1	Ambala	14	Min	7.3 1	424	0	125	7	20	1	0.29	0	20	5	48	1	11	82	1.601376	-14.0983
			Max	8.6 2	3250	44	881	521	435	490	1.31	0	207	120	397	187	29	1011	10.10039	4.085479
2	Bhiwani	32	Min	7.3 1	377	0	98	21	1	0	0	0	8.4	4.9	7.6	0.6	11	55	0	-57.199
			Max	8.6 4	8476	108	830	1811	2022	1600	9.61	0.035	566	500	1396	270	39	3151	28.00363	16.00327
3	Faridabad	7	Min	7.4 2	1105	0	268	28	39	0	0	0	72	21	93	1	20	350	2.661375	-20.3786
			Max	8.2 8	5890	0	610	1446	1215	30	1	0	369	238	865	31	27	1341	16.53108	1.081441
4	Fatehabad	10	7.40	425	0	141	21	0	0	0.03	0.01	12	12	4	2.00	11	80	0.120007	-26.5632	7.40
			8.72	548 6	63	910	773	1053	1104	1.75	0.07	293	326	483	25.00	22	2072	13.78901	4.301963	8.72
5	Gurgaon	21	Min	7.3	240	0	85	21	5	2	0	0	12	10	17	1	5	100	0.605319	-35.6402

				3																	
			Max	8.8 8	7215	48	659	2014	712	96	2	0	305	311	950	188	36	1962	21.62452	5.762153	
6	Hissar	35	Min	7.3 6	259	0	103	21	0	0	0.16	0.01	8	2	4	2	4	30	0.146713	-34.2592	
			Max	8.6 4	5964	76	679	1234	941	413	6.47	0.59	265	319	633	172	38	1972	25.79386	9.521372	
7	Jhajjar	15	Min	7.1 9	960	0	134	28	58	3	0	0	8	4.9	135	1.3	10	41	3.26502	-113.377	
			Max	8.9 3	1400 4	120	732	2920	4052	685	3.95	1.06	473	1134	1250	308	33	5850	17.18634	11.80327	
8	Jind	20	Min	7.6 0	330	0	61	7	8	1	0		8	5	10	3	3	50	0	-24.05	
			Max	8.9 2	4600	24	879	1021	347	39	2		305	136	765	480	18	1321	17.7059	8.175363	
9	Kaithal	22	Min	7.6 6	605	0	220	7	22	0	0		12	12	41	3	11	80	1.314037	-32.0379	
			Max	8.9 7	8150	36	1001	1503	1208	195	1		273	297	868	248	21	1781	15.57478	9.190083	
10	Karnal	30	Min	7.8 5	348	0	115	7	5	0	0.26	0	17	2	6	1.9	17	93	0	-3.02082	
			Max	8.9 0	5320	129	564	612	1220	400	3.25	0	128	63	1040	10.0	26	580	25.21889	10.78819	
11	Kurukshet	21	Min	7.9	397	0	128	7	8	0	0.27	0	21	5	35	1	18	114	0	-4.85582	

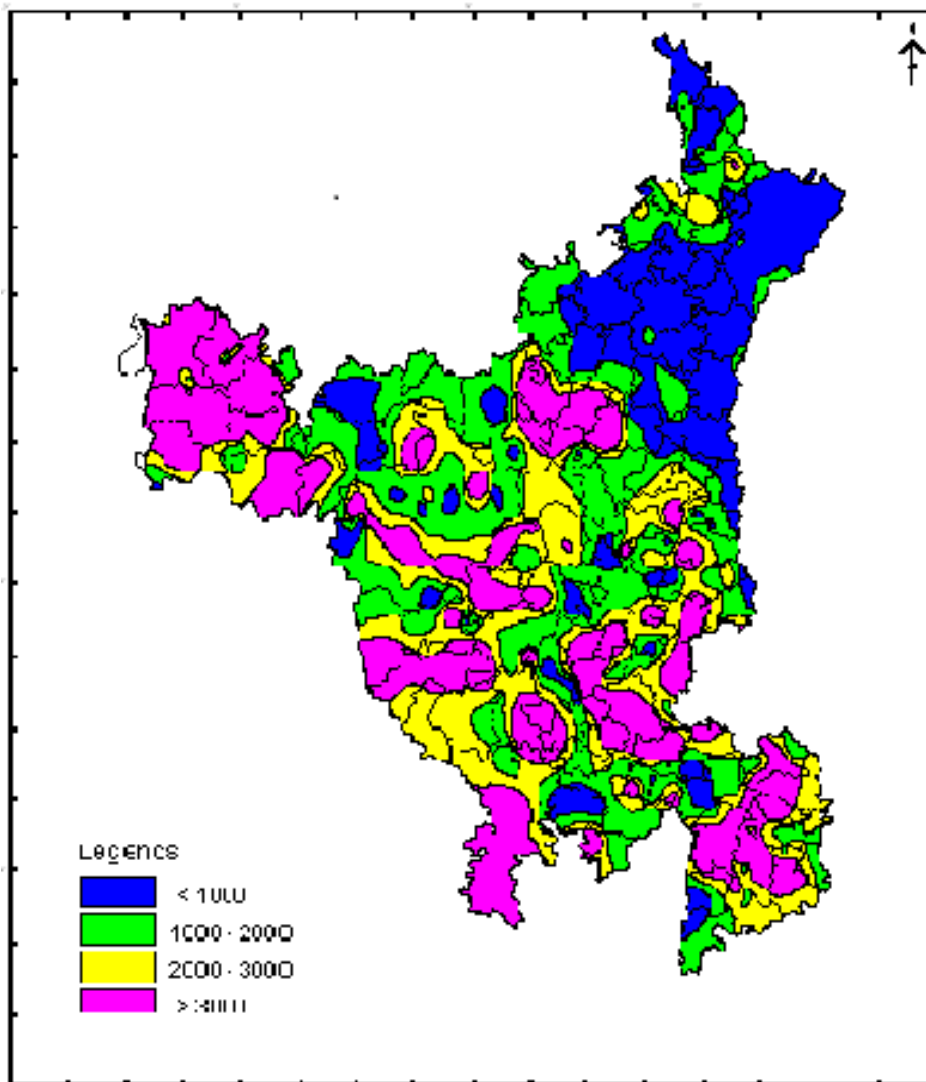
	ra			0																
			Max	8.7 6	1065	68	603	56	105	18	1.10	0	66	78	245	7	28	320	8.285881	7.153764
12	Mahendergarh	9	Min	7.5 6	901	0	159	63	200	1	0.06	0	33	35	46	2.1	15	250	0	-30.2994
			Max	8.3 5	5920	60	671	1271	1574	392	11.6 1	0.017	345	318	757	31	31	1664	14.61101	6.576337
13	Mewat	11	Min	7.4 2	685	0	98	57	0	4	0	0	40	19	33	1	20	280	0	-43.2879
			Max	8.4 8	6210	12	610	1928	1388	95	2	0	409	297	1181	289	35	2242	37.37181	0.436214
13	Palwal	21	Min	7.5 9	1270	0	342	70	10	0	0	0	24	24	100	1	5	200	0	-27.5803
			Max	9.9 4	6125	0	952	1503	1902	329	4	0	248	340	1151	365	42	2022	22	10.79668
14	Panchkula	24	Min	7.5 2	450	0.0	244	14	0	0.4	0.11	0.00	4	2	13	0.00	11	30	0.389496	-0.83457
			Max	8.4 0	1912	38.0	999	198	75	136.0	1.99	0.11	116	75	291	5.70	27	460	8.957621	7.520448
15	Panipat	21	Min	8.0 8	520	0	159	14	8	1	0.16		8	9.7	25	3	4	70	0.688902	-6.38026
			Max	8.9 9	4340	24	659	610	1060	56	6.5		40	151	770	165	17	721	17.17756	7.188437
16	Rewari	11	Min	7.4	125	0	122	28	12	3	0	0	16	20	16	0	9	160	0	-4.03291

				0																	
			Max	8.6 3	4420	24	561	893	588	61	2	0	80	141	789	7	29	661	17.98715	2.358834	
17	Rohtak	11	Min	7.5 8	375	0	122	21	8	0.02	0.27	0	12	25	8.5	4.4	15	182	0.264309	-9.51402	
			Max	8.7 4	4672	132	586	730	1338	310	2.14	0.187	202	123	845	538	28	758	18.63103	2.122043	
18	Sirsa	34	Min	7.2 4	755	0.0	141	21	0	0	0.30	0.01	24	7	45	1.50	7	120	0	-82.2429	
			Max	9.4 3	2390 6	126. 0	910	4885	4611	291	7.31	0.17	421	815	3450	270.00	25	4403	48.95675	10.3312	
19	Sonepat	34	Min	7.8 2	210	0	37	14	5.0	1	0	0	8	10	6	2	8	90	0.224504	-19.9737	
			Max	9.0 7	5640	24	635	936	990.0	42	2	0	200	219	509	295	21	1181	10.36088	4.153909	
20	Yamunana gar	18	Min	7.5 0	365	0	179	3.47	5	0.14	0.13	0.02	37	7.41	6.7	1.5	5.6	174	0.191471	-1.36726	
			Max	8.4 3	1505	56	643	160	228	87	0.68	0.04	164	33	180	81	24	541	5.657879	2.64859	
	Haryana	421	Min	7.1 9	125	0	37	3	0	0	0.00	0	4	2	4	0	3	30	0.191471	-1.36726	
			Max	9.9 4	2390 6	132	1001	4885	4611	1600	11.6 1	1	566	1134	3450	538	42	5850	48.95675	16.00327	

Distribution of Electrical Conductance (EC)

EC, a primary indicator of dissolved mineral content, varies from 125 $\mu\text{S}/\text{cm}$ to 23906 $\mu\text{S}/\text{cm}$ at 25°C. About 25% of the water samples have EC less than 750 $\mu\text{S}/\text{cm}$, 52% have EC between 750 and 3000 $\mu\text{S}/\text{cm}$ and the remaining 23% of the samples have EC more than 3000 $\mu\text{S}/\text{cm}$ (Table). Water with low EC (<750) are found mostly in Ambala, , Hissar, Panchkula, Panipat, Karnal, Kaithal, Kurukshetra, Sonapat and Yamunanagar districts, water with intermediate EC (750-3000) are mostly in Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Jind, Hissar, Kaithal, Karnal, Mewat, Rewari, Palwal, Panipat, Rewari, Rohtak, Sirsa, Sonapat, and Yamunanagar districts and samples with high EC (>3000) are found scattered throughout the State. However, most of them are from Bhiwani, Faridabad, Gurgaon, Hissar, Jhajjar, Kaithal, Palwal, Rohtak, Sirsa and Sonapat districts (Plate). The reason for high salinity in ground water of these areas may be due to natural concentration of salts as there is more evapo-transpiration than precipitation (Semi-arid climatic conditions) and lack of drainage.

DISTRIBUTION OF EC IN HARYANA, 2017 - 2018;



Distribution of Chloride

The distribution of chloride in ground water follows the distribution pattern of EC and it ranges from 3.0mg/l to 4885 mg/l. Chloride above 400 mg/l, in drinking water, may give salty taste to consumers. Bureau of Indian Standards (BIS 2012) has assigned a desirable concentration of 250 mg/l chlorides in drinking water. This limit can be extended to 1000 mg/l in case no other source with desirable chloride concentration is available. Out of 421 samples analyzed, 65% have chloride below desirable limit (250mg/l), 28% have between desirable and permissible level (250-1000 mg/l) and the remaining 7% of samples have chloride more than the permissible limit of 1000 mg/l (Table). Spatial distribution of chloride in ground water indicates that few

sites at Bhiwani, Faridabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Mewat, Palwal, and Sirsa districts (Plate) have chloride concentration above 1000 mg/l. High concentration of chloride is mostly observed in samples having high sodium content indicating highly saline nature of these shallow ground waters.

Plate

DISTRIBUTION OF CHLORIDE IN HARYANA(2017 - 2018)

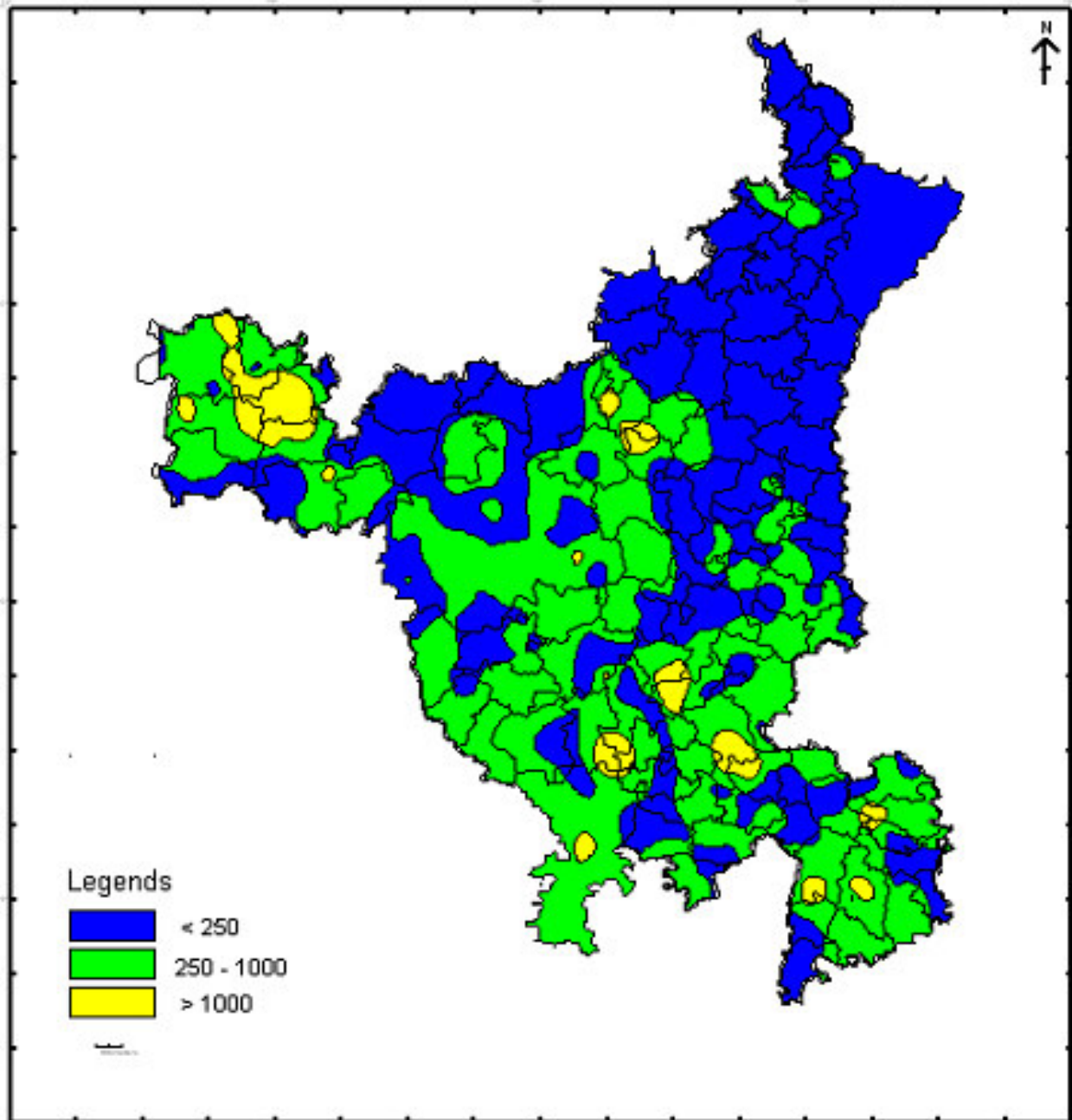


Table 2. District wise distribution of well waters of Haryana State in different classes of drinking water suitability

S.	District	No. of Samples	EC in 25°C in µS/cm			Cl in mg/l			F in mg/l			NO ₃ in mg/l		
			<750	750-3000	>3000	<250	250-1000	>1000	<1.0	1.0-1.5	>1.5	<45	45-100	>100
1	Ambala	13	3	9	1	9	4	0	10	3	0	10	3	0
2	Bhiwani/Charki Dadri	32	4	15	12	13	15	3	16	6	9	13	8	10
3	Faridabad	7	0	3	4	2	3	2	7	0	0	7	0	0
4	Fatehabad	10	1	7	2	7	3	0	7	2	1	7	1	2
5	Gurgaon	22	1	13	7	11	7	3	14	4	3	13	8	0
6	Hissar	35	7	19	9	18	16	1	17	3	15	28	4	3
7	Jhajjar	15	0	8	7	5	8	2	8	1	6	5	6	4
8	Jind	19	4	10	3	12	4	1	14	0	8	17	0	0
9	Kaithal	23	2	14	6	15	5	2	19	3	0	19	2	1
10	Karnal	30	17	11	1	28	1	0	25	1	3	28	0	1
11	Kurukshetra	21	16	4	0	20	0	0	19	1	0	20	0	0
12	Mahendergarh	9	0	5	2	2	4	1	3	1	3	4	1	2
13	Mewat	11	2	2	6	3	4	3	8	0	2	5	5	0
13	Palwal	21	0	15	5	13	6	1	8	3	9	17	1	2
14	Panchkula	24	17	7	0	24	0	0	23	0	1	19	2	2
15	Panipat	21	5	14	2	18	2	0	12	5	4	20	1	0
16	Rewari	11	2	7	1	5	5	0	7	2	1	6	4	0
17	Rohtak	11	2	6	3	6	5	0	8	1	2	7	2	2
18	Sirsa	34	0	15	18	16	9	8	5	5	23	20	6	7
19	Sonepat	34	5	24	5	19	15	0	25	5	4	34	0	0

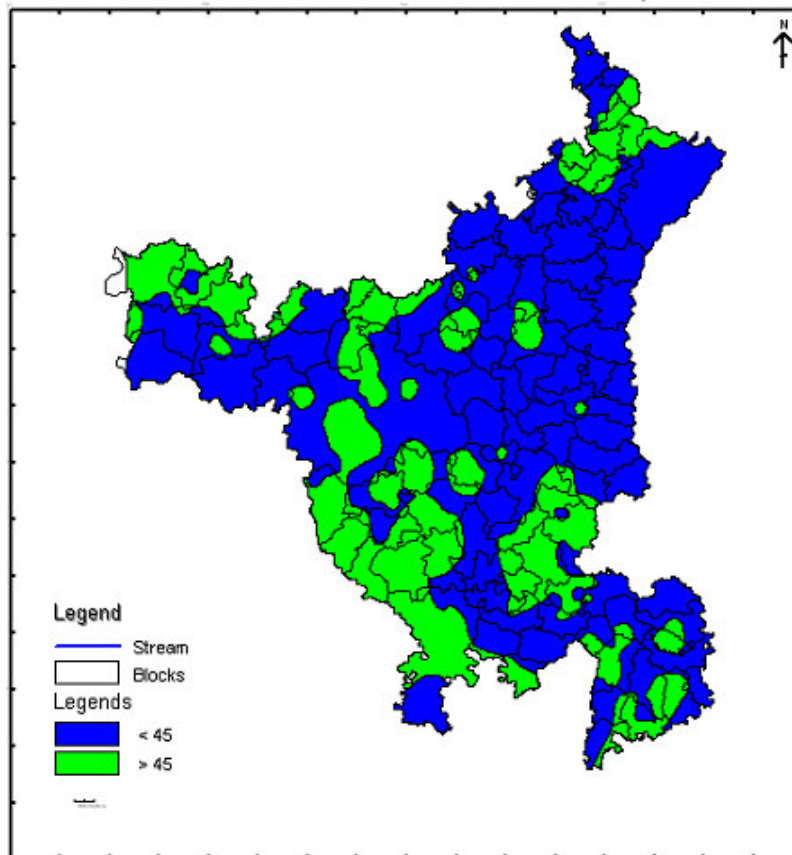
20	Yamunanagar	18	12	6	0	18	0	0	18	0	0	17	1	0
		421	98	212	88	264	117	27	273	46	89	316	55	36

Distribution of Nitrate

Presence of nitrate above 5.0 mg/l in ground water reflects contamination at some stage of its percolation and circulation. The probable major sources of nitrate content in ground water are excessive application of fertilizers, bacterial nitrification of organic nitrogen, seepage from animal and human wastes and atmospheric inputs. In the State, nitrate varies from nil to 685mg/l. Exceptionally high concentration of are encountered at Lohari(1018mg/l) district Bhiwanil, Nahla(1104 mg/l), district Fatehabad, Toshami(1270 mg/l), district Bhiwani. Spatial distribution of nitrate indicates that nitrate is less than 45 mg/l in majority of the areas (Plate). Out of the samples analyzed, 77% of the samples have nitrate within BIS limit of 45 mg/l for drinking waters (Table) and 23% have nitrate more than 45 mg/l. Concentration more than permissible limit samples are mostly from districts of Ambala, Bhiwani, Fatehabad,Gurgaon, Hissar, Jhajjar, Jind, Mahendragarh, Mewat,Palwal, Panipat, Rewari, Rohtak, and Sirsa districts.

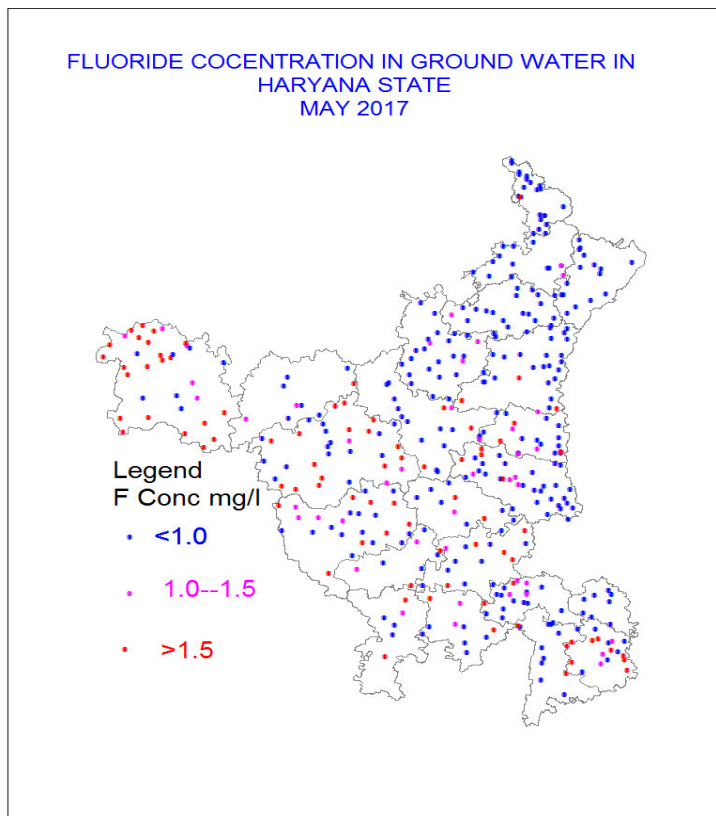
Plate

DISTRIBUTION OF NITRATE IN HARYANA(2017 - 2018)



Distribution of Fluoride

Fluoride, in small amounts in drinking water, is beneficial in reducing dental decay but when present in large amounts, has deleterious effects ranging from staining of tooth enamel to skeletal fluorosis. The fluoride contents in ground water of the State ranges from BDL to 11.61 mg/l at Kheritalwana in Mahendragarh district. Spatial distribution of fluoride indicates that fluoride is less than 1.5 mg/l in 67% samples. It is between 1.0 and 1.5 mg/l in 11% samples and is above 1.5 mg/l in the remaining 22% samples (Table). Ground waters with fluoride above 1.5 mg/l are found mostly in parts of Bhiwani, Fatehabd, Gurgaon, Hissar, Jhajjar, Jind, Karnal, Mahendergarh, Mewat, Palwal, Panipat, Rohtak, Sirsa and Sonapat districts (Plate) and are not suitable for drinking purpose. At many places, fluoride above 1.5 mg/l is observed in areas where agricultural activities are dominant. The likely causes for high fluoride in ground water are (i) leaching from phosphatic fertilizers where it is present as an impurity and (ii) depletion of calcium either due to precipitation or exchange phenomenon.



Types of waters

Considering the predominance of the cation and anion in the chemical composition of ground water, its type is determined and its relation with its occurrence in an area as well as with its salinity is studied. It is found that no discernible relationship between type of water and its occurrence in any particular area could be established. Nearly all types of waters are available in each district of the State. However, study of relation of water type with salinity of the water clearly indicates that nearly 24% ground waters of the State are fresh, have low salinity and predominance of calcium or magnesium or calcium + magnesium cations and bicarbonate as anion. Ground waters having intermediate salinity are mostly mixed cation type - HCO_3 type. At some places HCO_3 -type of waters with sodium as dominant cation are also encountered in low to moderately saline ground waters. This can be attributed either to precipitation of CaCO_3 due to loss of CO_2 or dissolution of Na-salts from the topsoil layers or to ion exchange reaction during the downward percolation of water. At some isolated locations sulphate is found to be dominant anion. In ground waters, where salinity is high; mostly Na is the dominant cation and Cl or Cl + $\text{SO}_4 + \text{NO}_3$ (Mixed anion) are dominant. permanent hardness is observed at few locations in

Hissar, Jhajjar and Bhiwani district depicted by dominance of Ca-Cl. Nevertheless, a few exceptions have also been found in these simple and well-defined types of ground waters.

Suitability for drinking

Salinity, nitrate, sulphate, fluoride, hardness and alkalinity are the parameters normally considered for evaluating the suitability of drinking water. BIS have assigned desirable and permissible concentration limits for these constituents. Based on BIS recommendations, ground water occurring in the northern and north-eastern areas of the State is suitable for drinking. However, ground water at several places in the southern and western parts of the State is not suitable for drinking either due to one or more constituent exceeding the maximum permissible limits. Waters falling under different classes of suitability for drinking uses are shown in Table and district-wise distribution of potable waters based upon EC, Cl, NO₃ & F contents are shown as bar diagram in Fig 1.

On perusal of Bar diagram, it is observed that ground water occurring in the districts of Ambala, Jhajjar, Kaithal, Karnal, Panchkula, Panipat, Sonapat and Yamunanagar are mostly suitable for drinking as more than 80% water samples are having all the above quality parameters within the permissible limits. In the districts of Bhiwani, Fatehabad, Hissar, Gurgaon, Kurukshetra Jind, Mahendergarh, Mewat and Palwal 50-80% water samples are having potable quality as per BIS 2012 standards. Ground water is mostly unsuitable for drinking due to one or more of these constituents exceeding the maximum permissible limits Faridabad, and Sirsa as these districts have less than 50% ground waters having chemical parameters within the permissible limits with respect to the based upon EC, Cl, NO₃ & F contents are shown as percentage classification chart.

Fig.1. District wise Distribution of Potable Waters in Haryana-2017

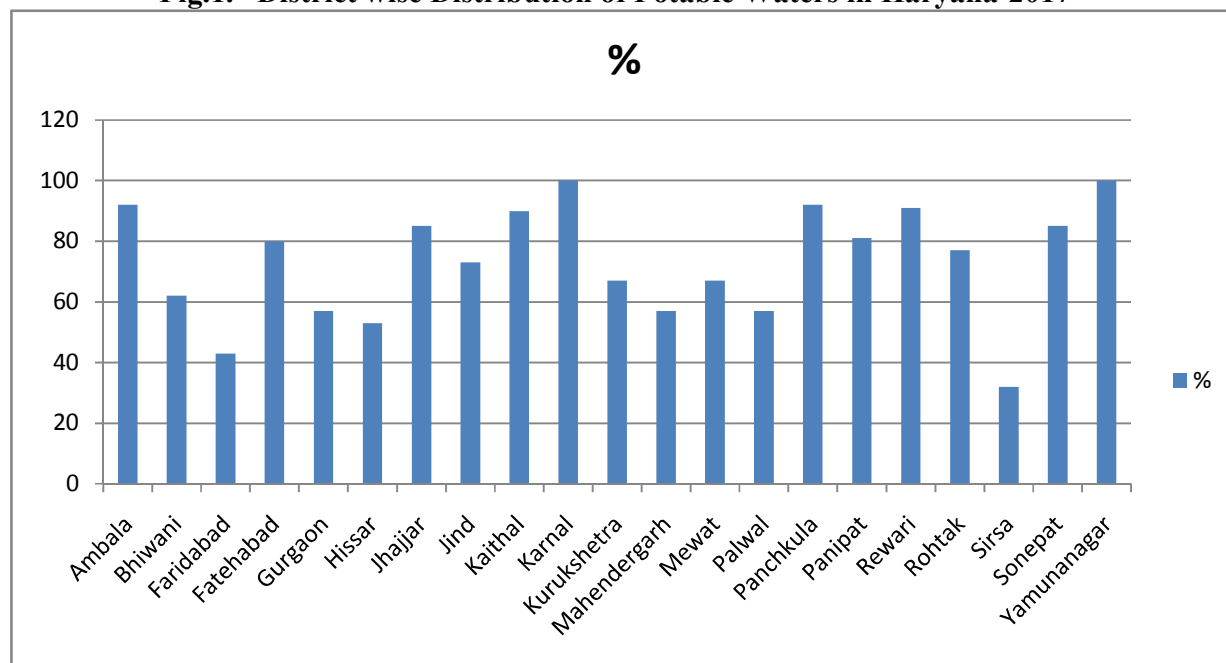


Table.3. Percentage wise classification chart for Portable water in Haryana state

Sr.No.	% wise classification	Name of the districts	Remarks
1.	>80	Ambala, Jhajjar, Kaithal, Karnal, Panchkula, Panipat, Sonapat and Yamuna Nagar	It has been classified on the basis of Salinity (EC, Cl, NO ₃ & F)
2.	50-80	Bhiwani, Fatehgarh, Gurgaon, Hissar, Jind, Kurukshetra, Mahendergarh, Mewat and Palwal	
3.	<50	Faridabad and Sirsa	

Suitability for irrigation

The suitability of ground water for irrigation is assessed based on EC, SAR and RSC values of waters. The diagram, suggested by USSL staff by taking EC and SAR into consideration is widely used for determining the irrigational classes of water. Salinity in terms of EC varies widely from 242 μS/cm at Kurlan in district Karnal and a maximum value of 25540 μS/cm at 25°C at Phagu in district Sirsa while SAR values range from 0.20 (Dhansu, district Hissar) to

40.23 (Bahu, district Rewari). Based on EC and SAR values, plot of USSL diagram indicates that most of the samples (74%) fall under C_2S_1 , C_2S_2 , C_3S_1 , C_3S_2 , C_4S_1 , and C_4S_2 classes of irrigation water. Continuous use of such waters may lead to low to very high salinity hazards, while they may not cause sodium hazards because of low SAR. The remaining 26% of water samples having C_3S_3 , C_3S_4 , C_4S_3 , C_4S_4 , and classes may lead to salinity as well as sodium hazards when used for irrigation under normal practices. However, these waters can be used for irrigation along with an appropriate quantity of gypsum.

The ground waters in the districts of Ambala, Fatehabad, Hissar, Jhajjar, Kaithal, Karnal, Kurukshetra, Panchkula, Panipat, Rohtak and Yamunanagar are mostly of C_1 , C_2 , C_3 salinity and S_1 - S_2 sodicity classes. Such waters can be used for irrigation on soils with good permeability for growing salt tolerant or semi salt tolerant crops. Addition of small quantity of gypsum may improve the permeability of the soil and avoid the sodium hazards. Ground waters from southern and western part of Haryana comprising of districts of Bhiwani, Faridabad, Gurgaon, Jind, Mahendergarh, Rewari, Sirsa, and Sonapat fall under C_4S_1 , C_4S_2 , C_3S_3 , C_3S_3 , C_4S_2 , C_4S_3 and C_4S_4 classes. Use of such waters for irrigation under normal conditions may lead to both high to very high salinity as well as sodium hazards.

Alkali hazards of irrigation ground waters are estimated through the computation of Residual sodium carbonate (RSC) also known as Eaton's Index. The values of RSC of ground waters are found to vary from below zero to 19.10 meq/l (Bahu, district Rewari). A negative value indicates little risk of sodium accumulation due to offsetting levels of calcium and magnesium.

A positive value indicate that the bicarbonate and carbonate will rescue free calcium and magnesium in the soil, thereby creating room for sodium to accumulate. Based on Eaton's index, it is found that 69% of the waters are rated fit, 6.7% marginal and the remaining 24.3% unfit for irrigational uses. The distribution of ground waters in various Eaton's index and irrigation rating based on USSL classification is given in table 4.

Table 4. District wise Irrigation Rating of Well Waters of Haryana.

S.N.	District	EATON's INDEX			USSL Classification
		(RSC in meq/l)			
		Safe	Marginal	Unsafe	
		<1.25	1.25-2.5	>2.5	
1	Ambala	7	1	5	C ₂ S ₁ , C ₃ S ₁ , C ₃ S ₂ , C ₄ S ₂ ,
2	Bhiwani	25	1	6	C ₂ S ₁ , C ₃ S ₁ , C ₃ S ₂ , C ₃ S ₃ , C ₄ S ₁ , C ₄ S ₂ , C ₄ S ₄
3	Faridabad	5	1	1	C ₃ S ₁ , C ₄ S ₁ , C ₄ S ₂ ,
4	Fatehabad	7	0	3	C ₂ S ₁ , C ₃ S ₁ ,
5	Gurgaon	13	2	6	C ₃ S ₁ , C ₄ S ₂ , C ₄ S ₃ ,
6	Hissar	31	0	4	C ₂ S ₁ , C ₃ S ₁ , C ₃ S ₂ , C ₄ S ₁ , C ₄ S ₂ , C ₃ S ₃
7	Jhajjar	12	0	3	C ₃ S ₁ , C ₃ S ₂ , , C ₄ S ₁ , C ₄ S ₂
8	Jind	11	2	4	C ₂ S ₁ , C ₃ S ₁ , C ₄ S ₁ , C ₄ S ₂ ,
9	Kaithal	14	2	6	C ₂ S ₁ , C ₃ S ₁ , C ₃ S ₂ , C ₄ S ₂ , C ₄ S ₃ , C ₄ S ₄
10	Karnal	14	11	4	C ₂ S ₁ , C ₃ S ₁ , , C ₃ S ₂ , C ₄ S ₂ , C ₄ S ₃
11	Kurukshetra	5	7	8	C ₂ S ₁ , C ₃ S ₁ ,
12	Mahendergarh	6	0	1	C ₃ S ₁ , C ₄ S ₁ , C ₄ S ₂
13	Mewat	10	0	0	C ₂ S ₁ , C ₃ S ₁ , C ₄ S ₁ , C ₄ S ₂ , C ₄ S ₄
14	Palwal	12	2	6	C ₃ S ₁ , C ₃ S ₂ , C ₄ S ₁ , C ₄ S ₂ , C ₄ S ₃ ,
15	Panchkula	16	3	5	C ₂ S ₁ , C ₃ S ₁ ,
16	Panipat	14	3	4	C ₂ S ₁ , C ₃ S ₁ , C ₃ S ₂
17	Rewari	9	0	1	C ₁ S ₁ , C ₂ S ₁ , C ₃ S ₁
18	Rohtak	10	1	0	C ₂ S ₁ , C ₃ S ₁ , C ₄ S ₁ , C ₄ S ₃
19	Sirsa	26	3	4	C ₃ S ₁ , C ₃ S ₃ , C ₄ S ₁ , C ₄ S ₂ , C ₄ S ₄
20	Sonepat	28	3	3	C ₁ S ₁ , C ₂ S ₁ , C ₃ S ₁ , C ₄ S ₁
21	Yamunanagar	15	2	1	C ₂ S ₁ , C ₃ S ₁

Suitability for Industries

Industries, in general, use water for variety of works depending upon the nature and size of the industry. As such specifications for suitability of water for industries vary widely depending upon the process in each industry. Therefore, chemical quality of water and its suitability could not be discussed due to diversified nature of industries.

Temporal Variation

The temporal changes in ground water quality are studied by considering important parameters such as salinity (EC), chloride, nitrate and fluoride contents of waters. The percent well waters falling in desirable, permissible and unsuitable classes of BIS-2012 standards during 2017 are compared with percent well waters in same classes during 2012. Table shows increase or decrease of percent well water falling in various suitability classes for drinking purposes.

Table 5 : Periodic Variation in Suitability Classes of Well Waters of Haryana

Parameter	Class	% of Samples						Periodic Variation 2012-17
		2012 (n= 331)	2013 (n=320)	2014 (n=358)	2015 (n=334)	2016 (414)	2017 (409)	
Salinity as EC (in $\mu\text{S}/\text{cm}$ at 25°C)	<750	29	37	25	27	30	24	+6
	750-3000	50	48	55	54	48	52	+2
	>3000	21	15	20	19	22	24	+3
Chloride as Cl (in mg/l)	<250	64	65	62	64	65	65	+1
	250 - 1000	28	29	31	29	28	29	+1
	>1000	8	6	7	7	7	6	-2
Nitrate as NO_3 (in mg/l)	< 45	69	77	72	71	73	77	+8
	> 45	31	23	28	29	27	23	-8
Fluoride as F (in mg/l)	<1.0	62	70	70	72	66	67	+5
	1.0 - 1.50	15	12	9	9	12	11	-4
	>1.50	23	18	21	19	22	22	-1

n=number of samples

It is evident from the table above that there is a not much change in the quality of ground water, based on the parameters considered, from 2012 to 2017. The ground water quality based on salinity and chloride content does not show any discernible change in percent of samples falling above the permissible level. A slight improvement (2%) has been observed in groundwater quality with respect to Chloride (2%) and Nitrate (8%) from 2012 to 2017.

On comparing the percent wells of 2016 and 2017 for portability and considering a change of $\pm 1\%$ as constant, it is observed that, in general, there is increase in salinity and Fluoride content.

There is not much change in chloride concentration while a slight improvement in water quality is observed with respect of nitrate concentration. The cause of deterioration of ground water quality may be anthropogenic as no natural source for fluoride and nitrate is found the state.

Ground Water Quality in respect of Heavy metals:

Abstain of Heavy metals in ground water is also periodically monitored by CGWB and as per studies carried out during 2017, some elements such as Fe, Mn, Zn, Cu, Se, Sn, Mo are essential in trace amounts for growth and development of living organisms as well as plants. Nevertheless, these are hazardous in large amounts. In addition, some metals like Pb, As, Cd, Hg, Cr, Be, Ba, are hazardous even in small amounts. The minimum and maximum Concentration of Heavy Metals has been despite in Table 5:

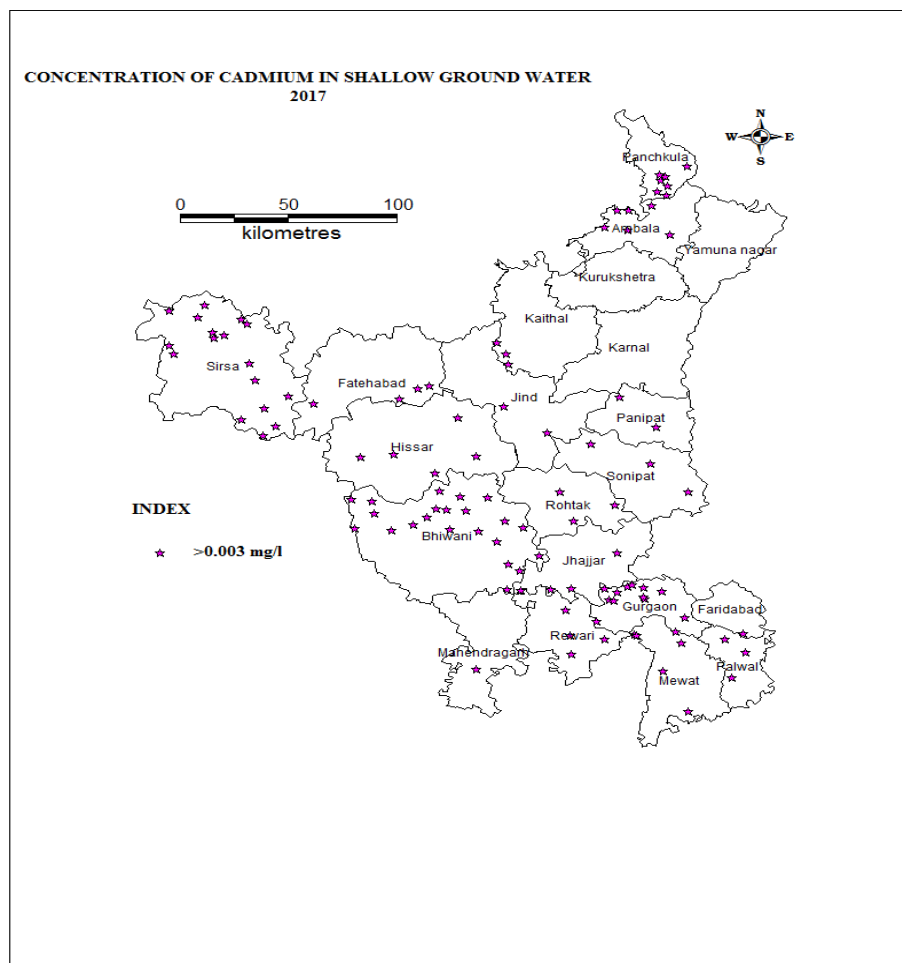
Table-6 : Range of Heavy Metals in Groundwater of Punjab State

S. No	No.of		Cd	Cu	Mn	Pb	Zn
	Sample		mg/l				
Ambala	14	Min	BDL	BDL	0.008	BDL	0.0042
		Max	0.0118	0.028	2.331	0.0434	9.025
Bhiwani	32	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.06	0.041	0.089	0.366	1.456
Faridabad	7	Min	BDL	BDL	0.0104	BDL	0.0064
		Max	BDL	0.0156	0.2294	0.0504	9.96
Fatehabad	10	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0114	0.0764	0.2368	0.047	2.27
Gurgaon	21	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0188	0.0142	0.0632	0.1012	0.728
Hissar	35	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0064	1.233	1.87	0.0644	7.73
Jhajjar	15	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0064	1.233	1.87	0.0644	7.73
Jind	20	Min	BDL	0.003	BDL	BDL	BDL

		Max	0.005	0.181	0.036	0.059	1.054
Kaithal	22	Min	BDL	0.001	BDL	BDL	BDL
		Max	0.005	0.577	0.149	0.223	1.680
Karnal	30	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.002	0.0624	0.2232	0.0924	2.28
Kurukshetra	21	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.2188	0.956	0.0799	2.049	BDL
Mahendergarh	9	Min	0	BDL	BDL	0.006	BDL
		Max	0.02	0.052	0.006	0.041	0.008
Mewat	11	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0194	0.0416	1.641	0.1426	0.1606
Palwal	21	Min	BDL	0.0016	0.004	BDL	BDL
		Max	0.0114	0.0212	0.0966	0.216	1.382
Panchkula	24	Min	BDL	BDL	0.0014	BDL	BDL
		Max	0.0066	3.108	0.156	0.36	4.42
Panipat	21	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0044	0.024	0.061	0.060	0.663
Rewari	11	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.013	0.011	0.0564	0.0926	0.1838
Rohtak	11	Min	BDL	BDL	0.013	BDL	BDL
		Max	0.006	0.044	0.424	0.057	1.4
Sirsa	34	Min	BDL	0.002	BDL	BDL	BDL
		Max	0.0462	1.536	0.3652	0.4812	6.8
Sonepat	34	Min	BDL	0.001	BDL	BDL	BDL
		Max	0.0066	0.031	0.557	0.058	0.898
Yamunanagar	18	Min	BDL	BDL	BDL	BDL	BDL
		Max	0.0712	1.444	0.0378	2.461	0.0712

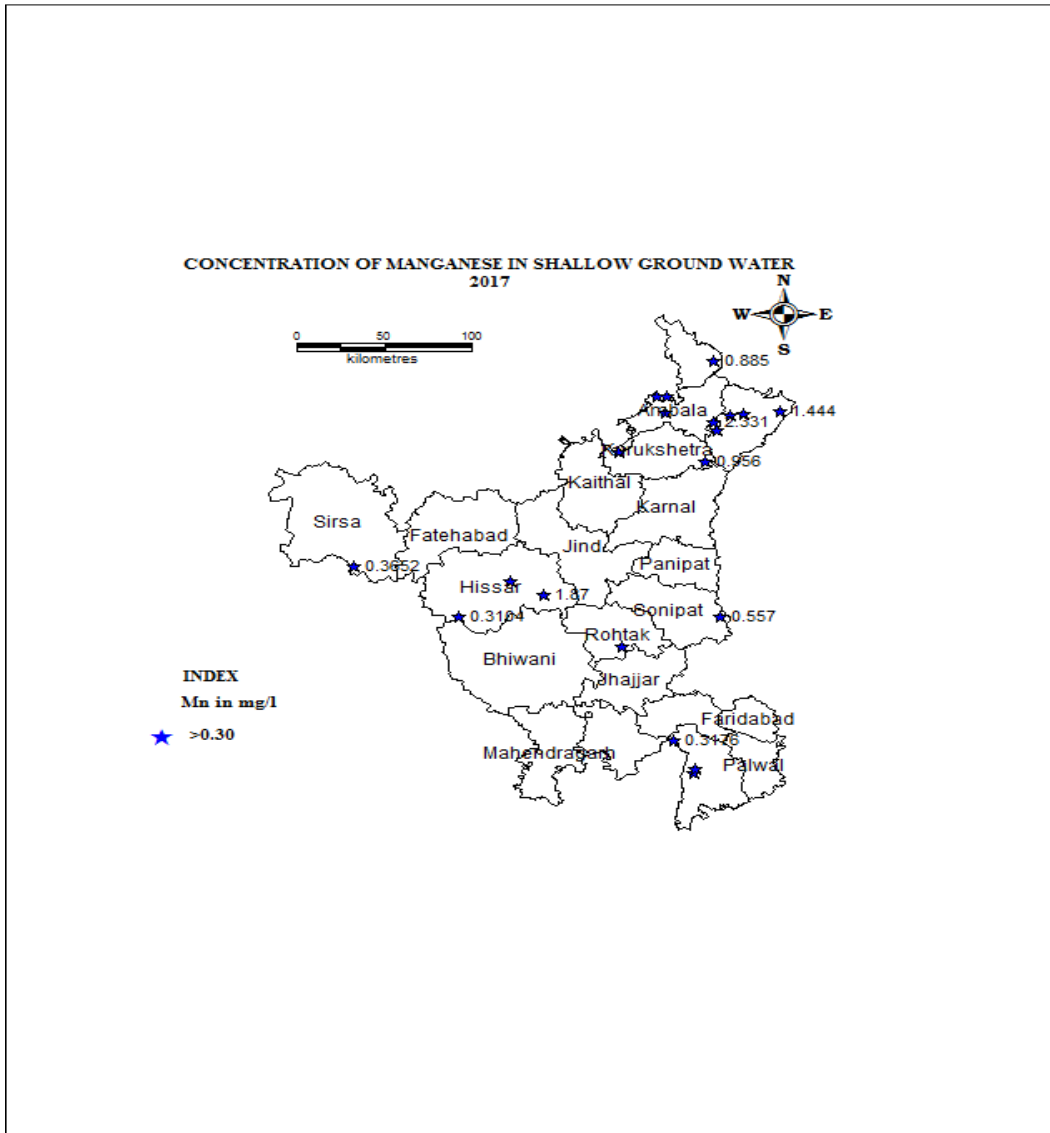
Cadmium:

The concentration of cadmium in shallow ground water in Haryana State 76% Water Samples are within the permissible limit and 24% water samples has been observed above permissible limit as per BIS Limit 0.003mg/l. The highest value has abstain in Sui(0.060mg/l),Bhiwani district and affected districts are namely Bhiwani, Gurgaon, Hissar, Jhajjar,Mewat, Palwal,Panchkula,Rewari,Rohtak and Sirsa. Concentration of Cadmium above permissible limit 0.003mg/l Shown in Fig.

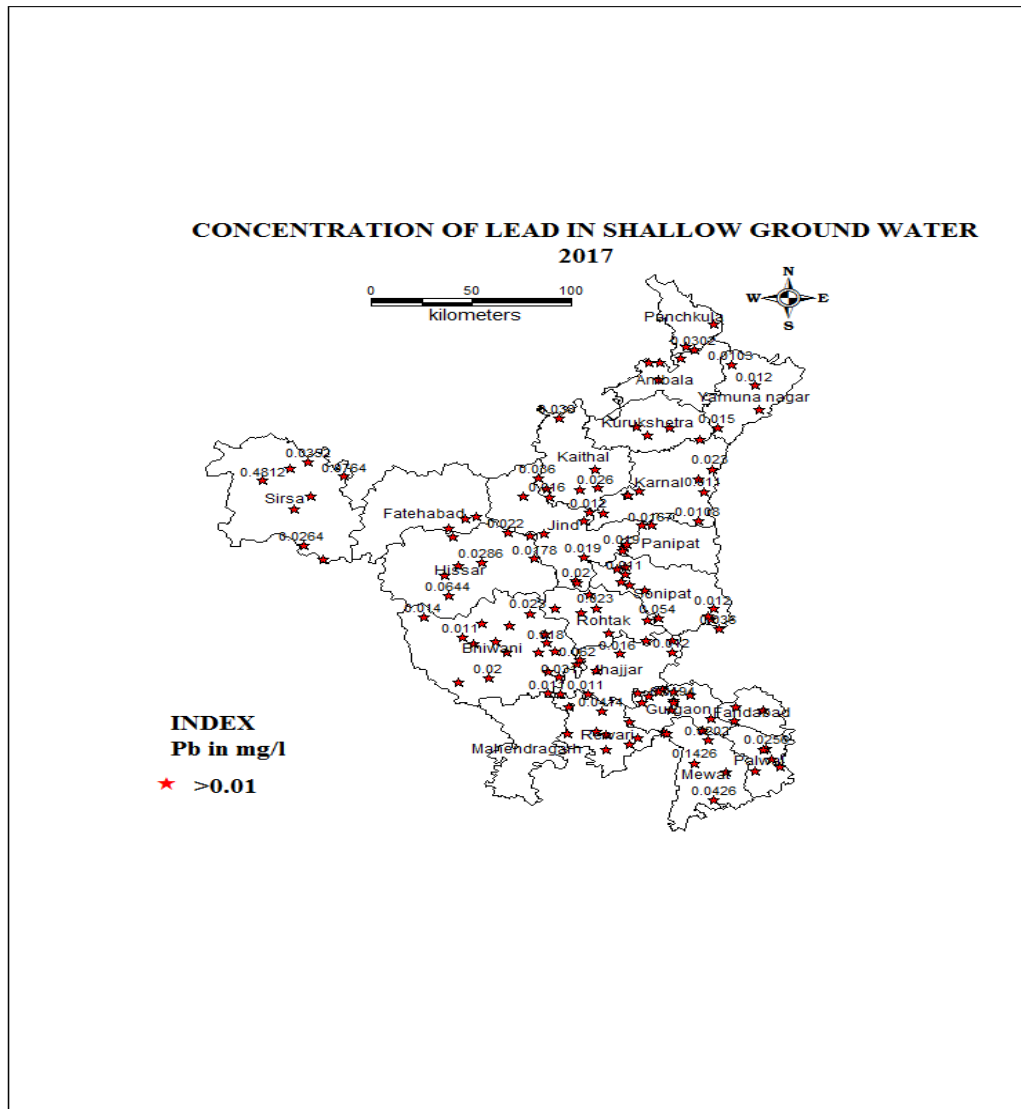


Copper: Copper concentration is generally below 1.5mg/l as BIS limits in groundwater of the State. Two GWMWs are found values more than the permissible limit e.g Golpura,Raipur Rani(3.108mg/l),Panchkula and Rasaliya Khera,Dabwali in Sirsa district of Haryana.

Manganese: Manganese above 0.3mg/l with higher concentration being reported from Ambala, Hissar, Kurukshetra, Mewat,Rohtak,Sonepat and Yamuna Nagar . Sporadic cases of highest manganese value have been reported in Khanahmedpur(2.0331mg/l),Barara,Ambala district. Concentration of Mn above permissible limit 0.003mg/l Sown in Fig.



Lead: Low concentration of Lead (66.5%) has been reported in entire districts of Haryana state but 33.5% samples of shallow aquifers of the districts have Lead above 0.01mg/l. Concentration of lead above permissible limit 0.01mg/l Sown in Fig.



Zinc: Concentration value of zinc have been observed within the permissible limit in entire districts of Haryana State.

Arsenic: Highest concentration of arsenic has been recorded in groundwater in Balana, Ambala (0.0475 mg/l) and Laxmanpura, (0.040) Bhiwani district. Other locations either BDL or less than the permissible limit (0.01 mg/l).

Conclusions & Recommendations

On perusal of above carried study, it can be concluded that in Haryana

1. Chemical quality in shallow ground water occurring in northern and northeastern parts is suitable for drinking as well as for irrigation.
2. Shallow ground water occurring in central parts has intermediate quality and is permitted for drinking use in case there is no alternative source. However, it is suitable for irrigation on well-drained soil for salt tolerant crops such as wheat, maize, barley etc.
3. Quality of shallow ground water occurring in southern and western parts is not suitable for drinking as well as for customary irrigation. The reason for unsuitability for drinking uses is high concentrations of either salinity or nitrate or fluoride. The reason for rejection for irrigation uses is high salinity coupled with high SAR and RSC more than 2.5 meq/l. However, these waters can be used for irrigation in conjunction with surface water.
4. Heavy metals contents are analysed for Cd, Cu, Mn ,Pb ,Zn and As. The concentration of Cadmium, Manganese and Lead in shallow ground waters are 76%, 95.2% and 66.5% water samples in Haryana State are observed within the permissible limit. Arsenics are found more than the permissible limit in the two locations only e.g. Balana, Ambala (0.0475 mg/l) and Laxmanpura, (0.040) Bhiwani districts.