

भारत सरकार  
जल संसाधन, नदी विकास एवं गंगा संरक्षण  
मंत्रालय  
केंद्रीय भूमि जल बोर्ड



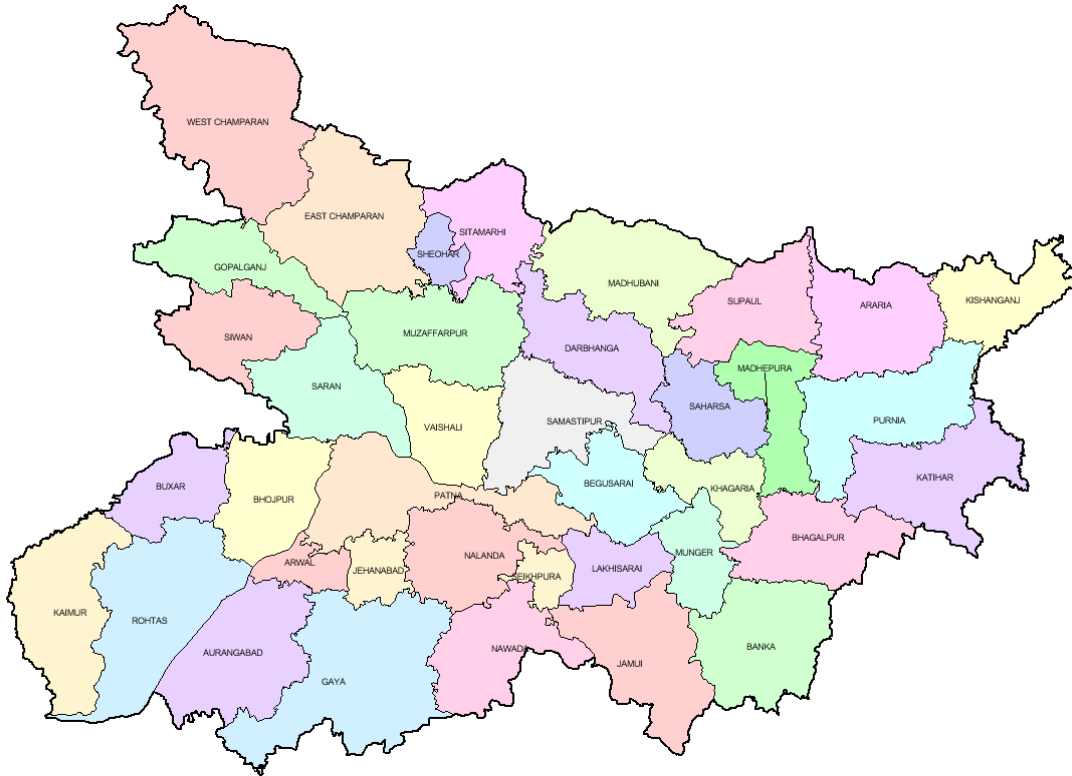
GOVT. OF INDIA  
MINISTRY OF WATER RESOURCES, RD & GR  
CENTRAL GROUND WATER BOARD

## वार्षिक भूजल पुस्तिका, बिहार

(2014-2015)

GROUND WATER YEAR BOOK, BIHAR

(2014 - 2015)



मध्य पूर्वी क्षेत्र, पटना  
दिसंबर 2015

MID-EASTERN REGION, PATNA  
December 2015

भारत सरकार  
GOVERNMENT OF INDIA  
जल संसाधन, नदी विकास एवं गंगा संरक्षण मंत्रालय  
MINISTRY OF WATER RESOURCES RD & GR  
केंद्रीय भूमि जल बोर्ड  
CENTRAL GROUND WATER BOARD

**वार्षिक भूजल पुस्तिका, बिहार  
(2014-2015)**

**GROUND WATER YEAR BOOK, BIHAR  
(2014 - 2015)**

**मध्य पूर्वी क्षेत्र, पटना  
MID-EASTERN REGION, PATNA**

**दिसंबर 2015  
December 2015**

# GROUND WATER YEAR BOOK, BIHAR (2014 - 2015)

## CONTENTS

CONTENTS	Page No.
List of Tables	i
List of Figures	ii
List of Annexures	ii
List of Contributors	iii
Abstract	iv
1. INTRODUCTION.....	1
2. HYDROGEOLOGY.....	1
3. GROUND WATER SCENARIO.....	1
<b>3.1 DEPTH TO WATER LEVEL.....</b>	<b>8</b>
3.1.1 MAY 2014.....	8
3.1.2 AUGUST 2014.....	10
3.1.3 NOVEMBER 2014.....	12
3.1.4 JANUARY 2015.....	14
<b>3.2 SEASONAL FLUCTUATION.....</b>	<b>16</b>
3.2.1 MAY 2014 TO AUGUST 2014.....	16
3.2.2 MAY 2014 TO NOVEMBER 2014.....	18
3.2.3 MAY 2014 TO JANUARY 2015.....	20
<b>3.3 ANNUAL FLUCTUATION.....</b>	<b>22</b>
3.3.1 MAY 2013 TO MAY 2014.....	22
3.3.2 AUGUST 2013 TO AUGUST 2014.....	24
3.3.3 NOVEMBER 2013 TO NOVEMBER 2014.....	26
3.3.4 JANUARY 2014 TO JANUARY 2015.....	38
<b>3.4 DECADAL FLUCTUATION.....</b>	<b>30</b>
3.4.1 DECADAL MEAN OF MAY TO MAY 2014.....	30
3.4.2 DECADAL MEAN OF AUGUST TO AUGUST 2014.....	32
3.4.3 DECADAL MEAN OF NOVEMBER TO NOVEMBER 2014.....	34
3.4.4 DECADAL MEAN OF JANUARY TO JANUARY 2015.....	36
<b>4. HYDROCHEMISTRY.....</b>	<b>38</b>
<b>5. RAINFALL DATA ANALYSIS.....</b>	<b>38</b>
<b>6.0 TREND ANALYSIS DURING PRE AND POST MONSOON.....</b>	<b>38</b>

## LIST OF TABLES

S. No.	Title
1.	Generalised geological succession of Bihar
2.	District-wise distribution of HNS as on 31-3-2014.
3.	HNS Monitoring schedule
4.	Number of HNS monitored during different periods in Bihar
5.	Districtwise well frequency for different ranges of depth to water level of HNS in May 2014
6.	Districtwise well frequency for different ranges of depth to water level of HNS in August 2014
7.	Districtwise well frequency for different ranges of depth to water level of HNS in November 2014
8.	Districtwise well frequency for different ranges of depth to water level of HNS in January 2015
9.	Districtwise categorisation of fluctuation and their frequency distribution of water levels of HNS of August 2014 w.r.t. May 2014
10.	Districtwise categorisation of fluctuation and their frequency distribution of water levels of HNS of November 2014 w.r.t. May 2014
11.	Districtwise categorisation of fluctuation and their frequency distribution of water levels of HNS of January 2015 w.r.t. May 2014
12.	Districtwise categorisation of fluctuation in water levels of HNS and their frequency Distribution between May'13 and May'14
13.	District wise categorisation of fluctuation in water levels of HNS and their frequency distribution between August '13 and August'14
14.	Districtwise categorisation of fluctuation in water levels of HNS and their frequency distribution between November'13 and November'14
15.	Districtwise categorisation of fluctuation in water levels of HNS and their frequency distribution between January'14 and January'15
16.	Districtwise categorisation of water level of May 2014 w.r.t. decadal mean May water level and frequency distribution of HNS
17.	Districtwise categorisation of water level of August 2014 w.r.t. decadal mean August water level and frequency distribution of HNS
18.	Districtwise categorisation of water level of November 2014 w.r.t. decadal mean November water level and frequency distribution of HNS
19.	Districtwise categorisation of water level of January 2015 w.r.t. decadal mean January water level and frequency distribution of HNS
20.	Salient features of chemical parameters of phreatic ground water samples of HNS in Bihar State collected during Pre-monsoon 2014.

## LIST OF FIGURES

Sl. No	Title
1.	Administrative map of Bihar State.
2.	Hydrogeology.
3.	Location of hydrograph network stations in Bihar State.
4.	Depth to Water level May 2014.
5.	Depth to Water level August 2014.
6.	Depth to Water level November 2014.
7.	Depth to Water level January 2015.
8.	Fluctuation in ground water level between May 2014 and August 2014.
9.	Fluctuation in ground water level between May 2014 and November 2014.
10.	Fluctuation in ground water level between May 2014 and January 2015.
11.	Fluctuation in ground water level between May 2013 and May 2014.
12.	Fluctuation in ground water level between August 2013 and August 2014.
13.	Fluctuation in ground water level between November 2013 and November 2014.
14.	Fluctuation in ground water level between January 2014 and January 2015.
15.	Fluctuation water level between May (mean) and May 2014.
16.	Fluctuation in water level between August (mean) and August 2014.
17.	Fluctuation in water level between November (mean) and November 2014.
18.	Fluctuation in ground water level between January (mean) and January 2015.

## ANNEXURE

- I Depth to water levels (m bgl) in the months of May '14, August '14, November '14, and January '15 in Bihar State.
- II Major chemical parameters of ground water samples of HNS collected during pre-monsoon 2014 in Bihar State.
- III District wise percentage of well showing Rise, Fall or No significant trend during Pre-monsoon and Post-monsoon Season of 2014

# **GROUNDWATER YEAR BOOK, BIHAR (2014 –2015)**

## **LIST OF CONTRIBUTORS**

### **DATA COLLECTION**

D. G. Dastidar, Sc - C  
R. R. Shukla, Sc - C  
S.N.Dwivedi, Sc-C  
P. K. Das, Sc – C  
K.A.Nambi, Sc-C  
S.S.Purty, Sc – B  
S.K. Adhikari, Sc – B  
Rakesh Singh, Sc – B  
A. N. Chowdhury, Asst. Chemist  
Suresh Kumar, Asst. Chemist  
P. K. Singh, Chief Draftsman  
A.C. Saurabh, Sr. Surveyor

### **HYDROGEOCHEMISTRY**

Atalanta Narayan Chowdhury, Asst. Chemist  
Suresh Kumar, Asst. Chemist  
Supriya Singh, STA (Chem.)

### **MAP PREPARATION**

S. S. Purty  
Scientist – ‘B’

### **ISSUANCE**

**Report Processing Cell**  
CGWB, MER, Patna

# **GROUND WATER YEAR BOOK, BIHAR (2014-2015)**

## **ABSTRACT**

Monitoring of ground water levels from 507 Hydrograph Network Stations (HNS) were carried out in the year 2014-2015 with an objective to assess ground water regime of phreatic aquifer. The water level monitoring was carried out in the months of May'14, August'14, November'14, and January'15. The ground water samples from the HNS were collected in the month of May'14 for chemical analysis. The water level in the HNS represented phreatic aquifer.

The observed water level data had been grouped into four categories viz. 0-2 m, 2-5 m, 5-10 m and >10 m. Thematic maps depicting ground water levels measured in different periods had been prepared. The water levels had been further analysed for study of its' change with respect to measurement of pre-monsoon period of the same year, previous year water level data of the same period, and decadal mean water level data of the same period. The fluctuation had been grouped under rise and fall categories. In each category there are three groups viz. 0-2 m, 2-4 m and >4 m. Thematic maps had been prepared for each category of fluctuation.

During pre-monsoon 2014 the ground water levels were found to vary between 0.44 and 15.80 m bgl. The depth to water level rests in range of 2 – 5 m bgl in 53% of HNS, which spatially covers northern part of North Bihar Plains (NBP) and small patches in the South Bihar Plains (SBP). During post-monsoon, water level rested in the range of 2 – 5 m bgl in 61% of the HNS. The fluctuation of water level between pre and post-monsoon 2014 indicated rise in water level in 50% of the HNS. Annual change of water level of May 2014 with respect to May 2013 indicated rise in water level in 57 % of the HNS, and during November 2014 with respect to November 2013 indicated rise in 40 % of the HNS. The change in water level of May 2014 with respect to the decadal mean of May (May 2004 to May 2013) indicated fall in 54 % of the HNS and during November 2014 with respect to the decadal mean of November (November 2004 to November 2013) indicated rise in 50% of the HNS.

# GROUND WATER YEAR BOOK, BIHAR (2014-2015)

## 1. INTRODUCTION

Bihar state lies between 83° 20' and 88° 00' E Longitudes and 24° 15' and 27° 23' N Latitudes. It shares international border with Nepal in the north and is bounded in the east, west and south by West Bengal, Uttar Pradesh and Jharkhand states respectively. The state covers geographical area of 94,163 Sq.km and has its capital at Patna (*Fig 1*).

Administratively the state is divided into 38 districts and 534 community development blocks. The population of the state is 10.41 crores (2011 census). Population density is 881 persons/Sq.km. The urban population is 11,758,016 and rural population is 92,341,436. There are 150 small and large towns in the state. The distribution of urban population is highly skewed as only three towns namely Gaya, Bhagalpur, and Muzaffarpur are having population of more than 3 lakhs, besides urban population of Patna urban agglomeration which is having 1,683,200.

## 2. HYDROGEOLOGY

The generalized stratigraphic succession of the state is presented in Table 1. The hydrogeological map of Bihar is depicted in *Fig 2*.

*Table 1. Generalized geological succession of Bihar.*

<i>Age</i>	<i>Formation</i>	<i>Broad Lithology</i>
Quaternary	Alluvial Deposits	Sand, clay, silt and occasional gravel
Tertiary	Siwaliks	Sandstone, conglomerate, clay stone, gravel
L-Cambrian	Vindhyan Super Group	Sandstone, limestone.
Proterozoic	Chotanagpur Granite Gneiss	Granite, granitic-gneiss, schist, phyllites, dolomites, basic rocks, amphibolites.
Archean	Bihar Mica belt	Gneiss, Pegmatites etc.,





*Fig. 1 Administrative Map of Bihar state*

### **Pre-cambrians**

The rocks belonging to Proterozoic and Archean age are granite, granitic-gneiss, quartzite, phyllites, slates, and metabasics. Rocks of Chhotanagpur Granite Gneissic Complex (CGGC) suit occur in the form of small strip in the districts bordering Jharkhand state. Meta-basic rocks intrude the Chhotanagpur Granite Gneiss Complex suit of rocks. Mica bearing pegmatite of Bihar Mica Belt has been found in Gaya, Nawada and Munger districts. In parts of Munger, Gaya and Nawada districts the meta-sedimentary rocks (viz. phyllite, schist and quartzite) of Pre-cambrian age are also found.

The occurrence and movement of ground water is controlled by the thickness and nature of weathered mantle and saprolite zone (a transition zone between weathered residuum and fresh basement), besides fractures lying underneath the weathered residuum. Thickness of the weathered zone usually ranges from 5 to 20 m. Thickness of weathered zone is more in schist and other meta-sedimentary rocks in comparison to the granite-gneiss. The weathered product of granite and granite-gneiss is marked by presence of coarse granular materials composed of quartz and feldspar, whereas those of schist and phyllite by clayey materials.

Ground water occurs under unconfined condition within the weathered mantle and saprolite zone. In the secondary porosities imparted by joints, cracks and fractures, ground water occurs under confined to semi-confined conditions.

## **Vindhyan**

Rocks of Vindhyan Super-group are confined in the west and north of the river Sone and forms eastern end of the Kaimur Plateau. It occurs in the parts of Rohtas, Kaimur and Aurangabad districts. The width of the Vindhyan rocks becomes less than 3 km near Sasaram in Rohtas district. Rocks found under this super-group are mainly sandstone, limestone, quartzite and schist. These rocks behave as consolidated formation and have remained unaffected by any large-scale tectonic disturbances, except faulting at a few places in the geological past. Vindhyan sandstones are compact and have low primary porosity. Ground water in this occurs within the weathered residuum and in the secondary porosity below them. Ground water occurs under unconfined condition in the weathered mantle. The thickness of the weathered residuum varies from 5 to 10 m.

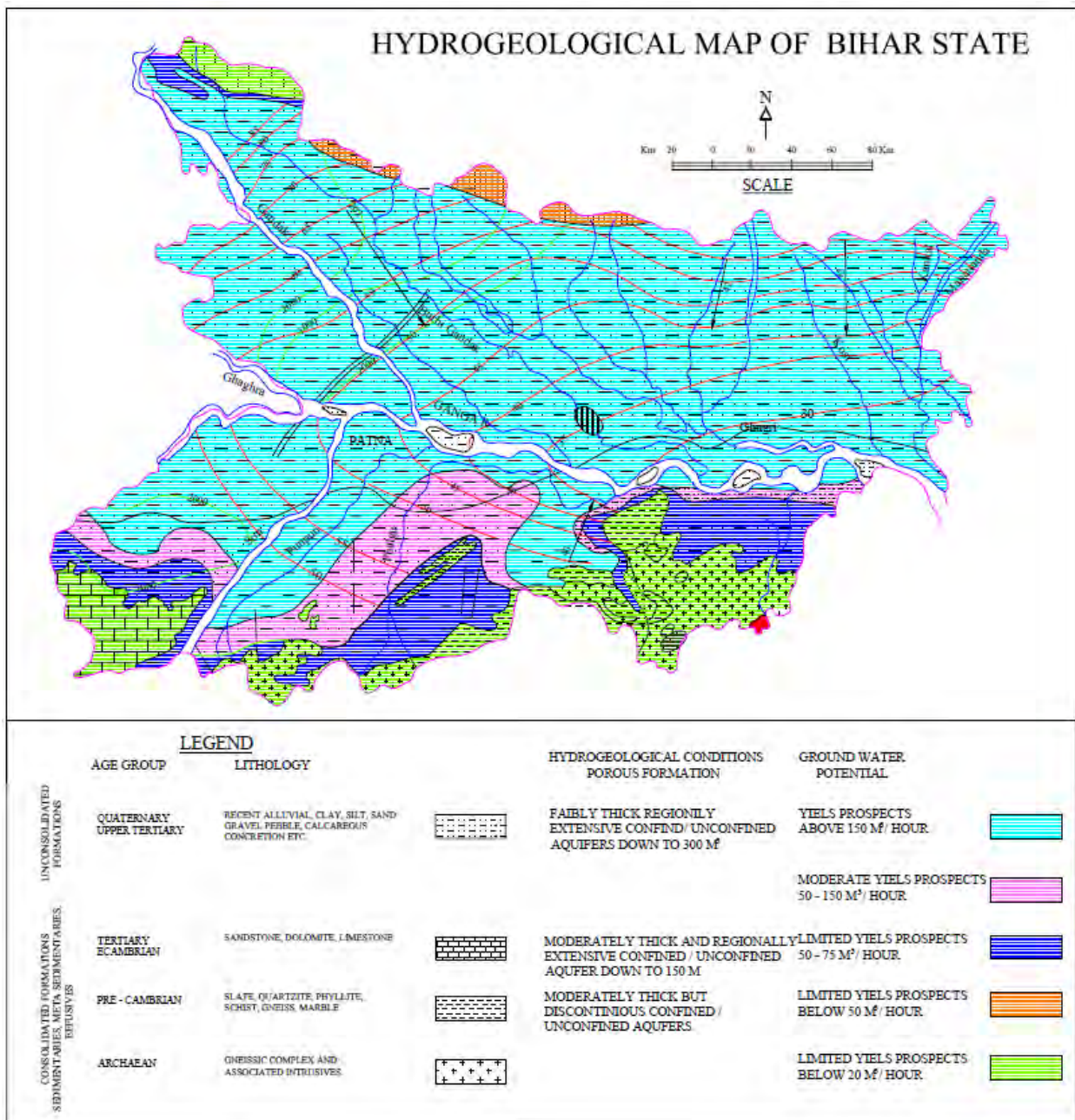
## **Siwaliks**

The Siwaliks of Upper Tertiary age occur as small patches in northwestern corner of the state in West Champaran district bordering Nepal. It consists of sandstone, conglomerate, red clay and spongy limestone and forms structural hills with a number of faults crisscrossing them. Ground water occurs under confined conditions in sandstones disposed at depth.

## **Quaternary alluvium**

Quaternary sediments of Recent to Sub-Recent age cover about 89 percent of the geographical area of the state. They occupy entire north Bihar plain, and a vast stretch of land between south of the river Ganga and the Chhotanagpur Plateau. Deep exploratory drilling by Central Ground Water Board has confirmed thickness of sedimentary deposits in north Bihar plain as more than three hundred meter. In the south of the river Ganga, the alluvial thickness gradually decreases to as low as 50 m or even less, towards the area bordering the Jharkhand state. The sedimentary deposit consists of alternate sequences of sand and clay layers representing multi-cyclic nature of sedimentation. The Quaternary alluvial deposit spread over south and north of the river Ganga is a part of Mid-Ganga Plain. The Terai belt, which is demarcated by auto-flow wells, occurs as a narrow strip in the bordering areas in Madhubani, Darbhanga, and West

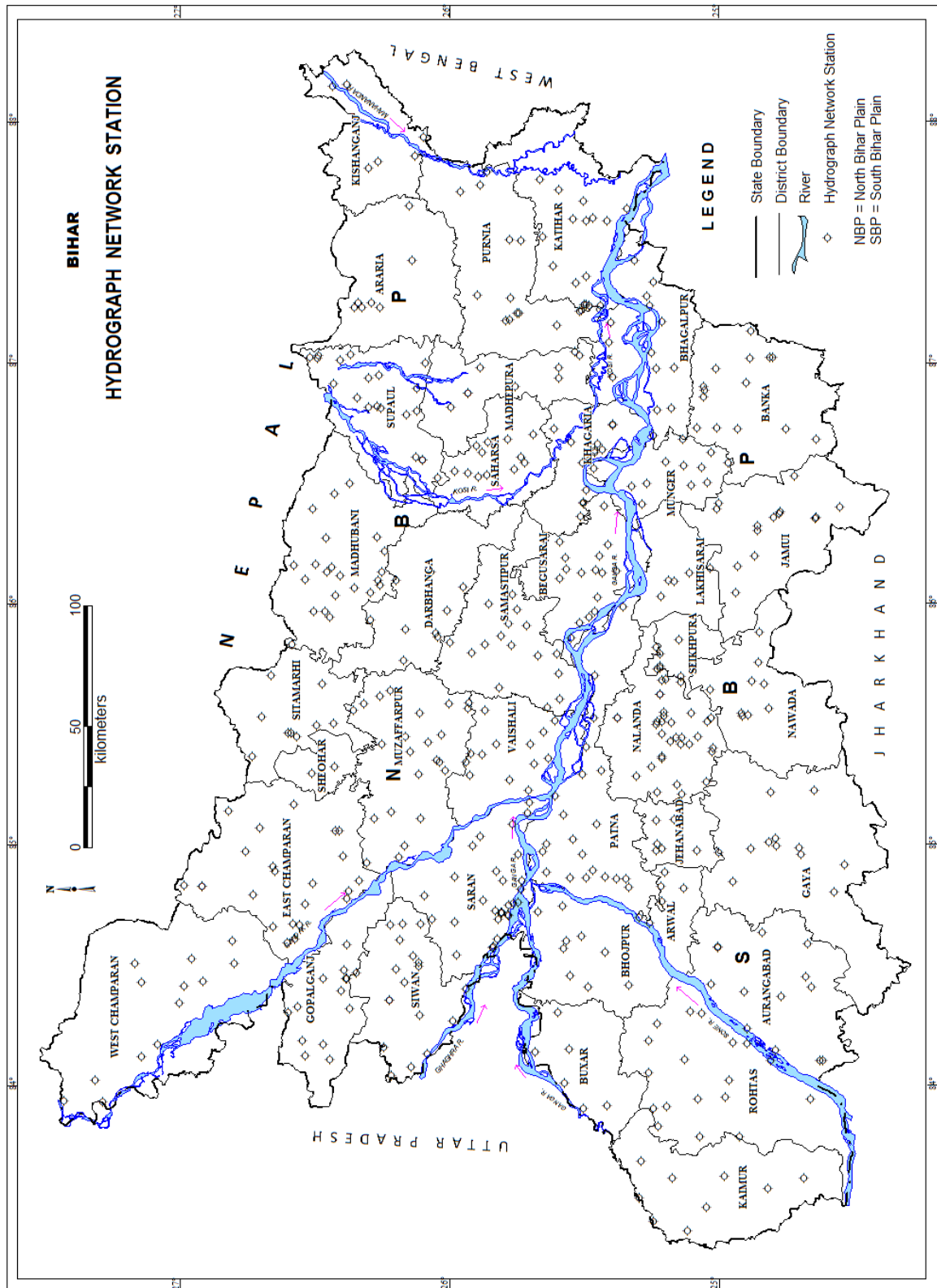
Champaran districts. It is an extension of Terai belt of Nepal which coalesces with alluvial plain. Ground water occurs under unconfined conditions in the phreatic aquifer, which is generally disposed within 70 m below ground. Aquifers situated at deeper levels have ground water levels under confined condition.



*Fig. 2 Hydrogeological Map of Bihar state*

### 3. GROUND WATER SCENARIO

A total of 507 Hydrograph Network Stations (HNS) which are dug wells tapping phreatic aquifer has been monitored as a part of ground water regime monitoring in the state of Bihar. Majority of the wells represent phreatic alluvial aquifer. The district wise location and distribution of the HNS are given in Fig 3 and Table 2 respectively.



*Fig. 3 Location of hydrograph network stations in Bihar*

*Fig. 3 Location of hydrograph network stations in Bihar state*

**Table 2** District wise distribution of the HNS as on 31.3.14

SN	District	No. of Wells
1	Araia	7
2	Aurangabad	13
3	Banka	14
4	Begusarai	16
5	Bhagalpur	15
6	Bhojpur	9
7	Buxar	6
8	Darbhanga	9
9	Gaya	12
10	Gopalganj	14
11	Jamui	15
12	Jehanabad & Arwal	12
13	Kaimur/Bhabhua	9
14	Katihar	17
15	Khagaria	13
16	Kishanganj	6
17	Lakhisarai	4
18	Madhepura	9
19	Madhubani	22
20	Munger	10
21	Muzaffarpur	23
22	Nalanda	30
23	Nawada	10
24	W Champaran	13
25	Patna	21
26	E Chamaparan	23
27	Purnia	14
28	Rohtas	18
29	Saharsa	12
30	Samastipur	15
31	Saran	30
32	Sheikhpura	6
33	Sheohar	2
34	Sitamarhi	8
35	Siwan	17
36	Supaul	20
37	Vaishali	13
<b>Total</b>		<b>507</b>

The numbers of HNS monitored in the state as per the following monitoring schedules:

**Table 3** HNS monitoring schedule

Sl. N.	Month	Date	Period
1	May	20 – 30	Pre-monsoon
2	August	20 – 30	Mid-monsoon
3	November	1 – 10	Post-monsoon
4	January	1 – 10	Recession

The Number of HNS monitored during the various monitoring period is given in **Table-4**. The water level data of HNS are presented in the Annexure I. The data were analysed for each

set of measurement and the thematic presentation of depth to water level and its fluctuations have been prepared in the range of 0 – 2 m, 2 – 5 m, 5 – 10 m and more than 10 m using GEMS software. Bihar state has been broadly divided into North Bihar Plain (NBP) consisting of areas falling to the north of the river Ganga and South Bihar Plain (SBP) consisting of areas falling to the south of the river Ganga and bordering Jharkhand state.

**Table 4** *Number of HNS monitored/analysed during different months*

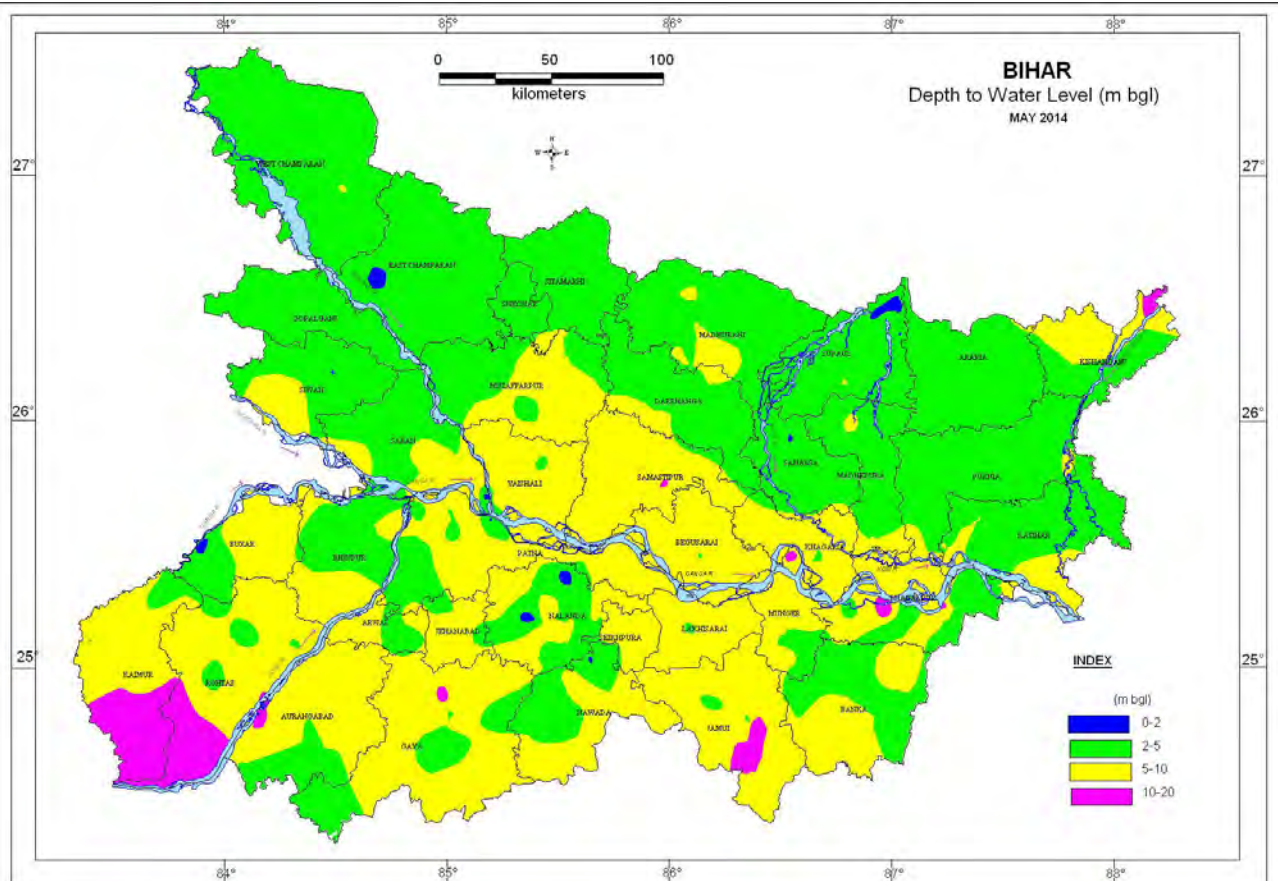
<b>State</b>	<b>May'13</b>	<b>August'13</b>	<b>November'13</b>	<b>January'14</b>
Bihar	487	482	477	487



### 3.1 DEPTH TO WATER LEVEL

#### 3.1.1 May 2014

During the Pre- Monsoon period (May 2014), 487 HNS were analysed. The Minimum depth to water level of is 0.44 m bgl below ground level (bgl) has been observed at, E Champaran district, and maximum water level of 15.80 m bgl has been occurred at, Jamui district. The depth to water level rests in range of 2 – 5 m bgl in 53% of the area of Bihar State, which spatially covers northern part of North Bihar Plains (NBP) and as small patches in the South Bihar Plains (SBP). The depth to water level rests in the range of 5 – 10 m bgl in about 44% of the area covering adjoining to the river Ganga, and major parts of SBP. In ~ 3% of area, water level > 10 m bgl has been recorded, which distributed as isolated patches mainly in Kaimur, Rohtas, Jamui, Gaya, Nawada and Bhagalpur district. In only 17 Hydrograph Network Station (HNS) disseminatly located in the State where < 2 m bgl has been recorded (**Fig. 4; Table 5**).



*Fig. 4: Depth to water level in May 2014*

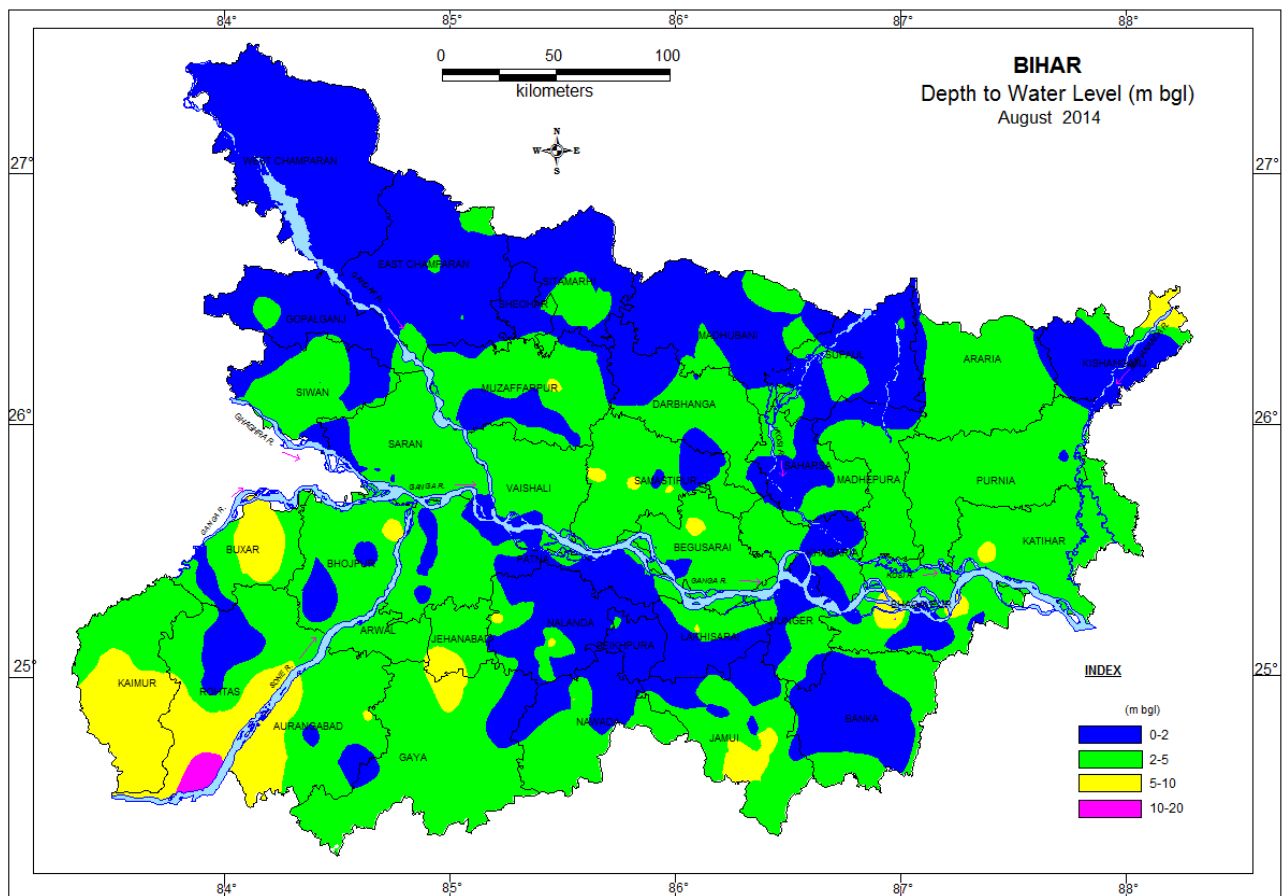
Table 5 District wise well frequency for different ranges of depth to water level of HNS in May 2014 in Bihar State

SN	District	No of Well Analysed	Depth to water level (m bgl)		0-2m		2-5m		5-10m		10-20m	
			Min	Max	No	%	No	%	No.	%	No	%
1	Araria	6	2.79	4.58	0.0	0.0	6.0	100.	0	0.0	0	0.0
2	Aurangabad	10	3.26	10.90	0.0	0.0	4.0	40.0	5	50.	1	10.0
3	Banka	13	2.72	8.70	0.0	0.0	10.0	76.9	3	23.	0	0.0
4	Begusarai	15	4.39	8.43	0.0	0.0	2.0	13.3	13	86.	0	0.0
5	Bhagalpur	14	3.18	12.78	0.0	0.0	6.0	42.9	6	42.	2	14.3
6	Bhojpur	9	3.73	6.29	0.0	0.0	7.0	77.8	2	22.	0	0.0
7	Buxar	5	1.52	8.20	1.0	20.0	1.0	20.0	3	60.	0	0.0
8	Darbhanga	8	2.30	5.74	0.0	0.0	6.0	75.0	2	25.	0	0.0
9	Gaya	9	2.80	10.91	0.0	0.0	3.0	33.3	5	55.	1	11.1
10	Gopalganj	12	2.20	4.37	0.0	0.0	12.0	100.	0	0.0	0	0.0
11	Jamui	15	3.65	15.80	0.0	0.0	2.0	13.3	9	60.	4	26.7
12	Jehanabad	10	3.07	7.50	0.0	0.0	4.0	40.0	6	60.	0	0.0
13	Kaimur	7	4.15	12.30	0.0	0.0	2.0	28.6	4	57.	1	14.3
14	Katihar	15	4.07	7.80	0.0	0.0	10.0	66.7	5	33.	0	0.0
15	Khagaria	12	4.70	7.18	0.0	0.0	2.0	16.7	10	83.	0	0.0
16	Kishanganj	3	2.79	10.25	0.0	0.0	2.0	66.7	0	0.0	1	33.3
17	Lakhisarai	4	1.58	8.31	1.0	25.0	0.0	0.0	3	75.	0	0.0
18	Madhepura	7	3.52	6.17	0.0	0.0	5.0	71.4	2	28.	0	0.0
19	Madhubani	20	2.20	6.68	0.0	0.0	14.0	70.0	6	30.	0	0.0
20	Munger	10	2.73	11.23	0.0	0.0	4.0	40.0	5	50.	1	10.0
21	Muzaffarpur	18	2.39	7.26	0.0	0.0	10.0	55.6	8	44.	0	0.0
22	Nalanda	31	0.75	9.13	3.0	9.7	13.0	41.9	15	48.	0	0.0
23	Nawada	9	1.80	8.64	1.0	11.1	3.0	33.3	5	55.	0	0.0
24	W Champaran	10	2.15	5.10	0.0	0.0	9.0	90.0	1	10.	0	0.0
25	Patna	58	1.72	9.64	3.0	5.2	30.0	51.7	25	43.	0	0.0
26	E Champaran	19	0.44	4.95	1.0	5.3	18.0	94.7	0	0.0	0	0.0
27	Purnia	12	3.17	5.17	0.0	0.0	11.0	91.7	1	8.3	0	0.0
28	Rohtas	15	1.94	11.64	1.0	6.7	3.0	20.0	8	53.	3	20.0
29	Saharsa	12	1.65	4.67	1.0	8.3	11.0	91.7	0	0.0	0	0.0
30	Samastipur	14	5.10	10.62	0.0	0.0	0.0	0.0	13	92.	1	7.1
31	Saran	25	1.07	8.65	1.0	4.0	15.0	60.0	9	36.	0	0.0
32	Seikhpura	6	5.10	9.13	0.0	0.0	0.0	0.0	6	100	0	0.0
33	Sheohar	2	3.10	3.83	0.0	0.0	2.0	100.	0	0.0	0	0.0
34	Sitamarhi	8	2.56	4.53	0.0	0.0	8.0	100.	0	0.0	0	0.0
35	Siwan	14	1.90	8.72	1.0	7.1	11.0	78.6	2	14.	0	0.0
36	Supaul	18	1.79	5.19	3.0	16.7	14.0	77.8	1	5.6	0	0.0
37	Vaishali	12	4.68	7.85	0.0	0.0	1.0	8.3	11	91.	0	0.0
	<b>Total</b>	<b>487</b>	<b>0.44</b>	<b>15.80</b>	<b>17</b>	<b>3.5</b>	<b>261</b>	<b>53.6</b>	<b>194</b>	<b>39.</b>	<b>15</b>	<b>3.1</b>



### 3.1.2 August 2014

During mid-monsoon (August 2014), a total of 482 HNS were monitored. The depth to water level has been found to vary between 0.01 m bgl (Katihar district) and 10.99 m bgl (Jamui district). The depth to water level varies in the range of 0 – 2 m bgl spread in about 38% area of the State, which spatially covers the major part and bordering area of Gopalganj, Madhubani, Supaul, Madhepura and Kishanganj district in NBP and Nalnda, Sheikhpura Lakhisarai Banka in SBP and as patches in many other part of the State. The depth to water level rests in the range of 2-5 m bgl in about 52% area of the State spatially covers almost entire State except the localised area in Bhabhua, Rohtas, Buxer, Gaya, Nawada, Jamui, Jehanabad and many other places in the State where the depth to water level is in the range of 5 to 10 m bgl which forms about 7% of the area of the State. Only four wells have shown water level more than 10 m bgl located in Bhagalpur, Jamui and Rohtas district. (Fig. 5; Table 6)



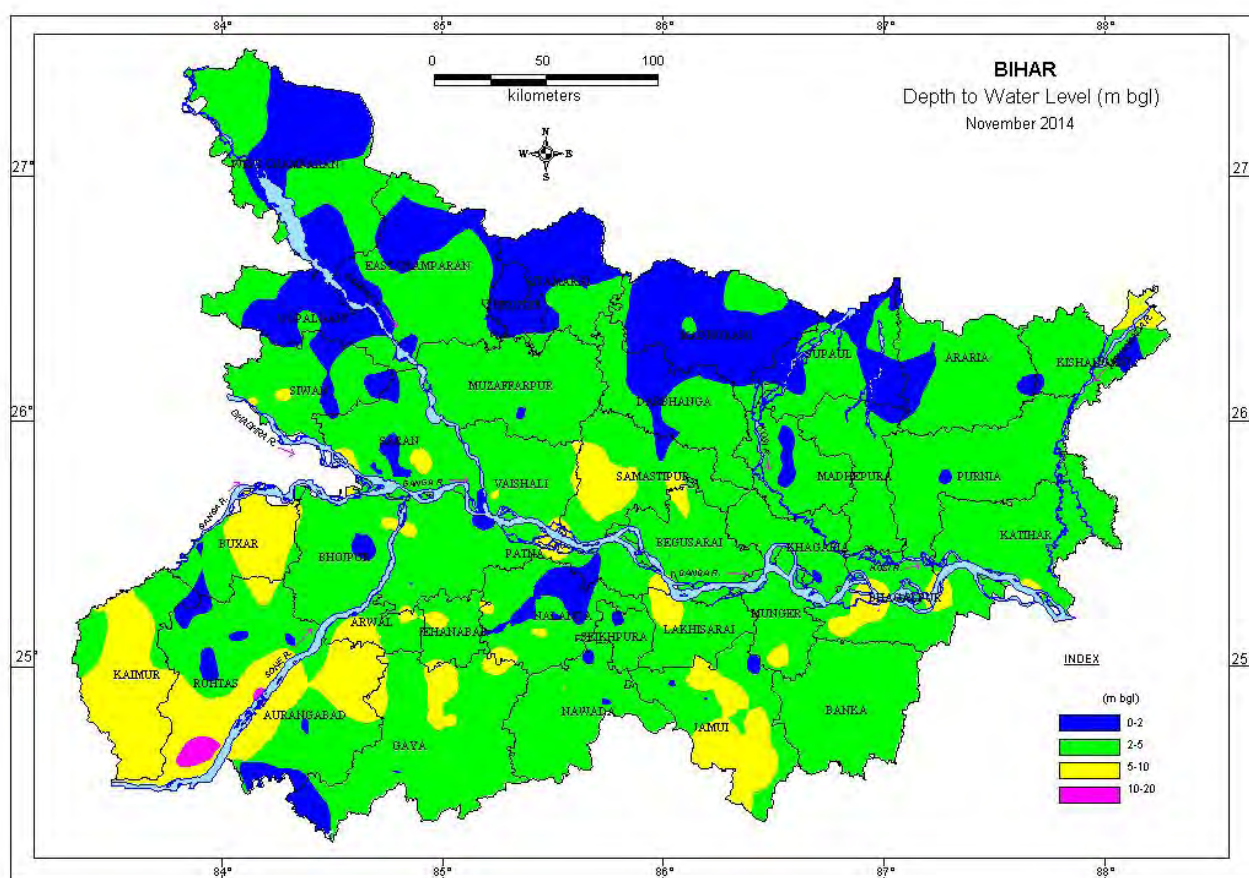
*Fig. 5: Depth to water level in August 2014*

Table 6 District wise well frequency for different ranges of depth to water level of HNS in August 2014 in Bihar State

SN	District	No of Well Analysed	Depth to water level (m bgl)		0-2m		2-5m		5-10m		10-20m	
			Min	Max	No	%	No	%	No.	%	No	%
1	Araria	6	2.12	3.55	0	0	6	100	0	0	0	0
2	Aurangabad	8	0.30	5.21	2	25	5	63	1	13	0	0
3	Banka	11	0.82	4.38	7	64	4	36	0	0	0	0
4	Begusarai	17	1.53	5.91	4	24	12	71	1	6	0	0
5	Bhagalpur	14	0.73	10.26	5	36	6	43	2	14	1	7
6	Bhojpur	9	0.69	6.30	2	22	6	67	1	11	0	0
7	Buxar	6	1.51	8.25	2	33	2	33	2	33	0	0
8	Darbhanga	9	0.71	3.76	5	56	4	44	0	0	0	0
9	Gaya	12	1.22	7.36	1	8	9	75	2	17	0	0
10	Gopalganj	14	0.01	3.62	12	86	2	14	0	0	0	0
11	Jamui	17	0.10	10.99	7	41	4	24	5	29	1	6
12	Jehanabad	7	2.97	4.40	0	0	7	100	0	0	0	0
13	Kaimur	8	2.73	7.90	0	0	5	63	3	38	0	0
14	Katihar	14	1.55	5.54	1	7	12	86	1	7	0	0
15	Khagaria	14	1.07	3.59	7	50	7	50	0	0	0	0
16	Kishanganj	4	0.57	8.22	3	75	0	0	1	25	0	0
17	Lakhisarai	4	0.55	5.58	2	50	1	25	1	25	0	0
18	Madhepura	9	2.12	3.40	0	0	9	100	0	0	0	0
19	Madhubani	22	0.10	3.71	15	68	7	32	0	0	0	0
20	Munger	9	0.46	5.10	6	67	2	22	1	11	0	0
21	Muzaffarpur	23	0.91	5.65	12	52	10	43	1	4	0	0
22	Nalanda	31	0.57	6.73	22	71	7	23	2	6	0	0
23	Nawada	10	0.42	5.31	7	70	2	20	1	10	0	0
24	W Champaran	13	0.38	1.53	13	100	0	0	0	0	0	0
25	Patna	19	0.10	3.70	8	42	11	58	0	0	0	0
26	E Champaran	23	0.56	2.32	18	78	5	22	0	0	0	0
27	Purnia	13	1.83	3.95	1	8	12	92	0	0	0	0
28	Rohtas	17	0.28	10.47	4	24	7	41	4	24	2	12
29	Saharsa	11	0.67	2.68	6	55	5	45	0	0	0	0
30	Samastipur	15	0.40	5.70	2	13	10	67	3	20	0	0
31	Saran	29	0.72	3.95	10	34	19	66	0	0	0	0
32	Seikhpura	6	0.72	3.69	5	83	1	17	0	0	0	0
33	Sheohar	2	0.76	1.58	2	100	0	0	0	0	0	0
34	Sitamarhi	8	1.16	4.21	7	88	1	13	0	0	0	0
35	Siwan	17	1.46	4.07	10	59	7	41	0	0	0	0
36	Supaul	18	0.93	3.69	14	78	4	22	0	0	0	0
37	Vaishali	13	0.40	4.77	1	8	12	92	0	0	0	0
	<b>Total</b>	<b>482</b>	<b>0.01</b>	<b>10.99</b>	<b>223</b>	<b>46</b>	<b>223</b>	<b>46</b>	<b>32</b>	<b>7</b>	<b>4</b>	<b>1</b>

### 3.1.3 November 2014

A total of 477 HNS were Analysed during post-monsoon period (November 2014). The minimum and the maximum depth to water levels have been recorded as 0.39 m bgl (Madhubani district) and 12.06 m bgl (Jamui district) respectively. In major area of the State (71% ) recorded in 291 wells, water level rests in range of 2 – 5 m bgl which covers almost entire State. The depth to water level in the range of 5-10 m bgl occurs in about 12 % of the area of the State, which occurs in and bordering area of Samstipur, Begusarai, Bhagalpur, Kaimur, Rohtas, Aurangabad, Buxar, Sheikhpora, Lakhisarai and Jamui district and many other places as patches. The water level in the range of 0 – 2 m bgl has been observed in only 16% of HNS, spatially covers as small patches at many locations in & NBP mostly in northern boarder of the State and at few locations in SBP. There are only 04 HNS stations which fall in Bhagalpur, Rohtas and Jamui districts where level has been observed more than 10 m bgl (**Fig. 6; Table 7**).



**Fig. 6:** Depth to water level in November 2014

SN	District	No of Well Analysed	Depth to water level (m bgl)		0-2m		2-5m		5-10m		10-20m	
			Min	Max	No	%	No	%	No.	%	No	%
1	Araria	6	1.71	3.33	3	50.0	3	50	0	0	0	0.0
2	Aurangabad	12	1.20	9.90	2	16.7	5	42	5	42	0	0.0
3	Banka	11	1.94	4.57	1	9.1	10	91	0	0	0	0.0
4	Begusarai	16	1.95	5.27	1	6.3	14	88	1	6	0	0.0
5	Bhagalpur	13	2.16	10.20	0	0.0	9	69	3	23	1	7.7
6	Bhojpur	8	0.70	5.55	1	12.5	6	75	1	13	0	0.0
7	Buxar	6	1.87	8.21	1	16.7	1	17	4	67	0	0.0
8	Darbhanga	8	0.81	3.72	4	50.0	4	50	0	0	0	0.0
9	Gaya	12	1.98	6.15	1	8.3	7	58	4	33	0	0.0
10	Gopalganj	14	1.04	3.62	9	64.3	5	36	0	0	0	0.0
11	Jamui	17	1.32	12.06	3	17.6	3	18	10	59	1	5.9
12	Jehanabad	8	2.77	7.40	0	0.0	6	75	2	25	0	0.0
13	Kaimur	7	3.40	7.70	0	0.0	2	29	5	71	0	0.0
14	Katihar	16	1.96	5.23	1	6.3	14	88	1	6	0	0.0
15	Khagaria	14	1.68	5.19	1	7.1	12	86	1	7	0	0.0
16	Kishanganj	4	1.80	8.80	1	25.0	2	50	1	25	0	0.0
17	Lakhisarai	2	3.56	6.40	0	0.0	1	50	1	50	0	0.0
18	Madhepura	9	2.17	4.01	0	0.0	9	100	0	0	0	0.0
19	Madhubani	21	0.39	2.61	18	85.7	3	14	0	0	0	0.0
20	Munger	10	2.30	8.41	0	0.0	9	90	1	10	0	0.0
21	Muzaffarpur	23	1.70	5.15	2	8.7	20	87	1	4	0	0.0
22	Nalanda	31	0.58	6.51	7	22.6	20	65	4	13	0	0.0
23	Nawada	10	1.83	5.26	2	20.0	7	70	1	10	0	0.0
24	W Champaran	13	0.83	3.60	4	30.8	9	69	0	0	0	0.0
25	Patna	18	1.20	6.49	3	16.7	12	67	3	17	0	0.0
26	E Champaran	23	0.75	4.44	9	39.1	14	61	0	0	0	0.0
27	Purnia	11	1.80	4.27	1	9.1	10	91	0	0	0	0.0
28	Rohtas	17	0.82	11.53	6	35.3	4	24	5	29	2	11.8
29	Saharsa	12	1.28	2.71	4	33.3	8	67	0	0	0	0.0
30	Samastipur	15	1.81	6.40	1	6.7	8	53	6	40	0	0.0
31	Saran	27	0.50	7.26	8	29.6	16	59	3	11	0	0.0
32	Seikhpura	6	1.32	3.47	2	33.3	4	67	0	0	0	0.0
33	Sheohar	2	0.65	1.08	2	100.0	0	0	0	0	0	0.0
34	Sitamarhi	8	0.70	2.67	7	87.5	1	13	0	0	0	0.0
35	Siwan	17	1.17	5.40	3	17.6	12	71	2	12	0	0.0
36	Supaul	18	1.54	3.56	7	38.9	11	61	0	0	0	0.0
37	Vaishali	12	2.02	5.71	0	0.0	10	83	2	17	0	0.0
	<b>Total</b>	<b>477</b>	<b>0.39</b>	<b>12.06</b>	<b>115</b>	<b>24.1</b>	<b>291</b>	<b>61</b>	<b>67</b>	<b>14</b>	<b>4</b>	<b>0.8</b>

### 3.1.0 January 2015

During the recession period (Jan. 2015), 479 HNS were analysed. The minimum depth to water level of 0.62 m below ground level (bgl) has been observed in the Saran district, and maximum water level of 11.89 m bgl has been observed in the Jamui district. The depth to water level rests in range of 2 – 5 m bgl in 74% of the area of Bihar State. The depth to water level rests in the range of 5 – 10 m bgl in 19% of the area covering adjoining area and major part of Samastipur, Begusarai, Sheikhpura, Lakhisarai, Jamui, Banka, Kaimur, Rohtas, Buxar, Aurangabad and many locations as patches . In only 6% area, which falls mostly as patches in NBP the depth to water level < 2 m bgl has been recorded. In only 05 wells located in Bhagalpur, Rohtas and Jamui district. (Fig. 7; Table 8).

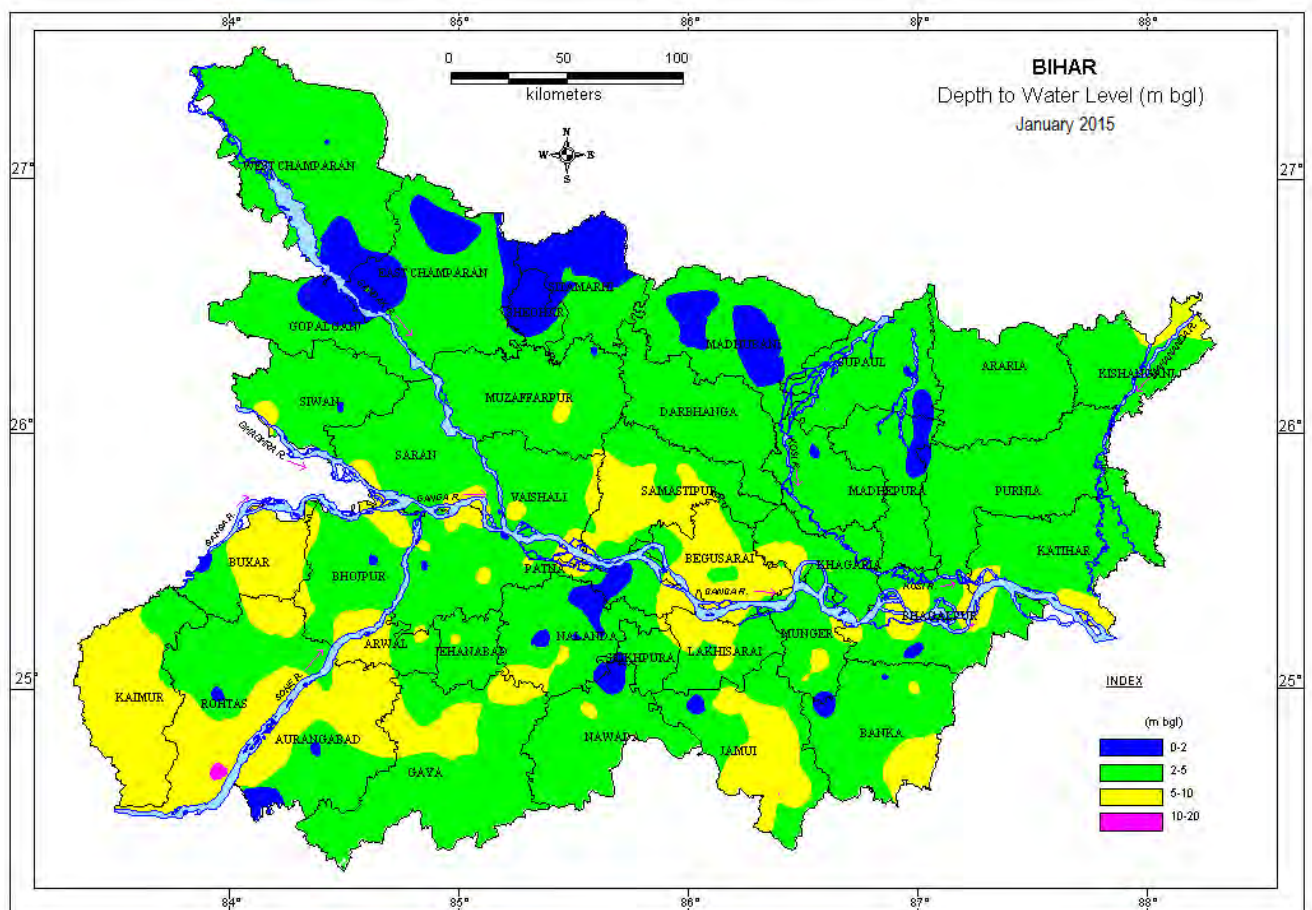


Fig. 7: Depth to water level in January 2015

Table 8 District wise well frequency for different ranges of depth to water level of HNS in Jan. 2015 in Bihar State												
SN	District	No of Well Analysed	Depth to water level (m bgl)		0-2m		2-5m		5-10m		10-20m	
			Min	Max	No	%	No	%	No.	%	No	%
1	Araria	6	2.20	3.91	0	0.0	6	100	0	0	0	0.0
2	Aurangabad	13	0.66	9.74	2	15.4	4	31	7	54	0	0.0
3	Banka	13	1.90	5.55	2	15.4	9	69	2	15	0	0.0
4	Begusarai	16	3.34	5.92	0	0.0	6	38	10	63	0	0.0
5	Bhagalpur	14	1.15	10.76	1	7.1	9	64	2	14	2	14.3
6	Bhojpur	9	1.67	6.82	1	11.1	6	67	2	22	0	0.0
7	Buxar	6	1.45	8.29	1	16.7	1	17	4	67	0	0.0
8	Darbhanga	8	2.08	4.58	0	0.0	8	100	0	0	0	0.0
9	Gaya	12	2.70	7.48	0	0.0	8	67	4	33	0	0.0
10	Gopalganj	14	1.29	4.23	2	14.3	12	86	0	0	0	0.0
11	Jamui	17	1.30	11.89	1	5.9	7	41	7	41	2	11.8
12	Jehanabad	11	2.37	6.47	0	0.0	8	73	3	27	0	0.0
13	Kaimur	7	3.26	8.70	0	0.0	1	14	6	86	0	0.0
14	Katihar	16	2.96	7.30	0	0.0	13	81	3	19	0	0.0
15	Khagaria	14	2.30	6.65	0	0.0	9	64	5	36	0	0.0
16	Kishanganj	4	2.47	9.11	0	0.0	3	75	1	25	0	0.0
17	Lakhisarai	4	0.82	7.26	1	25.0	0	0	3	75	0	0.0
18	Madhepura	10	1.50	4.65	1	10.0	9	90	0	0	0	0.0
19	Madhubani	21	0.65	3.92	6	28.6	15	71	0	0	0	0.0
20	Munger	10	1.01	6.80	1	10.0	7	70	2	20	0	0.0
21	Muzaffarpur	21	1.78	5.60	1	4.8	17	81	3	14	0	0.0
22	Nalanda	31	0.62	6.90	5	16.1	20	65	6	19	0	0.0
23	Nawada	10	1.05	6.46	1	10.0	7	70	2	20	0	0.0
24	W Champaran	12	1.28	3.93	2	16.7	10	83	0	0	0	0.0
25	Patna	21	1.31	8.08	4	19.0	11	52	6	29	0	0.0
26	E Champaran	20	0.76	3.56	6	30.0	14	70	0	0	0	0.0
27	Purnia	12	2.39	4.36	0	0.0	12	100	0	0	0	0.0
28	Rohtas	18	1.17	10.77	1	5.6	8	44	8	44	1	5.6
29	Saharsa	12	1.39	2.98	1	8.3	11	92	0	0	0	0.0
30	Samastipur	15	2.02	6.87	0	0.0	5	33	10	67	0	0.0
31	Saran	25	1.46	7.29	3	12.0	16	64	6	24	0	0.0
32	Seikhpura	6	1.91	5.22	1	16.7	4	67	1	17	0	0.0
33	Sheohar	2	0.67	1.60	2	100.0	0	0	0	0	0	0.0
34	Sitamarhi	8	1.06	3.04	5	62.5	3	38	0	0	0	0.0
35	Siwan	16	1.76	6.28	1	6.3	14	88	1	6	0	0.0
36	Supaul	20	1.52	4.89	3	15.0	17	85	0	0	0	0.0
37	Vaishali	13	2.31	7.23	0	0.0	11	85	2	15	0	0.0
	<b>Total</b>	<b>487</b>	<b>0.62</b>	<b>11.89</b>	<b>55</b>	<b>11.3</b>	<b>321</b>	<b>66</b>	<b>106</b>	<b>22</b>	<b>5</b>	<b>1.0</b>



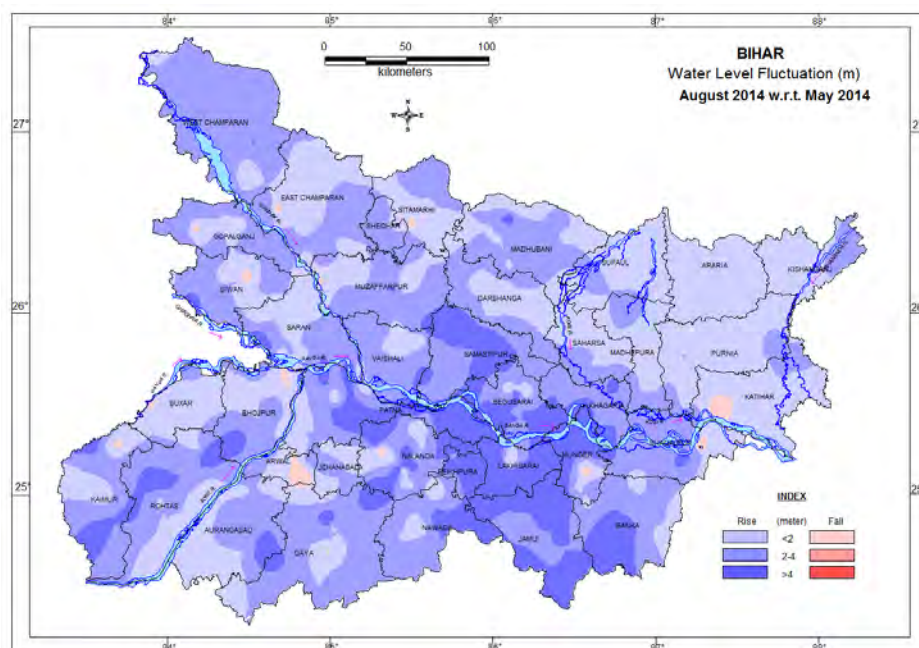
## 3.2 SEASONAL FLUCTUATION

### 3.2.1 May 2014 to August 2014

Water level fluctuation between May 2014 and August 2014 has been analysed for 430 HNS to study the seasonal fluctuation of depth to water level, and its categorization in different depth zones. The analyses indicates rise in the water level in 409 (95%) HNS whereas the fall is observed only in 20 (5%) HNS located in Bhagalpur, Bhojpur, Buxar, Gaya, Gopalganj, Aurangabad, Begusarai, Bhagalpur, Jehanabad & Arwal, Kaimur, Katihar, Muzaffarpur Nalanda, Nawada E Champaran, Saran, Sitamarhi and districts within the range of 0- 2 m except Bhagalpur district district where the fall in water level is in the range of 2 – 4 m in one HNS. The majority of HNS (37.5%) have shown the rise of water level in the range of 0 to 2 m whereas the segment of 2 - 4 m has been observed in 36% HNS only and about 22% of HNS have shown rise in water level of more than 4m.

About 37% of the area of the State has shown rise in water level in the range of 0- 2 m which covers the major and bordering area of E Champaran, Sitamarhi, Sheohar, Saran, Siwan, Muzaffarpur, Darbhanga, Supaul, Araria, Purnia, Kishanganj, Vaishali, Arwal, Patna, Nalanda and Bhagalpur and few localised area. About 47% area of the state are categorised under the segment of 2-4 m rise, including Rohtas, Gaya, Nawada, Jamui, Banka, Madhepura, Madhubani and E cahampara. Only 15% area has shown rise of water level more than 4 m in localised areas in SGP and along the river Ganga.

Fall has been observed at many locations as patches constitute only 0.75% area of the State. (Fig. 7; Table 9).



*Fig. 7: Fluctuation in ground water level between May 2014 and August 2014.*

**Table – 9** District wise categorization of fluctuation and their frequency of water levels of HNS of **August 2014 w.r.t. May 2014** for Bihar State

SN	District Name	No. of well analysed	Range of fluctuation (m)															Total No. of well		
			Rise (m)		Fall (m)		Rise				Fall					Rise	Fall			
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m			%	> 4m	%
1	Araria	6	0.14	1.56	-	-	6	100	0	0	0	0	0	0	0	0	0	0	6	0
2	Aurangabad	7	0.87	5.2	-	-	3	43	3	43	1	14	0	0	0	0	0	0	7	0
3	Banka	11	0.27	7.53	-	-	5	45	3	27	3	27	0	0	0	0	0	0	11	0
4	Begusarai	15	1.16	6.28	-	-	2	13	3	20	10	67	0	0	0	0	0	0	15	0
5	Bhagalpur	13	1.72	6.32	2.91	2.91	2	15	8	62	2	15	0	0	1	8	0	0	12	1
6	Bhojpur	9	0.68	4.59	0.01	0.27	5	56	1	11	1	11	2	22	0	0	0	0	7	2
7	Buxar	5	1.24	2.57	0.26	0.26	3	60	1	20	0	0	1	20	0	0	0	0	4	1
8	Darbhangha	8	0.85	3.42	-	-	3	38	5	63	0	0	0	0	0	0	0	0	8	0
9	Gaya	9	0.64	5.09	0.22	0.22	3	33	4	44	1	11	1	11	0	0	0	0	8	1
10	Gopalganj	12	1.21	4.21	0.63	0.63	2	17	8	67	1	8	1	8	0	0	0	0	11	1
11	Jamui	14	0.94	6.72	-	-	1	7	4	29	9	64	0	0	0	0	0	0	14	0
12	Jehanabad & Arwal	6	1.07	4.09	0.33	1.1	1	17	2	33	1	17	2	33	0	0	0	0	4	2
13	Kaimur	7	0.76	5	0.52	0.52	3	43	1	14	2	29	1	14	0	0	0	0	6	1
14	Katihar	14	0.61	4.4	1.32	1.32	8	57	4	29	1	7	1	7	0	0	0	0	13	1
15	Khagaria	12	2.57	4.99	-	-	0	0	6	50	6	50	0	0	0	0	0	0	12	0
16	Kishanganj	3	1.77	2.22	-	-	1	33	2	67	0	0	0	0	0	0	0	0	3	0
17	Lakhisarai	4	1.03	6.27	0.28	0.28	1	25	0	0	2	50	1	25	0	0	0	0	3	1
18	Madhepura	7	1.26	3.65	-	-	4	57	3	43	0	0	0	0	0	0	0	0	7	0
19	Madhubani	19	0.64	4.84	-	-	7	37	11	58	1	5	0	0	0	0	0	0	19	0
20	Munger	9	1.48	9.36	0.91	0.91	2	22	1	11	5	56	1	11	0	0	0	0	8	1
21	Muzaffarpur	18	0.33	4.77	0.37	0.37	5	28	9	50	3	17	1	6	0	0	0	0	17	1
22	Nalanda	31	0.18	7.46	0.6	0.6	10	32	10	32	10	32	1	3	0	0	0	0	30	1
23	Nawada	9	0.37	5.22	-	-	3	33	2	22	4	44	0	0	0	0	0	0	9	0
24	W Champaran	10	1.16	4.09	-	-	2	20	7	70	1	10	0	0	0	0	0	0	10	0
25	Patna	19	0.25	6.72	0.2	0.2	5	26	4	21	9	47	1	5	0	0	0	0	18	1
26	E Champaran	19	0.1	3.39	0.9	0.9	11	58	7	37	0	0	1	5	0	0	0	0	18	1
27	Purnia	12	0.25	2.9	0.03	0.03	9	75	2	17	0	0	1	8	0	0	0	0	11	1
28	Rohtas	15	0.28	6.38	-	-	7	47	5	33	3	20	0	0	0	0	0	0	15	0
29	Saharsa	10	0.45	3.01	-	-	8	80	2	20	0	0	0	0	0	0	0	0	10	0
30	Samastipur	14	2.33	6.43	-	-	0	0	6	43	8	57	0	0	0	0	0	0	14	0
31	Saran	25	0.35	6.7	0.01	0.01	9	36	8	32	6	24	1	4	0	0	0	0	23	1
32	Seikhpura	6	2.78	7.29	-	-	0	0	2	33	4	67	0	0	0	0	0	0	6	0
33	Sheohar	2	2.25	2.34	-	-	0	0	2	100	0	0	0	0	0	0	0	0	2	0
34	Sitamarhi	8	0.87	2.78	0.86	0.86	3	38	4	50	0	0	1	13	0	0	0	0	7	1
35	Siwan	14	0.67	4.65	0.83	0.83	6	43	6	43	1	7	1	7	0	0	0	0	13	1
36	Supaul	16	0.11	2.6	-	-	14	88	2	13	0	0	0	0	0	0	0	0	16	0
37	Vaishali	12	0.64	4.05	-	-	4	33	7	58	1	8	0	0	0	0	0	0	12	0
	<b>Total</b>	<b>430</b>	<b>0.10</b>	<b>9.36</b>	<b>0.01</b>	<b>2.91</b>	<b>158</b>	<b>37</b>	<b>155</b>	<b>36</b>	<b>96</b>	<b>22</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>409</b>	<b>20</b>

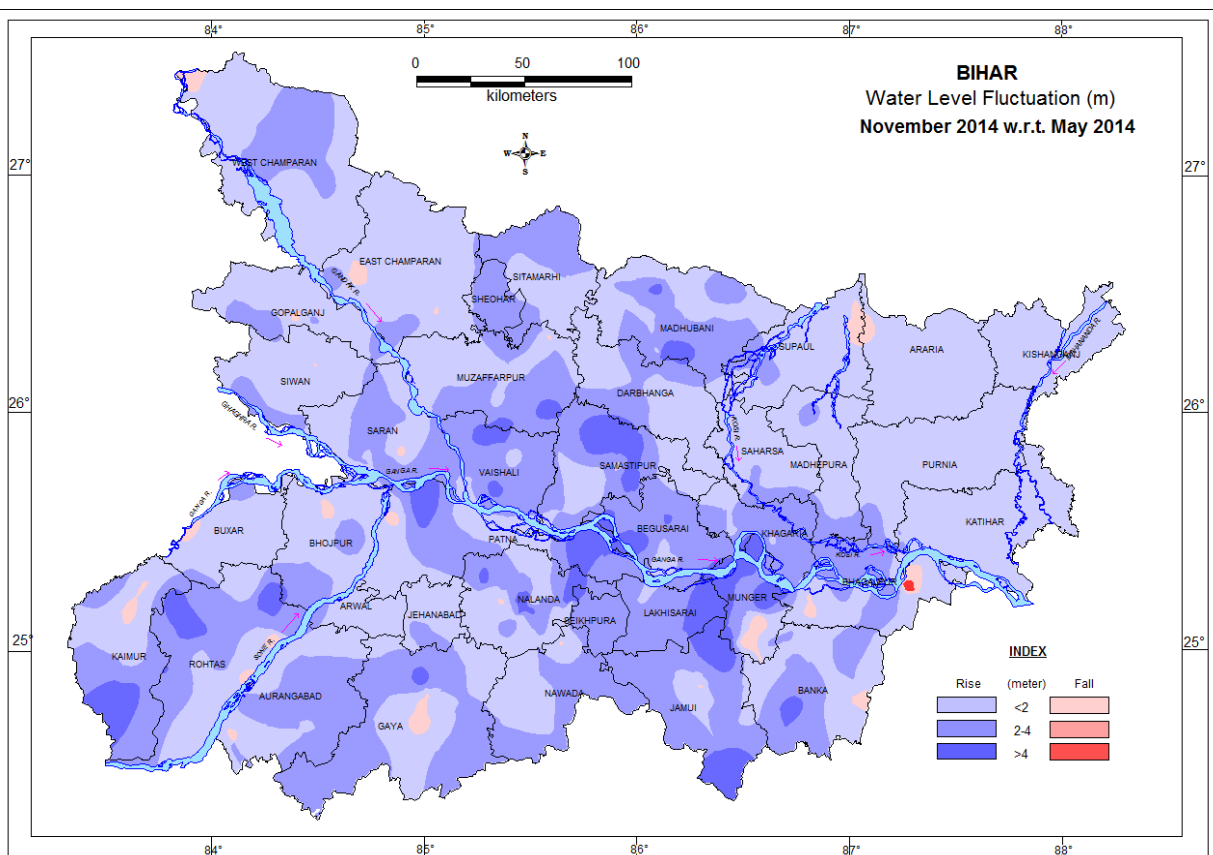


### 3.2.2 May 2014 to November 2014

Water level fluctuations between May 2014 and November 2014 has been analysed for 426 HNS. The rise of water level observed in 312 (92%) HNS ranged from 0.03 (Supaul) to 6.98 m (Samastipur) whereas, only 31 (8%) HNS have shown fall in water level ranged from 0.09 (Siwan) to 4.12 m (Bhagalpur). The majority of HNS (215 well, 50%) have shown rise in the range of 2-4 m whereas the 136 and 32 NHS have shown rise in water level in the range of 0-2 m and >4m respectively.

About 56 % area of the State has shown rise in water level. The 0-2 m segment has spread in a larger area in north-eastern and North-western part of NBP and in SBP, the adjoining part of Jehanabad, Nalanda and Buxar and in many other localised area of the State. About 37% area of the State spread in the major part of Kaimur, Bhojpur, Rohtas Aurangabad, Gaya, W Champaran, Jamui, Banka, Saran, Vaishali, Muzaffarpur, Samastipur, Munger, Bhagalpur, Madhubani, Sitamarhi and Sheohar district has shown water level in the range of 2-4 m. The total 5% area of the State categorised in the segment of more than 4 m rise of water level.

The fall is recorded as disseminated patches at many locations in the State. (**Fig 9, Table 10**).



**Fig. 9:** Fluctuation in ground water level between May 2014 and Nov. 2014.

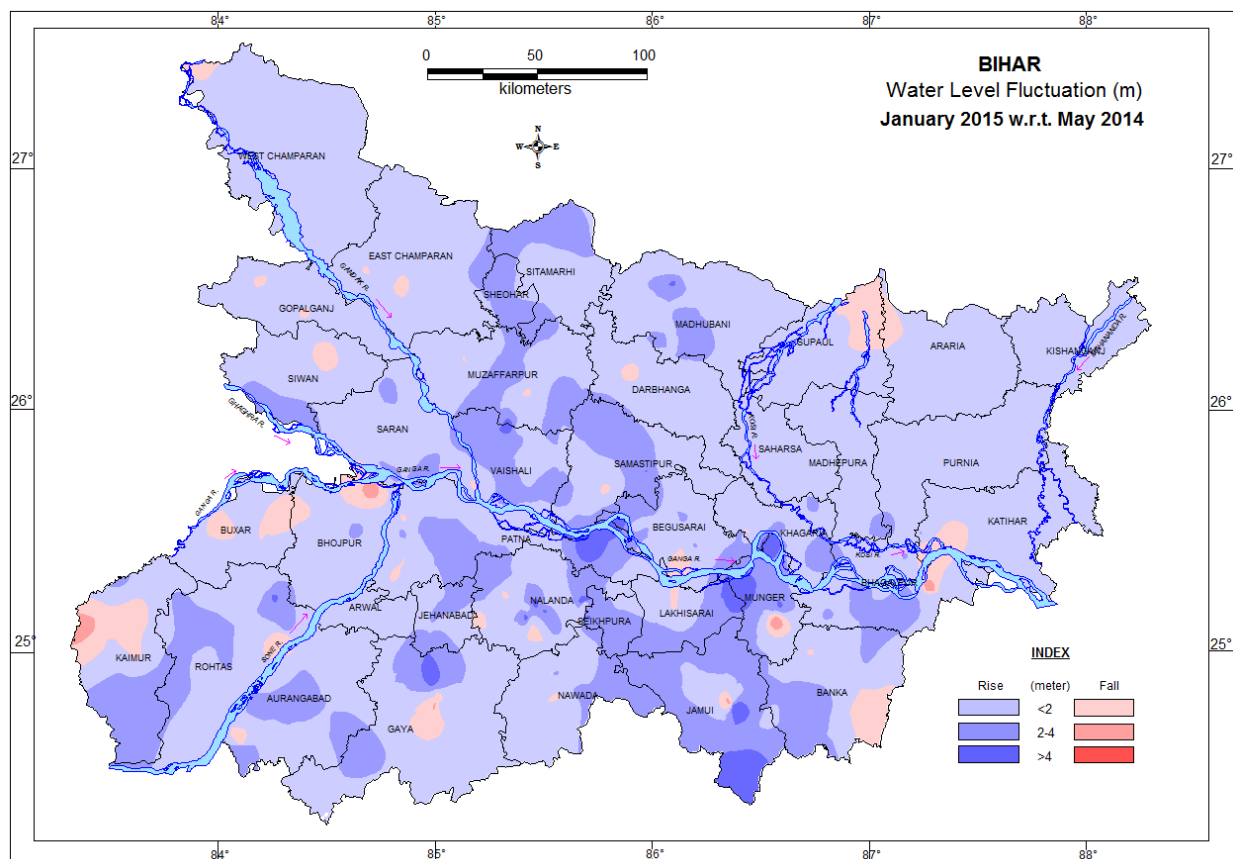
**Table – 10 District wise categorization of fluctuation and their frequency of water levels of HNS of November 2014 w.r.t. May 2014 for Bihar State**

SN	District Name	No. of well analysed	Range of fluctuation (m)																Total No. of well	
			Rise (m)		Fall (m)		Rise				Fall						Rise	Fall		
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m	%			> 4m	%
1	Araria	6	0.99	1.66	-	-	6	100	0	0	0	0	0	0	0	0	0	0	6	0
2	Aurangabad	10	1.5	3.4	0.6	0.6	3	30	6	60	0	0	1	10	0	0	0	0	9	1
3	Banka	11	0.08	4.79	0.15	0.15	5	45	4	36	1	9	1	9	0	0	0	0	10	1
4	Begusarai	14	1	6.17	-	-	2	14	7	50	5	36	0	0	0	0	0	0	14	0
5	Bhagalpur	13	0.42	4.39	0.14	4.12	4	31	5	38	1	8	2	15	0	0	1	8	10	3
6	Bhojpur	8	0.11	3.3	0.25	0.25	6	75	1	13	0	0	1	13	0	0	0	0	7	1
7	Buxar	5	0.06	2.95	0.35	0.35	3	60	1	20	0	0	1	20	0	0	0	0	4	1
8	Darbhanga	7	0.98	3.54	-	-	4	57	3	43	0	0	0	0	0	0	0	0	7	0
9	Gaya	9	0.86	5.33	0.59	0.95	3	33	2	22	1	11	3	33	0	0	0	0	6	3
10	Gopalganj	12	0.14	2.48	0.58	0.58	8	67	3	25	0	0	1	8	0	0	0	0	11	1
11	Jamui	14	0.24	6.63	0.37	0.37	6	43	4	29	3	21	1	7	0	0	0	0	13	1
12	Jehanabad & Arwal	8	0.03	2.58	-	-	7	88	1	13	0	0	0	0	0	0	0	0	8	0
13	Kaimur	7	1.08	4.6	0.19	0.54	3	43	1	14	1	14	2	29	0	0	0	0	5	2
14	Katihar	14	0.28	3.38	-	-	12	86	2	14	0	0	0	0	0	0	0	0	14	0
15	Khagaria	12	0.97	3.84	-	-	2	17	10	83	0	0	0	0	0	0	0	0	12	0
16	Kishanganj	3	0.99	1.45	-	-	3	100	0	0	0	0	0	0	0	0	0	0	3	0
17	Lakhisarai	2	1.91	3.46	-	-	1	50	1	50	0	0	0	0	0	0	0	0	2	0
18	Madhepura	7	0.82	3.31	-	-	5	71	2	29	0	0	0	0	0	0	0	0	7	0
19	Madhubani	19	0.76	5.43	-	-	9	47	7	37	3	16	0	0	0	0	0	0	19	0
20	Munger	10	1.83	6.52	0.12	1.81	1	10	2	20	4	40	3	30	0	0	0	0	7	3
21	Muzaffarpur	18	0.22	4.6	0.39	0.39	8	44	8	44	1	6	1	6	0	0	0	0	17	1
22	Nalanda	31	0.42	6.64	0.27	0.27	18	58	6	19	6	19	1	3	0	0	0	0	30	1
23	Nawada	9	0.31	4.03	0.13	0.13	3	33	4	44	1	11	1	11	0	0	0	0	8	1
24	W Champaran	10	0.32	2.38	0.43	0.43	6	60	3	30	0	0	1	10	0	0	0	0	9	1
25	Patna	18	0.48	5.8	0.62	1.06	8	44	6	33	2	11	2	11	0	0	0	0	16	2
26	E Champaran	19	0.12	2.52	0.21	1.74	13	68	4	21	0	0	2	11	0	0	0	0	17	2
27	Purnia	10	0.46	2	-	-	10	100	0	0	0	0	0	0	0	0	0	0	10	0
28	Rohtas	15	0.58	5.55	0.75	1.2	5	33	4	27	4	27	2	13	0	0	0	0	13	2
29	Saharsa	11	0.37	2.31	-	-	9	82	2	18	0	0	0	0	0	0	0	0	11	0
30	Samastipur	14	0.04	6.98	-	-	6	43	5	36	3	21	0	0	0	0	0	0	14	0
31	Saran	23	0.37	3.9	0.17	0.51	8	35	13	57	0	0	2	9	0	0	0	0	21	2
32	Seikhpura	6	3	6.35	-	-	0	0	3	50	3	50	0	0	0	0	0	0	6	0
33	Sheohar	2	2.45	2.75	-	-	0	0	2	100	0	0	0	0	0	0	0	0	2	0
34	Sitamarhi	8	0.68	3.83	-	-	3	38	5	63	0	0	0	0	0	0	0	0	8	0
35	Siwan	14	0.6	3.44	0.09	0.09	11	79	2	14	0	0	1	7	0	0	0	0	13	1
36	Supaul	16	0.03	2.28	0.91	0.91	13	81	1	6	0	0	1	6	0	0	0	0	14	1
37	Vaishali	11	1.36	4.96	-	-	1	9	6	55	4	36	0	0	0	0	0	0	11	0
	<b>Total</b>	<b>426</b>	<b>0.03</b>	<b>6.98</b>	<b>0.09</b>	<b>4.12</b>	<b>215</b>	<b>50</b>	<b>136</b>	<b>32</b>	<b>43</b>	<b>10</b>	<b>30</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>394</b>	<b>31</b>

### 3.2.3 May 2014 to January 2015

Water level fluctuation between May 2014 and January 2015 has been analysed for 438 HNS which indicates rise in water level in about 86 % of the HNS. The rise in water level in the range of 0 – 2 m in 63 % of the HNS, 2 – 4 m in 21% of the HNS and >4 m only in 4% HNS. The fall in water level has been observed only in 50 wells (11%) up to 2 m except 6 (1%) wells which have shown fall in the range of 2 to 4 m.

About 72% area has shown rise in water level up to 2m spread over entire State. The range of 2 to 4 m rise has been observed in many areas as patches which constitutes about 21% area of the State. The rise of water level more than 4m observed as patches in Patna, Munger, Jamui, and Gaya and vaishali district. Including the part of Supaul, Kaimur Buxar and Banka district the fall in the segment of 0-2m has been shown as patches at many disseminated locations in the State. The range of 2-4 m fall is observed in 6 HNS, located in Munger, Kaimur, Jamui, Gaya, Bhojpur and Bhagalpur district. No area has shown fall of water level more than 4 m (**Fig. 10, Table 11**).



**Fig. 10:** Fluctuation in ground water level between May 2014 and Jan. 2015.

**Table – 11** District wise categorization of fluctuation and their frequency of water levels of HNS of **January 2015 w.r.t. May 2014** for Bihar State

SN	District Name	No. of well analysed	Range of fluctuation (m)																Total No. of well	
			Rise (m)		Fall (m)		Rise				Fall				Rise	Fall				
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%			2-4m	%	> 4m	%
1	Araria	6	0.29	0.71	-	-	6	100	0	0	0	0	0	0	0	0	0	0	6	0
2	Aurangabad	10	0.63	3.31	1.16	1.16	4	40	5	50	0	0	1	10	0	0	0	0	9	1
3	Banka	13	0.22	3.84	0.15	1.86	7	54	3	23	0	0	3	23	0	0	0	0	10	3
4	Begusarai	14	0.07	5.01	0.53	0.53	8	57	4	29	1	7	1	7	0	0	0	0	13	1
5	Bhagalpur	13	0.51	3.17	3.72	3.72	7	54	5	38	0	0	0	0	1	8	0	0	12	1
6	Bhojpur	9	0.1	2.33	3.09	3.09	7	78	1	11	0	0	0	0	1	11	0	0	8	1
7	Buxar	5	0.05	1.56	0.09	0.42	3	60	0	0	0	0	2	40	0	0	0	0	3	2
8	Darbhanga	8	0.5	1.82	0.46	0.46	7	88	0	0	0	0	1	13	0	0	0	0	7	1
9	Gaya	9	0.56	5.11	0.9	2.28	4	44	0	0	2	22	2	22	1	11	0	0	6	3
10	Gopalganj	12	0.45	1.7	0.4	0.47	10	83	0	0	0	0	2	17	0	0	0	0	10	2
11	Jamui	14	1.1	11.42	2.9	2.9	6	43	4	29	3	21	0	0	1	7	0	0	13	1
12	Jehanabad & Arwal	10	0.28	3.7	-	-	9	90	1	10	0	0	0	0	0	0	0	0	10	0
13	Kaimur	7	0.15	3.6	0.17	2.66	2	29	2	29	0	0	2	29	1	14	0	0	4	3
14	Katihar	14	0.64	2.7	0.11	0.73	11	79	1	7	0	0	2	14	0	0	0	0	12	2
15	Khagaria	12	0.54	2.68	0.49	0.49	7	58	4	33	0	0	1	8	0	0	0	0	11	1
16	Kishanganj	3	0.32	1.14	-	-	3	100	0	0	0	0	0	0	0	0	0	0	3	0
17	Lakhisarai	4	0.76	1.42	0.2	0.2	3	75	0	0	0	0	1	25	0	0	0	0	3	1
18	Madhepura	7	0.18	2.93	-	-	6	86	1	14	0	0	0	0	0	0	0	0	7	0
19	Madhubani	19	0.19	4.33	-	-	14	74	4	21	1	5	0	0	0	0	0	0	19	0
20	Munger	10	1.16	7.56	3.81	3.81	4	40	2	20	3	30	0	0	1	10	0	0	9	1
21	Muzaffarpur	18	0.25	3.32	0.05	0.24	11	61	5	28	0	0	2	11	0	0	0	0	16	2
22	Nalanda	31	0.09	5.33	0.19	1.14	19	61	5	16	4	13	3	10	0	0	0	0	28	3
23	Nawada	9	0.75	3.15	0.23	0.27	3	33	4	44	0	0	2	22	0	0	0	0	7	2
24	W Champaran	10	0.59	1.45	0.49	0.49	9	90	0	0	0	0	1	10	0	0	0	0	9	1
25	Patna	21	0.2	5.09	0.02	1.35	10	48	5	24	1	5	5	24	0	0	0	0	16	5
26	E Champaran	18	0.18	2.11	0.32	0.46	14	78	2	11	0	0	2	11	0	0	0	0	16	2
27	Purnia	10	0.67	1.2	-	-	10	100	0	0	0	0	0	0	0	0	0	0	10	0
28	Rohtas	15	0.38	4.32	1.58	1.58	8	53	5	33	1	7	1	7	0	0	0	0	14	1
29	Saharsa	11	0.06	1.69	-	-	11	100	0	0	0	0	0	0	0	0	0	0	11	0
30	Samastipur	14	1.35	4.08	0.32	0.32	5	36	7	50	1	7	1	7	0	0	0	0	13	1
31	Saran	22	0.36	2.89	0.39	0.8	15	68	5	23	0	0	2	9	0	0	0	0	20	2
32	Seikhpura	6	1.58	4.29	-	-	1	17	4	67	1	17	0	0	0	0	0	0	6	0
33	Sheohar	2	2.23	2.43	-	-	0	0	2	100	0	0	0	0	0	0	0	0	2	0
34	Sitamarhi	8	0.31	2.64	-	-	3	38	5	63	0	0	0	0	0	0	0	0	8	0
35	Siwan	14	0.66	2.75	1.02	1.02	11	79	2	14	0	0	1	7	0	0	0	0	13	1
36	Supaul	18	0.08	1.83	0.05	1.15	12	67	0	0	0	0	6	33	0	0	0	0	12	6
37	Vaishali	12	0.62	5.19	-	-	5	42	6	50	1	8	0	0	0	0	0	0	12	0
	<b>Total</b>	<b>438</b>	<b>0.05</b>	<b>11.42</b>	<b>0.02</b>	<b>3.81</b>	<b>275</b>	<b>63</b>	<b>94</b>	<b>21</b>	<b>19</b>	<b>4</b>	<b>44</b>	<b>10</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>388</b>	<b>50</b>

### 3.3.0 ANNUAL FLUCTUATION

#### 3.3.1 May 2013 to May 2014

Fluctuation of ground water level between May 2013 and May 2014 of 348 HNS has been analysed which indicates rise in water level in 224 wells (64 %) of the HNS and fall in water level only in 112 No. (36%) of HNS. The rise has been observed in almost entire State. The rise to the tune of 0 – 2 m in 57% of HNS, in the tune of 2 – 4 m in the 5% and only 2% HNS has shown rise >4 m. The segment of >4m rise is observed in 08 NHS located each in Banka, Gaya, Jamui, Muzaffarpur, Nawada, Patna, E Champaran and Sheikhpura district. The fall of water level in the segment of 0-2 m has been observed in the major and adjoining part of Darbhanga, Samastipur, Vaishali, Muzaffarpur, Araria, Kishanganj, Bhagalpur, Katihar, Sitamarhi, Bhojpur and Aurangabad districts and as patches at few locations. The fall of water level in the range of 2-4 m has been observed which spread in 2% area of the State occurred in Aurangabad, Begusarai, Kaimur, Munger and Vaishali district. Only 3 wells, located in Begusarai, Kaimur and Khagaria district have shown fall of water level > 4 m.

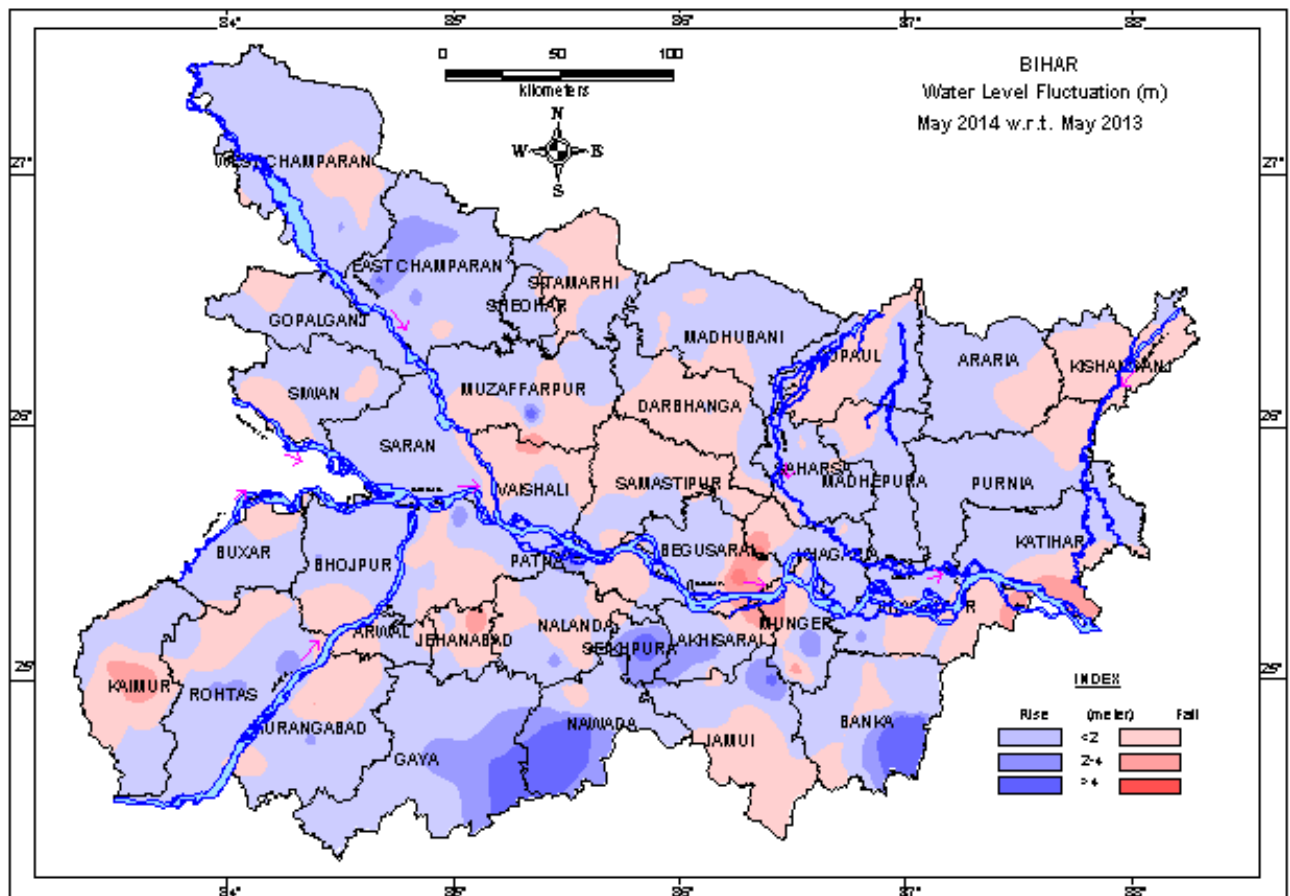


Fig. 11: Fluctuation in ground water level between May 2013 and May 2014.

Table – 12 District-wise categorization of fluctuation and their frequency of water levels of HNS of May 2014 w.r.t. May 2013 for Bihar State																				
SN	District Name	No of Wells	Range of Fluctuation (m)				No. of wells/Percentage Showing Fluctuation												Total No. of Wells	
			Rise		Fall		Rise						Fall						Rise	Fall
			Min	Max	Min	Max	0-2m	%	2-4m	%	> 4	%	0-2m	%	2-4m	%	> 4	%		
1	Araria	4	0.61	1.06	0.08	0.55	2	50	0	0	0	0	2	50	0	0	0	0	2	2
2	Aurangabad	9	0.02	2.32	0.92	2.03	5	56	1	11	0	0	2	22	1	11	0	0	6	3
3	Banka	11	0.48	7.08	0.3	0.68	6	55	0	0	1	9	3	27	0	0	0	0	7	3
4	Begusarai	14	0.14	1.81	4.76	4.76	12	86	0	0	0	0	0	0	0	0	1	7	12	1
5	Bhagalpur	11	0.21	2.37	0.53	1.84	6	55	1	9	0	0	4	36	0	0	0	0	7	4
6	Bhojpur	8	0.09	2.16	0.56	0.56	6	75	1	13	0	0	1	13	0	0	0	0	7	1
7	Buxar	5	0.69	0.82	0.02	1.28	3	60	0	0	0	0	2	40	0	0	0	0	3	2
8	Darbhangha	6	0.05	0.2	0.1	0.88	2	33	0	0	0	0	4	67	0	0	0	0	2	4
9	Gaya	7	0.73	4.55	-	-	2	29	2	29	1	14	0	0	0	0	0	0	5	0
10	Gopalganj	11	0.01	1.76	0.02	0.39	8	73	0	0	0	0	3	27	0	0	0	0	8	3
11	Jamui	8	0.28	4.68	1.18	1.83	4	50	0	0	1	13	3	38	0	0	0	0	5	3
12	Jehanabad & Arwal	8	0.08	1.82	1.42	3.07	5	63	0	0	0	0	1	13	1	13	0	0	5	2
13	Kaimur	7	0.25	1.54	0.46	4.12	3	43	0	0	0	0	1	14	1	14	1	14	3	3
14	Katihar	14	0.06	1.88	0.03	3.45	11	79	0	0	0	0	1	7	1	7	0	0	11	2
15	Khagaria	11	0.01	1.85	0.06	4.67	9	82	0	0	0	0	1	9	0	0	1	9	9	2
16	Kishanganj	3	0.15	0.15	0.3	1.03	1	33	0	0	0	0	2	67	0	0	0	0	1	2
17	Lakhisarai	3	0.3	3.79	-	-	2	67	1	33	0	0	0	0	0	0	0	0	3	0
18	Madhepura	7	0.63	1.04	0.44	1.06	5	71	0	0	0	0	2	29	0	0	0	0	5	2
19	Madhubani	13	0.07	1.82	0.08	1	9	69	0	0	0	0	4	31	0	0	0	0	9	4
20	Munger	7	0.24	3.69	0.2	3.9	2	29	1	14	0	0	2	29	2	29	0	0	3	4
21	Muzaffarpur	13	0.25	5.82	0.15	0.89	5	38	0	0	1	8	7	54	0	0	0	0	6	7
22	Nalanda	27	0.01	3.24	0.01	1.95	15	56	2	7	0	0	10	37	0	0	0	0	17	10
23	Nawada	7	0.39	6.25	1.09	1.09	5	71	0	0	1	14	1	14	0	0	0	0	6	1
24	W Champaran	6	0.01	2.16	0.2	0.46	3	50	1	17	0	0	2	33	0	0	0	0	4	2
25	Patna	19	0.09	4.32	0.03	1.56	9	47	1	5	1	5	7	37	0	0	0	0	11	7
26	E Champaran	15	0.25	4.56	0.42	0.42	9	60	3	20	1	7	1	7	0	0	0	0	13	1
27	Purnia	8	0.07	0.85	0.12	0.15	6	75	0	0	0	0	2	25	0	0	0	0	6	2
28	Rohtas	11	0.04	2.69	0.2	1.25	5	45	3	27	0	0	3	27	0	0	0	0	8	3
29	Saharsa	11	0.28	1.24	0.42	0.43	8	73	0	0	0	0	2	18	0	0	0	0	8	2
30	Samastipur	10	0.02	1.12	0.03	1.86	4	40	0	0	0	0	6	60	0	0	0	0	4	6
31	Saran	12	0.15	0.89	0.57	0.57	11	92	0	0	0	0	1	8	0	0	0	0	11	1
32	Seikhpura	5	0.03	5.22	0.68	0.81	2	40	0	0	1	20	2	40	0	0	0	0	3	2
33	Sheohar	1	0.26	0.26	-	-	1	100	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	7	0.7	0.7	0.04	0.57	1	14	0	0	0	0	5	71	0	0	0	0	1	5
35	Siwan	9	0.01	1.78	0.18	1.85	5	56	0	0	0	0	3	33	0	0	0	0	5	3
36	Supaul	13	0.06	1.16	0.03	1.08	4	31	0	0	0	0	9	69	0	0	0	0	4	9
37	Vaishali	7	0.03	0.35	0.32	3.46	3	43	0	0	0	0	2	29	2	29	0	0	3	4
	<b>Total</b>	<b>348</b>	<b>0.01</b>	<b>7.08</b>	<b>0.01</b>	<b>4.76</b>	<b>199</b>	<b>57</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>2</b>	<b>101</b>	<b>29</b>	<b>8</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>224</b>	<b>112</b>

### 3.3.2 August 2013 to August 2014

Water level fluctuation between August 2013 and August 2014 has been analysed for 367 HNS, which indicates that the rise of water level is in about 62% of the HNS and fall in about 38% of the HNS analysed. The rise of water level observed in the north-eastern and south-western part of the State and as patches in many other parts, which spread in range of 0 – 2 m in 34% area of the State. The segment of 2–4m fall has observed the part of Rohtas, Jehanabad, Gaya, Munger, Katihar, Purnia and Begusarai district and as patches at few location constitutes about 2% area of the State. Only two wells located in Gaya and Rohtas district have shown rise >4m.

About 50 % area of the State has shown rise in water level to the tune of 0 to 2 m cover the north-western, central and southern part of the State. The range of 2 to 4 m rise which constituted about 11% area of the State has been noticed in the central part of SBP and as patches at few locations. Including 7 in Nalanda district and 4 in Nawada district total 21 wells have shown rise more than 4 m. (Fig. 12, Table 13)

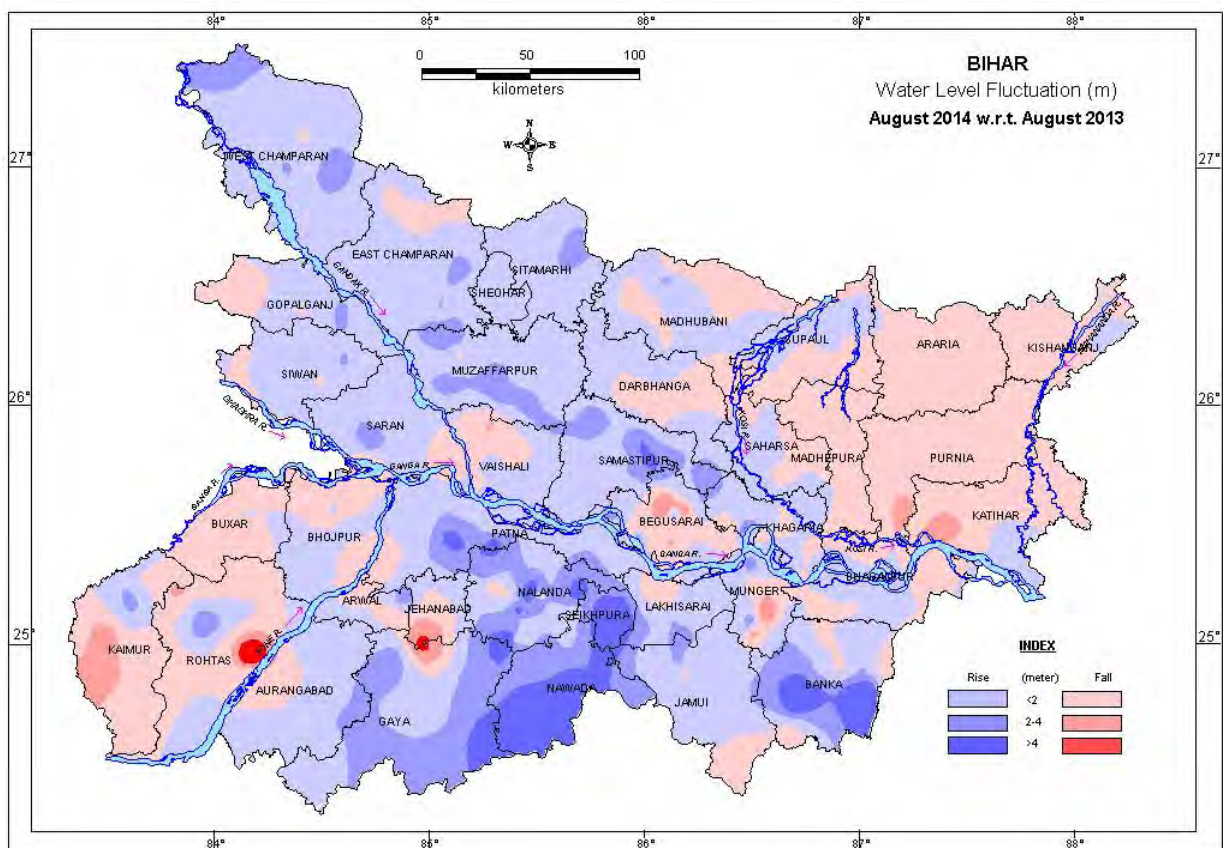


Fig. 12: Fluctuation in ground water level between Aug. 2013 and Aug. 2014.

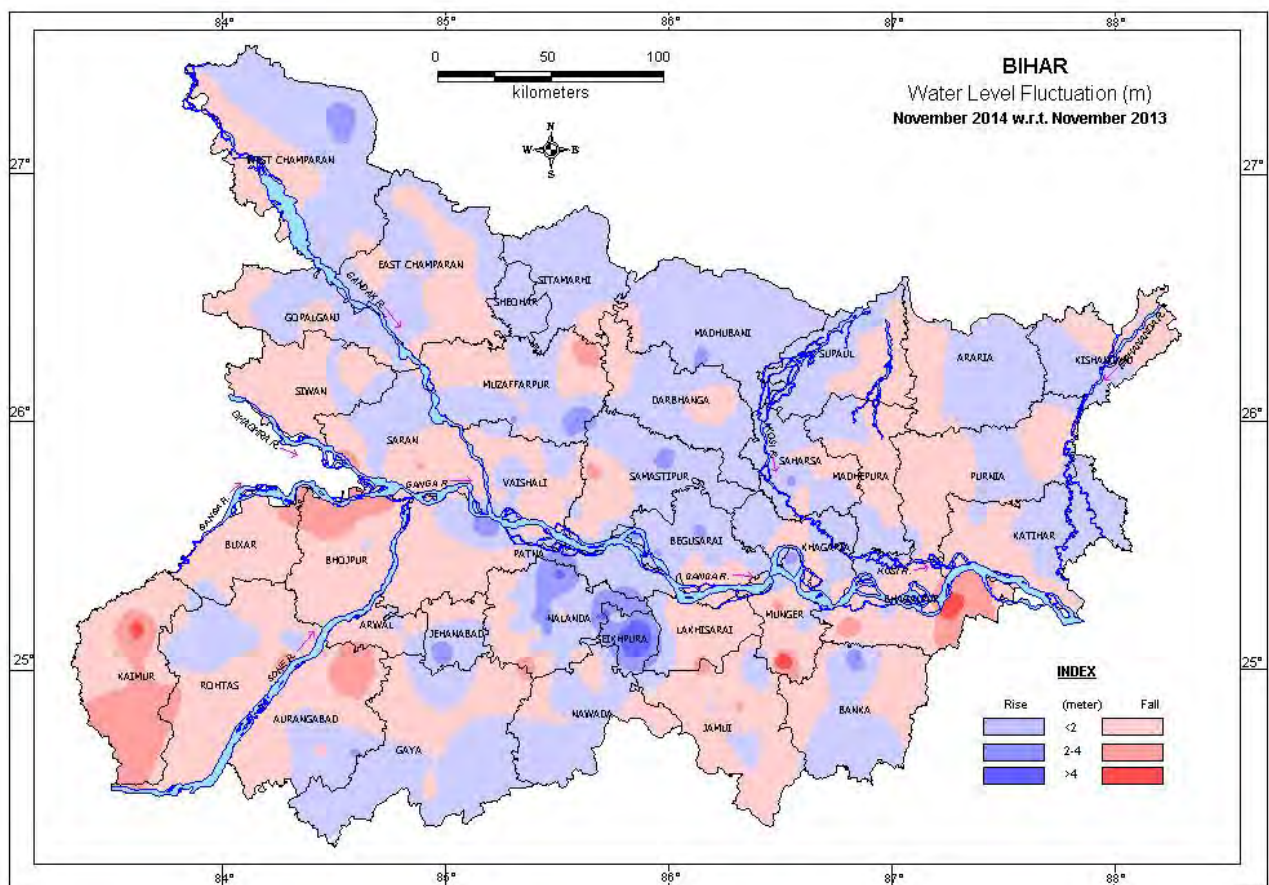
Table – 13 District-wise categorization of fluctuation and their frequency of water levels of HNS of August 2014 w.r.t. August 2013 for Bihar State																				
SN	District Name	No of Wells	Range of Fluctuation (m)				No. of wells/Percentage Showing Fluctuation												Total No. of Wells	
			Rise		Fall		Rise						Fall						Rise	Fall
			Min	Max	Min	Max	0-2m	%	2-4m	%	> 4	%	0-2m	%	2-4m	%	> 4	%		
1	Araria	4	-	-	0.56	0.82	0	0	0	0	0	0	4	100	0	0	0	0	0	4
2	Aurangabad	6	0.08	2.13	0.49	0.49	4	67	1	17	0	0	1	17	0	0	0	0	5	1
3	Banka	11	0.06	6.35	0.46	0.88	3	27	2	18	2	18	4	36	0	0	0	0	7	4
4	Begusarai	16	0.07	2.67	0.02	3.98	4	25	3	19	0	0	6	38	3	19	0	0	7	9
5	Bhagalpur	9	0.15	1.95	0.25	1.66	5	56	0	0	0	0	4	44	0	0	0	0	5	4
6	Bhojpur	8	0.16	1.17	1.77	2.25	6	75	0	0	0	0	1	13	1	13	0	0	6	2
7	Buxar	5	0.05	0.05	0.21	0.81	1	20	0	0	0	0	4	80	0	0	0	0	1	4
8	Darbhanga	7	0.07	1.71	0.25	0.54	4	57	0	0	0	0	3	43	0	0	0	0	4	3
9	Gaya	8	0.45	4.18	4.75	4.75	3	38	3	38	1	13	0	0	0	0	1	13	7	1
10	Gopalganj	8	0.1	2.25	0.2	0.8	4	50	1	13	0	0	3	38	0	0	0	0	5	3
11	Jamui	8	0.72	2.7	0.03	0.92	3	38	2	25	0	0	3	38	0	0	0	0	5	3
12	Jehanabad & Arwal	6	0.5	3.14	0.08	1.78	1	17	1	17	0	0	4	67	0	0	0	0	2	4
13	Kaimur	8	0.05	2.65	0.42	3.11	1	13	2	25	0	0	4	50	1	13	0	0	3	5
14	Katihar	14	0.17	0.66	0.19	3.53	2	14	0	0	0	0	11	79	1	7	0	0	2	12
15	Khagaria	13	0.05	4.33	0.06	1.35	6	46	0	0	1	8	6	46	0	0	0	0	7	6
16	Kishanganj	3	0.18	0.18	0.36	0.46	1	33	0	0	0	0	2	67	0	0	0	0	1	2
17	Lakhisarai	3	1.98	1.98	0.99	1.09	1	33	0	0	0	0	2	67	0	0	0	0	1	2
18	Madhepura	7	0.02	0.02	0.12	0.85	1	14	0	0	0	0	6	86	0	0	0	0	1	6
19	Madhubani	15	0.1	2.36	0.28	2.08	6	40	1	7	0	0	6	40	1	7	0	0	7	7
20	Munger	7	1.87	3.03	0.65	3.68	1	14	2	29	0	0	2	29	2	29	0	0	3	4
21	Muzaffarpur	15	0.2	3.3	0.46	0.46	8	53	6	40	0	0	1	7	0	0	0	0	14	1
22	Nalanda	28	0.25	6.43	0.52	1.11	9	32	10	36	7	25	2	7	0	0	0	0	26	2
23	Nawada	7	1.28	6.29	-	-	1	14	2	29	4	57	0	0	0	0	0	0	7	0
24	W Champaran	10	0.65	3.32	0.36	0.36	6	60	3	30	0	0	1	10	0	0	0	0	9	1
25	Patna	16	0.02	4.7	0.79	1.29	11	69	0	0	2	13	3	19	0	0	0	0	13	3
26	E Champaran	21	0.31	2.28	0.4	1.46	15	71	3	14	0	0	3	14	0	0	0	0	18	3
27	Purnia	9	0.39	0.39	0.14	3.07	1	11	0	0	0	0	7	78	1	11	0	0	1	8
28	Rohtas	16	0.14	3.61	0.02	7.18	3	19	1	6	0	0	10	63	1	6	1	6	4	12
29	Saharsa	10	0.06	1.5	0.06	0.42	5	50	0	0	0	0	4	40	0	0	0	0	5	4
30	Samastipur	11	0.46	4.77	-	-	8	73	1	9	2	18	0	0	0	0	0	0	11	0
31	Saran	12	0.08	2.84	1.38	2.1	9	75	1	8	0	0	1	8	1	8	0	0	10	2
32	Seikhpura	6	1.41	7.95	-	-	1	17	3	50	2	33	0	0	0	0	0	0	6	0
33	Sheohar	1	0.29	0.29	-	-	1	100	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	7	0.9	2.62	-	-	6	86	1	14	0	0	0	0	0	0	0	0	7	0
35	Siwan	10	0.08	2.26	0.01	0.2	5	50	1	10	0	0	4	40	0	0	0	0	6	4
36	Supaul	15	0.06	1.81	0.01	1.38	8	53	0	0	0	0	7	47	0	0	0	0	8	7
37	Vaishali	7	0.33	1.47	0.18	2.25	3	43	0	0	0	0	3	43	1	14	0	0	3	4
	<b>Total</b>	<b>367</b>	<b>0.02</b>	<b>7.95</b>	<b>0.01</b>	<b>7.18</b>	<b>157</b>	<b>43</b>	<b>50</b>	<b>14</b>	<b>21</b>	<b>6</b>	<b>122</b>	<b>33</b>	<b>13</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>228</b>	<b>137</b>



### 3.3.3 November 2013 to November 2014

Water level fluctuation between November 2013 and November 2014 has been analysed for 376 HNS, which indicates that there is a rise of water level in about 47% of the HNS and fall in about 53% of the HNS. The rise of water level spread in almost entire States whereas patches of the segment of 2 to 4 m rise has been observed in E Champaran, Muzaffarpur, Samastipur, Patna, Jehanabad, Nalanda and at many localised area. Only 7 wells have shown rise of water level more than 4 m located in Banka, Muzaffarpur, Nalanda and Shiekhpora district.

About 30 % area of the State which covers a major area in south-western part and many other place in the State as patches has shown the fall of water level upto 2 m . The range of 2 to 4 m fall has been observed in total 4% area of the State shown in Bhojpur, Kaimur, Aurangabad, Muzaffarpur, Bhagalpur, Munger and in many localised area. Only 04 wells have shown fall of water level more than 4 m located in Aurangabad, Kaimur, Bhagalpur and Munger district. **(Fig. 13, Table 14).**



**Fig. 13:** Fluctuation in ground water level between Nov 2013 and Nov. 2014.

Table – 14 District-wise categorization of fluctuation and their frequency of water levels of HNS of November 2014 w.r.t. November 2013 for Bihar State

SN	District Name	No of Wells	Range of Fluctuation (m)				No. of wells/Percentage Showing Fluctuation												Total No. of Wells	
			Rise		Fall		Rise						Fall							
			Min	Max	Min	Max	0-2m	%	2-4m	%	> 4	%	0-2m	%	2-4m	%	> 4	%	Rise	Fall
1	Araria	3	0.51	0.51	0.04	0.04	1	33	0	0	0	0	2	67	0	0	0	0	1	2
2	Aurangabad	12	0.14	2.26	0.41	5.51	2	17	1	8	0	0	7	58	1	8	1	8	3	9
3	Banka	11	0.61	4.24	0.07	0.93	3	27	0	0	1	9	7	64	0	0	0	0	4	7
4	Begusarai	15	0.36	3.96	0.4	1.96	8	53	4	27	0	0	3	20	0	0	0	0	12	3
5	Bhagalpur	10	0.25	0.42	0.37	5.15	2	20	0	0	0	0	6	60	1	10	1	10	2	8
6	Bhojpur	8	0.1	0.1	0.24	2.75	1	13	0	0	0	0	4	50	3	38	0	0	1	7
7	Buxar	6	-	-	0.27	2.18	0	0	0	0	0	0	5	83	1	17	0	0	0	6
8	Darbhanga	5	0.49	0.93	0.5	1.16	3	60	0	0	0	0	2	40	0	0	0	0	3	2
9	Gaya	6	1.07	1.9	0.1	0.26	2	33	0	0	0	0	4	67	0	0	0	0	2	4
10	Gopalganj	11	0.45	2.05	0.1	2.28	4	36	1	9	0	0	5	45	1	9	0	0	5	6
11	Jamui	10	0.02	1.38	0.67	2.69	4	40	0	0	0	0	4	40	2	20	0	0	4	6
12	Jehanabad	7	0.93	2.6	0.01	1.02	1	14	1	14	0	0	5	71	0	0	0	0	2	5
13	Kaimur	7	-	-	0.26	4.72	0	0	0	0	0	0	4	57	2	29	1	14	0	7
14	Katihar	14	0.23	1.22	0.17	1.02	5	36	0	0	0	0	9	64	0	0	0	0	5	9
15	Khagaria	13	0.11	1.99	0.18	1.57	7	54	0	0	0	0	6	46	0	0	0	0	7	6
16	Kishanganj	3	0.21	0.21	0.17	0.39	1	33	0	0	0	0	2	67	0	0	0	0	1	2
17	Lakhisarai	2	-	-	1.01	1.11	0	0	0	0	0	0	2	100	0	0	0	0	0	2
18	Madhepura	7	0.2	1.4	0.36	0.53	4	57	0	0	0	0	3	43	0	0	0	0	4	3
19	Madhubani	14	0.18	3.14	0.22	0.22	12	86	1	7	0	0	1	7	0	0	0	0	13	1
20	Munger	10	0.26	2.94	0.15	6.48	2	20	1	10	0	0	5	50	1	10	1	10	3	7
21	Muzaffarpur	17	0.28	4.18	0.05	2.46	6	35	1	6	1	6	8	47	1	6	0	0	8	9
22	Nalanda	27	0.04	4.48	0.07	3.51	11	41	3	11	3	11	9	33	1	4	0	0	17	10
23	Nawada	7	0.26	1.78	0.12	1.72	4	57	0	0	0	0	3	43	0	0	0	0	4	3
24	W Champaran	10	0.05	2.31	0.15	0.7	6	60	1	10	0	0	3	30	0	0	0	0	7	3
25	Patna	17	0.05	3.78	0.22	1.65	4	24	1	6	0	0	12	71	0	0	0	0	5	12
26	E Champaran	21	0.04	1.07	0.06	2.45	12	57	0	0	0	0	8	38	1	5	0	0	12	9
27	Purnia	7	0.18	0.69	0.39	1.07	2	29	0	0	0	0	5	71	0	0	0	0	2	5
28	Rohtas	16	0.18	2.05	0.3	2.61	6	38	1	6	0	0	7	44	2	13	0	0	7	9
29	Saharsa	11	0.13	2.63	0.01	0.77	4	36	1	9	0	0	6	55	0	0	0	0	5	6
30	Samastipur	10	0.03	2.92	0.08	2.38	5	50	1	10	0	0	3	30	1	10	0	0	6	4
31	Saran	13	0.22	1.84	0.14	3.09	5	38	0	0	0	0	6	46	2	15	0	0	5	8
32	Seikhpura	6	0.43	6.73	-	-	2	33	2	33	2	#	0	0	0	0	0	0	6	0
33	Sheohar	1	0.63	0.63	-	-	1	100	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	6	0.49	1.57	-	-	6	100	0	0	0	0	0	0	0	0	0	0	6	0
35	Siwan	12	0.01	0.33	0.4	1.45	4	33	0	0	0	0	8	67	0	0	0	0	4	8
36	Supaul	14	0.09	0.72	0.05	1.08	7	50	0	0	0	0	7	50	0	0	0	0	7	7
37	Vaishali	7	0.77	1.02	0.16	1.2	2	29	0	0	0	0	5	71	0	0	0	0	2	5
	<b>Total</b>	<b>376</b>	<b>1.07</b>	<b>0.10</b>	<b>0.00</b>	<b>6.48</b>	<b>149</b>	<b>40</b>	<b>20</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>176</b>	<b>47</b>	<b>20</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>176</b>	<b>200</b>

### 3.3.4 January 2014 to January 2015

Water level fluctuation between January 2014 and January 2015 has been analysed for 458 HNS. The rise of water level ranged from 0.01 to 4.95 m has been observed in 233 wells (51%) whereas the fall in water level was between 0.00 and 5.12m noticed in 221 Well (49%). The rise to the tune of 0 to 2 m has been shown in 52% area of the State spread in almost entire State. The segment of 2 to 4 m rise is observed in localised area in part Rohtas, Jehanabad, Nalanda, Sheikhpura, Saran, Sitamarhi, Samastipur, Bhagalpur and Jamui district. Only 6 well located Jamui, Munger, Nalanda, Sheikhpura and Sitamarhi district have shown water level rise more than 4m.

The fall in the range of 0 – 2 m, 2 – 4 m and > 4m has been observed in 46%, 2 % and 1% of HNS respectively. The fall ranged from 0 to 2 m is has been observed as patches in almost every part of the State. The segment of 2 to 4 m fall has been calculated for only 07 wells and covered the part of Bhagalpur, Munger, Kaimur and Bhojpur district. Only 04 wells analysed have shown fall of water level more than 4 m located in Aurangabad, Bhojpur and Kaimur district. (Fig. 14, Table 15).

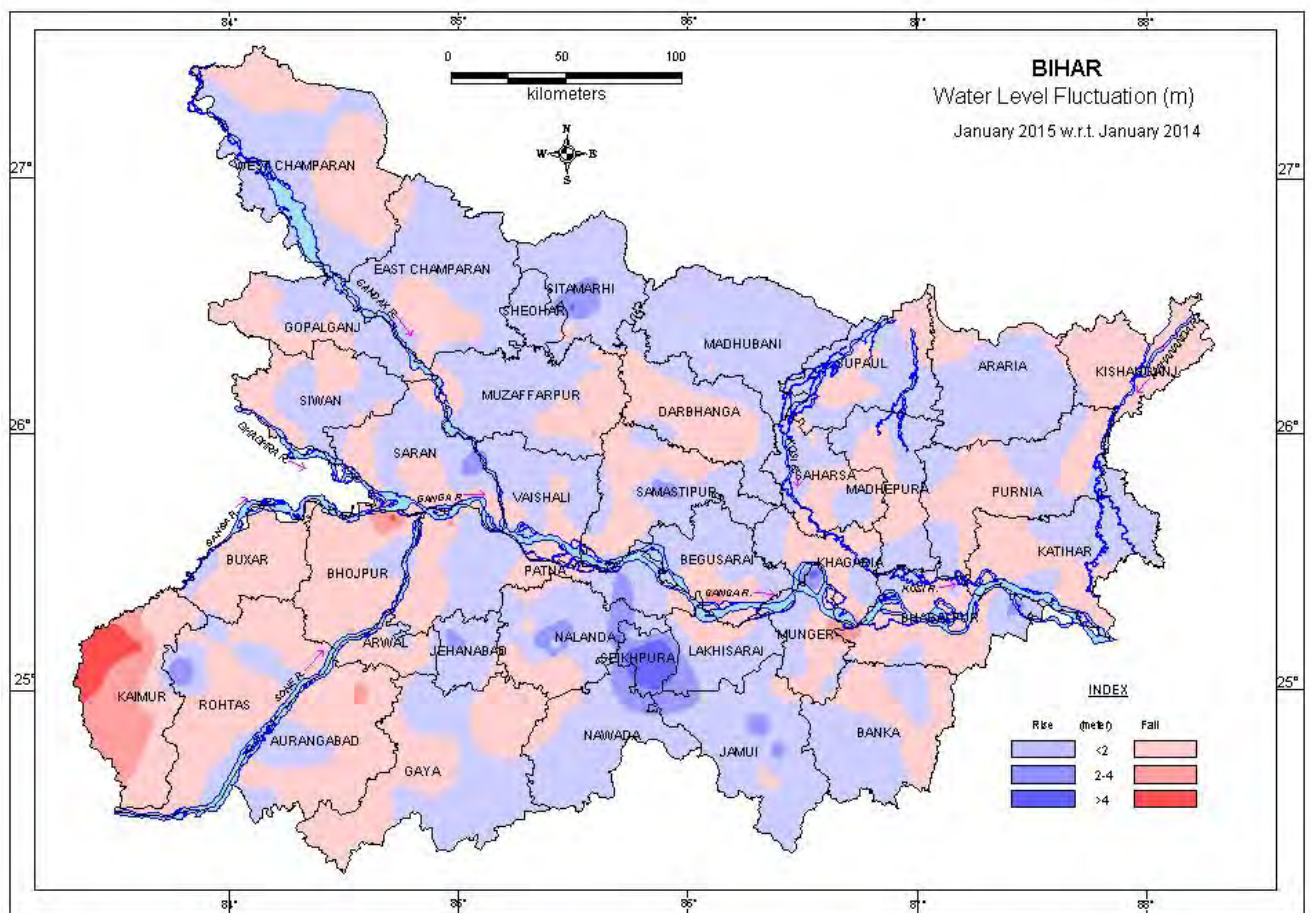


Fig. 14: Fluctuation in ground water level between Jan. 2015 and Jan. 2014.

Table – 12 District-wise categorization of fluctuation and their frequency of water levels of HNS of January 2015 w.r.t. January 2014 for Bihar State

SN	District	No. of Analysed wells	Range of fluctuation (m)				No. of Wells / Percentage showing fluctuation										Total Wells			
			Rise		Fall		Rise				Fall						Rise	Fall		
			Min.	Max.	Min.	Max.	<2m	%	2-4m	%	>4m	%	<2m	%	2-4m	%			>4m	%
1	Araria	5	0.24	0.96	0.02	0.04	3	60	0	0	0	0	2	40	0	0	0	0	3	2
2	Aurangabad	13	0.03	1.59	0.04	4.3	4	31	0	0	0	0	8	62	0	0	1	8	4	9
3	Banka	12	0.03	1.44	0.01	0.68	6	50	0	0	0	0	6	50	0	0	0	0	6	6
4	Begusarai	15	0.18	1.65	0.51	2.43	10	67	0	0	0	0	4	27	1	7	0	0	10	5
5	Bhagalpur	14	0.08	2.61	0.03	3.79	4	29	1	7	0	0	8	57	1	7	0	0	5	9
6	Bhojpur	8	0.33	0.98	0.75	4.39	2	25	0	0	0	0	5	63	0	0	1	13	2	6
7	Buxar	6	1.15	1.15	0.35	1.6	1	17	0	0	0	0	5	83	0	0	0	0	1	5
8	Darbhanga	8	0.06	1.08	0.02	1.36	3	38	0	0	0	0	5	63	0	0	0	0	3	5
9	Gaya	11	0.02	1.18	0.23	0.9	8	73	0	0	0	0	3	27	0	0	0	0	8	3
10	Gopalganj	14	0.01	1.91	0.07	0.96	4	29	0	0	0	0	10	71	0	0	0	0	4	10
11	Jamui	13	0.32	4.77	0.42	1.56	9	69	1	8	1	8	2	15	0	0	0	0	11	2
12	Jehanabad	11	0.05	3.6	0.07	1.53	6	55	2	18	0	0	3	27	0	0	0	0	8	3
13	Kaimur	7	-	-	0.01	5.12	0	0	0	0	0	0	2	29	3	43	2	29	0	7
14	Katihar	16	0.17	0.64	0.14	1.92	3	19	0	0	0	0	12	75	0	0	0	0	3	12
15	Khagaria	13	0.26	1.63	0.14	1.03	3	23	0	0	0	0	10	77	0	0	0	0	3	10
16	Kishanganj	4	-	-	0.21	0.77	0	0	0	0	0	0	4	100	0	0	0	0	0	4
17	Lakhisarai	1	-	-	0.43	0.43	0	0	0	0	0	0	1	100	0	0	0	0	0	1
18	Madhepura	8	0.17	1.98	0.15	0.41	3	38	0	0	0	0	4	50	0	0	0	0	3	4
19	Madhubani	21	0.01	1.84	0.06	1.05	19	90	0	0	0	0	2	10	0	0	0	0	19	2
20	Munger	9	0.2	4.95	0.01	1.47	5	56	0	0	1	11	3	33	0	0	0	0	6	3
21	Muzaffarpur	21	0.1	2.02	0.02	2.2	12	57	1	5	0	0	7	33	1	5	0	0	13	8
22	Nalanda	31	0.05	4.57	0.09	1.87	13	42	5	16	2	6	11	35	0	0	0	0	20	11
23	Nawada	8	0.05	1.66	0.15	0.26	6	75	0	0	0	0	2	25	0	0	0	0	6	2
24	W Champaran	11	0.01	0.82	0.01	1.64	3	27	0	0	0	0	6	55	0	0	0	0	3	6
25	Patna	19	0.09	2.04	0.12	2.47	6	32	1	5	0	0	11	58	1	5	0	0	7	12
26	E Champaran	16	0.06	1.27	0.12	0.92	11	69	0	0	0	0	5	31	0	0	0	0	11	5
27	Purnia	12	0.01	0.22	0.09	0.52	3	25	0	0	0	0	9	75	0	0	0	0	3	9
28	Rohtas	17	0.02	3.79	0.02	1.9	6	35	1	6	0	0	10	59	0	0	0	0	7	10
29	Saharsa	11	0.06	1.09	0.03	0.98	5	45	0	0	0	0	6	55	0	0	0	0	5	6
30	Samastipur	14	0.03	3.16	0.39	1.7	5	36	4	29	0	0	5	36	0	0	0	0	9	5
31	Saran	25	0.09	3.27	0.07	1	10	40	1	4	0	0	14	56	0	0	0	0	11	14
32	Seikhpura	6	0.2	6.9	-	-	3	50	2	33	1	17	0	0	0	0	0	0	6	0
33	Sheohar	2	0.68	0.74	-	-	2	100	0	0	0	0	0	0	0	0	0	0	2	0
34	Sitamarhi	7	0.84	4.36	0.54	0.54	5	71	0	0	1	14	1	14	0	0	0	0	6	1
35	Siwan	16	0.18	1.35	0.15	1.12	7	44	0	0	0	0	9	56	0	0	0	0	7	9
36	Supaul	20	0.14	1.77	0.01	1.79	10	50	0	0	0	0	10	50	0	0	0	0	10	10
37	Vaishali	13	0.02	1.57	0.1	1.79	8	62	0	0	0	0	5	38	0	0	0	0	8	5
	<b>Total</b>	458	0.01	4.95	0.00	5.12	208	45	19	4	6	1	210	46	7	2	4	1	233	221



### 3.4 DECADAL FLUCTUATION

#### 3.4.1 Decadal Mean of May to May 2014

Fluctuation in water level of May 2014 with respect to decadal mean of May has been analysed for 360 HNS, which indicates rise in 61% and rise in the remaining 39% of the analysed HNS. The rise in the tune of 0 – 2 m is observed in the 54% of the HNS analysed, spatially covers the 61% area of the State and occurs in the major and almost every part of the State. In only 10 HNS located in Bhagalpur, Bhojpur, Buxar, Jamui, Kaimur, Katihar, Patna Rohtas and Saran has shown rise in the tune of 2-4 m. About 4% area including the part of Siwan, Bhojpur, Patna, Aurangabad, Gaya, Nawada, Sheikhpur, Jamui, Munger Banka has recorded rise more than 4m.

About 33% area of the State has shown fall in water level less than 2 m whereas the segment of 2 – 4 m observed in only 2% area of the State covered the part of Samastipur, Kaimur, Jamui and Bhagalpur district . Only one well located in Bhagalpur district has shown fall in water level more than 4m. (Fig. 15, Table 16).

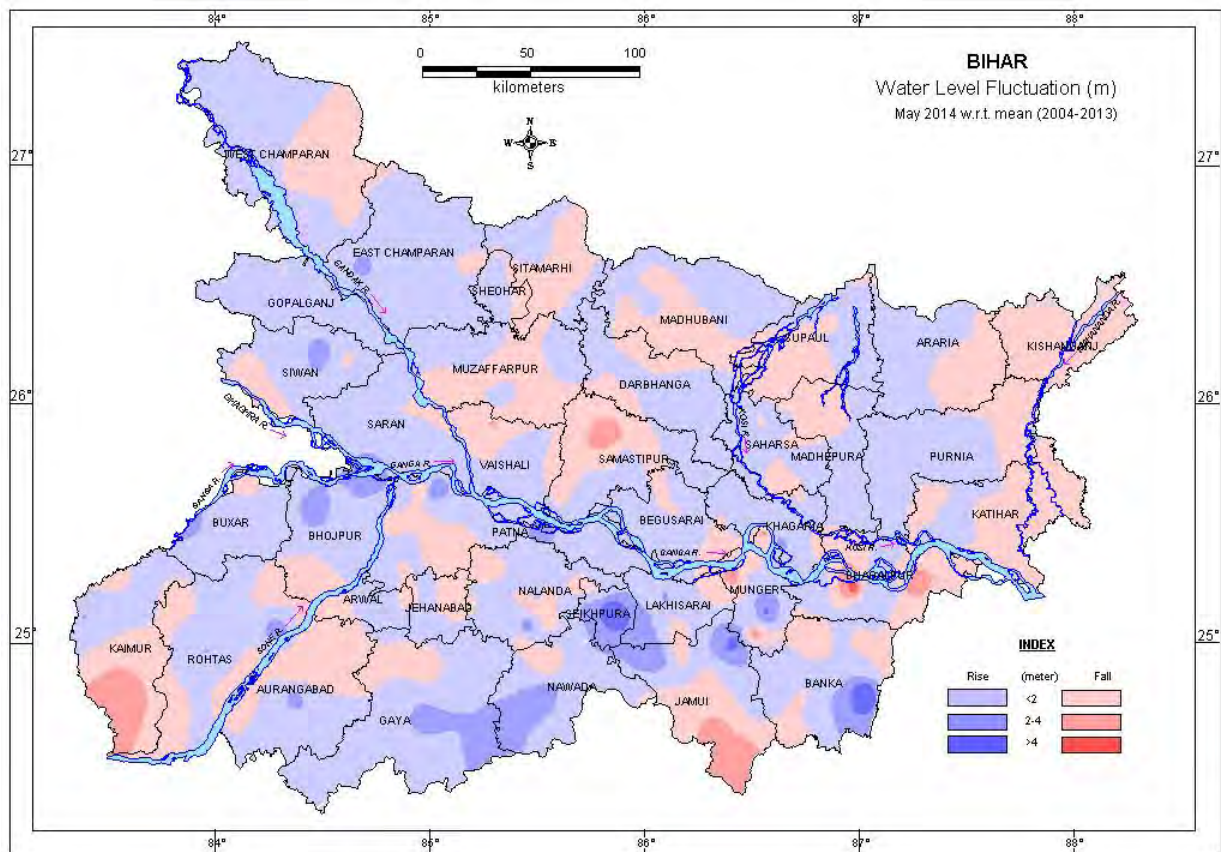


Fig. 15 Fluctuation in water level between May (mean) and May 2014.

Table – 16 District-wise categorization of fluctuation and their frequency of water levels of HNS of <b>May 2014 w.r.t. May mean (2004-2013)</b> for Bihar State																				
SN	District Name	No. of well analysed	Range of fluctuation (m)				No. of well/percentage showing fluctuation												Total No. of well	
			Rise (m)		Fall (m)		Rise				Fall								Rise	Fall
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m	%	> 4m	%		
1	Araria	4	0.61	1.06	0.29	1.05	2	50	0	0	0	0	2	50	0	0	0	0	2	2
2	Aurangabad	9	0.89	2.59	0.33	2.02	4	44	1	11	0	0	3	33	1	11	0	0	5	4
3	Banka	11	0.2	5.08	0.16	0.68	4	36	0	0	1	9	6	55	0	0	0	0	5	6
4	Begusarai	15	0.09	1.81	0.23	1.01	10	67	0	0	0	0	4	27	0	0	0	0	10	4
5	Bhagalpur	12	0.18	1.73	0.06	5.06	8	67	0	0	0	0	2	17	1	8	1	8	8	4
6	Bhojpur	8	0.82	3.48	0.53	0.53	5	63	2	25	0	0	1	13	0	0	0	0	7	1
7	Buxar	5	0.32	2.79	0.35	0.35	3	60	1	20	0	0	1	20	0	0	0	0	4	1
8	Darbhanga	6	0.26	0.88	0.31	0.98	4	67	0	0	0	0	2	33	0	0	0	0	4	2
9	Gaya	7	0.61	2.92	0.71	0.71	3	43	2	29	0	0	1	14	0	0	0	0	5	1
10	Gopalgani	11	0.24	1.75	0	0.08	8	73	0	0	0	0	3	27	0	0	0	0	8	3
11	Jamui	10	0.28	4.68	0.21	3.12	2	20	1	10	1	10	4	40	2	20	0	0	4	6
12	Jehanabad	8	0.14	2.13	0.89	1.38	5	63	1	13	0	0	2	25	0	0	0	0	6	2
13	Kaimur	7	0.17	2.04	0.65	3.04	3	43	1	14	0	0	2	29	1	14	0	0	4	3
14	Katihar	15	0.05	1.88	0.09	1.37	4	27	0	0	0	0	10	67	0	0	0	0	4	10
15	Khagaria	11	0.15	2.75	0.06	0.17	8	73	1	9	0	0	2	18	0	0	0	0	9	2
16	Kishanganj	3	-	-	0.13	1.03	0	0	0	0	0	0	3	100	0	0	0	0	0	3
17	Lakhisarai	3	0.74	2.31	0.01	0.01	1	33	1	33	0	0	1	33	0	0	0	0	2	1
18	Madhepura	7	0.33	0.97	0.75	1.47	5	71	0	0	0	0	2	29	0	0	0	0	5	2
19	Madhubani	13	0.13	0.72	0.08	1.19	6	46	0	0	0	0	7	54	0	0	0	0	6	7
20	Munger	9	0.87	4.4	0.32	2.97	3	33	0	0	1	11	2	22	3	33	0	0	4	5
21	Muzaffarpur	13	0.08	1.86	0.24	0.82	6	46	0	0	0	0	7	54	0	0	0	0	6	7
22	Nalanda	27	0.01	3.24	0.14	1.9	16	59	2	7	0	0	9	33	0	0	0	0	18	9
23	Nawada	7	0.39	2.72	1.46	1.46	5	71	1	14	0	0	1	14	0	0	0	0	6	1
24	W Champaran	6	0.49	1.45	0.45	0.56	4	67	0	0	0	0	2	33	0	0	0	0	4	2
25	Patna	20	0.14	3.37	0.03	1.56	10	50	2	10	0	0	7	35	0	0	0	0	12	7
26	E Champaran	15	0.38	3.11	0.03	0.23	11	73	1	7	0	0	2	13	0	0	0	0	12	2
27	Purnia	8	0.07	0.84	0.02	0.62	5	63	0	0	0	0	3	38	0	0	0	0	5	3
28	Rohtas	13	0.1	3.06	0.03	2.03	6	46	2	15	0	0	4	31	1	8	0	0	8	5
29	Saharsa	11	0.35	0.99	0.08	0.67	7	64	0	0	0	0	4	36	0	0	0	0	7	4
30	Samastipur	10	0.56	1.34	0.17	2.7	3	30	0	0	0	0	6	60	1	10	0	0	3	7
31	Saran	13	0.15	3.64	0.02	0.02	10	77	1	8	0	0	2	15	0	0	0	0	11	2
32	Seikhpura	5	0.03	5.26	0.44	0.81	1	20	0	0	1	20	3	60	0	0	0	0	2	3
33	Sheohar	1	0.33	0.33	-	-	1	100	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	7	0.02	1.18	0.07	0.55	3	43	0	0	0	0	4	57	0	0	0	0	3	4
35	Siwan	10	0.06	3.39	0.18	1.17	7	70	1	10	0	0	2	20	0	0	0	0	8	2
36	Supaul	13	0.06	0.59	0.03	1.22	6	46	0	0	0	0	7	54	0	0	0	0	6	7
37	Vaishali	7	0.16	1.06	0.19	2.09	4	57	0	0	0	0	1	14	2	29	0	0	4	3
	<b>Total</b>	<b>360</b>	<b>0.33</b>	<b>0.89</b>	<b>0.00</b>	<b>5.06</b>	<b>193</b>	<b>54</b>	<b>21</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>124</b>	<b>34</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>218</b>	<b>137</b>

### 3.4.2 Decadal Mean of August to August 2014

Fluctuation in water level of August 2014 with respect to decadal mean of August has been analysed for 393 HNS, which shows rise in water level in the 66% of HNS and fall in the remaining 34% of HNS. The rise in the range of 0 – 2 m has been observed in 53% of the HNS, spatially covers the major area in NBP and localised area in SBP. The range of 2 to 4 m rise has been recorded in the central part of SBP and as patches at many locations. Total 10 well including 7 well located in Nalnda district has shown rise in water level more than 4m.

About 31 % area of the State has shown fall of water level in the range of 0 to 2m covering the area in northwestern part and southwestern part of the State also observed as patches at many locations. The range of 2 – 4 m has been observed as patches in about 3% area of the State including the part of Kaimur, Rohtas, Bhagalpur, Katihar and Purnia district. The fall of water level more than 4m has been recorded only in one wells located in Bhagalpur district. (Fig. 16, Table 17).

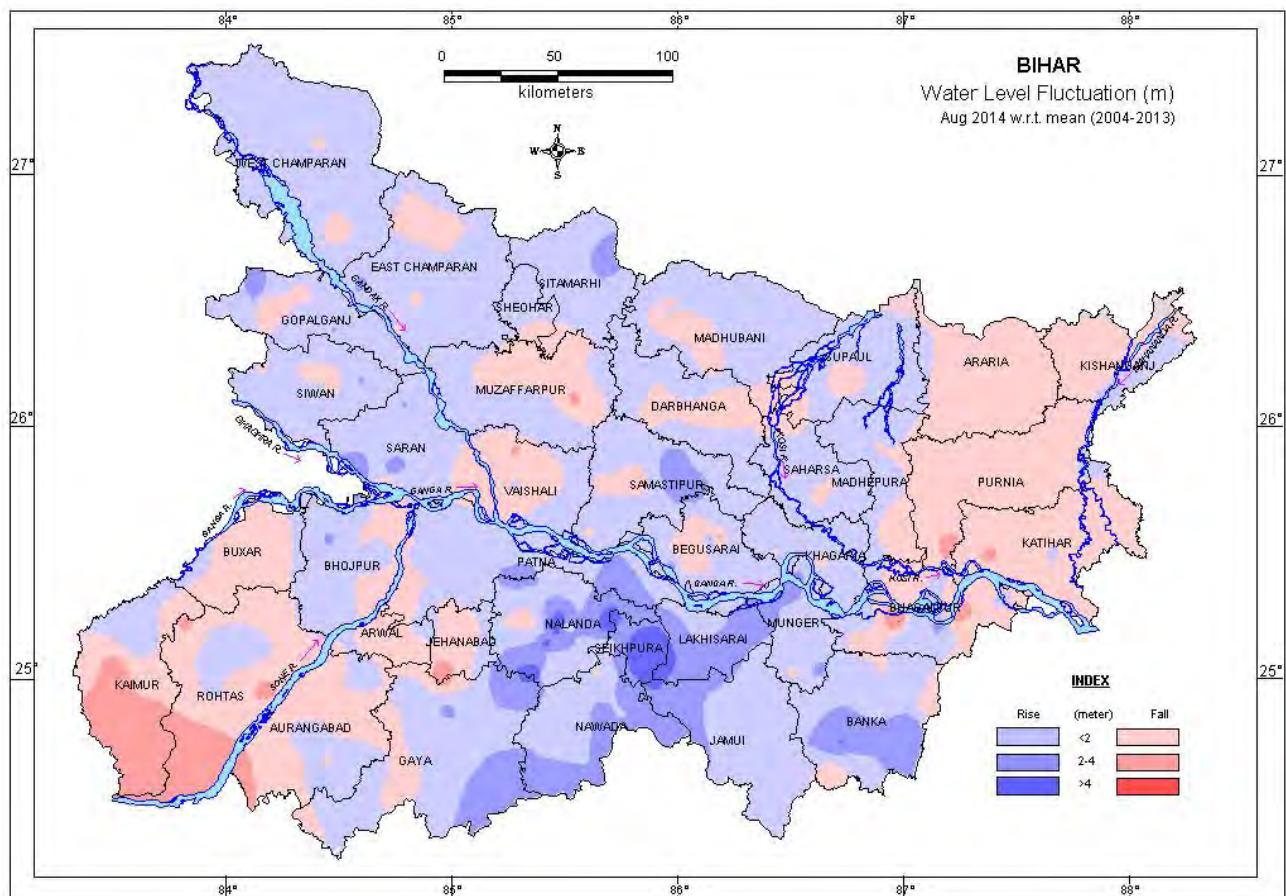


Fig. 16 Fluctuation in water level between Aug. (mean) and Aug. 2014

**Table – 17 District-wise categorization of fluctuation and their frequency of water levels of HNS of Aug. 2014 w.r.t. Aug. mean (2004-2013) for Bihar State**

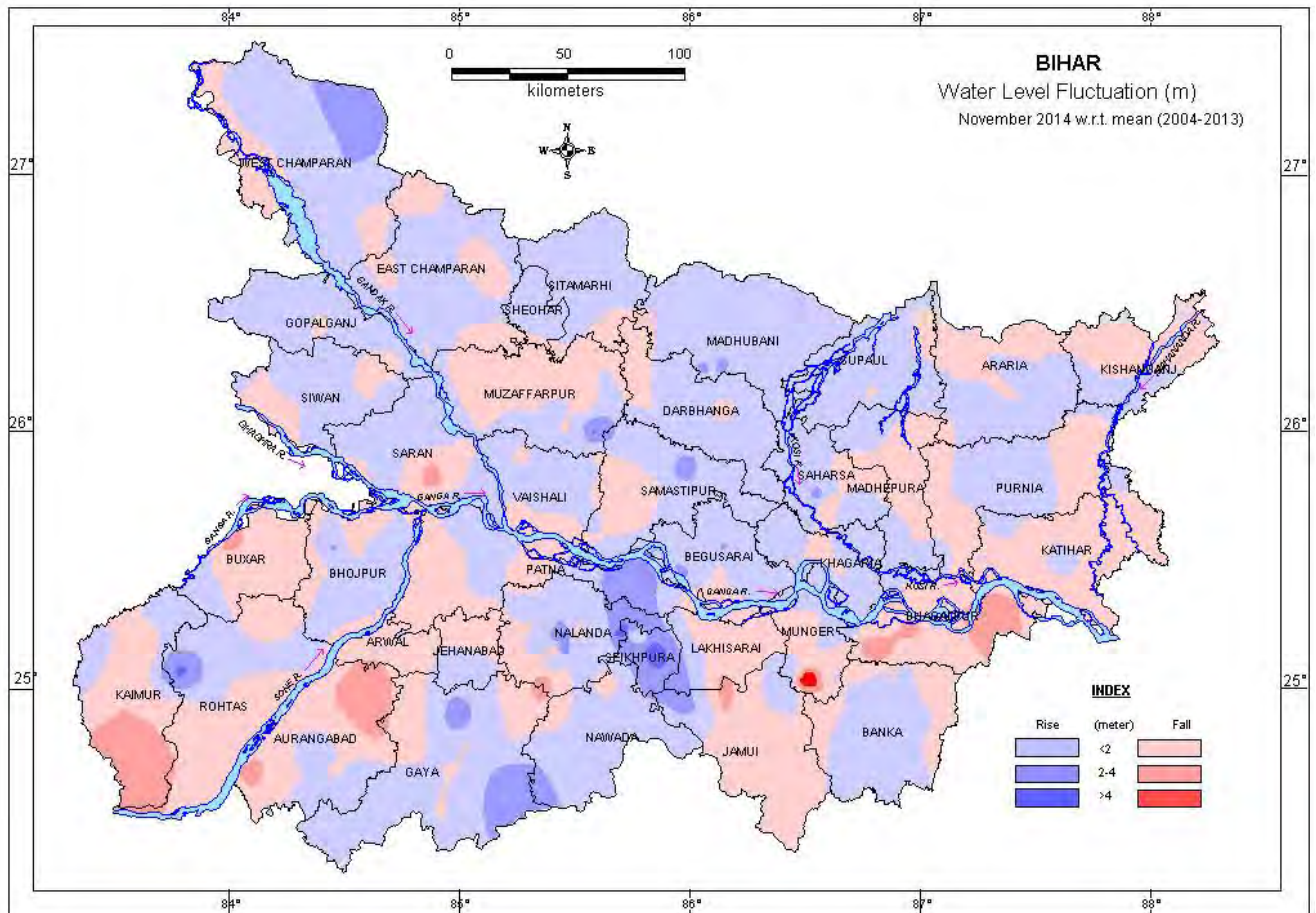
SN	District Name	No. of well analysed	Range of fluctuation (m)				No. of well/percentage showing fluctuation												Total No. of well			
			Rise (m)		Fall (m)		Rise						Fall									
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m	%	> 4m	%	Rise	Fall		
1	Araria	4	-	-	0.45	0.81	0	0	0	0	0	0	4	100	0	0	0	0	0	0	4	4
2	Aurangabad	8	0.22	1.65	0.3	1.39	4	50	0	0	0	0	4	50	0	0	0	0	0	0	4	4
3	Banka	11	0.12	4.13	0.49	1.22	6	55	1	9	1	9	3	27	0	0	0	0	0	0	8	3
4	Begusarai	16	0.07	3.25	0.02	2.68	8	50	2	13	0	0	5	31	1	6	0	0	0	0	10	6
5	Bhagalpur	12	0.33	2.27	0.46	4.08	7	58	1	8	0	0	2	17	1	8	1	8	1	8	8	4
6	Bhojpur	9	0.17	2.25	0.55	0.81	5	56	1	11	0	0	3	33	0	0	0	0	0	0	6	3
7	Buxar	6	0.04	0.85	0.08	1.65	2	33	0	0	0	0	4	67	0	0	0	0	0	0	2	4
8	Darbhanga	7	0.32	1.33	0.05	0.4	4	57	0	0	0	0	3	43	0	0	0	0	0	0	4	3
9	Gaya	10	0.02	2.97	0.48	2.82	6	60	2	20	0	0	1	10	1	10	0	0	0	0	8	2
10	Gopalganj	11	0.07	2.38	0.17	1.39	7	64	2	18	0	0	2	18	0	0	0	0	0	0	9	2
11	Jamui	9	0.08	2.7	-	-	7	78	2	22	0	0	0	0	0	0	0	0	0	0	9	0
12	Jehanabad & Arwal	6	1.08	1.08	0.45	1.78	1	17	0	0	0	0	5	83	0	0	0	0	0	0	1	5
13	Kaimur	8	0.1	1.82	0.44	3.42	4	50	0	0	0	0	2	25	2	25	0	0	0	0	4	4
14	Katihar	14	0.19	0.53	0.02	2.36	3	21	0	0	0	0	10	71	1	7	0	0	0	0	3	11
15	Khagaria	13	0.05	1.63	0.61	0.88	10	77	0	0	0	0	3	23	0	0	0	0	0	0	10	3
16	Kishanganj	3	0.29	0.42	1.23	1.23	2	67	0	0	0	0	1	33	0	0	0	0	0	0	2	1
17	Lakhisarai	3	0.97	3.44	-	-	1	33	2	67	0	0	0	0	0	0	0	0	0	0	3	0
18	Madhepura	7	0.17	0.44	0.12	0.64	3	43	0	0	0	0	4	57	0	0	0	0	0	0	3	4
19	Madhubani	16	0.11	1.71	0.1	1.45	9	56	0	0	0	0	6	38	0	0	0	0	0	0	9	6
20	Munger	9	0.16	2.59	0.29	0.29	5	56	3	33	0	0	1	11	0	0	0	0	0	0	8	1
21	Muzaffarpur	19	0.21	2.13	0.12	2.37	12	63	1	5	0	0	5	26	1	5	0	0	0	0	13	6
22	Nalanda	28	0.14	6.43	0.04	1.96	9	32	8	29	7	25	4	14	0	0	0	0	0	0	24	4
23	Nawada	7	0.79	3.64	0.24	0.24	3	43	3	43	0	0	1	14	0	0	0	0	0	0	6	1
24	W Champaran	10	0.15	1.95	0.36	0.5	8	80	0	0	0	0	2	20	0	0	0	0	0	0	8	2
25	Patna	17	0.02	2.96	0.16	1.29	12	71	2	12	0	0	3	18	0	0	0	0	0	0	14	3
26	E Champaran	23	0.05	2.38	0.04	1.46	17	74	1	4	0	0	5	22	0	0	0	0	0	0	18	5
27	Purnia	9	0.05	0.1	0.01	3.07	2	22	0	0	0	0	6	67	1	11	0	0	0	0	2	7
28	Rohtas	17	0.69	1.69	0.02	3.59	3	18	0	0	0	0	11	65	3	18	0	0	0	0	3	14
29	Saharsa	10	0.03	1.5	0.07	0.81	7	70	0	0	0	0	2	20	0	0	0	0	0	0	7	2
30	Samastipur	11	0.12	3.99	0.03	1.68	6	55	2	18	0	0	3	27	0	0	0	0	0	0	8	3
31	Saran	13	0.11	3.98	0.21	1.63	7	54	3	23	0	0	3	23	0	0	0	0	0	0	10	3
32	Seikhpura	6	1.41	7.27	-	-	2	33	2	33	2	33	0	0	0	0	0	0	0	0	6	0
33	Sheohar	1	0.1	0.1	-	-	1	100	0	0	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	7	0.01	2.78	-	-	6	86	1	14	0	0	0	0	0	0	0	0	0	0	7	0
35	Siwan	11	0.02	2.26	0.07	0.31	7	64	1	9	0	0	3	27	0	0	0	0	0	0	8	3
36	Supaul	15	0.09	0.77	0	0.9	9	60	0	0	0	0	6	40	0	0	0	0	0	0	9	6
37	Vaishali	7	0.16	0.7	0.2	2.25	3	43	0	0	0	0	3	43	1	14	0	0	0	0	3	4
	<b>Total</b>	<b>393</b>	<b>0.10</b>	<b>1.41</b>	<b>0.00</b>	<b>4.08</b>	<b>208</b>	<b>53</b>	<b>40</b>	<b>10</b>	<b>10</b>	<b>3</b>	<b>120</b>	<b>31</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>258</b>	<b>133</b>	



### 3.4.3 Decadal Mean of November to November 2014

Fluctuation in water level of November 2014 with respect to decadal mean of November has been analysed for 391 HNS, which shows rise in water level ranged from 0.25 to 5.99 m in 57% of the HNS and fall in the remaining 43 % of HNS. The rise in the range of 0 – 2 m, 2 – 4 m and >4m has been observed in the 50% 5% and 2% respectively. The rise up to 2m has been observed in 51% area and spread in almost every part State.

The fall is 38% and 4% of HNS in the range of 0-2 and 2-4 m respectively. The fall in water level >4 m has been observed in only two stations located in Aurangabad and Munger district. The fall of water level ranged from 0 to 2 m has been shown by 38% area of the State covers the major and bordering area of Muzaffarpur, Samastipur, Araria, Kishanganj, Purnia, Katihar, Bhagalpur, Jamui, Lakhisarai, Aurangabad, Arwal, Jehanabad, Nalanda, Rohtas, Kaimur, Buxar district and as patches at many locations. (Fig. 17, Table 18).



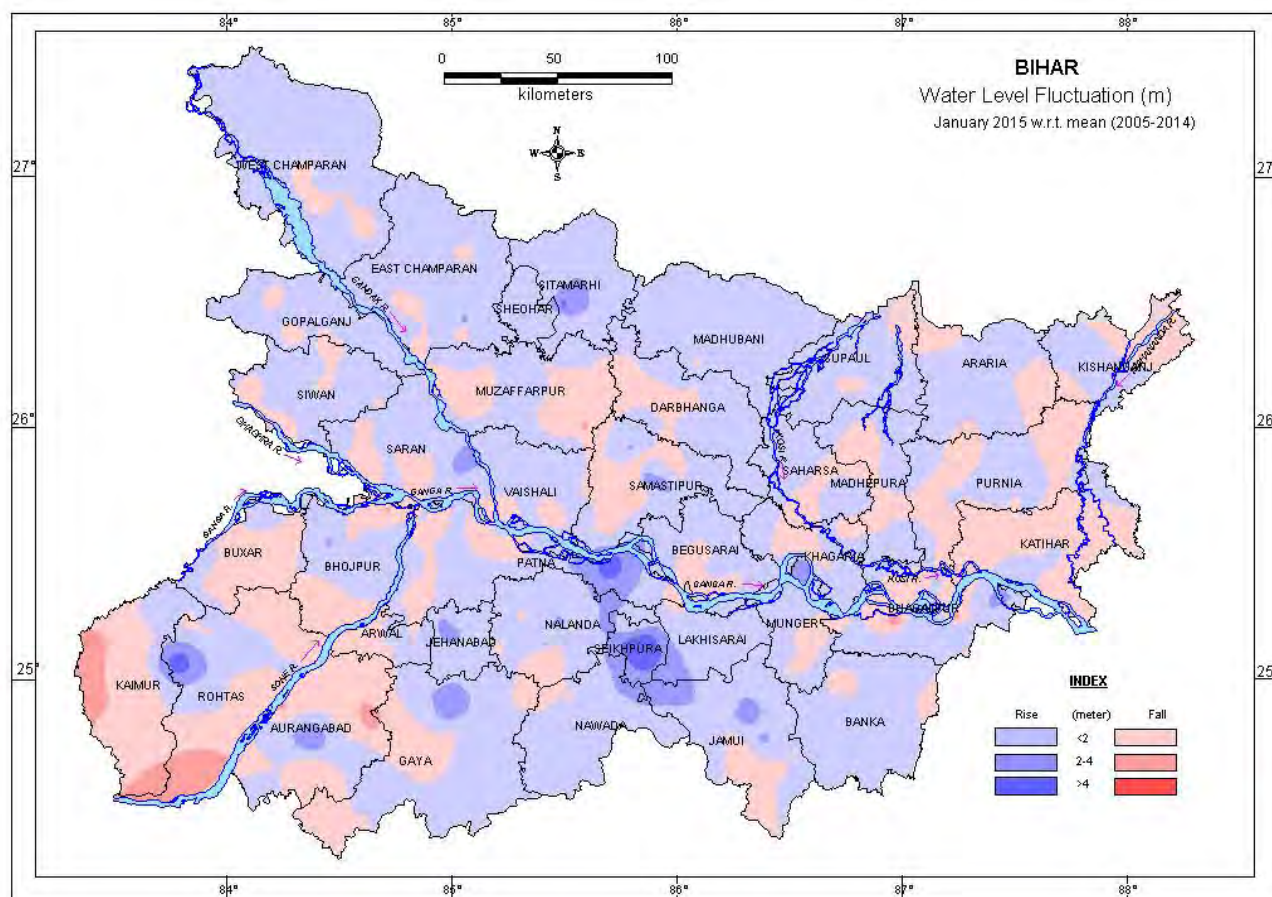
**Fig. 17** Fluctuation in water level between Nov. (mean) and Nov. 2014

Table – 18 District-wise categorization of fluctuation and their frequency of water levels of HNS of Nov. 2014 w.r.t. Nov. mean (2004-2013) for Bihar State																				
SN	District Name	No. of well analysed	Range of fluctuation (m)				No. of well/percentage showing fluctuation												Total No. of well	
			Rise (m)		Fall (m)		Rise						Fall							
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m	%	> 4m	%	Rise	Fall
1	Araria	4	0.57	0.57	0.01	0.04	1	25	0	0	0	0	3	75	0	0	0	0	1	3
2	Aurangabad	12	0.02	1.53	0.38	5.48	4	33	0	0	0	0	4	33	3	25	1	8	4	8
3	Banka	11	0.02	1.44	0.07	1.24	7	64	0	0	0	0	4	36	0	0	0	0	7	4
4	Begusarai	15	0.16	2.85	0.66	0.84	9	60	4	27	0	0	2	13	0	0	0	0	13	2
5	Bhagalpur	11	0.05	0.86	0.35	3.87	2	18	0	0	0	0	5	45	3	27	0	0	2	8
6	Bhoipur	8	0.61	2.25	0.03	2.23	4	50	1	13	0	0	2	25	1	13	0	0	5	3
7	Buxar	6	0.22	0.58	0.14	2.83	2	33	0	0	0	0	3	50	1	17	0	0	2	4
8	Darbhanga	6	0.05	1.15	0.14	0.7	4	67	0	0	0	0	2	33	0	0	0	0	4	2
9	Gava	9	0	3.22	0.06	0.17	2	22	2	22	0	0	5	56	0	0	0	0	4	5
10	Gopalgani	11	0.08	1.28	0.68	0.68	10	91	0	0	0	0	1	9	0	0	0	0	10	1
11	Jamui	10	0.11	1.59	0.45	2.69	3	30	0	0	0	0	5	50	2	20	0	0	3	7
12	Jehanabad & Arwal	7	0.17	1.06	0.39	2.15	2	29	0	0	0	0	4	57	1	14	0	0	2	5
13	Kaimur	7	0.37	1.41	0.32	2.93	2	29	0	0	0	0	3	43	2	29	0	0	2	5
14	Katihar	15	0.09	0.25	0.05	1.02	5	33	0	0	0	0	10	67	0	0	0	0	5	10
15	Khagaria	13	0.31	1.99	0.18	1.06	8	62	0	0	0	0	5	38	0	0	0	0	8	5
16	Kishanganj	3	0.39	0.39	0.17	1.93	1	33	0	0	0	0	2	67	0	0	0	0	1	2
17	Lakhisarai	2	-	-	0.29	0.34	0	0	0	0	0	0	2	100	0	0	0	0	0	2
18	Madhepura	7	0.52	1.4	0.19	0.75	3	43	0	0	0	0	4	57	0	0	0	0	3	4
19	Madhubani	15	0.18	2.66	-	-	13	87	2	13	0	0	0	0	0	0	0	0	15	0
20	Munger	10	0.13	1.43	0.11	6.48	4	40	0	0	0	0	5	50	0	0	1	10	4	6
21	Muzaffarpur	19	0.05	4.18	0.19	2.12	7	37	0	0	1	5	10	53	1	5	0	0	8	11
22	Nalanda	27	0.01	4.48	0.12	3.51	12	44	3	11	2	7	9	33	1	4	0	0	17	10
23	Nawada	7	0.1	1.44	0.75	0.75	6	86	0	0	0	0	1	14	0	0	0	0	6	1
24	W Champaran	10	0.04	3.66	0.35	0.56	6	60	1	10	0	0	3	30	0	0	0	0	7	3
25	Patna	18	0.29	3	0.22	1.65	5	28	1	6	0	0	12	67	0	0	0	0	6	12
26	E Champaran	23	0.11	1.17	0.06	2.45	15	65	0	0	0	0	7	30	1	4	0	0	15	8
27	Purnia	7	0.09	0.8	0.66	1.88	5	71	0	0	0	0	2	29	0	0	0	0	5	2
28	Rohtas	17	0.42	4.49	0.19	1.82	7	41	0	0	1	6	9	53	0	0	0	0	8	9
29	Saharsa	11	0.11	2.63	0.07	0.77	5	45	1	9	0	0	5	45	0	0	0	0	6	5
30	Samastipur	11	0.04	2.92	0.09	1.55	6	55	1	9	0	0	4	36	0	0	0	0	7	4
31	Saran	13	0.01	2.04	0.25	3.07	9	69	1	8	0	0	2	15	1	8	0	0	10	3
32	Seikhpura	6	0.46	5.99	0.21	0.21	1	17	2	33	2	33	1	17	0	0	0	0	5	1
33	Sheohar	1	0.5	0.5	-	-	1	100	0	0	0	0	0	0	0	0	0	0	1	0
34	Sitamarhi	6	0.52	1.47	-	-	6	100	0	0	0	0	0	0	0	0	0	0	6	0
35	Siwan	12	0.1	1.02	0.01	1.45	7	58	0	0	0	0	5	42	0	0	0	0	7	5
36	Supaul	14	0.06	0.72	0.14	0.82	9	64	0	0	0	0	5	36	0	0	0	0	9	5
37	Vaishali	7	0.74	1.79	0.22	0.71	4	57	0	0	0	0	3	43	0	0	0	0	4	3
	<b>Total</b>	<b>391</b>	<b>0.25</b>	<b>5.99</b>	<b>0.00</b>	<b>6.48</b>	<b>197</b>	<b>50</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>2</b>	<b>149</b>	<b>38</b>	<b>17</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>222</b>	<b>168</b>

### 3.4.4 Decadal Mean of January to January 2015

Fluctuation in water level of January 2015 with respect to decadal mean of January has been analysed for 339 HNS. In 62% of the HNS, rise in water level is recorded and remaining 38% HNS fall in water level has been observed. The rise in the range of 0 – 2 m has been spread in 25% area of the State, and covered the part of every district of Bihar. The segment of 2-4m rise constituted 3% area of the State including the part of Rohtas, Saran, Sitamarhi, Patna, Sheikhpura, Gaya and Jamui district. Total 6 wells located in Aurangabad, Jamui, Rohtas Patna, Sheohar and Sitamarhi district have shown rise in water level more than 4m.

About 29% area of the State has shown fall as patches in the tune of 0 to 2 m including the part Kaimur, Rohtas, Aurangabad, Buxar, Katihar, Kishanganj, Araria, Purnia, muzaffarpur, darbhanga, Samastipur district. The segment of 2 to 4 m fall has been observed in a localised area of Kaimur, Rohtas, Aurangabad and Bhagalpur district. No well has shown fall in water level more than 4m. (Fig. 18, Table 19).



*Fig. 18 Fluctuation in water level between Jan. (mean) and Jan. 2015*

**Table – 19** District-wise categorization of fluctuation and their frequency of water levels of HNS of **January 2015 w.r.t. January mean (2005-2014)** for Bihar State

SN	District Name	No. of well analysed	Range of fluctuation (m)				No. of well/percentage showing fluctuation												Total No. of well	
			Rise (m)		Fall (m)		Rise				Fall								Rise	Fall
			Min	Max	Min	Max	< 2m	%	2-4 m	%	> 4m	%	< 2m	%	2-4m	%	> 4m	%		
1	Araria	6	0.24	0.73	0.02	0.83	3	50	0	0	0	0	3	50	0	0	0	0	3	3
2	Aurangabad	13	0.97	4.04	0.04	2.92	3	23	0	0	1	8	6	46	3	23	0	0	4	9
3	Banka	12	0.37	1.88	0.01	0.8	9	75	0	0	0	0	3	25	0	0	0	0	9	3
4	Begusarai	15	0.18	2.08	0.27	0.78	10	67	1	7	0	0	4	27	0	0	0	0	11	4
5	Bhagalpur	14	0.18	2.66	0.26	3.32	8	57	1	7	0	0	3	21	2	14	0	0	9	5
6	Bhojpur	9	0.74	2.21	0.81	2.22	4	44	2	22	0	0	2	22	1	11	0	0	6	3
7	Buxar	6	1.39	1.55	0.11	1.03	2	33	0	0	0	0	4	67	0	0	0	0	2	4
8	Darbhanga	8	0.06	0.93	0.01	0.82	3	38	0	0	0	0	4	50	0	0	0	0	3	4
9	Gaya	12	0.04	3.95	0.04	0.93	8	67	1	8	0	0	3	25	0	0	0	0	9	3
10	Gopalgani	14	0.04	0.77	0.11	0.51	9	64	0	0	0	0	5	36	0	0	0	0	9	5
11	Jamui	13	0.03	4.77	0.02	1.56	5	38	2	15	1	8	5	38	0	0	0	0	8	5
12	Jehanabad & Arwal	11	0.17	3.6	0.28	0.55	7	64	2	18	0	0	2	18	0	0	0	0	9	2
13	Kaimur	7	1.4	1.4	0.83	2.65	1	14	0	0	0	0	5	71	1	14	0	0	1	6
14	Katihar	16	0.03	0.3	0	2.19	4	25	0	0	0	0	11	69	1	6	0	0	4	12
15	Khagaria	13	0.15	1.63	0.18	1.17	7	54	0	0	0	0	6	46	0	0	0	0	7	6
16	Kishanganj	4	0.24	0.55	0.46	1.97	2	50	0	0	0	0	2	50	0	0	0	0	2	2
17	Lakhisarai	3	0.09	1.5	-	-	3	100	0	0	0	0	0	0	0	0	0	0	3	0
18	Madhepura	8	0.09	1.98	0.06	0.84	4	50	0	0	0	0	3	38	0	0	0	0	4	3
19	Madhubani	21	0.01	2	0.92	0.92	19	90	1	5	0	0	1	5	0	0	0	0	20	1
20	Munger	9	0.42	3.21	0.22	1.42	6	67	1	11	0	0	2	22	0	0	0	0	7	2
21	Muzaffarnur	21	0.16	1.66	0.02	2.2	10	48	0	0	0	0	9	43	2	10	0	0	10	11
22	Nalanda	31	0.05	3.2	0.04	1.79	16	52	6	19	0	0	9	29	0	0	0	0	22	9
23	Nawada	8	0.11	1.44	0.26	0.26	7	88	0	0	0	0	1	13	0	0	0	0	7	1
24	W Champaran	12	0.01	1.42	0	0.46	7	58	0	0	0	0	4	33	0	0	0	0	7	4
25	Patna	21	0.03	4.83	0.24	2.19	10	48	1	5	1	5	8	38	1	5	0	0	12	9
26	E Champaran	18	0.03	2.24	0.12	0.36	12	67	1	6	0	0	5	28	0	0	0	0	13	5
27	Purnia	12	0.02	1.22	0.03	1.35	4	33	0	0	0	0	8	67	0	0	0	0	4	8
28	Rohtas	17	0.33	5.15	0.02	2.47	6	35	0	0	1	6	9	53	1	6	0	0	7	10
29	Saharsa	11	0.04	1.16	0.03	0.8	7	64	0	0	0	0	4	36	0	0	0	0	7	4
30	Samastipur	15	0.1	3.16	0.05	1.24	4	27	4	27	0	0	7	47	0	0	0	0	8	7
31	Saran	25	0.09	3.27	0.13	0.88	12	48	2	8	0	0	11	44	0	0	0	0	14	11
32	Seikhpura	6	0.2	5.59	-	-	3	50	2	33	1	17	0	0	0	0	0	0	6	0
33	Sheohar	2	0.68	1.12	-	-	2	100	0	0	0	0	0	0	0	0	0	0	2	0
34	Sitamarhi	8	0.37	4.36	-	-	7	88	0	0	1	13	0	0	0	0	0	0	8	0
35	Siwan	16	0.04	1.56	0.02	1.12	10	63	0	0	0	0	6	38	0	0	0	0	10	6
36	Supaul	20	0.05	1.77	0.02	1.06	13	65	0	0	0	0	7	35	0	0	0	0	13	7
37	Vaishali	13	0.01	1.96	0.21	1.02	10	77	0	0	0	0	3	23	0	0	0	0	10	3
<b>Total</b>		<b>470</b>	<b>0.30</b>	<b>1.40</b>	<b>0.00</b>	<b>3.32</b>	<b>257</b>	<b>55</b>	<b>27</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>165</b>	<b>35</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>290</b>	<b>177</b>

#### 4. HYDROCHEMISTRY

In order to access the chemical quality of ground water of phreatic aquifers of Bihar 424 ground water samples have been collected during May 2014. The groundwater samples have been analysed in Chemical laboratory at CGWB, MER, Patna. The chemical analysis reveals that water is mildly alkaline in nature where the mean value of pH is 7.8. pH is more than 7 in almost all the sample analysed. The Electrical conductivities indicates that the ground water is having moderate salinity with mean value of 849.31 micromoh/cm at 25oC in comparison to previous year (2013), which is 837.00 micromoh/cm at 25oC . The range of EC is 93 to 4386 micromoh/cm at 25°C. The concentration of Nitrate ions remains same in both the year (2013 & 2014) ranged from traces to 393 mg/l. The Fluoride ion concentration also remains the same from the previous year -2013. Previous year the fluoride concentration was 3.25 mg/l in Banka district which is remains same but in different location (Tinnurthy, Banka District). The water is mainly calcium-magnesium bicarbonate type.

Based on the data it can be inferred that ground water is by and large potable in nature and also suitable for irrigation purposes. In comparison to the last year (2013) there are no any major changes in chemical parameter of ground water samples has been observed. The results of the chemical analysis of the ground water samples are given in **Annexure II**.

#### 5. RAINFALL DATA ANALYSIS

The study of rainfall data indicates that Bihar received normal rainfall during the monsoon period after a deficit rainfall in the previous year and same is reflected in the unconfined aquifer. **(Table 20)**.

**Table 20:** Seasonwise actual and normal rainfall in Bihar in the year 2014

STATE	WINTER SEASON			PRE-MONSOON SEASON			MONSOON SEASON			POST MONSOON SEASON			ANNUAL 2014		
	A C T U A L	N O R M A L	% D E P	A C T U A L	N O R M A L	% D E P	A C T U A L	N O R M A L	% D E P	A C T U A L	N O R M A L	% D E P	A C T U A L	N O R M A L	% D E P
BIHAR	50.5	23	120	112.9	77.5	46	848.6	1027.6	-17	49	77.5	-37	1061	1205.6	-12

Source: <http://www.imdpune.gov.in/annual%20summary%202014.pdf>

The depth to water level during Aug' 14 revealed that 46% observation wells showed 0-2 m water level and also 46% wells analysed, showed 2-5 m depth to water level. The annual comparison indicates the rise of water level in 62% of the well, in which 52% of the wells analysed have shown rise in the range of 0-2 m. In the comparison of decadal August and August

'14 water levels, 66% of wells showed rise in water level in which the range of < 2m observed in 53% of the wells analysed.

Hence, the phreatic aquifer is in tune with the vagaries of normal rainfall.

## **6.0 TREND ANALYSIS DURING PRE AND POST MONSOON**

Trend of the ground water level for the last ten year (2005-2014) have been analyzed. District wise percentage of well showing Rise, fall or no significant trend during Pre- Monsoon and Post Monsoon Season has been given in the Annexure – III. A total of 33 districts have shown long term water level trend more than 50% of the HNS is showing the falling trend during the Pre-monsoon period. The post monsoon data of Araria, Aurangabad, Banka, Bhagalpur, Gaya, Gopalganj, Jamui, Jehanabad, Katihar, Kishanganj, Lakhisarai, Madhepura, Munger, Muzaffarpur, Purnia, Saharsa, Samastipur, Sitamarhi districts are also showing falling trend in more than 50% of the HNS analysed.

## Depth to Water level (m bgl) in various seasons

STATE : BIHAR

District	ARARIA	Year	Jan	May	Aug	Nov
	Araria	2014		4.58	3.02	3.33
	Jan	2015	3.91			
	Bathnaha 1	2014		4.14	3.27	3.03
		2015	3.53			
	Bathnaha_badres	2014		-	-	-
		2015	-			
	Haripur	2014		3.2	2.97	1.9
		2015	2.6			
	Matiyari	2014		3.92	3.55	2.76
		2015	3.21			
	Jokihat1	2014		3.37	2.12	1.71
		2015	3.08			
	Pallasi	2014		2.79	2.65	1.8
		2015	2.2			
District	AURANGABAD					
	Aurangabad	2014		4.68	1.12	1.64
		2015	1.37			
	Barun	2014		-	-	-
		2015	9.74			
	Narari Kala	2014		10.9	-	7.65
		2015	7.81			
	Daudnagar	2014		5.6	3.84	3.8
		2015	4.67			
	Deol	2014		5	3.37	3.5
		2015	4.16			
	Deohara_goh	2014		-	3.44	9.9
		2015	8.4			
	Deonara	2014		-	-	9.9
		2015	8.4			
	Madanpur	2014		5.5	0.3	2.1
		2015	2.38			
	Pataya	2014		4.03	3.16	2.1
		2015	3.4			
	Dhanibar	2014		7.3	-	7.9
		2015	8.46			
	Nabinagar dbib	2014		3.26	-	1.2
		2015	0.66			
	Obra	2014		7.64	4.34	4.95
		2015	5.36			
	Rafiganj	2014		9	5.21	6.4
		2015	8.25			
	Tineri Morh	2015	-			
District	BANKA					
	Amarpur ps	2014		3.63	3.23	1.94
		2015	3.32			
	English More	2014		2.72	1.02	2.58
		2015	2			
	Rampur	2014		3.28	1.5	2.16
		2015	1.9			

	Banka ps	2014		3.82	0.82	2.13
		2015	2.8			
	Barahat	2014		4.45	1.22	2.41
		2015	2.53			
	Baunsi	2014		3.69	-	3.84
		2015	5.55			
	Bausi pwdib	2014		3.08	1.55	-
		2015	4.63			
	Chandan	2014		7.88	3.02	4.15
		2015	4.63			
	Panjwara	2014		4.65	4.38	4.57
		2015	4.43			
	Katoria	2014		8.7	1.17	3.91
		2015	4.86			
	Rajaun ps	2014		7.7	3.68	4.33
		2015	5.4			
	Fulidumer	2015	-			
	Kharharia	2014		2.98	-	-
		2015	3.13			
	Mirjapur	2015	-			
	Sambhuganj	2014		4.73	1.74	2.7
		2015	3			
District	BEGUSARAI	:				
	Baraun mile	2014		7.31	1.53	2.2
		2015	5.72			
	Kumharson	2014		8.35	3.03	3.18
		2015	3.34			
	Naya Nagar Dularpur	2014		5.71	1.93	2.59
		2015	4.33			
	Teghra	2014		8.43	3.02	3.35
		2015	5.58			
	Bagrash	2014		6.53	4.56	4.16
		2015	5.82			
	Bakhari_salauna	2014		-	3.3	3.76
		2015	4.44			
	Manjaul	2014		8.26	1.98	2.09
		2015	4.99			
	Begusarai	2014		6.61	1.6	1.95
		2015	5.07			
	Begusarai_fc_ib	2014		4.99	2.3	3.99
		2015	5.52			
	Gopalpur	2014		6.87	2.53	3.07
		2015	4.72			
	Haridia	2014		4.39	2.03	2.94
		2015	4.32			
	Kaithma	2014		-	2.53	5.27
		2015	5.83			
	Matihani	2014		8.37	3.03	-
		2015	-			
	Mohanpur Usrai	2014		6.64	2.03	3.71
		2015	5.92			
	Pokharia	2014		6.96	2.12	4.38
		2015	5.81			



	Aghara	2015	-			
	Cheriabariarpur	2014		7.07	5.91	5
		2015	5.27			
	Bintoli	2014		8.27	2.47	4.44
		2015	5.72			
<b>District</b>	<b>BHAGALPUR</b>	:				
	Bihpur ib	2014		8.83	-	-
	0	2015	-			
	Marwa	2015	-			
	Ghoga rly stn	2014		5.37	0.73	2.16
		2015	2.2			
	Harchandpur	2014		3.31	1.59	2.89
		2015	2.04			
	Jagnathpur	2014		3.18	6.09	7.3
		2015	6.9			
	Kahalgaon rlyco	2014		11.56	8.01	9.35
		2015	10.76			
	Madrauni Chowk	2014		5.5	2.25	2.97
		2015	3.35			
	Bhagalpur city	2014		12.78	10.26	10.2
		2015	10.2			
	Jagadishpur	2014		3.52	1.07	2.74
		2015	1.15			
	Naugachhia h.s	2014		5.6	2.6	2.8
		2015	4.82			
	Pirpainti db.ib	2014		-	3.22	-
		2015	2.66			
	Sabaur	2014		4.05	1.55	2.75
		2015	2.55			
	Shahkund db.ib	2014		6.45	4.33	6.78
		2015	4.3			
	Akbarnagar stn	2014		3.54	1.06	3.68
		2015	3.03			
	Asarganj	2014		4.15	2.38	3.32
		2015	3.1			
	Sultanganj	2014		8.9	2.58	4.51
		2015	8.05			
<b>District</b>	<b>BHOJPUR</b>	:				
	Milki	2014		3.73	4	3.62
	0	2015	6.82			
	Simariya	2015	-			
	Bihiya	2014		3.73	3.05	3.35
	0	2015	3.63			
	Garhani	2014		4.88	2.9	3.22
	0	2015	3.55			
	Jagadishpur l	2014		3.94	2.01	3.8
	0	2015	3.64			
	Kulharia	2014		6.29	6.3	5.55
	0	2015	5.8			
	Pirro	2014		5.5	0.91	-
	0	2015	4.98			
	Chandawa	2014		4.06	2.98	2.47
	0	2015	2.49			

	Harnath Kundi	2015	3.6			
	3.60	2014		3.97	2.26	4.22
	Udwantnagar	2014		4	0.69	0.7
	0	2015	1.67			
<b>District</b>	<b>BUXAR</b>	:				
	Barhampur	2014		5.54	4.3	5.48
	0	2015	5.96			
	Buxar(SSA)	2014		5.53	4.27	5.02
	0	2015	5.62			
	Chausa	2014		1.52	1.78	1.87
	Dumraon	2014		-	8.25	8.21
	0	2015	8.29			
	Rajpur	2014		3.27	1.51	2.01
	0	2015	3.22			
	Neazipur	2014		8.2	5.63	5.25
	0	2015	6.64			
	Sohiar	2015	-			
<b>District</b>	<b>DARBHANGA</b>	:				
	Darbhanga	2014		2.3	1.45	0.81
	0	2015	2.76			
	Bithauli	2015	-			
	Jorja	2014		5.43	3.76	1.89
	0	2015	4.15			
	Bahera	2014		4.7	3.2	3.72
	0	2015	4.2			
	Baheri	2015	-			
	Baheri I	2014		3.78	1.48	1.93
	0	2015	2.53			
	Hayaghat	2014		-	2.6	3.14
	0	2015	-			
	Pouram	2014		5.74	2.32	3.14
	0	2015	4.58			
	Keoti	2014		3.9	1.56	-
	0	2015	2.08			
	Sakari I	2014		3.94	1.89	1.69
	0	2015	2.32			
	Simri (bithauli)	2014		4.1	0.71	3.04
	0	2015	3.29			
<b>District</b>	<b>GAYA</b>	:				
	Akauna	2015	-			
	Bhadeya	2015	-			
	Dobhi	2014		5.4	3.46	3.62
		2015	3.88			
	Paligaon	2014		8	7.36	6.12
		2015	3.98			
	Bodh Gaya	2014		2.8	3.02	3.52
		2015	3.7			
	Khandail	2015	-			
	Fatehpur	2014		6.3	2.47	3.35
		2015	4.33			
	Bitho Sharif	2014		-	3.22	4.08
		2015	4.4			
	Chakand	2014		10.91	5.82	5.58

		2015	5.8			
	Ram Kund	2014		3.87	2.63	4.46
		2015	5.66			
	Sangat Gali	2014		5.2	2.1	6.15
		2015	7.48			
	Manpur	2014		6.66	4.6	5.8
		2015	6.1			
	Sherghati	2014		-	3.4	1.98
		2015	3.12			
	Tekari	2014		-	2.21	3.51
		2015	3.68			
	Wazirganj	2014		4.2	1.22	2.18
		2015	2.7			
District	<b>GOPALGANJ</b>	:				
	Barauli	2014		3	0.69	1.68
	0	2015	2.05			
	Bhojpurwa	2015	-			
	Bhore	2014		4.34	1.26	1.86
		2015	2.73			
	Rampur2	2014		2.99	3.62	1.04
		2015	2.42			
	Turkaha	2014		2.2	0.59	1.26
		2015	1.29			
	Hathua1	2014		3.84	0.85	1.52
		2015	2.48			
	Jamunaha	2014		3.76	1.05	3.62
		2015	4.23			
	Misirbatha1	2014		4.37	1.2	3.26
		2015	3.5			
	Jalalpur2	2014		3.7	0.81	2.11
		2015	2.34			
	Kuchaikot	2014		2.9	0.87	1.16
		2015	1.6			
	Bangra	2014		3.15	0.69	1.66
		2015	2.7			
	Bangra Deoria	2014		-	0.65	2.3
		2015	2.73			
	Bishambarpur	2015	-			
	Chanwabe	2014		2.55	1.34	3.13
	0	2015	2.95			
	Lachchwar	2015	-			
	Manjhwa1	2014		4.2	0.01	1.93
		2015	2.5			
	Nunachapra	2014		-	3.15	1.46
		2015	2.42			
	Phulwariya	2015	-			
District	<b>JAMUI</b>	:				
	Chakai	2014		9.6	3.2	5.03
		2015	4.88			
	Chakai B	2014		7.49	6.55	7.25
		2015	5.68			
	Tarakhakhar	2014		-	2.35	9.81
		2015	10.14			

	Jamui	2014		10.01	5.06	7.82
		2015	8.58			
	Manjhwe	2014		8	1.48	5.39
		2015	4.4			
	Ambedkar Nagar	2014		3.9	0.1	2.43
		2015	6.8			
	Chandramanita	2014		5.3	1.52	3.77
		2015	3.82			
	Chandwari	2014		14.5	7.93	8.7
		2015	3.08			
	Harna	2014		-	7.65	8.2
		2015	8.58			
	Jhajha	2014		11.25	8.62	9.47
		2015	9.42			
	Gidhaur O	2014		8.65	2.95	9.02
		2015	7.55			
	Purna Khaira	2014		3.65	1.25	1.81
		2015	2.4			
	Gidhaur	2014		9.78	-	8.1
		2015	-			
	Lalmatia	2015	-			
	Laxmipur	2014		6.87	0.15	-
		2015	2.86			
	Sandipi	2014		7.95	1.32	1.32
		2015	4.9			
	Sikandra	2014		5.18	0.79	1.82
		2015	1.3			
	Batia	2015	-			
	Batia I	2014		15.8	10.99	12.06
		2015	11.89			
	Sono	2014		-	3.04	4.22
		2015	5.1			
District	JEHANABAD	:				
	Arwal	2015	-			
	Arwal I	2014		6.18	4.06	4.46
		2015	5.67			
	Dirpal Bigha	2014		-	4.04	-
		2015	-			
	Madhubani	2015	-			
	Ghoshi	2014		-	-	-
		2015	3.29			
	Kako	2014		7.5	-	-
		2015	3.8			
	Gaurakhini	2014		7.43	3.34	7.4
		2015	5.6			
	Jahanabad hosp.	2014		4.04	2.97	3.68
		2015	3.56			
	Teni Bigha	2014		3.55	-	-
		2015	2.37			
	Imamganj	2014		3.07	3.4	2.88
		2015	2.79			
	Kinjer	2014		6.93	-	6.8
		2015	6.47			

	Jhunathi	2014		6.65	3.15	5
		2015	4.69			
	Kurtha bdo	2014		3.3	4.4	2.77
		2015	2.48			
	Makhdumpur	2014		5.4	-	2.82
		2015	3.42			
District	KAIMUR	:				
	Bhabhua	2014		12.3	7.9	7.7
		2015	8.7			
	Saraiya	2015	-			
	Tori f.ck.post	2014		6.58	5.17	5.5
		2015	6.75			
	Chainpur	2014		7.24	6.48	5.8
		2015	7.09			
	Chand in p.s.	2014		4.96	3.65	3.4
		2015	7.62			
	Karmanasa	2014		-	2.73	-
		2015	-			
	Nuawan	2014		8.8	3.8	5.56
		2015	6.45			
	Mohania	2014		6.83	3.78	7.37
		2015	7.77			
	Bandipur	2014		4.15	4.67	4.34
		2015	3.26			
District	KATIHAR	:				
	Barari-1	2014		4.22	5.54	3.94
		2015	4.95			
	Dumaria	2014		7.8	3.4	4.42
		2015	5.1			
	Kursela	2014		7.19	3.35	4.71
		2015	7.3			
	Paranpur	2014		4.21	1.55	3.09
		2015	3.06			
	Dumer	2014		5.3	-	-
		2015	-			
	Mahendrapur	2014		4.68	2.4	2.82
		2015	3.3			
	Narahaiya	2014		4.78	3.86	3.36
		2015	3.84			
	Kadwa	2014		4.74	2.65	3.48
		2015	3.92			
	Sonauli	2014		4.2	3.18	2.8
		2015	2.96			
	Hafal	2014		4.23	3.12	2.64
		2015	3.05			
	Katihar	2014		4.64	3.55	3.18
		2015	3.69			
	Khiria	2014		-	-	3.51
		2015	3.98			
	Korha	2014		5.01	3.86	3.43
		2015	3.95			
	Routru	2014		4.07	3.46	2.96
		2015	3.43			

	Manihari	2014		6.61	4.8	5.23
		2015	5.73			
	Basantpur	2014		-	-	1.96
		2015	3.63			
	BastaulI	2014		4.44	2.7	2.9
		2015	3.08			
District	<b>KHAGARIA</b>	:				
	Pirnasara	2014		6.28	1.65	2.81
		2015	4.02			
	Basantpur	2014		6.03	1.8	2.28
		2015	3.54			
	Chautham	2014		5.19	1.52	2.29
		2015	4.4			
	Maheshkhunt I	2014		5.6	2.58	4.42
		2015	4.73			
	Gandhinagar	2014		4.7	2.07	2.08
		2015	3.29			
	Jamalpur	2014		5	1.66	2.29
		2015	3.63			
	Maheshkhunt	2015	-			
	Maheshkhunt Lohiya Chowk	2014		6.04	1.9	2.62
		2015	5.42			
	Maheshkunt	2014		-	3.07	4.02
		2015	5.06			
	Gangaut	2014		7.18	2.62	4.78
		2015	5.89			
	Ismailpur	2015	-			
	Kasimpur	2014		6.7	1.71	2.86
		2015	4.02			
	Khagaria	2014		6.85	2.52	4.74
		2015	6.31			
	Labhgaon	2014		6.16	3.59	5.19
		2015	6.65			
	Dewri	2014		-	1.07	1.68
		2015	2.3			
	Mohaddipur	2014		6.42	2.46	3.05
		2015	3.82			
District	<b>KISHANGANJ</b>	:				
	Bahadurganj	2014		-	-	-
		2015	2.73			
	Bahadurganj B	2014		-	1.12	2.75
		2015	-			
	Gunsagar	2015	-			
	Kishanganj	2014		3.5	1.73	2.21
		2015	3.03			
	Kaswa Kaliganj	2014		2.79	0.57	1.8
		2015	2.47			
	Thakurganj	2014		10.25	8.22	8.8
		2015	9.11			
District	<b>LAKHISARAI</b>	:				
	Dariyapur	2015	-			
	Barhaiya	2014		8.31	2.04	6.4
		2015	7.26			

	Kiul	2015	-			
	Kiul_1	2014		1.58	0.55	-
		2015	0.82			
	Lakhisarai	2014		5.3	5.58	-
		2015	5.5			
	Surajgarhal	2014		7.02	0.88	3.56
		2015	5.6			
<b>District</b>	<b>MADHEPURA</b>	:				
	Abhiyatola	2014		6.17	2.52	2.86
		2015	3.24			
	Chausal	2014		-	-	-
		2015	-			
	Ganeshpur	2014		3.63	2.26	2.58
		2015	3.02			
	Bhimpura	2015	-			
	Hatkora bazar	2014		3.52	2.26	2.45
		2015	2.83			
	Madhepura	2014		4.83	2.59	4.01
		2015	4.65			
	Surajganj	2015	-			
	Gaushala Chowk	2014		3.83	2.12	2.19
		2015	3.14			
	Murliganj	2014		-	-	-
		2015	1.5			
	Singeswar	2014		5.36	2.16	2.74
		2015	4.06			
	Gwalpara	2014		3.84	2.52	2.99
		2015	3.19			
	Kusthan	2014		-	2.72	2.17
		2015	2.76			
	Uda Kishanganj	2014		-	3.4	2.78
		2015	3.06			
<b>District</b>	<b>MADHUBANI</b>	:				
	Babubarhi	2014		2.98	0.58	1.99
		2015	1.24			
	Narar	2014		5.88	1.04	1.13
		2015	1.55			
	Benipatti	2014		2.2	0.65	0.74
		2015	1.32			
	Dhakjari	2014		3.63	1.61	1.63
		2015	2.12			
	Kapasias	2014		2.75	0.91	1.14
		2015	1.55			
	Jaynagar	2014		2.6	1.58	1.84
		2015	2.41			
	Bideshwar Asthan	2014		5.75	2.85	1.21
		2015	3.49			
	Jhanjharpur	2014		-	0.1	0.39
		2015	0.65			
	Bentadih	2014		4.12	0.85	1.65
		2015	2.5			
	Khajauli	2014		4.02	0.89	1.91
		2015	2.18			

	Ambedkar Nagar	2014		4.66	2.39	2.15
		2015	2.83			
	Bihari	2014		3.97	2	2.13
		2015	2.42			
	Madhubani	2014		3.1	1.13	1.24
		2015	1.7			
	Bhawanipur	2014		6.68	3.71	1.25
		2015	3.92			
	Pandaul	2014		5.55	2.8	1.61
		2015	3.75			
	Phulparas1	2014		2.74	2.1	1.49
		2015	2.39			
	Shambhuar	2014		5.57	1.81	1.95
		2015	2.85			
	Kapileshwar	2014		4.2	2.16	1.87
		2015	2.92			
	Siswar	2014		3.56	1.8	1.98
		2015	2.46			
	Karmanli	2014		4.18	-	-
	Karmnali	2014		-	1.45	1.59
		2015	2.46			
	Pariharpur	2014		5.08	2.1	2.61
		2015	2.7			
District	MUNGER	:				
	Bariarpur	2014		7.65	1.62	4.59
		2015	4.02			
	Singhiya chawk	2014		9.48	2.31	3.98
		2015	3.45			
	Jamalpur1	2014		7.57	1.21	3.28
		2015	4.19			
	Gangta Morh	2014		6.9	5.1	8.41
		2015	5.2			
	Gobadda	2014		7.68	-	2.31
		2015	3.34			
	Havelikhargpur	2014		2.99	3.9	4.8
		2015	6.8			
	Tarapur	2014		4.77	1.46	2.94
		2015	3.06			
	Purabsarai	2014		11.23	1.87	4.71
		2015	3.67			
	Rampur2	2015	-			
	-	2014		4.61	0.46	2.3
		2015	3.45			
	Sangrampur	2014		2.73	1.25	2.85
		2015	1.01			
District	MUZAFFARPUR	:				
	Aurai	2014		2.39	1.79	2.78
		2015	1.78			
	Rajkhand	2014		4.92	1.52	2.86
		2015	2.35			
	Bhagwanpur Chowk	2014		3.46	1.85	2.7
		2015	3.2			
	Jaffarpur	2014		3.3	2.97	3



		2015	3.35			
	Mahammadpur Balmi	2015	-			
	Bochaha	2015	5.12			
	5.12	2014		6.6	5.65	4.8
	Barkurwa	2014		6.88	2.97	2.28
		2015	3.56			
	Surfuddinpur	2014		-	4.7	4.2
		2015	4.58			
	Muzaffarpur	2014		5.25	2	2.84
		2015	2.16			
	Katral	2014		-	2.29	2.38
		2015	3.78			
	Ramnagar	2014		4.58	2.37	2.43
		2015	3.07			
	Sakri chatti	2014		3.18	1.04	1.9
		2015	2.61			
	Turki	2014		-	0.91	1.7
		2015	-			
	Wazitpur	2014		5.19	1.96	2.81
		2015	3.25			
	Gargaliya	2014		-	3.01	4
		2015	4.15			
	Digra	2014		5.29	2.13	2.05
		2015	5.53			
	Japaha	2014		6.18	1.89	4.42
		2015	3.64			
	Dewaria	2014		4.35	3.42	3.2
		2015	3.64			
	Paro	2014		4.94	1.17	2.8
		2015	3.16			
	Daha Chhapra	2014		3.32	3.69	3.1
		2015	3.07			
	Rajwara	2015	-			
	Sahebganj	2014		4.87	1.85	3.05
		2015	3.47			
	Dholi	2014		7.26	2.49	5.15
		2015	5.6			
	Mahantmanihari	2014		-	1.27	3.15
		2015	-			
	Mushari	2014		5.5	1.29	2.22
		2015	2.59			
	Seho	2015	-			
District	NALANDA	:				
	Asthwan	2014		3.53	0.97	1.46
		2015	1.78			
	Jangipur	2014		4	1.82	3.58
		2015	3.43			
	Sare	2014		9.13	1.67	2.49
		2015	3.8			
	Shahpur Morh	2014		3.3	0.94	2.14
		2015	2.24			
	B Sharif Rly Stn	2014		2.2	0.65	1.06
		2015	1.15			

	Biharsharif	2014		1.89	0.76	1.23
		2015	0.9			
	Muraura	2014		5	1.94	2.4
		2015	3.45			
	Ranabigha	2014		8.52	1.96	3.92
		2015	4.28			
	Sohdh	2014		3.54	1.07	2.98
		2015	3.3			
	Ekangarsarai	2014		6.55	5.58	5.54
		2015	4.2			
	Parwalpur	2014		0.75	0.57	1.02
		2015	0.62			
	Giriak	2014		4.76	1.2	2.77
		2015	3.65			
	Pawapuri	2014		4.9	2.05	2.41
		2015	2.4			
	Harnaut I	2014		1.18	0.82	0.58
		2015	0.96			
	Hilsa	2014		7.1	1.28	2.34
		2015	3.9			
	Nischalganj	2014		3.86	4.46	2.86
		2015	4.05			
	Ankuri Bazar	2014		7.63	2.28	6.18
		2015	6.9			
	Islampur	2014		2.67	1.16	1.68
		2015	3.5			
	Sherpur	2014		2.55	0.94	1.63
		2015	2.2			
	Daudpur	2014		8.16	1.76	2.28
		2015	3.5			
	Doiya	2014		5.23	1.27	2.36
		2015	4.26			
	Heganpura	2014		7.9	1.42	3.05
		2015	5.15			
	Paparnhosa	2014		5.1	2.55	2.48
		2015	4.15			
	Bhui	2014		6.9	2.72	2.92
		2015	5.1			
	Kundalpur	2014		9	4.24	4.7
		2015	5.3			
	Nalanda	2014		7.08	6.73	6.51
		2015	6.7			
	Nirpur	2014		7.2	1.02	6.07
		2015	2.29			
	Pilkhi	2014		5.69	0.94	4.58
		2015	5.6			
	Rajgir	2014		5.28	2.86	4.41
		2015	3.9			
	Silao	2014		3.44	1.92	2.6
		2015	4.58			
	Sithaura	2014		3.07	1.28	2.02
		2015	2.9			
District	NAWADA	:				

	Tungi	2014		3.75	2.72	3.44
		2015	3.98			
	Hisua	2014		6.45	1.23	2.42
		2015	3.7			
	Roh	2014		5.95	0.8	2.53
		2015	4.15			
	Kawakol ashram	2014		7.95	3.52	4.72
		2015	4.8			
	Rupau	2014		5.2	0.42	1.83
		2015	2.9			
	Garhpar	2014		3.39	1.9	2.87
		2015	2.58			
	Gonama	2014		4.82	1.6	3.77
		2015	5.09			
	Nawada2	2015	6.46			
	Pakribrawan	2014		8.64	5.31	5.26
		2015	-			
	Pakribrawan Pond	2015	-			
	Shahpur Morh	2014		-	1.52	2.81
		2015	2.3			
	Warshaliganj	2014		1.8	1.43	1.93
		2015	1.05			
District	PASHCHIM CHAMPARAN	:				
	Bagaha	2014		-	-	-
		2015	-			
	Belwa	2014		3.21	1.01	0.83
		2015	2.5			
	Mangalpur	2014		4.23	0.98	2.7
		2015	3.64			
	Bettiah	2014		2.73	1.46	0.88
		2015	1.28			
	Chanpatia	2014		5.1	1.01	2.91
		2015	3.93			
	Gurwalia	2014		3.65	1.04	2.18
		2015	2.68			
	Banspur pipra	2014		-	1.47	1.08
		2015	-			
	Lauria	2014		-	0.61	2.4
		2015	3.16			
	Panchpurwa	2014		-	0.38	2.35
		2015	3.16			
	Shishwania	2015	-			
	Majhwalia	2014		4	1.53	2.45
		2015	3.1			
	Korigawa Chowk	2014		3.39	1.22	1.02
		2015	1.98			
	Ramnagar	2015	-			
	Harnatanr	2014		4.54	1.03	2.72
		2015	3.28			
	Naurangia	2014		3.92	0.62	3.6
		2015	3.2			
	Valmikinagar	2014		2.15	0.99	2.58
		2015	2.64			

District	PATNA	:				
	Bakhtiarpur	2014		7.15	2.34	6.49
		2015	6.07			
	Agwanpur	2015	-			
	Barh I	2014		6.4	0.74	1.93
		2015	1.31			
	Rajpura	2015	-			
	Shahri	2015	-			
	Raghopur	2014		5.24	-	6.3
		2015	5.47			
	Tishkhora	2014		3.05	-	-
	Ardhra Chowki	2014		3.87	1.63	2.36
		2015	3.67			
	Bharatpura	2014		3.36	1.21	1.85
		2015	3.07			
	Din Bigha	2014		6.03	-	-
	Dulhin Bazar	2014		3.92	2.84	3.15
		2015	3.98			
	Mariyawa	2014		3.84	-	2.15
		2015	1.35			
	Noniatola	2014		3.32	1.72	2.75
		2015	3.02			
	Khaspur	2014		4.87	2.07	-
		2015	4.89			
	Daniyawan	2014		6.36	0.1	3.83
		2015	4.08			
	Fatuha	2014		7.19	1.54	4.6
		2015	5.7			
	Mokama	2014		3.5	3.7	4.12
		2015	4.85			
	Chhiyattar	2014		5.81	-	-
	Darbeshpur	2014		9.19	-	-
	Lalbegam	2014		7.9	2.43	2.1
		2015	6.4			
	Maner	2014		4.5	1.35	2.46
		2015	3.21			
	Maranchi	2014		8.93	2.21	6.03
		2015	8.08			
	Snehitola	2014		6.06	2.05	2.28
		2015	2.92			
	Bali Pakar	2014		2.95	2.7	2.47
		2015	3.12			
	Patna-City	2014		1.83	0.84	1.2
		2015	1.55			
	Chheditola	2014		3.65	-	-
	Etwarpur	2014		6.6	2.02	-
		2015	4.87			
	Hulas Chak	2014		4.1	3.64	-
		2015	1.96			
	Deokali	2014		8.47	2.92	4.87
		2015	5.16			
District	PURBA CHAMPARAN	:				
	Shyampur	2015	-			

	Areraj	2014		-	1.21	1.36
		2015	-			
	Chakial	2014		4.23	2.03	4.44
		2015	3.1			
	Uttari Gavandra	2014		3.1	1.53	2.38
		2015	2.92			
	Belai	2015	-			
	Chatia	2014		3.9	1.6	2.58
		2015	3.43			
	Chiraiya	2014		-	1.72	3.75
		2015	1.76			
	Mohabbatpur	2015	-			
	Ghorashan	2014		3.22	2.17	1.81
		2015	2.07			
	Sheoraha	2014		0.44	1.34	2.18
		2015	0.76			
	Dharampur	2014		4.95	1.56	2.43
		2015	3.33			
	Dipau	2014		2.46	1.78	2.34
		2015	2.92			
	Rajpur	2015	-			
	Dubey Tola	2014		3.02	1.15	2.27
		2015	1.98			
	Khajuriachowk	2014		-	1.98	1.84
		2015	-			
	Kizerpura	2014		4.92	2.14	2.8
		2015	3.56			
	Lala Chapra	2014		3.84	2.32	1.5
		2015	2.02			
	Lakhwara	2014		2.01	1.91	0.75
		2015	1.09			
	Motihari	2014		4.02	2.11	2.7
		2015	3.3			
	Chhauradanu	2015	-			
	Bishunpur Matiyarwan	2014		4.04	0.79	1.57
		2015	2.03			
	Gobindganj	2014		2.64	0.77	2.45
		2015	1.35			
	Patahi	2014		4.31	1.41	2.65
		2015	2.2			
	Belhi	2014		2.68	1.56	2.55
		2015	-			
	Raghunathpur	2014		2.31	0.56	1.37
		2015	1.68			
	Raxaul	2014		3.81	1.45	3.15
		2015	2.86			
	Sagauli	2015	-			
	Sugauli Bazar	2014		2.91	1.8	1.36
		2015	2.46			
	Bairiya Bazar	2015	-			
	Nawada	2015	-			
	Nawada 1	2014		-	1.42	1.89
		2015	2.46			

District	PURNIA	:				
	Bansbari	2014		3.64	2.35	-
		2015	-			
	Baisi2	2014		4.73	1.83	4.27
		2015	4.02			
	Chadia	2014		5.17	3.2	4
		2015	4.36			
	Budhia Gola	2014		4.12	3.7	2.52
		2015	3.05			
	Mangujan	2015	-			
	Dargaha	2014		-	-	3.88
		2015	3.55			
	Amri Kukran E	2014		5	3.95	-
		2015	-			
	Amri Kukran W	2014		4.93	2.53	2.93
		2015	3.75			
	Banmankhi	2014		3.7	3.45	2.25
		2015	2.83			
	Dhamdaha	2014		4.69	3.35	2.82
		2015	3.49			
	Kajha	2014		3.17	3.2	1.8
		2015	2.39			
	Barsoni	2015	-			
	Purnia	2014		3.49	2.74	2.51
		2015	2.55			
	Ranipatra	2014		4.72	3.34	3.27
		2015	3.66			
	Tikapatti Chowk	2014		4.15	3.34	2.7
		2015	3.48			
	Tilka Patti	2014		-	3.25	-
		2015	3.3			
District	ROHTAS	:				
	Bikramganj pp	2014		9.9	3.52	4.35
		2015	5.58			
	Chenari hospita	2014		10.93	6.43	6.85
		2015	7.95			
	Maliabagh	2014		6.4	4.51	5.2
		2015	5.95			
	Anikut	2014		10.33	10.05	11.53
		2015	9.95			
	Karbindia(templ	2014		8.25	7.88	7.22
		2015	7.85			
	Dinara l	2014		-	1.66	-
	Kochas	2014		4.85	2.51	1.42
		2015	3.25			
	Nokha in temple	2014		4.42	0.57	1.8
		2015	2.57			
	Bahaura	2014		4.74	2.19	1.3
		2015	2.24			
	Ambwalia	2014		6.3	1.14	2
		2015	3.42			
	Belthari	2014		-	2.03	2.66
		2015	4.06			

	Sirisiyan	2015	-			
	Jahanabad (kudra)	2014		-	-	2.5
		2015	2.5			
	Rajandih	2014		6.6	3.27	1.39
		2015	4.22			
	Nasriganj	2014		5.67	5.2	6.42
		2015	7.25			
	Auraiya	2015	5.81			
	Akbarpur in bdo	2014		11.64	10.47	10.7
		2015	10.77			
	Sasaram p.o.	2014		6.44	3.12	3.59
		2015	4.11			
	Tilothu bustand	2014		8.7	8.15	8.12
		2015	7.7			
	Amawan	2014		1.94	0.28	0.82
		2015	1.17			
<b>District</b>	<b>SAHARSA</b>	:				
	Bangaon	2014		2.23	1.03	1.78
		2015	2.06			
	Basudeva	2015	-			
	Chainpur	2014		3.02	1.12	2.43
		2015	2.96			
	Kharakuti	2015	-			
	Niralatola	2015	-			
	Panchgachhi	2015	-			
	Patodibazar	2014		2.69	1.38	1.95
		2015	2.3			
	Potwaha	2014		2.57	-	-
		2015	-			
	Saharsa I	2014		3.63	2.68	2.42
		2015	2.8			
	Tulsiyahi	2014		1.65	1.2	1.28
		2015	1.39			
	Sonbarsaraj	2015	-			
	Sonbarsaraj I	2014		4.36	2.14	2.39
		2015	2.74			
	Jamunia	2014		3.68	0.67	1.37
		2015	2.04			
	Semribaktiarpur	2014		4.35	2.44	2.71
		2015	2.97			
	Simri Bakhtiyarpur	2014		-	2.27	2.55
		2015	2.96			
	Adrahch	2014		3.5	1.92	2.48
		2015	2.76			
	Baidnathpur	2014		3.2	2.16	2.46
		2015	2.76			
	Chandaur Purbi	2014		4.67	-	2.58
		2015	2.98			
<b>District</b>	<b>SAMASTIPUR</b>	:				
	Kalyanpur	2014		8.06	2.96	4.67
		2015	5.44			
	Patapara	2014		5.1	0.4	3.69
		2015	2.02			

	Singhia Ghat	2014		10.62	5.7	3.64
		2015	6.54			
	Dalsinghsarai	2014		5.4	2.9	5.36
		2015	5.72			
	Malipur	2015	-			
	Basudebpur	2015	-			
	Jakhra	2014		7.35	3.34	3.43
		2015	4.35			
	Kishanpur1	2015	-			
	Kishanpur2	2014		-	3.1	4.22
		2015	3.63			
	Madudabad	2014		6.78	3.8	5.01
		2015	5.37			
	Bajidpur	2014		6.63	4.3	4.72
		2015	5.14			
	Shahpurpatori	2014		8.02	2.58	4.41
		2015	4.74			
	Kerian	2014		7.78	2.25	1.81
		2015	5.66			
	Rosera	2014		7.93	1.57	5.88
		2015	6.31			
	Sarai Ranjan	2015	-			
	Tajpur1	2014		8.22	5.27	6.4
		2015	6.87			
	Vikrampur	2015	-			
	Dandia Asadpur	2014		8.1	4.22	5.57
		2015	4.33			
	Ujiarpur	2014		8.1	5.53	6.15
		2015	6.52			
	Jathmalpur	2014		8.88	2.45	2.96
		2015	5.28			
District	SARAN	:				
	Jalalpur	2014		-	2.9	2.91
		2015	3.63			
	Manopali	2014		-	2	2.4
		2015	2.93			
	Chhapra	2014		3.7	3.71	2.08
		2015	-			
	Chirand	2014		4.1	3.72	3.73
		2015	4.9			
	Daldali Bazar A	2014		5.7	3.56	2.48
		2015	3.73			
	Daldali Bazar B	2014		5.1	3.76	2.56
		2015	2.41			
	Kapiya Niyamat	2014		-	3.57	1.98
		2015	-			
	Karbinidia	2014		-	3.55	-
	Mahuapakri	2014		3.75	3.75	-
		2015	-			
	Mauna Pakri	2014		4.09	3.74	1.5
		2015	2.93			
	Nagra	2014		4.85	2.14	3.52
		2015	4.02			



	Taraiya	2014		4.1	1.64	2.16
		2015	1.96			
	Ammi	2014		8.16	3.95	4.26
		2015	5.27			
	Bishunpur	2014		-	-	2.17
		2015	2.5			
	Ekma	2014		3.52	1.97	2.11
		2015	2.47			
	Garkha	2014		6.75	2.68	7.26
		2015	-			
	Minapur	2014		4.13	2.37	1.76
		2015	3.27			
	Bisunpur	2015	-			
	Rampur Kala	2014		3.86	2.7	1.02
		2015	2.43			
	Majhanpura	2014		8.65	1.95	-
		2015	7.29			
	Majhanpura New	2014		6.87	1.95	5.49
		2015	6.51			
	Manjhi	2014		7.05	1.95	7.22
		2015	6.24			
	Manjhi 2	2015	-			
	Marhaura	2014		4.5	2.7	2.3
		2015	2.7			
	Masrakh	2014		4.24	2.26	1.95
		2015	2.01			
	Masrakh1	2014		4.25	2	1.65
		2015	2			
	Saguni	2014		4.83	2.45	3.15
		2015	3.42			
	Saidpur	2014		4.89	2.45	2.33
		2015	2.97			
	Baleshara	2014		4.45	1.95	1.55
		2015	3.18			
	Chausia	2014		7.42	1.4	4.02
		2015	5.97			
	Nayagaon	2014		6.99	3.95	3.82
		2015	5.75			
	Sonepur1	2014		1.07	0.72	0.5
		2015	1.46			
<b>District</b>	<b>SEIKHPURA</b>	:				
	Ambari	2014		6.2	1.73	2.19
		2015	1.91			
	Barbiga	2014		6.47	3.69	3.47
		2015	4.89			
	Keotil	2014		5.4	0.72	1.32
		2015	2.6			
	Koeri Bigha	2014		5.1	1.52	1.85
		2015	2.5			
	Sherpar	2014		9.13	1.84	2.78
		2015	5.22			
	Nemdarganj	2015	-			
	Seikhpura	2014		5.23	0.73	2.21

		2015	2.95			
District	SHEOHAR	:				
	Belsand	2015	-			
	Sarbarpur	2014		3.83	1.58	1.08
		2015	1.6			
	Purnhaiya Bazar	2015	-			
	Sheohar	2014		3.1	0.76	0.65
		2015	0.67			
District	SITAMARHI	:				
	Dheng	2014		3.7	1.9	1.04
		2015	1.06			
	Bangaon	2015	-			
	Jagwanabazar	2014		4	1.34	1.25
		2015	1.88			
	Bhpbhana Khaptola	2015	-			
	Kodwara Tola	2015	-			
	Panaura	2014		3.52	1.3	1.14
		2015	1.41			
	Sitamarhi	2014		3.35	4.21	2.67
		2015	3.04			
	Sursand	2014		2.56	1.69	1.87
		2015	2.25			
	Khairwa	2014		3.68	1.18	1.19
		2015	1.56			
	Pupri	2015	-			
	Karahniya Chowk	2014		3.1	1.16	1.28
		2015	1.5			
	Kushmari	2015	-			
	Thumba	2014		4.53	1.75	0.7
		2015	2.05			
District	SIWAN	:				
	Andar	2014		6	3.6	5.4
		2015	4.39			
	Basantpur	2014		-	1.66	1.17
		2015	-			
	Chimanpur	2014		-	1.68	2.91
		2015	3.45			
	Hardia	2014		4.5	1.64	2.86
		2015	3.82			
	Malmalia Chowk	2015	-			
	Sarripatti	2014		3.93	2.02	2.01
		2015	2.23			
	Darauli	2014		8.72	4.07	5.28
		2015	6.28			
	Agaya	2015	-			
	Tarwara	2014		1.9	2.73	1.99
		2015	2.92			
	Chitakhal	2014		3.77	1.85	2.66
		2015	3.01			
	Deoria	2014		3.75	1.46	2.28
		2015	3.09			
	Maharajganj	2014		2.95	2.28	1.32
		2015	1.76			

	Patrehi	2014		3.9	1.97	2.39
		2015	2.95			
	Mairwal	2014		4.24	1.47	2.77
		2015	3.12			
	Sadikpur	2014		4.02	1.98	2.28
		2015	2.95			
	Murarpatti	2014		-	2.34	2.62
		2015	3.49			
	Bhagar	2014		3.66	1.97	2.16
		2015	2.73			
	Gangapur siswan	2015	-			
	Gangapur Siswan1	2014		4.9	1.64	2.6
		2015	2.15			
	Siwan1	2014		4.35	2.8	2.63
		2015	3.43			
District	SUPAUL	:				
	Balua	2014		-	1.71	2.81
		2015	3.26			
	Bhawanipur1	2014		1.79	1.68	1.79
		2015	2.23			
	Bhimnagar	2014		2.03	1.38	1.66
		2015	2.08			
	Birpur	2014		2.51	1.81	2.33
		2015	2.43			
	Ratanpura	2015	-			
	Ratanpura1	2014		1.93	1.15	1.74
		2015	2.32			
	Balua 1	2014		2.54	2.2	2.51
		2015	3.27			
	Balua Bazar	2014		1.97	1.35	2.88
		2015	3.12			
	Bhasanpatti	2014		-	0.93	1.69
		2015	1.91			
	Andauli	2014		2.58	-	-
		2015	1.52			
	Hardi	2015	-			
	Kario	2015	-			
	Malhani	2015	-			
	Supaul	2014		4.05	1.45	1.77
		2015	2.22			
	Thumba	2014		3.32	2.96	2.82
		2015	3.13			
	Pipra chowk	2014		5.19	3.69	3.56
		2015	4.89			
	Shyam Nagar	2014		4.01	1.8	2.92
		2015	2.67			
	Ganpatganj	2015	-			
	Ganpatganj1	2014		2.59	1.48	2.1
		2015	2.21			
	Kaithola	2014		3.45	2.08	2.12
		2015	2.32			
	Karjain	2014		3.13	1.77	2.7
		2015	3.05			

	Norha	2014		2.76	1.02	1.88
		2015	2.12			
	Parsarma	2015	-			
	Pratapganj	2014		2.45	1.22	2.02
		2015	2.68			
	Jadia	2014		3	1.15	1.54
		2015	1.81			
	Tribeniganj	2014		4.45	-	-
		2015	3.71			
<b>District</b>	<b>VAISHALI</b>	<b>:</b>				
	Chak Sikandar	2014		7.85	3.95	3.12
		2015	4.3			
	Kachanpur	2015	-			
	Mathura	2014		-	0.4	2.84
		2015	3.31			
	Mathura 2	2015	-			
	Baksama	2014		6.4	4.6	2.3
		2015	2.62			
	Bhaluhia (Garaul)	2014		6.65	3.8	2.02
		2015	2.72			
	Chandpur Kala	2015	-			
	Garaul	2014		7.5	3.91	2.54
		2015	2.31			
	Harpur	2014		5.06	3.81	-
		2015	3.86			
	Hajipur	2014		7.85	4.63	5.71
		2015	7.23			
	Sahjadpur	2015	-			
	Chakiyai	2015	-			
	Kumharkal	2014		6.42	3.5	3.49
		2015	4.12			
	Mahnar	2014		7.55	3.5	5.2
		2015	6.1			
	Mahua1	2014		4.68	4.04	3.32
		2015	3.91			
	Sarai1	2014		6.55	4.4	3.64
		2015	3.57			
	Tariya Supaul	2015	-			
	Patepur	2014		6.1	4.77	2.67
		2015	4.04			
	Gajipur	2014		6.4	3.5	3.88
		2015	4.58			



## Annexure II

## Major Chemical parameters of ground water samples of HNS collected during Pre-Monsoon 2014 in Bihar State

SN	Block/ Dist	Location	pH	EC	TDS	TH	Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	CO <sub>3</sub> <sup>2-</sup>	HCO <sub>3</sub> <sup>-</sup>	Cl <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	F <sup>-</sup>	PO <sub>4</sub> <sup>3-</sup>	SiO <sub>2</sub>
1	Muzaffarpur	Aurai	7.96	486	331	190	8.0	41.0	39.0	4.0	12	220	43.0	1.0	16	0.07	0.00	38.0
2	Muzaffarpur	Barkurwa morh	8.79	706	414	255	18.0	51.0	45.2	13.2	24	268	60.3	11.1	18	0.60	0.00	17.8
3	Muzaffarpur	Baghwanpur Chowk	8.50	828	524	200	16.0	39.0	90.0	5.0	12	159	78.0	2.0	152	0.00	0.00	38.0
4	Muzaffarpur	Bochaha (new well)	7.26	902	580	230	12.0	49.0	113.0	10.0	0	315	118.0	22.0	27	0.00	0.08	37.0
5	Muzaffarpur	Daha chapra	7.73	599	365	235	58.0	21.9	31.1	1.4	0	354	7.1	0.6	16	0.57	0.00	11.8
6	Muzaffarpur	Dewaria	8.23	695	419	195	20.0	35.2	76.1	5.2	0	116	138.3	42.3	18	0.95	0.05	12.2
7	Muzaffarpur	Dholi (Tola Jananhipur)	7.29	2664	1549	800	36.0	173.0	122.0	96.0	0	220	284.0	393.0	277	0.06	0.00	34.0
8	Muzaffarpur	Digra	7.54	740	448	220	64.0	15.0	59.0	12.0	0	311	41.0	11.0	22	0.39	0.00	34.0
9	Muzaffarpur	Gargalia (Minapur)	7.73	603	354	210	20.0	39.0	36.0	5.0	0	122	71.0	15.0	60	0.00	0.00	34.0
10	Muzaffarpur	Jaffarpur (Bichala tola)	7.76	508	291	190	44.0	19.0	18.0	4.0	0	232	21.0	1.0	10	0.18	0.00	32.0
11	Muzaffarpur	Japaha	7.32	1518	952	335	50.0	51.0	126.9	109.5	0	561	170.2	86.8	2	0.50	0.07	12.9
12	Muzaffarpur	Mushari	8.53	561	389	180	36.0	22.0	53.0	16.0	9	254	38.0	24.0	12	0.00	0.00	28.0
13	Muzaffarpur	Muzaffarpur (Patahi)	7.29	911	525	290	24.0	56.0	60.0	15.0	0	264	103.0	31.0	36	0.06	0.00	33.0
14	Muzaffarpur	Paroo	8.55	1123	707	370	56.0	56.0	80.0	11.0	15	146	145.0	2.0	220	0.00	0.00	39.0
15	Muzaffarpur	Rajkhund	8.30	610	390	180	32.0	24.0	55.0	9.0	0	159	85.0	5.0	52	0.27	0.00	31.0
16	Muzaffarpur	Ramnagar	7.50	1065	598	305	68.0	32.8	84.9	14.2	0	482	67.4	8.9	15	1.50	0.65	11.6
17	Muzaffarpur	Sahebganj	8.28	500	345	230	8.0	51.0	27.0	5.0	12	281	11.0	1.0	24	0.14	0.00	39.0
18	Muzaffarpur	Sakri Chatti	7.38	1090	681	315	78.0	29.2	36.4	85.0	0	372	102.8	75.3	25	0.30	0.19	22.4
19	Muzaffarpur	Sarfuddin-pur,(Bawan Bigha)	8.43	741	472	260	40.0	39.0	58.0	9.0	12	305	35.0	1.0	70	0.00	0.00	27.0
20	Muzaffarpur	Sukrahat	7.81	504	304	175	26.0	26.7	29.6	17.8	0	189	63.8	1.9	6	0.40	0.00	16.5
21	Muzaffarpur	Wazitpur	7.71	890	606	420	20.0	90.0	46.0	4.0	0	464	21.0	2.0	106	0.29	0.00	34.0
22	E. Champaran	Belhi	7.34	1465	909	270	30.0	47.4	195.6	22.0	0	348	276.5	99.7	0	1.09	0.00	24.3
23	E. Champaran	Bishnupur Matiyara	7.62	880	545	285	54.0	36.5	79.3	10.4	0	390	81.5	3.1	31	0.63	0.07	10.1
24	E. Champaran	Chakia	8.63	590	407	250	8.0	54.0	44.0	11.0	6	256	82.0	1.0	20	0.00	0.00	27.0
25	E. Champaran	Chatia	7.52	825	479	305	76.0	27.9	54.6	3.9	0	464	14.2	0.5	2	0.36	0.00	16.1
26	E. Champaran	Dharampur	7.80	438	266	210	20.0	39.0	8.0	5.0	0	220	21.0	1.0	8	0.24	0.00	30.0
27	E. Champaran	Dipau	7.82	437	270	160	32.0	19.0	25.0	4.0	0	171	27.0	31.0	4	0.07	0.00	24.0
28	E. Champaran	Dubey Tola	7.91	780	436	230	46.0	27.9	62.1	7.3	0	244	81.5	2.1	49	0.28	0.00	10.5
29	E. Champaran	Ghorasahan	8.25	950	542	220	64.0	15.0	97.0	1.0	0	327	81.0	31.0	25	0.64	0.00	28.0
30	E. Champaran	Govindganj	7.98	1298	727	290	24.0	56.0	125.0	33.0	0	422	124.0	42.0	30	0.37	0.00	35.0
31	E. Champaran	Kizerpura	8.84	507	283	160	12.0	32.0	29.0	5.0	18	225	11.0	2.0	8	0.36	0.10	36.0
32	E. Champaran	Lakhwara	7.80	520	345	195	48.0	18.2	45.1	1.3	0	329	14.2	3.1	3	0.73	0.16	11.2
33	E. Champaran	Lala Chapra	8.71	545	345	195	6.0	43.7	53.3	2.5	24	250	10.6	4.5	46	0.84	0.00	10.6
34	E. Champaran	Motihari (Banjaria thana)	8.69	393	266	120	34.0	9.0	36.0	3.0	12	197	18.0	1.0	5	0.14	0.00	32.0

35	E. Champaran	Nawada	7.97	552	316	210	48.0	22.0	14.0	9.0	0	262	21.0	3.0	4	0.10	0.00	35.0
36	E. Champaran	Patahi	7.60	487	278	110	26.0	11.0	38.0	13.0	0	159	41.0	13.0	5	0.24	0.00	34.0
37	E. Champaran	Raghnathpur	8.43	332	226	150	18.0	25.5	15.0	2.8	15	116	7.1	13.9	49	0.19	0.09	14.6
38	E. Champaran	Raxaul	8.47	288	185	105	16.0	15.8	19.3	3.1	0	173	7.1	2.3	5	0.37	0.00	10.8
39	E. Champaran	Sheoraha	8.24	325	195	90	22.0	8.5	25.4	2.7	0	140	17.7	2.1	12	0.28	0.03	18.1
40	E. Champaran	Chapwa (Sugauli)	7.33	1414	808	350	68.0	43.7	135.2	22.4	0	445	195.0	42.1	3	0.34	0.04	26.6
41	E. Champaran	Uttari Gobandra	8.40	414	266	160	8.0	34.0	10.6	24.8	6	171	10.6	21.5	25	0.25	0.00	23.5
42	W. Champaran	Belwa	8.37	272	186	130	10.0	25.5	14.7	2.2	9	146	7.1	14.0	3	0.13	0.00	14.1
43	W. Champaran	Bettiah (new well)	8.40	878	492	260	40.0	39.0	65.0	1.0	9	244	78.0	33.0	47	0.08	0.00	35.0
44	W. Champaran	Chanpatia	8.45	340	222	130	20.0	19.0	18.0	4.0	12	151	7.0	1.0	20	0.24	0.10	33.0
45	W. Champaran	Gurwalia	7.74	839	493	210	22.0	37.7	39.5	71.6	0	336	78.0	21.0	7	0.00	0.00	11.3
46	W. Champaran	Harnatanr	8.21	1116	660	250	46.0	32.8	94.5	44.9	0	195	127.6	168.5	0	0.14	0.35	12.3
47	W. Champaran	Karigwa Chowk	8.55	268	165	75	14.0	9.7	23.8	1.0	0	122	14.2	4.0	5	0.76	0.00	18.5
48	W. Champaran	Lauria	8.43	355	233	110	16.0	17.0	25.0	4.0	6	171	14.0	1.0	6	0.09	0.00	42.0
49	W. Champaran	Majhwalia (Guruchurwa)	7.29	760	438	270	50.0	35.2	51.0	6.9	6	354	56.7	1.9	0	0.12	0.00	17.0
50	W. Champaran	Mangalpur	8.30	307	190	135	12.0	25.5	14.0	1.8	9	146	17.7	6.3	0	0.49	0.00	17.5
51	W. Champaran	Naurangia	8.17	1137	785	280	104.0	5.0	75.0	94.0	18	307	76.0	82.0	108	0.00	0.00	43.0
52	W. Champaran	Valmiki Nagar (Laxmipur)	7.52	823	493	210	48.0	22.0	38.0	63.0	0	305	53.0	32.0	20	0.00	0.00	31.0
53	E. Champaran	Khejuria Bazar Samiti	8.03	590	340	185	30.0	26.7	45.1	2.8	0	177	56.7	45.1	13	0.73	0.00	12.2
54	E. Champaran	Murarpur	7.76	1686	1035	405	60.0	62.0	185.3	45.6	0	549	226.9	105.3	0	0.82	1.78	14.0
55	E. Champaran	Radia	8.34	470	286	155	10.0	31.6	46.6	3.0	15	220	7.1	16.6	16	0.32	0.00	11.4
56	Muzaffarpur	Katra	8.64	368	250	50	8.0	7.3	59.7	10.9	21	146	10.6	29.7	3	0.85	0.00	17.8
57	Muzaffarpur	Mohant Monihari	7.60	1009	579	320	60.0	41.3	77.4	1.3	0	342	106.4	57.4	14	0.70	0.00	12.9
58	Sitamarhi	Thumma	7.73	1258	768	400	68.2	56	70	48	0	537	71	27	52.0	0.93	1.4	47
59	Sitamarhi	Dheng	8.21	390	236	120	20	17	32	1.9	0	195	14	2.4	4.8	0.25	0.13	24
60	Sitamarhi	Khairwa	8.09	356	232	150	44	10	17	2.2	0	195	21	0.69	4.8	0	0.26	13
61	Sitamarhi	Punurwa	8.24	407	260	150	44	10	26	2.3	0	195	25	0.54	9.6	0	0.32	24
62	Sheohar	Sheohar	8.13	329	202	110	12	19	23	3.5	0	165	14	1.09	0.0	0.08	0	28
63	Sheohar	Sarbarpur	8.49	408	249	155	30	19.4	12.0	9.9	9	171	14.18	0.78	19.1	0.42	0.65	33.72
64	Sitamarhi	Karhania Chowk	7.45	268	184	105	14	17.0	21.1	1.8	0	122	17.73	10.77	12.0	0.06	0.00	14.72
65	Sitamarhi	Sitamarhi Police Line	8.36	358	236	130	30	13.4	21.8	7.0	15	183	10.64	1.58	0.0	0.66	0.63	30.49
66	Sitamarhi	Jagwana Bazar	8.05	180	114	60	8	10	10	0.7	0	55	18	1.58	6.8	0.15	0.16	26
67	Sitamarhi	Sursand	8.19	410	283	170	32	22	33	1.6	0	220	14	0.76	29.6	0.28	0	15
68	Madhubani	Bihari	8.18	459	266	140	36	12	30	2	0	220	11	0.46	4.8	0.22	0	36
69	Madhubani	jaynagar	7.09	705	457	225	76	9	69	1.8	0	427	7	0.61	9.6	0.38	0.2	23
70	Madhubani	Narar	8.08	920	533	280	60	32	54	33	0	342	82	7	24.0	0.71	0.25	33
71	Madhubani	Khajauli	8.30	813	517	255	52	30	58	26	0	378	67	14	17.6	0.2	0	21



72	Madhubani	Bentadih	7.81	385	242	90	16	12.2	40.8	1.1	0	214	7.09	1.52	0.0	0.54	0.00	32.60
73	Madhubani	Karmauli	8.36	409	257	90	12	15	55	1.4	0	220	7	1.6	9.6	0.57	0	21
74	Madhubani	Kapasias	7.79	1398	840	215	28	35.2	146.4	107.6	0	421	187.89	25.36	30.3	0.25	0.87	22.41
75	Madhubani	Dhakjari	7.56	1645	1120	490	80	71	182	53	0	708	234	38.9	14.4	0.28	0.37	15
76	Madhubani	Benipatti	7.90	407	273	140	44	7	33	1.6	0	244	7	0.61	4.8	0.2	0.37	25
77	Madhubani	Kapileswar	8.25	346	226	105	18	15	25	9	0	134	18	26	17.6	0.66	0.35	16
78	Darbhanga	Keoty	8.14	480	304	190	20	34	25	6.8	0	207	43	11	9.6	0.62	0.87	28
79	Darbhanga	Sakri	7.56	451	293	170	34	21	23	15	0	195	28	11	24.0	0.34	0	18
80	Madhubani	Pandaul	8.26	330	201	90	14	13	20	12.7	0	92	35	17.7	13.6	0.09	0	18
81	Madhubani	Shambhuar	7.86	1284	790	320	46	49.8	73.1	118.7	0	543	70.90	26.89	37.9	0.43	3.59	34.72
82	Madhubani	Madhubani	7.75	684	395	210	26	35.2	60.5	1.2	0	232	77.99	1.01	20.5	0.41	0.00	30.56
83	Madhubani	Pariharpur	7.76	411	263	210	20	38.9	6.2	0.7	0	214	10.64	1.24	17.9	1.38	0.00	35.56
84	Madhubani	Babubarhi	7.70	410	272	140	16	24.3	33.0	0.8	0	232	7.09	2.03	8.9	0.76	0.00	37.56
85	Madhubani	Khutauna	8.03	506	346	190	48	17	42	1.1	0	329	7	2	4.8	0.61	0	22
86	Madhubani	Siswar	8.19	638	390	190	64	7	56	1.8	0	293	43	12	4.8	0.47	0.15	22
87	Madhubani	Phulparas	8.28	318	214	140	20	22	14	1.2	0	171	11	4.3	4.8	0.88	0.26	32
88	Madhubani	Bideshwar Asthan	7.52	423	274	130	18	20.7	37.5	1.6	0	238	7.09	4.53	0.0	0.79	0.00	38.56
89	Darbhanga	Bahera	7.84	1050	605	340	44	56	81	0.93	0	537	35	1.9	24.0	1.05	0.1	33
90	Darbhanga	Samapur	8.22	621	384	160	24	24	60	16	0	281	46	7.1	4.8	0.37	0	30
91	Darbhanga	Baheri	8.57	491	335	170	36	19	55	2.5	18	268	14	0.72	4.8	0.62	0	27
92	Darbhanga	Deokuli Dham	8.28	534	352	110	36	8	68	2.3	0	311	14	0	0	0.51	0.16	33
93	Darbhanga	Jorja	8.02	592	394	170	24	27	73	2.1	0	329	21	2.4	14.4	0.66	0	28
94	Madhubani	Bhawanipur	8.30	471	319	70	8	12	85	1.4	0	281	7	1.05	9.6	0.51	0	23
95	Darbhanga	Dharampur Ujan	8.47	431	269	165	18	29.2	28.1	1.3	12	226	10.64	7.11	0.0	0.62	0.00	29.56
96	Darbhanga	Simri	7.39	705	411	200	60	12	50	3.1	0	329	28	6.4	4.8	0.72	0.21	44
97	Darbhanga	Dharbhanga	7.88	458	314	90	24	7	72	1.4	0	281	7	0.72	4.8	0.41	0.3	25
98	Darbhanga	Pouram	7.92	2756	1447	615	72	105.7	287.0	118.7	0	897	244.61	134.15	132.7	0.53	2.66	50.45
99	Samastipur	Jakhra	8.23	681	384	240	18	47.4	41.0	6.5	0	116	113.44	11.59	40.8	0.63	0.11	51.56
100	Samastipur	Jathmal pur (Samastipur)	7.84	933	523	320	60	41.3	45	2.1	0	403	50	20.6	24.56	0.43	0	33
101	Samastipur	Tajpur (Harishakarpur Baghauni)	8.41	956	578	295	54	38.9	82	3.7	12	500	28	7.54	16	0.32	0	35
102	Samastipur	Bhagwanpur Kamla (Ujiarpur)	7.87	961	592	220	44	44	95	3	0	439	67.36	5.36	50	0.61	0	14
103	Samastipur	Dadiya	7.43	648	406	225	42	29.2	23.6	23.5	0	287	17.73	21.20	27.1	0.25	0.06	32.18
104	Samastipur	Patpara	7.40	730	432	310	34	54.7	38.1	2.5	0	390	10.64	10.89	29.1	0.00	0.00	23.56
105	Samastipur	Kalyanpur	7.26	543	333	215	54	19.4	29.0	3.0	0	305	17.73	3.63	0.0	1.18	0.00	14.43
106	Samastipur	Singhiya Ghat	7.54	546	293	200	16	38.9	33.2	2.2	0	244	14.18	5.81	41.7	0.31	0.00	25.17
107	Samastipur	Karian	7.98	1040	621	310	52	72	49	1.8	0	476	57	30.14	35	0.55	0	33
108	Samastipur	Rosera	7.44	421	267	140	28	28	10	2.8	0	183	14	20.34	25.09	0.28	0	27

109	Samastipur	Dalsingh Sarai	8.51	656	417	180	12	60	42	2.8	18	329	14	30.35	16	0.29	0	27
110	Samastipur	Sahit (Bajidpur)	8.28	1326	823	410	54	66.8	110	21.2	0	561	70.9	41	90	0.15	0	27
111	Samastipur	Madudabad (new well)	8.19	1029	640	275	38	43.7	114	2.78	0	268	102.81	42	108	0.43	0	25
112	Samastipur	Shahpur Patori (Shahpur Undi)	7.58	810	540	230	52	40	94	1.1	0	378	57	3.5	35	0.41	0	26
113	Araria	Araria	7.36	434	273	75	12.0	10.9	40.3	33.3	0	153	35.5	21.4	8	0.21	1.54	17.8
114	Araria	Bathnaha 1	7.38	246	159	50	14.0	3.6	27.7	8.2	0	98	14.2	3.9	16	0.00	0.00	11.8
115	Araria	Haripur	7.57	227	156	33	4.0	5.5	40.0	3.0	0	134	7.1	2.2	0	0.20	0.62	12.2
116	Araria	Jokihat	6.90	175	125	40	8.0	4.9	8.8	19.7	0	61	10.6	20.6	2	0.00	0.41	12.9
117	Araria	Matiyari	7.08	431	261	80	20.0	7.3	41.5	27.3	0	159	35.5	7.7	6	0.21	4.48	18.5
118	Araria	Pallasi	7.00	305	203	55	18.0	2.4	27.9	29.6	0	128	17.7	3.0	15	0.00	0.22	11.6
119	Purnia	Amri Kukran (East)	7.34	604	341	190	32.0	26.7	38.7	12.2	0	201	53.2	41.4	3	0.00	6.65	10.8
120	Purnia	Amri Kukran (West)	7.39	959	593	150	38.0	13.4	63.1	113.0	0	299	85.1	50.8	25	0.36	3.19	22.4
121	Purnia	Baisi 2	7.70	601	341	130	34.0	10.9	44.4	20.2	0	171	53.2	51.7	6	0.06	1.27	16.5
122	Purnia	Banmankhi	7.96	163	110	50	8.0	7.3	9.8	3.3	0	73	10.6	2.5	0	0.00	0.10	24.3
123	Purnia	Bansbari	7.37	1034	567	355	56.0	52.2	53.8	20.2	0	378	85.1	27.2	31	0.00	1.26	10.1
124	Purnia	Budhia Gola	6.76	110	78	25	4.0	3.6	4.5	11.7	0	37	7.1	9.7	0	0.23	0.12	15.2
125	Purnia	Chadia	7.32	1003	600	180	18.0	32.8	50.9	118.7	0	378	74.4	55.5	2	0.31	0.17	16.1
126	Purnia	Dargaha	7.72	706	409	270	30.0	47.4	38.8	9.1	0	275	53.2	3.3	49	0.00	0.00	10.5
127	Purnia	Damdaha	7.30	1305	733	295	40.0	47.4	159.6	8.4	0	403	202.1	15.6	3	0.30	0.00	11.2
128	Purnia	Kajha	7.76	809	491	200	32.0	29.2	51.4	50.2	0	256	67.4	47.9	46	0.00	0.02	10.6
129	Purnia	Purnia	7.37	1517	876	255	26.0	46.2	126.4	157.5	0	433	163.1	29.0	49	0.00	0.00	14.6
130	Purnia	Ranipatra	7.53	460	274	130	28.0	14.6	33.2	18.6	0	183	24.8	27.4	5	0.14	0.00	10.8
131	Katihar	Tilka Patti	7.35	1036	570	295	44.0	45.0	83.5	12.3	0	250	166.6	35.7	12	0.00	0.00	18.1
132	Katihar	Bastaul	7.43	390	218	100	24.0	9.7	27.4	3.5	0	189	7.1	1.5	3	0.00	0.18	26.6
133	Katihar	Dumaria	7.04	1697	1024	440	70.0	64.4	96.4	159.6	0	683	156.0	12.9	25	0.00	1.20	23.5
134	Katihar	Makdampur	7.09	975	552	270	48.0	36.5	41.6	49.9	0	317	74.4	91.0	3	0.03	0.03	14.1
135	Katihar	Hafla	6.88	690	419	195	38.0	24.3	57.1	25.5	0	165	117.0	37.7	7	0.00	0.03	11.3
136	Katihar	Kadwa	7.83	145	99	25	4.0	3.6	18.4	6.2	0	67	10.6	3.0	0	0.18	0.10	12.3
137	Katihar	Katihar	7.53	374	243	160	42.0	13.4	15.8	5.8	0	195	21.3	2.0	5	0.00	0.07	18.5
138	Katihar	Korha	7.64	377	217	115	20.0	15.8	21.6	13.2	0	146	31.9	7.9	0	0.00	0.19	17.0
139	Katihar	Kursela	7.40	275	171	105	12.0	18.2	13.5	4.9	0	134	21.3	2.2	0	0.00	0.00	17.5
140	Katihar	Mahendrapur	7.46	860	493	270	30.0	47.4	60.0	25.8	0	433	49.6	0.4	3	0.00	0.01	12.2
141	Katihar	Manihari	7.59	703	400	240	58.0	23.1	39.3	14.7	0	293	67.4	4.7	0	0.00	0.05	14.0
142	Katihar	Narahaiya	7.35	626	361	155	26.0	21.9	43.5	23.4	0	153	78.0	47.7	16	0.03	0.30	11.4
143	Katihar	Paranpur	7.02	839	510	240	50.0	27.9	46.7	49.7	0	317	53.2	47.0	23	0.16	4.40	17.8
144	Katihar	Routara	7.17	707	450	95	20.0	10.9	76.6	55.7	0	171	67.4	88.9	14	0.00	0.12	12.9
145	Katihar	Sonauli	7.00	675	381	165	12.0	32.8	68.9	10.9	0	177	88.6	0.0	51	0.36	0.02	8.0

146	Katihar	Kheria Hat	7.01	484	284	125	12.0	23.1	48.7	9.0	0	207	42.5	7.2	3	0.00	0.04	12.1
147	Kishanganj	Bahadurganj	7.07	403	222	85	16.0	10.9	34.7	11.5	0	104	49.6	20.3	5	0.08	0.00	10.7
148	Kishanganj	Bhagalbari	7.10	93	59	30	4.0	4.9	4.0	3.9	0	37	8.9	2.3	0	0.00	0.03	8.6
149	Kishanganj	Kaswa Kaliganj	7.24	123	86	30	8.0	2.4	16.0	3.7	0	67	10.6	0.0	0	0.00	0.04	4.0
150	Kishanganj	Kishanganj	7.10	1082	732	125	22.0	17.0	206.2	19.8	0	238	166.6	78.1	66	0.28	0.00	11.2
151	Kishanganj	Thakurganj	6.96	130	92	20	4.0	2.4	18.4	3.7	0	61	10.6	0.0	0	0.00	0.24	15.3
152	Bhagalpur	Madrauni Chowk	7.67	468	257	195	4.0	45.0	14.3	5.4	0	238	10.6	1.0	16	0.18	0.01	15.0
153	Bhagalpur	Bihpur	7.61	558	338	160	10.0	32.8	56.8	9.2	0	201	92.2	0.6	5	0.23	0.05	8.5
154	Bhagalpur	Naugachiya	7.28	454	277	185	10.0	38.9	25.4	2.4	0	189	35.5	34.3	3	0.36	1.96	11.3
155	BEGUSARAI	Barauni 0 Mile	8.50	363	218	140	36.0	12.2	17.0	3.3	15	140	17.7	1.3	9	0.40	0.00	26.1
156	BEGUSARAI	Begusarai	7.31	737	427	300	28.0	55.9	33.3	5.2	0	336	53.2	11.1	9	0.70	0.00	26.1
157	BEGUSARAI	Teghra	7.76	760	424	220	4.0	51.0	60.3	4.8	0	177	120.5	18.0	24	0.76	0.08	31.9
158	BEGUSARAI	Naya Nagar Dularpur	7.30	722	417	210	26.0	35.2	48.1	21.4	0	140	124.1	18.6	34	1.10	0.23	22.8
159	BEGUSARAI	Matihani	7.61	1452	843	440	72.0	63.2	134.0	5.6	0	531	152.4	6.9	49	0.63	0.54	36.1
160	BEGUSARAI	Pangachi	7.93	510	327	240	40.0	34.0	17.1	0.6	0	275	31.9	1.3	12	0.55	0.00	22.2
161	BEGUSARAI	Begusarai fc ib	7.27	804	470	240	26.0	42.5	62.3	24.7	0	348	49.6	3.5	33	1.08	0.12	16.1
162	BEGUSARAI	Haridia	7.24	1153	648	420	68.0	60.8	48.2	21.5	0	519	81.5	9.0	16	1.10	0.00	25.9
163	BEGUSARAI	Mohanpur Usrai	8.59	2197	1254	730	124.0	102.1	172.1	13.4	14	573	347.4	42.8	64	1.01	1.29	29.2
164	BEGUSARAI	Manjaul	8.60	345	215	135	30.0	14.6	21.4	3.4	12	128	17.7	10.7	18	0.83	0.00	13.3
165	BEGUSARAI	Cheria bariarpur	7.14	2804	1582	625	102.0	89.9	309.7	41.2	0	811	368.7	47.3	82	0.98	0.00	45.1
166	BEGUSARAI	Gopalpur	7.92	1170	685	410	62.0	62.0	89.0	3.1	0	390	170.2	38.0	2	0.86	0.00	19.2
167	BEGUSARAI	Kumarshon	7.84	885	505	345	58.0	48.6	50.9	1.9	0	415	49.6	4.8	18	0.32	0.46	19.8
168	BEGUSARAI	Bagrash	8.30	434	261	135	6.0	29.2	16.0	33.9	0	214	28.4	1.3	2	0.62	0.00	13.4
169	KHAGARIA	Gangaur	7.88	1120	671	405	68.0	57.1	78.9	7.4	0	366	145.3	33.4	30	0.95	0.19	26.5
170	KHAGARIA	Labhgaon	7.61	829	567	240	50.0	27.9	82.6	10.2	0	354	85.1	23.1	21	0.81	0.00	50.4
171	KHAGARIA	Kasimpur	7.50	893	526	285	48.0	40.1	68.7	13.1	0	275	120.5	2.6	29	0.91	0.00	34.8
172	KHAGARIA	Khagaria	7.40	865	520	335	66.0	41.3	56.7	4.0	0	293	134.7	11.7	3	0.68	0.00	23.3
173	KHAGARIA	Basantpur	7.10	526	338	185	6.0	41.3	41.5	3.9	0	262	17.7	2.3	37	0.71	0.00	27.7
174	KHAGARIA	Jamalpur	8.46	854	494	320	4.0	75.3	46.7	6.1	6	433	35.5	14.4	9	0.58	0.00	34.3
175	KHAGARIA	Devnagar	7.25	1934	1089	285	24.0	54.7	269.5	33.8	0	622	226.9	23.0	41	0.40	0.00	35.8
176	KHAGARIA	Mohaddipur	8.15	1431	666	375	46.0	63.2	36.1	81.3	0	451	81.5	37.8	31	0.76	0.07	13.1
177	KHAGARIA	Gandhinagar	8.54	933	550	395	8.0	91.1	29.0	11.0	8	238	163.1	14.5	41	1.27	0.81	41.4
178	KHAGARIA	Maheshkhunt	7.24	1051	601	325	28.0	62.0	76.5	14.4	0	366	109.9	35.7	17	0.94	0.00	33.4
179	KHAGARIA	Chautham	7.46	752	435	295	30.0	53.5	42.0	4.3	0	336	49.6	3.9	19	1.12	0.00	26.7
180	KHAGARIA	Pirnasara	8.67	339	1589	475	86.0	63.2	290.0	189.0	20	726	297.8	80.0	87	0.77	2.02	41.3
181	SAHARSA	Sonbarsaraj	7.53	2650	201	75	10.0	12.2	32.9	1.8	0	79	35.5	8.3	16	0.98	0.00	34.4
182	SAHARSA	Simri Bakhtiyarpur	8.35	258	165	95	10.0	17.0	16.9	4.6	9	122	10.6	1.3	8	0.52	0.38	16.0

183	SAHARSA	Jamunia	8.16	345	238	65	6.0	12.2	35.1	18.4	0	104	42.5	3.9	18	1.02	0.00	36.9
184	SAHARSA	Chainpur	7.54	2246	1468	420	54.0	69.3	308.9	94.4	0	427	407.7	182.5	44	0.98	0.00	46.3
185	SAHARSA	Saharsa	7.54	978	576	340	38.0	59.5	65.9	6.0	0	372	70.9	44.1	46	1.02	0.00	17.0
186	SAHARSA	Potwaha	7.63	352	200	130	8.0	26.7	16.1	2.2	0	171	14.2	4.6	0	0.79	0.00	23.4
187	SAHARSA	Baijanathpur	6.92	1077	601	245	40.0	35.2	86.4	46.0	0	409	85.1	39.8	1	1.21	0.65	17.3
188	MADHEPURA	Gwalpara	8.60	324	192	105	6.0	21.9	20.1	5.2	12	134	14.2	7.0	2	1.04	0.00	25.1
189	MADHEPURA	Uda Kishanganj	7.52	1223	701	190	28.0	29.2	130.8	87.3	0	421	113.4	14.2	22	0.60	0.70	18.0
190	MADHEPURA	Abhiyatola	8.19	973	590	255	4.0	59.5	60.9	75.1	0	336	99.3	21.3	20	0.99	0.71	44.8
191	MADHEPURA	Ganeshpur	7.09	682	410	235	26.0	41.3	38.4	10.9	0	250	74.4	26.2	1	0.82	0.00	38.5
192	MADHEPURA	Gaushala Chowk	7.40	638	390	175	10.0	36.5	49.9	28.9	0	226	85.1	13.6	3	0.18	0.00	26.0
193	MADHEPURA	Hatkora bazar	7.64	900	525	245	32.0	40.1	81.3	6.6	0	281	131.2	17.5	13	1.07	0.00	31.1
194	MADHEPURA	Singeswar	7.44	626	378	240	24.0	43.7	22.3	31.3	0	336	31.9	4.8	1	1.19	0.00	13.5
195	MADHEPURA	Madhepura	7.91	757	450	160	18.0	27.9	65.1	45.7	0	250	74.4	25.2	21	0.68	1.02	19.8
196	SUPAUL	Shyam Nagar	8.03	440	255	155	6.0	34.0	23.6	8.8	0	146	53.2	14.4	2	1.32	0.00	22.3
197	SUPAUL	Ganpatganj	8.84	795	496	260	48.0	34.0	65.4	14.2	20	247	74.4	42.3	30	0.07	0.00	25.2
198	SUPAUL	Kaithtola	7.69	803	468	230	26.0	40.1	78.0	3.3	0	268	67.4	31.1	47	0.99	0.00	10.3
199	SUPAUL	Norha	8.61	176	109	40	8.0	4.9	16.5	8.4	12	49	17.7	1.8	2	0.07	0.00	12.1
200	SUPAUL	Karjain	7.66	756	498	230	44.0	29.2	74.3	5.9	0	323	78.0	22.8	18	0.22	0.00	28.5
201	SUPAUL	Ratanpura	8.51	545	316	135	4.0	30.4	19.9	58.9	3	226	42.5	2.9	5	0.09	0.09	12.7
202	SUPAUL	Birpur	7.40	874	508	320	78.0	30.4	37.7	19.8	0	403	42.5	18.4	10	0.49	0.47	24.6
203	SUPAUL	Bhimnagar	8.56	434	277	175	8.0	37.7	15.6	12.6	0	183	28.4	18.4	13	0.26	0.00	32.3
204	SUPAUL	Bhawanipur	7.06	631	400	220	26.0	37.7	33.1	7.6	0	253	42.5	26.8	22	0.69	0.00	48.7
205	SUPAUL	Balua Bazar	7.17	378	215	120	4.0	26.7	17.4	13.4	0	116	21.3	29.7	17	0.68	0.00	13.5
206	SUPAUL	Pratapganj	7.90	790	439	230	54.0	23.1	34.6	33.6	0	281	46.1	28.3	19	0.29	0.19	28.1
207	SUPAUL	Jadia	7.10	363	235	135	28.0	15.8	21.5	4.9	0	189	24.8	5.6	3	0.54	0.00	16.1
208	SUPAUL	Triveniganj	8.44	445	296	125	20.0	18.2	44.4	15.1	6	165	42.5	18.4	26	0.51	0.00	7.0
209	SUPAUL	Pipra chowk	8.77	841	566	210	16.0	41.3	64.0	78.6	9	293	81.5	39.1	43	0.11	0.00	18.8
210	SUPAUL	Thumba	8.40	397	230	115	8.0	23.1	31.5	3.9	24	98	35.5	11.9	10	1.21	0.00	30.5
211	SUPAUL	Supaul	6.95	762	516	260	26.0	47.4	72.3	14.2	0	290	99.3	35.2	26	1.38	0.11	18.0
212	SUPAUL	Aandauli	7.26	1648	991	360	82.0	37.7	153.1	97.5	0	488	230.4	4.2	46	1.10	0.00	41.2
213	SAHARSA	Patodibazar	7.41	613	400	155	8.0	32.8	60.2	37.0	0	201	85.1	9.5	27	0.69	0.00	16.7
214	SAHARSA	Tulsiyahi	7.17	859	541	200	10.0	42.5	36.7	114.9	0	250	145.3	18.2	2	0.99	0.28	18.4
215	SAHARSA	Bangaon	8.85	818	498	235	48.0	27.9	72.6	11.2	11	311	67.4	10.4	24	0.00	0.00	40.6
216	SAHARSA	Chandaur Purbi	7.55	783	485	255	8.0	57.1	74.0	6.3	0	262	113.4	6.1	20	1.40	0.00	38.0
217	SAHARSA	Adraha	7.44	1571	954	345	62.0	46.2	187.6	25.1	0	506	166.6	44.8	62	1.01	0.52	49.0
218	BEGUSARAI	Bintoli Kalyanpur	7.76	721	425	240	28.0	41.3	47.1	8.0	0	232	63.8	38.1	34	0.76	0.00	22.4
219	BEGUSARAI	Pokharia	7.35	595	357	265	18.0	53.5	18.3	3.7	0	183	74.4	5.8	52	0.88	0.00	18.7

220	Patna	Barh	7.14	1707	970	490	76	73	170	4.3	0	647	178	32	10	0.81	0.00	32
221	Patna	Mokama	7.4	795	467	260	44	37	64	2.7	0	354	60	0	6	0.57	0.00	37
222	Patna	Maranchi	7.5	1135	650	470	80	66	42	12.7	0	561	43	3	21	0.78	0.00	40
223	Lakhisarai	Barhaiya	7.56	722	444	250	22	47	54	1.9	0	366	50	10	3	0.61	0.00	32
224	Lakhisarai	Surajgarha	8.26	987	577	260	32	44	110	2.3	0	445	85	9	0	0.32	0.00	23
225	Munger	Purabsarai (Navtolia)	7.9	1120	627	370	44	63	53	41.2	0	488	64	14	14	0.05	0.00	36
226	Munger	Jamalpur	7.51	1005	583	370	104	29	58	0.8	0	415	71	21	22	0.52	0.00	24
227	Munger	Singhiya Chowk	7.33	1216	758	450	56	75	92	20.0	0	366	206	55	0	0.01	0.00	31
228	Munger	Bariarpur	7.21	1132	665	440	100	46	58	0.8	0	476	92	45	0	0.42	0.00	32
229	Munger	Gobadda	7.81	1026	581	340	22	69	76	0.2	0	397	128	9	0	1.30	0.00	34
230	Munger	Haveli Kharagpur	7.43	215	138	60	20	2	12	3.5	0	49	21	22	0	0.54	0.00	27
231	Munger	Gangta More	7.25	955	610	290	40	46	98	11.2	0	433	75	12	30	0.91	0.00	33
232	Munger	Sangrampur	8.57	318	196	100	12	15	33	2.6	18	122	25	0	8	0.42	0.00	15
233	Munger	Rampur	8.1	601	401	250	72	17	46	2.3	0	329	50	0	0	0.38	0.00	13
234	Munger	Tarapur	7.45	768	437	300	72	29	28	0.8	0	293	71	0	27	0.66	0.00	30
235	Munger	Asarganj	7.38	1628	1118	390	76	49	184	94.0	0	689	177	23	61	0.30	0.20	34
236	Bhagalpur	Sultanganj	8.29	648	427	240	48	29	49	16.0	0	317	57	16	0	0.39	0.00	18
237	Bhagalpur	Akbarnagar	7.46	621	396	190	36	24	57	1.9	0	281	7	2	60	0.42	0.00	36
238	Bhagalpur	Sahkund	8.22	503	296	190	28	29	23	1.9	0	110	74	7	30	0.48	0.00	35
239	Bhagalpur	Bhagalpur	7.76	596	351	205	26	34	41	0.4	0	281	21	17	13	0.49	0.00	27
240	Bhagalpur	Sabaur	7.34	2186	736	400	96	39	81	38.0	0	415	178	22	0	0.23	0.44	29
241	Bhagalpur	Kahalgaoon	7.4	1311	762	290	34	50	146	11.9	0	421	128	70	34	0.89	0.00	31
242	Bhagalpur	Ghoga	7.2	1188	691	420	120	29	90	1.2	0	397	135	35	0	0.54	0.00	38
243	Bhagalpur	Jagdishpur	7.53	2210	1259	420	58	67	293	25.8	0	683	255	25	81	1.15	0.00	37
244	Bhagalpur	Harchandpur	8.34	889	517	210	30	33	60	62.6	12	232	138	5	8	0.99	0.00	30
245	Bhagalpur	Jagnathpur	7.54	591	333	215	24	38	30	1.1	0	238	18	21	23	1.26	0.00	33
246	Banka	Rajaun	7.62	614	389	200	48	19	49	8.4	0	281	46	5	9	0.44	0.00	32
247	Banka	English Morh	7.21	405	245	100	28	7	26	17.0	0	116	28	28	13	0.12	0.00	27
248	Banka	Amarpur	7.07	2204	1234	450	136	27	198	87.0	0	628	206	73	86	0.31	1.90	38
249	Banka	Rampur	7.49	1320	805	380	100	29	137	11.3	0	415	163	37	38	0.84	0.34	36
250	Banka	Shambhuganj	7.4	836	483	210	48	22	74	3.1	0	305	71	13	31	0.91	0.00	34
251	Banka	Khararia	7.61	659	367	230	30	38	48	1.9	0	299	43	1	0	0.75	0.06	22
252	Banka	Banka	7.4	561	329	170	40	17	25	19.0	0	207	43	8	12	0.48	0.00	39
253	Banka	Barahat	8.02	747	501	250	32	41	92	5.8	0	415	64	0	0	0.87	0.00	12
254	Banka	Panjwara	8.21	306	203	90	12	15	27	6.6	0	98	28	8	24	0.46	0.00	22
255	Banka	Bausi Dbib	7.8	445	296	180	28	27	15	0.1	0	183	11	67	0	1.80	0.00	35
256	Banka	Baunsi	8.31	332	200	95	14	15	28	1.5	12	140	14	6	0	1.69	0.00	27

257	Banka	Katuria	8.04	698	450	250	72	17	38	1.5	0	207	78	65	0	0.78	0.00	51
258	Banka	Tinmurthy	7.6	568	340	140	40	10	60	1.9	0	122	107	8	0	3.25	0.00	36
259	Banka	Chandan	7.65	702	425	230	76	10	41	1.9	0	305	43	8	0	1.80	0.00	58
260	Jamui	Chandra Mandih	7.26	1048	670	295	54	39	98	15.8	0	421	64	31	47	0.95	0.89	64
261	Jamui	Chakai	7.36	1150	640	400	88	44	55	0.8	0	378	114	60	14	1.20	0.00	33
262	Jamui	Chakai B	7.72	1076	612	305	52	43	98	0.7	0	299	128	31	42	1.10	0.12	35
263	Jamui	Batia	8.16	346	222	120	28	12	29	0.8	0	134	28	13	16	0.55	0.00	12
264	Jamui	Chandwari	7.5	809	449	230	30	38	67	2.9	0	262	74	11	30	0.85	0.00	36
265	Jamui	Ambedkarnagar	7.93	640	375	210	52	19	44	0.8	0	244	64	14	0	0.44	0.00	32
266	Jamui	Gidhaur	8.29	494	302	160	36	17	30	0.4	0	207	28	4	21	0.84	0.00	38
267	Jamui	Laxmipur	7.25	808	488	245	24	45	74	0.8	0	287	67	26	38	0.40	0.00	38
268	Jamui	Sandipi	7.01	751	494	240	68	17	83	1.2	0	183	178	18	0	0.08	0.00	17
269	Jamui	Jamui	7.28	767	448	250	60	24	54	12.3	0	232	99	9	24	0.21	0.00	24
270	Jamui	Purna Khaira	7.83	687	413	265	40	40	41	0.3	0	317	32	20	18	0.54	0.00	28
271	Jamui	Sikandra	7.48	2892	1628	535	64	91	392	38.6	0	738	411	42	104	0.82	0.00	34
272	Jamui	Manjhwe	7.19	1625	971	390	58	60	187	13.5	0	610	163	59	25	1.98	0.38	32
273	Lakhisarai	Lakhisarai	7.82	1086	674	520	168	24	28	0.8	0	476	121	11	0	0.25	0.00	31
274	Lakhisarai	Kiul	8.37	407	262	150	36	15	28	1.5	18	183	21	4	0	0.78	0.00	33
275	Lakhisarai	Kajra	8.41	1506	842	295	14	63	193	20.13	39	555	128	1	11	0.87	0.00	49
276	Bhojpur	Bihiya	7.83	2302	1332	295	10.0	65.6	387.2	42.9	0	415	482.1	21.4	64	0.56	0.05	5.0
277	Bhojpur	Garhani	8.35	752	450	105	8.0	20.7	107.9	21.3	24	323	31.9	22.6	13	1.03	0.06	12.7
278	Bhojpur	Harnath Kundi	8.10	501	316	115	12.0	20.7	68.1	4.0	0	220	56.7	1.1	5	0.28	0.06	14.3
279	Bhojpur	Kulharia	7.64	696	395	120	14.0	20.7	89.2	13.8	0	311	39.0	0.0	15	0.24	0.01	13.4
280	Bhojpur	Milki	7.70	485	270	170	10.0	35.2	30.4	1.5	0	262	10.6	1.1	8	0.29	0.01	12.8
281	Rohtas	Akbarpur	7.84	572	333	145	18.0	24.3	40.6	21.1	0	195	53.2	24.9	17	0.35	0.04	14.5
282	Rohtas	Amawan Gate	8.44	961	529	225	44.0	27.9	99.7	3.5	15	207	138.3	0.4	52	0.42	0.06	27.5
283	Rohtas	Ambwalia	7.92	700	397	105	12.0	18.2	98.2	11.2	0	317	31.9	15.7	0	0.26	0.15	15.5
284	Rohtas	Anikut	8.17	516	312	145	18.0	24.3	51.6	4.4	0	244	35.5	7.4	0	0.36	0.04	21.5
285	Rohtas	Bahaura	8.17	440	267	150	18.0	25.5	40.1	1.3	0	226	17.7	8.0	2	0.11	0.15	16.2
286	Rohtas	Bikramganj	7.59	754	436	150	14.0	27.9	94.2	1.7	0	189	78.0	49.1	38	0.38	0.07	16.8
287	Rohtas	Chenari	8.07	628	407	175	32.0	23.1	64.4	21.4	0	317	42.5	10.7	1	0.36	0.02	17.6
288	Rohtas	Karbindia	8.09	456	264	140	18.0	23.1	46.7	1.0	0	220	21.3	0.0	6	0.19	0.06	13.9
289	Rohtas	Kochas	7.89	1110	646	335	52.0	49.8	101.6	21.4	0	366	173.7	1.1	8	0.51	0.09	14.6
290	Rohtas	Maliabagh	7.50	1147	808	155	16.0	27.9	135.2	101.7	0	201	106.4	250.5	31	0.35	0.01	16.6
291	Rohtas	Nasriganj	8.03	371	216	90	18.0	10.9	35.0	21.0	0	159	14.2	4.9	0	0.25	0.05	14.6
292	Rohtas	Nokha	7.79	928	605	95	12.0	15.8	179.3	3.0	0	275	88.6	0.0	123	0.78	0.06	15.0
293	Rohtas	Rajandih	7.55	752	437	160	36.0	17.0	79.3	21.4	0	201	102.8	28.6	17	0.00	0.15	13.1

294	Rohtas	Sasaram	7.52	514	282	155	14.0	29.2	37.6	3.0	0	214	35.5	14.1	4	0.27	0.06	13.8
295	Rohtas	Tilothu	7.93	505	301	185	16.0	35.2	34.7	0.9	0	195	28.4	20.1	13	0.08	0.05	32.7
296	Bhabua	Bandipur	7.99	1347	789	220	12.0	46.2	157.9	41.7	0	207	205.6	151.0	31	0.38	0.03	17.0
297	Bhabua	Bhabhua	7.38	760	430	275	34.0	46.2	46.1	2.3	0	201	109.9	48.2	7	0.00	0.07	13.5
298	Bhabua	Chainpur	8.29	640	391	250	49.0	31.0	41.7	1.7	0	275	42.5	11.0	32	0.50	0.07	13.9
299	Bhabua	Chand	6.94	2256	1411	395	4.0	93.6	283.2	99.9	0	177	535.3	252.5	21	0.05	0.19	12.7
300	Bhabua	Karmanasa	7.30	1202	742	255	28.0	45.0	178.0	2.6	0	140	336.8	51.1	3	0.23	0.03	11.3
301	Bhabua	Mohania	7.60	1259	773	230	58.0	20.7	176.2	52.9	0	354	216.2	5.7	13	0.00	0.05	13.9
302	Bhabua	Jahanabad (Kudra)	7.37	1534	882	260	18.0	52.2	197.5	32.8	0	415	237.5	48.1	25	0.11	0.02	17.7
303	Bhabua	Nuawan	7.47	1781	1169	365	38.0	65.6	267.9	15.8	0	207	273.0	354.0	10	0.09	0.05	18.0
304	Bhabua	Tori forest	7.98	1652	992	435	48.0	76.5	189.2	21.0	0	531	226.9	50.4	39	0.83	0.03	16.3
305	Buxar	Barhampur	7.80	1554	933	135	6.0	29.2	308.4	2.8	0	433	244.6	48.5	15	0.06	0.16	14.0
306	Buxar	Buxar	7.40	855	488	205	38.0	26.7	96.2	2.4	0	220	138.3	38.4	0	0.32	0.04	14.0
307	Buxar	Dumraon	7.36	1045	575	290	14.0	62.0	90.6	22.3	0	317	124.1	43.1	9	0.00	0.01	16.4
308	Buxar	Rajpur	8.00	1132	668	260	48.0	34.0	155.0	1.4	0	494	102.8	8.5	5	0.62	0.04	11.4
309	Saran	Minapur	7.16	2260	1309	460	48	82.6	297.9	8.4	0	390	446.67	119.20	29.1	0.82	0.03	38.72
310	Saran	Dighwara	7.85	639	365	175	32	23.1	56.1	4.8	0	244	53.18	10.32	12.0	0.61	0.05	24.37
311	Saran	Saguni	7.64	844	494	360	40	63.2	37.7	1.8	0	500	14.18	0.61	0.0	0.53	0.06	30.49
312	Saran	Sonepur	7.73	921	621	205	48	21	126	13.0	0	445	82	11.0	23	0.49	0.00	26
313	Saran	Chausa	8.26	1121	662	290	30	52	112	11.0	0	464	99	20.8	21	0.46	1.00	31
314	Saran	Nayagaon	8.52	516	305	140	20	22	48	2.0	12	195	39	11.1	10	0.32	0.00	26
315	Saran	Aami	8.20	720	462	200	24	34	82	21	0	360	57	0.18	8	0.96	0.00	15
316	Saran	Chiranad	8.66	1585	1047	590	88	90	78	102.0	18	403	241	120.0	52	0.35	0.00	20
317	Saran	Garkha	7.70	595	353	155	16	28	53	8.0	0	201	39	32.2	25	0.87	0.14	28
318	Saran	Chapra	7.25	1507	837	355	42	61	143	29	0	573	131	14.12	40	0.72	0.00	26
319	Saran	Majhanpura	7.89	735	470	260	34	43	49	2.0	0	281	43	46.0	50	0.34	0.00	32
320	Saran	Manjhi	8.63	420	250	145	16	26	24	3	12	183	11	12.70	14.06	0.94	0.00	25
321	Saran	Ekma	7.68	342	197	100	14	16	25	6	0	128	28	3.01	13.13	0.21	0.00	14
322	Siwan	Maharajganj	7.94	403	260	120	18	18	29	12.0	0	122	21	49.0	29	0.92	0.00	8
323	Siwan	Paterhi (Pateuha)	7.79	841	518	105	22	12	86	59.0	0	323	18	77.9	19	0.39	0.00	27
324	Siwan	Tarwara	7.65	1006	591	260	32	44	91	14.0	0	494	46	18.2	7	0.73	0.00	37
325	Siwan	Sadikpur Purabtola	8.49	702	458	205	28	32.8	79.6	0.7	0	262	96	28.30	0.0	0.36	0.14	32.60
326	Siwan	Siwan	8.21	364	219	125	12	23	18	6.0	0	159	21	9.5	4	0.34	0.00	28
327	Siwan	Mairwa	7.30	1311	804	355	6	83	143	29	0	476	135	42.7	50	0.25	0.08	26
328	Siwan	Chitakahl	8.16	304	194	80	6	18	16	11.0	0	134	11	21.0	0	0.34	0.00	29
329	Siwan	Deuria	7.80	632	370	295	40	47.4	15.7	2.0	0	281	39.00	1.54	30.3	0.42	0.07	22.41
330	Siwan	Darauli	7.48	532	314	170	26	26	26	9.0	0	232	20	6.7	18	0.51	0.00	41

331	Siwan	Ander	8.20	378	222	140	20	22	9	13.0	0	146	14	9.4	18	0.39	0.00	27
332	Gopalganj	Turkaha (Gopalganj)	8.50	478	276	145	12	28	27	7.0	9	140.5	14.18	11.2	48	0.28	0.02	37
333	Gopalganj	Hathua	7.60	1081	734	285	12	62	119	48.0	0	457.5	166.62	5.9	14	0.54	0.00	27
334	Gopalganj	Misirbatha	8.26	359	218	135	14	24	12	3.0	0	110	43	6.4	10	0.87	0.00	38
335	Gopalganj	Bhore	7.72	655	395	190	42	21	54	9.0	0	262	32	0.0	50	0.48	0.00	27
336	Gopalganj	Kateya	8.43	320	186	135	18	21.9	11.1	2.7	3	128	10.64	0.87	29.5	0.91	0.04	10.12
337	Gopalganj	Nimouinya	8.39	668	400	170	26	25.5	71.0	1.2	12	189	85.08	13.81	17.9	1.28	0.00	35.32
338	Gopalganj	Jalalpur	8.02	1014	648	185	18	34	122	53.0	0	414.8	106.35	9.1	34	0.21	0.00	19
339	Gopalganj	Manjhwa	7.41	2560	1498	440	76	61	318	43	0	671	291	149.60	74.77	0.38	0.16	75
340	Gopalganj	Phulwaria	7.64	1580	939	320	52	46.2	190.8	16.1	0	482	170.16	97.10	37.9	0.57	0.15	34.72
341	Gopalganj	Barauli	8.50	386	249	160	24	24	29	5.7	12	208	11	1.94	12.70	0.81	0.00	6
342	Gopalganj	Rampur	7.40	869	499	225	16	45	87	13	0	458.0	24.82	0.35	1.37	0.64	0.00	32
343	Gopalganj	Bishambharpur	8.53	365	227	150	26	20.7	10.6	6.4	9	146	10.64	0.53	28.9	0.67	0.00	27.54
344	Gopalganj	Bangra	8.30	473	299	120	14	21	38	13.0	0	204.5	10.64	16.5	24	0.24	1.18	36
345	Siwan	Basantpur	8.70	463	296	210	40	27	23	3.0	24	183	16	48.9	0	0.74	0.00	12
346	Siwan	Hardia	8.28	371	244	130	14	23	28	4.0	0	171	21	7.4	14	0.53	0.00	27
347	Saran	Mashrakh	8.16	695	457	210	32	32	77	8	0	445	7	4.60	12.40	0.41	0.00	12
348	Saran	Taraia	7.58	2457	1388	445	62	52	291	101.0	0	628	291	97.6	62	0.61	0.00	48
349	Saran	Nandanpur	7.42	2790	1597	635	86	102.1	228.9	109.5	0	519	347.41	255.70	100.9	2.20	0.00	48.05
350	Saran	Amnaour	7.45	610	350	210	38	27.9	35.8	1.4	0	336	10.64	0.76	0.0	0.81	0.07	29.82
351	Vaishali	Hajipur	8.47	325	198	125	24	16	12	10.0	9	140	14	3.0	6	0.62	0.00	22
352	Vaishali	Sarai	8.31	438	292	160	36	17	26	14.0	6	122	14	32.0	62	0.86	0.03	12
353	Vaishali	Garaul	7.51	2110	1316	460	42	86.3	217.9	119.5	0	531	350.96	103.60	41.0	0.74	0.06	30.56
354	Vaishali	Rasa Purbi	7.72	1562	868	650	54	125.1	76.3	3.5	0	494	138.26	43.80	132.7	0.85	0.08	50.45
355	Vaishali	Mahua	8.35	953	556	335	80	33	49	14.0	3	311	89	40.8	22	0.69	0.07	36
356	Vaishali	Mukundpur	8.54	450	293	200	16	38.9	17.6	2.4	12	201	17.73	1.21	40.8	0.35	0.04	21.16
357	Vaishali	Rajapakar	8.10	616	373	245	24	45.0	24.6	1.1	0	256	46.09	0.26	27.1	1.15	0.06	32.18
358	Vaishali	Hasanchowk	7.33	677	404	225	44	27.9	39.7	1.1	0	311	10.64	10.31	29.1	0.32	0.10	33.56
359	Vaishali	Mahnar	8.19	435	278	170	32	22	23	6.0	0	214	14	14.3	15	1.00	0.05	20
360	Vaishali	Kumarkahl Buzurg	7.99	899	452	320	36	55.9	57.5	1.4	0	336	67.36	31.87	30.0	0.87	0.02	24.43
361	Nalanda	Ankuri Bazar	7.68	717	477	175	14	34	86	20	0	256	78	16.0	32	1.10	0.00	40
362	Nalanda	Asthwan	7.46	1337	803	399	94	40	130	4	0	500	128	22.0	38	0.39	0.00	42
363	Nalanda	Biharsharif Rly Stn	7.65	634	409	232	61	19	44	11	0	280	42	2.3	42	0.29	0.00	16
364	Nalanda	Bhui	8.04	1582	915	504	52	91	122	14	12	397	255	44.4	52	0.66	0.00	35
365	Nalanda	Biharsharif	7.70	1601	918	475	72	72	140	21	24	555	135	38.0	41	1.01	0.13	46
366	Nalanda	Daudpur	8.29	1355	754	435	112	38	83	13	0	451	135	30.0	31	0.89	0.00	37
367	Nalanda	Doiya	7.50	2545	1751	571	36	117	422	10	0	793	397	13.0	248	1.00	0.00	23



368	Nalanda	Ekangarsarai	8.61	1347	792	155	4	35	190	61	48	415	85	48.0	62	1.15	0.00	23
369	Nalanda	Giriak	7.26	1962	1110	640	16	146	156	4	0	610	262	33.0	78	0.55	0.00	42
370	Nalanda	Harnaut	7.44	1253	741	50	16	2	186	78	0	268	156	66.5	29	0.23	1.35	43
371	Nalanda	Heganpura	7.70	1172	801	504	66	83	54.39	64	0	280	283	0.6	58	1.60	0.00	21
372	Nalanda	Hilsa	8.00	753	515	190	24	32	42	90	0	336	64	40.0	0	0.29	0.00	18
373	Nalanda	Islampur	7.84	2284	1518	320	82	28	304.88	117	0	390	355	327.5	44	0.37	0.05	22
374	Nalanda	Jangipur	8.50	396	267	140	20	22	31	1	0	171	28	16.4	10	0.36	0.00	34
375	Nalanda	Kundalpur	7.52	968	570	321	56	44	59	23	0	427	43	7.6	50	0.60	0.00	26
376	Nalanda	Moghra	7.86	739	459	266	48	36	47.42	8	0	310	54	0.0	50	0.49	0.00	27
377	Nalanda	Muraura	7.14	1055	607	258	64	24	64	54	0	439	74	25.4	0	0.43	0.00	34
378	Nalanda	Nalanda	7.90	970	643	480	74	72	30	7	0	482	79	8.0	60	0.47	0.00	18
379	Nalanda	Nirpur	7.85	2916	1984	590	88	90	448	61	0	610	358	265.0	269	0.80	0.00	32
380	Nalanda	Nischalganj	8.08	960	591	240	36	36	96	11	0	275	121	39.5	54	0.40	0.00	30
381	Nalanda	Papanhosa	7.70	987	588	255	42	37	101	4	0	268	106	23.1	78	1.37	0.00	32
382	Nalanda	Parwalpur	7.26	1248	624	269	32	46	114	23	36	275	110	40.3	39	0.85	0.00	29
383	Nalanda	Pawapuri	7.60	861	520	210	42	26	80	14	0	220	86	37.0	70	0.59	0.00	31
384	Nalanda	Pilkhi	8.65	930	607	322	40	54	66	16	0	275	36	4.8	190	0.64	0.00	32
385	Nalanda	Rajgir	7.18	1289	799	710	100	112	11	9	18	549	145	22.0	32	0.37	0.00	22
386	Nalanda	Ranabigha	7.52	1138	633	155	58	27	116	8	0	323	138	42.4	12	0.59	0.37	34
387	Nalanda	Sare	7.83	573	351	110	16	17	84	4	24	146	71	1.0	24	0.45	0.00	30
388	Nalanda	Sherpur	8.59	357	212	90	12	15	29	8	0	134	21	0.0	22	0.49	0.00	23
389	Nalanda	Silao	7.89	4386	2822	849	120	134	576	197	0	958	631	192.0	340	1.10	0.20	47
390	Nalanda	Sithuara	7.32	3090	1767	500	100	61	430	48	0	647	390	100.0	194	0.73	0.15	49
391	Nalanda	Sodh	7.86	895	571	205	48	21	120	2	0	317	131	29.2	0	0.48	0.04	25
392	Patna	Daniyawan	8.53	281	173	100	8	19	17	3	12	104	11	3.6	13	0.63	0.00	27
393	Patna	Patna City	8.18	653	390	200	36	27	49	3	0	134	85	39.1	34	0.21	0.00	36
394	Patna	Fatuha	8.37	526	314	120	12	22	65	3	18	195	35	17.5	0	0.15	0.00	30
395	Arwal	Arwal	7.35	675	432	240	56	24	44	5	0	195	71	89	0	0	0	24
396	Arwal	Gaurakshini	7.35	1378	779	390	42	69	123	4	0	543	103	23	41	1	0	42
397	Arwal	Imamganj	7.57	663	394	170	20	29	71	3	0	226	78	21	10	1	0	23
398	Arwal	Jhunathi	7.72	579	365	190	40	22	48	2	0	275	36	10	10	0	0	29
399	Arwal	Kinjer	7.8	448	298	190	32	27	28	2	0	256	11	3	10	1	0	29
400	Arwal	Kurtha	7.56	494	303	170	20	29	35	4	0	268	21	3	0	1	0	27
401	Jehanabad	Makhdumpur	7.76	764	425	90	4	19	112	2	0	317	25	8	30	1	0	31
402	Jehanabad	Tenibigha	7.23	1792	1017	305	32	55	246	6	0	525	245	13	61	1	0	38
403	Jehanabad	Jehanabad	7.22	2590	1553	290	20	58	462	10	0	427	461	48	216	0	0	17
404	Jehanabad	Kako	7.46	2865	1862	570	36	117	378	80	0	793	397	13	248	1	0	23

405	Patna	Andhra Chauki	7.74	261	162	90	20	10	11	1	0	134	4	5	0	0	0	30
406	Patna	Baliapakar	8.25	1465	866	290	16	61	184	30	0	512	85	44	106	0	0	27
407	Patna	Bharatpura	8.99	934	543	110	12	19	153	1		415	35	33	10	1	0	26
408	Patna	Deokoli	7.9	600	380	125	24	16	85	2	0	244	35	19	32	0	0	19
409	Patna	Lalbengwan	7.21	556	325	180	16	34	35	3	0	293	18	0	3	1	0	37
410	Patna	Maner	8.01	1514	920	310	40	51	215	3	0	354	220	6	144	1	0	24
411	Patna	Mariwama	8.2	384	226	125	28	13	30	1	0	195	14	3	4	0	0	14
412	Patna	Nonia Tola	7.5	477	300	125	22	17	57	4	0	220	43	1	15	0	0	8
413	Patna	Raghopur	8.18	1629	1068	600	80	97	166	12	0	470	337	20	44	0	0	25
414	Patna	Snehi Tola, Naubatpur	7.09	620	396	215	26	36	41	5	0	189	92	41	3	0	0	36
415	Aurangabad	Aurangabad	7.23	291	192	90	16	12	22	2	0	116	25	5	5	1	0	34
416	Aurangabad	Barun	7.41	1465	822	440	60	70	93	41	0	494	121	41	49	0	0	45
417	Aurangabad	Daudnagar	7.89	1930	1151	560	84	85	208	2	0	616	280	28	57	0	0	30
418	Aurangabad	Deo	7.7	420	262	120	24	15	29	8	0	122	11	22	45	1	0	33
419	Aurangabad	Dhanibar	7.85	556	347	165	22	27	42	11	0	189	28	39	40	0	0	22
420	Aurangabad	Madanpur	7.78	914	567	315	44	50	54	42	0	360	85	12	25	0	0	35
421	Aurangabad	Nabinagar	7.8	582	331	195	16	38	32	12	0	177	71	2	17	1	0	35
422	Aurangabad	Narari Kala	7.64	527	346	150	20	24	55	13	0	183	74	13	22	0	0	13
423	Aurangabad	Obra	7.27	1629	1025	440	80	58	180	21	0	634	156	41	71	1	0	29
424	Aurangabad	Raftganj	7.33	592	340	205	24	35	22	12	0	189	21	5	69	0	0	36
		Minimum	6.76	93.00	58.83	20.00	4.00	2.40	3.97	0.07	0.00	36.60	3.55	0.00	0.00	0.00	0.00	4.03
		Maximum	8.99	4386.00	2822.18	849.31	168.00	173.00	576.00	197.00	48.00	958.00	631.00	393.00	340.00	14.00	6.65	74.83
		Average	7.80	862.31	519.48	237.16	35.67	36.22	77.92	19.19	2.40	299.62	86.09	26.69	27.81	0.56	0.17	25.76

**District wise percentage of well showing Rise, fall or no significant trend during Pre-Monsoon and Post-Monsoon Season**

SI No	District	Pre Monsoon			Post Monsoon		
		Rise	Fall	No Significant Trend	Rise	Fall	No Significant Trend
		<i>In Percentage</i>			<i>In Percentage</i>		
1	Araria	0	100	100	0	100	100
2	Aurangabad	29	71	71	33	66	67
3	Banka	25	75	50	13	87	64
4	Begusarai	14	86	57	57	43	71
5	Bhagalpur	44	56	56	10	90	70
6	Bhojpur	14	86	71	56	44	67
7	Buxar	40	60	80	50	50	75
8	Darbhangha	67	33	100	100	0	100
9	Gaya	0	100	71	0	100	67
10	Gopalganj	36	64	100	50	50	90
11	Jamui	0	100	86	29	71	71
12	Jehanabad	29	71	100	29	71	71
13	Kaimur	29	71	87	63	37	75
15	Katihar	0	100	71	8	92	92
16	Khagaria	57	43	86	57	43	71
17	Kishanganj	33	67	100	25	75	100
18	Lakhisarai	40	60	40	40	60	80
19	Madhepura	0	100	83	0	100	80
20	Madhubani	33	67	67	50	50	100
21	Munger	29	71	57	25	75	75
22	Muzaffarpur	10	90	90	38	62	85
23	Nalanda	60	40	100	63	37	100
24	Nawada	33	67	50	83	17	80
25	W Champaran	0	100	100	57	43	86
26	Patna	37	63	74	64	36	64
27	E Champaran	33	67	100	92	8	92
28	Purnia	20	80	100	33	67	100
29	Rohtas	14	86	71	67	33	75
30	Saharsa	0	100	86	14	86	86
31	Samastipur	0	100	50	0	100	25
32	Saran	33	67	67	67	33	67
33	Sheikhpura	0	0	0	0	0	0
34	Sheohar	0	0	0	0	0	0
35	Sitamarhi	25	75	100	25	75	100
36	Siwan	60	40	80	67	33	100
37	Supaul	25	75	100	86	14	100
38	Vaishali	60	40	100	80	20	100