

## **BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 22.11.2018)**

### **1. ALL INDIA STATUS**

Central Water Commission is monitoring live storage status of 91 reservoirs of the country on weekly basis and is issuing weekly bulletin on every Thursday. Out of these reservoirs, 37 reservoirs have hydropower benefit with installed capacity of more than 60 MW. The total live storage capacity of these 91 reservoirs is 161.993 BCM which is about 63% of the live storage capacity of 257.812 BCM which is estimated to have been created in the country. As per reservoir storage bulletin dated **22.11.2018**, live storage available in these reservoirs is **101.731 BCM**, which is **63%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **103.236 BCM** and the average of last 10 years live storage was **105.855 BCM**. Thus, the live storage available in 91 reservoirs **as per 22.11.2018 Bulletin** is **99%** of the live storage of corresponding period of last year and **96%** of storage of average of last ten years.

The overall storage position is **less than the** corresponding period of last year in the country as a whole and is also less **than the** average storage of last ten years during the corresponding period.

### **2. REGION WISE STORAGE STATUS:**

#### **a) NORTHERN REGION**

The northern region includes States of Himachal Pradesh, Punjab and Rajasthan. There are 6 reservoirs under CWC monitoring having total live storage capacity of 18.01 BCM. As per Reservoir Storage Bulletin dated **22.11.2018**, the total live storage available in these reservoirs is **14.74 BCM** which is **82%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **68%** and average storage of last ten years during corresponding period was **70%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the corresponding period of last year and is also better than the average storage of last ten years during the corresponding period.

#### **b) EASTERN REGION**

The Eastern region includes States of Jharkhand, Odisha, West Bengal and Tripura. There are 15 reservoirs under CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated **22.11.2018**, the total live storage available in these reservoirs is **12.83 BCM** which is **68%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **77%** and average storage of last ten years during corresponding period was **74%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year and is also less than the average storage of last ten years during the corresponding period.

#### **c) WESTERN REGION**

The Western region includes States of Gujarat and Maharashtra. There are 27 reservoirs under CWC monitoring having total live storage capacity of 31.26 BCM. As per Reservoir Storage Bulletin dated **22.11.2018**, the total live storage available in these reservoirs is **15.34 BCM** which is **49%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **65%** and average storage of last ten years during corresponding period was **63%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year and is also less than the average storage of last ten years during the corresponding period.

**d) CENTRAL REGION**

The Central region includes States of Uttar Pradesh, Uttarakhand, Madhya Pradesh and Chhattisgarh. There are 12 reservoirs under CWC monitoring having total live storage capacity of 42.30 BCM. As per Reservoir Storage Bulletin dated **22.11.2018**, the total live storage available in these reservoirs is **29.23 BCM** which is **69%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **58%** and average storage of last ten years during corresponding period was **65%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the storage of last year and is also better than the average storage of last ten years during the corresponding period.

**e) SOUTHERN REGION**

The Southern region includes States of Andhra Pradesh, Telangana, AP&TG (2combined projects in both states), Karnataka, Kerala and Tamil Nadu. There are 31 reservoirs under CWC monitoring having total live storage capacity of 51.59 BCM. As per Reservoir Storage Bulletin dated **22.11.2018**, the total live storage available in these reservoirs is **29.60 BCM** which is **57%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **61%** and average storage of last ten years during corresponding period was **63%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year and is also less than the average storage of last ten years during the corresponding period.

The region wise and reservoir wise details are given in the following pages of the Bulletin.

**BROAD ANALYSIS OF OTHER TABLES IN THE BULLETIN**

- Normal storage means average storage of last ten years, Close to normal storage means where shortfall is upto 20% of normal, deficient storage is where shortfall is more than 20% of the normal and upto 60% of the normal, highly deficient means where shortfall is more than 60% of normal.
- In the table on page 4, better than normal storage is available in Ganga, Indus, Narmada, Mahi, and West Flowing Rivers of South and Cauvery & neighbouring EFRs. Close to Normal in Godavari and Mahanadi & Neighbouring East Flowing Rivers, Deficient in Tapi and Krishna and Highly Deficient in Sabarmati and Rivers of Kutch.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **37** and reservoirs having storage more than average of last ten years are **36**. The numbers of reservoirs having storage less than 20% with respect to last year is **1** and having storage less than 20% with reference to average of last ten years is **1**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **12** and having storage less than or equal to 50% with reference to average of last ten years are **11**.

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**Disclaimer:** The Data contained in this Bulletin is as received from the State Government/Project Authorities.

# STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 22.11.2018

- Central Water Commission is monitoring storage status of 91 important reservoirs spread all over the country, in which **37** reservoirs have hydropower benefit each with installed capacity of more than 60 MW. These reservoirs are identified thus(\*) in the enclosed weekly report.
- The total live storage in 91 important reservoirs in different parts of the country, monitored by CWC as on **22.11.2018** is **101.731** BCM ( **63** percent of the live storage capacity at FRL ).The current year's storage is nearly **99** percent of last year's storage and **96** percent of the average of last ten years.

## 3 Region wise storage status:-

REGION (Monitoring No. of Reservoirs)	Filling position of 91 reservoirs w.r.t. FRL								Departure from Normal storage		
	100%	91%-99%	81%-90%	71%-80%	61%-70%	51%-60%	41%-50%	40% & below			
<b>NORTH</b> (HP,Punjab & Rajasthan), (6 Resv.)	-	2	2	1	-	-	-	1	H.P.	17 %	
									PUNJAB	48 %	
									RAJASTHAN	3 %	
<b>EAST</b> (Jharkhand,Odisha, Tripura & W.Bengal ( 15 Resv.)	-	-	3	6	-	3	1	2	JHARKHAND	-18 %	
									ODISHA	-6 %	
									W. BENGAL	-32 %	
									TRIPURA	40 %	
<b>WEST</b> (Guj.& Mah.), (27 Resv.)	-	-	4	4	4	1	3	11	GUJARAT	-20 %	
									MAH.	-23 %	
<b>CENTRAL</b> (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	3	1	4	2	1	1	U.P.	9 %	
									UTTARAKHAND	2 %	
									M.P.	8 %	
									CHHATISGARH	-2 %	
<b>SOUTH</b> (Karnataka,TN,AP&TG,AP, TG, & Kerala), ( 31 Resv.)	-	3	6	8	2	4	4	4	AP&TG	-37 %	
									A,P	-11 %	
									TG	-30 %	
									KARNATAKA	-1 %	
									KERALA	6 %	
									T.N.	44 %	
Status of 91 reservoirs	0	5	18	20	10	10	9	19			

## 4 Basin wise storage position:

**Better than normal:** Ganga,Indus Narmada ,Mahi, West Flowing Rivers of South and Cauvery & neighbouring EFRS .

**Close to normal:** Godavari and Mahanadi & Neighbouring EFRS

**Deficient:** Tapi and Krishna .

**Highly deficient:** Sabarmati and Rivers of Kutch

- Out of 91 reservoirs, **63** reservoirs reported more than 80% of normal storage & **28** reservoirs reported 80% or below of normal storage. Out of these **28** reservoirs **11** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
VANIVILAS SAGAR	20		
YELDARI	21		
PENCH (TOTALADOH)	21		
DANTIWADA	23		
SABARMATI(DHAROI)	36		
SHETRANJI	38		
BHANDARDARA	43		
BHADAR	43		
UPPER WARDHA	44		
SRISAILAM	49		
UKAI	49		

<b>17</b> reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
6	4	7

- Out of **37** reservoirs with significant(\*) hydropower generation, the storage build up is less than or equal to normal in

**18** reservoirs.

NOTE : **Normal:** Average of previous ten years, **Close to normal:** Where shortfall is up to 20% of the normal, **Deficient:** Where shortfall is more than 20% of the normal and up to 60% of the normal, **Highly deficient** : Where shortfall is more than 60% of the normal

## WEEKLY REPORT - BASINWISE

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 22.11.2018

NAME OF BASIN	LIVE CAP. AT FRL	THIS YEAR'S STORAGE		LAST YEAR'S STORAGE		LAST 10 YEARS' AVG. STORAGE		% DEPARTURE W.R.T. AVE. OF 10 YEARS'
GANGA	28.096	16.860	60.01%	18.087	64.38%	16.451	58.55%	<b>2.49</b>
INDUS	14.730	12.410	84.25%	10.142	68.85%	10.305	69.96%	<b>20.43</b>
NARMADA	21.608	15.163	70.17%	10.259	47.48%	13.092	60.59%	<b>15.82</b>
TAPI	7.394	2.738	37.03%	3.749	50.70%	5.240	70.87%	<b>-47.75</b>
MAHI	4.012	3.338	83.20%	3.394	84.60%	2.998	74.73%	<b>11.34</b>
SABARMATI	0.735	0.175	23.81%	0.578	78.64%	0.481	65.44%	<b>-63.62</b>
RIVERS OF KUTCH	0.887	0.160	18.04%	0.654	73.73%	0.467	52.65%	<b>-65.74</b>
GODAVARI	15.394	8.203	53.29%	9.395	61.03%	9.620	62.49%	<b>-14.73</b>
KRISHNA	32.831	16.167	49.24%	22.393	68.21%	21.472	65.40%	<b>-24.71</b>
MAHANADI & NEIGHBOURING EFRS	13.181	8.698	65.99%	10.282	78.01%	10.351	78.53%	<b>-15.97</b>
CAUVERY& NEIGHBOURING EFRS	8.359	5.900	70.58%	4.579	54.78%	4.738	56.68%	<b>24.53</b>
WEST FLOWING RIVERS OF SOUTH	14.766	11.919	80.72%	9.724	65.85%	10.640	72.06%	<b>12.02</b>
<b>TOTAL</b>	<b>161.993</b>	<b>101.731</b>		<b>103.236</b>		<b>105.855</b>		
<b>PERCENTAGE</b>								<b>-3.90</b>

## WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 22.11.2018

S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	STORAGE AS % OF LIVE CAPACITY AT FRL			BENEFITS	
							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b>NORTHERN REGION</b>											
<b><u>HIMACHAL PRADESH</u></b>											
*1	GOBIND SAGAR(BHAKRA)	512.06	508.04	6.229	5.328	22-11-2018	86	79	78	676	1200
*2	PONG DAM	423.67	420.68	6.157	5.202	17-11-2018	84	67	68	-	360
<b><u>PUNJAB</u></b>											
*3	THEIN	527.91	522.17	2.344	1.880	22-11-2018	80	49	54	348	600
<b><u>RAJASTHAN</u></b>											
*4	MAHI BAJAJ SAGAR	280.75	280.30	1.711	1.666	20-11-2018	97	100	84	63	140
5	JHAKAM	359.50	358.30	0.132	0.120	20-11-2018	91	92	77	28	-
*6	RANA PRATAP SAGAR	352.81	347.71	1.436	0.539	22-11-2018	38	24	50	229	172
<b><u>EASTERN REGION</u></b>											
<b><u>JHARKHAND</u></b>											
7	TENUGHAT	269.14	259.38	0.821	0.392	22-11-2018	48	54	47	-	-
8	MAITHON	146.3	142.27	0.471	0.244	22-11-2018	52	100	93	342	-
*9	PANCHET HILL	124.97	124.01	0.184	0.139	22-11-2018	76	100	91	\$	80
10	KONAR	425.81	423.37	0.176	0.133	22-11-2018	76	78	88	\$	-
11	TILAIYA	368.81	367.99	0.142	0.115	22-11-2018	81	56	81	\$	4
<b><u>ODISHA</u></b>											
*12	HIRAKUD	192.02	190.81	5.378	4.058	22-11-2018	75	84	86	153	307
*13	BALIMELA	462.08	460.37	2.676	2.347	20-11-2018	88	46	62	-	360
14	SALANADI	82.30	74.32	0.558	0.318	22-11-2018	57	43	36	42	-
*15	RENGALI	123.50	118.41	3.432	1.802	20-11-2018	53	96	86	3	200
*16	MACHKUND(JALPUT)	838.16	836.75	0.893	0.764	20-11-2018	86	97	88	-	115
*17	UPPER KOLAB	858.00	855.54	0.935	0.702	20-11-2018	75	61	63	89	320
*18	UPPER INDRAVATI	642.00	638.86	1.456	1.122	20-11-2018	77	59	70	128	600
<b><u>WEST BENGAL</u></b>											
19	MAYURAKSHI	121.31	111.98	0.480	0.121	22-11-2018	25	95	48	227	-
20	KANGSABATI	134.14	126.28	0.914	0.336	22-11-2018	37	89	49	341	-
<b><u>TRIPURA</u></b>											
21	GUMTI	93.55	91.90	0.312	0.236	21-11-2018	76	93	54	-	15
<b><u>WESTERN REGION</u></b>											
<b><u>GUJARAT</u></b>											
*22	UKAI	105.16	95.56	6.615	2.313	22-11-2018	35	47	72	348	300
23	SABARMATI(DHAROI)	189.59	182.07	0.735	0.175	20-11-2018	24	79	65	95	1
*24	KADANA	127.7	126.11	1.472	1.030	20-11-2018	70	72	69	200	120
25	SHETRANJI	55.53	51.17	0.300	0.077	20-11-2018	26	56	68	36	-
26	BHADAR	107.89	103.33	0.188	0.048	20-11-2018	26	79	59	27	-
27	DAMANAGANGA	79.86	76.85	0.502	0.346	22-11-2018	69	95	93	51	1
28	DANTIWADA	184.1	168.74	0.399	0.035	20-11-2018	9	85	38	45	-
29	PANAM	127.41	126.95	0.697	0.522	20-11-2018	75	73	65	36	2
*30	SARDAR SAROVAR	138.68	127.52	5.760	2.654	22-11-2018	46	39	25	2120	1450
31	KARJAN	115.25	111.41	0.523	0.407	22-11-2018	78	84	85	51	3

## WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 22.11.2018

S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	STORAGE AS % OF LIVE CAPACITY AT FRL			BENEFITS	
							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b>MAHARASHTRA</b>											
32	JAYAKWADI(PAITHON)	463.91	458.90	2.171	0.624	21-11-2018	29	97	48	227	-
*33	KOYANA	657.90	654.79	2.652	2.300	22-11-2018	87	100	91	-	1920
34	BHIMA(UJJANI)	496.83	494.98	1.517	0.943	20-11-2018	62	100	79	125	12
35	ISAPUR	441.00	436.70	0.965	0.571	22-11-2018	59	15	56	104	-
36	MULA	552.30	545.66	0.609	0.307	22-11-2018	50	98	85	139	-
37	YELDARI	461.77	450.23	0.809	0.070	22-11-2018	9	13	41	78	-
38	GIRNA	398.07	390.16	0.524	0.199	22-11-2018	38	71	46	79	-
39	KHADAKVASLA	582.47	581.25	0.056	0.040	22-11-2018	71	86	70	78	8
*40	UPPER VAITARNA	603.50	602.51	0.331	0.299	22-11-2018	90	99	90	-	61
41	UPPER TAPI	214.00	213.52	0.255	0.226	22-11-2018	89	100	98	45	-
*42	PENCH (TOTALADOH)	490.00	471.64	1.091	0.132	22-11-2018	12	29	57	127	160
43	UPPER WARDHA	342.50	337.62	0.564	0.212	22-11-2018	38	91	86	70	-
44	BHATSA	142.07	134.76	0.942	0.754	22-11-2018	80	91	86	29.378	15
45	DHOM	747.70	743.11	0.331	0.233	22-11-2018	70	91	81	36.2	2
46	DUDHGANGA	646.00	643.31	0.664	0.590	22-11-2018	89	98	92	2.441	24
47	MANIKDOH (KUKADI)	711.25	698.85	0.288	0.108	22-11-2018	38	83	56	2.2	6
48	BHANDARDARA	744.91	731.11	0.304	0.126	22-11-2018	41	100	97	63.74	46
<b>CENTRAL REGION</b>											
<b>UTTAR PRADESH</b>											
49	MATATILA	308.46	306.23	0.707	0.410	14-11-2018	58	59	64	-	30
*50	RIHAND	268.22	262.10	5.649	3.066	22-11-2018	54	56	49	-	300
<b>UTTRAKHAND</b>											
*51	RAMGANGA	365.30	355.11	2.196	1.464	22-11-2018	67	64	72	1897	198
*52	TEHRI	830.00	823.45	2.615	2.348	22-11-2018	90	85	83	2351	1000
<b>MADHYA PRADESH</b>											
*53	GANDHI SAGAR	399.90	392.09	6.827	2.702	22-11-2018	40	62	48	220	115
54	TAWA	355.40	350.73	1.944	1.255	22-11-2018	65	63	84	247	-
*55	BARGI	422.76	420.25	3.180	2.520	22-11-2018	79	84	84	157	90
*56	BANSAGAR	341.64	340.40	5.166	4.615	22-11-2018	89	67	66	488	425
*57	INDIRA SAGAR	262.13	260.16	9.745	8.132	22-11-2018	83	35	68	2380	1000
58	BARNA	348.55	344.27	0.456	0.195	22-11-2018	43	49	72	546	-
<b>CHHATTIS GARH</b>											
*59	MINIMATA BANGOI	359.66	354.01	3.046	1.986	18-11-2018	65	64	67	-	120
60	MAHANADI	348.70	346.01	0.767	0.534	16-11-2018	70	38	70	319	10
<b>SOUTHERN REGION</b>											
<b>A.P. &amp; TG</b>											
*61	SRISAILAM	269.75	260.24	8.288	2.414	15-11-2018	29	59	60	0	770
*62	NAGARJUNA SAGAR	179.83	171.08	6.841	2.940	15-11-2018	43	55	52	895	810
<b>ANDHRA PRADESH</b>											
63	SOMASILA	100.58	94.09	1.994	1.125	15-11-2018	56	70	63	168	0
<b>TELANGANA</b>											
64	SRIRAMSAGAR	332.54	326.96	2.300	0.980	22-11-2018	43	62	60	411	27
65	LOWER MANAIR	280.42	273.30	0.621	0.246	22-11-2018	40	58	60	199	60

## WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 22.11.2018

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							CURRENT YEAR	LAST YEAR	LAST 10 YEARS AVERAGE	IRR. (CCA) IN TH. HA	HYDEL IN MW
1	2	4	6	5	7	8	9	10	11	3A	3B
<b><u>KARNATAKA</u></b>											
66	KRISHNARAJA SAGRA	752.50	750.75	1.163	1.061	20-11-2018	91	72	74	79	-
*67	TUNGABHADRA	497.74	493.01	3.276	1.465	22-11-2018	45	56	61	529	72
68	GHATAPRABHA	662.95	658.61	1.391	1.080	15-11-2018	78	90	83	317	-
69	BHADRA	657.76	655.70	1.785	1.551	15-11-2018	87	73	77	106	39
70	LINGANAMAKKI	554.43	551.92	4.294	3.550	22-11-2018	83	58	74	-	55
71	NARAYANPUR	492.25	489.08	0.863	0.385	15-11-2018	45	72	78	425	-
72	MALAPRABHA(RENUKA)	633.83	629.44	0.972	0.498	15-11-2018	51	41	54	215	-
73	KABINI(Sancherla Tank)	696.16	694.47	0.444	0.349	20-11-2018	79	86	41	85	-
74	HEMAVATHY	890.63	883.28	0.927	0.486	20-11-2018	52	24	53	265	-
75	HARANGI	871.42	862.84	0.220	0.084	20-11-2018	38	37	39	53	-
76	SUPA	564.00	558.00	4.120	3.418	22-11-2018	83	58	62	-	-
77	VANIVILAS SAGAR	652.28	633.11	0.802	0.028	19-11-2018	3	3	17	123	-
*78	ALMATTI	519.60	515.56	3.105	1.592	15-11-2018	51	95	77	@	290
*79	GERUSOPPA	55.00	52.08	0.130	0.113	22-11-2018	87	83	83	83	240
<b><u>KERALA</u></b>											
80	KALLADA(PARAPPAR)	115.82	113.70	0.507	0.440	19-11-2018	87	88	80	62	-
*81	IDAMALAYAR	169.00	157.60	1.018	0.695	19-11-2018	68	77	73	33	75
*82	IDUKKI	732.43	726.95	1.460	1.159	19-11-2018	79	68	66	-	780
*83	KAKKI	981.46	973.75	0.447	0.327	19-11-2018	73	79	79	23	300
*84	PERIYAR	867.41	864.92	0.173	0.114	20-11-2018	66	43	58	84	140
85	MALAPMUZHA	115.06	112.73	0.224	0.171	22-11-2018	76	66	79	21	3
<b><u>TAMIL NADU</u></b>											
86	LOWER BHAWANI	278.89	278.54	0.792	0.788	20-11-2018	99	42	52	105	8
*87	METTUR(STANLEY)	240.79	235.07	2.647	1.881	20-11-2018	71	47	51	122	360
88	VAIGAI	279.20	277.10	0.172	0.126	20-11-2018	73	51	52	61	6
89	PARAMBIKULAM	556.26	554.57	0.380	0.344	20-11-2018	91	52	74	101	-
90	ALIYAR	320.04	317.94	0.095	0.082	20-11-2018	86	36	78	#	60
*91	SHOLAYAR	1002.79	998.51	0.143	0.107	20-11-2018	75	36	69	-	95
TOTAL FOR 91 RESERVOIRS				161.993	101.731						
PERCENTAGE							63	64	65		

Sd/-

Director

\* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

W. M. , CWC

# TOTAL CCA 101 TH. HA OF PARAMBIKULAM &amp; ALIYAR

@' TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

† SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.