

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 04.08.2016)

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 157.799 BCM which is about 62% of the live storage capacity of 253.388 BCM which is estimated to have been created in the country. As per reservoir storage bulletin dated **04.08.2016**, live storage available in these reservoirs is **71.556 BCM**, which is **45%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **74.285 BCM** and the average of last 10 years live storage was **74.920 BCM**. Thus, the live storage available in 91 reservoirs **as per 04.08.2016 Bulletin** is **96%** 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 **04.08.2016**, the total live storage available in these reservoirs is **8.41 BCM** which is **47%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **80%** and average storage of last ten years during corresponding period was **54%** 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.

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 **04.08.2016**, the total live storage available in these reservoirs is **7.43 BCM** which is **39%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **48%** and average storage of last ten years during corresponding period was **37%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year but is better 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 27.07 BCM. As per Reservoir Storage Bulletin dated **04.08.2016**, the total live storage available in these reservoirs is **13.34 BCM** which is **49%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **42%** and average storage of last ten years during corresponding period was **50%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the storage of last year but is 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

04.08.2016, the total live storage available in these reservoirs is **25.24 BCM** which is **60%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **55%** and average storage of last ten years during corresponding period was **41%** 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 (2 combined 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 **04.08.2016**, the total live storage available in these reservoirs is **17.14 BCM** which is **33%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **32%** and average storage of last ten years during corresponding period was **53%** of live storage capacity of these reservoirs. Thus, storage during current year is better than the corresponding period of last year but is 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 8, better than normal storage is available in Narmada, Godavari, Ganga, Tapi and Mahi. Close to Normal in Mahanadi & neighbouring East Flowing Rivers and West flowing rivers of South and Deficient in Sabarmati, Indus, Krishna, Cauvery & neighbouring EFRs and Rivers of Kutch basin.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **38** and reservoirs having storage more than average of last ten years are **39**. The numbers of reservoirs having storage less than 20% with respect to last year is **3** and having storage less than 20% with reference to average of last ten years is **4**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **16** and having storage less than or equal to 50% with reference to average of last ten years are **17**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 04.08.2016

- 1 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.
- 2 The total live storage in 91 important reservoirs in different parts of the country, monitored by CWC as on **04.08.2016** is **71.556** BCM (**45** percent of the live storage capacity at FRL).The current year's storage is nearly **96** percent of last year's storage and **96** percent of the average of last ten years.

3 Region wise storage status:-

REGION (States), (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		
NORTH (HP, Punjab & Rajasthan), (6 Resv.)	-	-	-	2	-	-	3	1	H.P.	-27 %
									PUNJAB	-20 %
									RAJASTHAN	40 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	-	1	3	6	5	JHARKHAND	-13 %
									ODISHA	15 %
									W. BENGAL	-35 %
									TRIPURA	35 %
WEST (Guj. & Mah.), (27 Resv.)	-	1	5	3	1	3	2	12	GUJARAT	-1 %
									MAH.	-3 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	3	2	2	2	-	3	U.P.	-2 %
									UTTARAKHAND	-2 %
									M.P.	75 %
									CHHATISGARH	-26 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	2	-	2	1	6	4	16	AP&TG	-79 %
									A,P	-37 %
									TG	85 %
									KARNATAKA	-26 %
									KERALA	-12 %
									T.N.	-56 %
Status of 91 reservoirs	0	3	8	9	5	14	15	37		

4 Basin wise storage position:

- Better than normal:** Narmada, Godavari, Ganga, Mahi and Tapi.
- Close to normal:** Mahanadi & Neighbouring EFRS and West Flowing rivers of south.
- Deficient:** Sabarmati, Indus, Krishna, Cauvery & neighbouring EFRS and Rivers of Kutch.
- Highly deficient:** NIL

- 5 Out of 91 reservoirs, **49** reservoirs reported more than 80% of normal storage & **42** reservoirs reported 80% or below of normal storage. Out of these **42** reservoirs **17** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	METTUR(STANLEY)	43
BHIMA(UJJANI)	0	TUNGABHADRA	47
BHADAR	7	VANIVILAS SAGAR	48
VAIGAI	16	PARAMBIKULAM	49
ALIYAR	29	TILAIYA	49
KARJAN	29		
SHETRUNJI	34		
LOWER MANAIR	36		
SRISAILAM	37		
MALAPRABHA(RENUKA)	39		
YELDARI	40		
LOWER BHAWANI	43		

25 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
6	7	12

6 Out of **37** reservoirs with significant(*) hydropower generation, the storage build up is less than or equal to normal in 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 :- 04.08.2016

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	12.987	46.22%	18.809	66.95%	10.602	37.73%	22.50
INDUS	14.730	5.892	40.00%	11.101	75.36%	7.949	53.96%	-25.88
NARMADA	17.414	14.502	83.28%	8.051	46.23%	8.540	49.04%	69.81
TAPI	7.394	3.649	49.35%	1.952	26.40%	3.499	47.32%	4.29
MAHI	4.012	2.453	61.14%	3.343	83.33%	2.078	51.79%	18.05
SABARMATI	0.735	0.240	32.65%	0.640	87.07%	0.305	41.50%	-21.31
RIVERS OF KUTCH	0.887	0.196	22.10%	0.769	86.70%	0.353	39.80%	-44.48
GODAVARI	15.394	6.809	44.23%	3.849	25.00%	4.949	32.15%	37.58
KRISHNA	32.831	10.621	32.35%	8.196	24.96%	17.931	54.62%	-40.77
MAHANADI & NEIGHBOURING EFRS	13.181	4.831	36.65%	6.321	47.96%	5.715	43.36%	-15.47
CAUVERY & NEIGHBOURING EFRS	8.359	2.694	32.23%	4.643	55.54%	4.762	56.97%	-43.43
WEST FLOWING RIVERS OF SOUTH	14.766	6.682	45.25%	6.611	44.77%	8.237	55.78%	-18.88
TOTAL	157.799	71.556		74.285		74.920		
PERCENTAGE								-4.49

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 04.08.2016

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
<u>NORTHERN REGION</u>											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	487.87	6.229	2.666	04-08-2016	43	75	61	676	1200
*2	PONG DAM	423.67	405.22	6.157	2.189	04-08-2016	36	71	47	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	508.62	2.344	1.037	04-08-2016	44	87	56	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	278.10	1.711	1.365	04-08-2016	80	100	53	63	140
5	JHAKAM	359.50	351.75	0.132	0.066	04-08-2016	50	100	48	28	-
*6	RANA PRATAP SAGAR	352.81	351.00	1.436	1.091	04-08-2016	76	97	58	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.29	0.821	0.352	04-08-2016	43	61	41	-	-
8	MAITHON	146.3	142.31	0.471	0.246	04-08-2016	52	100	61	342	-
*9	PANCHET HILL	124.97	123.58	0.184	0.121	04-08-2016	66	100	82	\$	80
10	KONAR	425.81	420.01	0.176	0.083	04-08-2016	47	91	65	\$	-
11	TILAIYA	368.81	365.53	0.142	0.041	04-08-2016	29	100	58	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	186.38	5.378	1.845	03-08-2016	34	27	37	153	307
*13	BALIMELA	462.08	453.57	2.676	1.397	03-08-2016	52	47	19	-	360
14	SALANADI	82.30	65.20	0.558	0.126	03-08-2016	23	47	31	42	-
*15	RENGALI	123.50	115.64	3.432	1.122	04-08-2016	33	64	36	3	200
*16	MACHKUND(JALPUT)	838.16	831.98	0.893	0.448	03-08-2016	50	43	46	-	115
*17	UPPER KOLAB	858.00	851.68	0.935	0.402	04-08-2016	43	35	30	89	320
*18	UPPER INDRAVATI	642.00	633.34	1.456	0.609	04-08-2016	42	24	42	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	115.58	0.480	0.229	04-08-2016	48	83	53	227	-
20	KANGSABATI	134.14	124.27	0.914	0.239	04-08-2016	26	85	51	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	90.40	0.312	0.174	03-08-2016	56	78	41	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	98.62	6.615	3.449	04-08-2016	52	27	50	348	300
23	SABARMATI(DHAROI)	189.59	183.36	0.735	0.240	04-08-2016	33	87	41	95	1
*24	KADANA	127.7	123.19	1.472	0.769	04-08-2016	52	75	51	200	120
25	SHETRUNJI	55.53	50.37	0.300	0.058	04-08-2016	19	92	57	36	-
26	BHADAR	107.89	99.61	0.188	0.007	04-08-2016	4	78	54	27	-
27	DAMANAGANGA	79.86	73.70	0.502	0.233	04-08-2016	46	46	35	51	1
28	DANTIWADA	184.1	165.61	0.399	0.131	04-08-2016	33	87	20	45	-
29	PANAM	127.41	120.90	0.697	0.253	04-08-2016	36	57	51	36	2
*30	SARDAR SAROVAR	121.92	120.62	1.566	1.330	04-08-2016	85	95	71	2120	1450
31	KARJAN	115.25	92.93	0.523	0.085	04-08-2016	16	65	56	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 04.08.2016

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
MAHARASHTRA											
32	JAYAKWADI(PAITHON)	463.91	457.14	2.171	0.264	04-08-2016	12	6	24	227	-
*33	KOYANA	657.90	650.90	2.652	1.978	04-08-2016	75	72	79	-	1920
34	BHIMA(UJJANI)	496.83	488.65	1.517	0.000	03-08-2016	0	0	39	125	12
35	ISAPUR	441.00	432.05	0.965	0.287	03-08-2016	30	18	44	104	-
36	MULA	552.30	549.37	0.609	0.461	04-08-2016	76	35	49	139	-
37	YELDARI	461.77	449.84	0.809	0.059	04-08-2016	7	1	18	78	-
38	GIRNA	398.07	387.70	0.524	0.131	04-08-2016	25	8	20	79	-
39	KHADAKVASLA	582.47	581.89	0.056	0.048	04-08-2016	86	18	73	78	8
*40	UPPER VAITARNA	603.50	601.98	0.331	0.283	03-08-2016	85	50	67	-	61
41	UPPER TAPI	214.00	210.16	0.255	0.069	04-08-2016	27	48	37	45	-
*42	PENCH (TOTALADOH)	490.00	486.25	1.091	0.748	03-08-2016	69	18	42	127	160
43	UPPER WARDHA	342.50	341.52	0.564	0.479	04-08-2016	85	54	57	70	-
44	BHATSA	142.07	139.67	0.942	0.911	04-08-2016	97	58	68	29.378	15
45	DHOM	747.70	742.04	0.331	0.264	03-08-2016	80	39	60	36.2	2
46	DUDHGANGA	646.00	636.55	0.664	0.389	03-08-2016	59	59	76	2.441	24
47	MANIKDOH (KUKADI)	711.25	700.08	0.288	0.142	03-08-2016	49	22	30	2.2	6
48	BHANDARDARA	342.50	341.52	0.304	0.269	04-08-2016	85	54	57	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	306.93	0.707	0.479	03-08-2016	68	72	57	-	30
*50	RIHAND	268.22	256.98	5.649	1.147	04-08-2016	20	33	22	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	339.16	2.196	0.670	04-08-2016	31	75	40	1897	198
*52	TEHRI	830.00	796.00	2.615	1.359	04-08-2016	52	54	46	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	394.16	6.827	3.534	04-08-2016	52	89	33	220	115
54	TAWA	355.40	353.72	1.944	1.727	04-08-2016	89	63	71	247	-
*55	BARGI	422.76	419.60	3.180	2.338	04-08-2016	74	40	50	157	90
*56	BANSAGAR	341.64	337.04	5.166	3.222	04-08-2016	62	59	37	488	425
*57	INDIRA SAGAR	262.13	260.79	9.745	8.615	04-08-2016	88	35	40	2380	1000
58	BARNA	348.55	347.85	0.456	0.407	04-08-2016	89	59	56	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	347.30	3.046	1.138	04-08-2016	37	72	63	-	120
60	MAHANADI	348.70	346.85	0.767	0.600	03-08-2016	78	28	57	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	252.74	8.288	1.281	04-08-2016	15	0	42	0	770
*62	NAGARJUNA SAGAR	179.83	153.77	6.841	0.000	04-08-2016	0	0	38	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	84.22	1.994	0.308	04-08-2016	15	13	24	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	328.48	2.300	1.315	04-08-2016	57	8	24	411	27
65	LOWER MANAIR	280.42	267.39	0.621	0.071	04-08-2016	11	18	32	199	60

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GOVERNMENT OF INDIA

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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
<u>KARNATAKA</u>											
66	KRISHNARAJA SAGRA	752.50	744.32	1.163	0.477	03-08-2016	41	57	73	79	-
*67	TUNGABHADRA	497.74	491.47	3.276	1.137	04-08-2016	35	56	74	529	72
68	GHATAPRABHA	662.95	652.88	1.391	0.739	04-08-2016	53	31	74	317	-
69	BHADRA	657.76	646.76	1.785	0.729	04-08-2016	41	62	78	106	39
70	LINGANAMAKKI	554.43	543.20	4.294	1.653	04-08-2016	38	40	62	-	55
71	NARAYANPUR	492.25	491.63	0.863	0.660	04-08-2016	76	63	74	425	-
72	MALAPRABHA(RENUKA)	633.83	624.69	0.972	0.180	04-08-2016	19	23	47	215	-
73	KABINI(Sancherla Tank)	696.16	693.41	0.444	0.295	03-08-2016	66	89	59	85	-
74	HEMAVATHY	890.63	883.03	0.927	0.473	03-08-2016	51	85	83	265	-
75	HARANGI	871.42	871.06	0.220	0.217	04-08-2016	99	97	94	53	-
76	SUPA	564.00	536.54	4.120	1.516	04-08-2016	37	42	49	-	-
77	VANIVILAS SAGAR	652.28	634.27	0.802	0.045	04-08-2016	6	5	12	123	-
*78	ALMATTI	519.60	519.38	3.105	3.029	04-08-2016	98	48	75	@	290
*79	GERUSOPPA	55.00	50.40	0.130	0.104	04-08-2016	80	77	85	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	105.68	0.507	0.276	04-08-2016	54	27	53	62	-
*81	IDAMALAYAR	169.00	147.94	1.018	0.470	04-08-2016	46	46	53	33	75
*82	IDUKKI	732.43	714.74	1.460	0.608	04-08-2016	42	54	47	-	780
*83	KAKKI	981.46	968.00	0.447	0.256	04-08-2016	57	43	52	23	300
*84	PERIYAR	867.41	862.12	0.173	0.060	04-08-2016	35	45	55	84	140
85	MALAPMUZHA	867.41	862.12	0.224	0.075	04-08-2016	35	45	55	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	267.00	0.792	0.214	04-08-2016	27	70	63	105	8
*87	METTUR(STANLEY)	240.79	222.56	2.647	0.702	04-08-2016	27	64	62	122	360
88	VAIGAI	279.20	266.04	0.172	0.008	04-08-2016	5	37	29	61	6
89	PARAMBIKULAM	556.26	543.33	0.380	0.133	04-08-2016	35	43	72	101	-
90	ALIYAR	320.04	306.48	0.095	0.020	04-08-2016	21	92	74	#	60
*91	SHOLAYAR	1002.79	993.37	0.143	0.084	04-08-2016	59	84	85	-	95
TOTAL FOR 91 RESERVOIRS				157.799	71.556						
PERCENTAGE							45	47	47		

Sd/-

Director

W. M. , CWC

* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

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

† SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.

SI. No. 30th The FRL of S.S.P. 138.38 M and Live capacity at FRL will be 5.760 BCM. However at present the lowest block of the dam is at the level of 121.92 M. and the live capacity at this level is 1.566 BCM