

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 18.08.2016)

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 **18.08.2016**, live storage available in these reservoirs is **96.721 BCM**, which is **61%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **89.131 BCM** and the average of last 10 years live storage was **95.590 BCM**. Thus, the live storage available in 91 reservoirs **as per 18.08.2016 Bulletin** is **109%** of the live storage of corresponding period of last year and **101%** of storage of average of last ten years.

As per Table-01, the overall storage position is **better than the** corresponding period of last year in the country as a whole and is also **better 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 **18.08.2016**, the total live storage available in these reservoirs is **12.41 BCM** which is **69%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **90%** and average storage of last ten years during corresponding period was **69%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the corresponding period of last year but is equal to 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 **18.08.2016**, the total live storage available in these reservoirs is **10.44 BCM** which is **55%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **47%** and average storage of last ten years during corresponding period was **51%** 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.

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 **18.08.2016**, the total live storage available in these reservoirs is **19.72 BCM** which is **71%** 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 **64%** 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.

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

18.08.2016, the total live storage available in these reservoirs is **31.91 BCM** which is **75%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **73%** and average storage of last ten years during corresponding period was **56%** 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 **18.08.2016**, the total live storage available in these reservoirs is **22.69 BCM** which is **44%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **35%** and average storage of last ten years during corresponding period was **64%** 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, Mahi, Godavari, Ganga, Sabarmati and Tapi. Close to Normal in Mahanadi & neighbouring East Flowing Rivers and Indus and Deficient in West Flowing Rivers of South, Krishna and Cauvery & neighbouring EFRs and Highly Deficient in Rivers of Kutch Basin.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **45** and reservoirs having storage more than average of last ten years are **46**. 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 **3**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **8** and having storage less than or equal to 50% with reference to average of last ten years are **14**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 18.08.2016

- 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 **18.08.2016** is **96.721** BCM (**61** percent of the live storage capacity at FRL).The current year's storage is nearly **109** percent of last year's storage and **101** 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			
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	2	1	-	-	2	1	-	-	H.P.	-13 %	
									PUNJAB	11 %	
									RAJASTHAN	41 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	-	1	1	3	2	4	3	1	JHARKHAND	10 %	
									ODISHA	9 %	
									W. BENGAL	5 %	
									TRIPURA	76 %	
WEST (Guj.& Mah.), (27 Resv.)	3	6	1	3	6	-	1	7	GUJARAT	9 %	
									MAH.	14 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	3	4	1	2	1	-	1	U.P.	88 %	
									UTTARAKHAND	1 %	
									M.P.	42 %	
									CHHATISGARH	-10 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	1	1	2	1	3	2	8	13	AP&TG	-43 %	
									A,P	-47 %	
									TG	18 %	
									KARNATAKA	-25 %	
									KERALA	-20 %	
									T.N.	-57 %	
Status of 91 reservoirs	6	12	8	8	15	8	12	22			

4 Basin wise storage position:

Better than normal: Ganga,Sabarmati,Godavari,Mahi,Narmada and Tapi.

Close to normal: Mahanadi & Neighbouring EFRS and Indus.

Deficient: West Flowing Rivers of South,Krishna and Cauvery & neighbouring EFRS.

Highly deficient: Rivers of Kutch

- 5 Out of 91 reservoirs, **61** reservoirs reported more than 80% of normal storage & **30** reservoirs reported 80% or below of normal storage. Out of these **30** reservoirs **14** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	7	KARJAN	49
BHADAR	8	VANIVILAS SAGAR	49
VAIGAI	13		
ALIYAR	23		
YELDARI	28		
DANTIWADA	33		
SHETRANJI	36		
LOWER BHAWANI	38		
METTUR(STANLEY)	43		
KRISHNARAJA SAGRA	48		
PARAMBIKULAM	48		
MALAMPUZHA	49		

16 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
6	4	6

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

17 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 :- 18.08.2016

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	20.013	71.23%	19.584	69.70%	13.797	49.11%	45.05
INDUS	14.730	9.175	62.29%	12.984	88.15%	10.192	69.19%	-9.98
NARMADA	17.414	14.844	85.24%	14.567	83.65%	11.750	67.47%	26.33
TAPI	7.394	5.441	73.59%	5.019	67.88%	4.498	60.83%	20.96
MAHI	4.012	3.288	81.95%	2.341	58.35%	2.590	64.56%	26.95
SABARMATI	0.735	0.501	68.16%	0.621	84.49%	0.382	51.97%	31.15
RIVERS OF KUTCH	0.887	0.112	12.63%	0.767	86.47%	0.409	46.11%	-72.62
GODAVARI	15.394	9.047	58.77%	4.936	32.06%	7.054	45.82%	28.25
KRISHNA	32.831	16.913	51.52%	9.937	30.27%	22.214	67.66%	-23.86
MAHANADI & NEIGHBOURING EFRS	13.181	6.896	52.32%	6.768	51.35%	7.541	57.21%	-8.55
CAUVERY & NEIGHBOURING EFRS	8.359	2.806	33.57%	4.429	52.98%	5.180	61.97%	-45.83
WEST FLOWING RIVERS OF SOUTH	14.766	7.685	52.05%	7.178	48.61%	9.983	67.61%	-23.02
TOTAL	157.799	96.721		89.131		95.590		
PERCENTAGE								1.18

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 18.08.2016

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
NORTHERN REGION											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	496.70	6.229	3.720	17-08-2016	60	88	76	676	1200
*2	PONG DAM	423.67	414.61	6.157	3.887	17-08-2016	63	88	66	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	517.46	2.344	1.568	15-08-2016	67	89	60	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	281.30	1.711	1.711	17-08-2016	100	100	73	63	140
5	JHAKAM	359.50	359.80	0.132	0.132	17-08-2016	100	100	71	28	-
*6	RANA PRATAP SAGAR	352.81	352.56	1.436	1.393	16-08-2016	97	98	67	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	259.49	0.821	0.396	18-08-2016	48	49	40	-	-
8	MAITHON	146.3	144.88	0.471	0.364	18-08-2016	77	65	73	342	-
*9	PANCHET HILL	124.97	124.82	0.184	0.177	18-08-2016	96	67	82	\$	80
10	KONAR	425.81	423.58	0.176	0.137	18-08-2016	78	82	73	\$	-
11	TILAIYA	368.81	367.03	0.142	0.082	18-08-2016	58	100	68	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	187.85	5.378	2.467	18-08-2016	46	43	51	153	307
*13	BALIMELA	462.08	456.10	2.676	1.707	17-08-2016	64	44	32	-	360
14	SALANADI	82.30	69.20	0.558	0.201	17-08-2016	36	46	40	42	-
*15	RENGALI	123.50	118.56	3.432	1.847	17-08-2016	54	53	56	3	200
*16	MACHKUND(JALPUT)	838.16	834.21	0.893	0.579	17-08-2016	65	44	61	-	115
*17	UPPER KOLAB	858.00	853.81	0.935	0.562	17-08-2016	60	37	41	89	320
*18	UPPER INDRAVATI	642.00	636.36	1.456	0.878	18-08-2016	60	24	61	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	118.66	0.480	0.363	18-08-2016	76	72	54	227	-
20	KANGSABATI	134.14	127.98	0.914	0.429	18-08-2016	47	55	54	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	91.90	0.312	0.252	17-08-2016	81	82	46	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	102.08	6.615	5.016	18-08-2016	76	74	64	348	300
23	SABARMATI(DHAROI)	189.59	187.05	0.735	0.501	17-08-2016	68	84	52	95	1
*24	KADANA	127.7	127.00	1.472	1.119	17-08-2016	76	7	56	200	120
25	SHETRUNJI	55.53	50.62	0.300	0.064	17-08-2016	21	90	60	36	-
26	BHADAR	107.89	99.94	0.188	0.009	17-08-2016	5	79	59	27	-
27	DAMANAGANGA	79.86	75.75	0.502	0.304	18-08-2016	61	54	48	51	1
28	DANTIWADA	184.1	169.25	0.399	0.039	17-08-2016	10	87	30	45	-
29	PANAM	127.41	123.55	0.697	0.326	17-08-2016	47	56	62	36	2
*30	SARDAR SAROVAR	121.92	122.34	1.566	1.566	18-08-2016	100	100	94	2120	1450
31	KARJAN	115.25	99.86	0.523	0.169	18-08-2016	32	68	65	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 18.08.2016

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	461.83	2.171	1.428	18-08-2016	66	5	32	227	-
*33	KOYANA	657.90	657.56	2.652	2.465	17-08-2016	93	73	92	-	1920
34	BHIMA(UJJANI)	496.83	494.97	1.517	0.940	17-08-2016	62	0	58	125	12
35	ISAPUR	441.00	432.80	0.965	0.315	16-08-2016	33	25	56	104	-
36	MULA	552.30	551.79	0.609	0.582	16-08-2016	96	40	64	139	-
37	YELDARI	461.77	450.38	0.809	0.074	18-08-2016	9	3	33	78	-
38	GIRNA	398.07	394.36	0.524	0.335	17-08-2016	64	4	31	79	-
39	KHADAKVASLA	582.47	582.47	0.056	0.056	17-08-2016	100	27	70	78	8
*40	UPPER VAITARNA	603.50	602.74	0.331	0.307	17-08-2016	93	61	81	-	61
41	UPPER TAPI	214.00	210.72	0.255	0.090	17-08-2016	35	36	44	45	-
*42	PENCH (TOTALADOH)	490.00	487.30	1.091	0.818	17-08-2016	75	87	63	127	160
43	UPPER WARDHA	342.50	341.94	0.564	0.514	15-08-2016	91	91	70	70	-
44	BHATSA	142.07	137.46	0.942	0.853	17-08-2016	91	65	80	29.378	15
45	DHOM	747.70	747.13	0.331	0.331	17-08-2016	100	49	77	36.2	2
46	DUDHGANGA	646.00	642.96	0.664	0.579	18-08-2016	87	72	90	2.441	24
47	MANIKDOH (KUKADI)	711.25	704.60	0.288	0.181	18-08-2016	63	30	48	2.2	6
48	BHANDARDARA	342.50	341.94	0.304	0.289	15-08-2016	91	91	70	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	307.85	0.707	0.576	17-08-2016	81	86	74	-	30
*50	RIHAND	268.22	264.33	5.649	3.969	18-08-2016	70	35	33	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	343.00	2.196	0.838	17-08-2016	38	78	50	1897	198
*52	TEHRI	830.00	810.95	2.615	1.861	18-08-2016	71	75	60	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	396.39	6.827	4.602	18-08-2016	67	91	46	220	115
54	TAWA	355.40	354.39	1.944	1.852	18-08-2016	95	97	85	247	-
*55	BARGI	422.76	420.85	3.180	2.688	18-08-2016	85	68	72	157	90
*56	BANSAGAR	341.64	340.31	5.166	4.574	18-08-2016	89	66	52	488	425
*57	INDIRA SAGAR	262.13	260.19	9.745	8.153	17-08-2016	84	84	58	2380	1000
58	BARNA	348.55	348.00	0.456	0.416	18-08-2016	91	84	72	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	351.49	3.046	1.639	18-08-2016	54	72	70	-	120
60	MAHANADI	348.70	348.44	0.767	0.742	17-08-2016	97	28	68	319	10
SOUTHERN REGION											
A.P. & TG											
*61	SRISAILAM	269.75	266.49	8.288	4.438	18-08-2016	54	9	60	0	770
*62	NAGARJUNA SAGAR	179.83	156.82	6.841	0.220	18-08-2016	3	0	47	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	83.27	1.994	0.260	18-08-2016	13	12	24	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	327.72	2.300	1.138	18-08-2016	49	10	37	411	27
65	LOWER MANAIR	280.42	271.06	0.621	0.163	17-08-2016	26	19	39	199	60

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GOVERNMENT OF INDIA

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WEEK ENDING :- 18.08.2016

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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
KARNATAKA											
66	KRISHNARAJA SAGRA	752.50	744.06	1.163	0.459	17-08-2016	39	62	83	79	-
*67	TUNGABHADRA	497.74	493.09	3.276	1.482	18-08-2016	45	66	85	529	72
68	GHATAPRABHA	662.95	659.47	1.391	1.139	17-08-2016	82	39	86	317	-
69	BHADRA	657.76	648.47	1.785	0.861	17-08-2016	48	69	87	106	39
70	LINGANAMAKKI	554.43	545.77	4.294	2.109	18-08-2016	49	45	77	-	55
71	NARAYANPUR	492.25	492.02	0.863	0.710	18-08-2016	82	64	81	425	-
72	MALAPRABHA(RENUKA)	633.83	627.64	0.972	0.362	17-08-2016	37	28	64	215	-
73	KABINI(Sancherla Tank)	696.16	693.72	0.444	0.310	17-08-2016	70	88	61	85	-
74	HEMAVATHY	890.63	884.69	0.927	0.567	17-08-2016	61	81	91	265	-
75	HARANGI	871.42	871.02	0.220	0.216	17-08-2016	98	100	97	53	-
76	SUPA	564.00	542.66	4.120	1.959	18-08-2016	48	45	62	-	-
77	VANIVILAS SAGAR	652.28	634.20	0.802	0.044	18-08-2016	5	5	11	123	-
*78	ALMATTI	519.60	519.60	3.105	3.105	18-08-2016	100	55	89	@	290
*79	GERUSOPPA	55.00	48.68	0.130	0.095	18-08-2016	73	68	82	83	240
KERALA											
80	KALLADA(PARAPPAR)	115.82	103.75	0.507	0.244	18-08-2016	48	23	59	62	-
*81	IDAMALAYAR	169.00	149.80	1.018	0.511	18-08-2016	50	50	63	33	75
*82	IDUKKI	732.43	715.88	1.460	0.654	18-08-2016	45	57	55	-	780
*83	KAKKI	981.46	969.43	0.447	0.273	18-08-2016	61	46	62	23	300
*84	PERIYAR	867.41	861.66	0.173	0.052	18-08-2016	30	40	54	84	140
85	MALAPMUZHA	867.41	861.66	0.224	0.080	18-08-2016	30	40	54	84	140
TAMIL NADU											
86	LOWER BHAWANI	278.89	266.48	0.792	0.199	18-08-2016	25	66	66	105	8
*87	METTUR(STANLEY)	240.79	223.76	2.647	0.788	18-08-2016	30	58	69	122	360
88	VAIGAI	279.20	265.62	0.172	0.007	18-08-2016	4	31	33	61	6
89	PARAMBIKULAM	556.26	543.90	0.380	0.143	18-08-2016	38	49	78	101	-
90	ALIYAR	320.04	306.07	0.095	0.018	18-08-2016	19	91	81	#	60
*91	SHOLAYAR	1002.79	992.95	0.143	0.083	18-08-2016	58	83	88	-	95
TOTAL FOR 91 RESERVOIRS				157.799	96.721						
PERCENTAGE							61	56	61		

Sd/-

* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

Director

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

W. M. , CWC

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.

Sl. 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