

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 21.07.2016)

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 **21.07.2016**, live storage available in these reservoirs is **54.419 BCM**, which is **34%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **59.100 BCM** and the average of last 10 years live storage was **52.050 BCM**. Thus, the live storage available in 91 reservoirs **as per 21.07.2016 Bulletin** is **92%** of the live storage of corresponding period of last year and **105%** of storage of average of last ten years.

As per Table-01, the overall storage position is **less than the** corresponding period of last year in the country as a whole but is **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 **21.07.2016**, the total live storage available in these reservoirs is **6.05 BCM** which is **34%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **57%** and average storage of last ten years during corresponding period was **42%** 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 **21.07.2016**, the total live storage available in these reservoirs is **5.22 BCM** which is **28%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **40%** and average storage of last ten years during corresponding period was **26%** 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 **21.07.2016**, the total live storage available in these reservoirs is **8.56 BCM** which is **32%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **25%** and average storage of last ten years during corresponding period was **34%** 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

21.07.2016, the total live storage available in these reservoirs is **20.23 BCM** which is **48%** 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 **26%** 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 **21.07.2016**, the total live storage available in these reservoirs is **14.36 BCM** which is **28%** 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 **38%** 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 8, better than normal storage is available in Ganga, Narmada, Tapi, Godavari and West flowing rivers of South. Close to Normal in Sabarmati. Deficient in Indus, Mahi, Krishna, Mahanadi & neighbouring East Flowing Rivers 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 **35** 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 **4** and having storage less than 20% with reference to average of last ten years is **7**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **21** and having storage less than or equal to 50% with reference to average of last ten years are **19**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 21.07.2016

- 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 **21.07.2016** is **54.419** BCM (**34** percent of the live storage capacity at FRL).The current year's storage is nearly **92** percent of last year's storage and **105** 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.)	-	-	-	-	1	-	-	5	H.P.	-30 %
									PUNJAB	-22 %
									RAJASTHAN	25 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	1	-	-	1	4	9	JHARKHAND	-5 %
									ODISHA	14 %
									W. BENGAL	-35 %
									TRIPURA	55 %
WEST (Guj.& Mah.), (27 Resv.)	-	1	-	-	3	6	2	15	GUJARAT	-7 %
									MAH.	-8 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	2	1	1	2	2	4	U.P.	14 %
									UTTARAKHAND	-8 %
									M.P.	153 %
									CHHATISGARH	-27 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	2	1	1	-	4	2	21	AP&TG	-86 %
									A,P	-30 %
									TG	-7 %
									KARNATAKA	-2 %
									KERALA	0 %
									T.N.	-54 %
Status of 91 reservoirs	0	3	4	2	5	13	10	54		

4 Basin wise storage position:

Better than normal: Ganga, Tapi, Narmada, Godavari and West Flowing rivers of south.

Close to normal: Sabarmati

Deficient: Indus, Mahi, Krishna, Mahanadi & Neighbouring EFRS and Cauvery & neighbouring EFRS

Highly deficient: Rivers of Kutch.

- 5 Out of 91 reservoirs, **48** reservoirs reported more than 80% of normal storage & **43** reservoirs reported 80% or below of normal storage. Out of these **43** reservoirs **19** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	JHAKAM	32
BHIMA(UJJANI)	0	ALIYAR	40
JAYAKWADI(PAITHON)	0	LOWER MANAIR	43
YELDARI	0	METTUR(STANLEY)	43
BHADAR	10	SHETRUNJI	45
VAIGAI	18	VANIVILAS SAGAR	46
KARJAN	19	LOWER BHAWANI	47
ISAPUR	22		
SALANADI	27		
GIRNA	28		
SRISAILAM	29		
DANTIWADA	30		

24 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
9	5	10

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 :- 21.07.2016

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	10.407	37.04%	13.355	47.53%	7.799	27.76%	33.44
INDUS	14.730	4.472	30.36%	9.250	62.80%	6.216	42.20%	-28.06
NARMADA	17.414	11.632	66.80%	5.107	29.33%	4.243	24.37%	174.15
TAPI	7.394	2.289	30.96%	1.356	18.34%	2.276	30.78%	0.57
MAHI	4.012	1.282	31.95%	1.629	40.60%	1.608	40.08%	-20.27
SABARMATI	0.735	0.183	24.90%	0.162	22.04%	0.195	26.53%	-6.15
RIVERS OF KUTCH	0.887	0.072	8.12%	0.297	33.48%	0.208	23.45%	-65.38
GODAVARI	15.394	4.248	27.60%	3.591	23.33%	3.542	23.01%	19.93
KRISHNA	32.831	8.676	26.43%	9.071	27.63%	12.445	37.91%	-30.29
MAHANADI & NEIGHBOURING EFRS	13.181	2.954	22.41%	5.715	43.36%	3.968	30.10%	-25.55
CAUVERY & NEIGHBOURING EFRS	8.359	2.532	30.29%	4.384	52.45%	3.959	47.36%	-36.04
WEST FLOWING RIVERS OF SOUTH	14.766	5.672	38.41%	5.183	35.10%	5.591	37.86%	1.45
TOTAL	157.799	54.419		59.100		52.050		
PERCENTAGE								4.55

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 21.07.2016

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	484.16	6.229	2.292	20-07-2016	37	63	47	676	1200
*2	PONG DAM	423.67	398.46	6.157	1.241	21-07-2016	20	55	34	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	506.45	2.344	0.939	21-07-2016	40	84	51	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	270.10	1.711	0.607	21-07-2016	35	37	35	63	140
5	JHAKAM	359.50	337.95	0.132	0.010	20-07-2016	8	17	23	28	-
*6	RANA PRATAP SAGAR	352.81	350.28	1.436	0.962	21-07-2016	67	28	44	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.94	0.821	0.376	21-07-2016	46	49	40	-	-
8	MAITHON	146.3	141.54	0.471	0.215	21-07-2016	46	57	58	342	-
*9	PANCHET HILL	124.97	124.34	0.184	0.154	21-07-2016	84	85	75	\$	80
10	KONAR	425.81	419.21	0.176	0.072	21-07-2016	41	51	52	\$	-
11	TILAIYA	368.81	365.30	0.142	0.036	21-07-2016	25	45	49	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	183.50	5.378	0.881	20-07-2016	16	28	23	153	307
*13	BALIMELA	462.08	451.77	2.676	1.150	20-07-2016	43	47	14	-	360
14	SALANADI	82.30	57.65	0.558	0.044	20-07-2016	8	41	30	42	-
*15	RENGALI	123.50	113.27	3.432	0.614	20-07-2016	18	44	18	3	200
*16	MACHKUND(JALPUT)	838.16	829.91	0.893	0.340	20-07-2016	38	43	38	-	115
*17	UPPER KOLAB	858.00	849.82	0.935	0.268	20-07-2016	29	39	22	89	320
*18	UPPER INDRAVATI	642.00	632.08	1.456	0.506	21-07-2016	35	27	27	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	114.47	0.480	0.190	21-07-2016	40	66	47	227	-
20	KANGSABATI	134.14	123.35	0.914	0.204	21-07-2016	22	49	42	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	90.35	0.312	0.172	20-07-2016	55	57	36	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	95.27	6.615	2.214	20-07-2016	33	19	32	348	300
23	SABARMATI(DHAROI)	189.59	182.24	0.735	0.183	20-07-2016	25	22	27	95	1
*24	KADANA	127.7	119.18	1.472	0.479	21-07-2016	33	44	45	200	120
25	SHETRUNJI	55.53	50.20	0.300	0.058	21-07-2016	19	89	43	36	-
26	BHADAR	107.89	99.33	0.188	0.005	21-07-2016	3	7	27	27	-
27	DAMANAGANGA	79.86	74.00	0.502	0.242	20-07-2016	48	24	25	51	1
28	DANTIWADA	184.1	164.82	0.399	0.009	21-07-2016	2	4	8	45	-
29	PANAM	127.41	120.00	0.697	0.186	21-07-2016	27	47	45	36	2
*30	SARDAR SAROVAR	121.92	117.12	1.566	0.807	20-07-2016	52	49	43	2120	1450
31	KARJAN	115.25	87.30	0.523	0.040	20-07-2016	8	32	41	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 21.07.2016

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	455.02	2.171	0.000	21-07-2016	0	0	16	227	-
*33	KOYANA	657.90	643.20	2.652	1.346	20-07-2016	51	52	56	-	1920
34	BHIMA(UJJANI)	496.83	488.07	1.517	0.000	20-07-2016	0	0	20	125	12
35	ISAPUR	441.00	427.56	0.965	0.072	20-07-2016	7	20	34	104	-
36	MULA	552.30	544.43	0.609	0.263	21-07-2016	43	8	22	139	-
37	YELDARI	461.77	447.02	0.809	0.000	20-07-2016	0	1	13	78	-
38	GIRNA	398.07	382.86	0.524	0.018	20-07-2016	3	8	12	79	-
39	KHADAKVASLA	582.47	582.08	0.056	0.051	20-07-2016	91	18	52	78	8
*40	UPPER VAITARNA	603.50	598.93	0.331	0.190	20-07-2016	57	4	40	-	61
41	UPPER TAPI	214.00	209.81	0.255	0.057	20-07-2016	22	18	32	45	-
*42	PENCH (TOTALADOH)	490.00	483.00	1.091	0.558	20-07-2016	51	18	30	127	160
43	UPPER WARDHA	342.50	339.84	0.564	0.350	21-07-2016	62	50	46	70	-
44	BHATSA	142.07	129.03	0.942	0.657	20-07-2016	70	35	46	29.378	15
45	DHOM	747.70	736.46	0.331	0.170	20-07-2016	51	45	40	36.2	2
46	DUDHGANGA	646.00	632.78	0.664	0.344	20-07-2016	52	51	53	2.441	24
47	MANIKDOH (KUKADI)	711.25	695.56	0.288	0.095	20-07-2016	33	9	14	2.2	6
48	BHANDARDARA	342.50	339.84	0.304	0.163	21-07-2016	62	50	46	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	306.63	0.707	0.449	20-07-2016	64	51	42	-	30
*50	RIHAND	268.22	255.70	5.649	0.758	21-07-2016	13	30	13	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	330.83	2.196	0.372	21-07-2016	17	72	31	1897	198
*52	TEHRI	830.00	780.80	2.615	0.913	21-07-2016	35	33	27	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	392.32	6.827	2.783	21-07-2016	41	53	24	220	115
54	TAWA	355.40	352.93	1.944	1.593	21-07-2016	82	41	43	247	-
*55	BARGI	422.76	417.85	3.180	1.918	21-07-2016	60	33	25	157	90
*56	BANSAGAR	341.64	335.72	5.166	2.751	21-07-2016	53	56	28	488	425
*57	INDIRA SAGAR	262.13	258.69	9.745	6.898	21-07-2016	71	22	16	2380	1000
58	BARNA	348.55	347.35	0.456	0.376	21-07-2016	82	32	34	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	346.90	3.046	1.095	20-07-2016	36	74	53	-	120
60	MAHANADI	348.70	342.99	0.767	0.320	20-07-2016	42	26	44	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	240.30	8.288	0.575	21-07-2016	7	30	24	0	770
*62	NAGARJUNA SAGAR	179.83	153.53	6.841	0.000	21-07-2016	0	1	32	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	84.95	1.994	0.348	21-07-2016	17	13	25	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	324.16	2.300	0.510	21-07-2016	22	10	20	411	27
65	LOWER MANAIR	280.42	267.25	0.621	0.068	21-07-2016	11	19	26	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 21.07.2016

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>KARNATAKA</u>											
66	KRISHNARAJA SAGRA	752.50	744.30	1.163	0.476	20-07-2016	41	62	56	79	-
*67	TUNGABHADRA	497.74	491.46	3.276	1.135	21-07-2016	35	41	51	529	72
68	GHATAPRABHA	662.95	648.24	1.391	0.456	19-07-2016	33	22	41	317	-
69	BHADRA	657.76	645.19	1.785	0.616	19-07-2016	35	67	59	106	39
70	LINGANAMAKKI	554.43	541.72	4.294	1.424	17-07-2016	33	29	36	-	55
71	NARAYANPUR	492.25	491.93	0.863	0.698	21-07-2016	81	46	55	425	-
72	MALAPRABHA(RENUKA)	633.83	623.64	0.972	0.130	19-07-2016	13	18	25	215	-
73	KABINI(Sancherla Tank)	696.16	692.45	0.444	0.247	20-07-2016	56	96	53	85	-
74	HEMAVATHY	890.63	882.58	0.927	0.449	20-07-2016	48	79	62	265	-
75	HARANGI	871.42	871.05	0.220	0.217	20-07-2016	99	94	77	53	-
76	SUPA	564.00	532.45	4.120	1.243	17-07-2016	30	36	30	-	-
77	VANIVILAS SAGAR	652.28	634.28	0.802	0.045	21-07-2016	6	5	12	123	-
*78	ALMATTI	519.60	519.35	3.105	3.015	21-07-2016	97	37	58	@	290
*79	GERUSOPPA	55.00	49.09	0.130	0.097	21-07-2016	75	78	85	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	106.70	0.507	0.306	21-07-2016	60	25	44	62	-
*81	IDAMALAYAR	169.00	144.75	1.018	0.402	21-07-2016	39	39	41	33	75
*82	IDUKKI	732.43	713.12	1.460	0.543	21-07-2016	37	48	38	-	780
*83	KAKKI	981.46	965.31	0.447	0.229	21-07-2016	51	38	45	23	300
*84	PERIYAR	867.41	862.18	0.173	0.061	21-07-2016	35	53	53	84	140
85	MALAPMUZHA	867.41	862.18	0.224	0.063	21-07-2016	35	53	53	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	266.46	0.792	0.199	21-07-2016	25	68	54	105	8
*87	METTUR(STANLEY)	240.79	220.85	2.647	0.589	21-07-2016	22	54	52	122	360
88	VAIGAI	279.20	265.47	0.172	0.007	21-07-2016	4	37	23	61	6
89	PARAMBIKULAM	556.26	542.22	0.380	0.114	21-07-2016	30	30	57	101	-
90	ALIYAR	320.04	307.12	0.095	0.023	21-07-2016	24	86	60	#	60
*91	SHOLAYAR	1002.79	991.95	0.143	0.078	21-07-2016	55	78	71	-	95
TOTAL FOR 91 RESERVOIRS				157.799	54.419						
PERCENTAGE							34	37	33		

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