

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 04.07.2019)

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 **04.07.2019**, live storage available in these reservoirs is **26.944 BCM**, which is **17%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **32.581 BCM** and the average of last 10 years live storage was **32.78 BCM**. Thus, the live storage available in 91 reservoirs **as per 04.07.2019 Bulletin** is **83%** of the live storage of corresponding period of last year and **82%** 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 **04.07.2019**, the total live storage available in these reservoirs is **6.45 BCM** which is **36%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **16%** and average storage of last ten years during corresponding period was **28%** 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 **04.07.2019**, the total live storage available in these reservoirs is **2.87 BCM** which is **15%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **17%** and average storage of last ten years during corresponding period was **17%** 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 **04.07.2019**, the total live storage available in these reservoirs is **3.42 BCM** which is **11%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **14%** and average storage of last ten years during corresponding period was **18%** 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 **04.07.2019**, the total live storage available in these reservoirs is **8.72 BCM** which is **21%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **22%** and average storage of last ten years during corresponding period was **20%** of live storage capacity of these reservoirs. Thus, storage during current year is less than the storage of last year but is 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 **04.07.2019**, the total live storage available in these reservoirs is **5.49 BCM** which is **11%** 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 **20%** 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 Indus and Narmada. Close to Normal in Mahi and Mahanadi & Neighbouring East Flowing Rivers. Deficient in Ganga, Sabarmati, Rivers of Kutch, Godavari, Cauvery & neighbouring EFRs and West Flowing Rivers of South and Highly Deficient in Tapi and Krishna.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **18** and reservoirs having storage more than average of last ten years are **20**. The numbers of reservoirs having storage less than 20% with respect to last year is **18** and having storage less than 20% with reference to average of last ten years is **18**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **44** and having storage less than or equal to 50% with reference to average of last ten years are **46**.

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 04.07.2019

- 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 **04.07.2019** is **26.944** BCM (**17** percent of the live storage capacity at FRL).The current year's storage is nearly **83** percent of last year's storage and **82** 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	4	H.P.	49 %
									PUNJAB	4 %
									RAJASTHAN	-9 %
EAST (Jharkhand,Odisha, Tripura & W.Bengal) (15 Resv.)	-	-	-	-	-	1	-	14	JHARKHAND	-24 %
									ODISHA	-8 %
									W. BENGAL	-4 %
									TRIPURA	-33 %
WEST (Guj.& Mah.), (27 Resv.)	-	-	-	-	-	-	-	27	GUJARAT	-17 %
									MAH.	-66 %
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	-	2	10	U.P.	-24 %
									UTTARAKHAND	-25 %
									M.P.	17 %
									CHHATISGARH	-10 %
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	-	1	-	-	-	-	30	AP&TG	-52 %
									A,P	-84 %
									TG	-38 %
									KARNATAKA	-41 %
									KERALA	-54 %
									T.N.	-52 %
Status of 91 reservoirs	0	0	1	0	0	1	4	85		

4 Basin wise storage position:

Better than normal: Indus and Narmada

Close to normal: Mahi and Mahanadi & Neighbouring East Flowing Rivers .

Deficient: Ganga, Sabarmati, Rivers of Kutch, Godavari ,Cauvery & neighbouring EFRs and West Flowing Rivers of South .

Highly deficient: Tapi and Krishna

- 5 Out of 91 reservoirs, **29** reservoirs reported more than 80% of normal storage & **62** reservoirs reported 80% or below of normal storage. Out of these **62** reservoirs **46** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
YELDARI	0	MATATILA	19
BHIMA(UJJANI)	0	MULA	21
JAYAKWADI(PAITHON)	0	TEHRI	22
SHOLAYAR	0	UPPER VAITARNA	24
PENCH (TOTALADOH)	0	KAKKI	25
NAGARJUNA SAGAR	0	MANIKDOH	26
ISAPUR	0	BHANDARDARA	27
GANDHI SAGAR	0	BHADAR	29
TILAIYA	0	IDAMALAYAR	30
BARNA	0	GHATAPRABHA	34
ALIYAR	0	DUDHGANGA	35
TUNGABHADRA	7	TAWA	36
VANIVILAS SAGAR	9	UPPER WARDHA	36
UKAI	15	PERIYAR	37
DHOM	15	HARANGI	37
SOMASILA	16	MALAMPUZHA	40
MALAPRABHA(RENUKA)	19	ALMATTI	41
		KOYANA	42
		KABINI	42
		IDUKKI	43
		VAIGAI	44
		BHADRA	45
		METTUR(STANLEY)	47
		SHETRANJI	47
		HEMAVATHY	47
		PANCHET HILL	48
		SABARMATI(DHAROI)	49
		PARAMBIKULAM	49
		UPPER TAPI	49

16 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
5	7	4

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

25 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

WEEK ENDING :- 04.07.2019

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	5.020	17.87%	6.105	21.73%	6.454	22.97%	-22.22
INDUS	14.730	5.627	38.20%	1.864	12.65%	4.096	27.81%	37.38
NARMADA	21.608	4.800	22.21%	3.228	14.94%	2.457	11.37%	95.36
TAPI	7.394	0.260	3.52%	0.646	8.74%	1.409	19.06%	-81.55
MAHI	4.012	1.173	29.24%	1.546	38.53%	1.299	32.38%	-9.70
SABARMATI	0.735	0.051	6.94%	0.111	15.10%	0.105	14.29%	-51.43
RIVERS OF KUTCH	0.887	0.053	5.98%	0.117	13.19%	0.099	11.16%	-46.46
GODAVARI	15.394	1.219	7.92%	1.762	11.45%	2.460	15.98%	-50.45
KRISHNA	32.831	2.121	6.46%	5.046	15.37%	5.446	16.59%	-61.05
MAHANADI & NEIGHBOURING EFRS	13.181	2.624	19.91%	3.001	22.77%	2.673	20.28%	-1.83
CAUVERY & NEIGHBOURING EFRS	8.359	1.055	12.62%	3.505	41.93%	2.348	28.09%	-55.07
WEST FLOWING RIVERS OF SOUTH	14.766	2.941	19.92%	5.650	38.26%	3.934	26.64%	-25.24
TOTAL	161.993	26.944		32.581		32.780		
PERCENTAGE								-17.80

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

WEEK ENDING :- 04.07.2019

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	489.49	6.229	2.573	04-07-2019	41	7	28	676	1200
*2	PONG DAM	423.67	404.39	6.157	1.968	04-07-2019	32	9	21	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	509.75	2.344	1.086	04-07-2019	46	38	44	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	267.85	1.711	0.442	03-07-2019	26	36	22	63	140
5	JHAKAM	359.50	345.65	0.132	0.033	04-07-2019	25	31	19	28	-
*6	RANA PRATAP SAGAR	352.81	346.34	1.436	0.344	04-07-2019	24	30	34	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	257.01	0.821	0.311	04-07-2019	38	31	35	-	-
8	MAITHON	146.3	137.32	0.471	0.080	04-07-2019	17	34	31	342	-
*9	PANCHET HILL	124.97	121.18	0.184	0.040	04-07-2019	22	60	45	\$	80
10	KONAR	425.81	415.08	0.176	0.030	04-07-2019	17	20	33	\$	-
11	TILAIYA	368.81	363.37	0.142	0.000	04-07-2019	0	7	20	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	182.43	5.378	0.588	04-07-2019	11	13	10	153	307
*13	BALIMELA	462.08	443.48	2.676	0.333	03-07-2019	12	7	20	-	360
14	SALANADI	82.30	73.73	0.558	0.303	04-07-2019	54	45	27	42	-
*15	RENGALI	123.50	110.83	3.432	0.171	03-07-2019	5	7	7	3	200
*16	MACHKUND(JALPUT)	838.16	826.74	0.893	0.209	02-07-2019	23	14	27	-	115
*17	UPPER KOLAB	858.00	846.16	0.935	0.090	03-07-2019	10	8	15	89	320
*18	UPPER INDRAVATI	642.00	628.58	1.456	0.240	03-07-2019	16	10	17	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	109.84	0.480	0.077	04-07-2019	16	30	29	227	-
20	KANGSABATI	134.14	125.65	0.914	0.302	04-07-2019	33	46	28	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	88.10	0.312	0.094	03-07-2019	30	99	45	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	84.03	6.615	0.189	04-07-2019	3	8	20	348	300
23	SABARMATI(DHAROI)	189.59	178.49	0.735	0.051	04-07-2019	7	15	14	95	1
*24	KADANA	127.7	118.90	1.472	0.461	04-07-2019	31	43	43	200	120
25	SHETRUNJI	55.53	48.27	0.300	0.026	03-07-2019	9	12	18	36	-
26	BHADAR	107.89	100.03	0.188	0.009	04-07-2019	5	10	16	27	-
27	DAMANAGANGA	79.86	71.45	0.502	0.166	04-07-2019	33	28	18	51	1
28	DANTIWADA	184.1	166.50	0.399	0.018	04-07-2019	5	16	3	45	-
29	PANAM	127.41	121.50	0.697	0.237	04-07-2019	34	35	38	36	2
*30	SARDAR SAROVAR	138.68	120.03	5.760	1.223	04-07-2019	21	0	7	2120	1450
31	KARJAN	115.25	98.69	0.523	0.159	04-07-2019	30	33	29	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

WEEK ENDING :- 04.07.2019

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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>MAHARASHTRA</u>											
32	JAYAKWADI(PAITHON)	463.91	453.99	2.171	0.000	04-07-2019	0	20	7	227	-
*33	KOYANA	657.90	624.00	2.652	0.329	04-07-2019	12	29	30	-	1920
34	BHIMA(UJJANI)	496.83	485.09	1.517	0.000	04-07-2019	0	0	4	125	12
35	ISAPUR	441.00	425.78	0.965	0.000	04-07-2019	0	5	20	104	-
36	MULA	552.30	534.34	0.609	0.007	04-07-2019	1	1	5	139	-
37	YELDARI	461.77	446.01	0.809	0.000	04-07-2019	0	0	9	78	-
38	GIRNA	398.07	383.94	0.524	0.039	04-07-2019	7	10	8	79	-
39	KHADAKVASLA	582.47	579.24	0.056	0.017	04-07-2019	30	36	34	78	8
*40	UPPER VAITARNA	603.50	589.48	0.331	0.023	04-07-2019	7	34	29	-	61
41	UPPER TAPI	214.00	208.92	0.255	0.032	04-07-2019	13	14	25	45	-
*42	PENCH (TOTALADOH)	490.00	460.30	1.091	0.000	04-07-2019	0	4	17	127	160
43	UPPER WARDHA	342.50	334.50	0.564	0.069	04-07-2019	12	35	34	70	-
44	BHATSA	142.07	108.02	0.942	0.265	04-07-2019	28	38	36	29.378	15
45	DHOM	747.70	726.89	0.331	0.011	04-07-2019	3	16	22	36.2	2
46	DUDHGANGA	646.00	618.25	0.664	0.066	04-07-2019	10	33	29	2.441	24
47	MANIKDOH (KUKADI)	711.25	684.31	0.288	0.005	04-07-2019	2	8	7	2.2	6
48	BHANDARDARA	744.91	708.51	0.304	0.016	04-07-2019	5	32	20	63.74	46
<u>CENTRAL REGION</u>											
<u>UTTAR PRADESH</u>											
49	MATATILA	308.46	300.62	0.707	0.044	03-07-2019	6	8	32	-	30
*50	RIHAND	268.22	255.09	5.649	0.581	04-07-2019	10	10	11	-	300
<u>UTTRAKHAND</u>											
*51	RAMGANGA	365.30	335.98	2.196	0.554	03-07-2019	25	8	24	1897	198
*52	TEHRI	830.00	744.10	2.615	0.068	04-07-2019	3	7	12	2351	1000
<u>MADHYA PRADESH</u>											
*53	GANDHI SAGAR	399.90	380.58	6.827	0.000	04-07-2019	0	16	22	220	115
54	TAWA	355.40	338.30	1.944	0.181	04-07-2019	9	14	26	247	-
*55	BARGI	422.76	412.75	3.180	1.023	04-07-2019	32	39	19	157	90
*56	BANSAGAR	341.64	334.97	5.166	2.495	04-07-2019	48	42	32	488	425
*57	INDIRA SAGAR	262.13	250.20	9.745	2.214	04-07-2019	23	16	7	2380	1000
58	BARNA	348.55	337.48	0.456	0.000	04-07-2019	0	4	19	546	-
<u>CHHATTIS GARH</u>											
*59	MINIMATA BANGOI	359.66	349.90	3.046	1.438	04-07-2019	47	53	51	-	120
60	MAHANADI	348.70	339.39	0.767	0.124	03-07-2019	16	26	25	319	10
<u>SOUTHERN REGION</u>											
<u>A.P & TG</u>											
*61	SRISAILAM	269.75	245.61	8.288	0.808	02-07-2019	10	9	9	0	770
*62	NAGARJUNA SAGAR	179.83	154.72	6.841	0.000	02-07-2019	0	1	13	895	810
<u>ANDHRA PRADESH</u>											
63	SOMASILA	100.58	77.32	1.994	0.073	04-07-2019	4	16	22	168	0
<u>TELANGANA</u>											
64	SRIRAMSAGAR	332.54	319.61	2.300	0.155	04-07-2019	7	13	12	411	27
65	LOWER MANAIR	280.42	268.80	0.621	0.100	04-07-2019	16	16	21	199	60

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WEEK ENDING :- 04.07.2019

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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	738.89	1.163	0.183	03-07-2019	16	64	24	79	-
*67	TUNGABHADRA	497.74	479.51	3.276	0.053	04-07-2019	2	35	24	529	72
68	GHATAPRABHA	662.95	633.39	1.391	0.061	04-07-2019	4	17	13	317	-
69	BHADRA	657.76	638.91	1.785	0.256	04-07-2019	14	39	32	106	39
70	LINGANAMAKKI	554.43	533.02	4.294	0.488	04-07-2019	11	30	22	-	55
71	NARAYANPUR	492.25	487.43	0.863	0.240	02-07-2019	28	43	34	425	-
72	MALAPRABHA(RENUKA)	633.83	620.02	0.972	0.016	04-07-2019	2	9	9	215	-
73	KABINI(Sancherla Tank)	696.16	688.15	0.444	0.075	03-07-2019	17	93	40	85	-
74	HEMAVATHY	890.63	873.97	0.927	0.122	03-07-2019	13	72	28	265	-
75	HARANGI	871.42	856.16	0.220	0.038	03-07-2019	17	70	46	53	-
76	SUPA	564.00	533.40	4.120	1.304	04-07-2019	32	35	24	-	-
77	VANIVILAS SAGAR	652.28	631.59	0.802	0.008	04-07-2019	1	1	11	123	-
*78	ALMATTI	519.60	507.91	3.105	0.251	02-07-2019	8	21	20	@	290
*79	GERUSOPPA	55.00	51.93	0.130	0.112	04-07-2019	86	80	79	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	98.80	0.507	0.176	04-07-2019	35	73	37	62	-
*81	IDAMALAYAR	169.00	124.35	1.018	0.080	04-07-2019	8	42	26	33	75
*82	IDUKKI	732.43	702.13	1.460	0.183	04-07-2019	13	48	29	-	780
*83	KAKKI	981.46	930.89	0.447	0.035	04-07-2019	8	51	32	23	300
*84	PERIYAR	867.41	859.75	0.173	0.022	04-07-2019	13	49	35	84	140
85	MALAPMUZHA	115.06	102.20	0.224	0.029	04-07-2019	13	46	33	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	265.32	0.792	0.167	04-07-2019	21	52	30	105	8
*87	METTUR(STANLEY)	240.79	217.29	2.647	0.386	04-07-2019	15	28	31	122	360
88	VAIGAI	279.20	266.79	0.172	0.011	04-07-2019	6	31	15	61	6
89	PARAMBIKULAM	556.26	538.64	0.380	0.058	04-07-2019	15	32	31	101	-
90	ALIYAR	320.04	299.09	0.095	0.000	04-07-2019	0	27	38	#	60
*91	SHOLAYAR	1002.79	962.28	0.143	0.000	04-07-2019	0	91	48	-	95
TOTAL FOR 91 RESERVOIRS				161.993	26.944						
PERCENTAGE							17	20	20		

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.