

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 11.07.2019)

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 **11.07.2019**, live storage available in these reservoirs is **35.108 BCM**, which is **22%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **37.221 BCM** and the average of last 10 years live storage was **37.114 BCM**. Thus, the live storage available in 91 reservoirs **as per 11.07.2019 Bulletin** is **94%** of the live storage of corresponding period of last year and **95%** 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 **11.07.2019**, the total live storage available in these reservoirs is **7.38 BCM** which is **41%** 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 **31%** 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 **11.07.2019**, the total live storage available in these reservoirs is **3.37 BCM** which is **18%** 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 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 31.26 BCM. As per Reservoir Storage Bulletin dated **11.07.2019**, the total live storage available in these reservoirs is **5.01 BCM** which is **16%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **18%** 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 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 **11.07.2019**, the total live storage available in these reservoirs is **10.85 BCM** which is **26%** 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 **23%** 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 **11.07.2019**, the total live storage available in these reservoirs is **8.51 BCM** which is **16%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **31%** and average storage of last ten years during corresponding period was **24%** 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, Mahi, Narmada and Mahanadi & Neighbouring East Flowing Rivers. Close to Normal in Ganga and West Flowing Rivers of South. Deficient in Sabarmati, Rivers of Kutch, Godavari, Krishna, Cauvery & neighbouring EFRs and Highly Deficient in Tapi.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **27** and reservoirs having storage more than average of last ten years are **29**. The numbers of reservoirs having storage less than 20% with respect to last year is **10** and having storage less than 20% with reference to average of last ten years is **14**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **32** and having storage less than or equal to 50% with reference to average of last ten years are **32**.

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 11.07.2019

- 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 **11.07.2019** is **35.108** BCM (**22** percent of the live storage capacity at FRL).The current year's storage is nearly **94** percent of last year's storage and **95** percent of the average of last ten years.

3 Region wise storage status:-

REGION (Monitoring No. of Reservoirs)	(States),	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.)		-	-	-	-	-	-	3	3	H.P.	38 %
										PUNJAB	3 %
										RAJASTHAN	39 %
EAST (Jharkhand,Odisha, Tripura & W.Bengal) (15 Resv.)		-	-	-	-	-	1	1	13	JHARKHAND	-17 %
										ODISHA	14 %
										W. BENGAL	-8 %
										TRIPURA	-36 %
WEST (Guj.& Mah.), (27 Resv.)		1	-	-	-	-	-	1	25	GUJARAT	-10 %
										MAH.	-34 %
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)		-	-	-	-	-	2	1	9	U.P.	-15 %
										UTTARAKHAND	-14 %
										M.P.	25 %
										CHHATISGARH	1 %
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)		-	-	1	-	-	-	2	28	AP&TG	-53 %
										A,P	-83 %
										TG	-50 %
										KARNATAKA	-11 %
										KERALA	-55 %
										T.N.	-54 %
Status of 91 reservoirs		1	0	1	0	0	3	8	78		

4 Basin wise storage position:

Better than normal: Indus, Mahi, Narmada and Mahanadi & Neighbouring East Flowing Rivers

Close to normal: Ganga and West Flowing Rivers of South.

Deficient: Sabarmati, Rivers of Kutch, Godavari, Krishna, Cauvery & neighbouring EFRs.

Highly deficient: Tapi.

- 5 Out of 91 reservoirs, **41** reservoirs reported more than 80% of normal storage & **50** reservoirs reported 80% or below of normal storage. Out of these **50** reservoirs **32** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
YELDARI	0	TAWA	32
BHIMA(UJJANI)	0	UPPER WARDHA	32
JAYAKWADI(PAITHON)	0	VAIGAI	33
PENCH (TOTALADOH)	0	IDAMALAYAR	34
NAGARJUNA SAGAR	0	BHADAR	35
ALIYAR	0	PERIYAR	38
SHOLAYAR	1	IDUKKI	40
ISAPUR	2	HARANGI	41
BARNA	8	SRIRAMSAGAR	41
TILAIYA	9	SABARMATI(DHAROI)	42
VANIVILAS SAGAR	9	SHETRUNJI	43
TUNGABHADRA	16	METTUR(STANLEY)	44
SOMASILA	17	PARAMBIKULAM	44
UKAI	18	MALAMPUZHA	46
KAKKI	23	KONAR	49
GANDHI SAGAR	31		
MATATILA	32		

18 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
5	5	8

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

22 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 :- 11.07.2019

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	6.325	22.51%	6.195	22.05%	7.118	25.33%	-11.14
INDUS	14.730	6.055	41.11%	1.862	12.64%	4.684	31.80%	29.27
NARMADA	21.608	5.858	27.11%	3.492	16.16%	3.232	14.96%	81.25
TAPI	7.394	0.331	4.48%	0.709	9.59%	1.528	20.67%	-78.34
MAHI	4.012	1.745	43.49%	1.591	39.66%	1.320	32.90%	32.20
SABARMATI	0.735	0.047	6.39%	0.120	16.33%	0.112	15.24%	-58.04
RIVERS OF KUTCH	0.887	0.055	6.20%	0.117	13.19%	0.104	11.72%	-47.12
GODAVARI	15.394	1.415	9.19%	2.041	13.26%	2.566	16.67%	-44.86
KRISHNA	32.831	4.811	14.65%	7.230	22.02%	6.588	20.07%	-26.97
MAHANADI & NEIGHBOURING EFRS	13.181	3.093	23.47%	3.006	22.81%	2.732	20.73%	13.21
CAUVERY & NEIGHBOURING EFRS	8.359	1.429	17.10%	4.052	48.47%	2.659	31.81%	-46.26
WEST FLOWING RIVERS OF SOUTH	14.766	3.944	26.71%	6.806	46.09%	4.471	30.28%	-11.79
TOTAL	161.993	35.108		37.221		37.114		
PERCENTAGE								-5.40

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

WEEK ENDING :- 11.07.2019

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	492.33	6.229	2.891	11-07-2019	46	8	34	676	1200
*2	PONG DAM	423.67	404.76	6.157	2.023	11-07-2019	33	7	24	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	510.71	2.344	1.141	11-07-2019	49	39	47	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	272.95	1.711	0.850	11-07-2019	50	39	24	63	140
5	JHAKAM	359.50	348.60	0.132	0.047	11-07-2019	36	33	17	28	-
*6	RANA PRATAP SAGAR	352.81	346.91	1.436	0.425	11-07-2019	30	31	37	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	258.39	0.821	0.356	11-07-2019	43	32	37	-	-
8	MAITHON	146.3	138.22	0.471	0.103	11-07-2019	22	36	35	342	-
*9	PANCHET HILL	124.97	121.80	0.184	0.056	11-07-2019	30	52	50	\$	80
10	KONAR	425.81	415.18	0.176	0.031	11-07-2019	18	23	36	\$	-
11	TILAIYA	368.81	363.56	0.142	0.003	11-07-2019	2	7	25	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	183.34	5.378	0.833	11-07-2019	15	11	11	153	307
*13	BALIMELA	462.08	443.15	2.676	0.307	11-07-2019	11	8	14	-	360
14	SALANADI	82.30	73.85	0.558	0.306	11-07-2019	55	46	27	42	-
*15	RENGALI	123.50	111.18	3.432	0.230	11-07-2019	7	9	8	3	200
*16	MACHKUND(JALPUT)	838.16	826.40	0.893	0.196	10-07-2019	22	13	27	-	115
*17	UPPER KOLAB	858.00	847.05	0.935	0.132	11-07-2019	14	9	16	89	320
*18	UPPER INDRAVATI	642.00	629.80	1.456	0.321	11-07-2019	22	12	17	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.83	0.480	0.096	11-07-2019	20	30	33	227	-
20	KANGSABATI	134.14	125.81	0.914	0.310	11-07-2019	34	47	31	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	88.00	0.312	0.091	09-07-2019	29	100	46	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	84.57	6.615	0.255	11-07-2019	4	9	21	348	300
23	SABARMATI(DHAROI)	189.59	178.34	0.735	0.047	11-07-2019	6	16	15	95	1
*24	KADANA	127.7	120.91	1.472	0.591	11-07-2019	40	42	42	200	120
25	SHETRANJI	55.53	48.27	0.300	0.026	11-07-2019	9	12	20	36	-
26	BHADAR	107.89	100.31	0.188	0.011	11-07-2019	6	9	16	27	-
27	DAMANAGANGA	79.86	72.00	0.502	0.181	11-07-2019	36	33	22	51	1
28	DANTIWADA	184.1	166.45	0.399	0.018	11-07-2019	5	16	3	45	-
29	PANAM	127.41	122.00	0.697	0.257	11-07-2019	37	36	39	36	2
*30	SARDAR SAROVAR	138.68	121.09	5.760	1.415	11-07-2019	25	0	9	2120	1450
31	KARJAN	115.25	99.82	0.523	0.176	11-07-2019	34	36	31	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

WEEK ENDING :- 11.07.2019

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
MAHARASHTRA											
32	JAYAKWADI(PAITHON)	463.91	453.90	2.171	0.000	11-07-2019	0	19	7	227	-
*33	KOYANA	657.90	636.50	2.652	0.890	11-07-2019	34	48	37	-	1920
34	BHIMA(UJJANI)	496.83	485.98	1.517	0.000	09-07-2019	0	0	4	125	12
35	ISAPUR	441.00	426.15	0.965	0.005	11-07-2019	1	10	23	104	-
36	MULA	552.30	536.41	0.609	0.045	11-07-2019	7	6	10	139	-
37	YELDARI	461.77	446.08	0.809	0.000	11-07-2019	0	0	9	78	-
38	GIRNA	398.07	383.93	0.524	0.039	11-07-2019	7	10	8	79	-
39	KHADAKVASLA	582.47	582.47	0.056	0.056	11-07-2019	100	54	41	78	8
*40	UPPER VAITARNA	603.50	593.02	0.331	0.063	11-07-2019	19	45	33	-	61
41	UPPER TAPI	214.00	209.10	0.255	0.037	11-07-2019	15	18	26	45	-
*42	PENCH (TOTALADOH)	490.00	461.15	1.091	0.000	11-07-2019	0	10	23	127	160
43	UPPER WARDHA	342.50	334.47	0.564	0.068	11-07-2019	12	39	37	70	-
44	BHATSA	142.07	121.00	0.942	0.466	11-07-2019	49	48	41	29.378	15
45	DHOM	747.70	731.82	0.331	0.057	10-07-2019	17	26	24	36.2	2
46	DUDHGANGA	646.00	627.08	0.664	0.184	11-07-2019	28	51	36	2.441	24
47	MANIKDOH (KUKADI)	711.25	689.90	0.288	0.032	11-07-2019	11	12	9	2.2	6
48	BHANDARDARA	744.91	726.37	0.304	0.090	11-07-2019	30	40	27	63.74	46
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	301.54	0.707	0.083	10-07-2019	12	8	37	-	30
*50	RIHAND	268.22	255.45	5.649	0.687	11-07-2019	12	9	12	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	336.51	2.196	0.575	10-07-2019	26	8	24	1897	198
*52	TEHRI	830.00	753.45	2.615	0.257	11-07-2019	10	10	16	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	384.37	6.827	0.563	10-07-2019	8	16	26	220	115
54	TAWA	355.40	339.12	1.944	0.222	11-07-2019	11	16	36	247	-
*55	BARGI	422.76	414.90	3.180	1.334	11-07-2019	42	40	23	157	90
*56	BANSAGAR	341.64	335.54	5.166	2.689	11-07-2019	52	42	32	488	425
*57	INDIRA SAGAR	262.13	251.73	9.745	2.701	11-07-2019	28	17	10	2380	1000
58	BARNA	348.55	338.54	0.456	0.010	11-07-2019	2	14	29	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	351.02	3.046	1.578	11-07-2019	52	54	50	-	120
60	MAHANADI	348.70	339.84	0.767	0.146	10-07-2019	19	26	26	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	245.49	8.288	0.802	11-07-2019	10	9	10	0	770
*62	NAGARJUNA SAGAR	179.83	154.59	6.841	0.000	11-07-2019	0	1	13	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	77.14	1.994	0.071	11-07-2019	4	16	21	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	319.58	2.300	0.153	11-07-2019	7	15	16	411	27
65	LOWER MANAIR	280.42	268.71	0.621	0.098	11-07-2019	16	16	21	199	60

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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	741.01	1.163	0.280	11-07-2019	24	80	35	79	-
*67	TUNGABHADRA	497.74	482.32	3.276	0.149	11-07-2019	5	43	28	529	72
68	GHATAPRABHA	662.95	645.96	1.391	0.421	11-07-2019	30	31	20	317	-
69	BHADRA	657.76	641.48	1.785	0.386	11-07-2019	22	53	41	106	39
70	LINGANAMAKKI	554.43	537.56	4.294	0.899	11-07-2019	21	40	27	-	55
71	NARAYANPUR	492.25	487.80	0.863	0.270	11-07-2019	31	42	36	425	-
72	MALAPRABHA(RENUKA)	633.83	623.93	0.972	0.142	11-07-2019	15	12	13	215	-
73	KABINI(Sancherla Tank)	696.16	690.94	0.444	0.180	11-07-2019	41	93	48	85	-
74	HEMAVATHY	890.63	878.82	0.927	0.273	11-07-2019	29	83	38	265	-
75	HARANGI	871.42	858.34	0.220	0.054	11-07-2019	25	97	60	53	-
76	SUPA	564.00	537.70	4.120	1.597	11-07-2019	39	43	26	-	-
77	VANIVILAS SAGAR	652.28	631.55	0.802	0.008	11-07-2019	1	1	11	123	-
*78	ALMATTI	519.60	514.90	3.105	1.414	11-07-2019	46	46	33	@	290
*79	GERUSOPPA	55.00	50.84	0.130	0.106	11-07-2019	82	86	78	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	98.96	0.507	0.178	11-07-2019	35	73	40	62	-
*81	IDAMALAYAR	169.00	126.72	1.018	0.106	11-07-2019	10	50	30	33	75
*82	IDUKKI	732.43	702.32	1.460	0.189	11-07-2019	13	53	32	-	780
*83	KAKKI	981.46	931.50	0.447	0.036	11-07-2019	8	54	34	23	300
*84	PERIYAR	867.41	859.84	0.173	0.023	11-07-2019	13	46	35	84	140
85	MALAPMUZHA	115.06	103.51	0.224	0.039	11-07-2019	17	58	38	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	266.19	0.792	0.191	11-07-2019	24	58	32	105	8
*87	METTUR(STANLEY)	240.79	216.99	2.647	0.371	11-07-2019	14	34	32	122	360
88	VAIGAI	279.20	266.33	0.172	0.009	11-07-2019	5	29	16	61	6
89	PARAMBIKULAM	556.26	538.80	0.380	0.060	11-07-2019	16	41	36	101	-
90	ALIYAR	320.04	298.03	0.095	0.000	11-07-2019	0	29	38	#	60
*91	SHOLAYAR	1002.79	965.35	0.143	0.001	11-07-2019	1	95	54	-	95
TOTAL FOR 91 RESERVOIRS				161.993	35.108						
PERCENTAGE							22	23	23		

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.