

BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 16.05.2019)

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 **16.05.2019**, live storage available in these reservoirs is **35.99 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 **31.389 BCM** and the average of last 10 years live storage was **34.158 BCM**. Thus, the live storage available in 91 reservoirs **as per 16.05.2019 Bulletin** is **115%** of the live storage of corresponding period of last year and **105%** of storage of average of last ten years.

The overall storage position is **more than the** corresponding period of last year in the country as a whole and is also **more 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 **16.05.2019**, the total live storage available in these reservoirs is **8.54 BCM** which is **47%** 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 **26%** 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 **16.05.2019**, the total live storage available in these reservoirs is **5.04 BCM** which is **27%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **30%** and average storage of last ten years during corresponding period was **25%** 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 31.26 BCM. As per Reservoir Storage Bulletin dated **16.05.2019**, the total live storage available in these reservoirs is **4.10 BCM** which is **13%** 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 **22%** 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 **16.05.2019**, the total live storage available in these reservoirs is **11.44 BCM** which is **27%** 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 **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 **16.05.2019**, the total live storage available in these reservoirs is **6.86 BCM** which is **13%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **13%** and average storage of last ten years during corresponding period was **16%** of live storage capacity of these reservoirs. Thus, storage during current year is equal to 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 4, better than normal storage is available in Ganga, Indus, Narmada and West Flowing Rivers of South Close to Normal in Mahi, and Mahanadi & Neighbouring East Flowing Rivers. Deficient in Sabarmati, Rivers of Kutch, Godavari, Krishna and 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 **30** and reservoirs having storage more than average of last ten years are **32**. The numbers of reservoirs having storage less than 20% with respect to last year is **8** and having storage less than 20% with reference to average of last ten years is **13**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **22** and having storage less than or equal to 50% with reference to average of last ten years are **25**.

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 16.05.2019

- 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 **16.05.2019** is **35.990** BCM (**22** percent of the live storage capacity at FRL).The current year's storage is nearly **115** 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	-	1	1	3	H.P.	111 %
									PUNJAB	79 %
									RAJASTHAN	-5 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	-	-	1	1	13	JHARKHAND	-2 %
									ODISHA	6 %
									W. BENGAL	38 %
									TRIPURA	74 %
WEST (Guj.& Mah.), (27 Resv.)	-	-	-	-	-	-	-	27	GUJARAT	-33 %
									MAH.	-52 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	-	1	-	1	10	U.P.	-25 %
									UTTARAKHAND	39 %
									M.P.	30 %
									CHHATISGARH	-4 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	1	-	-	-	-	1	29	AP&TG	-47 %
									A,P	-85 %
									TG	-29 %
									KARNATAKA	10 %
									KERALA	3 %
									T.N.	-26 %
Status of 91 reservoirs	0	1	0	1	1	2	4	82		

4 Basin wise storage position:

Better than normal: Ganga, Indus, Narmada, and West Flowing Rivers of South.

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

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

Highly deficient: Tapi

- 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 **25** having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
YELDARI	0	MULA	33
BHIMA(UJJANI)	0	DAMANAGANGA	35
JAYAKWADI(PAITHON)	0	TAWA	38
SHOLAYAR	0	ISAPUR	43
UPPER TAPI	0	TUNGABHADRA	43
PENCH (TOTALADOH)	1	DHOM	44
GANDHI SAGAR	2	DUDHGANGA	48
BARNA	4	UPPER WARDHA	49
NAGARJUNA SAGAR	5		
GIRNA	9		
VANIVILAS SAGAR	12		
ALIYAR	13		
SOMASILA	15		
UKAI	21		
TILAIYA	25		
BHADAR	25		
BHANDARDARA	26		

18 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
4	6	8

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

18 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 :- 16.05.2019

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	6.830	24.31%	6.656	23.69%	6.464	23.01%	5.66
INDUS	14.730	7.720	52.41%	1.882	12.78%	3.797	25.78%	103.32
NARMADA	21.608	5.736	26.55%	4.216	19.51%	3.835	17.75%	49.57
TAPI	7.394	0.369	4.99%	1.116	15.09%	1.903	25.74%	-80.61
MAHI	4.012	1.303	32.48%	1.514	37.74%	1.440	35.89%	-9.51
SABARMATI	0.735	0.077	10.48%	0.113	15.37%	0.125	17.01%	-38.40
RIVERS OF KUTCH	0.887	0.056	6.31%	0.150	16.91%	0.078	8.79%	-28.21
GODAVARI	15.394	2.246	14.59%	2.688	17.46%	2.861	18.59%	-21.50
KRISHNA	32.831	2.835	8.64%	3.048	9.28%	4.139	12.61%	-31.51
MAHANADI & NEIGHBOURING EFRS	13.181	3.874	29.39%	4.967	37.68%	4.113	31.20%	-5.81
CAUVERY & NEIGHBOURING EFRS	8.359	1.204	14.40%	0.999	11.95%	1.822	21.80%	-33.92
WEST FLOWING RIVERS OF SOUTH	14.766	3.740	25.33%	4.040	27.36%	3.581	24.25%	4.44
TOTAL	161.993	35.990		31.389		34.158		
PERCENTAGE								5.36

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 16.05.2019

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
NORTHERN REGION											
<u>HIMACHAL PRADESH</u>											
*1	GOBIND SAGAR(BHAKRA)	512.06	493.61	6.229	3.323	16-05-2019	53	10	22	676	1200
*2	PONG DAM	423.67	408.09	6.157	2.676	16-05-2019	43	11	23	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	520.06	2.344	1.721	16-05-2019	73	26	41	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	268.10	1.711	0.456	15-05-2019	27	33	24	63	140
5	JHAKAM	359.50	345.20	0.132	0.031	15-05-2019	23	30	20	28	-
*6	RANA PRATAP SAGAR	352.81	346.27	1.436	0.333	16-05-2019	23	34	29	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	257.10	0.821	0.313	16-05-2019	38	40	34	-	-
8	MAITHON	146.3	138.11	0.471	0.100	16-05-2019	21	33	26	342	-
*9	PANCHET HILL	124.97	122.68	0.184	0.084	16-05-2019	46	23	39	\$	80
10	KONAR	425.81	417.67	0.176	0.054	16-05-2019	31	22	39	\$	-
11	TILAIYA	368.81	363.79	0.142	0.006	16-05-2019	4	8	17	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	185.20	5.378	1.415	15-05-2019	26	29	26	153	307
*13	BALIMELA	462.08	449.15	2.676	0.855	16-05-2019	32	9	15	-	360
14	SALANADI	82.30	73.86	0.558	0.306	16-05-2019	55	41	25	42	-
*15	RENGALI	123.50	113.04	3.432	0.552	15-05-2019	16	39	26	3	200
*16	MACHKUND(JALPUT)	838.16	829.89	0.893	0.339	13-05-2019	38	34	37	-	115
*17	UPPER KOLAB	858.00	848.70	0.935	0.213	15-05-2019	23	23	23	89	320
*18	UPPER INDRAVATI	642.00	629.83	1.456	0.323	15-05-2019	22	24	26	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	109.91	0.480	0.078	16-05-2019	16	36	19	227	-
20	KANGSABATI	134.14	125.73	0.914	0.306	16-05-2019	33	46	20	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	88.25	0.312	0.099	15-05-2019	32	63	18	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	85.45	6.615	0.363	16-05-2019	5	15	27	348	300
23	SABARMATI(DHAROI)	189.59	179.45	0.735	0.077	15-05-2019	10	15	17	95	1
*24	KADANA	127.7	120.52	1.472	0.565	15-05-2019	38	44	50	200	120
25	SHETRUNJI	55.53	48.27	0.300	0.026	13-05-2019	9	15	11	36	-
26	BHADAR	107.89	99.76	0.188	0.008	13-05-2019	4	18	17	27	-
27	DAMANAGANGA	79.86	65.70	0.502	0.045	16-05-2019	9	27	25	51	1
28	DANTIWADA	184.1	167.14	0.399	0.022	15-05-2019	6	18	3	45	-
29	PANAM	127.41	121.85	0.697	0.251	15-05-2019	36	36	38	36	2
*30	SARDAR SAROVAR	138.68	119.57	5.760	1.157	16-05-2019	20	0	13	2120	1450
31	KARJAN	115.25	101.15	0.523	0.197	16-05-2019	38	44	39	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 16.05.2019

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	454.70	2.171	0.000	16-05-2019	0	33	13	227	-
*33	KOYANA	657.90	631.32	2.652	0.627	16-05-2019	24	33	29	-	1920
34	BHIMA(UJJANI)	496.83	487.56	1.517	0.000	16-05-2019	0	8	6	125	12
35	ISAPUR	441.00	428.18	0.965	0.083	16-05-2019	9	0	20	104	-
36	MULA	552.30	535.77	0.609	0.032	16-05-2019	5	21	16	139	-
37	YELDARI	461.77	445.68	0.809	0.000	16-05-2019	0	0	9	78	-
38	GIRNA	398.07	385.02	0.524	0.006	16-05-2019	1	16	13	79	-
39	KHADAKVASLA	582.47	579.06	0.056	0.016	16-05-2019	29	54	48	78	8
*40	UPPER VAITARNA	603.50	594.50	0.331	0.081	16-05-2019	24	27	34	-	61
41	UPPER TAPI	214.00	207.68	0.255	0.000	16-05-2019	0	6	28	45	-
*42	PENCH (TOTALADOH)	490.00	464.14	1.091	0.002	16-05-2019	0	10	22	127	160
43	UPPER WARDHA	342.50	335.08	0.564	0.091	16-05-2019	16	37	33	70	-
44	BHATSA	142.07	111.28	0.942	0.310	16-05-2019	33	39	38	29.378	15
45	DHOM	747.70	730.04	0.331	0.039	16-05-2019	12	25	27	36.2	2
46	DUDHGANGA	646.00	619.57	0.664	0.080	16-05-2019	12	28	25	2.441	24
47	MANIKDOH (KUKADI)	711.25	685.20	0.288	0.008	16-05-2019	3	9	4	2.2	6
48	BHANDARDARA	744.91	709.14	0.304	0.017	16-05-2019	6	32	22	63.74	46
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	302.54	0.707	0.134	15-05-2019	19	8	35	-	30
*50	RIHAND	268.22	255.70	5.649	0.758	16-05-2019	13	14	17	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	344.07	2.196	0.884	16-05-2019	40	17	29	1897	198
*52	TEHRI	830.00	752.29	2.615	0.232	16-05-2019	9	4	6	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	381.22	6.827	0.030	16-05-2019	0	17	18	220	115
54	TAWA	355.40	337.60	1.944	0.145	16-05-2019	7	9	20	247	-
*55	BARGI	422.76	414.10	3.180	1.206	16-05-2019	38	50	26	157	90
*56	BANSAGAR	341.64	337.59	5.166	3.419	16-05-2019	66	44	37	488	425
*57	INDIRA SAGAR	262.13	252.54	9.745	3.028	16-05-2019	31	22	16	2380	1000
58	BARNA	348.55	338.15	0.456	0.003	16-05-2019	1	7	16	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	350.21	3.046	1.476	15-05-2019	48	52	48	-	120
60	MAHANADI	348.70	339.41	0.767	0.125	15-05-2019	16	28	27	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	246.22	8.288	0.838	14-05-2019	10	9	9	0	770
*62	NAGARJUNA SAGAR	179.83	155.75	6.841	0.048	14-05-2019	1	2	13	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	78.50	1.994	0.099	14-05-2019	5	18	33	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	319.98	2.300	0.173	16-05-2019	8	8	12	411	27
65	LOWER MANAIR	280.42	269.52	0.621	0.118	16-05-2019	19	17	23	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	739.45	1.163	0.207	15-05-2019	18	6	13	79	-
*67	TUNGABHADRA	497.74	480.68	3.276	0.085	16-05-2019	3	2	6	529	72
68	GHATAPRABHA	662.95	636.27	1.391	0.117	16-05-2019	8	9	6	317	-
69	BHADRA	657.76	640.19	1.785	0.318	16-05-2019	18	5	23	106	39
70	LINGANAMAKKI	554.43	536.42	4.294	0.780	16-05-2019	18	17	18	-	55
71	NARAYANPUR	492.25	487.09	0.863	0.214	14-05-2019	25	24	28	425	-
72	MALAPRABHA(RENUKA)	633.83	621.15	0.972	0.045	16-05-2019	5	6	7	215	-
73	KABINI(Sancherla Tank)	696.16	688.84	0.444	0.098	15-05-2019	22	10	9	85	-
74	HEMAVATHY	890.63	873.14	0.927	0.102	15-05-2019	11	9	8	265	-
75	HARANGI	871.42	855.13	0.220	0.032	15-05-2019	15	18	15	53	-
76	SUPA	564.00	534.69	4.120	1.390	16-05-2019	34	35	26	-	-
77	VANIVILAS SAGAR	652.28	631.84	0.802	0.011	16-05-2019	1	1	11	123	-
*78	ALMATTI	519.60	509.14	3.105	0.389	14-05-2019	13	10	7	@	290
*79	GERUSOPPA	55.00	52.93	0.130	0.118	16-05-2019	91	87	87	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	102.20	0.507	0.220	15-05-2019	43	64	29	62	-
*81	IDAMALAYAR	169.00	130.92	1.018	0.160	15-05-2019	16	20	20	33	75
*82	IDUKKI	732.43	708.92	1.460	0.396	15-05-2019	27	28	24	-	780
*83	KAKKI	981.46	949.04	0.447	0.106	15-05-2019	24	35	28	23	300
*84	PERIYAR	867.41	859.80	0.173	0.022	15-05-2019	13	15	20	84	140
85	MALAPMUZHA	115.06	101.67	0.224	0.025	16-05-2019	11	15	19	21	3
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	264.45	0.792	0.144	15-05-2019	18	14	17	105	8
*87	METTUR(STANLEY)	240.79	219.40	2.647	0.501	15-05-2019	19	10	27	122	360
88	VAIGAI	279.20	268.84	0.172	0.021	15-05-2019	12	12	13	61	6
89	PARAMBIKULAM	556.26	540.18	0.380	0.082	15-05-2019	22	6	24	101	-
90	ALIYAR	320.04	302.71	0.095	0.005	15-05-2019	5	1	42	#	60
*91	SHOLAYAR	1002.79	959.52	0.143	0.000	15-05-2019	0	0	4	-	95
TOTAL FOR 91 RESERVOIRS				161.993	35.990						
PERCENTAGE							22	19	21		

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.