# BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 17.08.2017)

#### 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 17.08.2017, live storage available in these reservoirs is 75.694 BCM, which is 48% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 95.931 BCM and the average of last 10 years live storage was 92.653 BCM. Thus, the live storage available in 91 reservoirs as per 17.08.2017 Bulletin is 79% 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 17.08.2017, the total live storage available in these reservoirs is 14.29 BCM which is 79% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 69% 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 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 reservoirsunder CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated 17.08.2017, the total live storage available in these reservoirs is 8.97 BCM which is 48% 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 47% 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 17.08.2017, the total live storage available in these reservoirs is 15.51 BCM which is 57% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 71% and average storage of last ten years during corresponding period was 62% 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 17.08.2017, the total live storage available in these reservoirs is 21.78 BCM which is 51% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 74% and average storage of last ten years during corresponding period was 57% 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.

#### 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 17.08.2017, the total live storage available in these reservoirs is 15.15 BCM which is 29 % of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 44% and average storage of last ten years during corresponding period was 59% 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, Sabarmati, Mahi, Rivers of Kutch and Ganga. Close to Normal in Mahanadi & neighbouring East Flowing Rivers. Deficient in Narmada, Tapi, Godavari, Cauvery & neighbouring EFRs, West Flowing Rivers of South and Krishna basin and NIL in Highly Deficient.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are 25 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 5 and having storage less than 20% with reference to average of last ten years is 9. The number of reservoirs having storage less than or equal to 50% with respect to last year are 17 and having storage less than or equal to 50% with reference to average of last ten years are 23.

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**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 17.08.2017

- 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
   17.08.2017 is 75.694 BCM ( 48 percent of the live storage capacity at FRL ). The current year's storage is nearly 79 percent of last year's storage and 82 percent of the average of last ten years.

3 Region wise storage status:

		Filling	positio	n of 91	reserv	oirs w	.r.t. FR	L			
<b>REGION</b> (States), (Monitoring No. of Reservoirs)	100%	91%- 99%	81%- 90%	71%- 80%	61%- 70%	51%- 60%	41%- 50%	40% & below	Departure fr stor		
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	1	ı	3	1	-	1	-	-	H.P. PUNJAB RAJASTHAN	16 % 35 % 0 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal ( 15 Resv.)	2	1	2	-	2	1	3	4	JHARKHAND ODISHA W. BENGAL TRIPURA	11 % -5 % 42 % 90 %	
WEST (Guj.& Mah.), (27 Resv.)	1	4	5	1	3	4	4	5	GUJARAT MAH.	-6 % -9 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	-	1	3	2	2	4	U.P. UTTARAKHAND M.P. CHHATISGARH	48 % -14 % -18 % -9 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), ( 31 Resv.)	1	-	2	-	-	2	6	20	AP&TG A,P TG KARNATAKA KERALA T.N.	-93 % -61 % -53 % -30 % -44 % -71 %	
Status of 91 reservoirs	5	5	12	3	8	10	15	33		/ 0	

4 Basin wise storage position:

Better than normal: Ganga, Mahi, Indus, Sabarmati, Rivers of Kutch.

Name of reservoir

Close to normal: Mahanadi & Neighbouring EFRS .

%

Deficient: Narmada ,Tapi ,Godavari, Cauvery & neighbouring EFRS, West Flowing Rivers of South and Krishna

Highly deficient: NIL

5 Out of 91 reservoirs, 50 reservoirs reported more than 80% of normal storage & 41 reservoirs reported 80% or below of normal storage. Out of these 41 reservoirs 23 having storage upto 50% of normal

39

40 43

44 49

50

storage.

Name of reservoir

NAGARJUNA SAGAR	0	INDIRA SAGAR
SRISAILAM	10	KRISHNARAJA SAGRA
ALIYAR	13	MALAMPUZHA
ISAPUR	13	MALAPRABHA(RENUKA)
SHOLAYAR	13	KAKKI
YELDARI	14	BHADRA
VANIVILAS SAGAR	15	
PENCH (TOTALADOH)	16	
VAIGAI	19	
MATATILA	25	
PERIYAR	28	
MAHANADI	29	
METTUR(STANLEY)	29	
LOWER BHAWANI	33	
SRIRAMSAGAR	34	
PARAMBIKULAM	36	
SOMASILA	39	

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

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

#### WEEKLY REPORT - BASINWISE

#### **GOVERNMENT OF INDIA**

### **CENTRAL WATER COMMISSION**

'E CAP. AT FRL		/EAR'S RAGE	LAST Y STOR		LAST 10 AVG. ST	_	% DEPARTURE W.R.T. AVE. OF 10 YEARS'		
28.096	17.303	61.59%	19.458	69.26%	14.024	49.91%	23.38		
14.730	11.938	81.05%	9.206	62.50%	10.082	68.45%	18.41		
17.414	7.340	42.15%	14.856	85.31%	12.163	69.85%	-39.65		
7.394	2.957	39.99%	5.397	72.99%	4.356	58.91%	-32.12		
4.040	0.400	<b>=0.040</b> /	0.000	04.0=0/	0.00=	00 1001	4= ==		

WEEK ENDING :- 17.08.2017

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	17.08.2017					
							STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	FITS
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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		I.	<u>I</u>					ı	
	HIMACHAL PRADESH										
*1	GOBIND SAGAR(BHAKRA)	512.06	505.74	6.229	4.972	17-08-2017	80	60	73	676	1200
*2	PONG DAM PUNJAB	423.67	419.98	6.157	5.047	17-08-2017	82	63	66	-	360
*3	THEIN	527.91	522.49	2.344	1.919	17-08-2017	82	68	61	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	278.80	1.711	1.453	17-08-2017	85	100	73	63	140
5	JHAKAM	359.50	359.75	0.132	0.132	17-08-2017	100	100	71	28	_
*6	RANA PRATAP SAGAR	352.81	349.17	1.436	0.770	16-08-2017	54	97	72	229	172
	EASTERN REGION										
	<u>JHARKHAND</u>										
7	TENUGHAT	269.14	258.30	0.821	0.353	17-08-2017	43	50	40	-	-
8	MAITHON	146.3	145.23	0.471	0.382	17-08-2017	81	78	74	342	-
*9	PANCHET HILL	124.97	125.39	0.184	0.184	17-08-2017	100	73	82	\$	80
10	KONAR	425.81	421.37	0.176	0.102	17-08-2017	58	75	70	\$	-
11	TILAIYA	368.81	368.98	0.142	0.142	17-08-2017	100	56	64	\$	4
	<u>ODISHA</u>										
*12	HIRAKUD	192.02	187.02	5.378	2.104	16-08-2017	39	46	46	153	307
*13	BALIMELA	462.08	448.57	2.676	0.798	16-08-2017	30	64	31	-	360
14	SALANADI	82.30	68.80	0.558	0.193	16-08-2017	35	35	37	42	-
*15	RENGALI	123.50	119.38	3.432	2.105	16-08-2017	61	51	48	3	200
*16	MACHKUND(JALPUT)	838.16	830.93	0.893	0.387	16-08-2017	43	64	58	-	115
*17	UPPER KOLAB	858.00	850.07	0.935	0.283	16-08-2017	30	60	37	89	320
*18	UPPER INDRAVATI	642.00	633.24	1.456	0.601	17-08-2017	41	59	57	128	600
	WEST BENGAL										
19	MAYURAKSHI	121.31	119.42	0.480	0.402	17-08-2017	84	75	55	227	-
20	KANGSABATI	134.14	130.76	0.914	0.638	17-08-2017	70	45	51	341	-
	TRIPURA										
21	GUMTI	93.55	93.10	0.312	0.291	15-08-2017	93	82	49	-	15
	WESTERN REGION	i									
	GUJARAT										
	UKAI	105.16	96.37			16-08-2017	39	75			300
	SABARMATI(DHAROI)	189.59	188.99			17-08-2017	93	68	50		1
	KADANA	127.7	126.44			17-08-2017	72		62		120
	SHETRUNJI	55.53	52.82			17-08-2017	44		53		-
	BHADAR	107.89	105.64			17-08-2017	56	5			
	DAMANAGANGA	79.86	75.20			16-08-2017	57		47		1
	DANTIWADA	184.1	183.44			17-08-2017	91	10	25		-
	PANAM	127.41	126.50			17-08-2017	70	47	59		2
	SARDAR SAROVAR	121.92	122.14			16-08-2017	100	100	93		1450
31	KARJAN	115.25	109.87	0.523	0.368	16-08-2017	70	35	60	51	3

GOVERNMENT OF INDIA

# CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA		WEE	K ENDING :-	17.08.2017	CENTRAL WATER COMMISSION					
			QUEDENT	ST	STORAGE A	S % OF LIVE C	APACITY AT	BENE	FITS		
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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	460.69	2.171	1.088	17-08-2017	50	65	30	227	-
*33	KOYANA	657.90	655.47	2.652	2.362	16-08-2017	89	92	92	-	1920
34	BHIMA(UJJANI)	496.83	493.99	1.517	0.672	17-08-2017	44	62	55	125	12
35	ISAPUR	441.00	427.30	0.965	0.062	16-08-2017	6	33	50	104	-
36	MULA	552.30	547.84	0.609	0.394	16-08-2017	65	96	65	139	-
37	YELDARI	461.77	448.66	0.809	0.026	17-08-2017	3	9	24	78	-
38	GIRNA	398.07	392.48	0.524	0.274	16-08-2017	52	65	27	79	-
39	KHADAKVASLA	582.47	581.80	0.056	0.047	16-08-2017	84	100	73	78	8
*40	UPPER VAITARNA	603.50	602.41	0.331	0.296	16-08-2017	89	93	81	-	61
41	UPPER TAPI	214.00	210.64	0.255	0.087	16-08-2017	34	30	40	45	-
*42	PENCH (TOTALADOH)	490.00	470.72	1.091	0.111	16-08-2017	10	75	62	127	160
43	UPPER WARDHA	342.50	338.21	0.564	0.245	17-08-2017	43	92	76	70	-
44	BHATSA	142.07	139.10	0.942	0.862	16-08-2017	92	91	80	29.378	15
45	DHOM	747.70	743.13	0.331	0.284	16-08-2017	86	100	78	36.2	2
46	DUDHGANGA	646.00	643.16	0.664	0.585	16-08-2017	88	87	89	2.441	24
	MANIKDOH (KUKADI)	711.25	703.70		0.167	16-08-2017	58	63	43	2.2	6
48	BHANDARDARA  CENTRAL REGION	744.91	744.23	0.304	0.292	16-08-2017	96	95	92	63.74	46
_	UTTAR PRADESH										
49	MATATILA	308.46	302.51	0.707	0.132	16-08-2017	19	81	74	_	30
	RIHAND	268.22	263.62		3.679	17-08-2017	65	67	36	_	300
	UTTRAKHAND										
*51	RAMGANGA	365.30	340.23	2.196	0.722	17-08-2017	33	38	52	1897	198
*52	TEHRI	830.00	808.35	2.615	1.772	17-08-2017	68	70	67	2351	1000
	MADHYA PRADESH										
*53	GANDHI SAGAR	399.90	395.40	6.827	4.108	16-08-2017	60	67	40	220	115
54	TAWA	355.40	347.93	1.944	0.913	17-08-2017	47	95	89	247	_
*55	BARGI	422.76	417.75	3.180	1.898	17-08-2017	60	85	71	157	90
*56	BANSAGAR	341.64	338.14	5.166	3.626	16-08-2017	70	83	55	488	425
*57	INDIRA SAGAR	262.13	250.92	9.745	2.371	17-08-2017	24	84	62	2380	1000
58	BARNA	348.55	344.81	0.456	0.224	16-08-2017	49	92	71	546	-
	CHHATTIS GARH										
*59	MINIMATA BANGOI	359.66	355.31	3.046	2.179	16-08-2017	72	54	66	-	120
60	MAHANADI	348.70	340.06	0.767	0.156	17-08-2017	20	97	71	319	10
	SOUTHERN REGION										
	A.P & TG										
*61	SRISAILAM	269.75	237.59	8.288	0.474	17-08-2017	6	54	55	0	770
*62	NAGARJUNA SAGAR	179.83	152.49	6.841	0.000	17-08-2017	0	3	37	895	810
	ANDHRA PRADESH										
63	SOMASILA	100.58	81.54	1.994	0.188	17-08-2017	9	13	24	168	0
	<u>TELANGANA</u>										
64	SRIRAMSAGAR	332.54	321.53	2.300	0.261	17-08-2017	11	50	34	411	27
65	LOWER MANAIR	280.42	272.34	0.621	0.208	17-08-2017	33	26	36	199	60

#### WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	17.08.2017					
			OURDENT				STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	FITS
S. NO	NAME OF RESERVOIR	FRL (m)	CURRENT RESERVOIR LEVEL (m)	LIVE CAPACITY AT FRL (BCM)	CURRENT LIVE STORAGE (BCM)	DATE	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	742.41	1.163	0.356	17-08-2017	31	39	77	79	-
*67	TUNGABHADRA	497.74	493.05	3.276	1.472	17-08-2017	45	45	80	529	72
68	GHATAPRABHA	662.95	654.19	1.391	0.810	16-08-2017	58	81	90	317	-
69	BHADRA	657.76	646.79	1.785	0.731	17-08-2017	41	48	83	106	39
70	LINGANAMAKKI	554.43	544.10	4.294	1.801	17-08-2017	42	49	71	-	55
71	NARAYANPUR	492.25	490.14	0.863	0.491	17-08-2017	57	83	81	425	-
72	MALAPRABHA(RENUKA)	633.83	626.09	0.972	0.251	16-08-2017	26	28	59	215	-
73	KABINI(Sancherla Tank)	696.16	691.13	0.444	0.188	17-08-2017	42	70	61	85	-
74	HEMAVATHY	890.63	882.05	0.927	0.421	17-08-2017	45	61	87	265	-
75	HARANGI	871.42	870.24	0.220	0.191	17-08-2017	87	98	97	53	-
76	SUPA	564.00	544.10	4.120	2.072	17-08-2017	50	47	57	-	-
77	VANIVILAS SAGAR	652.28	631.93	0.802	0.013	14-08-2017	2	5	11	123	-
*78	ALMATTI	519.60	519.60	3.105	3.105	17-08-2017	100	100	90	@	290
*79	GERUSOPPA	55.00	51.12	0.130	0.108	17-08-2017	83	73	78	83	240
	<u>KERALA</u>										
80	KALLADA(PARAPPAR)	115.82	98.96	0.507	0.178	17-08-2017	35	49	57	62	-
*81	IDAMALAYAR	169.00	144.06	1.018	0.388	17-08-2017	38	50	60	33	75
*82	IDUKKI	732.43	710.25	1.460	0.442	17-08-2017	30	44	54	-	780
*83	KAKKI	981.46	954.39	0.447	0.139	17-08-2017	31	61	63	23	300
*84	PERIYAR	867.41	859.98	0.173	0.025	17-08-2017	14	31	52	84	140
85	MALAPMUZHA	115.06	106.07	0.224	0.065	17-08-2017	29	35	67	21	3
	TAMIL NADU										
86	LOWER BHAWANI	278.89	264.85	0.792	0.154	17-08-2017	19	25	59	105	8
*87	METTUR(STANLEY)	240.79	219.09	2.647	0.483	17-08-2017	18	29	62	122	360
88	VAIGAI	279.20	266.62	0.172	0.010	17-08-2017	6	4	31	61	6
89	PARAMBIKULAM	556.26	541.42	0.380	0.101	17-08-2017	27	37	74	101	-
90	ALIYAR	320.04	303.79	0.095	0.009	17-08-2017	9	19	75	#	60
*91	SHOLAYAR	1002.79	972.76	0.143	0.016	17-08-2017	11	57	83	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	75.694						
	PERCENTAGE						48	61	59		

Sd/-

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

Director W. M., CWC

<sup>\*</sup> HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

<sup>#</sup> TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

<sup>@&#</sup>x27; TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

<sup>†</sup> 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  $\,$