

## **BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 16.03.2017)**

### **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 **16.03.2017**, live storage available in these reservoirs is **58.03 BCM**, which is **37%** of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was **47.54 BCM** and the average of last 10 years live storage was **57.8 BCM**. Thus, the live storage available in 91 reservoirs **as per 16.03.2017 Bulletin** is **122%** of the live storage of corresponding period of last year and **100%** of storage of average of last ten years.

As per Table-01, the overall storage position is **better than the** corresponding period of last year in the country as a whole and is also **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 **16.03.2017**, the total live storage available in these reservoirs is **4.32 BCM** which is **24%** 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 **33%** 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 **16.03.2017**, the total live storage available in these reservoirs is **11.13 BCM** which is **59%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **43%** 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 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 27.07 BCM. As per Reservoir Storage Bulletin dated **16.03.2017**, the total live storage available in these reservoirs is **12.80 BCM** which is **47%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **27%** and average storage of last ten years during corresponding period was **46%** 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.

**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 **16.03.2017**, the total live storage available in these reservoirs is **21.13 BCM** which is **50%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **39%** and average storage of last ten years during corresponding period was **35%** 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 **16.03.2017**, the total live storage available in these reservoirs is **8.66 BCM** which is **17%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **19%** 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 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 Narmada, Mahi, Ganga, Sabarmati, Godavari, Tapi and Mahanadi & neighbouring East Flowing Rivers. NIL in Close to Normal and Deficient in Indus, West Flowing Rivers of South and Krishna Basin and Highly Deficient in Rivers of Kutch, Cauvery & neighbouring EFR basin.
- Table on page 9-11 of the bulletin. The numbers of reservoirs having storage more than last year are **52** and reservoirs having storage more than average of last ten years are **42**. 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 **9**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **15** and having storage less than or equal to 50% with reference to average of last ten years are **22**.

States having better storage (in %) than last year for corresponding period:

Punjab, Jharkhand, Odisha, West Bengal, Gujarat, Maharashtra, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, AP&TG (Two combined projects in both states) and Telangana.

States having equal storage (in %) to last year for corresponding period: NIL

States having lesser storage (in %) than last year for corresponding period:

Himachal Pradesh, Uttarakhand, Rajasthan, Tripura, Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu.

# STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 16.03.2017

- 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 16.03.2017 is 58.033 BCM ( 37 percent of the live storage capacity at FRL ).The current year's storage is nearly 122 percent of last year's storage and 100 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			
<b>NORTH</b> (HP,Punjab & Rajasthan), (6 Resv.)	-	-	-	-	-	-	1	5	H.P.	-43 %	
									PUNJAB	18 %	
									RAJASTHAN	0 %	
<b>EAST</b> (Jharkhand,Odisha, Tripura & W.Bengal ( 15 Resv.)	2	-	1	-	1	3	4	4	JHARKHAND	33 %	
									ODISHA	25 %	
									W. BENGAL	14 %	
									TRIPURA	181 %	
<b>WEST</b> (Guj.& Mah.), (27 Resv.)	-	-	1	-	4	5	7	10	GUJARAT	12 %	
									MAH.	-6 %	
<b>CENTRAL</b> (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	-	-	1	3	-	3	5	U.P.	86 %	
									UTTARAKHAND	-42 %	
									M.P.	59 %	
									CHHATISGARH	21 %	
<b>SOUTH</b> (Karnataka,TN,AP&TG,AP, TG, & Kerala), ( 31 Resv.)	-	-	1	-	-	-	4	26	AP&TG	-72 %	
									A,P	-55 %	
									TG	61 %	
									KARNATAKA	-38 %	
									KERALA	-27 %	
									T.N.	-80 %	
Status of 91 reservoirs	2	0	3	1	8	8	19	50			

## 4 Basin wise storage position:

**Better than normal:** Ganga,Sabarmati,Godavari,Mahi, Narmada ,Tapi and Mahanadi & Neighbouring EFRS.

**Close to normal:** NIL

**Deficient:** Indus, West Flowing Rivers of South and Krishna

**Highly deficient:** Rivers of Kutch,Cauvery & neighbouring EFRS.

- 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 22 having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%
SHOLAYAR	0	ALMATTI	26
NAGARJUNA SAGAR	4	BHADRA	34
DANTIWADA	5	HEMAVATHY	36
BHADAR	12	MANIKDOH	37
VAIGAI	13	KRISHNARAJA SAGRA	40
PARAMBIKULAM	14	YELDARI	40
KABINI	15	SRISAILAM	41
ALIYAR	19	RAMGANGA	42
METTUR(STANLEY)	20	SOMASILA	
VANIVILAS SAGAR	21	PENCH (TOTALADOH)	45
LOWER BHAWANI	23		46
TUNGABHADRA	25		

19 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
6	4	9

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

19 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

GOVERNMENT OF INDIA

## CENTRAL WATER COMMISSION

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## WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 16.03.2017

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
<b>NORTHERN REGION</b>											
<b><u>HIMACHAL PRADESH</u></b>											
*1	GOBIND SAGAR(BHAKRA)	512.06	468.91	6.229	1.088	16-03-2017	17	34	33	676	1200
*2	PONG DAM	423.67	397.68	6.157	1.151	16-03-2017	19	18	31	-	360
<b><u>PUNJAB</u></b>											
*3	THEIN	527.91	504.97	2.344	0.866	16-03-2017	37	23	31	348	600
<b><u>RAJASTHAN</u></b>											
*4	MAHI BAJAJ SAGAR	280.75	273.05	1.711	0.857	16-03-2017	50	89	38	63	140
5	JHAKAM	359.50	346.95	0.132	0.039	16-03-2017	30	83	25	28	-
*6	RANA PRATAP SAGAR	352.81	346.13	1.436	0.314	16-03-2017	22	29	37	229	172
<b><u>EASTERN REGION</u></b>											
<b><u>JHARKHAND</u></b>											
7	TENUGHAT	269.14	259.61	0.821	0.401	16-03-2017	49	38	39	-	-
8	MAITHON	146.3	146.93	0.471	0.471	16-03-2017	100	26	63	342	-
*9	PANCHET HILL	124.97	125.00	0.184	0.184	16-03-2017	100	16	67	\$	80
10	KONAR	425.81	419.65	0.176	0.078	16-03-2017	44	49	57	\$	-
11	TILAIYA	368.81	365.77	0.142	0.047	16-03-2017	33	23	33	\$	4
<b><u>ODISHA</u></b>											
*12	HIRAKUD	192.02	189.09	5.378	3.070	14-03-2017	57	50	54	153	307
*13	BALIMELA	462.08	454.61	2.676	1.513	16-03-2017	57	43	42	-	360
14	SALANADI	82.30	67.66	0.558	0.169	15-03-2017	30	44	35	42	-
*15	RENGALI	123.50	121.48	3.432	2.779	16-03-2017	81	40	49	3	200
*16	MACHKUND(JALPUT)	838.16	830.92	0.893	0.388	16-03-2017	43	56	58	-	115
*17	UPPER KOLAB	858.00	854.25	0.935	0.595	16-03-2017	64	50	43	89	320
*18	UPPER INDRAVATI	642.00	636.12	1.456	0.855	16-03-2017	59	42	48	128	600
<b><u>WEST BENGAL</u></b>											
19	MAYURAKSHI	121.31	113.55	0.480	0.163	16-03-2017	34	18	31	227	-
20	KANGSABATI	134.14	125.32	0.914	0.284	16-03-2017	31	25	26	341	-
<b><u>TRIPURA</u></b>											
21	GUMTI	93.55	89.25	0.312	0.132	14-03-2017	42	53	15	-	15
<b><u>WESTERN REGION</u></b>											
<b><u>GUJARAT</u></b>											
*22	UKAI	105.16	100.11	6.615	4.088	15-03-2017	62	33	49	348	300
23	SABARMATI(DHAROI)	189.59	184.05	0.735	0.280	16-03-2017	38	30	29	95	1
*24	KADANA	127.7	123.95	1.472	0.832	16-03-2017	57	30	56	200	120
25	SHETRUNJI	55.53	51.72	0.300	0.093	16-03-2017	31	100	43	36	-
26	BHADAR	107.89	99.88	0.188	0.008	16-03-2017	4	100	35	27	-
27	DAMANAGANGA	79.86	74.30	0.502	0.253	15-03-2017	50	43	58	51	1
28	DANTIWADA	184.1	163.28	0.399	0.004	16-03-2017	1	100	19	45	-
29	PANAM	127.41	123.45	0.697	0.321	16-03-2017	46	22	51	36	2
*30	SARDAR SAROVAR	121.92	119.04	1.566	1.081	15-03-2017	69	22	58	2120	1450
31	KARJAN	115.25	104.07	0.523	0.242	15-03-2017	46	32	64	51	3

## WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 16.03.2017

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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
<b>MAHARASHTRA</b>											
32	JAYAKWADI(PAITHON)	463.91	460.44	2.171	1.012	16-03-2017	47	0	27	227	-
*33	KOYANA	657.90	642.42	2.652	1.137	16-03-2017	43	35	60	-	1920
34	BHIMA(UJJANI)	496.83	493.16	1.517	0.465	16-03-2017	31	0	41	125	12
35	ISAPUR	441.00	432.02	0.965	0.286	16-03-2017	30	19	41	104	-
36	MULA	552.30	544.78	0.609	0.275	15-03-2017	45	14	40	139	-
37	YELDARI	461.77	450.73	0.809	0.084	16-03-2017	10	6	26	78	-
38	GIRNA	398.07	389.92	0.524	0.192	16-03-2017	37	0	23	79	-
39	KHADAKVASLA	582.47	581.89	0.056	0.048	16-03-2017	86	54	41	78	8
*40	UPPER VAITARNA	603.50	599.02	0.331	0.193	16-03-2017	58	42	60	-	61
41	UPPER TAPI	214.00	211.75	0.255	0.135	16-03-2017	53	33	60	45	-
*42	PENCH (TOTALADOH)	490.00	473.20	1.091	0.172	16-03-2017	16	18	34	127	160
43	UPPER WARDHA	342.50	338.56	0.564	0.266	16-03-2017	47	31	39	70	-
44	BHATSA	142.07	125.25	0.942	0.546	16-03-2017	58	48	53	29.378	15
45	DHOM	747.70	738.56	0.331	0.203	16-03-2017	61	34	43	36.2	2
46	DUDHGANGA	646.00	635.76	0.664	0.369	16-03-2017	56	25	55	2.441	24
47	MANIKDOH (KUKADI)	711.25	688.61	0.288	0.023	16-03-2017	8	8	22	2.2	6
48	BHANDARDARA	744.91	737.69	0.304	0.189	16-03-2017	62	22	52	63.74	46
<b>CENTRAL REGION</b>											
<b>UTTAR PRADESH</b>											
49	MATATILA	308.46	304.71	0.707	0.279	15-03-2017	39	16	37	-	30
*50	RIHAND	268.22	261.49	5.649	2.829	16-03-2017	50	24	25	-	300
<b>UTTRAKHAND</b>											
*51	RAMGANGA	365.30	333.63	2.196	0.468	16-03-2017	21	100	51	1897	198
*52	TEHRI	830.00	771.50	2.615	0.650	16-03-2017	25	18	31	2351	1000
<b>MADHYA PRADESH</b>											
*53	GANDHI SAGAR	399.90	396.22	6.827	4.514	09-03-2017	66	52	33	220	115
54	TAWA	355.40	343.02	1.944	0.479	16-03-2017	25	18	26	247	-
*55	BARGI	422.76	415.80	3.180	1.502	16-03-2017	47	54	43	157	90
*56	BANSAGAR	341.64	338.01	5.166	3.571	09-03-2017	69	42	41	488	425
*57	INDIRA SAGAR	262.13	254.60	9.745	4.083	16-03-2017	42	31	27	2380	1000
58	BARNA	348.55	343.64	0.456	0.166	09-03-2017	36	9	21	546	-
<b>CHHATTIS GARH</b>											
*59	MINIMATA BANGOI	359.66	354.40	3.046	2.043	16-03-2017	67	41	56	-	120
60	MAHANADI	348.70	346.17	0.767	0.546	15-03-2017	71	39	57	319	10
<b>SOUTHERN REGION</b>											
<b>A.P. &amp; TG</b>											
*61	SRISAILAM	269.75	249.08	8.288	1.002	16-03-2017	12	11	30	0	770
*62	NAGARJUNA SAGAR	179.83	155.81	6.841	0.058	16-03-2017	1	0	20	895	810
<b>ANDHRA PRADESH</b>											
63	SOMASILA	100.58	86.31	1.994	0.429	16-03-2017	22	46	48	168	0
<b>TELANGANA</b>											
64	SRIRAMSAGAR	332.54	326.47	2.300	0.884	16-03-2017	38	6	20	411	27
65	LOWER MANAIR	280.42	274.14	0.621	0.283	16-03-2017	46	14	42	199	60

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GOVERNMENT OF INDIA

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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
<b>KARNATAKA</b>											
66	KRISHNARAJA SAGRA	752.50	738.84	1.163	0.181	16-03-2017	16	24	39	79	-
*67	TUNGABHADRA	497.74	481.45	3.276	0.112	16-03-2017	3	6	14	529	72
68	GHATAPRABHA	662.95	640.97	1.391	0.244	16-03-2017	18	10	15	317	-
69	BHADRA	657.76	640.64	1.785	0.341	16-03-2017	19	34	55	106	39
70	LINGANAMAKKI	554.43	539.94	4.294	1.178	16-03-2017	27	33	42	-	55
71	NARAYANPUR	492.25	487.39	0.863	0.237	16-03-2017	27	27	53	425	-
72	MALAPRABHA(RENUKA)	633.83	621.73	0.972	0.062	16-03-2017	6	5	10	215	-
73	KABINI(Sancherla Tank)	696.16	686.15	0.444	0.016	16-03-2017	4	22	24	85	-
74	HEMAVATHY	890.63	870.99	0.927	0.061	16-03-2017	7	13	18	265	-
75	HARANGI	871.42	855.89	0.220	0.036	16-03-2017	16	7	14	53	-
76	SUPA	564.00	539.53	4.120	1.727	16-03-2017	42	35	42	-	-
77	VANIVILAS SAGAR	652.28	632.84	0.802	0.025	16-03-2017	3	11	15	123	-
*78	ALMATTI	519.60	506.57	3.105	0.127	16-03-2017	4	9	16	@	290
*79	GERUSOPPA	55.00	51.25	0.130	0.109	16-03-2017	84	78	78	83	240
<b>KERALA</b>											
80	KALLADA(PARAPPAR)	115.82	96.05	0.507	0.139	16-03-2017	27	75	53	62	-
*81	IDAMALAYAR	169.00	145.77	1.018	0.423	16-03-2017	42	38	44	33	75
*82	IDUKKI	732.43	709.91	1.460	0.430	16-03-2017	29	40	44	-	780
*83	KAKKI	981.46	961.43	0.447	0.195	16-03-2017	44	56	57	23	300
*84	PERIYAR	867.41	859.46	0.173	0.017	16-03-2017	10	12	19	84	140
85	MALAPMUZHA	115.06	102.06	0.224	0.028	16-03-2017	13	14	24	21	3
<b>TAMIL NADU</b>											
86	LOWER BHAWANI	278.89	260.91	0.792	0.074	16-03-2017	9	21	40	105	8
*87	METTUR(STANLEY)	240.79	213.21	2.647	0.207	16-03-2017	8	26	38	122	360
88	VAIGAI	279.20	264.81	0.172	0.005	16-03-2017	3	9	22	61	6
89	PARAMBIKULAM	556.26	536.29	0.380	0.024	16-03-2017	6	32	45	101	-
90	ALIYAR	320.04	303.52	0.095	0.008	16-03-2017	8	18	45	#	60
*91	SHOLAYAR	1002.79	955.25	0.143	0.000	16-03-2017	0	0	6	-	95
TOTAL FOR 91 RESERVOIRS				157.799	58.033						
PERCENTAGE							37	30	37		

Sd/-

\* HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

Director

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

W. M. , CWC

# TOTAL CCA 101 TH. HA OF PARAMBIKULAM &amp; ALIYAR

@ TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

† SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.

Sl. 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