

BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 07.04.2016)

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 **07.04.2016**, live storage available in these reservoirs is **37.92 BCM**, which is **24%** of total live storage capacity of these reservoirs. This storage is **69%** of the storage of corresponding period of last year and **77%** of storage of average of last ten years.

As per Table-01, 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 **07.04.2016**, the total live storage available in these reservoirs is **4.25 BCM** which is **24%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **34%** and average storage of last ten years during corresponding period was **30%** 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 **07.04.2016**, the total live storage available in these reservoirs is **6.81 BCM** which is **36%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **48%** and average storage of last ten years during corresponding period was **38%** 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 27.07 BCM. As per Reservoir Storage Bulletin dated **07.04.2016**, the total live storage available in these reservoirs is **5.52 BCM** which is **20%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **38%** and average storage of last ten years during corresponding period was **42%** 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 **07.04.2016**, the total live storage available in these reservoirs is **13.27 BCM**

which is **31%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **41%** 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 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 **07.04.2016**, the total live storage available in these reservoirs is **8.08 BCM** which is **16%** 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 **27%** 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.
- Table on page 4: IMD has divided India in 36 meteorological sub-divisions. The data in respect of reservoir storage as compared with observed rainfall in sub-divisions having rainfall less than 80% of normal is given in the table.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storage more than last year are **17** and reservoirs having storage more than average of last ten years are **16**. The numbers of reservoirs having storage less than 20% with respect to last year is **7** and having storage less than 20% with reference to average of last ten years is **6**. The number of reservoirs having storage less than or equal to 50% with respect to last year are **34** and having storage less than or equal to 50% with reference to average of last ten years are **36**.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

- 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 **07.04.2016** is **37.920** BCM (**24** percent of the live storage capacity at FRL).The current year's storage is nearly **69** percent of last year's storage and **77** 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.)	-	-	-	-	-	-	-	6	H.P.	-21 %
									PUNJAB	-34 %
									RAJASTHAN	-6 %
EAST (Jharkhand, Odisha, Tripura & W. Bengal (15 Resv.)	-	-	-	-	-	-	3	12	JHARKHAND	-31 %
									ODISHA	-5 %
									W. BENGAL	35 %
									TRIPURA	481 %
WEST (Guj. & Mah.), (27 Resv.)	-	-	-	-	-	-	1	26	GUJARAT	-43 %
									MAH.	-60 %
CENTRAL (MP, UP, Uttarakhand & Chh.), (12 Resv)	-	-	-	-	-	-	3	9	U.P.	-7 %
									UTTARAKHAND	-61 %
									M.P.	41 %
									CHHATISGARH	-25 %
SOUTH (Karnataka, TN, AP&TG, AP, TG, & Kerala), (31 Resv.)	-	-	-	1	1	-	2	27	AP&TG	-79 %
									A,P	-4 %
									TG	-57 %
									KARNATAKA	-29 %
									KERALA	-3 %
									T.N.	-52 %
Status of 91 reservoirs	0	0	0	1	1	0	9	80		

4 Basin wise storage position:

Better than normal: Ganga, Sabarmati and Narmada.

Close to normal: Rivers of Kutch, Mahanadi & Neighbouring EFRS and West Flowing rivers of south.

Deficient: Indus, Tapi, Mahi, Godavari and Cauvery & neighbouring EFRS

Highly deficient: Krishna.

- 5 Out of 91 reservoirs, **32** reservoirs reported more than 80% of normal storage & **59** reservoirs reported 80% or below of normal storage. Out of these 59 reservoirs 36 having storage upto 50% of normal storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	MULA	33	BARNA	44
BHIMA(UJJANI)	0	DUDHGANGA	33	UPPER TAPI	44
JAYAKWADI(PAITHON)	0	LOWER MANAIR	36	JHAKAM	45
GIRNA	0	TEHRI	37	HARANGI	46
YELDARI	2	VAIGAI	38	SARDAR SAROVAR	46
SALANADI	14	SRISAILAM	38	MALAPRABHA(RENUKA)	46
BHANDARDARA	24	PANAM	39	SRIRAMSAGAR	47
LOWER BHAWANI	25	MAITHON	39	MALAMPUZHA	48
PANCHET HILL	25	MATATILA	39	BHADAR	48
PERIYAR	30	RAMGANGA	39	PENCH (TOTALADOH)	49
ALIYAR	31	KARJAN	39	PONG DAM	50
ISAPUR	33	MANIKDOH	42	BHADRA	50

23 reservoirs having storage 51% to 80% of normal storage.		
51% to 60%	61% to 70%	71% to 80%
6	8	9

- 6 Out of 37 reservoirs with significant(*) hydropower generation, the storage build up is less than or equal to normal in **27** 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 :- 07.04.2016

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	8.645	30.77%	11.172	39.76%	7.773	27.67%	11.22
INDUS	14.730	3.337	22.65%	5.223	35.46%	4.339	29.46%	-23.09
NARMADA	17.414	5.057	29.04%	6.089	34.97%	4.742	27.23%	6.64
TAPI	7.394	1.832	24.78%	2.668	36.08%	3.163	42.78%	-42.08
MAHI	4.012	1.014	25.27%	1.865	46.49%	1.683	41.95%	-39.75
SABARMATI	0.735	0.203	27.62%	0.122	16.60%	0.201	27.35%	1.00
RIVERS OF KUTCH	0.887	0.128	14.43%	0.101	11.39%	0.157	17.70%	-18.47
GODAVARI	15.394	3.185	20.69%	5.271	34.24%	4.925	31.99%	-35.33
KRISHNA	32.831	2.977	9.07%	7.237	22.04%	7.962	24.25%	-62.61
MAHANADI & NEIGHBOURING EFRS	13.181	4.934	37.43%	7.353	55.78%	5.861	44.47%	-15.82
CAUVERY & NEIGHBOURING EFRS	8.359	1.964	23.50%	2.331	27.89%	3.017	36.09%	-34.90
WEST FLOWING RIVERS OF SOUTH	14.766	4.644	31.45%	5.911	40.03%	5.614	38.02%	-17.28
TOTAL	157.799	37.920		55.343		49.437		
PERCENTAGE								-23.30

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 07.04.2016

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	479.85	6.229	1.889	06-04-2016	30	32	27	676	1200
*2	PONG DAM	423.67	395.72	6.157	0.931	07-04-2016	15	32	30	-	360
<u>PUNJAB</u>											
*3	THEIN	527.91	497.25	2.344	0.517	06-04-2016	22	55	34	348	600
<u>RAJASTHAN</u>											
*4	MAHI BAJAJ SAGAR	280.75	267.60	1.711	0.432	07-04-2016	25	33	28	63	140
5	JHAKAM	359.50	338.10	0.132	0.010	07-04-2016	8	20	17	28	-
*6	RANA PRATAP SAGAR	352.81	347.23	1.436	0.472	07-04-2016	33	26	34	229	172
<u>EASTERN REGION</u>											
<u>JHARKHAND</u>											
7	TENUGHAT	269.14	256.58	0.821	0.298	07-04-2016	36	42	35	-	-
8	MAITHON	146.3	137.75	0.471	0.090	07-04-2016	19	32	49	342	-
*9	PANCHET HILL	124.97	120.60	0.184	0.025	07-04-2016	14	24	55	\$	80
10	KONAR	425.81	418.86	0.176	0.068	07-04-2016	39	65	49	\$	-
11	TILAIYA	368.81	365.08	0.142	0.031	07-04-2016	22	48	29	\$	4
<u>ODISHA</u>											
*12	HIRAKUD	192.02	187.35	5.378	2.235	06-04-2016	42	38	43	153	307
*13	BALIMELA	462.08	450.86	2.676	1.042	07-04-2016	39	59	35	-	360
14	SALANADI	82.30	54.35	0.558	0.024	30-03-2016	4	40	31	42	-
*15	RENGALI	123.50	115.85	3.432	1.169	07-04-2016	34	67	40	3	200
*16	MACHKUND(JALPUT)	838.16	831.83	0.893	0.440	06-04-2016	49	49	51	-	115
*17	UPPER KOLAB	858.00	851.26	0.935	0.371	06-04-2016	40	57	37	89	320
*18	UPPER INDRAVATI	642.00	632.83	1.456	0.567	07-04-2016	39	57	40	128	600
<u>WEST BENGAL</u>											
19	MAYURAKSHI	121.31	110.23	0.480	0.084	07-04-2016	18	15	23	227	-
20	KANGSABATI	134.14	123.60	0.914	0.213	07-04-2016	23	26	12	341	-
<u>TRIPURA</u>											
21	GUMTI	93.55	89.80	0.312	0.151	06-04-2016	48	0	8	-	15
<u>WESTERN REGION</u>											
<u>GUJARAT</u>											
*22	UKAI	105.16	93.55	6.615	1.772	07-04-2016	27	36	44	348	300
23	SABARMATI(DHAROI)	189.59	182.67	0.735	0.203	07-04-2016	28	17	27	95	1
*24	KADANA	127.7	118.44	1.472	0.434	07-04-2016	29	64	57	200	120
25	SHETRUNJI	55.53	49.67	0.300	0.046	06-04-2016	15	17	25	36	-
26	BHADAR	107.89	101.93	0.188	0.027	07-04-2016	14	20	30	27	-
27	DAMANAGANGA	79.86	71.35	0.502	0.163	07-04-2016	32	33	51	51	1
28	DANTIWADA	184.1	170.67	0.399	0.055	07-04-2016	14	3	7	45	-
29	PANAM	127.41	118.30	0.697	0.138	07-04-2016	20	48	51	36	2
*30	SARDAR SAROVAR	121.92	114.02	1.566	0.369	07-04-2016	24	73	51	2120	1450
31	KARJAN	115.25	97.68	0.523	0.138	07-04-2016	26	49	63	51	3

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

WEEK ENDING :- 07.04.2016

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	454.95	2.171	0.000	07-04-2016	0	11	29	227	-
*33	KOYANA	657.90	636.75	2.652	0.759	06-04-2016	29	58	54	-	1920
34	BHIMA(UJJANI)	496.83	488.26	1.517	0.000	06-04-2016	0	21	32	125	12
35	ISAPUR	441.00	428.64	0.965	0.118	06-04-2016	12	30	38	104	-
36	MULA	552.30	537.66	0.609	0.071	06-04-2016	12	19	35	139	-
37	YELDARI	461.77	447.86	0.809	0.003	06-04-2016	0	11	23	78	-
38	GIRNA	398.07	380.34	0.524	0.000	06-04-2016	0	16	22	79	-
39	KHADAKVASLA	582.47	579.21	0.056	0.017	06-04-2016	30	73	36	78	8
*40	UPPER VAITARNA	603.50	596.63	0.331	0.132	05-04-2016	40	47	54	-	61
41	UPPER TAPI	214.00	209.92	0.255	0.060	06-04-2016	24	87	53	45	-
*42	PENCH (TOTALADOH)	490.00	472.68	1.091	0.158	07-04-2016	14	18	30	127	160
43	UPPER WARDHA	342.50	336.56	0.564	0.157	07-04-2016	28	36	39	70	-
44	BHATSA	142.07	117.79	0.942	0.410	06-04-2016	44	45	49	29.378	15
45	DHOM	747.70	731.75	0.331	0.107	06-04-2016	32	59	41	36.2	2
46	DUDHGANGA	646.00	623.00	0.664	0.121	06-04-2016	18	53	50	2.441	24
47	MANIKDOH (KUKADI)	711.25	683.50	0.288	0.022	06-04-2016	8	25	18	2.2	6
48	BHANDARDARA	342.50	336.56	0.304	0.036	07-04-2016	28	36	39	70	-
CENTRAL REGION											
UTTAR PRADESH											
49	MATATILA	308.46	302.21	0.707	0.115	06-04-2016	16	36	41	-	30
*50	RIHAND	268.22	257.19	5.649	1.220	07-04-2016	22	23	20	-	300
UTTRAKHAND											
*51	RAMGANGA	365.30	330.04	2.196	0.346	07-04-2016	16	63	40	1897	198
*52	TEHRI	830.00	751.70	2.615	0.220	06-04-2016	8	26	22	2351	1000
MADHYA PRADESH											
*53	GANDHI SAGAR	399.90	393.28	6.827	3.167	07-04-2016	46	40	25	220	115
54	TAWA	355.40	340.77	1.944	0.306	07-04-2016	16	34	25	247	-
*55	BARGI	422.76	416.00	3.180	1.540	07-04-2016	48	39	34	157	90
*56	BANSAGAR	341.64	333.76	5.166	2.145	07-04-2016	42	66	33	488	425
*57	INDIRA SAGAR	262.13	251.65	9.745	2.668	07-04-2016	27	27	20	2380	1000
58	BARNA	348.55	339.63	0.456	0.036	07-04-2016	8	25	18	546	-
CHHATTIS GARH											
*59	MINIMATA BANGOI	359.66	348.17	3.046	1.224	07-04-2016	40	81	53	-	120
60	MAHANADI	348.70	342.38	0.767	0.282	06-04-2016	37	44	49	319	10
SOUTHERN REGION											
A.P & TG											
*61	SRISAILAM	269.75	243.43	8.288	0.705	07-04-2016	9	30	22	0	770
*62	NAGARJUNA SAGAR	179.83	154.59	6.841	0.000	07-04-2016	0	5	24	895	810
ANDHRA PRADESH											
63	SOMASILA	100.58	91.52	1.994	0.841	07-04-2016	42	16	44	168	0
TELANGANA											
64	SRIRAMSAGAR	332.54	319.34	2.300	0.143	07-04-2016	6	16	13	411	27
65	LOWER MANAIR	280.42	267.83	0.621	0.079	07-04-2016	13	22	35	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	739.63	1.163	0.214	07-04-2016	18	37	29	79	-
*67	TUNGABHADRA	497.74	482.12	3.276	0.140	07-04-2016	4	3	5	529	72
68	GHATAPRABHA	662.95	636.77	1.391	0.128	07-04-2016	9	17	11	317	-
69	BHADRA	657.76	642.30	1.785	0.433	07-04-2016	24	52	48	106	39
70	LINGANAMAKKI	554.43	540.18	4.294	1.210	07-04-2016	28	32	34	-	55
71	NARAYANPUR	492.25	487.00	0.863	0.208	07-04-2016	24	21	41	425	-
72	MALAPRABHA(RENUKA)	633.83	621.01	0.972	0.041	07-04-2016	4	12	9	215	-
73	KABINI(Sancherla Tank)	696.16	687.74	0.444	0.062	07-04-2016	14	53	15	85	-
74	HEMAVATHY	890.63	873.34	0.927	0.107	07-04-2016	12	14	16	265	-
75	HARANGI	871.42	851.99	0.220	0.016	07-04-2016	7	9	16	53	-
76	SUPA	564.00	530.85	4.120	1.145	07-04-2016	28	45	37	-	-
77	VANIVILAS SAGAR	652.28	635.43	0.802	0.065	07-04-2016	8	5	14	123	-
*78	ALMATTI	519.60	507.72	3.105	0.231	07-04-2016	7	9	11	@	290
*79	GERUSOPPA	55.00	48.85	0.130	0.096	07-04-2016	74	85	82	83	240
<u>KERALA</u>											
80	KALLADA(PARAPPAR)	115.82	108.27	0.507	0.328	06-04-2016	65	50	41	62	-
*81	IDAMALAYAR	169.00	139.94	1.018	0.308	07-04-2016	30	44	36	33	75
*82	IDUKKI	732.43	711.20	1.460	0.478	07-04-2016	33	48	36	-	780
*83	KAKKI	981.46	963.93	0.447	0.216	07-04-2016	48	47	46	23	300
*84	PERIYAR	867.41	859.28	0.173	0.014	07-04-2016	8	15	27	84	140
85	MALAPMUZHA	867.41	859.28	0.224	0.027	07-04-2016	8	15	27	84	140
<u>TAMIL NADU</u>											
86	LOWER BHAWANI	278.89	261.49	0.792	0.083	07-04-2016	10	23	43	105	8
*87	METTUR(STANLEY)	240.79	221.35	2.647	0.621	07-04-2016	23	37	44	122	360
88	VAIGAI	279.20	268.67	0.172	0.020	07-04-2016	12	11	30	61	6
89	PARAMBIKULAM	556.26	540.27	0.380	0.083	07-04-2016	22	20	41	101	-
90	ALIYAR	320.04	305.46	0.095	0.015	07-04-2016	16	74	51	#	60
*91	SHOLAYAR	1002.79	961.85	0.143	0.019	07-04-2016	13	1	4	-	95
TOTAL FOR 91 RESERVOIRS				157.799	37.920						
PERCENTAGE							24	35	31		

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.

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