BRIEF NOTE ON LIVE STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 24.08.2016)

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 24.08.2016, live storage available in these reservoirs is 102.147 BCM, which is 65% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 91.022 BCM and the average of last 10 years live storage was 100.189 BCM. Thus, the live storage available in 91 reservoirs as per 24.08.2016 Bulletin is 112% of the live storage of corresponding period of last year and 102% of storage of average of last ten years.

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 24.08.2016, the total live storage available in these reservoirs is 12.97 BCM which is 72% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 91% and average storage of last ten years during corresponding period was 75% 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 reservoirsunder CWC monitoring having total live storage capacity of 18.83 BCM. As per Reservoir Storage Bulletin dated 24.08.2016, the total live storage available in these reservoirs is 11.80 BCM which is 63% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 53% and average storage of last ten years during corresponding period was 55% 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 **24.08.2016**, the total live storage available in these reservoirs is **19.73 BCM** which is **73%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **56%** and average storage of last ten years during corresponding period was **66%** 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

24.08.2016, the total live storage available in these reservoirs is **34.94 BCM** which is **83%** of total live storage capacity of these reservoirs. The storage during corresponding period of last year was **75%** and average storage of last ten years during corresponding period was **60%** 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 24.08.2016, the total live storage available in these reservoirs is 22.70 BCM which is 44% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 35% and average storage of last ten years during corresponding period was 65% of live storage capacity of these reservoirs. Thus, storage during current year is better than 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 8, better than normal storage is available in Narmada, Mahi, Godavari, Ganga, Sabarmati and Tapi. Close to Normal in Mahanadi & neighbouring East Flowing Rivers and Indus and Deficient in West Flowing Rivers of South, Krishna and Cauvery & neighbouring EFRs and Highly Deficient in Rivers of Kutch Basin.
- Table on page 5-7 of the bulletin. The numbers of reservoirs having storagemore than last year are 48 and reservoirs having storage more than average of last ten years are 48. 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 3. The number of reservoirs having storage less than or equal to 50% with respect to last year are 7 and having storage less than or equal to 50% with reference to average of last ten years are 14.

STORAGE STATUS OF IMPORTANT RESERVOIRS IN THE COUNTRY

AS ON 24.08.2016

- 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
 24.08.2016 is 102.147 BCM (65 percent of the live storage capacity at FRL). The current year's storage is nearly 112 percent of last year's storage and 102 percent of the average of last ten years.

3 Region wise storage status:-

		Filling	positio	n of 91	reserv	oirs w	<u>.r.t. FR</u>	L			
REGION (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.)	2	1	1	1	2	-	-	-	H.P. PUNJAB RAJASTHAN	-16 % 9 % 36 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	3	1	-	3	4	1	3	-	JHARKHAND ODISHA W. BENGAL TRIPURA	22 % 10 % 39 % 17 %	
WEST (Guj.& Mah.), (27 Resv.)	4	6	-	4	5	1	1	6	GUJARAT MAH.	9 % 13 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	-	4	4	2	-	1	1	-	U.P. UTTARAKHAND M.P. CHHATISGARH	87 % -2 % 46 % -10 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	1	1	2	1	3	4	7	12	AP&TG A,P TG KARNATAKA KERALA T.N.	-48 % -57 % 12 % -24 % -21 % -54 %	
Status of 91 reservoirs	10	13	6	11	14	7	12	18	·	5 . / 5	

4 Basin wise storage position:

METTUR(STANLEY)
MALAMPUZHA

Better than normal: Ganga, Sabarmati, Godavari, Mahi, Narmada and Tapi.

Close to normal: Mahanadi & Neighbouring EFRS and Indus.

Deficient: West Flowing Rivers of South, Krishna and Cauvery & neighbouring EFRS.

Highly deficient: Rivers of Kutch

5 Out of 91 reservoirs, 61 reservoirs reported more than 80% of normal storage & 30 reservoirs reported 80% or below of normal storage. Out of these 30 reservoirs 14 having storage upto 50% of normal

orage.				16	reser
Name of reservoir	%	Name of reservoir	%	having	stora
NAGARJUNA SAGAR	6	VANIVILAS SAGAR	49	to 80%	6 of no
BHADAR	8	KARJAN	50	storag	e.
VAIGAI	15			51%	61%
ALIYAR	21			to	to
YELDARI	27			60%	70%
DANTIWADA	32			7	3
SHETRUNJI	35			,	3
LOWER BHAWANI	35				•
SOMASILA	43				
KRISHNARAJA SAGRA	45	1			

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

16 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: 24 08 2016

WEEK ENDING :- 24.08.2016												
NAME OF BASIN	LIVE CAP. AT FRL		THIS YEAR'S STORAGE		LAST YEAR'S STORAGE		YEARS' ORAGE	% DEPARTURE W.R.T. AVE. OF 10 YEARS'				
GANGA	28.096	22.736	80.92%	19.952	71.01%	15.167	53.98%	49.90				
INDUS	14.730	9.701	65.86%	13.186	89.52%	11.063	75.11%	-12.31				
NARMADA	17.414	15.498	89.00%	14.729	84.58%	12.150	69.77%	27.56				
TAPI	7.394	5.542	74.95%	5.167	69.88%	4.618	62.46%	20.01				
MAHI	4.012	3.300	82.25%	2.344	58.42%	2.659	66.28%	24.11				
SABARMATI	0.735	0.574	78.10%	0.640	87.07%	0.382	51.97%	50.26				
RIVERS OF KUTCH	0.887	0.117	13.19%	0.766	86.36%	0.430	48.48%	-72.79				
GODAVARI	15.394	9.050	58.79%	5.046	32.78%	7.430	48.27%	21.80				
KRISHNA	32.831	16.951	51.63%	9.998	30.45%	22.660	69.02%	-25.19				
MAHANADI & NEIGHBOURING EFRS	13.181	7.950	60.31%	7.714	58.52%	8.276	62.79%	-3.94				
CAUVERY& NEIGHBOURING EFRS	8.359	2.850	34.09%	4.298	51.42%	5.207	62.29%	-45.27				
WEST FLOWING RIVERS OF SOUTH	14.766	7.878	53.35%	7.182	48.64%	10.147	68.72%	-22.36				
TOTAL	157.799	102.147		91.022		100.189						
PERCENTAGE								1.95				

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA			WEE	K ENDING :-	24.08.2016		CENTRALV	/IIVII55IU	IN	
					-		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
	NORTHERN REGION										
	HIMACHAL PRADESH	•									
*1	GOBIND SAGAR(BHAKRA)	512.06	498.76	6.229	3.987	24-08-2016	64	91	79	676	1200
*2	PONG DAM	423.67	415.26	6.157	4.024	24-08-2016	65	92	74	-	360
	<u>PUNJAB</u>										
*3	THEIN	527.91	519.39	2.344	1.690	24-08-2016	72	80	66	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	281.25	1.711	1.711	23-08-2016	100	100	75	63	140
5	JHAKAM	359.50	361.10	0.132	0.132	23-08-2016	100	100	73		-
*6	RANA PRATAP SAGAR	352.81	352.70	1.436	1.422	24-08-2016	99	96	71	229	172
	EASTERN REGION	Ī									
_	JHARKHAND										
	TENUGHAT	269.14	259.38	0.821	0.392	24-08-2016	48	47	42		-
8	MAITHON	146.3	147.65		0.471	24-08-2016	100	74	78	342	-
*9	PANCHET HILL	124.97	129.07		0.184	24-08-2016	100	58	86	\$	80
	KONAR	425.81	425.00		0.162	24-08-2016	92	84	77	\$	-
11	TILAIYA ODISHA	368.81	368.98	0.142	0.142	24-08-2016	100	100	72	\$	4
*12	HIRAKUD	192.02	188.30	5.378	2.683	23-08-2016	50	59	58	153	307
	BALIMELA	462.08	455.86			23-08-2016	63	44	35	-	360
	SALANADI	82.30	70.70		0.231	23-08-2016	41	45	44		
	RENGALI	123.50	120.79			23-08-2016	75	55	63		200
	MACHKUND(JALPUT)	838.16	834.30	0.893	0.586	23-08-2016	66	46	63	-	115
	UPPER KOLAB	858.00	853.89	0.935	0.568	23-08-2016	61	44	45	89	320
	UPPER INDRAVATI	642.00	636.55			23-08-2016	62	25	64		600
	WEST BENGAL										
19	MAYURAKSHI	121.31	118.55	0.480	0.357	22-08-2016	74	83	56	227	_
20	KANGSABATI	134.14	131.60	0.914	0.714	24-08-2016	78	48	55	341	-
	TRIPURA										
21	GUMTI	93.55	90.25	0.312	0.168	22-08-2016	54	86	46	-	15
	WESTERN REGION	•									
	<u>GUJARAT</u>										
*22	UKAI	105.16	102.14	6.615	5.048	23-08-2016	76	75	65	348	300
23	SABARMATI(DHAROI)	189.59	187.86	0.735	0.574	22-08-2016	78	87	52	95	1
*24	KADANA	127.7	126.70	1.472	1.109	23-08-2016	75	7	56	200	120
25	SHETRUNJI	55.53	50.62	0.300	0.064	23-08-2016	21	90	61	36	-
26	BHADAR	107.89	99.91	0.188	0.009	23-08-2016	5	79	59	27	-
27	DAMANAGANGA	79.86	76.15	0.502	0.319	23-08-2016	64	56	56	51	1
28	DANTIWADA	184.1	169.67	0.399	0.044	23-08-2016	11	87	34	45	-
29	PANAM	127.41	124.00	0.697	0.348	23-08-2016	50	56	65	36	2
*30	SARDAR SAROVAR	121.92	122.94	1.566	1.566	23-08-2016	100	100	93	2120	1450
31	KARJAN	115.25	100.32	0.523	0.176	23-08-2016	34	68	67	51	3

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA		WEE	K ENDING :-	24.08.2016	CENTRAL WATER COMMISSION					
			CUDDENT			24.00.2010	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
	MAHARASHTRA										
32	JAYAKWADI(PAITHON)	463.91	461.86	2.171	1.438	24-08-2016	66	5	34	227	-
*33	KOYANA	657.90	658.09	2.652	2.652	23-08-2016	100	74	93	-	1920
34	BHIMA(UJJANI)	496.83	494.90	1.517	0.919	23-08-2016	61	0	61	125	12
35	ISAPUR	441.00	432.80	0.965	0.315	23-08-2016	33	25	59	104	-
36	MULA	552.30	552.02	0.609	0.594	23-08-2016	98	41	66	139	-
37	YELDARI	461.77	450.40	0.809	0.075	24-08-2016	9	3	35	78	-
38	GIRNA	398.07	394.41	0.524	0.345	23-08-2016	66	4	32	79	-
39	KHADAKVASLA	582.47	582.47	0.056	0.056	23-08-2016	100	30	66	78	8
*40	UPPER VAITARNA	603.50	602.89	0.331	0.311	23-08-2016	94	62	82	-	61
41	UPPER TAPI	214.00	212.03	0.255	0.149	23-08-2016	58	67	55	45	-
*42	PENCH (TOTALADOH)	490.00	487.21	1.091	0.812	23-08-2016	74	88	67	127	160
43	UPPER WARDHA	342.50	342.14	0.564	0.531	24-08-2016	94	93	78	70	-
44	BHATSA	142.07	138.01	0.942	0.864	24-08-2016	92	67	83	29.378	15
45	DHOM	747.70	747.13	0.331	0.331	23-08-2016	100	47	78	36.2	2
46	DUDHGANGA	646.00	643.95	0.664	0.611	23-08-2016	92	73	91	2.441	24
	MANIKDOH (KUKADI)	711.25	704.92		0.185	23-08-2016	64	27	48	2.2	6
48	BHANDARDARA CENTRAL REGION	342.50	342.14	0.304	0.289	24-08-2016	94	93	78	70	-
		-									
40	MATATILA	200.40	207.07	0.707	0.500	04.00.0046	00	00	70	_	20
	RIHAND	308.46 268.22	307.97 265.18		0.589 4.335	24-08-2016 24-08-2016	83 77	86 38	76 37	-	30 300
30	UTTRAKHAND	200.22	205.16	5.049	4.333	24-00-2010	77	30	31	-	300
*51	RAMGANGA	365.30	345.43	2.196	0.946	24-08-2016	43	81	54	1897	198
	TEHRI		814.50		1.993	24-08-2016	76	77	69	2351	1000
32	MADHYA PRADESH	830.00	614.50	2.615	1.993	24-00-2010	70	11	09	2331	1000
*52	GANDHI SAGAR	399.90	398.89	6.827	6.008	24-08-2016	88	91	52	220	115
	TAWA	355.40	354.64		1.900		98	97	91	247	113
	BARGI	422.76	421.00			24-08-2016	95	73	75	157	90
	BANSAGAR	341.64	340.93			24-08-2016	94	68	57	488	425
	INDIRA SAGAR	262.13	260.62			24-08-2016	86	84	60	2380	1000
	BARNA	348.55	348.22			24-08-2016	95	85	73	546	-
00	CHHATTIS GARH	0.0.00	0.0.22	000	0.101	2.0020.0	00	00	.0	0.0	
*59	MINIMATA BANGOI	359.66	352.50	3.046	1.774	23-08-2016	58	73	73		120
	MAHANADI	348.70	347.89			23-08-2016	90	28	70	319	10
	SOUTHERN REGION		30	, 				_0	. •		
	A.P & TG	-									
*61	SRISAILAM	269.75	265.91	8.288	4.202	23-08-2016	51	9	61	0	770
	NAGARJUNA SAGAR	179.83	156.76			23-08-2016	3	0	50	895	810
	ANDHRA PRADESH						· ·	Ū	30		2.0
63	SOMASILA	100.58	82.57	1.994	0.227	23-08-2016	11	12	27	168	0
- =	TELANGANA		,								,
64	SRIRAMSAGAR	332.54	327.63	2.300	1.118	24-08-2016	49	10	38	411	27
	LOWER MANAIR	280.42	270.77		0.153	24-08-2016	25		42		

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	24.08.2016					
							STORAGE A	APACITY AT	BENE	FITS	
S. NO	NAME OF RESERVOIR	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	743.82	1.163	0.443	23-08-2016	38	60	85	79	-
*67	TUNGABHADRA	497.74	493.14	3.276	1.494	24-08-2016	46	67	86	529	72
68	GHATAPRABHA	662.95	659.92	1.391	1.169	24-08-2016	84	41	88	317	-
69	BHADRA	657.76	648.87	1.785	0.893	24-08-2016	50	70	90	106	39
70	LINGANAMAKKI	554.43	546.20	4.294	2.195	24-08-2016	51	44	75	-	55
71	NARAYANPUR	492.25	492.00	0.863	0.707	23-08-2016	82	66	84	425	-
72	MALAPRABHA(RENUKA)	633.83	627.89	0.972	0.373	24-08-2016	38	29	64	215	-
73	KABINI(Sancherla Tank)	696.16	694.05	0.444	0.327	23-08-2016	74	82	59	85	-
74	HEMAVATHY	890.63	884.75	0.927	0.571	23-08-2016	62	75	89	265	-
75	HARANGI	871.42	870.77	0.220	0.208	23-08-2016	95	93	97	53	-
76	SUPA	564.00	543.20	4.120	2.001	24-08-2016	49	43	64	-	-
77	VANIVILAS SAGAR	652.28	634.20	0.802	0.044	18-08-2016	5	5	11	123	-
*78	ALMATTI	519.60	519.60	3.105	3.105	23-08-2016	100	53	84	@	290
*79	GERUSOPPA	55.00	47.85	0.130	0.091	24-08-2016	70	65	80	83	240
	KERALA										
80	KALLADA(PARAPPAR)	115.82	103.32	0.507	0.238	23-08-2016	47	23	61	62	-
*81	IDAMALAYAR	169.00	150.42	1.018	0.525	23-08-2016	52	51	65	33	75
*82	IDUKKI	732.43	716.36	1.460	0.673	23-08-2016	46	57	56	-	780
*83	KAKKI	981.46	970.12	0.447	0.281	23-08-2016	63	49	65	23	300
*84	PERIYAR	867.41	861.38	0.173	0.048	24-08-2016	28	42	53	84	140
85	MALAPMUZHA	867.41	861.38	0.224	0.082	24-08-2016	28	42	53	84	140
	TAMIL NADU										
86	LOWER BHAWANI	278.89	265.98	0.792	0.184	24-08-2016	23	61	66	105	8
*87	METTUR(STANLEY)	240.79	224.98	2.647	0.881	24-08-2016	33	59	68	122	360
88	VAIGAI	279.20	266.24	0.172	0.009	24-08-2016	5	27	34	61	6
89	PARAMBIKULAM	556.26	544.59	0.380	0.154	24-08-2016	41	52	80	101	-
90	ALIYAR	320.04	305.79	0.095	0.017	24-08-2016	18	93	84	#	60
*91	SHOLAYAR	1002.79	992.00	0.143	0.079	24-08-2016	55	80	87	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	102.147						
	PERCENTAGE						65	58	63		

Sd/-

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

Director W. M. , CWC

 $^{^{\}star}$ HYDEL POWER CAPACITY HAVING CAPACITY MORE THAN 60MW

[#] TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

 $^{@^{\}scriptscriptstyle |}$ TOTAL CCA 425 TH. HA. OF NARAYANPUR AND ALMATTI

 $[\]dagger$ 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