BRIEF NOTE ON STORAGE STATUS OF 91 RESERVOIRS IN THE COUNTRY (WITH REFERENCE TO RESERVOIR STORAGE BULLETIN OF 21.10.2015)

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 21.10.2015, live storage available in these reservoirs is 91.667 BCM, which is 58% of total live storage capacity of these reservoirs. This storage is 77% of the storage of corresponding period of last year and 76% 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 21.10.2015, the total live storage available in these reservoirs is 14.66 BCM which is 81% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 76% and average storage of last ten years during corresponding period was 80% 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 21.10.2015, the total live storage available in these reservoirs is 12.79 BCM which is 68% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 78% and average storage of last ten years during corresponding period was 77% 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 27.07BCM. As per Reservoir Storage Bulletin dated 21.10.2015, the total live storage available in these reservoirs is 16.12 BCM which is 60% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 79% and average storage of last ten years during corresponding period was 82% 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 42.30BCM. As per Reservoir Storage Bulletin dated **15.10.2015**, the total live storage available in these reservoirs is **30.37** BCM which

is 72% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 82% and average storage of last ten years during corresponding period was 68% 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 region includes of Southern States 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 21.10.2015, the total live storage available in these reservoirs is 17.73 BCM which is 34% of total live storage capacity of these reservoirs. The storage during corresponding period of last year was 68% and average storage of last ten years during corresponding period was 80% 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 Ganga, Indus, Narmada, Sabarmati and Rivers of Kutch. Close to Normal in Tapi and Mahi. Deficient in Godavari, Mahanadi & neighbouring East Flowing Rivers, Cauvery& neighbouring EFRs and West Flowing rivers of South and Highly Deficient in Krishna basin.
- 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 18 and reservoirs having storage more than average of last ten years are 21. 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 6. The number of reservoirs having storage less than or equal to 50% with respect to last year are 19 and having storage less than or equal to 50% with reference to average of last ten years are 21.

States having better storage (in %) than last year for corresponding period: Himachal Pradesh, Punjab and Tripura.

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

States having lesser storage (in %) than last year for corresponding period: Rajasthan, Jharkhand, Odisha, West Bengal, Gujarat, Maharashtra, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, AP&TG (2combined project in both states), Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu.

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
 21.10.2015 is 91.667 BCM (58 percent of the live storage capacity at FRL). The current year's storage is nearly 77 percent of last year's storage and 76 percent of the average of last ten years.

3 Region wise storage status:-

		Filling position of 91 reservoirs w.r.t. FRL						L			
REGION (States), (Monitoring No. of Reservoirs)	100%	91%- 99%	81%- 90%	71%- 80%	61%- 70%	51%- 60%	41%- 50%	40% & below	Departure from Norma storage		
NORTH (HP,Punjab & Rajasthan), (6 Resv.)	1	3	1	1	1	1	ı	-	H.P. PUNJAB RAJASTHAN	3 % -14 % 3 %	
EAST (Jharkhand,Odisha, Tripura & W.Bengal (15 Resv.)	1	3	3	1	-	3		5	JHARKHAND ODISHA W. BENGAL TRIPURA	-26 % -10 % -51 % 83 %	
WEST (Guj.& Mah.), (27 Resv.)	1	4	5	5	1	3	1	7	GUJARAT MAH.	-10 % -43 %	
CENTRAL (MP,UP,Uttarakhand & Chh.), (12 Resv)	1	1	3	-	3	1	2	1	U.P. UTTARAKHAND M.P. CHHATISGARH	19 %	
SOUTH (Karnataka,TN,AP&TG,AP, TG, & Kerala), (31 Resv.)	-	-	1	1	4	7	3	15	AP&TG A,P TG KARNATAKA KERALA T.N.	-83 % -67 % -84 % -43 % -32 % -41 %	
Status of 91 reservoirs	2	11	13	7	9	15	6	28			

4 Basin wise storage position:

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

Close to normal: Tapi,Mahi.

Deficient: Godavari, Cauvery & neighbouring EFRS, Mahanadi & Neighbouring EFRS and West Flowing rivers of south.

Highly deficient: Krishna

5 Out of 91 reservoirs, 35 reservoirs reported more than 80% of normal storage & 56 reservoirs reported 80% or below of normal storage. Out of these 56 reservoirs 21 having storage upto 50% of normal

storage.

Name of reservoir	%	Name of reservoir	%	Name of reservoir	%
NAGARJUNA SAGAR	0	SOMASILA	33	HARANGI	49
JAYAKWADI(PAITHON)	9	HEMAVATHY	35		
SRIRAMSAGAR	13	MALAPRABHA(RENUKA	36		
BHIMA(UJJANI)	16	SALANADI	36		
GIRNA	18	MANIKDOH	39		
PANCHET HILL	20	GHATAPRABHA	41		
YELDARI	26	MAITHON	43		
LOWER MANAIR	26	LOWER BHAWANI	43		
KHADAKVASLA	28	MAYURAKSHI	47		
SRISAILAM	32	ALMATTI	49		

35 reservors								
having storage 51%								
to 80% of normal								
storage.								
51%	61%	71%						
to	to	to						
60%	70%	80%						
10	13	12						

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

27 reservoirs.

WEEKLY REPORT - BASINWISE

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION WEEK ENDING :- 21.10.2015

	******	1DII10	21.10.201	<u> </u>				
NAME OF BASIN	LIVE CAP. AT FRL	THIS YEAR'S LAST YEAR'S LAST 10 YEARS' STORAGE STORAGE AVG. STORAGE		% DEPARTURE W.R.T. AVE. OF 10 YEARS'				
GANGA	28.096	17.906	63.73%	19.973	71.09%	16.980	60.44%	5.45
INDUS	14.730	11.897	80.77%	10.672	72.45%	11.790	80.04%	0.91
NARMADA	17.414	14.809	85.04%	16.129	92.62%	13.894	79.79%	6.59
TAPI	7.394	5.061	68.45%	5.917	80.02%	6.244	84.45%	-18.95
MAHI	4.012	2.934	73.13%	3.512	87.54%	3.152	78.56%	-6.92
SABARMATI	0.735	0.647	88.03%	0.507	68.98%	0.564	76.73%	14.72
RIVERS OF KUTCH	0.887	0.781	88.05%	0.310	34.95%	0.566	63.81%	37.99
GODAVARI	15.394	7.111	46.19%	10.786	70.07%	11.054	71.81%	-35.67
KRISHNA	32.831	10.909	33.23%	22.956	69.92%	28.028	85.37%	-61.08
MAHANADI & NEIGHBOURING EFRS	13.181	8.703	66.03%	10.526	79.86%	10.882	82.56%	-20.02
CAUVERY& NEIGHBOURING EFRS	8.359	2.749	32.89%	5.748	68.76%	5.388	64.46%	-48.98
WEST FLOWING RIVERS OF SOUTH	14.766	8.160	55.26%	12.645	85.64%	12.470	84.45%	-34.56
TOTAL	157.799	91.667		119.681		121.012		
PERCENTAGE								-24.25

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	21.10.2015					
							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	U		I.						ı	
	HIMACHAL PRADESH										
*1	GOBIND SAGAR(BHAKRA)	512.06	510.14	6.229	5.657	19-10-15	91	87	87	676	1200
*2	PONG DAM PUNJAB	423.67	419.67	6.157	4.977	19-10-15	81	66	80	-	360
*3	THEIN	527.91	512.47	2.344	1.263	20-10-15	54	50	63	348	600
	RAJASTHAN										
*4	MAHI BAJAJ SAGAR	280.75	280.55	1.711	1.692	20-10-15	99	100	86	63	140
5	JHAKAM	359.50	358.40	0.132	0.121	20-10-15	92	95	83	28	-
*6	RANA PRATAP SAGAR	352.81	350.21	1.436	0.950	19-10-15	66	86	78	229	172
	EASTERN REGION	i									
	<u>JHARKHAND</u>										
7	TENUGHAT	269.14	260.16	0.821	0.423	20-10-15	52	50	43	-	-
8	MAITHON	146.3	140.88	0.471	0.190	20-10-15	40	92	94	342	-
*9	PANCHET HILL	124.97	121.04	0.184	0.036	20-10-15	20	99	96	\$	80
10	KONAR	425.81	423.92	0.176	0.142	20-10-15	81	100	89	\$	-
11	TILAIYA	368.81	368.57	0.142	0.132	20-10-15	93	100	84	\$	4
	ODISHA										
*12	HIRAKUD	192.02	191.77	5.378	4.662	19-10-15	87	86	93	153	307
*13	BALIMELA	462.08	457.66	2.676	1.919	19-10-15	72	98	63	-	360
14	SALANADI	82.30	65.10	0.558	0.125	19-10-15	22	64	62	42	-
*15	RENGALI	123.50	119.23	3.432	2.055	19-10-15	60	65	82	3	200
*16	MACHKUND(JALPUT)	838.16	837.71	0.893	0.848	19-10-15	95	96	87	-	115
*17	UPPER KOLAB	858.00	856.28	0.935	0.772	19-10-15	83	87	67	89	320
*18	UPPER INDRAVATI	642.00	635.80	1.456	0.824	19-10-15	57	90	79	128	600
	WEST BENGAL										
	MAYURAKSHI	121.31	112.14	0.480	0.125	20-10-15	26	23	56	227	-
20	KANGSABATI	134.14	124.01	0.914	0.229	20-10-15	25	29	49	341	-
	TRIPURA										
21	GUMTI WESTERN REGION	93.55	93.35	0.312	0.303	14-10-15	97	47	53	-	15
	GUJARAT	ı									
*22	UKAI	105.16	101.53	6.615	4.750	10 10 15	70	92	86	240	300
	SABARMATI(DHAROI)	189.59	188.63				72 88	82 69	77		
	KADANA	127.7	123.37				53	79			120
	SHETRUNJI	55.53	55.42				97	47			-
	BHADAR	107.89	107.13				82	45			
	DAMANAGANGA	79.86	80.05				97	94			1
	DANTIWADA	184.1	182.54				84	22			
	PANAM	127.41	123.80				48	74			
	SARDAR SAROVAR	121.92	120.57				84	71	74		1450
	KARJAN	115.25	109.29				68	97			3
31		110.20	100.20	0.020	0.004	10-10-10	30	31	33	01	3

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

	GOVERNMENT OF INDIA	WEEK ENDING :- 21.10.2015			CENTRAL WATER COMMISSION						
					K ENDING	21.10.2015	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
	MAHARASHTRA										
32	JAYAKWADI(PAITHON)	463.91	456.25	2.171	0.117	21-10-15	5	41	62	227	-
*33	KOYANA	657.90	651.82	2.652	1.908	19-10-15	72	97	98	-	1920
34	BHIMA(UJJANI)	496.83	492.10	1.517	0.223	19-10-15	15	100	91	125	12
35	ISAPUR	441.00	433.22	0.965	0.350	21-10-15	36	78	71	104	-
36	MULA	552.30	545.79	0.609	0.312	21-10-15	51	94	89	139	-
37	YELDARI	461.77	451.79	0.809	0.123	19-10-15	15	60	59	78	-
38	GIRNA	398.07	384.72	0.524	0.056	19-10-15	11	47	59	79	-
39	KHADAKVASLA	582.47	578.54	0.056	0.011	19-10-15	20	59	71	78	8
*40	UPPER VAITARNA	603.50	600.67	0.331	0.238	15-10-15	72	97	96	-	61
41	UPPER TAPI	214.00	214.00	0.255	0.255	19-10-15	100	100	100	45	-
*42	PENCH (TOTALADOH)	490.00	486.64	1.091	0.774	15-10-15	71	69	78	127	160
43	UPPER WARDHA	342.50	342.27	0.564	0.543	21-10-15	96	95	93	70	-
44	BHATSA	142.07	135.98	0.942	0.793	21-10-15	84	94	95	29.378	15
45	DHOM	747.70	737.06	0.331	0.178	21-10-15	54	98	93	36.2	2
46	DUDHGANGA	646.00	640.55	0.664	0.503	21-10-15	76	102	102	2.441	24
	MANIKDOH (KUKADI)	711.25	693.34	0.288	0.076	21-10-15	26	66	68	2.2	6
48	BHANDARDARA CENTRAL REGION	342.50	342.27	0.304	0.203	21-10-15	96	95	93	70	-
_	UTTAR PRADESH	ı									
40	MATATILA	308.46	306.48	0.707	0.434	19-10-15	61	69	87		30
	RIHAND	268.22	259.51	5.649	2.050	21-10-15	36	43	49	_	300
00	UTTRAKHAND	200.22	200.01	0.040	2.000	21 10 10	00	-10	-10		000
*51	RAMGANGA	365.30	354.45	2.196	1.425	21-10-15	65	87	72	1897	198
	TEHRI	830.00	819.10	2.615	2.170	21-10-15	83	91	81	2351	1000
02	MADHYA PRADESH	000.00	0.00	2.0.0	20	2	00	0.	0.	200.	.000
*53	GANDHI SAGAR	399.90	399.18	6.827	6.183	19-10-15	91	73	51	220	115
	TAWA	355.40	355.24		1.944	21-10-15	100	100	98	247	-
	BARGI	422.76	421.15		2.772	21-10-15	87	100	92	157	90
*56	BANSAGAR	341.64	336.74		3.114	19-10-15	60	90	61	488	425
*57	INDIRA SAGAR	262.13	260.11	9.745	8.099	21-10-15	83	93	72	2380	1000
58	BARNA	348.55	346.44	0.456	0.319	19-10-15	70	74	76	546	-
	CHHATTIS GARH										
*59	MINIMATA BANGOI	359.66	350.59	3.046	1.524	21-10-15	50	87	70	-	120
60	MAHANADI	348.70	343.27	0.767	0.337	19-10-15	44	88	74	319	10
;	SOUTHERN REGION										
	A.P & TG										
*61	SRISAILAM	269.75	258.63	8.288	2.079	21-10-15	25	29	78	0	770
*62	NAGARJUNA SAGAR	179.83	155.39	6.841	0.000	21-10-15	0	72	86	895	810
	ANDHRA PRADESH										
63	SOMASILA	100.58	85.96	1.994	0.407	21-10-15	20	64	61	168	0
	<u>TELANGANA</u>										
64	SRIRAMSAGAR	332.54	320.83	2.300	0.216	21-10-15	9	31	72	411	27
65	LOWER MANAIR	280.42	269.23	0.621	0.110	21-10-15	18	33	68	199	60

WEEKLY REPORT OF 91 IMPORTANT RESERVOIRS OF INDIA

GOVERNMENT OF INDIA

CENTRAL WATER COMMISSION

				WEE	K ENDING :-	21.10.2015					
			CURRENT	111/5			STORAGE A	S % OF LIVE C FRL	APACITY AT	BENE	EFITS
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> </u>	KARNATAKA										
66	KRISHNARAJA SAGRA	752.50	747.27	1.163	0.709	20-10-15	61	100	90	79	-
*67	TUNGABHADRA	497.74	494.93	3.276	1.958	20-10-15	60	87	85	529	72
68	GHATAPRABHA	662.95	648.65	1.391	0.535	20-10-15	38	93	93	317	-
69	BHADRA	657.76	650.57	1.785	1.152	20-10-15	65	99	95	106	39
70	LINGANAMAKKI	554.43	546.50	4.294	2.260	21-10-15	53	93	91	-	55
71	NARAYANPUR	492.25	489.96	0.863	0.472	21-10-15	55	81	92	425	-
72	MALAPRABHA(RENUKA)	633.83	626.48	0.972	0.275	20-10-15	28	74	80	215	-
73	KABINI(Sancherla Tank)	696.16	692.46	0.444	0.248	20-10-15	56	92	46	85	-
74	HEMAVATHY	890.63	878.87	0.927	0.275	20-10-15	30	98	86	265	-
75	HARANGI	871.42	861.83	0.220	0.079	20-10-15	36	82	73	53	-
76	SUPA	564.00	540.62	4.120	1.801	21-10-15	44	77	77	-	-
77	VANIVILAS SAGAR	652.28	636.65	0.802	0.087	14-10-15	11	6	16	123	-
*78	ALMATTI	519.60	515.05	3.105	1.452	21-10-15	47	93	96	@	290
*79	GERUSOPPA	55.00	46.83	0.130	0.086	21-10-15	66	90	84	83	240
	KERALA										
80	KALLADA(PARAPPAR)	115.82	103.85	0.507	0.246	20-10-15	49	91	85	62	-
*81	IDAMALAYAR	169.00	151.05	1.018	0.540	20-10-15	53	89	84	33	75
*82	IDUKKI	732.43	720.04	1.460	0.825	20-10-15	57	72	73	-	780
*83	KAKKI	981.46	965.61	0.447	0.231	20-10-15	52	70	84	23	300
*84	PERIYAR	867.41	861.66	0.173	0.066	20-10-15	38	65	51	84	140
85	MALAPMUZHA	867.41	861.66	0.224	0.142	20-10-15	38	65	51	84	140
	TAMIL NADU										
86	LOWER BHAWANI	278.89	266.68	0.792	0.205	20-10-15	26	43	60	105	8
*87	METTUR(STANLEY)	240.79	223.66	2.647	0.781	20-10-15	30	55	54	122	360
88	VAIGAI	279.20	271.81	0.172	0.045	20-10-15	26	22	38	61	6
89	PARAMBIKULAM	556.26	551.10	0.380	0.274	20-10-15	72	100	90	101	-
90	ALIYAR	320.04	318.21	0.095	0.084	20-10-15	88	97	88	#	60
*91	SHOLAYAR	1002.79	990.97	0.143	0.088	20-10-15	62	96	94	-	95
	TOTAL FOR 91 RESERVOIRS			157.799	91.667						

Sd/-

76

77

58

\$ TOTAL CCA 342 TH. HA OF DVC SYSTEM

PERCENTAGE

Director W. M., CWC

TOTAL CCA 101 TH. HA OF PARAMBIKULAM & ALIYAR

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

SI. No. 19th 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

(At sl. 30th) 0.444 BCM, Live storage at FRL of Kabini reservoir is intrim

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

 $[\]dagger$ SABARMATI RESERVOIR IS SUPPLEMENTED WITH NARMADA WATER THROUGH PIPELINE.