

# RAJIV SAGAR (BAWANTHADI) PROJECT

## STATUS -REPORT

### 1.GENERAL :

Rajiv Sagar (Bawanthadi) Project, a joint venture of the states of Madhya Pradesh and Maharashtra, is a Major Irrigation Scheme under construction on the river Bawanthadi. The Dam site is near village Kudwa in Katangi Tehsil of Balaghat district in M.P. and village Sitekasa of Tumsar tehsil of Bhandara district in Maharashtra. The construction of dam and Left Bank Canal is to be carried out by Madhya Pradesh and that of Right Bank Canal is to be carried out by Maharashtra while the cost of the dam is to be shared equally by the two states. The cost of L.B.C. and R.B.C. have to be borne by Madhya Pradesh and Maharashtra respectively. On completion, the project is proposed to irrigate 18,615 Ha. land of Balaghat district in M.P. by Left Bank Canal and 17,537 Ha. land in Bhandara district in Maharashtra by Right Bank Canal. At 158% Crop Intensity 29,412 Ha. land of Balaghat District and 27,708 Ha. land of Bhandara District will be irrigated.

### 2.PROJECT AT AGLANCE :-

The 6420 m long main dam consists of earthen embankment at both the flanks, 220 m long masonry dam in the river portion with maximum height of 31 m, having 110 m long non over flow section. Six number 15 m x 12 m. size Radial gates have been provided to discharge flood water of 12616 cumecs. at F.R.L. 344.40 m. The gross reservoir capacity is 280.241 Mm<sup>3</sup> and live capacity is 217.32 Mm<sup>3</sup>.

The 80.52 Km. long left Bank canal having head discharge of 22.275 Cumecs will irrigate 18615 Ha. land of 97 villages of Katangi and Waraseoni tehsil of Balaghat District in M.P.

The 26.60 Km. long right bank canal having head discharge of 21.00 Cumecs will irrigate 17,537 Ha. land of 85 villages of Tumsar Tehsil of Bhandara District of Maharashtra state.

Salient features of the project are enclosed in **Annexure - I**

### 3.ADMINISTRATIVE APPROVAL :-

The position of Administrative Approval is as under :

Administrative Approval for Rs.1181.75 Lakhs vide Govt. of M.P. Irrigation Department Memo No. F/10/8/73/IS/33/ Dated 10/11/75.

Administrative Approval for Rs.1165.52 Lakhs vide Govt. of Maharashtra memo No. PIM/8075/176/T-25 Secretriare Bombay Dated 12/09/75.

First Revised Administrative Approval for Rs.7179.43 Lakhs has been accorded by the Govt. of Maharashtra for their portion of the work vide their No.BDP.1088/2073/295/88 -MP(2) Dated 12-8-93.

First Revised Administrative Approval for Rs.8978.037 Lakhs has been accorded by the Govt. of M.P. vide their No.28/19/31/MPS/86/1376/ Dated 18/10/93.

Second Revised Administrative Approval for Rs.18200.79 Lakhs has been accorded by the Govt. of Maharashtra for their portion of the work vide their No.MSID/2101/2884/01/MP(2) Dated 07.12.2001.

Second Revised Administrative Approval for **Rs.19499.175** Lakhs has been accorded by the Govt. of M.P. vide their No.M.P.WRDCB/31/02/2259/207 Dated 02.03.2002.

As per present price level (year 2009) the third revised estimate of project for Rs. 140719.159 lakh has been prepared by the both states and submitted to the E.in.C Bodhi Bhopal for recommendation to Illrd revised administrative approval vide C.E. Seoni memo No. 613/III<sup>rd</sup> RAA/Part-1/D.W./09 dated 08.09.2009. The details on as below.

(Rs. Lakh)

Particulars	Revised Estimated Cost	Share of M.P.	Share of M.S.
UNIT-I HEAD WORKS	32751.170	16375.585	16375.585
UNIT-II CANALS			
Left Bank Canal	49410.470	49410.470	-
Right Bank Canal	58557.519	---	58557.519
<b>TOTAL</b>	<b>140719.159</b>	<b>65786.055</b>	<b>74933.104</b>

(Abstract of revised Estimate of M.P. is enclosed as **Annexure-II.**)

#### **4.C.W.C.CLEARANCE :-**

The Central water Commission, New Delhi has accorded approval on 24-04-89 as under:

The technical advisory committee of Irrigation and flood control for multipurpose projects, in its 43<sup>rd</sup> meeting held in New Delhi on 18.05.89 found the project fit for approval, provided that:-

( a ) Rehabilitation & Resettlement Plan be submitted to the ministry of social welfare and environments.

- (i) The G.O.I. Ministry of Environment and forests has accorded approval the Rehabilitation and Resettlement plan vide their letter No. J-12011/10/87-IA-1 dated 05.05.1990.
- (ii) The G.O.I. Ministry of welfare/Kalyan Mantralaya New Delhi has also accorded approval to Rehabilitation and Resettlement plan vide their letter No. 20017/12/89-TD (B) dated 30.10.1990.
- (iii) The 104<sup>th</sup> Meeting of Technical advisory committee of irrigation flood control for multipurpose project is held on 12.05.2010 at New Delhi the revised project cost Rs. 1407.19 Crores has been approved and Recommended for Investment Clearance from G.O.I. Planning commission New Delhi.

G.O.I. Planning Commission has also accorded investment clearance vide their letter No.244/99-I & CAD New Delhi Dtd. 16.12.99 for Rs.161.57 Crore.

## **5.ENVIRONMENTAL CLEARANCE :**

Govt. of India, Ministry of Environment and forest New Delhi vide their letter No.

J-12011/10/89-IA Dt. 28/4/89 have cleared the scheme subject to certain conditions which are being complied with, both at field and Govt. level. The Govt. of M.P. vide their letter No.28/19 / 31/ MPS/86/2256 Bhopal Dated 4/9/90 have accepted the conditions.

## **6.FOREST CLEARANCE :-**

The Govt. of India Ministry of Environment and Forest vide their letter No.8-478/82-FC/ Dated 28/4/89 have accorded approval for transfer of 1940.02 Ha. Forest land of M.P. and 2448.10 Ha. forest land of Maharashtra. The Govt. of M.P. vide their letter No.28/19/31/MPS/ 86/2256 Bhopal Dated 4/9/90 have accepted the conditions.

## **7.POSITION OF PROPOSAL OF ADDITIONAL FOREST LAND :-**

The final approval of additional forest land under project has been accorded by G.O.I. the Ministry of Environment and forest vide their Memo No. F-No. 8-478/1982-FC dated 20.04.2010.

## **8.POSITION OF LAND ACQUISITION :-**

Particulars of land proposed to be acquired by respective states are given below.

(Figures in Ha.)

Details	Land Approved by GOI		TOTAL	Land Surrender to forest Deptt.		TOTAL	Land Acquired		Percentage	
	M.P.	M.S.		M.P.	M.S.		M.P.	M.S.	M.P.	M.S.
1	2	3	4	5	6	7	8	9	10	11
<b>Forest Land</b>										
Head Works	1146.28	2860.22	4006.50	100.191	479.40	579.591	767.97	2380.82	67	84
Canals	1267.05	420.509	1687.559	313.150	-	313.150	480.00	4.16	38	1
Total :-	2413.33	3280.729	5694.059	413.341	479.40	892.741				
<b>Private Land</b>										
Head Works	82.58	1045.04	1127.62	---	---	---	82.58	1045.04	100	100
Canals	700.00	514.01	1214.01	---	---	---	550.00	300.99	79	58.5
<b>Govt. Land</b>										
Head Works	71.40	139.60	211.00	---	---	---	71.40	139.60	100	100
Canals	97.00	375.00	472.00	---	---	---	80.00	---	82	--

## **8.1.REHABILITATION:**

PARTICULARS	M.P.	M.S.	TOTAL
No. of villages coming under submergence	1 (Land only)	10 (2 Partial)	11
No. of families affected	37 (land, owner)	759	796
Population affected	-	3519	3519

## **8.2 AFFECTED PROPERTY (UNIT - I )**

PARTICULARS	M.P.	M.S.	Total	COST (Rs. Lakhs)
Buildings, House (Nos.)	7 (Kachha)	632	639	396.95
Trees(Nos.)	4657	2851	7508	18.85
Others(Wells) Nos.	2	118	120	3.80
Others Temples	-	11	11	
Others Govt. Buildings	-	15	15	

## **9.PRESENT POSITION OF WORK :-**

### **(i) EARTHEN DAM :-**

#### **R.D. 0 to 3678.50 m.(Left flank)**

The Earthwork in this reach has been completed.

**R.D. 3898.50 to 3960 m. (Right Flank) :**

Tender of river closer has been finalized and issue work order to the contractor on dated 31.05.2010.

**R.D. 3960 to 6420 m (Right flank) :**

The work is completed up to TBL .

**(ii) MASONRY DAM ( Spillway):- R.D. 3678 M. to 3898 M. :-**

The Over flow blocks are also completed up to crest level. i.e. 332.40. All piers were raised up to hoist level. Construction of Deck Bridge have been completed. The masonry work of Non Over flow blocks has already been completed up to T.B.L. i.e. 348.65

**(iii) RADIAL GATES.**

The erection of radial gates for the project is being done by Mechanical wing of Govt. of M.S.. The work is in progress. At present the work of zenty cran and rails radial gate is in progress. Thus 99% work of Radial gates have been completed.

**(iv) CANAL HEAD SLUICE:-**

( I ) **Left Sluice** :- This work is 100% completed.

( II ) **Right Sluice** :- This work is 100% completed.

**10. POSITION OF RIVER CLOSER OF THE PROJECT :-**

The construction of Head work nearly completed 95%. The balance work for the river closer work will be executed between R.D. 3898.50 m. to 3960.00 m. The 12<sup>th</sup> Call of tender for river closer has been approved in P.R.C. on dated 10.05.2010 & the work is awarded to M/s Reddy brothers Mansar Distt. Nagpur it is proposed to complete up to 6/2011

**11. POSITION OF REHABILITATION AND RESETTLEMENT OF VILLAGES COMING UNDER SUBMERGENCE :-**

The Rehabilitation and Resettlement of the fully effected 8 No. village of Maharashtra State work are being done by Irrigation Department of Maharashtra State. As per certificate of S.E. Irrigation Circle Gosikhurd the work of rehabilitation has been completed only the resettlements of village are remain.

**12. CONSTRUCTION PROGRAMME:-**

It is proposed to complete the project by June 2011. Physical statement showing the annual progress for the year 2009-2010 is enclosed as **Annexure –IV**.

**13. BUDGET REQUIREMENT:-**

Revised year wise construction programme for head work is as under-

YEAR	HEAD WORK (Rs. In Lakh)
2010-2011	1213.00
2011-2012	1200.00
<b>TOTAL</b>	<b>2413.00</b>

The expenditure done on the Unit-I Head work up to 09/2010 is Rs. **29753.55** Lakh. (Year wise expenditure statement is attached as **Annexure –V**). There is provision of Rs. 5178.97 Lakh in the budget of 2010-11. (work 5011.37+ Estt. 185.20).

The project is included under A.I.B.P. in the year 2003-04 in month of 10/2003 for completion of balance works amounting to Rs 108.07 Crore (Loan 86.36+State Share 21.71=108.07 Crore). Expenditure under AIBP on H/W up to September – 2010 is Rs. **79.93 Crore**.

**14. YEAR WISE EXPENDITURE & SHARE RECEIVED FROM MAHARASHTRA :-**

Year wise expenditure done on the project and share received from M.S. is Shown in **Annexure-V.**

**15. TARGET FOR COMPLETION OF PROJECT :-**

River closer work will be completed up to 6/2011 and target for completion of project is 03/2012.

## RAJIV SAGAR PROJECT SALIENT FEATURES

1 Purpose	Irrigation		
2 Location			
Latitude	21°-32''-30'		
Longitude	79°-32''-30'		
Toposheet No.	55 <sup>0</sup> / <sub>10</sub>		
Nearby Village	Kudwa (M.P.) / Sitekasa (M.S.)		
Tehsil	Katangi (M.P.) / Tumsar (M.S.)		
District	Balaghat(M.P.) / Bhandara (M.S.)		
3 River/Basin	Bawanthadi,Tributary of Wainganga in Godawari Basin		
4 Catchment Area in Sq.Km.	<u>M.P.</u>	<u>M.S.</u>	<u>TOTAL</u>
	764	601	1365
5 Average Annual Rainfall	1,162.55 mm.		
6 Yield	Mm <sup>3</sup> /TMC		
(a) 75% Dependability	475.72/16.80		
(b) Upstream Reservation	113.27/4.00		
(c ) Balance available at Dam Site (a-b)	362.45/12.80		
(d) Regeneration	11.32/0.40		
(e) Net available (a-b+d)	373.78/13.20		
7 Water Utilisation (Mm <sup>3</sup> /TMC)	M.P.	M.S.	TOTAL
(a) Irrigation	<u>158.88</u>	<u>149.68</u>	<u>308.56</u>
	5.614	5.289	10.903
(b) Annual evaporation losses	<u>26.26</u>	<u>24.74</u>	<u>51</u>
	0.928	0.872	1.8
(c ) Drinking Water	<u>6.00</u>	<u>6.00</u>	<u>12.00</u>
	0.212	0.212	0.424
8 Storage Planning(Mm <sup>3</sup> /TMC)	M.P.	M.S.	TOTAL
(a) Gross Storage Capacity	-	-	<u>280.241</u>
			9.9
(b) Dead Storage Capacity	-	-	<u>62.921</u>
			2.22
(c ) Live Storage Capacity	<u>108.66</u>	<u>108.66</u>	<u>217.32</u>
	3.84	3.84	7.68
9 Principle Levels(Meters)			
(a) T.B.L.	348.65		
(b) M.W.L.	345.60		
(c) F.R.L.	344.40		
(d) Spillway Crest	332.40		
(e) Minimum draw down level	336.75		
(f ) L.S.L.(L.B.C.)	333.50		
(g) L.S.L.(R.B.C.)	333.50		
(h) Lowest River bed Level	317.60		



**ANNEXURE-II****RAJIV SAGAR PROJECT (DISTT. BALAGHAT.)****GENERAL ABSTRACT**

S. No.	SUB HEAD	UNIT-I	UNIT-II
1.	'A' Preliminary	118.74	116.31
2.	'B' Land	2172.40	238.21
3.	'C' Works	10185.48	634.80
4.	'D' Regulators	266.05	103.42
5.	'K' Buildings	214.34	83.08
6.	'E' Falls	-	96.19
7.	'F' C.D. Works	-	2025.63
8.	'G' Bridges	-	438.57
9.	'H' Escapes	-	111.66
10.	'L' Earth Work	-	3644.09
11.	'M' Plantation	8.00	70.34
12.	'O' Miscellaneous	491.35	288.93
13.	'P' Maintenance	125.30	94.44
14.	'Q' Special T & P	74.00	13.74
15.	'R' Communication	412.29	102.46
16.	'U' Distributaries	-	1728.84
17.	'X' Environment	953.18	116.38
18.	'Y' Losses on stock	31.64	23.85
19.	Establishment	1284.87	1063.57
	Cost control cell	9.93	7.23
20.	Ordinary T & P	150.21	99.07
21.	Audit Charges	150.21	99.07
22.	Suspense (R&R)	(-) 51.02	(-)12.88
23.	Capitalized value of abatement & land Revenue	7.46	9.96
	<b>TOTAL</b>	<b><u>16604.43 = 8302.215</u></b> <b>2</b>	<b>11196.96</b>

Share of M.P.- 8302.215 + 11196.96 = - **19499.175** Lakhs

**RAJIV SAGAR (BAWANTHADI) INTER STATE PROJECT****GENERAL ABSTRACT**

S. No.	SUB HEAD	UNIT-I	UNIT-II
1.	'A' Preliminary	319.52	139.20
2.	'B' Land	3233.77	879.36
3.	'C' Works	15154.85	-
4.	'D' Regulators	267.05	291.41
5.	'K' Buildings	696.06	218.53
6.	'E' Falls	-	176.22
7.	'F' C.D. Works	-	3858.21
8.	'G' Bridges	-	1508.00
9.	'H' Escapes	-	102.83
10.	'L' Earth Work	-	19464.67
11.	'M' Plantation	117.16	211.81
12.	'O' Miscellaneous	1044.37	841.94
13.	'P' Maintenance	106.59	327.57
14.	'Q' Special T & P	35.48	19.75
15.	'R' Communication	946.45	-
16.	'U' Distributaries	-	14684.28
17.	'W' Drain	-	-
18.	'X' Environment & Ecology	7919.76	976.33
19.	'Y' Losses on stock	26.65	81.90
	Total :-	29867.71	43782.01
20.	a) Establishment b) Cost control cell	2663.39 -	4719.29 -
21.	Ordinary T & P	122.14	437.82
22.	Receipt & Recoveries	(-) 13.96	-
23.	a) Capitalized value of abatement & land Revenue b) Audit and account charges.	- 111.89	70.26 437.82
24.	Suspense (R&R)	-	(-) 36.73
	<b>Total Direct and indirect charges.</b>	<b><u>32751.17</u> = 16375.585 2</b>	<b>49410.47</b>

**Madhya Pradesh 50% share + LBC****16375.585 + 49410.47  
= Rs. 65786.055 Lakhs**

**WISE EXPENDITURE DONE ON HEAD WORK & SHARE****RECEIVED FROM MAHARASHTRA STATE****(Rs. In Lakhs )**

Year	Unit-I	Share received from Maharashtra
	Head Works	
Up to 3/79	40.07	7.20
79-80	6.28	10.00
80-81	73.60	60.59
81-82	134.83	76.07
82-83	204.55	181.1
83-84	96.29	100.7
84-85	32.64	-----
85-86	23.26	-----
86-87	23.27	-----
87-88	31.83	-----
88-89	0.99	-----
89-90	14.40	-----
90-91	66.91	-----
91-92	67.44	-----
92-93	59.75	-----
93-94	108.65	200.00
94-95	453.23	227.00
95-96	207.47	564.50
96-97	423.38	-----
97-98	905.82	-----
98-99	1504.13	400.00
99-2000	2046.34	690.00
2000-2001	2350.34	1125.78
2001-2002	1575.32	178.86
2002-2003	1086.12	-----
2003-2004	639.43	-----
2004-2005	627.28	-----
2005-2006	940.88	800.00 500.00 287.18
2006-2007	520.79	
2007-2008	456.96	
2008-2009	465.72	
2009-2010	4921.790	
2010-2011 Up to 09/2010	342.64	
<b>Total Expenditure by M.P.</b>	<b>20511.43</b>	<b>5408.98</b>
Total Exp. by M.S. up to 12/2009	9242.12	-
<b>G. Total up to 09/2010</b>	<b>29753.55</b>	<b>5408.98</b>

1. 50% Share cost	-	14876.78
2. Share Received by M.S.		
Up to 7/09	-	5408.98
3. Expdt. In curred by M.S.		
Up to 12/2009	-	9242.12
Total share received by M.S.		<b>14651.10</b>
Balance Share is to be received from		
M.S. State by M.P. upto 9/2010		<b>225.68 Lakhs</b>

**PHYSICAL PROGRESS FOR THE MONTH OF 10/2010 STATE:M.P.**

**AIBP: Name of the Project:- Rajiv Sagar Project, Annual Progress for the year 2010-11**

S. No.	Item of A.I.B.P.	Unit	Revised Estimated Qty.	Progress up to 3/2010	Programme for 2010-11	Achievement up to the end of the previous month	Achievement during the month 10/2010	Cumulative Achievement for the Year (7+8)	Remark
1	2	3	4	5	6	7	8	9	10
1	<b>Unit-I Head Works :</b>								
	i) Land Acquisition (Private)	Ha.	82.583	82.583	-	-	-	-	
	ii) Land Acquisition (Forest)	Ha.	1046.089	767.97	378.119	-	-	-	
	<b>EARTHWORK</b>								
	1.Excavation:	Th.Cu.M.	740	740	Nil	-	-	-	
	2.Embankment	Th.Cu.M.	4436	3859	350	-	-	-	
	3. Masonry	Th.Cu.M.	72 (Revi.)	72	Nil	-	-	-	
	4.Concrete	Th.Cu.M.	113.40	112.935	0.175	-	-	-	

**Executive Engineer  
Rajiv Sagar Project Dn. No. 2  
Kudwa , Distt. Balaghat**



**Office of the Executive Engineer  
Rajiv Sagar Project Dn. No.-2  
Kudwa, Distt. – Balaghat**

Memo No. /TS/Status Report/Kudwa Date :  
.10.2009  
To,

**The Superintending Engineer  
Rajiv Sagar Project Circle,  
Balaghat.**

**Sub :- Submission of Status Report for the month of 07/2009.**

Kindly find enclosed here with the Status Report for the Month of 07/2009 for favour information please.

**Encl :- 2 No. Status Report Executive**  
**Engineer**  
**2**  
**(M.P.)**  
**Rajiv Sagar Project Dn. No.-**  
**Kudwa, Distt. – Balaghat**

Endt. No. /TS/Status Report/Kudwa Date :  
.08.2009

**Copy Submitted to :-**  
Chief Engineer, Wainganga Basin Water Resources Department  
Seoni for favour information please.

**Encl :- 2 No. Status Report Executive**  
**Engineer**  
**2**  
**(M.P.)**  
**Rajiv Sagar Project Dn. No.-**  
**Kudwa, Distt. – Balaghat**