Enclosure to Principal Chief Conservator of Forest (HoFF), M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell/CR-40/1127/2019-20, Date 04/10/2019

Model Rate Structure for Compensatory Afforestation

Model No.5.

Fencing and Irrigated Plantations

Model rate structure for plantation of mixed tree species having rainfall less than 800 mm and medium quality, medium drained soil.

Spacement	- 3m x 3m		
Size of Pits	- 0.45 x 0.45 x 0.45m		Wage Rate-
No. of Seedlings	- 1111 per ha	wage rate	Rs.404.50 per day.

Village	Malewadi
Range	Indapur
Round	Bhigwan
Beat	Palasdeo
Gat no.	181, 182

(Amount in Rs.)

Sr.No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. / Model No. / Item No.	For 38.896 ha Man days	Wages	Material supply	Total (Rs. Per Ha.)
	A. Pre Monsoon Works PPO/PYO									
1	(a) Survey and demarcation	1	404.5	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	1	404.5	91	495.5
	(b) Preparation of treatment map (100 m x 50 m grid)	1	404.5	91	495.5	Item No. 1b	1	404.5	91	495.5
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	161.8	0	161.8	Item No. 1c	0.4	161.8	0	161.8
	(d) Fixing 60cm x 0.05cm x12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs.75/- for each pillrs)	0	0	225	225	Item No. 1d	0	0	225	225
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4045	91	4136	Item No. 1e	10	4045	91	413[illegible]
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	12539.5	0	12539.5	Item No. 2	31	12539.5	0	12539.5
3	Providing and fixing chain link fencing, 102 Rmt per ha (With one gate + two wickets gates for one site) (Rs.1494/- per Rmt of basic rate + 20% for transportation of ave. [illegible]us 20% for tribal/remote area (by [illegible] process.) (Rs.1494+149+149=1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mmx50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item No.1744 for 2017-18)	0	0	182865.6	182865.6	As per SSR rates 201718 Item No. 1744	0	0	182865.6	182865.6
4	Alignment of pits at 3m x 3m spacement. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1124.51	49.77	1174.28	Item No. 4	2.78	1124.51	49.77	1174.28
5	Digging of pits of size 0.45 x 0.45 x 0.45 m (1111 pits per ha) 6.60 M.D per 100 pits. **Note :-** As per local conditions provision for mechanized digging can be made.	73.33	29661.99	0	29661.99	Item No. 5	73.33	29661.99	0	29661.9
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	404.5	0	404.5	Item No. 6	1	404.5	0	404.5
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing color band and recording the same in Register (0.75 M.D.) per 100 plants	0.75	303.37	25	328.37	Item No. 7	0.75	303.37	25	328.37
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	5000	5000
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wages Rs.11.90 and M & S Rs.3.62 per plant)	46.71	18894.19	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	46.71	18894.19	4825.46	23719.65
	Total	**167.97**	**67943.86**	**193263.83**	**261207.69**		167.97	67943.86	193263.83	261207.69
	Contingency 3%		0		7836.23		0	0		7836.2307
	Labour Welfare 4%		0		10448.3		0	0		10448.3076
	Grand Total	**167.97**	**67943.86**	**193263.83**	**279492.22**		167.97	67943.86	193263.83	279492.2283
	B. Fi[illegible]r Operations									
1	[illegible] Nursery cost for maintenance of 1333 seedling per ha Rs. 3.77 per seedling (Wages Rs.2.69, M & S Rs. 0.81)	14.8	5986.6	1079.73	7066.33	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	14.8	5986.6	1079.73	7066.[illegible]
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7458.98	1944.25	9403.23	Item No. 2	18.44	7458.98	1944.25	9403.23
3	Transportation of 1333 seedlings from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedlings & M.S. Rs.1.82 Per seedlings)	1.87	756.41	2426	3182.41	Item No. 3 10% Extra Plants to be transported	1.87	756.41	2426	3182.41
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	4493.99	0	4493.99	Item No. 4	11.11	4493.99	0	4493.99
5	3 seedlings (1 Rmt circular) and 2 soil workings (4.00 M.D per 100 seedlings) fertilizer application Rs.0.82 per seedling	44.44	17975.98	911.02	18887	Item No. 5	44.44	17975.98	911.02	18887
6	Watering 1111 seedlings November and December 1 time each, January to March 2 times each per seedlings 5 litre water, purchase of 1111 plastic can of 5 litre / matka @Rs.25/- each and 100 litre capacity 11 drums @Rs.400/ each for supplying water and water supply at @Rs.0.05 per litre and wages for watering 1 M.D. for 150 seedlings.	59.25	23966.62	54395	78361.62	Item No. 7	59.25	23966.62	54395	78361.62
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1795.98	0	1795.98	Item No. 6 20% instead of 10%	4.44	1795.98	0	1795.98
8	Part Nursery cost for causality replacement in SYO (222 seedlings per ha.) (wages Rs. 11.90 and material supply Rs.3.62 total Rs.12.55 per seedling.)	7.77	3142.96	803.64	3946.6	Item No. 8 20% instead of 10%	7.77	3142.96	803.64	3946.6
9	Watch and ward (10 months – 1 watcher per 10 ha)	27.38	11075.21	0	11075.21	Item No. 9	27.38	11075.21	0	11075.21
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	465.17	10	475.17	Item No. 10	1.15	465.17	10	475.17
11	Fire tracing	2	809	0	809	Item No. 12	2	809	0	809
	Total	192.65	77926.9	61569.64	139496.54		192.65	77926.9	61569.64	139496.54

•	Contingency 3%		0		4184.9					4184.8962
	Labour Welfare 4%		0		5579.86					5579.8616
	Grand Total	192.65	77926.9	61569.64	149261.3		192.65	77926.9	61569.64	149261.2978
C. Second Year Operations										
1	Part nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs.3.77 and M.S. Rs.1.82 per seedlings.	2.46	995.07	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	2.46	995.07	404	1399.07
2	Transportation of 222 seedlings for causality replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D Per 100 Seedling & M.S. Rs.1.82 per seedlings	0.31	125.39	404.04	529.43	Item No. 2 20% instead of 10%	0.31	125.39	404	529.39
3	Planting for casualty replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1795.98	0	1795.98	Item No. 3 20% instead of 10%	4.44	1795.98	0	1795.98
4	2 weedings and 1 soil working, with fertilizer application 2.5 M.D. per 100 seedlings at M.S. Rs. 0.82 per seedling	27.77	11232.96	911.02	12143.98	Item No. 4	27.77	11232.96	911.02	12143.98
5	Watering 1111 seedlings in November, December, January and June 1 time each and in February to May 2 times each total 12 times 5 litre per seedlings, replacing 10% plastic can / matka @Rs.25/- each replacing 111 cans / matka, supplying water @Rs.0.50/- per litre and watering 150 seedlings per M.D.	88.88	35951.96	36105	72056.96	Item No. 5	88.88	35951.96	36105	72056.9
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 6	36.5	14764.25	0	14764.25
7	Fire tracing	2	809	0	809	Item No. 8	2	809	0	809
	Total	162.36	65674.61	37824.06	103498.67		162.36	65674.61	37824.02	103498.63
	Contingency 3%		0		3104.96					3104.9589
	Labour Welfare 4%		0		4139.94					4139.9452
	Grand Total	162.36	65674.61	37824.06	110743.57		162.36	65674.61	37824.02	110743.5341
D. Thir[illegible]r Operations										
1	[illegible]ng and 1 soil working (1.50 M.D per 100 seedlings) applying fertilizer @ Rs.0.82 per plant.	16.67	6743.01	911.02	7654.03	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	16.67	6743.01	911.02	7654.03
2	Watering 556 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times per seedlings 5 litre, water supply @Rs.0.50/- litre and watering 150 seedlings per M.D.	44.48	17992.16	16680	34672.16	Item No. 2	44.48	17992.16	16680	34672.
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	36.5	14764.25	0	14764.25
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 5	2	809	25	834
5	Fire tracing	2	809	0	809	Item No. 6	2	809	0	809
	Total	101.65	41117.42	17616.02	58733.44		101.65	41117.42	17616.02	58733.44
	Contingency 3%		0		1762					1762.0032
	Labour Welfare 4%		0		2349.33					2349.3376
	Grand Total	101.65	41117.42	17616.02	62844.77		101.65	41117.42	17616.02	62844.7808
E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	2	809	25	8
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
	Total	40.5	16382.25	25	16407.25		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.29
	Grand Total	40.5	16382.25	25	17555.75		40.5	16382.25	25	17555.7575
F. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
	Total	40.5	16382.25	25	16407.25		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.2
	Grand Total	40.5	16382.25	25	17555.75		40.5	16382.25	25	17555.757
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.2
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
	Total	40.5	16382.25	25	16407.25		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.29
	Grand Total	40.5	16382.25	25	17555.75		40.5	16382.25	25	17555.7575
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	8

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•	**Total**	**40.5**	**16382.25**	**25**	**16407.25**		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.29
	Grand Total	**40.5**	**16382.25**	**25**	**17555.75**		40.5	16382.25	25	17555.7575
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2	809	25	834	Item No. 2	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	8[illegible]
	Total	**40.5**	**16382.25**	**25**	**16407.25**		40.5	16382.25	25	16407.[illegible]
	Contingency 3%		0		492.21					492.217[illegible]
	Labour Welfare 4%		0		656.29					656.2[illegible]
	Grand Total	**40.5**	**16382.25**	**25**	**17555.75**		40.5	16382.25	25	17555.7575
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	809	25	834	Item No. 2	2	809	25	834
3	Fire tracing	2	809	0	809	Item No. 3	2	809	0	809
	Total	**40.5**	**16382.25**	**25**	**16407.25**		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.29
	Grand Total	**40.5**	**16382.25**	**25**	**17555.75**		40.5	16382.25	25	17555.7575
K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.5	14764.25	0	14764.25
2	Counting of survival percentage Grid wise and Sp[illegible] wise and to Note the same on Register i[illegible]nd October.	2	809	25	834	Item No. 2	2	809	25	8[illegible]
3	F[illegible]cing	2	809	0	809	Item No. 3	2	809	0	809
	Total	**40.5**	**16382.25**	**25**	**16407.25**		40.5	16382.25	25	16407.25
	Contingency 3%		0		492.21					492.2175
	Labour Welfare 4%		0		656.29					656.29
	Grand Total	**40.5**	**16382.25**	**25**	**17555.75**		40.5	16382.25	25	17555.7575

Abstract for Model No.5

(Amount in Rupees)

S. N.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amount	Man days	Wages	Material supply	Total
								For 38.896 ha.			
1	Pre Monsoon works	167.97	67943.86	193263.83	261207.7	18284.53	**279492.22**	167.97	67943.86	193263.83	279492.2283
2	First Year Operations	192.65	77926.9	61569.64	139496.5	9764.76	**149261.3**	192.65	77926.9	61569.64	149261.2978
3	Second Year Operations	162.36	65674.61	37824.06	103498.7	7244.9	**110743.57**	162.36	65674.61	37824.02	110743.5341
4	Third Year Operations	101.65	41117.42	17616.02	58733.44	4111.33	**62844.77**	101.65	41117.42	17616.02	62844.7808
5	Fourth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
6	Fifth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
7	Sixth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
8	Seventh Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
9	Eighth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
10	Nineth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
11	Tenth Year Operations	40.5	16382.25	25	16407.25	1148.5	**17555.75**	40.5	16382.25	25	17555.7575
	Total	**908.13**	**367338.54**	**310448.55**	**677787.1**	**47445.02**	**725232.11**	908.13	367338.54	310448.51	725232.1435

Cost per plant Rs.652.77

Note:-

1. Rates of chain linked fencing derived from SSR-2017-18 with addition for area difference and transportation lead.

2. Plantat[illegible] M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. vide letter No.Desk-1/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

(Rahul Patil, IFS)
Deputy Conservator of Forests,
Pune Forest Division, Pune