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

No. of Seedlings - 1111 per ha wage rate Wage Rs.339.61 per day.

(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 34.50 ha Man days	Wages	Material supply	Total (Rs. Per Ha.)
	A. Pre Monsoon Works PPO/PYO									
1	(a) Survey and demarcation	1	339.61	91	430.61	Letter Dt. 07/03/2018 Irrigated & fencing Plantation	34.5	11716.545	3139.5	14856.0
	(b) Preparation of treatment map (100 m x 50 m grid)	1	339.61	91	430.61	Item No. 1b	34.5	11716.545	3139.5	14856.0
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	135.84	0	135.84	Item No. 1c	13.8	4686.48	0	4686.
	(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	7762.5	776
	(e) Clearing of bushes and preparation of site (As per requirement)	10	3396.1	91	3487.1	Item No. 1e	345	117165.45	3139.5	120304.
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	10527.91	0	10527.91	Item No. 2	1069.5	363212.895	0	363212.8
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. leadplus 20% for tribal/remote area (by tender 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	6308863.2	6308863
4	Alignment of pits at 3m x 3m spacement. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	944.12	49.77	993.89	Item No. 4	95.91	32572.14	1717.065	34289.205
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	24903.6	0	24903.6	Item No. 5	2529.885	859174.2	0	85917
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	339.61	0	339.61	Item No. 6	34.5	11716.545	0	11716.
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	254.71	25	279.71	Item No. 7	25.875	8787.495	862.5	9649.
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	172500	172
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	15863.18	4825.46	20688.84	Item No. 9 20% Casualty replacement in place of 10%	1611.495	547279.71	166478.37	713758
	Total	**167.97**	**57044.29**	**193263.83**	**250308.12**		5794.965	1968028.005	6667602.135	8635630
	Contingency 3%		0	7509.23	7509.24		0	0		259068.9
	Labour Welfare 4%		0	10012.31	10012.32		0	0		345425.2
	Grand Total	**167.97**	**57044.29**	**193263.83**	**267829.69**		5794.965	1968028.005	6667602.135	9240124
	B. First Year Operations									
	Part 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	5062.23	1079.73	6105.96	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	510.6	174646.935	37250.685	211897
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	6262.41	1944.25	8206.66	Item No. 2	636.18	216053.145	67076.625	283129
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	635.07	2426	3061.07	Item No. 3 10% Extra Plants to be transported	64.515	21909.915	83697	105606.
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0	3773.07	Item No. 4	383.295	130170.915	0	130170
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	15092.27	911.02	16003.29	Item No. 5	1533.18	520683.315	31430.19	552113
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	20121.89	54395	74516.89	Item No. 7	2044.125	694205.205	1876627.5	2570832
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1507.87	0	1507.87	Item No. 6 20% instead of 10%	153.18	52021.515	0	52021
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	2638.77	803.64	3442.41	Item No. 8 20% instead of 10%	268.065	91037.565	27725.58	118763
9	Watch and ward (10 months – 1 watcher per 10 ha)	27.38	9298.52	0	9298.52	Item No. 9	944.61	320798.94	0	32079
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	390.55	10	400.55	Item No. 10	39.675	13473.975	345	13818
11	Fire tracing	2	679.22	0	679.22	Item No. 12	69	23433.09	0	2343
	Total	**192.65**	**65425.87**	**61569.64**	**126995.51**		**6646.425**	**2258434.515**	**2124152.58**	4382587
	Contingency 3%		0	3809.87	3809.87					131477.
	Labour Welfare 4%		0	5079.82	5079.82					175303.
	Grand Total	**192.65**	**65425.87**	**61569.64**	**135885.19**		6646.425	2258434.515	2124152.58	468936

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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	835.44	404	1239.44	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	84.87	28822.68	13938	42760.6
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	105.28	404.04	509.32	Item No. 2 20% instead of 10%	10.695	3632.16	13938	17570.1
3	Planting for casualty replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1507.87	0	1507.87	Item No. 3 20% instead of 10%	153.18	52021.515	0	52021.5
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	9430.97	911.02	10341.99	Item No. 4	958.065	325368.465	31430.19	356798.65
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	30184.54	36105	66289.54	Item No. 5	3066.36	1041366.63	1245622.5	2286989.
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 6	1259.25	427654.065	0	427654.0
7	Fire tracing	2	679.22	0	679.22	Item No. 8	69	23433.09	0	23433.
	Total	**162.36**	**55139.08**	**37824.06**	**92963.14**		**5601.42**	**1902298.605**	**1304928.69**	3207227.2
	Contingency 3%		0	2788.89	2788.89					96216.818
	Labour Welfare 4%		0	3718.53	3718.53					128289.09
	Grand Total	**162.36**	**55139.08**	**37824.06**	**99470.56**		**5601.42**	**1902298.605**	**1304928.69**	**3431733.2**
D. Third Year Operations										
1	1 weeding and 1 soil working (1.50 M.D per 100 seedlings) applying fertilizer @ Rs.0.82 per plant.	16.67	5661.3	911.02	6572.32	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	575.115	195314.85	31430.19	226745.
	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	15105.85	16680	31785.85	Item No. 2	1534.56	521151.825	575460	1096611.8
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Item No. 3	1259.25	427654.065	0	427654.0
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 5	69	23433.09	862.5	24295
5	Fire tracing	2	679.22	0	679.22	Item No. 6	69	23433.09	0	23433
	Total	**101.65**	**34521.36**	**17616.02**	**52137.38**		3506.925	1190986.92	607752.69	1798739
	Contingency 3%		0	1564.12	1564.12					53962.18
	Labour Welfare 4%		0	2085.5	2085.5					71949.58
	Grand Total	**101.65**	**34521.36**	**17616.02**	**55787**		**3506.925**	**1190986.92**	**607752.69**	**1924651.3**
E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654.0
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	23433
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382.
	Contingency 3%		0	413.38	413.38					14261.48
	Labour Welfare 4%		0	551.17	551.17					19015.3
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		**1397.25**	**474520.245**	**862.5**	**508659.5**
F. Fifth Year Operations										
	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654.
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	23433
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382.
	Contingency 3%		0	413.38	413.38					14261.48
	Labour Welfare 4%		0	551.17	551.17					19015.3
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.5
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654.
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	2343
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382
	Contingency 3%		0	413.38	413.38					14261.48
	Labour Welfare 4%		0	551.17	551.17					19015.3
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.5
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	2429
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	2343
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	47538
	Contingency 3%		0	413.38	413.38					14261.4
	Labour Welfare 4%		0	551.17	551.17					19015.
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654

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2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295.5
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	23433.0
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382.74
	Contingency 3%		0	413.38	413.38					14261.4823
	Labour Welfare 4%		0	551.17	551.17					19015.309
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.537
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654.06
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295.5
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	23433.0
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382.74
	Contingency 3%		0	413.38	413.38					14261.4823
	Labour Welfare 4%		0	551.17	551.17					19015.309
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.537
K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	12395.77	0	12395.77	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1259.25	427654.065	0	427654.0
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	679.22	25	704.22	Item No. 2	69	23433.09	862.5	24295.
3	Fire tracing	2	679.22	0	679.22	Item No. 3	69	23433.09	0	23433.
	Total	**40.5**	**13754.21**	**25**	**13779.21**		1397.25	474520.245	862.5	475382.7
	Contingency 3%		0	413.38	413.38					14261.482
	Labour Welfare 4%		0	551.17	551.17					19015.30
	Grand Total	**40.5**	**13754.21**	**25**	**14743.75**		1397.25	474520.245	862.5	508659.53

Abstract for Model No.5

(Amount in Rupees)

S.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amount	Man days	Wages	Material supply	Total
								For 34.50 ha.			
1	Pre Monsoon works	167.97	57044.29	193263.83	250308	17521.57	**267829.69**	5794.965	1968028.005	6667602.135	9240124.25
2	First Year Operations	192.65	65425.87	61569.64	126996	8889.69	**135885.19**	6646.425	2258434.515	2124152.58	4689368.192
3	Second Year Operations	162.36	55139.08	37824.06	92963	6507.42	**99470.56**	5601.42	1902298.605	1304928.69	3431733.206
4	Third Year Operations	101.65	34521.36	17616.02	52137	3649.62	**55787**	3506.925	1190986.92	607752.69	1924651.383
5	Fourth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
6	Fifth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
7	Sixth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
8	Seventh Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
9	Eighth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
10	Nineth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
11	Tenth Year Operations	40.5	13754.21	25	13779	964.54	**14743.75**	1397.25	474520.245	862.5	508659.5372
	Total	**908.13**	**308410.03**	**310448.55**	**618859**	**43320.1**	**662178.68**	31330.485	10641389.76	10710473.6	22846493.79

Cost per plant Rs.596.02

Note:-

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

(Sreelakshmi A.)
Deputy Conservator of Forests,
Pune Forest Division, Pune