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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.

Spacing - 3m x 3m

Size of Pits - 0.45 x 0.45 x 0.45m

No. of Seedlings - 1111 per ha

wage rate- 413.69 per day

Ca Area= 34.00 hector

Range Indapur

Round Indapur

Beat Kati

village sarafwadi g.no.27,96,97,98,99

Abstract for Model No.5

S. N.	Year of operation	Total
1	Pre Monsoon works	9558893.724
2	First Year Operations	5138625.469
3	Second Year Operations	3818894.035
4	Third Year Operations	2136722.547
5	Fourth Year Operations	610436.2091
6	Fifth Year Operations	610436.2091
7	Sixth Year Operations	610436.2091
8	Seventh Year Operations	610436.2091
9	Eighth Year Operations	610436.2091
10	Nineth Year Operations	610436.2091
11	Tenth Year Operations	610436.2091
Total		24926189.24

Cost per plant Rs. 659.8768793



(Rahul Patil, IFS)

Deputy Conservator of Forests,
Pune Forest Division, Pune

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Size of Pits
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- 0.45 x 0.45 x 0.45m

- 1111 per ha

wage rate

Wage Rate-
Rs 413.69 per day

Range Indapur

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Beat Kati

village sarafwadi

g.no.27,96,97,98,99

(Amount in Rs.)

Sr.No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. / Model No. / Item No.	Man days	Wages	Material supply	Total (Rs. Per Ha.)
A. Pre Monsoon Works PPO/PYO							For 34 ha.			
1	(a) Survey and demarcation	1	413.69	91	495.5	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	34	14065.46	3094	17159.46
	(b) Preparation of treatment map (100 m x 50 m grid)	1	413.69	91	495.5	Item No. 1b	34	14065.46	3094	17159.46
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.4	165.476	0	161.8	Item No. 1c	13.6	5626.184	0	5626.184
	(d) Fixing 60cm x 0.05cm x 12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs.75/- for each pillars)	0	0	225	225	Item No. 1d	0	0	7650	7650
	(e) Clearing of bushes and preparation of site (As per requirement)	10	4136.9	91	4136	Item No. 1e	340	140654.6	3094	143748.6
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	12824.39	0	12539.5	Item No. 2	1054	436029.26	0	436029.26
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. 100m. 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 50mmx50mm, 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	6217430.4	6217430.4
4	Alignment of pits at 3m x 3m spacing. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs.	2.78	1150.0582	49.77	1174.28	Item No. 4	94.52	39101.9788	1692.18	40794.1588
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	30335.8877	0	29661.99	Item No. 5	2493.22	1031420.182	0	1031420.182
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1	413.69	0	404.5	Item No. 6	34	14065.46	0	14065.46
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	310.2675	25	328.37	Item No. 7	25.5	10549.095	850	11399.095
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0	0	170000	170000
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	19323.4599	4825.46	23719.65	Item No. 9 20% Casualty replacement in place of 10%	1588.14	656997.6366	164065.64	821063.2766
	Total	167.97	69487.509	193263.83	261207.69		5710.98	2362575.316	6570970.22	8933545.536
	Contingency 3%		0		7836.23		0	0		268006.3661
	Labour Welfare 4%		0		10448.3		0	0		357341.8214
	Grand Total	167.97	69487.509	193263.83	279492.22		5710.98	2362575.316	6570970.22	9558893.724
B. First Operations										
1	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	6122.612	1079.73	7066.33	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	503.2	208168.808	36710.82	244879.628
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7628.4436	1944.25	9403.23	Item No. 2	626.96	259367.0824	66104.5	325471.5824
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	773.6003	2426	3182.41	Item No. 3 10% Extra Plants to be transported	63.58	26302.4102	82484	108786.4102
4	Planting of 1111 seedlings (1.0 MD per 100 seedlings)	11.11	4596.0959	0	4493.99	Item No. 4	377.74	156267.2606	0	156267.2606
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	18384.3836	911.02	18887	Item No. 5	1510.96	625069.0424	30974.68	656043.7224
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	24511.1325	54395	78361.62	Item No. 7	2014.5	833378.505	1849430	2682808.505
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 6 20% instead of 10%	150.96	62450.6424	0	62450.6424
8	Part Nursery cost for casualty 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	3214.3713	803.64	3946.6	Item No. 8 20% instead of 10%	264.18	109288.6242	27323.76	136612.3842
9	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	11326.8322	0	11075.21	Item No. 9	930.92	385112.2948	0	385112.2948
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	475.7435	10	475.17	Item No. 10	39.1	16175.279	340	16515.279
11	Fire tracing	2	809	0	809	Item No. 12	68	27506	0	27506

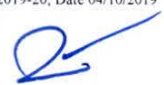
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Total		192.65	79678.9985	61569.64	139496.54	6550.1	2709085.949	2093367.76	4802453.709	
Contingency 3%			0		4184.9				199073.6113	
Labour Welfare 4%			0		5579.86				192098.1484	
Grand Total		192.65	79678.9985	61569.64	149261.3	6550.1	2709085.949	2093367.76	5138625.469	
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	1017.6774	404	1399.07	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	83.64	34601.0316	13736	48337.0316
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	128.2439	404.04	529.43	Item No. 2 20% instead of 10%	10.54	4360.2926	13736	18096.2926
3	Planting for causality replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1836.7836	0	1795.98	Item No. 3 20% instead of 10%	150.96	62450.6424	0	62450.6424
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	11488.1713	911.02	12143.98	Item No. 4	944.18	390597.8242	30974.68	421572.5042
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	36768.7672	36105	72056.96	Item No. 5	3021.92	1250138.085	1227570	2477708.085
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Item No. 6	1241	513389.29	0	513389.29
7	Fire tracing	2	809	0	809	Item No. 8	68	27506	0	27506
Total		162.36	67148.3284	37824.06	103498.67		5520.24	2283043.166	1286016.68	3569059.846
Contingency 3%			0		3104.96					107071.7954
Labour Welfare 4%			0		4139.94					142762.3938
Grand Total		162.36	67148.3284	37824.06	110743.57		5520.24	2283043.166	1286016.68	3818894.035
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	6743.01	911.02	7654.03	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	566.78	229262.34	30974.68	260237.02
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	1512.32	611733.44	567120	1178853.44
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14764.25	0	14764.25	Item No. 3	1241	501984.5	0	501984.5
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	68	27506	850	28356
5	Fire tracing	2	809	0	809	Item No. 6	68	27506	0	27506
Total		101.65	41117.42	17616.02	58733.44		3456.1	1397992.28	598944.68	1996936.96
Contingency 3%			0		1762					59908.1088
Labour Welfare 4%			0		2349.33					79877.4784
Grand Total		101.65	41117.42	17616.02	62844.77		3456.1	1397992.28	598944.68	2136722.547
E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
Total		40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
Contingency 3%			0		492.21					17115.0339
Labour Welfare 4%			0		656.29					22820.0452
Grand Total		40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
F. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
Total		40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
Contingency 3%			0		492.21					17115.0339
Labour Welfare 4%			0		656.29					22820.0452
Grand Total		40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
Total		40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
Contingency 3%			0		492.21					17115.0339
Labour Welfare 4%			0		656.29					22820.0452
Grand Total		40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92

3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
	Total	40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
	Contingency 3%		0		492.21					17115.0339
	Labour Welfare 4%		0		656.29					22820.0452
	Grand Total	40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
	Total	40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
	Contingency 3%		0		492.21					17115.0339
	Labour Welfare 4%		0		656.29					22820.0452
	Grand Total	40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
	Total	40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
	Contingency 3%		0		492.21					17115.0339
	Labour Welfare 4%		0		656.29					22820.0452
	Grand Total	40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091
K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	15099.685	0	14764.25	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	1241	513389.29	0	513389.29
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	827.38	25	834	Item No. 2	68	28130.92	850	28980.92
3	Fire tracing	2	827.38	0	809	Item No. 3	68	28130.92	0	28130.92
	Total	40.5	16754.445	25	16407.25		1377	569651.13	850	570501.13
	Contingency 3%		0		492.21					17115.0339
	Labour Welfare 4%		0		656.29					22820.0452
	Grand Total	40.5	16754.445	25	17555.75		1377	569651.13	850	610436.2091

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. M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell /CR-40/1127/2019-20, Date 04/10/2019


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