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DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, HP.

FRL

Species wise and Class wise Enumeration of trees

Abstract of trees									
S. No.	Local Name	Scientific Name	0-30 (cm)	31-60 (cm)	61-90 (cm)	91 - 120 (cm)	121-150 (cm)	>150 (cm)	Total Nos.
1	Akhrot	<i>Juglans regia</i>	47	50	28	2	0	0	127
2	Ash/Shunu	<i>Fraxinus floribunda</i>	98	55	3	0	0	0	156
3	Badah/Willow	<i>Willow/Salix</i>	956	40	0	0	0	0	996
4	Bakharu	<i>Lonicera</i>	105	6	0	0	0	0	111
5	Bhujpatra	<i>Betula utilis</i>	1	3	0	0	0	0	4
6	Chilgoza	<i>Pinus gerardiana</i>	626	272	27	13	0	0	938
7	Deodar	<i>Cedus deodara</i>	652	596	300	82	0	0	1630
8	Fir / Spruce	<i>Pecia simithiana morinda</i>	8	5	3	1	0	0	17
9	Goon	<i>H c natt</i>	469	423	107	41	0	0	1040
10	Jammu	<i>Prunus padus</i>	3	1	0	0	0	0	4
11	Kail	<i>Pinus wallichiana</i>	182	64	33	15	0	0	294
12	Kainth	<i>Pires pisia</i>	19	21	4	0	0	0	44
13	Khadak	<i>Cettris australice</i>	1038	525	55	6	0	0	1624
14	Killar	<i>Parrotis Jacquemontiana</i>	9724	36	1	0	0	0	9761
15	Mandar / Mapple	<i>Acer Caesium</i>	626	95	1	0	0	0	722
16	Maral	<i>Almus</i>	125	89	28	4	0	0	246
17	Poplar/Safeda	<i>populus alba</i>	38	21	1	0	0	0	60
18	Payakh	<i>alnus nitida / alder</i>	951	568	89	21	0	0	1629
19	Pingyath	<i>Crataegus</i>	47	2	0	0	0	0	49
20	Robinia	<i>Robinia spedeuocacia</i>	3	3	0	0	0	0	6
21	Sanjal	<i>Fraxinus xynthozeloides</i>	945	87	1	0	0	0	1033
22	Thangi	<i>Corylus Columa</i>	185	87	9	5	0	0	286
	Total Nos of trees at FRL		16848	3049	690	190	0	0	20777


(Range Officer)
Range Forest Officer
Killar Forest Range
KILLAR


(Divisional Forest Officer)
Divisional Forest Officer
Pangi Forest Division
KILLAR

DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, HP.

Species wise and Class wise Enumeration of trees

FRL - 2 M

Abstract of trees									
S. No.	Local Name	Scientific Name	0-30 (cm)	31-60 (cm)	61-90 (cm)	91 - 120 (cm)	121-150 (cm)	>150 (cm)	Total Nos.
1	Akhrot	<i>Juglans regia</i>	47	49	27	2	0	0	125
2	Ash/Shunu	<i>Fraxinus floribunda</i>	98	55	3	0	0	0	156
3	Badah/Willow	<i>Willow/Salix</i>	946	38	0	0	0	0	984
4	Bakharu	<i>Lonicera</i>	105	6	0	0	0	0	111
5	Bhujpatra	<i>Betula utilis</i>	1	3	0	0	0	0	4
6	Chilgoza	<i>Pinus gerardiana</i>	618	268	26	13	0	0	925
7	Deodar	<i>Cedus deodara</i>	631	585	298	81	0	0	1595
8	Fir / Spruce	<i>Pecia simithiana morinda</i>	8	5	3	1	0	0	17
9	Goon	<i>H c natt</i>	468	422	107	41	0	0	1038
10	Jammu	<i>Prunus padus</i>	3	1	0	0	0	0	4
11	Kail	<i>Pinus wallichiana</i>	173	63	32	15	0	0	283
12	Kainth	<i>Pires pisia</i>	19	21	4	0	0	0	44
13	Khadak	<i>Cettris australice</i>	1024	517	54	6	0	0	1601
14	Killar	<i>Parrotis Jacquemontiana</i>	9704	35	1	0	0	0	9740
15	Mandar / Mapple	<i>Acer Caesium</i>	621	92	1	0	0	0	714
16	Maral	<i>Almus</i>	122	87	28	4	0	0	241
17	Poplar/Safeda	<i>populus alba</i>	37	20	1	0	0	0	58
18	Payakh	<i>alnus nitida / alder</i>	932	557	87	21	0	0	1597
19	Pingyath	<i>Crataegus</i>	47	2	0	0	0	0	49
20	Robinia	<i>Robinia spedeuocacia</i>	3	3	0	0	0	0	6
21	Sanjal	<i>Fraxinus xynthozeloides</i>	932	86	1	0	0	0	1019
22	Thangi	<i>Corylus Columa</i>	180	87	9	5	0	0	281
	Total Nos of trees at FRL -2 M		16719	3002	682	189	0	0	20592


 (Range Officer)
 Range Forest Officer
 Killar Forest Range
 KILLAR


 (Divisional Forest Officer)
 Divisional Forest Officer
 Pangi Forest Division
 KILLAR

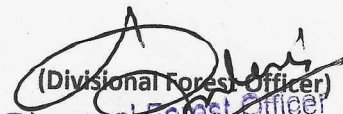
DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, HP.

Species wise and Class wise Enumeration of trees

FRL - 4 M

Abstract of trees									
S. No.	Local Name	Scientific Name	0-30 (cm)	31-60 (cm)	61-90 (cm)	91 - 120 (cm)	121-150 (cm)	>150 (cm)	Total Nos.
1	Akhrot	<i>Juglans regia</i>	47	49	26	2	0	0	124
2	Ash/Shunu	<i>Fraxinus floribunda</i>	96	55	2	0	0	0	153
3	Badah/Willow	<i>Willow/Salix</i>	933	36	0	0	0	0	969
4	Bakharu	<i>Lonicera</i>	105	6	0	0	0	0	111
5	Bhujpatra	<i>Betula utilis</i>	1	3	0	0	0	0	4
6	Chilgoza	<i>Pinus gerardiana</i>	608	263	26	13	0	0	910
7	Deodar	<i>Cedus deodara</i>	608	572	290	80	0	0	1550
8	Fir / Spruce	<i>Pecia simithiana morinda</i>	8	5	3	1	0	0	17
9	Goon	<i>H c natt</i>	469	422	107	41	0	0	1039
10	Jammu	<i>Prunus padus</i>	3	1	0	0	0	0	4
11	Kail	<i>Pinus wallichiana</i>	164	60	32	14	0	0	270
12	Kainth	<i>Pires pisia</i>	19	21	4	0	0	0	44
13	Khadak	<i>Cettris australice</i>	1020	513	54	6	0	0	1593
14	Killar	<i>Parrotis Jacquemontiana</i>	9671	34	1	0	0	0	9706
15	Mandar / Mapple	<i>Acer Caesium</i>	618	92	1	0	0	0	711
16	Maral	<i>Almus</i>	122	87	28	4	0	0	241
17	Poplar/Safeda	<i>populus alba</i>	37	19	1	0	0	0	57
18	Payakh	<i>alnus nitida / alder</i>	920	549	86	20	0	0	1575
19	Pingyath	<i>Crataegus</i>	47	2	0	0	0	0	49
20	Robinia	<i>Robinia spedeuocacia</i>	3	3	0	0	0	0	6
21	Sanjal	<i>Fraxinus xynthozeloides</i>	910	82	1	0	0	0	993
22	Thangi	<i>Corylus Columa</i>	174	84	9	5	0	0	272
	Total Nos of trees at FRL - 4 M		16583	2958	671	186	0	0	20398

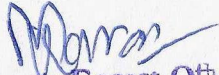

 (Range Officer)
 Range Forest Officer
 Killar Forest Range
 KILLAR


 (Divisional Forest Officer)
 Divisional Forest Officer
 Pangi Forest Division
 KILLAR

DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, HP.

Total cost of trees at FRL (above 30 cm)

Abstract (Cost of trees as per Species wise and Class wise)													
S. No.	Species	III	IIA	IIB	IA	IB	IC	ID	IE	Total Trees	Total Volume	Rate (Amount in Rs. per cum)	Total Cost (in Rs.)
1	Deodar	255	182	159	120	98	82	26	56	978		84683	258493163.8
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	216.75	258.44	405.45	441.6	471.38	487.9	184.08	586.88		3052.48		
2	Kail	29	21	14	22	7	4	8	7	112		56684	20326882.4
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	24.65	29.82	35.7	80.96	33.67	23.8	56.64	73.36		358.6		
3	Fir/Spruce	3	0	2	2	1	0	0	1	9		35892	1308622.32
	Volume Factor	1.13	2.12	3.11	4.25	5.95	7.79	9.2	12.4				
	Total Volume	3.39	0	6.22	8.5	5.95	0	0	12.4		36.46		
4	B/L	1447	644	293	185	102	67	92		2830		11245	47433321.65
	Volume Factor	0.68	1.35	2.14	3.2	4.39	4.39	4.39					
	Total Volume	983.96	869.4	627.02	592	447.78	294.13	403.88			4218.17		
									Grand Total=	3929	7665.71		327561990.21


Range Forest Officer
Killar Forest Range
(Range Officer)
KILLAR


Divisional Forest Officer
(Divisional Forest Officer)
Pangi Forest Division
Killar 176323

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DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, HP.

Total cost of trees at FRL -2M (above 30 cm)

Abstract (Cost of trees Species wise and Class wise)													
S. No.	Species	III	IIA	IIB	IA	IB	IC	ID	IE	Total Trees	Total Volume	Rate (Amount in Rs. per cum)	Total Cost (in Rs.)
1	Deodar	247	181	157	118	98	82	26	55	964		84683	255854441.6
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	209.95	257.02	400.35	434.24	471.38	487.9	184.08	576.4		3021.32		
2	Kail	29	21	13	21	7	4	8	7	110		56684	19973741.08
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	24.65	29.82	33.15	77.28	33.67	23.8	56.64	73.36		352.37		
3	Fir/Spruce	3	0	2	2	1	0	0	1	9		35892	1308622.32
	Volume Factor	1.13	2.12	3.11	4.25	5.95	7.79	9.2	12.4				
	Total Volume	3.39	0	6.22	8.5	5.95	0	0	12.4		36.46		
4	B/L	1426	634	289	183	100	66	92		2790		11245	46804613.7
	Volume Factor	0.68	1.35	2.14	3.2	4.39	4.39	4.39					
	Total Volume	969.68	855.9	618.46	585.6	439	289.74	403.88			4162.26		
5	Total cost of trees at FRL - 2 M									3873	7572.41		323941418.66


Range Officer
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Divisional Forest Officer
Pangi Forest Division
Killar 176323

DUGAR HYDRO ELECTRIC PROJECT (500 MW)

Pangi at Killar, District Chamba, HP.

Total cost of trees at FRL - 4 M (above 30 cm)

Abstract (Cost of trees Species wise and Class wise)													
S. No.	Species	III	IIA	IIB	IA	IB	IC	ID	IE	Total Trees	Total Volume	Rate (Amount in Rs. per cum)	Total Cost (in Rs.)
1	Deodar	237	180	155	115	97	78	26	54	942		84683	250337344.1
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	201.45	255.6	395.25	423.2	466.57	464.1	184.08	565.92		2956.17		
2	Kail	29	19	12	21	7	4	7	7	106		56684	19266891.6
	Volume Factor	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	24.65	26.98	30.6	77.28	33.67	23.8	49.56	73.36		339.9		
3	Fir/Spruce	3	0	2	2	1	0	0	1	9		35892	1308622.32
	Volume Factor	1.13	2.12	3.11	4.25	5.95	7.79	9.2	12.4				
	Total Volume	3.39	0	6.22	8.5	5.95	0	0	12.4		36.46		
4	B/L	1407	629	284	181	100	66	91		2758		11245	46341769.5
	Volume Factor	0.68	1.35	2.14	3.2	4.39	4.39	4.39					
	Total Volume	956.76	849.15	607.76	579.2	439	289.74	399.49			4121.1		
5	Total cost of trees at FRL - 4 M									3815	7453.63		317254627.53


Range Officer
Killar Forest Range
KILLAR

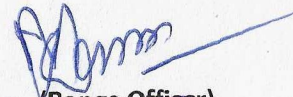

Divisional Forest Officer
Pangi Forest Division
Killar 176323

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DUGAR HYDRO ELECTRIC PROJECT (500 MW)
Pangi at Killar, District Chamba, H.P.

Total cost of trees at FRL

Abstract (Cost of trees Species wise and Class wise)															
S. No.	Species	V	IV	III	IIA	IIB	IA	IB	IC	ID	IE	Total Trees	Total Volume	Rate (Amount in Rs. per cum)	Total Cost (in Rs.)
1	Deodar	409	243	255	182	159	120	98	82	26	56	1630		84683	271874771.5
	Volume Factor	0.22	0.28	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	89.98	68.04	216.75	258.4	405.45	441.6	471.38	487.9	184.08	586.88		3210.5		
2	Kail	127	55	29	21	14	22	7	4	8	7	294		56684	22783566.96
	Volume Factor	0.22	0.28	0.85	1.42	2.55	3.68	4.81	5.95	7.08	10.48				
	Total Volume	27.94	15.4	24.65	29.82	35.7	80.96	33.67	23.8	56.64	73.36		401.94		
3	Fir/Spruce	5	3	3	0	2	2	1	0	0	1	17		35892	1378252.8
	Volume Factor	0.22	0.28	1.13	2.12	3.11	4.25	5.95	7.79	9.2	12.4				
	Total Volume	1.1	0.84	3.39	0	6.22	8.5	5.95	0	0	12.4		38.4		
4	B/L		16006	1447	644	293	185	102	67	92		18836		11245	90630314.45
	Volume Factor		0.24	0.68	1.35	2.14	3.2	4.39	4.39	4.39					
	Total Volume		3841.4	983.96	869.4	627.02	592	447.78	294.13	403.88			8059.61		
												Grand Total=	20777	11710.45	386666905.71


 (Range Officer)
Range Forest Officer
Killar Forest Range


 (Divisional Forest Officer)
Pangi Forest Division
Killar 176323

14011)

DUGAR HYDRO ELECTRIC PROJECT (500 MW)

Pangi at Killar, District Chamba, H.P.

Cost of trees as per Village wise at FRL

Abstract			
S. No.	Village	Total Nos of Trees	Total Cost (in Rs.)
1	R F Luj	12,784	114,460,775.02
2	R F Kanyun	1,191	29,289,868.46
3	R F Urnu	711	14,166,120.67
4	Shelli	1,334	50,005,547.32
5	Hasku	55	2,266,865.76
6	R F Chhatwani	1,776	23,456,988.04
7	R F Chilkot	1,835	81,311,925.98
8	R F Kalatop	493	36,366,412.30
9	R F Kagal	102	9,809,955.13
10	R F Punto	496	25,532,447.03
	Grand Total at FRL =	20,777	386,666,905.71


 (Range Officer)
 Range Forest Office,
 Killar Forest Range
 KILLAR


 (Divisional Forest Officer)
 Pangi Forest Division
 Killar 176323

DUGAR HYDRO ELECTRIC PROJECT
Pangi at Killar, District Chamba, H.P.

Cost of trees as per Village wise at FRL -2 M

Abstract				
S. No.	Description	Total Nos of Trees	Total Cost (in Rs.)	Remarks
1	FRL (total)	20,777	386,666,905.71	
2	FRL -2 (Village wise)			
2.1	R F Kanyun	185	409,507.67	
2.2	R F Urnu		440,729.17	
2.3	Shelli		417,198.89	
2.4	Hasku		26,410.04	
2.5	R F Chhatwani		263,812.30	
2.6	R F Chilkot		697,422.31	
2.7	R F Kalatop		688,274.65	
2.8	R F Kagal		155,275.47	
2.9	R F Punto		1,357,005.99	
3	Subtotal	185	4,455,636.49	
	Cost of Trees at FRL-2M	20,592	382,211,269.22	

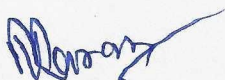

 (Range Officer)
 Range Forest Officer
 Killar Forest Range
 KILLAR

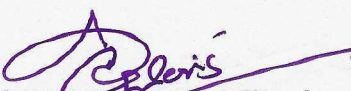

 (Divisional Forest Officer)
 Divisional Forest Officer
 Pangi Forest Division
 Killar 176323

DUGAR HYDRO ELECTRIC PROJECT
Pangi at Killar, District Chamba, H.P.

Cost of trees as per Village wise at FRL -4 M

Abstract				
S. No.	Description	Total Nos of Trees	Total Cost (in Rs.)	Remarks
1	FRL (total)	20,777	386,666,905.71	
2	FRL -2 (Village wise)			
2.1	R F Kanyun	379	1,343,302.36	
2.2	R F Urnu		1,534,809.67	
2.3	Shelli		1,359,912.33	
2.4	Hasku		34,506.44	
2.5	R F Chhatwani		598,842.74	
2.6	R F Chilkot		2,327,989.71	
2.7	R F Kalatop		963,858.15	
2.8	R F Kagal		789,918.97	
2.9	R F Punto		3,072,724.53	
3	Subtotal	379	12,025,864.90	
	Cost of Trees at FRL-4M	20,398	374,641,040.81	


 (Range Officer)
 Killar Forest Range
 KILLAR


 (Divisional Forest Officer)
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