

APPENDIX 2: TREATMENT DESCRIPTIONS

HARVEST METHODS

CLEARCUT

This harvest method consists of cutting essentially all trees and regenerating the stand. Only immediate roost trees (IRTs), as defined in the Forest Plan (page A-16), and snags (dead trees) are retained. At least 15 basal area per acre (BA) is retained in any scoured ephemeral stream zones¹ (DB-VEG-28, Forest Plan 2-27). The result is an even aged stand with scattered IRTs and snags (when present) and at least 15 BA retained in any scoured ephemeral stream zones.

TWO AGED SHELTERWOOD

This harvest method calls for retention of 10-20 BA of dominant or codominant trees. All IRTs are retained. Within any scoured ephemeral stream zones, a minimum of 15 BA is retained. Desired leave tree species in order of priority are: 1) white oak or chestnut oak, 2) hickory, 3) other hardwoods, except red maple. Leave trees selected for retention are generally long-lived species that are dominant, vigorous, exhibit healthy crowns, and ideally have a DBH of 14 inches or greater. Where no such tree is present, or no desired leave tree species is available, the healthiest tree of the most desired species with the largest DBH is selected. Some overlap between IRTs and desired leave trees may occur (i.e., an IRT can be a desired leave tree, such as shagbark hickory). All live IRTs are counted towards the minimum BA requirement. The result is an even aged stand with the residual 10-20 BA of shelterwood trees designed to provide structure and mast for wildlife.

DEFERMENT HARVEST

This harvest method calls for the initial retention of 20-40 BA of dominant or codominant trees. All IRTs are retained. Within any scoured ephemeral stream zones, a minimum of 15 BA is retained. Desired leave tree species in order of priority are: 1) white oak or chestnut oak, 2) hickory, 3) other hardwoods, except red maple. Leave trees selected for retention are generally dominant, vigorous, exhibit healthy crowns, and ideally have a DBH of 14 inches or greater. Where no such tree is present, or no desired leave tree species is available, the healthiest tree of the most desired species with the largest DBH is selected. Some overlap between IRTs and desired leave trees may occur (i.e., an IRT can be a desired leave tree, such as shagbark hickory). All live IRTs are counted towards the minimum BA requirement. Approximately 10 to 15 years after the initial harvest, a harvest of residuals is conducted in which the originally retained 20-40 BA is removed (except for IRTs) in a second harvest. The result is a 10-15 year old, even aged stand with at least 15 BA retained in any scoured ephemeral stream zones.

THINNING

This harvest method consists of cutting suppressed, intermediate, and a few co-dominant trees while retaining 50-70 BA of dominant and co-dominant, vigorous, healthy, trees. Leave tree species in order of retention priority are: 1) white oak or chestnut oak, 2) hickory, 3) yellow poplar, 4) other hardwoods, except red maple. The result is a two aged stand with 50-70 BA of overstory trees and a regenerating understory.

¹ Scoured ephemeral stream zone: The area within 25 feet on either side of a definable channel of water flow in which surface waterways converge with enough energy to remove soil, organic matter, and leaf litter on an annual basis (Forest Plan A-32).

SALVAGE

This harvest consists of the removal of all damaged, dying, and dead trees within an area after a disturbance. Salvage harvests range from removal of several trees in a small area (a few acres) to salvage of large areas (100s or 1,000s of acres) following widespread disturbance. Common disturbances in this area that create a need for salvage harvests include damage from wildfire, wind, snow, ice, and forest pests. The need for this harvest type is disturbance driven. Results vary depending on the severity of the disturbance.

INTERMEDIATE VEGETATION TREATMENTS

CROP TREE RELEASE

This treatment releases desired trees in the dominant and co-dominant crown classes that are vigorous, exhibit healthy crowns, and have good form. The number of crop trees is determined on a stand-by-stand basis, as older stands generally have a lower number of crop trees per acre than younger stands. The species preference for crop trees in order is as follows: white oak, northern or southern red oak, chestnut oak, post oak, hickories, black oak, black walnut, yellow poplar, other hardwoods. Undesirable competing vegetation within four feet of the crowns of desired trees would be cut and left on the ground and/or treated with herbicide.

PRE/POST HARVEST SITE PREPARATION

This treatment consists of preparing a stand for natural regeneration and/or planting. It is conducted immediately before or after all clearcuts, two aged shelterwoods, and deferment harvests. All undesirable species (e.g., red maple), trees not selected for retention, non-merchantable material (i.e., trees smaller than 8 inches diameter at breast height), and any trees competing with desired regeneration are cut and/or treated with herbicide.

MIDSTORY REMOVAL

Midstory control is a treatment whereby trees in the midstory that are preventing sunlight from reaching desired regeneration on the forest floor are cut and/or treated with herbicide. This allows for increased growth of desired regeneration.

GRAPEVINE CONTROL

Where the presence of excessive grapevine is inhibiting tree growth across a stand, this treatment is employed. Grapevines are cut and/or treated with herbicide. This treatment is usually carried out in conjunction with other intermediate treatments such as site preparation, midstory removal, crop tree release, and invasive species control. It can also be independent.

INVASIVE SPECIES CONTROL

This treatment consists of manual and/or chemical treatment of native and non-native invasive species wherever they are detected. This treatment is carried out independently and in conjunction with other intermediate treatments. High priority areas would be roadsides and stands proposed for treatment.

TREATMENT TABLES

Table Key:

- CC = Clearcut
- DH = Deferment harvest
- HR = Harvest residuals
- 2A = Two aged shelterwood
- THIN = Commercial thinning or CTR
- MR = Midstory removal
- CTR = Crop tree release
- PHSP = Pre and/or post-harvest site prep
- NNIS/GV = Non-native invasive species and/or grapevine control

Table 1: Treatment (TRT) by Stand

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6247	1	28	CC	PHSP	CTR	
6247	5	32	CC	PHSP	CTR	
6249	11	14	CC	PHSP	CTR	
6249	34	11	CC	PHSP	CTR	
6251	2	43	CC	PHSP	CTR	
6251	3	11	CC	PHSP	CTR	
6251	5	80	CC	PHSP	CTR	
6251	11	9	CC	PHSP	CTR	
6251	13	43	CC	PHSP	CTR	
6251	25	14	CC	PHSP	CTR	
6252	8	59	CC	PHSP	CTR	
6252	9	33	CC	PHSP	CTR	
6253	11	6	CC	PHSP	CTR	
6253	13	42	CC	PHSP	CTR	
6253	21	49	CC	PHSP	CTR	
6253	24	42	CC	PHSP	CTR	
6253	30	44	CC	PHSP	CTR	
6254	16	24	CC	PHSP	CTR	
6255	6	44	CC	PHSP	CTR	

² TRT 1 = the first treatment conducted within the indicated stand. It could occur at any time within the next 40 years (approximately 2023-2063).

³ TRT 2 = second treatment conducted in the indicated stand. PHSP (pre/post-harvest site prep) would occur immediately before or after a harvest treatment; a CC or 2-age treatment would occur approximately 6-12 years after a MR treatment; a THIN could occur at any time after invasive species and/or grapevines have been treated.

⁴ TRT 3 = third treatment conducted in the indicated stand. CTRs would occur between 15 and 30 years post-harvest; HRs would occur 10-15 years after initial harvest; PHSP would occur immediately before or after a TRT 2 harvest.

⁵ TRT 4 = fourth treatment. CTRs would occur 15-30 years after the TRT 3 harvests of the indicated stands.

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6256	5	27	CC	PHSP	CTR	
6257	10	47	CC	PHSP	CTR	
6257	12	18	CC	PHSP	CTR	
6258	18	74	CC	PHSP	CTR	
6258	19	18	CC	PHSP	CTR	
6260	2	40	CC	PHSP	CTR	
6265	7	38	CC	PHSP	CTR	
6267	3	9	CC	PHSP	CTR	
6269	19	37	CC	PHSP	CTR	
6247	11	78	DH	PHSP	HR	CTR
6247	12	47	DH	PHSP	HR	CTR
6249	2	46	DH	PHSP	HR	CTR
6249	4	27	DH	PHSP	HR	CTR
6249	5	30	DH	PHSP	HR	CTR
6249	12	39	DH	PHSP	HR	CTR
6250	4	28	DH	PHSP	HR	CTR
6250	5	35	DH	PHSP	HR	CTR
6251	1	35	DH	PHSP	HR	CTR
6251	7	57	DH	PHSP	HR	CTR
6251	8	50	DH	PHSP	HR	CTR
6251	10	45	DH	PHSP	HR	CTR
6251	24	45	DH	PHSP	HR	CTR
6251	30	24	DH	PHSP	HR	CTR
6251	31	22	DH	PHSP	HR	CTR
6256	3	80	DH	PHSP	HR	CTR
6256	6	42	DH	PHSP	HR	CTR
6256	7	51	DH	PHSP	HR	CTR
6256	12	27	DH	PHSP	HR	CTR
6257	22	55	DH	PHSP	HR	CTR
6258	9	44	DH	PHSP	HR	CTR
6258	10	46	DH	PHSP	HR	CTR
6258	15	15	DH	PHSP	HR	CTR
6258	37	10	DH	PHSP	HR	CTR
6258	38	26	DH	PHSP	HR	CTR
6260	8	99	DH	PHSP	HR	CTR
6263	2	98	DH	PHSP	HR	CTR
6263	4	32	DH	PHSP	HR	CTR
6263	11	145	DH	PHSP	HR	CTR
6264	19	80	DH	PHSP	HR	CTR
6265	14	49	DH	PHSP	HR	CTR

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6265	15	36	DH	PHSP	HR	CTR
6265	17	60	DH	PHSP	HR	CTR
6265	31	35	DH	PHSP	HR	CTR
6267	2	41	DH	PHSP	HR	CTR
6267	4	29	DH	PHSP	HR	CTR
6267	5	55	DH	PHSP	HR	CTR
6267	6	31	DH	PHSP	HR	CTR
6269	1	96	DH	PHSP	HR	CTR
6269	3	121	DH	PHSP	HR	CTR
6269	5	100	DH	PHSP	HR	CTR
6269	18	152	DH	PHSP	HR	CTR
6270	2	25	DH	PHSP	HR	CTR
6270	9	46	DH	PHSP	HR	CTR
6270	10	84	DH	PHSP	HR	CTR
6270	17	44	DH	PHSP	HR	CTR
6266	801	23	MR	2A	PHSP	CTR
6249	16	24	MR	2A	PHSP	CTR
6250	3	38	MR	2A	PHSP	CTR
6253	29	21	MR	CC	PHSP	CTR
6263	15	16	MR	2A	PHSP	CTR
6263	27	16	MR	2A	PHSP	CTR
6265	6	35	MR	CC	PHSP	CTR
6265	8	23	MR	CC	PHSP	CTR
6266	3	69	MR	2A	PHSP	CTR
6266	7	33	MR	2A	PHSP	CTR
6266	8	30	MR	2A	PHSP	CTR
6266	11	25	MR	2A	PHSP	CTR
6267	7	73	MR	2A	PHSP	CTR
6267	9	32	MR	2A	PHSP	CTR
6270	5	66	MR	2A	PHSP	CTR
6247	3	12	NNIS/GV	THIN		
6247	6	42	NNIS/GV	THIN		
6248	1	32	NNIS/GV	THIN		
6248	3	20	NNIS/GV	THIN		
6248	13	35	NNIS/GV	THIN		
6248	14	38	NNIS/GV	THIN		
6248	15	27	NNIS/GV	THIN		
6249	3	84	NNIS/GV	THIN		
6249	6	46	NNIS/GV	THIN		
6249	9	73	NNIS/GV	THIN		

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6249	13	40	NNIS/GV	THIN		
6249	14	40	NNIS/GV	THIN		
6249	17	52	NNIS/GV	THIN		
6249	20	32	NNIS/GV	THIN		
6249	21	93	NNIS/GV	THIN		
6249	25	36	NNIS/GV	THIN		
6249	27	52	NNIS/GV	THIN		
6249	31	99	NNIS/GV	THIN		
6249	32	12	NNIS/GV	THIN		
6249	38	35	NNIS/GV	THIN		
6249	39	46	NNIS/GV	THIN		
6250	1	31	NNIS/GV	THIN		
6250	2	24	NNIS/GV	THIN		
6250	6	8	NNIS/GV	THIN		
6250	8	6	NNIS/GV	THIN		
6250	10	19	NNIS/GV	THIN		
6250	11	8	NNIS/GV	THIN		
6250	13	25	NNIS/GV	THIN		
6250	14	39	NNIS/GV	THIN		
6250	15	30	NNIS/GV	THIN		
6250	17	47	NNIS/GV	THIN		
6251	9	41	NNIS/GV	THIN		
6251	12	33	NNIS/GV	THIN		
6251	14	37	NNIS/GV	THIN		
6251	16	40	NNIS/GV	THIN		
6251	22	22	NNIS/GV	THIN		
6251	26	16	NNIS/GV	THIN		
6251	28	46	NNIS/GV	THIN		
6251	29	19	NNIS/GV	THIN		
6252	1	15	NNIS/GV	THIN		
6252	2	6	NNIS/GV	THIN		
6252	5	46	NNIS/GV	THIN		
6252	7	36	NNIS/GV	THIN		
6252	10	22	NNIS/GV	THIN		
6252	11	10	NNIS/GV	THIN		
6252	12	34	NNIS/GV	THIN		
6252	21	22	NNIS/GV	THIN		
6253	2	7	NNIS/GV	THIN		
6253	12	22	NNIS/GV	THIN		
6253	17	31	NNIS/GV	THIN		

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6253	23	15	NNIS/GV	THIN		
6253	25	13	NNIS/GV	THIN		
6253	26	32	NNIS/GV	THIN		
6253	27	39	NNIS/GV	THIN		
6253	33	108	NNIS/GV	THIN		
6254	1	34	NNIS/GV	THIN		
6254	7	28	NNIS/GV	THIN		
6254	9	52	NNIS/GV	THIN		
6254	10	24	NNIS/GV	THIN		
6254	12	20	NNIS/GV	THIN		
6254	15	40	NNIS/GV	THIN		
6254	17	32	NNIS/GV	THIN		
6255	1	20	NNIS/GV	THIN		
6255	2	13	NNIS/GV	THIN		
6255	5	33	NNIS/GV	THIN		
6255	7	4	NNIS/GV	THIN		
6255	8	21	NNIS/GV	THIN		
6255	14	49	NNIS/GV	THIN		
6255	15	24	NNIS/GV	THIN		
6256	4	37	NNIS/GV	THIN		
6256	11	27	NNIS/GV	THIN		
6256	15	8	NNIS/GV	THIN		
6257	9	21	NNIS/GV	THIN		
6257	13	19	NNIS/GV	THIN		
6257	14	28	NNIS/GV	THIN		
6257	15	13	NNIS/GV	THIN		
6257	18	12	NNIS/GV	THIN		
6257	19	16	NNIS/GV	THIN		
6257	20	31	NNIS/GV	THIN		
6257	23	30	NNIS/GV	THIN		
6257	27	25	NNIS/GV	THIN		
6258	1	11	NNIS/GV	THIN		
6258	2	45	NNIS/GV	THIN		
6258	11	27	NNIS/GV	THIN		
6258	14	43	NNIS/GV	THIN		
6258	17	33	NNIS/GV	THIN		
6259	1	41	NNIS/GV	THIN		
6260	4	31	NNIS/GV	THIN		
6260	5	4	NNIS/GV	THIN		
6260	6	31	NNIS/GV	THIN		

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6263	3	37	NNIS/GV	THIN		
6263	5	24	NNIS/GV	THIN		
6263	6	41	NNIS/GV	THIN		
6263	10	58	NNIS/GV	THIN		
6263	14	22	NNIS/GV	THIN		
6263	22	46	NNIS/GV	THIN		
6263	33	94	NNIS/GV	THIN		
6263	34	97	NNIS/GV	THIN		
6264	1	21	NNIS/GV	THIN		
6264	2	26	NNIS/GV	THIN		
6264	3	27	NNIS/GV	THIN		
6264	8	36	NNIS/GV	THIN		
6264	15	47	NNIS/GV	THIN		
6264	16	85	NNIS/GV	THIN		
6264	17	56	NNIS/GV	THIN		
6264	18	32	NNIS/GV	THIN		
6264	25	26	NNIS/GV	THIN		
6264	26	18	NNIS/GV	THIN		
6265	1	36	NNIS/GV	THIN		
6265	9	23	NNIS/GV	THIN		
6265	12	44	NNIS/GV	THIN		
6265	13	32	NNIS/GV	THIN		
6265	16	31	NNIS/GV	THIN		
6265	25	38	NNIS/GV	THIN		
6266	4	38	NNIS/GV	THIN		
6266	6	37	NNIS/GV	THIN		
6266	9	25	NNIS/GV	THIN		
6266	10	7	NNIS/GV	THIN		
6267	1	30	NNIS/GV	THIN		
6267	8	27	NNIS/GV	THIN		
6269	2	11	NNIS/GV	THIN		
6269	4	24	NNIS/GV	THIN		
6269	9	19	NNIS/GV	THIN		
6269	11	31	NNIS/GV	THIN		
6269	12	43	NNIS/GV	THIN		
6269	17	34	NNIS/GV	THIN		
6270	1	42	NNIS/GV	THIN		
6270	4	44	NNIS/GV	THIN		
6270	7	38	NNIS/GV	THIN		
6270	13	36	NNIS/GV	THIN		

Compartment	Stand	Acres	TRT 1 ²	TRT 2 ³	TRT 3 ⁴	TRT 4 ⁵
6270	14	21	NNIS/GV	THIN		
6270	19	46	NNIS/GV	THIN		
6270	20	45	NNIS/GV	THIN		
6270	21	32	NNIS/GV	THIN		
6247	4	30	2A	PHSP	CTR	
6247	7	20	2A	PHSP	CTR	
6249	1	53	2A	PHSP	CTR	
6249	30	46	2A	PHSP	CTR	
6249	33	37	2A	PHSP	CTR	
6249	36	57	2A	PHSP	CTR	
6249	42	60	2A	PHSP	CTR	
6251	4	85	2A	PHSP	CTR	
6251	18	34	2A	PHSP	CTR	
6251	19	100	2A	PHSP	CTR	
6251	23	44	2A	PHSP	CTR	
6251	32	29	2A	PHSP	CTR	
6252	13	45	2A	PHSP	CTR	
6253	15	38	2A	PHSP	CTR	
6254	5	23	2A	PHSP	CTR	
6255	4	34	2A	PHSP	CTR	
6255	9	81	2A	PHSP	CTR	
6255	10	16	2A	PHSP	CTR	
6255	11	13	2A	PHSP	CTR	
6257	7	79	2A	PHSP	CTR	
6257	8	26	2A	PHSP	CTR	
6257	11	28	2A	PHSP	CTR	
6257	16	27	2A	PHSP	CTR	
6257	26	58	2A	PHSP	CTR	
6258	13	51	2A	PHSP	CTR	
6258	16	30	2A	PHSP	CTR	
6260	1	15	2A	PHSP	CTR	
6260	7	30	2A	PHSP	CTR	
6260	9	60	2A	PHSP	CTR	
6260	10	64	2A	PHSP	CTR	
6264	9	30	2A	PHSP	CTR	
6264	10	61	2A	PHSP	CTR	
6265	28	23	2A	PHSP	CTR	

Table 2: Harvest Method Summary (BA = Basal Area per acre)

Harvest Method	Retained after harvest	Retained after Harvest of Residuals	Acres
Clearcut	IRTs	N/A	1,016
2-Aged Shelterwood	10-20 BA	N/A	1,869
Deferment Harvest	20-40 BA	IRTs and Regeneration	2,462
Thinning	50-70 BA	N/A	4,449
		TOTAL	9,796