

Appendix B - Unit Silviculture and Slash Treatments for Alternatives 1, 2, and 3

Table B-1. Alternative 1 - Unit silvicultural prescriptions and slash treatments

Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
39-51	8	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-52	29	biomass thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
39-53	7	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-54	97	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-55	48	hazard reduction thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
39-56	74	standard thin	whole-tree yard	burn landings
39-57	59	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-58	91	biomass thin	whole-tree yard	burn landings
39-59	54	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-60	212	biomass thin	whole-tree yard	burn landings
39-61	57	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-62	15	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-63	23	standard thin	whole-tree yard	burn landings
39-64	35	standard thin	whole-tree yard, hand pile	burn piles, burn landings
39-65	23	biomass thin	whole-tree yard	burn landings
39-66	46	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-67	58	biomass thin	whole-tree yard	burn landings
39-68	76	standard thin	whole-tree yard, hand pile	burn piles, burn landings
43-20	487	standard thin	whole-tree yard	underburn (50%), burn landings
44-60	509	standard thin	whole-tree yard	underburn (50%), burn landings
47-100	85	standard thin	whole-tree yard	underburn, burn landings
47-101	17	standard thin	whole-tree yard	underburn, burn landings
47-102	86	standard thin	whole-tree yard	burn landings
47-103	192	standard thin	whole-tree yard	underburn, burn landings
47-104	301	standard thin	whole-tree yard	underburn (50%), burn landings
48-200	28	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings

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Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
48-201	9	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-202	40	biomass thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-203	50	standard thin	whole-tree yard	burn landings
48-204	15	standard thin	whole-tree yard	burn landings
48-205	73	standard thin	whole-tree yard	burn landings
48-206	87	standard thin	whole-tree yard	under burn, burn landings
48-207	28	aspen release	whole-tree yard, slash	under burn, burn landings
48-208	14	meadow restoration	whole-tree yard, slash	under burn
48-209	105	standard thin	whole-tree yard	under burn, burn landings
48-210	296	standard thin	whole-tree yard	under burn, burn landings
48-211	208	standard thin	whole-tree yard	burn landings
48-212	96	standard thin	whole-tree yard	burn landings
48-213	102	standard thin	whole-tree yard	burn landings
48-214	12	meadow restoration	whole-tree yard, hand pile	burn piles
48-215	17	standard thin	whole-tree yard	burn landings
48-216	32	standard thin	whole-tree yard, machine pile	burn piles, burn landings
48-217	85	standard thin	whole-tree yard, slash	burn landings
48-218	46	standard thin	whole-tree yard, slash	burn landings
48-219	38	standard thin	whole-tree yard, slash	burn landings
48-220	113	standard thin	whole-tree yard	under burn, burn landings
48-221	9	LP Regen GTR	whole-tree yard, machine pile	burn landings
48-222	19	LP Regen GTR	whole-tree yard, machine pile	burn landings
48-223	8	LP Regen GTR	whole-tree yard, machine pile	burn landings
48-224	41	standard thin	whole-tree yard, slash	burn landings
48-225	33	standard thin	whole-tree yard, slash	burn landings
48-226	19	standard thin	whole-tree yard, slash	burn landings
48-365	20	mature stand thin	whole-tree yard, slash	burn landings

Table B-2. Alternative 2 - Unit silvicultural prescriptions and slash treatments

Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
39-54	62	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-56	74	standard thin	whole-tree yard	burn landings
39-57	59	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-58	91	biomass thin	whole-tree yard	burn landings
39-59	54	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-60	100	biomass thin	whole-tree yard	burn landings
39-60	37	biomass thin	whole-tree yard	burn landings
39-61	29	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-62	15	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-63	23	standard thin	whole-tree yard	burn landings
39-64	35	standard thin	whole-tree yard	burn piles, burn landings
39-65	23	biomass thin	whole-tree yard	burn landings
39-66	46	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-67	58	biomass thin	whole-tree yard	burn landings
39-68	76	standard thin	whole-tree yard, hand pile	burn piles, burn landings
43-20	468	standard thin	whole-tree yard	under burn (50%), burn landings
44-60	475	standard thin	whole-tree yard	under burn (50%), burn landings
44-60	0	standard thin	whole-tree yard	under burn (50%), burn landings
47-100	85	standard thin	whole-tree yard	under burn, burn landings
47-101	17	standard thin	whole-tree yard	under burn, burn landings
47-102	86	standard thin	whole-tree yard	burn landings
47-103	192	standard thin	whole-tree yard	under burn, burn landings
47-104	274	standard thin	whole-tree yard	under burn (50%), burn landings
48-200	28	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-201	9	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-202	40	biomass thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-203	50	standard thin	whole-tree yard	burn landings
48-204	15	standard thin	whole-tree yard	burn landings
48-205	73	standard thin	whole-tree yard	burn landings
48-206	87	standard thin	whole-tree yard	under burn, burn landings
48-207	28	aspen release	whole-tree yard, slash	under burn, burn landings
48-208	14	meadow restoration	whole-tree yard, slash	under burn

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Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
48-209	105	standard thin	whole-tree yard	under burn, burn landings
48-210	296	standard thin	whole-tree yard	under burn, burn landings
48-211	208	standard thin	whole-tree yard	burn landings
48-212	96	standard thin	whole-tree yard	burn landings
48-213	102	standard thin	whole-tree yard	burn landings
48-214	12	meadow restoration	whole-tree yard, slash, hand pile	burn piles, burn landings
48-215	17	standard thin	whole-tree yard	burn landings
48-216	32	standard thin	whole-tree yard, machine pile	burn piles, burn landings
48-217	85	standard thin	whole-tree yard, slash	burn landings
48-218	46	standard thin	whole-tree yard, slash	burn landings
48-219	38	standard thin	whole-tree yard, slash	burn landings
48-220	113	standard thin	whole-tree yard	under burn, burn landings
48-221	9	LP Regen GTR	whole-tree yard, machine pile	burn piles, burn landings
48-222	19	LP Regen GTR	whole-tree yard, machine pile	burn piles, burn landings
48-223	8	LP Regen GTR	whole-tree yard, machine pile	burn piles, burn landings
48-224	41	standard thin	whole-tree yard, slash	burn landings
48-225	33	standard thin	whole-tree yard, slash	under burn, burn landings
48-226	19	standard thin	whole-tree yard, slash	under burn, burn landings
48-365	20	mature stand thin	whole-tree yard, slash	under burn, burn landings

Table B-3. Alternative 3 - Unit silvicultural prescriptions and slash treatments

Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
31-227	82	standard thin	whole-tree yard	underburn, burn landings
39-51	8	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-52	29	biomass thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
39-53	7	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-54	97	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-55	48	hazard reduction thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
39-56	74	standard thin	whole-tree yard	burn landings
39-57	59	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-58	91	biomass thin	whole-tree yard	burn landings
39-59	54	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-60	212	biomass thin	whole-tree yard	burn landings
39-61	57	hazard reduction thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-62	15	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-63	23	standard thin	whole-tree yard	burn landings
39-64	35	standard thin	whole-tree yard, hand pile	burn piles, burn landings
39-65	23	biomass thin	whole-tree yard	burn landings
39-66	46	mature stand thin	whole-tree yard, slash, machine pile	burn piles, burn landings
39-67	58	biomass thin	whole-tree yard	burn landings
39-68	76	standard thin	whole-tree yard, hand pile	burn piles, burn landings
43-20	468	standard thin	whole-tree yard	underburn (50%), burn landings
44-60	475	standard thin	whole-tree yard	underburn (50%), burn landings
44-60	0	standard thin	whole-tree yard	underburn (50%), burn landings
47-100	85	standard thin	whole-tree yard	underburn, burn landings
47-101	17	standard thin	whole-tree yard	underburn, burn landings
47-102	86	standard thin	whole-tree yard	burn landings
47-103	192	standard thin	whole-tree yard	underburn, burn landings
47-104	274	standard thin	whole-tree yard	underburn (50%), burn landings
48-200	28	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-201	9	standard thin	whole-tree yard, hand pile road 50'	burn piles, burn landings

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Unit	Acres	Prescription	Slash Treatment	Prescribed Burning
48-202	40	biomass thin	whole-tree yard, hand pile road 50'	burn piles, burn landings
48-203	50	standard thin	whole-tree yard	burn landings
48-204	15	standard thin	whole-tree yard	burn landings
48-205	73	standard thin	whole-tree yard	burn landings
48-206	87	standard thin	whole-tree yard	underburn, burn landings
48-207	28	aspen release	whole-tree yard, slash	underburn, burn landings
48-208	14	meadow restoration	whole-tree yard, slash	underburn
48-209	105	standard thin	whole-tree yard	underburn, burn landings
48-210	296	standard thin	whole-tree yard	underburn, burn landings
48-211	208	standard thin	whole-tree yard	burn landings
48-212	96	standard thin	whole-tree yard	burn landings
48-213	102	standard thin	whole-tree yard	burn landings
48-214	12	meadow restoration	whole-tree yard, slash, hand pile	burn piles, burn landings
48-215	17	standard thin	whole-tree yard	burn landings
48-216	32	standard thin	whole-tree yard, machine pile	burn piles, burn landings
48-217	85	standard thin	whole-tree yard, slash	burn landings
48-218	46	standard thin	whole-tree yard, slash	burn landings
48-219	38	standard thin	whole-tree yard, slash	burn landings
48-220	113	standard thin	whole-tree yard	burn landings
48-221	9	regeneration harvest with GTR	whole-tree yard, machine pile	burn piles, burn landings
48-222	19	regeneration harvest with GTR	whole-tree yard, machine pile	burn piles, burn landings
48-223	8	regeneration harvest with GTR	whole-tree yard, machine pile	burn piles, burn landings
48-224	41	standard thin	whole-tree yard, slash	burn landings
48-225	33	standard thin	whole-tree yard, slash	under burn, burn landings
48-226	19	standard thin	whole-tree yard, slash	under burn, burn landings
48-227	23	meadow restoration	whole-tree yard, slash, hand pile	burn piles, burn landings
48-365	20	regeneration harvest with GTR	whole-tree yard, slash	underburn, burn landings

Appendix C: Project Effects as they pertain to the Aquatic Conservation Strategy

The Aquatic Conservation Strategy (ACS) was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands. Based on direction from 2004 the Aquatic Conservation Strategy was applied at the watershed scale and not the project scale, however recently new direction specifies that the Aquatic Conservation Strategy must be applied at the project scale.¹ For this reason, the proposed activities within Riparian Reserves and the potential effect on each objective are presented below. Due largely to the lack of water quality limiting factors and the lack of resident fish, the effects of the proposed action and no action alternatives were determined to be neutral or positive for each objective.

The effects of all alternatives are also positive to neutral at the 5th-level watershed scale. The potential for these activities to actually have a positive effect at the 5th-level watershed scale is due to the scarcity of Riparian Reserves in the Porcupine Watershed. For example, the proposed action will treat 54 acres of Riparian Reserves in the Porcupine watershed. This is a small acreage that would normally be inconsequential at the 5th-level watershed scale, however there are only 317 acres of Riparian Reserve within the entire Porcupine watershed, so the project will be treating 17 percent of the total Riparian Reserve acreage. A description of how each ACS objective will be affected by the proposed action and alternatives follows. Because Alternatives 2 and 3 have only small elements that differ from Alternative 1 they are all analyzed together under “Action Alternatives”.

ACS Objective 1.

Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

Action Alternatives: By restoring declining populations of aspen and meadow habitat all action alternatives will restore the distribution, diversity and complexity of watershed and landscape-scale features. This will have a positive effect for this objective.

No Action: Continued loss of aspen stands results in continued loss in distribution, diversity, and complexity of watershed and landscape-scale features.

ACS Objective 2.

Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

Action Alternatives: All action alternatives would restore stringer meadow riparian areas with aspen stand component thereby restoring spatial and temporal connectivity within the project area. This action will have a positive effect on this objective. Thinning conifers along the outer edges of riparian areas will improve edge habitat adjacent to riparian features.

¹ USDA Forest Service, USDI Bureau of Land Management, 2007. Memorandum - Compliance with the Aquatic Conservation Strategy. 3 p.

No Action: Continued conifer encroachment in aspen stands and meadows. Continued use of roads and fragmentation of meadow habitats by roads. Continued decline in meadow habitats and loss of spatial and temporal connectivity.

ACS Objective 3.

Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

Action Alternatives: All action alternatives will have a positive effect on the objective. Roads within the meadow bottoms have channeled water and obliterated the remnants of the original channels in some areas. The removal of the roads will allow for the restoration of intermittent stream channels within the treatment areas.

No Action: Roads will continue to channel water through the meadows. Channel recovery will not occur if roads located in meadow areas are maintained.

ACS Objective 4.

Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

Action Alternatives: All action alternatives are expected to have no effect on water quality due to lack of surface flow in the project area. Potentially localized increases in turbidity could occur in the vicinity of Hambone Meadow following ground disturbing activities however these effects would be of short duration (limited to one runoff season) and because the channel sinks into the ground below the meadow there would be no potential for water quality impacts to occur downstream of the assessment area.

No Action: There would be continued localized impacts to water quality in roaded areas of meadows.

ACS Objective 5.

Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

Action Alternatives: The activities proposed within Riparian Reserves for all alternatives should have no impact on the sediment regime. Intermittent channel within the project area have very low runoff even in wet years and stream gradients are less than 2 percent making the potential for sediment transport very low under natural conditions. The project has no potential to increase sediment load within the intermittent stream channels.

No Action: There is no potential to change the existing sediment regime for the no action alternative.

ACS Objective 6.

Maintain and restore instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high and low flows must be protected.

Action Alternatives: There is some potential for the action alternatives to affect instream flows. This potential exists where road decommissioning activities are occurring in meadows. Small increases in instream flows are possible after removal of conifers but should not persist with recovery of aspen stands and meadows.

No Action: Runoff in meadows would remain channeled in road beds. Channel development would not occur if road use continued.

ACS Objective 7.

Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

Action Alternatives: All action alternatives would have no effect on the timing, variability, and duration of floodplain inundation. There is a possibility that higher water table conditions could result in areas of heavy conifer removal but these increases will probably not be detectable.

No Action: The no action alternative will have no effect on the timing, variability, and duration of floodplain inundation and water table elevations in meadows and wetlands.

ACS Objective 8.

Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

Action Alternatives: All action alternatives will restore the meadow component in Riparian Reserves. Restoration of aspen will restore the species composition and structural diversity of plant communities in riparian areas. Thinning conifers along the outer edges of the riparian areas will improve edge habitat adjacent to riparian features.

No Action: There would be a continued decline in species composition and structural diversity of plant communities in riparian areas and a continued loss of meadow habitats.

ACS Objective 9.

Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

Action Alternatives: All action alternatives will restore habitat to support native plant, invertebrate, and vertebrate riparian dependent species.

No Action: There would be a continued loss of riparian meadow habitat and aspen stands needed to support well-distributed population of native plant, invertebrate, and vertebrate riparian-dependent species.

Appendix D: Past, Present and Reasonably Foreseeable Management Activities within the Porcupine 5th-level Watershed

Table D-1. Past, present and reasonably foreseeable management activities within the Porcupine 5th-level watershed¹

Project name	Years of activity	Commercial Thin Acres	Sanitation Acres	Regeneration Acres	Salvage Acres	Aspen Release Acres	Meadow Restoration Acres	Road Const. Miles	Road Close Miles	Road Decomm. Miles	Slash Pile & Burn Acres	Broadcast Burn Acres
Long Grade EA	1997-1998	2,285		20								
Broken EA	1997-1998	315										
Chippy EA ²	1997-2000	1,350										1,350
Iron Grass Plantation Thin EA	1997-2003	1,960										
Hopper EA	1999-2003	1,400						0.3	2.5			
Bear EA	2001-present	4,000	435	24	150			0.45	3.0	1.5	274	15
Crater EA	2001-	800							4.0	1.0		
Davis EA	2002-present	5,000	700		230	5	30	0.3	24.0	10.0	230	
Hemlock EA	2003-present	4,500	19	240 L	140			2.0	18.0		380	600
Powder EA (188 acres ²)	2006-present	3,000		60					24.0	3.0	700	120
Red Hill Plantation Thin EA ²	2007-present	3,500										
Lost Plantation Thin EA	2007-present	2,840										

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Project name	Years of activity	Commercial Thin Acres	Sanitation Acres	Regeneration Acres	Salvage Acres	Aspen Release Acres	Meadow Restoration Acres	Road Const. Miles	Road Close Miles	Road Decomm. Miles	Slash Pile & Burn Acres	Broadcast Burn Acres
Bear Fire Restoration CE	2007				200						130	
Hambone Aspen Stewardship	2008					90						
Rattlesnake Well Meadow Restoration	2008-2009						80					
Toad Mtn. Aspen Release	2008-2009					30						
White Deer Lake Aspen & Meadow Restoration	2008-2009					50	5					
Totals,NF		30,950	764	344	720	175	125	3.0	75.5	15.5	1,714	2,085
Private Lands THP's ³	1999-2006	2,500	2,600	1,200	3,275							

¹Information was derived from FACTS (GIS) database and District staff knowledge. This table may not reflect special uses or projects with limited ground disturbance or habitat alteration. Past actions listed include timber sales, fuel treatments, and transportation activities within the past decade. Future actions include those actions within the reasonably foreseeable future (3-5 years), including projects with signed decisions that have not proceeded, as well as proposals in the planning stage of development. No future activities are known as of October, 2007.

² Project is within the Porcupine Vegetation and Road Management Project boundary.

³Information from California Department of Forestry Timber Harvest Database. There may be more than one treatment on the same area over the time period.