NATIONAL FOREST FOUNDATION

CONSERVATION CONNECT
A learning network for collaboration

Forest Restoration and Conservation Guidelines

Summary

This best practice features forest management guidelines developed by the Northeastern Washington Forest Coalition

Keys to Success

- Work closely with the Forest Service while developing guidelines to ensure alignment and buy-in
- Make a plan to update and adapt guidelines over time

"We are finding that we need to incorporate new science into our guidelines, as well as a change in Forest Service roads policy - the message here being that guidelines need to be adaptive and updated to reflect new information."

~Mike Petersen, Northeastern Washington Forestry Coalition member

National Forest Foundation
Bldg. 27, Suite 3
Fort Missoula Rd.
Missoula, MT 59804
406.542.2805
www.nationalforests.org

Streamlining decision-making with collaboratively developed forest management guidelines

Collaborative groups are increasingly developing creative tools to streamline collaborative processes and work more efficiently with the U.S. Forest Service.

The Northeastern Washington Forestry Coalition (NEWFC) pioneered the idea of developing collaborative guidelines and sideboards to apply to forest projects. For the Colville National Forest landscape, NEWFC initially reached agreement on proposed management areas that encompass the group's diverse interests: *Responsible Management Areas* (focused on sustainable active management), *Restoration Areas* (focused on watershed and wildlife habitat restoration, old growth protection, and ecosystems), and *Wilderness Areas* (focused on maintaining existing wilderness and inventoried roadless areas).

Over time, NEWFC was able to collaboratively develop technical guidelines for forest restoration and conservation, including guidelines focused on regeneration harvest, thinning, and old growth forest stand management.

NEWFC and the Colville National Forest have worked together for many years; the longstanding relationship, strong trust, and mutual understanding helped facilitate support and buy-in for the guidelines from the National Forest. Groups considering developing technical forest management guidelines must ensure that the Forest Service is a partner throughout the process, even in the midst of staff turnover and changing policies.

This best practice includes NEWFC Guidelines and an example of how the guidelines have informed Colville National Forest project development.

Link

- Northeastern Washington Forest Coalition website: www.newforestrycoalition.org/

10/2015

NEWFC INTERIM GUIDELINES

NEWFC Interim Guidance for Regeneration Harvest

On acres where

- average crown ratio is <35% due to forest health issues or
- there exists an *immediate threat*[1] of crown ratio decreasing to <35% or an *immediate threat* of mortality due to forest health issues and
- a regeneration harvest is deemed appropriate
- and there are at least 20 *suitable* dominant/co-dominant leave trees

leave 20 dominant/co-dominant trees per acre (TPA). In the event that there are not enough *suitable* trees to leave 20 TPA, leave all *suitable* leave trees. Post-treatment TPA will be computed only on the acres in the harvest unit that meet the above description. Acres that, prior to treatment, did not contain enough *suitable* trees to meet the 20 TPA minimum will not be included in the TPA computation; however, on these acres, all *suitable* leave trees must be left standing.

Regeneration Harvest Sideboards:

The maximum size of a 20-TPA regeneration patch is 15 acres. The 20-TPA patches cannot exceed 25% of any 100-acre "moving window" (grid) placed over USFS land. The 20- TPA regeneration patches must be at least 2 average dom/co-dom tree lengths apart from each other. NEWFC feels that if these sideboards are exceeded, the appropriate Scenic Management System (SMS) standard will not be met, even if edges are feathered and patches of trees are left within the regeneration harvest area. If the CNF feels that it is possible to meet the appropriate standard with greater regeneration patch sizes and/or a higher percentage of a 100-acre grid being comprised of 20-TPA regeneration patches, NEWFC asks that the CNF Landscape Architect meet with NEWFC and demonstrate that the appropriate standard can indeed be met.

The above guidance can be mixed with below guidance in stands identified as regeneration-harvest areas, so long as no more than 25% of any 100-ac "moving window" (grid) placed over USFS land is affected by either of the two approaches:

> Given the site specific conditions in the stand, determine the opening size necessary to provide desired future species a competitive advantage in 83% of the opening (i.e. 52% visual sky percentage for white pine). In addition, determine the opening size needed to provide 52% visual sky percentage to 50% of the clearing, and then apply the following: 1) up to 10 % of the stand may be comprised of the larger size opening (i.e. 3 acres for white pine), 2) up to 15 % of the stand may be comprised of the smaller size opening (i.e. 1 acre for white pine); 3) buffers of trees between the openings shall be at least a width equal to two average dominant/co-dominant tree heights in the stand.

NEWFC Interim Guidance for Thinning Overstocked Stands

On acres where

- average crown ratio is >35% and
- there is no *immediate threat* of crown ratio decreasing to <35% and
- prior to treatment, density of *suitable* leave trees exceeds the NEWFC post-treatment SDI target.

leave, on average, enough trees to meet the SDI target specified in the NEWFC Post-treatment SDI table. Post-treatment SDI will be computed only on the acres in the harvest unit that meet the above description. Acres that, prior to treatment, did not contain enough *suitable* trees to meet the SDI target will not be included in the density computation; however, on these acres, all *suitable* leave trees must be left standing.

NEWFC Post-Treatment SDI Table

DRY PP PAG:

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
P. Pine	77	46	58	27	50	36	35	55	25	42

DRY DF PAG:

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
Larch	170	100	127	19	112	80	23	122	56	28
P. Pine	150	88	112	20	99	71	25	107	49	30
Doug Fir	160	94	120	19	105	75	24	116	53	29

DRY GF PAG:

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
Larch	155	91	116	20	102	73	25	111	51	30
P. Pine	145	85	108	20	95	68	25	105	48	30
Doug Fir	160	94	120	19	105	75	24	116	53	29

MESIC GF PAG:

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
Larch	180	105	134	19	119	85	25	129	59	29
P. Pine	155	91	116	19	102	73	25	111	51	30
Doug Fir	190	112	142	18	126	90	22	137	63	26

MESIC DF PAG:

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
Larch	220	129	164	16	145	104	21	159	73	25
P. Pine	205	120	153	17	135	97	21	148	68	25
Doug Fir	160	94	120	19	105	75	24	116	53	29

CEDAR & HEMLOCK SERIES (All Plant Associations):

Post-treatment species	Post-treatment SDI	12" QMD			16" QMD			20" QMD		
		BA	TPA	Space	BA	TPA	Space	BA	TPA	Space
Larch	240	141	179	16	158	113	20	172	79	24
P. Pine	205	120	153	17	135	97	21	148	68	25
White Pine	275	161	205	15	182	130	19	199	91	22
Doug Fir	185	108	138	18	121	87	22	133	61	27

Interim Active Restoration Old Growth Guidelines for the North East Washington Forestry Coalition's Active Management Area in the Colville National Forest V7

Active management within old growth stands is debated amongst scientists[2] and within the conservation community. Many conservation groups across Washington, Oregon, and Idaho do not support active management within old growth forests at all. Old growth areas are fragments of ecosystems not functioning with ecological integrity due to decades of fire suppression, antiquated logging practices, extensive roads, invasive species, and motorized recreation. Current levels of late-successional old growth fall far below historic levels. Attempts at actively managing these limited and complex forest ecosystems is essentially uncharted territory and as such an experimental approach. Any management of old growth areas on the Colville will require the use of best available science, monitoring, and adaptive management.

The Colville National Forest should identify, inventory, and map old growth stands in the Colville National Forest.

The Colville National Forest should adopt a plan for the maintenance of old-growth, associated wildlife species and their viability that is tiered to an independent scientific and independent peer-reviewed plan which includes the size and distribution of old growth stand across the landscape. This should be integrated into a wildland fire plan that addresses old growth areas, in order to be effective and maximize future viability.

Old growth restoration should be prioritized on a landscape basis where fire exclusion and other human activities (i.e. road building) have resulted in major alterations in ecosystem structure, function, or composition[3].

Projects must be based on best available scientific data for local conditions. The outcome of old growth treatments must be restored[4] old growth components and processes, which in turn will benefit species associated with old forest habitat.

A long term objective and maintenance plan must be identified and described, and included within the project planning documentation (i.e. what are the desired future conditions for the stand in 10 yrs, 20 yrs, 30 yrs and how will this compare to the expected future conditions of the stand).

Historic baselines[5], project baselines (untreated portions of units or similar stands), and desired post-treatment conditions must be identified as reference conditions for monitoring/adaptive management.

A third-party/multiparty monitoring process must be established and described and funded.
Soil transects must be included in the monitoring process.

Old growth areas proposed for restoration treatment must be limited to dry plant association groups[6].

Trees >21" dbh and old trees >80 years old must be retained. Trees <12" dbh may be removed without collaboration within an old growth stand. Removal of trees 12-21" dbh require collaboration. Exceptions may be made for encroaching large (not old) shade tolerant species via collaboration.
Post treatment Stand Density Index (SDI)[7] in old growth units must not drop below the SDI lower management threshold established by NEWFC.

Retain snags, down wood, and all components needed to expeditiously restore old growth processes.

---

[2] Please see Appendix A: The Debate on Fire
[3] Old growth restoration areas should be prioritized across the forest landscape on a watershed basis.
[4] Restoration may include situations that have not developed into chronic degeneration of old growth function (i.e. old growth Ponderosa pine stand with an encroaching shade-intolerant Douglas-fir understory which is beginning to cause uncharacteristic mortality in overstory.
[5] For items identified for monitoring
[6] Add plant association group (PAG) descriptions
[7] See Appendix C: Stand Density Index (SDI) and Management Zones

Trees proposed for removal must be considered for creating/recruiting large snags and down woody debris (DWD).

Approximately 25% of a mechanically treated[8] unit should be left untreated in a clumpy, patchy mosaic[9].

New permanent roads must not be constructed. Any type of road construction/reconstruction is discouraged and any proposal must be collaborated upon.

Winter logging should be utilized to protect forest soils. If however, units cannot meet winter logging requirements (i.e. low elevation sites) the use of forwarding equipment over slash on dry soils may be acceptable. Low impact equipment should also be used, although tractor logging over frozen ground may be acceptable.

Prescribed fire should be required post treatment, unless doing so would constitute an unacceptable level or risk to surrounding homes. Efforts should be taken to inform and educate adjacent property owners.

Duff around large trees > 21" dbh should be considered and possibly removed before re-introducing fire.

Restoration efforts must include invasive species containment. Herbicide use should be minimized.

The Agency must contact via mail all private property owners adjacent to old growth restoration treatments to avoid and/or resolve any contentious issues.

[8] 25% retention is prior to prescribed burning
[9] See Appendix B: Rationale for 25% Retention

An example of how it works with the Forest Service

Points of Agreement Between the Colville National Forest and the Northeast Washington Forestry Coalition on the Malo East Lake Fuels Reduction Project (Attachment to the NEWFC *Letter of Support,* May 21, 2008)

1. It was agreed to keep road segment 15 as proposed... The Forest agrees to construct an effective closure as per number 3 below, to minimize the risk of noxious weed introduction and to follow up monitor and treat any noxious weeds the treatments bring in.
2. Treatment within...units [34, 37, 38, 211, 249, and 250—all within NEWFC's *Restoration Zone*] will adhere to current prescriptions and fuel management objectives.
3. It was agreed that the use of existing non-system road templates to conduct treatments in LOS units is acceptable to all parties, upon assurance that they will be put to bed and the approaches camouflaged after use.
4. Units 252 and 39 are accessed by reuse of unauthorized existing roads and will not be changed in the Decision Notice.
5. Road segment 87 is an existing road template that is proposed for moderate reconstruction and addition to the Forest road system. There is no change in the Decision Notice regarding this road.
6. It is agreed that road segment 41 will be removed from the project.
7. The parties agree that temporary road segment 19 will be dropped from the project and that units 32 and 40 will be winter logged. Temporary road segment 51 reaches up to, but not into, unit 32, and will not be changed. Landings will be placed outside of unit 32.
8. Temporary road segment 3 (unit 4), segment 11 (units 5 and 9), and segment 81 (units 47 and 49) are proposed for construction in LOS units. It is agreed that these proposed temporary road segments will be as short as possible and that the roads will extend into the LOS units 4, 5, and 47 only to reach a suitable landing location. This distance is estimated to be 0.2, 0.15 and 0.1 miles respectively.

   Though it is preferred that closure of these temporary roads would occur within one year of commencing work, it is recognized that in some cases the need to seed or construct closure devices may have to be delayed due to weather or other unforeseeable conditions. In this instance, closure would occur as soon as restricting conditions allow and resource impacts due to closure avoided. The following language will be added to the Decision Notice for placement in purchaser contracts stipulating closure of temporary roads in LOS units after completion of work.

   "After a Temporary Road has served Purchaser's purpose, Purchaser shall give notice to Forest Service and shall remove bridges and culverts, eliminate ditches, outslope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches, and waterbars, as staked or otherwise marked on the ground by the Forest Service."

   Additionally, it is agreed that Purchasers will be required to seed all temporary roads in LOS units following the Colville National Forest Seeding Guidelines (or more recent direction) and camouflage to the best of their ability the entrances to these roads where they meet existing system roads. It is agreed that during road placement, to the degree reasonably possible, engineers will avoid removing trees greater than or equal to 21 inches in diameter.
9. It is agreed that proposed road segment 6 which crosses a Pileated Woodpecker Management Requirement Area will be changed from a system road to a temporary road and shortened by about a third**.**
10. No change will be made in the DN to proposed system road segment 8, with its creek crossing. It will be stated that an effective road closure will be constructed at the junction of road segment 8 and Tonasket Creek Road and a second closure prior to the intersection of road segments 8 and 9 or 6, whichever is sooner. Closure types will remain at the discretion of the District Ranger.
11. All late and old seral (LOS) units except unit 4 (which was determined to be to rocky and steep to safely log in winter conditions, and will, therefore, be logged in summer conditions) proposed for commercial treatment (units 5, 9, 32, 37, 39, 40, 47, 49, 117, 132, 145, 167, 168, 174, 176, 211, 250, and 252) will be winter logged using the following criteria:

    Winter logging conditions: Harvest activities would be timed to occur during periods of snow and, or, frozen ground to minimize compaction. A minimum of 8-10 inches of frozen ground and, or, compacted snow would be required

prior to harvest activities. This can be a combination of frozen ground and compacted snow or only compacted snow, or only frozen ground as long as it meets the depth requirement. Frozen ground means the ground remains hard and frozen after the equipment has passed, and does not break-up. If this requirement isn't being met, or if resource damage is occurring, the sale administrator will shut down operations, until such time as the required conditions are met.

If winter logging conditions are not met for three consecutive years, commercial treatment may occur during summer dry season conditions described as follows:

Summer logging conditions: Harvest activities may be timed to occur during periods of dry soil conditions. The soil is dry enough for heavy equipment if the soil consistency is loose, friable or firm, and shows no evidence of plasticity. Note, where summer logging occurs, it may be necessary to allow mechanical felling equipment off skid trails. This is to enable removal of small trees shorter than 50 feet that cannot be reached from the skid trails with the appropriate felling equipment. Forwarders and grapple skidders would remain on skid trails whose frequency would not exceed 130 feet except where converging at a landing or to avoid a natural feature. To the extent possible, slash will be placed on skid trails during operations.

12. In an effort to avoid impacts to soils, it was agreed to drop mechanical piling in LOS units. Instead it was agreed that the contract, as stated in the Decision Notice, will require removal of newly created slash greater than 3 inches in diameter caused by mechanical harvest. Removal is to occur during treatment from the following units: 4, 40, 168, 174, and 252. These units were proposed for mechanical piling in the EA. Further, these units will have fuels handpiled and burned as needed (fuels greater than 15 tons per acre) within 300 feet of the Forest boundary. If possible, the remaining acres in these units will be underburned. The exceptions are units 167 and 176 which will be proposed for underburning in their entirety.

13. The Forest agrees to leave a minimum of 25% of all LOS units as depicted in the EA (except unit 252), in untreated cover patches, except for parts of those units within 300 feet of the Forest boundary. Cover patches may have non-commercial trees and brush and may burn during prescribed fire activity. Within 300 feet of the Forest boundary treatments would be conducted to meet the purpose and need of the project and to reduce fuel continuity adjacent to private land.

14. Design element 66 in the EA will be modified (in italics) in the Decision Notice as follows: “66. Within treatment units in Pine Marten and Pileated Woodpecker Management Requirement areas and units with late structure (table 2.6) retain as practicable all standing *snags* and *existing* down trees greater than 16 inches DBH. *Where harvest-caused felling of snags greater than 16 inches DBH is unavoidable, downed snags will be retained on site.* Within MR areas, if harvest-caused felling of standing snags results in levels less than 4 per acre overall, snag levels would be increased to this level by creating snags. Exceptions to this design element would be on a unit by unit basis with consultation by the wildlife biologist or their designee.”

15. The Forest agrees to revise table 3.5 (EA page 99) of the Environmental Assessment to better reflect the now completed pre-prescriptions. We agree to change the desired residual basal area for Late Structural Stage to average between 90 and 110 square feet per acre with exceptions for units 5, 9, 117, 145, and 132 that are suffering from a root rot, and, or insect infestations.

    These units would have on average a residual basal area of between 90 and 110 square feet per acre on those portions of the units not affected by treatments to address root rot pockets, and there is no residual basal area specification in the portions of these units that are within root-rot treatment prescriptions. As per Forest Plan direction, no trees 21 inches or greater dbh would be harvested in these units.

    These are average values and are meant as such, rather than a hard and fast limitation on each and every acre. For example, where environmental conditions do not support the required square feet per acre this element would not be met.

16. The Forest Service agrees to use a variety of treatment methods to accomplish noxious weed control in the MEL project area. The Forest does not agree to conduct a “pilot project” to test and monitor a variety of weed management approaches.

17. The Forest does not agree to change the amount of road decommissioning in the EA