The trouble with "Variable Retention Harvests"
or
"When is a clearcut still a clearcut?"
By Oregon Wild, July 2013

Thinning Ain't Broke, So Clearcutting Won't Fix It

For the last ten years, the Forest Service and Bureau of Land Management (BLM) have focused on restoring moist forests and watersheds in Western Oregon degraded from past clearcutting, including thinning dense young plantation stands. Such thinning has allowed the agencies to minimize conflict and controversy while also meeting the timber targets under the Northwest Forest Plan as established by Congress. When carefully done, thinning young stands provides ecological benefits by helping develop some characteristics of natural forests more quickly over time. Thinning also produces jobs and wood products as a byproduct of ecological restoration. Unfortunately, BLM is now facing pressure to move back toward controversial practices, including clearcutting mature forests, largely to satisfy the timber industry's and some counties' cry for greater timber volume to solve a complex economic problem.

For example, logging principles advanced by Drs. Norm Johnson and Jerry Franklin are being demonstrated in a series of "pilot" projects initiated by the Secretary of the Interior on BLM lands. The goals of these pilot projects include 1) providing timber, 2) increasing early seral habitat, 3) and testing new logging principles. The projects in moist forest types utilize a harvest prescription called "variable retention harvest" (VRH). Johnson and Franklin spend a good deal of time trying to distinguish VRH from plain clearcutting.

The Society of American Foresters defines "clearcut" as "1. a stand in which essentially all trees have been removed in one operation —note depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration …"[1] While the underlying goals of VRH may not be as purely economic as most clearcutting, and while VRH may leave more structure in the stand than a traditional clearcut, the results on the ground are more accurately described as "clearcut with reserves,"[2] with similar ecological and hydrological impacts to clearcutting.

The expansion of VRH across the BLM landscape, as recommended by Johnson and Franklin, would have many negative impacts. It would be a significant departure from the Northwest Forest Plan's emphasis on the need to protect and restore old forests and the recent success enjoyed by the agencies from focusing on thinning dense young stands that were previously clearcut. And most importantly, there are better ways to manage our public forests. There is no compelling reason to shift from successful and much needed thinning to destructive and controversial clearcutting – with or without reserve trees.

---

[1] http://dictionaryofforestry.org/dict/term/clearcut.

[2] See http://dictionaryofforestry.org/dict/term/regeneration_method and http://dictionaryofforestry.org/dict/term/variable_retention_harvest_system

State Rules & Private Land Clearcuts
Rules for private forest management in Oregon allow clearcuts of up to 120 acres at a time, with minimal stream buffers and retention trees. Clear cut areas are densely replanted, and herbicides are often used to kill competing native vegetation and maximize survival of desired crop trees.

Clearcuts on State ODF land | Clearcuts on private industry land

Clearcuts and VRH on Federal Public Forestlands
A form of clearcuts are also allowed on federal public lands, in areas designated as "matrix" under the Northwest Forest Plan (NWFP). On each acre, between 6 and 25 scattered trees per acre must be left, depending on the location. For a variety of reasons, clearcutting has not been widely practiced on federal lands in recent years. Those reasons include controversy and wildlife impacts.

Under Johnson & Franklin's "variable retention harvest," about 20-30% of the pre-harvest timber sale unit is left, mostly in aggregates that range from about ¼ - 4 acres. A few scattered trees may also be left. The dominant features in the resulting stand are cleared areas with little or no structure and highly disturbed soil. Johnson & Franklin recommend that the cleared areas be managed to develop shrubs and other early seral vegetation, with low-density replanting and without aggressive efforts to control competing vegetation.

"Variable Retention Harvest" on BLM lands

Regeneration harvest on National Forest lands

Thinning

Over the past two decades, logging on federal public lands in western Oregon has largely shifted away from clearcutting to "variable density thinning" prescriptions in previously clearcut plantation stands under 80 years of age. This way of logging is designed to introduce more plant and animal diversity into these dense stands, including small openings which are planted with a diversity of tree species, varying the spacing between trees, and creating snags and down wood.

Variable Density Thinning on National Forest lands

Why We Don't Need More Clearcuts on Public Lands

Previously managed forest stands need restoration. Mature and old-growth forests need conservation.

- There is no ecological reason to log moist forest stands over 80 years old. Forests in the 80-120 year range are poised to develop the next cohort of old-growth forest and provide habitat for fish & wildlife, including threatened species. There is a serious deficit of late-seral habitat, and we need to grow more.
- Focusing on ecological restoration thinning, with timber as a byproduct, is a common sense approach for management of public forests. For the last five years, BLM has been generating an average of 190 MMBF per year by focusing on thinning young stands to restore habitat diversity. Ecologically appropriate restoration thinning is a win-win that produces desired economic, ecological, and social results.

Clearcutting has negative impacts, ecologically and socially.

- Clearcutting (aka "regeneration" or "variable retention" harvest) has significant negative impacts on wildlife and natural forest components like snags and down wood, and increases invasive weeds, blowdown, fuel loads, fragmentation, and forest edge habitat.
- Just because current plans allow clearcutting in some areas does not mean clearcuts are required. New information since the Northwest Forest Plan was adopted shows that more mature forest habitat is needed to help threatened species recover, and to store carbon and mitigate global climate change. Clearcutting in critical habitat or mature forests conflicts with recovery of listed species and current ecological and social priorities.
- Clearcutting is socially unacceptable. Most Oregonians value clean drinking water, wildlife viewing opportunities, recreational opportunities, and scenic beauty on public lands. Clearcuts compromise these values. Clean streams and healthy forests enhance Oregon's quality of life which may be its most valuable economic development asset.

Early seral habitat can be enhanced without clearcutting mature forests.

- While young forests ("early seral") is over-abundant across the landscape as a result of all the clearcutting on non-federal lands, an argument can be made that *high quality* early seral habitat is lacking. The sheer abundance of low-quality early seral on non-federal lands, may partially mitigate for the shortage of high-quality early seral habitat. In general, though, high-quality early seral habitat is produced not by logging, but by natural disturbance. Fires and other disturbances are still creating adequate amounts of high-quality early seral habitat on federal lands, and this trend may increase in some instances with global warming.
- While there is a well documented need to increase mature & old-growth forest habitat, the agencies have not set any have goals for early seral habitat development. While some rare wildlife depend on early seral forests, most species associated with this habitat are less likely to become endangered because they tend to be more mobile, generalists and opportunists.
- Sacrificing rare mature forests to restore rare early seral forest does not make sense, especially when there are a variety of ways to develop or enhance early seral habitat on public lands that do not require clearcutting mature forests. These include:

    - Allowing natural successional processes to take place after fire. This means retaining large tree structure, embracing non-conifer vegetation diversity, tolerating slow conifer re-establishment, and not logging post-burned landscapes.
    - Embedding structure-rich "gaps" when thinning dense young stands.
    - Extending the early seral character of existing very young stands that are starting to become dominated by conifers through pre-commercial thinning and gap creation.
- Management of private lands should be reformed to improve the quality of early seral habitat within that landscape. This may include retaining more live and dead tree structure in logged sites, relaxing or removing the "free to grow" requirement, encouraging less dense conifer replanting in some areas, and reducing or eliminating the use of herbicides that suppresses competing vegetation.

A wide range of adverse impacts stem from clearcuts and "variable retention harvests."
Both types of logging practices:

- Remove wood legacies in direct conflict with natural processes.
- Require roads that represent novel hydrological structures on the landscape that reroute water, wood, and sediment. Roads are a source of chronic sediment.
- Add unnatural cumulative disturbance on top of natural processes that are already creating early-seral forests and dynamic stream conditions. The NWFP was intended to limit, not expand, the adverse effects of clearcutting.
- Cause forest fragmentation often resulting in small disconnected islands of habitat.
- Harm soil through compaction, nutrient loss, erosion, and landslides.
- Deplete forest carbon stores and add to global warming pollution.
- Degrade water quality, scenic views, recreation, and quality of life.