

Testimony by Jerry F. Franklin

**“Reforestation Problems on National Forests: A GAO Report on the Increasing Backlog”**  
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I agree with the general conclusions of the GAO report. The Forest Service does have serious deficiencies in providing accurate and nationally consistent data regarding reforestation and timber stand improvement needs. I would note that there are many similar topics where the agency lacks consistent and retrievable documentation of stand conditions, past silvicultural activities, and management needs on national forest lands. The absence of such data bases, combined with the massive retirements of career professional foresters, is resulting in a significant and irretrievable “loss of institutional memory” on the part of the Forest Service.

However, perhaps the most fundamental of the GAO findings in importance is the need to “clarify the direction and policies for the reforestation and timber stand improvement program to be consistent with the agency’s current emphasis on ecosystem management” (p. 36). The Forest Service clearly has not systematically assessed its objectives and methods (silvicultural prescriptions) in reforestation and stand improvement in light of the dramatic shift from timber production to ecosystem management that has occurred in the last 15 years. This failure is resulting in projects, prescriptions, assessments, and inventories that are neither consistent with ecosystem-based objectives nor consistent among regions or even national forests within a region.

The emphasis in managing much of the national forest land base has shifted from maximizing timber production to other resource objectives, such as providing habitat for biodiversity and restoring forests to historic and less fire-prone conditions. Objectives and practices in reforestation and stand improvement programs need to reflect these new management objectives and not the historic timber emphasis. What was appropriate for timber production is not necessarily “good” for many ecological objectives!

For example, traditional practice following natural disturbances called for rapid re-establishment of dense (“fully stocked”) stands of commercially important tree species. Such an approach may be antithetical to both short- and long-term ecological objectives. Early successional forest habitat—relatively open areas free of dominance by closed forest canopies—characteristically has high levels of species diversity and is the site of many important ecological processes, such as nitrogen fixation. Allowing for the slower and less uniform process of natural regeneration may have greater ecological benefits, particularly when such naturally disturbed areas are allowed to retain the structural legacies of the previous stands—i.e., are left unsalvaged.

Traditional reforestation practices often result in perverse outcomes, such as on sites that suffer uncharacteristically severe (stand replacement) wildfire as a result of uncharacteristic fuel accumulation. On such sites it is currently common practice to salvage and immediately re-establish dense, uniform plantations—effectively recreating the conditions for the next, uncharacteristic stand-replacement fire! In some national forests successful past efforts to replace under-stocked natural stands with dense plantations have been as important as fire suppression programs in creating fire prone stands and landscapes. This may have been appropriate when the objective was to intensively tend these stands for timber production but such practices are not consistent with current objectives. Many professionals in the agency recognize such inconsistencies and have made efforts to change practices but past regulations (e.g., reforest in five years) and tradition often make this difficult or impossible.

Additional examples of perverse outcomes from traditional reforestation practices can be found in the Pacific Northwest. Here the agency is engaged in a major program—appropriately I would argue—to treat plantations established during the last forty years so as to accelerate development of structurally complex forests, which provide habitat for species such as the Northern Spotted Owl. Why would we continue to establish new dense plantations of this type on sites where our goal is structurally and compositionally complex forests?! It would not achieve our ecological goals and, if successful, result in the need for additional stand improvement treatments.

I would emphasize again the importance of structurally complex, gradually reforesting early successional habitat for ecological diversity. Mount St. Helens has provided us with a clear example of the unique contributions that large, slowly reforesting areas of this type can make to regional biological diversity. For example diversity and density of avifauna (birds), amphibians, and meso-predators are at extraordinarily high levels in the Mount St. Helens landscape.

Stand improvement needs and practices need serious reconsideration along with reforestation practices. Treatment of young stands for ecological purposes often contrasts with what is done to achieve timber management objectives. For example, creation of uniform stands is a goal in timber management; stimulating spatial heterogeneity through variable density thinning is often a goal in ecologically-oriented stand treatments. Related to this, ecological treatments often involve removal of some of the dominant trees while traditional timber thinning is “from below”—removal of only the smaller trees. Traditional wood production thinning focuses on elimination of commercially unimportant species and defective trees while ecological thinning may focus on retention of minor stand components and trees that have special value as habitat.

Many Forest Service professionals understand these differences and are adjusting their assessments and prescriptions accordingly. I give high marks to the insight and creativity of the majority of the agencies professionals as they deal with a bewildering array of new knowledge and new goals. However, agency traditions and local policies may not always support their efforts.

A serious, agency-wide re-evaluation and rationalization of reforestation and stand improvement policies is urgently needed. Even the language that is utilized – “timber” stand improvement – is inappropriate where development and enhancement of ecological values are really the primary objective. The language helps perpetuate the confusion of field personnel, stakeholders, and decision makers about what is really intended with reforestation and stand improvement activities. There have been profound expansions in the scientific underpinnings for silviculture along with the dramatic changes in management direction that warrant agency-wide attention.

A major national initiative by the Forest Service to systematically examine and revise the philosophies, principles, and practices on which its silvicultural activities are based --including reforestation and stand improvement—would be an important and useful exercise.