

Evaluation info for conifer retention guideline

Several scoping comments were made relative to our existing conifer regeneration guideline which recommends retention of conifer regeneration when harvesting mixed stands. The comment was as follows - "Some Native Plant Community discussions of changes to forest composition resulting from harvesting vs. fire or wind as a disturbance regime [focus] on the increase of red maple and balsam for example in today's stands. Change [the guideline] to reserve pine and spruce regeneration instead of conifer regeneration."

The basic contention is that balsam fir retention and abundance in mixed stands is increasing at a disproportionate rate relative to other conifers, causing a change in the NPC for certain forest types. Comparison of PLS and FIA data (Figure 1) generally indicates that balsam fir is increasing in abundance and altering NPC's, especially in fire dependent stands (NPC's beginning with "FD" – between the dotted lines on the figure). Active suppression of most fires over the past 100 years has removed the primary form of disturbance common to fire-dependent systems. Exclusion of fire benefits balsam fir, as it is very susceptible to fire and shade tolerant, allowing it to exist in the understory of many stands. Following harvesting or overstory dieback (i.e., succession), balsam fir in the understory is released from competition, allowing it to outcompete other species that are in less advanced stages of growth (i.e., number and size of balsam fir is greater than other species), eventually resulting in greater balsam fir abundance than was historically present. In non fire-dependent NPC's, there is general agreement that balsam fir is commonly present during establishment and early development of the stand, and it is not recommended that any change to the guideline apply to those NPC's.

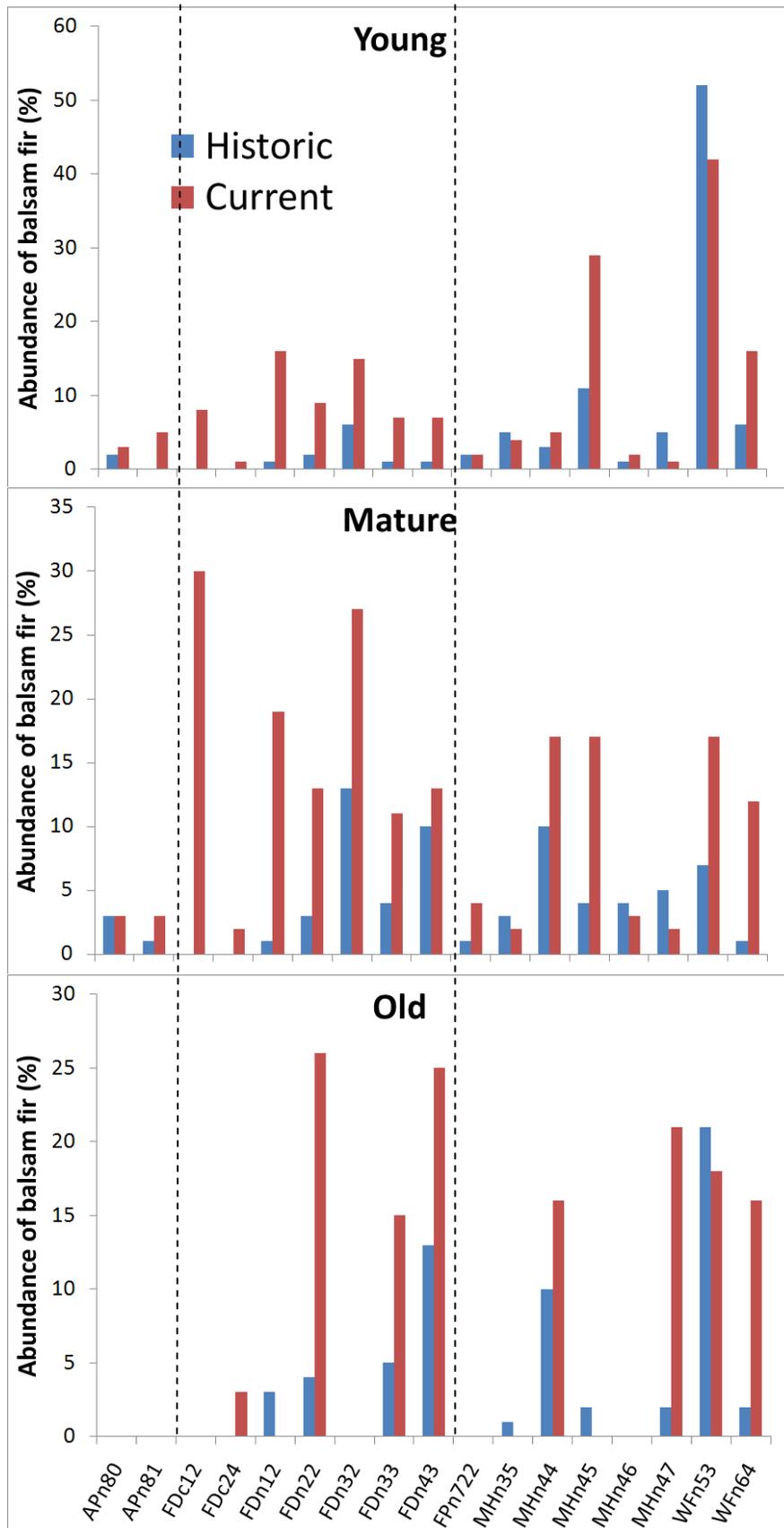


Figure 1. Historic (public land survey records) and current (FIA data) abundance of balsam fir by native plant community classification in Minnesota and stage of forest development.