

WILDLIFE MANAGEMENT INDICATOR HABITATS

Monitoring Conducted

Amounts of management indicator habitats
Population trends changes of associated species

Background:

Management Indicator Habitats (MIHs) are “coarse filter” habitats that were identified and selected in the 2004 Forest Plan revision because they represent the major biological communities on the Superior National Forest (SNF) that are most affected by our management activities. The coarse filter management concept assumes that managing to ensure such representation will provide habitat for as many species as possible. MIHs provide a practical and efficient approach to considering the thousands of species that are found on the SNF. The Forest Plan provides objectives for the amount and spatial context of MIHs for each of the six Landscape Ecosystems (Forest Plan pp. 2-55 to 2-78).

The coarse filter approach is complemented with the “fine filter” management approach that provides additional consideration for habitat needs of individual species of concern and interest. Forest Plan fine filter species include Management Indicator Species, threatened, endangered and sensitive species, and other species of interest.

Monitoring both habitat conditions and a broad suite of species is an important component of the coarse and fine filter management approaches.

Management Indicator Habitats

MIH amounts, trends, and spatial patterns are monitored to assess the degree to which to site-specific projects implement Forest Plan MIH objectives. Data for MIHs outside the Boundary Waters Canoe Area Wilderness (BWCAW) are from Superior NF’s Combined Data System (CDS) forest vegetation inventory. This monitoring report shows the annual “snapshot” of MIH conditions that occur on the ground as an “existing condition” for 2007.

Monitoring MIHs outside the BWCAW is continual during the year. It is continuously updated so that Forest Plan implementation projects, especially the large landscape-scale vegetation management projects, can use the most up to date information for planning. In addition to considering existing condition, during project planning MIH conditions are also projected out to 2014. These are based on all project proposals and all projects that have already had final decisions made, but are not yet implemented. This ensures that any given project in the planning stage will recognize how other completed, ongoing or proposed future projects would contribute to managing toward Forest Plan objectives.

For MIH conditions within the BWCAW the SNF continues to rely on the Forest Plan Final Environmental Impact Statement data which are from the Fire Effects Tradeoff model for the 2001 BWCA Fuel Treatment Final Environmental Impact Statement. In future years, the SNF expects to reassess those conditions, though the Forest Plan does not have MIH objectives within the wilderness.

Population Changes of Species Associated with Management Indicator Habitats

On annual to five year timeframes the SNF and its partners continue to actively monitor or inventory a wide array of species. These include the four management indicator species, many breeding songbirds, sensitive

Management Indicator Habitats (MIHs) Summary Points

MIHs 1-10: Forest type and age management indicator habitats:

- * Forest plan implementation MIHs are monitored and analyzed on a continual basis for each large landscape (10,000s of acres) vegetation management project.
- * For the eight large projects from 2004-2007, the need to move habitats toward Forest Plan MIH objectives was a key part of the purpose and need for each project.
- * Numerous species are being monitored to enable the SNF to evaluate Forest Plan assumptions about population and habitat links

species, numerous terrestrial and aquatic game species, and a variety of insects, amphibians, mussels, and non-native invasive species.

The purpose of monitoring species associated with MIHs is to evaluate our assumptions and predictions about population and habitat links. Understanding links between population trends (direction and magnitude of population change over time) or population trajectories (the size of the population over time) of species on the SNF and management impacts is a scientifically challenging task. This is because species respond not only to land uses and habitat changes that the SNF affect, but also to factors outside the control of the Forest Service. For examples, factors such as weather, climate, land uses in migratory or distant wintering habitat, introduced diseases and pests, hunting, forest fragmentation on other land ownerships can substantially impact populations. Nevertheless, monitoring as many species as reasonable increases the likelihood of detecting those relationships between habitat availability and species abundance that may be due to Plan implementation impacts. Monitoring species also may alert us to management issues of potential concern.

Evaluation and Conclusions

Management indicator habitats

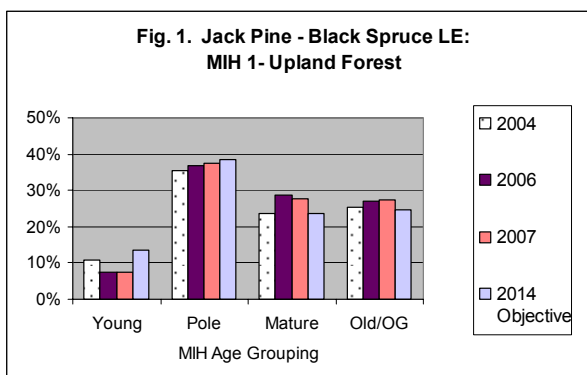
MIH conditions change slowly. This is because in any given year Forest Plan implementation changes only a very small percent of the total habitat in each of the six Landscape Ecosystems outside the BWCAW. Because there is minor changes from 2006, the more detailed analysis of MIHs in the 2006 report remains appropriate for this year and will not be repeated in that detail.

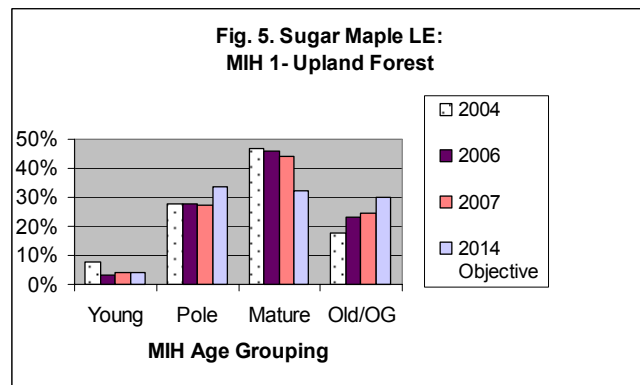
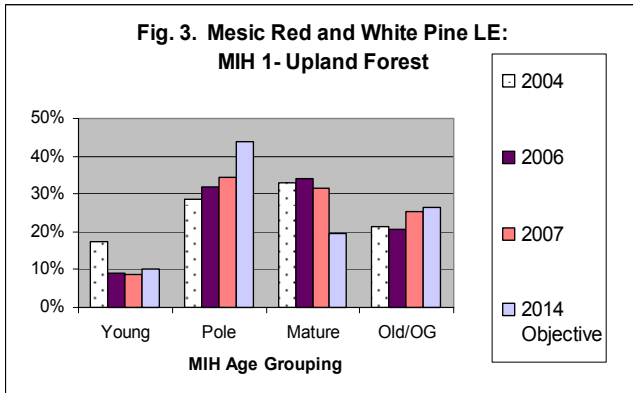
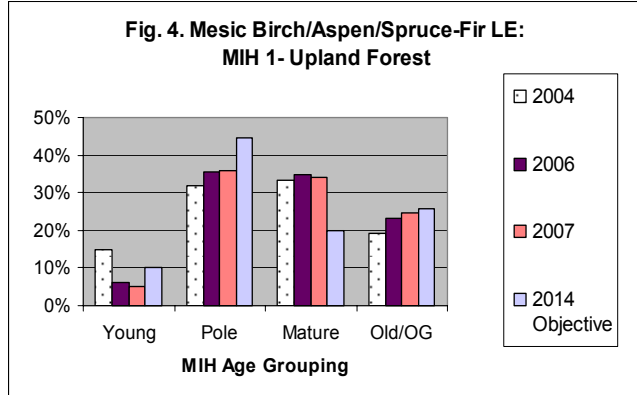
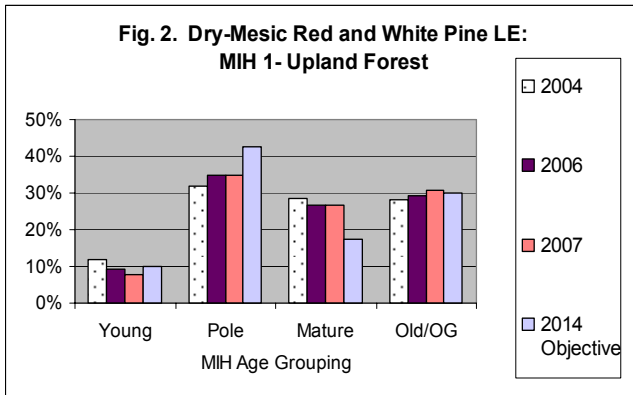
For most MIH’s, conditions continue to trend toward Forest Plan objectives and Forest Plan Final Environmental Impact Statement (EIS) conditions analyzed in Chapter 3.3.1. Therefore, management actions in the first three years of implementation are consistent with Plan direction. The extent to which conditions are trending toward objectives is acceptable. The conclusions of the Forest Plan EIS about the effect of management on these MIHs and their associated species also remain valid: the amount and distribution by Landscape Ecosystem of MIHs is adequately representative of those habitats that would have been expected under the range of natural variability of Superior NF ecosystems and therefore, current implementation of the Plan is expected to maintain the desired diversity and viability of native and desired non-native species. (Refer to 2006 Monitoring Report pp. 59-73 for discussion on MIHs that are not specifically trending toward objectives.)

Figures 1-5 show the conditions of MIH 1 – Upland Forest. MIH 1 is a habitat that encompasses all upland MIHs and upland forest types: aspen, birch, spruce, balsam fir, northern hardwoods, and red, white and jack pine. As a “catch-all” upland MIH, it provides a very broad indication of habitat conditions based on age groupings. For associated species it represents the coarsest filter for upland habitat.

The conditions represented in Figures 1-5 show four different age groupings of MIH 1 present in the five upland Landscape Ecosystems (LE): Young seedling/open forest stage; sapling/pole stage; mature forest; and old/old growth (OG) and multiaged stage.

The condition of the MIH at the beginning of Plan implementation – and those conditions analyzed in the 2004 Forest Plan Final Environmental Impact Statement – represented by “2004”. Conditions in “2006” and “2007” are actual conditions on the ground. “2014 Objective” is the percent that was projected in 2014 (end of first decade of the Plan) if the Forest Plan were fully implemented.





In the young forest stage of MIH 1 in each upland Landscape Ecosystem there is less young forest than at the beginning of Forest Plan implementation in 2004 and there is less than what was projected by the Forest Plan FEIS by 2014. One of the main considerations here is that the existing conditions do not reflect the upcoming vegetation treatments for which decisions have been made, but for which the actual treatments (mainly timber harvest) have not yet been implemented. In other words, the degree shown in Figures 1-5 to which the SNF is moving toward objectives for young MIHs does not account for planned treatments because those treatments have not occurred yet. Another factor is that many of the acres that were in the young stage at the time the Forest Plan was adopted in 2004 have now succeeded to the pole stage. As discussed in more detail in the 2006 Monitoring Report (p. 63), this does not indicate a concern about implementation or species viability.

Cumulative Effects for All Vegetative Growth Stages (Age Groups) of MIH 1.

No additional information is available on cumulative effects from actions on non-NFS lands that is different from assumptions made in the Forest Plan EIS. In the third year of implementation (2007), we have no information to indicate that substantial unexpected changes have occurred on non-NFS. Therefore the conclusions about cumulative effects documented Forest-wide in the FEIS (Chapter 3.3.1-43 to -51) are assumed to remain valid.

Population Trends of Species Associated with Management Indicator Habitats

This 2007 report does not provide results of the various monitoring programs, although a wealth of information about abundance, distribution and trends is available on line in reports cited in the reference section below. During project planning, biologists use these sources and others to ensure use of best available information. Our intent is to provide evaluation of trends of many of these MIH associates in the future monitoring reports. With only three years of Forest Plan implementation, changes to habitats have been relatively minor and it is unlikely that impacts to species from projects could be detected in such a short timeframe. Therefore, information on species populations and habitat links that was documented in the Forest Plan Final Environmental Impact Statement for most species remains appropriate information for consideration during project planning.