

NH Wildlife Action Plan Maps

Summary of Changes between 2005 data and 2010 data

The 2010 **Wildlife Habitat Land Cover** data includes several changes that increase the accuracy of the data and its usability to local communities. We updated the habitat models because we acquired some more accurate and updated data that was used to build the models.

The three major changes are:

- 1) Locations of Appalachian Oak Pine and Hemlock Hardwood Pine forests due to the release of digital soils data for Belknap and Merrimack counties.
- 2) Inclusion of all potential grasslands instead of just those over 25 acres in size.
- 3) Incorporation of all shrublands and other small open habitats into the surrounding forest.

The result is a more comprehensive and accurate depiction of the habitat of New Hampshire. Remember that these are still based on models, so you may see some differences between what the models predict and what you see on the ground.

Wildlife Habitats

Forests: In creating the models for forest types, a critical factor that affects where different communities of trees will grow is soil type. For example, Appalachian Oak Pine forests grow on sandier soils than Hemlock Hardwood Pine forests. By having better digital soils data in two counties (the last two to be digitized), we could more accurately map those forest types using a model developed by The Nature Conservancy. This results in a change to the Highest Ranked Habitat by Ecological Condition data, as there are now some larger patches of Appalachian Oak Pine forest in Merrimack County, and thus some of the more southern forests scored lower on the condition analysis. Repairs of a few small errors in the models may also change the locations of some patches of other forest types.

Grasslands: Many communities were interested not only in larger grasslands, those that support our rarest grassland birds, but also those that supported bobolinks, meadowlarks and various reptiles. Grasslands are also valuable farmland. We mapped all potential grasslands (croplands are considered potential grasslands as they provide some of the benefits of grasslands and could easily become grasslands under a different management routine). For the condition analysis however, we only used grasslands greater than 25 acres in size. This is because our rarest and most declining grassland species need grasslands at least this large, and the other species will also benefit by protecting and managing these grasslands for wildlife.

Other habitat not mapped: In the 2005 version of the data, there were some areas that appeared as holes in forests. These were areas that did not fit into the habitat models, but were shrublands, small openings in forests and other open areas. These areas tend to be transitional, and over time become forest. These areas are now incorporated into the surrounding forest.

Condition Analysis and Ranking

In general, the condition analysis was done the same way it was done in 2005. The same types of data were incorporated into the analysis for each habitat type. The changes include:

- 1) Three additional years of wildlife, plant and natural community data
- 2) Refinement of wildlife species data used include only species of greatest conservation need (endangered, threatened, special concern species from the 2008 updated list)
- 3) Refinement of natural community and plant data from the Natural Heritage Bureau

Some places that were considered highest ranking in 2005 are not shown as such now due to changes in habitat land cover and the additional species occurrence records. *This does not mean these places have actually become less valuable to wildlife!* The rankings are based on a percentage of the state by area, and we have kept those percentages the same (except for High Elevation Spruce Fir). Some areas will have been found to have rare species, because someone has gone out, looked and recorded the data with the Natural Heritage Bureau. This increased the condition score. Other areas may have become lower in rank because the models now show that area to be a different type of forest, or be competing for the honors with habitat that was formerly a different kind of forest that may be a larger patch, have documented rare species, be less susceptible to development or have other attributes that cause it to score higher in condition.

A significant improvement in the accuracy of scoring the relative condition of forest habitats was accomplished by evaluating all forest as a seamless matrix. This assigns a condition score to each 30 X 30 meter (0.22 acre) pixel in the forest habitat data. Using the same thresholds as the 2005 analysis, areas, or neighborhoods, scoring Highest Ranked Habitat by Ecological Condition are selected for each of the forest types. Rather than elevating entire polygons, only the portion of forest meeting the condition threshold is assigned the highest rank. The minimum area of a highly ranked matrix forest is 100 acres. The landscape condition score was based on different data than in 2005, but they still addressed the same aspects of condition.

If you are in the middle of a land conservation project, and are concerned that the 2010 maps of your site have less high ranked habitat than the 2005 maps, please contact Emily Brunkhurst at emily.brunkhurst@wildlife.nh.gov. She will discuss your project with you and provide a letter discussing the merits of your project for your use. This will only be available for projects that are already partly funded at the time of the 2010 data release.