

## **Ecologic Function**

### **Coarse Scale Habitat – Forest Proximity of Patches Target –Ecologic Function**

The purpose of setting a target related to this value is to ensure that the preferred scenario includes forest patches that are functionally connected.

It is well established in conservation planning literature that habitats in close proximity to each other support more species than those that are isolated. The successful movement of wildlife is dependent on not only the proximity of the patches but the corridors between them.

#### **Datasets**

The following datasets were considered as potential sources with which to facilitate potential target development for this ecological objective:

1. NPCA NAI ELC Community Series Mapping
2. Soil Landscapes of Canada

Forest cover is determined by combining all of the mature wooded area community types from the ELC mapping. This means that most mature tree dominated communities like Woodlands, Savannahs and Plantations are included with the ELC 'Forest' community and considered part of the broader and more general concept of 'forest cover' as it pertains to habitat.

Forest patches were derived by dissolving the mature wooded ELC communities isolated as forest cover habitat into individual mapping units. A derivative patch is a polygon of forest cover that does not share a border with another patch, there needs to be a separation by non natural cover in between.

Nearest Neighbor analysis was performed on the forest patches and summary statistics were generated for each soil landscape to consider as part of the discussion around potentially developing a target for this ecological objective.

Across the study area there are a total of 15647 patches, with on average 38 meters between nearest neighbors (standard deviation of 70 m).

#### **Discussion**

It was explained to the group that the MARXAN model could calculate proximity but that it would seriously increase the processing time. It was suggested to the Scenario Development Team (SDT) that proximity between features would be better determined once the most important areas of existing areas of existing natural cover were determined.

#### **Data Gap**

None noted.

#### **Decision**

Date: April 7, 2011

**No target was set for this value.**

**Representation in the Learning Scenarios**

Due to the fact that no target was set for this value, there is nothing to report in relation to their performance in the scenarios.

**Representation in the Final Scenarios**

Due to the fact that no target was set for this value, there is nothing to report in relation to their performance in the scenarios.

**Recommendations**

Run the analysis on the preferred scenario results to see how close together the patches are (book keeping exercise)

Add feature typing to the local ELC community mapping based on size thresholds and surrounding land use context to identify true forest habitats from more general wooded habitat types. There are many small wooded area polygons of mature trees in the mapping that are classified as forest communities that may provide refuge for species but do not necessarily provide true forest habitat. Consider a minimum patch size threshold for identification of forest patches.

Consider breaking up soil landscape 569001 into zones east and west of the Welland Canal.