

## Homework No. 9 – Inventory with Fixed-Area Plots

### Objective

In this assignment, you will practice collecting data from a systematic sample in a mixed northern hardwood stand using fixed-area plots. The ultimate goal is to estimate stand-level summaries of stocking and stand density.

### Instructions

You will establish three 1/24<sup>th</sup> acre plots at pre-determined locations in a stand off of Misery Bay Road west of Toivola MI. This stand is privately owned by GMO Renewable Resources, a timber investment management organization that holds more than 440,000 acres in the western Upper Peninsula. Locations are noted in the attached map.

Plot locations have been established for you using a 200 ft. grid located randomly in the stand of interest. Navigate to each plot location by pacing along an appropriate azimuth. When you've located the plot center, mark the tree nearest the center with flagging tape. This is important; you will return to this plot next week.

Then, establish a 1/24<sup>th</sup> acre, circular, fixed-area plot at each plot center. Pick a very obvious tree and start measuring in a clockwise direction, recording species and dbh (to the nearest 1/10"). Remember to check for borderline trees as necessary.

When you're done, choose one hardwood and one softwood tree on each plot and measure the total height of the tree. Sample only from trees greater than 10" dbh and try to pick a different height-class tree on each plot.

### Product

When you have time, back at the "office", enter all of the data into an Excel workbook. Then, submit your field sheets, and a hardcopy of your workbook as attachments to an appropriate memo. Submit only one memo per team; this means you have to list all of the team members and obtain all of their initials! Also, email your workbook to Robert.

### Due Date

This assignment is due at the beginning of class on Monday April 13, 2009.