

# Assisted Tree Range Expansion Project (ATREP)

## Data Collection and Entry Guide

Thanks for participating in our project! This guide will provide you with simple instructions for collecting and reporting some basic information and measurements on the trees that you have planted as a part of ATREP. Please email [kama.ross@macd.org](mailto:kama.ross@macd.org) if you have any questions.

The data form that you will submit the following information through is located on the 'Get Involved' page of the website, Atrep.net.

1. **Full name, email and address**— The basics. Please include your middle name as the middle initial is important for keeping track of participants.
2. **Tree Code**— The abbreviations for the 6 species offered through ATREP are as follows:
  1. Tulip tree (*Liriodendron tulipifera*) = LITU
  2. Shagbark hickory (*Carya ovata*) = CAO2
  3. Sassafras (*Sassafras albidum*) = SAAL
  4. Hackberry (*Celtis occidentalis*) = CEOC
  5. Black gum (*Nyssa sylvatica*) = NYSY
  6. Swamp white oak (*Quercus bicolor*) = QUBI

The tree code will consist of the **species abbreviation, an underscore, your full initials and the number of the tree that you are planting**. Each tree code will look something like this “LITU\_Mjb1”. In this example, the tree species is *Liriodendron tulipifera* (the tulip tree), the name is Madeline Jean Baroli and it is the first tree. If I were planting 3 tulip trees total, the respective tree codes would be “LITU\_Mjb1” “LITU\_Mjb2” and “LITU\_Mjb3”. The same process applies if I were to be planting multiple species. For instance, two shagbark hickories would be coded as “CAOV2\_Mjb1” and “CAOV2\_Mjb2”. Take care to label a flag or your tree’s protective cover with its number, as it will be important to ensure consistent data!

3. **Tree vitality**— Three simple options: alive, dead, or uncertain. If a tree is struggling to get proper nutrients or water, it can sometimes be difficult to assess this. Green foliage is an obvious indicator that the tree is alive, but if a tree lacks foliage it does not necessarily imply that it is dead. Be sure to inspect twigs for new growth; even if the sapling lacks foliage, there may be a small, swollen buds at the branch tips that indicate the tree is still alive. Dead saplings will have stems and branches that easily snap when gently bent, as opposed to returning to a straight position, and a simple ‘scratch’ test will reveal a green or white inner cambium layer if the tree is alive. If you check the ‘uncertain’ box our District Forester will contact you in order to assess the tree.
4. **Tree height**— Since your trees are saplings, simply measure their height to the nearest centimeter with a measuring tape. When the tree grows over six feet tall, you can elect to only report the tree’s DBH, or use [these picture instructions](#) for calculating the tree’s exact height.
5. **Tree diameter at breast height (DBH)**— Please enter N/A in this field unless the tree is at least six feet tall. If the tree is over six feet tall, use a flexible measuring tape to obtain the DBH; at about 4.25 feet high on the tree, measure the circumference to the nearest millimeter and then divide that number by pi.

**6. Notes—** This section is for you to include any notes on what you are observing of your trees.

We ask that you report on the following indicators of tree health:

- *Foliage color—*
  - What color is the foliage?
  - Are there any unusual patterns of leaf discoloration?
  - Changes in foliage color during the growing season can be an indicator of nutrient deficiencies, waterlogging or drought, bacterial scorch, and more.
- *Quality of foliage—*
  - Is there any evidence of dieback (are leaves falling or wilting prematurely)?
  - Are leaves curling or warping from their usual shape? This can be a sign of damage from an insect or virus.
  - Is there evidence of physical damage from insect or animal feeding?
- *Bark abnormalities—*
  - Are there any obvious cankers/knots present on the bark?
  - Is there any discoloration or necrosis (tissue death) at the joints where branches meet the main stem?

Feel free to reference [this guide](#) for further information on assessing tree health.