



In 2021, Cleveland Metroparks initiated a three-year partnership with The Lubrizol Foundation to address climate change. With funding from The Lubrizol Foundation, Cleveland Metroparks Natural Resources team will estimate carbon storage and sequestration (annual capture of atmospheric carbon dioxide) across different native plant communities in our park system.

Using data from the long-term Plant Community Assessment Program, Cleveland Metroparks will generate a preliminary carbon accounting report in early 2022, followed by a more comprehensive carbon accounting report by mid-year. These reports will use data from several hundred plots across all of Cleveland Metroparks that document the distribution of our various native forest types. The reports will include attributes about the composition of each forest by tree species, size, condition and number. The reports will also summarize estimates of carbon storage and sequestration by tree species and by forest type.

Each tree species has a different tolerance to climate change. In other words, in our region, some species are expected to persist under increased climate change, while others are poorly adapted and may not be able to persist. In order to manage our forests into the future, Cleveland Metroparks Natural Resources division will assess each species' climate tolerance threshold. We will also assess other forest vulnerabilities and stressors.

**Our ultimate goals are to:**

- **Increase forest resilience to climate change**
- **Stimulate natural tree regeneration**
- **Enhance carbon storage and sequestration**



Using the carbon accounting reports, Cleveland Metroparks will then develop forest management guidelines to increase the resilience of our forests. We will investigate a suite of solutions; some examples of forest management techniques include timber stand improvement (TSI), enhancing forest form and function, planting climate tolerant species, maintaining or increasing biodiversity and controlling invasive species.

To better prepare other natural areas in Northeast Ohio for climate change, Cleveland Metroparks plans to develop an online mapping tool to engage other organizations, municipalities, and citizens. The goal of this tool is to provide attributes of our natural communities as well as resources and recommendations for climate-friendly forest management and tree plantings. **Look for this new tool by 2023!**

