

1 Overview

1.1 Purpose and Pattern

The purpose of this model is to investigate the positive feedback loop between urban residents, their decisions about vegetation in their yards, and bird species richness. The ecological trends that result from these interactions (i.e., increased bird populations, increased vegetation structure) are meant to inform policy on urban infrastructure, neighborhood regulations on yard vegetation, and education programs for homeowners. The model is parameterized based on empirical knowledge of vegetation structure, bird populations and behavior, and human behavior to answer the following questions:

- How do residents' opinions of birds affect the decisions they make about vegetation structure in their yards?
- How do bird populations respond to vegetation structure in yards?
- What spatial patterns emerge on the landscape over long periods of time?