

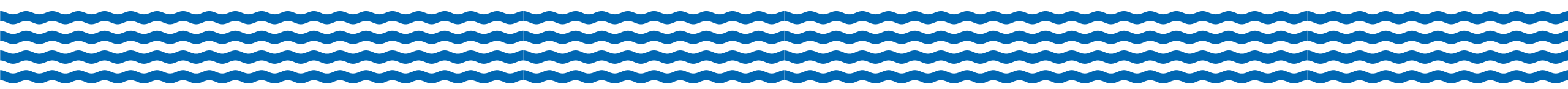


Mercer Island Open Space Forest Health Assessment 2024



Goals of the Forest Health Assessment

- Establish baseline of forest health in 2024.
- Measure progress towards habitat restoration targets outlined in Climate Action Plan.
- Assess change in forest structure and biodiversity since 2014 Open Space Vegetation Management Survey.



Methods: Overstory plots

- 146 10m x 40m tree plots “macroplot”
 - 10m x 10m “microplot”
- Basal area of trees
- Trees per acre
- Ivy growth on trees
- Count and species of saplings
- Count and species of seedlings
- Coarse woody debris



61 plots on Trust Property

Methodology: Understory plots

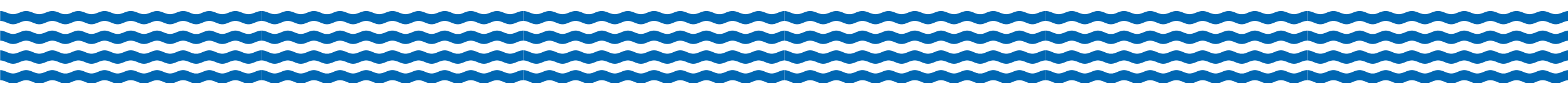


- 446 5m x 5m understory plots
 - % cover of bare soil
 - Organic soil layer depth
 - % cover and species name for understory species and tree seedlings (<1" diameter)

196 plots on Trust Property

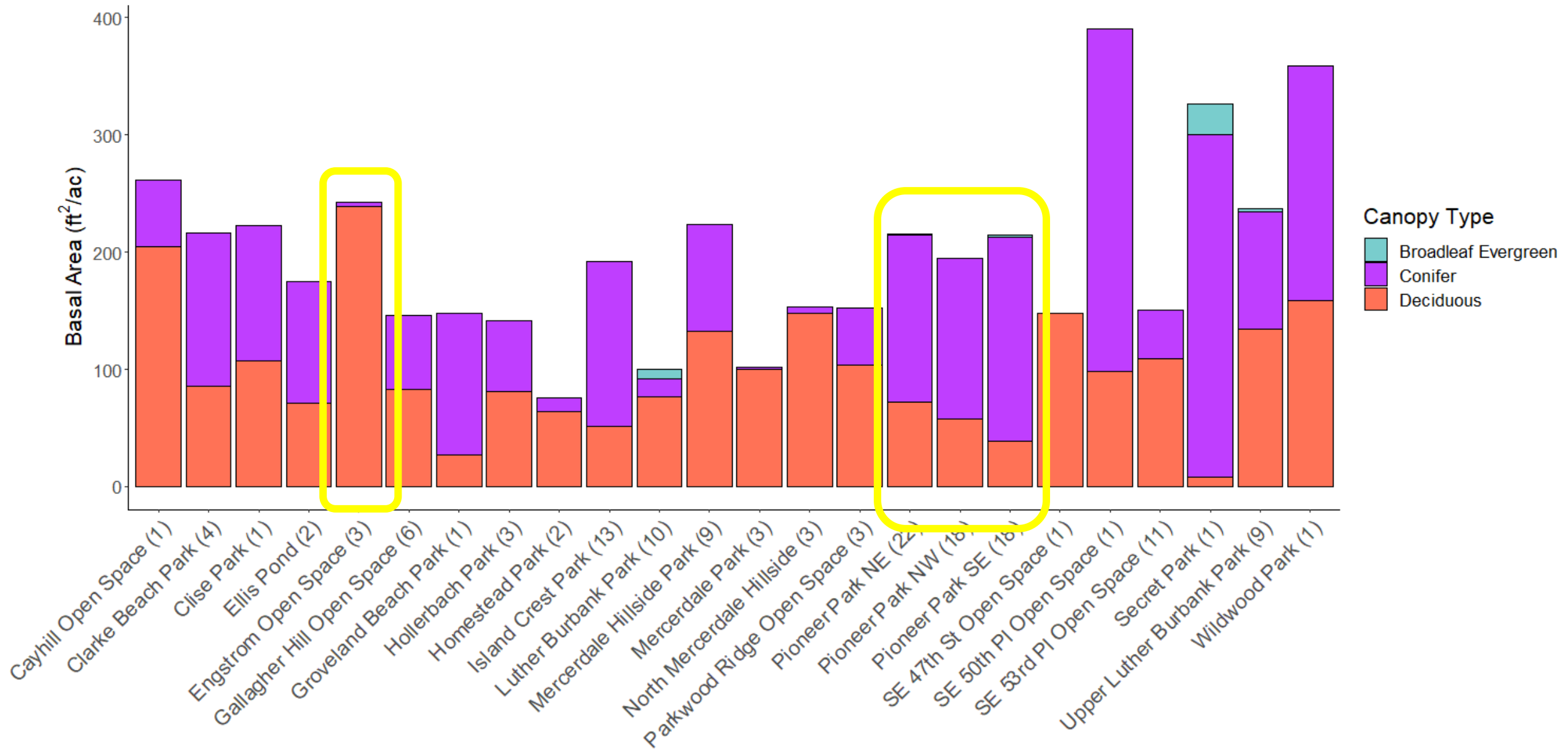
Forest Structure

- Wide variability throughout Trust Properties.
- Vast majority native trees in canopy.
- Tree density was high in some plots.
- Coarse woody debris and snag density averages on target, with great deal of variation

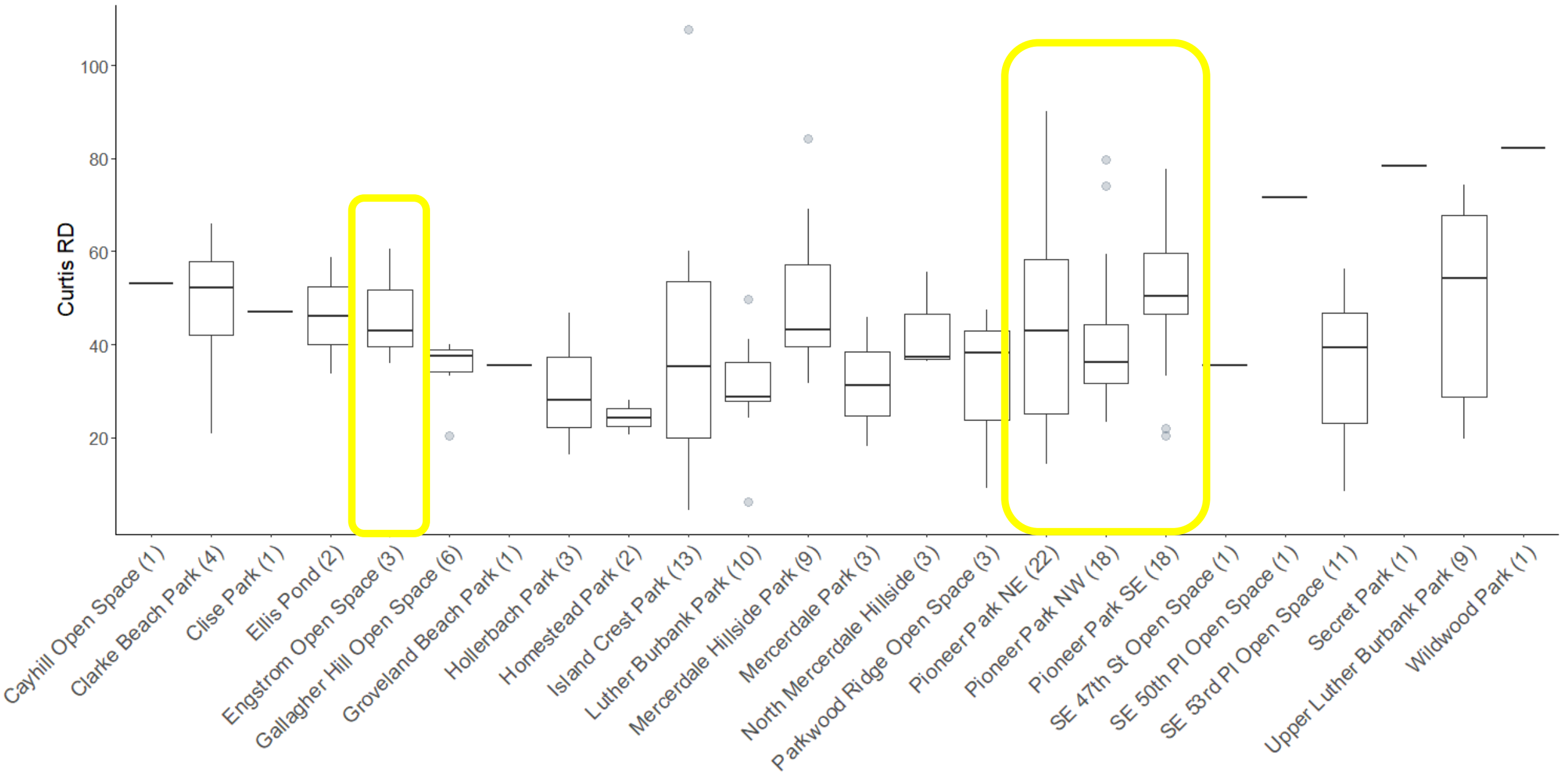


Basal Area by Canopy Type

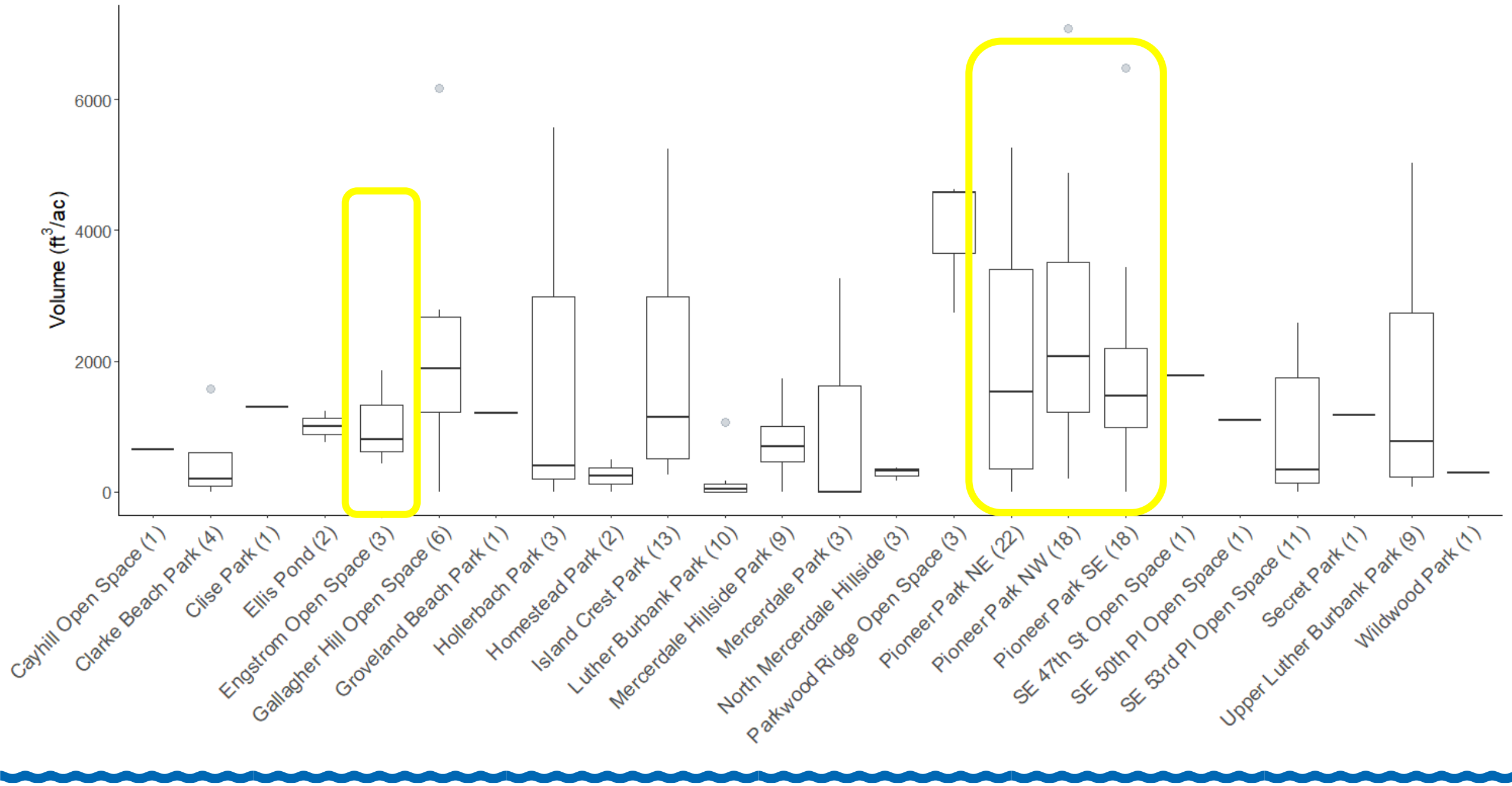
Native Species



Relative Density

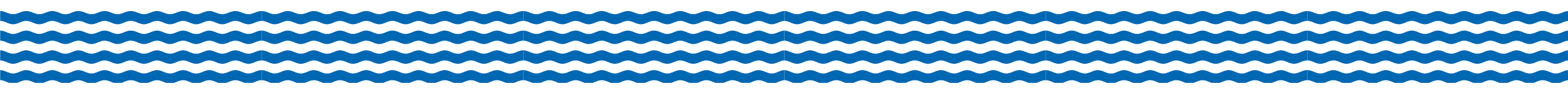


Coarse Woody Debris

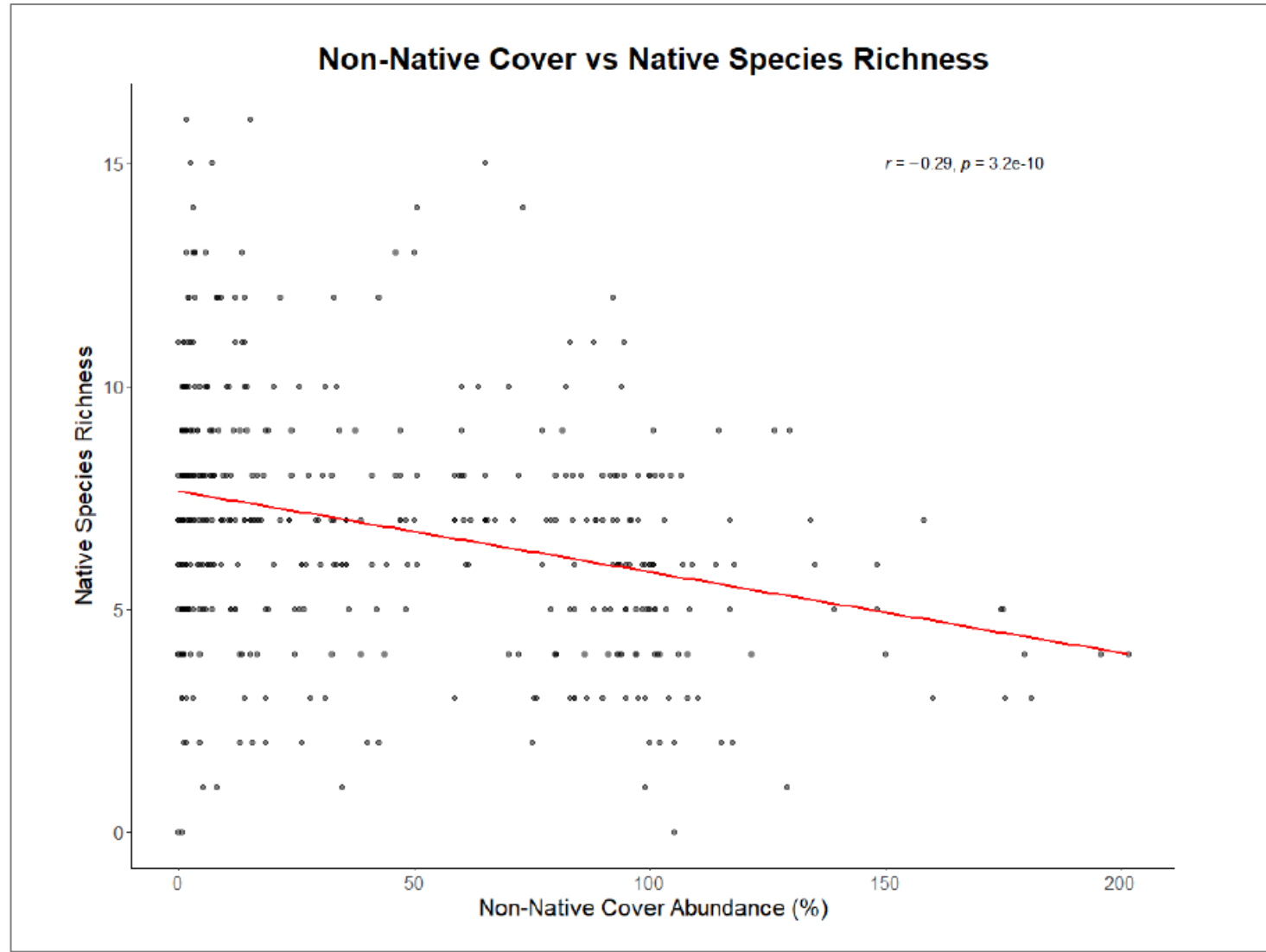


Tree regeneration

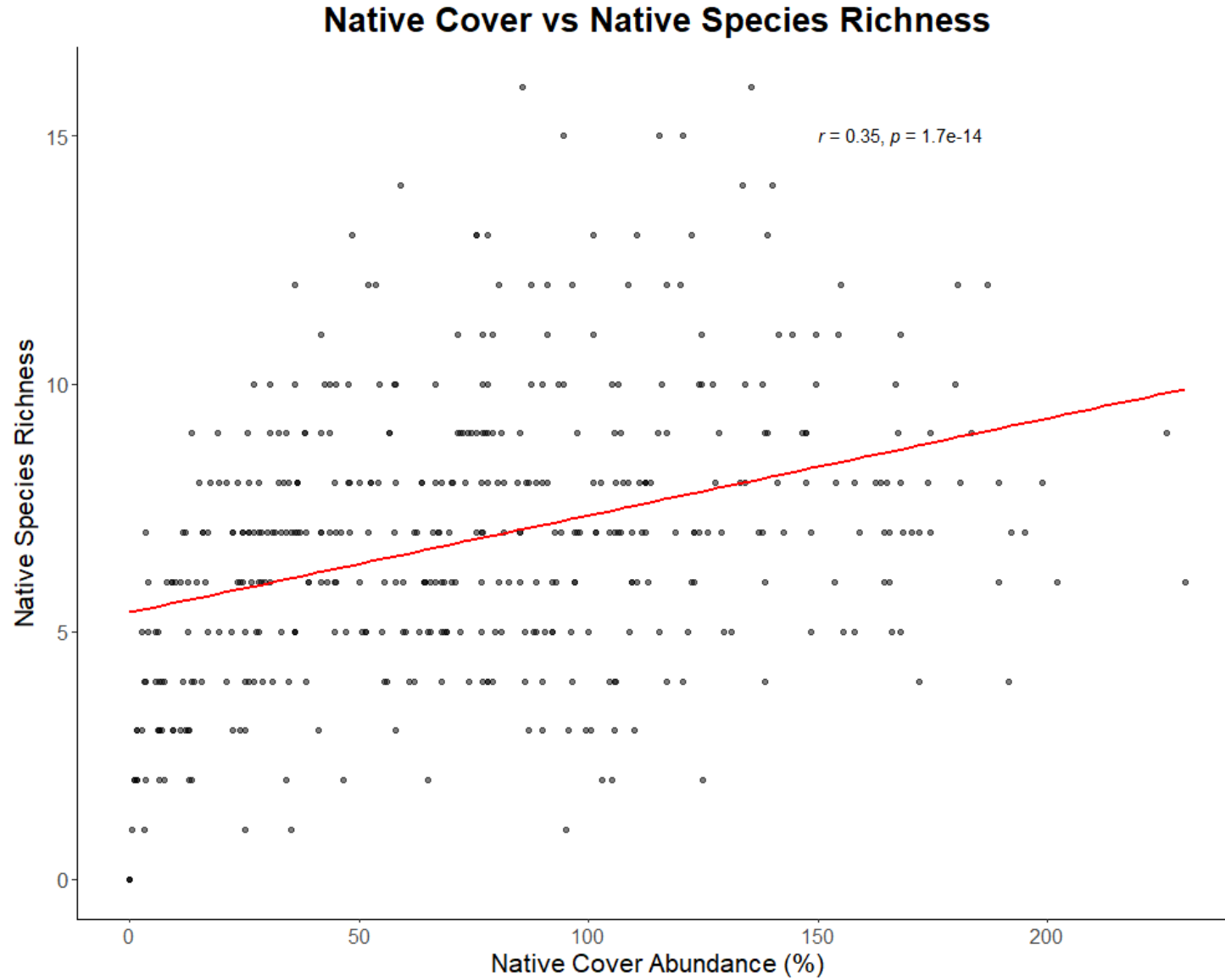
- Wide spatial variability of native tree regeneration.
- Holly seedling pressure still high.
- Planting efforts likely responsible for most conifer regeneration.



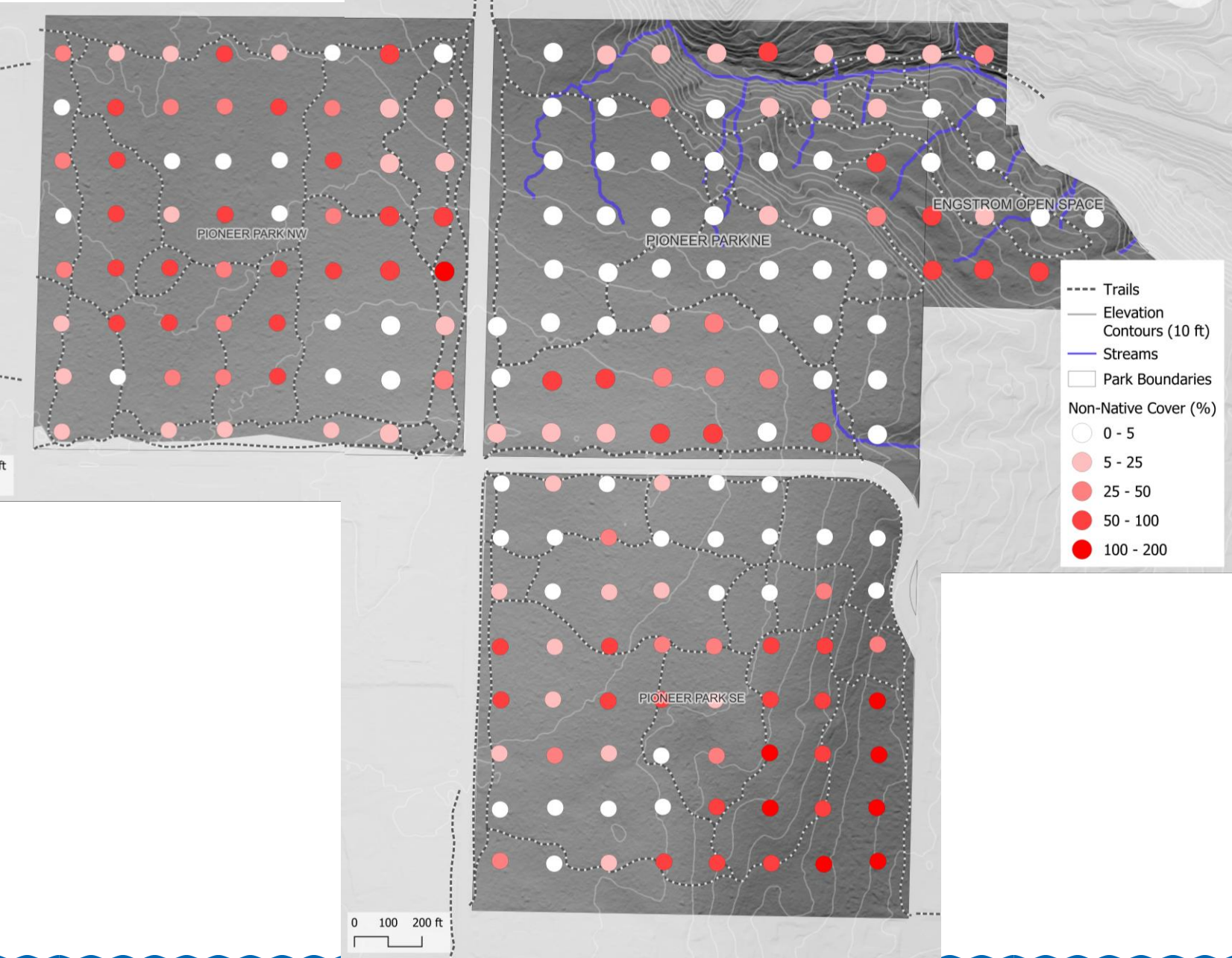
Understory



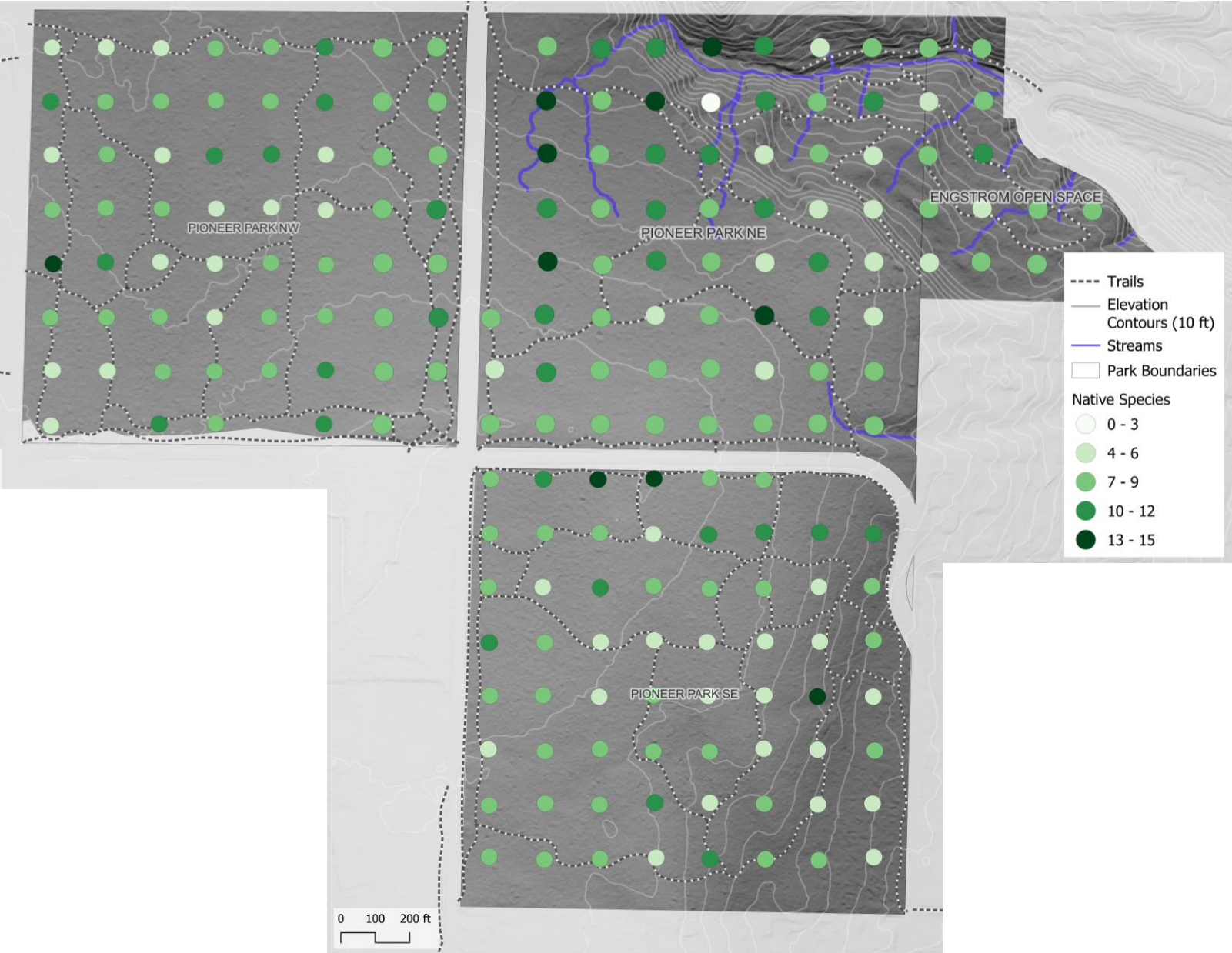
Understory



Percent Cover of Invasive Species



Native Species Richness



Next Steps

- Define baseline, based on Climate Action Plan targets.
- Update Open Space Vegetation Management Plan with 2024 data.
- Investigate need for thinning or targeted planting.
- Adapt management approach in response to trends over time.

