

Internship Scope of Work

Priorities for Summer Intern Research:

- 1) Identify geographic patterns in canopy cover and recent gains/losses under the first year of Title 11
 - a) Using current zoning/land-type designations, map out the status of each neighborhood's canopy cover in relation to Urban Forest Management Plan canopy goals (e.g., below/at/above goals)
 - b) Estimate recent canopy changes (2014-present) covering first year of Title 11 implementation
 - c) Overlay 2015 tree planting/removal permits with canopy changes to approximate compliance and identify neighborhoods with high/low participation
 - d) Explore relationships between canopy loss/gain and tree permit participation with social, policy, and environmental indicators across the city. In particular, consider:
 - i) Portland Housing Bureau's 5 Indicators used for "Opportunity Mapping": (1) Childhood Education; (2) Employment; (3) Transportation; (4) Access to Family Wage Jobs; and (5) Healthy Eating Active Living
 - ii) Gentrification Risk
 - iii) Air quality indicators
 - iv) Heat island indicators
 - v) Parks access (1/2-mile walk to a developed park or natural area as a City Goal since 2001)
- 2) Assess current and future zoning in terms of implied trends in canopy cover (if time allows)
 - a) For each neighborhood, characterize the areal extent and the number and type of trees or canopy cover exempt from Tree Code under current zoning and Comp Plan
 - b) Investigate potential relationships between updates in Comp Plan zoning with current canopy cover status (below/at/above goals) and whether the zoning change is likely to increase/decrease canopy cover
 - c) Integrate these implied trends with the social and economic indicators above

Primary Datasets:

LiDAR data collected from a 2014 flight over the Portland Metro area; 2015 or 2016 aerial or satellite imagery; 2015 Tree Permit spreadsheet/database; Current and Comp Plan zoning layer and Parks distance; PHB's "Opportunity Maps" and Gentrification Risk; Oregon DEQ Maps of Air Toxics and Heavy Metals; PSU map of heat island indicators

Lead Point of Contact:

1. David Diaz, Forestry Program Manager
Ecotrust

e-mail: ddiaz@ecotrust.org
phone: (503) 467-0821

Secondary Points of Contact:

2. Vivek Shandas, Professor
Director, Sustaining Urban Places Research Lab
Research Director, Institute for Sustainable Solutions
Portland State University

e-mail: vshandas@pdx.edu
phone: (503) 725-5222

Vivek also serves on the Portland Urban Forestry Commission

3. Angie DiSalvo, Outreach and Science Supervisor
Portland Parks & Recreation, Urban Forestry

e-mail: angie.disalvo@portlandoregon.gov
phone: (503) 823-4484