Increasing canopy in the Arboretum:
Can the IU Arboretum do more to help reach the campus UTC goal of 40%?

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Introduction

In March 2010, Indiana University Bloomington released the new Campus Master Plan. This plan outlined many goals for the future of campus, but most were not directly associated with a particular timeline. One goal the University outlined was to increase tree canopy cover on campus from 20% to 40%. The Arboretum, as well as the Jordan River corridor, will be instrumental in achieving this goal.

Figure 1. Indiana University Arboretum in the fall (Smith, 2009).

Opportunities and Challenges

The Arboretum is one of the biggest opportunities to be taken advantage of with this plan. This tree devoted space is only sparsely forested. The Jordan River wildlife corridor is another huge opportunity for the campus to capitalize on and plant trees.

Strengths	**Weaknesses**
Stormwater runoff and air pollution reduction Temperature reduction Benefit Tree Campus USA status	High cost of planting and maintenance Likely will want lots of red maple and red oak: less diversity
Opportunities	**Threats**
Make the Cox Arboretum truly devoted to trees Benefit campus wildlife Benefit IUB's greenspace	New building construction Emerald Ash Borer and Asian Longhorned Beetle Loss of trees/young males

Figure 2. SWOT analysis of the Canopy Cover Increase plan of the IUB Master Plan.

Role of the Arboretum

At present, the role of the Arboretum in the eyes of the University is unclear. No written plan for the future of the Arboretum exists, and the once visualized "stadium of green" is not quite what exists in the present. An arboretum, by definition, is a place devoted to trees. Currently, the Arboretum is sparsely forested. In an effort to achieve the 40% canopy cover goal, the Arboretum plays a crucial role and provides an opportune space for many trees to be planted. The role of the Arboretum is important to the goal, but it is evident that it is not the panacea to achieve 40%. Tree planting here is crucial, but in order to meet the numerical goal, widespread planting over campus needs to occur.

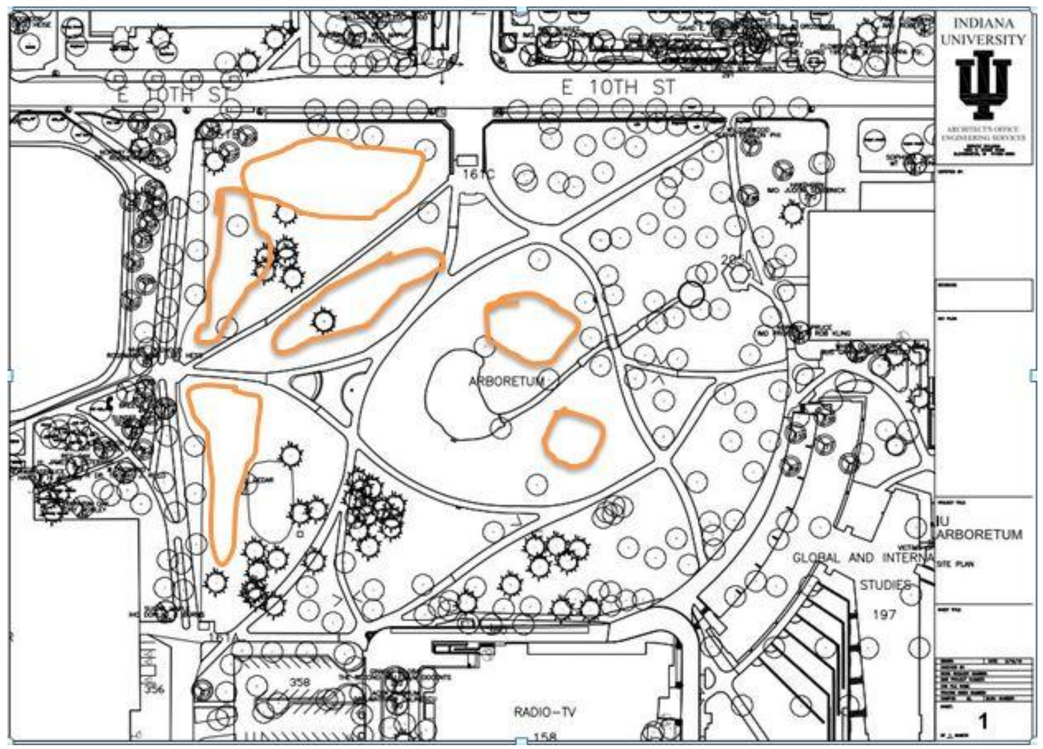
Methodology and Implementation Timeline

IU Office of Sustainability states that by 2020:

- 12,000 trees must be planted to meet canopy goal
- Campus studies indicate up to 25% yearly mortality of planted trees
- 4,000 additional trees may be necessary

Efforts should be focused on the Arboretum, Jordan River corridor, and on newly constructed areas and gateways. Increasing survivability is also key.

Figure 4. The highlighted areas below show space in the arboretum that is not planted with trees. These spaces could be planted more heavily to optimize canopy density.



Threats

Internal

- Desire for more open space (Master Plan Recommendation)
- Construct new parking areas, buildings, and gateways through campus (Master Plan Recommendation)

External

- Emerald Ash Borer
- Asian Longhorned Beetle

Summary

In order to reach the goal of 40%, IU needs to not only focus on foresting the selected areas mentioned, but the entire campus. By taking advantage of opportunities presented and minimizing the impacts of threats, the goals can be successfully reached.

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For further information

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