20 Year Plan For Increasing Indiana University's Bloomington Campus Tree Canopy

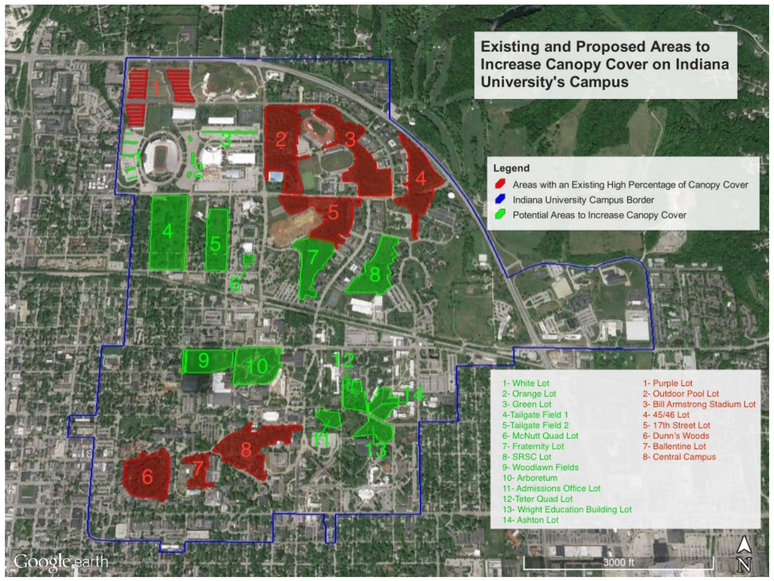
Abstract

Using GoogleEarth Pro, as well as studying the current Indiana University Master Plan, we have developed a proposal to increase Indiana University-Bloomington's tree canopy from 20% to 40%. The current major canopy areas on Indiana University's campus consist of 95 acres. With these areas making up 8% of the current 20% canopy coverage, revealing another 77 acres of land that can be used to increase the canopy coverage is crucial to reaching 40% goal. Combining the major canopy coverage areas with an increase in the street tree population, we have proposed an effective way to increase the current canopy coverage from 20% to 40%.

The Proposal

We propose planting 550 trees a year, for 20 years in order to most effectively increase the tree canopy coverage. Planting 550 trees over a 20 year period will equate to over an 11,000 trees being planting on Indian university's campus . Referencing both the Indiana University Bloomington Tree Care Plan and the City of Dayton's plan, we concluded that planting 550 would be the best course of action because it leaves room for some tree mortality. Due to the natural secession of trees, not all the will survive as a result of maintenance flaws and natural causes. Taking this into account we believe that planting more trees is essential to the success of the 20-year plan. This number takes into account the replacement of old and dying mature trees, which are particularly common with urban trees. We propose that all trees that are planted on the campus to be native to Indiana. When estimating the cost of this proposal, we believe it would be best to calculate all costs on the higher end of the spectrum in order to eliminate underfunding.

The average cost of a native Indiana tree is about $250. This results in an estimated $137,500 per year for the purchase of trees. This does not include labor costs or maintenance. As long as the project continues to receive funding the total cost of the 20-year plan is $2,750,00 for 11,000 trees.



Map 1. Map of current high percentage tree canopy areas, as well as proposed areas to increase the current tree canopy..

Plot Name	Perimeter (Yds)	Square Yds	Total Acreage
Arboretum	899	47928	9.9
Wood Lawn Fields	1013	32260	6.67
Fraternity Lot	1180	45758	9.45
SRSC Lot 1	1232	48854	10.09
Tailgate Fields 1	1299	91741	18.95
Tailgate Fields 2	977	43633	9.02
Teter Quad Lot	747	17268	3.57
Wright Education Building Lot	611	14945	3.09
Ashton Lot	600	17694	3.66
Admissions Office Lot	403	8871	1.83
McNutt Quad Lot	197	2616	0.54
Memorial Stadium Green Lot	667	1906	0.39
Memorial Stadium White Lot	657	1941	0.4
Memorial Stadium Orange Lot	320	1130	0.23
Total	**10802**	**376545**	**77.79**

Table 1. Potential areas to increase Indiana University's tree canopy coverage.

Money Allocation	Estimated Cost (Yearly)	Total Cost (20 Year Period)
Tree Planting	137500	2750000
Maintenance/ Labor Cost	52800	1056000
Total	190300	3806000

Table 2. Estimated cost for proposed plan.

Using The Students

When looking over the master plan, our group noticed that there were several proposed student housing buildings and green spaces around Indiana University's campus. We also realized that there is still substantial space in the Arboretum in central campus that is known for its incredibly diverse number of native Indiana tree species. As a school that was named Tree Campus USA by the Arbor Foundation in 2009, we thought it is completely plausible in all regards: sufficient funding, the currently available space, minimal impact to current infrastructure, and the aesthetics it would provide. Karen Hanson, IU provost and vice president, said back in 2009, "Throughout its history, our campus has placed a high priority of its trees and green spaces", yet there are currently no other forestry courses here at IU other than its Urban Forestry course. (IU News Room). We propose that an increase in tree cover on campus, especially around SPEA and student resident buildings, there would be more attention focused on our campus trees, which would hopefully push for the addition of more forestry courses through SPEA.

Barriers

-Funding
-Student Support
-Weather
-Construction
-Administration

Conclusion

We propose that the current 20% canopy coverage of Indian University be increased to 40%. In order to do so, We propose using student organizations and classes to utilize the potential areas that could increase the canopy coverage. Classes like SPEA's Urban forestry need to be continued to plant street trees, but need to expand to a wider area as well.

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