Indiana University's
Bloomington Urban Forestry
Research Group (BUFRG)

**Bloomington Bicentennial Bond Tree Planting
Survey Report**
May 10, 2022
Stephanie Freeman-Day and Dr. Burney Fischer

Introduction

The City of Bloomington Bicentennial Bond Tree Planting Survey is a partnership between the City Urban Forestry Department and the Bloomington Urban Forestry Research Group (BUFRG). The survey began in February and March 2022, with a pre-planting survey sent to all addresses identified as candidates for the City's tree planting scheduled for the Spring and Fall of 2022. BUFRG researchers sent to each address an initial postcard announcing the survey, followed a week later by a paper survey and accompanying letter. One week later, a reminder postcard was sent, followed a week later by a second survey. From a starting set of 311 address, 273 were deliverable as addressed. Of these 273 surveys sent, 91 households submitted responses, a 33% response rate. All data was then collected and analyzed using Microsoft Excel. Included in this report are descriptive statistics from our findings.

Overview of Results

- Trees in Bloomington are a topic of interest to many residents, as evidenced by the 33% response rate to the survey. This response rate does not exclude any surveys from the sample that were sent to businesses, etc.
- In three of the four planting areas, a majority of respondents felt like their neighborhood could use more trees. The exception is Planting Area 2, which includes Hoosier Acres and St. James Woods. More residents in that area felt neutral about the addition of trees to their area.
- Residents also see the need for the completion of alternative projects, especially street repair and addressing flooding and drainage issues.
- People generally agreed with statements describing ecosystem services, or benefits, of trees. They were most likely to agree to statements related to environmental sustainability, followed by economic sustainability, and then by social/human health sustainability.
- There is less awareness of Bloomington's urban forestry program or the job of an arborist. Respondents knew the least about the location of the public right-of-way.

Perception of need for planting trees

Over half (52%) of respondents to the survey indicated that they agreed somewhat or strongly agreed that their neighborhoods could use more trees. About a fifth (19%) strongly or somewhat disagreed (Figure One).

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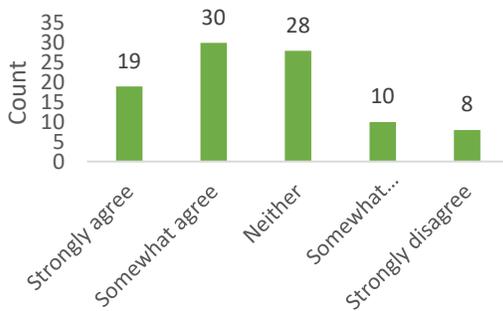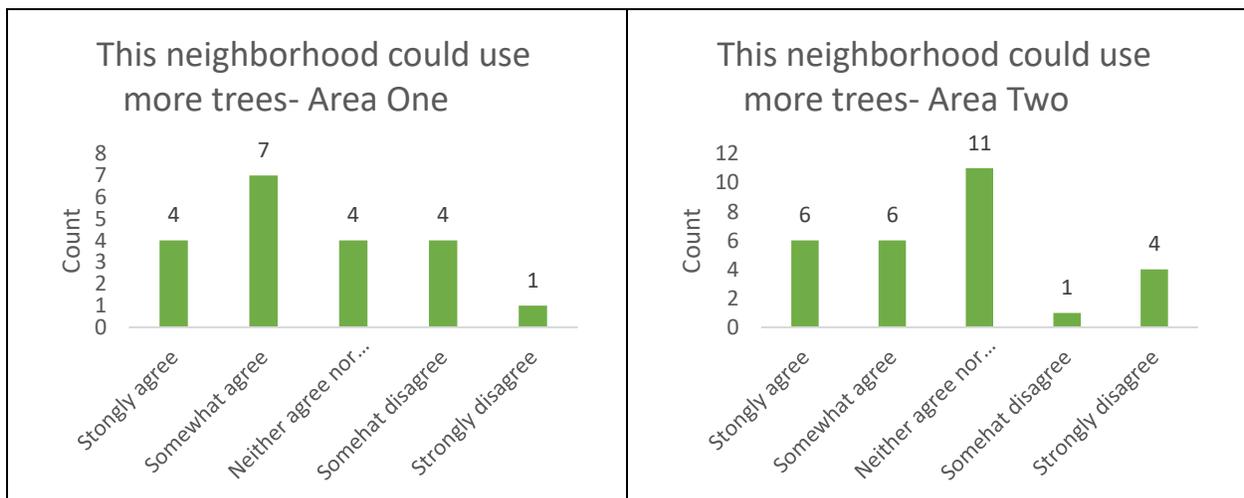### This neighborhood could use more trees

Figure 1- Question 12 from survey, for all neighborhoods combined

Some differences can be seen in resident views about the need for more trees in their neighborhood when the data is broken down into the four planting areas (see map in Appendix for reference) designated for the project (Figure 2). Planting Area Two was the only area where less than half (43%) of respondents agreed that more trees were needed in their neighborhood. In the other neighborhoods 55% (Planting Area One), 57% (Planting Area Three), and 53% (Planting Area Four) agreed or strongly agreed with this statement. In all cases, a quarter or less of respondents disagreed that additional trees were needed- Planting Area One 25%, Planting Area Two, 18%, Planting Area Three 18%, Planting Area Four- 13%.
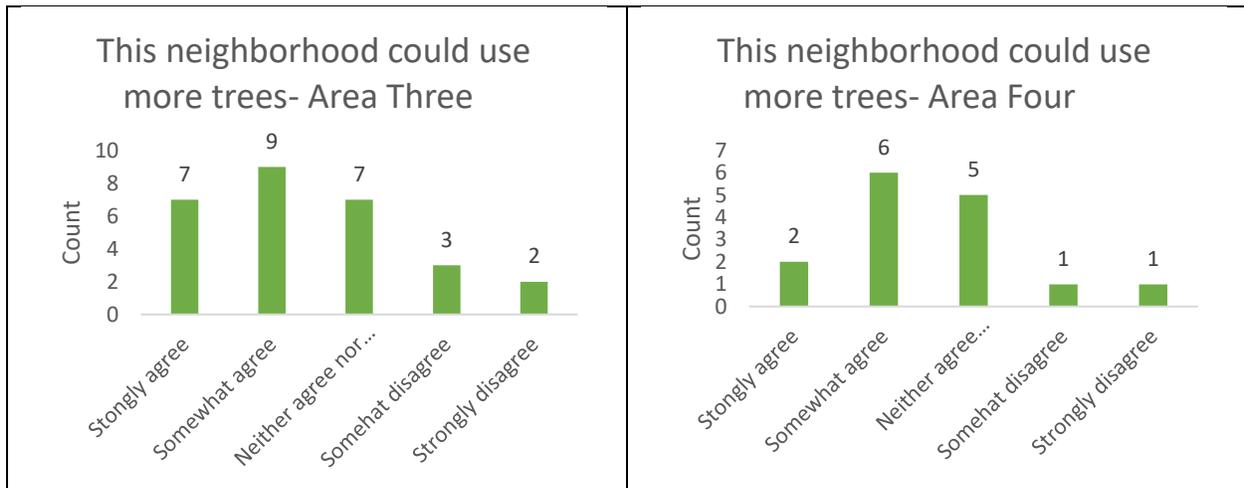
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This neighborhood could use more trees- Area Three

This neighborhood could use more trees- Area Four

Figure 2- Question 12 broken down by Planting Area

Respondent experiences varied with regards to their own tree planting activities on their property. 49% had planted a tree on their property and 51% had not. 31% were very likely to plant a tree on their property in the near future, 26% were somewhat likely, and 43% were not at all likely. A few respondents wrote in, unprompted, that their status as renters impacted the answers given to these questions.

Have you planted a tree on your current property?

How likely are you to plant a tree on your current property in the near future?

Respondents generally did indicate their neighborhoods needed more trees, but also felt there is other work needed in their area (Figure 3). When asked if they could choose one project for the city to fund and complete in their neighborhood, answers varied. 18% chose planting more trees, 9% chose repairing sidewalks, 21% indicated fixing potholes or repaving streets, 24% said installing or replacing lighting, 6% chose pruning trees, and 23% indicated "other". When "other" was selected, residents were given the

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opportunity to write in their preferences. Responses included street improvements (traffic calming, etc.), more art, and addressing drainage and flooding issues. Urban forestry specific recommendations include removal of invasive species (Callery Pear, Tree of Heaven, Japanese Honeysuckle) and addressing problem trees in the area.
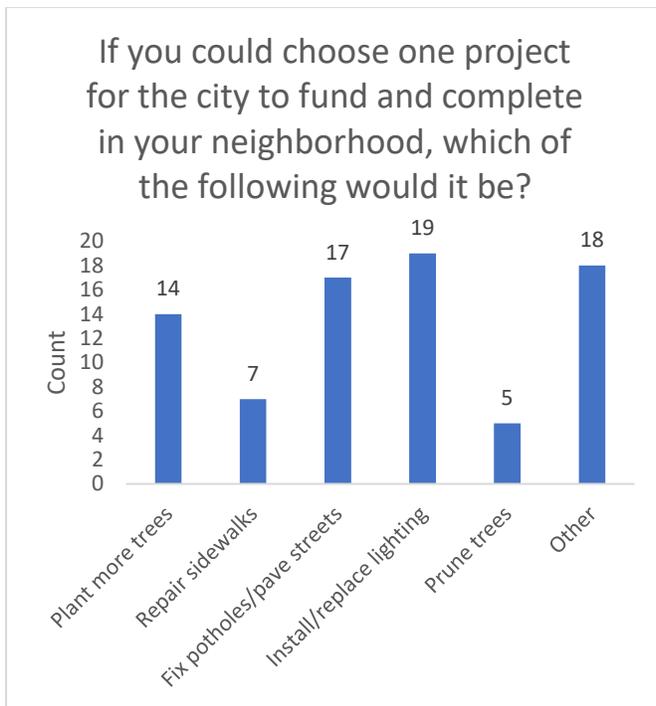

Figure 3- Question 6 from survey

Resident views on benefits of trees

The survey contains a series of questions related to ecosystem services, or benefits of trees. Residents were asked if they agreed or disagree with statements reflecting these ecosystem services. Statements, along with statistics on respondent views are broken down into three main components of sustainability- ecological, economic, and social/human health.

<u>Ecological sustainability benefits</u>

Respondents largely agreed with statements related to ecological benefits of trees. 95% agreed that trees attract birds and other wildlife, with no respondents disagreeing. 93% agree that trees filter pollutants with only 1% disagreeing. When asked if areas with tree cover have cooler temperatures in the summer, 88% strongly or somewhat agree and 3% somewhat or strongly disagree.
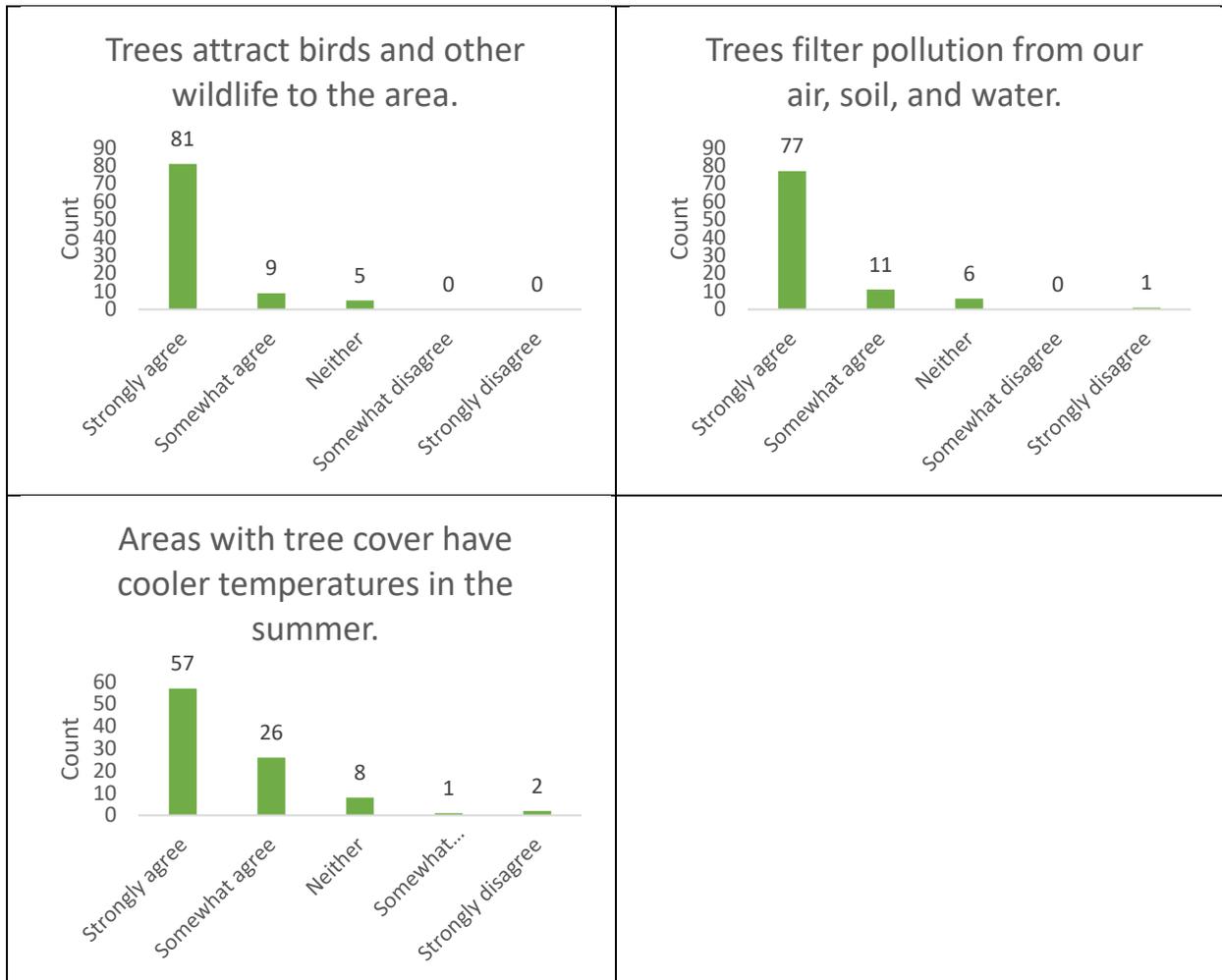
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Figure 4- Respondent agreement with statements on ecological sustainability benefits of trees

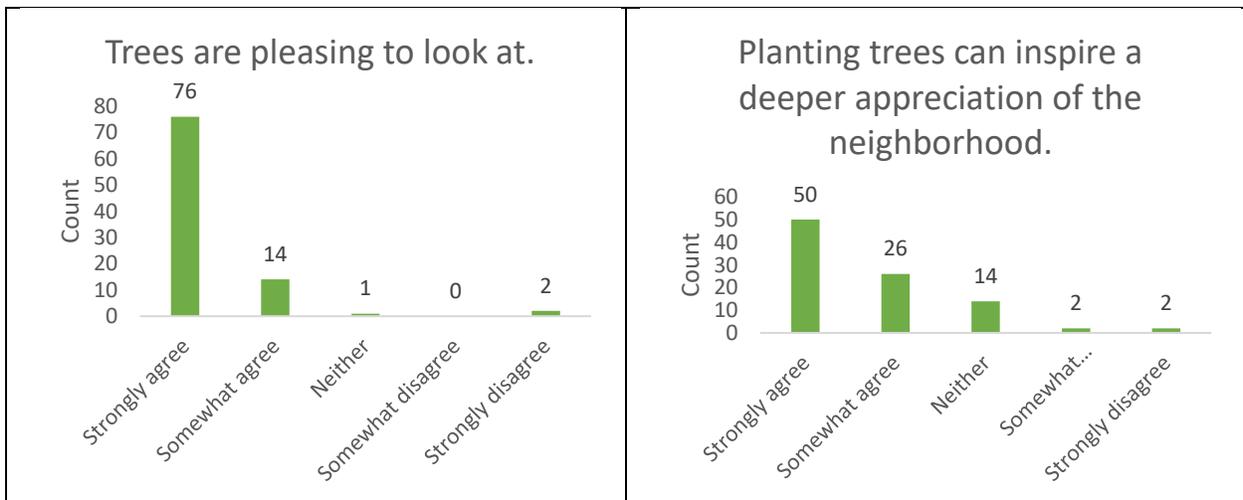Economic sustainability benefits

There was general agreement with statements related to economic sustainability benefits from trees. 77% strongly or somewhat agreed that trees can increase property value, with 3% somewhat or strongly disagreeing. When asked if the shade trees produce can reduce cooling bills. 90% somewhat or strongly agreed and 4% somewhat or strongly disagreed.

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Figure 5- Respondent agreement with statements on economic sustainability benefits of trees

Social/human health sustainability benefits

Overall, respondents agreed with statements about tree benefits to social or human health. 97% agreed that trees are pleasing to look at, with 2% disagreeing. 81% agreed or strongly agreed that planting trees can inspire a deeper appreciation of the neighborhood, with 4% somewhat or strongly disagreeing. When asked if children usually play more outside in greener areas, 68% agreed and 5% disagreed. 54% of respondents agreed that people living in areas with more trees have lower levels of stress and anxiety with 5% disagreeing.
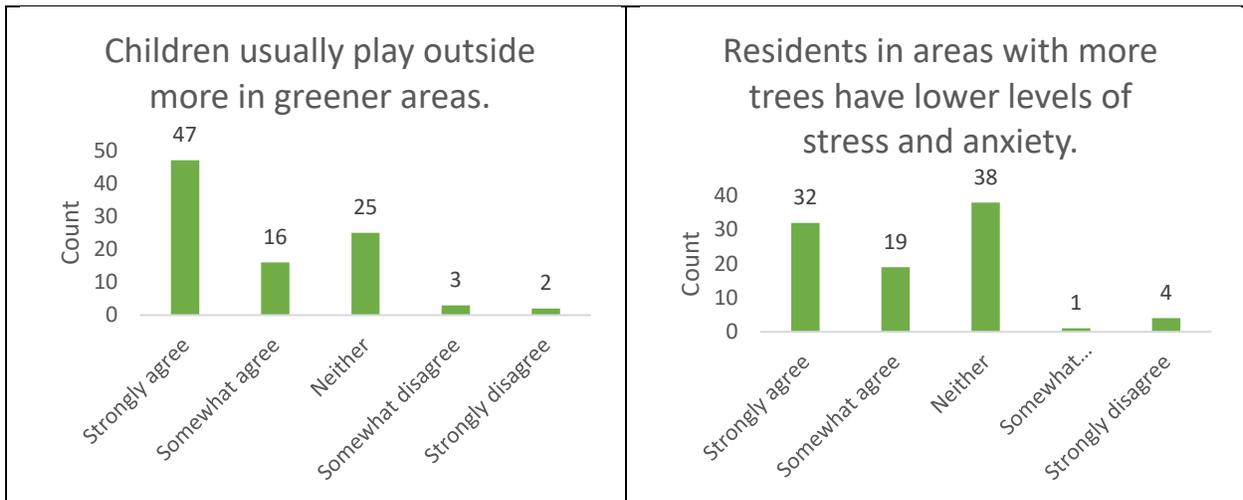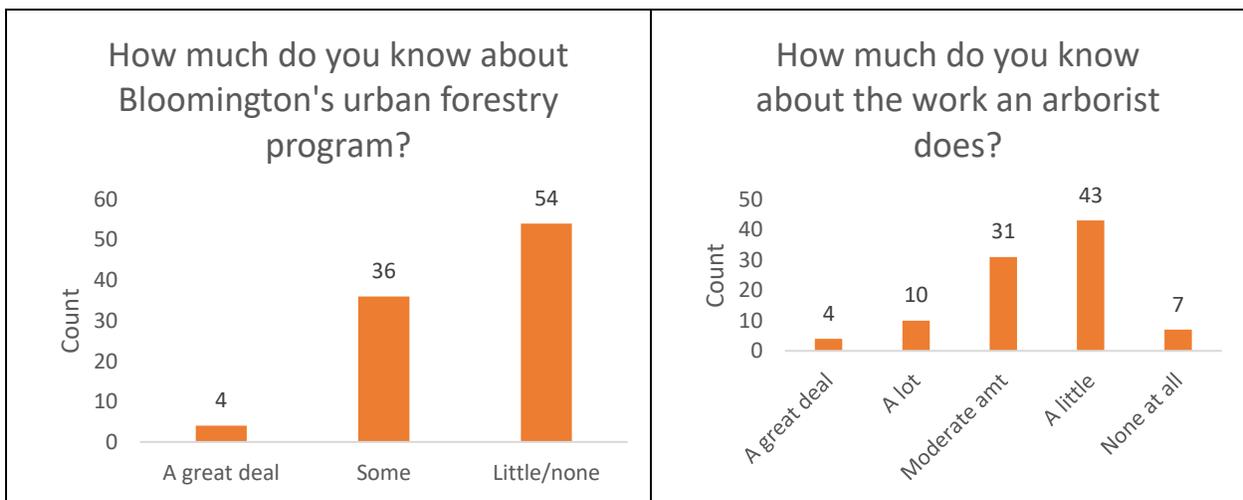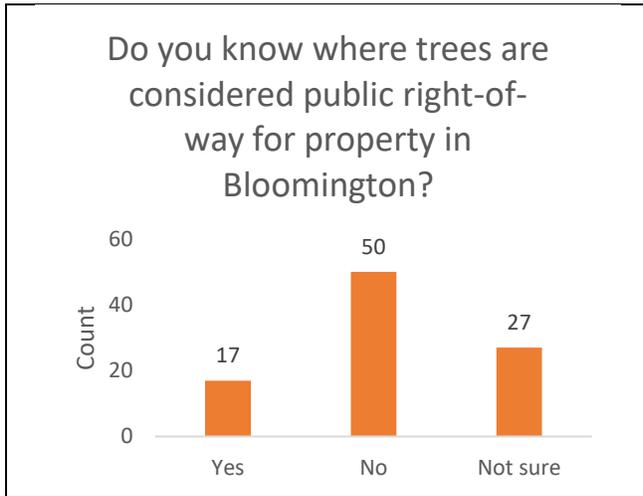
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Figure 6- Respondent agreement with statements on social/human health sustainability benefits of trees

Respondent knowledge on municipal urban forestry and arborists' work

The charts below show respondent knowledge about Bloomington's urban forestry programming and about the work an arborist does. 57% said they knew "a little" or "none at all" about Bloomington's urban forestry program, 38% know some, and 4% know a great deal. When asked how much they know about an arborist's work, 53% know a little or none at all about an arborists work, 33% know a moderate amount, and 15% know a great deal or a lot. 18% of respondents indicated they knew where the public right-of-way for trees is in Bloomington. When indicating where this area was, about 2/3 of those answering yes were correct.
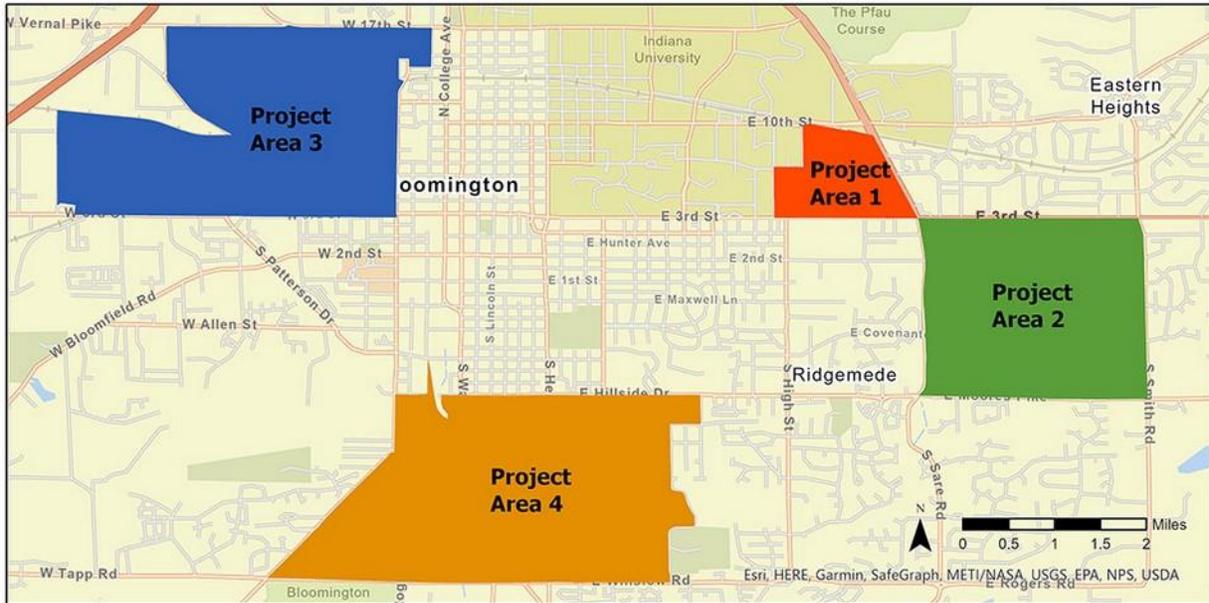
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Do you know where trees are considered public right-of-way for property in Bloomington?

Conclusion

Overall, survey respondents indicated positive attitudes towards trees. About half of residents have planted trees on their property and over half are at least somewhat likely to do so in the near future. Most agreed that trees provide benefits to people and increase ecological, economic, and social sustainability. The majority feel their neighborhoods could use more trees. However, tree plantings are in competition with other projects respondents indicate are needed in their neighborhoods. Many residents expressed enthusiasm for upcoming tree plantings, some had questions about the types of trees planted, and some expressed concern about conflicts with power lines and sewage pipes (See Table A1 in appendix). Respondents showed moderate levels of knowledge with regards to municipal urban forestry program. Projects like the Bicentennial Bond Planting could serve as opportunities to increase knowledge about Bloomington's urban forestry program and about benefits and issues with urban trees.

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Appendix

Appendix Figure 1- Map of planned planting areas

Appendix Table 1- Respondent answers when asked if they had questions, suggestions, or comments about the urban forest or city trees

- More please (more trees) less lawns
- Will the project thin out trees in my yard for the better health of old growth trees?
- Location where they want to plant is very close to the sewer line
- I like that Bton has a lot of trees all over town.
- *line of sight at intersections- select and maintain compatible trees/plantings for auto/pedestrian traffic *help develop para-mobile or non-sighted safety re tree debris and placement

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- Do not plant large overstory trees in the right of way. The root systems damage streets and sidewalks. Do not plant common hackberry trees in the right of way. They break apart very easily.
- I would love to see more trees along roadsides and in shopping/commercial areas like College Mall
- Thanks for planting native trees that host a lot of native insects for the birds
- Trees are great- BUT planting them should not be a priority for the use of taxpayer money. Furthermore, they should not be planted where there are no sidewalk setbacks. That is effectively in someone's yard. Also- I have planted trees in my yard that have been destroyed by deer- even with the protective rings installed. Many trees the city plants will not survive. This is a waste of money!
- Do not plant trees under or in proximity to power lines or transmission lines for power supply
- I believe that adding trees is a wise investment in Bloomington's future. I planted 2 this fall.
- What kind of trees might be planted?
- The more trees, the better
- Trimming, planting, installing natural or other fencing borders on utility easements and/or city right of way
- We seem to be replacing Bradford Pears with Japanese Lilacs- why not use a domestic species? Redbuds and dogwoods everywhere!
- Would like some private planting- feel like I live in a fish bowl. Maybe I live in an area controlled by HBO dictates?
- I wonder to what extent roots affect utilities and structures. Do they cause damage resulting in expensive repairs or disruptions like water loss or street closings?
- How do trees affect solar panels? I have heard of a homeowner who invested in solar panels only to learn that the City was planting trees very close to their home that would grow tall enough one day to prevent adequate sunlight to reach the solar panels.
- Many trees in our neighborhood are old and lose branches during storms. Last year this led to a power outage in our neighborhood for several days. Does your program assess risk of trees located near power lines or is this up to private property owners?
- No tree wanted. Too many leaves cause floods.
- What does "public right of way" for trees in Q9 mean?
- I know the area between the street and sidewalk is sometimes referred to as the "tree plot". Unsure about easements and uncleared alleys.
- Trees that spring up in economically depressed neighborhoods- soft maples, walnuts, etc.- also can damage property. It would be wonderful if the city helped to remove these trees and replaced with safer alternatives.
- I think downtown could use some more trees.
- My corner (9th and Jackson) is already very blind to traffic- trees highly reduce visibility through our neighborhood
- Yes, I've tried to call for information and meetings. (No, I don't use a computer) Yes, I have questions about what trees should be planted in my yard (care of the tree?) I see a lot of dead trees that have been planted and left.
- Grateful for them, curious about how species are selected
- Needs more flowering trees, trees need to live longer before being cut.

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- We need people to maintain the trees on their property. Too much property damage from negligent property owners. Too many property owners rent out their homes and don't maintain their property. Also, more education on invasive species!
- I like the work being done and hope it can be done in my section of Kirkwood.

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