

White's Woods Community Interest Study: Final Report

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Executive Summary

Purpose

Established in 1968 as part of the Commonwealth of Pennsylvania Project 70 Land Acquisition and Borrowing Act, The White's Woods Nature Center (White's Woods) covers 248 acres of wooded land in White Township (Future Possibilities, 2022). Under the supervision of the Department of Conservation of Natural Resources (DCNR), White Township Supervisors manage this White Township-owned property. White Township Supervisors have proposed stewardship plans that involve land management practices such as selective timbering. Members of the community, organized into the local grass-roots group Friends of White's Wood, have expressed concerns that the proposed plan would reduce recreational and educational opportunities of the site and disrupt its ecological function.

In order to understand how the public uses White's Woods and their perspective on White Township's proposed changes to White's Woods, FWW enlisted the help of a team of five doctoral students supervised by Dr. Susan Boser. The research team completed a mixed-method study comprised of a community interest survey and key stakeholder interviews to inform FWW and their initiatives to address the following research questions:

- How does the public use White's Woods?
- How do the public and key stakeholders view White Township Supervisors' proposed changes (selective timbering, limited-season bow hunting, etc.) to White's Woods?

Methods

The team developed a 32-item survey, distributed through via email to a mixed sample. Friends of Whites Woods sent the survey to their distribution lists as well as the lists of their community partner organizations: The Indiana Community Garden, The Evergreen Conservancy, The Artist's Hand, and The Indiana County Humane Society. In an effort to diversify the respondents, the team also sought data from individuals not associated with Friends of White's Woods. Thus, the survey was also sent to distribution lists including: Indiana University of Pennsylvania faculty and staff, Indiana County Farmers Market Association, Indiana County Chamber of Commerce, Create and Curate small business owner shop, and the Downtown Indiana group. Each list was chosen due to their unique perspectives on White's Woods' community impact. The team estimates between 500 and 600 messages were distributed, and 289 responses were obtained.

The team also conducted interviews. Given the study's interest in discovering community impact, participants were sought from four constituencies: local conservation groups, local government officials, individuals involved in tourism, and individuals involved in professional forestry or forest appraisal. Eight interviews were conducted including members from each of these groups.

Results

The majority of respondents noted using White's Woods for exercise, though it's also important for developing social connections, for intellectual or professional pursuits, and personal wellness.

The public is opposed to the potential changes to White's Woods. Selective timbering of White's Woods was opposed by 67.6% of survey respondents. Additionally, 70.3% of survey respondents believe selective timbering will have a negative effect on White's Woods and 68.7 believe selecting timbering will have a negative impact on the local ecosystem. The concern of the participants is illuminated by one interviewee who stated, "No matter how they timber, they're going to disrupt the forest floor and the paths and the trails."

The issue of storm water management was identified as an important problem for our survey respondents with 70.6% reporting that White's Woods was either very important or extremely important to the issue of storm-water management. Additionally, a local government official said, "If they start cutting down trees, which is a natural way to absorb water, it's going to have a negative effect on residents." Aside from storm water, the community also believes White's Woods is important for the preservation of wildlife (82.3%), air quality (82.6%), nature conservation (84.7%), and the removal of pollutants from the air (89.8%).

The possibility of allowing limited-season bow hunting was identified as a concern as 51% of survey respondents reported it would impact their use of the woods, and with 57.4% strongly opposed to the practice. Concern for safety was seen as the primary reason. Despite this, based on interviews, the deer population is perceived as a growing issue. So although interview participants expressed the desire for the deer population to be regulated, it was viewed by some as an acceptable practice in the woods with emphasis on culling the herd.

However, the use of electric bicycles in White's Woods was not a major concern to frequent users of White's Woods. 70.4% of survey respondents stated the presence of electric bicycles would have no impact on their visitation of White's Woods.

Finally, the process by which discussions and planning have taken place lacks transparency on what exactly is meant by "selective timbering" and specificity on the impact of the selective timbering on the woods overall. Respondents noted that problems certainly exist, but so do possible opportunities for resolution.

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Introduction

Established in 1968 as part of the Commonwealth of Pennsylvania Project 70 Land Acquisition and Borrowing Act, The White's Woods Nature Center (White's Woods) covers 248 acres of wooded land in White Township (Future Possibilities, 2022). As part of this legislation, White's Woods has been designated for "recreation, conservation and historical preservation." (Ford, 2021). This purpose distinguishes it from a working forest, which is subject to timbering. As part of its acquisition, White's Woods is to remain "largely in its natural state" for hiking and other forms of "passive recreation" (Future Possibilities, 2022). As such, White's Woods is distinct from other uses designated by Project 70 (Ford, 2021).

Under the supervision of the Department of Conservation of Natural Resources (DCNR), White Township Supervisors manage this White Township-owned property. On three previous occasions (1995, 2007-08, and 2020-present), White Township Supervisors have proposed stewardship plans that involve land management changes to White's Woods including selective timbering. The first proposal in 1995 was rejected by White Township citizens; the second and third plans were rejected by DCNR because the proposals did not meet regulatory requirements stipulated for Project 70 land acquisitions. The 2007-08 stewardship plan was rejected because DCNR found that the amount of timber harvesting planned was inconsistent with the definitions of recreation and conservation stipulated in Project 70. The 2020 stewardship plan is under ongoing discussion; members of the community have expressed concerns that the proposed plan would reduce recreational and educational opportunities of the site and disrupt its ecological function, and because of its incompleteness (Future Possibilities, 2022). As a result, White's Woods has remained relatively untouched since the most recent harvesting of any timber in the early 1950's (White Township Stewardship Committee, 2022).

Friends of White's Woods (FWW) is a local grass-roots organization established to protect White's Woods and educate the public about the value of this nature center. Their specific objectives include understanding the public's opinion on the management of White's Woods as well as the diversity of people using White's Woods (Future Possibilities, 2022). Friends of White's Woods has tirelessly advocated to keep White's Woods as a natural habitat as intended by the acquisition designated through Project 70.

In order to understand how the public uses White's Woods and their perspective on White Township's proposed changes to White's Woods, FWW enlisted the help of a team of five doctoral students: Amal Alqahtani, Noura Agbere, Joseph Fetzer, Richard Patterson, Adam Jones, supervised by Dr. Susan Boser. The research team completed a mixed-method study comprised of a community interest survey and key stakeholder interviews to inform FWW and their initiatives.

Statement of the problem

Project 70 allowed the Commonwealth of Pennsylvania to issue bonds to acquire land for the purpose of development of state parks, reservoirs, and other conservation, recreation, and historical preservation purposes (Ford, 2021). Modification to any lands purchased through the Project 70 acquisition require approval from the DCNR. Following the most recent stewardship

plan put forth by the White Township Supervisors, the DCNR recommended the inclusion of public input to better “understand the wishes and desires of its residents, and most importantly, identifying and understanding the values citizens hold and expect from these woodlands” (Future Possibilities, 2022). In order to make changes to land acquired through Project 70 funds and designated for recreation, conservation, and historical preservation, the municipality must identify suitable land to replace any land which is being converted from its original purpose (Ford, 2021). In addition, documentation of outreach to the public as well as input from the public is required for any requests of conversions (Ford, 2021). The purpose of this designation in the legislation is to protect Project 70 lands from being lost to urban and suburban development forever and to assist local governments in the acquisition of such lands (Ford, 2021).

As communities around the country struggle to reforest lands for the purpose of carbon sequestration (Domke et al, 2020), it is important to understand what a community like Indiana County should be doing with a resource that is capable of absorbing massive amounts of carbon annually. The most recent stewardship plan proposed by Millstone Land Management would involve the removal of the largest-diameter trees in White’s Woods for the purpose of creating a more aesthetically pleasing recreational opportunity (Lawer, 2020). Mildrexler et al (2020) have recently demonstrated that the largest trees in a forest disproportionately store larger amounts of carbon as compared to their smaller counterparts. Making up only two to three percent of the trees in a typical forest, trees greater than 21 inches in diameter store between 33% and 46% of the carbon in a typical forest (Mildrexler et al, 2020).

Phase 1 of the Milestone plan would include treatment of a 30 acre plot of White’s Woods which would cost the township \$20,000 for treatment plus \$6,000 for the conservation seed mix. Phase 2 would net \$39,965.44 for the purchase of harvested timber. After paying the \$15,300 consultant fee to Millstone Land Management, the township would have gained \$24,665.44. Phase 3 would cost \$114,450 for treatment and \$6,600 for the stream bank improvements. In total, the land management proposal for White’s Woods would cost the township \$122,384.56. In contrast, if White Township were to leave White’s Woods untouched, they could be eligible for carbon sequestration payments of an estimated \$210,000 through the Allegheny Land Trust (FWW, Allegheny Land Trust).

Friends of White’s Woods notes that, as it stands, this forest absorbs about 207,000 gallons of stormwater, 17,010 pounds of pollutants, and 1,102 tons of carbon annually (Friends of White’s Woods). They also argue that the park provides unique recreational and educational opportunities unavailable to the public at other community parks. This unique access to nature undisturbed and White’s Woods significant contribution to the ecosystem have driven the sense of urgency and importance in Friends of White’s Woods to protect White’s Woods from being selectively timbered.

The plan submitted by Millstone Land Management cites a recent survey of Indiana County residents which demonstrated the importance of recreation to residents (Lawer, 2020). The main aims of the Township, according to this plan, are to increase aesthetics, safety, and recreation opportunities for residents (Lawer, 2020). White Township and Friends of White’s Woods share the desire for recreation in the community, which is also supported in the literature (Mowen et al,

2018). However, Friends of White's Woods states that Indiana County, including White Township and Indiana Borough, boasts over twenty parks and trails meeting many of the recreational needs of the community (Indiana County Parks and Trails, White Township, and Indiana Borough). They argue that, in light of this, White's Woods provides a unique opportunity not available in any of the other parks, namely the trails by which residents can explore an untouched natural environment and the plants and wildlife that inhabit the area (Future Possibilities, 2022).

In light of the conflicting perspectives on how to best manage White's Woods, the research team has collaborated with the Friends of White's Woods to conduct a mixed methods research study. Qualitative data collected through interviews combined with the quantitative data from the survey instrument should provide insight into the public's perspectives on the use and management of White's Woods.

Research questions

The purpose of this research is to determine how the community uses White's Woods Nature Center and their opinions of proposed changes to the land. We aim to answer the following research questions:

- How does the public use White's Woods?
- How do the public and key stakeholders view White Township Supervisors' proposed changes (selective timbering, limited-season bow hunting, etc.) to White's Woods?

Methods

A mixed-methods research design is consistent with comprehensive data collection and analysis needed to capture the characteristics, attitudes, and opinions of the sample (Patton, 2015). Combining qualitative and quantitative data in this study serves as a way to gain a more robust understanding of the key stakeholders and community perspectives and a baseline rationale to guide future discussions, plans, and initiatives for White's Woods.

To gain access to public opinion about the current status of White's Woods, a cross-sectional survey instrument was developed using researcher subject matter expertise and existing literature on maintaining existing natural resources. The survey instrument included 32 items which were designed to gain a comprehensive understanding of public opinion on the current use of White's Woods as well as proposed changes by the White Township Supervisors. The second method of data collection involves a series of qualitative semi structured interviews with key community stakeholders to obtain their perspectives regarding White's Woods.

The research team used purposeful sampling to solicit survey respondents. A purposive sample is one that is intentionally selected for its ability to provide data and insight specific to the research question being investigated (Patton, 2015). Using this approach, the team collaborated with the Friends of White's Woods to have the survey sent to their distribution list as well as distribution lists of their community partner organizations (The Indiana Community Garden, The Evergreen Conservancy, The Artist's Hand, and The Indiana County Humane Society). In an effort to diversify the respondents, the sample also sought data from individuals not associated with Friends of Whites Woods. Thus the team also sent the survey to Indiana University of Pennsylvania (IUP) faculty and staff distribution lists as well as the Indiana County Farmers

Market, Indiana County Chamber of Commerce, Create and Curate small business owner shop, and the Downtown Indiana group. Each list was chosen due to their unique perspectives on White's Woods' community impact.

To recruit interview participants, the research team used purposeful criterion and snowball sampling. Given the study's interest in discovering community impact, participants were sought from four constituencies: local conservation groups, local government officials, individuals involved in tourism, and individuals involved in professional forestry. Then, snowball sampling was also sought (Patton, 2015). Thus at the end of each interview, the participant was asked to identify any other individuals with whom the research team should conduct an interview.

Survey findings

Public perception was evaluated using a 32-item survey instrument created by the research team in collaboration with the Friends of White's Woods. The survey instrument (Appendix A) included four sections. Section one included questions about the public's perceived impact of White's Woods on the ecosystem and the community. Using a 5-point Likert scale ranging from 1 (Not at all important) to 5 (extremely important), questions sought to capture respondents' beliefs about White's Woods' impact on storm water run-off, air quality, wildlife preservation, nature conservation, local economy, and historical value. Section two focused on the proposed changes (i.e., selective timbering, limited-season bow hunting, and electric bicycles) to White's Woods by the White Township Supervisors. Section three included questions about the existing landscape and facilities at White's Woods. For example, "The trails at White's Woods are adequately maintained" and "White's Woods should be developed to include restroom facilities." Responses to these questions were rated using a 5 point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree). Section four included demographic questions and usage questions including frequency of use, time spent at the location, and purpose for attendance at White's Woods.

To evaluate the results of the survey instrument, descriptive statistics were processed using SPSS (Version 28, SPSS, Chicago, IL). Participants had the autonomy to skip questions while completing the survey which impacted the sample size for each measure. Overall, 289 participants provided at least partial responses. Participant demographic information (Table 1, Appendix C) indicate that most participants (69.2%) travel to White's Woods on a monthly basis or less and spend less than 2 hours (91.6%) at the nature center. The primary reasons for traveling to White's woods include walking and hiking (n=232), enjoying fresh air and being outdoors (n=193), relaxing, relieving distress, mental health (n=166), and spending time with family (n=122).

Participant perception of the value of White's Woods as a natural resource (Table 2, Appendix D) included six separate items. Combining responses of "very important" and "extremely important", the highest ratings came in areas related to preserving nature. For example, participants indicated that White's Woods was most important for nature conservation (84.7%), followed by air quality (82.6%) and wildlife preservation (82.3%). A much lower percentage, approximately (38.6%) felt that White's Woods was important to the local economy.

Capturing public perception of the changes proposed by the White Township Supervisors was a primary concern for FWW. Selective timbering was perceived as having a negative impact on White’s Woods (70.3%), the ecosystem (68.7%) and the individual respondent (58.6%), as shown in Table 3, below.

Table 3: Proposed changes to White’s Woods and perceived impact.

Variable	Very negative effect	Moderate negative effect	Neutral	Moderate positive effect	Very positive effect
SELECTIVE TIMBERING					
Impact on the White’s Woods (n=283)	134 (47.3%)	65 (23.0%)	38 (13.4%)	31 (11.0%)	15 (5.3%)
Impact on local ecosystem (n=281)	127 (45.2%)	66 (23.5%)	37 (13.2%)	37 (13.2%)	14 (5.0%)
Impact on you personally (n=285)	129 (45.3%)	38 (13.3%)	98 (34.3%)	11 (3.9%)	9 (3.2%)
	Strongly oppose	Somewhat oppose	Neutral	Somewhat favor	Strongly favor
Support/opposition for selective timbering (n=284)	144 (50.7%)	48 (16.9%)	37 (13.0%)	36 (12.7%)	19 (6.7%)
LIMITED-SEASON BOW HUNTING					
Impact on White’s Woods (n=282)	76 (27.0%)	71 (25.2%)	72 (25.5%)	46 (16.3%)	17 (6.0%)
Impact on local ecosystem (n=285)	50 (17.8%)	70 (24.9%)	88 (31.3%)	58 (20.6%)	15 (5.3%)
Impact on your personally (n=283)	71 (25.1%)	67 (23.7%)	115 (40.6%)	17 (6.0%)	13 (4.6%)
	Strongly oppose	Somewhat oppose	Neutral	Somewhat favor	Strongly favor
Support/opposition for limited-season bow hunting (n=284)	102 (35.9%)	61 (21.5%)	53 (18.7%)	37 (13.0%)	31 (10.9%)

The majority of respondents (67.6%) were strongly opposed or somewhat opposed to selective timbering of the area. Limited-season bow hunting was also identified as having a negative effect on White’s Woods (52.2%), the ecosystem (42.7%) and the individual respondent (48.8%). Approximately 57% of respondents were strongly or somewhat opposed to limited season bow hunting in White’s Woods. When asked if limited-season bow hunting in White’s Woods would impact participant time spent in the woods, 29.4% of participants indicated it would have no impact, 9.1% said they would visit White’s Woods during the proposed hunting season, while 51% said they would decrease their use for the woods.

The survey also asked respondents opinions about the trail options, markings and facilities (Table 4, below.) Combining “somewhat agree” and “strongly agree”, 213 respondents or 75% marked that they liked the trail options in White’s Woods. A smaller number, 101 or 36% would like to see the number of trails increased, with the majority neither agreeing or disagreeing. Regarding trail maintenance, 153 or 56% felt that the trails themselves were adequately maintained, with a smaller number, 93 or 33% indicating that the trail markings were well maintained. The largest percentage (41.5%) had no opinion on this. Interestingly, 159 or 56% were opposed to adding facilities like pavilions or grills, and 175 or 62% either “strongly disagreed” or “somewhat disagreed” with adding structures, such as playground equipment or

Table 4: Perspectives on Trails & Facilities or Infrastructure.

Variable	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I like the trail options at White's Woods. (n=283)	9 (3.2%)	5 (1.8%)	56 (19.8%)	84 (29.7%)	129 (45.6%)
White's Woods should increase the number of trails. (n=283)	36 (12.7%)	36 (12.7%)	110 (38.9%)	72 (25.4%)	29 (10.2%)
The trails at White's Woods are adequately maintained. (n=282)	3 (1.1%)	27 (9.6%)	95 (33.7%)	107 (37.9%)	50 (17.7%)
The trail markings at White's Woods are well maintained. (n=282)	18 (6.4%)	54 (19.4%)	117 (41.5%)	75 (26.6%)	18 (6.4%)
White's Woods should be developed to include restroom facilities. (n=283)	48 (17.0%)	42 (14.8%)	56 (19.8%)	96 (33.9%)	41 (14.5%)
White's Woods should be developed to include recreational facilities (e.g., pavilions, grills, etc). (n=282)	102 (36.2%)	57 (20.2%)	59 (20.9%)	51 (18.1%)	13 (4.6%)
White's Woods should be developed to include structures (e.g., additional playground equipment, recreational facilities). (n=282)	109 (38.7%)	66 (23.4%)	60 (21.3%)	36 (12.8%)	11 (3.9%)
White's Woods should be utilized for more activities (e.g., education, organized recreation, etc) (n=283).	21 (7.4%)	25 (8.8%)	79 (27.9%)	112 (39.6%)	46 (16.3%)

recreational facilities. However, a higher percentage 137 or 48.5% were in support of adding restrooms. Finally, there was support for utilizing the woods more for recreation, with 158 or 56% supporting.

Interview Findings

The team hoped for a total of 10 interviews, and reached out to 25 individuals with requests. We interviewed eight people about White's Woods, including members of local conservancy groups, local government officials, and a businessman with experience in land appraisal. Our analysis clustered into three areas. The first area focused on participants' experience and use of the forest. While the survey describes the ways in which people use the woods, the interviews revealed more about what the woods mean to them. The second area addressed how respondents viewed the proposed changes and the potential impact to the community. For the third area, they shared reflections about the process by which the proposed changes are being presented

Community uses

For a number of our respondents, exercise – for themselves and, often, their dogs - was what led them to White's Woods. As one put it, "You know, we think of it as getting a good hike in at the same time that the dog's getting to run." The location of the woods right on the edge of the Borough makes it easily accessible for use in this way.

However, interviewees also spoke about the social connections fostered by these walks in the Nature Center. For example, one said that “a lot of the people I now know as colleagues I actually met first for the first time in White’s Woods.” The peace and quiet of the woods lends itself to developing these connections. One interviewee described it this way: “There's something about walking along in the woods, not being able to hear anything because you are so isolated yet so in the center of a town in a busy part of the county, that it's just easy to become engaged in those conversations.” In essence, the nature of the woods and its presence where the township meets the borough supports development of social connections and community.

As respondents to the survey indicated, many people also use the Woods for birdwatching, photography, or for intellectual or professional pursuits. One person referred to it as his research lab, explaining: “just in getting ideas for teaching my woodworking classes and looking at the different ways that trees grow, understanding the grain in relation to how the tree broke.” He spoke about bringing classes up to the woods, allowing students to see firsthand how the grain is shaped.

While exercise or walking the dog may be part of the rationale, overall personal wellness is a goal for many. As one interviewee described their experience in White’s Woods: “I walk the dog. I clear my head. I call it my sanctuary. It's a place that I can kind of become centered into myself.” Again, the stillness of the woods and the periodic encounters with wildlife foster a groundedness that is rejuvenating.

In short, while exercise is indeed a reason, the experience of the woods involves much more than that. One person summarized it this way:

It just so happens you're exercising. But just to be in the woods to experience the changing of the seasons, meeting friends, socializing, looking for various soil components, insects, hydrology. Boy, it's just a gamut of taking my dog for a walk, intellectual pursuit of just about everything that you can garner from being outside, and talking to other people about a variety of subjects.

Not surprisingly, people that have this experience of White’s Woods have some strong perspectives about the proposed changes.

Proposed changes & potential impact to the community

The most significant concerns centered around the potential for timbering. We sought a diverse group of perspectives on purpose, and did have one response that expressed support of timbering. This individual self-identified as having a strong business orientation, with particular experience in valuing property. He saw the trees as a valuable asset and one that should be monetized: “These trees are inventory and need to be handled like if you run a business. If you don't timber the wood at some point, it's going to be too old and become worthless.” This was a singular point, though, and all others regardless of their particular interests, expressed strong concerns about the proposed timbering.

Many of the concerns were connected to what interviewees perceive as an absence of clarity about the Township's motives and intentions. As one said, "why do they keep doing this?" Another expanded on this, saying "I would love to hear what the goals are for the timbering. Their honest goals. I want to know what the real reasons are, why now, and why is it necessary. I haven't heard that yet." This is connected to perspectives about the process, which will be addressed separately. However the absence of clarity has fostered some mistrust, exacerbating fears about what could happen.

Some of this surfaces in contradictions. For example, some noted that one plan for timbering claims the forest has a number of invasive species, and that timbering could address that; as one person noted "They're saying, oh, we're doing it because of invasive species." However, this is in contrast with most respondents' experience. Many interviewees shared their observations of what trees have been marked in the forest, for example: "when you look at the trees that are marked in the woods and identified to be timbered, they're the very best and most mature and select. And it's like, why? I mean, they're the most valuable!" Regarding the issue of managing invasive species, several expressed that opening the canopy would actually increase problems in this regard. One person stated, "opening that canopy will create a problem with invasive plants that would be enormous right now... The reason that the invasive plants aren't too bad up there is because of the closed canopy."

Interviewees also shared that they had heard the timbering was focused on removing deadwood. Yet they also saw this as a problem, as they feel deadwood is valuable to the forest ecosystem. "A lot of wildlife depends on the deadwood. Forest ecosystems depend on trees going down every year." Other participants expressed different concerns about the impact timbering might have on wildlife and how that might impact surrounding neighborhoods. Referencing the recent logging nearby along Martin Road: "There was a massive logging effort, on the other side of the road, from 6th street coming around, and the wildlife from that area has been creeping into White's Woods down to the borough. We have bears now roaming and it's hard to not make a connection. It's pushing wildlife into town."

Even if the intention is to conduct selective timbering, respondents expressed concerns about the collateral damage from the process itself. As one said, "Even if it's selective you're disturbing habitat. There's going to be a lot of disruption and damage done just to get the equipment up there."

Respondents identified other, significant concerns about the proposed timbering. The biggest involved the potential for increased flooding in the Borough if a considerable amount of timbering were to take place in White's Woods. This is a significant issue for the Borough in particular, as it currently lacks the infrastructure for effective management of storm water. In describing their priorities, one Borough official noted that "(Storm water infrastructure is) near the top. We're spending millions of dollars on that right at the moment. We have an antique storm sewer system that needs to be upgraded. That's going to cost one hell of a lot of money and we've already spent quite a bit. We want to do that without breaking the bank. There are three

creeks that run through Indiana, and two of them come out of White's Woods." Officials from both the Borough and the County discussed at length the role of White's Woods in storm water management because "the woods provide a way of keeping water runoff from flowing into the borough and flooding homes, flooding street" as one put it. Another official added "We have flooding issues when we get large rains. If they start cutting down more trees that's less trees to suck up the water which runs into the borough. It overburdens our storm water system. Most issues are from the poor infrastructure, but if they start cutting down trees it's going to have a negative effect on residents or the taxpayer. It has a huge consequence on the infrastructure of the borough and as a representative on borough Council that would probably be my biggest concern."

The lack of transparency in and mistrust of the White Township Supervisors' plan raises additional concerns here too. One participant noted that if timbering is not properly managed in terms of "the S&E (sediment & erosion) controls being properly installed and managed, the storm water impact and erosion is just incredible. And you look at the homes that are just sitting on the slope in White Township as well as the borough, it is prime time for just a wash right down the hill."

The interviews brought out other ways in which White's Woods is valuable to the region. One is its role in carbon sequestration. One participant shared that "The carbon absorption alone, both annual and standing, is tremendous. I can quote the figures, 27,000 pounds it stores and about 1100 pounds annually it absorbs. It's about 1100 pounds of air pollutants it also absorbs every year. And sulfur dioxide is one of them."

Finally, a couple respondents spoke to the value White's Woods has for the Indiana area overall. They described it as an attractive feature that "Visually, it makes the town look like a winning community. It looks comfortable, it looks settled, it looks safe. It looks like you're coming home to *It's a Wonderful Life*, a town where Jimmy Stewart would have grown up. That's exactly the first impression." Another agreed, supporting "keeping it as natural as it is now, but improve some of the signs in there which are broken. Those things need to be replaced." Some expressed the potential draw that White's Woods could have for the region. One person noted that "I found some articles on the web indicating that it's a regional draw. If you go to AllTrails.com, you'll see about 100 reviews that come in from different parts of the area." This person went on to suggest that marketing could help promote it even more: "So I think it actually could be a bigger draw if the township and the borough could agree to put a sign in the borough, for instance." This person also encouraged "doing some sort of marketing, because it's a great asset to have in town and not everyone knows it's there."

Other potential changes include bow-hunting and use of electric bikes. These were nowhere near as controversial as timbering, though interviewees did have some comments.

Several felt that bow-hunting was potentially beneficial. Several people either hunted themselves or had friends or family members that did. One noted that "Sometimes hunting is necessary to

keep populations of wild animals down” while another added that “I’m in favor of controlled bow hunting because in White’s Woods there’s a large deer population and they’re in the borough quite a bit.” However most people also expressed concerns about safety. For example, “Some kind of management of the woods no doubt could be beneficial. Yet any kind of hunting when you have people out walking their dogs walking with their children so forth scares me.” Another explained “I’ve spoken with bow hunters who told me that they’re scared about having hunting in a recreation area, in that they have had the trajectory of an arrow be remarkably changed by just brushing a branch. And so they have found for themselves that it’s not nearly as predictable as you’d like for it to be. And as a result of those conversations, particularly, it concerns me because those trails are very close together.” Indeed, the absence of hunting there was why some folks choose to hike in White’s Woods during hunting season: “Some times in the year I walk only in White’s Woods. I tend to avoid areas where they’re hunting, so during hunting seasons, I’m in White’s Woods.” In short, participants recognized the benefits of bow-hunting, but were deeply concerned about whether it could be done safely.

Fewer interviewees expressed perspectives about electric bikes. The greatest concern was, again, ensuring safety. “Many of the trails are really quite narrow, on the narrowest of trails, it’s really not a good idea” said one person. “You really shouldn’t have hikers and bikers, in the same place” said another, adding “that’s a dangerous mix.” Of note, we did not hear concerns about people using electric bikes per se; the concern was more about ensuring that it wouldn’t negatively impact people hiking.

The process of navigating proposed changes to White’s Woods

Respondents discussed the process by which changes to White’s Woods have surfaced. They felt that it’s been marked by a lack of transparency and a failure to engage and to work with the public. They describe the ways in which the process has unfolded, and how it has fostered a sense of mistrust and divisiveness.

One of the first things that participants commented on as what one described as the “lack of transparency,” with several describing the lack of clarity about the potential goals of timbering, as noted earlier. Another stated that the process “hasn’t been entirely open” and that one way this happened was that “their meetings have been called without proper notice.” This aspect of the process left people feeling that, as one put it, “the supervisors seem to have their own counsel about what they want to do and they’re just trying to find a way to do it, rather than sounding out the opinion of the public.” One participant also expressed a concern about “the (public) requirements that they have for any project that they help fund. It seems as though the Township doesn’t legitimately acknowledge that.” Another felt that the manner of obtaining a bid also reinforced this sense, saying “They had selected a forester that came up with a plan and they said that because it was under (a certain) amount of money, (they) weren’t required to open it up for public bidding.” These impressions, plus “just the way they went about it without being open and engaging” as one said, has fostered mistrust.

Perhaps the biggest sticking point was the lack of felt community engagement by White Township Supervisors in their decision-making process. "I haven't heard that White Township took the initiative to go around and find out who uses White's Woods, for what, and how they will be impacted" said one individual, who was disturbed about the process. Another noted that it led to some demoralization, saying that "the community has spoken for 27 years now. When they want to talk about the ice rink, they talk to the ice rink users" but this person's sense was that same courtesy did not extend to users of White's Woods. Another shared that he suspected that a level of stereotypes persisted about those who wish to protect the forest: "they probably think that the Friends of White Woods or anyone that is standing up against their plan are just tree huggers and hippies and nut jobs" rather than seeing these interests as legitimate.

Participants shared that this position has worsened their suspicion and mistrust, when the Township might have managed things differently. One person put it this way: "They knew there was an advocacy group out there. Why not involve them from the beginning, being open book. Any public agency must be open. We must not make the public feel we're pulling anything over on them because we want their buy in. They pay taxes, they have a right to have a say. And so the way they went about it, it just raised suspicion." Instead, this individual pointed out that had the Township reached out to constituents and partnered with them, "we could come up with a plan that would have been a win-win for the Township supervisors as well as the community at large. Now, there's a perceived suspicion about the Township supervisors. I myself have that suspicion of them. Like, what are they trying to pull?"

One individual offered an example of how the process could have gone. "We have done selective timbering in our county parks, but we didn't keep it a secret. We made sure that we followed protocol, we went out for proposals, we involved our park board, we had public meetings, and most importantly of all, we had an excellent manager who had the right background in recreational management, forestry. And he managed it where it was necessary. He said, no machinery in here, (it) has to be done by a team of horses because it's a sensitive area ecologically, so you could never tell where it was done. And did he take the best of the best (trees)? No. Most of the time it was trees that were endangered, like the ash trees because of the ash borers, or the hemlock trees because of woolly adelgid. So it was done selectively, but the RFPs were gone through with a fine-tooth comb. It was open to the public with dialogue and it was properly managed." Another suggested that perhaps a professional facilitator or mediator might be engaged to enable a mutually beneficial resolution.

In summary, problems certainly exist, as do possible opportunities for resolution. For most of our respondents, the effort is worth it, saying White's Woods "allows our residents a beautiful opportunity to get all the benefits that come from the interacting with nature. So it seems to me that that's part of having a civilized society. It would be a tremendous loss to no longer have that."

DISCUSSION

The results of the research indicate a substantial concern about the impact that potential changes to White's Woods would have on the local community and ecosystem. Selective timbering of

White's Woods was opposed by 67.6% of survey respondents. Additionally, 70.3% of survey respondents believe selective timbering will have a negative effect on White's Woods and 68.7% believe selecting timbering will have a negative impact on the local ecosystem. The concern of the participants is illuminated by one interviewee who stated, "No matter how they timber, they're going to disrupt the forest floor and the paths and the trails. I just don't see the purpose of timbering." Further, the process by which discussions and planning have taken place lacks transparency on what exactly is meant by "selective timbering" and specificity on the impact of the selective timbering on the woods overall. This lack of transparency was highlighted by an interviewee stating, "There are right ways and wrong ways of doing it. I'm not sure that this is exactly the right way."

The issue of storm water management was identified as an important problem for our survey respondents with 70.6% reporting that White's Woods was either very important or extremely important to the issue of stormwater management. Additionally, a local government official said, "If they start cutting down trees, which is a natural way to absorb water, it's going to have a negative effect on residents ... we deal with stormwater and sewer, those are major issues that we have and that's a big chunk of all our tax money." Expressing concern for the heavy rain in the Indiana community, another interviewee indicated, "The storm water runoff is gigantic, the Marsh Run and White's Run both have done a lot of damage in those years that we're getting heavy rain. There's no reason to expect that we're not going to have that pattern again and sometime soon. We can't afford to make that worse." Aside from storm water, the community also believes White's Woods is important for the preservation of wildlife (82.3%), air quality (82.6%), nature conservation (84.7%), and the removal of pollutants from the air (89.8%).

Though the survey does not address the issue of communication with the public, this was a recurring issue raised by key stakeholders through the interviews. There's a general pattern of misunderstanding between private and public constituents with concern to what is perceived as an ongoing effort seeking to change the way White's Woods is used now and in the future. Key stakeholders expressed the need for communication to be ongoing in the best interest of the woods and community, but to proceed in a clear, transparent manner in which all that are involved are properly informed and educated on the proposed management of White's Woods. As expressed by an interviewee, "I want to know what the real reasons are and why now and what is going on. Why is it necessary? I haven't heard that yet - at least not satisfactory to me - that it's necessary."

The possibility of allowing limited-season bow hunting was identified as a concern as 51% of survey respondents reported it would impact their use of the woods, and with 57.4% strongly opposed to the practice. Concern for safety was expressed by one interviewee who stated, "I understand there's a balance to things, but because White's Woods is predominantly used by local residents for recreation and fitness the bow hunting thing is scary to me." Despite this, based on key stakeholder interviews, the deer population is perceived as a growing issue. So although interview participants expressed the desire for the deer population to be regulated, it was viewed by some as an acceptable practice in the woods with emphasis on culling the herd.

The use of electric bicycles in White's Woods was not a major concern to frequent users of White's Woods. 70.4% of survey respondents stated the presence of electric bicycles would have

no impact on their visitation of White's Woods. One interviewee stated: "I have no problem with electric bikes. And some people can't do those hills without electric bikes." At the same time, some did express concern about the potential impact on hikers. As such, 40.1% of survey respondents indicated they would like to see electric bicycles limited to certain areas and trails. Overall, the use of electric bicycles remains a minimal concern to participants with the exception of potentially limiting them to designated areas of White's Woods.

The public expressed a clear desire to leave White's Woods as a natural forest (Table 4). 56.4% of survey respondents do not want to see additional recreational facilities at White's Woods and 62.1% do not want to see additional playground facilities while 75.3% of respondents like the trail options as they are in the forest. One interviewee confirmed this sentiment stating, "Selective timbering would drastically change what White's Woods is. Just leave the place alone." The only change survey respondents indicated would be beneficial for White's Woods were an increase in educational programs (55.9%) and inclusion of restroom facilities (48.4%).

CONCLUSION

The public is opposed to the potential changes to White's Woods. The possibility of selective timbering in particular is a major concern because of its potential impact on stormwater runoff, the local ecosystem, and the ability of the public to use the park. The lack of clear communication regarding the potential changes to and future management of White's Woods has left the public confused as to what outcomes may be achieved. If funding the future management of White's Woods is a concern, the public has expressed their interest in White Township pursuing carbon sequestration payments through the Allegheny Land Trust as 78% indicated that White Township should pursue this opportunity. The Friends of Whites Woods have the opportunity to increase public education on the value of White's Woods to the ecosystem such as the removal of pollutants, stormwater runoff, and carbon storing.

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Appendices

Appendix A Survey Instrument

1. How often does your household visit White's Woods?
I have never been there
Less than once per year
1-3 times per year
4-6 times per year
Monthly or less
2-3 times per month
Weekly
3-5 times per week
Daily
2. During your last visit, how much total time did you spend in White's Woods?
I've never been to White's Woods
Less than 1 hour
About 1 hour
Between 1 and 2 hours
More than 2 hours
3. How did you learn about White's Woods?
(Open)
4. How often did your household visit other parks in Indiana County?
I have never been to other parks
Less than once per year
1-3 times per year
4-6 times per year
Monthly or less
2-3 times per month
Weekly
3-5 times per week
Daily
5. Why do you visit White's Woods? (Check all that apply)
Walking or hiking
Running
Bicycling/mountain biking
Cross country skiing
Enjoying fresh air and enjoying being outdoors
Relaxing, relieving stress, mental health

Spending time with family
Walking dogs
Bird watching
Teaching others about nature
Photography
Other: please explain _____ -

6. Would you say open spaces, parks, and outdoor recreation are
- Very important
 - Important
 - Moderately important
 - Slightly important
 - Unimportant
7. How important is White's Woods to each of the following- Very important, Important, Moderately important, Slightly important, Unimportant
- Storm runoff
 - Wildlife preservation
 - Air quality
 - Local Economy
 - Nature Conservation
 - Historical Value
8. White Township now allows hunting with a limited number of licenses at the White's Woods. Will this negatively impact your visitation to White's Woods?
- Definitely
 - Probably
 - Neutral
 - Probably not
 - Definitely not
9. White Township now allows motorized vehicles/AIVs in limited areas of White's Woods. Will this negatively impact your visitation to the park?
- Definitely
 - Probably
 - Neutral
 - Probably not
 - Definitely not
10. White's Woods absorbs about 207,000 gallons of stormwater run-off annually. How important is this to the community?
- Very important
 - Important

Moderately important
Slightly important
Unimportant

11. White's Woods removes about 17,000 pounds of pollutants (sulfur dioxide, particulate matter, etc.) annually. How important is this to the community?

Very important
Important
Moderately important
Slightly important
Unimportant

12. White's Woods stores about 1,102 tons of carbon annually which could account for payments of \$210,000 if the forest remains untouched. Should White Township pursue this source or revenue?

Definitely
Probably
Neutral
Probably not
Definitely not

13. Please rate your support/opposition for the following: Strongly oppose, somewhat oppose, neutral, somewhat favor, strongly favor

Timbering of White's Woods
Hunting in White's Woods
Electric vehicle use in White's woods

14. Please rate how you feel each of the following will affect Indiana County: Very negative affect, moderate negative affect, neutral, moderate positive affect, very positive affect

Timbering of White's Woods
Hunting in White's Woods
Electric vehicle use in White's woods

15. Please rate how you feel each of the following will affect the local ecosystem: Very negative affect, moderate negative affect, neutral, moderate positive affect, very positive affect

Timbering of White's Woods
Hunting in White's Woods
Electric vehicle use in White's woods

16. Please rate how you feel each of the following will affect you personally: Very negative affect, moderate negative affect, neutral, moderate positive affect, very positive affect

Timbering of White's Woods
Hunting in White's Woods

Electric vehicle use in White's Woods

17. White Township is considering allowing timbering of White's Woods as a potential source of revenue. Should White Township pursue this source or revenue?

- Definitely
- Probably
- Neutral
- Probably not
- Definitely not

18. I like the trail options at White's Woods.

- Strongly disagree
- Somewhat disagree
- Neither Agree nor Disagree
- Somewhat agree
- Strongly agree

19. White's Woods should increase the number of trails.

- Strongly disagree
- Somewhat disagree
- Neither Agree nor Disagree
- Somewhat agree
- Strongly agree

20. The trails at White's Woods are adequately maintained.

- Strongly disagree
- Somewhat disagree
- Neither Agree nor Disagree
- Somewhat agree
- Strongly agree

21. The trail markings at White's Woods are well maintained.

- Strongly disagree
- Somewhat disagree
- Neither Agree nor Disagree
- Somewhat agree
- Strongly agree

22. White's Woods should be developed to include facilities (i.e. restrooms, pavilions, grills, etc.)

- Strongly disagree
- Somewhat disagree
- Neither Agree nor Disagree
- Somewhat agree

Strongly agree

23. White's Woods should be developed to include structures (playground equipment, recreational facilities)

Strongly disagree

Somewhat disagree

Neither Agree nor Disagree

Somewhat agree

Strongly agree

24. White's Woods should be developed to include activities (education, organized recreation)

Strongly disagree

Somewhat disagree

Neither Agree nor Disagree

Somewhat agree

Strongly agree

25. Is there anything else you would like us to know?

Demographic Questions

What is your age in years?

(open)

Gender identity?

(open)

About how far in miles do you travel to get to White's Woods?

_____ Miles

Appendix B. Interview Questions

1. What is your professional and/or personal relationship with White's Woods?
2. Have you ever personally visited White's Woods? What was your purpose when visiting?
3. You may be aware that the White Township Supervisors' made some recent changes (bow hunting in select areas and recreational vehicles in some limited locations) and are seeking to log the Woods. What are your thoughts about these?
4. Did you play a role in past discussions and/or decisions around the White Township Supervisor's proposed changes (hunting, recreational vehicles, timbering, etc.) to White's Woods? (If yes) Please tell me about this.
5. What concerns, if any, do you have about the process the White Township Supervisors are using to make decision about these issues?
6. Does the timbering of White's Woods align with your organization's values or goals? How so?
7. In your opinion, how would the timbering of White's Woods impact the local ecosystem (wildlife, storm water, invasive species, etc.)?
8. How does White's Woods impact the Indiana community?
9. In what ways would logging White's Woods impact the Indiana community?
10. How do you see White's Woods being used in the future?
11. Is there anything about this issue that I haven't asked you but that you think we should know?
12. Are there other individuals you think I should interview?

Appendix C.

Table 1: Demographic Data			
	Mean (Range)	Standard Deviation	Sample size
Age	53.18 (19-85)	13.90	278
Distance traveled to visit WW	7.15 miles (0-275 miles)	21.95	185
	Frequency	Percentage	Sample size
Gender Identity			276
Female	164	59.4%	
Male	109	39.5%	
Cisgender male	1	0.4%	
Cisgender female	1	0.4%	
Non-binary	1	0.4%	
How often does your household visit WW?			289
Less than once per year	87	30.1%	
Monthly or less	113	39.1%	
Weekly	76	26.3%	
Daily	13	4.5%	
During your last visit, how much total time did you spend in WW?			287
I've never been to WW	37	12.9%	
Less than 1 hour	31	10.8%	
About 1 hour	75	26.1%	
Between 1 and 2 hours	120	41.8%	
More than 2 hours	24	8.4%	

Appendix D.

Table 2: Participant perception of the value of White's Woods as a natural resource.

Variable	Frequency	Percentage	Sample size
How important is WW to storm water run-off?			272
Not at all important	6	2.2%	
Slightly important	11	4.0%	
Moderately important	63	23.2%	
Very important	93	34.2%	
Extremely important	99	36.4%	
How important is WW to wildlife preservation?			277
Not at all important	3	1.1%	
Slightly important	6	2.2%	
Moderately important	40	14.4%	
Very important	101	36.5%	
Extremely important	127	45.8%	
How important is WW to air quality?			276
Not at all important	4	1.4%	
Slightly important	10	3.6%	
Moderately important	34	12.3%	
Very important	85	30.8%	
Extremely important	143	51.8%	
How important is WW to the local economy?			275
Not at all important	25	9.1%	
Slightly important	38	13.8%	
Moderately important	106	38.5%	
Very important	59	21.5%	
Extremely important	47	17.1%	
How important is WW to nature conservation?			275
Not at all important	4	1.5%	
Slightly important	4	1.5%	
Moderately important	22	8.0%	
Very important	88	30.4%	
Extremely important	157	54.3%	
How important is WW to historical value?			276
Not at all important	13	4.7%	
Slightly important	22	8.0%	
Moderately important	77	27.9%	
Very important	75	27.2%	
Extremely important	89	32.2%	