



ALT's Tree Stewardship Program

DATA COLLECTION AND RESTORATION TREE CARE

What is the tree stewardship program?



- ALT's Tree Stewardship program is a volunteer-powered effort to collect data on and care for restoration trees at ALT's conservation areas. The data collected by volunteers will be imported into [TreeKeeper](#) and contribute to the [Pittsburgh Canopy Alliance](#)'s mission of fostering a healthy and growing urban canopy.
- Stewards will receive the training necessary to conduct census-taking and basic tree care either individually with the field coordinator or at a group volunteer workday.

Pittsburgh Canopy Alliance and TreeKeeper

- **The Pittsburgh Canopy Alliance is a working group of more than 20 nonprofit organizations and government agencies from across Allegheny County.**
- Alliance partners are committed to increasing equitable access to urban tree canopy and the many human health, environmental, and economic benefits that it brings.



An All-In-One Urban Forestry Management System

Designed by Urban Foresters for Urban Foresters, TreeKeeper is the pioneer resource management software in our industry and continues to evolve to meet the changing demands of this field.



The two key responsibilities of a tree steward are census-taking and tree-tending.

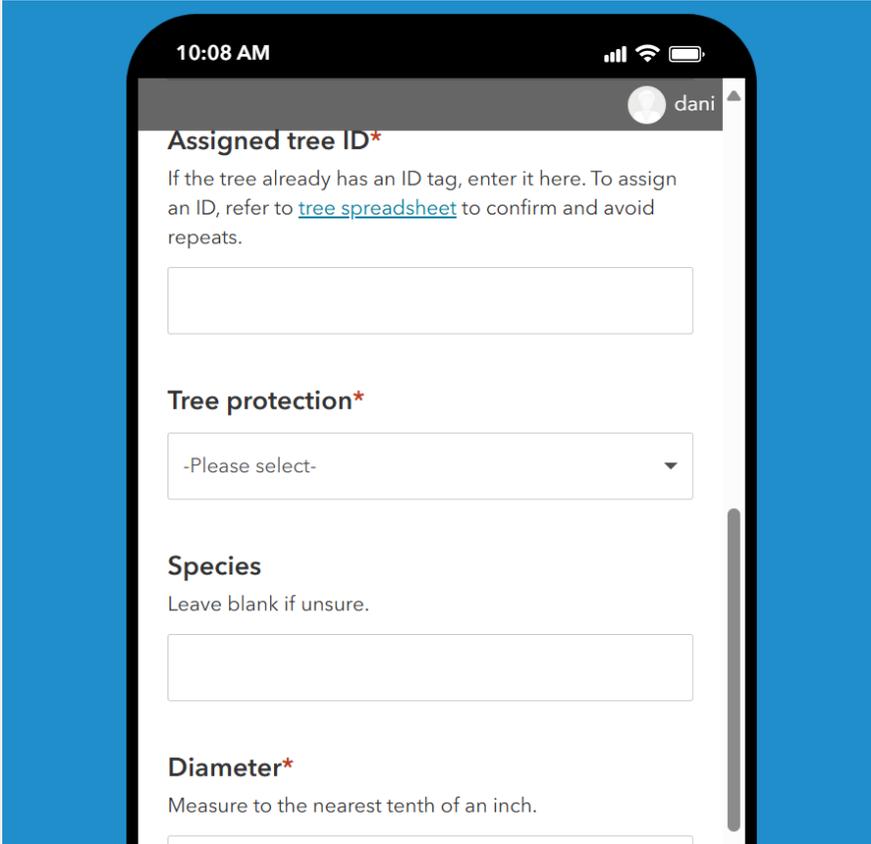
- Census-taking is the on-site collection of data, seasonally or annually.
- Stewards record information about the location and physical attributes of the tree.
- Trees are assigned an ID number and tag.
- Data is reported via a simple form on your phone.

- Tree-tending is the regular care and maintenance of trees.
- Stewards ensure the health and success of trees at ALT restoration planting sites.
- The tree's support and protection structures are inspected and maintained.
- Volunteer time is reported via a form on your phone.

Census-taking: accessing and providing data

- Stewards collect data using an ArcGIS survey on their phone. There is a separate survey for each property.
- Stewards assign each tree a unique ID: the property initials and a number. (ex.- GW28 is the 28th tree to be ID'ed at Girty's Woods)
 - Before assigning an ID, check [the tree census spreadsheet](#) or contact the [Field Coordinator](#) to confirm the ID number you should use. Avoid repeats.
- The survey will prompt you for the following information:
 - Location
 - Species
 - Diameter
 - Type of protection
 - Date of recording
 - Condition

SCREENSHOT OF THE FORM



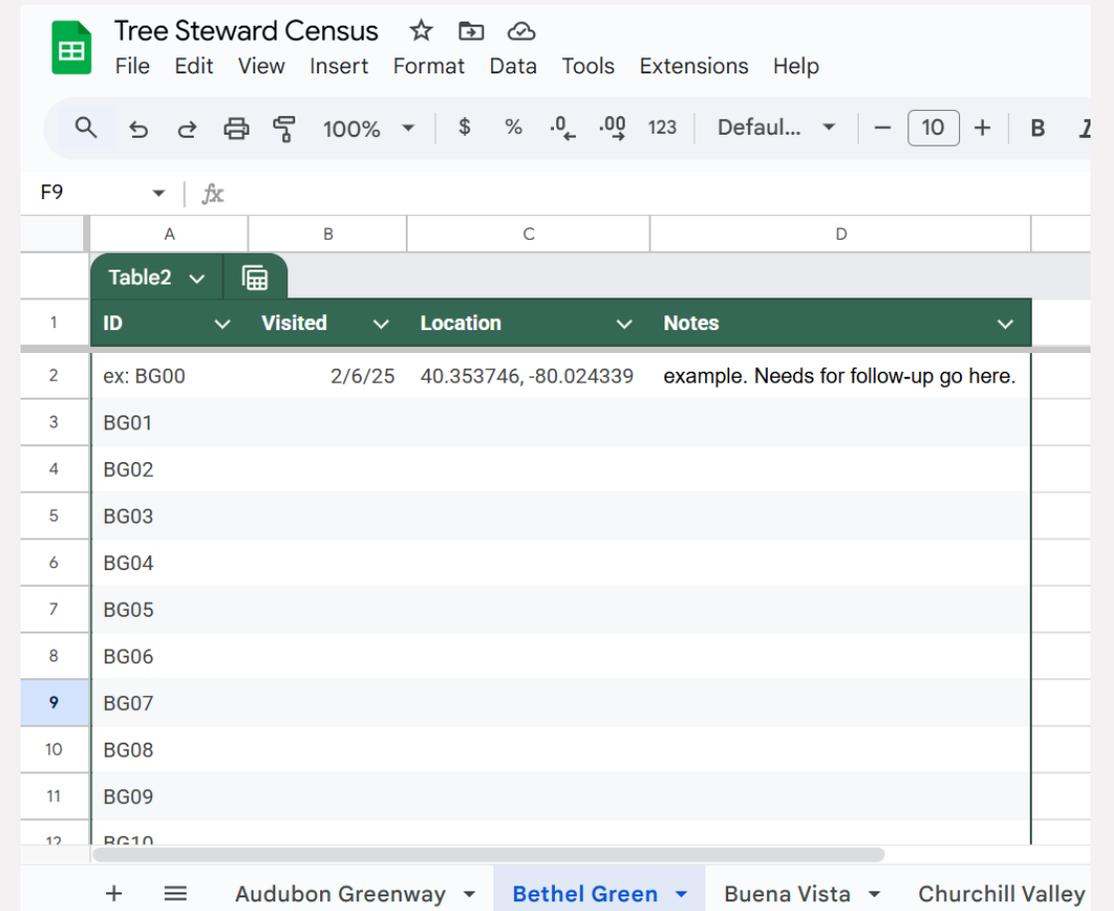
The screenshot shows a mobile application interface for a tree census survey. The top status bar displays the time as 10:08 AM, along with signal strength, Wi-Fi, and battery icons. The user's name 'dani' is visible in the top right corner. The form contains several sections:

- Assigned tree ID***: A text input field with a red asterisk. Below it, a note reads: "If the tree already has an ID tag, enter it here. To assign an ID, refer to [tree spreadsheet](#) to confirm and avoid repeats."
- Tree protection***: A dropdown menu with a red asterisk and the placeholder text "-Please select-".
- Species**: A text input field with the instruction "Leave blank if unsure." below it.
- Diameter***: A text input field with a red asterisk and the instruction "Measure to the nearest tenth of an inch." below it.

Census-taking: accessing and providing data

- The data stewards collect with the survey will be saved in ArcGIS
- The Field Coordinator will access this data and manually update the Tree Steward Census spreadsheet.
- The spreadsheet only contains pertinent information for stewards to access in the field.
 - Tree ID
 - Most recent visit date
 - GPS location
 - Notes- follow-up needs such as a dead tree that needs to be replanted, tree protection in need of repair, or a species that needs identification or clarification.
- The spreadsheet is important reference to ensure that new trees receive an unclaimed ID and repeats are avoided.
- Check with the Field Coordinator to confirm that the spreadsheet is up-to-date before beginning a census visit in the field.

SCREENSHOT OF THE FORM



The screenshot shows a Google Sheet titled "Tree Steward Census" with a menu bar (File, Edit, View, Insert, Format, Data, Tools, Extensions, Help) and a toolbar with search, navigation, and formatting options. The spreadsheet displays a table with the following data:

	A	B	C	D
	ID	Visited	Location	Notes
1				
2	ex: BG00	2/6/25	40.353746, -80.024339	example. Needs for follow-up go here.
3	BG01			
4	BG02			
5	BG03			
6	BG04			
7	BG05			
8	BG06			
9	BG07			
10	BG08			
11	BG09			
12	BG10			

At the bottom of the sheet, there are location filters: Audubon Greenway, Bethel Green (selected), Buena Vista, and Churchill Valley.

https://docs.google.com/spreadsheets/d/1t0cjp-fn01d1n1n1A_v35x9y0QqinX0zW_L0n1f1n1kV0n1m/edit#gid=

Tree Steward Census

File Edit View Insert Format Data Tools Extensions Help

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	A	B	C	D	E
	Table3				
1	ID	Visited	Location	Notes	
2	ex: BV00	2/6/25	40.279632, -79.819547	example. Needs for follow-up go here.	
3	BV01				
4	BV02				
5	BV03				
6	BV04				
7	BV05				
8	BV06				
9	BV07				
10	BV08				
11	BV09				
12	BV10				

+ ≡ Audubon Greenway ▾ Bethel Green ▾ Buena Vista ▾ Churchill Valley ▾ Devil's Hc

A steward collecting data and assigning ID's to trees at Buena Vista would check the Tree Steward Census spreadsheet.

Example- There are not yet any trees with an assigned ID at Buena Vista, so the steward will begin with "BV01".

Once the collected data is received by the Field Coordinator, they will update the spreadsheet to reflect the latest information.

Please note: there can be a delay in collected data becoming available on the spreadsheet. Always check with the Field Coordinator to ask about updates!

Collecting data: Location

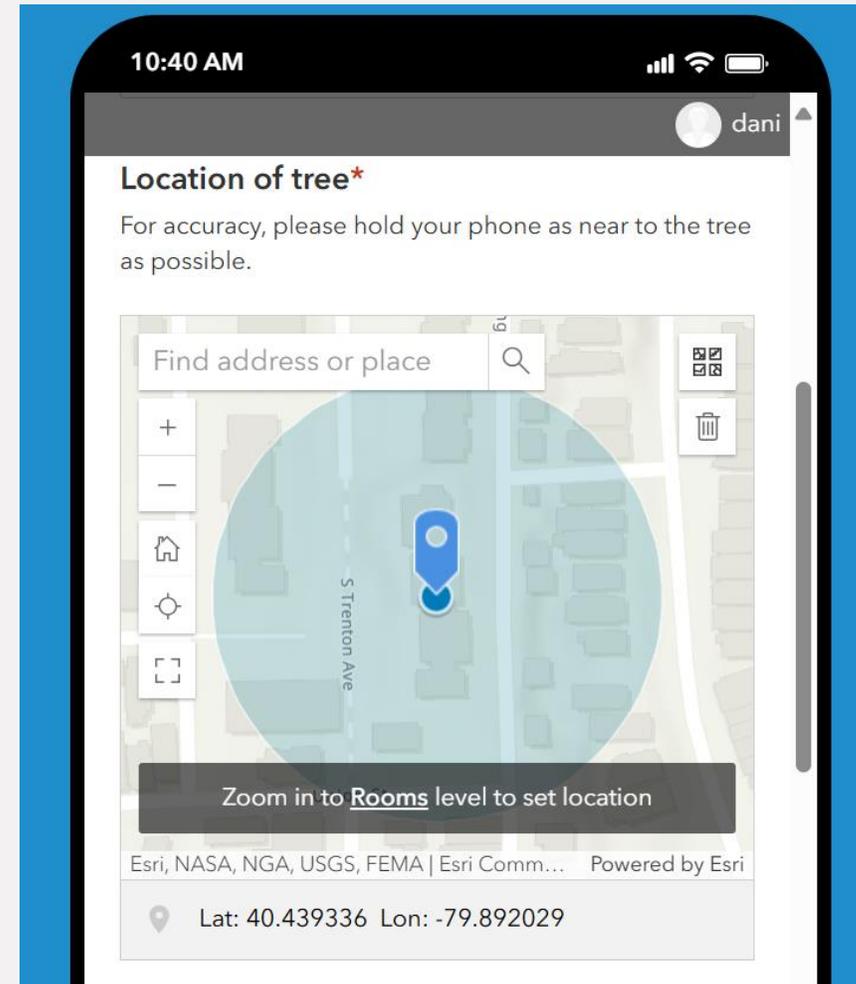
The survey will prompt you for location data.

Make sure that location tracking is enabled on your phone.

Battery-saving settings on your phone may affect GPS accuracy.

Pinch to zoom or press the + icon. **Zoom in as much as you can!**

You will receive a warning message if your GPS accuracy doesn't meet the 5-meter threshold.



Collecting data: Species

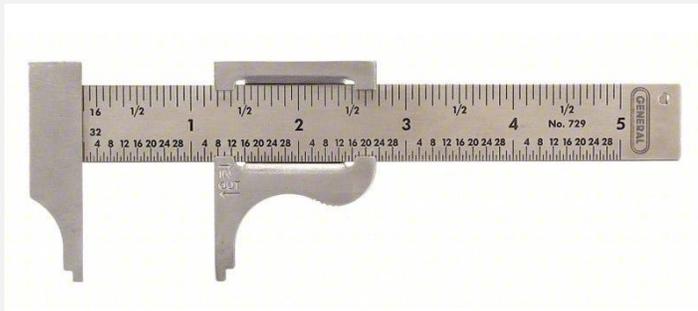
- While many of the trees that stewards will be observing have tags listing their species, some may have been lost.
- Stewards should do their best to determine the tree species using plant ID apps such as Seek, PlantNet, and PictureThis, or by using a field guide.
- A drop-down list of tree species is available in the survey. You can type in the name of the tree, or scroll through options.
- Select 'Other' if you don't see the tree species listed, and leave a note later in the survey.



Collecting data: Diameter

DIAMETER SHOULD BE MEASURED AT CHEST HEIGHT (KNOWN AS THE DBH). IF THE TREE IS SMALLER, MEASURE AT THE MIDDLE. MEASURE TO NEAREST TENTH OF AN INCH. TREE CALIPERS MEASURE DIAMETER. ORDINARY TAPE MEASURES WILL MEASURE CIRCUMFERENCE. PLEASE NOTE IF YOU HAVE MEASURED THE DIAMETER OR CIRCUMFERENCE SO THAT THE FIELD COORDINATOR CAN ENSURE A CORRECT DBH.

$$\text{DIAMETER} = \text{CIRCUMFERENCE} / 3.14159$$



Collecting data: Tree protection

Most of the trees you will be collecting data on are protected with a tube and stake. Others may be protected by a wire cage, a large deer-proof fence, or have no protection. The survey will prompt you to select one. At the end of the survey, there will be space available to make any notes, such as a tube in need of repair or a tree outgrowing its protection.



Fence



Tube



Cage

Tagging trees

- Stewards will be provided with aluminum tree tags.
- If a tree isn't already tagged, etch the ID onto the tag using a pencil, awl, or pen.
- Hang the tag loosely from the tree- leave room for growth.
- Tag should display the ID as two capital letters and numbers (ex: SJ325) and, if possible, the species of the tree on the reverse side.
- **If you find a dead tree, you do not need to tag it.** Report the tree as dead in the monitoring form and do not assign it an ID.



Tree tending: Gear and supplies



Cell phone, fully charged

Permanent marker

Ballpoint pen or sharpened pencil

Work gloves and boots

Hand pruners

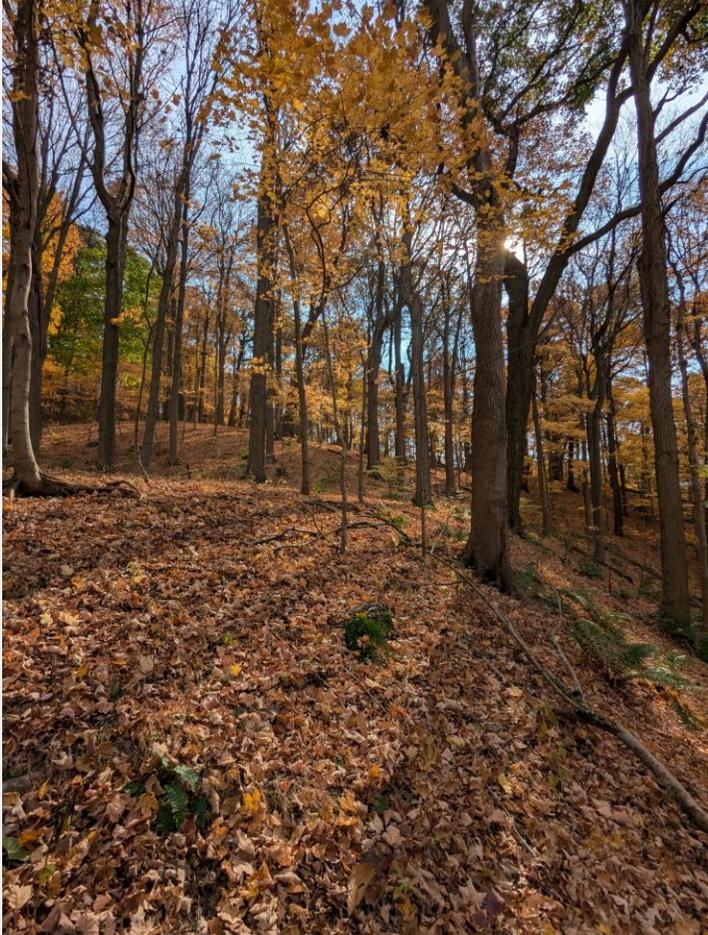
Mallet

Zip ties/ twist ties

Measuring tape/ caliper

Tree ID app or field guide

Tree-tending tasks: documentation



Record

Record census data as previously described

Mark

Mark the date of your visit on the tree tube with permanent marker (month/ day/ year)

Report

Report your time to ALT Volunteer Reporting at the conclusion of your visit.

Tree-tending tasks: support and protection



Stake

Ensure the stake is stable. Use a mallet to drive the stake upright into the ground.

Ties

The tube should be secured to the stake with two zip ties or twist ties.

Tube

Clear the tube of all weeds and debris. First, check for wasp nests. Do not disturb wasp nests; note their presence and leave alone.

Basic tree care

- Tubes are designed to remain on the tree until the trunk outgrows them. This protects the tree from deer grazing and antler rub.
- Regularly checking that the tree is growing straight and that the stake and tube are secure will ensure that the tree can eventually 'break out' of the tube.
- Mice will nest in tubes. Mouse nests and collected leaf litter can damage the bark of the tree. Remove all debris with gloves.
- Remove any vegetation growing in or on the tube. Vines and invasive shrubs will outcompete or girdle the tree.

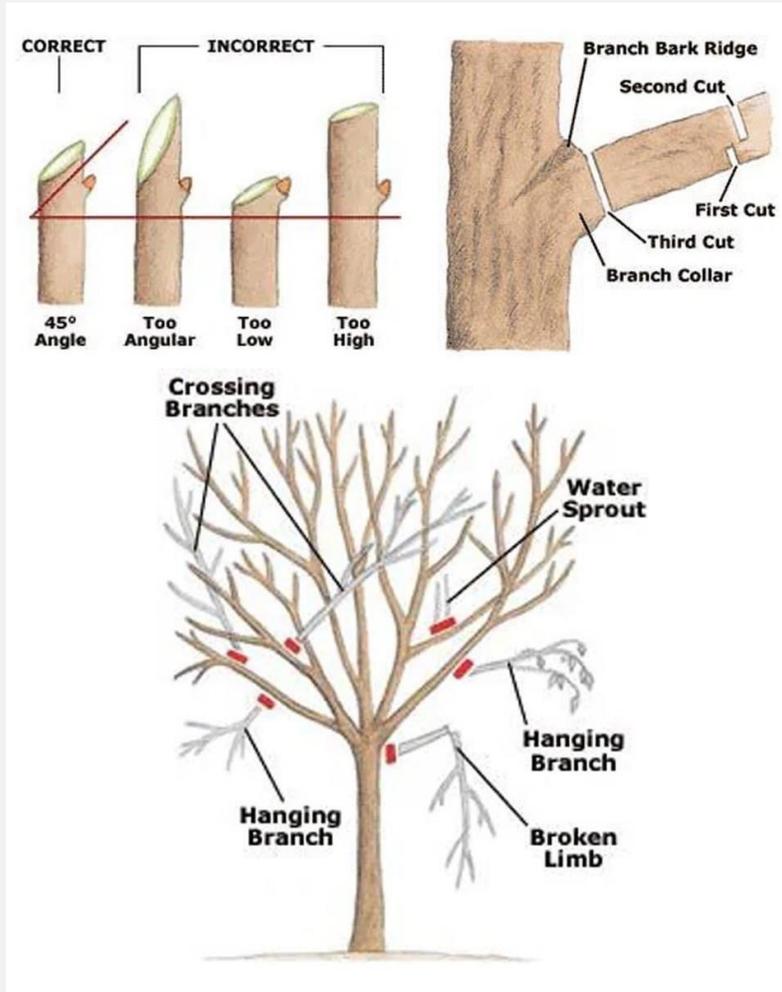




Basic tree care

- Check the base of the tree. Exposed roots should be covered with soil.
- Conversely, trees that have been planted too deeply will rot; gently remove soil that is covering the bark.
- Pruning small lower branches and suckers can help strengthen the tree. Prune cleanly, close to the trunk, to prevent damage to the bark.
- Pruning is best completed when the tree is dormant in winter through early spring.
- Be selective; pruning too many branches at a time can limit the tree's ability to heal.

Tree Pruning Basics



- Use clean tools. Sanitize pruners and loppers with rubbing alcohol.
- Keep branch collars intact.
- Cut cleanly, don't rip or pull. Avoid tearing or damaging the bark.
- Never prune more than 30% of a tree's limbs.

Examples of what we're avoiding!

**THIS TREE TUBE WAS OVERRUN WITH
INVASIVE PLANTS**



THIS TREE NEEDED MORE SUPPORT



Field Work Safety

- Check the weather forecast and plan accordingly. Rain and high winds are not ideal conditions for collecting data safely or effectively.
- Dress to protect yourself from sun, brambles, ticks, and mosquitos. Perform a thorough tick check after returning home.
- Hunting is permitted on many ALT properties; wear hi-vis orange and be seen!
- Practice the campsite rule; leave your surroundings better than you found them. Bring a bag for any trash or treasures you may encounter.
- Ensure your phone has a full charge. Mapping and data entry can use a lot of battery power.
- In case of an emergency, dial 911.
- Report hazards and issues to stewardship@allegHENYlandtrust.org or with the [Field Report survey](#)
- Stay hydrated. Bring a reuseable water bottle and a snack.
- Keep an eye out above and below you. Be mindful of hanging limbs overhead and tripping hazards and ground-nesting hornets underfoot.
- Work within your comfort zone. If it feels unsafe, don't do it!

Restoration Planting Locations

Conservation Area	Location
Audubon Greenway	https://maps.app.goo.gl/ZL2CdS98DizGJ7E39
Bethel Green	https://maps.app.goo.gl/u29g5fJgyh9BUfgu5
Buena Vista Heights	https://maps.app.goo.gl/GkBkKEw7pJKvKLjN9
Churchill Valley Greenway	https://maps.app.goo.gl/tnQrMhxDJ1toV1nXA
Dead Man's Hollow	https://maps.app.goo.gl/PsuuRKdEzoLRWznMA
Devil's Hollow	https://maps.app.goo.gl/HG71Adh7SSdLjVg86
Gateway Woods	https://maps.app.goo.gl/dwf8K7k7Uiz1M6gf7
Girty's Woods	https://maps.app.goo.gl/JcivADGXB4y8boei7
Irwin Run	https://maps.app.goo.gl/i1SNfxE8eye5d5nV7
Linbrook Woodlands	https://maps.app.goo.gl/qfWz1mMHE3RtPrBt9
Meyer Farm	https://maps.app.goo.gl/gM8GBtHAJ1Mzyjzu9
Venango Trail	https://maps.app.goo.gl/c9CPSiwwhmgFCuQf7
St. John's Green	https://maps.app.goo.gl/wbQzeE71cRj94RWG8
Wingfield Pines	https://maps.app.goo.gl/bXmeoYc3NCmons967

Data collection surveys



- Audubon Greenway: <https://arcg.is/0ebSL41>
- Bethel Green: <https://arcg.is/0CPOOC0>
- Buena Vista Heights: <https://arcg.is/1WH4Lj1>
- Churchill Valley Greenway: <https://arcg.is/0aXqj10>
- Dead Man's Hollow: <https://arcg.is/1jnDaD1>
- Devil's Hollow: <https://arcg.is/1vj5jm0>
- Girty's Woods: <https://arcg.is/1qCbjm0>
- Gateway Woods: <https://arcg.is/019SO13>
- Irwin Run: <https://arcg.is/1v9qeL4>
- Linbrook Woodlands: <https://arcg.is/1eGHTa0>
- Meyer Farm: <https://arcg.is/1aTb1X2>
- St. John's Green: <https://arcg.is/zH9b8>
- Venango Trail: <https://arcg.is/04yzPr>
- Wingfield Pines: <https://arcg.is/1H1nuK5>

Key links to remember



Tree census spreadsheet: use to confirm the ID# of each tree [Tree Census](#)



Volunteer waiver: update annually [ALT Waiver](#)



ALT Volunteer reporting form: use to report your time [Volunteer Reporting](#)



TreeKeeper: public-facing map where your data will end up [TreeKeeper](#)



ALT Slack account: Keep in touch with Stewardship and other Tree Stewards. [Slack](#)



Field Coordinator contact: dani@alleghenylandtrust.org - **Communication is key!**

Thank you, Tree Steward!

