The protocols in this document are samples – HTHC users are welcome to consider them and adapt them for their needs, or develop their own protocols based on their experiences.

# Protocol for recording health and pest checks on trees *new* to the HTHC database

*This protocol is meant for projects that will run Health and Pest Checks on trees that* are not in the HTHC Database. *It assumes trees are established (not being planted). Since the trees are not already in the HTHC Database, they cannot be Assigned to Participants – they must be added to the database first using the Add a Tree tool. This protocol shows the most efficient way to Add a Tree, run a Health Check on it, and run a Pest Check in one visit. If doing Tree Care, instead of Health or Pest checks, at step 2, tap on Tree Care instead of Health Check.*

# Using the HTHC App

1. Be sure you are signed in.
2. Click on Health Check. This will automatically bring up the ‘Add a Tree’ page.

# Add a Tree

1. Give this tree a name – *use a standardized format so the tree is recognizable in later database review*
2. Give the tree a species -as accurate as possible. Select a genus (like Maple spp) if you know what kind of tree it is, but don’t know the species. Some types of trees, like Cherries and Crabapples, are very difficult to speciate, so using ‘Prunus spp’ and ‘Malus spp’ is acceptable.
3. Icon – choose one.
4. Location: Give each tree an address – this is critical for allowing the data you collect to work with previous data.
	1. Use the Target button to Auto-Generate an address. If it is incorrect or cannot find an address, manually type one.
5. Location: Correct the Lat/Long
	1. Press the Pencil button to open the map. Tap the correct location on the map to move the pin (you do not need to drag it). Then hit ‘Done’ on bottom right
	2. Use visual cues like buildings or visible trees to find the correct location for your tree.
6. Details
	1. Select ‘Adopting’. This will bring up DBH info.
	2. Measure the DBH of the tree in inches and type it in the DBH field.
		1. Be sure to input DBH correctly – the other open space is for circumference
		2. Inputting the DBH will auto-calculate a circumference
7. Notes
	1. Note the height you measured the DBH.
	2. Make any other notes that may be relevant for future tree monitors, like
		1. Is the tree hard to find?
		2. Are there safety concerns (dangerous median, etc)

# Health Check

1. Go through each of the Health Metrics. Use your field guides when you have questions. For each metric, the “i” button on the right opens an explainer page.
	1. Look at the tree from multiple angles
	2. Confer with your partner/team to reach a consensus value for each metric.
2. Images
	1. Take a “Tree Portrait” – a picture of the entire tree. You may need to step back to do this
		* 1. Be careful – be mindful of your surroundings when taking the picture
	2. You can take multiple pictures of the tree, including close-ups, if you’d like, but the Tree Portrait is required.
3. Notes – Add any notes about the tree’s health that may be relevant.
4. ***Hit Save***

# Pest Detection

1. Click on Pest Detection
2. Go to ‘My Trees’ on the bottom left
3. Select the tree you just did a Health Check on
4. The app will automatically open the pest detection screen
5. Go through each pest symptom
	1. Use the ‘i’ buttons on the right to access explainers for each symptom
	2. Check the tree from multiple angles, and work with your partners to come to a consensus on each symptom
6. Be sure to add notes if you see something suspicious
	* 1. What was suspicious?
		2. Where on the tree was it?
7. ***Hit Save***
8. ***Continue to next tree, repeat starting at #1.***

# Dashboard Steps

*Steps for Project Leader only*

1. Set up a Project in the HTHC Dashboard with a general area that includes the entire area that your project is collecting data.
2. After every day of field data collection, click on ‘Add Trees to Project’
3. Add each tree to your project
4. Continue through life of project
5. If desired, follow steps for Adding Users to your Project and manage trees for follow-up activities, like later Tree Care or repeated Health and Pest Checks for Quality Checks, or the following field season

# Protocol for Recording Tree Care Activities on Assigned Trees

*This protocol is for Projects that intend to use the HTHC Project Management Dashboard to Assign trees to Participants, and then have the Participants perform and record tree stewardship (Tree Care) activities using the HTHC Mobile App. The protocol’s steps also work for performing Health Check or Pest Detection checks on assigned trees – simply change ‘Tree Care’ to ‘Health Check’ or ‘Pest Check’ as needed.*

# Setup with the HTHC Dashboard

1. Project Leader must create a Project that includes the trees to be checked.
2. Project Leader must make sure all Participants have created accounts with HTHC and have been added to the Project.
3. Project Leader Assigns trees to Participants. It is recommended to do this at least a few hours before field work begins.

# Using the HTHC App and Finding Your Tree

1. Be sure you are signed in.
2. Go to the Main Menu.
3. Tap My Trees (go to A) or Tap on Map (go to B)
	1. A list of trees will appear. Select the tree you are interested in.
	2. Tree points will appear on map, centered on your location. Tap on the tree you are interested in, and tap the edit (pencil-shaped) button.
4. The tree page will open. Tap on ‘Record an Activity on this Tree’ or press the + button.
5. Tap on Tree Care. The Tree Care form will open.

# Tree Care Form

1. Tap the space under ‘Stewardship Tasks’ to open the drop-down menu of choices
2. Tap to select each stewardship task or tree care activity you performed. If necessary, select ‘Other’ for any task not listed
3. (Coming 2019) Fill out how much time you spent on the activities you performed
4. Tap in the space under ‘Notes’ to add any unlisted stewardship tasks and any other notes you wish to add