1. Title Screen

1.1 Title Screen

Narration:

[music]
2. Introduction

2.1 Welcome!

Narration:

Have you ever wondered about the environmental benefits provided by a single tree? How about the benefits generated by several trees? i-Tree Design, a free tool provided by the U.S. Forest Service, helps you discover the benefits of trees! Through this web-based tool, you can input data on one or more trees growing in your community and calculate the benefits they provide, such as the amount of stormwater they intercept, their positive effects on air quality, and the amount of carbon dioxide they sequester.
Narration:

In this interactive how-to video, you will discover how to use i-Tree Design. Specifically, you will learn how to draw structures, place trees in your drawing, and interpret the results.
Ready to get started? Select Next to continue.
i-Tree Design: How to Calculate Tree Benefits

2.3 Orientation

Narration:

Before you continue, be sure to review the features available to you in this video by selecting each marker. When you're ready, select Next to continue.
7. Drawing a Structure

7.1 Drawing a Structure

Narration:

To use i-Tree Design, you will need to have several pieces of information about the tree whose benefits you are calculating. Review the Tree Value Worksheet under Resources for a guide to help you collect this information.

When you're ready, select Next to continue.
7.2 Drawing a Structure

Narration:

To calculate tree benefits using i-Tree Design, first input the address of your building and select Go.
7.3 Drawing a Structure

Narration:

Under “Draw Structures”, select Yes to calculate the benefits of trees on your building's cooling and heating bills.
7.4 Drawing a Structure

Narration:

Next, you need to identify and outline your building's structure on the map. Select the Draw icon and drag the icon to a corner of your building's image.
7.5 Drawing a Structure

Narration:

Drag the icon around the perimeter of the building, clicking once at each corner of the building.
i-Tree Design: How to Calculate Tree Benefits

7.6 Drawing a Structure

Narration:

When you have finished, double-click to finish your building's drawing. Answer the question prompts about your building.
i-Tree Design: How to Calculate Tree Benefits

3. Placing a Tree

3.1 Placing a Tree

Narration:

Next, place trees around your building's image. Click on “Place Trees.”
Narration:

Enter the information about the tree whose benefits you are calculating.

The information includes Tree Species, Tree Circumference or Tree Diameter at Breast Height (or DBH), Tree Condition, and Tree Exposure to Sunlight.
### 3.3 Placing a Tree

**Narration:**

Now you are ready to place your tree! Select the **Tree** icon and drag it to the location of the tree on the property map.

If you are calculating benefits for more than one tree, repeat these steps.
3.4 Placing a Tree

Narration:

When you have finished, select “Estimate Benefits” to continue. Identify how far into the future you would like to calculate the benefits of your tree.
3.5 Placing a Tree

Narration:

Select **Calculate** to view the benefits provided by the tree.
4. Understanding Results

4.1 Understanding Results

Narration:

The Results screen shows the impact of your tree on key criteria as well as that impact over time. You can choose to review Results for a single tree or for all trees. To view your Results, select each tab.
4.2 Understanding Results

Narration:

The **Stormwater** tab describes how your tree reduces water runoff and keeps pollutants from flowing directly into bodies of water.
4.3 Understanding Results

Narration:

The **Energy** tab explores how much energy your tree may help conserve and how much it may reduce heating and cooling costs.
4.4 Understanding Results

Narration:

The Air Quality tab discusses how your tree absorbs pollutants in the air, releases oxygen, and offers other benefits.
4.5 Understanding Results

Narration:

The Carbon Dioxide tab explores how much carbon dioxide your tree sequesters or locks up and the impact of this carbon dioxide storage on heating and air conditioning demands in nearby buildings. Each of these criteria can be further explored by looking at how these impacts change over time, from the current year through the future year you previously selected.
i-Tree Design: How to Calculate Tree Benefits

5. FAQs

5.1 FAQs

Explore these frequently asked questions to discover more about i-Tree Design and how you can use this tool with your students.
i-Tree Design: How to Calculate Tree Benefits

Question 1 (Slide Layer)

FAQs
Select each question to learn more.

I inputted data for a tree, but it’s not showing up when I click on “Estimate Benefits.”

Be sure that you “planted” the tree by dragging the Tree icon, to the location of the tree on the property map.

Question 2 (Slide Layer)

FAQs
Select each question to learn more.

I inputted data for a tree, but it’s not showing up when I click on “Estimate Benefits.”

When I “Estimate Benefits,” how many years should I specify?

You can specify any number of years from 2 to 59 years. For consistency in data, you may want to use the same number of years for each tree you input (e.g., 50 years). The benefits displayed on the next screen will include the results for the current year, as well as the cumulative results for the specified number of years.
Question 3 (Slide Layer)

### FAQs

**I inputted data for a tree, but it’s not showing up when I click on “Estimate Benefits.”**

When I “Estimate Benefits,” how many years should I specify?

**Do I have to “Model Crown Growth”?**

No, this is an optional tool that can be used if you want to see how big the crown of a tree will grow over time. Some trees grow faster than others, so this is a useful tool to see how fast a tree crown will grow and to determine where different species of trees should be planted.

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Question 4 (Slide Layer)

### FAQs

**I inputted data for a tree, but it’s not showing up when I click on “Estimate Benefits.”**

When I “Estimate Benefits,” how many years should I specify?

**Do I have to “Model Crown Growth”?**

When I click “Estimate Benefits,” I don’t see the tree that I just planted and inputted data for.

Near the top of the Estimate Benefits page, there is a drop-down menu for “Display results for”. Use this drop-down menu to select a specific tree; the default is to show the cumulative results for all the trees in your project.
i-Tree Design: How to Calculate Tree Benefits

Question 5 (Slide Layer)

FAQs
Select each question to learn more.

Click on “Return to Setup” in the upper right corner of the screen.

How do I add data for another tree?

How do I view a “Report” that shows the results for all of the trees in my project?

Can I save my i-Tree Design project so that I can keep adding more trees?

Why can’t I find my tree data for a saved project?

Question 6 (Slide Layer)

FAQs
Select each question to learn more.

I inputted data for a tree, but it’s not showing up when I click on “Estimate Benefits.”

There is a menu of options on the upper right-hand corner of the screen where you can select “View Report.” Note that you can also use this menu to “Print” the report.

How do I view a “Report” that shows the results for all of the trees in my project?

Can I save my i-Tree Design project so that I can keep adding more trees?

Why can’t I find my tree data for a saved project?
i-Tree Design: How to Calculate Tree Benefits

Question 7 (Slide Layer)

FAQs

Select each question to learn more.

Yes, i-Tree Design will automatically save the data you input. To make it easy to access your saved data, use the same computer each time you access the i-Tree Design website. When you return to the i-Tree Design website, input your street address. On the next screen, you will see your project. Click “Estimate Benefits” to view the project data you have entered to date.

You can also save your project as a file. Click “Save Result” on the menu in the upper right-hand corner.

Can I save my i-Tree Design project so that I can keep adding more trees?

Why can’t I find my tree data for a saved project?

Question 8 (Slide Layer)

FAQs

Select each question to learn more.

Click “Estimate Benefits” and then click “Calculate” to see your saved data.

Why can’t I find my tree data for a saved project?
6. Conclusion

6.1 Conclusion

Narration:
Before you dive into i-Tree Design, be sure to visit i-tree-learn.org to explore additional tools and resources for i-Tree Design. You can also download free activities that encourage students to use i-Tree Design to investigate the environmental benefits of trees. Questions? Contact the i-Tree Design support staff for help using this tool as well as other i-Tree tools. Ready to calculate tree benefits? Select Exit to leave this interactive video and begin using i-Tree Design!