

# When was the last time YOU took a hike?

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“There can be no greater issue than that of conservation in this country.” – Theodore Roosevelt

## Abstract

In Connecticut, there are over 100 state parks and forests as well as a number of preserves managed by local land trusts; however, many people are unaware of these areas for recreation. The main objective of the project was to make the public aware of the great outdoor recreational assets of one of CT's largest land trusts using interactive online mapping technology. Using ArcGIS online and story maps, I created a customized preserve map that allows the public to explore what their local trails have to offer. The story map and guide provided here is a prototype of a more detailed story map that the Joshua's Tract Conservation and Historic Trust will continue to develop after a workshop that I will hosting in the future.

## Introduction

### The Problem

- Since Richard Louv's 2005 *Last Child in the Woods* book, there has been a lot of discussion on how to get more people out in the local preserves to reduce Nature Deficit Disorder.<sup>1</sup>
- Connecticut (CT), although a densely populated state, has over 100 state parks and state forests, with the largest state forest having more than 23,000 acres.<sup>2</sup>
- CT currently has 108 active land trusts, who collectively conserved 190,193 acres.<sup>3</sup>
- For example, Joshua's Tract Conservation and Historic Trust protects more than 4,000 acres across 14 towns in northeast corner CT.<sup>4</sup>
- Interestingly, 60% of outdoor enthusiasts (ages 18-44) use technology to search for information about outdoor recreation.<sup>5</sup>

### Our Objectives

- To make the public aware of the great outdoor recreational assets of Joshua's Trust properties via interactive online mapping tools:
  - Use innovative ArcGIS online and GPS technology to create interactive maps of several Joshua's Trust properties;
  - Create an online story map based on the interactive ArcGIS maps to provide property information in an exciting way to the public; and
  - Train Joshua's Trust volunteers how to expand on the new story map to showcase more properties to the public over time.

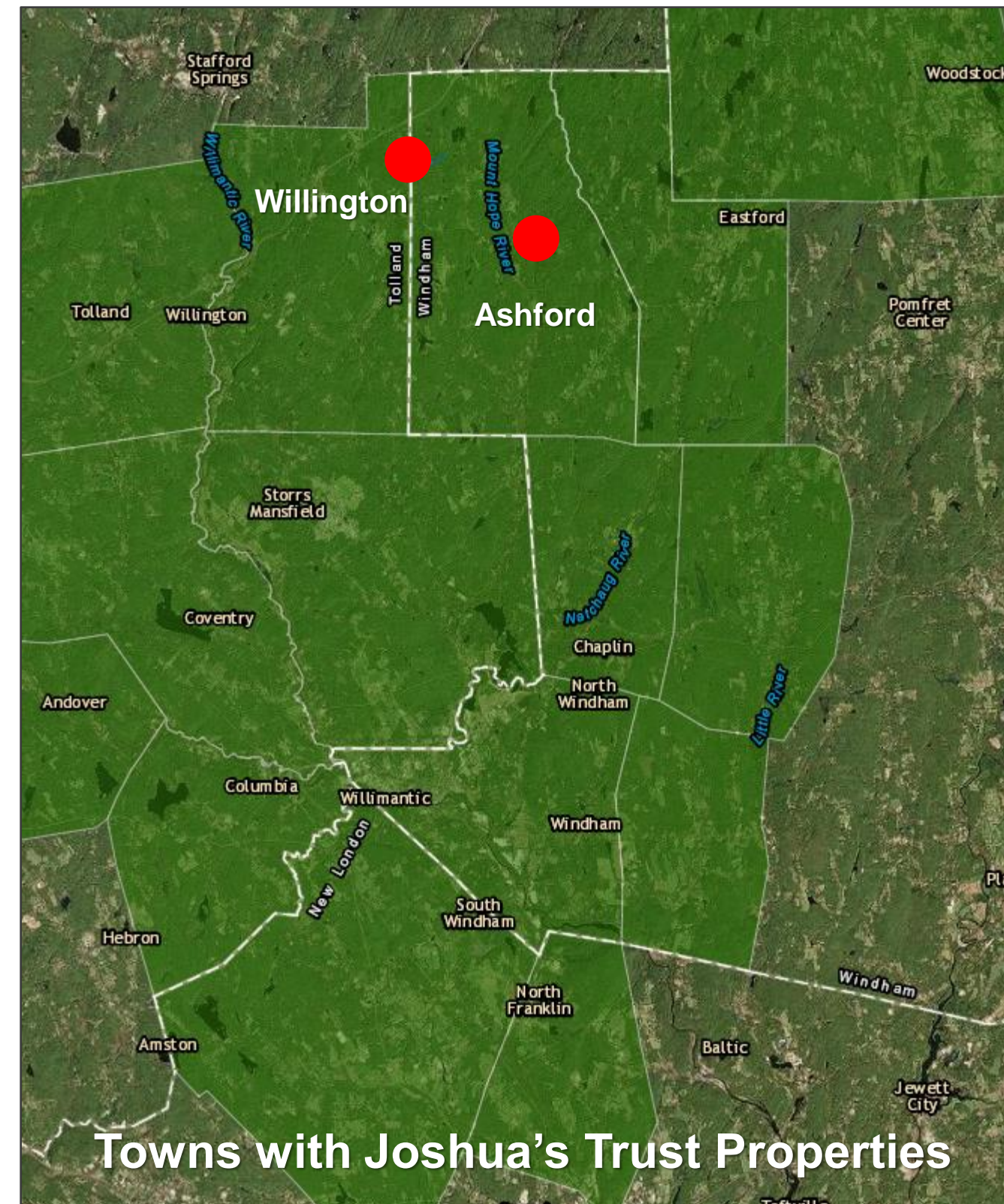
## Acknowledgements

I would like to thank everyone that helped make this entire project possible. I would like to thank the Joshua's Tract Conservation and Historic Trust group, and more specifically Michael Hveem and Paul Pribula. I would also like to thank Carrie and Emily from UConn Clear for lending me a GPS unit. Last but not least, I would like to thank Laura Cisneros for being an amazing mentor and helping me out when I didn't understand something.

## References

- <sup>1</sup>Louv R. 2005. *Last Child in the Woods*. North Carolina: Algonquin Books of Chapel Hill.
- <sup>2</sup>Perry J. & Perry J. 1997. *The Sierra Club Guide to the Natural Areas of New England*. San Francisco: Sierra Club.
- <sup>3</sup>Land Trust Alliance. 2015. *Connecticut Acres of Land Protected*. Connecticut Land Trusts. [accessed 15 Feb. 2017] <<http://www.landtrustalliance.org/censusmap/#Connecticut>>.
- <sup>4</sup>Joshua's Trust. 2014. *Joshua's Trust*. [accessed 15 Feb. 2017] <<http://joshuastrust.org/>>.
- <sup>5</sup>Outdoor Foundation. 2011. *Outdoor Recreation Participation Report 2011*. [accessed 24 Feb. 2017] <<http://www.outdoorfoundation.org/pdf/ResearchParticipation2011.pdf>>.
- <sup>6</sup>Esri. 2017. *Story Maps*. Esri. [accessed 15 Feb. 2017] <<https://storymaps.arcgis.com/en/>>.

## The Process



### Main Goal

The main goal was to make the public aware of outdoor recreational assets on Joshua's Trust properties using innovative online mapping technology.

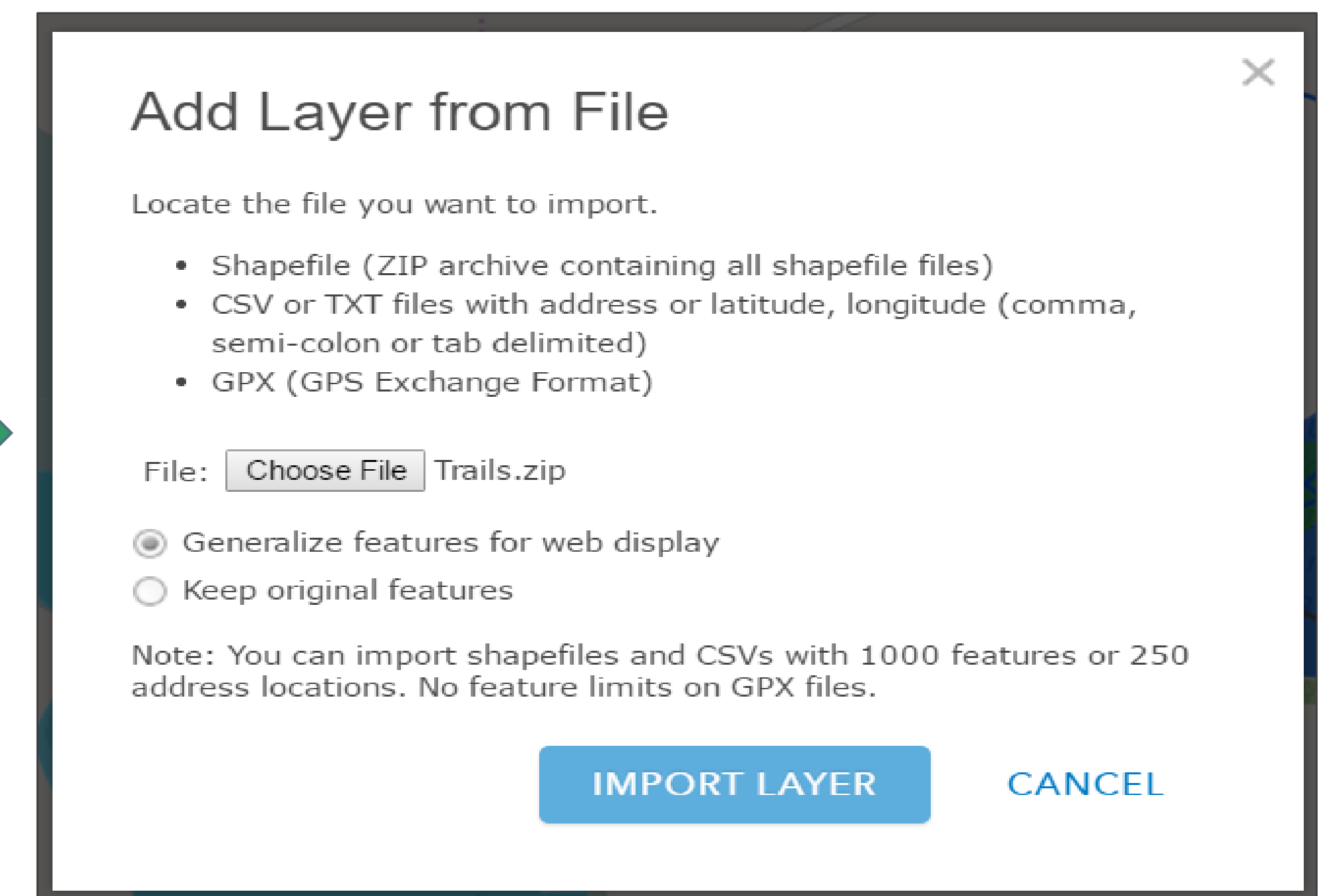
### Step 1

First, I selected properties for which I developed a beta test interactive story map. I settled on Tinkerville Brook Preserve (located in Willington, CT) and Ironmine Valley (located in Ashford, CT) because these two locations were close to where I live, but I had never heard of them.



### Step 2

The second step was to gather on-the-ground information from the preserves, such as taking photos and marking waypoints of significant features/landmarks and recording the routes of trails using a GPS device.



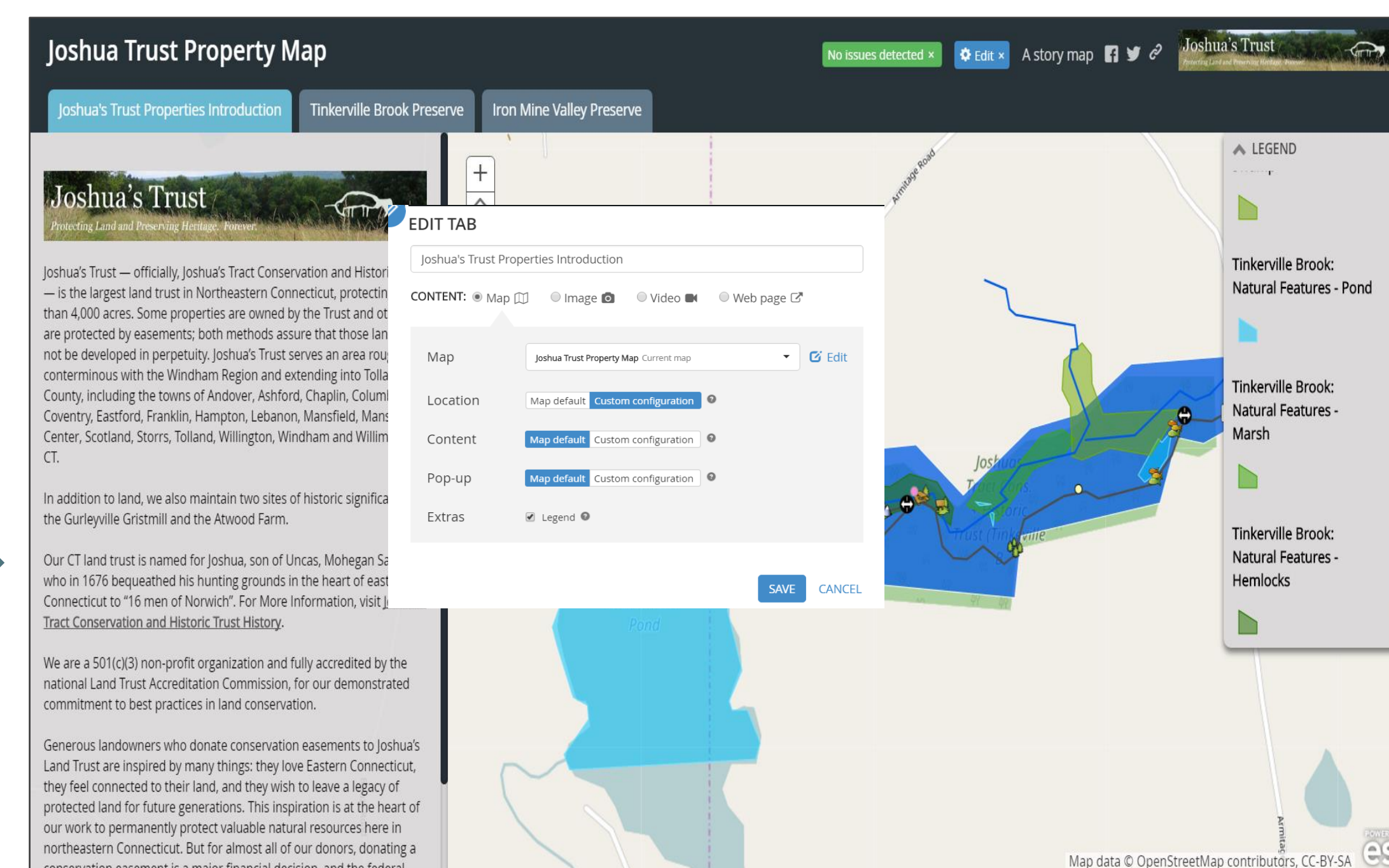
### Step 3

I then imported the data from the GPS unit and my camera onto my computer to be used to assemble an interactive map using ArcGIS Online (<http://www.arcgis.com/home/index.html>). I then uploaded waypoints, trail routes and photos to ArcGIS Online. In the screenshot above, I was uploading the route of the trails of the Tinkerville Brook Preserve. I also uploaded shapefiles of the preserves provided to me by Joshua's Trust.



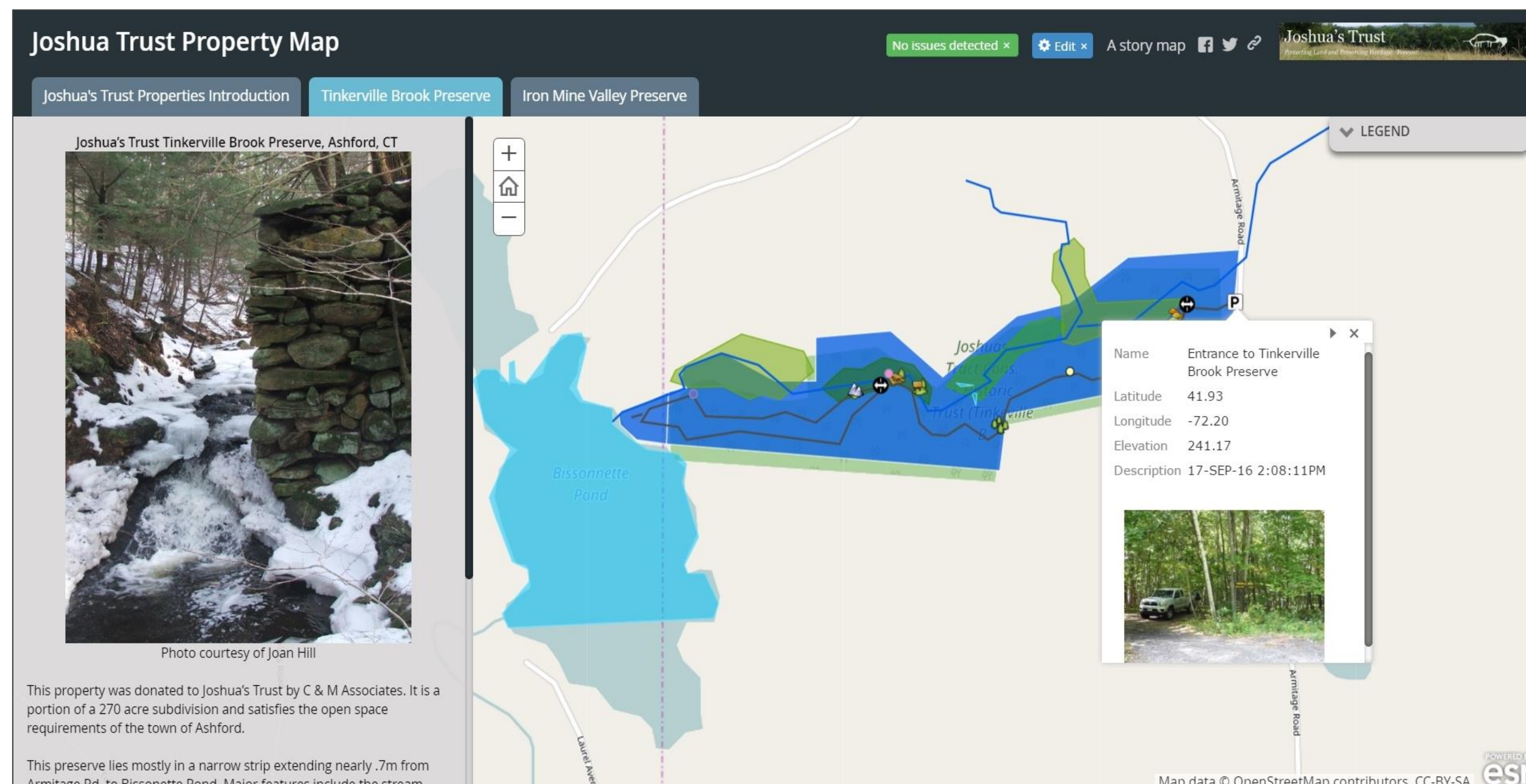
### Step 4

Once all of the data were uploaded to ArcGIS Online, I was then able to make the information look more appealing/user-friendly. In the screenshot above, I was able to pick custom waypoint icons so that people can get a general idea of which feature was marked without actually having to click on the waypoint. I also customized pop-up boxes so that the user could click on a feature and a picture of that feature would appear with a brief description.



### Step 5

On this step, I converted the ArcGIS Online map to an ESRI story map. What is a story map? A story map is something that allows you to customize regular online maps with pictures and text relating to what the map is showing. From there, I selected the “Map Series Builder” template to create a story map that allows the user to quickly glean information on each property. After I selected this template, all of my data from the map was transferred. From there, I had to create tabs for each preserve (see screenshot to the left). After I created each tab, I then tailored the side panel to display a picture I took of each preserve and a brief description of what each preserve is like.



## Final Product

The final product is a user-friendly story map that allows local community members to experience the property before visiting the preserves. This allows the public to become familiar with local outdoor recreational areas as well as become familiar with attributes of the property, making it a more enjoyable experience. In the final story map, there are three tabs. The first tab provides a view of all Joshua's Trust properties and has a brief description of land trust. The subsequent tabs have specific information on each preserve with a picture. Under each of these tabs there is a brief description of each preserve, a picture taken on the trail of the preserve, a trail map of the preserve, and a legend to identify the different features of the preserve and the different waypoints.

## Future Directions

The story map and guide provided here is a prototype of a more detailed story map that the Joshua's Trust will develop. The plan is to replicate what I did with these two preserves for all 66 of the Joshua's Trust's properties. I will be hosting a workshop at the Joshua's Trust office at a later date to teach land trust members how to create interactive maps for the remaining properties and add this to the online story map. I will be taking the volunteers through a step by step process (as shown here) in order for them to achieve the final product that they would like. The final goal of this project is to distribute the story map widely so that local community members can become familiar with what the local trails/preserves have to offer.