Trail Mapping Project Template

A trail map is used to aid in navigation and symbolizes natural and human-made features on a landscape. A good trail map ensures that visitors are safe and informed and can increase public awareness and use of a recreation area or open space. This project template will provide guidance for carrying out a CTP trail mapping project.

Why Conduct a Trail Mapping Project?

Trail maps can be created using both traditional and modern mapping techniques. Maps can be produced in formats that range from paper PDFs to interactive mobile applications that can be used with GPS navigation on the trail. Trail maps give the reader a graphic representation of the environment and serve a number of purposes. They can increase awareness of public and private lands, providing an important tool for those utilizing the property for recreation, planning or monitoring. They can also serve to increase public safety as well as improve the integrity of the landscape for plants and wildlife by providing information about designated recreation areas as well as areas that may be inaccessible or closed to the public.

What Will this Trail Mapping Project Accomplish?

By the end of this project, your team should produce a trail map in Google Maps, ArcGIS online, other online mapping programs and/or as a pdf map that can be accessed on the internet, at a trailhead, or from a mobile device.

Ideas for Tailoring Project

If your team would like to explore additional components to add to your project, here are some ideas:

- Create an engaging, interactive web map or story map with ArcGIS Online.
- Integrate camera traps to gain an understanding of who and what uses the trails.
- Consider creating a kiosk or trail sign for the property. You may have to partner with another organization to fund this.
- Use a 360 degree camera to add flair to your photos and create a virtual trail map.
- Organize a trail maintenance day.
- Create or update trail blazes on unmarked/poorly marked trails.

IMPORTANT: Once you've completed this handout or outlined your project, take photos of all pages (including additional pages that describe your project plan) and email it to nrca@uconn.edu so that we can best assist you during your project.

Natural Resources Conservation Academy
University of Connecticut

Your Project Plan

The following is a guide to assist you in your project planning. You may wish to develop your own strategy. If you follow this outline below, however, it's not necessary to fill in every box; you may want to add or modify the sections below to best help you develop your project.

Step 1: Determine your project duration

The scope of your project should be determined by how much time you are able to commit to the project. All team members need to contribute equally to the project. As a team, determine the total amount of time you will be able to dedicate to this project.

- ☐ 3-5 weeks
- ☐ 6-8 weeks
- ☐ Other _____

Compare schedules and list some tentative times that might work for your field work. For example, do you want to wrap up the project before the end of summer? Before the holiday season sets in? Are there days of the week after school/work/other that are most accommodating for your schedules or days/dates that you are unavailable to meet?

Step 2: Determine what trail(s) to map

List project location(s) that your team would like to focus on. What kind of property is it (state park/forest, land trust, town park, school property, etc.). Who do you need to contact for permission (if needed), & tentative date of site visit.

Property name & type:

Point of contact:

Tentative schedule for visit(s):

CTP

Step 3: What is the final product?

List the primary audience(s) for your trail map. What will they use your map for?

Are there existing trail maps or online maps for other trails that you want to emulate in part or full? List them here.

Step 4: Determine how you will map and present your trails

Describe how you would like to document trails for your project. Check all that apply, but consider each carefully based on your project timeline, audience and technical knowledge of your partnership.

- ☐ Interactive online trail map (Google Maps, ArcGIS Online, other)
- ☐ PDF trail map (suitable for printing)
- ☐ Interactive 360° virtual trail walk
- ☐ ArcGIS Online story map (interactive trail map + descriptive text and media)
- ☐ Map for AllTrails or similar trail library app
- ☐ Other _____

Describe how you will use Track-Kit, Epicollect, Google Maps, or any other technology (note: you do not need to use both apps if not necessary).

Are there other field mapping methods you'd like to consider? (Review "Ideas for Tailoring Project" above.)

Step 5: Determine how you will share your results

Describe how you would like to showcase your project (*e.g.*, put on a community event, present at organization meeting, present at a regional conference, distribute education materials, share products on website/social media, share on NRCA website via conference poster, or Online NRCA Project Form).

Project Timeline

Select the project scope that is most suitable for your team (short project, 3-5 weeks or longer project, 6-8 weeks) and review the timeline and tasks below. Assign teammates to tasks, as appropriate. Add additional tasks to each phase, as necessary.

3-5 Week Plan – Blue

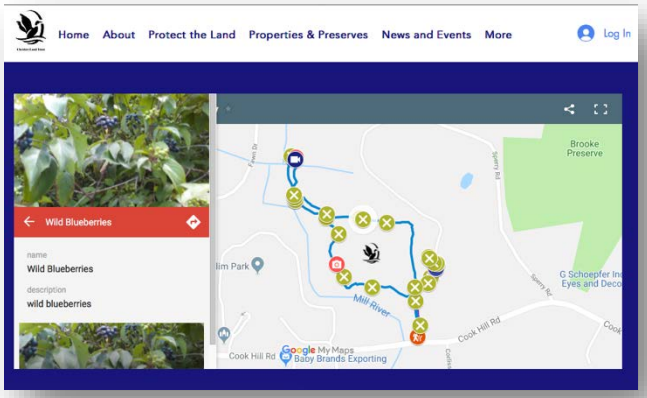
6-8 Week Plan – Blue & Green

General Timeline	Project Tasks	Resources Needed	Assign Teammates to Tasks
Phase 1: _____ *Write completion date*	1. Choose property(s) & gain permission. 2. Determine the primary purpose for your trail map. Who is the audience? 3. Select what format(s) you would like to make your trail map available in (paper, online map, app, etc.). This should be consistent with your audience. 4. Review mapping apps. 5. Explore examples of other trail maps. What works/doesn't? What is within scope of this project? 6. Collect relevant information about property and determine what features are critical to include on a map. 7. Discuss final product & where to showcase work.	• Reference guides for smartphone mapping apps (Track Kit, Epicollect5) • Contact info for property owner, if necessary • Literature/info about property, including pre-visit planning using GIS resources: CTECO, Google Maps, ArcGIS Online • Examples of other trail maps (*e.g.*, trail maps on NRCA, CLEAR and ESRI websites)	
Phase 2: _____ *Write completion date*	1. Test apps on devices. Cache Track Kit basemap prior to field visit, if necessary. 2. (Optional) Create Epicollect field data form. 3. Visit property and collect track and waypoint data along trail(s).	• Smartphone with Epicollect & Track-Kit apps installed and working properly • (Optional) Download Epicollect form to device(s) • Reference Guides for apps • Field notebook	
Phase 3: _____ *Write completion date*	1. Import field data (track & waypoints) into Google Maps, ArcGIS Online, or other program. 2. Clean up track as needed. 3. Create interactive map from GPS field data. 4. Determine final product & where to showcase work.	• Computer & smartphone • CTP Handbook • (Optional) Poster template or story map how-to-guide	
Phase 4: _____ *Write completion date*	1. Create static PDF maps for trail kiosks or an interactive story map	• Additional information about property to include as descriptive information • ArcGIS Online account (if creating a story map) • GIS software (if creating a paper map)	

General Timeline	Project Tasks	Resources Needed	Assign Teammates to Tasks
Phase 5: _____ *Write completion date* *Note: Timing dependent on volunteers & season*	1. Plan a public trail day event in the community; or 2. Work with land trust to carry out trail maintenance; or 3. Join a land trust meeting to increase public awareness of your new information resource.	• Contacts (town contacts, land trusts, hiking and biking clubs, etc.) • Flyers and social media for promotion • (Optional) Refreshments & first aid supplies for event day	
Final Steps: _____ *Write completion date*	1. Develop final product describing project & outcome. 2. Showcase project.	• (Optional) Poster template or story map how-to-guide • Online NRCA Project Form	

Sample Projects:

Fresh Meadows Wildlife Sanctuary Map and Survey: A student from Lyman Hall High School partnered with a volunteer from the Cheshire Land Trust to create an interactive trail map on Google Maps of this important wildlife corridor. The map includes points of interest, photos, videos, and trail and habitat features. They used Track Kit to map the trail system, and camera traps and an Epicollect survey to collect data on the wildlife and wildflowers in the sanctuary. https://www.cheshirelandtrust.org/map-embed-blind



Ives Farm Virtual Tour: Another Lyman Hall student worked with a Cheshire Land Trust volunteer to create an interactive, virtual trail map of this land trust property. The trail map is available on google maps, and the team also created a Story Map on ArcGIS online with information about the wildlife, forest stands, and other species on the property. In addition to Track Kit, the team used a 360-degree camera and the Google Street View app to create an immersive, virtual trail experience. https://goo.gl/w6XVwC