Hiking with GPS

- Navigating Trails, Exploring, and finding your way out of the woods
- Planning hikes and seeing distances and elevations
- Knowing where you are heading, what is nearby, and where you have gone

Rick Gardner - April 2020

Agenda

SESSION 1

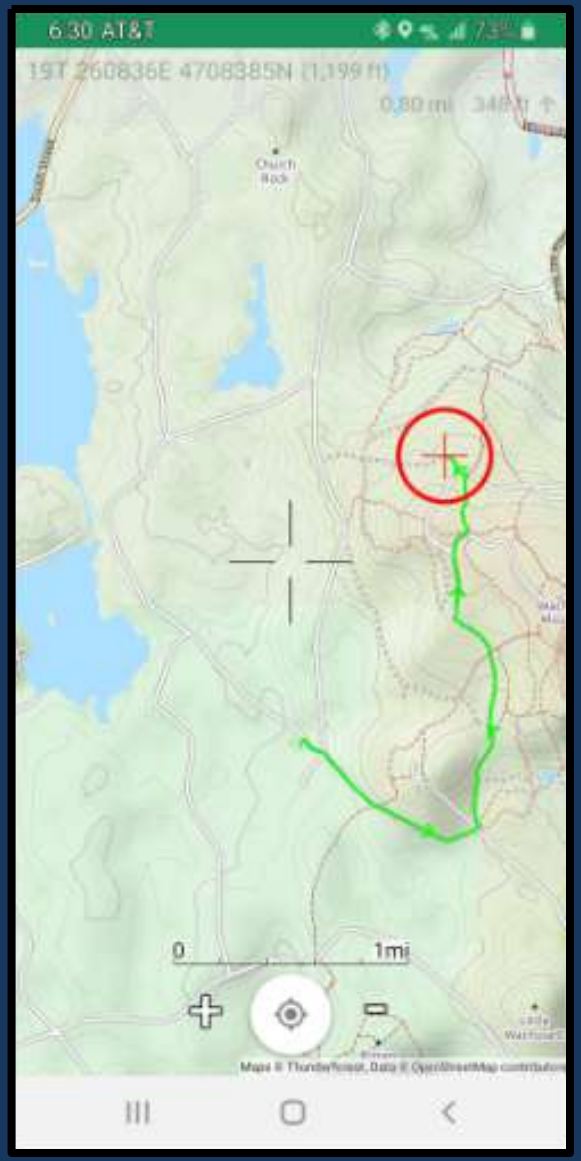
- Introduction: GPS Apps and View Ranger
- Tracking your hikes: Tracks

SESSION 2

- Planning Hikes: Routes
- Other Features and Settings, including GPX Files

GPS Apps

- Many Free Apps for Planning and Tracking Hikes
  - View Ranger, Gaia, AllTrails, others
- Hike with a selection of Maps
- See trails, roads, mountains, lakes, satellite view
- Save tracks for later use
- See statistics such as miles, elevation, time
- Capture photos
- Plan routes and analyze difficulty
- Other Features!!



View Ranger is my choice! Others work similarly

Company & history

ViewRanger is a free GPS navigation app used by millions of people around the world to plan, navigate, record and share their outdoor adventures.

Combining the world's best offline maps with interactive route guides and advanced GPS navigation features, ViewRanger is the ultimate adventure tool for anyone exploring the great outdoors.

ViewRanger partners with 23 national mapping agencies and international cartographic publishers to provide high quality digital topographic maps; works with more 600 organisations – including national parks and major outdoor brands – who publish and promote route guides through the app; and is used and trusted by more than 250 Search and Rescue teams across Europe, the US and Canada.

The app is available to download for free on Apple iPhone, iPad and Apple Watch; on Android smartphones, tablets and smartwatches; and on Amazon Kindle Fire.

Part 1

Taking a walk and tracking with View Ranger

A Few Definitions

GPS: Global Positioning Satellite

Track: A recording of the GPS Points in a walk

Route: A PLAN for a hike, prepared ahead of time

Installing View Ranger

Getting Started

1. Install View Ranger

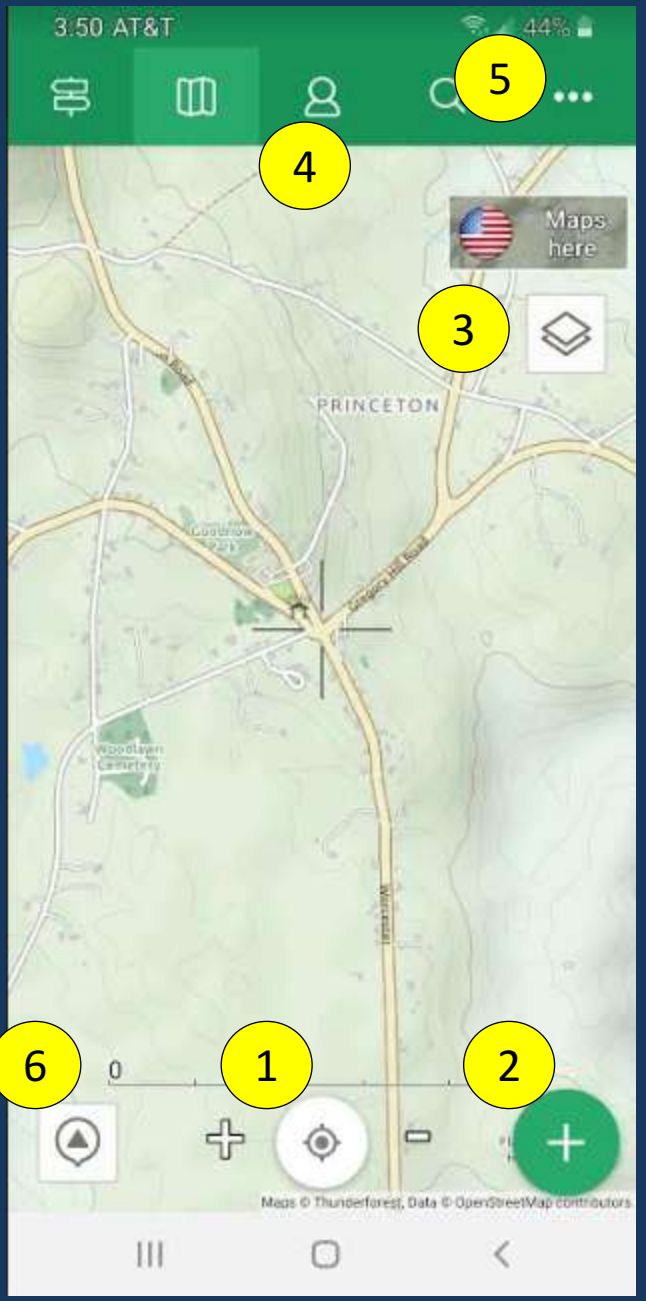
2. Free for basic; $5/Year for Premium;
   $20/Year for Premium with added maps

1. Create ID and Password. This will also be used by the ViewRanger Web Site.

2. Follow the prompts to complete the install

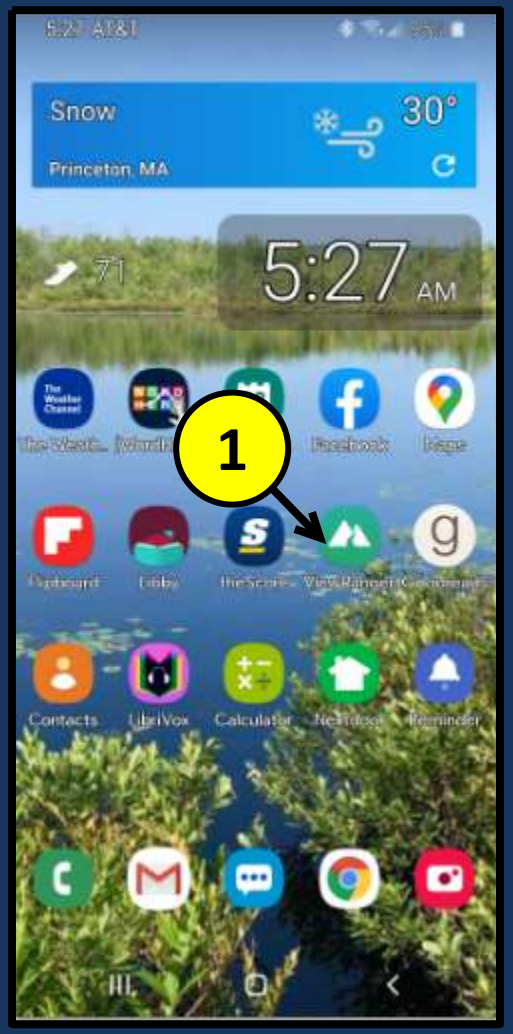
View Ranger Panel

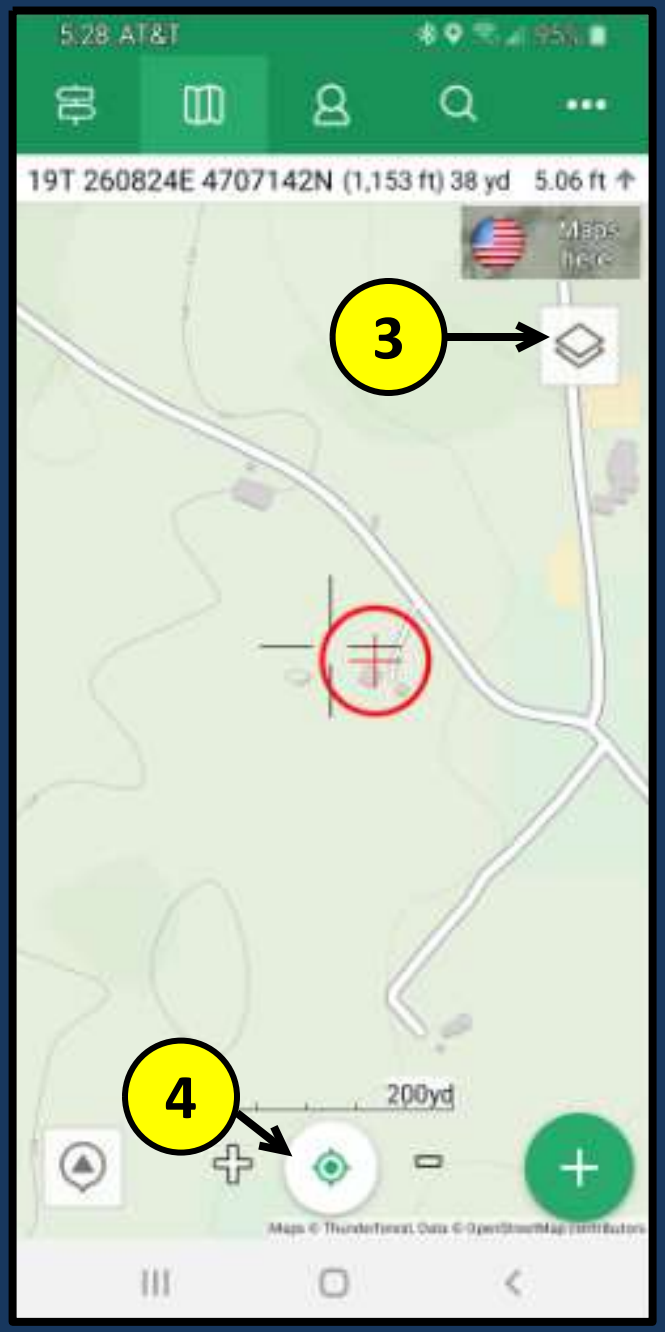
1. Center the view around current location
2. Start a new Track, Route, or Capture a Point of Interest (POI)
3. Layers: Choose Maps or save maps for offline use
4. Get a list of all routes or tracks to select
5. More: Settings, Synchronize, etc
6. Sky View – See what is on the horizon



Starting out…

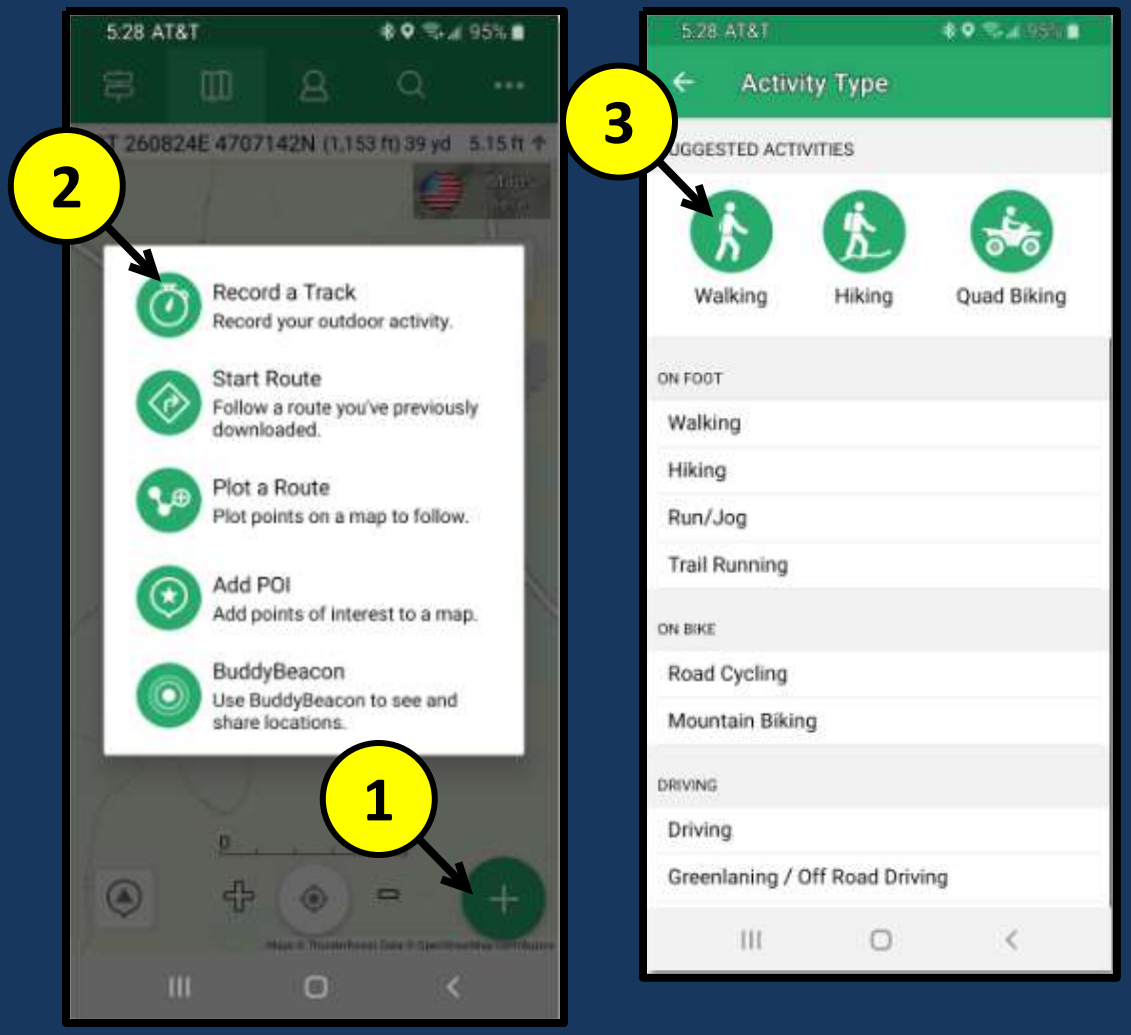
1. Click View Ranger App
2. Screen Opens to show the default Map
3. Select Layers Icon and choose Map – Open Cycle Map
4. Click Center icon to center the map around YOU
5. Note: Expand of Compress Map by using +/- buttons





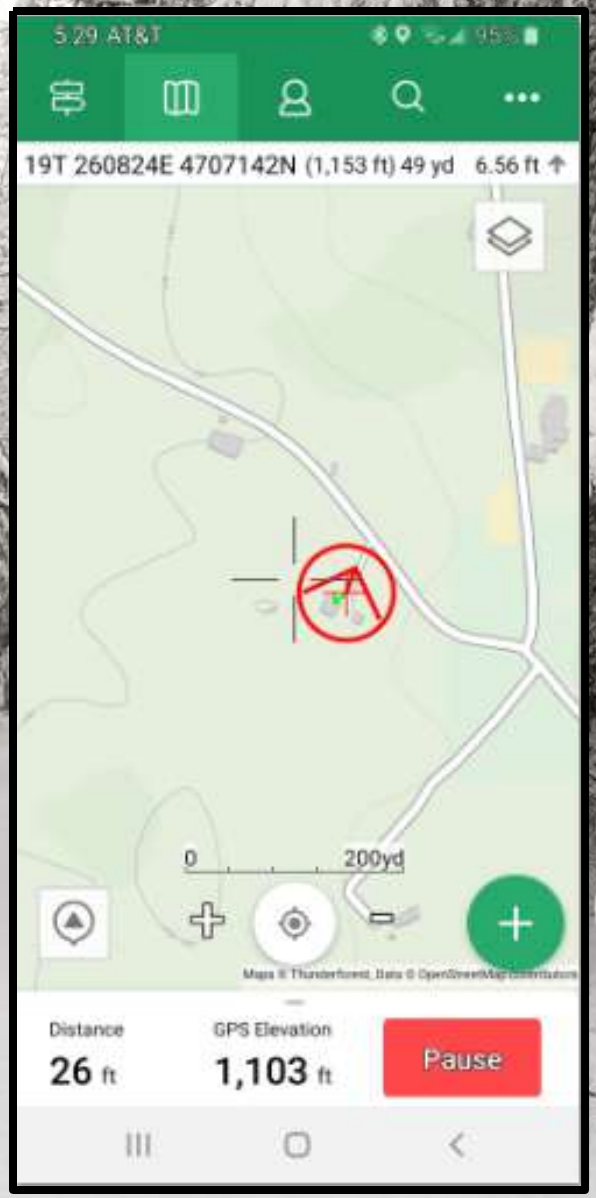
Starting out…

1. Click the large green + button to start a track
2. Select “Record a Track”
3. Select Activity Type
4. View Ranger will then start tracking your GPS points
5. Use defaults on GPS Settings to start…but these can be varied.



Beginning a track…

1. View Ranger will start drawing a green line as you walk
2. Distance is tracked at the bottom, but you can hide this panel to see more map
3. You can always pause the tracking if you want to stop or go off-trail



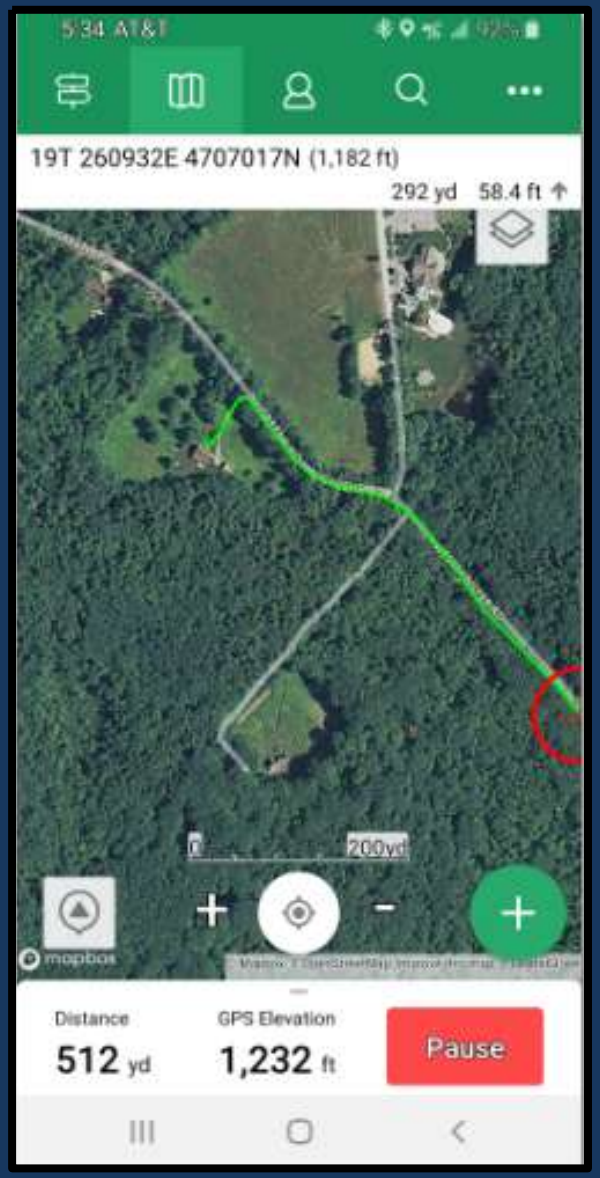
Switching Maps

1. Open Cycle Map is the best for TRAILS. But you may want a Street view map or satellite view.

2. You can switch by using the Layers icon.

3. Satellite view is great if you are bushwacking or if you are wondering when you will get to an open field for lunch!!

4. You can get added maps (but questionable value!)



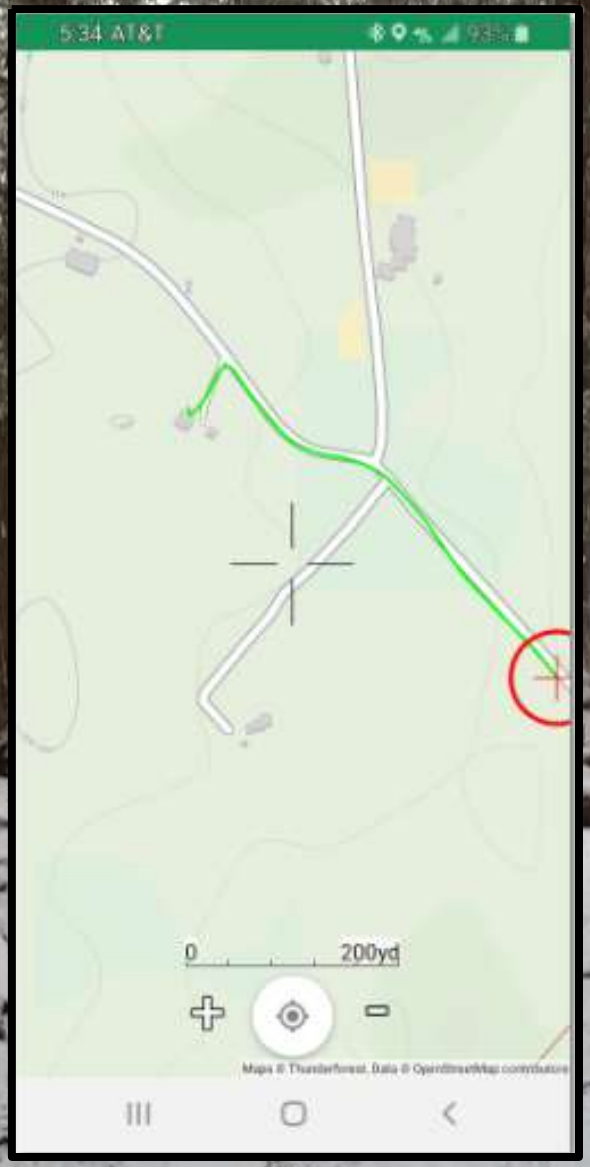
How far to….?

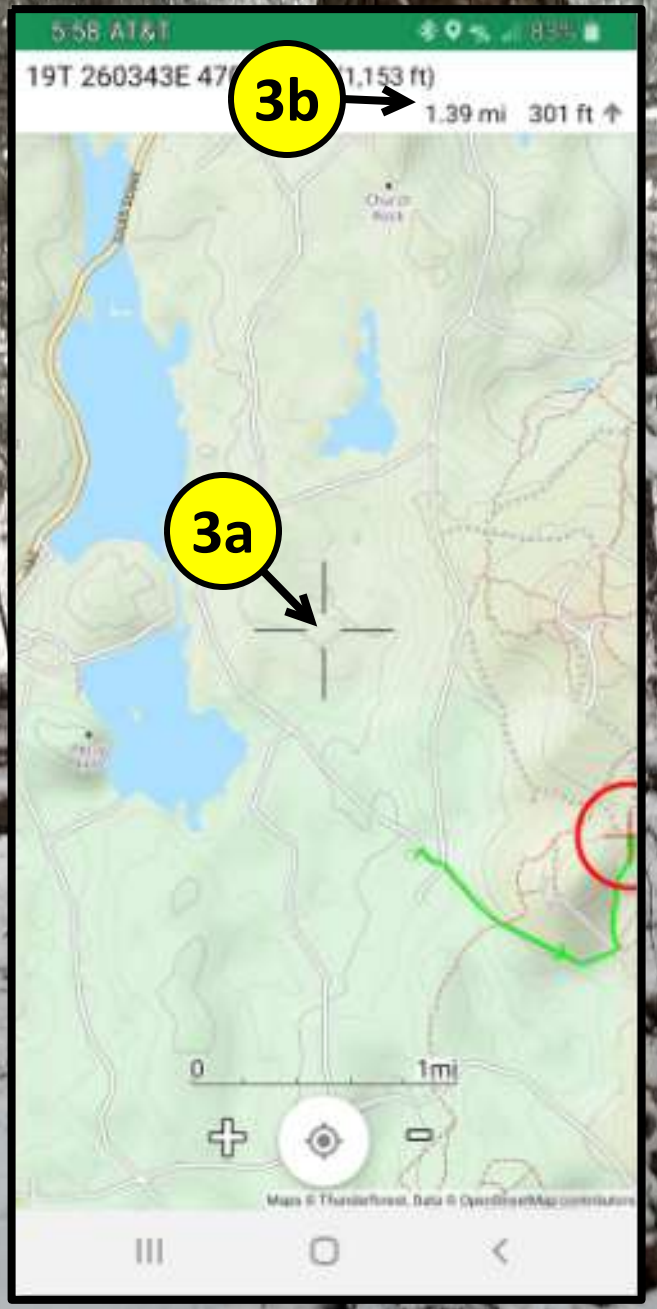
1. Tracking proceeds as you walk…in this case up to Admin Road and then into WMSR

2. Can hit the center button to re-center

3. BUT…if I want to know how far it is to another point on the map…

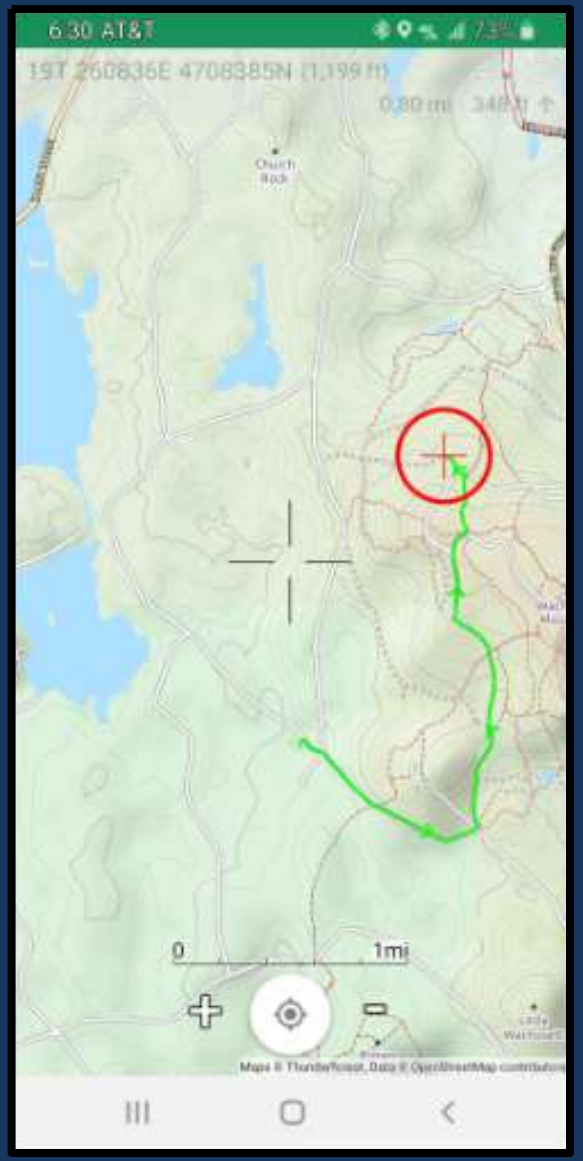
    a) Move the center cross-hairs to the target position
    b) The distance shows at the top
    c) So…1.39 miles

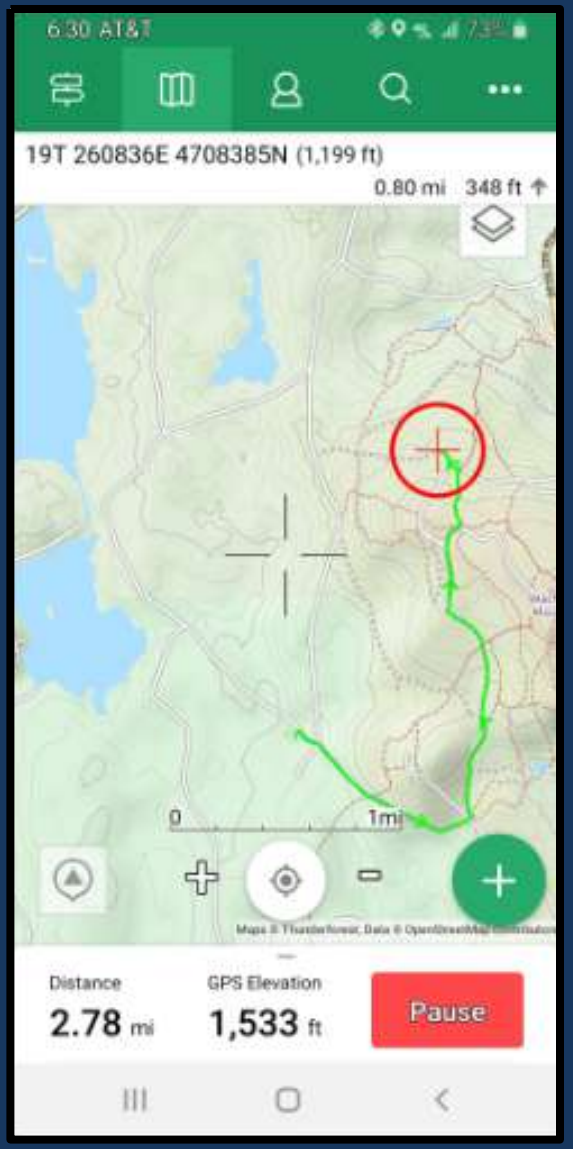




Stopping at North Road Lookout

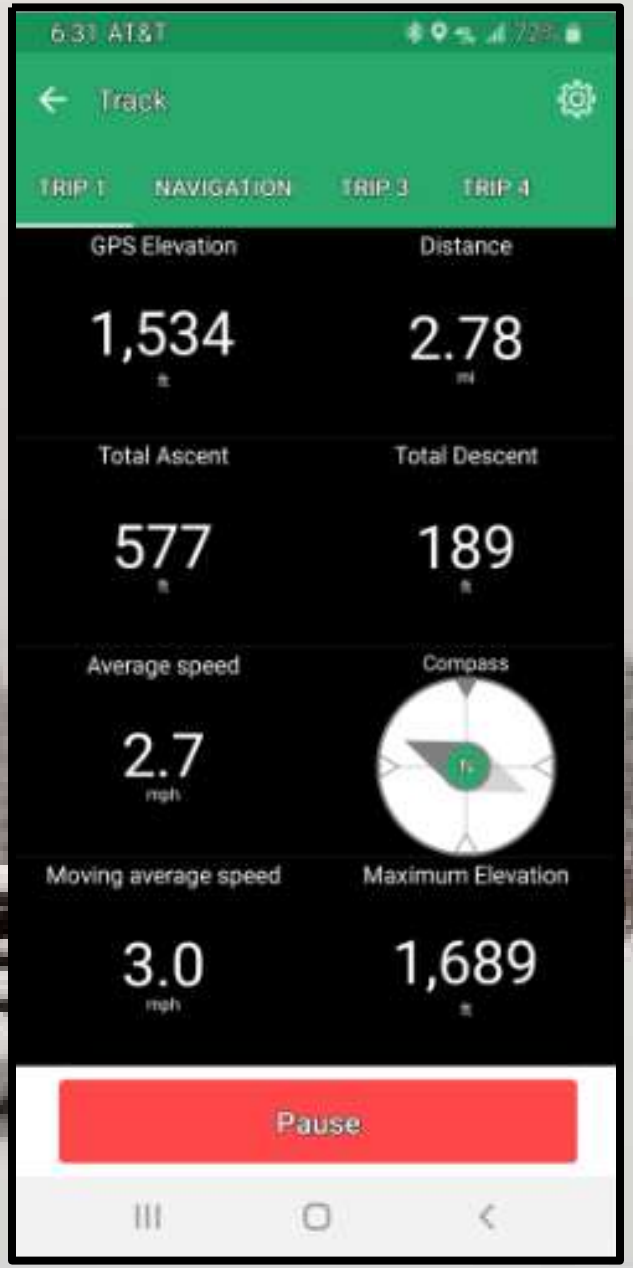
1. Walked Admin Road to Semuhenna to North Road
2. Stopped at North Road Lookout
3. Can see all trails around me
4. Can Zoom into the map
5. Can see distance and elevation





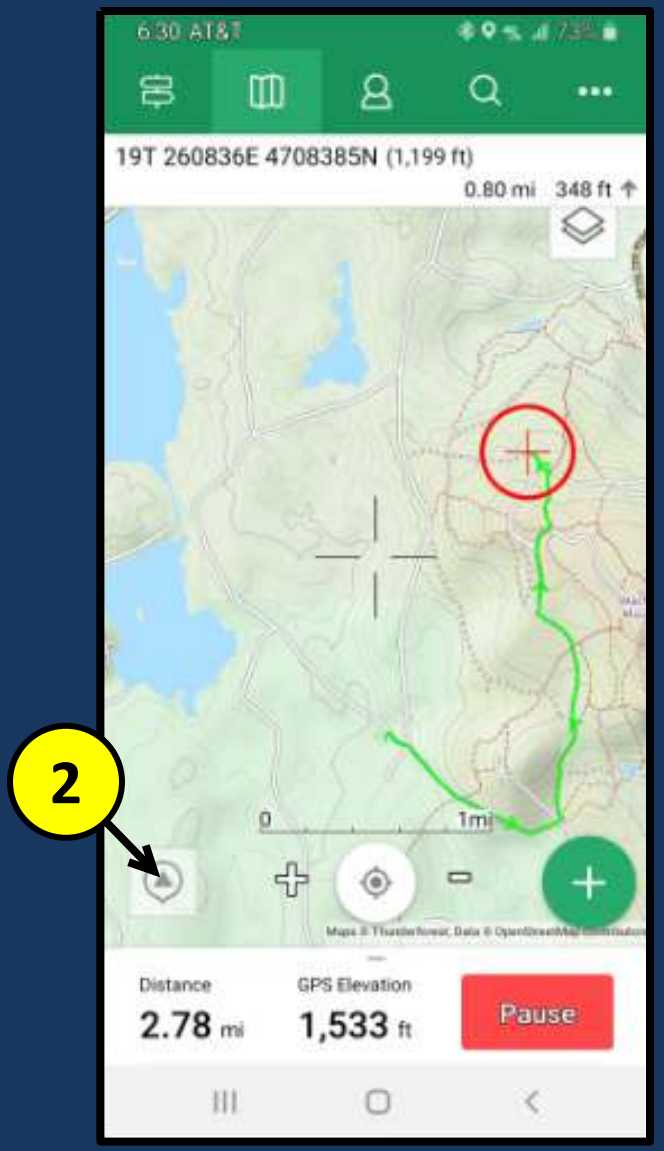
Stopping at North Road Lookout

1. Can drag up the bottom panel to see more
2. Flag a Point of Interest or take a photo to store with route
3. Touch the distance or Elevation and see the larger panel on the right
4. Back button to get back to the map



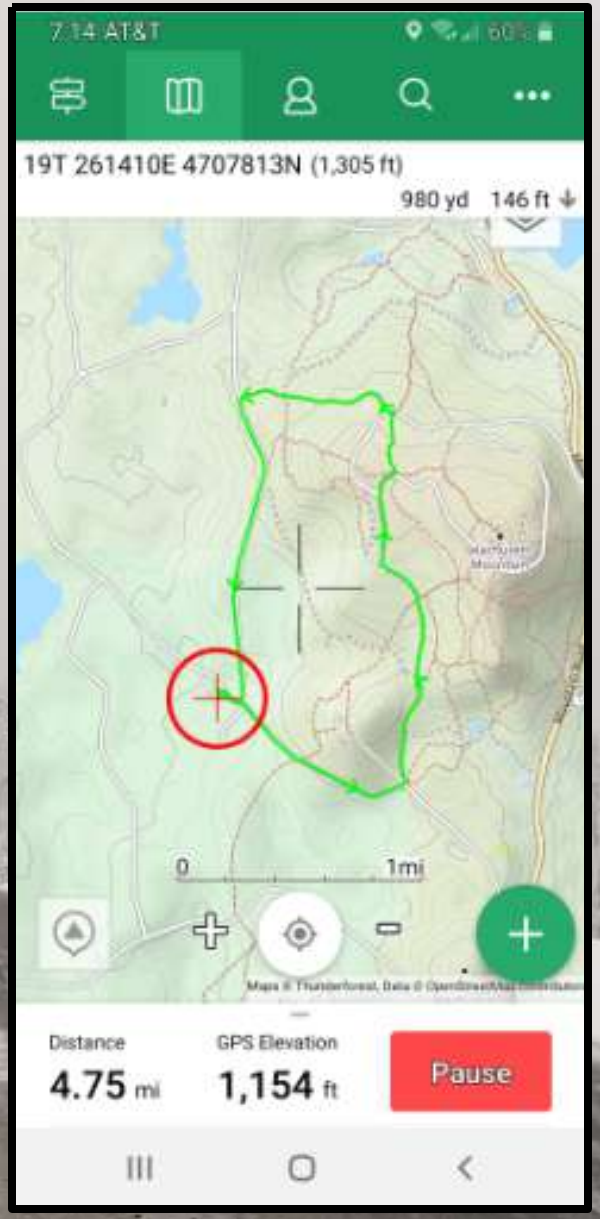
Stopping at North Road Lookout

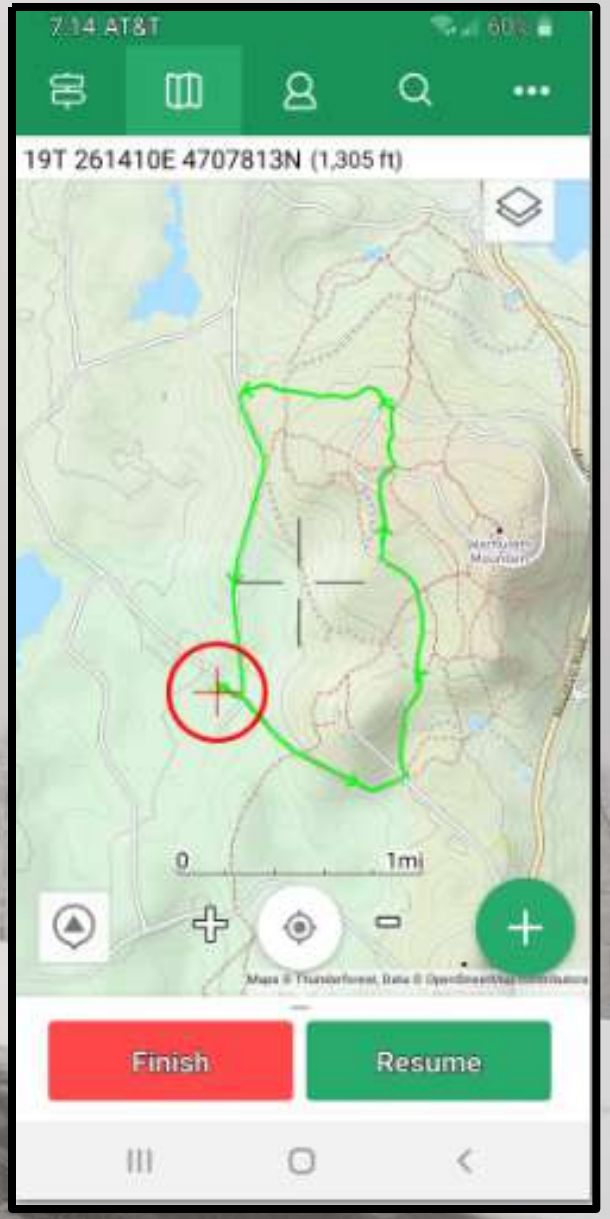
1. If you buy the $5.00 per year ‘Premium’ edition you can use the skyline feature
2. Click the skyline icon
3. On the right, see the landscape features and distances.



Completing the Track

1. Click Pause
2. A pop-up will ask you to confirm
3. Click Finish
4. Add a good description of the hike





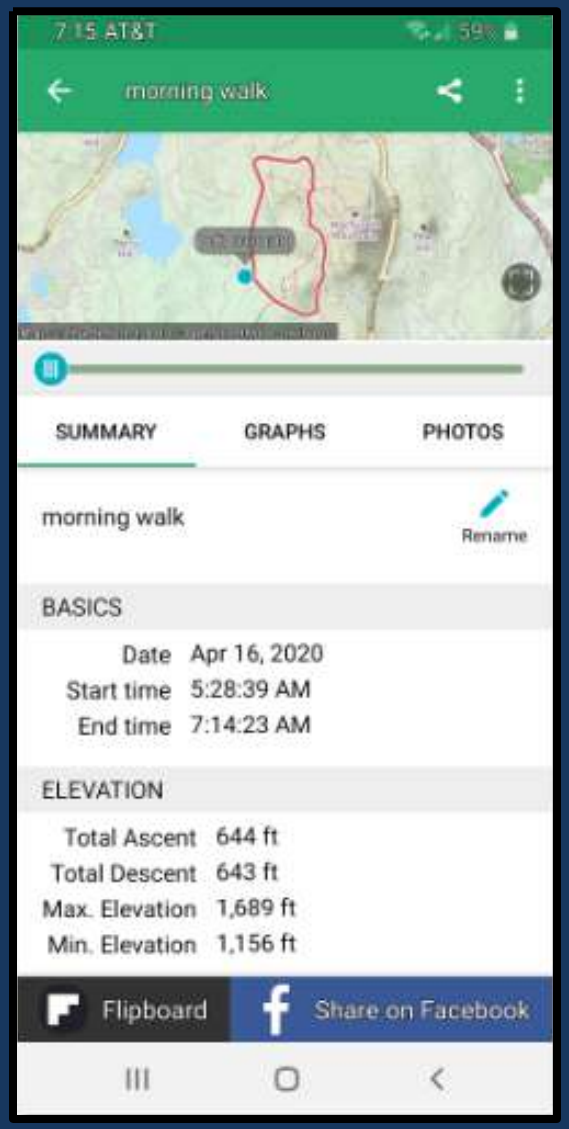
Completing the Track

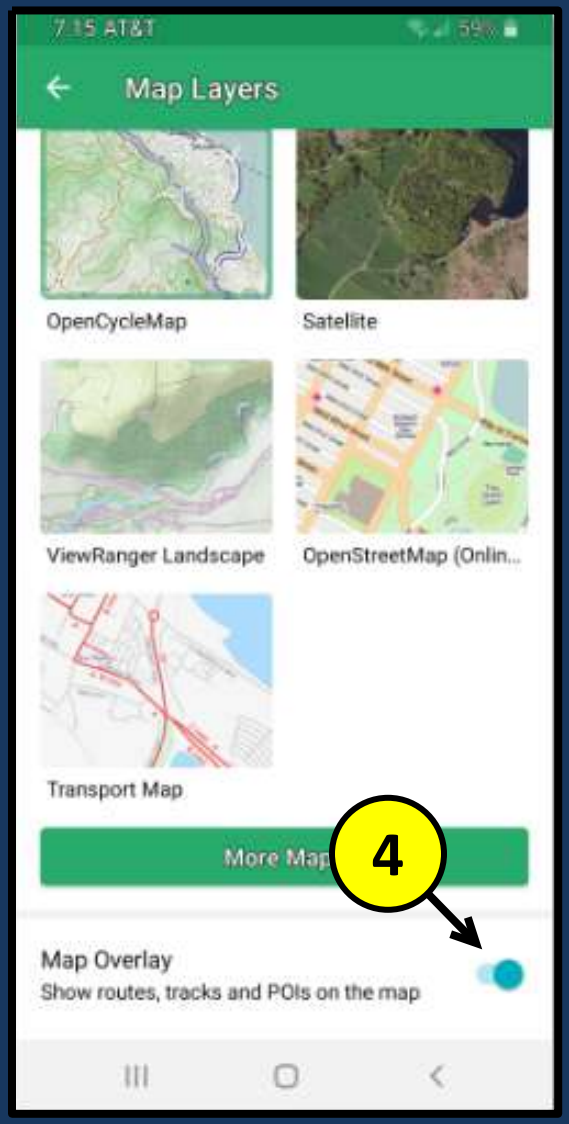
1. From the closing panel, you can see times, distance, elevation, walking rate, and other statistics

2. Also see graphical representations

3. Saved version also goes to the ‘cloud’ for viewing on your desktop

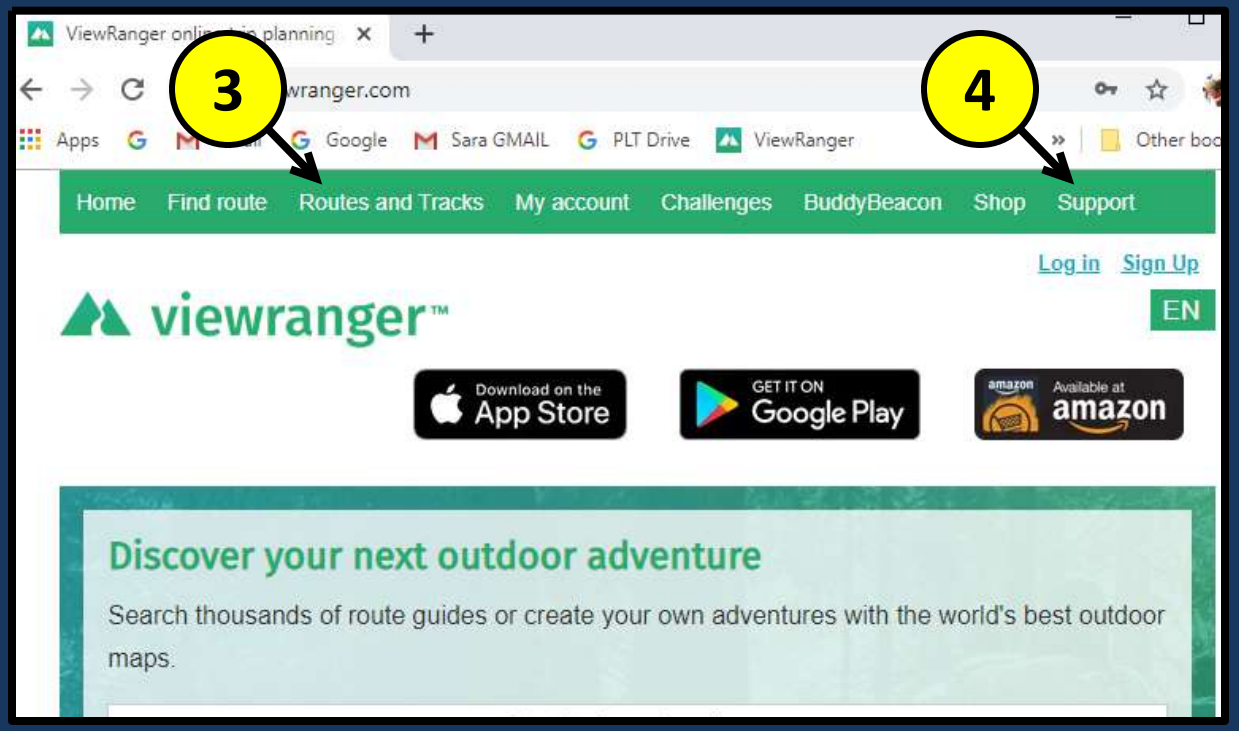
4. If you set you Map Overlay ON, your track will always show on your main screen





The View Ranger Web App

1. MyViewRanger.com
2. Enter ID and Password from your phone setup
3. Mostly use the ‘Routes and Tracks’ Option
4. Lots of video tutorials available
5. Can also search the web for specific help. Type ViewRanger in Google Queries!



Some Tutorials

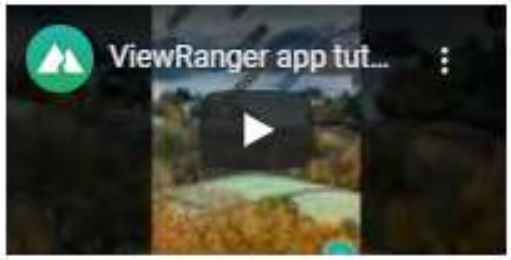
Video Tutorials

How to switch map types

Easily switch between multiple map layers, wherever you are in the world.

How to save offline maps

Download and save offline maps to use without mobile or data signals.



How to use Skyline augmented reality

Label more than 9 million landscape features around the world and navigate hiking routes using augmented reality.

How to plot routes

Create your own outdoor routes with our in-app route-plotting tool.

How to follow routes

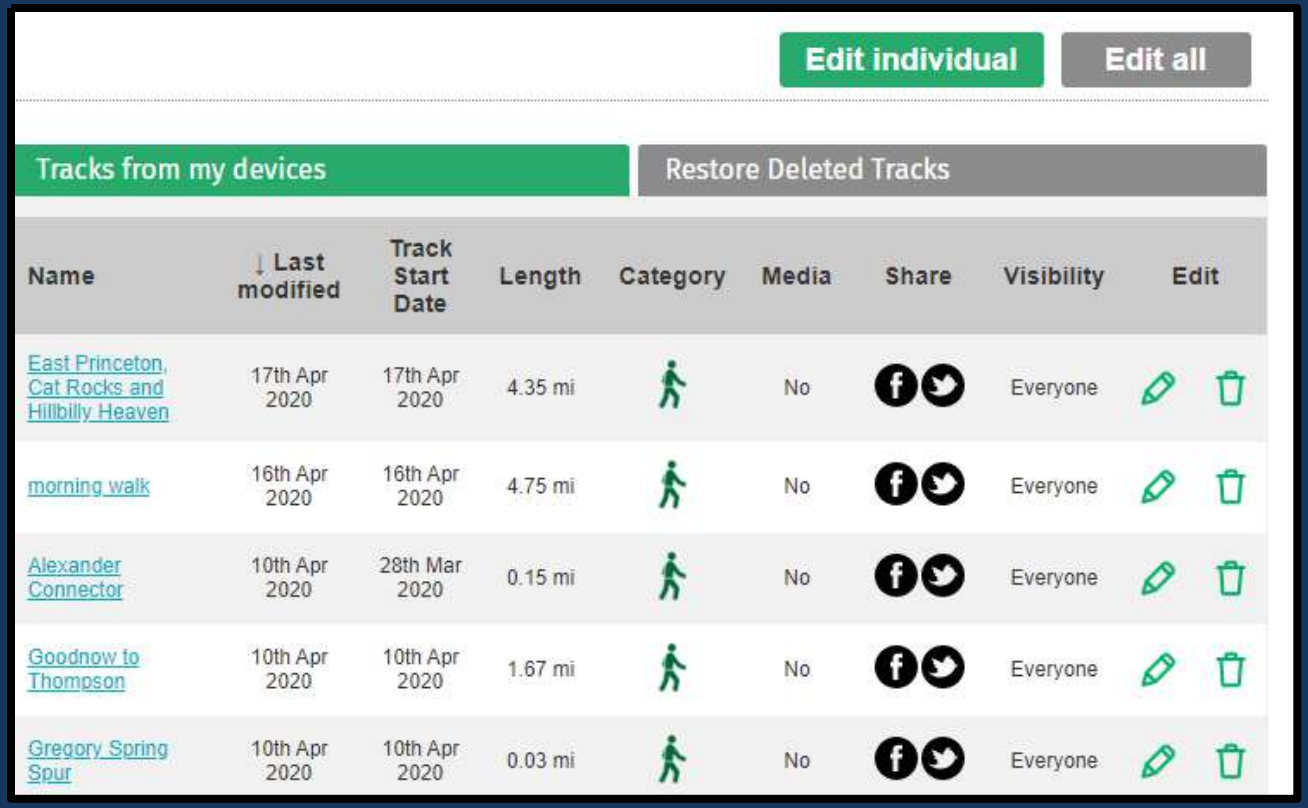
Once you've downloaded or plotted routes, follow them using our offline GPS.

How to locate yourself

Pinpoint your precise GPS location on the ViewRanger map screen.

Working with your Tracks

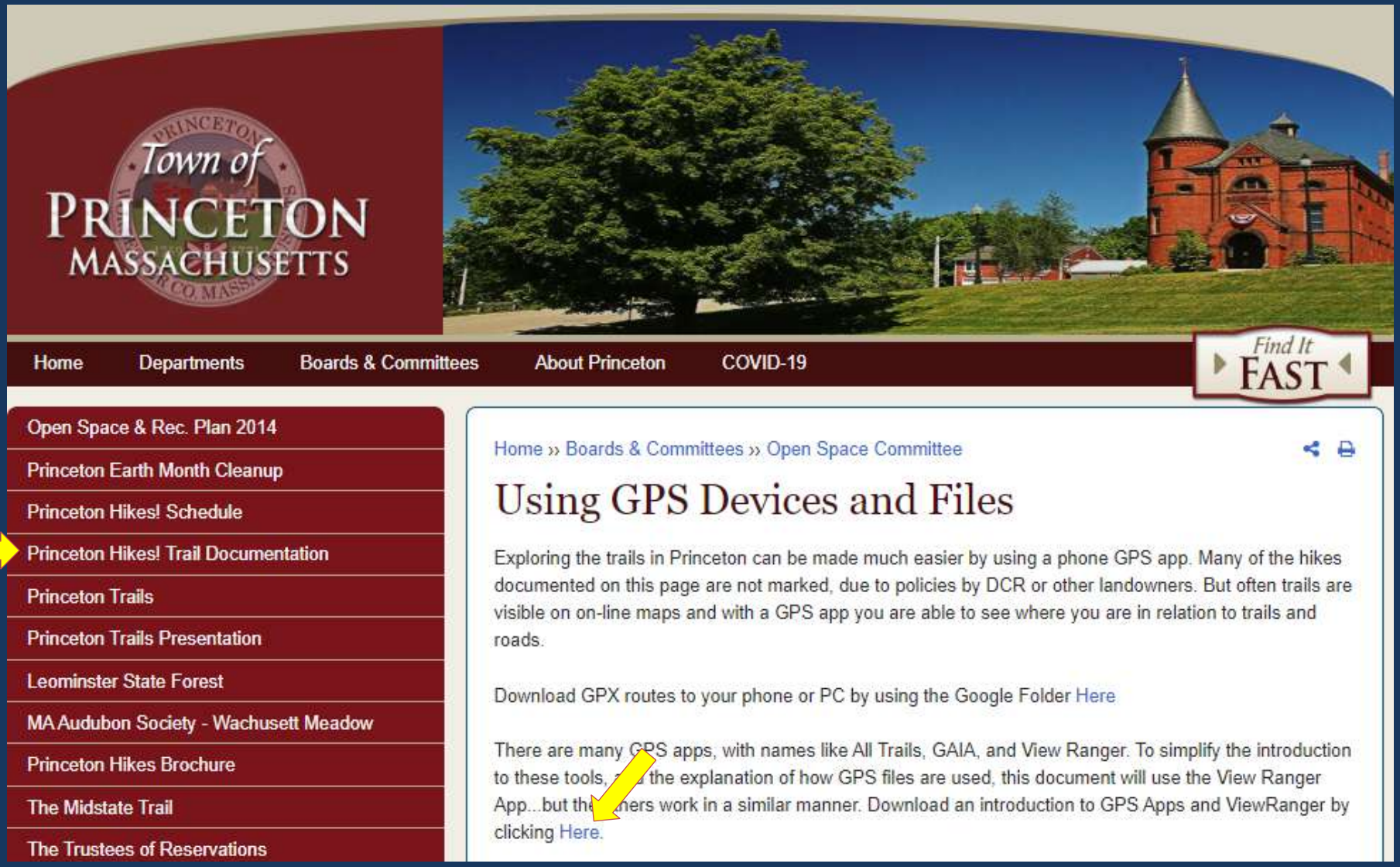
1. View the Tracks and statistics
2. Change the names
3. Export to GPX for sharing
4. Make a track public
5. Delete a track



The web app also can be used to create Routes.
Subject of the next class, will present soon!!

Download this Presentation – Open Space Page

Click Trail Documentation, then link for GPS Apps



Closing Notes

- Try it out…go for a hike!! Check it frequently while you hike, and kick the tires!
- To minimize battery use, you can turn on airplane mode. Useful for long hikes!
- Also try out myviewranger.com. We will be using that more in the second session

Session 2 will be Next Week (Tuesday at 4 or Thursday at 7)

1. Planning Routes
2. Synchronizing between Phone and Web
3. Following Routes
4. Creating Routes from Tracks
5. Exchanging GPX Routes
6. Tracking Co-Hikers - Buddy Beacon
7. Settings

Hiking with GPS – Session 2

SESSION 1

- Introduction: GPS Apps and View Ranger
- Tracking your hikes: Tracks

SESSION 2

- Planning Hikes: Routes
- Other Features and Settings, including GPX Files

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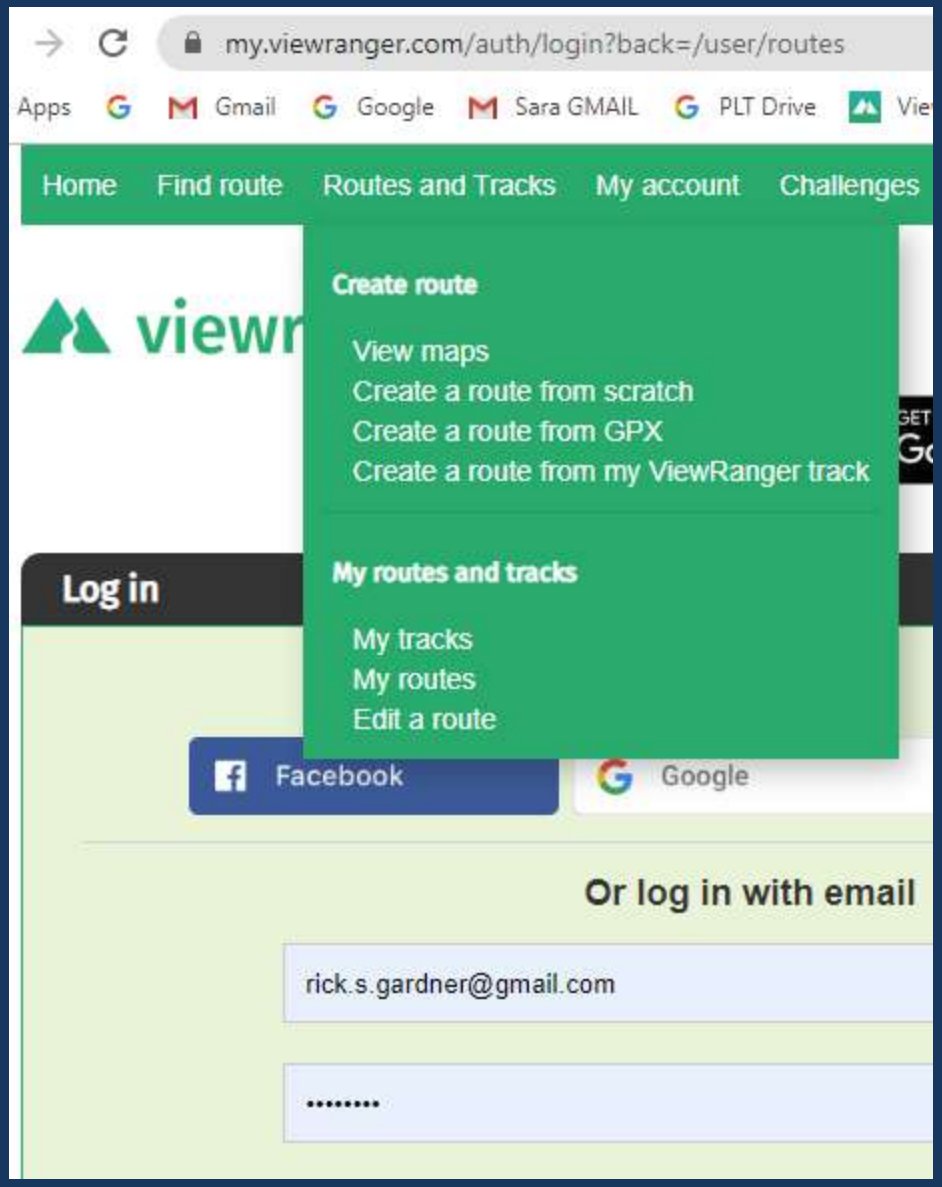
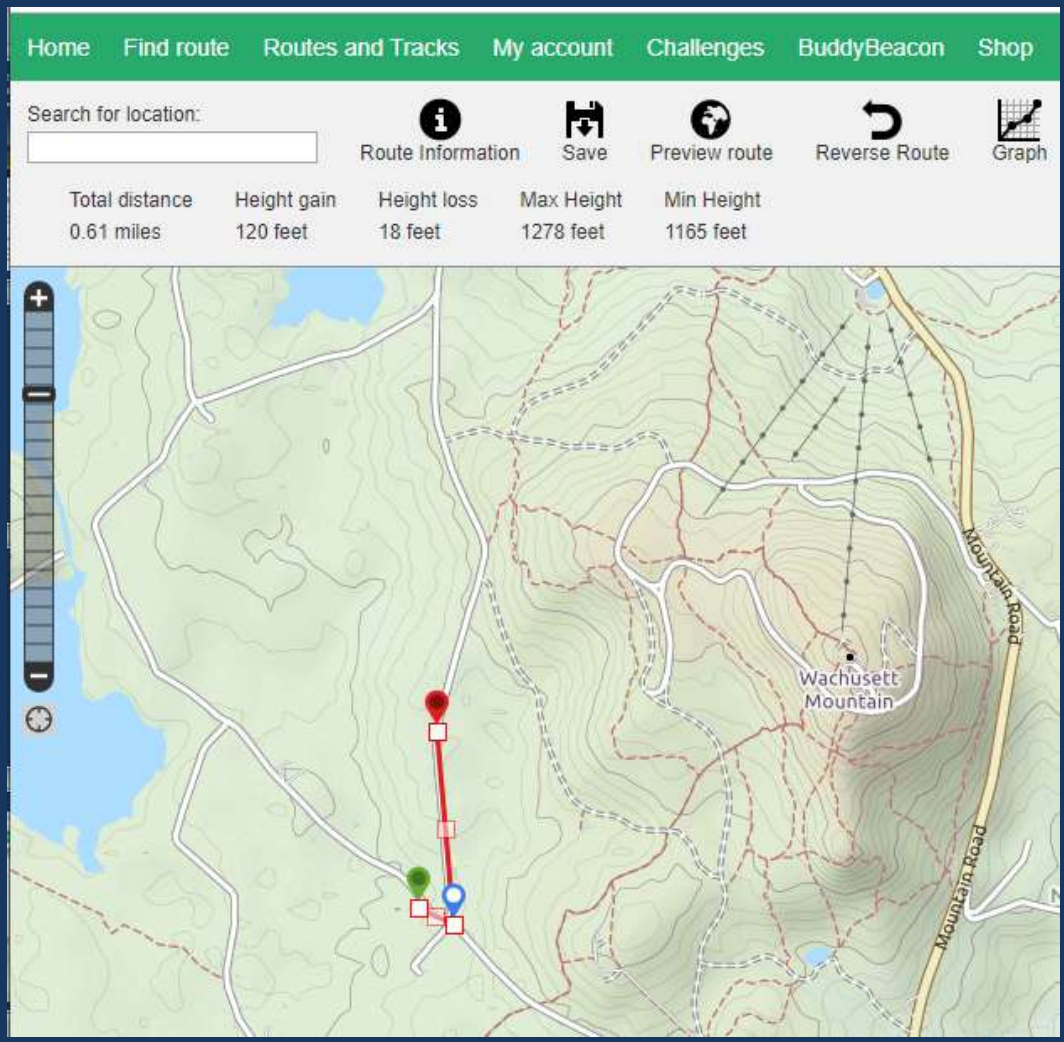
Recording a Route – Getting Started

1. Routes can be planned from the phone or the web interface
2. BUT…use the web to see the maps best!
3. You can also create Routes from GPX files or from Tracks



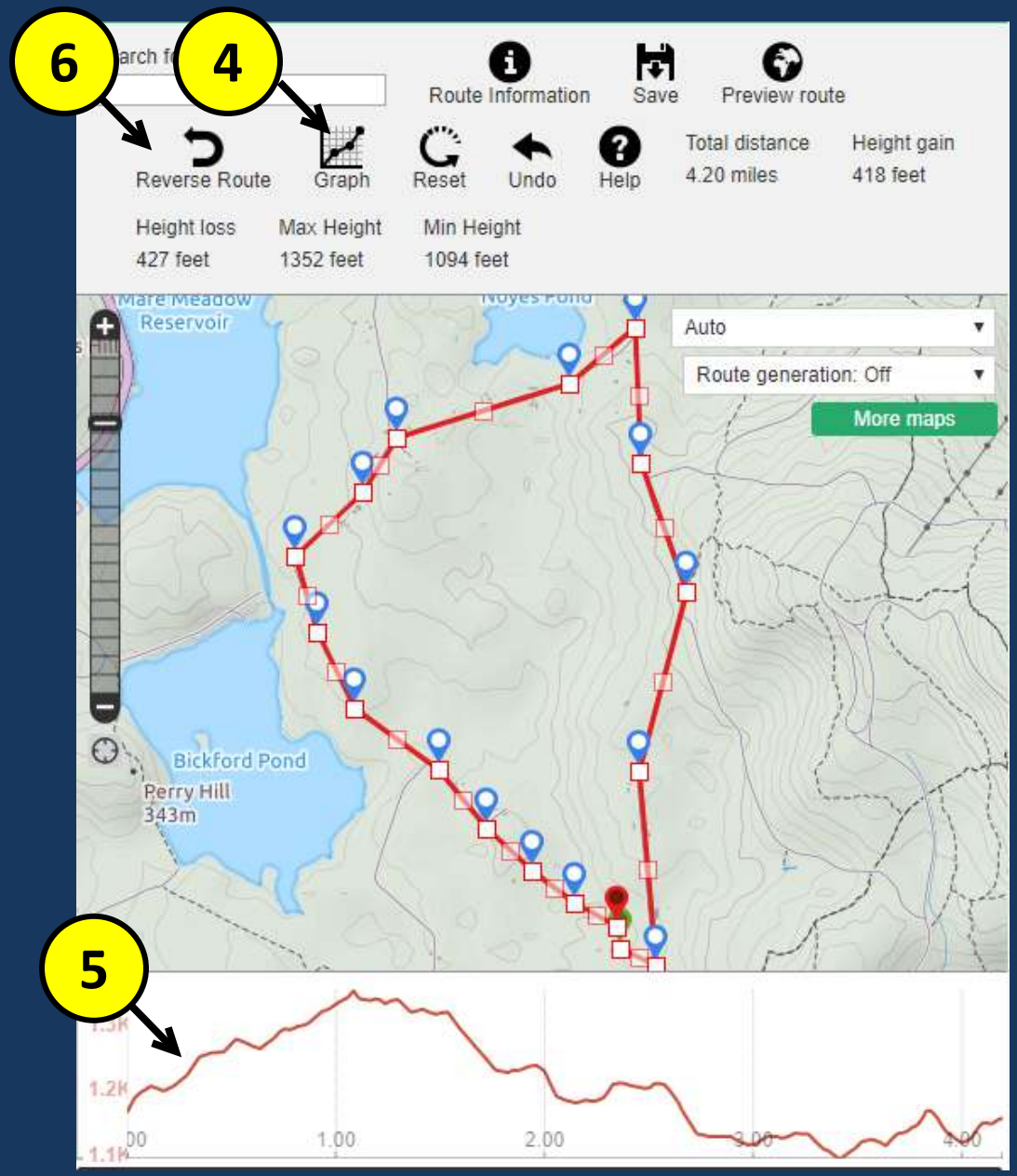
Recording a Route – Plotting the Route

1. Click to start, and then continue to click around the trail that you are following
2. Click and drag to move a point
3. Right click on a point to delete or to set a ‘waypoint’
4. Waypoints can be named and given a special icon



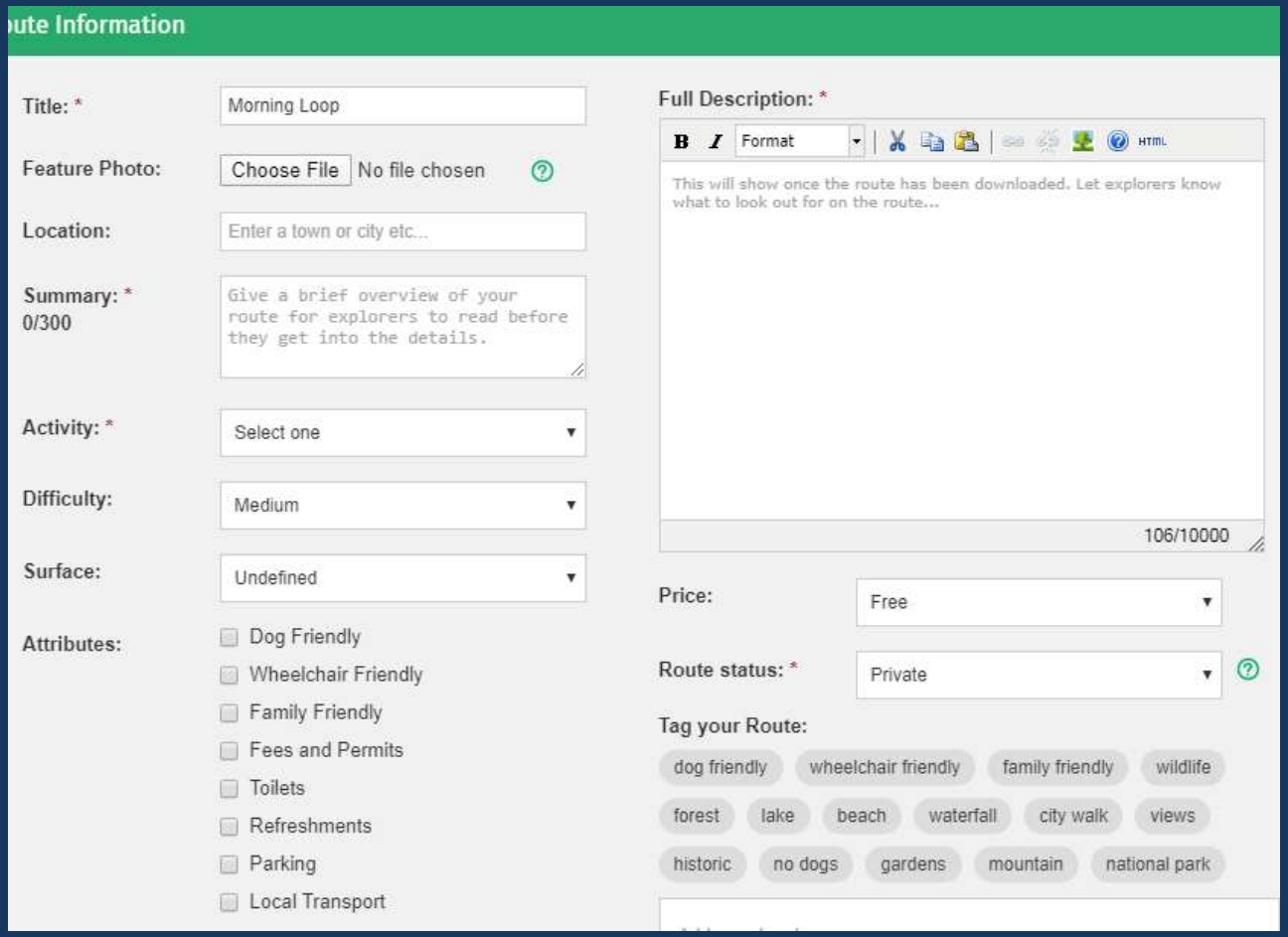
Recording a Route – Statistics

1. Finish the route.
2. I often expand the map at this point and fine tune the route.
3. The top of the screen shows some statistics …distance and elevation
4. Click ‘Graph’ Button to see the altitude profile on the bottom
5. Drag the cursor across the graph to see where the points are on the map
6. You can also reverse the route.



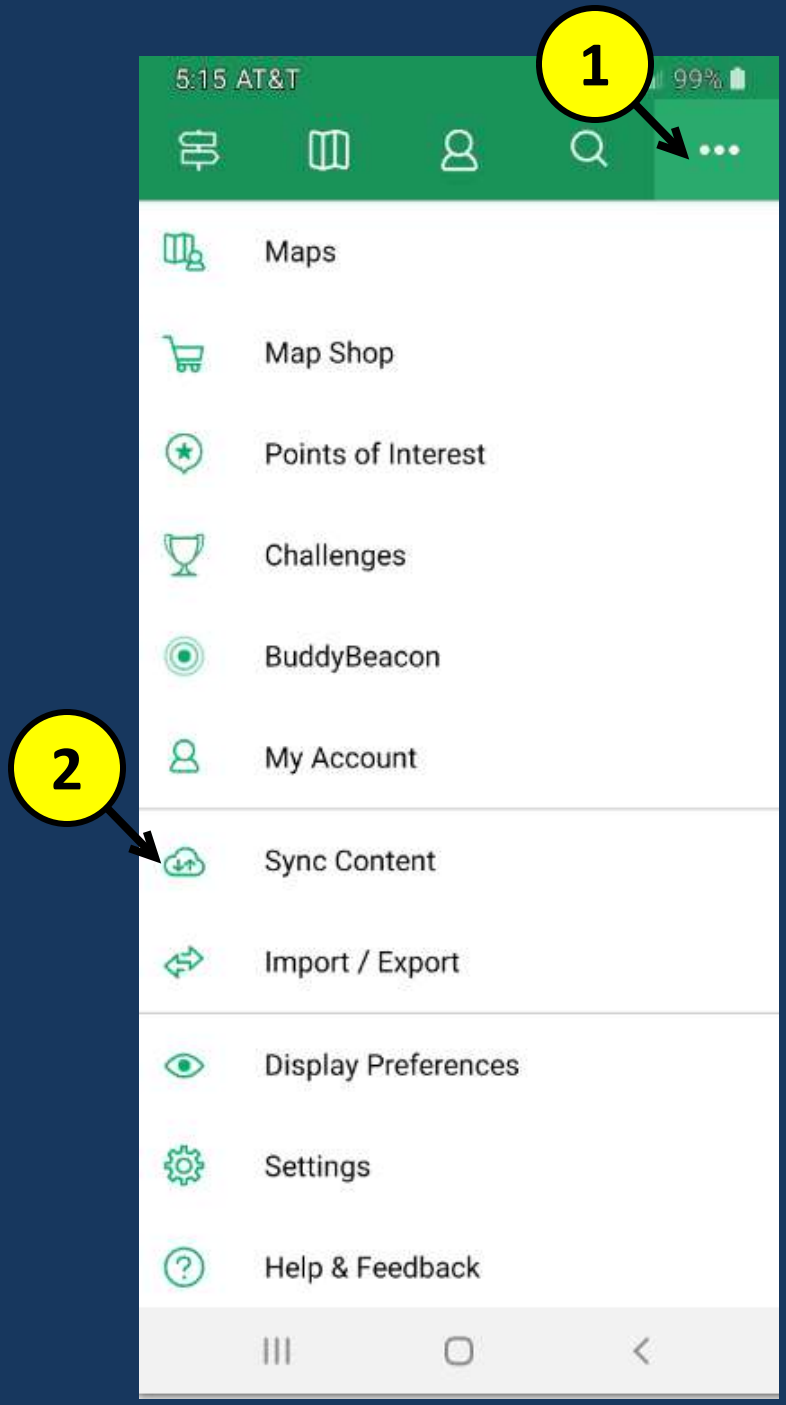
Recording a Route – Naming and Documenting

1. Click ‘Route Information’
2. Assign a name
3. Add further description as desired



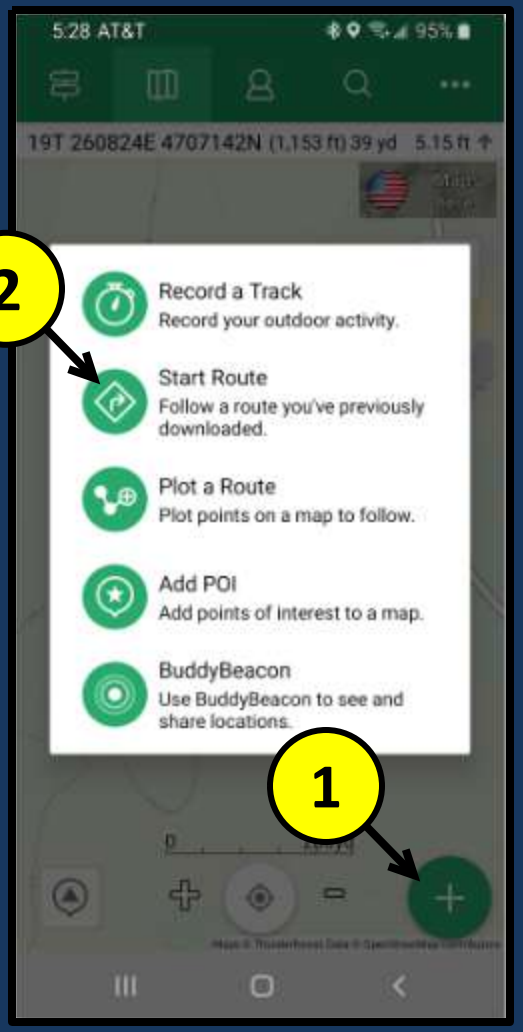
Synchronizing the Route

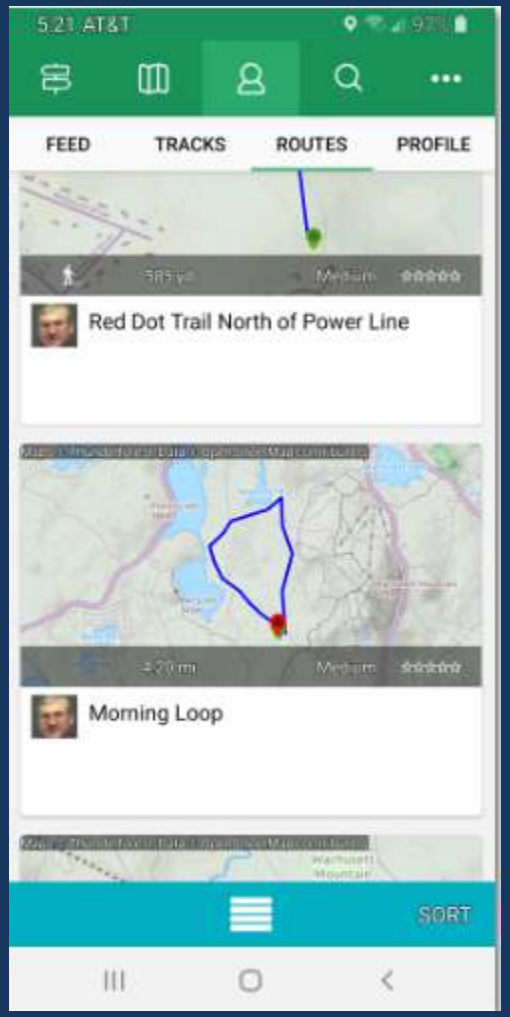
1. Click the three dots on the top right
2. Click ‘Sync Content to pull the route down to your phone
3. All objects will be synchronized



Following a Route

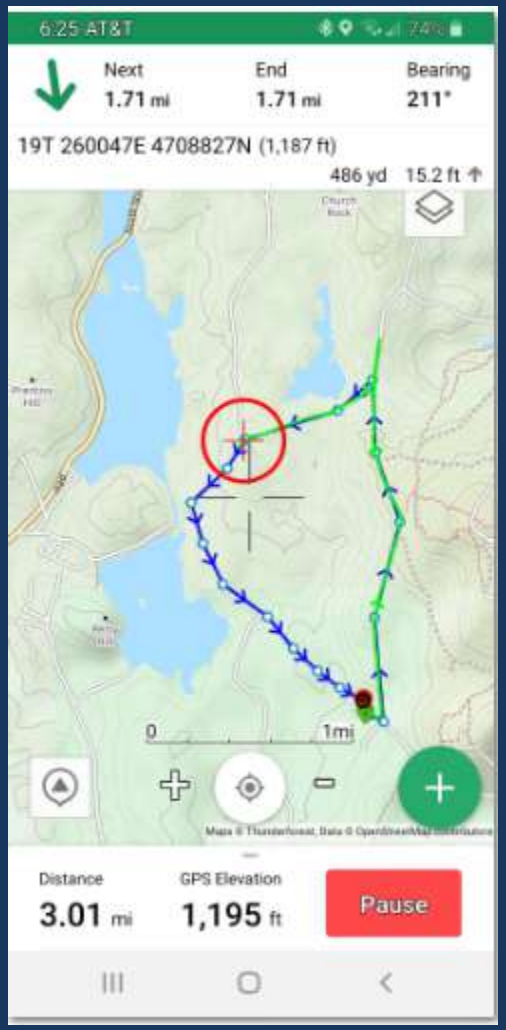
1. Click the plus button’
2. Select ‘Start Route’
3. Select the route that you want to follow
4. Display will switch to the map and show the route, and will start tracking





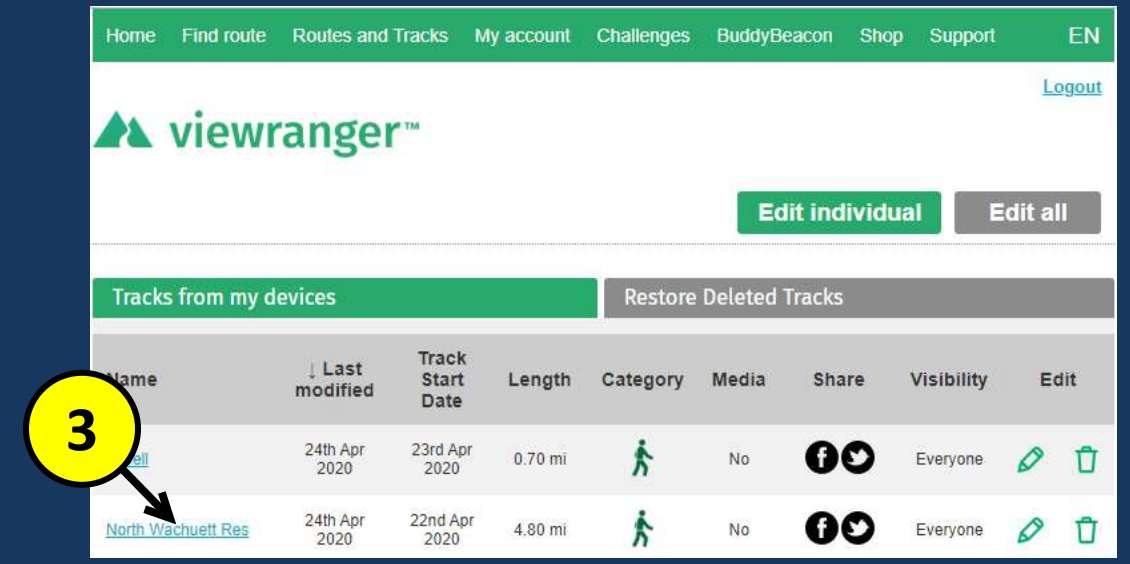
Following a Route - Statistics

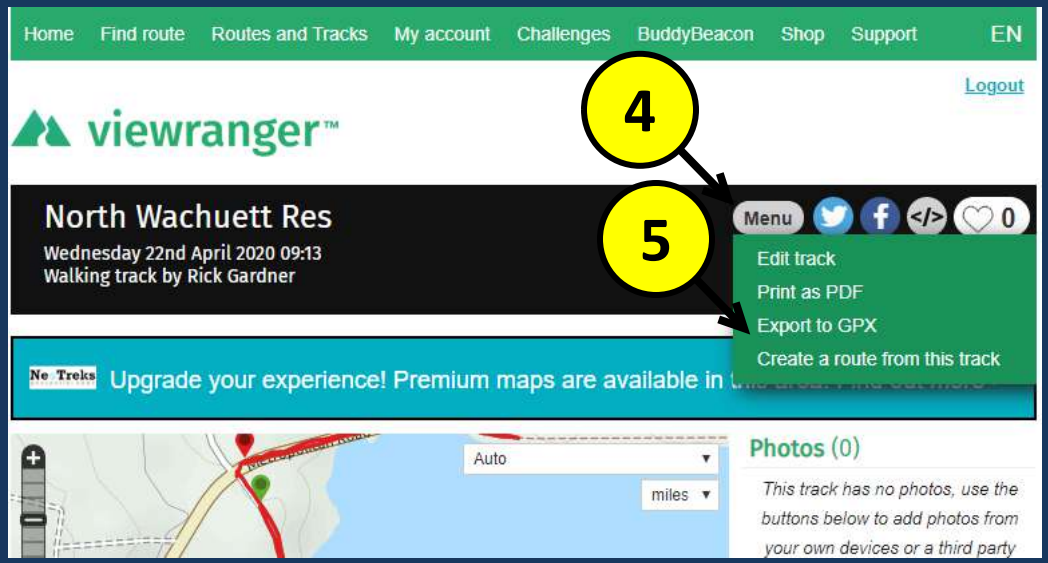
1. Now you are tracking vs the Route
   - Route in blue
   - Track in green
2. Can check statistics
3. Display shows distance to next way point or to end
4. A chart is also available to show upcoming altitude for the next mile
5. Regular statistics capabilities are available
6. Finish track normally



Creating Routes from Tracks

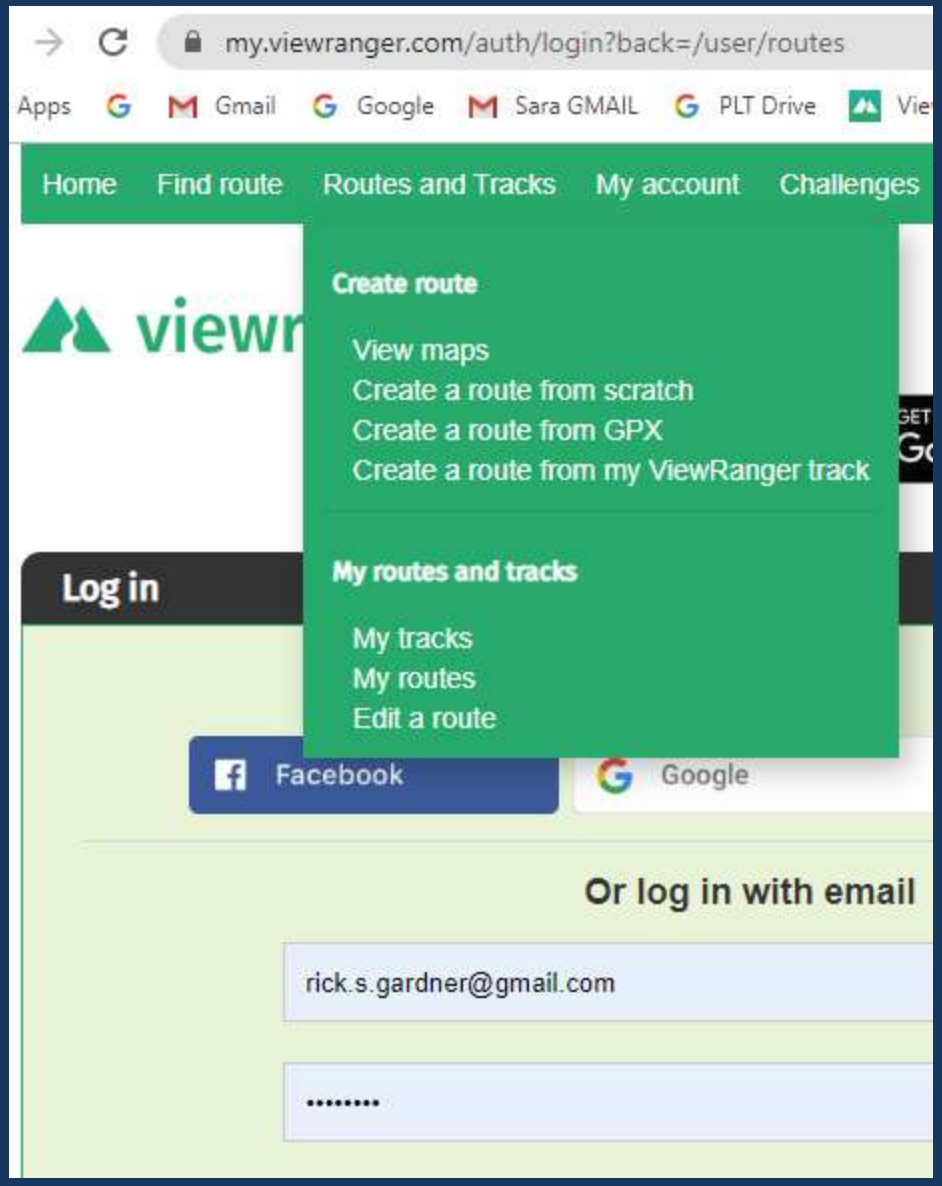
1. On the web, click Routes and Tracks
2. Select ‘My Tracks’ or ‘My Routes’
3. Click on the hyperlink to open the Track or Route
4. Click Menu
5. Click ‘Export to GPX’





Exchanging GPX Tracks

1. GPX File is simply a listing of coordinates, time, and altitude
2. You can find and eMail GPX tracks
3. Import either route or track GPX files into ViewRanger
4. You can then edit the route as desired
5. This is also the way to Copy Routes
6. Synchronize to get the route to your phone



Get GPX Tracks from the Princeton Hikes! Web Page

A work in process.

I will be adding more

Home ›› Boards & Committees ›› Open Space Committee

Princeton Hikes! Trail Documentation

Within Princeton

Click to find trail map and directions for the hikes that have been guided by Princeton Hikes! If you would like information about GPS Apps and files, click here.

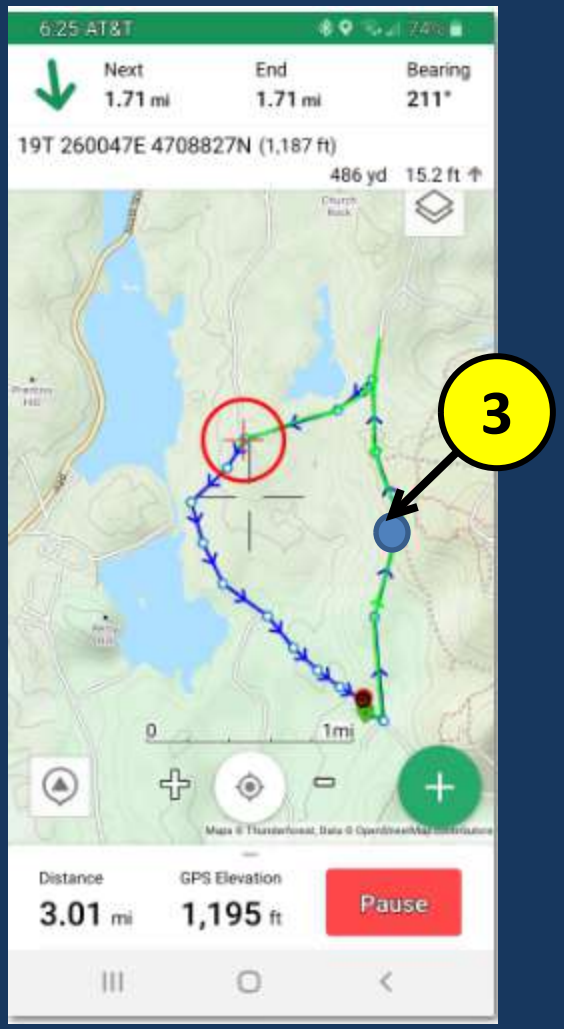
Town	Hike Name	Difficulty	Distance	Elevation	Uses	GP
Princeton	Wachusett West Loop	Moderate	4 Mi	500 Ft	SX	X
Princeton	Wachusett North Loop	Difficult	5 Mi	1000 Ft	SX	X
Princeton	Wachusett North Loop - Halfway	Moderate	4 Mi	700 Ft	SX	
Princeton	Wachusett South Loop	Difficult	3 Mi	1000 Ft	SX	X
Princeton	Wachusett East Loop	Difficult	3.5 Mi	1000 Ft	SX	X
Princeton	Wachusett Redline	Very Difficult	17.6	4400 Ft	X	
Princeton	Leominster State Forest Paradise Pond and Wolf Rock Loop	Moderate	4 Mi	300 Ft	BHSX	X
		Moderate-				

Buddy Beacon – Keeping Track of Co-Hikers

1. Buddy Beacon provides a way to keep track of a co-hiker that might be going faster or slower

2. Requires a little bit of setup on both View Rangers

3. Shows as a dot on the map

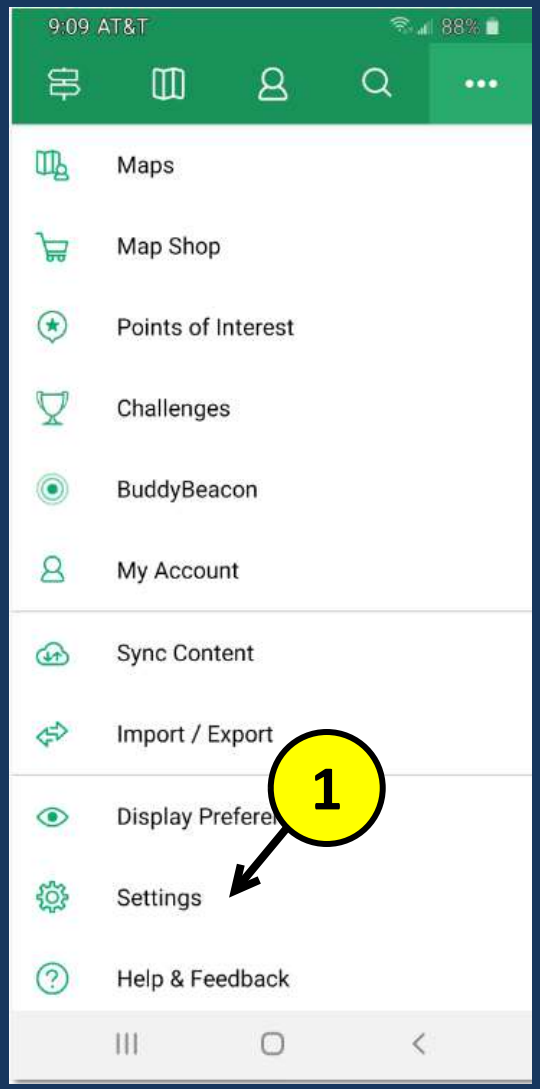


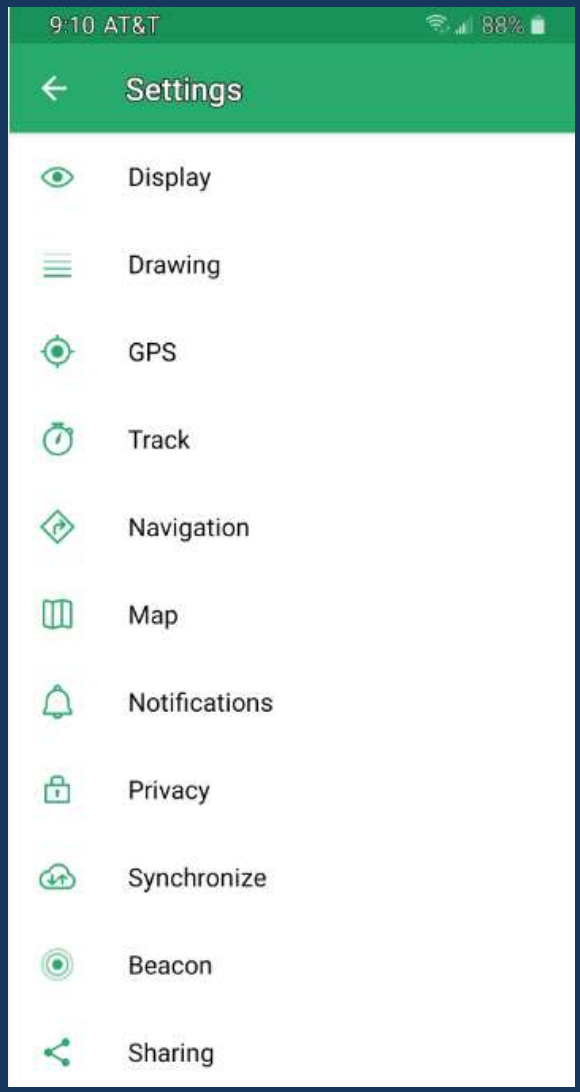
Settings

1. Settings provide a way to customize how ViewRanger works

2. Examples:
   - Display Settings
   - Customize colors used to draw lines
   - Set notifications
   - Set timings for tracks and GPS
   - Configure the information panels
   - Set buddy beacon frequency

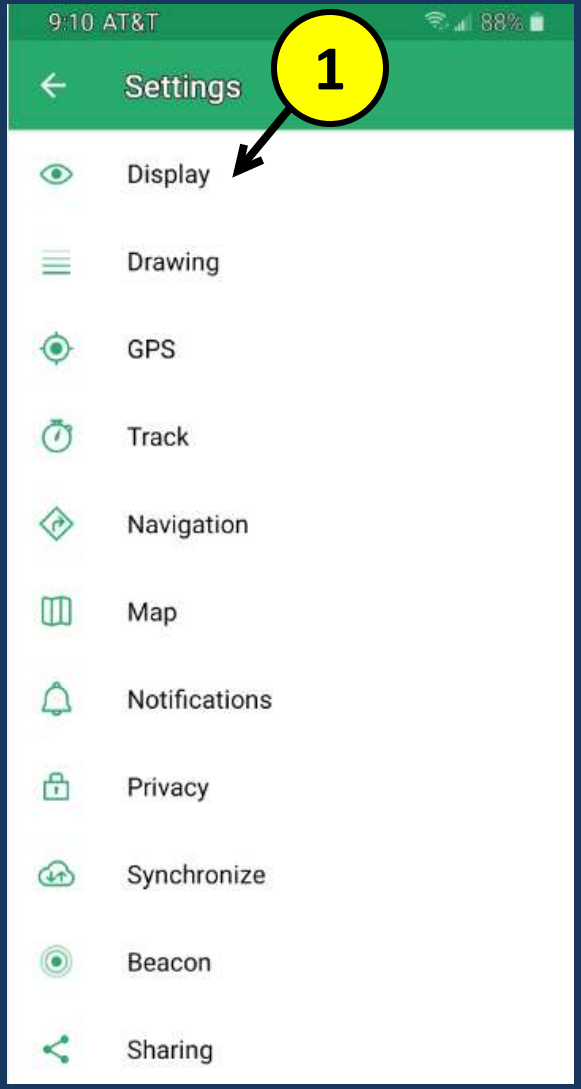
3. But….use these sparingly at first!!

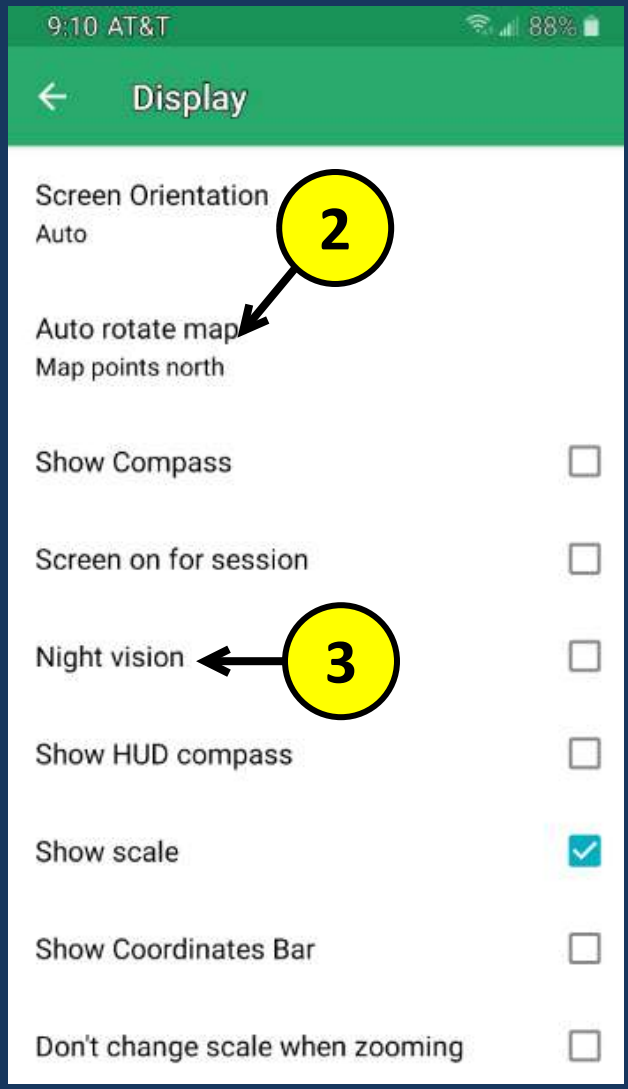




Settings - Display

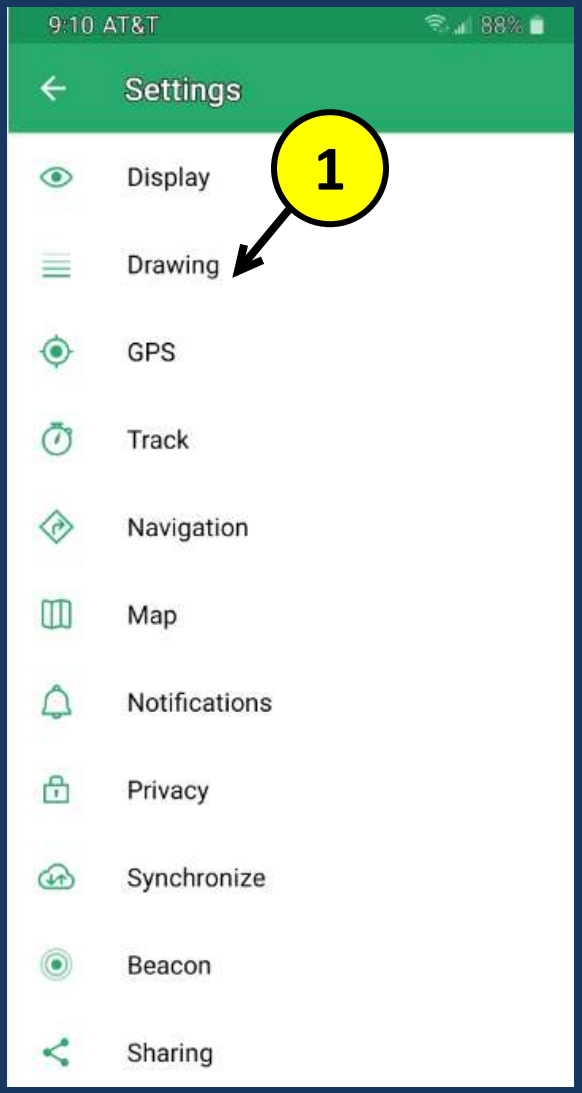
1. Display Settings
2. I like to have my map ALWAYS point north
3. Night vision is useful when hiking at night (dark background)

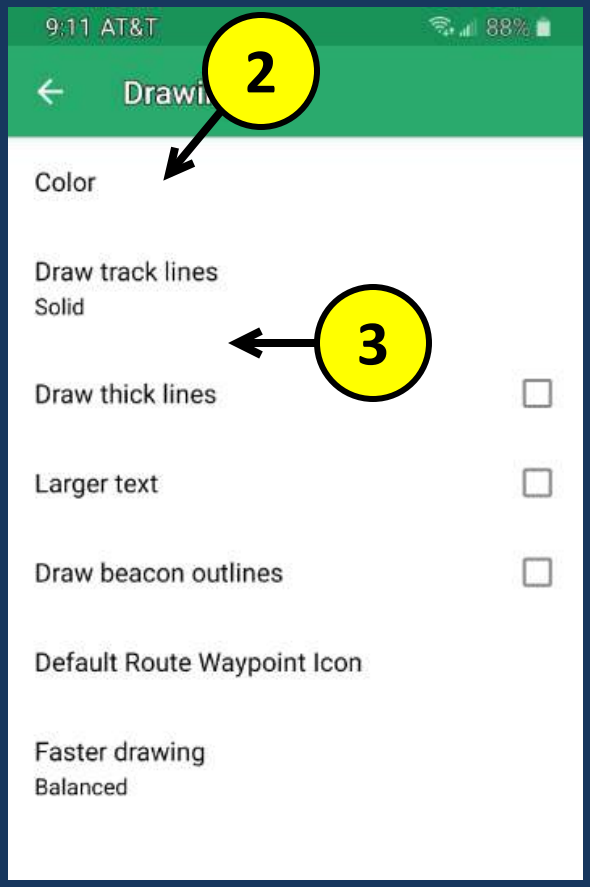




Settings - Drawing

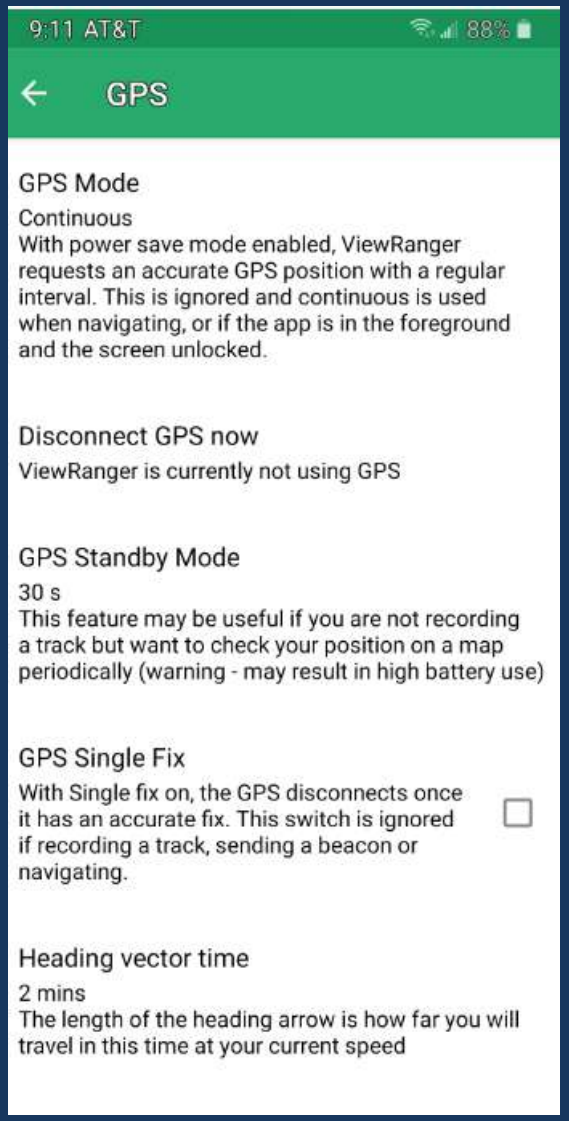
1. Drawing Settings
2. Set colors for routes and tracks
3. Change the types of lines
4. Etc.

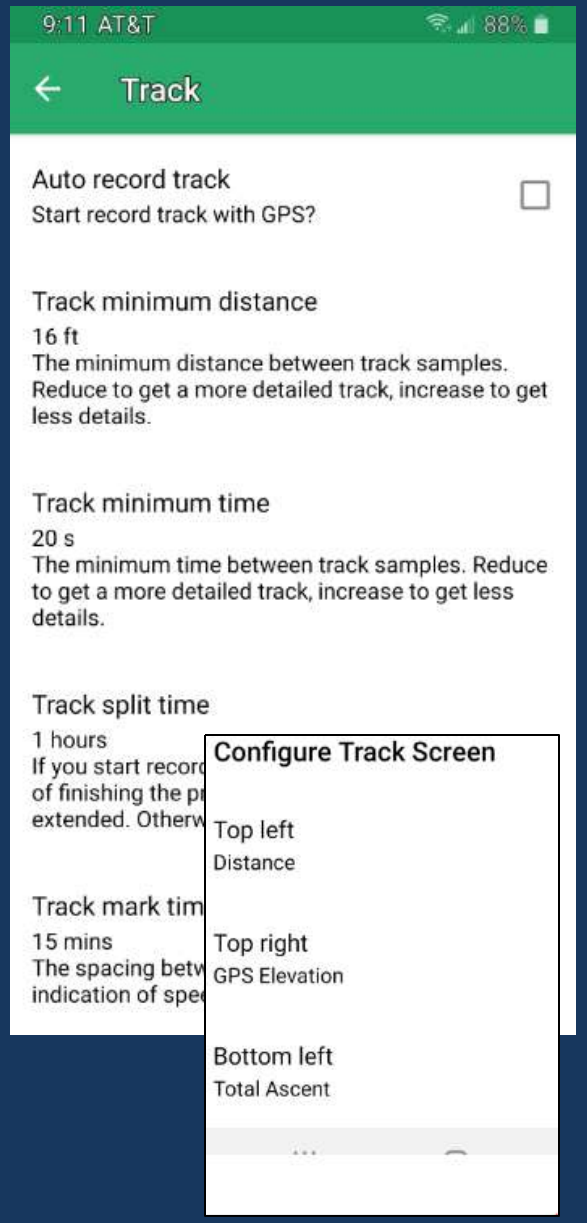




Settings – Track and GPS

1. GPS and Track Settings
2. Control how the GPS works, how frequently it polls, etc.
3. Track allows you to control how tracks terminate
4. I've never changed these but they could be useful!
5. The bottom of the Track panel allows you to choose statistics for the display





Closing Notes

- Try it out…go for a hike!! Check it frequently while you hike, and kick the tires!
- To minimize battery use, you can turn on airplane mode. Useful for long hikes!
- Some settings, like GPS and Track, will also effect battery life
- Take advantage of the GPS tracks on the Princeton Hikes page….
- Also try out myviewranger.com. We will be using that more in the second session