

Useful apps to load on your phone before you go out on the Highland Forest trails

These phone apps help you know your location on the Highland Forest trails.

They help you during the day when other members of your group ask “Where are you?”

They help you if have an issue – you need to communicate your location to HF staff, or the HF Nordic Ski Patrol.

- **Maprika:** The Highland Forest Trail Map is on Maprika - a digital map app. <https://maprika.com>
<https://maprika.com/maplink.php?id=4737>

Maprika works best on Android devices.

On iPhones *GPS on Ski Map by Maprika* can be hit or miss if it will install on your iPhone.

- Share your location with others in your group. This is really useful when a group has split-up.

- **BackCountrySOS:** app for text to 911. Developed by Teton County Search and Rescue.
<https://www.backcountrysos.com>

- Text to 911 is supported by a number of counties in NY state including:

- Text so fewer issues with 911 misunderstanding what you are saying.

Easier to report / send your exact location: Latitude/Longitude coordinates, What3Words location information.

- **What3Words:** 3 unique words will give your location within a 10 ft x 10 ft, 3 m x 3 m, grid anywhere in the world.
<https://what3words.com>

- locate.what3words.com – a low bandwidth web page that one can use to get their W3W location.

- **AirFlare:** AirFlare, is an app that turns your mobile phone into an outdoors rescue locator. <https://airflare.com>

- AirFlare allows you to share your location, route traveled, with selected family and friends, or emergency responders.

- AirFlare smartphone app is designed for strong, spotty, or zero connectivity. Airflare makes the phone instantly locatable by rescuers via even a fleeting Internet connection.

Maprika	HF Map	BackCountrySOS	What3Words	AirFlare
				

When driving around, on roads, *Where Am I?* gives the address, shows your location on a map.

This is especially handy when the house numbers are few and far between – like driving to Highland Forest.

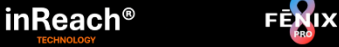
- *Where Am I - Find My Location* <https://play.google.com/store/apps/details?id=net.aleksandre.android.whereami>
- There are similar apps for the iPhone.
- Street address requires a connection to the cell phone network. Latitude/longitude are from the phone’s GPS.

Highland Forest has Markers along the Trail

- These are listed on the Highland Forest trail maps – paper and digital.

Phones and Watches – options for Satellite SOS when out of cell phone coverage areas

- **Apple iPhone 14 on:** Use Emergency SOS via satellite on your iPhone <https://support.apple.com/en-us/101573>
- **T-Mobile:** certain plans allow for Satellite text and text to 911 when there is no cell phone coverage.
 - **T-Satellite:** add to Verizon or AT&T for \$10/month as a second eSIM on certain phones. 1-800-937-8997
<https://www.t-mobile.com/support/coverage/satellite-support#non-tmobile>
<https://www.t-mobile.com/coverage/satellite-phone-service>
- **Verizon:** Satellite text for Apple, certain new Android phones. <https://www.verizon.com/support/satellite-faqs/>
- **Google Pixel Watch 4 LTE edition:** being released Oct 9 2025 allows one to directly communicate with satellites in an emergency scenario. First two years are free for now.
- **Garmin Fenix 8 Pro:** just released. Adds InReach Satellite SOS. (Adds voice/video and text messaging via LTE.)
 - Requires paid plans – no free satellite SOS. <https://www.garmin.com/en-US/p/837461/>



inReach® Plans		Enabled	Essential	Standard	Premium
(per Month)		\$7.99	\$14.99	\$29.99	\$49.99
SATELLITE or LTE-M	Emergency SOS	Included	Included	Included	Included
	Voice Calling	Unlimited	Unlimited	Unlimited	Unlimited
CELLULAR	Text Messages	Unlimited	Unlimited	Unlimited	Unlimited
	Voice/Photo Messages	Unlimited	Unlimited	Unlimited	Unlimited
SATELLITE	Live Tracking	Unlimited	Unlimited	Unlimited	Unlimited
	Weather Forecasts	Unlimited	Unlimited	Unlimited	Unlimited
	Check-in & Rescues	(\$5.10 each)	Unlimited	Unlimited	Unlimited
	Text Messages	(\$0.50 each)	30 included (over \$10 each)	150 included (over \$10 each)	Unlimited

First Time Activation Fee Waived (\$39.99)
Support for Multiple Active Devices in the Messenger App Coming Soon

Avenza Maps: Many of the NYS DEC State Forest, State Park, other DEC recreational maps, are Georeferenced PDF Maps.

- GeoPDF are PDF documents with coordinate information added.
 - Maps that have geospatial data added to the existing file.
 - Contain embedded coordinates that allow you to track your actual location on the map.
- The Avenza App uses the Phone's GPS data to show your location on the map.

Avenza Maps is a free app that provides mobile maps for IOS and Android for skiing, hiking, camping and outdoor pursuits. More than 1 million offline maps are now available for download to your device. Many of them are free. Users can view their maps on their device without cellular service or data usage through the use of GPS.

Key Things to Know about Avenza Maps:

- Avenza Maps – free version limited to loading 3 maps at a time. *Load maps before you go to the trail!*
 - Unless you get them from the Avenza store <https://store.avenza.com/> then you have unlimited maps.
- Some maps you may need to pay for – Finger Lakes Trail Conference
- You can load any GeoPDF.
- Georeferenced PDF Maps - NYS Dept. of Environmental Conservation <https://www.dec.ny.gov/pubs/120176.html>
- topoView - Accessing USGS Topographic Maps Has Never Been Easier <https://ngmdb.usgs.gov/topoview/>
- Avenza Map Store has Premium Paid Maps available. <https://store.avenza.com/>

Maprika a free app <https://maprika.com> HF Trail map: <https://maprika.com/maplink.php?id=4737>

Google Play for Android phones - <https://play.google.com/store/apps/details?id=com.maprika>

In the Apple Store it is called: *GPS on Ski Map by Maprika*. On iOS finding and installing the Maprika app can be hit or miss - <https://itunes.apple.com/us/app/gps-on-ski-map-by-maprika/id404686699>

Maprika allows you to:

- Mark your starting point. So you can navigate back to your starting location.
- Mark a trail issue to report.
- Share your location with others in your group. This is really useful when a group has split-up to ski multiple trails.
- Create a track log so you can see the route you have taken.

Text to 911 – text your information to 911. Less power is needed for text messages than voice messages

- Text to 911 is supported by a number of counties in NY state.
- Text so fewer issues with 911 misunderstanding what you are saying.

Easier to report / send your exact location: Latitude/Longitude coordinates, What3Words location information.

BackCountrySOS app for text to 911 – developed by Teton County Search and Rescue, Jackson Hole, Wyoming.

- <https://www.backcountrysos.com>
- Even with the best preparation, skills and behavior, sometimes accidents happen. If they do, BackcountrySOS is a simple-to-use smartphone app that allows you to quickly get your status and location information to emergency personnel.
- Low power. It will only use your phone's GPS for the brief period where it fetches your location.
- Data efficient. The app works as long as you have enough signal to squeeze out a text message. It will work in places where you can't get data access or make a voice call.

Text to 911: What You Need To Know <https://www.fcc.gov/consumers/guides/what-you-need-know-about-text-911>

The Text-to-911 Registry can be found here: [Text-to-911 Registry](https://www.fcc.gov/sites/default/files/text_911_master_psap_registry.xlsx) (xls)

https://www.fcc.gov/sites/default/files/text_911_master_psap_registry.xlsx [found on

<https://www.fcc.gov/general/psap-text-911-readiness-and-certification-form>]

What3Words <https://what3words.com>

- Three unique words that give your location within a 10 ft x 10 ft, 3 m x 3 m, grid anywhere in the world.

- [locate.what3words.com](https://www.what3words.com) – a low bandwidth web page that one can use to get their W3W location.
 - This works better on your cell phone – can directly get your GPS coordinates, your desktop system sends the location of your network connection.

What3Words app

- What3Words gets the GPS information from the phone. So it also works in airplane mode, or when there is no cell phone service.
- What3Words app has a Navigate feature.
 - This passes the Target Location to the mapping program of your choice. The Target Location can be a What3Words address or Lat/Lon.
 - What3Words has a Compass option. *You might have to swipe all the way to the right in the Navigate list of apps to find it.*
 - What3Words compass gives you a direction of travel and distance to the Target Location.
- What3Words app can be set to display a second coordinate set. Handy for having Latitude/Longitude to give to a helicopter, or put in your GPS unit.
- Tompkins County is featuring What3Words on their Tompkins Ready web page - <https://www.tompkinscountyny.gov/All-Departments/Emergency-Response/Tompkins-Ready>

Airflare app <https://airflare.com>

AirFlare is an app that turns your mobile phone into an outdoors rescue locator.

- Also gives you the option to share track information/track log, digital bread crumbs, of your route with the individuals that you choose.
- AirFlare smartphone app is designed for strong, spotty, or zero connectivity. Airflare makes the phone instantly locatable by rescuers via even a fleeting Internet connection.

AirFlare uses include:

-  Keep Track of Each Other: AirFlare allows family members and friends to share locations peer-to-peer, keeping everyone connected, whether on the mountain or hiking, biking, and camping together.
-  Faster Assistance: AirFlare helps reduce response time in case of an emergency, while also enabling you to self-locate your group.

AirFlare cost:

- AirFlare app has a very reasonable price - \$ 4.99 per year, \$14.99 lifetime. One can also get together with friends and for \$ 48.99 get 11 lifetime licenses.
-  Free Trial: Download the AirFlare app for free.

AirFlare possible uses on an outing:

- The leader and the "caboose" on an outing can see their locations on a map. As well as the track log/ digital bread crumbs. In case one has to back track to refind the route.
- If there is an issue then a SAR team can use the AirFlare Console to bring up the leader's or "caboose's" track log/digital bread crumbs of their route.
- If they drop out of cell service, then AirFlare would give their last reported location – using GPS data from their phone. This narrows the location of where to start searching.

Additional Airflare notes from co-founder Denis Lee

AirFlare co-founder Denis Lee said that upon hearing about AirFlare, many people mistakenly compare it to traditional special-purpose locator devices. "We prefer to think of AirFlare as a base level of protection that everyone can have, complementing and strongly encouraging situationally appropriate tools," he said. "From avalanche beacons to satellite emergency notification devices, all are unique in their utility, training, and costs. Just as a craftsman wouldn't leave a screwdriver at home because they're carrying a hammer, we believe everyone should always have all the right tools for the job. AirFlare is the protection everyone can have all the time."

The applications go far beyond ski areas, according to Lee.

"Virtually anyone who adventures in the outdoors can benefit from using AirFlare, including anglers, ATV and UTV riders, bicyclists and mountain bikers, birders, boaters, canoers, dirt bikers, hikers and trail runners, horseback riders, hunters, kayakers, rafters, rock climbers, snowmobilers, and snowshoers," Lee said. "You can even use it to find your friends at

music festivals and theme parks. In all those environments, cellular service is often less than perfect and AirFlare's unique technology shines."

Additional Notes

Sharing your location, tracking your location, within Marika.

Maprika, used by Highland Forest for their digital map.

- Allows you to "Share my location with friends."
- This sharing is only within Maprika.
- You can manually: "New meeting here" on a point. Click on the 3 vertical dots – *Meeting coordinates* is an option. You then have to manually copy out the Latitude and Longitude. Then send or paste them in another app.

Passive Detection – RECCO passive reflector strips placed in your clothing. An RFID tag for searchers to find you.

- RECCO is a radar system that uses a directional detector/receiver and a reflector.
- A 2.2 pound hand-held battery-powered detector can locate a reflector up to 262.5 feet away through air, and up to 65.5 feet away on the ground.
- The RECCO reflector is included in some gear – outerwear. Or a reflector can be attached to pack, helmet, etc.
- The NY DEC in Lake Placid has a RECCO detector.
- More common in Europe. There folks skiing in ski areas, in bounds, can be buried in avalanches. Unlike side country, back country, skiers/snowmobilers/hikers these "in bounds" folks don't routinely carry avalanche transceivers.

<https://www.facebook.com/TetonCountySAR/posts/pfbid02XNMGzJd8SWrkUcQRGN5col7YMS4aJCm7M1tma6chsNZ3cLzouYWC1TBV65wxpmeyl>

RECCO is not just for the winter. These passive reflectors placed in your backpack, jacket or helmet can make you quickly searchable by TCSAR's helicopter any time of year.

"We can locate a single reflector within a meter or less easily. With the long range receiver, we can fly at 300 feet above ground level and literally be searching a football field in width and length while flying 40 knots airspeed." — Tim Ciocarlan, founding member of TCSAR

McGill Office for Science and Society Separating Sense from Nonsense

<https://www.mcgill.ca/oss/article/technology-did-you-know-general-science/recco-reflectors-echo-safety-signals>

RECCO Reflectors Echo Safety Signals

RECCO Reflectors are a low-cost safety addition to outerwear and gear for those braving the backcountry, whether on foot or ski. How does this technology work?

Extra notes to drop – just keeping this informations

Converting W3W to or from other Coordinate Systems

<https://coordinates-converter.com/>

- When you put in an address you get DD, UTM, W3W, Plus Code (Google Open Location Code) on the right.
- You can put in values to display a location on the map, it will fill in the other coordinates.
- You can point to a location on the map to get the coordinates there.
- Example: if you have cell phone service, point to a pick-up point on a road, then give the coordinates there to command. Or a helo landing site, then give them DD.

<https://www.doogal.co.uk/BatchReverseGeocoding>

- Can convert a single value, or multiple values.
- Displays on a map so you can verify.
- Click on Text tab to see the UTM values.

Google Plus Code - Google Open Location Code, an alternative to W3W

Google has developed: Plus Code (Google Open Location Code) <https://maps.google.com/pluscodes/>

- Plus Codes are like street addresses for people or places that don't have one.
- Instead of addresses with street names and numbers
- Plus Codes are based on latitude and longitude, and displayed as numbers and letters.
- With a Plus Code, people can receive deliveries, access emergency and social services, or just help other people find them.

Emergency Alerting: Satellite SOS

- Only the iPhone's Satellite SOS is included for free for a couple of years.
- <https://www.rei.com/learn/expert-advice/personal-locator-beacons.html>
 - Choose a PLB if you want to avoid subscription fees and/or you're solely interested in being able to send an SOS in an emergency.
 - Choose a satellite messenger if you also want to be able to send messages to loved ones and/or are interested in additional features like navigation.
- Breitling has their Emergency watch - <https://www.breitling.com/us-en/emergency/>

Subscription services – pay to send alerts

- Garmin InReach®. Devices that connect to a Satellite for SOS.
<https://www.garmin.com/en-US/c/outdoor-recreation/satellite-communicators/>
 - SOS Coverage and What Happens When Triggering an SOS
<https://support.garmin.com/en-US/?faq=dENvi0yoo51ib0Zh8L4EI6>
- Zoleo is a cell phone to satellite connector so you can send and receive SMS texts from your phone (small message service so 160 characters or less). <https://www.zoleo.com>
 - Your own ZOLEO SMS number and email address.
 - First satellite communicator to offer truly seamless global messaging coverage across satellite, cellular and Wi-Fi networks.