Data Download How To

Different data types:

GPX –

GPX files are the most commonly used data type for GPS units. The data format usually contains information such as coordinates, waypoints, tracks, and routes and can display in a series of points (waypoints) or as a line (track/route).

KML/KMZ -

KML data was originally developed, and best used, with Google Earth. Some newer tracking and wayfinding apps allow for the import of KML data. At the most basic level, the data stores latitude and longitudinal data. A KMZ file is the zipped version of a KML making the file sharable.

Georeferenced PDF (GEOPDF) –

A PDF document with latitude and longitude data attached to it relating it to real world latitude and longitudinal locations on earth's surface. This type of document is useful for in the field wayfinding as it will show up accurately to where the location is in the real world. These maps can also be downloaded and used offline.

Apps for Navigating

** Note: Most offline navigation capabilities require a subscription or paid service**

Android App:

[GPX Viewer](#) – GPX and KMl Files lines and points – <u>one time purchase for full capabilities</u>

GPX Viewer has a free and paid version. The free version allows for all basic imports and exports of data as well as real-time location viewing for wayfinding. There is an option for a one-time purchase of $8.00 which gives you the ability to use the navigation offline. If the app and track is opened and uploaded in an area with service and kept open in the transition to no cell service, you still can navigate offline.

[YouTube Overview video](#)

[YouTube How-To video](#)

[How-To Document](#)

Apple App:

[GPS Tracks](#) – Import and export both GPX and KML files for free – offline navigation requires a subscription

This app is great for easily importing and exporting your data from a GPX or KML file. The free version allows for most everything you will need for basic navigation. The pro version allows you to use the maps offline, see weather, calculate elevation for each waypoint and change your basemap. The pro version is a subscription service and not a one-time purchase. Click the link below to read the How-to manual to use this app.

[How-To Document](#)

Both:

[CalTopo](#)

CalTopo is a web based and application-based program used to create maps. The web-based program is mostly used as a GIS (Geographic Information

System) to create maps and do basic analytics. The associated app is where you can view the maps you have created in the web-based version of CalTopo.

There is both a paid and free version. The free version allows for unlimited imports and exports of KML and GPX point and line data. There are different tiers for the paid subscription service, but the most basic one also gives you the ability to navigate while offline. More advanced versions of the subscription allow for the creation and downloading of maps and basemaps.

CalTopo Training

Gaia - Membership needed for offline capabilities

Both a web and mobile app version. Website allows you to upload GPX and KLM files as well as create your own routes. You can access saved routes created on the website on the app when signed into your account. You cannot import GPX or KML files directly through the app.

Gaia How-To document

Map Download App:

Avenza: (The ideal candidate)

Available for both Apple and Android devices. There is both a free version and a paid version. The free version is very capable of all your needs and allows for the download and activation of three maps. You can also collect tracks and data points using the free version. The maps must be downloaded first where data or Wi-Fi is available before using them for offline navigation. The paid version allows for multiple map uploads and activations as well as several other advanced features.

Avenza also has a very robust "map store" allowing you to search for and download from hundreds of available maps both free and paid. If you have a georeferenced PDF map you would like to use you simply upload it to your Avenza account via the mobile app or web.

Other:

GPS Navigation units

These units are mostly used by people who frequently are out of service and need navigation. Each one varies by initial price and subscription fee. Depending on the unit type, they can allow you to import maps and GPX or KML tracks. This is a very pricey option but optimal for offline navigation.

Disclaimer:

The Nevada Division of Outdoor Recreation does not advocate for or recommend a single application or web based mapping or navigation resource. The division is not responsible for any losses or injuries acquired while using any of the applications listed in this document. This document is intended for informational purposes only.