



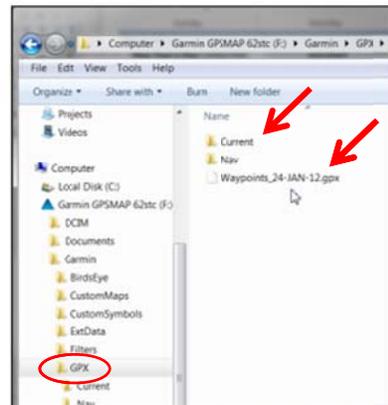
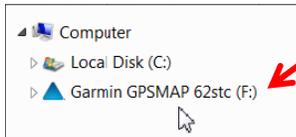
"Next-generation" Garmin GPS Data Transfer – Workflow Options



The GPSMAP 76 series and the GPSMAP 60 series models have been discontinued by Garmin. They have been replaced with the GPSMAP 78 (s, sc) and the GPSMAP 62 (s, sc, st, stc). These new receivers are not compatible with MN DNR Garmin software version 5.4.1. In other words DNR Garmin can't download data from them directly. The following information provides **three workflow options** to move data from the GPS receiver to the PC and from the PC to ArcGIS software.

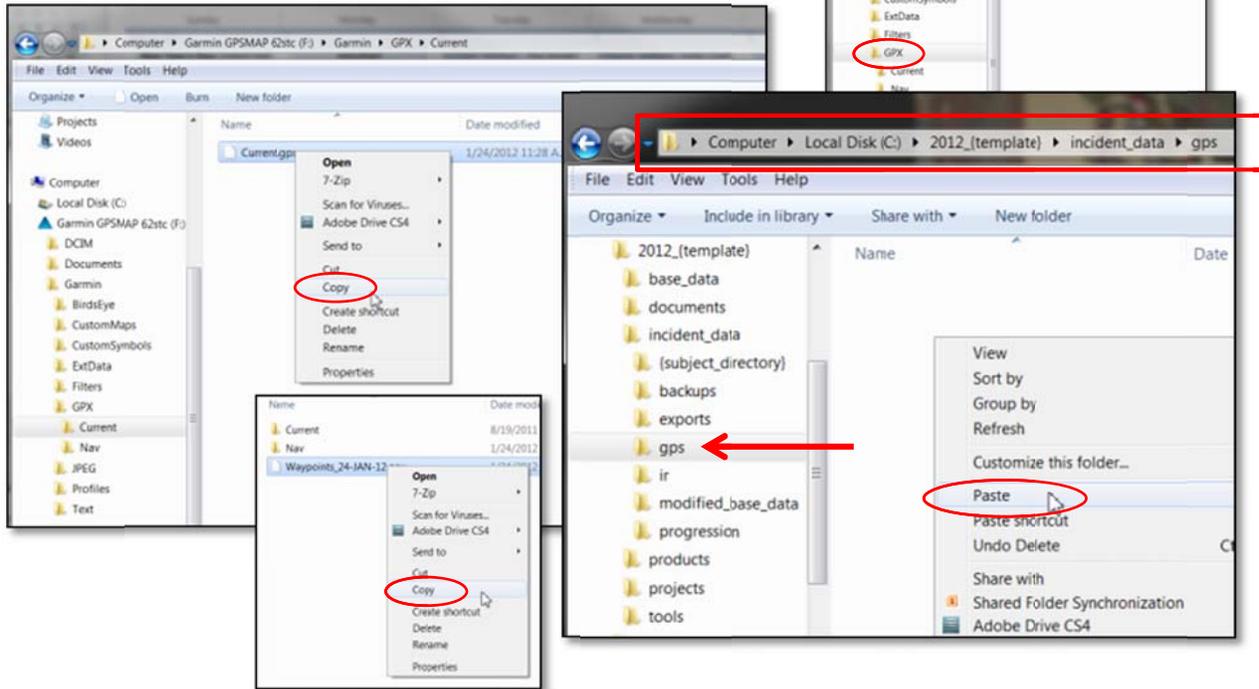
The 78 and 62 series receivers store data in GPX (GPS eXchange format). GPX is a device-independent data format. It can be used to describe waypoints, tracks, and routes. The format is open and can be used without the need to pay license fees. Its tags store location, elevation, and time and can in this way be used to interchange data between GPS devices and software packages. Latitude and longitude are expressed in decimal degrees using the WGS 84 datum. Elevation is recorded in meters. Dates and times are not local time, but instead are Coordinated Universal Time (UTC) using ISO 8601 format.

GPX files can easily be copied from the GPS unit and pasted to your desktop using Windows Explorer. Simply plug in your GPS using a USB cable and it is read in the same manner as an external hard drive.



In the **GPX** folder, **Waypoints*.gpx** contains all waypoints collected. **Current.gpx** (in the Current folder) contains active track log.

Copy and Paste to your local drive.



When working on an incident, be sure to rename files to be GSTOP compliant. The **2012_GSTOP_File Namer.xlsx** tool is found at http://gis.nwgc.gov/links_tools.html and is an easy way to create names.

Choose Feature Type	GPS_lin	GPS Data Files (stored under incident_data/gps)
Choose Data Source	giss	20120124_1052_Webinar_WIKNP0001_GPS_lin_giss_Hansen_llw84.gpx
Choose File Type	gpx	
Choose GPS Collection Name	Hansen	
Choose Feature Type	GPS_pnt	20120124_1052_Webinar_WIKNP0001_GPS_pnt_giss_Hansen_llw84.gpx
Choose Coordinate System/ Datum	llw84	
Choose File Type	gpx	

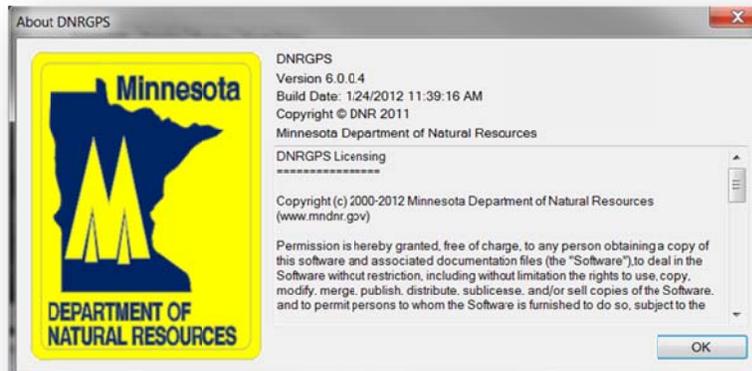
1.) Using MN DNRGarmin 5.4.1 (aka the old DNRGarmin)

GPX files (either saved on your computer or accessed directly from your GPS unit by browsing to it) can be loaded into MN DNRGarmin 5.4.1.

This allows for **editing** in the DNRGarmin table (if needed) and **saving** to .txt, .shp, etc.

2.) Using DNRGPS

MN DNR recently released **DNRGPS** which is directly compatible with the newer receivers and with ArcGIS 10.0. To download DNRGPS go to, <http://www.dnr.state.mn.us/mis/gis/DNRGPS/DNRGPS.html>



DNRGPS is a self-contained program which means it can be run from anywhere – your hard drive, a thumb drive, or a network location.

3.) Using ArcGIS

Its been advertised that ArcGIS 10.1 will be directly compatible with GPX file format. In other words you can plug your GPS into your computer and bring your GPX files directly into ArcMap.

The Alaska Regional Office of the National Park Service has created a **GPX plug-in for ArcGIS 10.0**. It is in Beta testing and can be found at http://gis.nwcg.gov/links_tools.html



Features:

- View GPX files natively in ArcCatalog and ArcMap without any conversion software.
- Each GPX file is a feature dataset with one or more feature classes (waypoints, routes, route points, closed routes, tracks, track points, closed tracks) depending on the data in the GPX file.
- Drag and drop the GPS feature classes from ArcCatalog to ArcMap
- Easily export the GPX files to a shapefile or geodatabase