



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

State Water Quality Division – Wastewater Program

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C. L. "Butch" Otter, Governor  
John Tippetts, Director

## MEMORANDUM

April 25, 2018

**TO:** Health District Environmental Health Directors  
Health District Land Based Supervisors  
DEQ Regional Engineering Managers  
DEQ Regional Office Administrators  
DEQ Wastewater Program Staff – State Office

**FROM:** James Craft, On-Site Wastewater Coordinator

**SUBJECT:** Guidance on Recording Waypoints from Subsurface Sewage Disposal Drainfields

This memorandum provides guidance and instructions for health districts to record waypoints using a GPS device in newly permitted and inspected subsurface sewage disposal drainfields. Data gathered on waypoints will be used by the DEQ source water program as a potential contaminant Geographic Information Systems (GIS) layer to consider when developing source water assessments for public water systems.

### Garmin Oregon 600T Handheld GPS Device

DEQ is providing health districts with a Garmin Oregon 600T handheld GPS device for use in gathering waypoints in drainfields. Waypoints are locations you record and store in the device. The device allows for touchscreen operation and for dual orientation views. The device requires two alkaline, NiMH, or lithium batteries. Health Districts are responsible for acquiring and properly disposing of batteries for the device. Although the device is capable of many GPS features, DEQ is only interested in gathering waypoints on the drainfields.

The device can be customized to the user's liking by changing the dashboard view. The owner's manual for the Oregon 600t is available at the Support Center <https://support.garmin.com> or more specifically: <https://support.garmin.com/support/manuals/manuals.htm?partNo=010-01066-10&language=en&country=US>

### Instructions for Recording Waypoints

Out of the box configurations allows for recording the waypoint without any setup or reconfiguring the device. There are two buttons on the device, a power button and a user key button. Use the touchscreen for additional inputs. Switching between orientation views (horizontal vs vertical) may be easier for changing functions and inputting information.

Waypoints are to be recorded in the center of the subsurface sewage disposal drainfield. Record multiple waypoints for systems with multiple drainfields. All waypoints shall reference the septic permit number. Include the permit number in the device's notes field. You can also edit your notes later after downloading waypoints into DNR GPS. As a recommended practice, also write down the coordinates in your field notebook as a backup reference. If there are accuracy issues or the device cannot find satellites due to mountainous terrain, using Google Earth to pinpoint and obtain coordinates will be accepted.

### **Quick Guide for Recording Waypoints:**

You can save your current location as a waypoint once the device locates satellites.

1. Select the user key.

The default function of the user key marks a waypoint.

2. If necessary, select a field to make changes to the waypoint.

3. Select Save.

### **Finding a Waypoint**

1. Select Waypoint Manager.

2. Select a waypoint from the list.

3. If necessary, select  to narrow the search.

4. Select an option:

- Select "Spell Search" to search using the name of the waypoint.

- Select "Select Symbol" to search using the symbol of the waypoint.

- Select "Search Near" to search near a recently found location, another waypoint, your current location, or a point on the map.

- Select "Sort" to view the list of waypoints based on nearest distance or alphabetical order.

### **Editing a Waypoint**

Before you can edit a waypoint, you must create a waypoint.

1. Select Waypoint Manager.

2. Select a waypoint.

3. Select an item to edit, such as the name or Note field.

4. Enter the new information, and select .

### **Deleting a Waypoint**

1. Select Waypoint Manager, then tap the icon , select Delete.

2. Select waypoint(s) that you want to delete.

3. After selecting waypoint(s), tap Delete and confirm your selection.

### **Transferring Waypoints to a Computer**

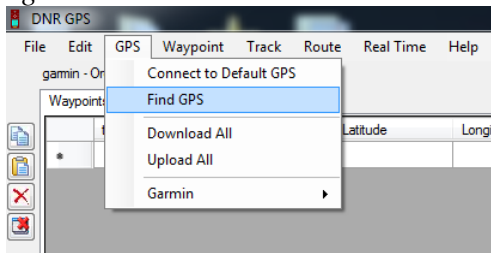
DEQ is utilizing the Minnesota Department of Natural Resources Garmin GPS application (DNR GPS). DNR GPS is a no-cost software application and was built to transfer data between Garmin GPS handheld devices and various GIS software packages. DNR GPS uses a C# (C Sharp) program language that interacts with the GPS via a USB port allowing GIS users to transfer Waypoints, Tracks, and Routes from a GPS to ArcMap or Google Earth and store them as points, lines or polygons.

Health districts are to download and install the latest copy of DNR GPS 6.1.0.6 (6/2/2014) from:  
<http://www.dnr.state.mn.us/mis/gis/DNRGPS/DNRGPS.html>

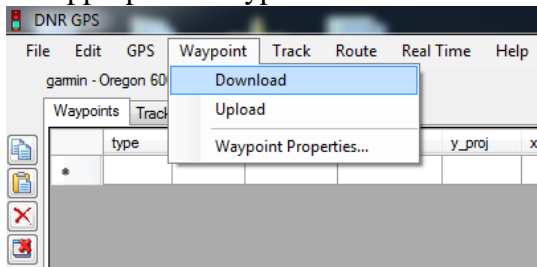
DNR GPS has available help resources at: <http://maps1.dnr.state.mn.us/dnrgps/index.html>

Using the provided USB cable that came with the device, connect the Garmin Oregon 600t to an available USB port in your computer.

Open the DNR GPS program. Under the GPS menu dropdown, select Find GPS. *If DNR GPS does not find the device, unplug the USB cable and insert the plug again. Try to find the device again.*

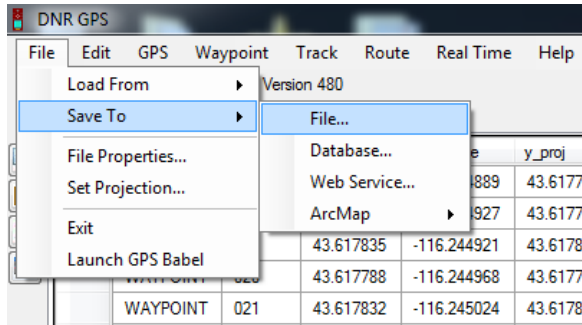


Under the Waypoint menu dropdown, select Download. A pop-up window will appear and select the appropriate waypoint file/date name from the Garmin device.



A spreadsheet will appear after downloading the waypoint data. You can edit your notes from the field under the comment column. DNR GPS imports the waypoint data in Lat/Long WGS84 coordinates. When the download is completed this spatial information is projected to the user specified projection. The projected Y and X coordinates are stored in the Y\_Proj and X\_Proj fields. *NOTE: No matter which position format you customize in the Garmin Oregon 600T Garmin, data is still converted to WGS84 coordinates during the transfer.*

To save the waypoint data, select Save To under the File dropdown menu. Save the file type as a Google Keyhole Markup Language (.kml) to a designated folder of your choosing.



### **Sending Waypoint data to Idaho Department of Environmental Quality**

Waypoint data in the form of a .kml file should be submitted via email to DEQ semi-annually to the On-site Wastewater Coordinator, [james.craft@deq.idaho.gov](mailto:james.craft@deq.idaho.gov). More frequent submittals from the health districts will be accepted and are encouraged to better keep track of the submissions to DEQ. DEQ will send a reminder semi-annually to the health districts for submitting waypoint data.

Please route this memo to your staff working in the subsurface sewage disposal program and ensure they are recording and sending waypoints to DEQ semi-annually. If there are any questions or comments please contact James Craft at (208) 373-0144 or by email at [james.craft@deq.idaho.gov](mailto:james.craft@deq.idaho.gov).