Name _____

GPS Navigation Lab

Purpose: To become familiar with GPS units, GPS software and to practice GPS navigation to a point. This skill is useful for sampling in fields and wildlands. This exercise also includes use of different types of online maps.

Equipment:

GPS 76
Laptop & Cable
EasyGPS
Maps
Waypoint file

Procedure:

In the Lab

1. Download the waypoints to your GPS Unit using DNR Garmin. Set the GPS to degrees.
2. Divide into groups of 2. Each person will have a GPS unit.
3. Review the GPS 76 Manual. You will need to navigate to the waypoints downloaded to the GPS.

In the Field

4. Practice setting a waypoint (NAV) and navigate to Waypoint “006”. (We will do this as a class).
5. You will be assigned a Letter: _____. You will use the letter to get your next waypoint instructions.
6. You will navigate to four points. At each point you will find a sign with directions for YOU. Remove your directions. If the sign contains only your directions PLEASE take the sign if you are the last person to visit the point.
7. At least four times during the course save a new waypoint to the GPS. Check the GPS satellite view and record the accuracy. Note: your surroundings.
8. Plot your points on the aerial photo provided.

In the lab

9. Upload the GPS waypoints using DNR Garmin, edit the waypoints by deleting the points that you DID NOT visit and save as a KML file.
10. Plot the waypoints assigned to you and the new ones you created on Google Maps or Google Earth (see the Google Map Directions online) by uploading (importing) the KML file.
11. Change the symbols so your points use different symbols. Print the Google Map or Google Earth image and attach to the lab. Save the KML file.
12. Turn in your waypoint slips and your maps with this sheet.

Notes:

Plot and label your points on the photo above.

Questions:

1. How does GPS determine position?

_____

_____

_____

_____

_____

_____

2. How does a GPS determine the direction (bearing) of travel to the waypoint?

_____

_____

_____

_____

3. How does a GPS point the direction of the waypoint?

4. How did your GPS accuracy change over the course and why?

5. How did terrain effect the GPS accuracy?