

Mountaineers – Foothills Branch

Application for Wilderness

Navigation Equivalency



Revised: 11/22/2020

Wilderness Navigation Equivalency is an opportunity for Mountaineers club members who are experienced in off trail navigation using the modern navigation tools, popular with Mountaineers climbers and scramblers, to gain the [Basic Navigation badge](#) as well as the [Basic GPS badge](#). These are the badges obtained by taking the Wilderness Navigation Course.

If you need to renew your previously earned Basic Navigation badge, which expires after a few years, you can renew it by instructing at the Wilderness Navigation course. Contact the leader of the Wilderness Navigation course for sign-up instructions.

Equivalency candidates must be a paid member of the Mountaineers and have participated in or registered for at least one course or multiple activities with the **Foothills branch**. If you are taking the Alpine Scrambling or Basic Climbing course through a different Mountaineers Branch, please contact that branch's navigation committee.

Below is a description of the Foothills Branch Wilderness Navigation Equivalency process and the application you must submit to apply for equivalency.

Equivalency candidates will be required to demonstrate knowledge, skills and experience including, but not limited to, the following:

- Use a compass to take and follow bearings.
- Use topo maps to:
 - Recognize geographic features and terrain obstacles
 - Plan routes
 - Determine bearings, distances & elevations
 - Determine and find coordinate positions using both Lat/Long & UTM
- Use an altimeter to assist in determining your location
- Use the CalTopo website to create & print maps, plus set & export waypoints.
- Use the Gaia GPS navigation website to define routes and print maps.
- Use the Gaia app on your Apple or Android smart phone to view routes created on their website, import waypoints exported from CalTopo and of course follow those routes and waypoints.
- Knowledge of emergency locator beacons, aka PLBs. *You don't have to personally own one.*

FYI: Mountaineers members get their first year of Gaia use free. Search under "Member Benefits" on the website for details.

The Foothills branch requires the use of Gaia in the Wilderness Navigation course and equivalency program. If you don't have an iPhone or an Android smart phone, Gaia works on many iPads and Android tablet computers, so you can use one of those for these purposes.

After you earn your navigation badge, you are welcome to use Gaia or any other GPS app in all Mountaineers scramble and climbing courses and trips.

Equivalency Process:

The equivalency process consists of three steps:

1. Create and submit an "Equivalency Application". This is a file containing answers to our questions about your experience and your results from a series of exercises that demonstrate your skills.
2. Participate in a 30 minute phone interview with the Equivalency Coordinator and answer some additional questions to further demonstrate your skills.
3. Participate as an assistant instructor at the all-day Wilderness Navigation field trip. The purpose of this is to give you a chance to demonstrate your hand-on skills as well as help train the current students. Note that registering for the field trip will require a 15 dollar fee. Plan on a couple hours of evening hours to prepare for the day.

NOTE:

To create your application, you will need to paste screen prints of maps and images into a word processing document and then save it as a PDF file. Both the Google Docs and Microsoft OneDrive word processing systems make it easy to paste images into documents then resize & crop them. Both systems can also export the documents as PDF. The images you gather will come from a web browser on computer. You will additionally need to capture a screen image from your phone. All smart phones have the ability to capture screen images, so if you don't currently know how to do that, you might need to some digging around on the web for instructions.

When you paste photos and images into your application, please crop them so that only the relevant content is in the image and it is of high enough resolution to easily read it.

After you have completed your application, email it to the Navigation Equivalency Coordinator (get email from the website). The Coordinator will then coordinate with you to schedule a phone interview.

After the interview, you can register for the one of the field trips the next time the Wilderness Navigation course is held. The field trips are held in March and October.

Start your application with the remaining text.

Delete everything above this line and gold italic instruction text below.

Mountaineers Foothills Branch - Wilderness Navigation Equivalency Application

1. Date:

2. Name:

3. Email address:

4. Phone number:

5. Mountaineers profile:

Go to your Mountaineers profile page and copy/paste the URL from the top of the browser.

6. Reason:

Explain why do you want equivalency for our Wilderness Navigation course rather than simply take the course?

7. Compass:

Paste in a close-up straight-down in-focus high resolution photo of your magnetic compass against a white background. If it has a mirror/cover, open that up. If you have an altimeter watch and/or a PLB, include a picture of those as well. Describe how much have you used this/these tool(s).

8. Previous Navigation Training:

Describe any formal navigation course(s) that you took or taught. Include the as much of the following information as you can conveniently can.

- *Include the title and rough date(s) of the course(s).*
- *Include a link to the course's webpage, (if one exists)*
- *Include description of the key subjects taught in the course(s).*
- *Describe what sorts of technology the course(s) utilized.*
- *Paste in screen print(s) of documentation confirming your completion, (if exists)*

9. Recent Cross Country Trips:

Describe two fairly recent off-trail trips you had where you were responsible for or greatly participated in the navigation and route finding. These trips don't necessarily have to include climbing a peak, but could also include cross country travel to reach a high basin lake or a Search-And-Rescue mission.

- *Provide the approximate dates for the trips and describe the conditions.*
- *Paste in maps showing your routes. You don't need to define the route precisely in CalTopo. Simply copy a snip-it of a map to a painting program, and then freehand draw the approximate route you followed.*
- *Describe how you used Gaia on your phone during the trips.*
- *Describe how you used your compass and altimeter during the trips.*

10. Silver Peak Exercise:

The ability to plan and communicate off-trail hiking routes has significantly improved with modern computer based tools. Accordingly, the ability to use these tools is now considered essential. To demonstrate your skill with these tools, you will plan an off-trail scramble trip to Silver Peak near Snoqualmie Pass.

Your planned trip would start at the Lake Annette trailhead, hike up the trail toward Lake Annette, then leave the trail and ascend the forest to the north basin of Silver at about 4200'. You will then hike up the northwest basin of Silver Peak,

ascend west to ridge near the summit and hike up the last part of the ridge to the summit. For the descent, you will drop down as directly as possible to about 300' north of Lake Annette. You will then follow the hiking trail out.

10.1 Planning your route via CalTopo

Launch CalTopo and create a map using the Map Builder layout and zoom in on the I-90, Silver Peak & Lake Annette area.

Setup the following series of points in CalTopo to roughly mark your route. Determine each point's elevation, as well as the bearing and straight line distance to the next point.

Fill in the following table and unlike this text in italics, don't delete this table:

| Point Along Your Route | Point Elevation | Bearing To Next Point | Straight Line Distance To Next Point | Elevation Change To Next Point |
|---|-----------------|-----------------------|--------------------------------------|--------------------------------|
| Lake Annette Trailhead | | | | |
| Leave trail to ascend to Silver's north basin | | | | |
| Cross ridge into the north basin | | | | |
| Top of north basin | | | | |
| Summit | | | | |
| On trail 200 yards north of Lake Annette. | | | | |
| Lake Annette Trailhead | | | | |

Generate and save an 8.5x11 PDF map showing the route from the trailhead to the summit. Include WGS84 UTM 1000m grid lines and Lat Long tick marks on the map.

Use the CalTopo print feature to generate a map. Create a snippet / cropped screen print of the map and paste it into this application.

Print out a copy of the CalTopo map. Black and White is adequate. You will need a paper copy during your phone interview.

Please reread the instructions above about printing the map and make sure you followed them exactly.

Export the waypoints to a file and save it for later use.

10.2 Planning your route via Gaia GPS

Launch the Gaia GPS website on a desktop or laptop PC and login to your Gaia Account.

Using the "Gaia Topo (feet)" overlay, draw a route that roughly follows the same route you defined in CalTopo. The route should "snap" to the trail for the trail sections. The off-trail sections don't have to exactly hit the same waypoints you setup in CalTopo, just be pretty close.

Use the Gaia GPS website print feature to generate a map. Create a snippet / cropped screen print of the map and paste it into this application.

10.3 Viewing your points and route in Gaia on your phone

Launch the Gaia on your phone and switch to the UGGS map overlay.

Pan to the Silver Peak / Lake Annette area and display the route you setup on the Gaia website.

Download the GPX file you created in CalTopo above to your phone and import it into Gaia.

Confirm the points you created in CalTopo display along with the Gaia GPS created route.

Create a screen print of your phone screen showing the full Gaia Map. Upload the screen print to your PC and paste it into this application.

11. Additional Information

Include any additional information you would like to share with us.