



Declination

Model Used: WMM-2020
 Latitude: 40° 11' 48" N
 Longitude: 74° 18' 11" W
 Date: 2020-09-26
 Declination: 12° 28' W ± 0° 22' changing by 0° 2' E per year

State of New Jersey, Esri, ... (BSI)

This map and course were developed by Nat Schaffner and updated by John Hayward as Eagle Scout Projects. The official Turkey Swamp Park website can be found at <https://www.monmouthcountyparks.com/documents/130/Turkey%20Swamp%20Brochure.pdf>

What is orienteering?

Orienteering is a sport of Scandinavian origin. The goal is to locate the control markers with the assistance of a magnetic compass and a topographic map. Orienteering is an excellent way to stay active, have fun, and learn useful map-reading skills.

How do I use this course?

There is no particular order that the markers must be found in, but there are two variants that have been planned out. Both start at marker 1, which is located directly in front of the Turkey Swamp Visitor's Center Building, halfway between the parking lot and the building.

Both courses follow roughly a loop, and end at the first marker. The longer is simple to follow: travel to each marker in numeric order: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 1. The path begins in a forested area, and then goes out into an open field. This is approximately three miles long, depending on how the open areas are traversed.

The easier path is primarily in the field area, and is optimal for younger children, as it is relatively short, and all participants remain in view, while allowing the group to be spread out. The order of these markers is as follows: 1, 10, 9, 8, 12, 11, 1. This course is approximately two miles, and also varies based on how the open areas are traversed (following the

borders of the field, as opposed to shortcutting through wooded areas). Control marker locations are indicated on the map by a white and red square, divided diagonally, and labeled with a number. The markers are 3-foot tall 4x4's, with the marker's sign on their front. They are not located directly on trails and may take a few moments to find.

This map has a few rudimentary markers you should become familiar with, including roads, open areas, forested areas, and water. The key on the map also gives compass directions, and the left and bottom borders are accurately gridded with latitude and longitude markings, for use with a GPS device, or other navigation methods. The map features will help you identify where a marker is, and the brown lines indicate contours in the land (where the ground slopes more sharply the lines are closer together, and flat areas have very far-apart lines).

The markers themselves are numbered as they appear in the map, but are also labeled with a letter, to verify that the correct marker was found. Use these letters as a key to see if participants actually found the marker.

How do I use my compass?

Place a compass on the map at the location you're currently at and point the direction of travel arrow to the control marker you are going to. Holding the base of the compass in

place, rotate the dial on the compass until the north on the dial matches the north on the map. The degree bearing that your compass reads is the direction you need to travel, before adjusting for magnetic declination.

To adjust your compass's degree bearing for the declination, you need to know the declination of your location. For example, because the declination of Turkey Swamp Park is 12 degrees west, you need to add 12 degrees to your initial degree bearing.

Now hold your compass out in front of you and rotate your whole body until the magnetic north needle is inside of the north arrow on the base (Red Fred in the Shed). You should now be facing the direction you want to travel. As you go, look for features around you that show you where you are on the map.

As you go, please remember to respect the natural wildlife, by staying on trails (where available) to prevent habitat destruction, not littering, and not harming any animals you may come across.

Have fun!

Errors or problems with the course should be reported to:

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haywardd@optonline.com