

GPS Visualizer

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GPS Visualizer Home Page

GPS Visualizer is a free program that runs online in your Web browser. You do not have to install anything on your computer. To use the program, go to <http://www.gpsvisualizer.com/>. While the software doesn't have a version number, the instructions and screenshots are based on the software and backgrounds of about January 2017.

The Home Page looks like this:



Draw a Map

Steps:

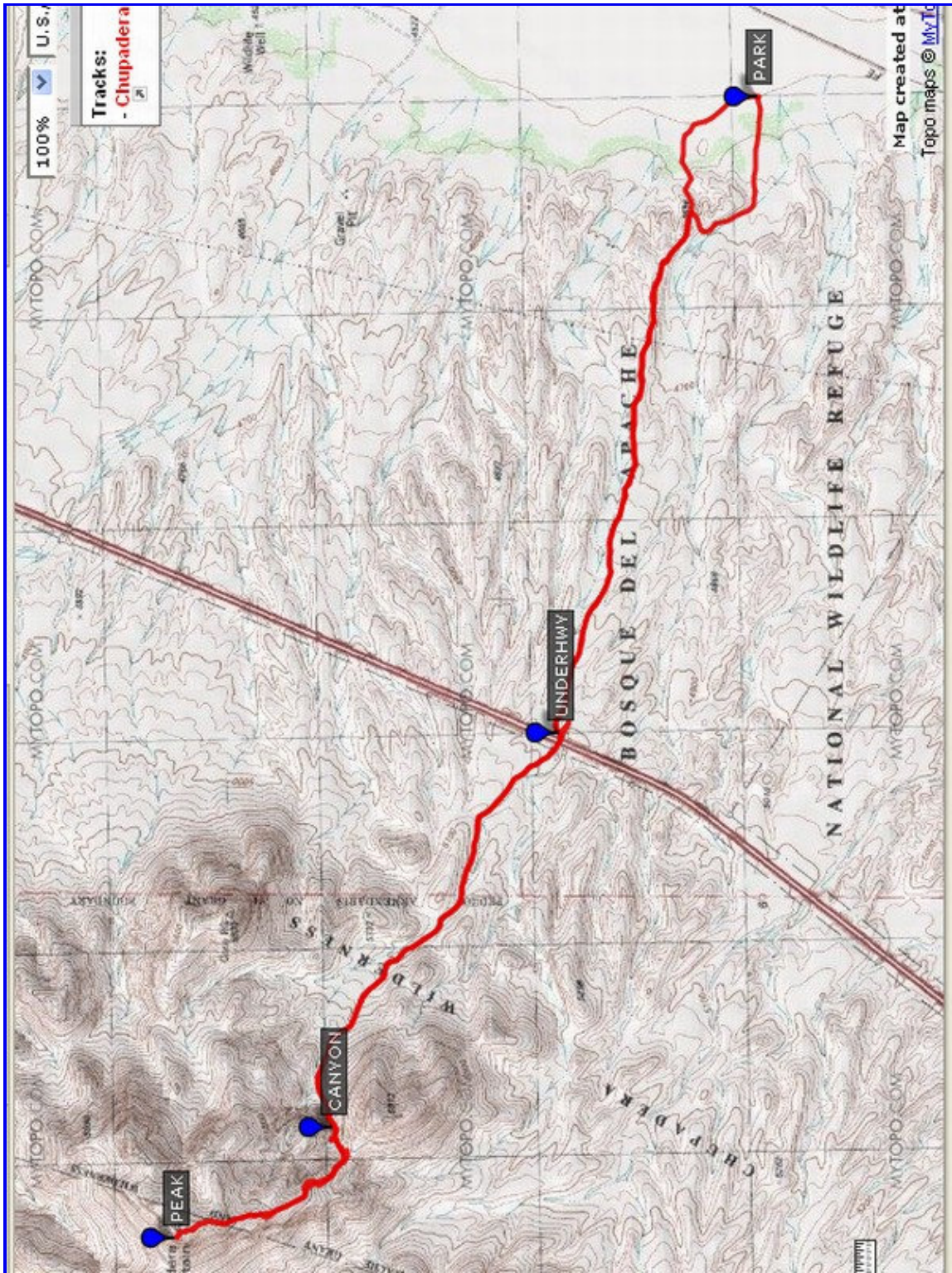
1. Click on "Make a Map" near the top of the screen.
2. Depending on whether you expect the map to look better vertical or horizontal set the dimensions as 600x800 pixels or 800x600 pixels, respectively.
3. Set the Full screen mode option to "Yes".
4. Set the Initial map type to one of the topo choices, such as "USGS topo."
5. Set the Units to U.S.
6. Set the default color of the track to red (the convention for our hike descriptions).
7. For Waypoint Labels, choose "Names appear as permanent labels".
8. Set the default marker color of the waypoints to blue.
9. Leave all the other options at their starting values.
10. On the right-hand side of the screen, under "Upload your GPS data files here", select the "Browse" button for File #1.
11. Find the location on your hard drive of the .gpx file you want to map, and click Open. The file path will appear in the box next to the "Browse" button.
12. Click on the button "Draw the map" below.
13. The map will open in a new window. (For a short period of time, the map can be downloaded by clicking on "download" from GPSVisualizer.com.)
14. Click on the download link, and choose a place on your hard drive to store the map file. It will be an .html file, not a .jpg file.
15. Go to the file location, and double click on it to open it. It will be an interactive map.
16. Zoom in or zoom out using the + and – boxes on the upper left of the screen, or right-click on the map

and drag it up and down or side to side to get the whole track shown and positioned evenly on the screen.

17. To make a .jpg file on a PC, load the image into the clipboard by: holding down the Alt key and at the same time press the Print Screen key (at the upper right of the keyboard).
18. Start an image editing software program.
19. See [for options for cropping, resizing, and saving the map image on a Windows PC.](#)



[What you're after is a JPEG image, 600x800 pixels, with file size no larger than 300 KB. You should be able to get something like the image below.](#)

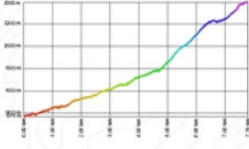


Draw an Elevation Profile and Determine Maximum and Minimum Elevations

Steps:

1. Click on "Draw a Profile" near the top of the screen.
2. Choose PNG as the output format.
3. Choose Profile width as 600, Profile height as 450. (Change these later if you wish.)
4. Choose Units as U.S. (to get feet).

5. If you're going to save the elevation profile to post it on the hike's supplemental page, add a title using the hike name (e.g., Bear Canyon Arroyo Hike).
6. If the .gpx file includes elevation data, you can use that. For Add DEM elevation data, choose the default of "No." If the .gpx file does not include elevation data, select "USGS NED1" as the option.
7. For Track/line options, under "Include waypoints, if possible," choose "Yes, with vertical labels."
8. Under "Upload your GPS data files here", click the "Browse" button next to File #1 and select the file from your hard drive.
9. Scroll down the page and click on the button "Draw the Profile" on the lower right-hand side of the screen.



Draw a profile

This form is for plotting profiles -- e.g., elevation profiles -- from GPS tracks. You can choose the units for both the X and Y axis. The most common settings are X=distance and Y=altitude, but in fact you can make a graph of any field that's part of your data.

If you have a file that does not contain any elevation information (or the URL of a route you created using Google Maps' driving directions), you can add altitudes to your points using the new feature labeled "Add DEM elevation data" ([read more about elevation](#)).

General parameters show advanced options [+]

OUTPUT FORMAT: PNG -- better than JPEG for profiles

Profile width: pixels Profile height: pixels

Profile margin: pixels (added to width & height on all sides)

Units: U.S. Title:

X-Axis: Distance X divisions:

X min.: X max.:

Y-Axis: Elevation Y divisions:

Y min.: Y max.:

Add DEM elevation data:

Upload your GPS data files here:

(Total size of all files cannot exceed 5 MB)

File #1 BearCanyonArroyo...g_ed500Babel.gpx

File #2 No file selected.

File #3 No file selected.

[Show additional file input boxes](#)

Draw the profile

 Open in new window

Or type/paste your data here:

latitude, longitude, altitude

Force plain text to be this type:

Or provide the URL of data on the Web:

Or draw a cross-section between two points:

Point 1: Point 2:

Number of trackpoints to interpolate:

Track/line options show advanced options [+]

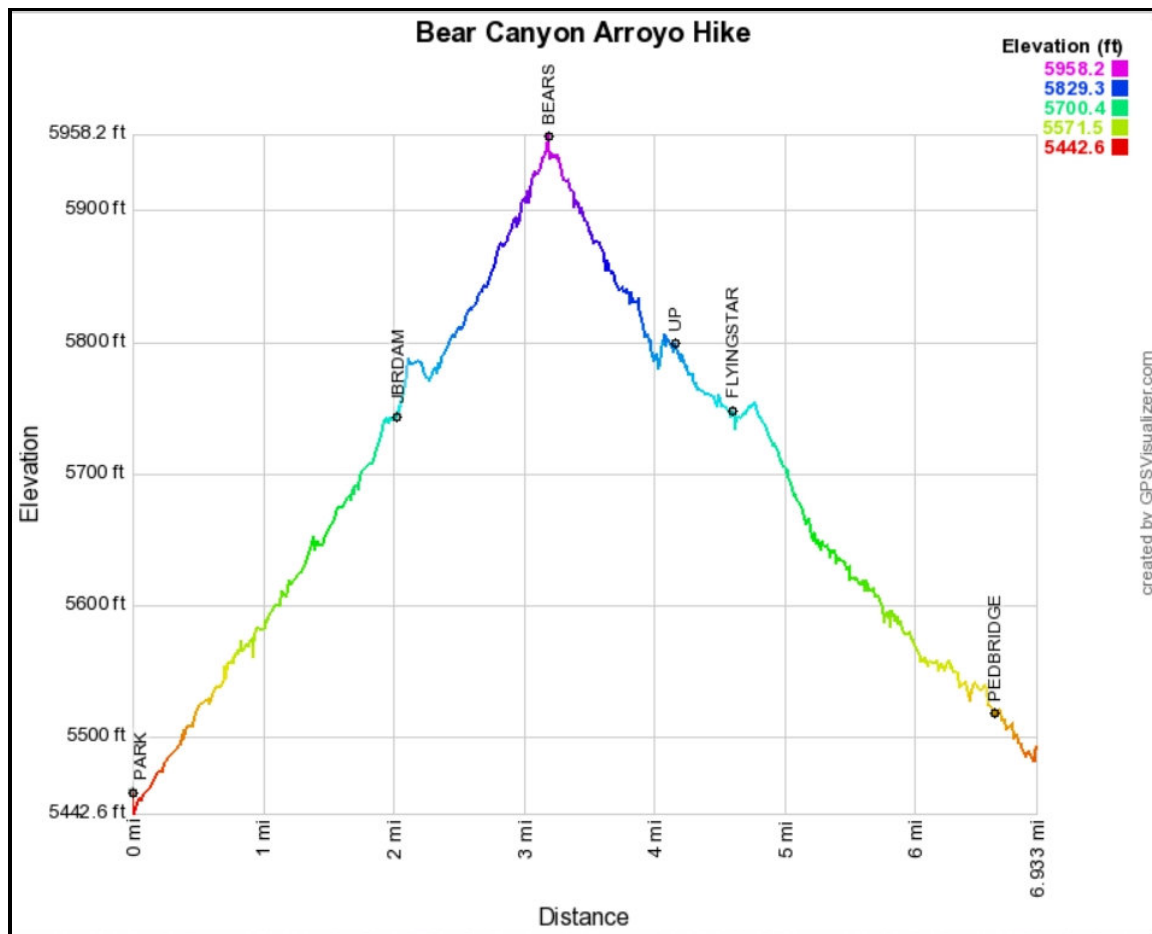
Drawing mode: Line width:

Colorize by: Elevation Min: Max:

Cumulative distance: Track dividers:

Include waypoints, if possible:

10. The elevation profile appears.
11. The minimum elevation will be the number listed at the lower left side of the elevation profile, while the maximum elevation will be the number listed at the upper left side. The track length in miles will be listed at the lower right side.
12. Export the image file. You can choose



Determine Distance Along the Track

You can use the elevation profile above to estimate the distance of each waypoint along the track from the starting location.

Draw Tracks and Waypoints on a Topo Map

This comes in handy if you want to plan an exploratory hike.

Steps:

1. Click on Draw a Map.
2. In the last line of text before the black bars, find the words "GPS Visualizer's sandbox" that is a link. Click on it.
3. A Mercator projection comes up with a box on the left-hand side of the screen that says "use this box to re-center the map on an address or city". It's actually much more generic than that.
4. Think of a place name close to the area you want to examine. Some that have worked are "Hamilton Mesa New Mexico", "Bernalillito Mesa New Mexico", and "Tomas Baca Well New Mexico"; generally any text that appears on a topo map will work, as well as city names. Even your street name with "New Mexico" added may work.
5. Zoom in using the navigation tools in the upper left part of the screen.
6. When you've verified that you're in the right location, move the map around to find your area of

interest. A number of the trails are indicated by dashed lines, as they are on paper topo maps.

7. Change the default background in the upper right-hand corner of the screen from "Google hybrid" to one of the topo options. Sometimes you'll want to switch backgrounds from time to time, for example, to a Google Earth-type view that shows old roads.
8. Add a waypoint by clicking on the waypoint symbol in the upper right-hand part of the screen, then clicking on the map where you want the symbol to appear.
9. Create a track by clicking on the trk button, then click along where you want the track to go. The software connects your individual clicks for you.
10. When you're finished drawing the track, double-click on the last box to end the track.
11. You can save the results as a .gpx file by clicking on the GPX button, then on the filename, then Save File. The name will be in the form of a string of numbers – string of numbers.gpx.

You can work with this .gpx file as you would one recorded by a GPS.

Add Elevation Data to Track File

Many of the track files posted on the website do not include elevation data. GPS Visualizer can add elevation data to the track file using a Digital Elevation Model (DEM).

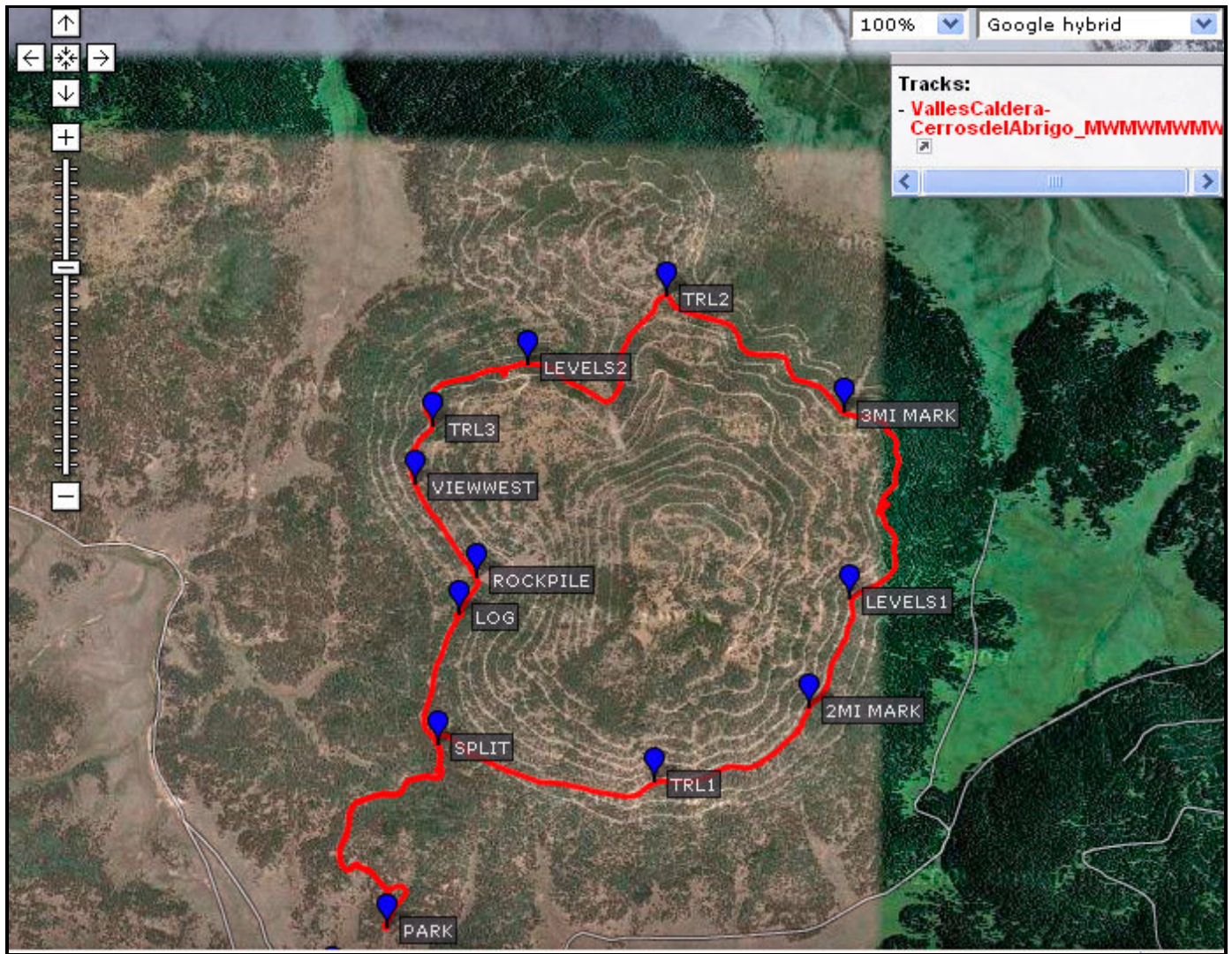
Steps:

1. Click on Convert a File.
2. Choose GPX as the output format.
3. Click on a Browse button next to "Upload your files here" and locate the track file on your hard drive.
4. For "Add DEM elevation data," choose "From best available source."
5. Click on the Convert button.
6. In the new window that opens, click to download the output file and save it on your hard drive.

View in Google Earth

Once you've imported a waytrack file into GPS Visualizer, you can toggle between different views of the data. We've been talking about the topo view, but you can also look at several different aerial views that show roads as well as terrain features.

The following is an example of the Cerros del Abrigo hike in the Valles Caldera. You wouldn't know it from the ground, but the hill has a web of old logging roads which are connected only at a few locations, which is clear from the Google terrain view.



Locate Street Names

If your trailhead is near a populated area, you might want to refer to street names in the trailhead directions.

Switch from a topo view to Google hybrid or Google terrain, and zoom in. You won't necessarily find all the street names, but most of the major ones.