

Heightmap Tutorial Alternative

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Tanagrams.io Method:

[Tanagrams.io](https://tanagrams.io) is another alternative method for dynamically generating height maps



The UI and rendering are much more consistent and user-friendly compared to USGS. The entire map is intractable. You choose what section you'd like to use by simply zooming on the desired area, turning off auto-exposure, map lines, and labels, upping the render multiplier to a minimum of 2, and hitting render. Depending on your internet and server status, you should get fairly consistent images. But, the quality may vary from day to day. Ideally, your resulting render should be relatively near 4096x4096 (if too low, increase the render multiplier), but anything over or a bit under is acceptable, and can be manipulated in Photoshop.

Resulting render of Baja, California



From this stage, we send the image over to Photoshop, or any program that can effectively export an image in greyscale, .raw, 16 bit, IBM PC format. These four attributes are **crucial** for the GECK and/or Tesannwyn to correctly read the heightmap.

Editing tip: adjusting *levels* and adding *gaussian blur* can be crucial in creating a smooth and well-blended landscape generation. It's not an exact science and is something you will have to go back and forth to adjust to your liking.

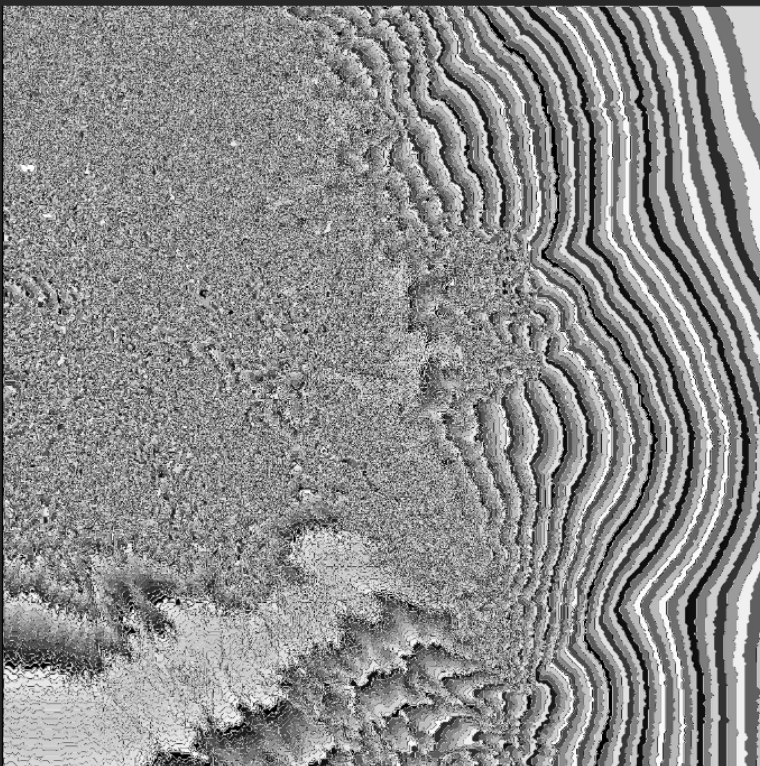
Once this image is imported into your desired editor, resize the image to 4096x4096 pixels. From here, you will cut this 4k image into 4 (1024x1024) squares, each exported separately:

Export Tip: When exporting in photoshop, click: *file\save as copy* - to get the correct exporting option for photoshop .raw files.

-1_0.raw	0_0.raw
-1_-1.raw	0_-1.raw

Once these are exported, and of the correct format, they should each look as follows when opening in Photoshop:

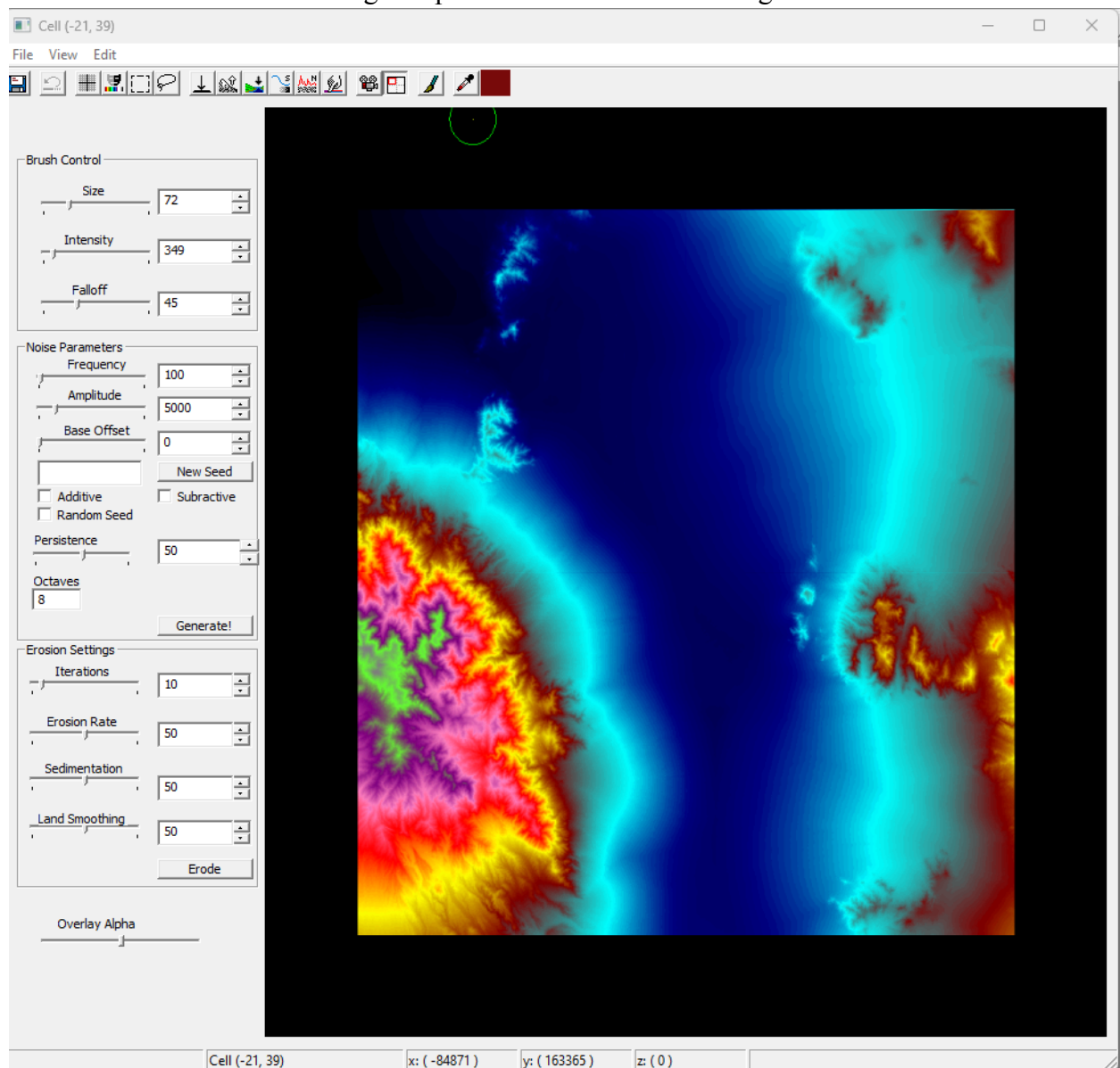
Heightmap of a mountain near Las Vegas



From this stage, we're ready to open it up in the GECK. But first, add a folder titled "HeightField" inside of your desired game's *data* folder. Place the four coordinate named .raw files inside, and boot up the GECK.

Once you've booted up the GECK, create the desired world space on your desired plugin and save. Then, go to World / Heightmap Editing / *YourWorldspace* and click *ok*. If everything was done correctly, you should end up with your desired heightmap on the heightmap editor:

Heightmap of a mountain near Las Vegas



From this stage, you will have to use erosion and noise parameters to *tweak the living hell* out of the heightmap data. When you've reached your desired state, click the blue save button in the

top left to generate the terrain.

Many nuances have been left out of this tutorial, for brevity's sake. But, the tricky parts are covered. As nice as heightmapping is, it's still far from perfect due to the downscaling involved in video games. No matter how perfect of a heightmap you have, manual editing will still be necessary. Think of this as a supplemental start to a worldspace, not a replacement. The skeleton of your terrain is here, but you'll need to flesh it out to make it a playable space.

