

Making maps using Photoshop

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PHOTOSHOP: MAP MAKING : BASIC BLACK AND WHITE / ALPHA CHANNEL MAP FOR LATER MAP TUTORIALS
SKILL LEVEL : BEGINNER

ABOUT: TO CREATE FICTIONAL MAPS (though you can use these methods on real world ones) HISTORICALLY, COAST LINES ON MEDIEVAL (AND EARLIER) MAPS WERE NEVER AS ACCURATE AS THE ONES I'M MAKING HERE - WHICH ARE MORE OF WHAT YOU'LL GET FROM MODERN DAY SOURCES. YOU CAN STILL ACHIEVE THE MORE AUTHENTIC LOOK BY USING THE ERASER AND BRUSHES OR FILTERS TO BREAK DOWN THE DETAILS. THIS IS ORIGINALLY TO SHOW PHOTOSHOP TECHNIQUES TO MAKE SOMETHING QUICKLY AND EFFECTIVELY WITH SOME ARTISTIC LICENCE.

FOR REFERENCE, RESEARCH AND [FURTHER READING](#) HISTORICAL AND FICTIONAL MAPS HERE ARE SOME LINKS IF YOU'LL LIKE TO GET SOME IDEAS BEFORE YOU START...

HISTORICAL: [ODDEN'S BOOKMARKS](#) / [INTERNET MEDIEVAL SOURCEBOOK](#) / [MAPS OF THE EARLY MEDIEVAL PERIOD 400-1300 A.D.](#)

FICTIONAL : [LEGOLAS' FANTASY AND MEDIEVAL MAPS](#) / [MAP-A-WEEK](#)

If you're not a complete beginner, or want to skim through all the detail explanation, I've **highlighted** the key parts, so just look out for those.

THE FINAL RESULT:



This is the final image, black for the land and white for the sea. You can work the other way around, I found it easier to read this way. All the other maps I've done use this process as the foundation, so its good to start here if you're new to PhotoShop. (Larger image at end of tutorial)

Creating the basic image

1.0: Open Photoshop and create a new document

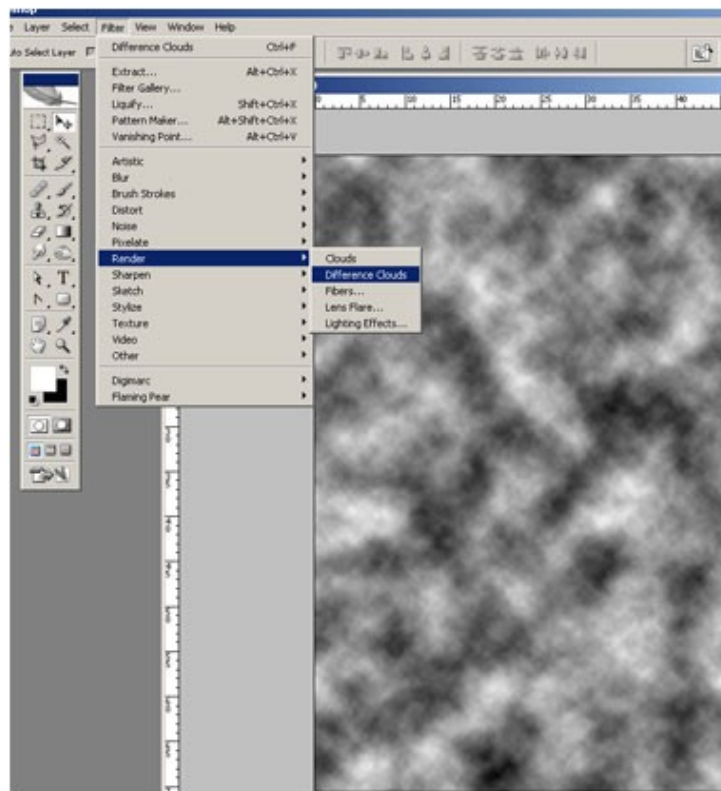
File > New > Name it. > size dimensions: Width 1300 pixels and a Height 2000 pixels.

Resolution for mine is left at 72. You can put in any dimensions or resolution you like, these are the ones used in this tutorial which is roughly based on a page for a novel. If you want double page, then simply double the width as you expect. The higher the pixel resolution, the more detail you can put in and the sharper it will print out. Print for magazines and posters is usually at 300ppi

1.1: Select your new file. Make sure you have the default black and white as your colours. It doesn't matter which are foreground or background. You can click on the mini foreground and white background icon to reset to default colours.

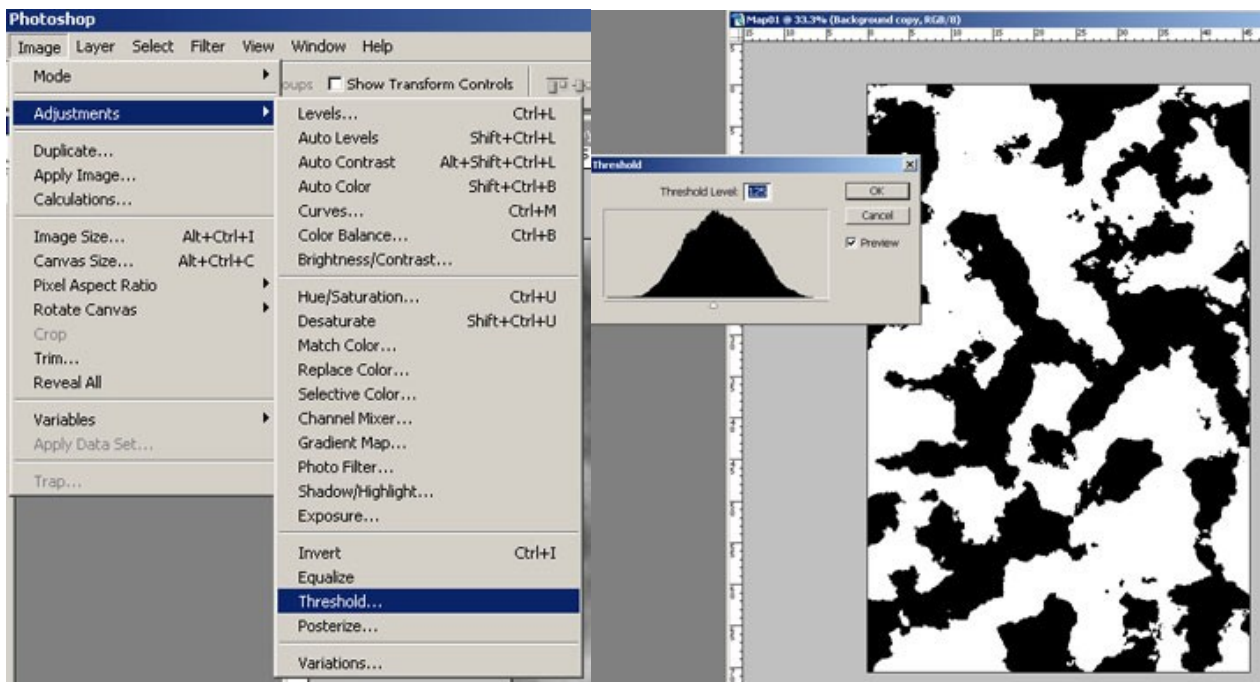
Filter > Render > Difference Clouds

You can repeat this a few times if you want more complexity. **Ctrl+F** is the short-cut to repeat your last selected filter. We will come back to this for other map tutorials. For now I'll stay with just the once because it will be enough.



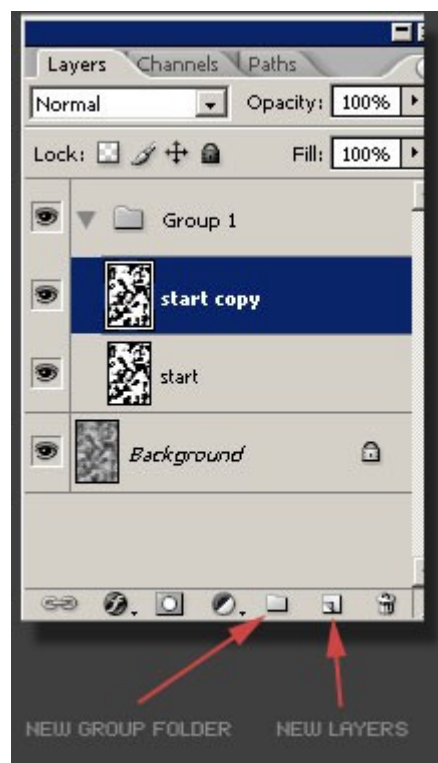
1.2: Image > Adjustments > Threshold

Use the slider to get the kind of detail you like. (see images below) I concentrate on the black as the land mass and the white as the sea at this stage. I haven't moved too far from the middle, moving it a touch so I get a bunch of small islands as well as the main land.



1.3: We are going to use this image a few times later on so we need to preserve it.

In your layers palette, name it something and **duplicate** it. You can do this by L click and drag to the **new layer** icon. I also created a **new group to keep things tidy for later**. You can do this by clicking on the folder icon and then **drag your files into the folder** on your layers palette.



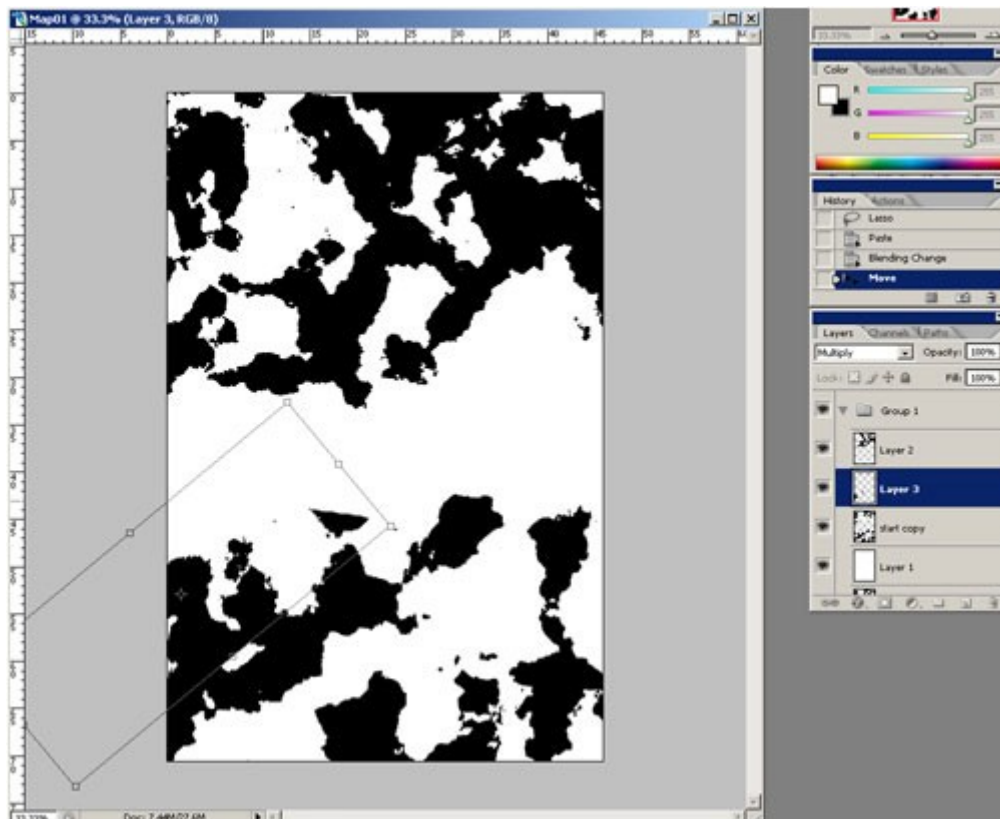
1.4: Create a new layer between the two you have in 1.3. Fill it in white. Now **go to the layer above**, select your **lasso tool**. **Draw around areas you like**. When you have your selection, cut it out and paste it back down (**Ctrl+X, Ctrl+V**). it pastes it to a new layer

1.5: In your Layers Palette, change the blending from "Normal" to "Multiply". Use your Move tool to **position your section** of land anywhere you like. You can use the layer you took it from to help you be more creative by overlapping bits, giving you more ideas.

This part can take time depending on what you're after. You can click back to the original version or your copy, continuously cutting and pasting sections to build up your map. Try and **concentrate on coastline and islands, later we'll be filling the bigger land masses**, so you just need to make a mental note for now. I let the map create itself and what 'feels right'.

Don't forget you can also **use your transform tools to flip vertically, horizontally or rotate**. Try not to use scale tools to scale up, though. it will pixelate the image and you won't have a consistent map. If you want more detail at this stage, best start again and give yourself a higher resolution image.

Transform tools can be found at **Edit > Transform > Rotate (or flip)**



1.6: If you're drying up with coastline, simply create another document the same resolution as your first (size dimensions don't need to be the same) and **go through 1.0 to 1.2. Chop bits out and paste them into your first map**.

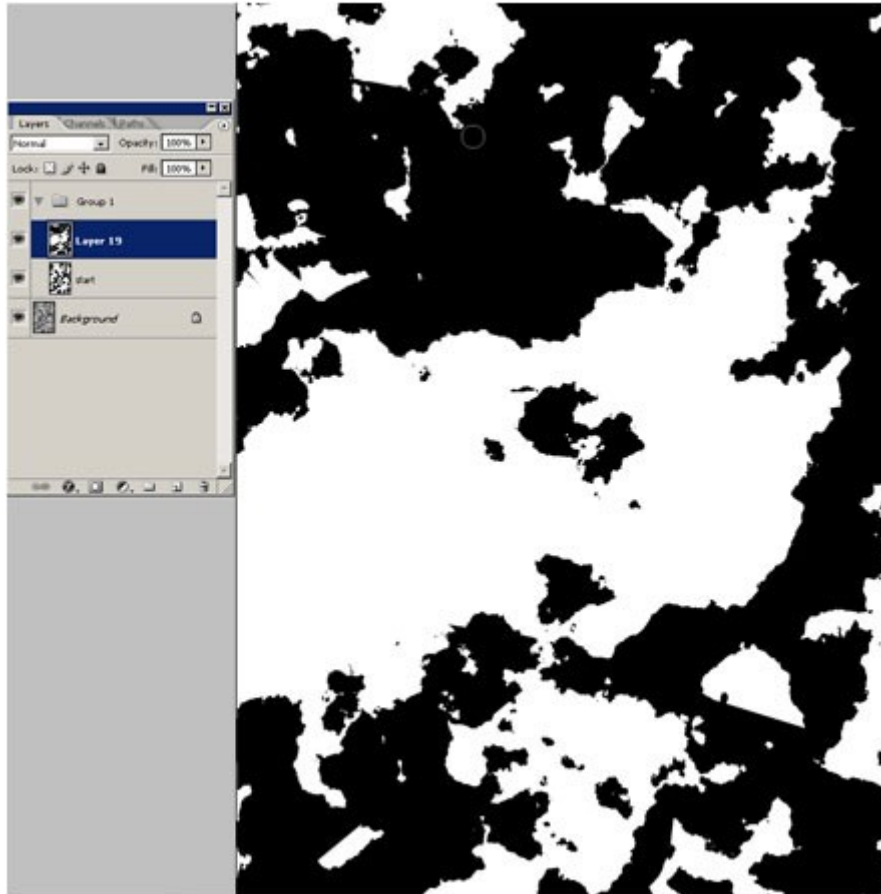
Play around with both Normal and Multiply layer blending, see what happens. You can erase bits of the layers away to create small features on your map, but try not to have the hard edge the eraser can make. If you find you have one, paste a long bit of coast line over the top.

It's also worth thinking about the purpose of your map at this stage. **Create natural harbours or points of interest where opposing forces would wage a war over strategic locations. Most Civilizations start up around rivers and coastlines, so its good to put some forethought in.**

For more authenticity, you might want to think back to prehistory of your creation. How the continents moved. This tutorial is closer in, so it's more where land has been flooded. It's not wrong if you don't think about all this stuff now because you can always change it later if you want to. If you are interested in this bit - grab your nearest atlas and have a look there for ideas.

I ended up with 19 layers and created about 4 - 5 other documents as mentioned above, continuously chopping and moving rotating about. I then **merged all these layers together onto my white background. Still keeping the original, just in case I need it later.**

1.7: Easy bit. Select your **brush tool, black as your colour and fill in those land masses.** You can leave areas that could be lakes and inland seas. If you don't have those, don't worry we're onto those next!



1.8: Lakes

Repeat steps 1.0 to 1.2 but this time on the Threshold play around with it so you have lots of lake looking bits. "OK" it, then use your magic wand tool to select the white areas. Cut it out and paste it over onto your map document in an area you like. Repeat until you're happy. (see images below)

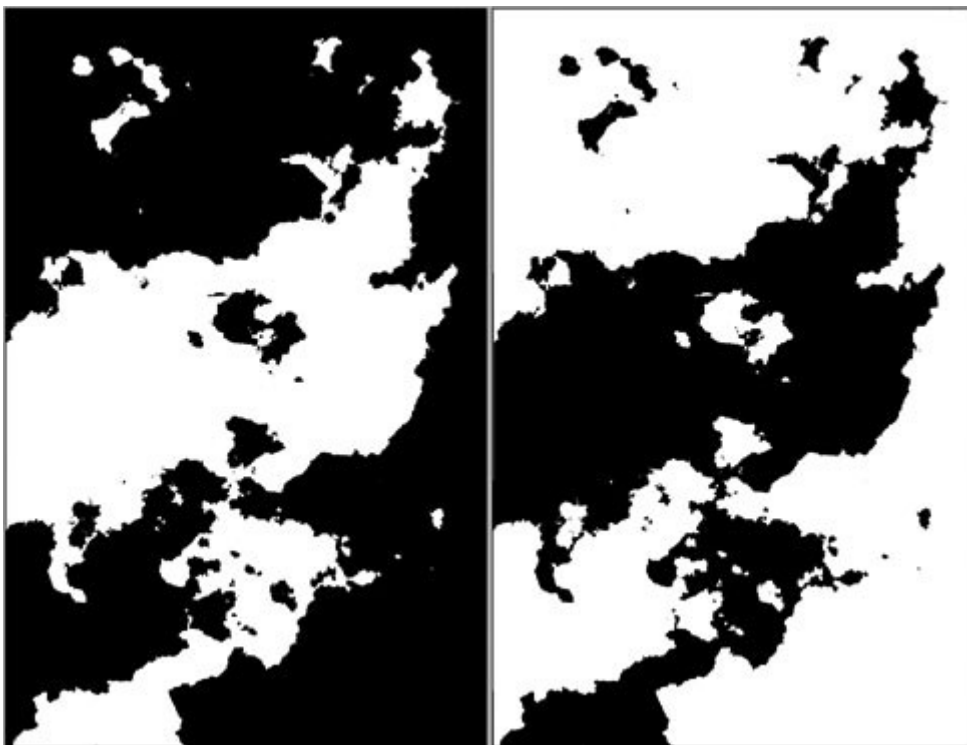
You'll soon discover that you can also use this part to create more interesting bits on your coastlines, not just lakes. You can create natural harbours or re-arrange the coast line. You can scale, rotate - but only scale down, *not up* or you'll have resolution issues. If you want a bigger lake, you can join parts together or do this part again and use Threshold.

You can also go back to your first threshold layer (1.2) and Image > Adjustments > Invert if you spotted any cool shapes.

Create a new layer behind the one you're working on and fill it with black might help you if you're chopping and moving your lakes around on your merged layers.



1.9: When you're done merge down again so you have your new map! Even now you could Image > Adjustments > Invert to change the map.



Normally white would be used as high ground and black as low ground (this is explained in a later tutorial) I like to use black as the land as a personal preference for me, as I find it easier to read – totally up to you though. If you do choose to invert, then you will need to remember what you have as high and low in the remainder of this tutorial.

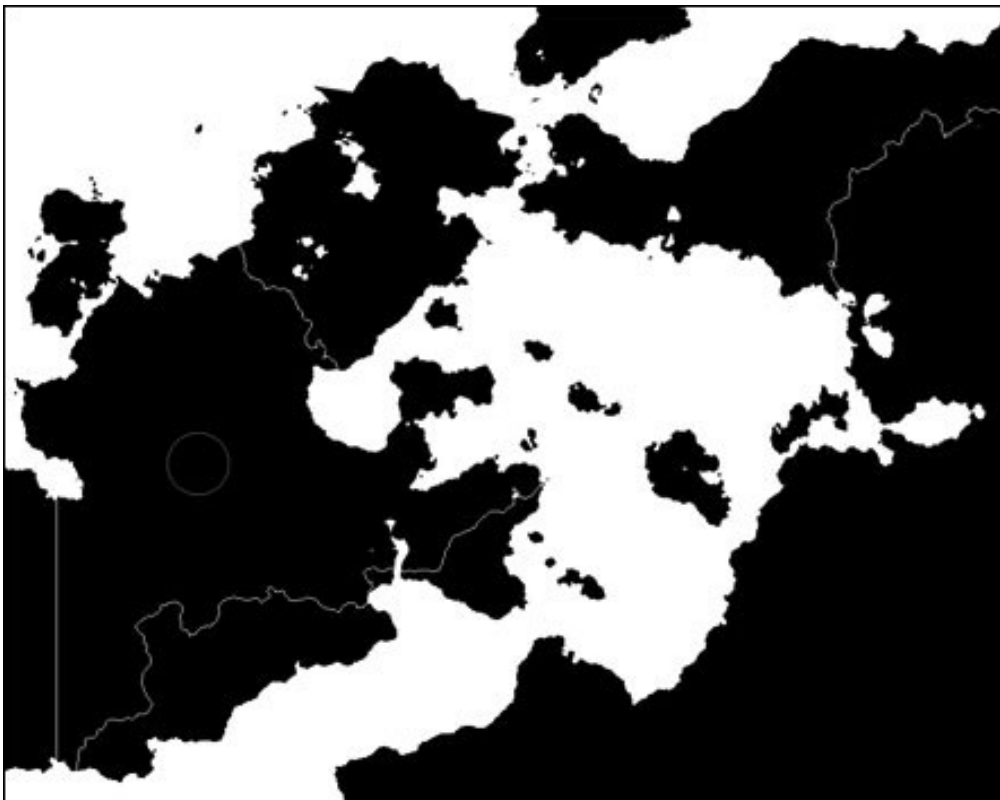
2.0 Territory boundaries and rivers (optional)

To create territorial borders, go back to your first image mentioned at step 1.3. Using your magic wand again click on a black area. While you have your selection, create a new layer above your cool looking map and activate it. Make sure you have white as your foreground colour.

Edit > Stroke > 1 pixel

2.1: Deselect (Ctrl+D) and using your move tool, move your layer around your map to section off your territories where you want them. Erase, cut and move, rotate where you see fit. You can even use the edge of the document stroke as straight line to make hard line boundaries as you get in American states.

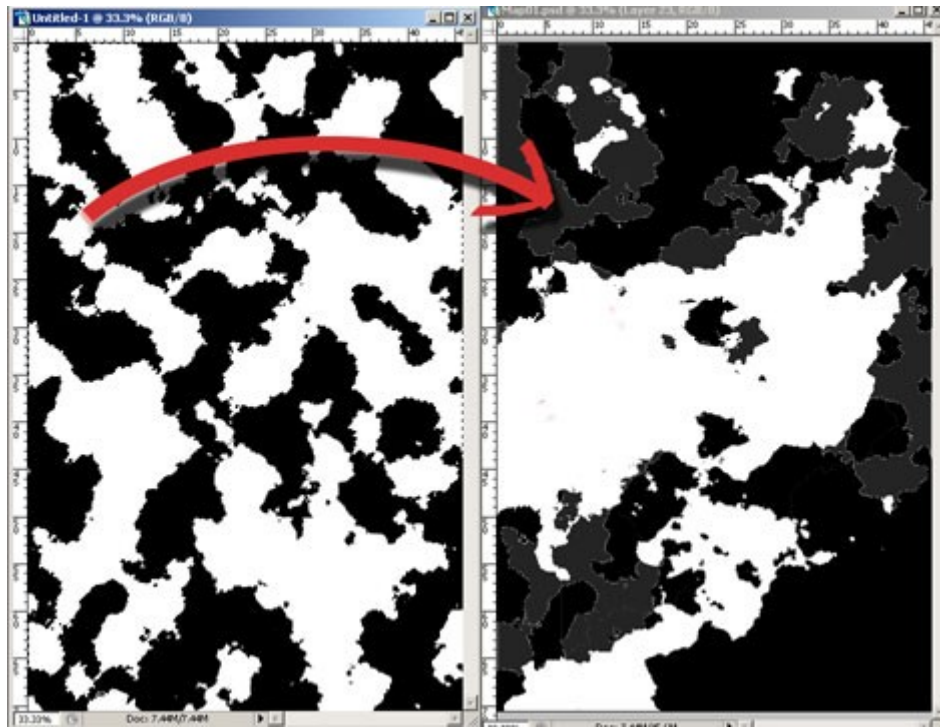
Reduce the opacity to about 20%.



2.2: For rivers you can do a similar process. Do the same thing you did above for the territories. This time think about the river shapes you need, so you'll probably want to avoid making small islands and instead try going for more simple coastline shapes.

Using your magic wand selection tool, copy and paste the areas you like over to your map. Then with the new layer (on your map) active and while selected, Stroke it with 1 pixel. If you want bigger rivers then while you have this all selected create a new layer and the repeat by stroking it with more pixel weight, say 3.

(illustration below shows copied image at about 10% opacity so you can see what I'm doing. Normally I wouldn't do this.)



Now work into these layers by **chopping bits up and moving them about so your rivers branch off**. You can use the same bits elsewhere on your map, rotating them or flipping them won't be noticeable at a glance, but if you do want to be unique, then keep repeating the above until you're happy.

If you do want thicker rivers than smaller ones, then I would suggest 3 levels - one of each pixel weight and, so you're not overwhelmed by all these, break it down by concentrating on the thickest to thinnest at a time and delete anything you don't want with your eraser. Sometimes it's worth checking the atlas or NASA satellite images to see how nature does it to make it more convincing.



When using the eraser make sure the Mode is set to Pencil or that you have a solid brush. This way the bits you delete will be crisp and clean, with a soft, fall off brush, it'll give a grey scale falloff which won't give you the best result later when adding the smaller bits. If you chop up the stroke layers into smaller sections, so you can lasso around them and move them over the ends of the larger river mouths you just made, it's much more manageable.

Once you have all the rivers sorted out like above, merge those layers, duplicate it. Put the bottom's opacity down some way and this time use your eraser on the top one with a brush tool and a soft, fall off brush. partly delete away the harder, brighter inner rivers. Leave the parts near to the coastline. Using two layers helps preserve the rivers in case you want them again.

That's about it! You can go into as much detail as you like. This is probably not spot on in true geography terms, so how much research you want to do is up to you. For us laymen this is fine for our purpose. Here's my finished B&W, Alpha Map. I decided not to use the territory boundaries because I wanted to use the rivers instead. Here's the final result...

