



Hello there, Fellow Survivor!

I'm the Sunshine part of Srsly_Sunshine! If you're reading this, then you're using my SS Terrain modlet! So thank you for that! This is my first ever mod, and my first time coding, and my first yadayadayada, anyways I'm new, so this will be a bit different than most how-to guides that you've probably seen.

Firstly, I'd like to dedicate this modlet to any and all those affected by Covid-19 and the frontline workers that put their lives on the line to help others.

A Special Thank You to a few special people!

TormentedEmu, the super special person who laid the groundwork and gave the generous permission to use her base code to get this mod to work, along with tons of help throughout the process.

Guppycur, for use (*and abuse*) of his modding discord server, helping with this guide and throughout the whole process, and allowing me to use terrain textures that he had previously!

Sphereii, for a lot of coding help, as well as his Legacy Distant Terrain mod that makes this all possible.

Lastly, thank you to TFP for creating a game that has and can give us something to smile at, or rage at, during these trying times.

Onwards to the mod stuff!

To use SS Terrain, you should be able to just drop it into your mod folder, make sure you have Sphereii's Legacy Distant Terrain Modlet **and that EAC (Easy Anti Cheat) is OFF**, and you're good to go!

SS Terrain requires Sphereii's Legacy Distant Terrain mod in order to function. It can be found here:

<https://gitlab.com/sphereii/Spherell-Mods/-/archive/master/Spherell-Mods-master.zip?path=Spherell%20Legacy%20Distant%20Terrain>

SS Terrain does use harmony and csharp in order to edit, append, and patch the original game files. There are no other mods that currently edit these files, so there shouldn't be any conflicts.

Currently there are 80 Terrains included within this modlet. However, you can also add your own...

Adding your own Terrain Texture

In order to add your own Terrain Textures, you will need *basic* knowledge of Modding, Unity, and XML.
Unity version 2020.3.24f1 is required.

Start by using a program like AssetRipper to have access to SS_Terrain.unity3d within Unity.

**For each texture you want to add, you need to have a base texture, a normal map, and a specular map.
They must be the same size. PNG is the recommended file type.**

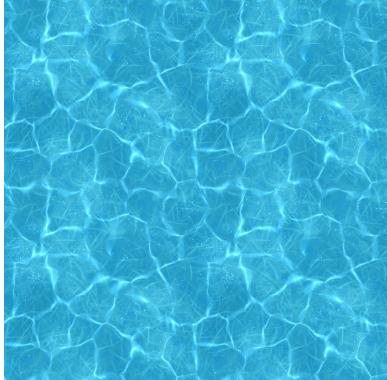
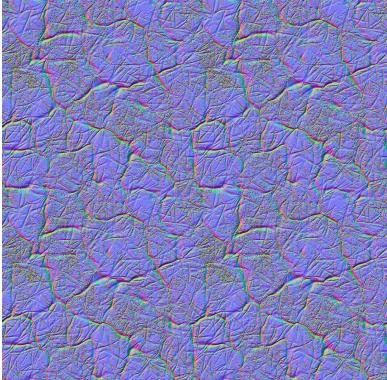
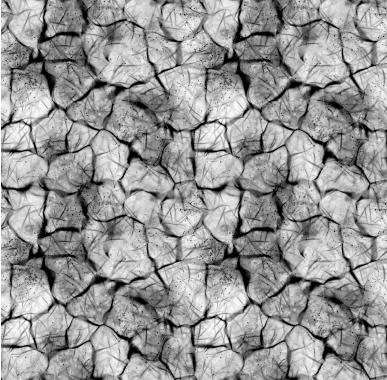
These must be named as follows

Texture.PNG → Base Texture

Texture_n.PNG → Normal Map

Texture_s.PNG → Specular Map

This is an example as to what your different textures should look like.

Texture.PNG	Texture_n.PNG	Texture_s.PNG
		

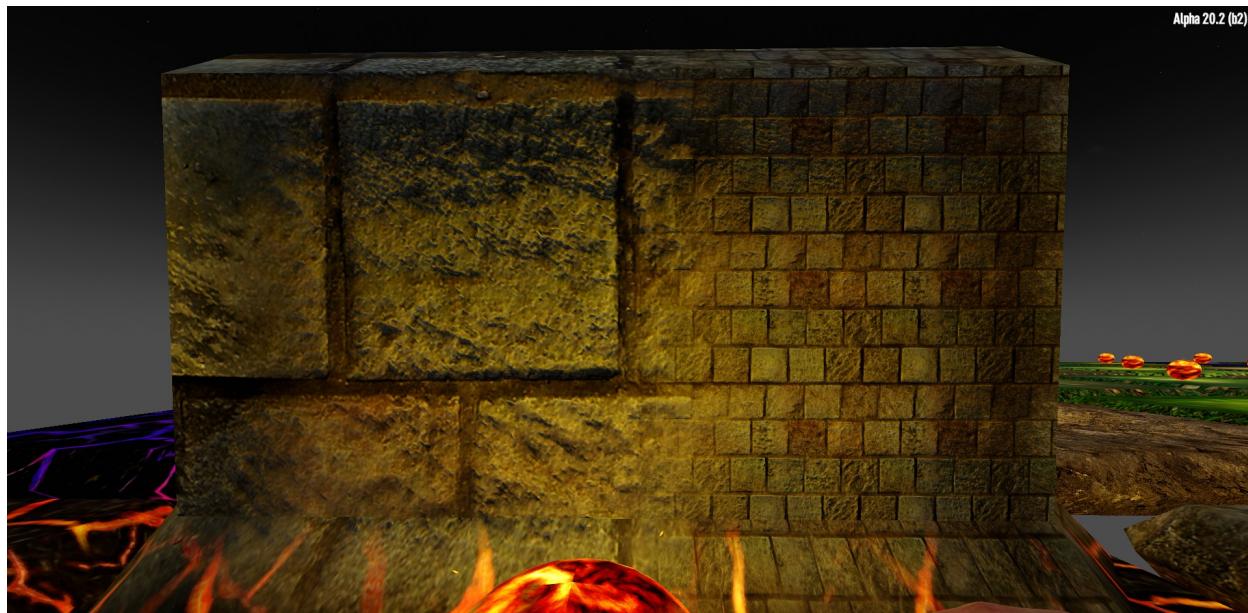
Need a Normal map or Specular map generated?

You can generate a normal and specular map here: <https://cpetry.github.io/NormalMap-Online/>

Preparing Your Textures

Textures must be pre-tiled. Pre-Tiling is essentially manually scaling the texture. The different sizes I recommend are 2x2, 4x4, or 8x8. (8x8 will show the entirety of your singular texture on one block worth of space) but you can play around with this to find what you like.

Below is an example of tiling... The left is what happens when you don't tile a texture. The right is what happens when you do. Tile your textures appropriately in order to make them look right. Trial and error goes a long way. The texture on the left was not tiled, the texture on the right was tiled at 8x8.



1) Select image in BMP, GIF, JPEG, PNG, TIFF format:

 Choose File No file chosen

The program I use to tile textures:

<https://www.imgur.com/eng/check-texture-tile.php>

- 1) Choose your texture file
- 2) Select your scale
(2x2, 4x4, 8x8)
- 3) Output should be PNG-24

Press OK and wait for it to complete.

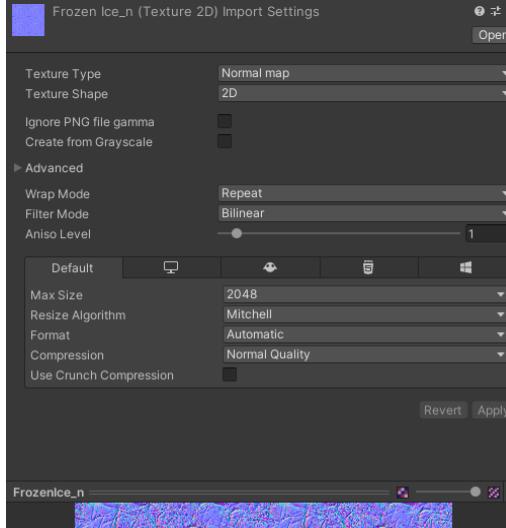
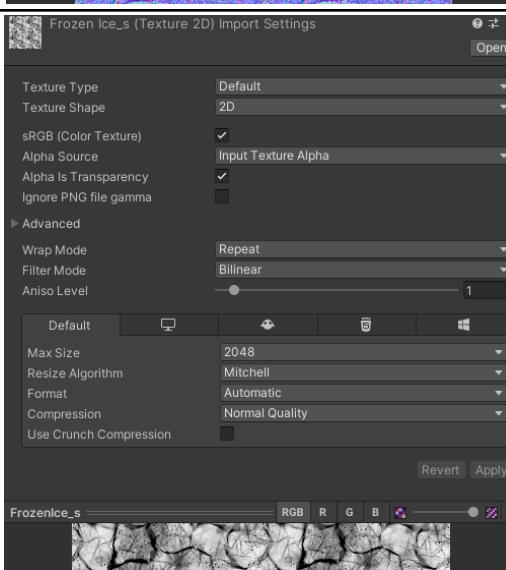
Then click “Download Processed Image”

Bringing Your Textures into Unity

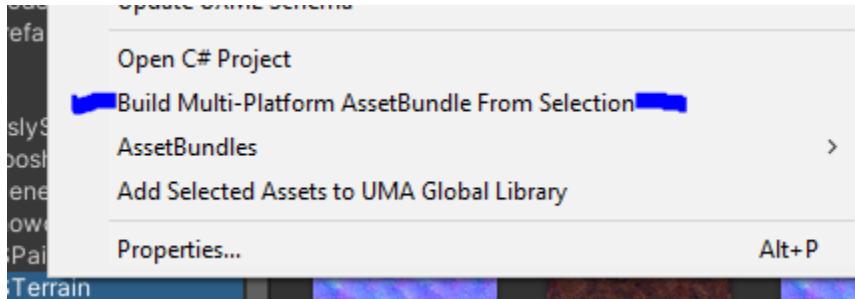
Once you have your Base Texture, Normal Map, and Specular Map, it's time to bring them into Unity.

Within Unity, add your PNGs into the SS_Terrain folder.

Click on each one and set them to the following settings:

 <p>The screenshot shows the 'Frozen Ice_n (Texture 2D) Import Settings' window. The 'Texture Type' is set to 'Normal map' and 'Texture Shape' to '2D'. Under the 'sRGB (Color Texture)' section, 'Input Texture Alpha' is selected as the 'Alpha Source'. The 'Alpha is Transparency' checkbox is unchecked. In the 'Advanced' section, 'Wrap Mode' is set to 'Repeat', 'Filter Mode' to 'Bilinear', and 'Aniso Level' to 1. The 'Format' is 'Automatic' and 'Compression' is 'Normal Quality'. The preview window shows a purple and blue textured image labeled 'FrozenIce_n'.</p>	<h3>Normal Map Texture</h3> <p>Texture type: Normal map Texture Shape: 2D Ignore PNG file gamma: Unchecked Create from Grayscale: Unchecked</p> <p>Wrap Mode: Repeat Filter Mode: Bilinear Aniso Level: 1</p> <p>Compression: Normal Quality</p>
 <p>The screenshot shows the 'Frozen Ice_s (Texture 2D) Import Settings' window. The 'Texture Type' is set to 'Default' and 'Texture Shape' to '2D'. Under the 'sRGB (Color Texture)' section, 'Input Texture Alpha' is selected as the 'Alpha Source'. The 'Alpha is Transparency' checkbox is checked. In the 'Advanced' section, 'Wrap Mode' is set to 'Repeat', 'Filter Mode' to 'Bilinear', and 'Aniso Level' to 1. The 'Format' is 'Automatic' and 'Compression' is 'Normal Quality'. The preview window shows a black and white textured image labeled 'FrozenIce_s'.</p>	<h3>Specular Map Texture</h3> <p>Texture type: Default Texture Shape: 2D sRGB (Color Texture): Checked Alpha Source: Input Texture Alpha Alpha is Transparency: Checked Ignore PNG file gamma: Unchecked</p> <p>Wrap Mode: Repeat Filter Mode: Bilinear Aniso Level: 1</p> <p>Compression: Normal Quality</p>

After that is done, you will need to package it using Xyth's Export Script.



You should overwrite **SS_Terrain.Unity3d** located in SS_Terrain>Resources (Otherwise you will need to unpack and edit the harmony scripts which are equivalent to the finest italian spaghetti)

Adding Your Texture to UVMapping

Next, add your new texture to the SS_Terrain_UV.xml in SS_Terrain>Resources

```
<?xml version="1.0" encoding="UTF-8"?>
<uvmapping>
<!--GRASS-->
<uv id="701" x="34" y="34" w="247" h="247" blockw="8" blockh="8" color="0.2588235,0.2705882,0.1921569" globaluv="True" index="0" material="dirt" texture="forest_ground_basesat.png" />
<uv id="702" x="34" y="34" w="247" h="247" blockw="8" blockh="8" color="0.2588235,0.2705882,0.1921569" globaluv="True" index="0" material="dirt" texture="forest_ground_Aqua.png" />
<uv id="703" x="34" y="34" w="247" h="247" blockw="8" blockh="8" color="0.2588235,0.2705882,0.1921569" globaluv="True" index="0" material="dirt" texture="forest_ground_Blue.png" />
<uv id="704" x="34" y="34" w="247" h="247" blockw="8" blockh="8" color="0.2588235,0.2705882,0.1921569" globaluv="True" index="0" material="dirt" texture="forest_ground_Lime.png" />
```

As far as I know, there is not a limit to the number of textures added, but I have not tried anything above 999.

All you need to do here is assign a texture ID (usually the next number in the sequence) and set the “texture” to be the name of your texture within unity.

Make sure you keep in mind what your texture ID is, as you will need it for making your block.

Creating Your New Terrain Block

Here, you should create a block following the same structure as the ones already present. You can add all the normally available block properties to this, however you will need to include the following line

```
<property name="Texture" value="701"/>
```

Where 701 is your texture ID from the UV mapping xml.

It is also important to put Terrain for both Shape and Mesh.

Here is also where you should put a map color for your terrain block.

```
<block name="FG_Base">
    <property name="Material" value="MforestGround"/>
    <property name="NoScraping" value="true"/>
    <property name="Shape" value="Terrain"/> [REDACTED]
    <property name="Mesh" value="terrain"/> [REDACTED]
    <property name="Texture" value="701"/> [REDACTED]
    <property name="TerrainIndex" value="9"/>
    <property name="LPHardnessScale" value="2"/>
    <property name="Map.Color" value="40,73,39"/>
    <property name="ImposterExclude" value="true"/>
    <property class="RepairItems">
        <property name="resourceClayLump" value="14"/>
    </property>
    <drop event="Harvest" name="resourceClayLump" count="22" tag="oreWoodHarvest"/>
    <drop event="Harvest" name="resourceYuccaFibers" count="2" tag="allHarvest"/>
    <drop event="Destroy" count="0"/>
    <drop event="Fall" name="resourceClayLump" count="44" prob="0.187" stick_chance="0"/>
    <drop event="Fall" name="FG_Base" count="1" prob="0.25" stick_chance="1"/>
    <property name="CanMobsSpawnOn" value="true"/>
    <property name="EconomicValue" value="5"/>
    <property name="EconomicBundleSize" value="1"/>
    <property name="SellableToTrader" value="false"/>
    <property name="FilterTags" value="MC_outdoor,SC_terrain"/>
    <property name="SortOrder1" value="d0k0"/>
    <property name="SortOrder2" value="0050"/>
    <property name="DisplayType" value="blockTerrain"/>
</block>
```

Optional Steps:

ItemIconAtlas

If you want an icon for your block (which generally you do) you will need to head over to SS_Terrain>UIAtlases>ItemIconAtlas and add the image there. Conveniently, if you name the block(in blocks.xml) the same as the icon you want to use for your terrain block, then the game will automatically pick it up and you won't have to point the block to the image.

For example, I named a block "Cliff" and added the image "Cliff.PNG" - The game then automatically assigned that icon image to that block.

Finally, Localization.

Generally, you can just copy what I've done there... But you're taking the name you used for the block in blocks.xml and then changing it to something that looks nicer, and giving it a description if you want.

Congrats! Your new terrain texture should be in the game! :)