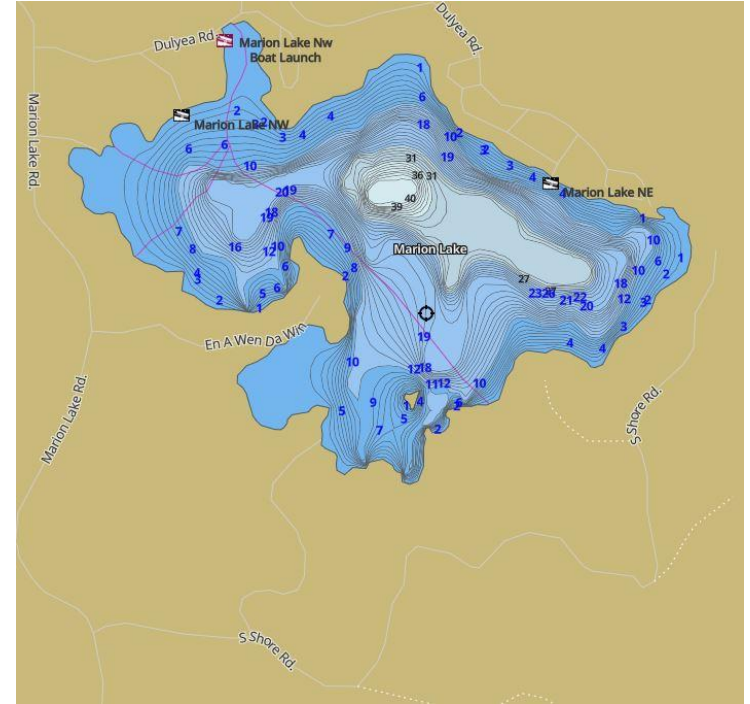


Marion Lake

LEGO Depth Map Instructions



The Finished Product should look something like this...



This LEGO set is made of 36 tiles.
Each tile is 16x16 studs. The top left is labeled 1-1, and while the one to the right of it is 1-2, and below it is 2-1. This pattern continues until 6-6 in the bottom right corner.

This LEGO set requires:

- Dark Blue covering 234 studs
- Medium Blue covering 344 studs
- Light Blue covering 1868 studs
- Brown / Green covering 6770 studs

Covering a total of 9216 studs...

Tile 1-1, 1-5, 1-6,
4-1, 4-2, 5-1, 5-2,
5-5, 5-6, 6-1, 6-2,
6-3, 6-4, 6-5, 6-6

(make 15 of these)

[illegible]

Tile 1-2

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 2 2 2 2 2 2]]
```

Tile 1-3

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 3 3 3 3 3 3 3 3 3 3 2 2 2]
 [2 2 2 3 3 3 3 3 3 3 3 3 2 2 2 2]
 [2 2 2 3 3 3 3 3 3 3 3 2 2 2 2 2]]
```

Tile 1-4

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 2 2 2 2 2 3 3 3 3 3 3 3 3]
 [3 3 2 2 2 2 2 2 2 3 3 3 3 3 3 3]
 [3 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3]]
```


Tile 2-1

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 2 2 2 2]]
```

Tile 2-2

```
[[3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2]
 [3 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2]
 [3 3 3 3 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 1 1 1]
 [2 2 2 2 2 2 2 2 2 2 2 2 1 1 1 1]
 [2 2 2 2 2 2 2 2 2 2 1 1 1 1 1 1]
 [2 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1]
 [2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1]
 [2 2 2 2 2 2 2 2 1 1 1 1 1 1 2 ]]
```

Tile 2-3

Tile 2-4

[illegible]

Tile 2-5

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3]
 [0 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3]
 [0 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [0 0 0 0 1 2 2 2 2 2 2 2 2 2 2 2]
 [0 0 0 0 0 1 2 2 2 2 2 2 2 2 2 2]
 [0 0 0 0 0 0 1 2 2 2 2 2 2 2 2 2]]
```

Tile 2-6

```
[[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3]
 [2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3]]
```

Tile 3-1

[illegible]

Tile 3-2

[illegible]

Tile 3-3

```
[[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 ]  
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 ]  
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 ]  
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 ]  
[2 2 2 2 2 2 2 2 2 2 3 2 2 2 2 2 ]  
[2 2 2 2 2 2 2 3 3 3 3 3 2 2 2 2 ]  
[2 2 2 2 2 2 3 3 3 3 3 3 3 2 2 2 ]  
[2 2 2 2 2 2 3 3 3 3 3 3 3 2 2 2 ]  
[2 2 2 2 2 3 3 3 3 3 3 3 3 3 2 2 ]  
[2 2 2 2 3 3 3 3 3 3 3 3 3 3 2 2 ]  
[2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 2 ]  
[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 ]  
[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 1 ]  
[3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 1 ]  
[3 3 3 3 3 3 3 3 3 3 3 3 3 2 1 ]  
[3 3 3 3 3 3 2 2 2 2 2 2 2 2 2 2 ]]
```

Tile 3-4

```
[[2 2 2 2 2 1 1 1 0 0 0 0 0 0 0 0]
 [2 2 2 2 2 1 1 1 1 0 0 0 0 0 0 0]
 [2 2 2 2 1 1 1 1 1 1 0 0 0 0 0 0]
 [2 2 2 2 1 1 1 1 1 1 1 0 0 0 0 0]
 [2 2 2 1 1 1 1 1 1 1 1 1 0 0 0 0]
 [2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
 [1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1]
 [1 1 1 1 1 1 1 2 2 2 1 1 1 1 1 1]]
```

Tile 3-5

[illegible]

Tile 3-6

Tile 4-3

```
[[3 3 3 3 3 2 2 2 2 2 2 2 2 2 2]
 [3 3 3 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 3 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 3 2 2 2 2 2 2 2 2 2 2 2 2 2]
 [3 3 3 3 2 3 3 3 3 2 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 2 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 2 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 2 2 2]
 [3 3 3 3 3 3 3 3 3 3 3 3 2 2 2]]
```

Tile 4-4

```
[2 1 1 1 1 1 2 2 2 2 1 1 1 1 1 2]
[2 2 2 1 2 2 2 2 2 2 1 1 1 1 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2]
[2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3]
[2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3]
[2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3]
[2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3]
[2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3]
[2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3]
[2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3]
```

Tile 4-5

[illegible]

Tile 4-6

[illegible]

Tile 5-3

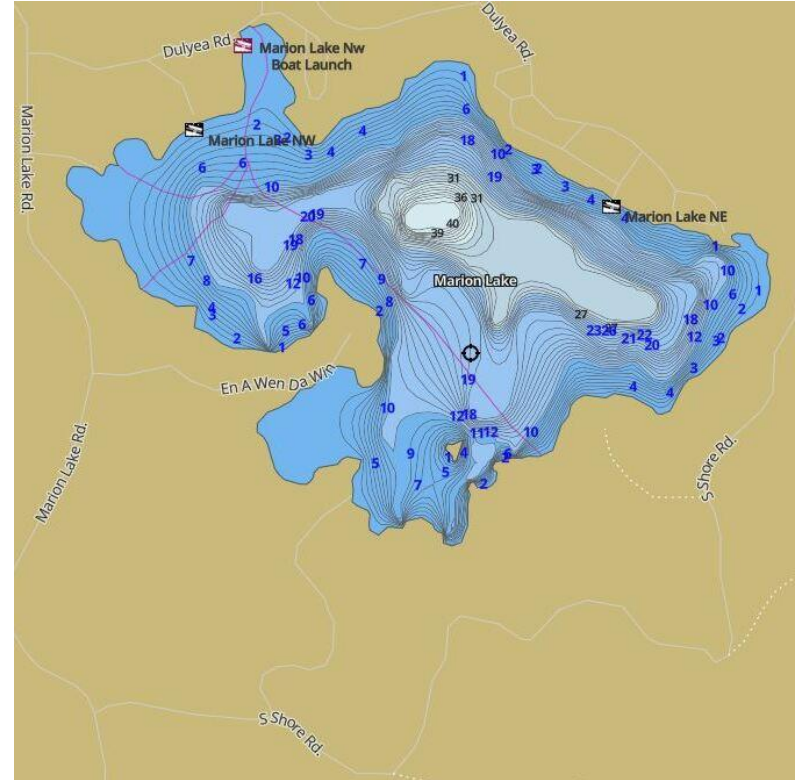
[illegible]

Tile 5-4

[illegible]

How it was made:

First, this square
(672x672 pixel)
screenshot was
taken of a depth map
of the lake.



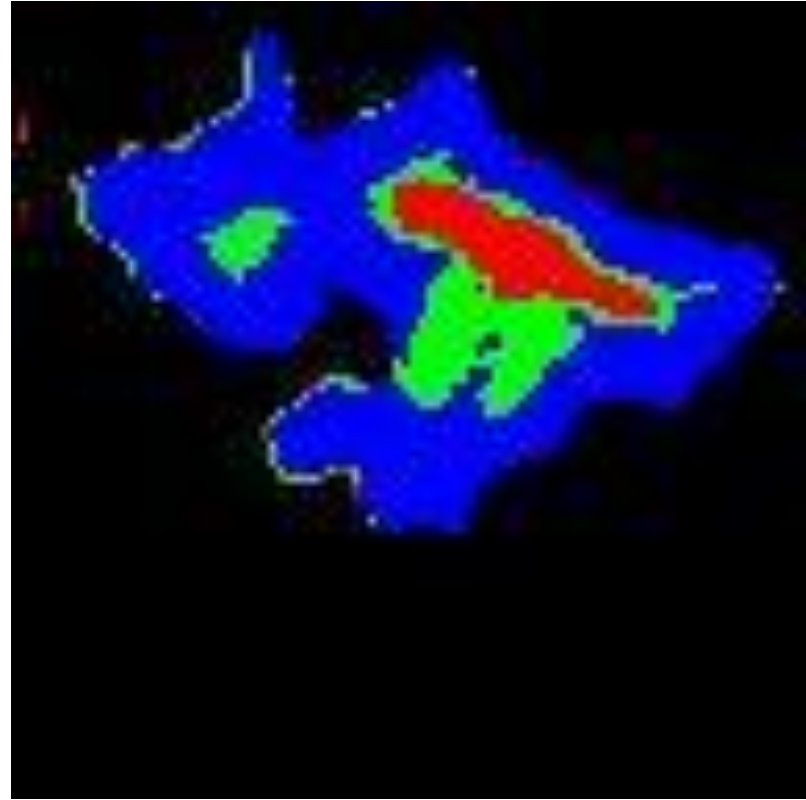
I then took every
7th pixel to
construct this
96x96 pixelated
image of the lake



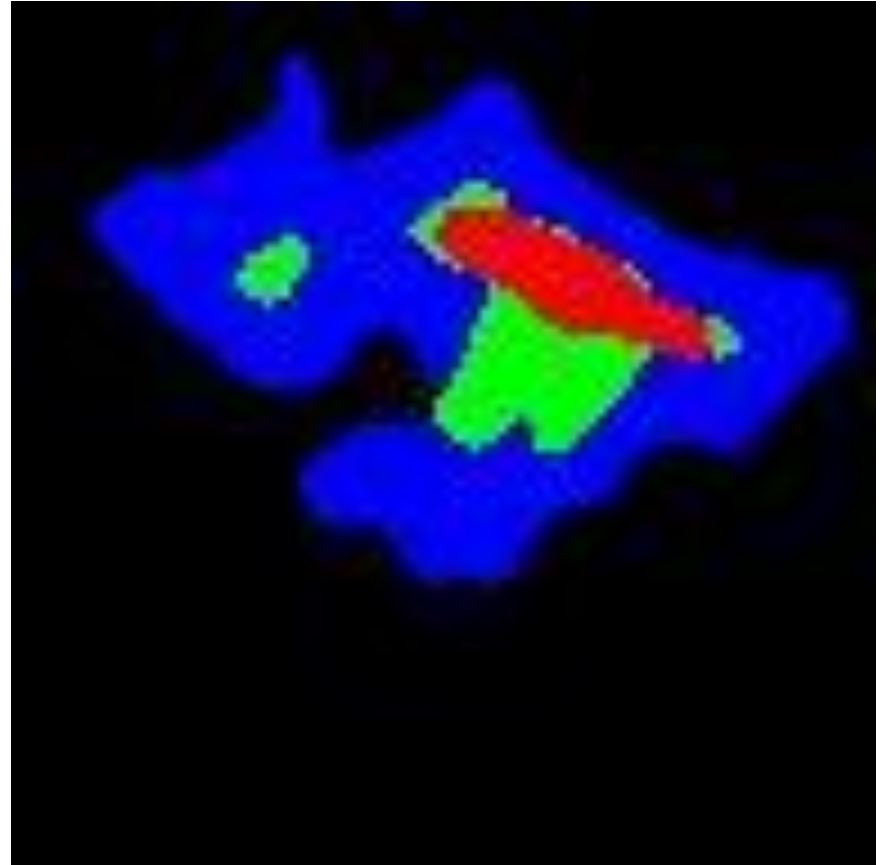
Since obviously that picture would not translate well to a lego set, I used kernel smoothing to eliminate some imperfections.



Next, I mapped each pixel to either dark blue, middle blue, light blue, or tan based on RGB proximity and changed the colors so they were easier to discern



I then changed each pixel to the most frequent pixel in its neighborhood, which removed the remaining imperfections in the map.



Lastly, I mapped the colors back to dark blue, middle blue, light blue, and green to make the map look prettier and more realistic.

