

### Part Two: Begin Planning Your Final Project

I have two water effects I would like to work on for the final project. They are both shown in the picture below. The first effect is water caustics which are created by light shining through the ripples on the surface of water. There are two ways the effect could be accomplished. Using a water shader, a ray could be traced from the normals of a surface of the water to the ground below. While this might work, it could also be performance heavy, so the second option is to apply some form of perlin noise to ground. It would run easier, but the effect may not be as accurate as the first option. The second effect I would like to work on is underwater light rays. The rays are formed when light hits particles in the air or water. After the volumetric rendering lecture, the lecturer suggested using a 3D texture which after some research seem to be commonly suggested for volumetric effects. I'm not familiar with 3D textures, but they seem to have a fair amount of documentation.

As for teammates, I believe I will be working with Buzz Tilford and Gabriel McNeill

