



## Setup

- Create a new material and assign the desired Calm Water Shader.
- Assign the material to your water geometry.
- For best results with displacement your mesh needs to be scaled to [1,1,1] or scaled by import settings.
- You can create a water plane the size and resolution you want by using the provided script by going to unity's toolbar: Tools - Create Water Plane ...

More information on this script is available here: <http://wiki.unity3d.com/index.php?title=CreatePlane>

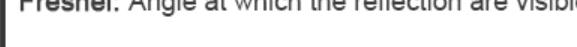
## Properties



**Color**  
**Shallow Color:** The color that is over the depth value  
**Depth Color:** The color that is below the depth value  
**Depth:** The depth of the transition between Shallow and Depth Color  
**Edge Fade:** The transparency range of the shore line.

**Specular**  
**Specular Color:** The color of the specular highlights  
**Smoothness:** The shininess value of the specular highlights

**Bump**  
**NormalMap:** The texture that creates the bump effect.  
**Bump Strength:** The intensity of the bump effect.  
**Scroll Speed [X,Y]:** The speed of the normalMap animation.  
**Distortion:** The intensity of the refraction effect.  
**Distortion Quality:** Low quality distortion will show objects in front of the water in the refraction while high quality will prevent this.



**Reflections**

**Reflection Type:**

- CubeMap will use only a CubeMap
- RealTime uses the mirror reflection script and creates real time reflections.
- Mixed is a combination of the CubeMap and the real time reflections.

**CubeColor:** Tints the cubemap color

**CubeMap:** The cubemap texture used to create cubemap reflections

**Reflection:** Intensity of realtime reflection

**Fresnel:** Angle at which the reflection are visible.

**Foam**

**Foam Color:** Tints the foam

**Foam Texture:** Texture used for the foam

**Foam Size:** Size of the dynamic foam border around the edges of objects

**Displacement**

**Amplitude:** Height of the waves

**Frequency:** The distance between waves

**Steepness:** The steepness of the waves

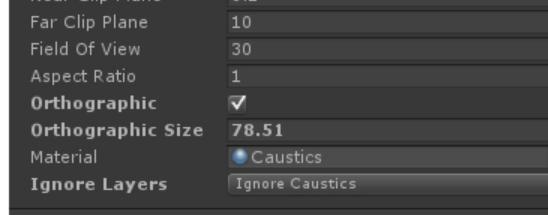
**Waves Speed:** Speed of the waves [XYZW]

**Waves Directions 1 - 2:** [XZ] Waves Tiling [YW] Angle

**Smoothing:** Normals recalculation according to the displacement. 1 Smoothing is equal to full recalculation and 0 equals to no recalculation. [Better on DX11 atm]

**Tessellation:** [DX11] Level of subdivision (edge length based)

## Mirror Reflection Script



**Based on this script:** <http://wiki.unity3d.com/index.php/MirrorReflection3>

In order to get real time reflections you will need to attach this script to your water geometry.

**Disable pixel lights:** Disable additional lights in the reflection in order to increase performances.

**Texture Size:** The resolution of the texture used to create the reflections.

**Clip Plane Offset:** Adjust this value to offset the position of the reflection and fit your need.

**Reflect Layers:** The layer that will be included in the reflection. The more objects you exclude from the reflection the better the performances will be.

## Caustics projection



You can fake caustics using unity's projector and an included custom shader.

Please refer to this page to setup the projector options:

<http://docs.unity3d.com/Manual/class-Projector.html>

**Projector Shader**

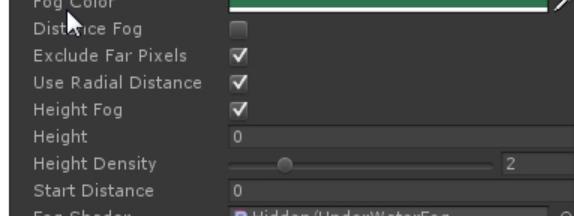
**Main Color:** Tints the caustic texture

**Cookie:** The caustic texture

**Caustic Speed:** Animation speed

**Tiling:** Amount caustic texture tiling

**Falloff:** Ramp texture that determines the fading of the caustic texture.



This post effect is basically unity's global fog with some tweaks. You can refer to their documentation here:

<http://docs.unity3d.com/Manual/script-GlobalFog.html>

**Fog Control script**

I also provide a control script that will turn the fog on when the camera is under the water and off when it is over the water.

The Fade Speed property is used to determine how fast the transition will happen.