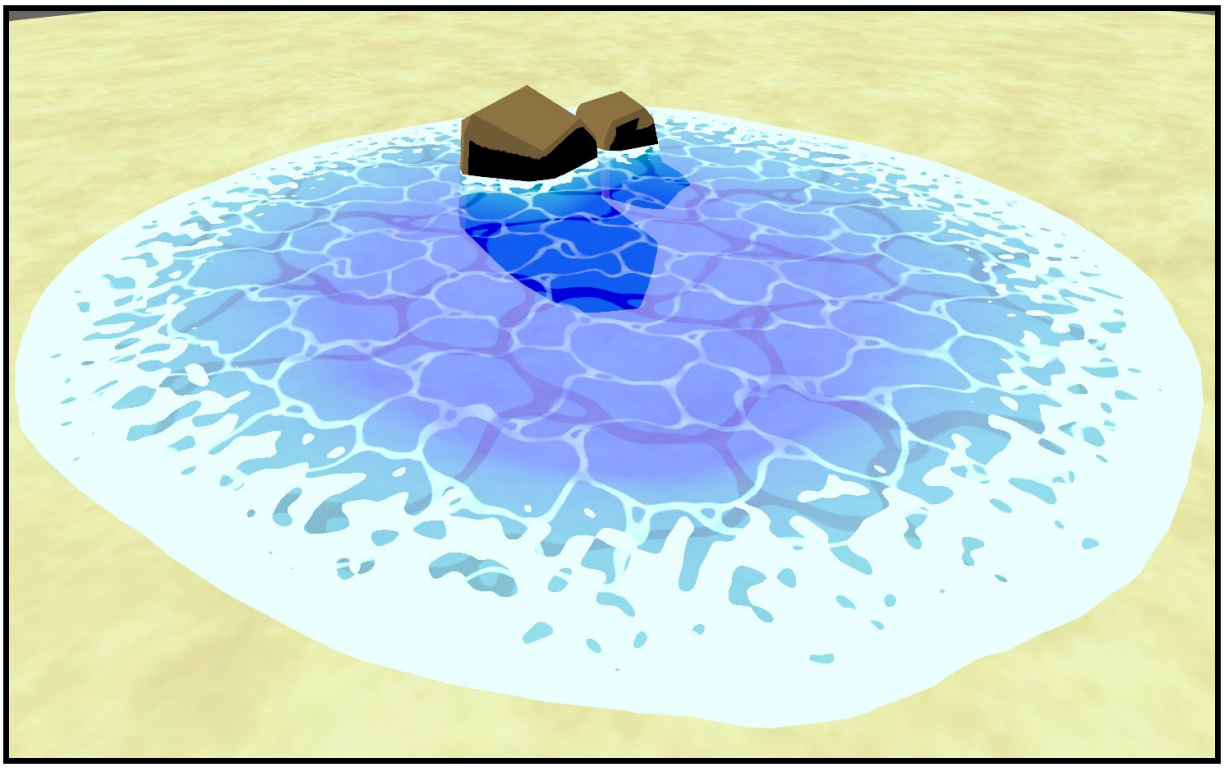


ToonSketch Water

A non-photorealistic water shader from... Ikonoclast

User Manual [v1.0]

ToonSketch Water is a non-photorealistic shader pack comprising a material shader that simulates water with a non-photorealistic toon style.

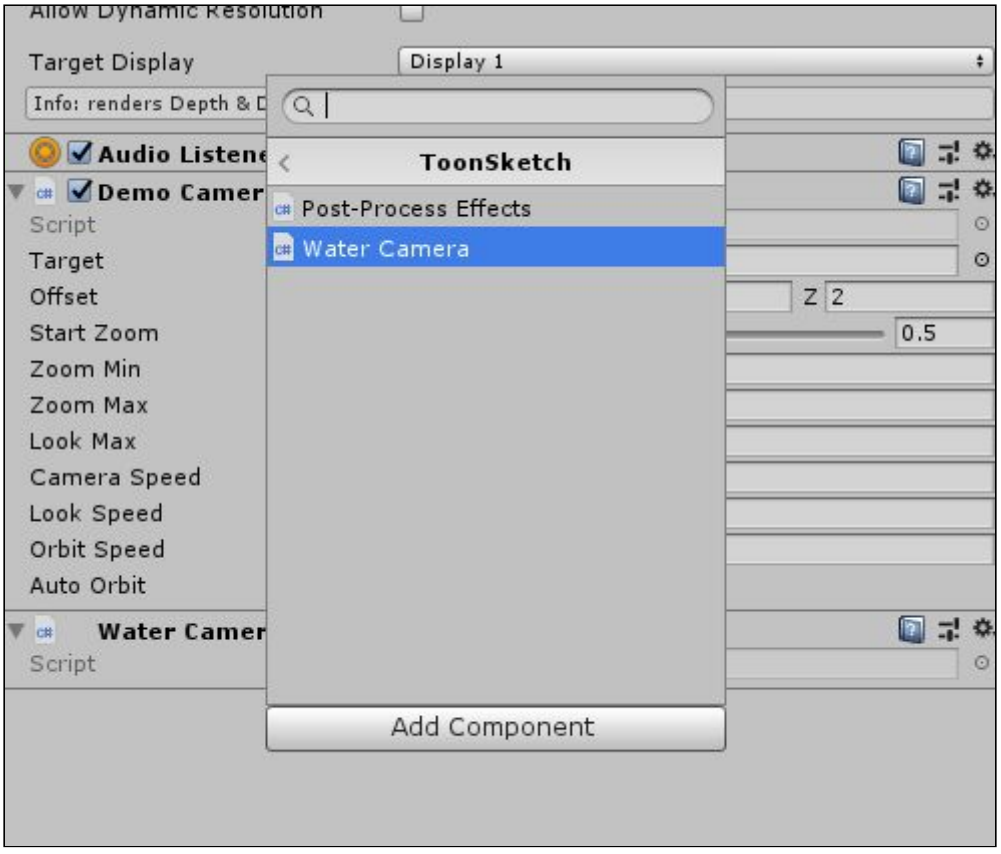
Table of Contents

Water Material Shader

The material shader can be used just like any standard material shader in Unity and offers a number of different options for achieving non-photorealistic water effects.

Camera Setup

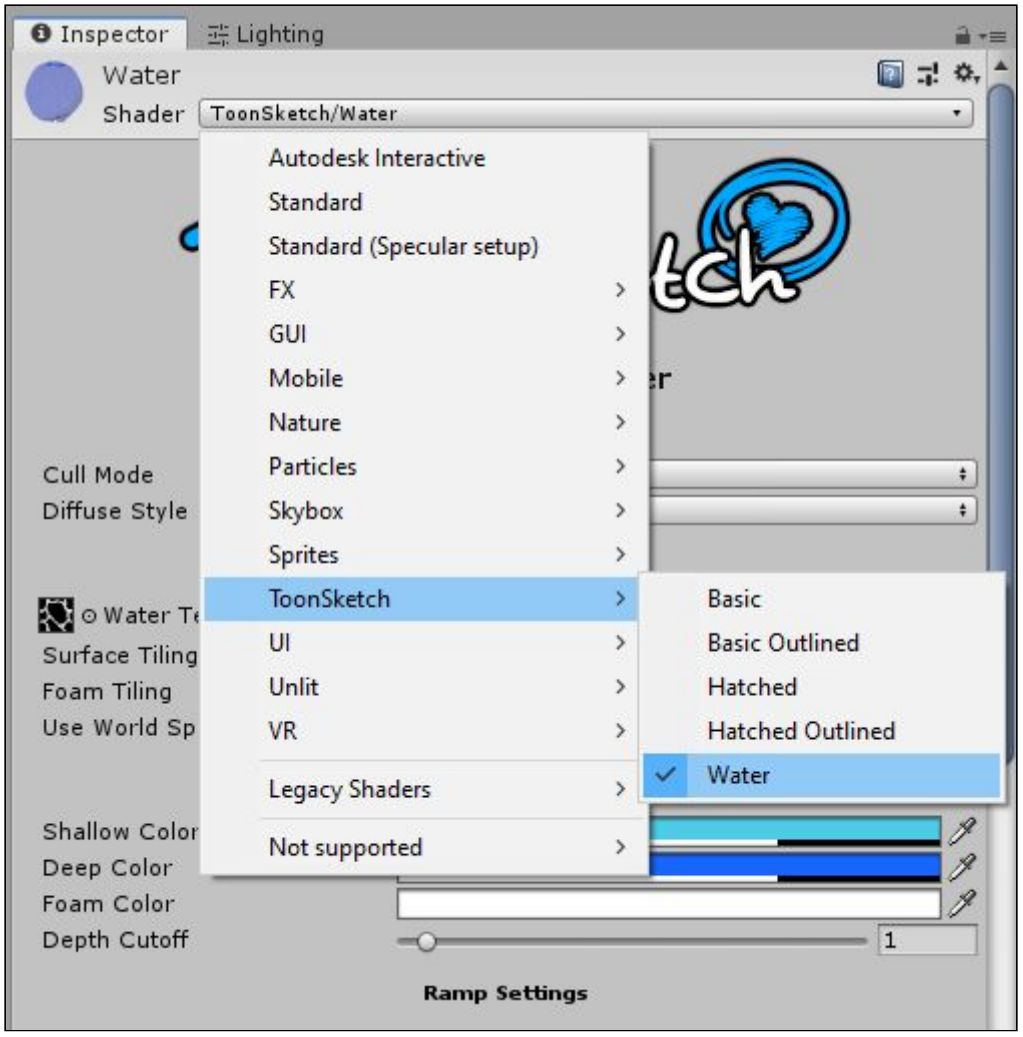
To ensure that water effects are rendered properly you will need to enable rendering of depth and depth normals on your scene camera. A simple component is provided for this purpose and you can enable it by selecting a camera in your scene and attaching the *ToonSketch* water camera component to it under *“Add Component > ToonSketch > Water Camera”* as shown below…



Once the component is selected, you should then see the water effects in your scene rendering properly.

Material Usage

To use the shader, first create a new material asset or select an existing material asset, and then from the shader selection dropdown navigate to *ToonSketch* and select the water shader as shown below…



Once the shader is selected, you will see the controls for the material shader in the Inspector window, these are broken into distinct sections outlined below…

Cull Mode

Cull mode determines which, if any, faces of the object will be ignored and not rendered. The standard option is back face culling, but if you require double-sided faces (for example, when using a material on a plane) you can disable culling entirely.

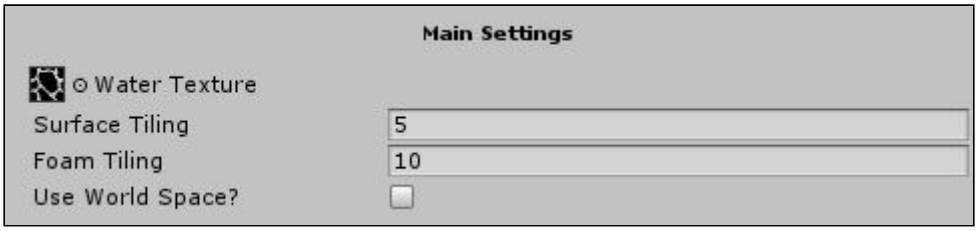
Diffuse Style

The diffuse style determines if the shader will soften the lighting output or not, as seen in the comparison image to the right.

The leftmost output is a two band ramp with *“Hard”* selected and the rightmost is the same ramp with *“Soft”* selected.

This causes the leftmost output to have much stronger banding between light and dark areas on the material.

Main Settings



Water Texture

The water texture will be used as the surface texture of the material. This texture will be applied to both the surface and the foam effect.

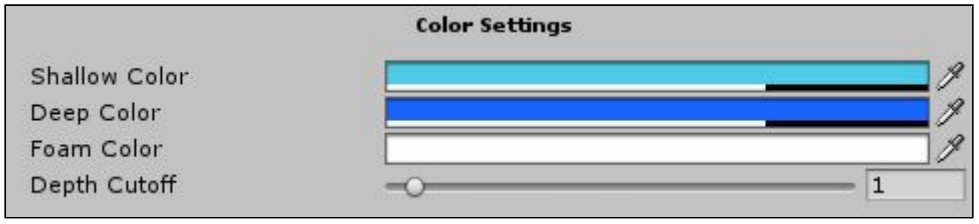
Surface/Foam Tiling

This sets the amount of tiling to use for both the surface and foam effect when applying the water texture.

Use World Space

This setting determines if the texture should be applied using UVs or if world space coordinates should be used instead.

Color Settings



Shallow Color

This sets the color to use for the shallowest parts of the water.

Deep Color

This sets the color to use for the deepest parts of the water.

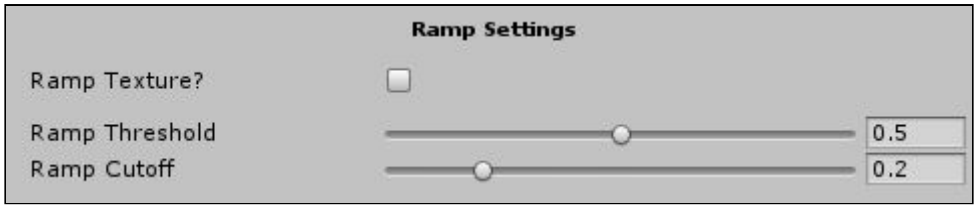
Foam Color

This sets the color to use for the foam effect applied to the water.

Depth Cutoff

This sets the cutoff point of the depth test for determining water coloration.

Ramp Settings



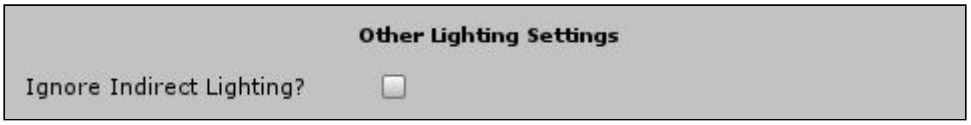
Ramp Texture

The ramp texture is used to control how lighting is mapped to the material surface and can be used to generate many different effects such as distinct shading bands or other different shading styles. ToonSketch includes three example ramp textures which can be found under *“Assets/ToonSketch/Shared/Textures”*

Ramp Threshold/Cutoff

If you select to not use a ramp texture you will be given the following options to control the light ramp, where threshold sets the amount of light at which the ramping occurs and the cutoff amount controls the amount of falloff.

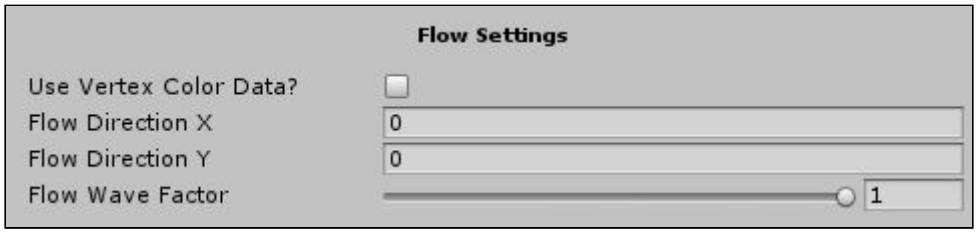
Other Lighting Settings



Ignore Indirect Lighting

This setting controls whether the shader will ignore indirect lighting sources such as ambient light, etc.

Flow Settings



Use Vertex Color Data

This setting will make it so that the flow of water is determined by the red and green channels of the input vertex color. This allows for you to paint different flow directions on different parts of the geometry as needed.

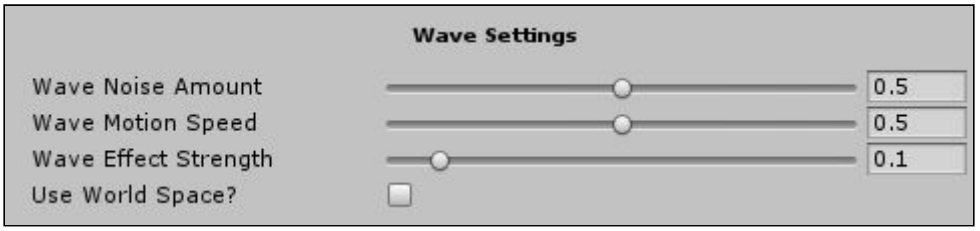
Flow Direction

If not using vertex color as the flow input, then you can manually set the direction of water flow here.

Flow Wave Factor

This setting determines how much the flow of water affects the vertex wave effect.

Wave Settings



Wave Noise Amount

The amount of noise applied to the motion of the vertex wave effect.

Wave Motion Speed

The speed of the motion of vertex waves.

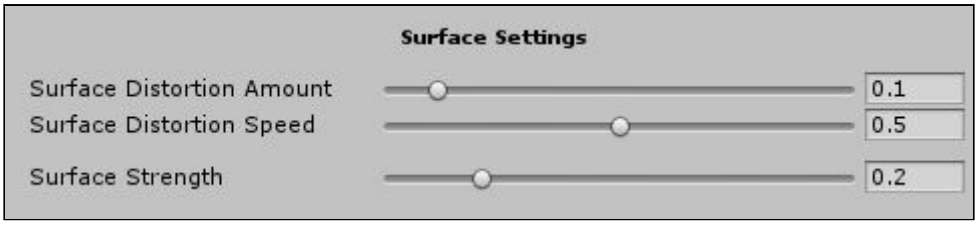
Wave Effect Strength

The strength of the effect applied to vertex wave motion.

Use World Space

This setting determines if the wave effect applies based on UVs or world coordinates.

Surface Settings



Surface Distortion Amount

This setting determines the amount of distortion applied to the surface water texture.

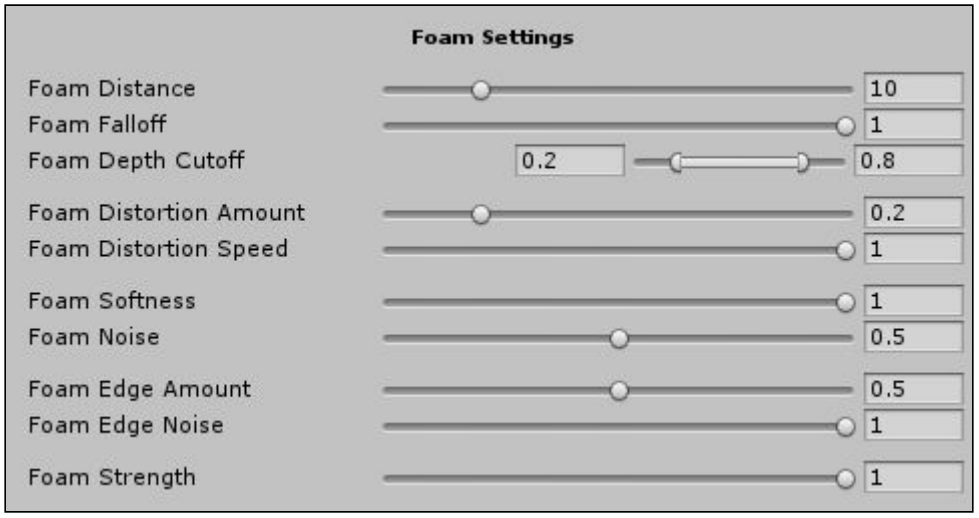
Surface Distortion Speed

This setting determines the speed at which the surface water texture is distorted.

Surface Strength

This is the strength of the surface water texture as applied to the final output color of water. The surface effect is applied subtractively so the higher this value the more the texture is subtracted from the output color.

Foam Settings



Foam Distance

This setting determines how far from the water's edge the foam effect should extend.

Foam Falloff

This setting determines how sharp the falloff of the foam effect is once it reaches maximum distance.

Foam Depth Cutoff

This sets the cutoff point of the depth test for determining the amount of foam to apply at edges. This can be used to tweak just how much foam is generated at shallow edges such as those at coastlines, etc. and those at deep edges such as where objects intersect the water’s surface.

Foam Distortion Amount

This setting determines the amount of distortion applied to the foam water texture.

Foam Distortion Speed

This setting determines the speed at which the foam water texture is distorted.

Foam Softness

This setting determines the softness of the falloff applied to the overall foam effect and how sharp the cutoff is between where there is foam and where there isn’t.

Foam Noise

The amount of noise applied to the overall foam effect. This leads to spots of higher and lower transparency of the foam water texture, etc.

Foam Edge Amount

This setting determines how much of a hard foam effect there is at the edges of water.

Foam Edge Noise

The amount of noise applied to the edge foam effect. This leads to higher and lower amounts of hard edge foam.

Foam Strength

The strength of the overall foam effect, this determines how strongly the overall foam effect (excluding the edge foam) is applied to the final output color.

Thank You & Contact

Many thanks for checking out *ToonSketch Water* and we hope that you find this shader useful.
If you have any questions about this product or encounter any bugs please email us at: hello@ikonoclast.love
Also please feel free to email us at the above email address if you end up using any ToonSketch effects in your own releases, we are always interested in seeing how people make use of the shaders and what visual styles you decide to create~

Thanks~! ❤

http://ikonoclast.love/