# Stylized Low-Poly Water

## Introduction:

This is the documentation for the shader properties of a low-poly water surface shader in Unity. The shader provides stylized water simulation with customizable properties such as wind angle, smoothness, transparency, wave noise scale, wave speed, wave amplitude, shallow color, deep color, depth color fade, foam, and foam color.

## Compatibility:

This shader is compatible with both the built-in renderer pipeline and the Universal Render Pipeline (URP). This means that you can use it in a variety of projects and with different graphics setups, ensuring maximum compatibility and flexibility. Whether you're working on a small project with limited hardware or a large-scale project with demanding graphics requirements, this shader will provide the tools you need to create the stunning stylized low-poly water in your Unity projects.

## Get started:

1. Import the shader into your Unity project.
2. Create a new material and apply the shader to it.

With these options, you can customize the look of the water to fit your needs. Have fun experimenting and creating your own unique water style!

## Tips:

1. If your render pipeline does not support depth or you don't want to use depth, check "EnableDepth" property false.
2. Don't mark water objects static. It breaks a vertex shader.

## Need to know:

1. In some versions of the unit, with the selected render pipeline "Built-in" may not be drawn by the custom editor.

# Properties:

- Wind Angle
  - Property name: _WindAngle
  - Type: Float
  - Description: Specifies the direction of the wind in the range of 0 to 360.
- Smoothness
  - Property name: _Smoothness
  - Type: Float
  - Description: The property "_Smoothness" is a float value that represents the smoothness of a shader. It has a range from 0 to 1. This value determines the smoothness or roughness of a material's surface and affects how light interacts with the surface. A value of 0 represents a completely rough surface and a value of 1 represents a completely smooth surface. The smoothness of a material affects its appearance and how it reflects light, making it an important consideration for creating realistic materials in your project.
- Metallic
  - Property name: _Metallic
  - Type: Float
  - The "_Metallic" property is a scalar value that determines the level of metallic reflection for a material using this shader. The property is represented as a floating-point value in the range of 0 to 1. A value of 0 means that the material is completely non-metallic and has no reflective properties, while a value of 1 indicates that the material is fully metallic and has a strong reflective appearance. The default value of this property is set to 0. This property can be adjusted to give materials a more metallic appearance or to fine-tune the level of reflection in the material.
- Transparency
  - Property name: _Transparency
  - Type: Float
  - Description: Specifies the transparency of the water surface. The value ranges from 0 to 1.
- EnableMaxByTransparency
  - Property name: _ENABLEMAXBYTRANSPARENCY
  - Type: Float
  - Description: A toggle to enable or disable the maximum transparency of the water surface by distance.
- MaxTransparencyByDistance
  - Property name: _MaxTransparencyByDistance
  - Type: Float
  - Description: This property sets the maximum transparency of the water surface based on the distance from the camera. The value is in distance units and has a default value of 50.
- HightFrequency
  - Property name: _HightFrequency
  - Type: Float
  - Description: Specifies the high frequency of the water surface.

- WaveNoiseScale
  - Property name: _WaveNoiseScale
  - Type: Float
  - Description: Specifies the scale of the wave noise.

- WaveSpeed
  - Property name: _WaveSpeed
  - Type: Float
  - Description: Specifies the speed of the waves.
- WaveAmplitude
  - Property name: _WaveAmplitude
  - Type: Float
  - Description: Specifies the amplitude of the waves.
- ShallowColor
  - Property name: _ShallowColor
  - Type: Color
  - Description: Specifies the color of the shallow water.
- EnableDepth
  - Property name: _EnableDepth
  - Type: Float
  - Description: This property enables depth mechanics. Affects foam and depth color.
- DeepColor
  - Property name: _DeepColor
  - Type: Color
  - Description: Specifies the color of the deep water.
- DepthColorFade
  - Property name: _DepthColorFade
  - Type: Float
  - Description: Specifies the fade of the color based on depth.
- Foam
  - Property name: _Foam
  - Type: Float
  - Description: A toggle to enable or disable the foam effect.
- FoamColor
  - Property name: _FoamColor
  - Type: Color
  - Description: Specifies the color of the foam effect.
- FoamSpeed
  - Property name: _FoamSpeed
  - Type: Float
  - Description: Specifies the speed of the foam effect.

- FoamScale
  - Property name: _FoamScale
  - Type: Float
  - Description: Specifies the scale of the foam effect. The value ranges from 0 to 1.
- FoamCutoff
  - Property name: _FoamCutoff
  - Type: Float
  - Description: Specifies the cutoff of the foam effect.
- FoamDeepStart
  - Property name: _FoamDeepStart
  - Type: Float
  - Description: Specifies the start point of the foam effect in deep water.