jolix / **Documentation**

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jolix edited this page 5 minutes ago · 18 revisions

Latest online documentation: https://github.com/jolix/Low-Poly-Water/wiki

Welcome to the wiki and thank you for purchasing Low Poly Water!

Please consider rating or leaving a review. This will help the growth of this asset.

For support and feedback: jolixmail@gmail.com
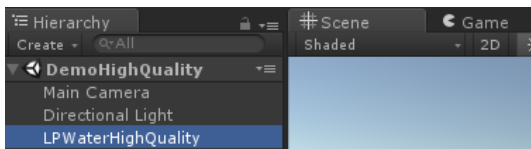
Supports:
- ☑ Shader Model 3.0 or higher
- ☑ Mobile devices with Shader Model 3.0 or higher.
- ☑ Virtual reality devices
- ☑ Desktop and consoles

Getting Started

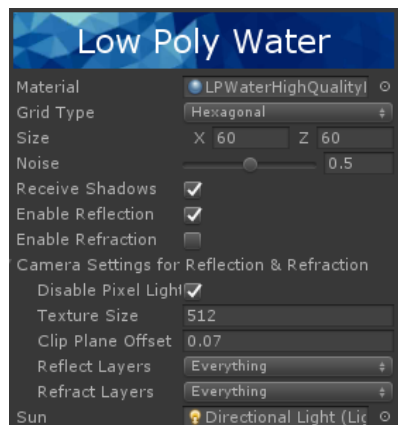1. Drag one of the water prefabs (inside the Prefab folder) to the scene.

2. Select the prefab object in the scene.

3. Adjust the properties to your liking using the inspector window.

Property Documentation

LowPolyWater Component

Clone this wiki locally

https://github.com/jolix/Do

📥 Clone in Desktop

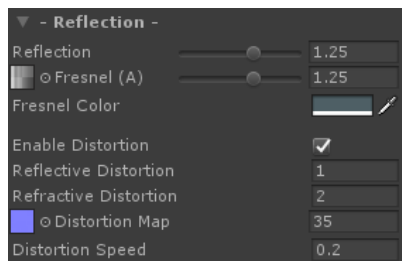| Property	Description
Material	The low poly water material of your choice.
Grid Type	**Hexagonal:** Generates an hexagonal water plane. **Square:** Generates a square water plane. **Hexagonal LOD:** Generates an hexagonal water plane with LOD options. **Custom:** Enables custom meshes to be used.
Size	The size of the water plane.
Noise	Offset the vertices with position-dependent noise.
Receive Shadows	Enables shadows. If depth effects AND shadows are enabled, an extra hidden camera will render to a Z-Buffer without the water mesh. Not suitable for low-end mobile and VR devices.
Enable Reflection	Enables **planar** light reflections. This will not make sense for non-planar meshes. This adds an extra hidden camera. Not suitable for low-end mobile and VR devices. Does not support single-pass VR rendering.
Enable Refraction	Enables **planar** water refraction. This will not make sense for non-planar meshes. This adds an extra hidden camera. Not suitable for low-end mobile and VR devices. Does not support single-pass VR rendering.
Disable Pixel Lights	Disable pixel lights in the reflection render. Enable for better performance.
Texture Size	The texture size of the reflection and refraction. Choose a lower size for better performance.
Clip Plane Offset	The offset of the reflection plane. Increase if you see clipping artifacts.
Reflect Layers	Unity Layers to render in the reflection pass.
Refraction Layers	Unity Layers to render in the refraction pass.
Sun	A direction light representing the sun. The script will automatically search for a directional light when no object is assigned.

Lighting

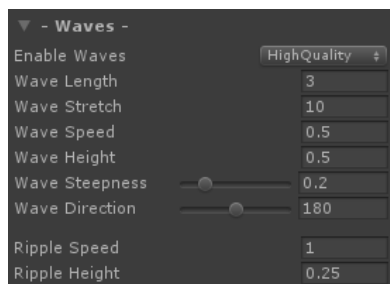| Property	Description
Color	The color of (shallow) the water.
Deep Water Color	The color of the deep water. (Only if Light Absorption is enabled).
Opacity	The opacity of the water.
Specular	Specular lighting power.
Sun Color	Specular lighting color.
Shadow Bias	Controls the shadow strength if shadows are enabled.

Property	Description
Diffuse	Diffuse lighting influence.
Enable Point Lights	Supports up to 4 point lights. Disable for better performance.
Shading	**Flat:** Pixels inside a triangle have always the same color. Lighting is calculated in the vertex shader. **VertexLit:** Lighting is calculated in the vertex shader. **PixelLit:** Lighting is calculated in the fragment shader. Slowest option.

Reflection

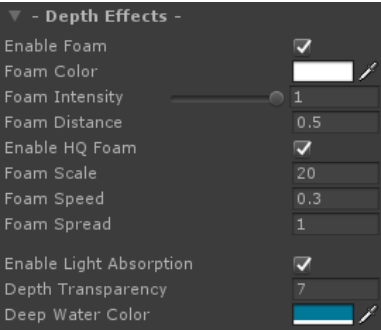| Property	Description
Reflection	The reflection strength of the water.
Fresnel (A)	An 8-bit alpha texture approximating a Fresnel lens. A default texture is provided in the Textures sub-folder. The slider controls the fresnel power.
Fresnel Color	The color of the horizon for the Fresnel effect to reflect.
Enable Distortion	Enable reflection / refraction distortion effects. Disable for better performance.
Reflective Distortion	Distort the reflection texture.
Refractive Distortion	Distort the refraction texture.
Distortion Map	Use a normal texture to distort the reflection / refraction textures. The float value controls the tile-parameter allowing the distortion to scale.
Distortion Speed	The moving velocity of the refraction and reflection distortion.

Waves

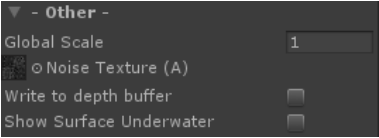| Property	Description
Enable Waves	**Off:** Disable waves. **LowQuality:** These waves are calculated using the Noise Texture. This option is faster than HighQuality, but the texture sampling can cause flickering/jittering of the lighting. **HighQuality:** Based on Trochoidal or Gerstner waves. Slowest Option.

Property	Description
Wave Length	The length of the waves.
Wave Stretch	Higher values stretch out the waves in the perpendicular travel direction.
Wave Speed	The travel velocity of the waves.
Wave Height	The amplitude of the waves.
Wave Steepness	The steepness of the waves.
Wave Direction	The travel direction of the waves.
Ripple Speed	The speed of the water ripples.
Ripple Height	The amplitude of the water ripples.

Depth Effects

Property	Description
Enable Foam	Toggles the foam (shore blending) feature. Toggle off for best performance.
Foam Color	The color of the Foam.
Foam Intensity	The intensity of the blending/fading into the shore.
Foam Distance	The distance from the edge intersection to start blending with the shore.
Enable HQ Foam	Toggles High Quality foam distortion. Toggle off for best performance.
Foam Scale	The scale of the foam distortion.
Foam Speed	The speed of the foam distortion.
Foam Spread	The spreading amount of the foam distortion.
Enable Light Absorption	Toggles the *Light Absorption* effect. The water absorbs the light, so deeper parts of the water have a darker color. This uses the depth buffer to calculate the absorption.
Property	Description
Depth Transparency	How deep the light gets through.
Deep Water Color	The color of the deepest parts of the water.

Other

Property	Description
Global Scale	The global scale of the waves and ripples.
Noise Texture (A)	A single-channel (8-bit alpha) texture with random numbers between 0 and 255.
Write to Depth Buffer	Render to the Z-Buffer. Enabling this allows image effects that use the Z-Buffer (like Depth of Field) to work properly. If shadows are enabled, the mesh is written to the depth buffer by default.
Show Surface Underwater	If this is enabled, back-face culling is turned off (*Cull Off*). An underwater system or underwater effects are not supported. Disable for best performance.

Floating Objects / Wave Displacement

This feature is still in development and not fully supported.

To enable floating:

1. Uncomment line 5 of `LowPolyWaterv2/Shaders/LowPolyWaterAdvanced.shader` :

   `#define LPW_DISPLACE`

2. Set `enableDisplace` to `true` at line 30 of `LowPolyWaterv2/Scripts/LowPolyWaterScript.cs` :

   `static bool enableDisplace = true;`

3. Make sure *Enable Waves* is set to *HighQuality* in the material inspector.

4. The vertical displacement is returned by:

   `float LPWAsset.Displacement.Get(Vector3 position, Material waterMaterial);`

Version Notes

v2.00:

- Reflection and refraction support
- Shadow receiving
- Custom mesh support
- Static LOD grid
- Foam distortion
- Light absorption
- Point light support (up to 4)
- Inspector GUI overhaul

v1.05:

- Tiling is now possible with noise
- Edge blend supports Single-pass stereo

v1.04:

- Fixed memory leak in Editor Mode
- WaterFresnel texture set to Clamp
- Fixed precision issues
- Vertex Lit rendering path support

v1.03:

- Waterchunks have now the same layer as the parent object
- Fixed issues with SM2.0 mobiles
- Fixed issues with iOS depth camera

v1.02:

- Change size in X and Z directions
- Fixed scaling issues
- Shore blend for Orthographic camera
- Opacity parameter
- Option to write to depth buffer
- Proper shore opacity

v1.01: Meshes are not saved, but regenerated on load

Refunds

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