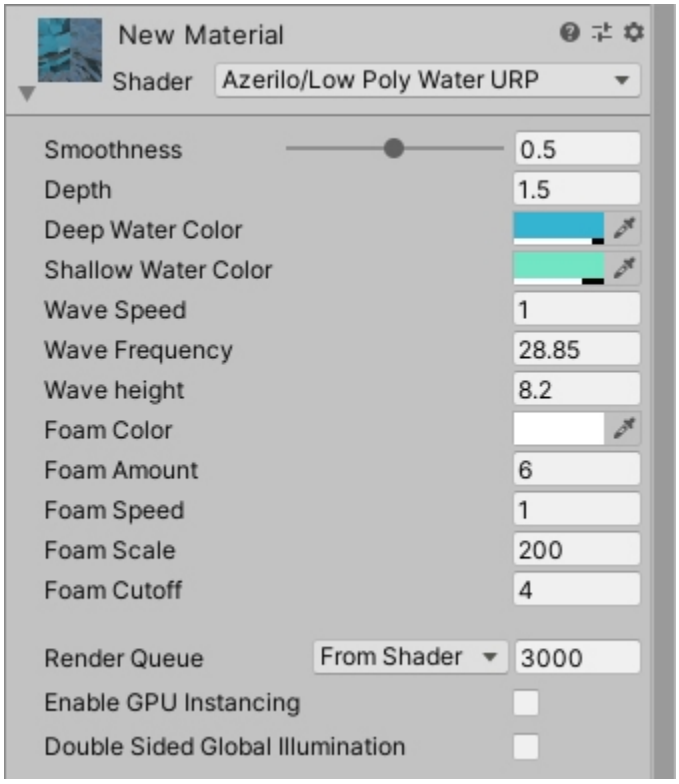
Low Poly Water for URP Manual

You can use this shader only in the Universal Render Pipeline.
In the package manager make sure you are using Universal RP 7.4.3 and higher. The lower versions have depth precision issue on Android platform.

Features:

- High performance. All the calculations run on the GPU
- Compatible with Unity 2019.3.15 and higher
- Works on all platforms (Mobile, PC, Console)
- Water depth and color control
- Wave height and speed control
- Foam around objects in the water

The shader parameters look like this:

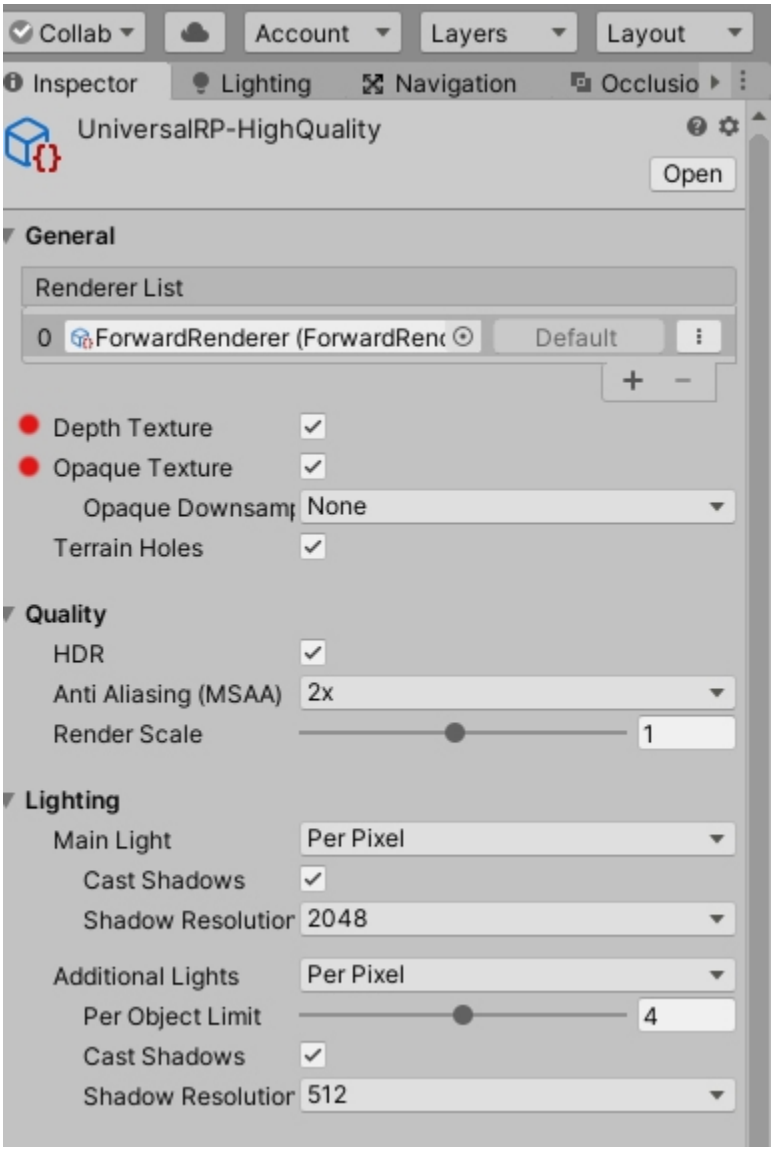


Each material parameter name is self-explanatory. Before reading this manual please watch the video tutorial on YouTube:

Low Poly Water Introduction

How to use it?

Before being able to use this shader you should setup the Universal Rendering Pipeline (URP) into your project or start an URP project in the Unity Hub. See the Unity URP Manual for more information.



Now open the three URP settings files in Assets/Settings (HighQuality, MediumQuality and LowQuality) and tik the Depth Texture and Opaque Texture checkboxes. This ensures correct colors and reflections on the water surface in any build target quality you might be using (for example webGL and mobile tend to use LowQuality or MediumQuality).

To view the influence of the quality settings open Project Settings -> Quality. Select a quality level in the upper table and view the impact in the Game viewer window. The default quality setting for each build target can be seen (and set) by clicking on one of the triangles in the Default row of the table. Normally PC is set to High while Mobile and webGL are set to Low.

Open the Demo scene file from the Scenes folder to see this shader in practice.

Practical usage tips

After importing the package it is best to make a duplicate of any of the example materials found in “Azerilo/Low Poly Water URP/Materials”. The only difference between these materials are the settings of my Low Poly Water URP shader. By customizing your own duplicate of one of the materials you keep my keep settings for future reference.

As a first experiment use the default Unity plane as your water 3d mesh. It has 100 quads and 200 triangles. Set the Unity Editor Draw Mode to ‘Shaded Wireframe’ or ‘Wireframe’ (dropbox in left upper corner of the Scene viewer window). Now apply your duplicate material to the plane surface and watch the magic… The default height of the dancing vertices corresponds with the Wave height setting of my shader.
You will notice that the colors on the water surface not only depend on the color settings of my shader but at least as much by the colors of the lighting and other materials under the water. Also the direction of the directional light has a lot of influence.
In most cases the default Unity plane will only be large enough for a small puddle in your scene.

If you need higher resolution planes I made some for you. you can find them in the “Azarilo/Low Poly Water URP/Meshes” folder. Plane40x40 contains 1600 quads and 3200 tris. Plane200x200 contains 40k quads and 80k tris. When opening one of these Plane fbx mesh files in Unity, by default 1cm is converted to 0.01 Unity unit. Even the Plane200x200 turns out quite small with that conversion. To create a much larger water surface in Unity (1000x1000 Unity units!) please uncheck the Convert Units checkbox on the Model tab of the fbx file (see Inspector window).

Now make your own copy of one of the materials in Azarilo/Low Poly Water URP/Materials and set that custom material on the water plane you created from one of my fbx mesh models. Now you can customize the properties of the material shader as you see fit for your scene.

By rotating the scene directional light, you can change the appearance of the water. Disable cast shadows option on the water plane if you don’t plan to go under water in you game. Casting shadows triples the triangle count: the Plane200x200 mesh I provide has 80k triangles. When tripled with shadow casting on you get 240k tris, which is clearly unacceptable in web or mobile apps.

If the water light reflection is not correct, in the lighting settings window click the “Generate Lighting” button.

If you have any problem or question you can reach me at:

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