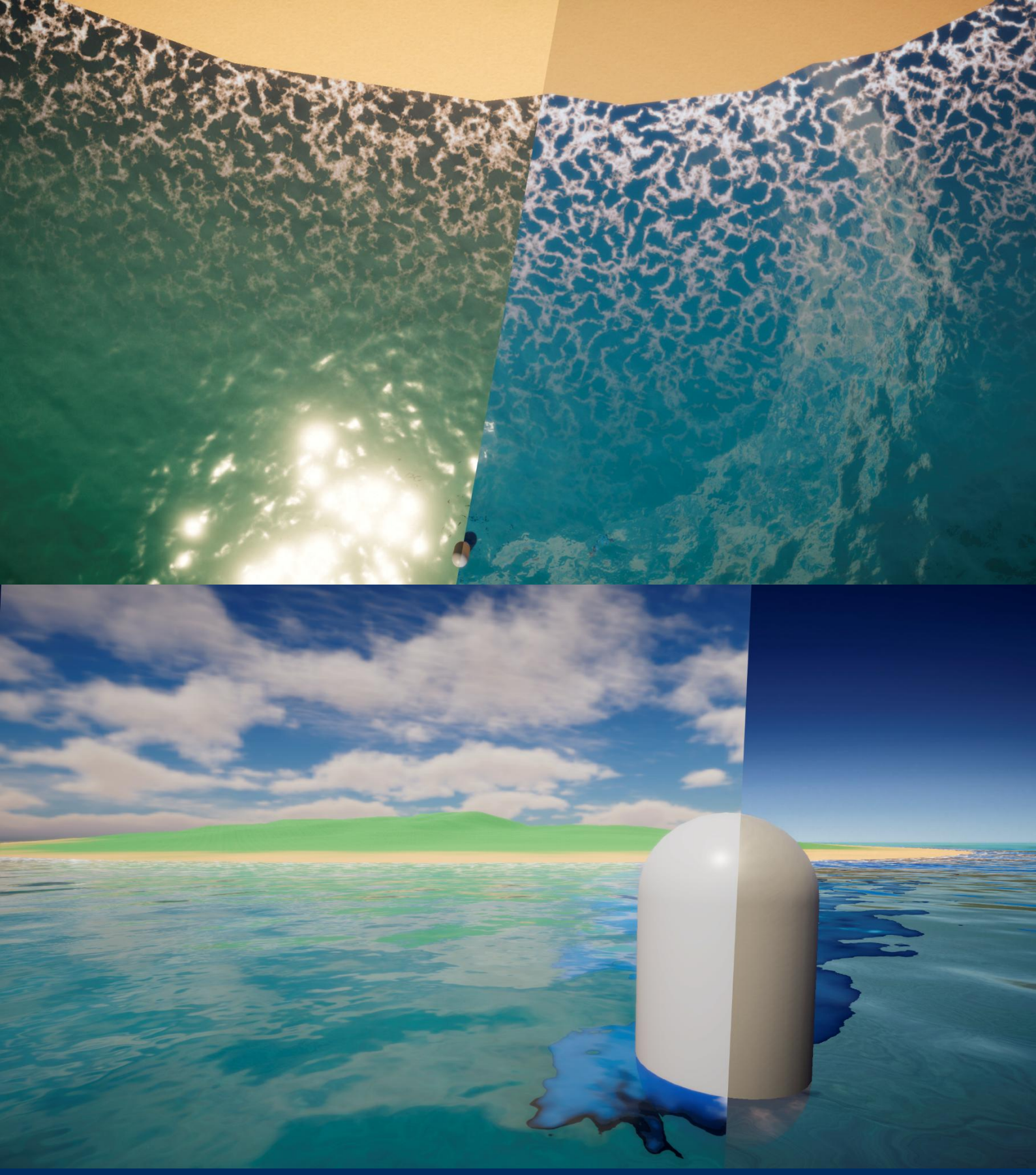


AURW 4.1

Contents

Introduction 1
Development status 1
About 1
AURW Free Version 2
Start using AURW Free 2
Main properties 2
Refraction 2
Foam rendering 3
AURW Lite 4
Getting started 4
Rendering 4
How to use the ocean chunk render 4
Warning 5

AURW

Documentation

Introduction

Another Ultra Realistic Water (AURW) it's a solution for developers who needs to add water to their project quickly and efficiently.

Before continuing you need to check this documentation matches with the version of the package you installed in Unity.

Development status

AURW			
	Free	Lite	Pro
URP	✓	✓	×
HDRP	✓	×	×
BIRP	×	×	×

Published
Under Development
Not Developed yet
Not planned

Our packages still in development phase. If you are looking for a version compatible with other render pipeline, there's a table of published packages on the Unity Asset Store and their status.

If you have any troubles with our packages report it.

AURW is more than a package, is a big project. Starting from the free version, that is a small taste of my potential, with a lite version dedicated for low rendering power devices and finally the biggest power of AURW: the pro. All these versions are from the big family of AURW. Every "version" actually is a dedicated version. You can decide what's better for your project.

About

The Phantom Studios is a small developer that at the moment is developing water for the *Unity Engine.* Get all The Phantom Studios updates on:

- YouTube: Watch the latest trailers and developing update of our products!
- Website: You can find more about us, what we are working on and more! You can find the full documentation of AURW here!
- GitHub: Watch our project repositories, see how we are working and more!
- E-mail: For business or details about our products contact us at thephantomstudios.sprt@gmail.com (For troubles with our products go to our website)

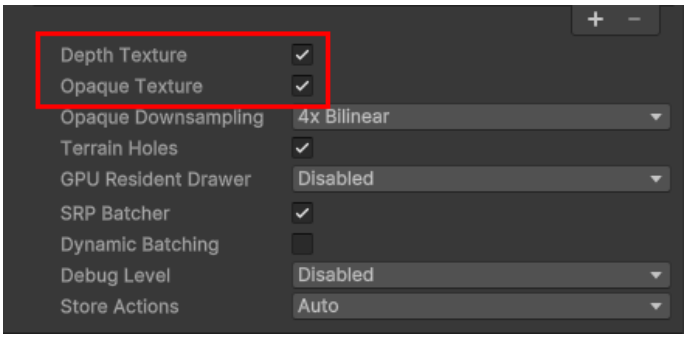
AURW Free Version

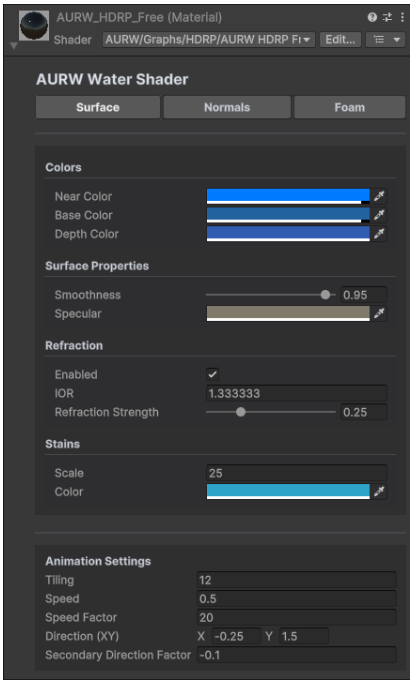
This is the free version of AURW. Now only on *High Definition Render Pipeline* and *Universal Render Pipeline*. Both packages have the same content and there's no difference.

Start using AURW Free

Before start using AURW make sure your project supports the respective render pipeline version. These both versions were developed and tested on Unity 6.0, older versions might not support the package at all and we are not giving support for older versions.

Once you have imported the package to your project you should be able to use the water with no problem. If you are on ***Universal Render Pipeline***, make you sure you have activated the *Depth Texture* and *Opaque Texture* on you *Render Pipeline Asset.*





The structure of the package is designed to remove demo scene and keep the important files. On *"Phantom Studios/AURW/Demo"* path you can delete this folder and the package will work with no problem.

Use the shader with the material example on "*Phantom Studios/AURW/Material*" or making yours with the shader on "AURW/Graphs/AURW URP Free" or "AURW/Graphs/AURW HDRP Free", depending the render pipeline. You can notice that this material has a custom GUI, making it more intuitive to use. Divided on sections is more comfortable to read and use.

Main properties

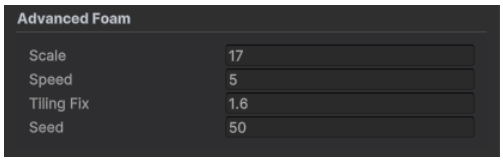
If you created your own material, you can notice that colors make contrast so you can see which color modifies what. You can see that after the tabs section there are the animation settings. This shader uses the worlds UVs. The tilling value is the divider of 1, so bigger it is, smaller the texture will be. The speed factor propriety is a fix for the speed, using directly time would be really faster. Is recommended to use it on 10 or 20. But the speed value is how speed you want to be after the factor fix. This way is more comfortable to use values like 1 instead of really small values. The direction is a vector 2 that moves the texture depending on the value on the axis. The secondary Direction Factor is the way you want to the second texture move, usually faster than the main map, or opposite value. In normal strength section you can see that the big normal has a custom scale, based on the tilling of the textures.

Refraction

The refraction is rendered from a distorted UVs and applying them to the scene color texture. You can enable or disable this effect. The IOR is the Index Of Refraction, it usually is 1.333 but you can change it. The refraction effect uses another normal strength, you can decide the value of the normals used to refraction with the Refraction Strength.

Foam rendering

The foam rendering is pretty complex, it comes from a Perlin noise texture. You can change the noise scale and the speed of it, it has his own tilling fix, making the texture bigger. You can change the seed but actually you can leave it on 0.



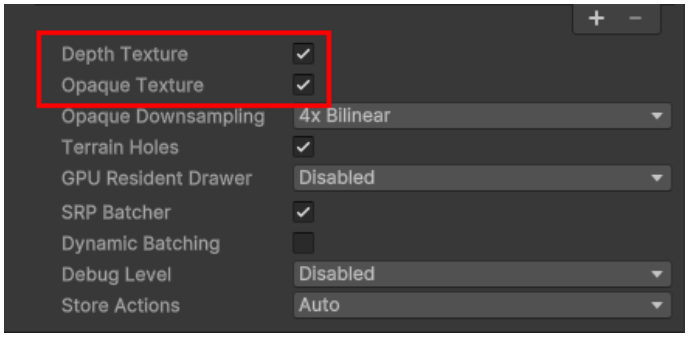
AURW Lite

AURW Lite is the version dedicated to low powered devices. This is a new project, so you can give ideas and help writing me a e-mail. This project was tested and developed on *Unity 6.0* on a *Universal Render Pipeline (17.1*) project. If you have troubles on an older version, you won't be supported.

This package makes particular focus on a high and low rendering quality.

Getting started

Make sure you have activated depth and opaque texture on your Render Pipeline asset. If you have more than one, you have to activate this on each render asset. If you want to disable the depth rendering, you can do it by disabling depth texture. Do not disable the opaque if you are using the high-quality shader. If you are not using the high quality shader at all, and you don't want depth effect on the water, you can disable both textures.



Advice: You can create 2 render data and using its render asset, one for the high-quality enabling depth and opaque texture and the other one for the low-quality rendering.

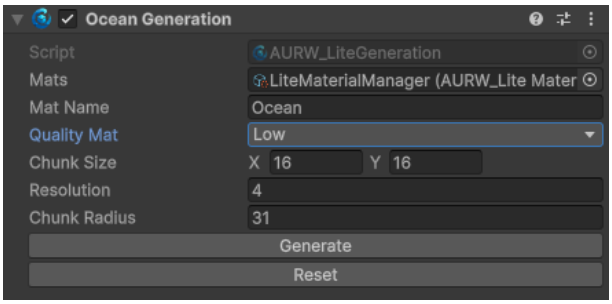
Rendering

This version of AURW includes a water chunk-build generation system. The goal of this system is a baked way to render water and adding it into the occlusion culling.

If you don't want to use this new rendering feature, you can create a plane and add it into your scene.

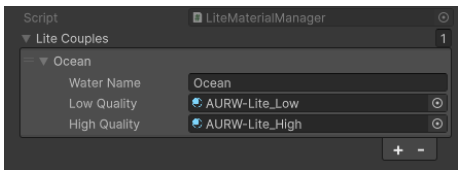
How to use the ocean chunk render

This new system is under developing, if you have some troubles, please report it.



Create an empty game object on your scene, call it "Ocean" and add "AURW/Lite/Ocean Generation" component. You can see a few of variables.

Set your LiteMaterialManager scriptable, creating it on Create → AURW → Lite → MaterialManager. Create your couple material name, and set the respective high and low-quality materials like in the example. The low quality is required, if not the game won't start!



Set your desired quality, between high and low qualities.

Set your chunk size on your Vector2. It's preferable to use a squared size.

Set a resolution not lower than 4 to avoid rendering errors. Set your radius not equivalent to 0.

Then you can click on the Generate button, it will automatically render all the ocean.

Click reset to remove the ocean.

What's the difference between high and low shaders?

The only difference is the refraction effect. To avoid creating unnecessary shader keyword I just decided to create 2 different shaders.

Warning

This system is not fully developed. It might cost more that expected and not doing the work how it was conceived. I'll be online watching for errors in this new feature on email:

thephantomstudios.sprt@gmail.com