

Thank you

Thank you very much for choosing *Crest Ocean System* 3.4 for LWRP!

Please follow *@crest_ocean* on Twitter for news and updates, and drop in to the Crest Discord server <https://discord.gg/g7GpjDC> to say hello!

Crest began life as open source software hosted here: <https://github.com/crest/crest-oceanrender>. This may be a useful resource for issue searching/posting, for looking at experimental development branches, looking at commit history for files, and misc.

Note: Unity 2019.x and LWRP 5.13.0 or later are required. The most recent version of each is recommended due to the large volume of fixes and improvements that Unity are making. The URP version of Crest is obtained by installing the Crest package from Unity 2019.3.

Documentation

There is a getting started video available on YouTube here: https://www.youtube.com/watch?v=TpJf13d_-3E.

Refer to *userguide.pdf* alongside this document for full documentation, including detailed setup steps.

Support

There are a number of channels to get support. First and foremost, you can contact us directly via this email address: huw.bowles@gmail.com.

Another support channel is the *Crest* Discord: <https://discord.gg/g7GpjDC>.

Finally issues can be searched and posted on the *Crest* GitHub: <https://github.com/crest/crest-oceanrender>.

Notes

- Some of the example scenes require configuring LWRP. An example configuration is provided at *Crest/CrestExampleURPAsset.asset*. See the *Crest* user guide setup instructions for details.
- Some of the example scenes require a new layer to be added to your project called Terrain. *Crest* is unable to add this layer to your project automatically, so it will throw an error if this layer is not found.
- Issue with LWRP and VR - refraction appears broken due to what seems to be a bug in LWRP (BoatAttack suffers from the same issue). See Issue #206 on the *Crest* GitHub.

- Custom sky assets may require their code to be added to the ocean shader for the fogging/scattering to work. The ocean shader *Ocean.shader* has a comment pointing out where such code may need to be inserted: "If you are using a third party sky package such as Azure, replace this with their stuff!". For additional info/discussion in the context of Azure[SKY] see Issue #62 on the *Crest* GitHub.

Release Notes

3.4

- Ocean depth cache supports saving cache to texture on disk
- Ray trace helper for ray queries against water
- Fix for dynamic wave sim compute shader not compiling on iOS
- Input shader for flowmaps
- Shader code misc refactors and cleanup
- Add warning if *Opaque Texture* and *Depth Texture* options not enabled on pipeline asset.
- Fix bright flashes underwater when MSAA enabled

3.3

- Fix for compute-based height queries which would return wrong results under some circumstances (visible when using Visualise Collision Area script)
- VR: Fix case where sea floor depth cache was not populated
- VR: Fix case where ocean planar reflections broken

3.2

- Add links to recently published videos to documentation
- Fixes for wave shape and underwater curtain on Vulkan
- Fix for user input to animated wave shape, add to shape now works correctly
- Fix for underwater appearing off-colour in standalone builds
- Fix garbage generated by planar reflections script
- Fix for invalid sampling data error for height queries
- Fix for underwater effect not working in secondary cameras
- Asmdef files added to make Crest compilation self-contained

3.1

- Made more robust against VR screen depth bug, resolves odd shapes appearing on surface
- Preview 1 of Crest URP - package uploaded for Unity 2019.3

3.0

- Compute Shader Queries - simpler and faster system to service ocean height queries
- *SampleHeightHelper* and *SampleFlowHelper* helpers added to make it easier and simpler to sample ocean data on the CPU
- Vary smoothness over distance - helps widen specular response on surface
- Support for coloured caustics texture

2.2

- Fix waves not working on some GPUs and Quest VR - Issue #279
- Fix planar reflections not lining up with visuals for different aspect ratios
- Documentation - strategy for configuring dynamic wave simulation
- Documentation - dedicated, fleshed out section for shallow water and shoreline foam
- Documentation - technical information about render/draw order

2.1

Version 2 of *Crest* introduced significant changes. We recommend backing up your project before upgrading from 1.x to 2.x.

- Clear dynamic wave, foam and shadow data to prevent initialised data entering system
- Fix potential out of bounds array access in Crest shaders
- Remove geometry shader code path for rendering inputs to fix bugs and simplify codebase
- Better validation and errors around legacy wave spectra data to prevent runtime errors