

Sky Master ULTIMATE v3.0

Guide

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Sky Master ULTIMATE v3.0 setup is made through the SkyMaster script, which combines a configurator for the various modules (Sky, Volume Clouds, Ocean, Image effects etc) and a global controller for adjusting and controlling the various systems.

The four main scripts that comprise Sky Master are the SkyMasterManager, which is inserted in the scene by pressing “Add sky” button, the Terrain & Image effects Manager, which is added to the scene when a terrain is configured with “Configure Terrain” button, the Volumetric clouds script that is included in each of the volume cloud presets added by pressing the “Volume clouds” buttons and the WaterManager that is added when “Add Water” button is pressed. Below, a step by step guide is provided, for setting up a complete system. The steps must be completed in order, so all references are correctly inserted in all scripts.

1. Add an empty gameobject to the scene and add the “SkyMaster” component. This is the global configurator - controller for Sky Master.

1.1. NOTE: Make sure to erase the previous sun light from the scene, as the system will add a new sun in the next step

2. Define the center of the map. If not defined a center will be created and referenced automatically at the map zero.

3. Press “Add Sky” to create the base sky system and assign the skybox shader to the Unity skybox. This will also instantiate the Sun System, that contains the sun and moon and center it around the map center. The moon will move along with the sun in the opposite to map point location. A separate moon orbit will be available in v3.x cycle as extra option. **Particles for weather (rain, snow etc) & shader based cloud domes are also created in this step & are assigned to the sky manager.**

4. After the Sky and Sun system have been created, more options open up for the control and adjustment of the individual systems, as described below.



Setup GI Proxy system on the Sun light. Bounce lights will be created around the hero position.
Extra setup may be required depending on the scene specifics and world scale.

Define player by tag optionally. Defaults to the Main Camera if not defined. The hero is used for GI Proxy setup and also for local effects that follow the hero (e.g rain, in the default local mode)

Define a 2nd sun that will be added to the Skybox, in the defined transform position.
The transform can be any item & may be parented to the sun system to rotate alongside it.

Adds a windzone to the Sky Manager, which will govern volume cloud motion. This windzone must also be inserted in the InfiniGRASS manager, if the asset is used along with Sky Master
Optionally add a skydome based version, instead of the skybox mode. The sky preset will be set to a specifically created one for the skydome use. The dome can be erased and the presets may be restored for skybox by pressing one of the available library icons in this section.

Set season, time of day to start the game with, the horizontal sun position & day cycle speed.
Lower sun speeds will expand the day duration. The dawn can be shifted for a small amount.

The new Latitude / Longitude time of day system can be enabled using the ‘LatLonTOD’ toggle, in order to automatically define the sun positioning based on the geographic location of the observer and current the time of day.

NEW in v3.3 - Use Lat/Lon correct moon positioning. Press to setup the effect.
The moon is parented to its own system & is also lit properly by the sun.

Enable Moon for Latitude/Longitude system)
Setup Lat/Lon Moon

Adjust the intensity of the sun and moon lights.

Adjust the sky coloration brightness

Adjust the moon halo in the skybox shader

Adjust the scale of the world. The sun system, particles, volume & dome clouds are automatically scaled to match the new size.

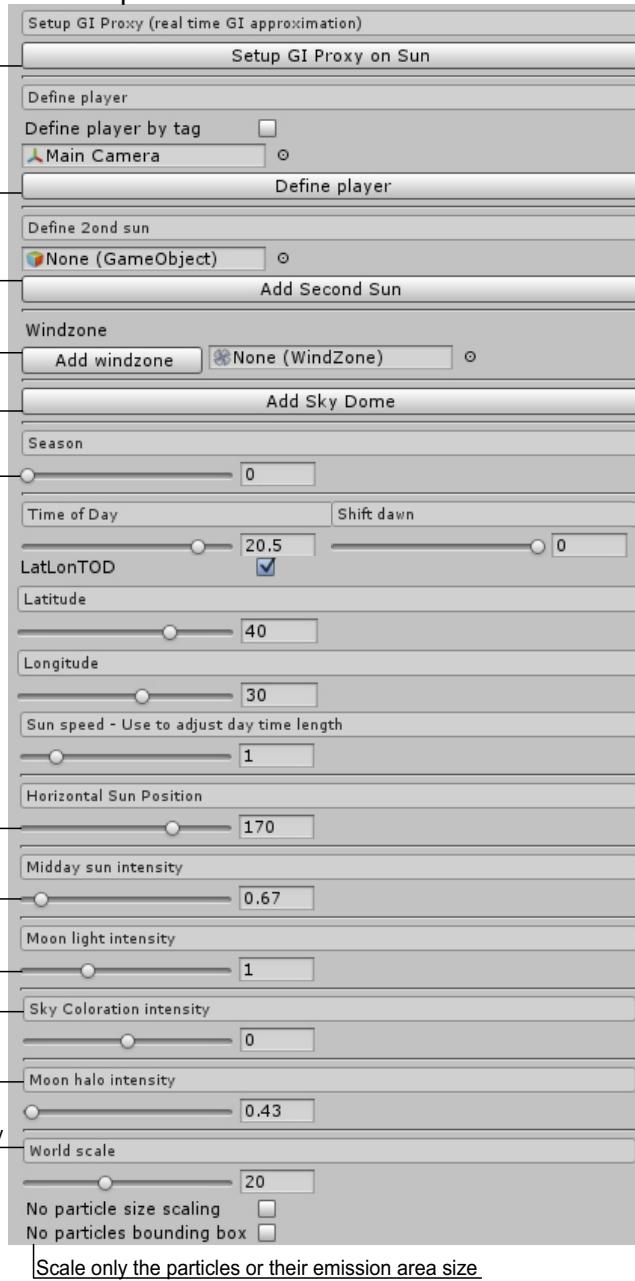
Default Sun-Moon system to be instantiated

Define a Transform that marks the center of the map, to adjust Sky Master systems by.

Add the main sky shader in Unity skybox. The material is automatically assigned

Add an Optional sky dome that will render the sky on the inner surface of a sphere

Use for special FX or when a second sky is needed in the same scene

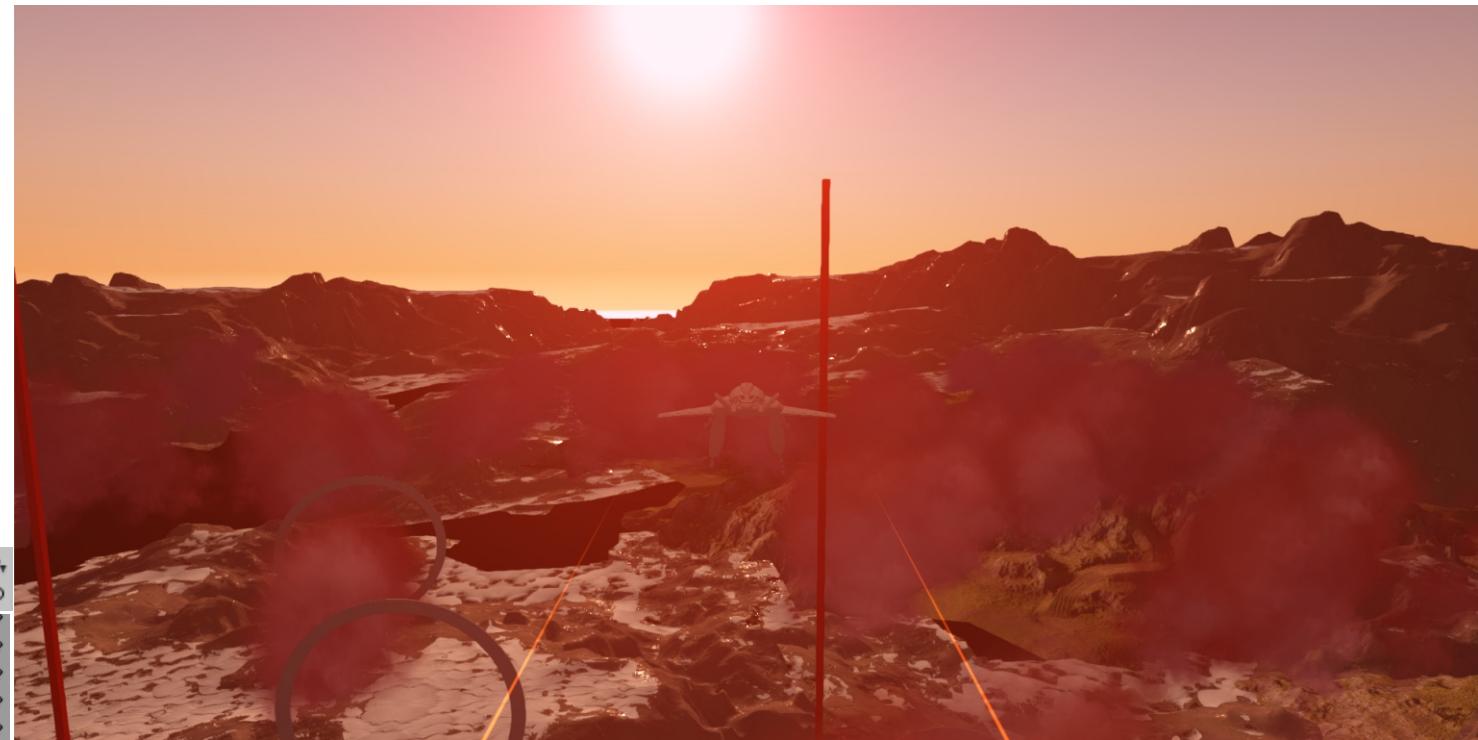


4.1. Sun and ambient colors and presets can be altered directly in the Sky Master Manager script, in the sections presented below.

4.2. Sky Master uses a few tags-layers for special effects. The most important is **the “Conductor” tag that must be defined for lightning system to work properly** (The Conductor tagged objects will attract lightning, used to dynamic effects and gameplay situations). The “Flamer” and “Flammable” tags are optional and are used in the advanced particle & decal spread-painting system (used for ice creation that sticks to objects and melts or spreading fire). The “PPaint” tag is used in the same system to define which items to paint decals & particles on. The optional “NoForcePDM” tag can be used to define which particles to exclude from the advanced forces - turbulence system. The “TerrainSM” layer is used to define terrains for depth map render camera in the water shore line system.



Sky Preset icons, press to choose Skybox style (older v2.x cycle presets may be defined in the manager directly)



▼ **Sky Master Manager (Script)**

Script **SkyMasterManager**

Dusk_L1_dome_color
Dusk_L2_dome_color
Dawn_L1_dome_color
Dawn_L2_dome_color
Day_L1_dome_color
Day_L2_dome_color
Night_L1_dome_color
Night_L2_dome_color

Day_Sun_Color
Day_Ambient_Color
Day_Tint_Color
Dusk_Sun_Color
Dusk_Ambient_Color
Dusk_Tint_Color
Dawn_Sun_Color
Dawn_Ambient_Color
Dawn_Tint_Color
Night_Sun_Color
Night_Ambient_Color
Night_Tint_Color

Shader based cloud dome coloration parameters

Coloration for the ambient and sun light can be altered in the Sky Master Manager parameters

Sky Presets are defined in this variable in the Sky Master Manager.

▼ **Sky Master Manager (Script)**

Script **SkyMasterManager**

Sun Target
Current_Time
Current_Day
Current_Month
Days_per_month
Auto_Cycle_Sky
SUN_LIGHT
SUPPORT_LIGHT
MOON_LIGHT
SPEED
Preset

20.5
0
0
30

Sun
MoonLight
MoonLight
1
9

5. Define volumetric clouds presets, by pressing on the relevant icon set. These clouds will be used in the new in v3.0 Volumetric Weather types. The clouds are assigned to the Sky Master Manager script and are instantiated along with the chosen Volume Weather. Volumetric clouds are instantiated based on the map center and current wind direction, so they will traverse the map.

6. Parameters for the quick adjustment of the shader based cloud dome and volumetric clouds are described below.

6.1. Volumetric cloud coloration & advanced parameters can be changed in the cloud prefabs, that can be located by clicking in the references created in the Sky Master manager.



Volumetric & Shader based Clouds

Shader based Cloud dome

Cloud shift - density control

Cloud lower layer size

Cloud coverage offset

Cloud ambience

Shader based cloud dome adjustments

Cloud density (shifts one of the cloud layers to fill the sky)

Cloud size (resize one of the cloud layers)

Cloud coverage control

Cloud ambience

Volumetric Clouds

Parameters activated with the next volumetric cloud bed creation

Cloud bed width

Cloud bed height

Cloud particles size

Cloud size

Cloud centers multiplier

Volumetric Cloud adjustments

Volumetric cloud bed size in x,z plane

Vertical displacement of the cloud bed from the ground

Volumetric cloud particle size. Increase for thicker clouds when the next cloud is instantiated.

Volumetric cloud size, defines how far away from each cloud center particles will be spread

Volumetric cloud number for the next instantiated cloud bed. Particle count is divided by the centers

Sky Master Manager (Script)

Script

SkyMasterManager

Heavy Storm Volume Clouds

SETD2_HEAVY STORM CLOUDS



Dusty Storm Volume Clouds

None (Object)



Day Clear Volume Clouds

SETD1_DAY CLOUDS



Snow Storm Volume Clouds

None (Object)



Snow Volume Clouds

None (Object)



Rain Storm Volume Clouds

None (Object)



Rain Volume Clouds

None (Object)



Pink Volume Clouds

SETD8_PINK CLOUDS



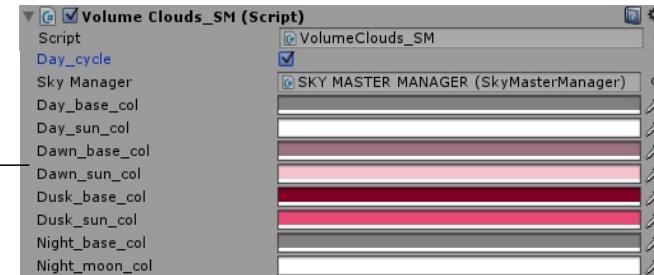
Lightning Volume Clouds

None (Object)

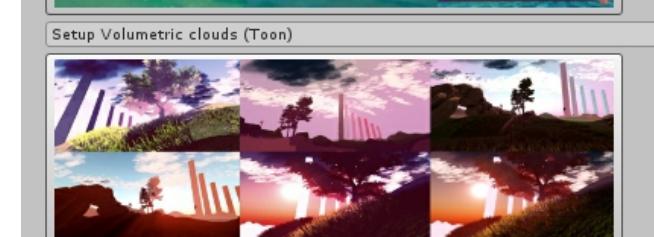


Volumetric cloud prefab

Cloud coloration based on TOD



Volumetric cloud styles library

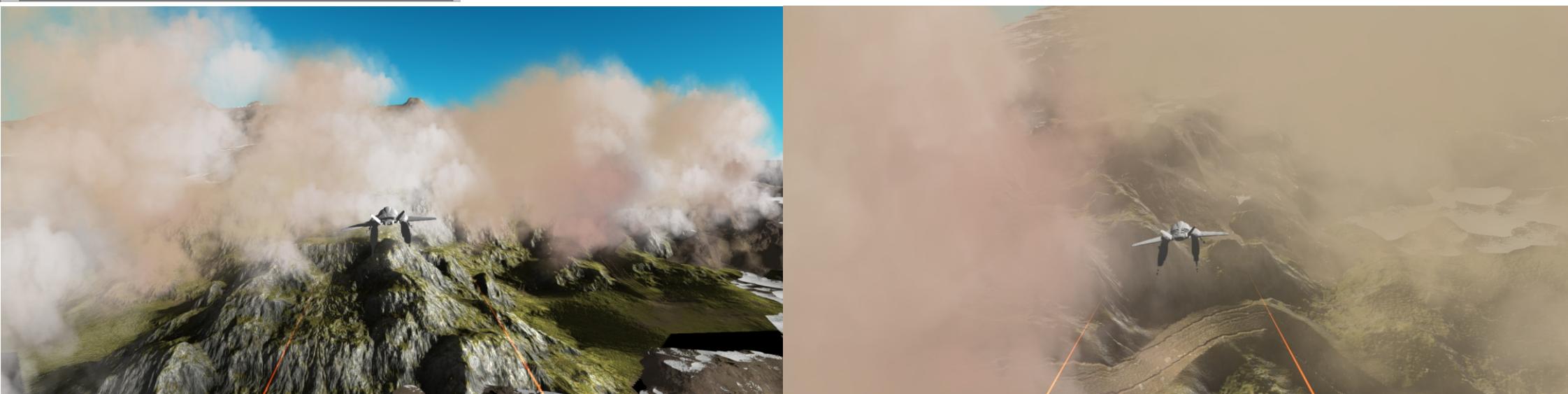


6.2. The volumetric cloud bed has several options for performance control, which can be changed either directly in the cloud prefab, which gets instantiated at the relevant weather or can be globally changed from the Inspector “Override performance” option, which provides a shortcut way to refine performance by adjusting the cloud motion and update intervals.

The ‘Smooth cloud motion’ option will decouple the wind based translation of clouds from the rest of the performance system and can be used for simulating a perfectly smooth motion, in cases of strong wind. If wind is very low, it is advised to disable this option.

The ‘Update Interval’ option defines the interval between two updates in the volumetric cloud system, this option will still do the calculations for all clouds when the update happens. The “Spread calculations to frames” option will add an extra layer of performance enhancement, by spreading the calculations across multiple frames and is especially useful when lots of particles are required. The two options can be combined.

<input checked="" type="checkbox"/> Override Performance <small>Override default performance settings of current volume cloud bed. Use Smooth cloud motion for decoupling the cloud motion from the performance settings.</small> <input checked="" type="checkbox"/> Smooth cloud motion <small>Decouple wind based cloud motion from the performance system, for a perfectly smooth motion. Recommended for desktop use & strong wind.</small> <input type="checkbox"/> Update interval <small>Time between two consecutive executions of the cloud Update function</small> <input type="checkbox"/> Spread calcs to frames <small>Spread calculation for particle color across frames, use when lots of particles are used.</small> <input checked="" type="checkbox"/> Renew clouds <small>Renew the volumetric cloud bed, the previous one will fade out until extinction and the new one will fade in. Use with a bed created outside the map area to emulate a constant flux of clouds. Extra care must be taken so the previous volumetric cloud bed is destroyed fast so the two beds coexist for very little time.</small> <input checked="" type="checkbox"/> Override Fade-Boundary <small>Overrides the fade in/out and Boundary options</small> <input type="checkbox"/> Boundary where clouds are renewed <small>The cloud bed is renewed when 90% of the clouds are beyond the Boundary distance from the cloud bed center.</small> <input type="checkbox"/> Fade in speed <small>Cloud fade in speed</small> <input type="checkbox"/> Fade out speed <small>Cloud fade out speed. This must be set high enough to make the previous cloud bed disappear as fast as possible, and low enough to get a smooth disappearance effect.</small> <input type="checkbox"/> Fade out time <small>Maximum time fade out will last, use a higher number if the clouds disappear suddenly before the full fade out</small>	Overrides the performance settings set in the Volumetric Cloud prefab Decouple wind based cloud motion from the performance system, for a perfectly smooth motion. Recommended for desktop use & strong wind. Time between two consecutive executions of the cloud Update function Spread calculation for particle color across frames, use when lots of particles are used. Renew the volumetric cloud bed, the previous one will fade out until extinction and the new one will fade in. Use with a bed created outside the map area to emulate a constant flux of clouds. Extra care must be taken so the previous volumetric cloud bed is destroyed fast so the two beds coexist for very little time. Overrides the fade in/out and Boundary options The cloud bed is renewed when 90% of the clouds are beyond the Boundary distance from the cloud bed center. Cloud fade in speed Cloud fade out speed. This must be set high enough to make the previous cloud bed disappear as fast as possible, and low enough to get a smooth disappearance effect. Maximum time fade out will last, use a higher number if the clouds disappear suddenly before the full fade out
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6.3 The volumetric cloud system includes an option for lateral cloud motion (differential motion parameter) for motion variety when clouds move with wind. The glow and light modifier affect the cloud shader by adding more light overall or enhancing the sun lit cloud area.

Differential motion **Differential cloud motion, makes particles move at different speeds**

Differential speed **Speed of differential based motion**

Differential factor **Amount of differential motion. Use negative values to emulate cyclone effects**

Glow modifier **Cloud glow enhancement**

Min light modifier **Control cloud shader minimum brightness**

Light intensity modifier **Control cloud light intensity**

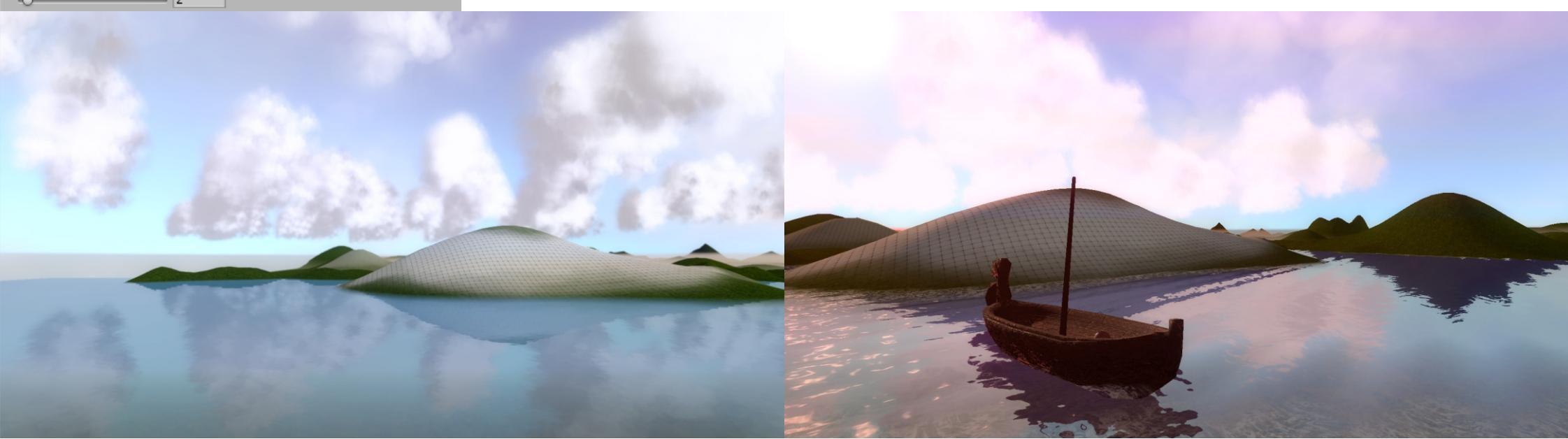
Sun intensity modifier **Control sun effect on clouds**

Modifiers speed **Speed at which the controls are applied when changed**

Cloud dusk color  **Color of lit cloud areas at dusk**

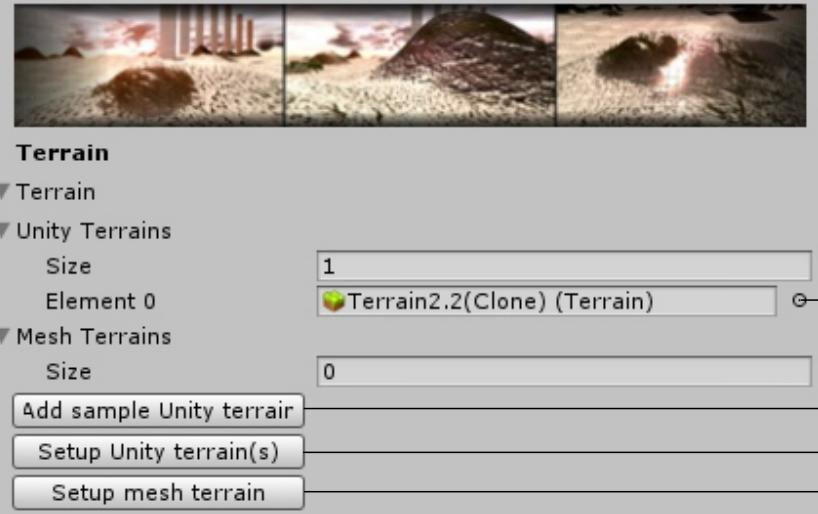
Cloud base dusk color  **Color of cloud base color at dusk**

Cloud speed multiplier **Multiply cloud speed, over the default wind based speed**



7. Setup the terrain and fog script. Choose a terrain to add the script to (or multiple terrains, the SeasonalTerrainSKYMASTER component will be added to the first one and the rest will be configured with the snow enabled material for use with Sky Master snow system. This material can be changed if snow is not required.

7.1. The terrain script handles seasonal changes to the terrain (using Sky master material), volumetric fog and image effects in main and VR cameras (e.g sun shafts). The included preset system allows the smooth transition of various volumetric fog and sun shaft styles (e.g. fog for rain, underwater shafts etc). These presets are selected based on Sky Master Manager Volumetric Weather and Water module (when underwater).



Define terrains to setup with snow growth material
The terrain-fog handler script will be added to the first in the list.

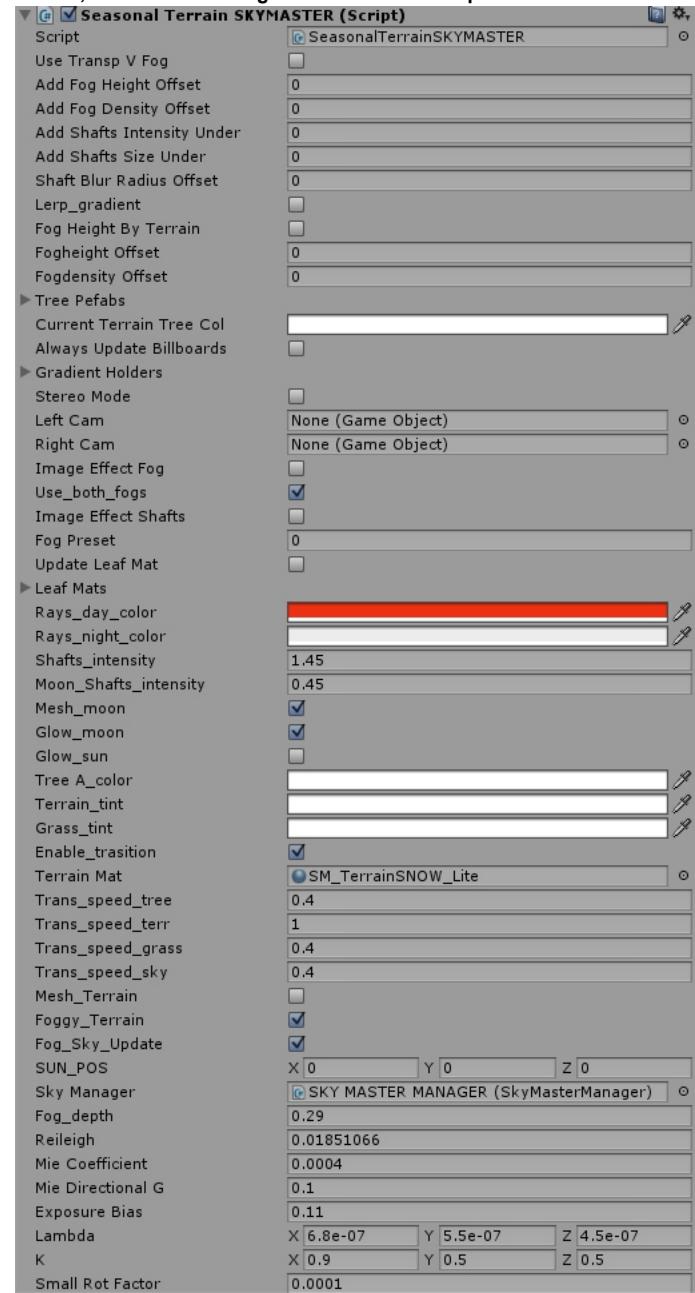
[Add a sample terrain to setup.](#)

[Setup Unity terrains \(adds Terrain script to 1st item & snow material to all\)](#)

[Setup mesh terrains](#)



Terrain, seasonal and image effects handler script.



8. Setup image effects.

8.1. Volumetric fog can be added to the main and VR cameras (must be first defined in the relevant boxes). This is **used and controlled by the terrain-fog script** for the volumetric fog.

8.1.1. The transparent variety of the volume fog can be defined as alternative, to better integrate volumetric clouds and ocean with volume fog. The limitation is that objects will not render correctly behind the clouds and is not recommended for fly through case. The two fogs can be switched to adapt to the specific needs.

8.2. Sun shafts image effect, used and controlled in the **Terrain-fog script** presets for sun beams effect.

8.3. The **Water drops** adds a plane with the running water effect in the camera, for emulation of running water on the screen. This plane can also be copied and used for windows in rainy setting. The shader is controlled by Sky Master Manager.

8.4. Underwater blur is used by the Water module for the blur of image while underwater. It is also automatically added with water creation.

8.5. The rest of the effects are standalone and can be individually adjusted in the camera after insertion.



Camera FX	
▼ Volume fog, Sun shafts	
Sun Shaft size	Control sun shaft size
<input type="range"/> 1.45	
Moon Shaft size	Control moon shaft size
<input type="range"/> 0.45	
Sun Shaft length	Control sun shaft length
<input type="range"/> 0	
Water splash amount	Water flow intensity
<input type="range"/> 1	
Water refraction	Water refraction
<input type="range"/> 4.5	
Water Freeze speed	Speed for gradual freeze effect to appear
<input type="range"/> 0.2	
Enable water freeze	Enable gradual water freeze effect
<input type="checkbox"/>	
Freeze inwards	Control freeze direction
<input type="checkbox"/>	
Tone mapper brightness	Tone mapping image effect brightness control
<input type="range"/> 2.2	
VR Cameras - Left/Right - Define to add effects - Terrain Script is required	
<input type="checkbox"/> None (GameObject)	Define Left/Right VR cameras to add effects to
<input type="checkbox"/> None (GameObject)	
Add volumetric fog	Volumetric fog effect, and transparent variety
Add sun shafts	Sun shafts effect
Add bloom	Blur effect for underwater, automatically added when water is added.
Add Underwater blur	Add plane with water flowing shader. Freeze screen effect is also supported.
Add Water Drops	
Add Aberration	
Add Tone Mapping	
Add Mouse Look	

Standalone image effects (not controlled by Sky Master scripts)



9. Weather effects can be changed on demand through this section of the configurator and also events can be defined to take place at the specified time frames.

9.1. To define weather events, select Volume Weather type, define time and chance to happen and press "Add event" button. Events can be removed by pressing the "-" button in the right side of the inserted entries.

The screenshot shows the 'Weather' configuration panel. It includes settings for current weather (Cloudy), snow coverage (1), snow coverage speed (1), enable Unity fog (unchecked), use transparent volume fog (unchecked), unity fog density (1), volume fog density (0), and volume fog height (0). A 'Volume fog density' table lists HeavyStorm (90) and Tornado (90) with their respective timing and weather types. Below this is a 'Weather type' dropdown set to Tornado, and detailed parameters for start hour (4), start day (2), start month (2), end hour (44), end day (4), end month (2), volume cloud height (100), and volume cloud span (1000).

Choose Volumetric Weather to activate. **The current weather must be out of the “fade in” state to enable a new one (around one minute duration).**

Choose maximum snow coverage amount, for the gradual snow growth. The snow will grow on snow storm & melt away on sunny or other weather.

[Control the snow growth speed on terrain](#)

Activate Unity fog along with Volume fog. This fog affects the volume clouds & can be used to give extra depth to the cloud bed.

Activate transparent volume fog (must first be inserted in step 8). This fog affects the volume clouds & ocean.

Adjust the density of Unity fog.

Adjust the density of the Volumetric fog.

Adjust the height of the Volumetric fog.

Add the defined weather event, which will be added to the events list.
Events can be removed with the minus button.

[List of defined Volume Weather events](#)

Event type, timing and chance to occur in the time frame



InfiniGRASS used with the snow system in Sky Master 3.0. The grass is snow ready

Weather event type selection

The 'Add event' dialog shows a list of weather types. 'Sunny' is checked, while 'Cloudy' is selected. Other listed weather types include Foggy, Heavy Fog, Tornado, Snow Storm, Freeze Storm, Flat Clouds, Lightning Storm, Heavy Storm, Heavy Storm Dark, Rolling Fog, Volcano Erupt, and Rain.

Weather type:	Sunny
Weather chance:	Foggy
Start hour (1-24):	Heavy Fog
Start day (1-30):	Tornado
Start month (1-4):	Snow Storm
End hour (1-24):	Freeze Storm
End day (1-30):	Flat Clouds
End month (1-4):	Lightning Storm
Volume cloud height:	Heavy Storm
Volume cloud span:	Heavy Storm Dark
	Cloudy
	Rolling Fog
	Volcano Erupt
	Rain

10. Sky Master ULTIMATE v3.0 offers snow integration with SpeedTree, Unity trees & grass, Unity terrain and meshes.

10.1. The **SpeedTree shaders** can be downloaded from the Unity forum thread and are not distributed with the asset.

10.2. **InfiniGRASS** is supported directly, after grass is added it can receive snow gradually in Snow Storm weather. The windzone created for Sky master must be inserted in the grass manager to use the same wind features on the grass.

10.3 Unity trees & grass snow is covered by replacement shaders, that can be found in the assets - Foliage folder and must be extracted to be activated. The materials that are created with the shaders will not revert back to Unity shaders if they are erased, so it is recommended to separate from the trees that use Unity shaders prior to the Sky Master. To revert to old shaders if Sky Master ones are erased, the tree materials have to be reconstructed.

10.4. Unity terrain is supported though a snow shader and material that is assigned when terrain is setup in the configurator. This material can be swapped out if another must be used. Support for RTP will come in version 3.x cycle updates.

10.5 Meshes can use two variants of the snow shader, a SM2.0 one for speed-compatibility and a SM3.0 one for extra effects like flowing water and puddles.



Foliage

Foliage

Setup snow on mesh

For Unity terrain trees & grass, please extract the 'Unity_terrain_foliage_SM3_overrides.unitypackage' file located in the V3.0 assets, foliage folder

For SpeedTree trees, please extract the 'SpeedTree_SM3.unitypackage' file that can be downloaded from the Unity Forum thread.

Download SpeedTree snow shaders

Sky Master gradual snow growth can be directly used with InfiniGRASS asset grass & foliage and is activated in snow conditions. The water module is compatible with the InfiniGRASS shaders. For more information on InfiniGRASS, press below:



Choose mesh to setup with snow enabled material

Press to move to download page for SpeedTree snow enabled shaders

Press for more information on InfiniGRASS and demos with its use with Sky Master ULTIMATE 3.0 snow & water



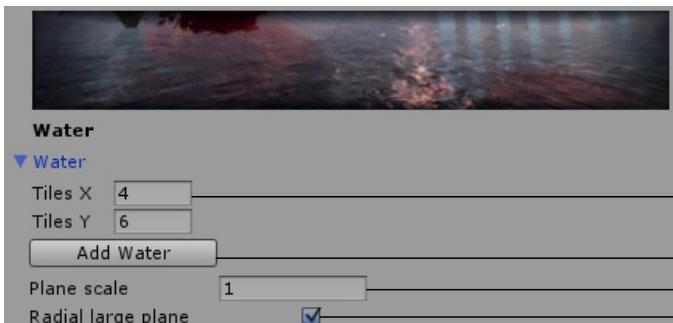
11. The new water module in Sky Master ULTIMATE v3.0 can be used for the creation of oceans and local water bodies.

11.1. The water is created with tiles. Define the tile count in X and Z axis to form the desired grid and press “Add water” to create the water body. Caustics are automatically added with the projector to the scene and may need manual adjustment in position based on the terrain specifics.

11.2. A Wave height sampler can be inserted in the scene, to provide a sample of height calculation for the GPU ocean. A complete buoyancy system will be available in the next Sky Master update (v3.1), based on these calculations.

11.3. Multiple water presets are available and there is also a “Custom” choice in the Water script that allows manual alteration of properties.

11.4. Extra waves for more detail can be activated using the Extra Waves Factor for weighting & the Frequency etc factors for wave definition.



Water wave controls, for refinement of the presets, alter by choosing “Custom” in Water Type pull down menu

Define the desired water tiles count in X and Z axis

Press to add water, using the defined tile array.
The Water handler & caustics are automatically added.

Plane scale

Use the radial plane mode, this will insert 4 planes with radial detail (max near the hero) for better endless ocean adaptation

Options after water addition

Remove water colliders

Restore water colliders

Add Height Sampler

Board boat

Enable thrower

Water follows player

Enable & disable water planes colliders

Insert a wave height sampler, for use in gameplay situations.
A buoyancy system will be added in v3.x update cycle of Sky Master

Board the created boat & enable ball thrower, for preview of extra height points

Make water follow the player in x-z axis, for endless ocean emulation

Wave controls

Waves direction

Waves direction

Extra waves factor X

Extra waves factor Y

Extra waves direction

Wave A direction control

Wave B direction control

Extra Wave A amplitude

Extra Wave B amplitude

Extra Waves direction

Water controller script

Water Handler SM (Script)
Script: WaterHandlerSM
Shore Blend Offset: 0.01

Wave Amp Offset

Wave Freq Offset

Wave Speed Offset

Wave Dir 1 Offset

Wave Dir 2 Offset

Depth Color Offset: 0

Extra Waves Factor

Extra Waves Freq Factor

Extra Waves Amp Factor

Extra Waves Dir Factor

Extra Waves Steep Factor

Caustics Projector: Projector (2) (Projector)

Caustics Mat: WaterCaustics

Caustic Intensity: 0.4

Caustic Size: 40

Water Base: Water4Advanced(Clone) (WaterBase)

Sun Shafts Int: 100

Bump Tiling Xoffset: 0

Bump Tiling Yoffset: 0

Depth Fog Switch: 10

Below Water:

Water Type: Caribbean

Under Water Type: Turbulent

X: 1 Y: 1 Z: 1

X: 0 Y: 0.1 Z: 0

Main Camera (UnderWaterImageEffect): None (Under Water Image Effect)

Underwater Blur: None (Under Water Image Effect)

Underwater Blur L: None (Under Water Image Effect)

Underwater Blur R: None (Under Water Image Effect)

Fog_Color:

Sky Manager: SKY MASTER MANAGER (SkyMasterM)

Ocean Mat: Water4Advanced SM 3.0

Night Water Color:

Storm Water Color:

Snow Storm Water Color:

Day Water Color:

Dusk Water Color:

Night Reflect Color:

Day Reflect Color:

Dusk Reflect Color:

Day River Color:

Day River Reflect Color:

Day Ocean Color:

Day Ocean Reflect Color:

Dark Ocean Color:

Dark Ocean Reflect Color:

Muddy Water Color:

Muddy Reflect Color:

Emerald Water Color:

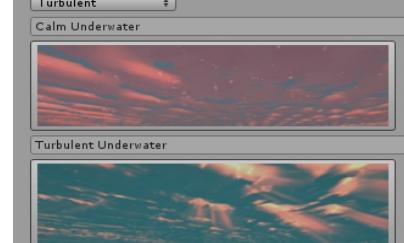
Emerald Reflect Color:

Specular Source: Water4Advanced(Clone) (SpecularLig)

Water presets

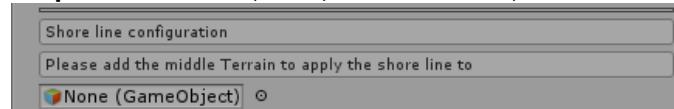


Underwater presets

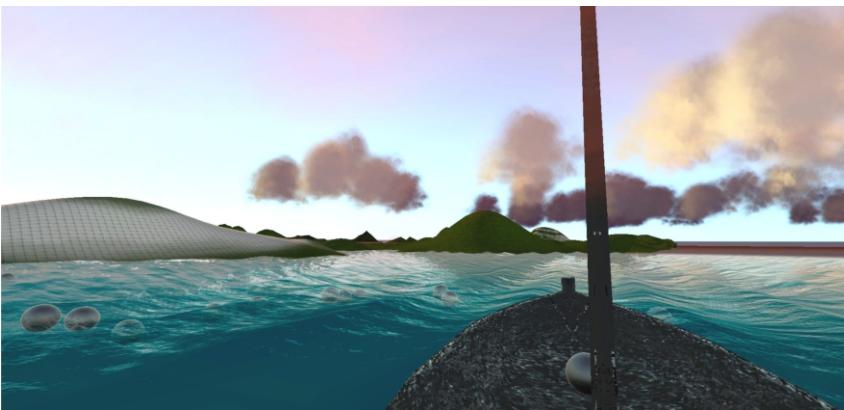
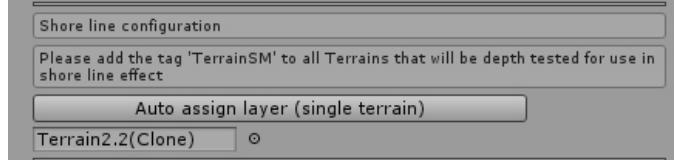


11.5 Step by step use of the terrain depth rendering and shore line waves control system.

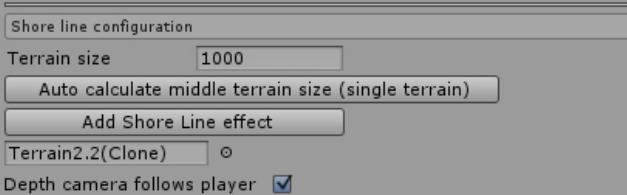
Step 1. Define terrain (if multiple, the central one)



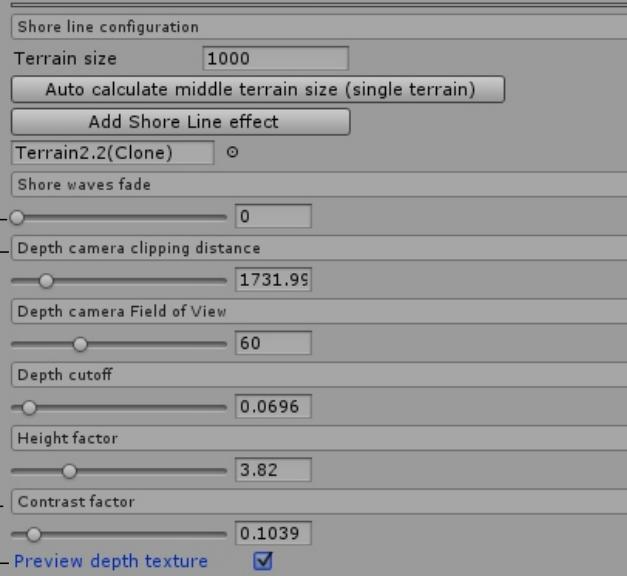
Step 2. Add the 'TerrainSM' layer to all terrains (the tag may be also applied later to any extra terrain to add to the shore line effect)



Step 3. Provide the size of the terrain the camera must cover. If one terrain is used, the value can be auto calculated. The follow player mode will move the depth rendering camera to match the players current area.



Step 4. Press 'Add Shore Line Effect' button to create the shore line controller and depth rendering camera.



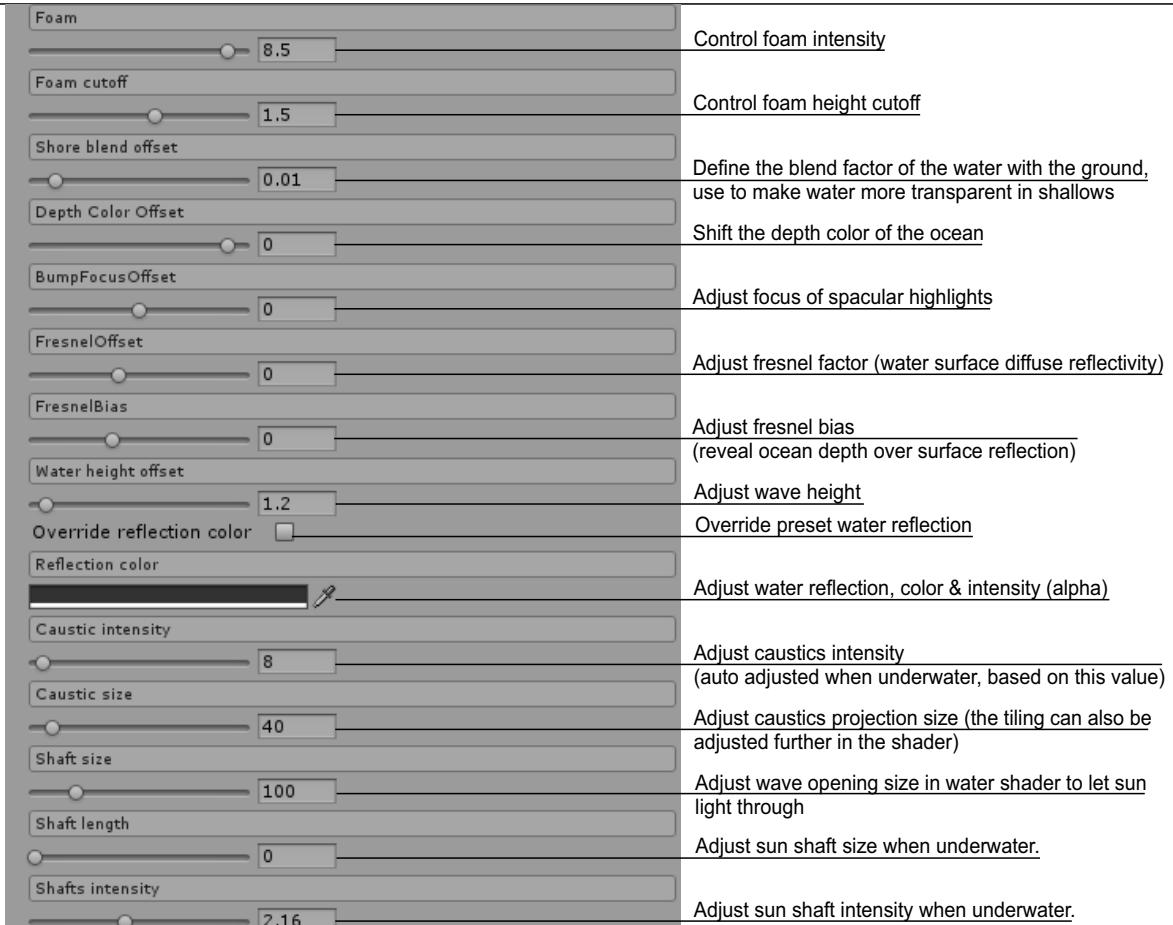
Adjust wave fade on shores

Adjust depth render parameters

Preview depth render of the terrain(s)

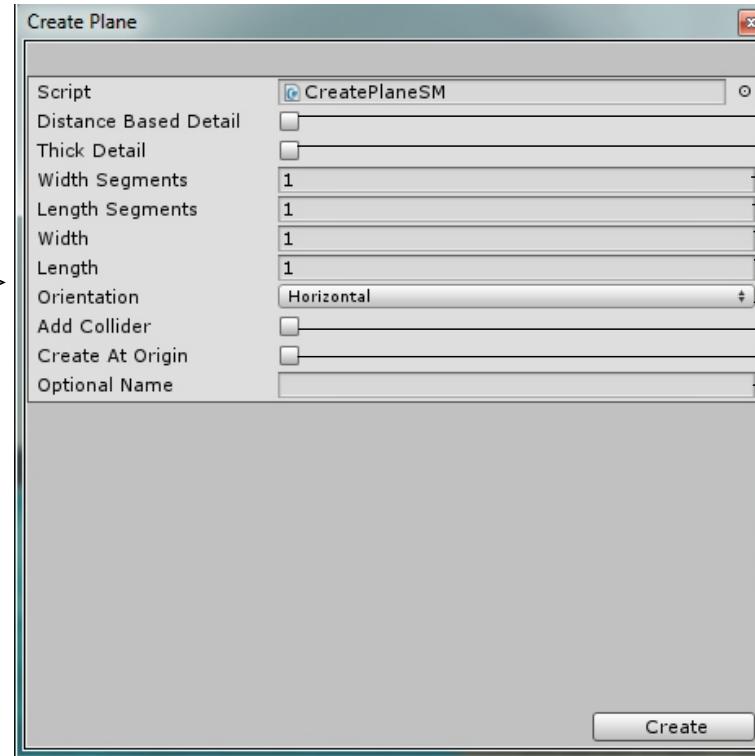
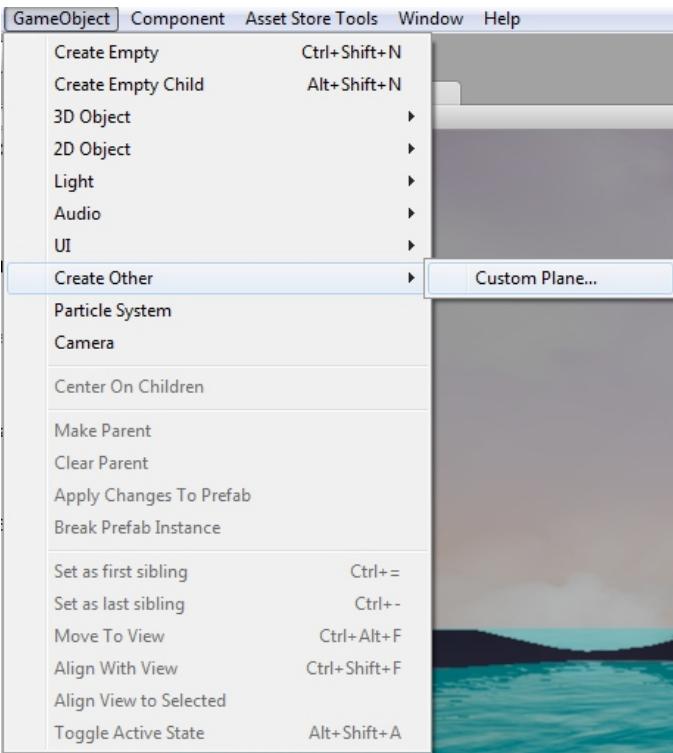


Water rendering options & caustics control

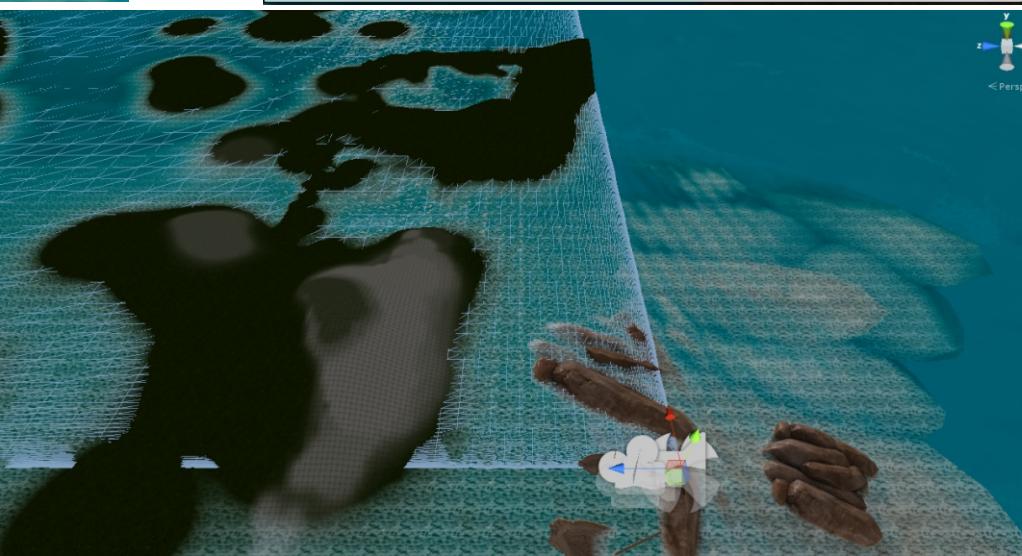
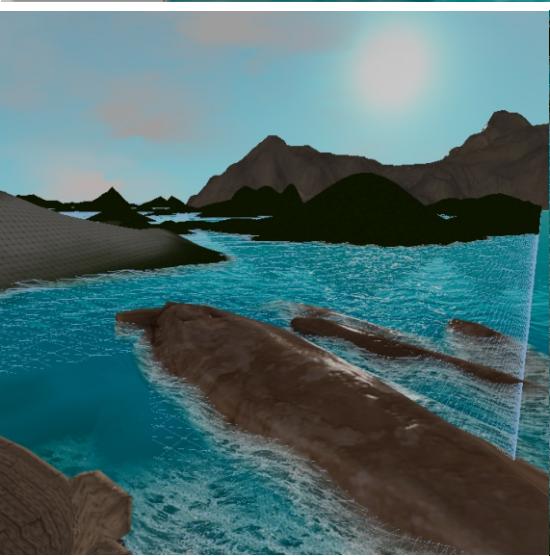


11.6 Sky Master includes a system that can create a custom water plane, for use with the Ocean, as alternative (or together with) the default normal planes. This can be found in Gameobject Menu (Create Other section).

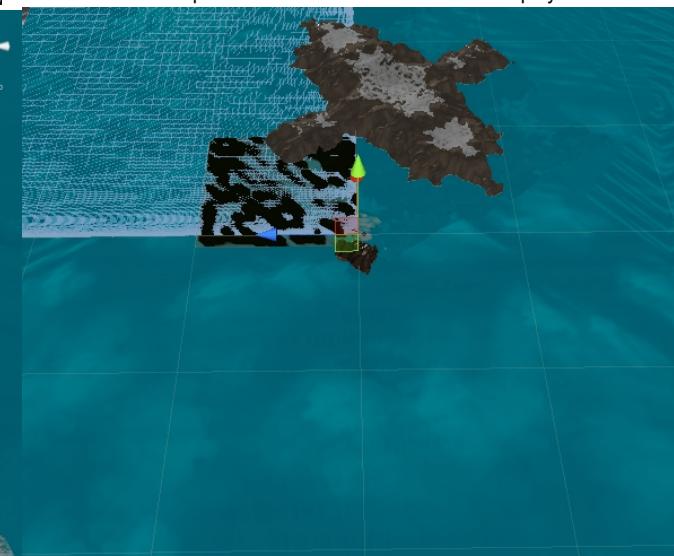
The system can increase detail near the plane pivot to create a radial detail distribution. Then Sky Master will instantiate this plane four times to cover all sides and create the thicker grid in the hero spot. The 'follow hero' mode for water makes sure this detail is always near the hero.



Increase detail in closer distance to pivot
 Further Increase detail in closer distance to pivot
 Plane width segments count
 Plane length segments count
 Plane width
 Plane length (use very small when lots of density goes in, values like 0.01f will allow easier scaling of the plane later)
 Orientation of plane (use default for Ocean)
 Add collider to the plane
 Create at map origin
 Name the plane



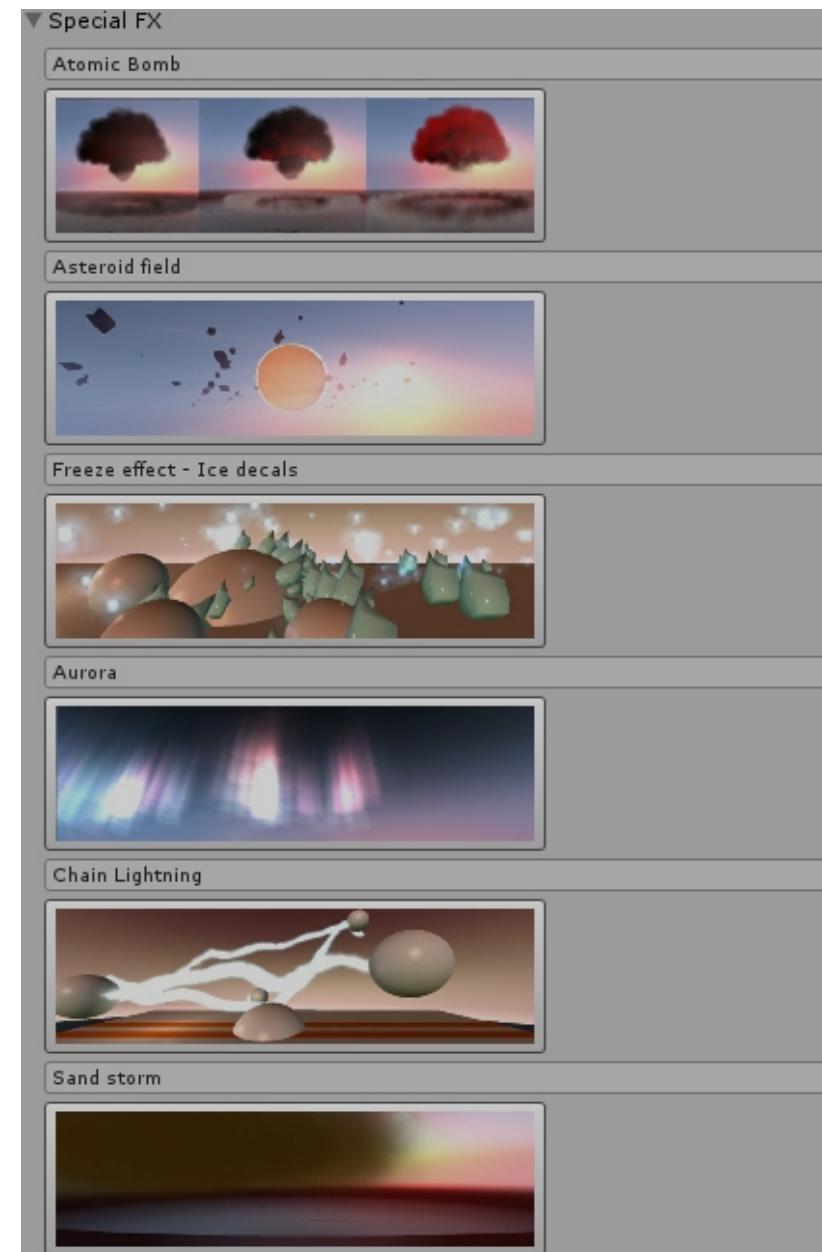
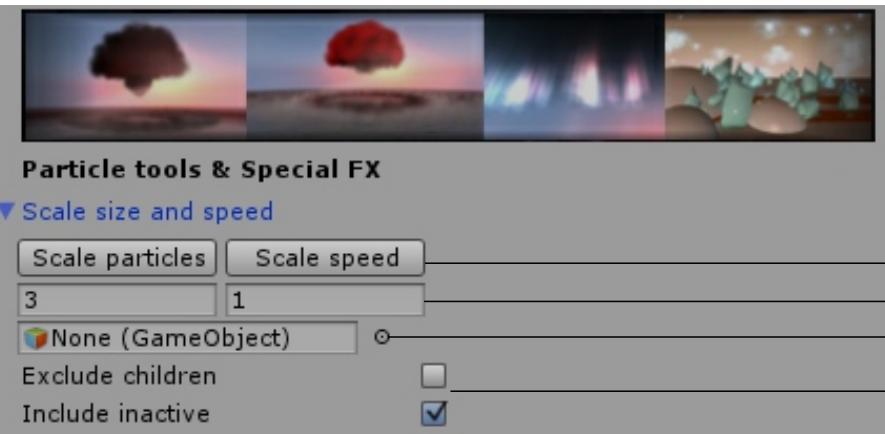
Four planes with maximum detail near the player.



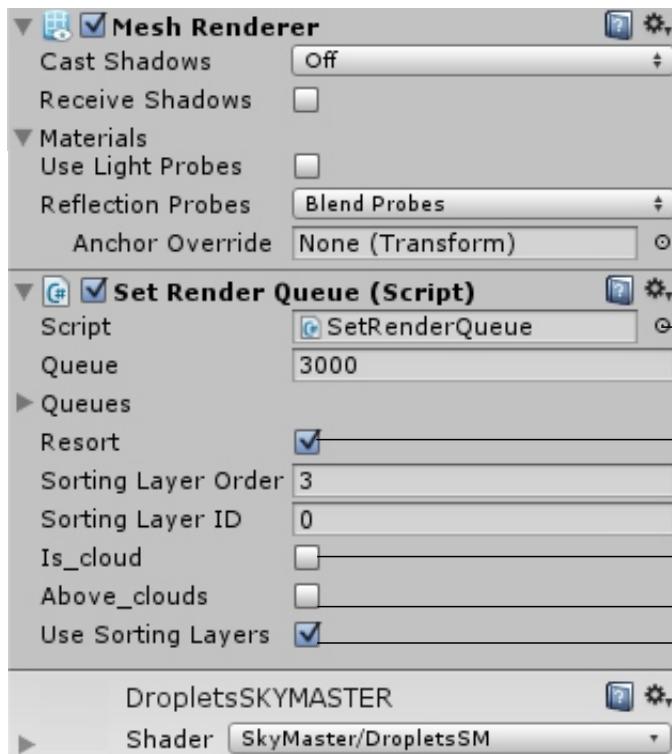
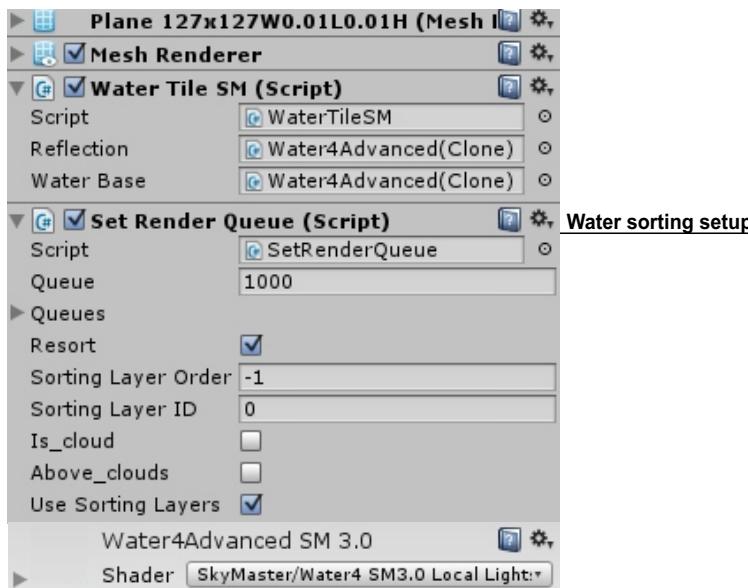
12. Special FX section contains various effects, like ice decals, explode effects, dynamic asteroid field and chain lightning.

12.1. A tool for particle scaling is provided and can be used to scale particles as desired. The same module is automatically used when the world scale changes to adapt the weather particle effects to the new world size.

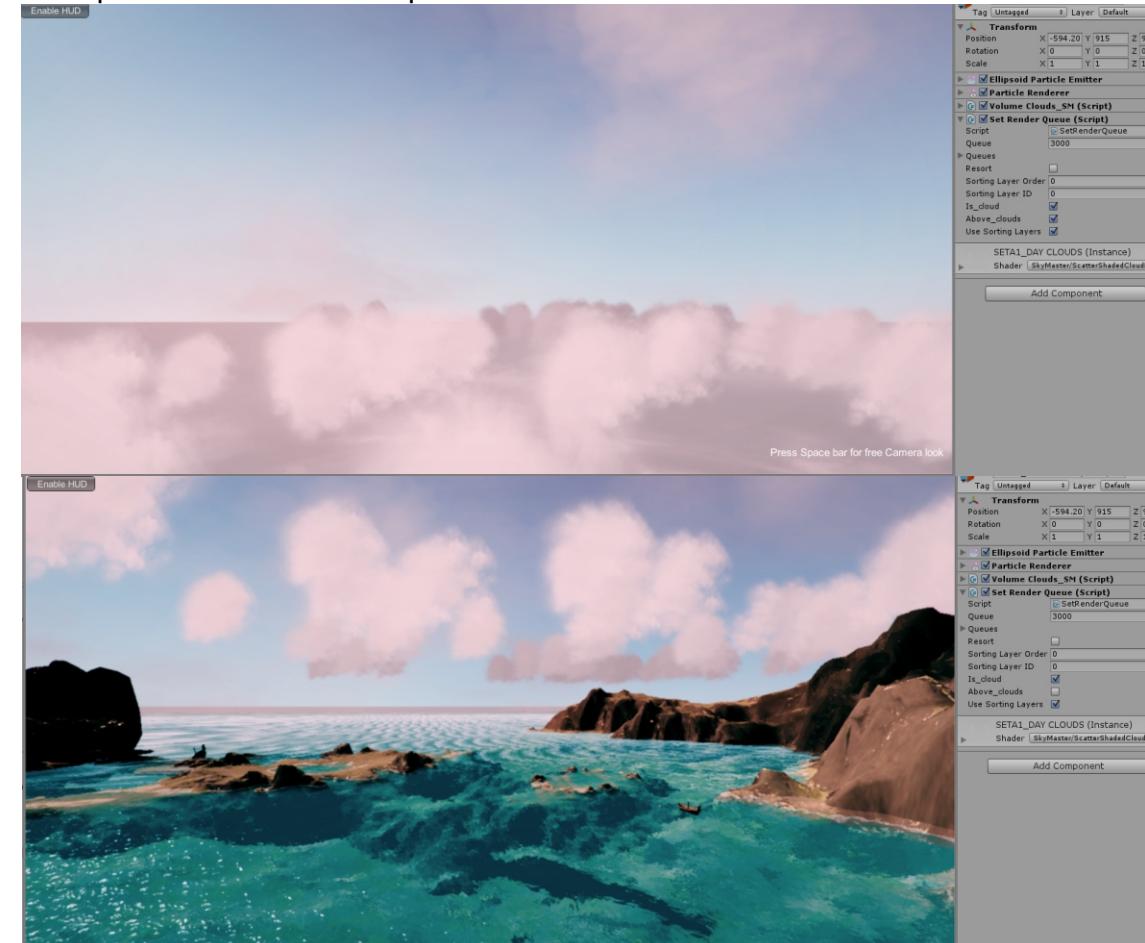
12.2. The Atomic bomb effect uses the new in v3.0 volumetric lit particles, using the sun as reference.



13. The various systems use a sorting layer setup and control script to render the clouds, water and rain drops plane (in front of the camera) in the correct order. The volumetric clouds are assigned the 0 sorting depth by default and when the player moves above the cloud bed, they get the 1 sorting layer, so they appear in front of all ground particle effects (which are 0 by default, so 1 will render on top). The Rain Drops plane in the camera front is set to depth 3 and the water to depth -1. The script is attached to the relevant prefabs by default when instantiated in sky - water creation through the Inspector and pre-configured to the above mentioned values. The system also sets the render queue for the item.



Above and below clouds automated setup, use the "Is cloud" option for the automatic sorting order assignment. The script must be attached to the cloud prefab.



Enable to resort the system. Set in Editor mode to enable a resort on game start

This is used for the volumetric cloud automatic sorting setup

Sorting order in layer ('Default' sorting layer is used). This value determines the render order of items.

ID of sorting layer - Default set to 0

This is used for the volumetric cloud automatic sorting setup

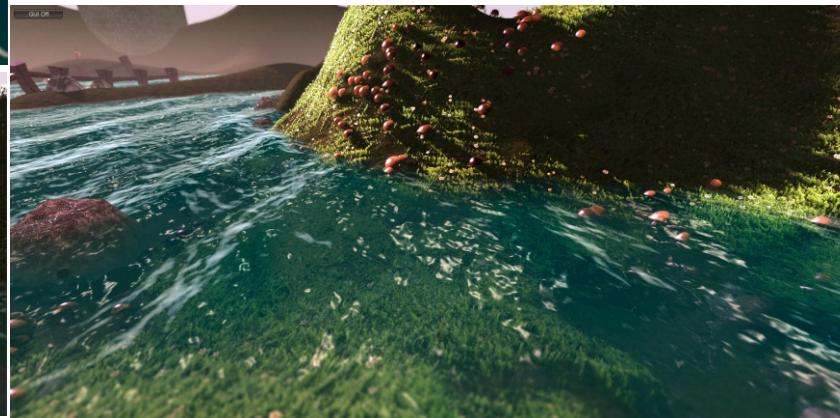
(sorting set to 0 when below clouds and to 1 when above)

Flags when player is above clouds, in "Is cloud" mode

Enable layer sorting on item script is attached to

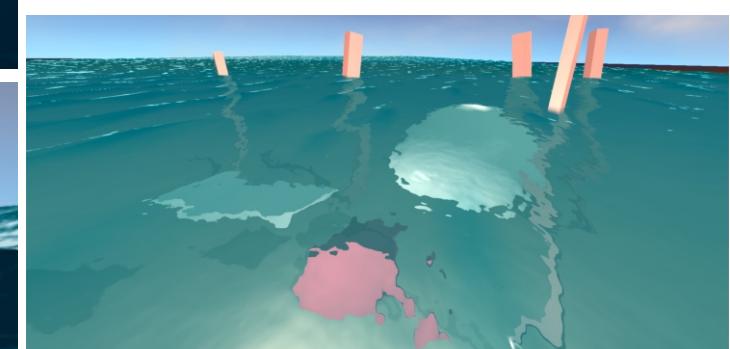
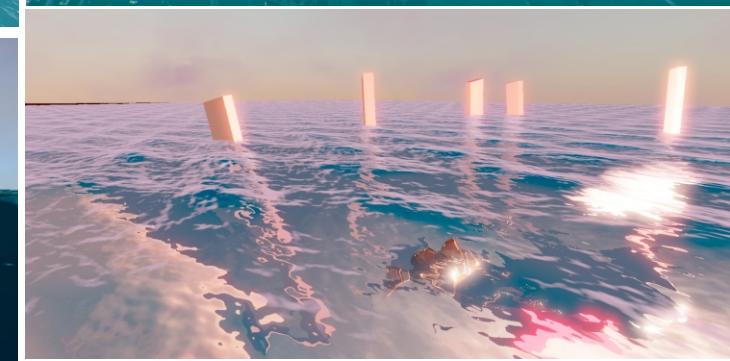
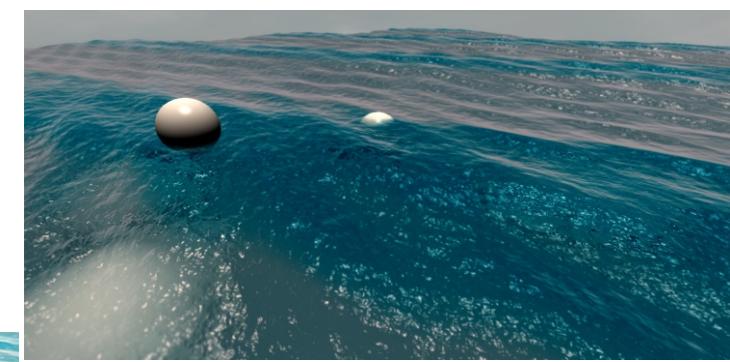
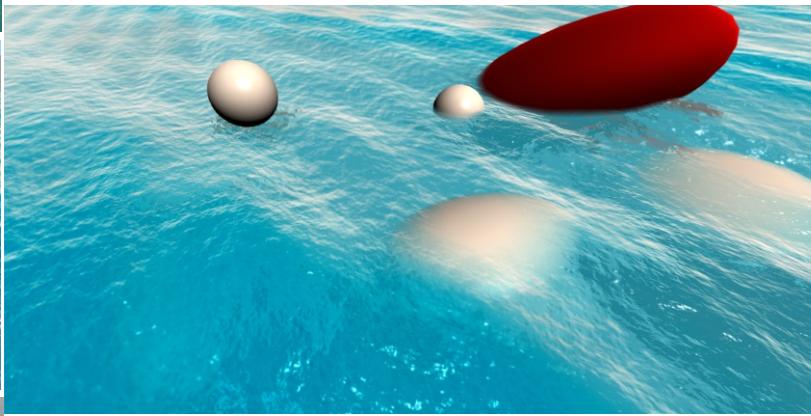
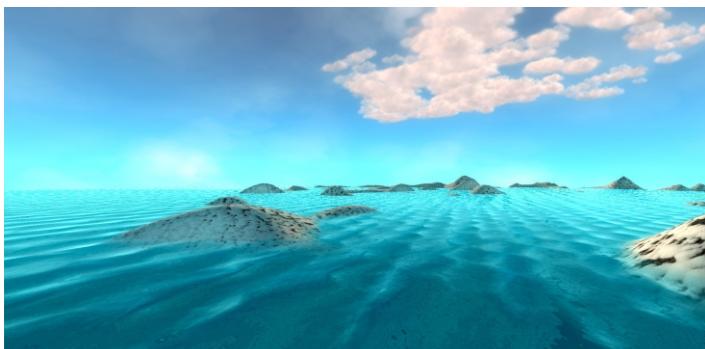
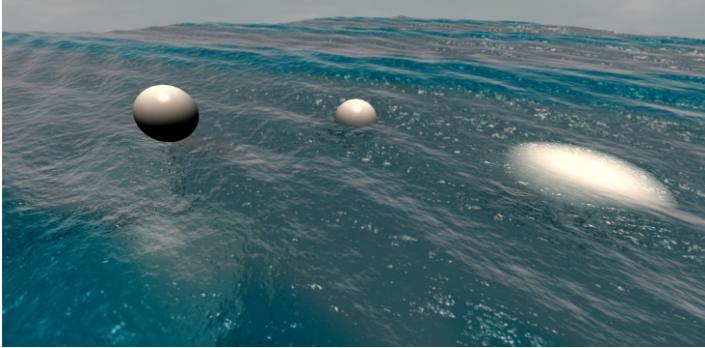
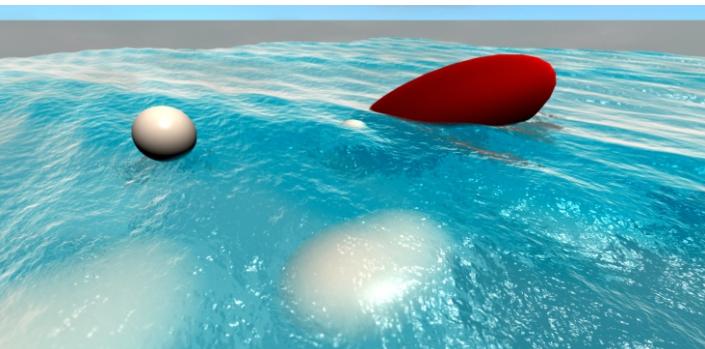
River water

Interaction with InfiniGRASS



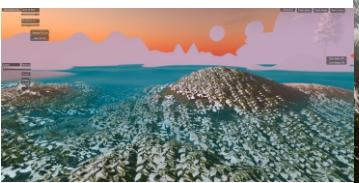
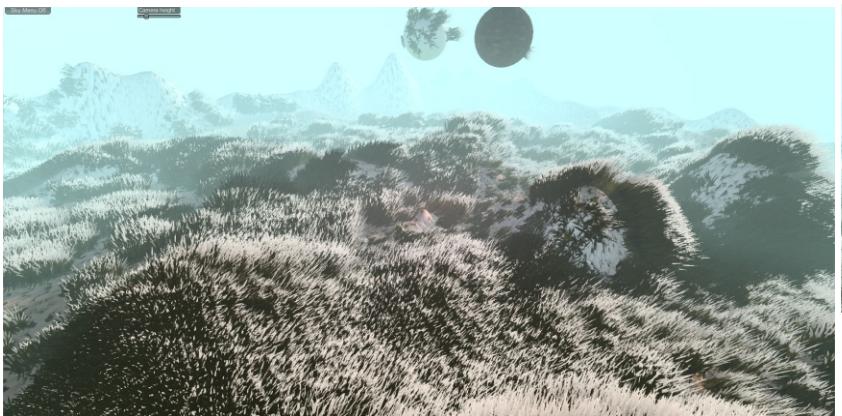
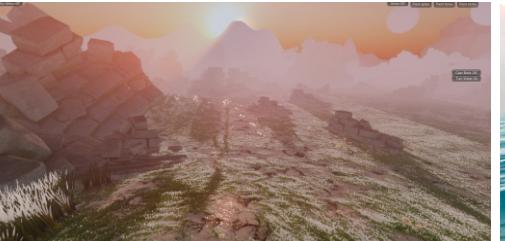
Ocean water

Reflection and Refraction



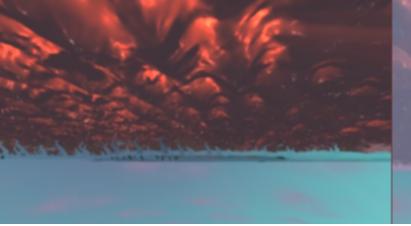
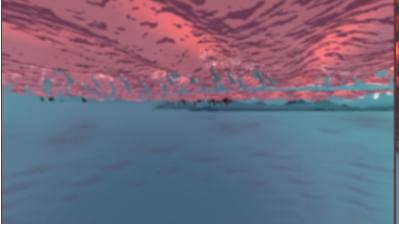
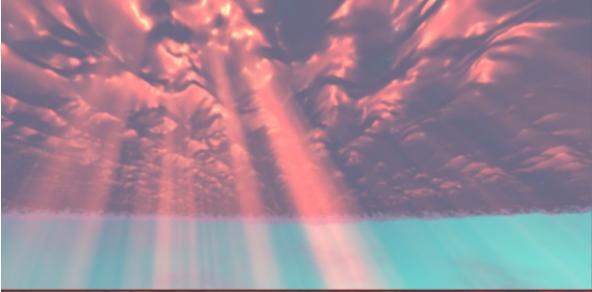
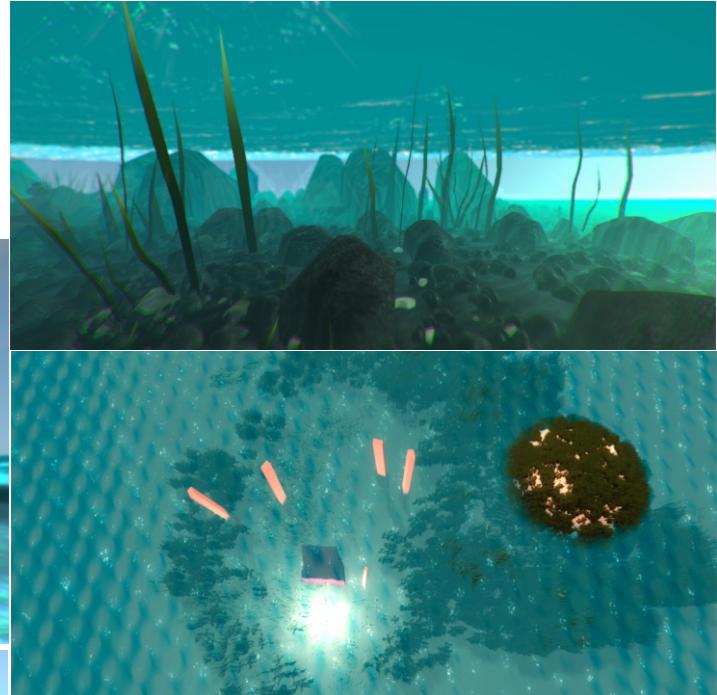
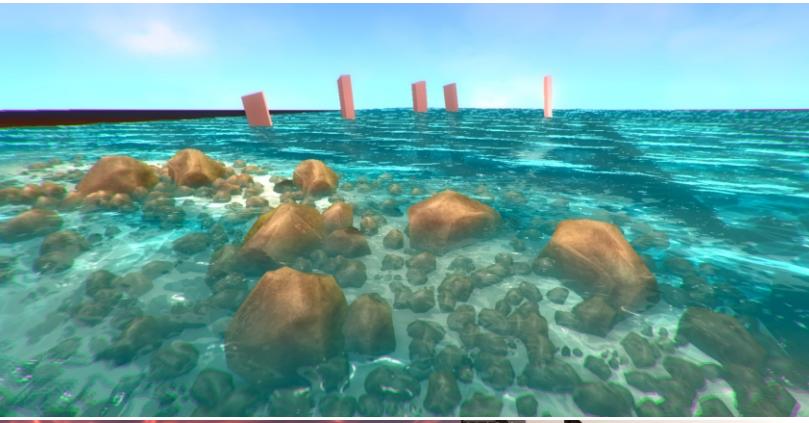
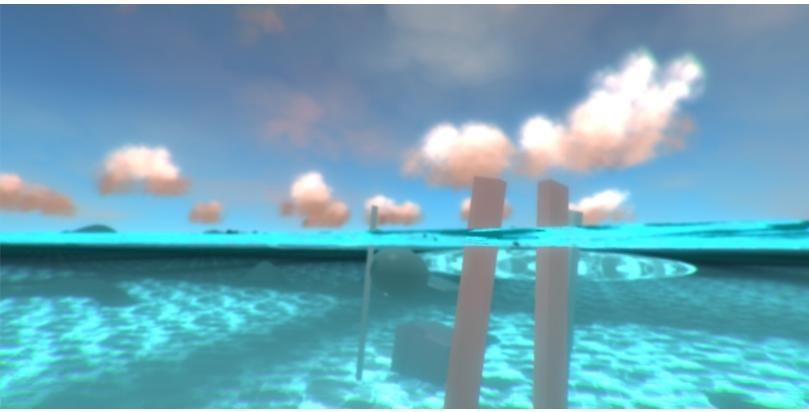
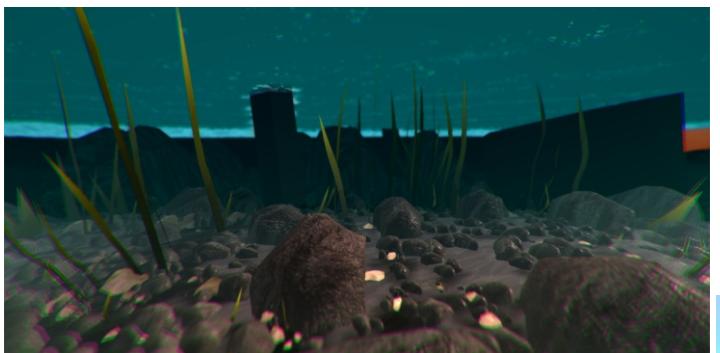
Snow

Gradual snow growth on InfiniGRASS



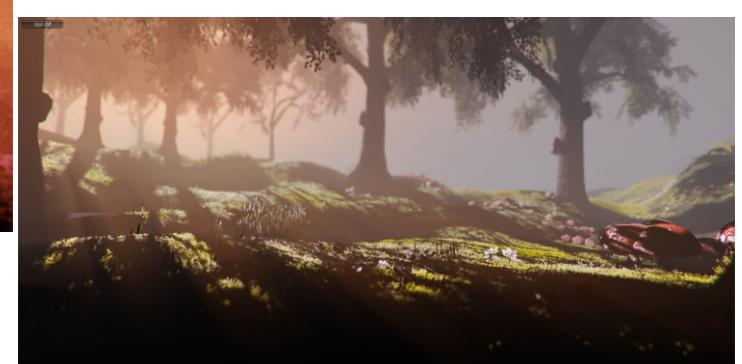
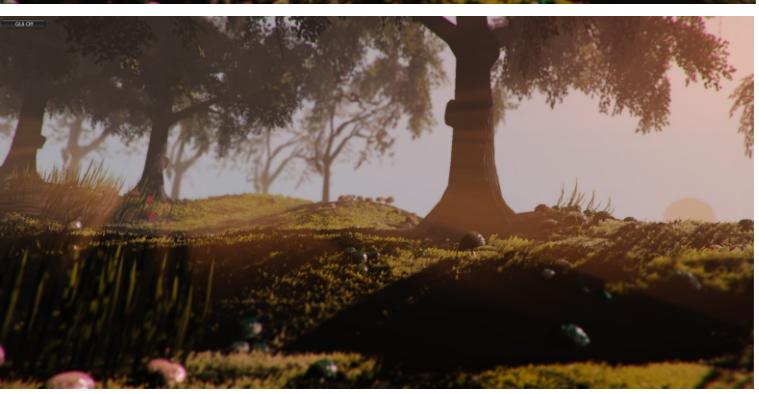
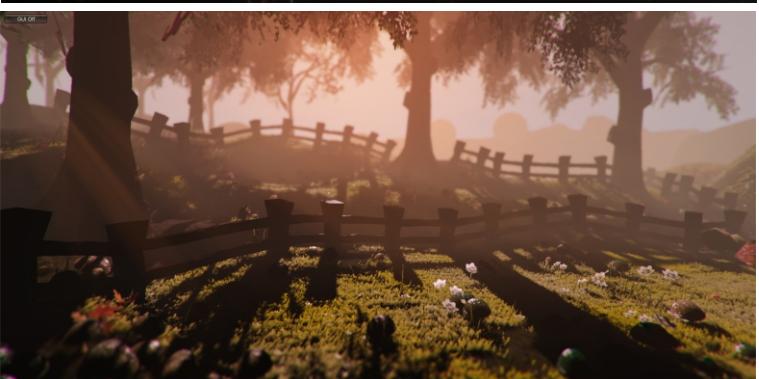
Underwater

Reflection and Refraction



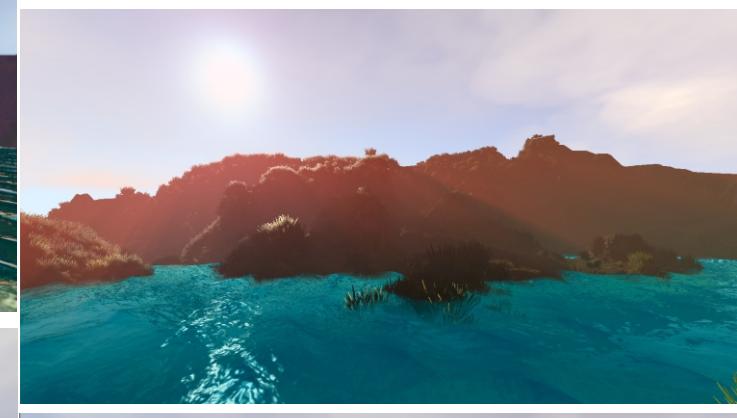
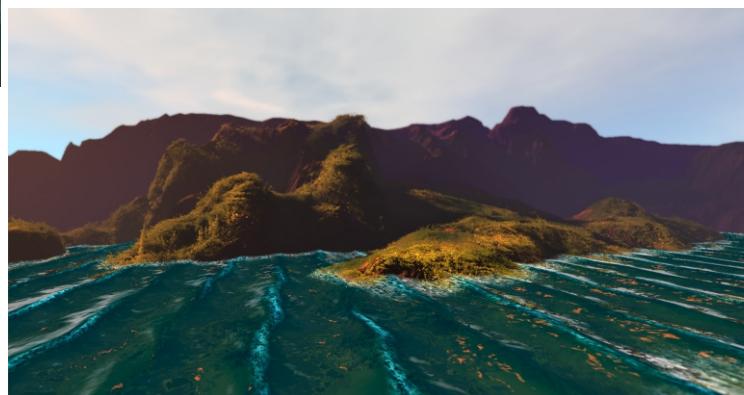
Misty Forest

Volumetric fog



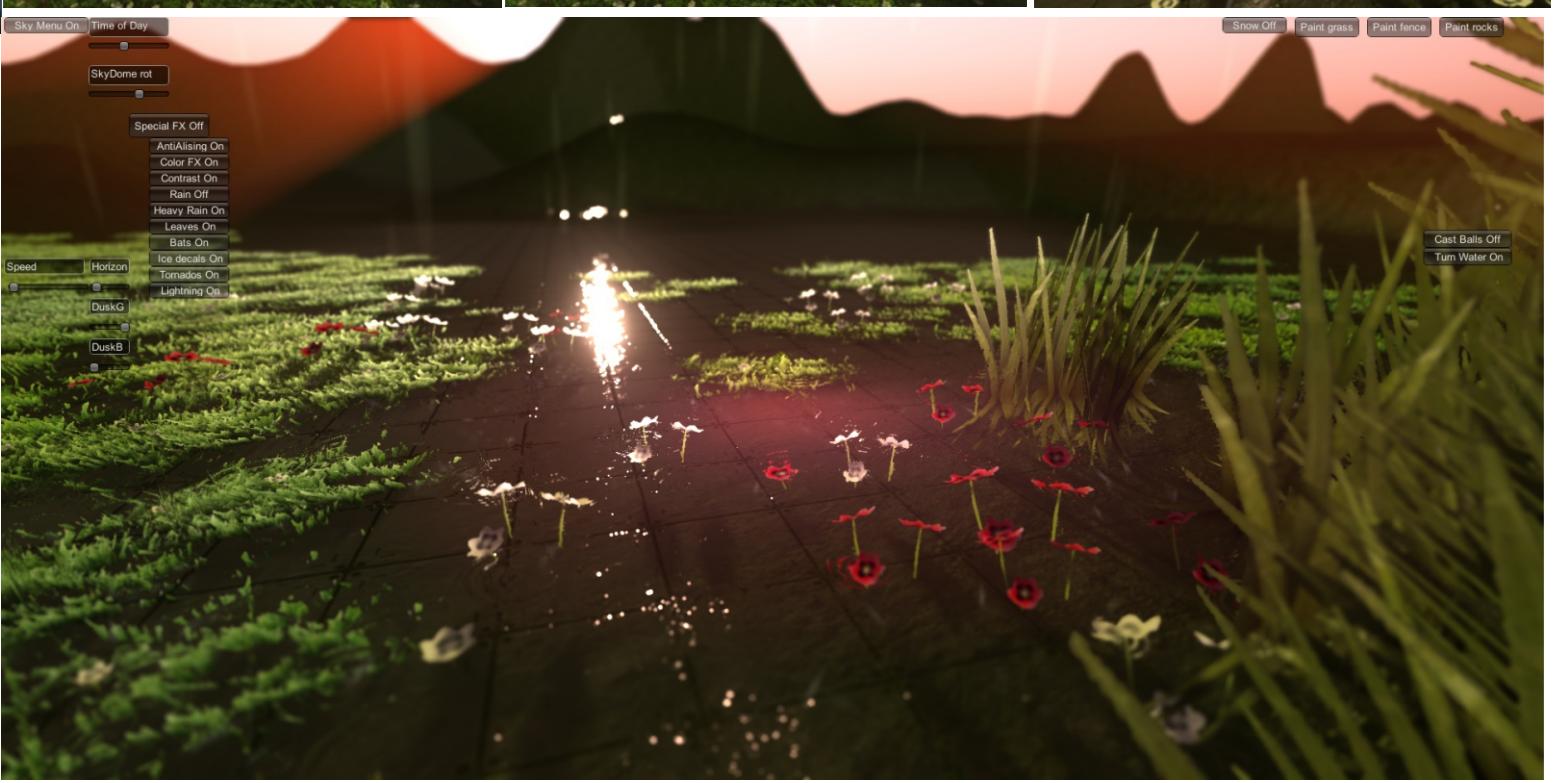
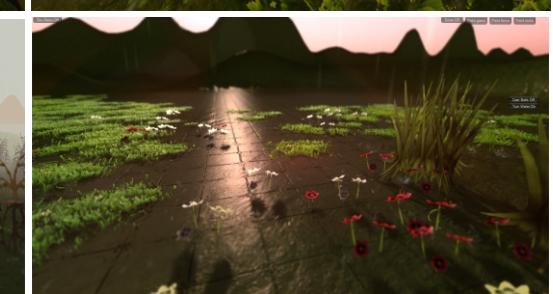
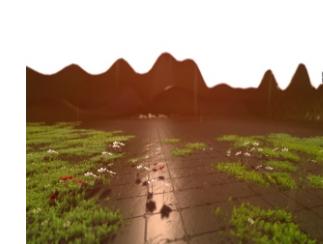
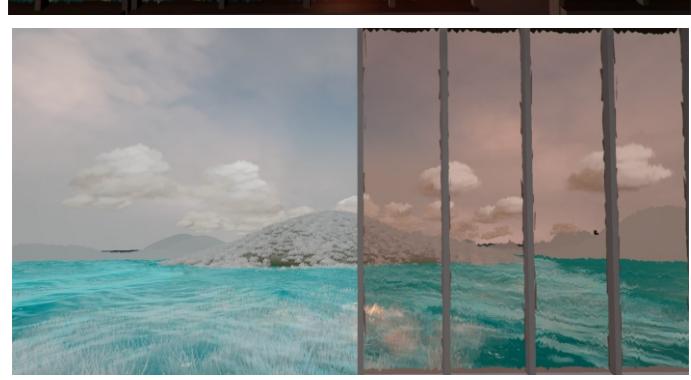
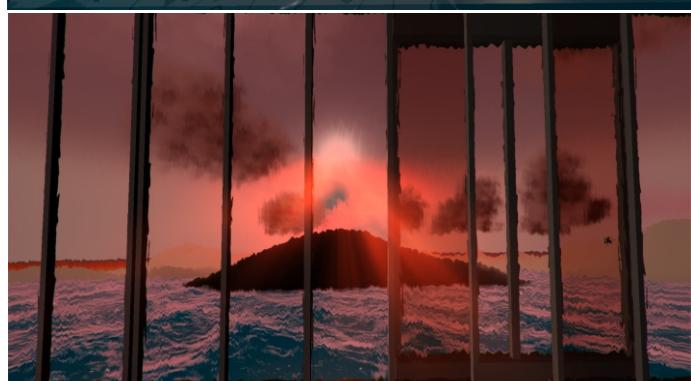
Island

InfiniGRASS and Ocean



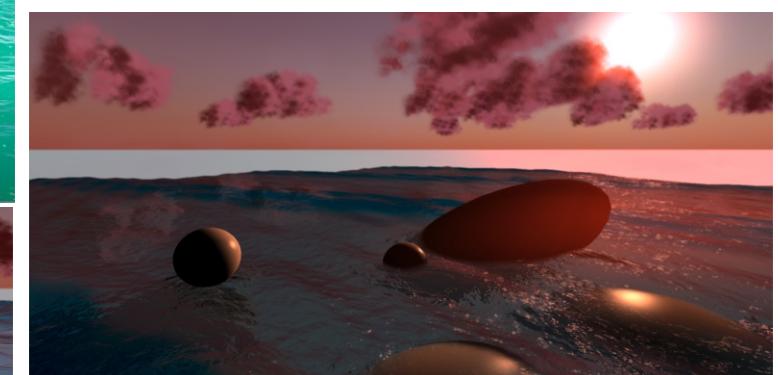
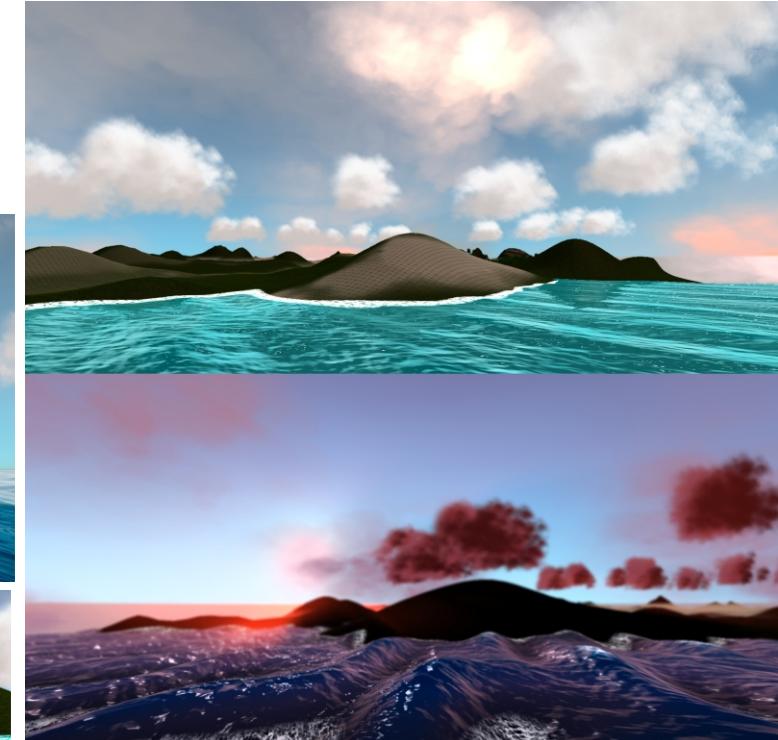
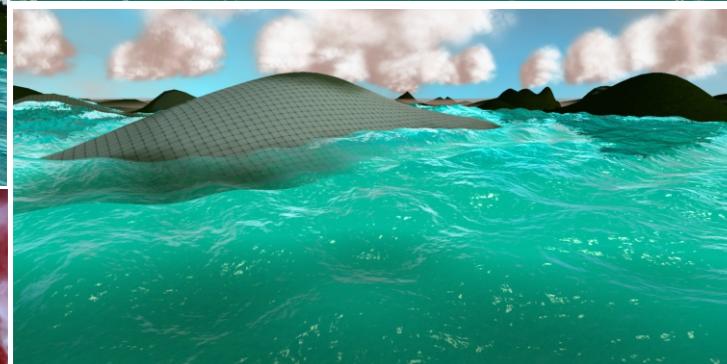
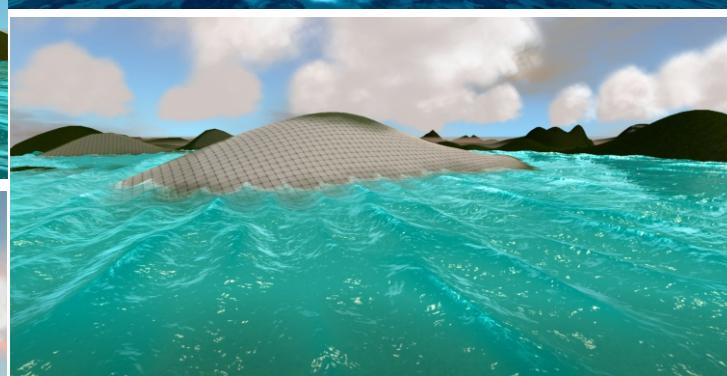
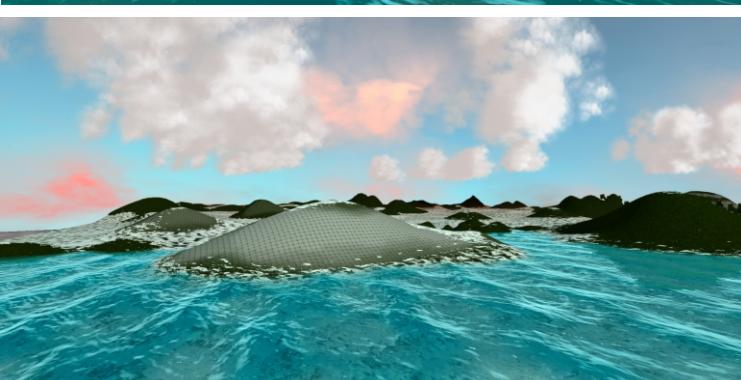
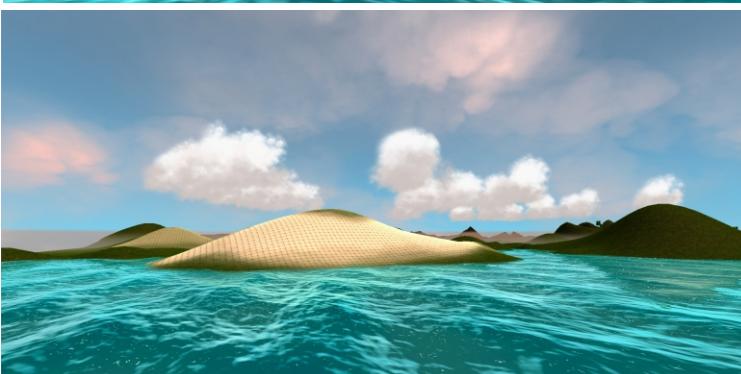
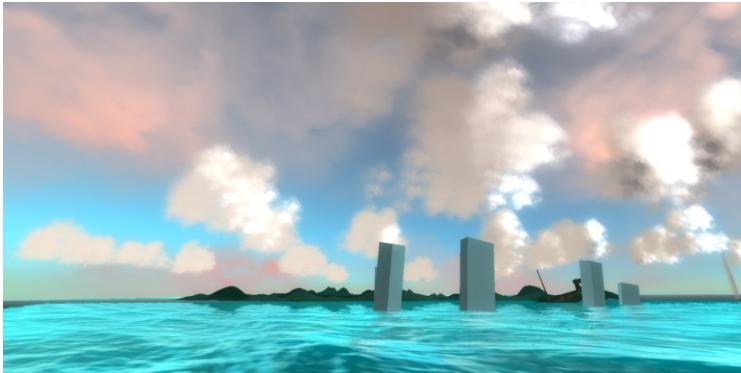
Rainy Day

Water drops - Liquids



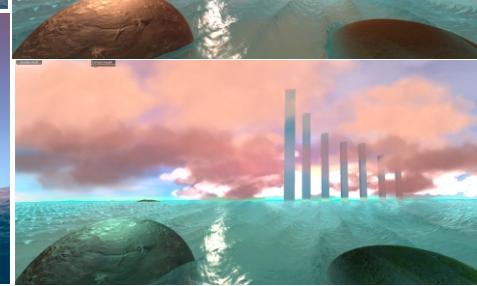
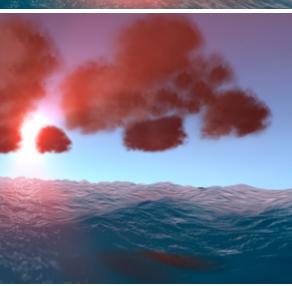
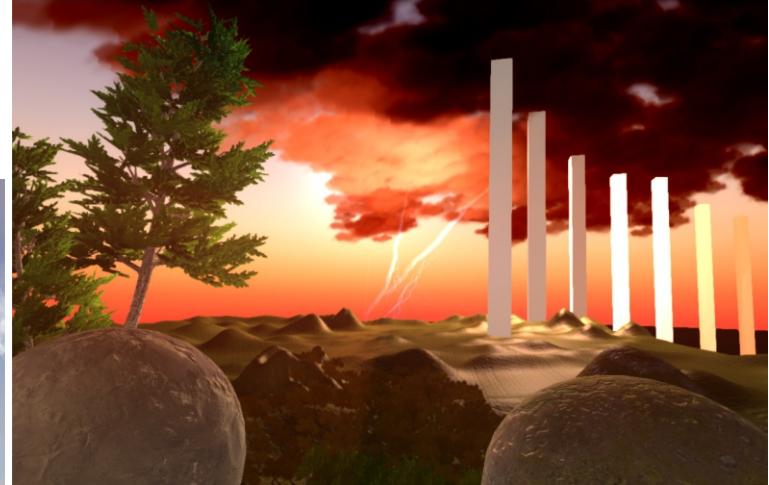
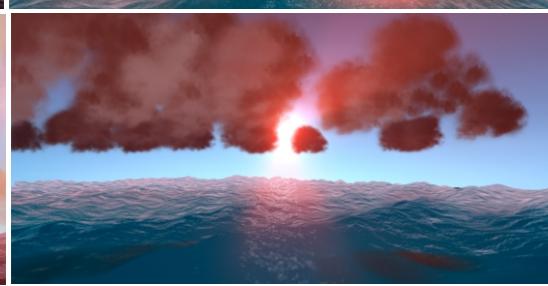
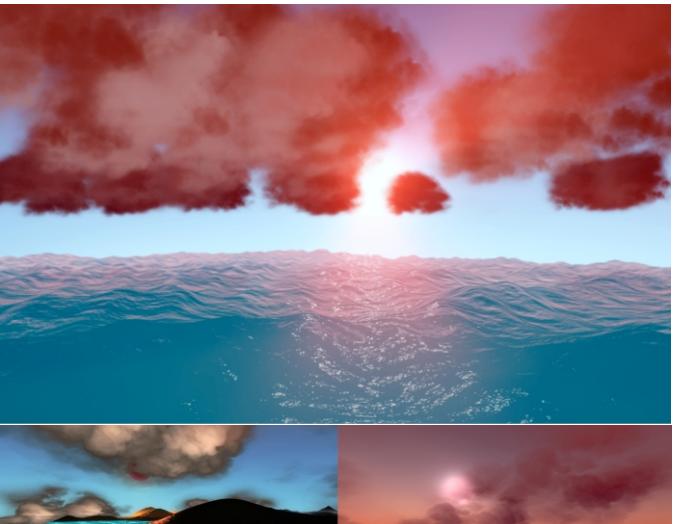
Ocean clouds

Volumetric clouds & water



Clouds

Scatter shading and local lights



Terrain

Wet ground

