Getting Started Guide

Water System

Game 2D Water Kit version 1.4.8

For the complete documentation, please check

https://haydeludos.github.io/Game2DWaterKit-Documentation/water-system/

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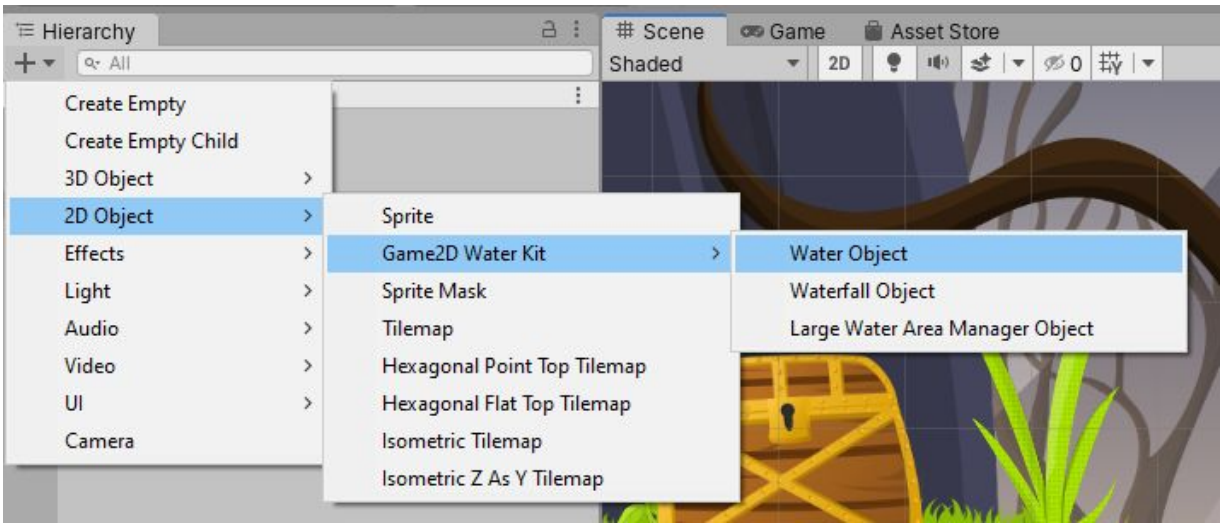
Creating a water object

We create a water object from the hierarchy's **Create** menu:



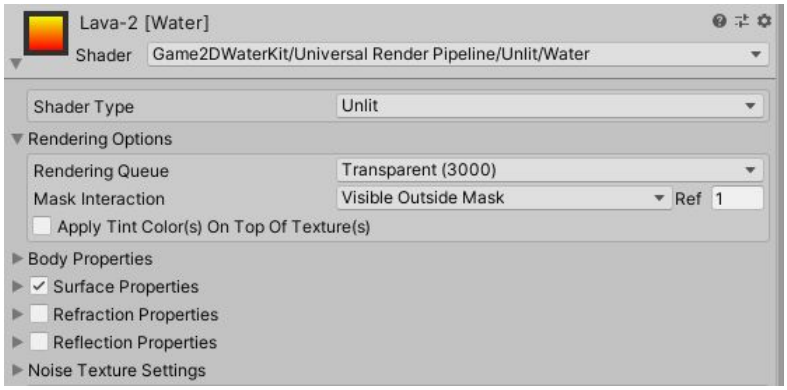
2D Object ➔ Game 2D Water Kit ➔ Water Object

Resizing the water object

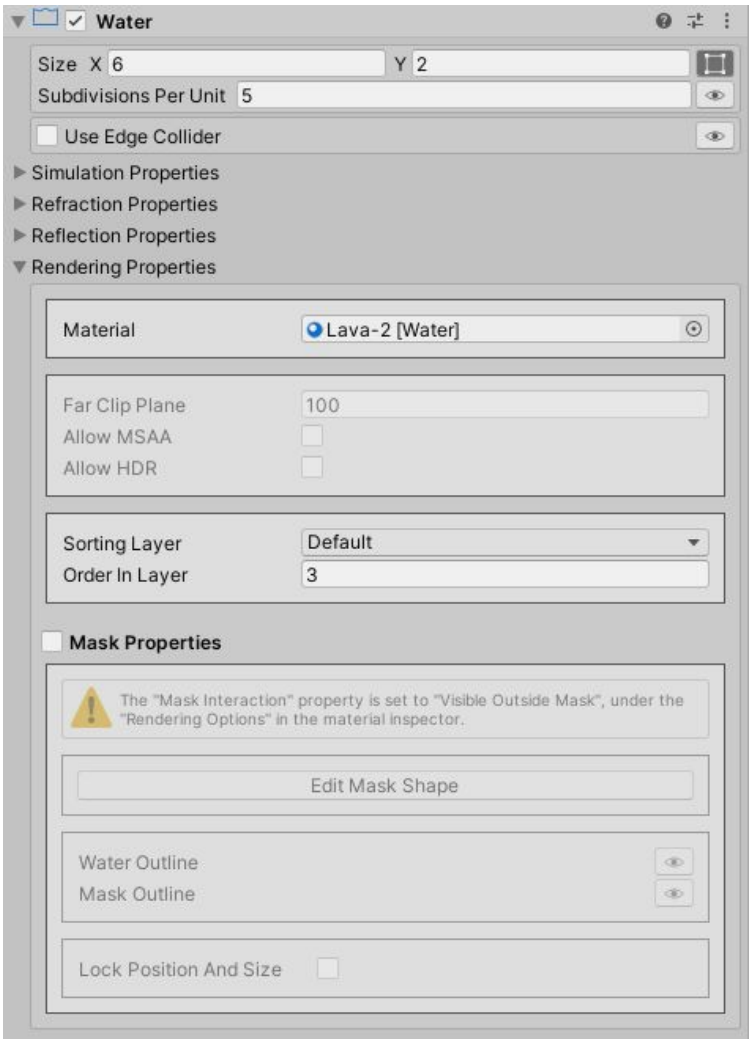
We resize the water object right in the scene view using the **Rect Tool**, or we can just provide the **width** and the **height** in the water component inspector.

Sorting the water object relative to sprites

Before trying to sort the water object relative to sprites, we first need to make sure that the **Rendering Queue** property, under the ***Rendering Options*** in the water material inspector, is set to **Transparent**.

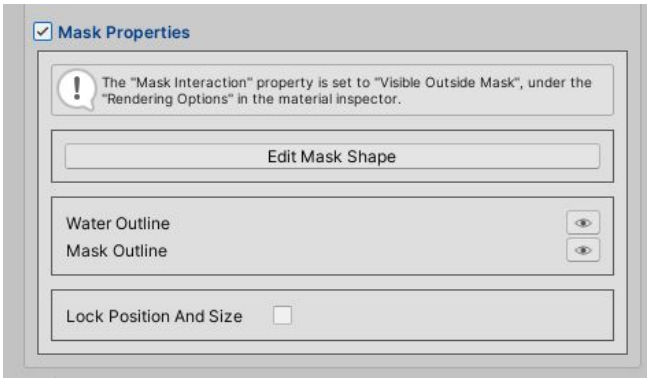


Then, under the ***Rendering Properties*** in the water component inspector, we specify the **sorting layer** as well as the **order within that layer**.

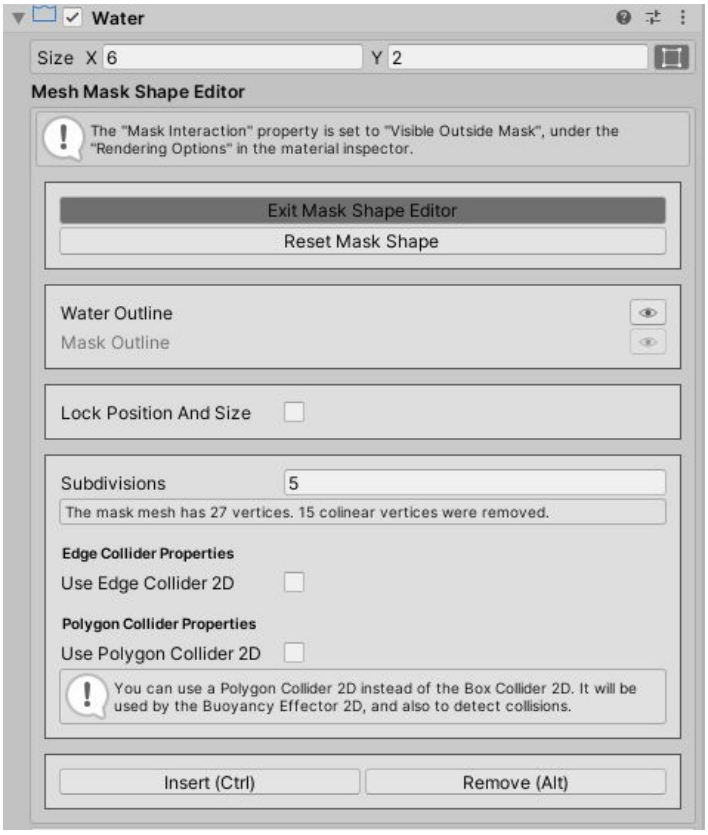


Changing the shape of the water object

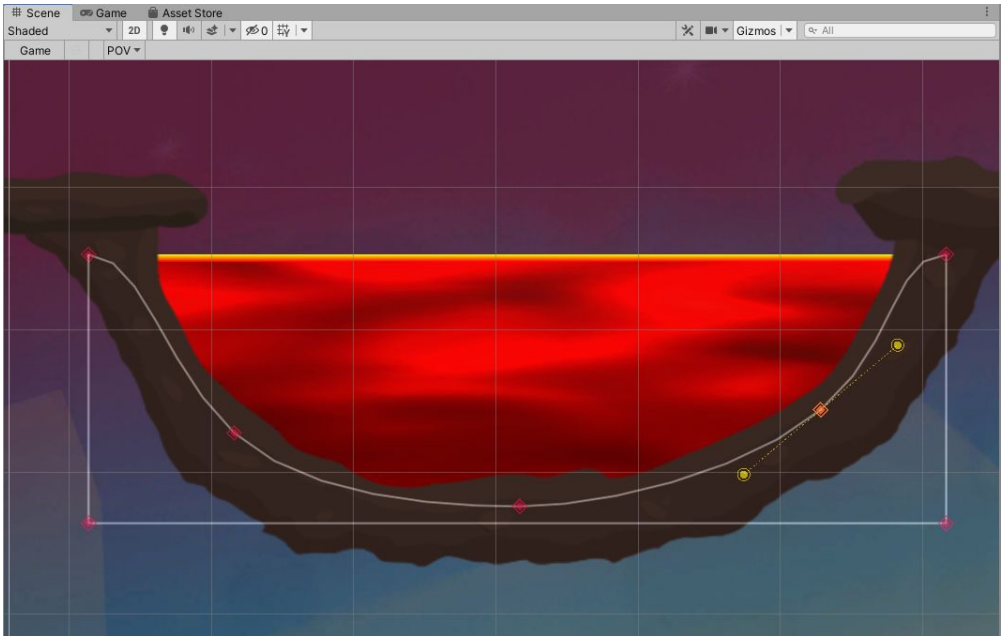
We can hide or reveal parts of the water object to make it take a certain shape, either by using **Sprite Masks** or by enabling the **Mesh Mask** feature under the ***Rendering Properties*** in the water component inspector.



To edit the mask's shape, we first need to enter the ***Mesh Shape Editor*** by pressing the **Edit Mask Shape** button.



Then, we can tweak the mask's shape using the **control points** in the ***scene view***.

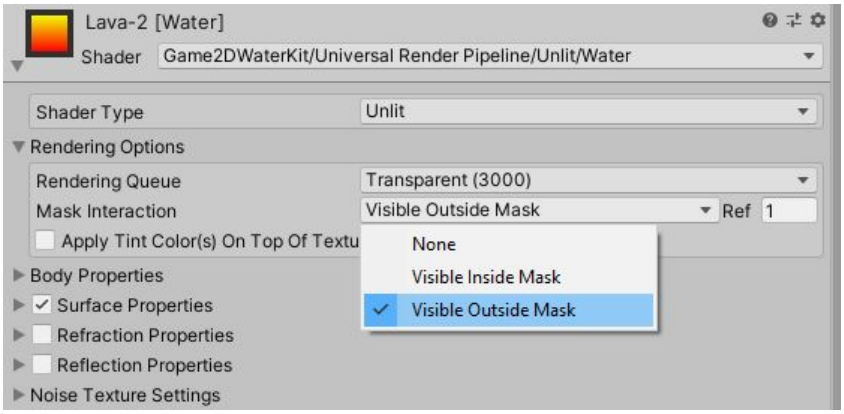


- Hold the **Ctrl** key and then click on any of the green dots to **add** a control point at that position.
- Hold the **Alt** key and click the control point you want to **remove**.

Under the ***Rendering Options*** in the water material inspector, we can set the **Mask Interaction** property to:

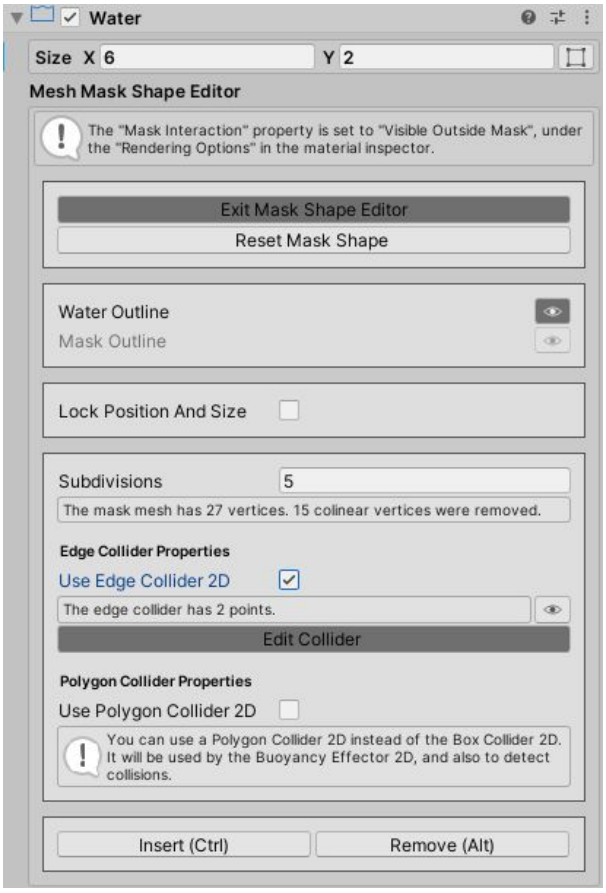
- Visible Inside Mask
- Visible Outside Mask

Note: The image above (of the scene view) shows a water object with a **Mask Interaction** set to ***Visible Outside Mask***.



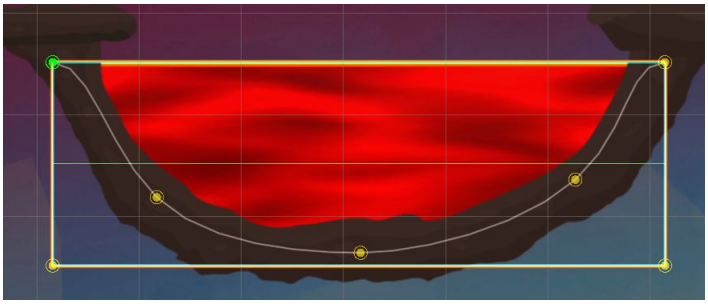
If the **Lock Position and Size** property is toggled on, the mask will no longer update its size and position to match the water object's size and position.

Setting up the Edge Collider 2D

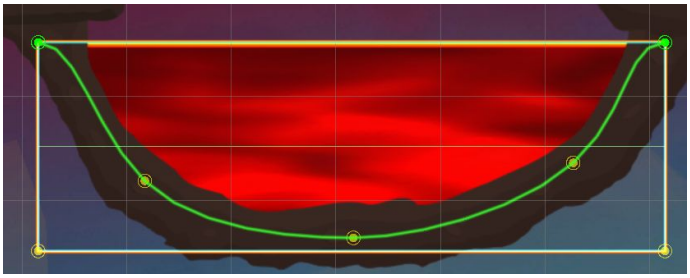


If the **Use Edge Collider 2D** property is toggled on, we can easily edit the edge collider's polyline so it matches the mask's outline. We start editing the Edge Collider 2D by pressing the **Edit Collider** button, and then we follow a ***3-step process***:

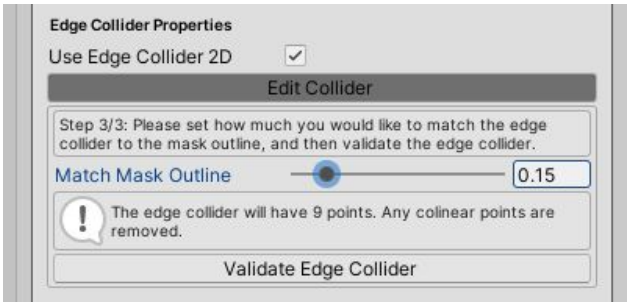
- **Step 1:** (Scene view) Select which control point to be the edge collider's **start point**.

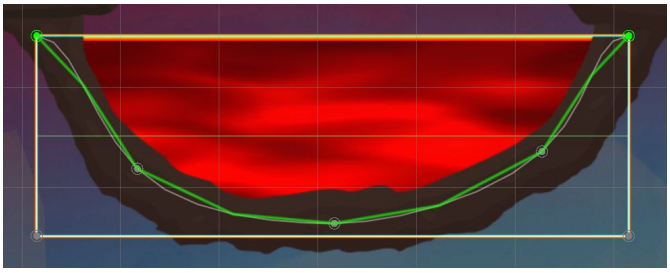


- **Step 2:** (Scene view) Select which control point to be the edge collider's **end point**.

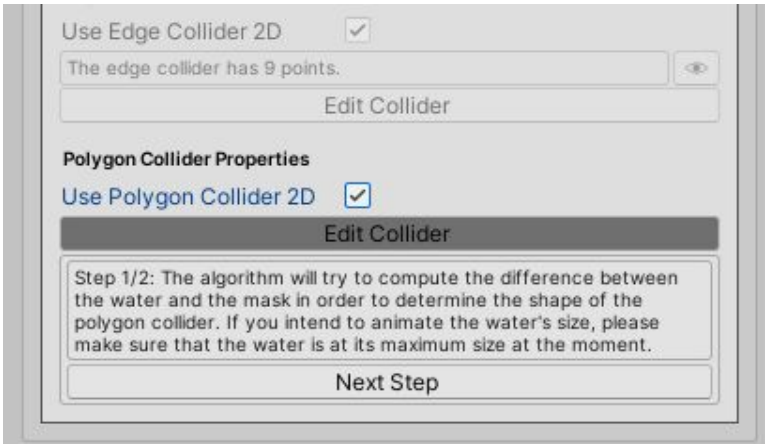


- **Step 3:** (Inspector) Set how much you would like to match the edge collider to the mask outline. Then, validate the edge collider to apply the changes.





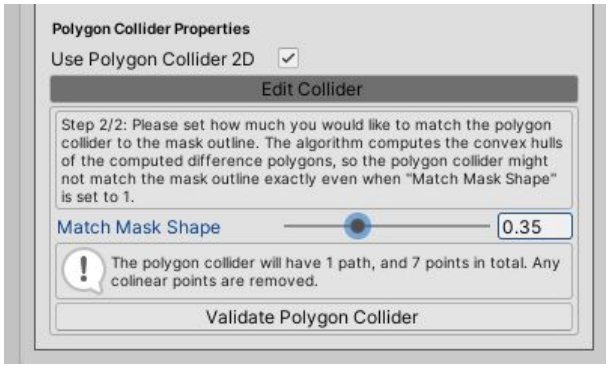
Setting up the Polygon Collider 2D

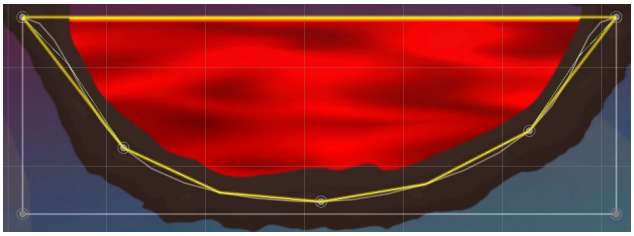


Wa can also set up a **Polygon Collider 2D** to be used to detect collisions. It will also be used by the Buoyancy Effector 2D.

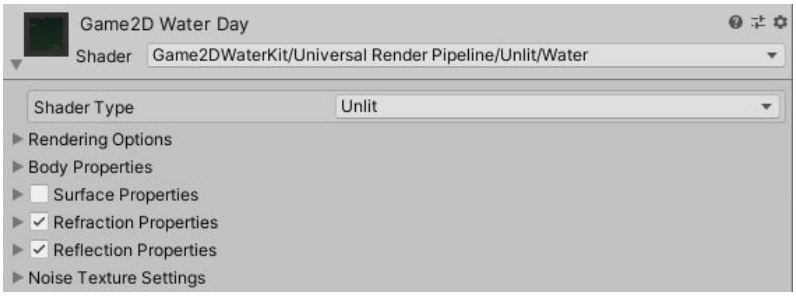
Editing the shape of the polygon collider is ***2-step process***:

- **Step 1:** Make sure the **water** object is at its **maximum size**. This is really needed if we intend to ***animate*** the water object later on, and also when the ***Lock Position And Size*** property is toggled on. Depending on the Mask Interaction, the algorithm will compute either the intersection or the difference between the water and the mask in order to determine the shape of the polygon collider.
- **Step 2:** Set how much we would like to match the polygon collider to the mask shape. Then, we validate the polygon collider to apply the changes.





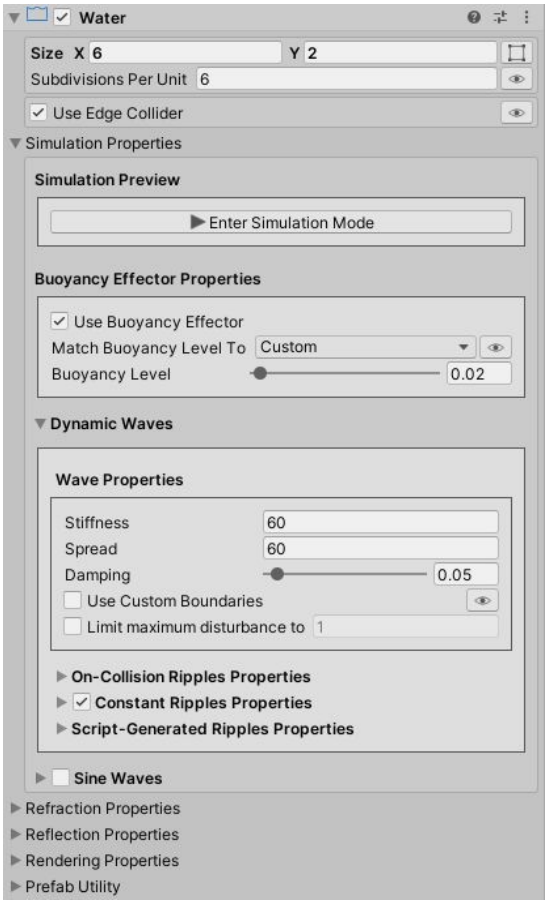
Tweaking the water visuals



We tweak the colors and the textures of the body and the surface, and also enable the refraction and the reflection effects in the water material inspector.

For a complete description, please check
https://haydeludos.github.io/Game2DWaterKit-Documentation/water-system/water-visuals/

Tweaking the water simulation



We tweak the properties of Dynamic Waves and Sine Waves, and also activate the different types of ripples under the Simulation Properties in the water component inspector.

For a complete description, please check
https://haydeludos.github.io/Game2DWaterKit-Documentation/water-system/water-simulation/