



Ultra-real water & oceans.

Compositing Recipe for Psunami Water



Table of Contents

Step 01: Set up Punami scene	2
Step 02: Render Depth Map	2
Step 03: Arrange comp layers	2
Step 04: Apply Threshold filter	2
Step 05: Generate Luma Track matte	3
Step 06: Import midground layer	3
Step 07: Fix the jaggies	3
Step 08: Play with Threshold Level	4
In Conclusion	5
Alternate way of compositing	5

**A water simulation plugin for After Effects,
Final Cut Pro, Motion, and Premiere Pro**



[from: **Digital Anarchy**]
f/x tools for revolutionaries

www.digitalanarchy.com

Compositing Recipe for Depth Map

There are a few approaches to compositing another layer into a Psunami ocean scene. The scenario that this tutorial will discuss uses the Depth Map Render Mode. This Depth Map compositing technique is a little complicated but very flexible, and only requires one full Psunami layer in your project.

At the end of this tutorial, we will briefly discuss an alternate way of compositing with Water Only to Max Distance mode that is faster and easier but not as effective. The language in this tutorial focuses on setting up your Psunami scene in After Effects.

Step 01: Set up Punami scene

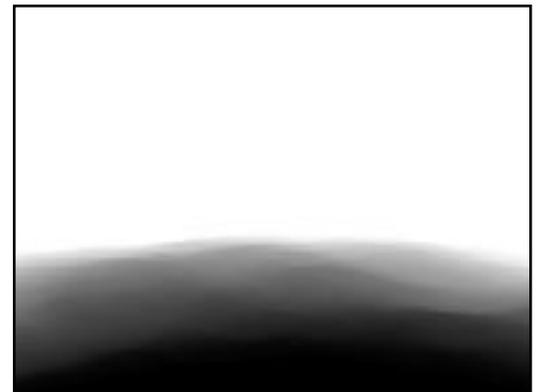
First, set up your Psunami scene to your liking. You can work with unrendered layers and pre-comps if you choose.

As long as you don't need to change your original Psunami layer, you'll find this technique to be much faster if you first pre-render the Psunami layer in Realistic mode as a lossless movie, then import that Psunami movie into its own comp.

Step 02: Render Depth Map

Using the same basic Psunami settings, render another version of the Psunami scene in Depth Map mode as a lossless movie. If you're using Psunami's default settings, Color Min/Max Scale values of 20 and 40 are a good starting point.

Your Depth Map image should look something like the image at right.



Step 03: Arrange comp layers

If you haven't made a new comp yet, do so, then drag in your Realistic Psunami movie and the Depth Map movie.

Duplicate the Realistic layer, and arrange the layers so the Depth Map movie is on top.

Step 04: Apply Threshold filter

Select the Depth Map movie and apply After Effects' Threshold filter, which you'll find in the Adjust submenu in the Effect menu.

The Threshold filter takes grayscale images and turns them into high contrast black-and-white images based on the Level property in the Threshold filter. Grayscale pixels with values above the threshold level will be set to white; pixels below the threshold level will be set to black.

Try a Level setting of about 85, which will give you an image like the one at right.

Step 05: Generate Luma Track matte

We're going to use this b/w image as a Luma Track matte to mask the foreground layer over the background layer.

To do this, first make sure the Depth Map layer is directly above the foreground Realistic layer in the Timeline. Switch the Timeline controls from Switches to Modes, and choose Luma Inverted Matte from the Track Matte pop-up for the foreground Realistic layer. This will switch off the video for the Depth Map layer, and mask the foreground layer in the shape of the Depth Map black and white area.

By applying the track matte in Luma Inverted Matte mode, we tell After Effects to use the grayscale values in the Depth Map for masking, and to invert the Depth Map so that the foreground is opaque and the background transparent. You won't see a change at this point since we're masking a layer onto itself.

Step 06: Import midground layer

Next, bring your midground layer into your composition. Place it between the foreground and background Realistic layers. You should see the foreground layer intersecting the midground layer, with the background layer behind the midground layer, as in the image at right.

Step 07: Fix the jaggies

The first thing you'll notice is that the edge of the foreground layer is jaggy and looks unnatural. This is because the Threshold filter maps all the pixels in the image to either pure black or pure white, leaving no grayscale pixels for antialiasing.

The easiest way around this is to apply a Gaussian Blur to the Depth Map layer after the Threshold filter, set to a value of around 3 or so. This gives you a Depth Map like the one in the illustration below left, which will give you a much smoother composite.



The images below shows the result of the softened Depth Map.



So far, this probably just seems like a lot of extra work. (At this stage, the composite looks like the same results as the Water Only to Max Distance technique we will discuss at the end of our tutorial.) But by adjusting the Threshold Level, we now have the ability to set the foreground composite edge anywhere we want in the ocean surface.

Step 08: Play with Threshold Level

Setting the Threshold Level higher will push the foreground layer edge further back to the horizon. This is because more of the foreground pixels will be set to black than they were with the lower setting (remember, we're inverting the Luma Track Matte). Scale your midground layer appropriately and it will look farther away.

The illustration below left shows the same composite with the boat scaled down and a Threshold of 200. The illustration below right shows the same composite with the boat scaled up and a Threshold of 30.



In Conclusion

The beauty of the technique we have just described is that you have complete control over the positioning of the foreground layer edge relative to the background, without having to change any settings or re-render layers.

As the image at right demonstrates, you can easily composite multiple layers into your scene, all without having to change or re-render your original Psunami scene. Do this by duplicating the Depth Map and foreground Realistic layers, and changing the Threshold settings in the duplicated Depth Map layer.



Alternate way of compositing

A different scenario is to set the Render What popup to Water Only to Max Distance. You will render two layers, one in Air and Water mode and the other in Water Only to Max Distance mode. Use the alpha channel in the Water Only to Max Distance layer to mask the Air and Water layer. Then insert your own layer in between the two Psunami layers.

This technique is reasonably fast and easy to use, but isn't very flexible, especially when you're trying to control the edge of the foreground layer for a smoother composite. It also requires two different Psunami layers with different settings, which makes the project much slower to work with.