

Creating a Sea Scene

Tutorial

CSCI 140

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Creating a Sea Scene

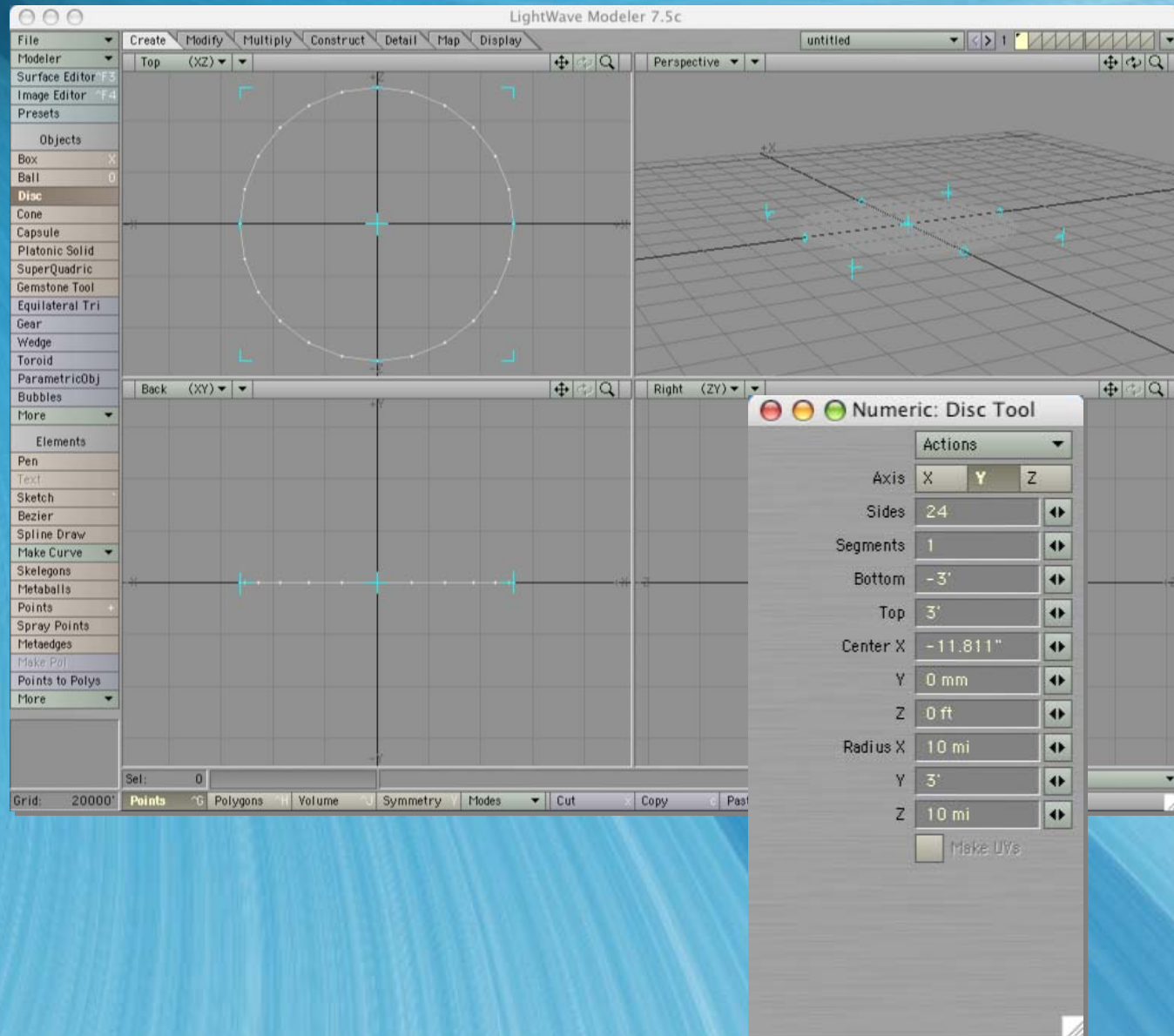
This tutorial is designed to show you how to create an ocean backdrop complete with sky and sun.



This tutorial will explain how to create the ocean in **Modeler** and use the **Bump** to give it texture, where to position the **Camera** and **Light** in **Layout**, and how to create the sky with **SkyTracer**.

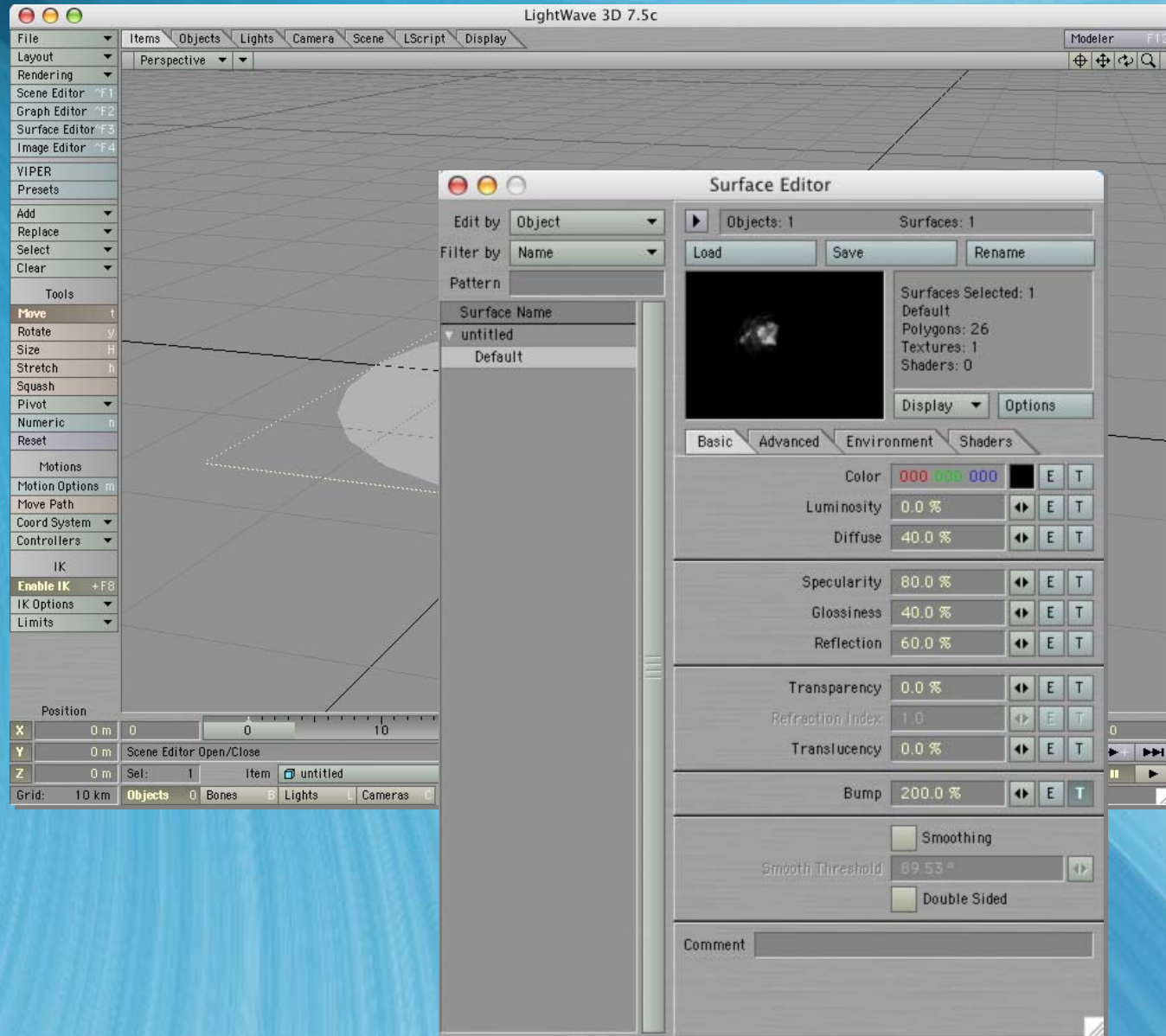
Step 1: Create your Sea

- In **Modeler**, Use the **Disc** tool to create a 10 mi. radius ocean on the **X-** and **Z-axis**
- Make the surface of the Disc (**Y-axis**) 3 ft. thick



Step 2: Bring your Sea to Layout

- In **Layout**, load your sea object (**lwo**)
- Open the **Surface Editor** panel and set the following attributes:
 - Color: **Black**
 - Diffuse: **40%**
 - Specularity: **80%**
 - Glossiness: **50%**
 - Reflection: **60%**
 - Bump: **200%**



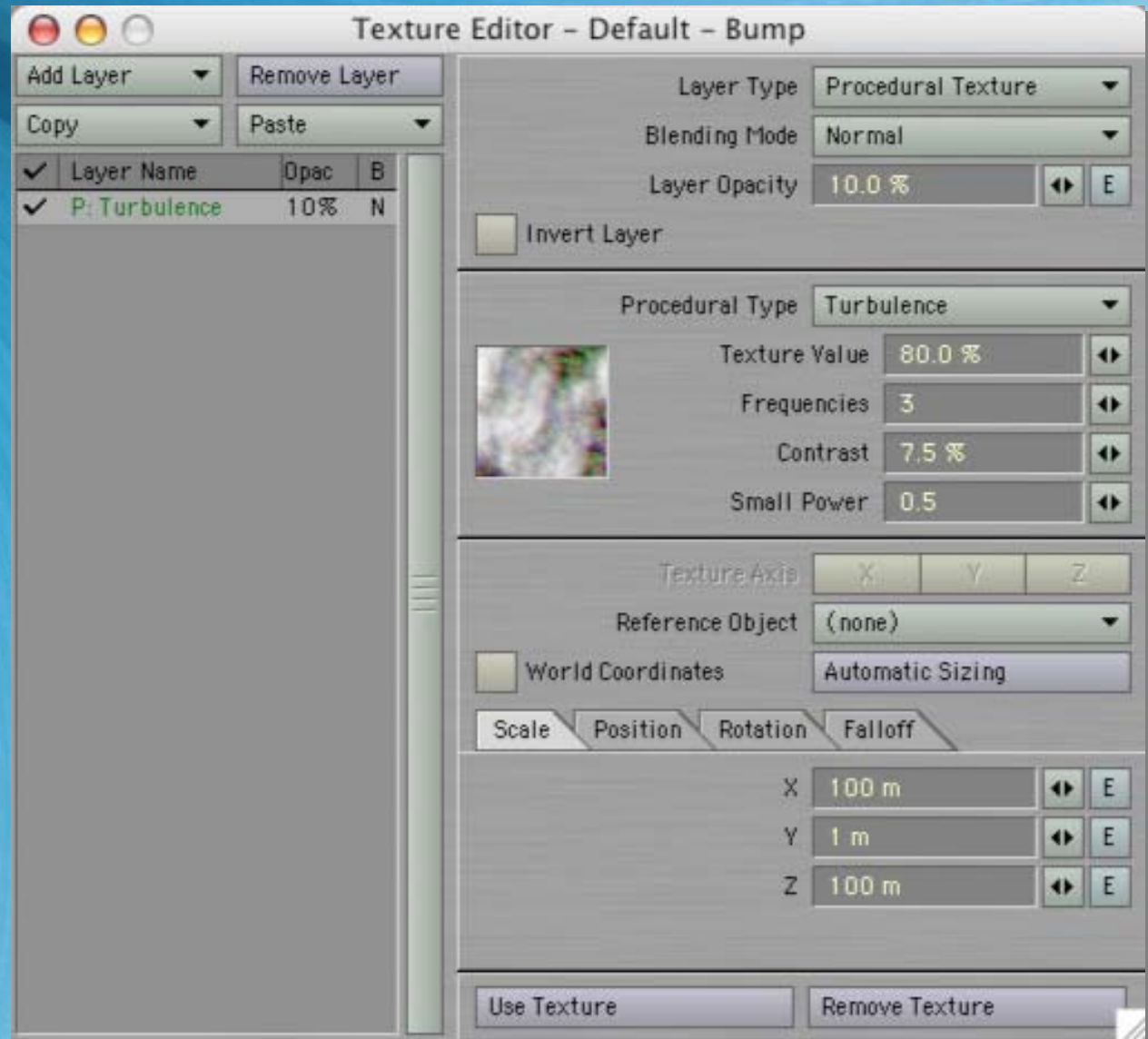
Step 3.1: Modify the Bump texture

- In the **Surface Editor** panel, click on the **T** by the **Bump** attribute to open the **Texture Editor** panel. We will create 3 layers of Bump textures to give the sea a wave-like appearance.

- Set the **Layer Type** to **Procedural Texture** and adjust the following attributes:

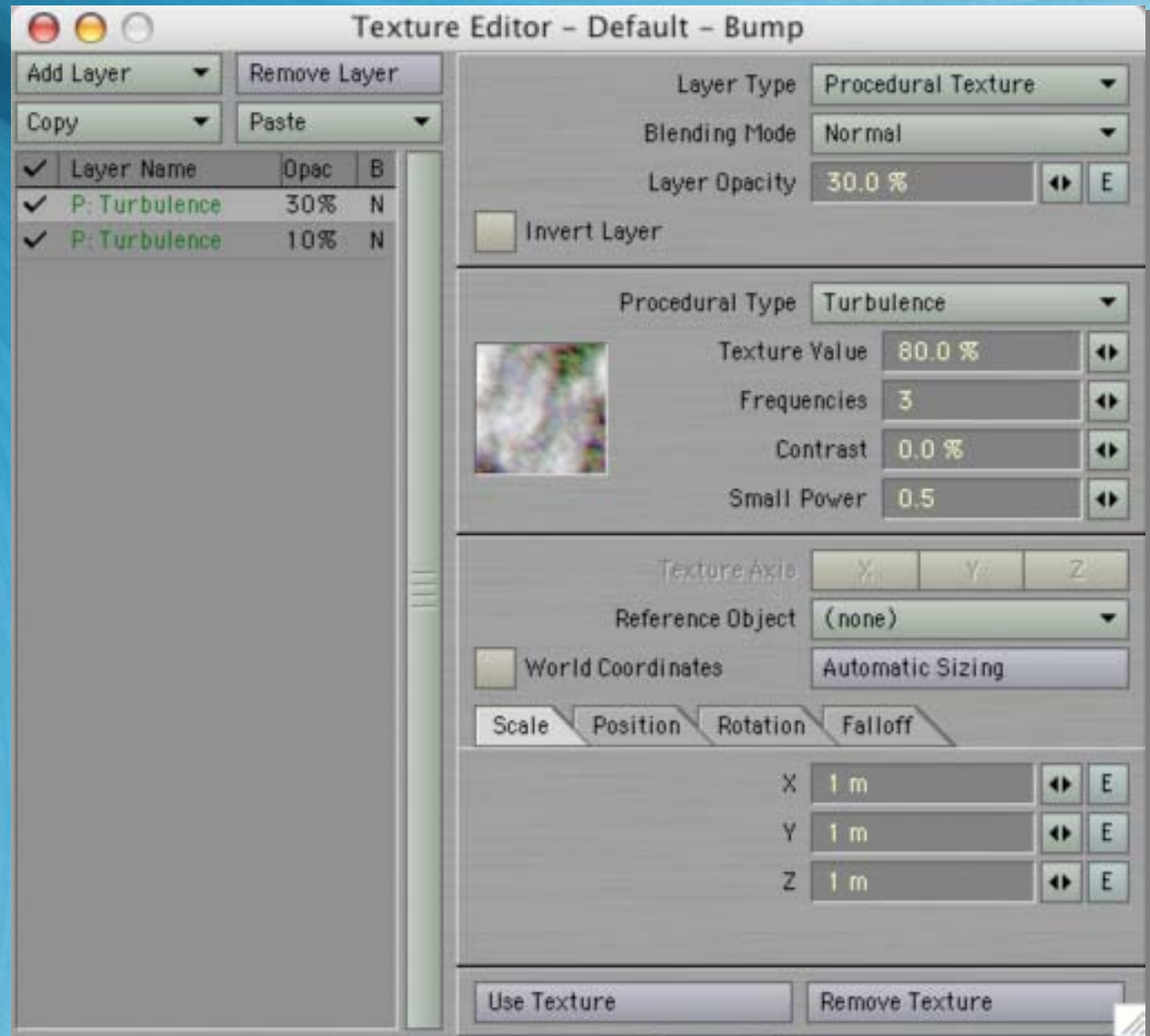
- Layer Opacity: 10 %
- Texture Value: 80 %
- Contrast: 7.5 %

- Adjust the **Scale** so that it is 100 m, 1 m, and 100 m for the **X**-, **Y**-, and **Z**-axis respectively.



Step 3.2: Modify the Bump texture

- In the **Texture Editor** click on **Add Layer: Procedural** to add another layer.
- Set the following attributes:
 - Layer Opacity: 30 %
 - Texture Value: 80 %
- Leave all the rest to their default values.



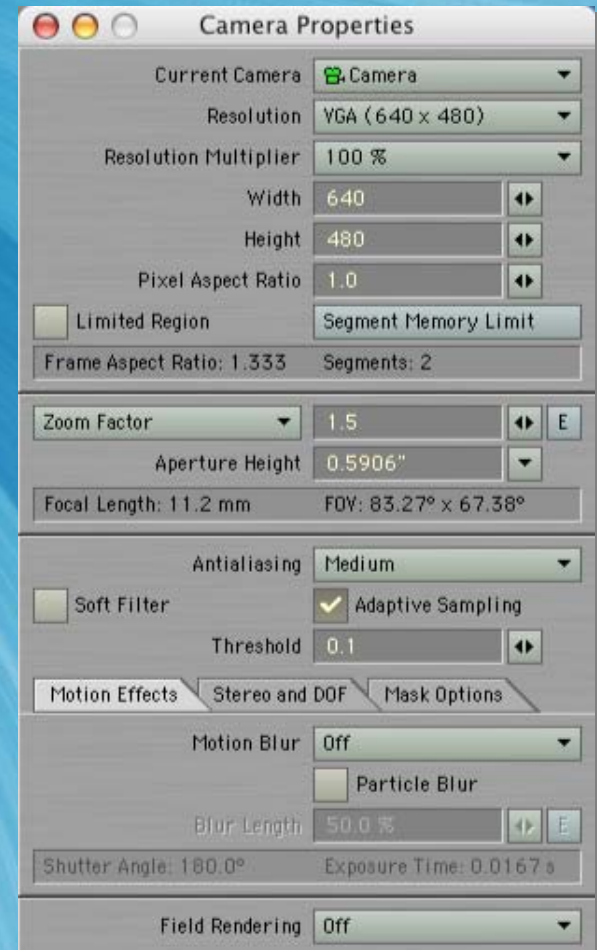
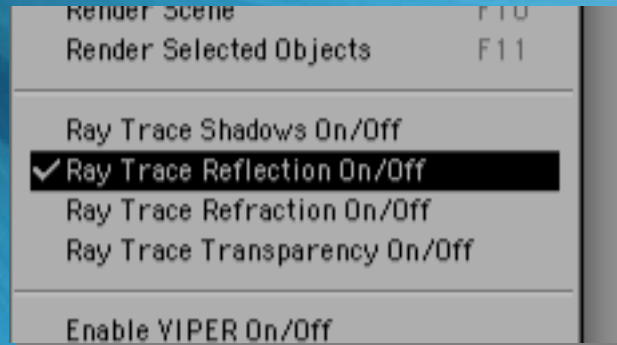
Step 3.3: Modify the Bump texture

- In the **Texture Editor** click on **Add Layer: Procedural** to add a 3rd layer.
- Set the following attributes:
 - Layer Opacity: 20 %
 - Texture Value: 80 %
- Adjust the **Scale** so that it is 300 mm for all the axis.
- We now have our water surface.



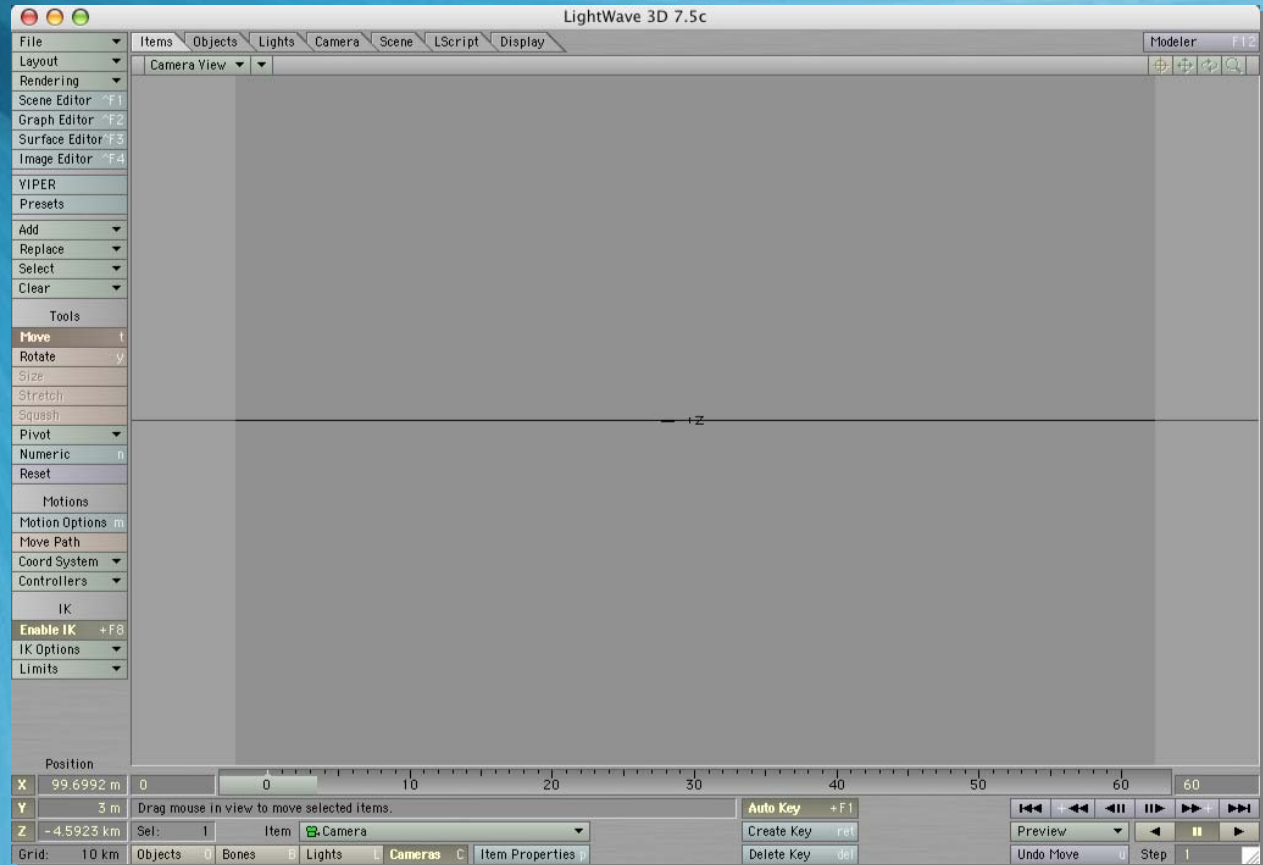
Step 4.1: Setup the Camera

- In *Layout*, go to the *Rendering* menu and enable *Ray Trace Reflection*.
- Select *Cameras* at the bottom of the *Layout* window, and click on *Item Properties*. Set the following:
 - Zoom Factor: *1.5*
 - Antialiasing: *Medium*



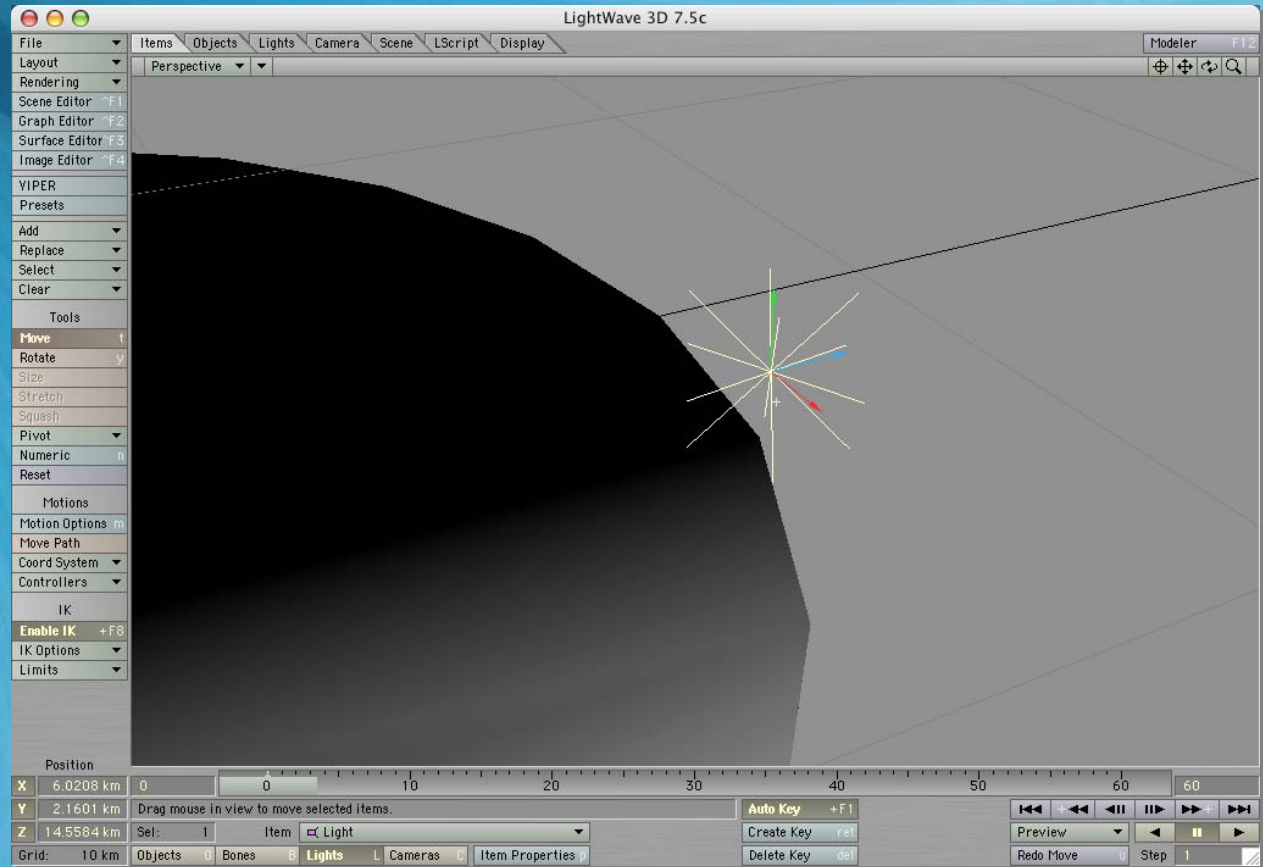
Step 4.2: Setup the Camera

- Position the camera wherever you'd like. In *Layout*, I left it at the center of sea object looking out to the horizon, and raised it 3 m above the surface.



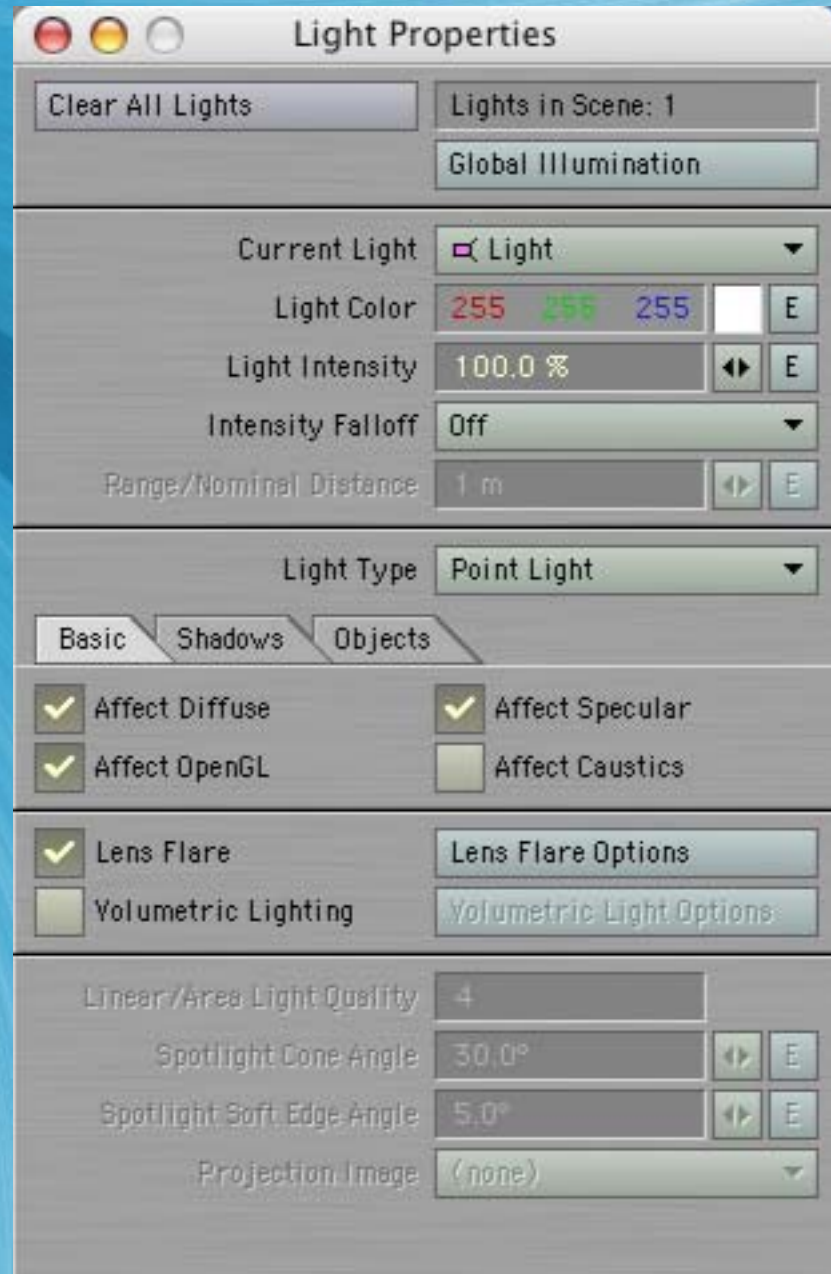
Step 5.1: Setup the Light

- The **Light** will act as the sun. Position it wherever you would like, as long as it's above the horizon and near the edge of the ocean **Disc**. In this example, we will put it near the horizon.



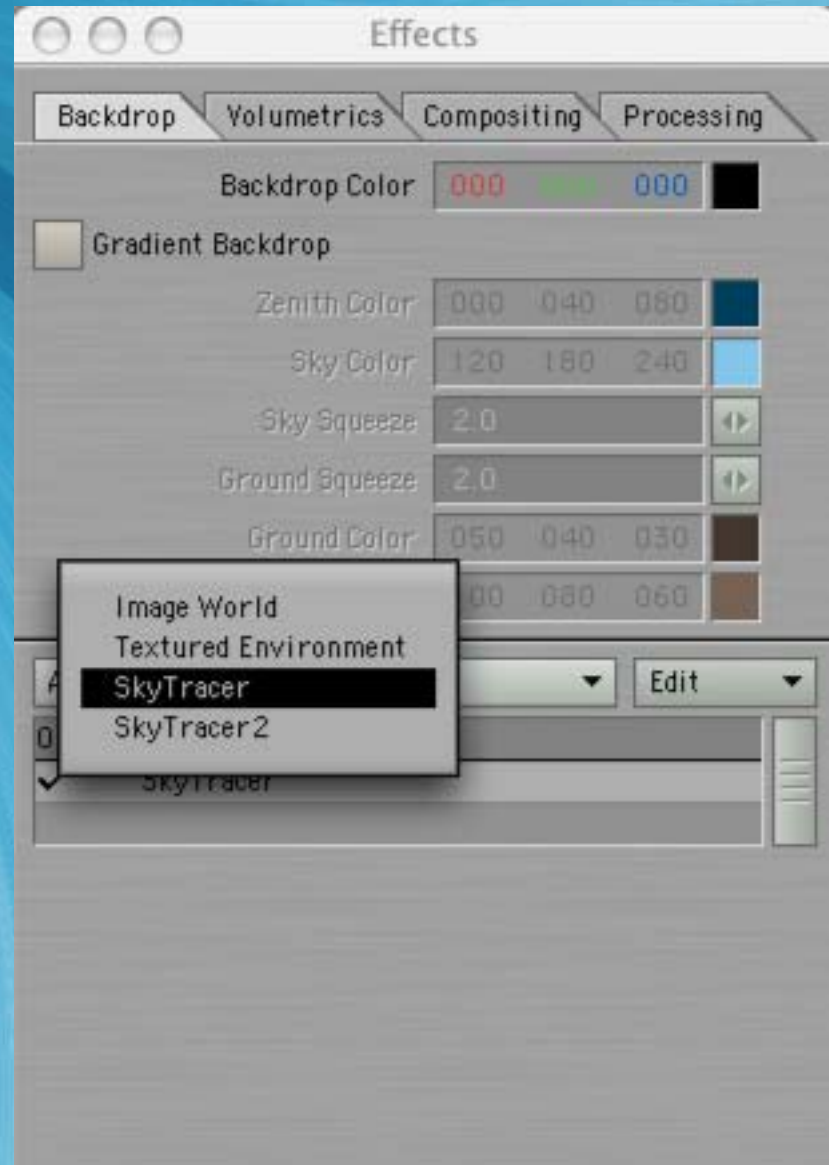
Step 5.2: Setup the Light

- In *Layout*, click on *Item Properties* with *Lights* selected, and the *Light Properties* panel will open.
- Make the *Light Type* a *Point Light*.
- Enable *Affect Diffuse*, *Affect Specular*, *Affect OpenGL*, and *Lens Flare*.
- Click *Global Illumination* at the top.
 - In the following panel, change *Ambient Intensity* to 0%.



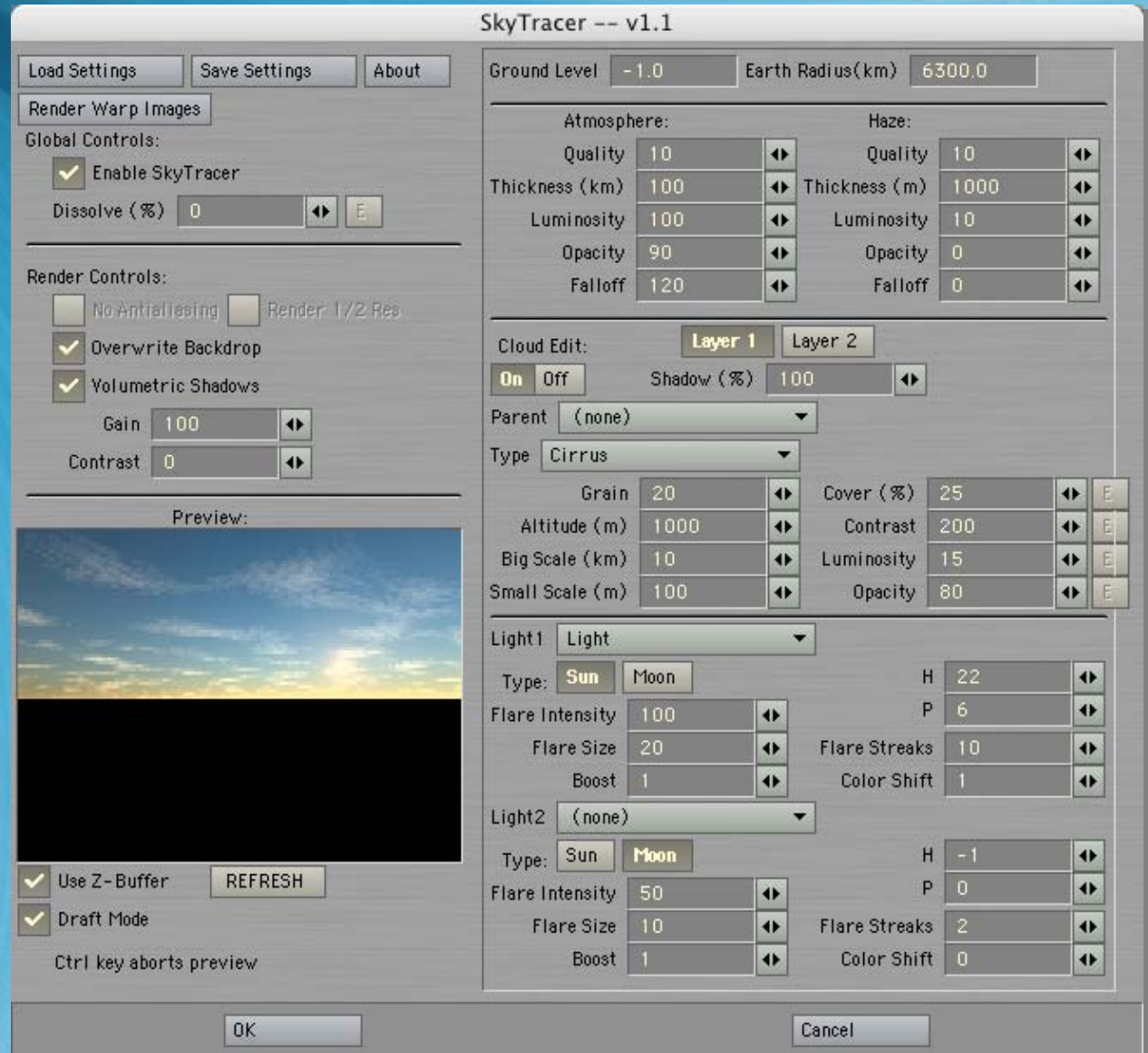
Step 6.1: Setup SkyTracer

- In *Layout*, click on the Scene tab, and click on the *Backdrop Effect*.
- Click on *Add Environment* and select *SkyTracer*.
- Double-click on the *SkyTracer* environment.



Step 6.2: Setup SkyTracer

- In the **SkyTracer** panel, configure however you would like. In this example, we turned on **Cloud Edit** and put **Cirrus** clouds in the scene.
- Your **Light1** source should be your sun **Light** in the scene.



Step 7: Render Scene

- Everything should be setup now, and you can render your scene.
- Before you **Render**, create a **Motion Key** (hit Enter) for **All Items** in **Layout**.
- Click on the **Rendering** menu and select **Render Current Frame** (F9).



Conclusion

- We used **Modeler** to create our 10 m radius **Disc** for our sea model.
- We used the **Surface Editor** to modify the sea's wavy surface with 3 **Bump** textures.
- In **Layout**, we positioned the **Camera** right above the water and the sun **Light** on the horizon.
- We added a **SkyTracer Backdrop** to give the scene a realistic looking sky.