Creating Realistic Water

Brandon Coomes
Step One: Modeler

Create a box 2km width, 1 m height, and 2 km depth.

Hit Tab to Subpatch.

Hit “q” and name it.

Save the object, then send to layout.
Layout:
Go to Object Properties.
Change Display Subpatch Level to 150.
Change the Render Subpatch Level to 300.
Go under the Deform tab and add a Displacement Map

Use the following settings:
Layout Type: Procedural
Opacity: 7000%
Displacement Axis: Y

Proc. Type: Turbulence
Texture value: 3.155
Frequencies: 10
Contrast: 12%
Small Power: 0.4

Scale:
X - 500 m
Y - 500 m
Z - 500 m

Hit use texture.
Now go back into surface editor, and hit the texture tab beside Color to add one of our two gradient layers.

The first one’s settings:
Layer Type: Gradient
Opacity: 100%
Create four keys along the gradient like shown.

Adjust the color setting on each to about 50 Red, 70 Green, and 50 Blue.

Adjust the Alpha settings on 1-2 keys to get the same affect as shown.
2nd Gradient:
Layer Type: Gradient
Opacity: 70%
Input Parameter: Slope

Create 2 keys and place as shown.

Match up the colors to near the same as the first gradient.

Tweak the Alpha to between 100%-98%.

Hit use texture.
Open add in a Bump texture map with 3 layers.

First layer settings:
Layer Type: Proced. Text.
Opacity: 50%
Proced. type: Turbulence
Texture value: 80%
Frequencies: 3
Contrast: 0%
Small Power: 0.5

Scale:
X, Y, and Z. - 50m
2nd Layer:
Procedural Texture
Opacity: 100%
Procedural Type: Smoky1
Texture Value: 61%
Frequencies: 3
Contrast: 0
Small Power: 0.5

Scale
X, Y, Z: 60m
3rd Layer:
Procedural Texture
Blending Mode: Multiply
Opacity: 50%
Procedural Type: Crumple
Texture Value: 90%
Frequencies: 2
Small Power: 1

Scale:
X = 2km
Y = 1m
Z = 2km
Surface Editor Settings

- Luminosity: 0%
- Diffuse: 100%
- Specularity: 80%
- Glossiness: 100%
- Reflection: 0%
- Transparency: 0%
- Translucency: 0%
- Bump: 100%
Go to the Shaders tab in Surface Editor.
Add the “Fast Fresnel” and “Thin Film” shaders.

On the Fresnel Shader settings have:
Reflectivity: 70%
Specular: 60%
On the Thin Film, make the settings:

Primary Wavelength: 441 nm

Angle Variation: 5

Color Mixing (Blend): 5%
Finally, add in an environment. SkyTracer2 in this case.

Set the SKT_Sun to a point light and position it over the water.

...and finally we can render.
And the finished product:
Conclusion:

-One method that can yield realistic water results

-Can tweak settings to achieve desired effects

Reference:

http://www.3dluvr.com/content/article/107/2