

Volumetric Fog (Lite)

A simple and fast volumetric fog + shadows renderer feature for Unity URP.

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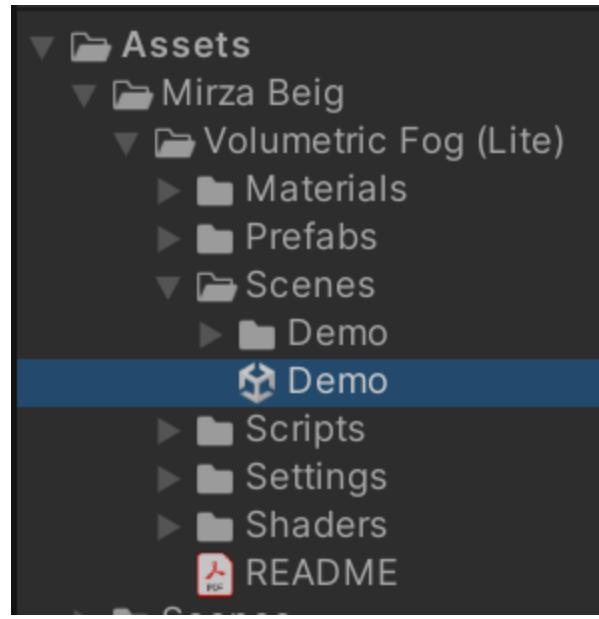
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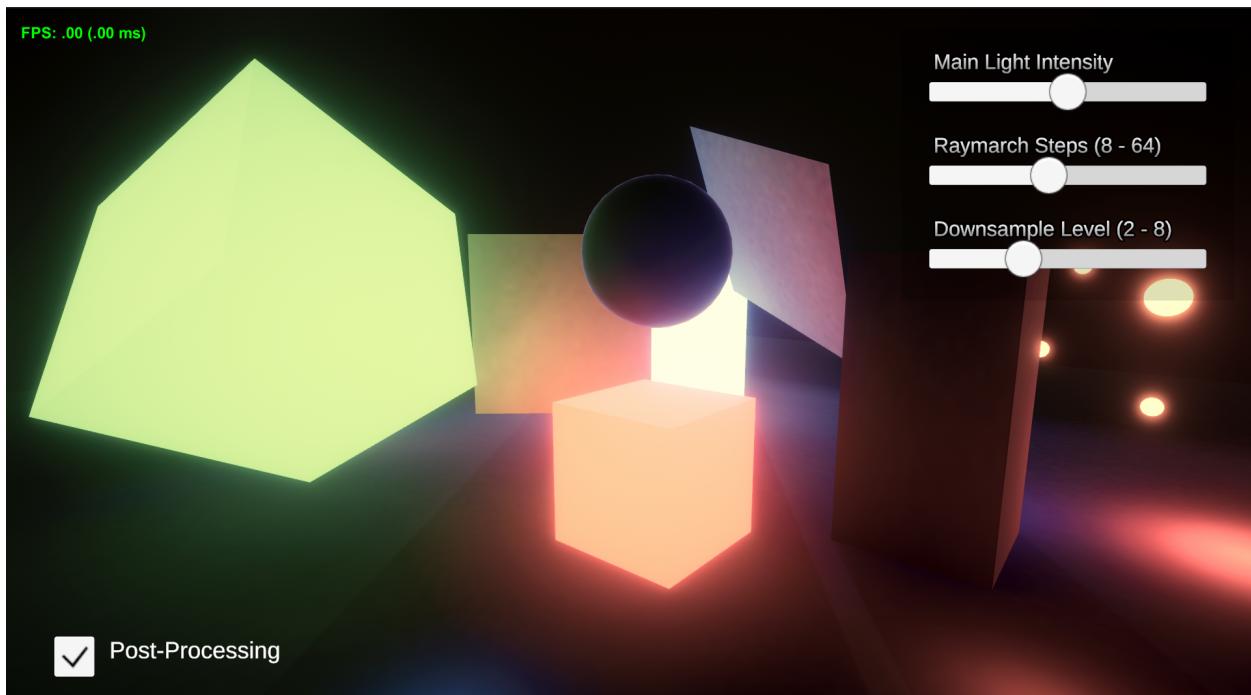
Quickstart (Overview)

This effect works as a renderer feature for URP. There is an included demo scene + render pipeline asset with the feature already setup for quick previewing.

1. Navigate to the Scenes folder and open the Demo.

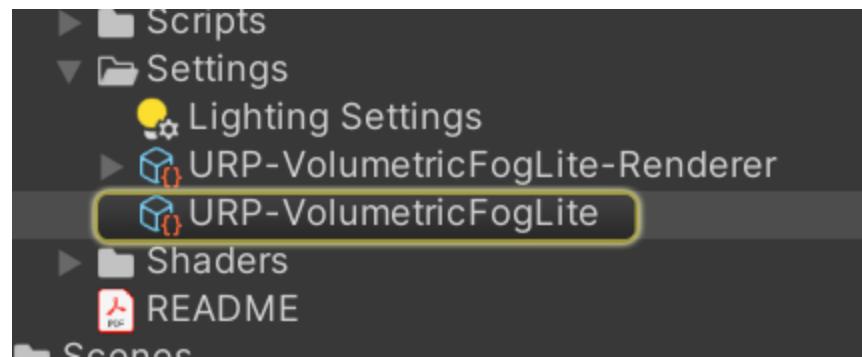


Mirza Beig/Volumetric Fog (Lite)/Scenes/...

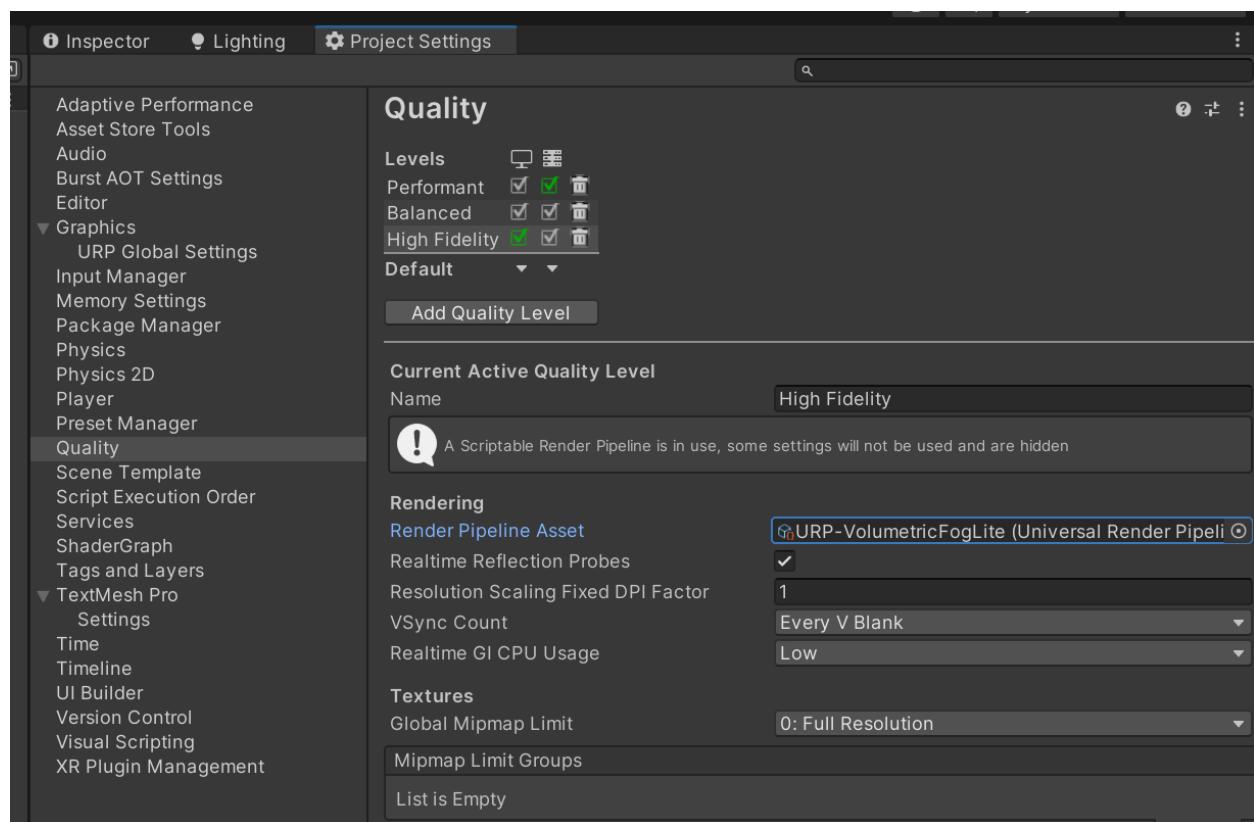


Demo scene, with volumetric fog renderer feature *not* setup.

2. Navigate to the included Settings folder to find the demo renderer asset, then assign this to the current Render Pipeline Asset in your Project Settings → Quality.

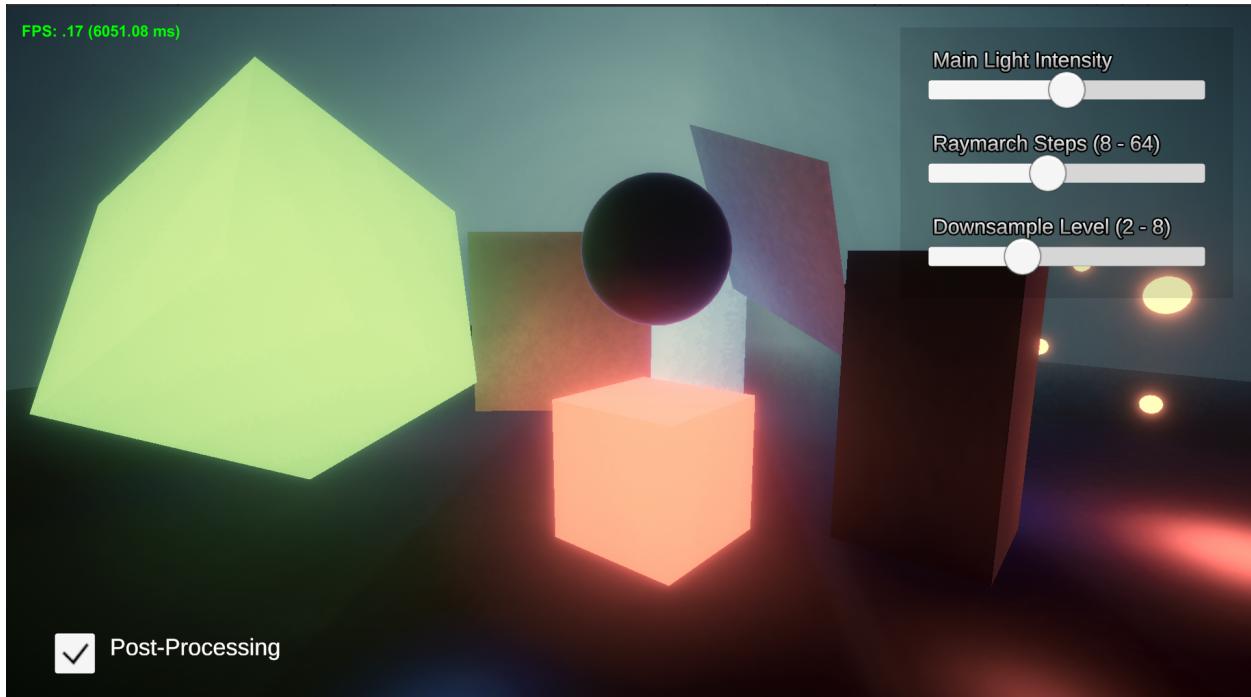


The included render pipeline asset, URP-VolumetricFogLite:
Mirza Beig/Volumetric Fog (Lite)/Settings/...

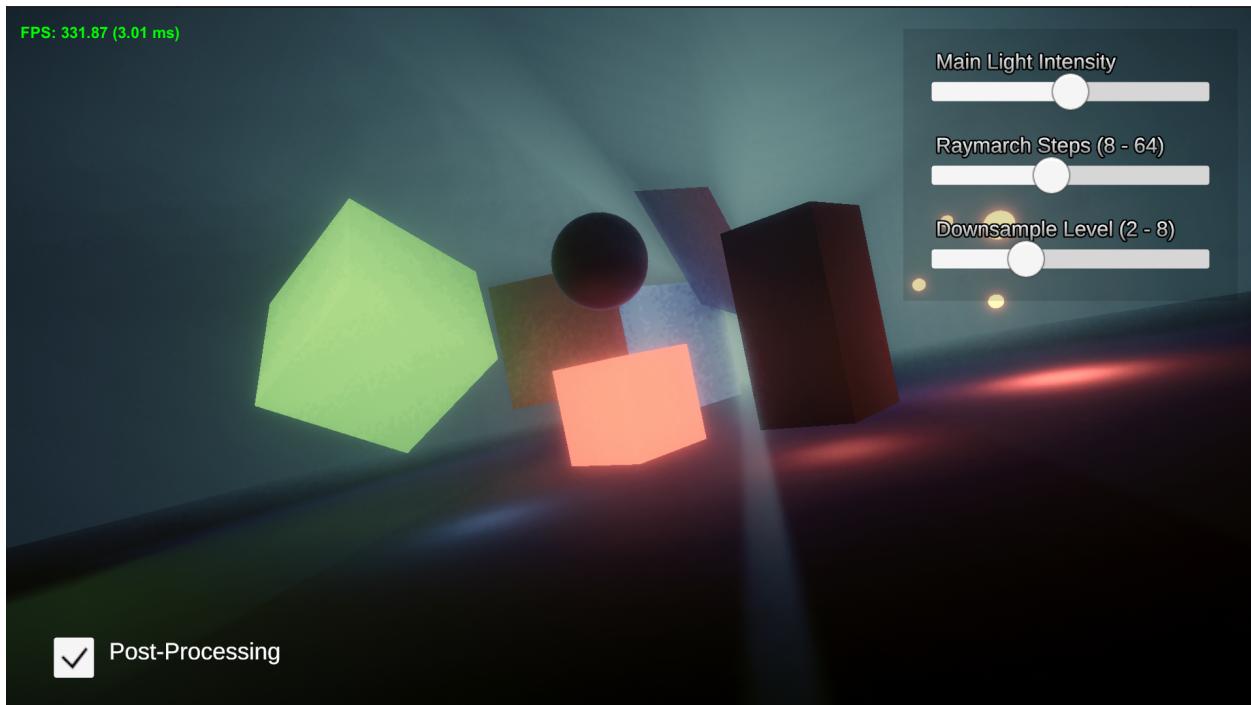


Project Settings → Quality → Rendering → Render Pipeline Asset:

3. Done.



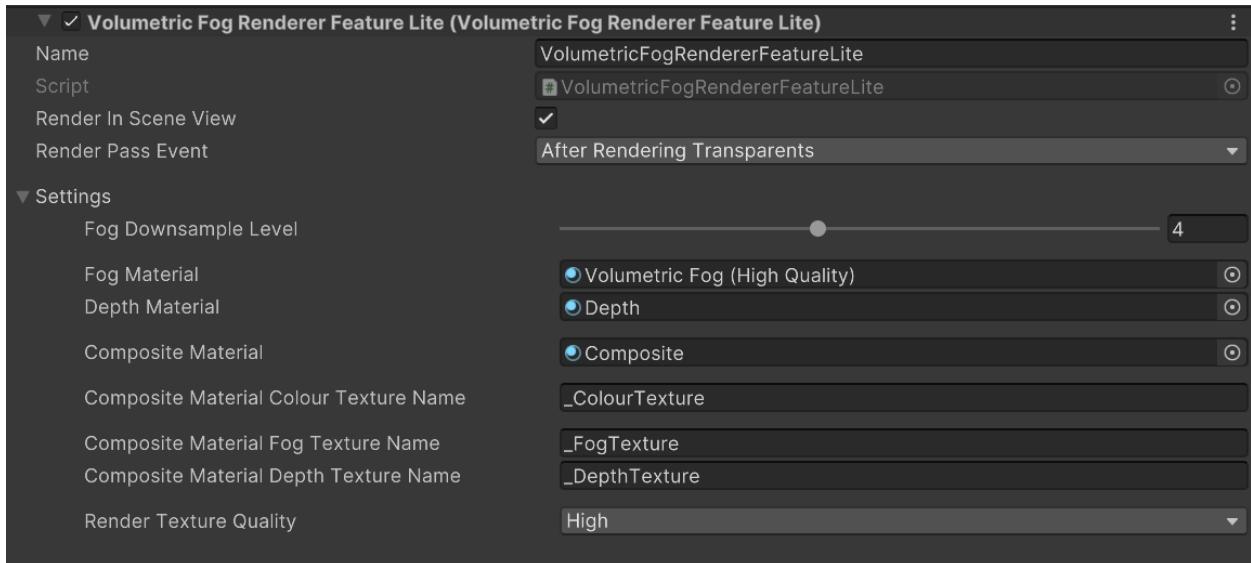
Fog is now rendering.



Volumetric shadows should work.

DIY

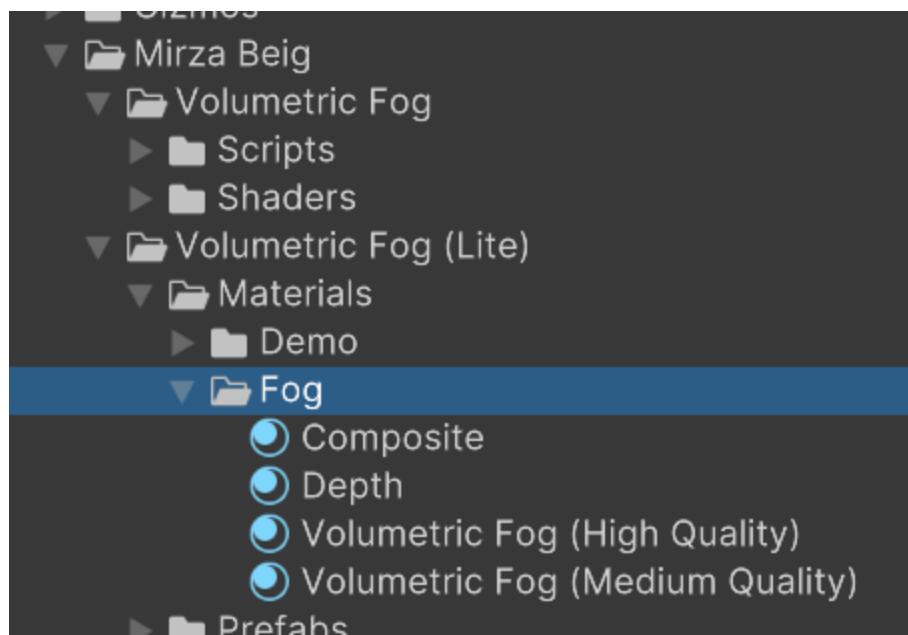
Add 'Volumetric Renderer Feature Lite' to your URP renderer data asset.



Volumetric Fog renderer feature for URP.

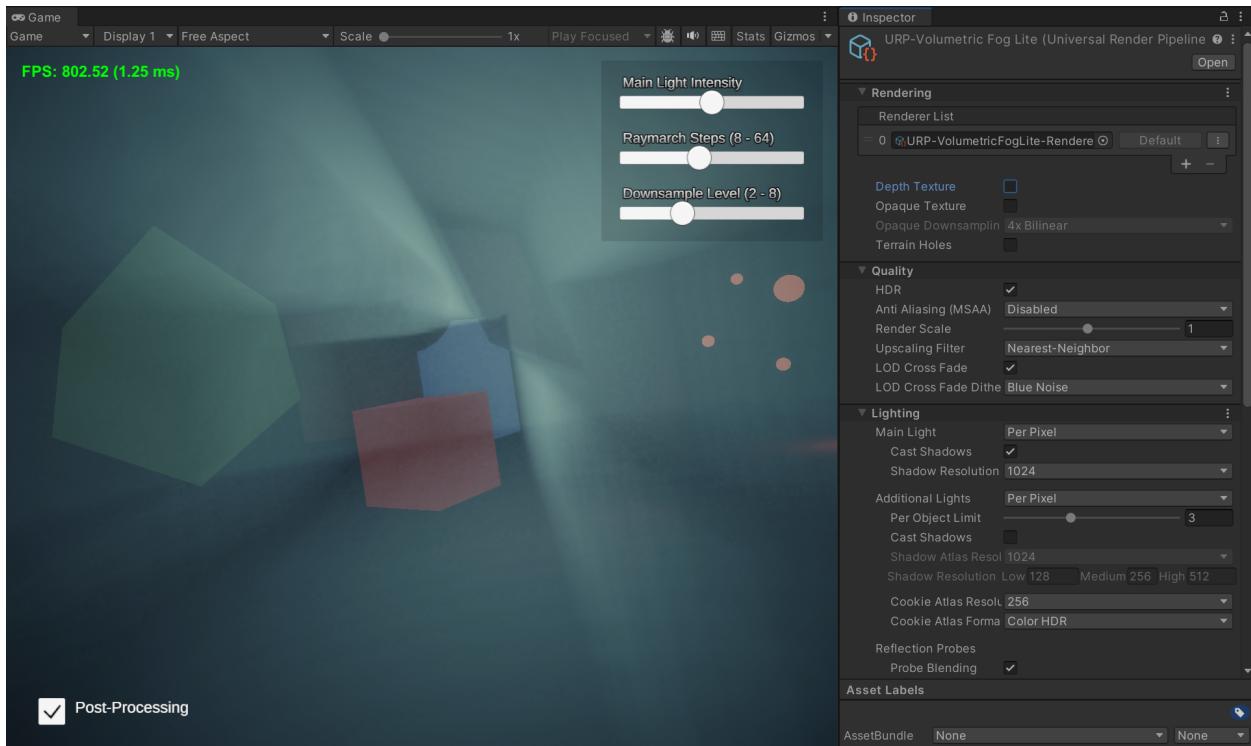
You'll need to assign the **Fog**, **Depth**, and **Composite** materials.

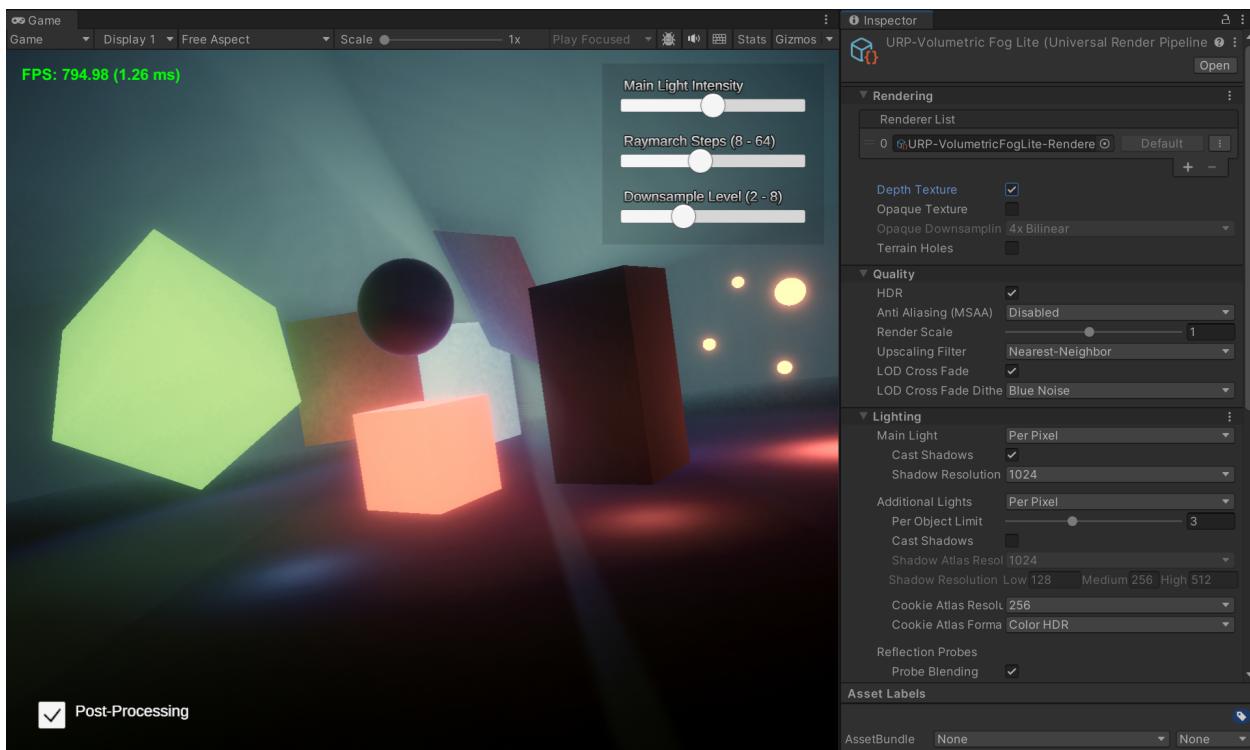
These are found under the materials folder:



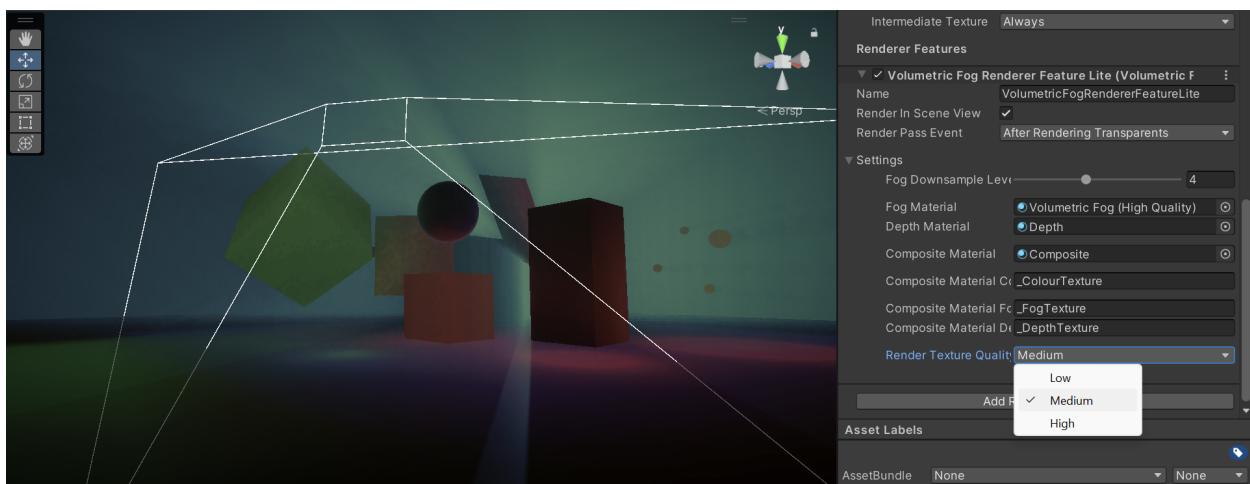
Mirza Beig/Volumetric Fog/Materials/Fog/...

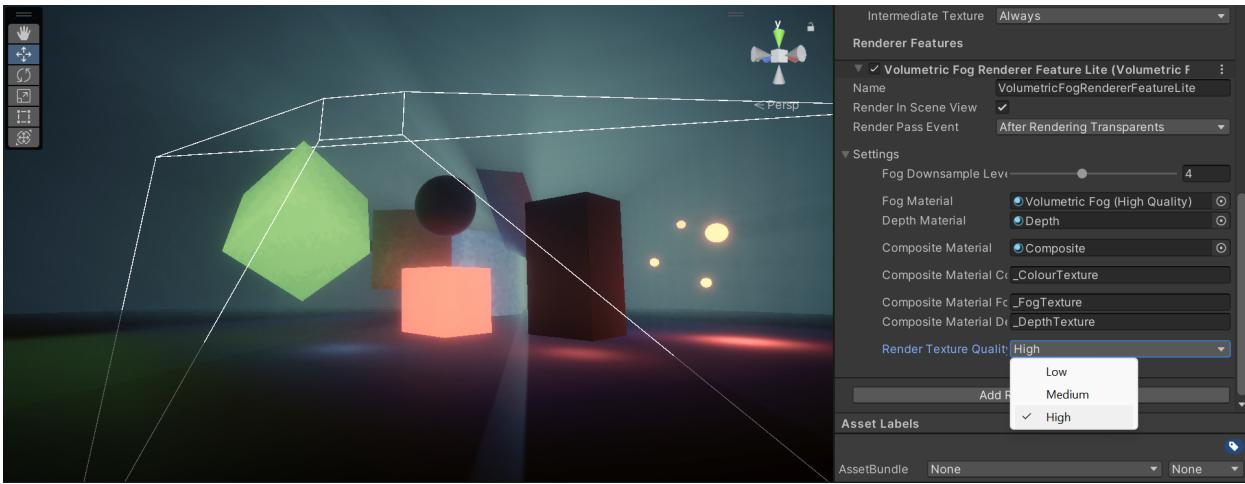
On your renderer asset, set **Depth Texture** → **Enabled** to allow fog to blend with the scene.





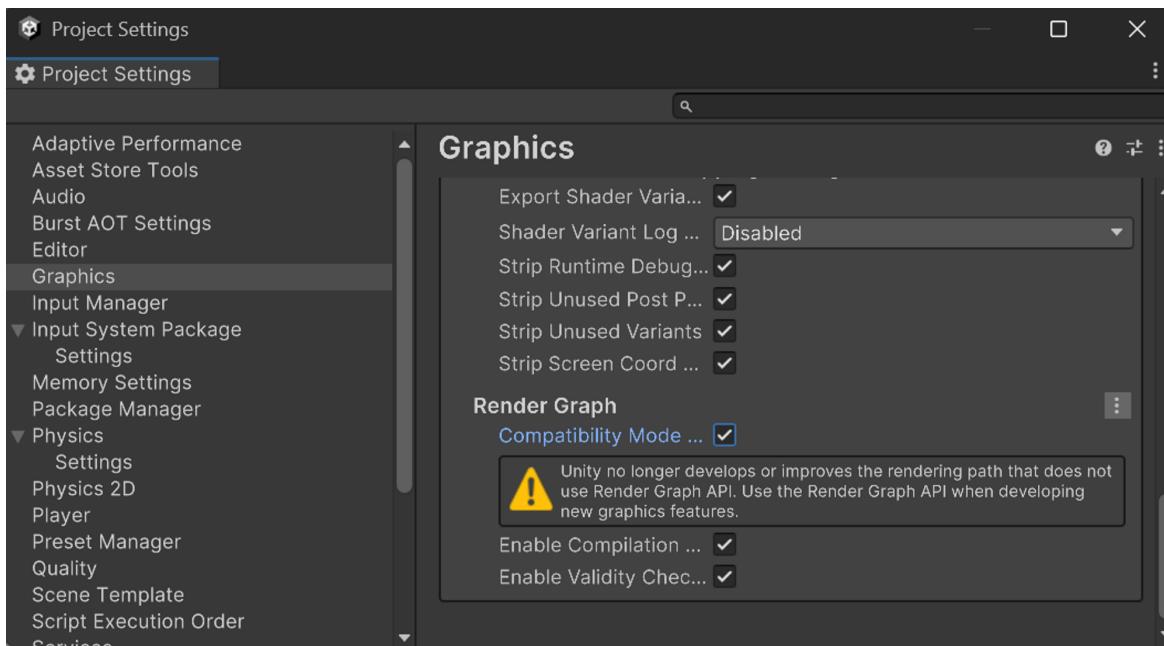
On the renderer feature, set **Render Texture Quality → High ↑** for HDR colours and bloom.





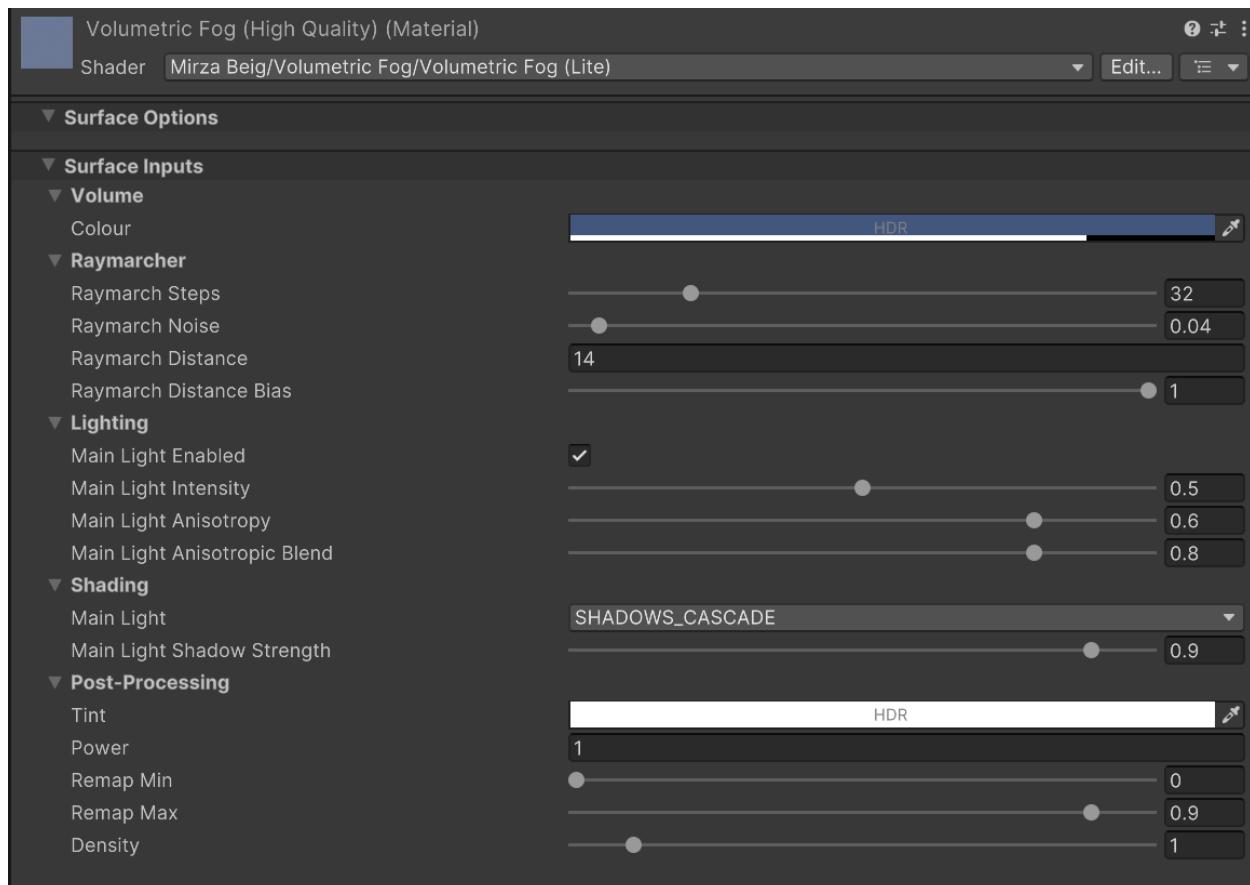
Unity 6

If using Unity 6, please enable **Compatibility Mode** from **Project Settings → Graphics**.



Fog Material

You can fine-tune the material to suit your needs.



Fog material with some typical values.

Volume

- **Colour:** *base fog colour/tint* - the colour of the fog even without lighting.
 - Alpha-opacity = density.
 - Scene light colour is added to this.

Raymarcher

- **...Steps:** *quality of volumetric effect, number of iterations.*
- **...Noise:** randomize raymarch sampling, useful for hiding low-step count aliasing/artifacts.
- **...Distance:** distance ('depth') of the volumetric fog effect into the scene.
- **...Distance Bias:** essentially a density control, crushes raymarch distance to max depth.

Lighting

Main Light...

- ...**Enabled**: pick up main light in volumetric fog.
- ...**Intensity**: brightness scale.
- ...**Anisotropy**: light intensity directional bias.
- ...**Anisotropy Blend**: apply mask as Alpha mask to render pixels within the mask transparent.

Shading

Main Light...

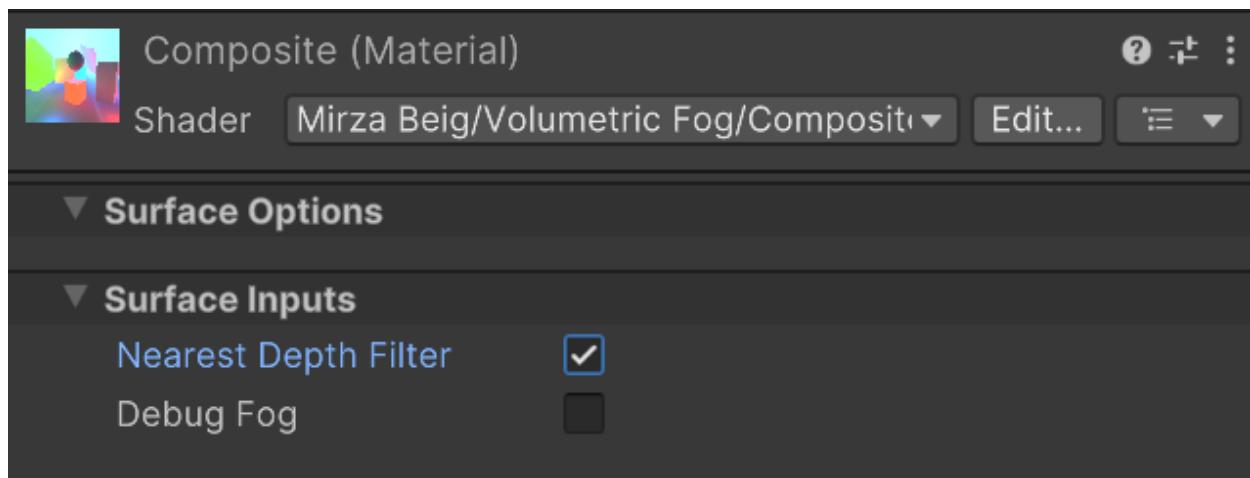
- ...**SHADOWS | SHADOW CASCADE | SHADOWS SCREEN**: type of volumetric shadow sampling.
- ...**Shadow Strength**: intensity of volumetric shadows darkening.

Post-Processing

- **Tint**: multiply output by this.
- **Power**: reshape fog, power.
- **Remap Min**: reshape fog curve, *smoothstep* min.
- **Remap Max**: reshape fog curve, *smoothstep* max.
- **Density**: alpha-opacity multiplier.

Composite Material

There are a few options for compositing.



Nearest Depth Filter

Enhanced depth-based compositing for low-resolution fog buffer/texture.

Debug Fog

Debug fog as grayscale.