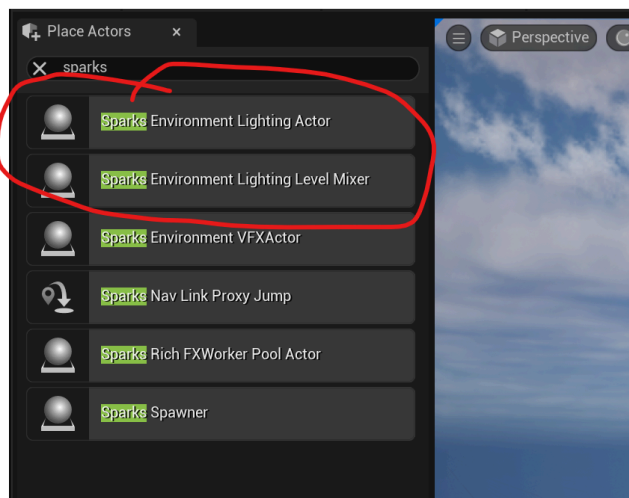# Environment Light Preset Mixer

The Environment Light Preset Mixer system encapsulates the main UE level-wide/scene lighting components into swappable, reusable, mixable assets. Its purpose is to allow basic lighting setups to be easily reused across levels. It also has features for transitioning between lighting setups.

The Environment Light Preset Mixer controls these components:

- One Directional Light
- Exponential Height Fog
- Sky Atmosphere
- Sky Light
- Volumetric Clouds
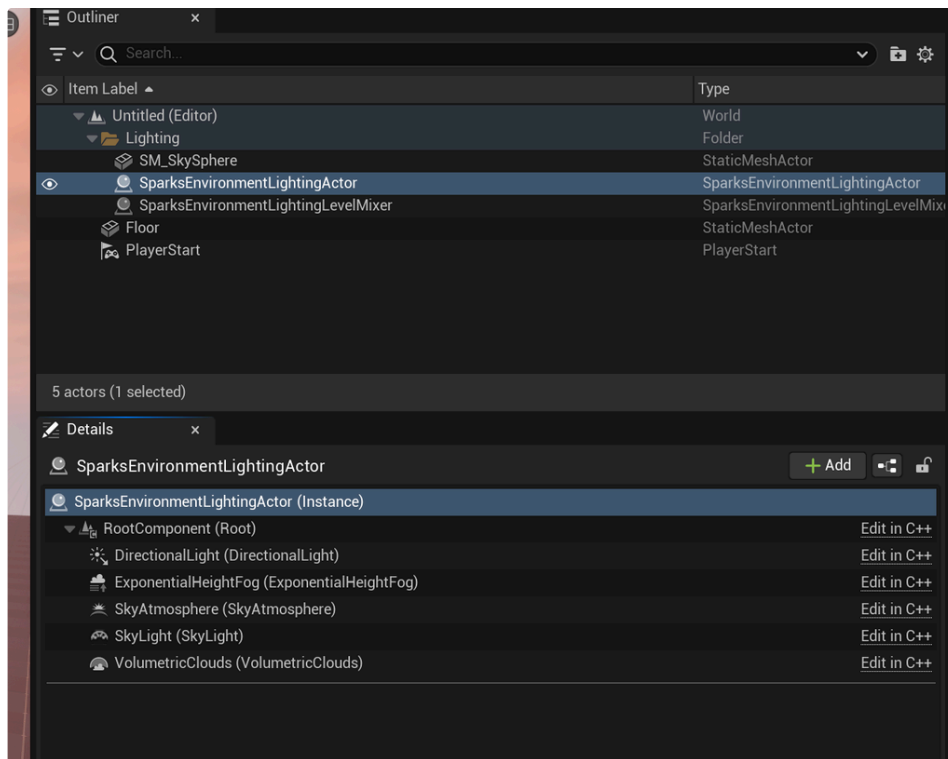- A Post Process Volume

Setup

1. Create an empty level; or, to add the system to an existing level, ***delete the components listed above*** – there can only be a single instance of any of those in a level (except for post process volumes).
2. Add a SparksEnvironmentLightingActor and a SparksEnvironmentLightingLevelMixer:
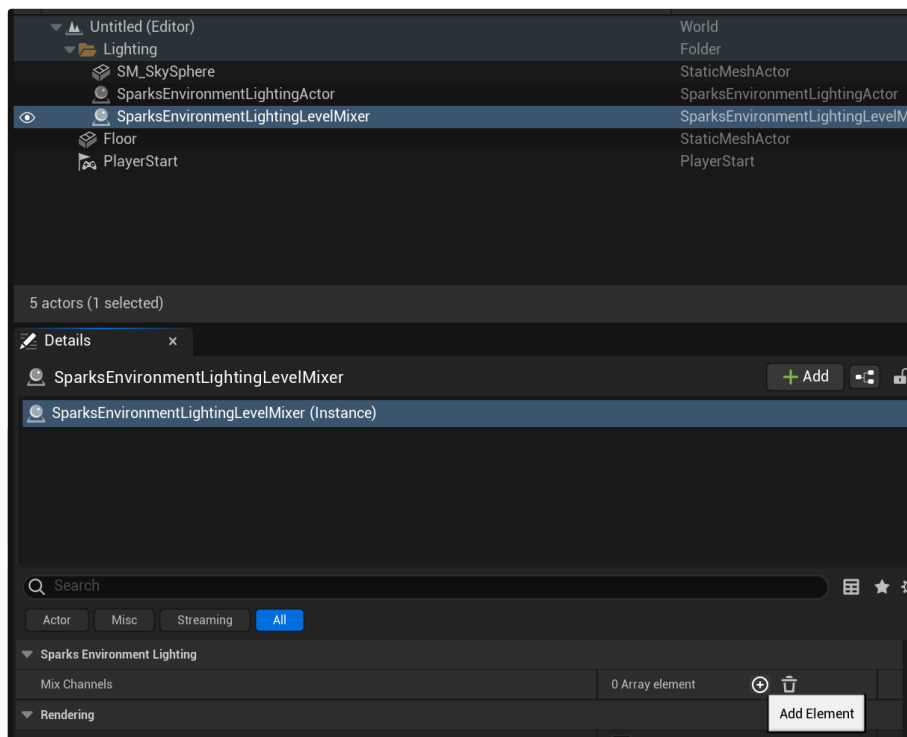

   Each level using the system will have one SparksEnvironmentLightingActor, and one SparksEnvironmentLightingLevelMixer.
3. The SparksEnvironmentLightingActor contains the UE lighting components:
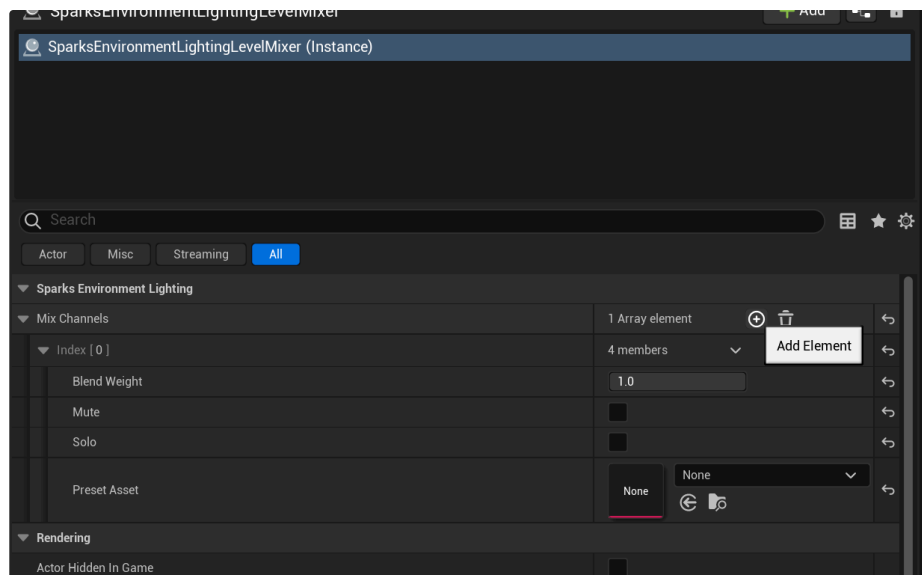
4. The SparksEnvironmentLightingLevelMixer is where you'll create and manage presets. The Mixer is connected to the Lighting Actor in the level – it supplies and controls most of the settings for those components.
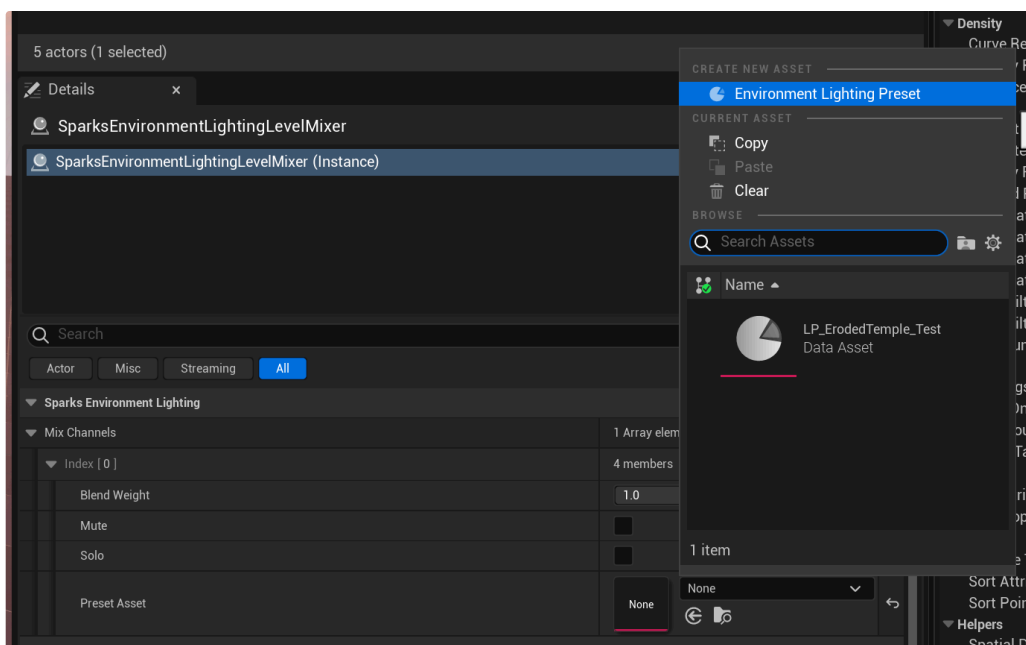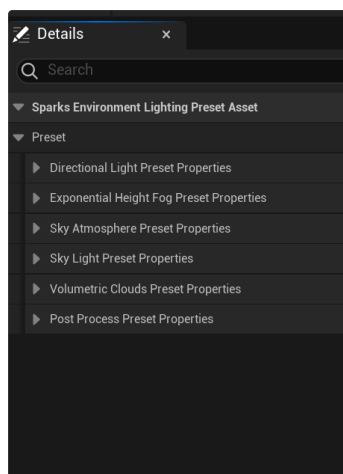

Creating Presets

To create a new preset, add a channel in the Mixer:

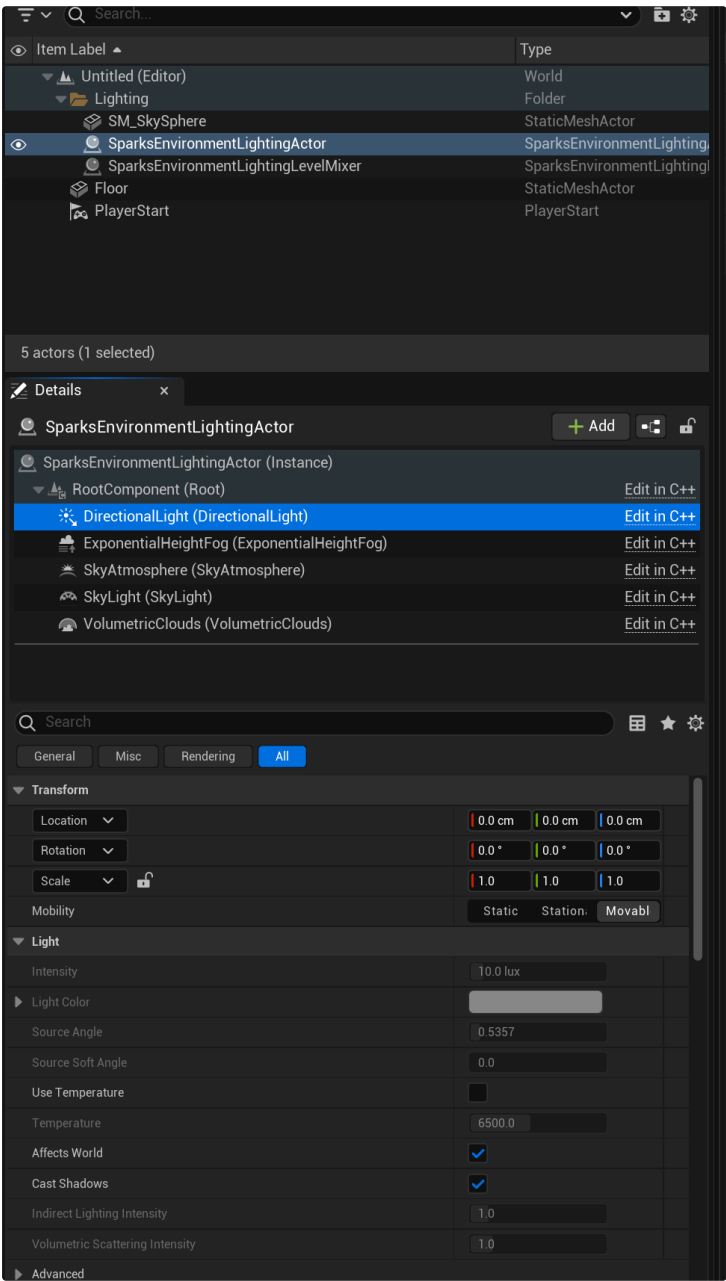Then, select "Environment Lighting Preset" in the Preset Asset pulldown menu:

Open the newly created preset to find the settings for all lighting components:

Preset Controlled Settings vs. Lighting Actor Settings

All settings managed by the preset system are displayed in the preset asset. If you look at those same settings in the corresponding component in the Lighting Actor, you'll see they are greyed out:

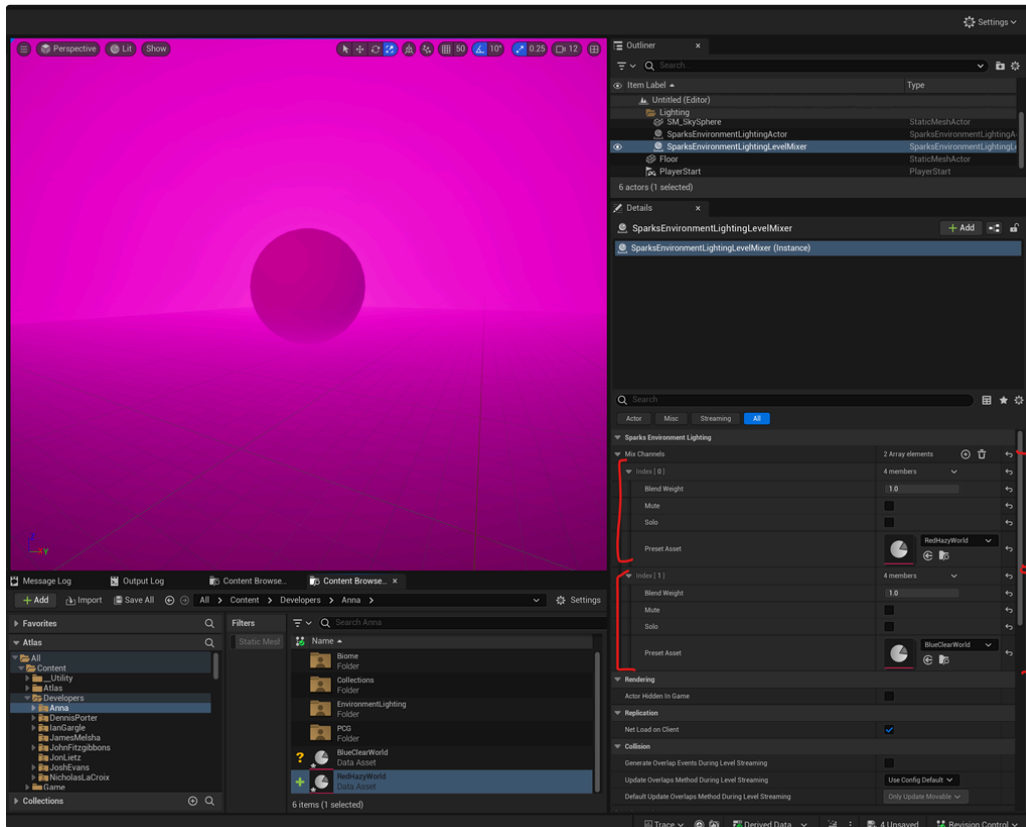
The opposite is true for the preset:

The purpose of this is to distinguish between settings which apply to the level as a whole (in the Light Actor), and settings which configure the specific look of a lighting setup (the Light Mixer). For example, "Casts Shadows" applies to the level as a whole – you wouldn't want a preset to toggle that on and off. "Use Temperature" applies to the level as a whole, but the specific temperate is set by the mixer.

Generally, the settings controlled by the Light Mixers are blendable; the ones controlled by the Light Actor are not.
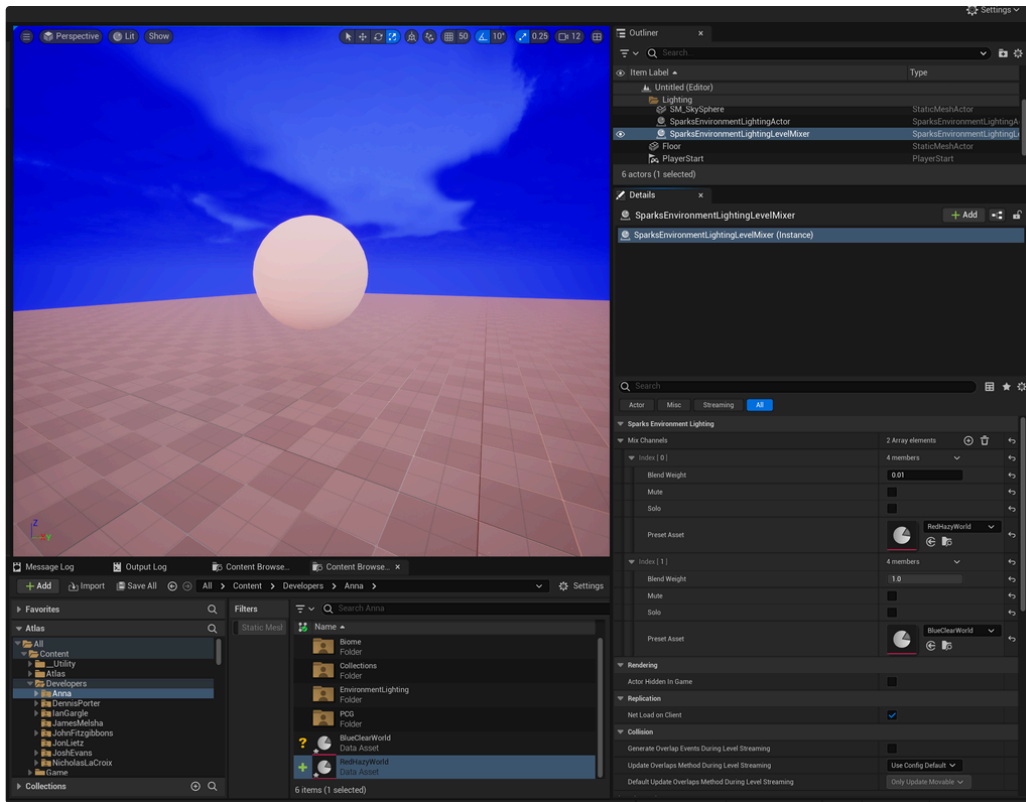
Mixing Presets

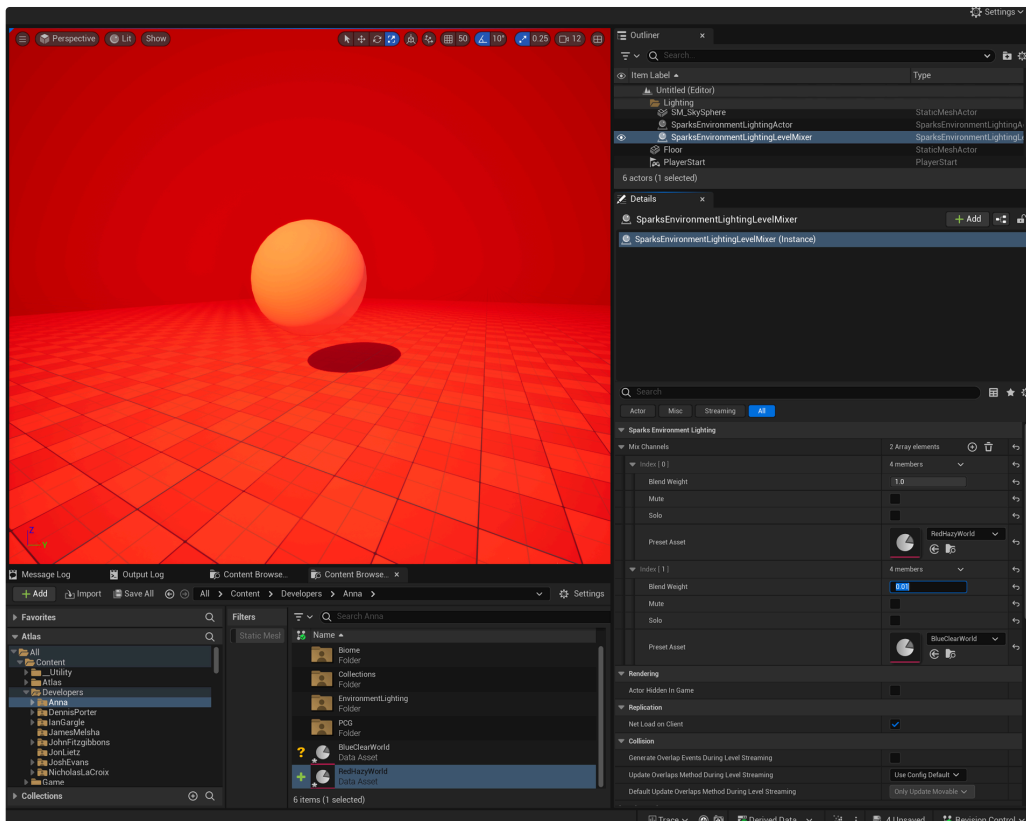In the Mixer, you can create channels to blend lighting presets. Here, there are two:

The first channel has a preset with red lighting, and thick fog; the second has blue lighting, and thin fog. In the viewport, we see the effect of **both** presets added together with equal weight.

Here, the Blend Weight of the first channel is set to (almost) zero, and the other set to one. This removes the effect of the red preset, leaving only the blue preset:

And here's the opposite case:

Mute/Solo

In each channel:

- Mute - Disables that channel

- Solo - Enables channels where Solo is checked; disables all others

Questions?

Ping Anna Dickinson anytime!