



## Depth map and raytraced shadows

In Maya, an individual light source can produce no shadows (default), depth map shadows or raytraced shadows. You can combine depth map shadow casting lights and raytraced shadow casting lights in a scene.

Adjusting the attributes of depth map shadows or raytraced shadows can simulate shadows from many different types of real-world light sources and objects.

Depth map shadows and ray traced shadows produce similar results, though depth map shadows usually take less time to render. Generally, choose depth map shadows unless they cannot accomplish your visual goal.

Images by Alan Opler



No shadows  
(default)



Depth map



Raytraced (with reflection)

**Depth map shadows**

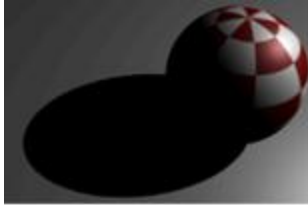


Image of flowers by Alan Opler

Depth map shadows produce very good results in almost all situations, with marginal increase to rendering time.

A depth map represents the distance from a specific light to the surfaces the light illuminates. A depth map is an data file that contains the depth data rendered from a light's point of view. Each pixel in the depth map represents the distance from the light to the nearest shadow casting surface in a specific direction.

To create depth map shadows, see [Render depth map shadows](#).

If a scene contains a depth map shadow casting light source, Maya creates a depth map file (stored as a Maya IFF File) for that light source during rendering and uses the depth map file to determine which surfaces are in shadow. In some cases, you can reduce rendering times by saving and reusing a depth map. To find out how to reuse depth maps, see [Reuse depth maps](#).

### Raytraced shadows



Image of flowers by Alan Opler

Raytraced shadows can produce soft and transparent shadows but can be very time consuming.

Raytracing is a type of shadow rendering where the path of individual light rays are calculated from their source (the light) to their destination (the camera).

Use raytraced shadows only to produce more physically accurate shadows (like those in the real world). Common purposes include:

- (for area lights only) where shadows blur and become lighter as they increase in distance from the object
- to produce shadows from transparent colored surfaces
- to produce soft-edged shadows (though depth maps can also produce good results)

To create raytraced shadows, see [Render raytraced shadows](#).

#### Note

You can see depth map shadows in Interactive Photorealistic Rendering (IPR) but you cannot see raytraced shadows. You must render the scene in order to visualize raytraced shadows. See [Visualize interactively with IPR](#) for information about visualization.

#### Related topics

- [Shadow in Maya](#)
- [Render depth map shadows](#)
- [Render raytraced shadows](#)

## Render raytraced shadows

### To create a raytraced shadow

1. Select the light for which you want to produce a shadow.
2. In the **Raytrace Shadow Attributes** section of the light's **Attribute Editor**, turn on **Use Ray Trace Shadows**.
3. Select the surface on which you want to cast a shadow.
4. In the **Render Stats** section of the surface's **Attribute Editor**, turn on **Casts Shadows**.
5. In the **Raytracing Quality** section of the **Render Settings** window ([Window > Rendering Editors > Render Settings](#)), turn on **Raytracing**.
6. Render.

#### Related topics

- [Shadow in Maya](#)
- [Raytraced shadows](#)