

CLOUDS 2

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This image was captured at 7:30 A.M., looking out over Lake Dillon. There was interesting cloud activity on the route down from the Eisenhower tunnel complex to the valley below, but an opportunity to capture an image did not present itself until further into the valley. The intent of this image was to capture the fog and clouds created by Lake Dillon, as well as the interaction with the wind at low levels.

Although the Denver Skew-T plot for this timeframe was gathered, it unfortunately can not tell us anything about local conditions for this specific phenomenon. This is due to the geographical difference in sounding location, the immediate local conditions, and the considerably low altitude involved. The Skew-T plot does, however, explain the lack of high-level clouds in the atmosphere. The local phenomenon can be explained fairly easily if we consider the dynamics between Lake Dillon and the cold mountain air.

Lake Dillon, as a large body of water, has a tremendous amount of thermal energy stored in it. The water temperature changes very slowly with time, even when there is a large temperature gradient between the water and air. The temperature of the air at the time the image was taken was approximately 15 degrees Fahrenheit, while the mean water temperature for Lake Dillon in November is approximately 39 degrees. As the lake cools, it evaporates water. If the air cannot completely incorporate these water molecules, fog is formed. This is apparent over the entire surface of the lake in this image. The cloud of interest appears most robust closest to the lake surface, and as the wind pulls it to the left in the image, it is broken up and evaporates rapidly.

To capture this image, a Nikon F100 35mm SLR was used, with a Sigma 28-70mm f/2.8-4 lens. The image was captured at 28mm focal length, f/22, and a shutter speed of 1/1600th of a second. The film used was Kodak T-MAX P3200 Black and White. To print this image, a 75mm enlarger lens was used, at f/11, exposing for 40 seconds on Ilford resin coated multi-grade paper. The image was then scanned into Photoshop Elements 4.0 and saved as a .PSD file. Since the image was scanned as grayscale, no color editing was needed.

What I like most about this image is that it demonstrates the compartmental nature of mountain terrain. What is happening on one side of a ridge may be completely different on the other side. This image shows that weather in the valley is defying the weather trend at higher altitudes. To improve this image, I would especially like to increase the contrast, namely by using a red filter. However, the nature of clouds is that they are rather unpredictable, and capturing the same image again would require a constant vigil over Lake Dillon.

REFERENCES:

"Atmospheric Soundings." 24 Nov. 2007. University of Wyoming. 27 Nov. 2007
<<http://weather.uwyo.edu/upperair/sounding.html>>.