CASE STUDIES FOR EVALUATING PHOTOSIMULATIONS FOR VISUAL IMPACT ASSESSMENT

Principle
Represent all projected visual changes

Statement
The simulation must include all reasonably anticipated direct and indirect project-related visual changes.

Explanation
Often there are particular elements of a project that are expected to present the primary visual impact. For instance, the focus for wind energy projects is on the wind turbines because they are so large. However, wind energy projects create other visible changes to the landscape, including roads, power lines, transfer stations, and clearings around and adjacent to the wind turbines that are required for their installation and maintenance. All of these changes must be represented.

Case Study. View of Pisgah Mountain Wind from Eagle Bluff
Silver Maple Wind is a five turbine 20 MW expansion project that is proposed adjacent to and will visually appear to be part of the existing five turbine 9 MW Pisgah Mountain Wind project. The photograph in Figure 2 shows the existing Pisgah Mountain Wind turbines from Eagle Bluff. It was included in the Silver Maple Wind VIA to show the existing condition and was used as the base-photograph for the photosimulation in Figure 3, which shows the addition of the Silver Maple Wind project turbines.

The construction of simulations for the Silver Maple Wind project focuses on the wind turbines because they will become the dominant visual elements in the landscape. The importance of the clearings associated with the existing Pisgah Mountain Wind project are plainly evident in Figures 1, 2, and 3. However, the photosimulation in Figure 3 does not represent the necessary clearings that will be associated with the Silver Maple Wind project. This is a serious omission.

Discussion
While not as prominent as the turbines themselves, the omission of these new clearings significantly underrepresents the significance of the visual change. The clearings provide a visual indication of the real "footprint" of the wind project on the ridgeline. The proposed turbines are not simply and cleanly inserted into the forest, as represented in Figure 3. A wind energy development is a massive high-technology industrial facility that affects the whole mountain. Photosimulations must portray all reasonably anticipated direct and indirect project-related visual changes.

FIGURE 1. An aerial photograph showing the horizontal angle of view for Figures 2 and Figure 3.

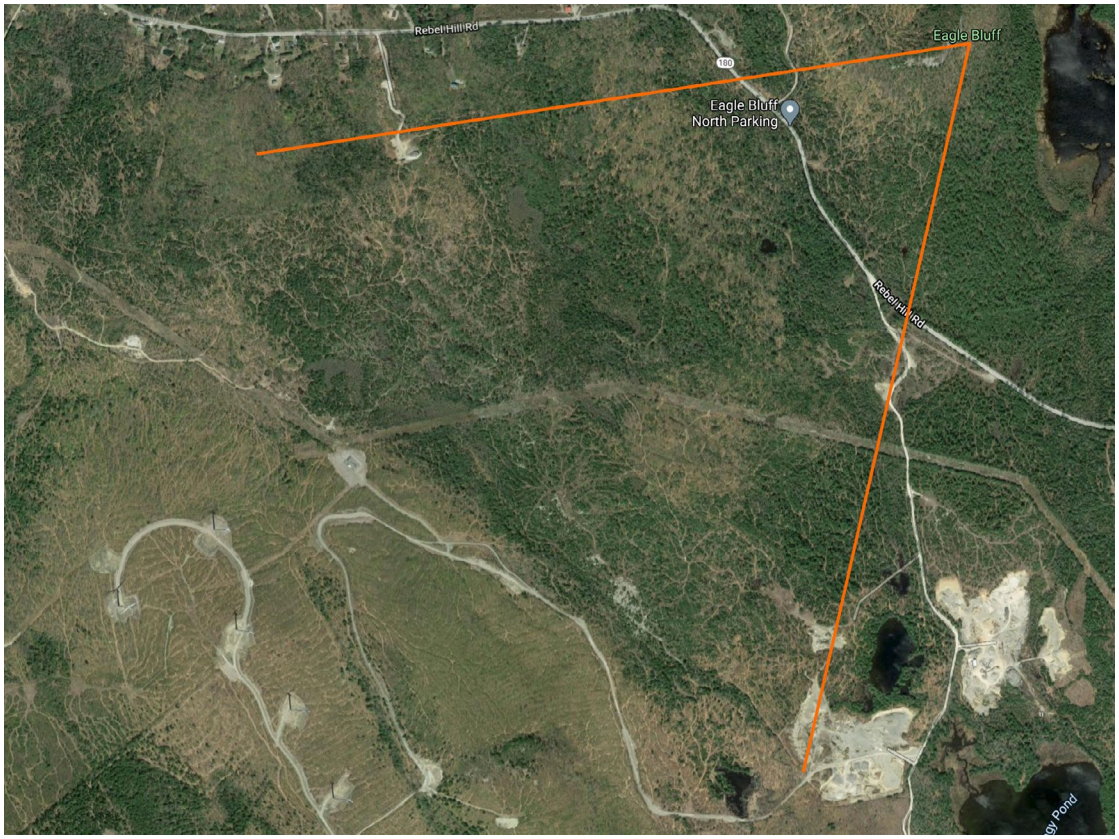

FIGURE 2. A photograph of the Pisgah Mountain Wind project from Eagle Bluff taken with a 28mm EFL.



FIGURE 3. A photosimulation of the existing Pisgah Mountain Wind and proposed Silver Maple Wind projects from Eagle Bluff.



Statement of Limitations: The simulations presented here were entered into the public record as part of a permitting process. They were prepared to be printed on 11-by-17-inch paper. However, in the process of distribution as PDFs they may have been substantially compressed. The figures presented here were clipped from these PDFs, converted to high quality JPGs and their resolution reduced. The original photosimulation has been substantially changed and as presented here should be used only as learning material.

Source: The figures used in this case study are taken from materials submitted to the Maine Department of Environmental Protection.