Additional Information Regarding Soil Erosion Hazard Data Used in Maps of Ewing Mountain Vegetation Project Area

To make our maps, we used the Gridded SSURGO (gSSURGO) database created by the USDA-National Resources Conservation Service (NRCS). The gSSURGO Database is derived from the official SSURGO Database, but is in the format of an Environmental Systems Research Institute, Inc. (ESRI) file geodatabase. USDA-NRCS, Description of gSSURGO database, at http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053628 .

The SSURGO database contains information about soil as collected by the National Cooperative Soil Survey over the course of a century. The information was gathered by walking over the land and observing the soil. Many soil samples were analyzed in laboratories. The maps outline areas called map units. The map units describe soils and other components that have unique properties, interpretations, and productivity." USDA-NRCS, Description of SSURGO database, at www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/planners/?cid=nrcs142p2_053627 . The SSURGO database provides information about the location, characteristics, limitations, and risks of various soil types, in a way that is similar to the county-by-county NRCS soil surveys that long have been in use, but is more complex and powerful because it can be analyzed in GIS.

To analyze potential erosion risks of ground-based timber harvest, we used the SSURGO attribute for erosion hazard for forest roads and trails. This 30m resolution data layer contains information regarding "the relative risk of erosion caused by the construction and use of forest roads and trails, ranging from slight to very severe risk of erosion." ArcGIS, USA Soils Erosion Hazards Forest Roads Dataset description, at www.arcgis.com/home/item.html?id=fca8f121f7f5410b9147f9769e01ecc1 . We believe this is a relevant and informative metric for evaluation the potential erosion hazard from construction and use of temporary logging roads and skid roads/trails. As the description of this data layer explains:

> Poorly planned or maintained forest roads are a major source of erosion and sediment pollution of streams. Foresters can reduce the risk and expense of forest road construction and maintenance by avoiding soils that are susceptible to erosion.
>
> This layer provides erosion hazard of forest roads and trails in five categories:
>
> > **Slight:** Little or no erosion is likely.
> >
> > **Moderate:** Some erosion is likely. Occasional maintenance may be needed. Simple erosion control measures needed.
> >
> > **Severe:** Significant erosion can be expected. Roads require frequent maintenance. Costly erosion control measures are needed.
> >
> > **Very Severe:** Expect the same problems as the "Severe" class, but with special circumstances. In particular, most of the soils with this rating have especially high organic content.
> >
> > **Not Rated:** The soil is not rated for erosion hazard.

Id.

To determine slopes within the proposed harvest units, we relied on the U.S. Geologic Survey's National Elevation Dataset (10-meter resolution) and identified slopes of 35% or greater.