Supplementary Material

Study site

For this study, the field measurements were taken (July 2017) in a portion of the 1.1-MW solar PV array in which a re-vegetation study had been conducted as part of an effort to restore the soil surface beneath the PV array to the condition similar to that of the soil surface before the construction of the solar PV. The PV panels were mounted on top of mono-axial tracking system that were oriented north- south so that the panels would face east in the morning and progressively tilt west towards the end of the day. With the height variation due to the change in the angle of the PV panel throughout the day, the PV panels are located approximately one meter above ground. Measurements and samples were taken along three transects in the re-vegetated portion and along another transect in an undisturbed area adjacent to the re-vegetated portion. For the transects in the re-vegetated portion of the array, the sampling locations along the transect were directly below the edges of the panel (“east edge” and “west edge”), the central location under the panel (“below panel,” directly adjacent to the column of the mounting system), and the space between each row of panels (“interspace”) (**Supplementary Figure 1**). As for the transect in the adjacent undisturbed area, the sampling locations were placed at distances equivalent to the sampling locations along the re-vegetated transects. No measurements or samples were taken in a non-revegetated portion of the photovoltaic array as civilian access was limited in that area.

## Supplementary Figures



**Supplementary Figure 1.** Locations of the treatment and control transects at the study location. (**A**) The red parallelogram indicates the extent of the re-vegetated portion of the solar PV plant (**B**) Re-vegetated solar PV site at National Wind Technology Center, CO. (**C**) Schematic detailing the sampling locations relative to the tracking solar PV arrays, showing two of the four rows (not to scale).