Prepared by the University of Idaho through a Western SARE Professional Development Grant (project EW18-018)

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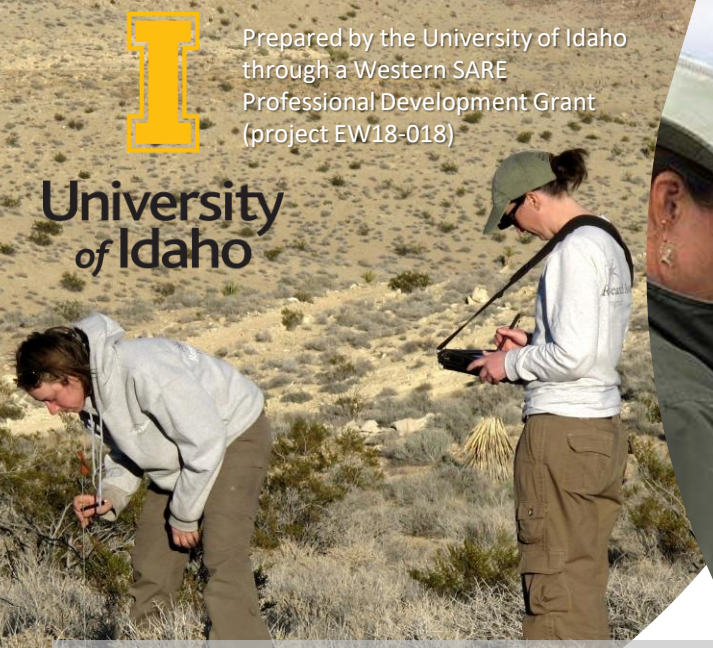
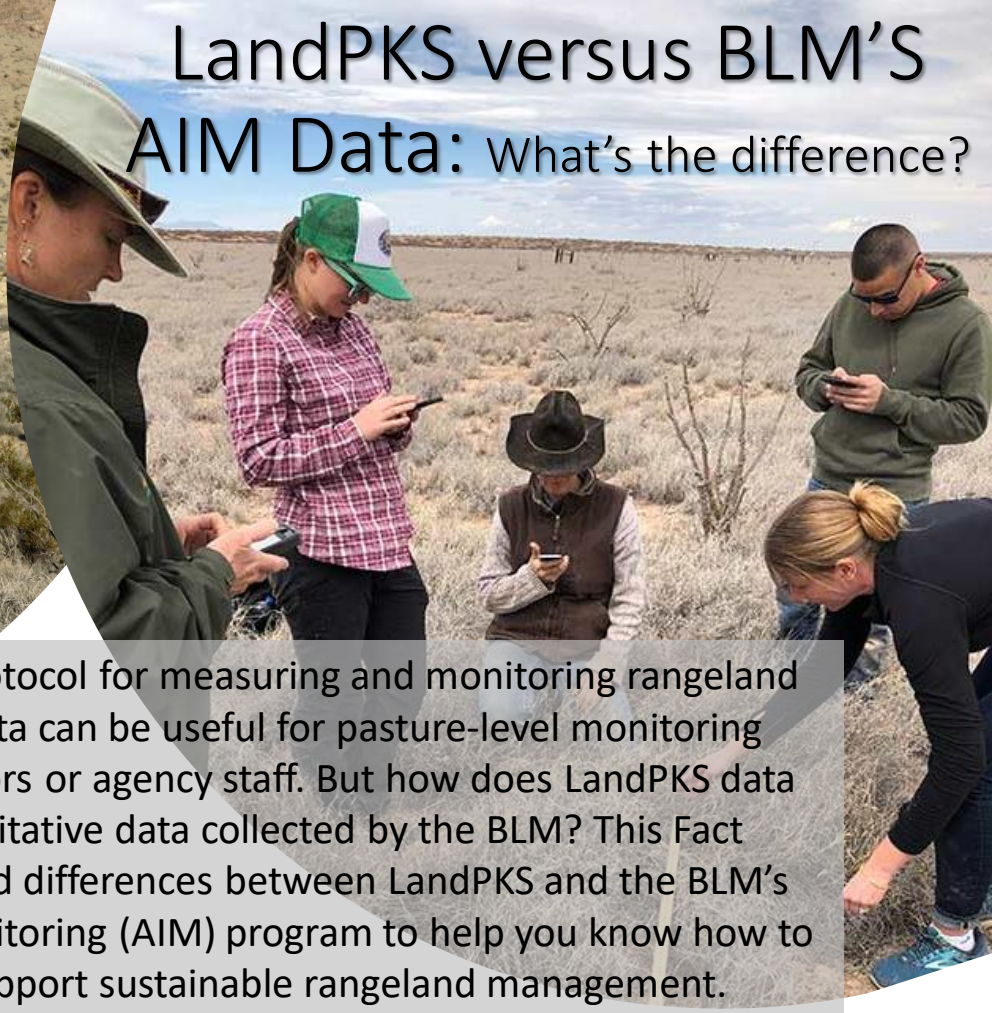
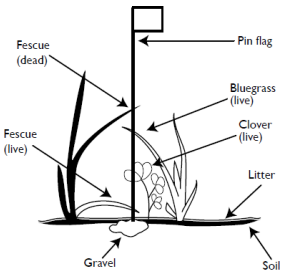
LandPKS versus BLM'S AIM Data: What's the difference?





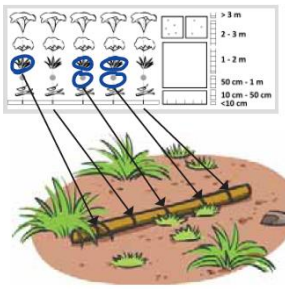
LandPKS is a quick, simplified protocol for measuring and monitoring rangeland vegetation and soils. LandPKS data can be useful for pasture-level monitoring and easily shared with cooperators or agency staff. But how does LandPKS data compare to more-detailed quantitative data collected by the BLM? This Fact Sheet looks at the similarities and differences between LandPKS and the BLM's Assessment, Inventory, and Monitoring (AIM) program to help you know how to use both datasets together to support sustainable rangeland management.

BLM's AIM Protocols



- Line-point Intercept (LPI) estimates vegetation cover and bare ground
- Thin pin flag to guide observations
- All intercepts of pin count toward cover
- Data recorded by plant species
- Measured vegetation height and canopy gaps

LandPKS Protocols



- Simplified LPI technique made at points along a stick. Stick placed multiple times per site
- Must visually estimate intercepts along the stick
- Data recorded by major plant functional groups (e.g., shrubs, annual grasses, perennial grasses)
- Estimated vegetation height and canopy gaps

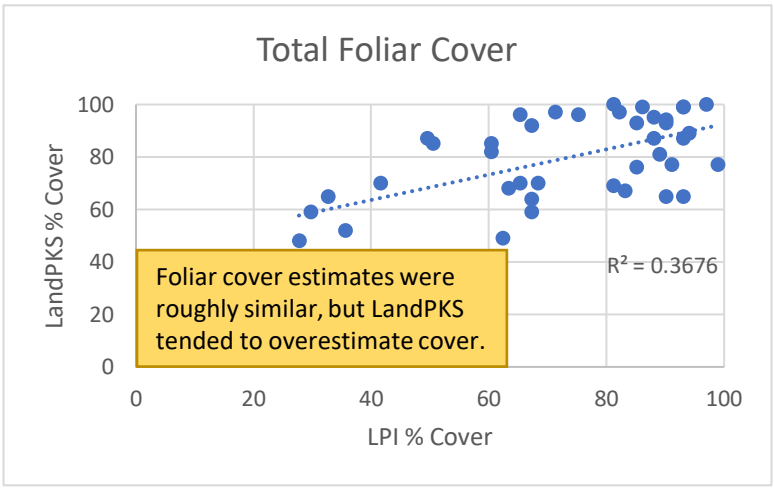
Similarities Between the Protocols

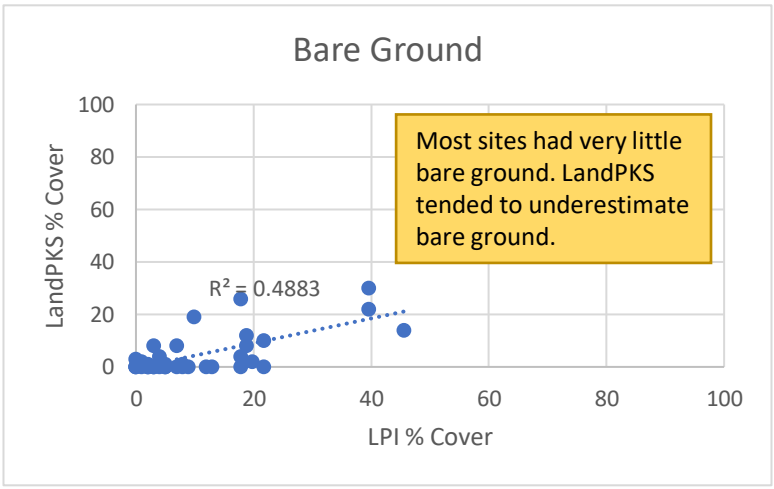
- LandPKS and BLM's AIM measure most of the same indicators, including:
  - Vegetation Cover
  - Bare Ground
  - Canopy Gaps
  - Vegetation Height
- Both LandPKS and BLM's AIM use the same definitions for key attributes like foliar vegetation cover, soil, rock
  - This ensures the data are compatible

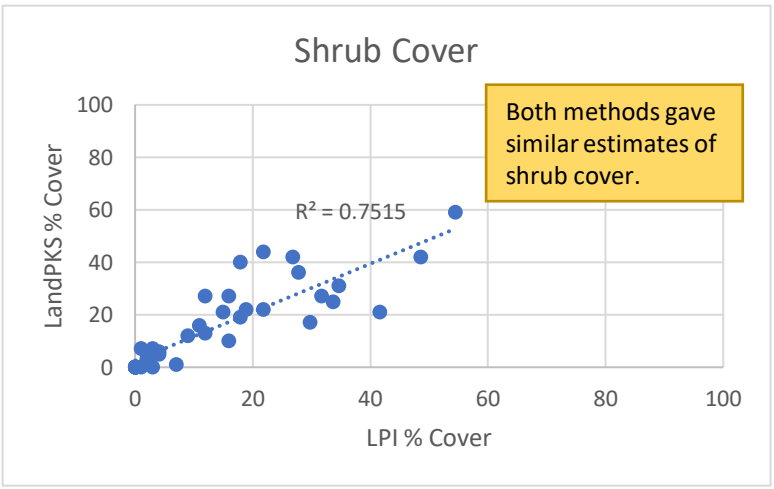
A Comparison of Methods

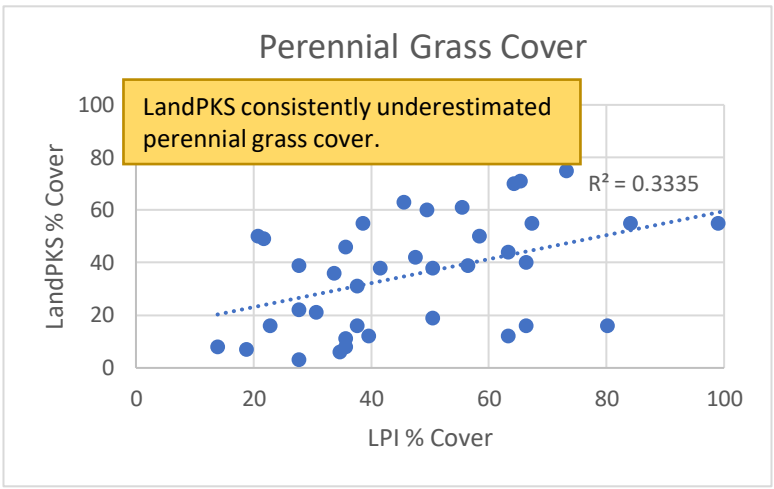
In Summer of 2020, we collected BLM AIM and LandPKS data at 41 locations in sagebrush-steppe ecosystems across southern Idaho. Four AIM transects were set to coincide with LandPKS transects, and each method was otherwise run according to its standard protocols. AIM data were aggregated to the same general plant and soil categories used by LandPKS, and the results were compared using scatter plots with trend lines. Results are shown on the following page.

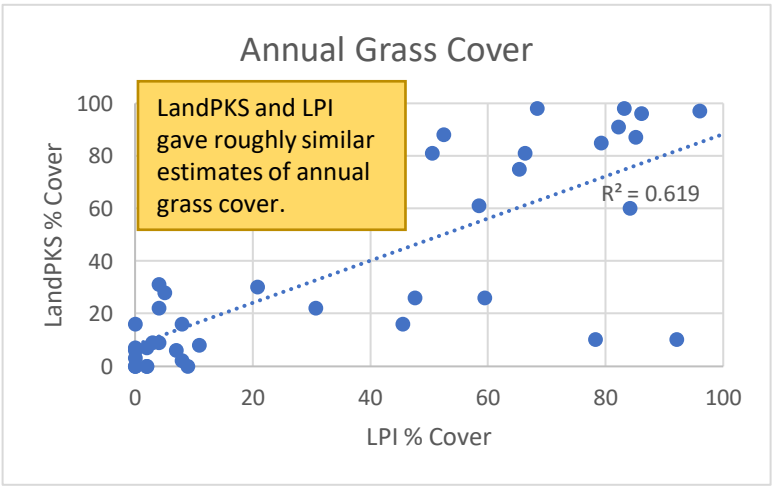
LandPKS vs Line-point Intercept (LPI) Comparison Results

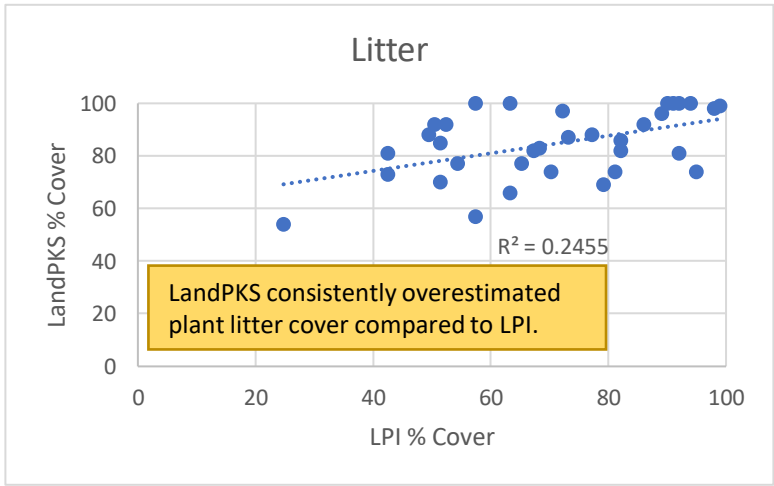












What Does This All Mean?

LandPKS and the LPI technique used by the BLM's AIM program gave roughly similar estimates of vegetation cover. However, it is easy to read too much into method comparisons like what is presented here. While correlations were poor in some cases, differences in where the observations (e.g., LPI pin drops) were made at each site could be the cause. Also, these results are from a single crew working in a limited set of plant communities. Results may be different with a broader set of sites. Regardless, these results show that both methods tend to characterize sites similarly. This means that both data sets would be valuable as lines of evidence for understanding and documenting rangeland condition and trend.

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