

## RANGE EVALUATION ENSURES LONG-TERM HEALTH

**A**s a landowner, you watch your land like you would an investment—taking note of major changes, ups and downs. You notice the leaves fade to yellow in the fall, the creeks rise in the spring, and the elk coming and going by day or by season.

But how about the gradual changes—the slow invasion of knapweed or the subtle erosion of soils?

These changes often don't appear obvious until the health of the land is severely impaired. By then, for the working rancher, the land's diminished ability to turn a profit can be significant. And, for an organization holding conservation easements, like the Elk Foundation, the land's value as wildlife habitat also comes into question.

In recent months, the Elk Foundation Lands Department has explored new ways to evaluate rangeland health and help landowners protect against decreasing land health and productivity. Working with a professional range evaluation company, Land EKG® of Bozeman, Mont., the Elk Foundation lands staff has reviewed an innovative range evaluation technique that will help our conservation easement donors track changes on their land and optimize their land's carrying capacity.

The Land EKG® technique takes into account the four major components of rangeland health. Those measurements include:

- Energy flow, involving the conversion of sunlight energy into plants, which is then converted into protein by animals;
- Mineral cycling, involving the return of valuable minerals to the soil, through the decomposition of plants and animal manure;
- Water cycling, involving the availability of water for plant growth; and,
- Succession, involving the mix of plant species and whether they move toward dominance by desirable or undesirable species.

The "EKG" evaluates these four segments of rangeland health by measuring several factors for each category. For example, mineral cycling is evaluated based on the amount of dead and decaying matter and how well it's incorporated into the ground. Water cycling includes measures of erosion, soil crusting and exposed soil.

The EKG technique begins by establishing permanent transects on the property. A simple form—which landowners can learn to fill out themselves—makes it easy to consistently reevaluate the rangeland's health a couple times a year.

Once potential and existing problems have been identified, the range evaluation information will support smarter short- and long-term management plans. It also helps point the landowner toward the best tools for improvement, from fire to mechanical manipulation, rest to animal impact.

Ultimately some form of regular range evaluation can lead to increased forage production, better land health and more valuable wildlife habitat.

If you would like more information about the Land EKG® technique or the Elk Foundation's conservation easement monitoring process, please contact a member of the Elk Foundation's Lands staff or check out the Land EKG® web site at [www.landekg.com](http://www.landekg.com).



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