



Monitoring With Ranch Records

The development of ranch management plans that document past and future ranch operations are often the first step in addressing an environmental impact. As rangeland owners and managers become more involved in the development of management plans, they may soon discover that they do not have the backlog of “data” that federal agencies have. This guide to resource management records can be used to document past utilization and practices and to improve documentation of ranch operations in the future.

Insufficient data to document past use and impact is a major problem faced by private rangeland owners and managers. The rancher is at a disadvantage when he cannot quantify past grazing use, improving ecological conditions, improvement practices and their long-term benefits, and other indicators of good management or stewardship. The landowner may be frustrated by his apparent inability to substantiate that an imposed management system will be an economic hardship on his operation.

Questions being asked more and more by stockmen grazing on public and private lands are, “What information do I need to prepare a ranch plan or Allotment Management Plan (AMP)?” and “What kinds of data do I need to document conditions in the future?” Many ranchers do not realize that they have an abundance of “data” already captured on photographs, documented on range records, or stored in an undocumented form in their own minds. One advantage most stockmen have over government agency personnel is experience and a “feel for their land.” This guide was prepared to assist stockmen using public or

private rangelands to compile a data base in a manner useful to the management planning process. This checklist includes six kinds of records on past and present use and information needed to document range use in the future.

Historical Records: Develop a history of the ranch or management unit from ranch records including such items as:

- Journals or letters
- Landscape photographs
- Ownership and sale history
- Reputation of the property
- Tax records
- Economic history
- Grazing management plans
- Past hazards, disturbances, and disasters
- Government agreements
- Range improvements
- Conservation projects
- Livestock use records
 - Type of livestock carried
 - Weight of marketed animals
 - Calf crop percentage
 - Death losses and reasons
 - Livestock sale prices
 - Stocking rate adjustments
- Changes in number and kind of wildlife

Physical and Environmental Records: Acquire maps, aerial photos, and surveys of topography, soils, vegetation types, and other physical features of the ranch or allotment. Keep a diary of environmental conditions, problems, and activities including:

Climatic records—temperatures, precipitation, snow depth and persistence, patterns of storms, unusual freeze, length of growing season, prevailing seasonal winds, etc.

Water records—availability at natural and developed sources.

Problems—trespass, vandalism, theft, poisonous plants, insects, predators, encroachment of undesirable vegetation, inadequate water and fencing, range fires, etc.

Activities—alternative uses of the ranch or allotment by persons other than permittee (e.g., hunters, fishermen, recreationists, mining activities, trespass livestock, etc.)

Vegetation and Pasture Use Records: Some of this information may be available from the government agency responsible for public land allotments. Be sure you have a copy of all records they may have.

Write down your range, pasture, and vegetation management objectives including:

- utilization objectives
- improvement objectives
- conservation objectives

For each forage source (e.g., ranch pastures, public land, rented pasture) record the following information using a form. A computer spreadsheet or data base could also be used:

- Pasture name & location
- Pasture in dates
- Pasture out dates
- Livestock numbers or AUs by kind and class
- Estimated utilization (RDM on out date)

Keep a record of range improvements:

- records of design and costs
- maintenance expenses
- responsibility for upkeep
- use dates (e.g., when wells are turned on or off)

Rangeland vegetation conditions change seasonally and annually due to weather and management.

Weather, fire, and management can result in immediate, sometimes catastrophic, easily perceived change as well as slow imperceptible change that can only be documented by long-term monitoring. Depending on objectives, change can be positive or negative. Baseline records and periodic monitoring can provide the information for documenting change. Baseline records and monitoring programs should be developed for a specific purpose. Frequently the purpose is documenting changes in vegetation (species composition, productivity, structure, nutritional quality, palatability, undesirable plants, etc.) on uplands and in riparian areas. Monitoring can be time consuming and expensive.

Livestock Performance Records: Many forms, pocket diaries, and computer programs are available for keeping these records. Livestock management goals (long-term) and objectives (short-term, 1-2 years) should be recorded so that the following records can be used to determine progress:

- Type of operation (cow/calf, stocker, llama, etc.)
- Breeding performance and goals
- Class of livestock (age, sex, grade, etc.)
- Kinds of livestock (sheep, cattle, etc.)
- Stocking rate or livestock numbers
- Calf crop percentage
- Weaning weights
- Market weights
- Description of supplemental feeding program
- Livestock handling dates
- Season and age of breeding, birth, weaning, etc.
- Work plan for branding, marking, vaccinating, shearing, etc.
- Purchase practices
- Marketing practices

Economic Records: Perform a cost and return analysis on all proposed Allotment Management Plans, best management practices, or other environmental quality plans affecting your operation. Include:

Investments

- Land investment
- Improvement investment
- Machinery and equipment
- Livestock investment

Cost

- Feed and supplements
- Leases and grazing fees
- Transportation costs
- Livestock expenses
- Labor expense
- Property tax
- Utility cost
- Machinery and equipment
- Other ranch costs

Income

- Livestock sales
- Crop sales
- Values of ranch products consumed on ranch
- Outside income

Wildlife Records: Knowing the number and kind of wildlife on your ranch is increasingly important. Conduct wildlife counts to determine:

- Kind of wildlife
- Numbers of wildlife
- Seasonal use patterns
- Sex ratios
- Competitive use with livestock
- Predator problems

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