

Forest Service Adaptive Management Policies and Implementation

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Society of Range Management, Arizona Section
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References for today's presentation

- Forest Service Handbook 2209.13 – GRAZING PERMIT ADMINISTRATION HANDBOOK
- Chapter 90 – Rangeland Management Decisionmaking (National Environmental Policy Act (NEPA) Implementation for authorizing grazing on NFS lands)
 - National Direction issued September 9, 2004
 - Regional Supplement issued September 8, 2007
 - New Regional Supplement issued May 6, 2016
- Chapter 10 – Permits with Term Status
 - New Regional Supplement issued February 23, 2015
 - https://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?2209.13

Chapter 90

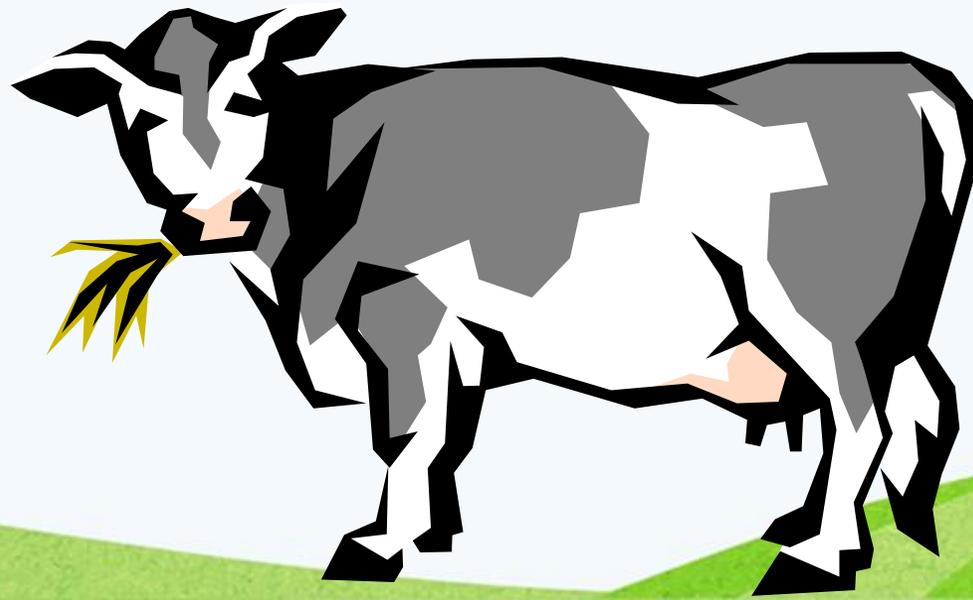
NEPA analysis for the authorization of livestock grazing leads to NEPA-based decisions, and the implementation with an objective of achieving and maintaining desired conditions on National Forest System (NFS) lands.

The analysis is on the proposed action and the effects of the components of the proposed action.

The proposed action is outcome-based and relies on achieving objectives and a trend toward desired conditions utilizing the many tools of grazing management.

Why formally adopt adaptive management?

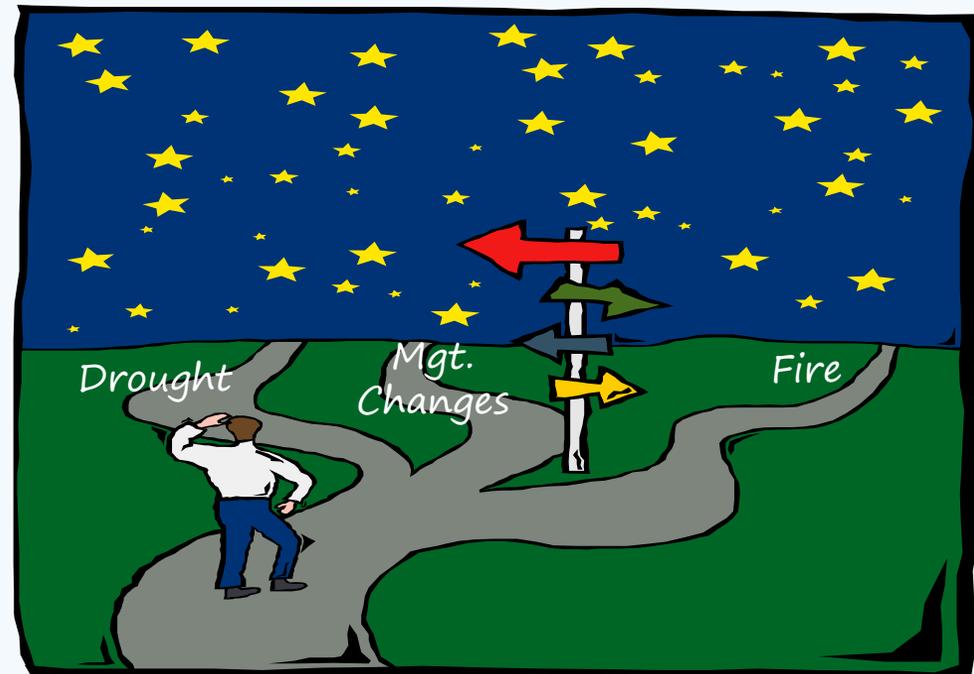
- Livestock grazing is a long-term *on-going activity* – it is very different than most NFS projects which have a clear beginning and end point.



Rangeland Management Decisions have been so narrowly focused that they allow for little to no management flexibility to adjust to changed conditions or new information.



Adaptive Management is like mapping out the Forks in the road – each fork provides an opportunity to change course to get where you are going....to successful outcomes.



Proposed Action

The proposed action should include at least the basic elements of what ultimately becomes an allotment management plan developed to achieve identified objectives.

*This should include an adaptive management strategy as part of the proposed action providing flexibility that will allow the **Responsible Official** to respond to unpredictable ecosystem drivers and stressors, such as drought, flooding and fire events.*

In addition, adaptations may also provide for minor modifications due to changed conditions or new information, such as canopy openings resulting from vegetation treatments, or a new listing or designation under the Endangered Species Act.

The Responsible Official must ensure that actions the Agency proposes to do under adaptive management are analyzed and their effects disclosed to the public in accordance with NEPA.

Four elements of a proposed action

- *Authorization*
 - *Name of the allotment*
 - *AUMs and kinds and classes of livestock to be authorized*
 - *Period of use on the allotment*
 - *Off-system roads motorized use needed for allotment management*
 - *Any site-specific special authorizations or prohibitions required for livestock operations*

Four elements of a proposed action

- *Management*
 - *Objectives for resource conditions and trend specific to the allotment*
 - *General management practices including grazing systems, allowable use levels, salt and mineral use, and animal husbandry practices*
 - *Adaptive management strategies to be implemented*
 - *Any site-specific resource protection measures (project design features) to be implemented*

Four elements of a proposed action

- *Improvements*
 - *Existing structural improvements and maintenance activities likely to be needed*
 - *Obsolete structural improvements requiring decommissioning or removal*
 - *Proposed new structural improvements and activities required for construction and maintenance*
 - *Maintenance and/or implementation activities needed for any non-structural improvements*

Four elements of a proposed action

- *Monitoring*
 - *Purpose for monitoring*
 - *Likely attributes to be monitored*
 - *Likely methods for monitoring identified attributes*
 - *Likely frequency of both implementation and effectiveness monitoring*
 - *A general description of monitoring locations*

What is adaptive management?

Adaptive Management: A system of management practices based on clearly identified intended outcomes and monitoring to determine if management actions are meeting those outcomes; and, if not, to facilitate management changes that will best ensure that those outcomes are met or re-evaluated. Adaptive management stems from the recognition that knowledge about natural resource systems is sometimes uncertain and that management plans may need to be adjusted based on the new knowledge and the trends in monitoring data. (FSH 1909.15, 36 CFR 220.3.)

Features of adaptive management include:

- 1. characterizing uncertainty and assumptions;*
- 2. testing assumptions and collecting data using data collection protocols at appropriate temporal and spatial scales;*
- 3. analyzing new information obtained through monitoring and project experience;*
- 4. learning from monitoring results and new information;*
- 5. adapting assumptions and strategies to design better plans and management direction;*
- 6. adjusting actions and making decisions on the basis of what has been learned; and*
- 7. creating an open and transparent process that shares learning internally and with the public (FSH 1909.12(06.1)).*

In addition to the NEPA process described in Chapter 90 Chapter 10 also provides guidance for adaptive management processes due to drought and disturbance.

Drought:

Guidelines reference Larry Howery paper:

Rangeland Management Before, During, and After Drought.
University of Arizona Cooperative Extension AZ1136.

Disturbance:

*Considerations for Re-stocking and Management of
Grazing Allotments Post Wildfire and Other Disturbances.*

Chapter 10 acknowledges:

The ability to adapt management to changing conditions is critical to sustaining rangelands.

Management must be responsive to:

*managed actions such as livestock grazing and prescribed fire,
unplanned events such as wildfire, flood and extreme drought.*

Adapting management often requires a fairly rapid assessment of ecological conditions (ground cover, species presence, forage production) and infrastructure damage.

Tools available:

Particular GIS layers for evaluation of forage availability and restocking potential:

Burn Severity, Soil and Vegetation Type, Slope Class, Infrastructure, Threatened & Endangered, Aquatics and Wildlife Habitat Areas, Monitoring/Assessment Areas-

Important aspects to increase restocking success include:

Assess allotments on a pasture-by-pasture basis considering livestock behavior, management objectives and weather patterns following the fire,

Determine the need for consultation with Fish & Wildlife Service under the Endangered Species Act.

Develop criteria for assessing if plants are ready to be grazed.

Establish successful collaboration, local interdisciplinary team, permittees, federal, state, county and local government entities and Non-Governmental Organizations.

Document the criteria evaluated, assessment and/or monitoring results, including GIS analysis, all collaboration and rationale for the restocking strategy.

This approach allows for the strategy to be a staged approach to incrementally restock based on continuing assessment of fire (other disturbance) affected areas.

Questions

