

Soil Quality Standards and The Gallatin N. F.

or

“The End of Arm Waving”

Henry Shovic,
Gallatin N. F. Soil Scientist
Nov 29, 2007

- Introduction and history
- The New Protocol for Soil Disturbance Measurement
- Soils Disturbance Methodology Used on the Gallatin N. F.
- The Soils Best Management Practice (BMP) on the Gallatin
- Recent Applications
- Trends and future response

Gallatin Soils Project Analysis System and BMP's

Henry Shovic,
Gallatin National Forest
February 19, 2008

Objective: To provide a systematic way of approaching soil quality issues in projects

- Respondent to litigation
- Efficient and repeatable
- Integrates the SQ protocol
- Transparent
- Transportable
- Follows standards (manual direction)
- Based on risk assessment

Definitions

- Activity Area
- Analysis Unit
- Restoration
- Monitoring
- Assessment

Activity Area

- Harvest unit
- Shows where and how harvesting will occur
- Temp roads (including proportioned ones outside of AA if contribute)
- Landings (even if outside AA if contribute)

Analysis Unit

- Conceptual
- Multiple or no harvest methods specified
- Large

Restoration

- Planned measure
- To recover significant soil productivity
- On a previously disturbed site
- Example: temp road obliteration (acre for acre)

Monitoring

- Use of the Region One SQ Protocol
- With proxies for compaction
- With a minimum sample size for detrimental effects of previous harvest

Assessment

- A Systematic data-based review of either the AA or AU

- Activity Area
- Analysis Unit
- Restoration
- Monitoring
- Assessment

Assessment

- Review
- All AU's and AA's get an assessment
- AU's do not get monitoring
- But not all AA's get monitoring

Assessment for AA's and AU's

- For Ground-based proposals
 - Aerial photos
 - Soil survey
 - Timber data
 - Specialist input
 - Ground traverse
- For skyline/heli based proposals
 - Aerial photos
 - Soil survey
 - Timber data
 - Specialist input

This gives us information on feasibility, soil hazards, evidence of previous disturbance, sufficient for AU's and a starting point for AA's.

- Here is where AU work stops.
- But for AA's and evaluation of alternatives..

If evidence of previous disturbance by assessment

- If only system roads – review on ground
- If only old roads and landings – monitor pre-harvest and post-harvest on ground
- Any other method –
 - > 15% total, then restoration needed
 - < 15% total, then restoration optional
- Post harvest monitoring must be specified

If there is evidence of **no** pre-harvest, based on assessment

- If only system roads – review on ground, done
- Any other method –
 - > 15% total, then restoration needed
 - < 15% total, then restoration optional
- Post-harvest monitoring must be specified

In the EA and for the Line Officer

- Post-harvest monitoring should be specified.
- “Must” be completed within two years of AA completion.
- Must adhere to current protocol

Appeal/Litigation Response

- Organized, systematic data-based look at every AA
- Every AA is evaluated against soil quality standards (manual direction) and a recommendation made
- And that's it.

BMP's

- Practices that, when applied, are concluded to protect soil productivity

- The Gallatin BMP
- Objectives:
 - Data- based
 - Lawyer friendly
 - Simple --- moderate level program
 - Simple --- contract prep and administration
 - Simple --- administrative investment