

Draft Ecological Monitoring Thoughts for MoPWR

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1. What CFLR allows funding for monitoring:
 - a. CFLR Fund can be used to pay up to 50% of cost of carrying out and monitoring ecological treatments on NFS lands.
 - b. Monitoring cost may include: sample design, data collection, data management, data analysis and reports.
2. What the MOPWR document says:
 - a. The ecological conditions will be monitored using over 100 already established permanent vegetation monitoring plots. This will be an important effectiveness monitoring method.
 - b. Data will be collected systematically and will include measurements of indicator plant species richness, changes in tree structure/density and basal area, Brown's fuels transects, and ground cover changes.
 - c. An important implementation monitoring method used will include tabulation of silvicultural and prescribed burn treatments measured in acres treated. These acres will be counted toward restoration objective acres within the respective ecological landtype. Acres counted will include cutting treatments followed by prescribed burning that move the land toward desired FRCC conditions for the respective natural community.
 - d. Effectiveness will be measured in fuels reductions as quantified in Brown's transects and increases in indices for plant species richness as quantified through Floristic Quality Assessment (Taft, 1997) developed by TNC, MDC, DNR and NPS.
3. CFLR funding for monitoring plots:
 - a. New and resampled FQI plots
 - b. Composition, structure, basal area, age class
 - c. Fuels
 - d. FRCC conditions
 - e. Bird transects
4. Ecological Indicators
 - a. MIS in Forest Plan
 - b. Shortleaf Pine Ecosystem Desired Conditions (composition, structure, old growth, restored grass/forb cover, species richness).

c. FRCC

5. Strategy: The multiparty collaborative group has expanded their existing monitoring plan for 15 years (through 2015) to meet the requirements of CFLRP. The Mark Twain National Forest will continue working with TNC to resample over 100 permanent vegetation monitoring plots

Part of strategy should include:

- a. Focus on what the MoPWR document specifically states:
 - b. Integrate RO and WO additional requirements.
 - c. Identify key collaborators to work on protocols and designs with MoPWR givens (budget, primary objectives, ecological indicators).
 - d. Collaborators develop 15 year monitoring work plan based on
 - i. Monitoring objectives
 - ii. What relevant monitoring work has already occurred
 - iii. Design that includes interim analysis and reports
 - iv. Monitoring protocols built around givens
 - v. Ability to meet funding match
6. Who are the Collaborators:
- a. American Bird Conservatory: Bird Monitoring Framework; protocols
 - b. Northern Research Station: Bird monitoring protocols
 - c. The Nature Conservancy: Vegetation monitoring (FQI)
 - d. DNR. Help with collecting bird data
 - e. MDC. Vegetation monitoring protocols

Actions needed to establish ecosystem monitoring plan:

1. Mention of monitoring process in CFLR work plan due May 1. Brian
2. Look at monitoring plan templates
3. Identify lead people who should have a role in collaborative monitoring strategy and planning.
4. Develop Ecological Monitoring IDT
5. Identify what it is we want the landscape to look like in 15 years to guide monitoring protocols and design.
6. What existing monitoring is in place?
 - a. TNC plots: Doug
 - b. Bird surveys? Frank
7. Have a group meeting to flesh out or endorse monitoring protocols. What are the monitoring questions and ecological indicators?
8. How do or can we acquire and use other monitoring data?
9. Identify who should take the lead in implementing and reporting on various monitoring objectives.

At SLP Initiative meeting:

- a. Does the group see a role in helping with Ecological Monitoring?
- b. Does the Ouachita/Ozark see value in connecting to the MTNF monitoring strategy?