2008 MOFEP Principal Investigators' Meeting
October 21, 2008

The meeting was called to order at 8:15 a.m. David Gwaze welcomed the attendees and made announcements:

DeeCee Darrow has been selected as the Division Administrator for Wildlife, so has left the Steering Committee. Mike Hoffman (Forest Management Chief in Forestry Division) has taken her place.

There have been three focus items for the Steering Committee in the past year:

- The 2008 workshop has been organized in collaboration with MO SAF; there will be presentations this afternoon and a field tour tomorrow. The workshop will provide an opportunity for new managers to learn about MOFEP.

- Review of conceptual models. Overall planning has been shown in the visual models; they will aid in identifying areas for collaboration and integration. There is one general model that shows the primary relationships and four sub models (Biotic Community/Flora, Biotic Community/Fauna, Physical Environment and Human Impacts). The models are finalized and have been incorporated in the strategic plan, but they are flexible and can be revised as needed. This year we have used the models to determine what areas still need to be worked on and have added arrows to show what has been done. Models have been split into finer detail to more clearly define what makes up each component. The next plan is to review the models to aid integration, and to identify where integration needs to occur.

- Planning for 2011 harvest
    - Timber harvest committee is planning next harvest (members)
    - Complete inventory by May 09
    - Timber marking by fall 2010
    - Harvest starts 2011 and finishes by fall of that year
    - Slashing done by June 2012
    - Mofep crews can start collecting post harvest data in June 2012

  The Steering Committee has discussed what method of even-age management to use; whether to follow the Forestry Division Directive to use less intrusive practices and leave 20 ft^2 basal area in clearcuts. This is still being discussed.

A project proposal for this year (overstory vegetation) will be presented on Thursday.

David encouraged Principal Investigators to prepare Science Notes summarizing their findings. Examples are available if anyone would like one.

Today's presentations will summarize progress 2005-2008, describe future plans, and tell how the data from the project might be integrated with other projects.

Ground flora - Susan Farrington
http://mofep.mdc.mo.gov/Presentations/Farrington2008PI.pptx

Oak regeneration and recruitment/ canopy mapping - David Larsen
http://mofep.mdc.mo.gov/Presentations/Larsen2008PI.ppt

Inventory by WPA found average of 40 ft^2 basal area in Reynolds county (excluding Forest Service land) in 1938

Repeat measurements - Canopy mapping and height measurements are very useful but crown width measurements vary so widely that they are not as useful

Highest density 20^{th}/acre plot had 800 trees

The 18 clearcut sites won't be touched during the next harvest so there is no need to revisit now, but some of the uneven-aged plots may be, so collecting data in those plots before harvest may be more important

Overstory Vegetation, Down Wood, Tree Cavities, Stump Sprouts, Fuel Loading
Randy Jensen

http://mofep.mdc.mo.gov/Presentations/Jensen2008PI.ppt

Overstory Vegetation

Can be integrated with any study that needs description of mofep forest structure/composition

Down wood and snags

Is there a way to integrate inventory data with canopy mapping with overstory data?

- Might be difficult because different things are being sampled
- At this point don't have data to show change over time for canopy mapping
- Need a way to use area-based and time-based data together

Tree Cavities

Integration – birds, herptiles, small mammals, forest economics, bats (especially Indiana bats)

Bigger trees are more prone to have cavities; black gum has the most cavities (20%; oaks 4%, pine .5%). There is lots of variation in cavity types between tree species.

Stump sprouts

There are no plans to start a new study for the 2011 harvest. The study may possibly be repeated after 15-20 growing seasons on the original plots.

This study can be integrated with overstory, ground flora and carbon flux.

Unenven age has almost no stump sprouting, only seedlings; however, stump sprouts add a significant portion of the regeneration in even age stands. Group opening stands were intermediate.

- Do we need to do new stump sprout study in next harvest if we switch to more basal area retention due to FDD? Probably we should.

Hard Mast- Carrie Steen
http://mofep.mdc.mo.gov/Presentations/HMast2008PI.pptx

Protocols for this study have changed from the original study to simplify data organization and distinguish more classes of acorns (ie, too immature to germinate but still have nutritional value, etc.), and to classify acorns in more groups

Forest Interior Birds – Andy Forbes
http://mofep.mdc.mo.gov/Presentations/Forbes2008PI.ppt

Next questions:

- When will early successional species drop out and forest interior species return (as trees re-grow in clearcuts)?
- How will birds respond to second round of treatments?
- What will the cumulative effects look like?
- How long do forest birds use clearcuts for the young – do they remain until migration, or just use for a short time?)
- Can we quantify what is happening to the habitat for these birds when they are not in Missouri? If winter habitat is lost or weather causes losses in bird populations? The changes we see here in MO may not be related to what is happening on MOFEP sites. Do we have a way to monitor this?
    - Avian bird coalition is attempting to track this; birds are in southern areas longer than they are in MO so this is important.

- Are there other possibilities for integration besides the insects?
    - Potential for integration with hard mast project

Amphibians/Reptiles & Small Mammals- Rochelle Renken
http://mofep.mdc.mo.gov/Presentations/Renken2008PI.pptx

New objectives:

- Determine if the current protocol of trapping amphibians and reptiles results in researcher impact and if a modified version of the trapping protocol would produce similar capture rates and relative abundance trends as the current protocol in the three years prior to the second entry harvest in 2011. Is checking traps every 3-5 days sufficient? We want to move toward checking traps daily (as we instruct wildlife collectors to do). Both protocols are being used, so they can be compared.
    - When switching to a modified protocol in 2012 will plan to use the original arrays, not the paired arrays used to compare the researcher impacts, because that will provide a longer-term dataset for comparisons

- Begin discussions with intra- and inter-agency personnel to develop a decision index to aid managers in determining if and when even-aged and uneven-aged management systems need to be modified to result in the management objective of sustained amphibian, reptile, and small mammal communities

Carbon flux and storage - Jiquan Chen
http://mofep.mdc.mo.gov/Presentations/Chen2008PI.ppt

- Do we need to consider studying carbon level in deeper parts of the soil (>30 cm) – yes
- Is black carbon being included?
  – it was in the original measurements

Nutrient cycling- Keith Goyne
Graduate student Meredith Albers is also working on this project, which has been underway for about 1 year.
http://mofep.mdc.mo.gov/Presentations/Goyne2008PI.ppt