OSU College of Forestry  
McDonald-Dunn Research Forest Faculty Planning Committee Meeting #16  
316 Peavy Forest Science Center or Zoom (Join Zoom Meeting)  
31 October 2023, noon-2pm

**Agenda**

*Meeting Purpose:*
- Share information on recent and upcoming modeling and writing efforts
- Make decisions on process to be implemented to evaluate tradeoffs
- Brainstorm about monitoring efforts needed to evaluate if goals are being met

<table>
<thead>
<tr>
<th>Start Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>noon</td>
<td>Review where we’ve been and where we’re going</td>
</tr>
<tr>
<td>12:05pm</td>
<td>Recap decisions made regarding metrics to be used to assess tradeoffs among land allocation scenarios</td>
</tr>
<tr>
<td>12:10pm</td>
<td>Discuss process to be used to assess tradeoffs</td>
</tr>
<tr>
<td>12:45pm</td>
<td>Recap decisions made regarding changes to the table of contents of the new plan</td>
</tr>
<tr>
<td>1:00pm</td>
<td>Discuss indicators of performance and sustainability</td>
</tr>
<tr>
<td>1:55pm</td>
<td>Next steps</td>
</tr>
<tr>
<td>2:00pm</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
MCDONALD-DUNN RESEARCH FOREST PLANNING PROCESS
The DSU College of Forestry is developing a new management plan for the McDonalD Dunn Research Forests, which is anticipated to be ready for implementation in 2020. This new plan will determine how the forests provide opportunities for teaching, research and outreach efforts of the College of Forestry. The new research forest plan will reflect the colleges diverse values, and will position the McDonalD Dunn Research Forest to be a model example of multiple value forest management. Management decisions and activities on the McDonalD Dunn Research Forest will be driven by College of Forestry research agenda, education and demonstration opportunities, and considerations of an inclusive balance of ethical values and uses.

- Public input opportunities include three Community Listening Sessions, a webinar through which written comments can be provided, and an email to which written questions can be sent.
- Two committees will assist in the development of the new plan: an external Stakeholder Advisory Committee (SAC) and College of Forestry Faculty Planning Committee (FFPC). Comments submitted through the webform will be forwarded to these committees.

### Upcoming Meetings & Events:
- **October 31, 12:00 - 2:00 - FFPC meeting**  
  Zoom link: https://crenwater.usj/967271327350996727132735099672713273509967271327350996727132735099
- **November 14, 12:00 - 2:00 - FFPC meeting**  
  Zoom link: https://crenwater.usj/967271327350996727132735099672713273509967271327350996727132735099
- **November 28, 12:00 - 2:00 - FFPC meeting**  
  Zoom link: https://crenwater.usj/967271327350996727132735099672713273509967271327350996727132735099
- **December 12, 12:00 - 2:00 - FFPC meeting**  
  Zoom link: https://crenwater.usj/967271327350996727132735099672713273509967271327350996727132735099

### Past Meetings & Events:
- **June 14, 2022, SAC and FFPC Joint Kickoff Meeting**  
  Agenda, video, meeting summary
- **Aug 30, 2022, SAC Meeting Agenda, presentation, meeting summary**
- **Aug 31, 2022, Community Listening Session Agenda, presentation, meeting summary**
- **Sept. 16, 2022, Faculty Planning Committee Meeting Agenda, presentation, meeting summary**
- **Sept. 20, 2022, Stakeholder Advisory Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Oct. 11, 2022, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Oct. 25, 2022, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Nov. 7, 2022, Community listening session Agenda, presentation, video recording, meeting summary**
- **Nov. 22, 2022, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Dec. 5, 2022, Stakeholder Advisory Committee Agenda, presentation, video recording, meeting summary**
- **Dec. 6, 2022, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Dec. 9, 2022, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Dec. 13, 2022, Stakeholder Advisory Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Jan. 16, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Jan. 23, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Feb. 6, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Feb. 20, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Feb. 25, 2023, SAC and FFPC Joint Field Tour**
- **Mar. 1, 2023, Stakeholder Advisory Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Mar. 6, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Mar. 20, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Mar. 21 & 22, 2023, Academic User Listening Sessions (open forums)**
- **Mar. 27, 2023, SAC and FFPC Joint Field Tour**
- **Apr. 13, 2023, Stakeholder Advisory Committee Meeting Agenda, presentation, video recording, meeting summary**
- **Apr. 17, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **May 1, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **June 12, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**
- **July 17, 2023, Faculty Planning Committee Meeting Agenda, presentation, video recording, meeting summary**

### SUBMIT YOUR COMMENTS

Submit comments or questions:

Submit Your Comments
Submit Your Questions
Stay Connected

Read Public Comments
Historic Documents: McDonalD Dunn Research Forest Planning 2004-2013
McDonald-Dunn Research Forest Management Planning Process

Phase I: Information gathering, Discussions, Assessment of former FMP
(Spring-Summer 2022)
- Initial Interviews
- Inventory of COF Academic Use
- Community Listening Session I
- Stakeholder Advisory Committee Meetings
- Faculty Planning Committee Meetings
- Comment / Question Submission

Phase II: Synthesizing, Modeling, Writing, Refining
(Fall 2022-Fall 2023)
- Stakeholder Advisory Committee Meetings
- Faculty Planning Committee Meetings
- Community Listening Session II
- Academic User Listening Session
- Community Input Sessions I & II
- Comment / Question Submission

Phase III: Finalizing (End of 2023/Early 2024)
- Presentation of draft plan to the Dean & Forestry Executive Committee for review
- Forest management plan refinement
- Forest management plan approval by Dean
McDonald-Dunn Research Forest Management Planning Process

Round I modeling

FPC  SAC  CIS

Round II modeling

FPC  SAC  CIS
Recap: 5 new ‘Forest Management Strategies’

A. Even-aged, short rotation

B. Even-aged, long rotation

C. Multi-aged, multi-species

D. Managed reserves

E. Ecosystems of concern (meadows, oak woodlands, riparian)
## Overview of each new ‘Management Strategy’

<table>
<thead>
<tr>
<th>Overview</th>
<th>Even-aged short rotation</th>
<th>Even-aged long rotation</th>
<th>Multi-aged multi-species</th>
<th>Managed reserves</th>
<th>Ecosystems of concern</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td>Even-aged plantations of Douglas-fir (or other climatic-appropriate species and genetic stock) will be established and managed to be financially competitive by maximizing yields of wood products valuable for domestic mills. Clearcut harvests will not exceed 80 acres (with limited exceptions due to large-scale disturbances).</td>
<td>Even-aged forests of Douglas-fir (or other climatic-appropriate species and genetic stock) will be established and managed to provide older forest conditions and produce high-quality wood for domestic mills. Clearcut harvests will not exceed 40 acres (with limited exceptions due to large-scale disturbances).</td>
<td>Multi-aged, mixed-species forests of primarily Douglas-fir will be established and managed using <strong>shelterwood-with-residuals, group-selection, and variable retention</strong> regeneration to create heterogeneity in openings, regenerate new age classes of trees, and maintain structural diversity for a variety of values. Multiple native tree species will be encouraged. These harvests will not exceed 40 acres.</td>
<td>These areas will be held and conserved outside the management base using only a light touch when needed to promote and maintain historical older-forest structural and compositional diversity for a variety of values, and provide for public safety. Forest succession and developmental processes following natural disturbances will proceed with little human intervention. Areas added to the existing reserve base may need more active operations to promote the development of historical conditions.</td>
<td>Restoration and maintenance activities will be undertaken in native oak savanna/woodlands, meadows, and riparian/aquatic systems. Two strategies will be employed: • retain and conserve the most at-risk and highest value components of ecological and cultural diversity, and • use intensive efforts where needed to improve and restore broader ecological and/or cultural functions at specific sites.</td>
</tr>
</tbody>
</table>
Recap: We’ll be evaluating the merits of several ‘scenarios’

- Baseline Scenario
  - Even-aged, short rotation
  - Even-aged, long rotation
  - Multi-aged/multi-species
  - Managed reserve
  - Ecosystems of concern
  - Long term learning *

• long-term learning = acreage used for long-term research and recurring teaching and demonstrations
Recap: Modeling of Scenarios to Evaluate Tradeoffs

<table>
<thead>
<tr>
<th>Proportion</th>
<th>Scenario A (baseline)</th>
<th>Scenario B (lots of EASR)</th>
<th>Scenario C (lots of EALR)</th>
<th>Scenario D (lots of MAMS)</th>
<th>Scenario E (lots of MR &amp; EOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even-aged, short rotation</td>
<td>27%</td>
<td>40%</td>
<td>15%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Even-aged, long rotation</td>
<td>29%</td>
<td>15%</td>
<td>40%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Multi-aged/multi-species</td>
<td>21%</td>
<td>10%</td>
<td>10%</td>
<td>40%</td>
<td>15%</td>
</tr>
<tr>
<td>Managed reserve</td>
<td>4%</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>Ecosystems of concern</td>
<td>6%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Long term learning *</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- long-term learning = acreage used for long-term research and recurring teaching and demonstrations
Evaluating the merits of several ‘scenarios’

Further discussion of the values to use to assess tradeoffs among *management strategies*?

<table>
<thead>
<tr>
<th>Forest Value</th>
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</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td></td>
</tr>
<tr>
<td>Carbon storage</td>
<td></td>
</tr>
<tr>
<td><strong>Culturally important species</strong></td>
<td></td>
</tr>
<tr>
<td>Forest products</td>
<td></td>
</tr>
<tr>
<td>Recreation suitability /</td>
<td></td>
</tr>
<tr>
<td>Scenic beauty</td>
<td></td>
</tr>
<tr>
<td>Resilience - density</td>
<td></td>
</tr>
<tr>
<td>Resilience - composition</td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td></td>
</tr>
<tr>
<td>Wildfire risk</td>
<td></td>
</tr>
</tbody>
</table>

Forest Value Relevant metrics
- **Biodiversity** - Taxa-specific indices (a measure of habitat quality for various taxa)
- **Carbon storage** - Aboveground biomass (a measure of biomass of stem wood, bark, and foliage)
- **Culturally important species** - Taxa-specific indices (a measure of habitat quality for culturally important taxa)
- **Forest products** - Merchantable board feet of various forest products
- **Recreation suitability / Scenic beauty** - An index (derived by asking forest users to provide ratings of stands of various ages and conditions, then multiplying the time a stand would be in each phase for each scenario)
- **Resilience - density** - Stand Density Index (a measure of tree density and size)
- **Resilience - composition** - An index (a measure of species composition reflecting species diversity)
- **Revenue** - Projected (a dollar value projected to be earned through timber harvest)
- **Wildfire risk** - Composite index (derived from Canopy bulk density, Canopy base height, Canopy cover)

[Images of pie charts representing different values]
Modeling Biodiversity – example data shown below, derived through expert opinion
- could we use a similar approach for Culturally Important Species?
Evaluating the merits of several ‘scenarios’

Further discussion of the values to use to assess tradeoffs among management strategies?

<table>
<thead>
<tr>
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<tbody>
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<tr>
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</tr>
<tr>
<td>Resilience - composition</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Wildfire risk</td>
</tr>
</tbody>
</table>

Forest Value Relevant metrics

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- Carbon storage: Aboveground biomass (a measure of biomass of stem wood, bark, and foliage)
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- Revenue: Projected (a dollar value projected to be earned through timber harvest)
- Wildfire risk: Composite index (derived from Canopy bulk density, Canopy base height, Canopy cover)
Options for assessing tradeoffs among scenarios

• We will have 9 “forest values” to compare across 5 scenarios
• Ultimately, FPC, SAC, and the community will weigh in on their degree of preference for each
• We need to decide on process to be used to assess

• Some options
  - Assess with true values, each on a different scale
  - Convert quantitative values for each metric to qualitative (high, medium, low)
  - Convert quantitative values for each metric to ranking (1, 2, 3, 4, 5)
Options for assessing tradeoffs among scenarios
- Raw numbers

(mock-up numbers are inserted below as placeholders to show the variety of scales across forest values)

<table>
<thead>
<tr>
<th>Forest Value</th>
<th>Scenario A (baseline)</th>
<th>Scenario B (lots of EASR)</th>
<th>Scenario C (lots of EALR)</th>
<th>Scenario D (lots of MAMS)</th>
<th>Scenario E (lots of MR &amp; EOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td>3.8</td>
<td>2.5</td>
<td>3.9</td>
<td>2.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Carbon storage</td>
<td>820 MT C/ha</td>
<td>1640 MT C/ha</td>
<td>1010 MT C/ha</td>
<td>940 MT C/ha</td>
<td>1730 MT C/ha</td>
</tr>
<tr>
<td>Culturally important species</td>
<td>2.4</td>
<td>3.1</td>
<td>3.6</td>
<td>3.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Forest products</td>
<td>5.1 MMBF</td>
<td>5.8 MMBF</td>
<td>4.7 MMBF</td>
<td>4.2 MMBF</td>
<td>3.7 MMBF</td>
</tr>
<tr>
<td>Recreation suitability/scenic beauty</td>
<td>3.3</td>
<td>3.1</td>
<td>3.9</td>
<td>3.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Resilience - density</td>
<td>144 trees/ha</td>
<td>159 trees/ha</td>
<td>150 trees/ha</td>
<td>162 trees/ha</td>
<td>138 trees/ha</td>
</tr>
<tr>
<td>Resilience - composition</td>
<td>4.0</td>
<td>3.8</td>
<td>4.5</td>
<td>4.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Revenue</td>
<td>$1.0 M</td>
<td>$1.2 M</td>
<td>$0.8 M</td>
<td>$0.6 M</td>
<td>$0.4 M</td>
</tr>
<tr>
<td>Wildfire risk</td>
<td>42</td>
<td>49</td>
<td>40</td>
<td>46</td>
<td>44</td>
</tr>
</tbody>
</table>
Options for assessing tradeoffs among scenarios
- Qualitative (high, medium, low) (mock-up ratings are inserted below as placeholders to demo this approach)

<table>
<thead>
<tr>
<th>Forest Value</th>
<th>Scenario A (baseline)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Carbon storage</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Culturally important species</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Forest products</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Rec suitability/scenic beauty</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Resilience - density</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Resilience - composition</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Revenue</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Wildfire risk</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
</tbody>
</table>

High
Medium
Low
## Options for assessing tradeoffs among scenarios

- **Ranking (1 through 5)** (mock-up rankings are inserted below as placeholders to demo this approach)

<table>
<thead>
<tr>
<th>Forest Value</th>
<th>Scenario A (baseline)</th>
<th>Scenario B (lots of EASR)</th>
<th>Scenario C (lots of EALR)</th>
<th>Scenario D (lots of MAMS)</th>
<th>Scenario E (lots of MR &amp; EOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Carbon storage</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Culturally important species</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Forest products</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Rec suitability/scenic beauty</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Resilience - density</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Resilience - composition</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Revenue</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Wildfire risk</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Highest (5)
Moderately high (4)
Moderate (3)
Moderately Low (2)
Lowest (1)
# Draft Table of Contents of the New Plan – version discussed during 17 Oct FPC meeting

## Draft New Plan TOC - Oct 2023
- Table of Contents
- Executive Summary

### Chapter 1 - Introductory Context
1.1 Intent of the 2024 McDonald-Dunn Forest Plan
1.2 Defining the Vision, Mission, and Goals for Research and Demonstration Forests (2021)
1.3 Developing the 2024 McDonald-Dunn Forest Plan (2022-2023)
1.4 Overview of Recent History of the McDonald-Dunn Forest (past 30 years)
   1.4.1 The 1993 Plan
   1.4.2 The 2005 plan
   1.4.3 Suspension and Resumption of the 2005 Plan

### Chapter 2 - Site Description
2.1 Location of the Forest
2.2 Biophysical Conditions
2.3 History of Ownership and Land Use
2.4 Cultural Resources
2.5 Zoning and Regulations
2.6 Harvest History and Recreation Use History
   *(Does Jenna have historical data on reuse? From what period?)*
2.7 Current Forest Conditions

### Chapter 3 - New Management Paradigms
3.1 Tribal Engagement
   3.1.1 Content to be decided upon in consultation with tribal members

3.2 Fostering Learning Opportunities
   3.2.1 Long-term Research
   3.2.2 Dedicated Teaching Areas
      *(Fitz & Brent should decide if this section and map are warranted)*
   3.2.3 Processes to be Used to Initiate Use of the Forest for Research, Teaching, or Outreach

3.3 Forest Management Strategies
   3.3.1 The Five Management Strategies
   3.3.2 Analyses Used to Allocate Land to each Management Strategy
   3.3.3 Timber Harvest Schedule
   3.3.4 Anticipated Future Forest Conditions
   3.3.5 Alternative Funding Mechanisms
      *(Is this the best location for this? (How will we write this?)*

### Chapter 4 - Plan Implementation
4.1 Roles - Research forest staff, Forest Executive Committee, Dean
4.2 Annual Reporting
4.3 Adaptive Management/Continuous Improvement
4.4 Performance & Sustainability Indicators

- Literature Cited
- Glossary
- Appendices
## Draft Table of Contents of the New Plan – version revised after discussion on 17 Oct; changes in red

### Table of Contents

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  - 2.1 Location of the Forest
  - 2.2 Biophysical Conditions
  - 2.3 History of Ownership and Land Use
  - 2.4 Cultural Resources
  - 2.5 Zoning and Regulations
  - 2.6 Harvest Disturbance History
  - 2.7 Recreation Use History
  - 2.8 Current Forest Conditions
- Chapter 3 - New Management Paradigms
  - 3.1 Tribal Engagement
    - 3.1.1* Content to be decided upon in consultation with tribal members
    - 3.1.x Processes to be Used...
  - 3.2 Fostering Learning Opportunities
    - 3.2.1 Long-term Research Areas
    - 3.2.2 Dedicated Teaching Areas: High Use Teaching and Outreach Areas
    - 3.2.3 Processes to be Used to Initiate Use of the Forest for Research, Teaching, or Outreach
  - 3.3 Forest Management Strategies
    - 3.3.1 The Five Management Strategies
    - 3.3.2 Analyses Used to Allocate Land to each Management Strategy
    - 3.3.3 Timber Harvest Schedule
    - 3.3.4 Anticipated Future Forest Conditions
    - 3.3.5 Alternative Funding Mechanisms (This does not seem the best location for this—where should it go?)
  - 3.4 Biodiversity
    - 3.4.1 At-risk Plants & Wildlife
    - 3.4.2 Management of Meadows
    - 3.4.3 Management of Oak Woodlands
    - 3.4.4 Management of Riparian & Aquatic Areas
    - 3.4.5 Management of Vegetation Communities of Concern (Do we need this?)
    - 3.4.6 Management of Legacy Trees, Snags, & Down Wood
    - 3.4.7 Management of Hardwoods
  - 3.5 Threats to Forest Health
    - 3.5.1 Climate Change
    - 3.5.2 Invasive Species
    - 3.5.3 Wildfire
    - 3.5.4 Insects & Disease
    - 3.5.5 Development (WUI)
  - 3.6 Human Dimensions
    - 3.6.1 Recreation
    - 3.6.2 Cultural Heritage (Remove this section if it is redundant with 2.4 and/or 3.1.1)
    - 3.6.3 Wildland-Urban Interface
    - 3.6.4 Vandalism
  - 3.7 Enhancing Community Engagement
    - 3.7.1 Volunteering
    - 3.7.2 Interpretation
    - 3.7.3 Communication Strategies
    - 3.7.4 Community Science
  - 3.7 Enhancing Economic Sustainability (Should we create an additional section for this material?)
    - 3.7.1 Sustained Income Generation
    - 3.7.2 Additional Potential Sources of Income
- Chapter 4 - Plan Implementation
  - 4.1 Roles - Research Forest Staff, Forest Executive Committee, Dean
  - 4.2 Annual Reporting
  - 4.3 Adaptive Management/Continuous Improvement
  - 4.4 Performance & Sustainability Indicators

### Additional Sections
- Literature Cited
- Glossary
- Appendices
Indicators of Performance and Sustainability

• 2005 Plan
  o defined 7 goals
  o set 1-4 objectives for each goal
  o proposed 1-8 indicators for each objective

• New plan
  o FRAC defined 10 goals for all Research Forests
  o we should begin to consider relevant objectives and indicators for each goal
  o the idea is to define monitoring, to enable adaptive management