McDonald & Dunn Forest Management Planning Process

Spring 2022 – Early 2024

OSU College of Forestry
McDonald-Dunn Research Forest Faculty Planning Committee Meeting #18
316 Peavy Forest Science Center or Zoom (Join Zoom Meeting**)**
28 November 2023, noon-2pm

Agenda

Meeting Purpose:
- Share information on recent and upcoming modeling and writing efforts
- Make decisions on interpreting modeling results
- Brainstorm about monitoring efforts needed for adaptive management
- Consider roles in plan implementation

Start Time	Activity
noon	**Review where we've been and where we're going**
12:05pm	**Updates on metrics to be used to assess tradeoffs among land allocation scenarios and revisit threshold setting for qualitative metrics**
12:30pm	**Discuss monitoring expectations (indicators of performance and sustainability)**
1:45pm	**Discuss roles and responsibilities**
1:55pm	**Next steps**
2:00pm	**Adjourn**

MCDONALD-DUNN RESEARCH FOREST PLANNING PROCESS

MCDONALD-DUNN RESEARCH FOREST PLANNING PROCESS

The OSU College of Forestry is developing a new management plan for the McDonald and Dunn Research Forests, which is anticipated to be ready for implementation in 2024. 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 college's 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 agendas, education and demonstration opportunities, and considerations of an inclusive balance of forest uses and values.

The process of developing the new management plan will involve opportunities for public input, and two committees working in tandem from spring 2022 through fall 2023.

- Public input opportunities include three Community Listening Sessions, a webform 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 (FPC). Comments submitted through the webform will be forwarded to these committees.

Upcoming Meetings & Events:

- November 28, 12:00 - 2:00 - FPC meeting
  Zoom link: https://oregonstate.zoom.us/j/96772313273?pwd=TzJGT3FpYlZORm1ac2FxMjMrMGNrdz09
- December 12, 12:00 - 2:00 - FPC meeting
  Zoom link: https://oregonstate.zoom.us/j/96772313273?pwd=TzJGT3FpYlZORm1ac2FxMjMrMGNrdz09

Past Meetings & Events:

- June 14, 2022, SAC and FPC 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)- Remarks made by an individual during the Dec 6 Faculty Planning Committee meeting do not reflect the values of the university or the College of Forestry, or our shared commitment to respectful discussion and engagement. The College appreciates all input being provided in planning the future of the McDonald-Dunn Research Forests and is committed to listening to and considering all perspectives with respect. An apology for these remarks was made during the Stakeholder Advisory Committee meeting on Dec 13.
- Dec. 13, 2022, Stakeholder Advisory Committee Meeting (agenda, video recording, meeting summary)
- Dec. 20, 2022, Faculty Planning Committee Meeting (agenda, presentation, video recording, meeting summary)
- Jan. 18, 2023, Stakeholder Advisory Committee (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 FPC 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 FPC Joint Field Tour
- Apr. 13, 2023, Stakeholder Advisory Committee Meeting (agenda, presentation 1, presentation 2, 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)
- Oct. 17, 2023, Faculty Planning Committee meeting (agenda, presentation, video recording, meeting summary)
- Oct. 31, Faculty Planning Committee meeting (agenda, presentation, video recording, meeting summary)
- Nov. 14, Faculty Planning Committee meeting (agenda, presentation, video recording)

SUBMIT YOUR COMMENTS	SUBMIT YOUR QUESTIONS	STAY CONNECTED

READ PUBLIC COMMENTS	HISTORIC DOCUMENTS - MCDONALD-DUNN RESEARCH FOREST PLANNING 2004-PRESENT

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-WInter 2024)

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 (Early 2024)

Presentation of draft plan to the Dean & Forestry Executive Committee for review	Forest management plan refinement	Forest management plan approval by Dean

Tentative Timeline (subject to change)

- FPC meetings
  - Fall term: biweekly (Dec 12)
  - Winter term: monthly (once in early Jan, early Feb, early March)
- SAC meetings
  - Mid-January (Jan 17?)
  - Mid-February
- Community Input Sessions
  - Late January
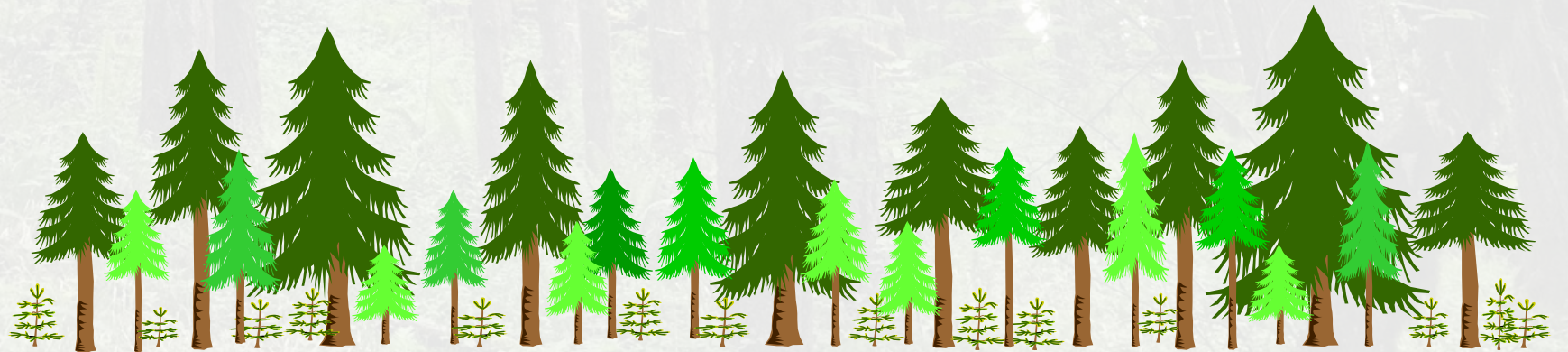 - Late February

Recap: 5 new 'Forest Management Strategies'

A. **Even-aged, short rotation**

B. **Even-aged, long rotation**

C. **Multi-aged, multi-species**

D. **Managed reserves**

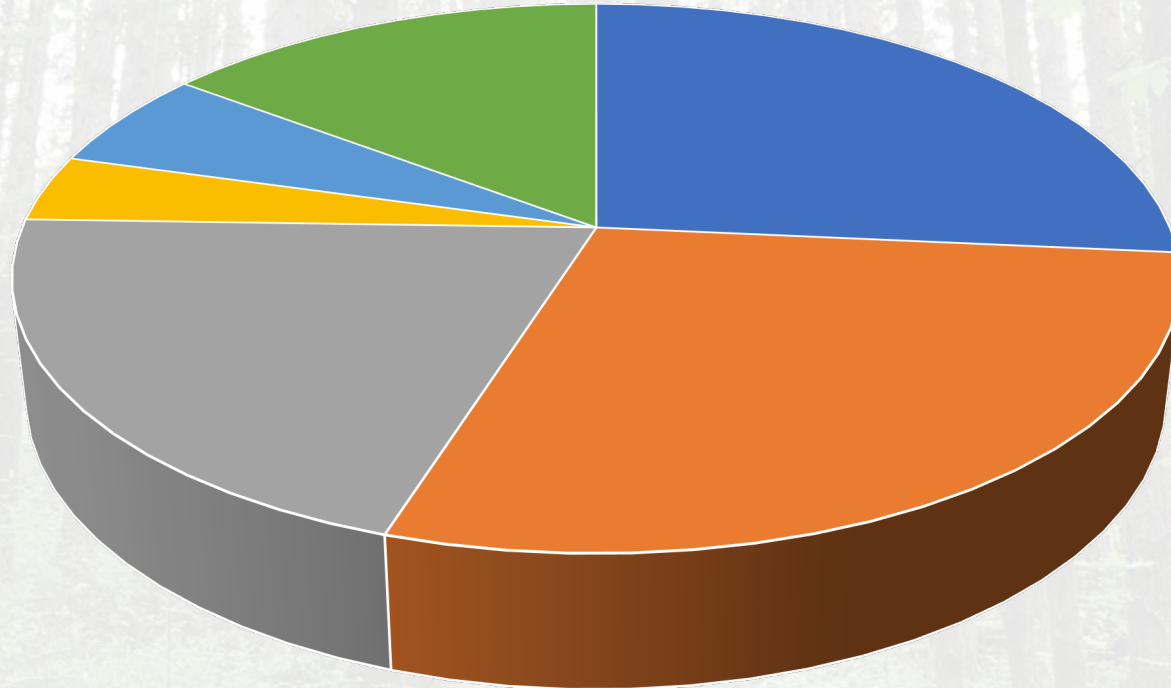E. **Ecosystems of concern** (oak woodlands, meadows, riparian)

Overview of each new 'Management Strategy'

	Even-aged short rotation	Even-aged long rotation	Multi-aged multi-species	Managed reserves	Ecosystems of concern
Overview	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).	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).	Multi-aged, mixed-species forests of primarily Douglas-fir will be established and managed using _shelterwood-with-residuals, group-selection,_ and _variable retention_ regeneration harvests 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.	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.	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.

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
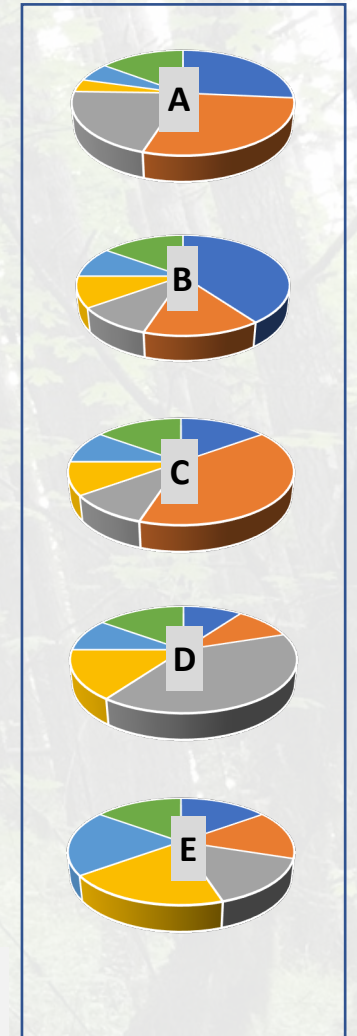
Recap: Modeling of Scenarios to Evaluate Tradeoffs

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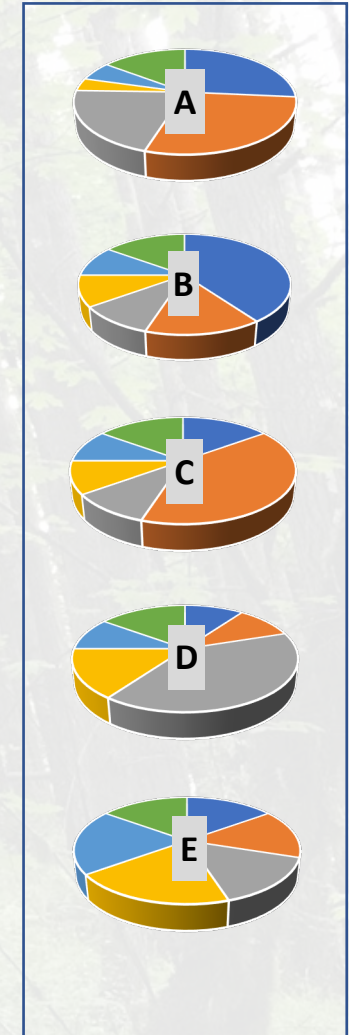
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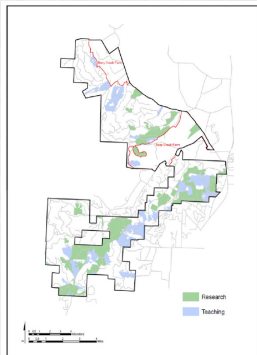
- Even-aged, short rotation
- Even-aged, long rotation
- Multi-aged/multi-species
- Managed reserve
- Ecosystems of concern
- Long term learning *

Evaluating the merits of several 'scenarios'

What values will we evaluate as we assess tradeoffs among *management strategies?*

Value
Biodiversity
Carbon storage
Culturally important species
Forest products
Recreation suitability / Scenic beauty
Resilience - density
Resilience - composition
Revenue
Wildfire risk
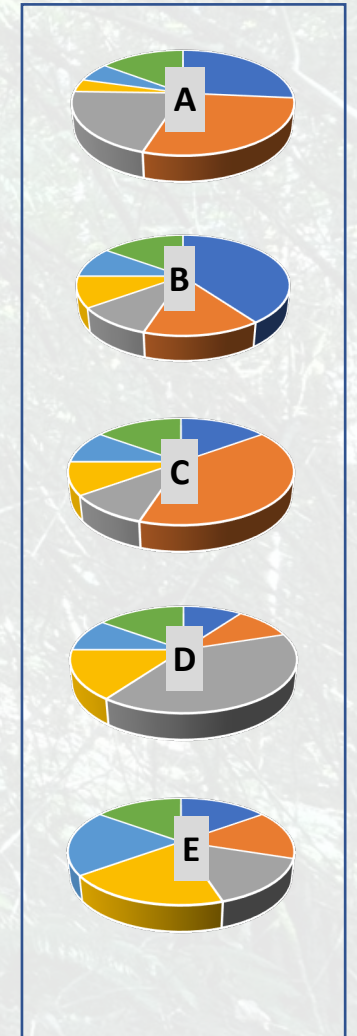
Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: raw numbers [mock #s]

Forest Value	Scenario A (baseline)	Scenario B (lots of EASR)	Scenario C (lots of EALR)	Scenario D (lots of MAMS)	Scenario E (lots of MR & EOC)
Biodiversity	3.8	2.5	3.9	2.1	3.4
Carbon storage	820 MT C/ha	1640 MT C/ha	1010 MT C/ha	940 MT C/ha	1730 MT C/ha
Culturally important species	2.4	3.1	3.6	3.7	2.9
Forest products	5.1 MMBF	5.8 MMBF	4.7 MMBF	4.2 MMBF	3.7 MMBF
Rec suitability/scenic beauty	3.3	3.1	3.9	3.5	3.7
Resilience - density	144 trees/ha	159 trees/ha	150 trees/ha	162 trees/ha	138 trees/ha
Resilience - composition	4.0	3.8	4.5	4.6	4.3
Revenue	$1.0 M	$1.2 M	$0.8 M	$0.6 M	$0.4 M
Wildfire risk	42	49	40	46	44

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: % change [mock #s]

Forest Value	Scenario A (baseline)	Scenario B (lots of EASR)	Scenario C (lots of EALR)	Scenario D (lots of MAMS)	Scenario E (lots of MR & EOC)
Biodiversity	3.8	-34%	+3%	-44%	-10%
Carbon storage	820 MT C/ha	+100%	+ 23%	+15%	+111%
Culturally important species	2.4	+29%	+50%	+54%	+21%
Forest products	5.1 MMBF	+14%	-8%	-18%	-27%
Rec suitability/scenic beauty	3.3	-6%	+18%	+ 6%	+12%
Resilience - density	144 trees/ha	+10%	+4%	+13%	-4%
Resilience - composition	4.0	-5%	+13%	+15%	+8%
Revenue	$1.0 M	+20%	-20%	-40%	-60%
Wildfire risk	42	+17%	-5%	+10%	+5%

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: color-coded % change [mock #s]

Forest Value	Scenario A (baseline)	Scenario B (lots of EASR)	Scenario C (lots of EALR)	Scenario D (lots of MAMS)	Scenario E (lots of MR & EOC)
Biodiversity	3.8	-34%	+3%	-44%	-10%
Carbon storage	820 MT C/ha	+100%	+ 23%	+15%	+111%
Culturally important species	2.4	+29%	+50%	+54%	+21%
Forest products	5.1 MMBF	+14%	-8%	-18%	-27%
Rec suitability/scenic beauty	3.3	-6%	+18%	+ 6%	+12%
Resilience - density	144 trees/ha	+10%	+4%	+13%	-4%
Resilience - composition	4.0	-5%	+13%	+15%	+8%
Revenue	$1.0 M	+20%	-20%	-40%	-60%
Wildfire risk	42	+17%	-5%	+10%	+5%

Is this degree of specificity warranted for all values?

Should we set acceptability thresholds for any?

What background info should we provide to assist in interpreting?

Considerable increase (>50% increase)

Modest increase (10-50% increase)

Little change (10% increase – 10% decrease)

Modest decrease (10-50% decrease)

Considerable decrease (>50% decrease)

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline

McDonald-Dunn Research Forest – Interpreting Results from the Modeling of Alternative Land Allocation Scenarios

Three questions for us to deliberate:

1. What degree of specificity is appropriate for each value, when comparing with the baseline (i.e., current condition
2. Would it be appropriate to set acceptability thresholds for any of these forest values? If so, how would they be der
3. What background info should we provide to assist non-experts in interpreting?

Forest Value	Degree of specificity	Should thresholds be set?	Background information
Carbon	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Forest products	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Resilience-density	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Wildfire risk	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?

McDonald-Dunn Research Forest – Interpreting Results from the Modeling of Alternative Land Allocation Scenarios

Three questions for us to deliberate:

1. What degree of specificity is appropriate for each value, when comparing with the baseline (i.e., current conditions)?
2. Would it be appropriate to set acceptability thresholds for any of these forest values? If so, how would they be derived?
3. What background info should we provide to assist in interpreting?

Forest Value	Degree of specificity	Should thresholds be set?	Background information
Biodiversity	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Resilience-composition	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Recreation	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?
Culturally important species	Precise % change --, -, +, ++ Other	No Yes If yes, how to set them?	Range: How to interpret what is acceptable/desirable?

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline

Forest Value	Degree of specificity	Should thresholds be set?	Background information
Carbon	Precise % change	No	Range: 0 to infinity How to interpret what is acceptable/desirable? - Put the baseline value into context by comparing it with other forests in the region. - Explain tradeoffs: although increases are helpful for sequestering atmospheric carbon and may generate revenue if markets emerge, increases could mean additional fuel that increases wildfire risk.
Forest products	Precise % change	No	Range: 0 to infinity How to interpret what is acceptable/desirable? - Higher numbers indicate greater revenue. Total value will be influenced by the amount of each product type created (poles vs lumber vs pulpwood).
Resilience-density	Precise % change	No	Range: not known at this time How to interpret what is acceptable/desirable? - Higher numbers are indicative of greater density, suggesting lower resilience, due to susceptibility to drought and insects.
Wildfire resistance	Precise % change or --, -, +, ++ (TBD)	Maybe How would thresholds be set? - Compare with what's reported in the literature. - Run the model and look at sensitivity.	Range: TBD: it may be 0 to 10 or it may be 0 to 100% How to interpret what is acceptable/desirable? - Lower numbers will indicate lesser resistance to wildfire and higher numbers greater resistance.
Biodiversity	--, -, +, ++	Maybe How would thresholds be set? - Consider midpoint (2.5) or 0.5 below current conditions(baseline) as lower threshold.	Range: 0 to 5 How to interpret what is acceptable/desirable? - Higher numbers indicate higher habitat suitability averaged across taxa.
Recreation	--, -, +, ++	Maybe How would thresholds be set? - Consider setting neutral acceptability (3.0) as lower threshold.	Range: 1 to 5 How to interpret what is acceptable/desirable? - Survey answer choices include: 1=unacceptable, 2=somewhat unacceptable, 3=neutral, 4=somewhat acceptable, 5=acceptable. - A higher overall number reflects greater acceptability across forest recreation users.
Resilience-composition	--, -, +, ++	No	Range: 0 to 5 How to interpret what is acceptable/desirable? - Lower numbers indicate conditions are nearly single species (Douglas-fir) and higher numbers indicate the presence of trees of other species. Higher numbers could suggest greater resilience to factors such as stress from pathogens and pests.

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: color-coded % change [mock #s]

Forest Value	Scenario A (baseline)	Scenario B (lots of EASR)	Scenario C (lots of EALR)	Scenario D (lots of MAMS)	Scenario E (lots of MR & EOC)
Biodiversity	3.8	--	+	--	--
Carbon storage	820 MT C/ha	+100%	+ 23%	+15%	+111%
Forest products	5.1 MMBF	+14%	-8%	-18%	-27%
Rec suitability/scenic beauty	3.3	-	+	+	++
Resilience - density	144 trees/ha	+10%	+4%	+13%	-4%
Resilience - composition	4.0	-	++	++	+
Revenue	$1.0 M	+20%	-20%	-40%	-60%
Wildfire resistance	42	+17%	-5%	+10%	+5%

Considerable increase (>50% increase or +++)

Modest increase (10-50% increase or ++)

Little change (10% increase – 10% decrease or +, -)

Modest decrease (10-50% decrease --)

Considerable decrease (>50% decrease or ---)

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: color-coded % change [mock #s]

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Resilience - density	144 trees/ha	+10%	+4%	+13%	-4%
Revenue	$1.0 M	+20%	-20%	-40%	-60%
Wildfire resistance (if % of landscape)	42	+17%	-5%	+10%	+5%
Biodiversity	3.8	--	+	--	--
Rec suitability/scenic beauty	3.3	-	+	+	++
Resilience - composition	4.0	-	++	++	+
Wildfire resistance (if 0-10)	42	++	-	+	+

Considerable increase (>50% increase or +++)
Modest increase (10-50% increase or ++)
Little change (10% increase – 10% decrease or +, -)
Modest decrease (10-50% decrease --)
Considerable decrease (>50% decrease or ---)

Options for assessing metrics used to evaluate scenarios
- Relative comparison with baseline: color-coded % change [mock #s]

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Wildfire resistance (if % of landscape)	42	+17%	-5%	+10%	+5%
Biodiversity	3.8	--	+	--	--
Rec suitability/scenic beauty	3.3	-	+	+	++
Resilience - composition	4.0	-	++	++	+
Wildfire resistance (if 0-10)	42	++	-	+	+

If threshold set to 0.5 units below baseline, 2 scenarios are precluded

Considerable increase (>50% increase or +++)
Modest increase (10-50% increase or ++)
Little change (10% increase – 10% decrease or +, -)
Modest decrease (10-50% decrease --)
Considerable decrease (>50% decrease or ---)

Indicators of Performance and Sustainability

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

- New plan
  - FRAC defined 10 goals for all Research Forests, some of which align with 2005
  - we need to set objectives and indicators for each of the 10 new goals
  - the intent is to define monitoring needs … this will enable adaptive management

New goals in relation to those from the 2005 Plan

- Goal 1 - Learning, Discovery, Engagement ….. Goals 1 & 7 from 2005 Plan
- Goal 2 – Stewardship ……………………………. Goals 2 & 3 from 2005 Plan
- Goal 3 – Research ……………………………….. Goal 1 from 2005 Plan
- Goal 4 - Resilient Forests …………………….. *No analogue in 2005 Plan*
- Goal 5 - Working Demonstration Forest …….. Goal 1 from 2005 Plan
- Goal 6 – Recreation ……………………………. Goal 5 from 2005 Plan
- Goal 7 - Community Connections …………….. Goal 6 from 2005 Plan
- Goal 8 - Financial Sustainability ……………….. Goal 2 from 2005 Plan
- Goal 9 – Accountability …………………………. *No analogue in 2005 Plan*
- Goal 10 - Continuous Improvement …………. Goal 7 from 2005 Plan

Our Goals

- Goal 1 - Learning, Discovery, Engagement
- Goal 2 - Stewardship
- Goal 3 - Research
- Goal 4 - Resilient Forests
- Goal 5 - Working Demonstration Forest

- Goal 6 - Recreation
- Goal 7 - Community Connections
- Goal 8 - Financial Sustainability
- Goal 9 - Accountability
- Goal 10 - Continuous Improvement

Goal	Objectives	Indicators	Methodology to measure	How often to measure	Who will measure
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Missions & Goals

Mission 1. To create opportunities for education, research, and outreach to address the economic, social, and environmental values of current and future generations of Oregonians and beyond.

Mission 2. To demonstrate how an actively and sustainably managed forest fosters economic prosperity, biodiversity conservation, and resilience amidst disturbances and global change.

Mission 3. To support social and cultural values of forests, enhancing the wellbeing of local communities, Tribal communities, and our broader citizenship.

goal 1 - learning, discovery engagement

goal 3 - research

goal 8 financial stability

goal 4 - resilient forests

goal 5 - working demo forest

goal 10 continuous improvement

goal 9 accountability

goal 2 stewardship

goal 6 - recreation

goal 7 - community connections

Our Goals

- Goal 1 - Learning, Discovery, Engagement
- Goal 2 - Stewardship
- Goal 3 - Research
- Goal 4 - Resilient Forests
- Goal 5 - Working Demonstration Forest

- Goal 6 - Recreation
- Goal 7 - Community Connections
- Goal 8 - Financial Sustainability
- Goal 9 - Accountability
- Goal 10 - Continuous Improvement

Mission	Objectives	Indicators	Methodology to measure	How often to measure	Who will measure
1	A				
	B				
	C				
2	A				
	B				
	C				
3	A				
	B				
	C				
mashup	A				
	B				
	C				