Technical Support

For Technical Support:

kcg.wendy@gmail.com

Audio Problems?

You might try calling into the meeting by phone

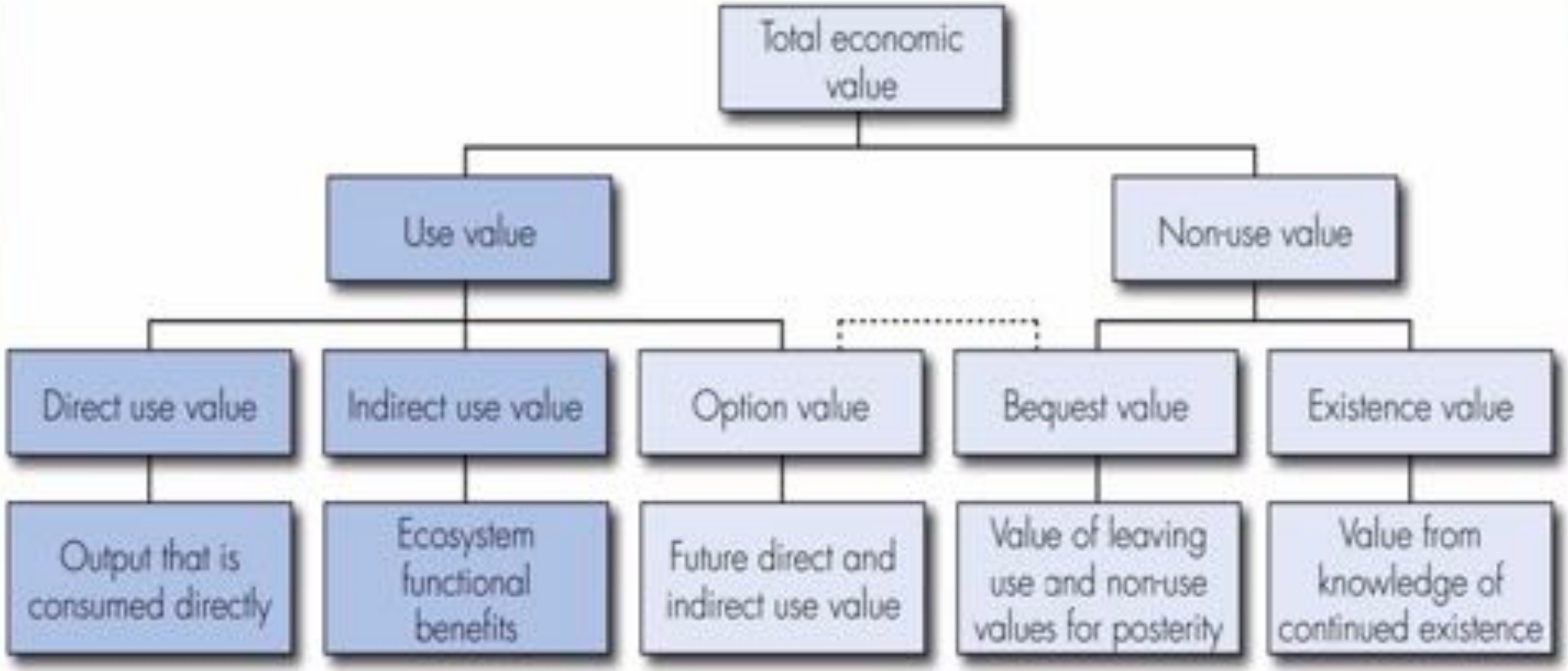
- Call: 1 253 205 0468
- Meeting ID: 858 9493 1904
- Passcode: 757021

Defining Mature and Old Growth Forests

Objective:

- **Develop a mature and old growth definition framework** that considers the important values provided by old forest conditions, recognizes existing and evolved definitions to provide an improved picture for land managers to guide sound, science-informed, decision-making

Tribal and Social values, special places



Source: Forslund, A., Renöfält, B.M., Barchiesi, S., Cross, K., Davidson, S., Farrel, T., Korsgaard, L., Krchnak, K., McClain, M., Meijer, K., & Smith, M. (2009). Securing water for ecosystems and human well-being: The importance of environmental flows. Swedish Water House Report 24, SIWI.

Zoom reminders

- Hand raise (if you are calling in *9)
- Mute (if you are calling in *6)

Requests for input on definition/inventory

- Tribal Forums
- Stakeholder sessions
- Formal Request for Information
- Federal employee sessions
- Formal Tribal Consultation

Agenda

- Opening Remarks
- Why We Are Here
- Progress Update
- Questions and Discussion

Public comment – what we heard

- Request for information resulted in thousands of comment letters
- Comments contained 13 themes related to definitions and inventory; some key themes:
  - Don't reinvent definitions – start with what's in current management plans
  - Use measurable criteria at appropriate scales
  - Consider social aspects (e.g., spirituality, sense of place) as part of definitions
- Comments informed definition and inventory team structure and options considered

Mature and Old Growth Inventory Technical Team (MOGITT)

- Focused on developing frameworks, definitions, metrics, inventory, risk analysis, long-term monitoring, and research and development

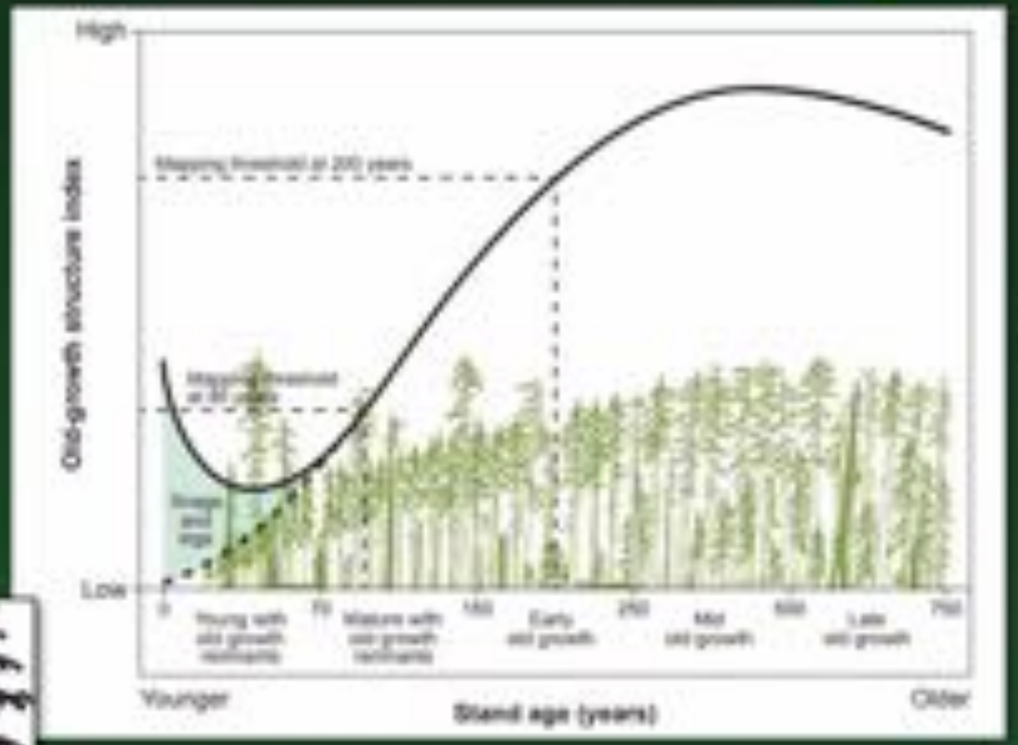
- 15 members: Research scientists from the Forest Service Forest Inventory and Analysis (FIA) and U.S. Geological Survey (USGS), senior foresters from the Bureau of Land Management (BLM), and ecologists, analysts, and land management planners from the Forest Service National Forest System (NFS)

Session Objectives

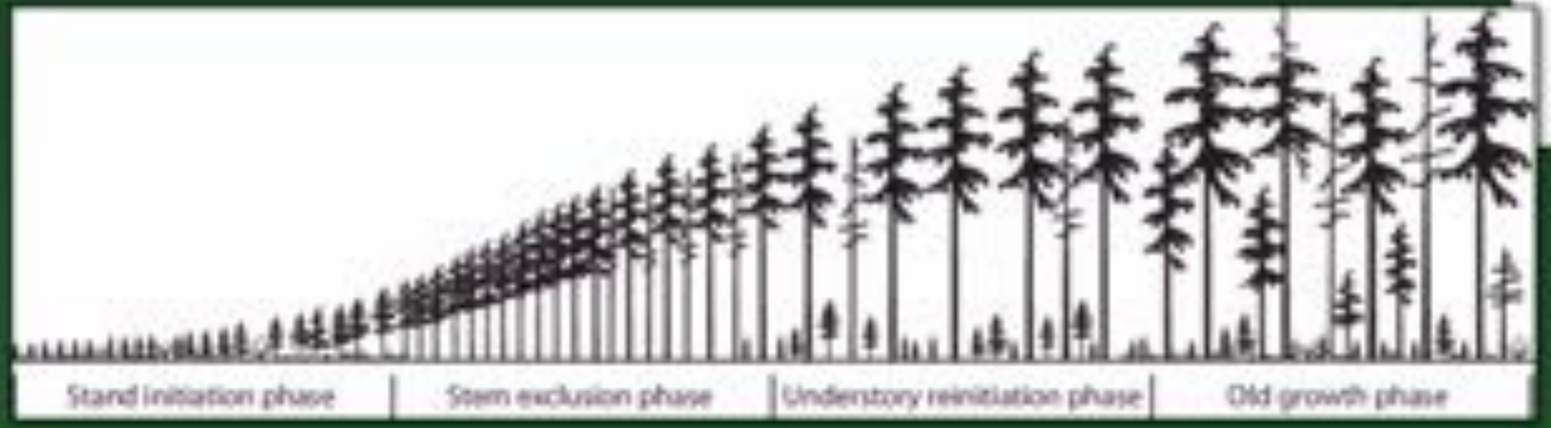
- Describe what we heard from the formal Request for Information process and informal feedback (engagement sessions, correspondence)
- Discuss how that input was incorporated and present working products
- Listen to your feedback
- Clarify timeline and process for moving forward

Potential Frameworks

Nine potential frameworks for defining mature and old growth were brought forward in public comments.



Spies and Franklin 1988,
Davis et al. 2015



Oliver and Larson (1996)

Discussion Questions

We hope to organize questions in this order:

1. Methodological
2. Process and/or practical implications
3. Recommendation for a robust public engagement process moving forward

Narrative Frameworks

Narrative Framework – Old Growth

- "**Old-growth forests** are ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics, which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function."

- Source: Forest Service 1989 Chief's letter to Regional Foresters

Session Ground Rules

- This is an information and dialog session
- This is not a formal comment period – it's a status update and listening session
- Agency core values, This Is Who We Are

Narrative Framework – Mature Forest

- Mature forest is defined in an ecological context (the stage of forest development immediately before old growth) rather than in economic terms (sustained timber yield).
- Mature forests exhibit structural characteristics which are lacking in immature forests and may contain some but not all the structural attributes in old-growth forests. The mature stage of stand development generally begins when a forest moves beyond self-thinning, starts to diversify in height and structure, and/or the understory begins to re-initiate.
- Structural characteristics that mark the transition from an immature to mature forest are unique to each forest type; they may include but are not limited to abundance of large trees, large tree stem diameter, stem diameter diversity, horizontal canopy openings/patchiness, aboveground biomass accumulation, stand height, presence of standing and/or downed boles, and/or vertical canopy layers.

Opening Remarks

- Linda Walker, USDA Forest Service, Director of Ecosystem Management Coordination

Working Definition – Principles

- Scientifically sound
- Objective and simple
- Contain metrics compatible across a spectrum of stand conditions from mature to old growth
- Compatible with Forest Inventory and Analysis (FIA) data for all stand conditions
- Applicable across spatial scales and federal jurisdictions
- Feasible to complete national inventory by April 22, 2023

Reporting Unit

National Forest System and Bureau of Land Management treed area from National Land Cover Dataset, showing forestland area within Firesheds

Fireshed Tree Acres (BLM&FS)

0 - 1	50,001 - 100,000
2 - 10,000	100,001 - 160,000
10,001 - 25,000	160,001 - 390,397
25,001 - 50,000	

Why Here, Why Now:

- Executive Order 14072: Strengthening the Nation's Forests, Communities, and Local Economies (22 April 2022)
- Section 2(b): Requires USDA and DOI to define, identify, and complete an inventory of old-growth and mature forests on Federal lands, accounting for regional and ecological variations, as appropriate, and make the inventory publicly available
- Within one year, or by April 22, 2023

Initial Inventory

- This is an initial inventory, and we expect it to be refined over the next few years
- It is a national scale inventory, informative for national and regional planning

Why Here, Why Now, continued:

- Executive Order 14072 Section 2(b): Define, Identify, Inventory are first steps and will inform future steps:
  - Combined effort of Departments of Interior (Bureau of Land Management) and Agriculture (Forest Service)
  - Section 2(c): Risk reduction activities, analysis of threats, policy
- Secretary's Memorandum 1077-004: Climate Resilience and Carbon Stewardship of America's National Forests and Grasslands (issued June 23, 2022) specifically references E.O. 14072 implementation and other actions

Old Growth Working Definitions

Old growth criteria will retain current Forest Service Region-by-Region approach, based generally on definitions produced in response to Chief Robertson's 1989 letter

Definition Development Timeline

Mature – Working Definitions

Without clear scientific consensus to define Mature, rapid inquiry is necessary given project timelines

Tech team is conducting comparative analysis among several criteria options and other published methods

1. Seek universal definition framework (one national model)
2. Build mature characteristics off regional old growth

Density of large trees & stand height

Defining Mature and Old Growth Forests

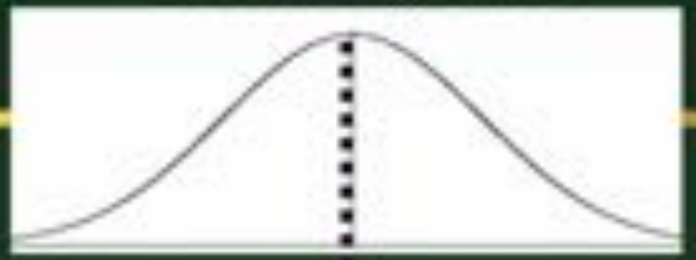
- Defining old growth and mature forests has evolved over time
- Many scientists agree that old-growth forests differ widely in character with age, geographic location, climate, site productivity, and characteristic disturbance regime
- Little information or consensus exists on mature forest, as it is a relatively new area of interest

Density of large trees

- Use regional old growth vegetation classifications
- Apply a large tree diameter threshold for mature based on a consistent ratio

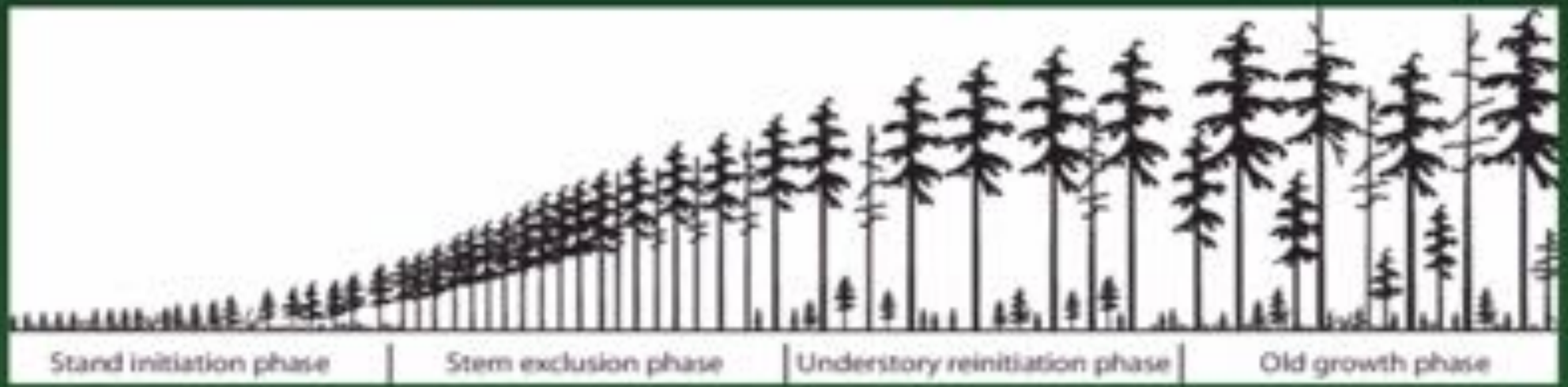
Forest Inventory Growth Stage Statistics (FIGSS) Approach Through Stand Development Lens

Medians of Structural Indicators for Old-Growth Plots by Forest Type and Site Productivity Class



FIA plots not classified as Old-Growth must have at least 50% of Indicators (by forest type and site productivity class) exceed this Mature Threshold

(Median/3)*2



Pilot Units

ALASKA
R10
Chugach National Forest

Gifford Pinchot National Forest
R6
Medford District Office
R1
Superior National Forest
R9
R4
R2
White River National Forest
R5
R3
Gila National Forest
Cherokee National Forest
R8

Future Opportunities

- Validation dataset against which to assess accuracy
- Current vs. desired conditions
- Adequately capturing disturbance dynamics
- "Old-growthiness" as a continuum
- Non-timber forest types
- Incorporating tribal and social values
- Remote sensing methods for finer scale inventory

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Next Steps

- Evaluate definition and inventory progress in context of what we've heard in these sessions
- Finalize our definition, method, and produce the inventory
- Begin the threat assessment phase (EO 14072 2(c))
- Determine next steps in 'robust public engagement', including how inventory can be refined moving forward

For more information

https://www.fs.usda.gov/managing-land/old-growth-forests

Point of Contact

Mature and Old Growth Communications Team

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