
WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Marbled Murrelet Long-Term Conservation Strategy

A report to the Board of Natural Resources

presented by **Kyle Blum** *July 2016*

Outline

1. Correction from last meeting

2. Additional Alternative Summaries

Trust Mandate

As manager of state trust lands, DNR has legal fiduciary responsibilities under the State Constitution to:

- Generate revenue and other benefits for each trust, in perpetuity
- Preserve the corpus of the trust
- Exercise reasonable care and skill
- Act prudently to reduce the risk of loss for the trusts
- Maintain undivided loyalty to beneficiaries
- Act impartially with respect to current and future beneficiaries

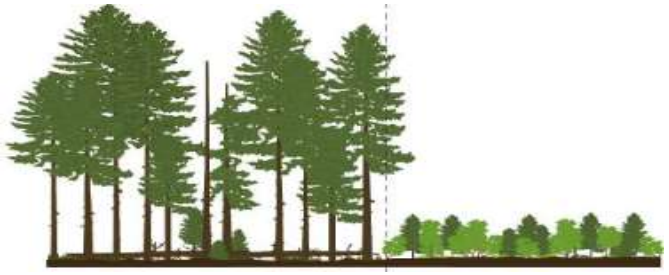
Evaluation Criteria

1. To the maximum extent practicable, minimize and mitigate the impacts of take.

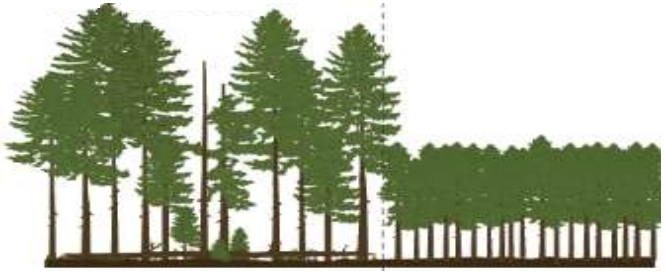
2. Not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

3. Make a significant contribution to maintaining and protecting marbled murrelet populations in western Washington over the life of the HCP.

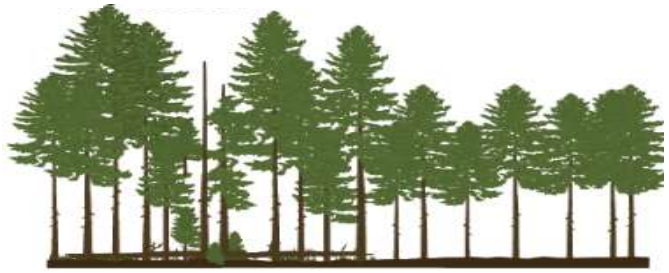
Correction



Hard Edge



Soft Edge



No Edge

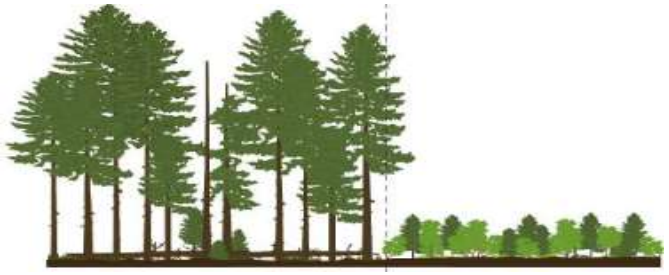
Calculation error in July BNR presentation

Percentage of LTFC currently in a soft edge condition was incorrectly set at 36.1%.

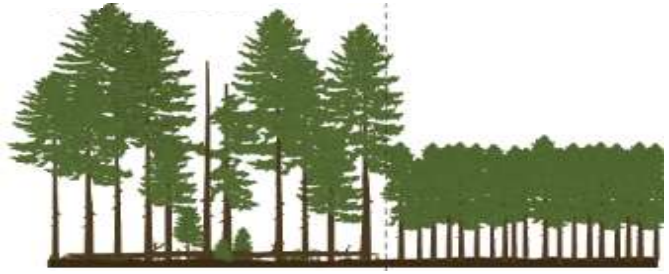
Correct value = 26%

**This value influences the edge habitat discount, and therefore adjusted P-stage acres*

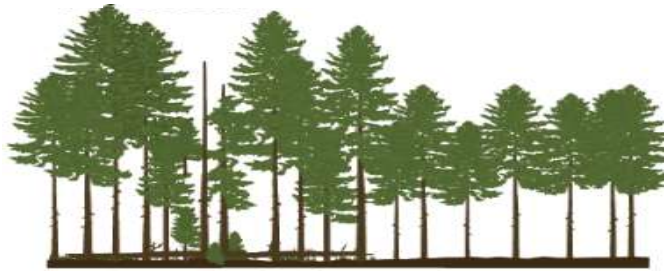
Correction



Hard Edge



Soft Edge

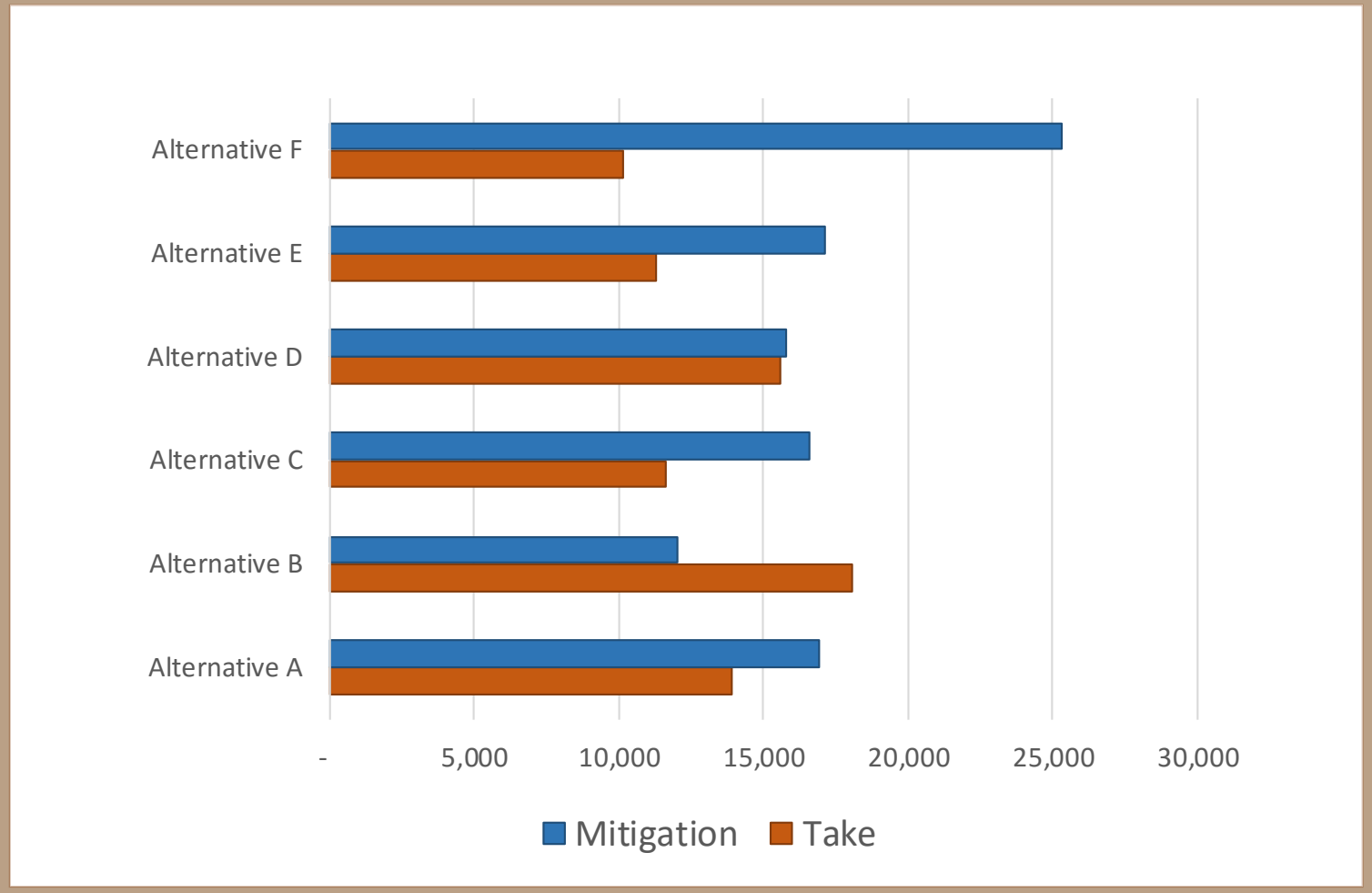


No Edge

Change in adjusted take and mitigation acres:

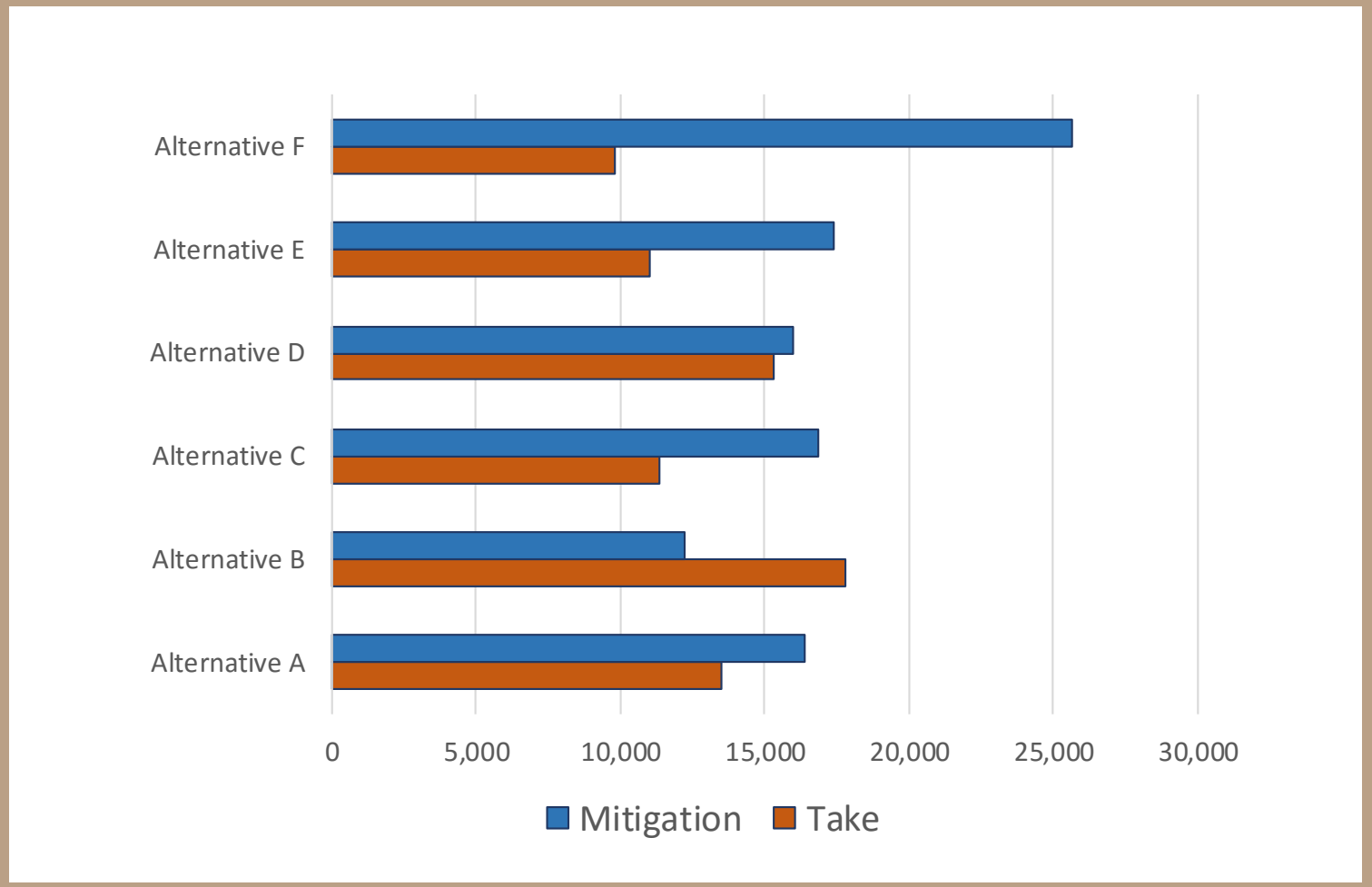
	Old Take	*New Take*	Take Difference	*Old Mitigation*	*New Mitigation*	Mitigation Difference
A	13,841	13,530	-311	16,094	16,405	311
B	18,084	17,833	-251	11,998	12,249	251
C	11,638	11,351	-287	16,582	16,869	287
D	15,600	15,335	-265	15,754	16,019	265
E	11,303	11,016	-287	17,099	17,387	288
F	10,126	9,785	-341	25,292	25,633	341

Alternative Outputs – Not Corrected



Alternative Outputs – After Correction

Take and Mitigation by Alternative



Alternative F Occupied Site Buffers

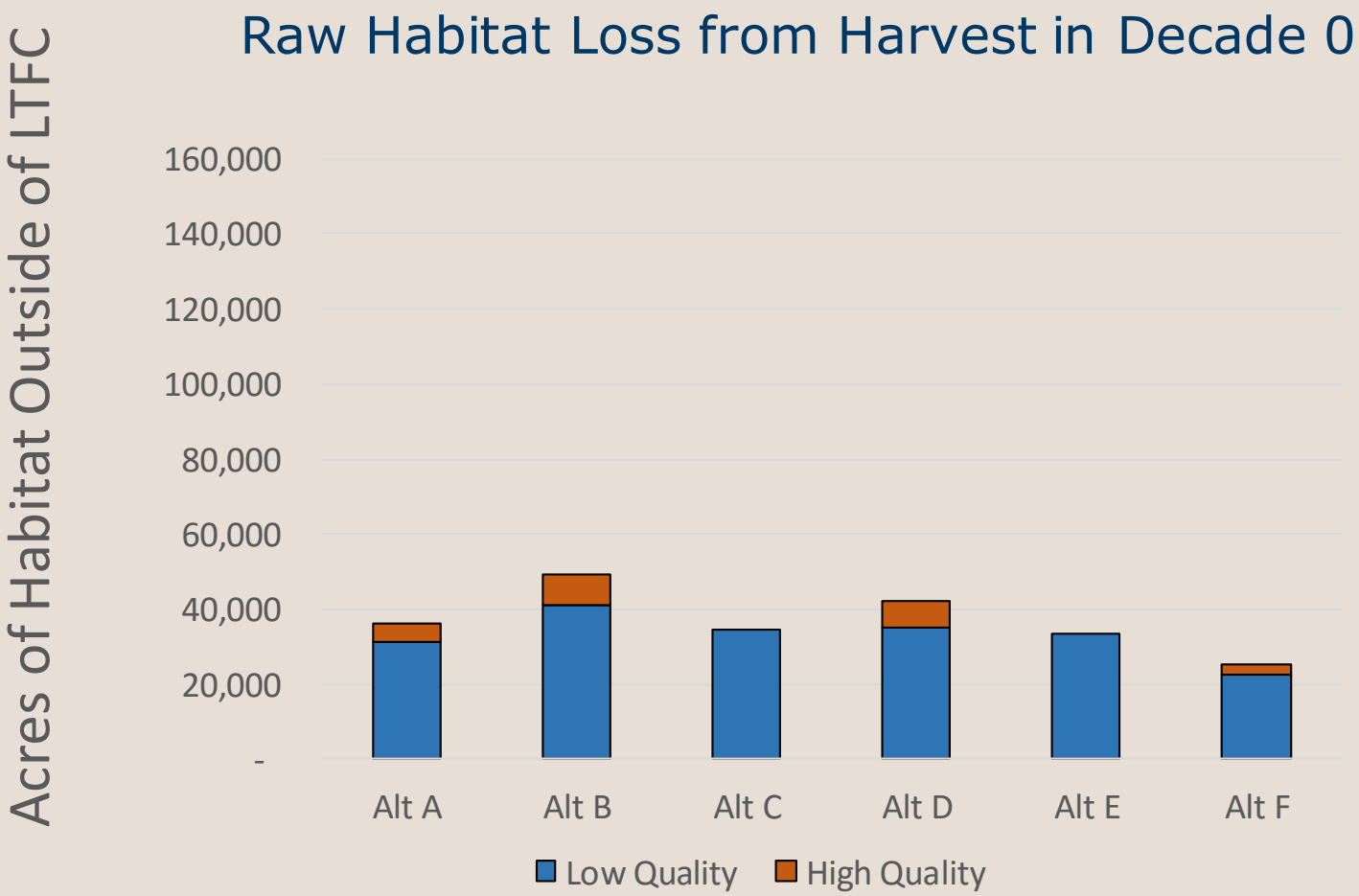
Alternative Profiles

Approximate Acres of Marbled Murrelet-Specific Conservation

Murrelet-specific conservation acres (2016)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Occupied sites	8,000	10,000	10,000	10,000	10,000	10,000
Occupied site buffers	12,000		13,000	13,000	13,000	16,000
Habitat identified under interim strategy	17,000					
Marbled murrelet management areas						78,000
Emphasis areas			14,000		14,000	
Special habitat areas			9,000	28,000	13,000	
High quality P-stage habitat (>= .47) patches			7,000		7,000	
Existing Northern Spotted Owl Habitat- low quality						47,000
TOTAL	37,000	10,000	53,000	51,000	57,000	151,000

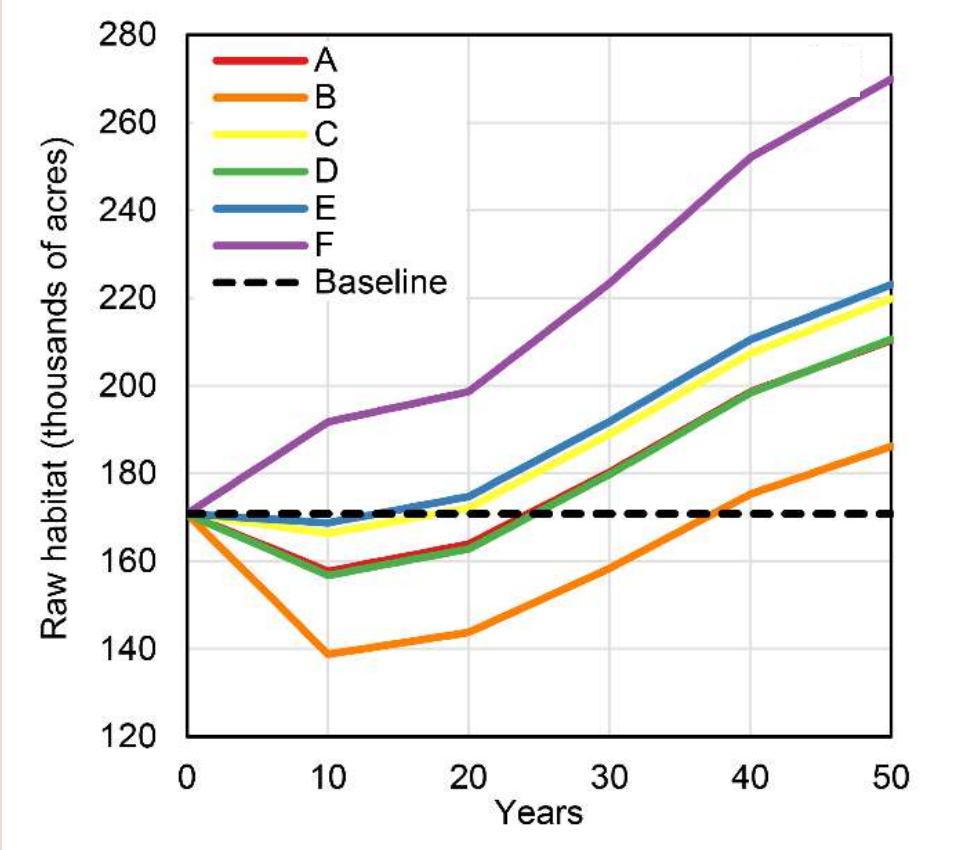
*Note there is a lot of overlap of this habitat with existing conservation. Alternative A has approximately 114,000 acres selected for 'SUITABLE', 'RECLASS', 'POTEN', and 'NEWLYID'. Of that acreage, approximately 98k overlaps with existing conservation, occupied sites, or buffers on those sites.

Additional Alternative Summaries



Additional Alternative Summaries

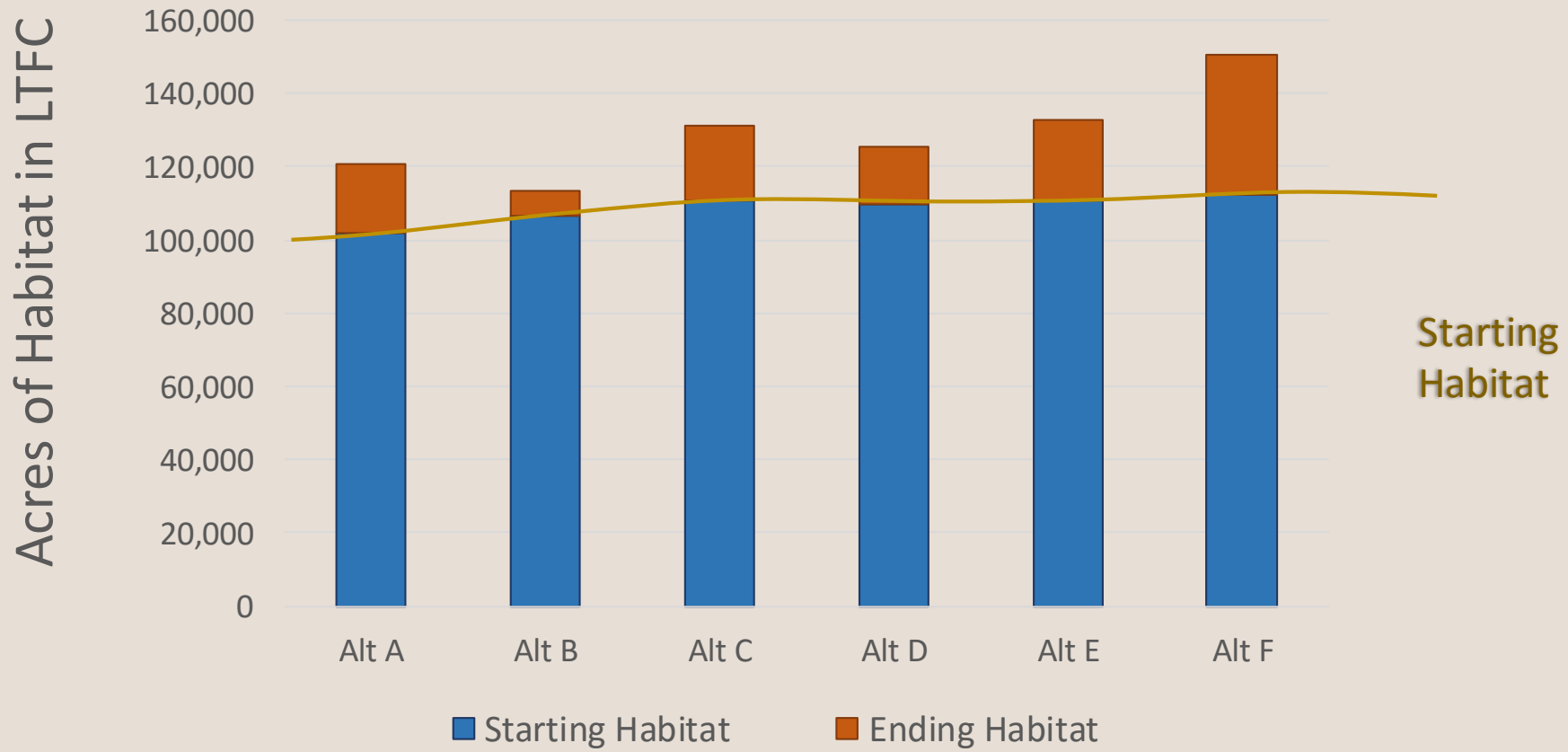
Raw Habitat Growth over Planning Period*



*Peery, M. Z. & Jones, G.M. (2016). Assessing the Potential Effects of Washington DNR Forest Management Alternatives on Marbled Murrelet Population Viability. Draft report submitted to Washington Department of Natural Resources and U.S. Fish and Wildlife Service.

Additional Alternative Summaries

Adjusted Habitat Growth over Planning Period, Stringers Excluded



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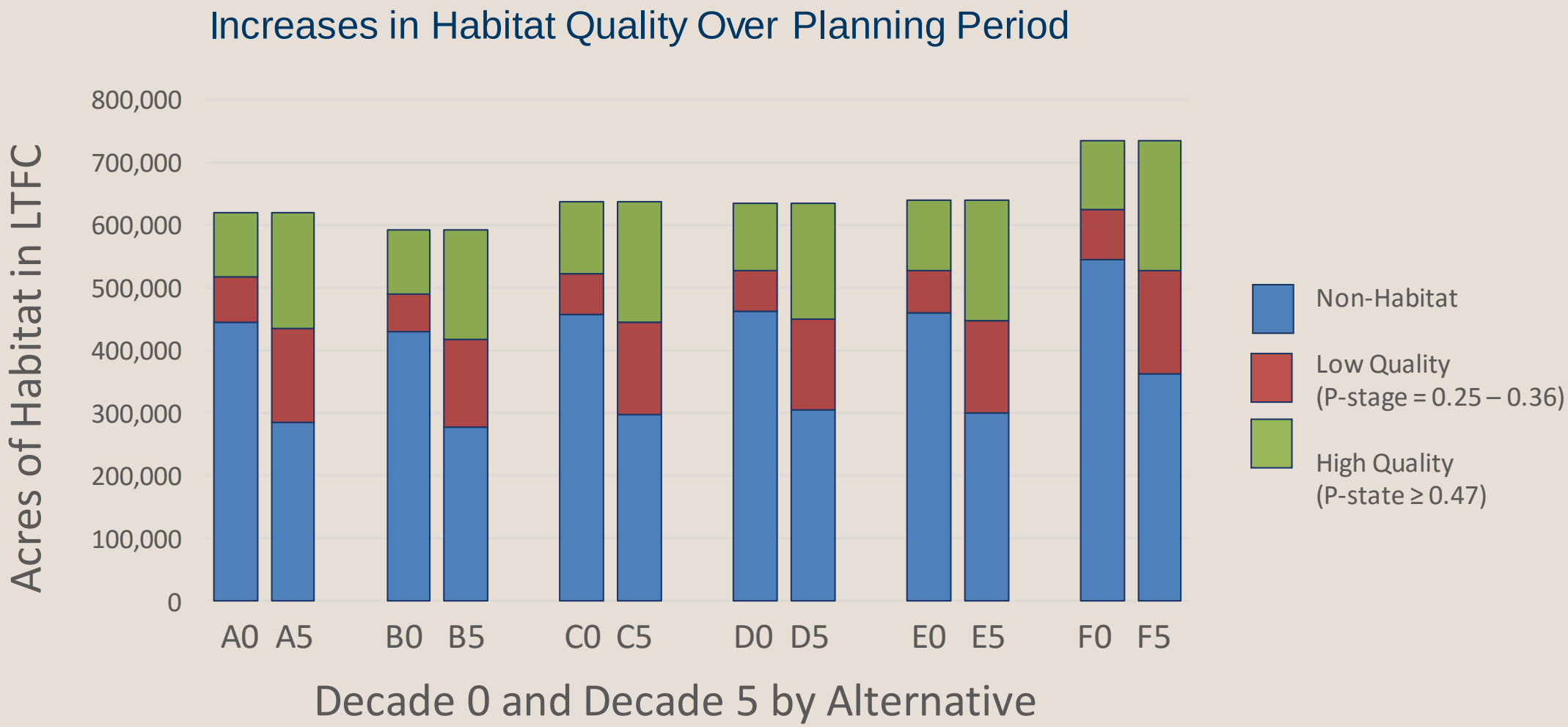

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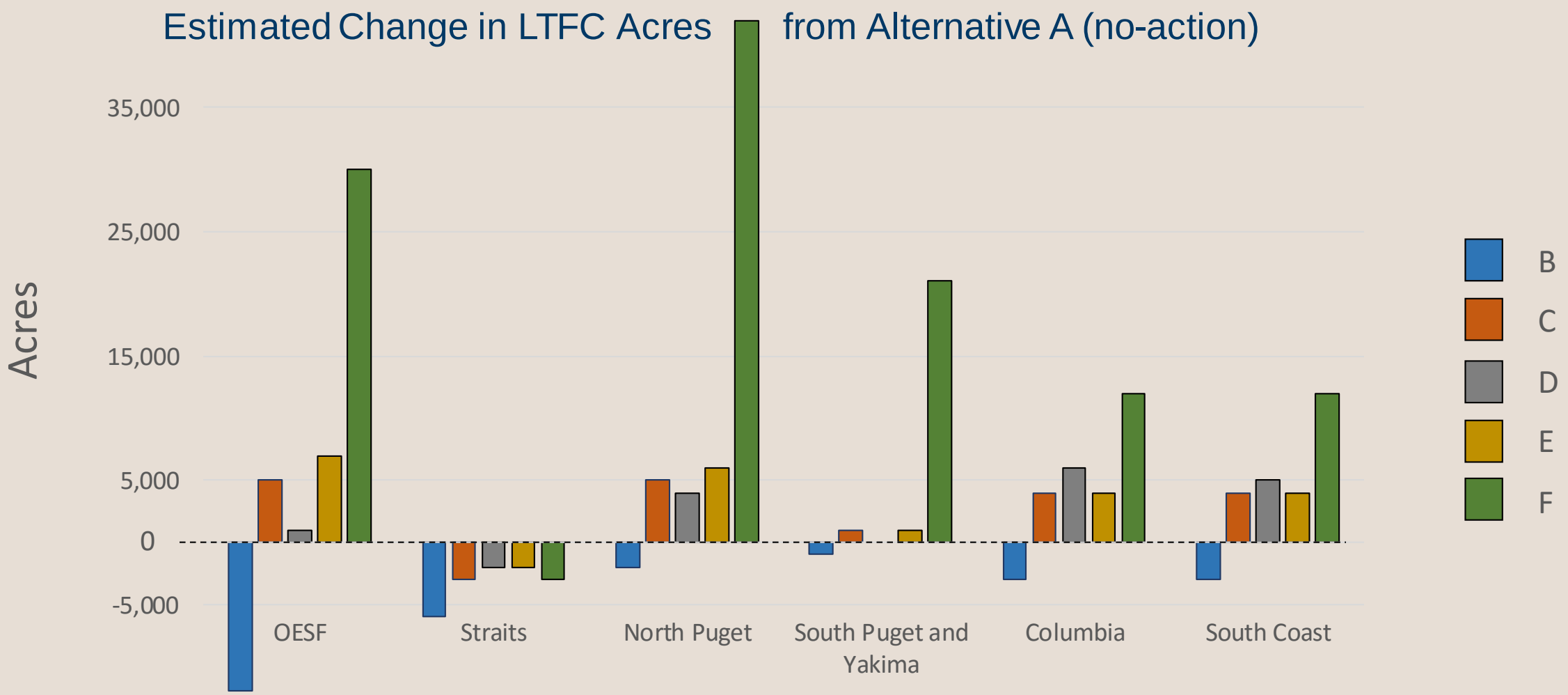
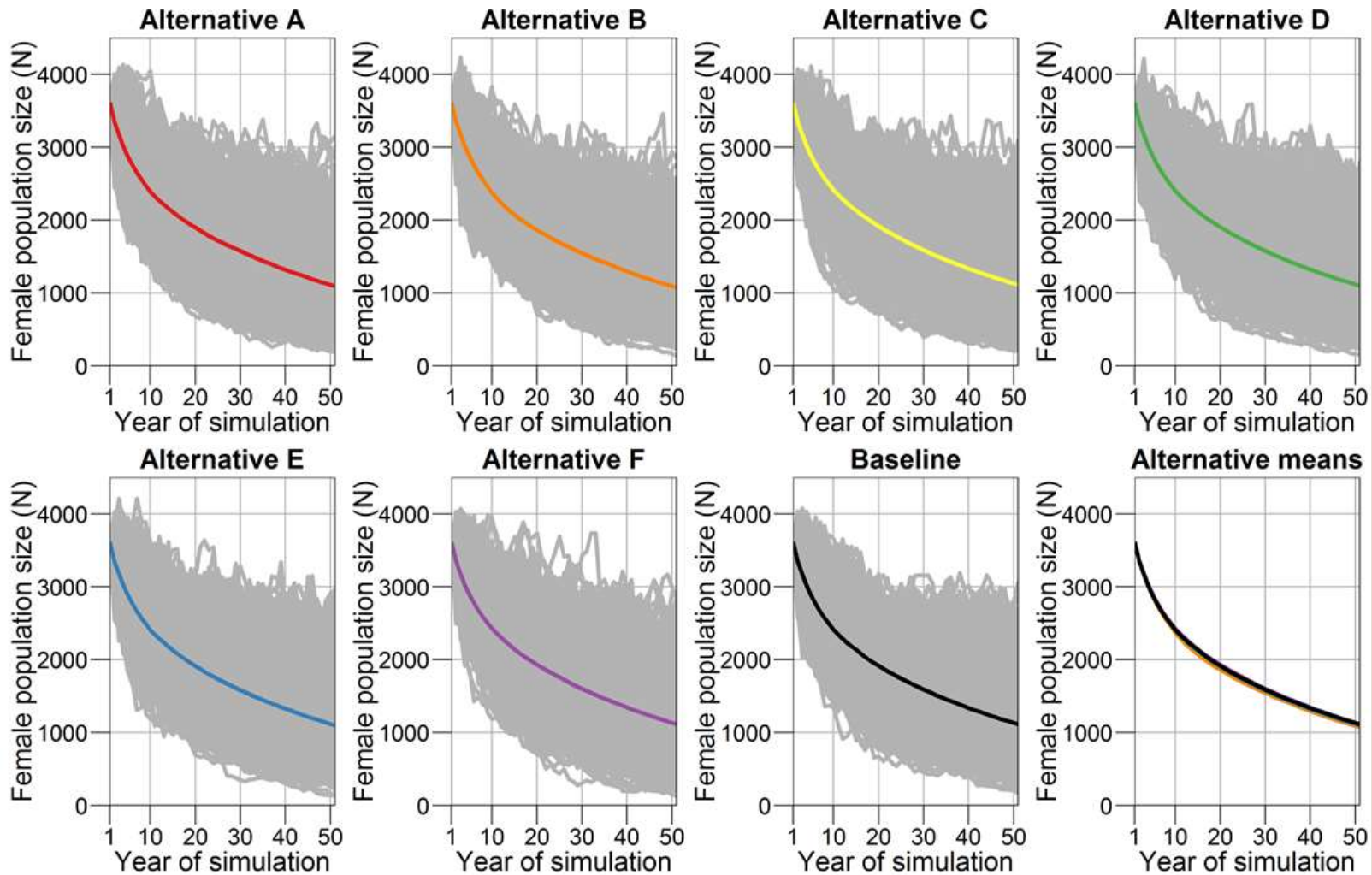


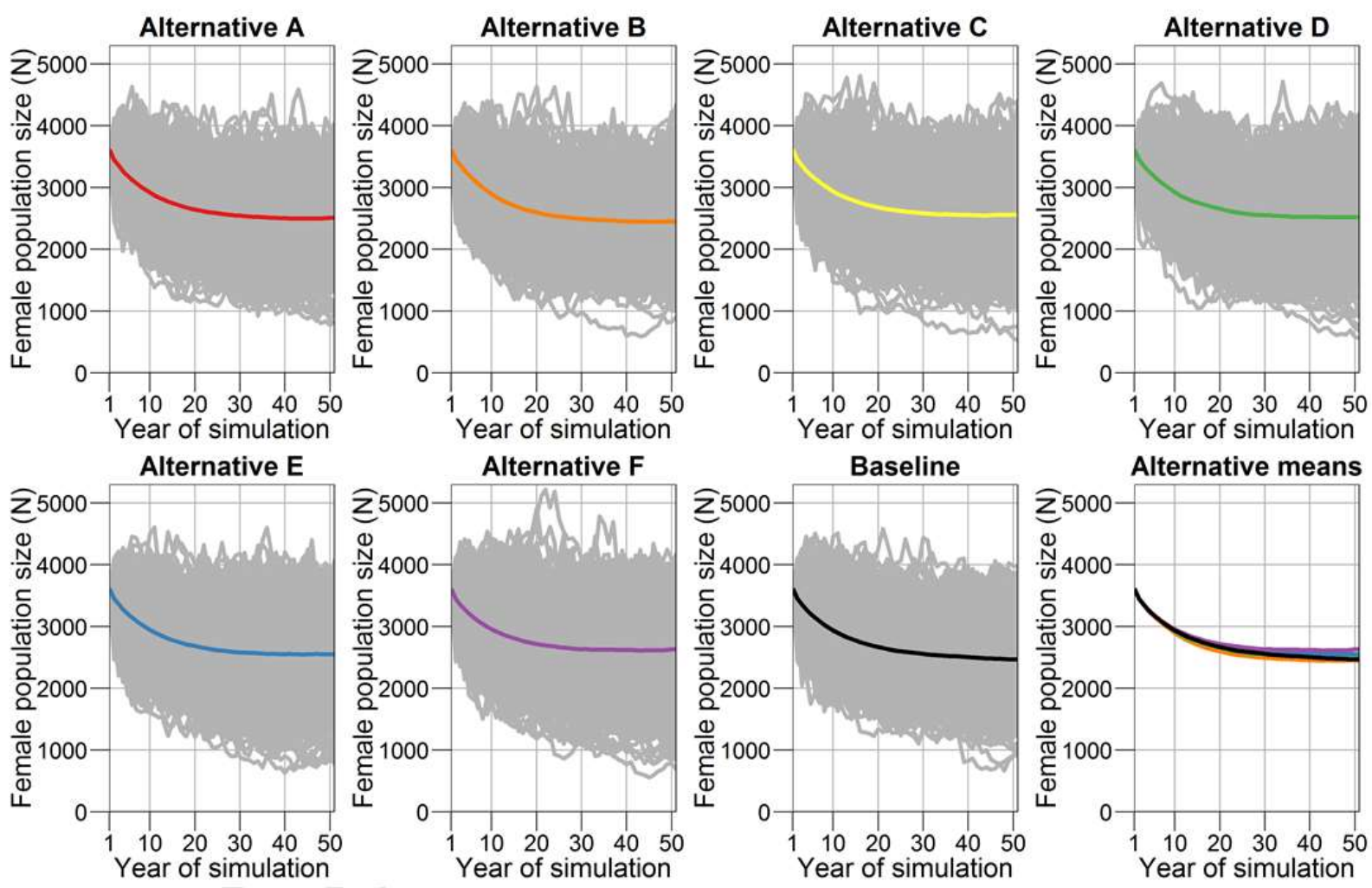
Modeling the Effects of DNR Forest Management Alternatives on Marbled Murrelets in Washington:
A Population Viability Analysis Approach

Zach Peery and Gavin Jones
Department of Forest and Wildlife Ecology
University of Wisconsin-Madison

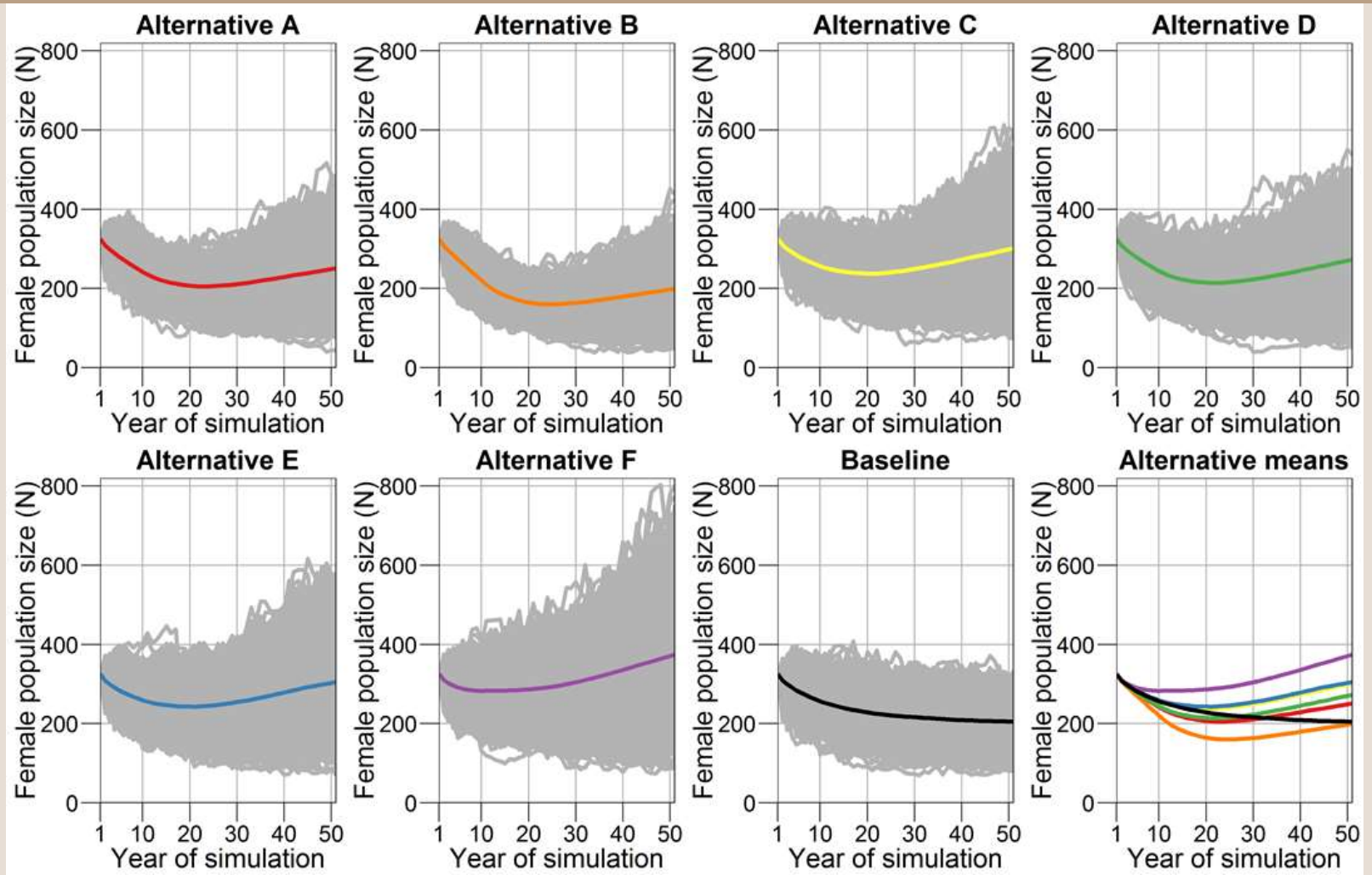
Risk Analysis - WA



Enhancement Analysis - WA



Enhancement Analysis - DNR

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