

TABLE OF CONTENTS

INTRODUCTION	1
Old Growth Management on the Lolo National Forest	1
Debate over Old Growth Management	2
BASIS OF SCIENCE FOR OLD GROWTH TREATMENTS	3
Old Growth Vegetation Structure	3
Old Growth Associated Species	3
Restoration Defined	3
STUDY AREA	4
METHODOLOGY	5
Vegetation Methodology	5
Wildlife Methodology	6
Goshawk Survey Methods	6
Flammulated Owl Survey Methods	6
Pileated Woodpecker Survey Methods	7
Calculating Detection Rate and Stand Use	8
Habitat Component Assessment	8
STUDY RESULTS VEGETATION	8
Treated Stands	8
Stands with Ecosystem Burning	9
Stand with Timber Harvest	9
Stand Affected by Wildfire	10
Stands with High Intensity Wildfire	11
Stands with Low Intensity Wildfire	11
Stands with Mixed Intensity Wildfire	11
STUDY RESULTS WILDLIFE	12
Goshawk Surveys	12
Flammulated Owl Surveys	13
Pileated Woodpecker Surveys	13
Habitat Components and Species Presence	13
Habitat and Occupancy of Wildfire Stands	14
CONCLUSIONS AND DISCUSSION	14
Vegetation	14
Treatment Impacts on Old Growth Associates	15
Northern Goshawk	15
Flammulated Owl	17
Pileated Woodpecker	18
Wildfire Impacts on Old Growth Associates	18
MANAGEMENT RECOMMENDATIONS	19
ACKNOWLEDGEMENTS	19
REFERENCES	19
APPENDIX 1 - OLD GROWTH MANAGEMENT ON THE LOLO NATIONAL FOREST	
Old Growth Definition – 1986	1
Old Growth Allocation – 1986	1
Management Area 21	1

FOREST PLAN MONITORING	2
1986 to 1990	2
1991 to 1993	2
1993 Forest Plan 5-Year Review	3
1994 Lolo National Forest Old Growth Strategy	4
Green et al - Old Growth Definition	4
Ecological Stratification	5
Classifying Old Growth Types	5
Old Growth Evaluation	6

APPENDIX 2 – LOLO NATIONAL FOREST PLAN OLD GROWTH MONITORING

Introduction	1
Forest Plan Monitoring Findings	1
1986 to 1987	1
1988	1
1989	1
1990	1
1991	2
1992	3
1993	3
1994	3
1995	3
1996	4
1997	4
1998	5
1999	6
2000-2001	7

APPENDIX 3 – LOLO NATIONAL FOREST INVENTORY AND ANALYSIS (FIA) DATA

Introduction	1
Quantity and Distribution of Old Growth	1
Reliability of FIA Old Growth Data	2
Collection of FIA Data	3
Statistical Accuracy	3

APPENDIX 4 – BASIS OF SCIENCE, SUPPORTING SCIENTIFIC LITERATURE

Maintaining or Restoring Old Growth Structure	1
Effectiveness of Silvicultural Treatments on Maintaining or Restoring Stand Structure	2
Species Monitoring	4
Northern Goshawk	5
Flammulated Owl	6
Pileated Woodpecker	9
Maintaining or Restoring Habitat Conditions	10

APPENDIX 5 – OLD GROWTH CHARACTERISTICS OF TREATED STANDS

APPENDIX 6 – OLD GROWTH CHARACTERISTICS OF STAND BURNED BY WILDFIRE

APPENDIX 7 – STANDS DROPPED FROM STUDY

APPENDIX 8 – WILDLIFE DETECTION SURVEY MAPS

APPENDIX 9 – WILDLIFE TABLES

Table 1 – Range of Key Vegetation Attributes
Table 2 – Stand Attributes Measured at Observation Points (Northern Goshawk)
Table 3 – Stand Attributes Measured at Observation Points (Flammulated Owl)

Table 4 – Stand Attributes Measures at Observation Points (Pileated Woodpecker)

APPENDIX 10 – OLD GROWTH MONITORING, STAND PHOTOGRAPHS