

==== Simulated Form AD-416 =====
RESEARCH WORKUNIT/PROJECT DESCRIPTION -- RESEARCH RESUME
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Accession No. 0167827 Agency Identification 2.OCI 3.IDAZ 4. Work Unit/Project No. 5. IDAZ-ES-0505 Date 21 Feb 1995
Status 6. A New Project

7. TITLE MANAGEMENT, HEALTH, AND SUSTAINABILITY OF FOREST ECOSYSTEMS

8. PERFORMING ORGANIZATION 1210 1626 9. REGIONAL PROJECT
FOREST RESOURCES
COLLEGE OF FORESTRY, UNIV OF IDAHO
Cooperating depts:

12. Investigator Name(s):

- | | |
|-------------------|----------------------|
| 1) <u>ADAMS D</u> | 4) <u>HATCH C</u> |
| 2) <u>FINS L</u> | 5) <u>KOROL J</u> |
| 3) <u>FORCE J</u> | 6) <u>MARSHALL J</u> |

<u>18. PROJECT TYPE</u> <u>S State</u>	<u>19. Contract No.</u> _____
	<u>20. Face amount</u> _____
	<u>21. FY</u> _____

24. OBJECTIVES

To design and evaluate management techniques that promote forest health and productivity.

25. APPROACH

1) Identify the indicators of forest health and sustainability. 2) Monitoring and inventorying forest ecosystems using expert systems, remote sensing and GIS. 3) Analyzing relationships among insects, disease and host trees. 4) Investigating relationships between forest ecosystem health and wildlife. 5) Determining relationships between ecosystem processes and forest ecosystem health and sustainability. 6) Developing silvicultural techniques, including fire, for improving forest ecosystem health and landscape management. 7) Studying the long-term effects of production silviculture on sustainability.

27. KEYWORDS

FOREST-ECOSYSTEM-HEALTH INSECT-AND-DISEASE WILDLIFE FIRE-ECOLOGY
REMOTE-SENSING GIS SILVICULTURE LANDSCAPE-ECOLOGY MODELING WATERSHED
FOREST-POLICY PLANNING MENSURATION INVENTORY EXPERT-SYSTEMS REGENERATION
SUSTAINABILITY

<u>28. AWARD DATE</u>	<u>29. START DATE</u> 1 Oct 1993	<u>30. TERMINATION DATE</u> 31 Dec 2006	<u>DURATION</u> 159 months
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Admin:		

Chas R Holt

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Accession No. 0167828 Agency Identification 2.OCI Work Unit/Project No. 3.IDAZ 4. Date 21 Feb 1995
Status 6. A New Project
5. IDAZ-ES-0506

7. TITLE FOREST BIOLOGY IN THE INLAND NORTHWEST

8. PERFORMING ORGANIZATION 1210 1626 9. REGIONAL PROJECT _____
FOREST RESOURCES
COLLEGE OF FORESTRY, UNIV OF IDAHO
Cooperating depts:

12. Investigator Name(s):

- | | |
|-------------------|----------------------|
| 1) <u>ADAMS D</u> | 4) <u>MARSHALL J</u> |
| 2) <u>BELT G</u> | 5) <u>MOORE J</u> |
| 3) <u>FINS L</u> | 6) <u>MORGAN P</u> |

18. PROJECT TYPE <u>S</u> State	19. Contract No. _____
	20. Face amount _____
	21. FY _____

24. OBJECTIVES

To investigate the physical, chemical and biological mechanisms that control the function of forest and rangeland ecosystems in the Northwest.

25. APPROACH

1) Analyzing the ecology of fungal root diseases. 2) Analyzing the genetic characteristics of rare and endangered forest and rangeland plants. 3) Investigating the genetic characteristics of native tree species and analyzing how native genotypes might be improved. 4) Studying the physiological mechanisms controlling the survival and growth of forest trees and associated plants. 5) Quantifying relationships between forest productivity and soil, water, climate and nutrition. 6) Determining basic nutritional requirements of inland west tree species and nutrition/forest health relationships.

27. KEYWORDS

ECOLOGY GENETICS PHYSIOLOGY MINERAL-NUTRITION BOTANY

28. <u>AWARD DATE</u>	29. <u>START DATE</u> <u>1 Oct 1993</u>	30. <u>TERMINATION DATE</u> <u>31 Dec 2006</u>	<u>DURATION</u> <u>159 months</u>
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Accession No. 0167829 Agency Identification 2.OCI Work Unit/Project No. 3.IDAZ 4. IDAZ-ES-0507 Date 21 Feb 1995
Status 6. A New Project

7. TITLE SOCIAL FACTORS IN NATURAL RESOURCE MANAGEMENT

8. PERFORMING ORGANIZATION 1210 1626 9. REGIONAL PROJECT _____
FOREST RESOURCES
COLLEGE OF FORESTRY, UNIV OF IDAHO

Cooperating depts:

12. Investigator Name(s):

- | | |
|---------------------|-----------------------|
| 1) <u>FORCE J</u> | 4) <u>MCKETTA C</u> |
| 2) <u>MACHLIS G</u> | 5) <u>MEDEMA L</u> |
| 3) <u>MAHONEY R</u> | 6) <u>OLAUGHLIN J</u> |

18. PROJECT TYPE S State

19. Contract No. _____
20. Face amount _____
21. FY _____

24. OBJECTIVES

To investigate the human and social factors related to the use and management of natural resources.

25. APPROACH

1) Studying the impact on dependent communities. 2) Conducting visitor surveys. 3) Analyzing economic impacts of fluctuations in natural resource use.

27. KEYWORDS

DEPENDENT-COMMUNITIES VISITOR-SURVEYS SOCIAL-ECOLOGY ECONOMICS

28. <u>AWARD DATE</u>	29. <u>START DATE</u> <u>1 Oct 1993</u>	30. <u>TERMINATION DATE</u> <u>31 Dec 2006</u>	<u>DURATION</u> <u>159 months</u>
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RESEARCH WORKUNIT/PROJECT DESCRIPTION -- RESEARCH RESUME

Accession No. 0167856 Agency Identification 2.OCI 3.IDAZ 4. Work Unit/Project No. 5. IDAZ-ES-0504 Date 21 Feb 1995
Status 6. A New Project

7. TITLE ECOLOGY, USE AND MANAGEMENT OF RANGELANDS IN FORESTED ENVIRONMENTS OF IDAHO

8. PERFORMING ORGANIZATION 0674 1626 RANGE RESOURCES COLLEGE OF FORESTRY, UNIV OF IDAHO
9. REGIONAL PROJECT _____

Cooperating depts:

12. Investigator Name(s):

- | | |
|--------------------------|-----------------------|
| 1) <u>BUNTING S C</u> | 4) <u>KINGERY J L</u> |
| 2) <u>EHRENREICH E H</u> | 5) <u>LOHMAN K</u> |
| 3) <u>JOHNSON K L</u> | 6) <u>MOSLEY J C</u> |

18. PROJECT TYPE <u>S State</u>	19. Contract No. _____
	20. Face amount _____
	21. FY _____

24. OBJECTIVES

Conducting research on the ecological characteristics of rangelands in forested environments, together with evaluation of management programs based on those characteristics is the overall objective.

25. APPROACH

1) Competitive interactions between bunch grasses and tree seedlings at the forest-range margin. 2) Fire history and effects, and successional relations as affected by fire of forest and range vegetation. 3) Rehabilitation and management of disturbed foothill forest lands. 4) Stream water quality as affected by forest-range landuse practices. 5) Grazing management of wild and domestic ungulates with emphasis on vegetation management, water quality, tree regeneration, and nutrient cycling in forested environments. 6) Evaluation and application of agroforestry techniques in land utilization and management. 7) Characterization and monitoring of mountain meadows and riparian areas.

27. KEYWORDS

RANGE FIRE-HISTORY FIRE-EFFECTS PLANT-SUCCESSION GRAZING-MANAGEMENT
LAND-REHABILITATION WATER-QUALITY RIPARIAN-AREAS VEGETATION-MANAGEMENT
TREE-REGENERATION NUTRIENT-CYCLING FOREST-RANGE-MARGIN

28. <u>AWARD DATE</u>	29. <u>START DATE</u> 1 Oct 1993	30. <u>TERMINATION DATE</u> 31 Dec 2006	<u>DURATION</u> 159 months
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RESEARCH WORKUNIT/PROJECT DESCRIPTION -- RESEARCH RESUME

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Accession No. 0167825 Agency Identification 2.OCI 3.IDAZ 4. Work Unit/Project No. 5. IDAZ-ES-0503 Date 21 Feb 1995
Status 6. A New Project

7. TITLE EFFICIENCY IN WOOD HARVEST, MANUFACTURE, AND CONSTRUCTION DESIGN

8. PERFORMING ORGANIZATION 1200 1626 9. REGIONAL PROJECT _____
FOREST PRODUCTS
COLLEGE OF FORESTRY, UNIV OF IDAHO
Cooperating depts:

12. Investigator Name(s):

- | | |
|-----------------------|--------------------------|
| 1) <u>FOLK R L</u> | 4) <u>LEE H W</u> |
| 2) <u>GORMAN T M</u> | 5) <u>MOSLEMI A A</u> |
| 3) <u>JOHNSON L R</u> | 6) <u>STEINHAGEN H P</u> |

18. PROJECT TYPE S State | 19. Contract No. _____
20. Face amount _____ | 21. FY _____

24. OBJECTIVES

The overall objective is to contribute to both the efficient use of our renewable wood resource and to the economic vitality of the forest products industry.

25. APPROACH

1) Timber supply and harvesting: Design, develop and evaluate harvesting systems for operation in multi-structural stands of small and large diameter trees with emphasis on maintaining environmental quality. Mathematically model timber supply. 2) Wood products manufacture: Develop new wood products and improve physical and mechanical properties of existing products. Improve wood drying and quality/process control systems so that the recovery of the most valuable wood products is increased. Employ modeling approaches to analysis. Manufacturing processes and systems. 3) Wood construction and design: Improve wood design features and conduct life-cycle analysis to reduce costs and enhance thermal properties of wood buildings.

27. KEYWORDS

TIMBER-HARVESTING WOOD-PRODUCTS-MANUFACTURE WOOD-PROPERTIES WOOD-DRYING
QUALITY/PROCESS-CONTROL TIMBER-SUPPLY WOOD-CONSTRUCTION-AND-DESIGN
LIFE-CYCLE-ANALYSIS WOOD-BUILDINGS

28. AWARD DATE | 29. START DATE | 30. TERMINATION DATE | DURATION
| | 1 Oct 1993 | 31 Dec 2006 | 159 months

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Date 21 Feb 1995

Accession No. Agency Identification Work Unit/Project No. Status
1. 0165824 2. OCI 3. IDAZ 4. 5. IDAZ-ES-0502 6. A New Project

7. TITLE MONITORING RECREATION & TOURISM USE IN ID FOREST LANDS &
TIMBER-DEPENDENT RURAL COMMUNITIES

8. PERFORMING ORGANIZATION 5039 1626 9. REGIONAL PROJECT
RESOURCE RECREATION & TOURISM
COLLEGE OF FORESTRY, UNIV OF IDAHO

Cooperating depts:

12. Investigator Name(s):

- | | |
|----------------------|--------------------------|
| 1) <u>FAZIO J R</u> | 4) <u>HUNT J D</u> |
| 2) <u>HAM S H</u> | 5) <u>KRUMPE E E</u> |
| 3) <u>HARRIS C C</u> | 6) <u>MCLAUGHLIN W J</u> |

18. PROJECT TYPE S State

19. Contract No. _____

20. Face amount _____

21. FY _____

24. OBJECTIVES

The overall objective is to monitor outdoor recreation and tourism participation patterns and trends with emphasis on environmental, social, and economic impacts in timber-dependent and other rural communities.

25. APPROACH

1) Examinations of shifts in the traditional industrial and economic base of communities with particular attention to the impact of outdoor recreation and tourism. 2) Intensive studies of the social impact of recreation and tourism on timber-dependent communities. 3) Special studies of environmental impact of outdoor recreation and tourism on riparian areas, specially designated forest lands, and natural areas adjacent to rural communities. 4) Inventories and assessments of information and environmental education actions for optimizing benefits and mitigating costs to rural communities from outdoor recreation and tourism. Exploration of methods to reduce conflict between user interest groups. 5) Development of participatory planning processes that integrate public sector outdoor recreation and private sector tourism development strategies. 6) Special studies to develop a better understanding of the social and physical dynamics related to trees within rural communities in order to improve tree health, stimulate tree care and replacement, and contribute to public safety.

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RESEARCH WORKUNIT/PROJECT DESCRIPTION -- RESEARCH RESUME
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Accession No. 0167822 Agency Identification 2.OCI 3.IDAZ 4. Work Unit/Project No. 5. IDAZ-ES-0500 Date 21 Feb 1995
Status 6. A New Project

7. TITLE STUDIES OF WILDLIFE POPULATIONS, HABITATS & THEIR RELATION- SHIPS
IN MANAGED & UNMANAGED ID FORESTS

8. PERFORMING ORGANIZATION 1776 1626 9. REGIONAL PROJECT _____
FISH & WILDLIFE RESOURCES
COLLEGE OF FORESTRY, UNIV OF IDAHO

Cooperating depts:

12. Investigator Name(s):

- 1) GARTON E O 4) SCOTT J M
- 2) REESE K P 5) _____
- 3) PEEK J M 6) _____

18. PROJECT TYPE S State

19. Contract No. _____

20. Face amount _____

21. FY _____

24. OBJECTIVES

The overall objective is to document, analyze and interpret biological and ecological information on game birds and mammals as well as non-game and endangered species and their habitats in forested environments that are managed and in areas designated as wilderness in Idaho and surrounding states.

25. APPROACH

1) Analysis of habitat and habitat relationships by remote sensing and GIS techniques. 2) Studying population ecology, dynamics, and viability, especially using modeling approaches. 3) Conducting biological and ecological studies of selected bird and mammal species in forested habitats. 4) Conducting studies of biological diversity in selected habitats, especially in forest successional stages, riparian zones and wetlands.

27. KEYWORDS

WILDLIFE-POPULATIONS WILDLIFE-HABITATS FOREST-MANAGEMENT-PRACTICES
BIOLOGICAL-DIVERSITY ECOLOGY RIPARIAN-ZONES WETLANDS

28. AWARD DATE

29. START DATE
1 Oct 1993

30. TERMINATION DATE
31 Dec 2006

DURATION
159 months

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Accession No. Agency Identification Work Unit/Project No. Date 21 Feb 1995
Status
1. 0167823 2. OCI 3. IDAZ 4. 5. IDAZ-ES-0501 6. A New Project

7. TITLE FISH POPULATIONS & AQUATIC HABITATS IN LAKES/STREAMS CONTAINED
WITHIN/SUPPLIED BY FORESTED WATERSHED

8. PERFORMING ORGANIZATION 1776 1626 9. REGIONAL PROJECT
FISH & WILDLIFE RESOURCES
COLLEGE OF FORESTRY, UNIV OF IDAHO

Cooperating depts:

12. Investigator Name(s):

- 1) BENNETT D H
- 2) BJORN T C
- 3) FALTER C M
- 4) SCARNECCHIA D L
- 5)
- 6)

18. PROJECT TYPE S State

19. Contract No. _____

20. Face amount _____

21. FY _____

24. OBJECTIVES

The overall objective is to investigate fish populations and factors affecting their productivity in forested environments with emphasis on salmonids and forest management practices.

25. APPROACH

1) Intensive studies of habitat conditions of streams as they influence fish productivity. 2) Documentation and distribution of aquatic organisms important as foods during the life cycles of fish species. 3) Conducting risk assessments associated with water resources and their uses as they impact fish populations. 4) Intensive studies aimed at identifying and addressing factors limiting chinook salmon and other sensitive or T&E species.

27. KEYWORDS

FISH-POPULATIONS HABITAT-CONDITIONS FOREST-MANAGEMENT-PRACTICES
WATER-RESOURCES SALMONIDS

28. AWARD DATE | 29. START DATE | 30. TERMINATION DATE | DURATION

| | 1 Oct 1993 | 31 Dec 2006 | 159 months

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Dept: Admin: <i>Chas R. Bledsoe</i>		