



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
WASHINGTON, D.C. 20245

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PRIDE IN
AMERICA

IN REPLY REFER TO:

Forestry
Code 230

53 BIAM Supplement 5, Release 2

MAR 14 1991

Memorandum

To: Holders of 53 BIAM
From: Deputy Commissioner of Indian Affairs
Subject: Forest Development (Supplement 5)

Patrick A. Hayes

This release provides detailed instructions on forest development in the form of a supplement to the basic portion of 53 BIAM.

Filing Instructions:

(a) Remove superseded material:

53 BIAM Supplement 5,
Release 1, Dated 3/19/80

(9 sheets)

(b) Insert new material transmitted:

53 BIAM Supplement 5
Release 2, Dated 3/14/91

(8 sheets)

(c) Pen-and-ink changes
None

Attachment

FOREST DEVELOPMENT
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FOREST DEVELOPMENT
General

1. GENERAL

1.1 Policy and Scope.

A. Definition. Forest Development is that segment of the Forestry Program that addresses the improvement of forest resources. It involves forestation and commercial forest stand improvement (CFSI) activities, principally, and consists of all silvicultural treatments applied to establish, promote, enhance, and maintain optimum growth on selected trees to produce perpetual yields of desired forest products under the principles of sustained yield forest management. Although present forest management policy requires that certain forest development objectives be attained through sale contract specifications or by harvesting operations, achievement of these objectives may require additional silvicultural treatments. Therefore, forest development silvicultural practices shall be used whenever feasible and cost-effective to improve, extend, or modify production within the commercial forest land base.

B. Indian Lands Affected. A primary criteria for making forest development investments is a high probability that long term land use will remain commercial forest production.

C. Range of Activities. The Forest Development Program consists of forestation, stand improvement, and related investments that enhance forest productivity. Forest development funds will be used to reestablish, maintain, and improve growth and stocking of desirable commercial species. A benefit/cost analysis will be prepared by the tribes and agencies to rank individual forest development projects and establish funding priorities.

1.2 Authority. See 53 BIAM 5.2.

1.3 Responsibility. See 53 BIAM 5.3.

A. Assistant Secretary - Indian Affairs. In addition to responsibilities specified in 53 BIAM 5.3, the Assistant Secretary shall:

(1) Maintain consolidated records for all forest development accomplishments by funding source.

(2) Prepare national standards, plans, program budget requests, and submit program accomplishment reports to Congress.

(3) Allocate appropriated forest development funds not in the Indian Priority System (IPS) to Area Offices.

(4) Monitor Area Office and field office forest development program activities for compliance with national policy and conduct oversight to ensure that forest development funds are spent as prescribed by Congress.

B. Area Director. In addition to responsibilities specified in 53 BIAM 5.3, the Area Director shall:

FOREST DEVELOPMENT

General

(1) Provide Agency Superintendents and Tribal Leaders with national forest development policy, goals, guidelines, and directives in conjunction with local Area Office policy.

(2) By October 1 each year, prepare and submit to the Assistant Secretary for approval, an annual consolidated forest development projects planning report based on field project plans and submissions.

(3) Allocate available funds to field programs. Determine if project funds should be reallocated to ensure attainment of Area forest development goals.

(4) Provide technical guidance and assistance to field offices, monitor field activities, and conduct program oversight, if appropriate.

(5) Receive forest development accomplishment data from the field, and submit a consolidated Area Office Forest Development Program Accomplishment Report to the Central Office no later than November 30.

C. Superintendent. In addition to responsibilities specified in 53 BIAM 5.3, the Superintendent shall:

(1) Develop programs that conform to policy, goals, and guidelines. Submit annual project plans that identify and include all support needs to the Area Director no later than September 15.

(2) Conduct field operations and/or monitor contracted programs, if appropriate, to ensure accomplishment of program objectives.

(3) Maintain program/project records and submit annual forest development project accomplishment reports, including maps, to the Area Director no later than November 15.

(4) If appropriate, provide technical assistance to tribes on request.

D. Participating Indian Tribe. If the program is administered under Public Law 93-638, as amended by Public Law 101-472, the immediate Bureau official with line authority will be responsible for submission of reports, maintenance of records, and development and maintenance of plans.

FOREST DEVELOPMENT
Activities

2. ACTIVITIES

2.1 General. Forest development (See 53 BIAM 5.4) includes funds and efforts to conduct all activities of reforestation and CFSI necessary to properly manage the commercial Indian forest to produce sustained yields of desired forest products.

2.2 Forest Development.

A. Funding Sources. Potential funding sources are Tribe/Agency funds in the IPS, forest management deductions, Congressional add-on funds, tribal funds and other funds.

(1) Reforesting harvested sale areas is an essential silvicultural practice and a key component of a reservation forest management plan. Sale areas harvested after 1978 will be initially regenerated under terms of the sale contract.

(2) Congressional add-on funds are allocated to Areas based on needs identified in their Forest Development Planned Project/Activities reports. The forest development program add-on funds shall only be used to eliminate the inventory of forest development needs, which may be updated annually.

B. Conduct of Activities. Forest development program activities are conducted by tribal and BIA forestry personnel through force account, contract funds (PL 93-638, buy-Indian, open-market), grant, or other viable recognized mechanisms.

(1) Because of the specific purpose for Congressional add-on funds mandated by Congress, a maximum of 15 percent of each Area's allocation may be used for administrative costs associated with programmatic activities. Forest development administrative costs are those costs that can not be assigned to specific forest development project acres, e.g., long-range planning and training.

(2) Reforestation of timber sale areas will be funded with receipts from that sale activity. Acres included in this activity will not be recorded in the inventory of forest development needs until the silvicultural prescription has failed. Areas may establish criteria for evaluating reforestation efforts on timber sale areas.

(3) Forest development Congressional add-on funds cannot be used in other forestry program segments, or transferred to other Bureau programs.

FOREST DEVELOPMENT
Practices

3. PRACTICES

3.1 General. Forest development program practices are: (1) Silvicultural treatments, and (2) administrative support activities.

3.2 Silvicultural. Silvicultural treatments are, principally, divided into two major activities: (1) Reforestation and (2) CFSI. These include:

A. Reforestation. Reforestation includes tree planting, replanting, and direct seeding. Specific requirements exclude the funding of afforestation with Congressional add-on funds. Accepted reforestation practices include:

(1) Stocking surveys and planning to determine the most feasible project sites, procedures, and methodology.

(2) project field delineation.

(3) Site preparation.

(4) Tree seed production and acquisition.

(5) Planting stock production and acquisition.

(6) Tree planting and replanting and direct seeding operations.

(7) Protecting recently forested areas.

(8) Post planting stocking and contract compliance surveys.

(9) Limited access road repair.

B. CFSI. CFSI includes the silvicultural practices that enhance growth and yield of existing commercial forest stands. Accepted CFSI practices include:

(1) Commercial stocking inventories and stocking studies to determine the most feasible sites, procedures, and methodologies.

(2) Project field delineation.

(3) Precommercial thinning and release operations.

(4) Reduction of hazardous fuel generated by CFSI operations.

(5) Fertilizing commercial forest soils that support young, thrifty stands.

(6) Protecting recently treated timber stands.

(7) Limited access road repair.

FOREST DEVELOPMENT
Practices

C. Other Practices. Other forest development activities may be approved by the Area Director if supported by silvicultural principles and benefit/cost analyses.

D. Equipment. Equipment may be procured and maintained with Congressional add-on funds; however, Area Directors must approve equipment purchases costing more than \$2,500 per unit. This equipment must be used in direct forest development program support.

3.3 Program Support Activities. Program support activities include:

A. Forest Development Plans and Records.

(1) Plans

(a) Long-term reservation forest development plans will be prepared that list the goals and objectives of the reservation forest development program, and conform to the long-range forest management objectives of the reservation forest management plan (See 53 BIAM Supplement 2).

(b) Annual forest development plans are action plans prepared at field locations that include a prioritized list of proposed projects and activities that should be accomplished during the specific year. Plans will be submitted to the Area Office by September 15 and to the Central Office by October 1 each year.

(c) An individual project plan will be developed for each proposed forest development project or activity, and will consist of the proposal narrative, benefit/cost analysis, and ranking status [See Supplement 5, 3.3 A.(2)].

(2) Records

(a) An individual forest development project record is the basic program document. Various forestry program reports derive from, or build on, each project record or combinations of records.

(b) Each Area Office shall develop a specific record format that addresses its requirements. A forest development project record should contain, as a minimum, the following elements:

(i) Proposal narrative/description;

(ii) Project statistics, including: Name, ID Number, Type, Category, Size, Source of seed/planting stock, Costs - planned/actual, Time Frames - planned/actual, Benefit/Cost Ratio, Ranking - ___ of ___;

(iii) Benefit/cost analysis recommendations;

(iv) Project ranking rationale;

FOREST DEVELOPMENT
Practices

(v) Project progress reports and maps; and

(vi) Project final evaluation report.

(c) A system will be developed to ensure that project map data is transferred to a permanent base map.

B. Benefit/Cost Analyses. Benefit/cost analyses will be prepared for individual forest development projects and activities, or for groups of similar projects (See 25 CFR 163.25), and used as one of the determinants in setting local (not Area or national) project funding priorities. Analyses will include all costs that are associated with the individual project.

(1) Each analysis will include both a measure of economic efficiency and economic equity (impacts). Efficiency is measured by the benefit/cost ratio. All costs and benefits of the project that are measurable in dollars should be included in the calculation. Equity refers to the economic impacts of the project that have a direct bearing on community stability. These impacts include the nonmarket benefits and the social effects that are usually measured by changes in employment, income distribution, and the intangible benefits that contribute to community stability and welfare. Both economic efficiency and economic equity shall be used in developing forest development investment priorities.

(2) Procedures for forest development program benefit/cost analyses should be developed locally; however, all procedures, including computer operated programs, must be approved by the Area Director. Appropriate benefit/cost analyses procedures may be found in the booklet Economic Guides for Managing Forest Resources prepared by the Branch of Forest Resources Planning of the Division of Forestry. A four percent discount rate will be used in all benefit/cost analyses.

C. Project Ranking and Funding Priorities: The project ranking process is based on project prioritization (highest benefit/cost ratio first to lowest benefit/cost ratio last). Environmental factors, equity impact and tribal considerations may dictate exceptions to the benefit/cost ratio ranking process.

(1) Forest development program projects funded under the IPS shall be ranked and prioritized based on benefit/cost analyses (See 25 CFR 163.25).

(1) Indian tribes should develop their own funding priority systems for their IPS programs.

D. Monitoring and Evaluation. The Bureau will supervise, monitor, and provide program oversight, as appropriate, to assure forest development projects are cost-effective, and that Indian commercial forest lands are managed in a perpetually productive state, thereby fulfilling Federal trust responsibility for sustained yield forest management.

(1) Program activities will be evaluated to determine if correct and effective procedures were used. Recommendations will be provided to correct noted deficiencies.

FOREST DEVELOPMENT
Practices

(2) Oversight must ensure program integrity and accountability of funds. The program will be monitored to collect proper data needed to prepare the various forest development program reports required by Congress, Office of Management and Budget, other Federal Agencies, Department of the Interior and BIA.

E. Technical Training. Technical training and assistance may be provided to forest development workers.

F. Reports. Complete and accurate reports are essential to a successful forest development program. Annual appropriations are based on previous year's accomplishments, as reported by the BIA and reviewed by Congress. Forest development program reports required during each fiscal year are:

(1) Forest Development Program Planned Projects Annual Submission.

(a) Reservation plans are consolidated into Agency plans which are consolidated into Area Office annual Forest Development Program Planned Projects and Activities Reports (Illustration 1).

(b) By September 15 each year [See Supplement 5, 3.3A(1)(b)] the appropriate Bureau official will submit, to the Area Director, a prioritized list of proposed forest development program projects for funding in the new fiscal year. These reports will be submitted to the Central Office by October 1 each year.

(2) Forest Development Accomplishment, Expenditures and Inventory Status Reports.

(a) Forest Development Program accomplishments and inventory status are reported on Revised Form 5-5345 (Illustration 2). Reports will be submitted to the Area Office by November 15 and the Central Office by November 30 each year.

(b) Reforestation and CFSI accomplishments will continue to be reported in the Annual Forestry Report (See Annual Forestry Report, 53 BIAM Supplement 1)

FOREST DEVELOPMENT PROGRAM, PLANNED PROJECTS/ACTIVITIES

For Fiscal Year 19__

Reporting Office: _____

Status as of: _____ 19__

Location(s):	Allocation* (Tent/Act) \$M.0	Planned		Expenditures		Estimated Accomplishments	
		Reforestation \$M.0	CFSI \$M.0	Admin Costs \$M.0	All** Other \$M.0	Acres Reforest.	Treated CFSI
(Reservation, Agency, Area Office) Activity							

TALS

* Name Funding Source If Not Congressional "Add-on"
 ** "All Other Costs" are project costs and will not be computed as "Administrative Charges".

Form 5-5344
Revised Feb., 1991

FOREST DEVELOPMENT PROGRAM, PLANNED PROJECTS/ACTIVITIES

Instructions

Column headings are self-explanatory. List planned projects/activities in order of funding priority, i.e., highest priority first to least priority last. Any funding source other than Congressional add-on funds should be identified with footnotes. Potential funding sources other than Congressional add-on funds are Tribe/agency funds in the Indian Priority System, timber sale deductions, other tribal funds, and funds from other agencies. For entries required under the heading titled "Planned Expenditures":

1. Reforestation - Enter the estimated direct, field costs, e.g. seedling procurement, site preparation, field planting, or direct seeding.
2. CFSI (Commercial Forest Stand Improvement) - Enter the estimated cost of field operations, including precommercial thinning, weeding, release, species conversion, fertilizing, and treating thinning project slash.
3. Administration - Forest development administrative costs are those costs that can not be assigned to specific forest development project acres, e.g., long-range planning and training.
4. All Other - Include forest development program facilities construction, operation, and maintenance costs; limited forest road rehabilitation, repairs, and maintenance to gain access to project sites; project crew training costs, vehicle and equipment procurement and maintenance. These charges are project costs and will not be computed as administrative charges.

Form 5-5345
Revised Feb., 1991

FOREST DEVELOPMENT PROGRAM PROJECTS/ACTIVITIES ACCOMPLISHMENT REPORT

Instructions

* In conjunction with the mandate to eliminate the inventory of deficient commercial forest acres, Congress requires an annual report from BIA on progress in complying with the mandate. Form 5-5345 is designed to provide the information that Congress requires.

Form 5-5345 should show all forest development accomplishments. Note that forest development accomplishments (and expenditures) are separated by funding source. Congressional add-on funds must be accounted for separately. However, tribes can and do use other funds to conduct this program segment, the principal sources are timber sale administrative deductions, IPS funds, other tribal funds, and funds from other agencies.

Report Base is the reporting point level, for example: Indian Reservation, Agency, Area Office, or Nationwide (Central Office).

Location(s) vary depending on Report Base, for example:

Report Base	Location(s)
Nationwide	All Area Offices reporting accomplishments, one Area summary report per line.
Area Office	All Agency Offices within Area reporting accomplishments, one Agency summary report per line.
Agency	Reservation(s) within Agency reporting accomplishments, one Reservation summary report per line.
Reservation	Individual forest development projects/activities reporting accomplishments and expenditures, one per line.



United States Department of the Interior

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WASHINGTON, D. C. 20245

IN REPLY REFER TO:

MAR 19 1980

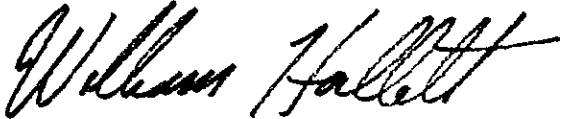
53 BIAM Supp. 5 Release 1

Memorandum

To: Holders of 53 BIAM Supp. 5
From: Commissioner of Indian Affairs
Subject: 53 BIAM Supp. 5, Forest Development

This release provides detailed instructions on Forest Development in the form of a supplement to the basic portion of the new Forestry Program Manual.

Additional instructions in the form of Central Office supplements to the basic manual parts are currently being developed and will be issued at a future date.


Commissioner of Indian Affairs

Filing Instructions:

(a) Remove superseded material:
None

(b) Insert new material transmitted:
53 BIAM Supp. 5, Table of Contents
(dated 3/19/80)

(1 sheet)

53 BIAM Supp. 5, 1. and 2. and Illustrations 1-3
(dated 3/19/80)

(13 sheets)

Pen-and-ink changes:
None

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2. Practices
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 - C. Benefit/Cost Analyses
 - D. Records and Reports

Illustrations 1 - 3

FOREST DEVELOPMENT
General

1. GENERAL

1.1 Policy and Scope. Pursuant to Congressional directives for improved timber management on Indian lands, forest development activities will be conducted with emphasis directed toward on-the-ground accomplishment of reforestation, thinning and related investments that directly enhance timber production. Forest development funds will be used to establish, re-establish, maintain and/or improve growth of desirable commercial timber species and stocking levels when these goals cannot be fully accomplished silviculturally by timber harvesting activities. Treatment of forest areas and timber stands and practices to be used shall be planned and executed on a cost/benefit priority basis at the local level.

Forest development on tribal lands will normally take precedence over such practices on allotted lands on the same reservation due to the less stable tenure of ownership and land use of the latter. A primary criteria for making forest development investments will be that the long-term land use will be for commercial timber production. Where applicable, the provisions of the National Environmental Protection Act, as amended, will be met in the forest development program planning and implementation processes.

A. Tribal Lands. Forest development projects on tribal lands will be prepared after consultation with the tribe and, when possible, tribal resolutions approving such projects or programs will be secured. Priority for projects will be based on benefit/cost analyses.

B. Allotted Lands and Alaska Public Domain Native Allotments. Forest development projects on these lands should be prepared in a manner similar to those on tribal lands. This will be considered a trust function and, provided the cultural practice is fully justified, the allottee's permission is not required but should be actively sought. A benefit/cost analysis must be prepared and possible future uses of the allotment will be considered in preparing the analysis.

C. Former Alaska Reservations and Alaska Native Claims Settlement Act (ANCSA) Village Corporation Lands. Forest development projects on these lands will be prepared in a manner similar to those on tribal lands after consultation with the owners or their duly authorized representatives. When possible, approval of projects should be secured. Priority for projects will be based on benefit/cost analyses.

1.2 Authority. Refer to 53 BIAM 5.2. A major increase in funding for the Bureau's forest development program and a mandate for expanded accomplishments are directed by the Congress pursuant to P.L. 94-373 (Fiscal Year 1977 Appropriations Bill).

FOREST DEVELOPMENT
General

1.3 Responsibility. Refer to 53 BIAM 5.3

A. Assistant Secretary. The Assistant Secretary - Indian Affairs shall be responsible for:

(1) Maintaining consolidated records concerning Congressional add-on funds and forest development backlog data.

(2) Allocation and reallocation of funds to Areas based on current forest development backlog information, project execution capabilities, and accomplishments record.

(3) Preparation of Bureau-wide standards, planning, program oversight and progress reports to Congress.

B. Area Director. The Area Director will provide Agency Superintendents with forest development procedures, guidelines and policy interpretation. Target goals for accomplishments will be established, and project proposals will be secured from Agencies and approved in accordance with these established goals and forest development procedures. Following approval, available funds will be allocated to projects/programs. Periodic review and assessment of project accomplishments will be conducted, and reallocation of funds shall be made, as required, to insure attainment of Area-wide forest development goals.

The Area Director shall secure annual forest development reports from Agencies at the close of the fiscal year and submit a consolidated Area-wide report to the Assistant Secretary.

C. Superintendent. The Superintendent shall be responsible for:

(1) Development of projects that meet policy, guideline and target goal requirements. These shall identify and include all support needs.

(2) Secure accomplishment of projects as approved by the Area Directors.

(3) Maintain and submit annual project records and accomplishment reports including maps to the Area Director.

FOREST DEVELOPMENT
Practices

2. PRACTICES

2.1 General. Refer to 53 BIAM 5.4. Forest development add-on funds shall be used solely for improvement of commercial timber resources. Long-term forest development plans will be developed and updated for Indian lands having a commercial timber resource. Annual project plans shall be made and approved for such lands and subsequent allocations to fund proposed projects shall be made on the basis of these plans.

2.2 Specific Practices for Forest Development.

A. Forestation. The Congress has mandated that BIA harvest operations include provisions for forestation. Efforts will be made to obtain natural regeneration through cutting methods adapted to the silvicultural requirements of the stands. Regeneration plans shall be included in timber sale proposals which provide for re-establishment of the timber stand by natural regeneration or subsequent forestation projects. If after a reasonable period (as established by the Area Director) but not to exceed five years, it is apparent that adequate natural regeneration has not occurred, the stand will be re-established in accordance with the forestation plan set forth in the timber sale proposal. Practices for forestation of commercial timber lands include:

- (1) Planning, including regeneration inventories or stocking studies to determine most feasible areas and procedures.
- (2) Technical training to accomplish program objectives.
- (3) Site preparation, including site preparation for natural regeneration.
- (4) Seed acquisition through direct purchase, cone collection, establishment of seed producing areas and processing and storage of seed.
- (5) Planting stock acquisition, including greenhouse/nursery services or operations.
- (6) Planting or direct seeding operations.
- (7) Limited improvement of existing access into forestation project area(s) when necessary for project accomplishment and evaluation.
- (8) Protection of recently forested areas.
- (9) Project/program reporting, evaluation, records and maps.

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Practices

B. Timber Stand Improvement. In addition to mandating the restoring of Indian commercial timber land productivity, Congress has directed an intensification of forest improvement activities to maintain and/or enhance growth of existing timber stands. Timber stand improvement shall be identified in timber sale proposals as well as in the forest development project planning system. Practices for timber stand improvement include:

- (1) Planning, including stocking inventories and growing stock level studies to determine most feasible areas and procedures.
- (2) Professional or technical training to accomplish program objectives.
- (3) Noncommercial thinning (including cleaning, weeding, and release) by use of mechanical or approved chemical means.
- (4) Slash treatment when generated by thinning projects approved under the forest development program.
- (5) Fertilization of young, well-spaced timber stands.
- (6) Limited improvement of existing access into the T.S.I. project area(s) when necessary for project accomplishment and evaluation.
- (7) Protection of stands where T.S.I. investments are made.
- (8) Project/program reporting, evaluation, records, and maps.

C. Benefit/Cost Analyses. Benefit/cost analyses will be prepared for forest development projects or treatment practices in accordance with procedures that shall be established by the Area Director. These analyses will become a part of project files to be used locally in establishing the priority of forest development investments. In general, each benefit/cost analysis should follow the basic format provided in Illustration 1, Benefit/Cost Analysis, and shall contain as a minimum:

- (1) Present stand condition.
- (2) Planned treatment.
- (3) Statement as to why treatment is necessary.
- (4) Present stand value at time of harvest.
- (5) Projected stand value (after treatment) at time of harvest.

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(6) Cost of planned treatment.

(7) Other information available which could significantly alter benefit/cost ratio.

(8) Computed benefit/cost ratio using a discount rate found appropriate by the Area Director. Priority should be given to those projects or treatment practices where the benefit/cost analysis demonstrates the greatest return for the funds invested.

(a) The discount rate to be applied to determine net worth will be determined by the Area Director and shall be used throughout the Area. Determination of the assigned rate will include a review of rates used for similar activities in or near the Area.

(b) Stumpage values have been shown to be increasing at a rate over and above inflation. These increase factors should be applied to current stumpage value prior to discounting to determine current net value. These factors will be updated as appropriate to reflect future trends. Current factors should be obtained by Area Offices from the nearest U. S. Forest Service Regional Office.

D. Records and Reports. Prior to October 1 each year, Areas will submit to the Central Office a Forest Development Projects Planning Report for the forthcoming fiscal year (Illustration 2). After the close of the fiscal year, each Area will submit to the Central Office a Forest Development Projects Accomplishment Report (Illustration 3).

In addition, an interim accomplishment report may be requested by the Central Office to determine if all available funds are planned for their intended use or if there are funds available for reallocation.

As a source of information for the above reports, a detailed record of each project will be maintained permanently and shall contain as a minimum:

- (1) Benefit/cost analysis.
- (2) Type of project (planting, seeding, site preparation, etc.)
- (3) Time period of project.
- (4) Area of project.

FOREST DEVELOPMENT
Practices

- (5) Funds used.
- (6) Costs.
 - (a) Planning.
 - (b) Performing.
- (7) Source of planting stock or seed used.
- (8) Map of Project.
- (9) Results of Project.

Benefit/Cost Analysis: Proposed Reforestation Project

Problems

This area of 2,000 acres of brush in the Rocky Mountain Region is a good ponderosa pine site. Early day clearcutting plus a series of wildfires removed all the overstory and regeneration leaving only a brush field. The only method available to reforest this site is to remove the brush and plant.

Treatment

Through planting, this acreage can be added to the stocked acreage of the commercial timber land-base and the tree growth may be added to the AAC each year after establishment.

The cutting cycle for ponderosa pine on this site has been set at 80 years. The following data is based on estimated conditions using growth information acquired from previously planted sites.

Species	Ponderosa Pine
Present age:	-
Site Index:	55
Stocking before planting:	0 stems/acre
Stocking after planting:	450 stems/acre
Average volume growth projected:	275 bd.ft.acre/yr.
Cost of planting:	\$150 per acre

Analysis

For the purpose of the example, a five percent discount rate is used. The planted stand will yield 22,000 bd. ft. per acre at present value of \$90 per MBM in 80 years.

The average per year increase of stumpage over inflation for the Rocky Mountain and Southwest Regions is presently 2.62%.

Cost of planting is \$150 per acre based on planting 2,000 acres during last fiscal year.

Summary of Benefits

Generation of 44,000 MBM at the end of an 80-year cutting cycle at \$90 per MBM present value and 2.62% value increase per year per MBM on 2000 acres = \$15,773 per acre applied to the present stumpage price

before it is discounted for present net value. Applying a five percent discount rate to get the present value for all benefits:

\$15,773.34 per acre discounted 5% for 80 years = \$318.26
cost per acre for planting = \$150.00
benefit - cost per acre = \$168.26
benefit/cost ratio = 2.12:1

Note: Other possible projects have B/C ratios in the same range down to about 0.5:1.

Form 5-5344
March 1980

Report 53-26

FOREST DEVELOPMENT PROJECTS PLANNING

Instructions

Column headings are self-explanatory except for entries required under the heading entitled "Assigned to Forest Development Projects" namely:

1. Reforestation - Enter the estimated cost of seedling procurement, site preparation and field planting or seeding.
2. TSI - Enter the estimated cost of field operations only. Included here are thinning, pruning, and fertilization. Treatment of thinning slash is a part of the thinning operation.
3. Plan, Direct, Monitor - Includes all costs relative to administration of project work, forest development planning efforts and special studies.
4. All Other - Includes facilities construction and maintenance, road construction and maintenance, purchase of supplies and equipment, training, etc.

Form 5-5345
 March 1980

FOREST DEVELOPMENT PROJECTS ACCOMPLISHMENT REPORT

Report 53-27

Fiscal Year 19__

Location: _____

Agency	F.Y. _____ Add-On Alloc. \$M.0	Accomplishments and Expenditures (Forest Development Add-On Funds)				Accomplishments and Expenditures (All Other Fund Sources)			
		Reforestation Acres \$M.0	TSI Acres \$M.0	Plan Direct Monitor \$M.0	All Other \$M.0	Reforestation Acres \$M.0	TSI Acres \$M.0	All Other \$M.0	
TOTALS									

FOREST DEVELOPMENT PROJECTS ACCOMPLISHMENT REPORT

Instructions

COLUMN HEADINGS (Page 1 of 2)

1. AGENCY - The report must necessarily be portrayed by Agency. Where the Area Office retains and expends funds for forest development work, expenditure of these funds must also be shown in the appropriate columns.
2. ADD-ON ALLOCATION - Those funds allocated to each Area Office and Agency for the fiscal year in which the Accomplishment Report is prepared.
3. ACCOMPLISHMENTS AND EXPENDITURES (Forest Development Add-On Funds)
 - a. Reforestation - Enter number of acres reforested (planted, seeded, etc.) during the fiscal year and the cost incurred. Cost should only include those expenses related to seedling procurement, site preparation and actual field planting or seeding.
 - b. TSI - Enter total number of acres treated during the fiscal year and direct field cost incurred. Included here are thinning, pruning and fertilization. Treatment of thinning slash is a part of the thinning operation.
 - c. Plan, Direct, Monitor - Includes all costs relative to administration of project work, forest development planning efforts and special studies.
 - d. All Other - Includes facilities construction and maintenance, road construction and maintenance, purchase of supplies and equipment, training, etc.

Note: Because prior fiscal year "Add-On" funded projects may carry over into succeeding fiscal years, identify by footnote acres accomplished and dollars expended for each fiscal year for the Area as a whole. Make sure these same figures are included in the Agency accomplishment figures for the fiscal year being reported.

Loss of any fiscal year "Add-On" funds because of contract cancellation or other reason must be footnoted.

4. ACCOMPLISHMENTS AND EXPENDITURES (All Other Fund Sources) - Instructions are identical to 3. a., b., c. and d. above except Plan, Direct and Monitor expenditures are included under the column entitled "All Other." Fund sources include regular program funds, administrative fee monies, 8862, T.S.A. Add-On Funds, etc. Footnote the accomplishments funded by 8862.

COLUMN HEADINGS (Page 2 of 2)

1. Column headings are self-explanatory except for entries required under the heading entitled "Accruals," namely:
 - a. Real - Those accruals created through regular forestry activities or catastrophic events. Accruals created as a result of wildfire must be footnoted.
 - b. New Info. Those accruals arrived at through new inventories or surveys. They may be either positive or negative values.