

**Forest Service Handbook
Service Wide (WO)
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Forest Service Handbook 2409.18 – Timber Sale Preparation Handbook

Chapter 20 – Proposal Development (Gate 1) and Project Analysis and Decision (Gate 2)

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Superseded Directive: Timber Sale Project Development – Gate 1.

Approved by: Christopher French, Deputy Chief National Forest System.

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Responsible Staff: Forest Management, Rangelands Management, and Vegetation Ecology (FMRMVE)

Digest: Following is an explanation of the changes throughout the directive by section.

Chapter 20 – Restructures chapter. Revises direction pertaining to Gate 1 to correspond with the new Program Management process. Moves general financial and economic analysis direction to chapter 10 of this handbook. Moves salability, small sales, and sale purpose and activity code direction to chapter 10 of this handbook. Incorporates and revises direction pertaining to Gate 2 previously in chapter 30 of this handbook to correspond with the new Program Management process. Makes minor corrections in spelling, punctuation and style practices throughout the chapter. Updates and incorporates additional references throughout. Clarifies Timber Sale Project Design terminology. Clarifies that the gate system is also applicable to stewardship contracting. Substantive changes are as follows:

Sections 21 – 21.2: Revises captions.

Sections 21.21 – 21.41: Adds new codes.

Section 21.21: Incorporates direction previously in section 31.1 of this handbook.

Section 21.22: Incorporates direction previously in section 31.3 of this handbook.

Section 21.24: Incorporates direction previously in section 33 and 33.1 of this handbook.

Section 21.24a: Incorporates direction previously in section 33.2.

Section 21.24b: Incorporates direction previously in section 33.3.

Section 21.25: Incorporates Gate 1 specific financial and economic efficiency analysis direction previously in section 13.11 of this handbook.

Section 21.25a: Incorporates direction previously in section 13.2 of this handbook.

Section 21.25d: Incorporates direction previously in section 13.4 of this handbook.

Sections 22 – 22.2: Revises captions.

Section 22.2: Includes additional elements required by TIM in Gate 1.

Section 22.3: Removes previous code.

Section 23: Revises caption and incorporates direction previously in section 31 of this handbook.

Section 23.04: Adds a new code and aligns with FSM 2404.

Section 23.1: Adds a new code and incorporates direction previously in section 34 of this handbook.

Section 23.2: Adds a new code and incorporates direction previously in sections 32 and 32.1, as well as other sections of this handbook.

Section 23.21: Adds a new code and incorporates direction previously in section 13.2 of this handbook.

Section 23.22: Adds a new code and incorporates direction previously in sections 13.4 and 32.5 of this handbook.

Section 23.3: Adds a new code and incorporates direction previously in section 31.2 of this handbook.

Section 24: Revises caption and incorporates direction previously in section 35 of this handbook.

Section 24.1: Adds a new code and incorporates direction previously in section 35.1 of this handbook.

Section 24.2: Adds a new code and incorporates direction previously in sections 35.2 and 35.3 of this handbook. Includes additional elements required by TIM in Gate 2.

Section 25 – 27.2: Removes previous codes.

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21 - Proposal Development – Gate 1

Proposal development includes activities in the project management process that begin with the initial concept and end with the proposed action as shown in exhibit 01. The responsible official provides direction (leader's intent) to initiate the development of the project into a proposed action, assigning the appropriate and necessary staffing for the interdisciplinary team and identifying public and other agency engagement strategies. This is the first decision point in the process, to incorporate the project into the program of work.

21 - Exhibit 01

Project Management Process



21.1 - Initial Concept

Integration of various resources is imperative in developing a project proposal, beginning at the initial concept. The initial concept is examined holistically for synergistic, complementary, or other relevant treatment opportunities to meet objectives within the plan components of the land management plan. The holistic approach may also result in cost efficiencies by completing treatments simultaneously, or through use of stewardship authority to offset goods and services. An initial concept may not include timber sales as an implementation tool but may be modified during proposal development to include timber sales.

The initial concept of a project that includes timber sales as an implementation tool may precipitate from various sources, including but not limited to integrated resource or landscape level assessments to achieve desired conditions within the plan components of the land management plan, watershed analysis, or vegetation surveys. The initial concept may also result from implementing the 10-year timber sale action plan in the land management plan.

References to timber sales in sections 21 through 22.2 of this handbook are also applicable to stewardship projects that include disposal of timber or forest products.

21.2 - Proposal Development and Design

Interdisciplinary project development integrates the timber sale component with other objectives within the plan components of the land management plan (habitat management, restoration activities, and so forth); assists with refining the purpose and need; identifies potential resource effects and associated land management plan compliance actions (design elements); and identifies other requirements of law, regulation, and policy to design the proposed action.

Specialists in silviculture and forestry expertise in preparation, administration, and/or logging systems are included when timber sales are used as a tool to implement the project. In stewardship contracting, the team may also include, as appropriate, interested parties outside the Agency. The collaborative process is transparent and exists throughout the project timeline (FSH 2409.19, chapter 60). The good neighbor authority allows for the Cooperator to work closely from project conception to completion, including providing services in support of National Environmental Policy Act (NEPA) documentation (FSH 2409.19, sections 81.1 and 81.2).

The timber sale members of the team should review all available relevant information to arrive at an initial estimate of the feasibility of the proposed project and recommend to the responsible official whether the project should continue. Sources of information may include:

1. The land management plan, including lands suitable for timber production (FSH 1909.12, ch. 60 and Title 36, Code of Federal Regulations, section 219.11 (36 CFR 219.11)).
2. Existing landscape or area analyses or past timber projects. Landscape analyses may include aspects of resources such as watershed, soils, visual resource delineations, recreation areas, wilderness areas, and wildlife species (protected, endangered, and threatened). If no transportation analysis exists, review sufficient available resource data to determine the feasibility of developing the transportation systems needed to support the project. Information from past timber projects is collected through monitoring and evaluation during the implementation phase of the project management process. This information is valuable in determining consequences in similar, future projects.
3. Currently available resource data such as remote sensing, atlases, watershed analyses, previous sales and their impacts, revenue and cost data, soil and geologic data, visual resource management mapping, archaeological reconnaissance findings, fuel situation information, compartment inventory of stand data, fish and wildlife surveys and

inventories, ecological inventories, stream classification results, right-of-way needs, landline survey needs and property status, special-use permits, range allotment usages, recreation use patterns, topographic maps, stand record systems, and other data that pertain to the area of interest. Some of this information may exist in the form of Geographic Information System (GIS) layers which cover the project area.

4. Agency surveys, financial data, plans, and other information.
5. Readily available information from the stakeholders, forest visitors, landowners, user associations and groups, permittees.
6. Any pertinent data available from various locations in the organization, including the Ranger District, zone, Forest, and Regional levels.

21.21 - Field Reconnaissance

The timber sale members of the team should conduct field reconnaissance to develop sale and stewardship designs of the project timber sale component. Refer to FSM 2431.12a for the purpose of conducting reconnaissance surveys. Coordinate field reconnaissance with specialists in all relevant disciplines pertaining to the project. Field verify the accuracy of any GIS layers and refine the data for the project area. Leave adequate flagging, stakes, marks, or other tracks in the field to ensure sale preparation activities can continue in the most cost-effective manner practicable (FSM 2432.12d).

In salvage situations, use existing data and professional judgment to hasten the design process. The Land Management Planning Handbook, FSH 1909.12, section 64 and 36 CFR 219.11(d)(4)(iii) direct that unit size limitations shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm. Follow Regional guidelines for exceptions to unit size limitations in these situations.

21.21a - Silvicultural Diagnosis

Silvicultural diagnosis of stands within the project area are prepared or reviewed by the certified silviculturist in accordance with direction located in FSM 2470 and the Silvicultural Practices Handbook (FSH 2409.17, ch. 80). Under the good neighbor authority, the Forest Service shall prepare and/or approve the silvicultural diagnosis of stands within the project area. The silvicultural diagnosis may include non-timber treatment alternatives within a stewardship project. Management direction within the diagnosis is extracted from the plan components of the land management plan. The silvicultural diagnosis provides alternative treatments which inform the environmental document in Gate 2.

21.22 - Ecosystem Analysis

Consider any previous analysis using ecosystem management principles done at the landscape level in the sale or stewardship area design, including:

1. The past and future planned development for the entire watershed,
2. Adjacent area activities, and
3. The transportation analysis.

Consider the pattern, methods, and timing of vegetation treatments for the sale and surrounding areas to ensure future treatments and options continue to meet management objectives and ecosystem management principles.

21.23 - Preliminary Logging Plan

The preliminary logging plan depicts logging systems that may be appropriate for the project area being analyzed when timber sales are used to implement a project. Limitations on type and physical capability need to be considered for equipment that is available to harvest and transport timber from the area. Evaluate temporary, existing, and specified road needs within the project area that may be appropriate for the project activities that utilize the roads. Identify any physical, economic, and social limitations or barriers within the project area that would affect project activities and treatment alternatives, such as cultural resources, protected improvements, and other protected areas. The preliminary logging plan will contribute to a successful logging plan in Gate 3 and may prevent unexpected implementation and administration difficulties from occurring later (section 32.5 of this handbook discusses logging plan development during Gate 3). The logging plan may describe various designs for stewardship contracts or agreements with alternative non-timber treatments.

21.24 - Transportation Planning in Project Design

If transportation planning has been completed for the project area, review it for accuracy regarding the use of roads for project activities within the proposal when timber sales are used as a tool to implement a project. If transportation planning or analysis has not been completed for the sale area as part of the land management plan or a previous effort, complete it as part of the analysis for Gate 1. Refer to FSM 2431.12b for additional direction and references with regard to transportation analysis.

Plan integrated transportation and logging systems for the analysis area. Engineering and a forester with expertise in timber sale preparation, timber sale administration, and/or logging systems need to coordinate efforts to ensure roads are built to standards that can support logging traffic. If roads must be built to a higher standard, ensure supplemental funds are

available to offset the additional cost as described in section 31.2 of this handbook. Roads intended to be used to haul logs need to be travelled or walked during field reconnaissance (section 21.21 of this handbook regarding field reconnaissance) to identify potential problems with using the roads and prevent unforeseen design issues or costs. Confirm that roads intended to be used to haul logs through non-Forest Service ownership have right-of-way easements consistent with intended use. Ensure the requirements for construction, operation, and maintenance of roads for commercial timber sale use are consistent with harvesting procedures and the land management plan and will achieve resource management objectives. Refer to section 31 of this handbook for additional direction regarding timber sale roads. Apply the following rules to transportation planning:

1. Integrate the transportation planning process with other resource analyses to ensure the road system requirements meet documented resource management objectives;
2. Consider alternative road systems and timber harvest methods in the transportation planning process;
3. Document National Forest System roads selected in planning on the transportation atlas as long-term or short-term facilities;
4. Analyze existing National Forest System roads to ensure the roads meet the requirements of FSM 7720 before timber sale use;
5. Justify recommendations for exclusions of commercial use on National Forest System roads by preparing a statement of the reasons for exclusion, other alternatives considered, and the costs involved; and
6. Consider using low-standard or controlled temporary road construction when salvaging timber.

21.24a - Planned Capacity

Plan for timber sale haul roads with the capacity to safely handle the scheduled traffic when timber sales are being used as a tool to implement a project. Determine any operating or hauling restrictions that apply to the roads and bridges. Apply the following rules:

1. Permit no road use if the use would cause irreparable damage to the road or unacceptable impacts to adjacent resources. Damage does not include normal wear and tear correctable by maintenance activities. Refer to section 31.3 of this handbook regarding use of existing roads.

2. If the additional traffic generated by an individual sale exceeds the operational limits of a road, authorize the additional use only if one or more of the following conditions apply:
 - a. Road construction occurs in advance of the sale,
 - b. Traffic management controls can be implemented within the limits of the facility. For public safety, restrict public access in situations where low-standard or temporary roads are used for quick access to salvage, or
 - c. Road reconstruction occurs as a requirement of the sale.
3. Use appropriated funds to finance that portion of the reconstruction needed to accommodate the traffic on the road prior to the sale.
4. Design roads constructed on National Forest System lands to standards appropriate for the intended uses, which may include logging, other commercial traffic, and public traffic; consider safety, cost of transportation, and impacts on lands and resources. Design and construct roads as stable and durable structures to facilitate maintenance during and after use. Include necessary drainage facilities, adequate erosion control, gates or other closure devices, and resource protection devices. Incorporate best management practices to respond to endangered species, sediment control, and standards within the plan components of the land management plan. Refer to section 31.21 of this handbook for additional direction on specified road construction standards.

21.24b - Specified Roads

Refer to section 31.2 of this handbook for additional direction on specified roads when timber sales are used as a tool to implement a project. Use specified roads when:

1. Road requirements are necessary to minimize temporary and extended impacts on resources, especially, land, water, wildlife, and air;
2. Construction is required to maintain a quality that permits future use without need to re-accomplish or replace work that is currently in satisfactory condition. Construction should minimize repeated impacts and avoid unacceptable risks to resources. It should not result in future capital expenditures, such as rebuilding or relocating roads for each sale;
3. Pavement structures are needed for structural support or to prevent erosion from traffic or natural elements. Pavement structures should have sufficient depth for wear and maintenance during and at the termination of the sale; or

4. Construction requirements result in the lowest total transportation cost (construction, hauling, and maintenance) for the sale, while ensuring safety and minimizing temporary or extended resource impacts.

21.25 - Financial Analysis at Gate 1

Procedures on completing the financial efficiency analysis are provided in section 14 of this handbook. Determine the primary purpose of the proposal as described in sections 11.51 through 11.51a of this handbook. Use financial analysis to determine the financial efficiency of activities considered in formulating the proposed action when timber sales are used as a tool to implement the proposal. At this stage of project development, prior to undertaking major implementation investments, it is important to evaluate the financial efficiency of the proposal to determine if it represents a prudent means of achieving resource objectives within the plan components of the land management plan. This analysis, along with information on the purpose of the harvest, provides the responsible official information to determine the feasibility of the proposal and whether further investment of resources is warranted. A timber sale project plan (sections 12, para. 1; and 21.4 of this handbook) may include one or more timber sales, permit areas, or stewardship projects that include disposal of timber or forest products.

Any service work associated with stewardship projects that include disposal of timber or forest products will be included within the analysis. The financial efficiency analysis is only one of multiple factors in the decision-making process. In stewardship projects, financial efficiency is used to compare viable options of completing the stewardship restoration objectives.

Procedures for completing an economic efficiency analysis are provided in section 15 of this handbook, if such an analysis is warranted.

21.25a - Scope of Analysis

The financial efficiency analysis at Gate 1 should be an analysis of the net financial revenue or cost of the proposal.

Estimates of timber revenues are determined based on transaction evidence base period values, by species, and adjusted for significant cost or value differences. Unit costs per hundred cubic feet (CCF) may be estimated and applied based on Forest-wide averages if site-specific data is not available. Non-timber activities being considered in the proposed action, such as wildlife habitat enhancement, should be included in the analysis along with timber activities. The acreage and volume of timber harvest and other treatments should be based on estimates within the proposed action.

Section 21.25c of this handbook provides guidance on how to complete the financial efficiency analysis at Gate 1 and includes a suggested format to display the results. Include within the

analysis a description of the purpose of the project as it relates to objectives within the plan components of the land management plan and a comparison of estimated short-term revenue with estimated short-term cost. The analysis may also include projections of long-term revenues and costs into the future, discounted to the present.

21.25b - Feasibility

Before a decision is made to proceed to Gate 2 on a project that includes timber sales as a tool to implement the proposal, each of the factors in section 13 of this handbook must be evaluated. Consider these factors when determining feasibility and whether to progress to Gate 2. Document in the timber sale project plan the final determination to continue or discontinue the project.

As discussed in section 13 of this handbook, feasibility also needs to be analyzed for stewardship contracts and agreements that result in disposal of timber or forest products. The type and amount of service work bundled into a contract or agreement which removes timber or forest products may enhance or detract from the feasibility of a stewardship project.

21.25c - Project-Level Financial Analysis

1. Before proceeding with a project proposal, develop the short-term financial efficiency estimate for the proposed action. This analysis normally covers a period of 3 to 10 years (Gate 1 through reforestation if the harvest is a regeneration cut, or through harvest of the existing stand if the harvest is an intermediate cut).
2. Calculate the financial present net value (PNV) for the proposed action in accordance with section 14.2 of this handbook. For revenue and cost estimates, use data that best represent the revenues or costs that are expected to occur. For stewardship projects that include disposal of timber or forest products, include associated service work within the analysis.
3. Calculate the 3-year average financial costs for direct cost categories in accordance with section 14.32 of this handbook. These financial costs include Forest Service budget expenditures only. Do not include any program planning costs or costs that occurred prior to the starting point of the analysis (Gate 1).
4. Discount the costs and revenues to year “0” (the year Gate 1 is accomplished) by using the methodology and formulas described in section 14.33 of this handbook, or by using a computer program that uses the same calculation procedures.

The financial PNV is the difference between the total discounted revenues and the total discounted financial costs. If needed for analysis, values can be compared based upon one unit

of volume. To arrive at these values, the unit revenue, unit financial cost, and unit financial net revenue can be calculated by dividing the totals by the amount of volume anticipated for sale.

The financial analysis at Gate 1 is a comparison of estimated costs and revenues from the potential harvest of the existing stand. A more comprehensive analysis that includes an analysis of future costs and benefits is performed at Gate 2 (sec. 23.2 of this handbook), but is not mandatory at Gate 1. Computer software packages that perform discounting and other analytical techniques may be used to expedite the Gate 1 financial analysis. QuickSilver, a software program maintained by the Washington Office, is available to perform the calculations and documentation required to complete the analysis.

Non-market values and non-Forest Service costs are not a part of the Gate 1 financial analysis and are not included in the calculation of the financial PNV. Exhibit 01 provides a sample format for documenting results of the Gate 1 financial analysis.

21.25c - Exhibit 01

Example of Gate 1 Short-term Financial Analysis Information 1/

Benefit/Cost Category	Short-term Existing Stand
Financial Efficiency Analysis (Required)	
Revenue	
Timber	\$759,100
National Forest System Roads	21,300
Recreation	1,000
Range	2,000
Other <u>1/</u>	<u>0</u>
Total Present Value Revenues	<u>\$783,400</u>
Financial Costs <u>2/</u>	
Harvest Administration	\$ 73,500
Sale Preparation	51,100
Environmental Analysis and Documentation	28,200
Other Resource Support	19,900
Brush Disposal (FS Cost Only)	9,000
Road Design and Construction (FS Cost Only)	11,500
Reforestation <u>3/</u>	82,000
KV Work Other than Required Reforestation	22,300
Silvicultural Exams	0
Stand Improvement	0
Timber and Transportation Planning	0
Other <u>1/</u>	<u>0</u>
Total Present Value Financial Costs	<u>\$297,500</u>
Financial PNV	<u>\$485,900</u>
Economic Efficiency Analysis (Optional)	
Economic Benefits	
Timber	\$783,400
National Forest System Roads	21,300
Recreation	1,500
Range	2,000
Water	0
Wildlife and Fish	200
Other <u>1/</u>	<u>0</u>
Total Present Value Economic Benefits	<u>\$808,400</u>
Economic Costs (Total Present Value) <u>2/</u>	
Financial Costs	\$297,500
Non-market Costs (list separately)	0
Cooperative Road Maintenance	1,800
Other <u>1/</u>	<u>0</u>
Total Present Value Economic Costs	<u>\$299,300</u>
Economic PNV	<u>\$509,100</u>

1/ Short-term analysis includes the revenues and financial costs of the existing stand only (through reforestation for regeneration harvest).

2/ It is not mandatory to display cost detail if it is included in supporting documentation

3/ Existing stand reforestation costs should be included for regeneration cuts only.

21.25d - Displays and Documentation

Append the financial efficiency analysis, economic efficiency analysis (if appropriate), and feasibility determination results and documentation to the timber sale project plan (sections 12, para. 1; and 21.4 of this handbook).

21.3 - Proposed Action

The proposed action is the culmination of modifying the initial concept in response to information obtained through the interdisciplinary process for a holistic project incorporating appropriate activities and treatments within a landscape. The proposed action explicitly incorporates design elements (implementation criteria) necessary for land management plan consistency. The proposed action is designed to meet plan components of the land management plan and be consistent with law, policy, and regulation.

This is the second decision point in the project management process, accepting the proposed action to initiate the environmental analysis process.

21.4 - Timber Sale Project Plan

The timber sale project plan is a two-component document. Both components are titled “Timber Sale Project Plan.” The first component is a narrative document aggregating the information gathered during the proposal development process. The second component is a certification signed by the responsible official which is printed from the Timber Information Manager (TIM) as described in section 22.1 of this handbook. The first component is attached to the second component.

Within the first component, the results of the proposal development process (proposed action) are used to inform the environmental analysis process for a project expected to result in timber sales, stewardship contracts, or stewardship agreements that include disposal of timber or forest products. The timber sale project plan references the proposed action to identify the appropriate sale objective codes (sections 11.51 through 11.51a of this handbook). The timber sale project plan provides verification of a proposed project and identifies expenditures for completing subsequent “gate” actions. Include recommendations on the feasibility and efficiency of preparing the project and documentation of the analysis used to arrive at the findings. Use information derived from the proposal development process (section 21.2 of this handbook) to make these recommendations. The timber sale project plan documents the responsible official’s determination that investments in project planning should or should not continue for a given area of National Forest System land. Preparation of the plan may provide a basis for soliciting information and assistance from other agencies and interested or potentially affected segments of the public.

21.41 - Contents of Timber Sale Project Plan

Each timber sale project plan should adequately address implementation issues influencing project decisions and should provide the responsible official with options with which to address landline location, transportation networks, resource skill requirements, sensitive issues, financial efficiency, salability to potential purchasers, and other impacts and opportunities influencing timber sale and stewardship projects that include disposal of timber or forest products. Timber sale project plans should be developed prior to beginning sale preparation activities to provide the responsible official the information needed to evaluate financial efficiency and to achieve objectives within the plan components of the land management plan.

At a minimum, the timber sale project plan must:

1. Describe the proposed project area and verify the compartment and management area of proposed activities. A timber sale project plan may include one or more timber sales, permit areas, stewardship contracts, or stewardship agreements;
2. State resource objectives within the plan components in accordance with the land management plan, and provide a preliminary classification of the sale or sales, or portions of the sale or sales, defining the primary purpose of the proposed harvest (sections 11.51 through 11.51a of this handbook describe sale objective codes for projects);
3. Identify critical timber sale implementation concerns related to the proposal;
4. Identify special skills needed to address critical timber sale implementation concerns;
5. Identify and update pertinent information within and adjacent to the project area and indicate potential outputs, including those identified in the land management plan;
6. Develop preliminary direction that relates how the silvicultural, logging, and road systems must function to meet the resource objectives;
7. Display the results of the financial analysis and the purchaser salability analysis conducted to determine if the timber sale component is a feasible and efficient means of achieving the objectives within the plan components of the land management plan;
8. Verify the lands are suitable for timber production, or the proper National Forest Management Act (NFMA) exemption exists for harvest on unsuitable land, to ensure the project is compliant with plan components of the land management plan;
9. Display on a standardized map the information necessary to delineate key items described in the preceding paragraphs; and

10. Provide for approval by the responsible official, the feasibility of the proposal and a determination whether further investment in the proposal is warranted.

22 - Tracking and Reporting At Gate 1

22.1 - Documentation

Before moving to Gate 2, accomplish the following:

1. Enter project information in the Timber Information Manager (TIM) described in section 11.5 of this handbook; and
2. Obtain Line Officer (responsible official) approved certification specified in FSM 2432.15, "Timber Sale Project Plan." The project must be within the delegated disposal authority of the Line Officer as shown in FSM 2404.28. The first component of the timber sale project plan described in section 21.4 of this handbook must be attached to the printed certification (which is the second component of the complete timber sale project plan).

The completion date of Gate 1 is the date the certification report is signed. Gate 1 is locked in TIM when the certification report is printed. Accomplishment timing of this gate does not vary between regular program projects, stewardship, Healthy Forest Restoration Act (HFRA) projects, or good neighbor authorities.

22.2 - Sale Tracking and Reporting

Incorporate the information developed at Gate 1 into TIM. The following information must be included:

1. Project name;
2. Project identification number;
3. Planning, Appeals, and Litigation System (PALS) project name;
4. Planning, Appeals, and Litigation System (PALS) project identification number;
5. Actual date certification report is signed;
6. Estimated volume; and
7. Estimated bid date (fiscal year).

23 - Project Analysis and Decision – Gate 2

Provide, where necessary, the appropriate analysis and documentation as specified by NEPA policy and procedures located in FSM 1950, FSH 1909.15, and 36 CFR 220. In support of the project analysis process when timber sales are used as a tool to implement the project, the following must also be addressed:

1. Produce a timber sale project design that is useful in preparing timber sales during sale project implementation (Gate 3);
2. Provide feasible implementation strategies to inform alternative development during the environmental analysis process; and
3. Provide for financial efficiency (sec. 23.2 of this handbook discusses how to measure efficiency) in meeting plan components of the land management plan;

References to timber sales in sections 23 through 24.2 of this handbook are also applicable to stewardship projects.

23.04 - Responsibility

Refer to FSM 2404 for Line Officer responsibility for environmental documentation when timber sales are used as a tool to implement the project. Additional responsibilities identified in FSM 2404 may pertain to analyzing the project; such as presale preparation, cost efficiency, feasibility, range of implementation tools, and so forth.

23.1 - Environmental Analysis

The steps necessary to support an efficient environmental analysis are shown in section 21, exhibit 01 of this handbook, which include scoping, alternative development, effects, findings, observation, and decision. Refer to FSM 1950, FSH 1909.15, 36 CFR 220, and FSM 2432.22g for principal direction pertaining to environmental analysis. Consider requirements, opportunities, and limitations when implementation tools such as stewardship authority, HFRA, and good neighbor authority are being considered for timber management. Stewardship and good neighbor authority are discussed in FSH 2409.19, chapters 60 and 80 respectively.

23.2 - Financial and Economic Analysis at Gate 2

Procedures on completing and updating the financial efficiency analysis are provided in section 14 of this handbook and FSM 2432.22a. Financial efficiency analysis is not required by NEPA, however it is a tool to identify efficiencies that may be attained through varying implementation activities in projects that include timber sales as an implementation tool. This analysis must be included in the development of silvicultural prescriptions. Update the Gate 1

analysis with more site-specific information to determine whether further investments of resources and capital in the project are worthwhile and, if so, which project alternative provides the most efficient means of achieving the stated project objectives. A timber sale project design (section 12, para. 2; and 23.3 of this handbook) may include one or more timber sales, permit areas, or stewardship projects that include disposal of timber or forest products.

As stated for Gate 1, any service work associated with stewardship projects that include disposal of timber or forest products will be included within the analysis. The financial efficiency analysis is only one of multiple factors that the decision maker considers when making the decision. In stewardship projects, financial efficiency is used to compare viable options of completing the stewardship restoration objectives.

Procedures for completing an economic efficiency analysis are provided in section 15 of this handbook, if such an analysis is warranted.

1. Complete the financial efficiency analysis for each alternative that is formulated and examined in detail during the environmental analysis at Gate 2. Complete each analysis using a pre-investment perspective during initial stages of project development before making major management decisions on whether or how to continue with the project. Base each analysis on all activities specified in the alternatives, including harvest methods and mitigation measures. Actions that are related to the existing stand and activities and outputs associated with regenerated stands must be consistent with plan components of the land management plan.
2. If a portion of the project is designed to achieve forest stewardship objectives, consider the development of methods that would achieve the non-timber objectives within the plan components of the land management plan through non-harvest methods (sections 11.51 through 11.51a of this handbook describe sale objective codes).
3. The financial efficiency analysis should be formulated during the project development process (sec. 21.25 of this handbook), then updated and revised as needed during the environmental analysis phase and the input data are refined.
4. The financial efficiency analysis provides information that contributes to overall timber sale program financial efficiency. The information can be used to evaluate the efficiency of alternatives relative to improving the financial position of the timber sale program.

QuickSilver, a software program maintained by the Washington Office, is available to perform the calculations and documentation required to complete the analysis.

23.21 - Scope of Analysis

At Gate 2, update and expand the financial efficiency analysis developed in Gate 1 to display the relative difference in financial efficiency between alternatives being proposed in the environmental analysis when timber sales are being used as a tool to implement a project (sec. 21.25 of this handbook describes the financial analysis conducted in Gate 1).

Examine the long-term effects on financial efficiency by including future costs and revenues and discounting them to the present. Section 14 of this handbook provides guidance for completing the efficiency analysis, and section 23.22 of this handbook provides a suggested format for displaying the results of the analysis. Include within the financial efficiency analysis a comparison of short-term revenues and costs for each timber sale implementation alternative being proposed and an estimate of long-term financial efficiency (projected at least 60 years into the future) with anticipated costs and revenues discounted to the present. The analysis may also include projections of financial efficiency beyond the 60-year minimum through one full rotation or infinitely (to derive the soil expectation value).

23.22 - Displays and Documentation

Append the financial and, if appropriate, economic efficiency analysis results and documentation to the timber sale project design (section 12, para. 2 of this handbook), and/or silvicultural prescription, as appropriate. Incorporate by reference or append the financial efficiency analysis and economic efficiency analysis (if completed) to the environmental analysis documentation.

Report the results of the Gate 2 financial analysis in a table similar to that displayed in exhibit 01.

23.22 - Exhibit 01

Gate 2 Financial and Economic Efficiency Information

Benefit/Cost Category	Short-term Existing Stand	Long-Term Regeneration Stand	Both Stands
Financial Efficiency Analysis (Required)			
Revenue			
Timber	\$759,100	\$239,500	\$998,600
National Forest System Roads	21,300	500	21,800
Recreation	1,000	4,000	5,000
Range	2,000	13,000	15,000
Other <u>1/</u>	0	0	0
Total Present Value Revenues	\$783,400	\$257,000	\$1,040,400
Financial Costs			
Harvest Administration	\$ 73,500	\$1,400	\$74,900
Sale Preparation	51,100	1,000	52,100
Environmental Analysis and Documentation	28,200	600	28,800
Other Resource Support	19,900	400	20,300
Brush Disposal (FS Cost Only)	9,000	200	9,200
Road Design and Construction (FS Cost Only)	11,500	200	11,700
Reforestation <u>2/</u>	82,000	1,600	83,600
KV Work Other than Required Reforestation	22,300	400	22,700
Silvicultural Exams	0	200	200
Stand Improvement	0	2,600	2,600
Timber and Transportation Planning	0	700	700
Other <u>1/</u>	0	0	0
Total Present Value Financial Costs	\$297,500	\$9,300	\$306,800
Financial PNV	\$485,900	\$247,700	\$733,600
Economic Efficiency Analysis (Optional)			
Economic Benefits			
Timber	\$783,400	\$257,000	\$1,040,400
National Forest System Roads	21,300	500	21,800
Recreation	1,500	4,400	5,900
Range	2,000	13,000	15,000
Water	0	1,200	1,200
Wildlife and Fish	200	4,600	4,800
Other <u>1/</u>	0	0	0
Total Present Value Economic Benefits	\$808,400	\$280,700	\$1,089,100
Economic Costs (Total Present Value)			
Financial Costs	\$297,500	\$9,300	\$306,800
Non-market Costs (list separately)	0	0	0
Cooperative Road Maintenance	1,800	100	1,900
Other <u>1/</u>	0	0	0
Total Present Value Economic Costs	\$299,300	\$9,400	\$308,700
Economic PNV	\$509,100	\$271,300	\$780,400

1/ Document the source and nature of "other" revenues, costs, and benefits.

2/ Existing stand reforestation costs should be included for regeneration cuts only.

23.3 - Timber Sale Project Design

The timber sale project design is a two-component document. Both components are titled “Timber Sale Project Design.” The first component is a narrative document aggregating the information gathered during the environmental analysis and decision process. The second component is a certification signed by the Line Officer which is printed from the Timber Information Manager as described in section 24.1 of this handbook. The first component is attached to the second component.

Within the first component, the timber sale project design is a narrative summary of documentation gathered during Gates 1 and 2 to support the environmental analysis and decision. The timber sale project design document includes sufficient site-specific information, preliminary sale design, and appropriate management guidance to facilitate implementation at Gate 3 of a sale, stewardship contract, or stewardship agreement that includes disposal of timber or forest products. A timber sale project design may include one or more timber sales, permit areas, or stewardship projects that include disposal of timber or forest products and must include the following:

1. Approximate cutting unit location and size;
2. Nature and condition of timber stands proposed for harvest;
3. Silvicultural prescriptions;
4. Selected logging systems information;
5. Locations and standards of local, collector, and specified roads;
6. Planned fuel treatments;
7. Location of key resource values;
8. Preliminary design for resource improvements;
9. Zones or areas with specific management requirements, constraints, or mitigation requirements;
10. Financial and economic information as described in section 23.2 of this handbook; and
11. Description of service work to be performed for stewardship (if appropriate).

Use of Regional forms, National forms, software, marking guides, harvest layout notes, or checklists is encouraged to ensure a more complete information transfer. Avoid excessive use of jargon, codes, or abbreviations in timber sale project design documents.

24 - Tracking and Reporting At Gate 2

Gate 2 is completed when the Line Officer who acts as the decision maker (responsible official) determines the selected alternative through the environmental analysis process, signs the appropriate National Environmental Policy Act (NEPA) decision document, approves a timber sale project design (project plan), and signs the certification report generated by the Timber Information Manager (TIM).

24.1 - Documentation

As a minimum requirement to complete Gate 2 from a timber management perspective, documentation must include:

1. A signed NEPA decision document (Decision Memo, Decision Notice, or Record of Decision);
2. A project file containing analysis documents and information supporting the environmental analysis;
3. A timber sale project design narrative document that provides field instructions for carrying out the decision. As discussed in section 23.3 of this handbook, the timber sale project design summarizes the documentation gathered during Gate 2 to support the environmental document and decision. It provides a crosswalk from Gate 2 to Gate 3 to ensure the project(s) within the environmental documentation are implemented as designed; and
4. Line Officer (responsible official) certification specified in FSM 2432.23, “Timber Sale Project Design.” NEPA decisions for stewardship contracting and good neighbor authority remain the responsibility of the Forest Service responsible official and may not be delegated (FSH 2409.19, sections 61.11 and 81.1). The project must be within the delegated disposal authority of the Line Officer as shown in FSM 2404.28. The first component of the timber sale project design described in section 23.3 must be attached to the certification (which is the second component of the complete timber sale project design). The completion date for Gate 2 is the date the certification report is approved. Gate 2 is locked in TIM when the certification report is printed. Accomplishment timing of this gate does not vary between regular program projects, stewardship, HFRA projects, or good neighbor authorities.

24.2 - Sale Tracking and Reporting

Incorporate the information developed or updated at Gate 2 into TIM. As needed, and as indicated by changes resulting from the environmental analysis and decision process, update the timber sale objective codes and corresponding percentages (sections 11.51 through 11.51a

of this handbook describe the sale objective codes for projects). The following information is required:

1. Project name;
2. Project identification number;
3. Planning, Appeals, and Litigation System (PALS) project name;
4. Planning, Appeals, and Litigation System (PALS) project identification number;
5. Actual date certification report is signed;
6. Estimated volume;
7. Estimated bid date;
8. Estimated acres to harvest;
9. Estimated specified road construction and reconstruction mileage and cost; and
10. Type of decision document and date.