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FINAL
HERGER-FEINSTEIN QUINCY LIBRARY GROUP FOREST RECOVERY ACT PILOT PROJECT

STATUS REPORT TO CONGRESS FISCAL YEAR 2002

Spanish DFPZ Prescribed Burn, April 2002. Mount Hough Ranger District, Plumas National Forest.

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TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

LIST OF PICTURES

Executive Summary

The *Herger-Feinstein Quincy Library Group Pilot Project Status Report, Fiscal Year 2002* is the fourth annual status report required by the Herger-Feinstein Quincy Library Group Forest Recovery Act of 1998 (HFQLG Act). It covers the period from October 1, 2001 to September 30, 2002 (FY02) and describes how, and to what extent, the specific mandates of the HFQLG Act were accomplished. The HFQLG Act was signed into law in October 1998 and is attached in Appendix A. A brief history of the Pilot Project can be found in Appendix B.

Since the Herger-Feinstein Quincy Library Group (HFQLG) Final Environmental Impact Statement Record of Decision (ROD) was signed in August 1999, the Pilot Project has accomplished 79 projects consisting of approximately 64,000 acres of Defensible Fuel Profile Zones (DFPZ), 3,300 acres of small Group Selection (GS), and 2,300 acres of Individual Tree Selection (ITS). Additionally, the Pilot Project has accomplished 40 riparian restoration projects consisting of 1,900 acres. See Table 1 below.

Table 1. Summary of Allocation, Expenditures and Accomplishments: FY99 to FY02.

Fiscal Year	**Allocation** (Millions$)	**Expenditures** (Millions $)	**Resource Management Activities Accomplished** (Acres)				
			DFPZs	GS	ITS	Riparian Restoration	Total Acres
1999	8.0	2.0	640	0	172	0	812
2000	12.2	7.2	7,158	200	772	81	8,211
2001	26.2	28.2	38,421	1,949	528	945	41,843
2002	26.2	21.5	17,636	1,171	824	838	20,469
Totals	**72.6**	**58.9**	**63,855**	**3,320**	**2,296**	**1,864**	**71,335**

Accomplishments projected by the HFQLG EIS through FY02 are 120,000 to 180,000 acres of DFPZs, 26,100 acres of GS, and unspecified amounts of ITS and riparian restoration, not exceeding 210,000 total acres of Pilot Project treatments. With three of the five years completed, the Pilot Project has accomplished less than half of the minimum expectations for DFPZ and GS, while expending implementation funds at two-thirds the rate of the estimated need ($31 million per year).

Reasons for this include:

- HFQLG ROD Mitigation Measure: Until the Forest Service developed new owl guidelines, no Pilot Project activities could occur in suitable owl habitat. This pushed GS treatments for FY00 and FY01 to the eastside districts of the Pilot Project (non-owl habitat), where opportunities for treatments were significantly less than on the westside and transition-zone districts.
- Supplemental Environmental Impact Statement (SEIS): In June 2001, a Federal District Court judge ordered the Forest Service to develop a SEIS considering maintenance requirements for DFPZs, including the use or non-use of herbicides. The SEIS Draft was published in October 2001, and the Final ROD is expected to be published in June 2003.

- Sierra Nevada Forest Plan Amendment (SNFPA) ROD: This decision, made in January 2001, replaced the Mitigation Measure. As a result, Standards and Guidelines for Pilot Project DFPZ construction were altered, reducing opportunities for cost-effective DFPZ projects. The SNFPA also limited GS activities to projects already in preparation in non-owl habitat, and to 4,000 acres per year in an Administrative Study (the Study), to be planned in cooperation with the Pacific Southwest Research Station.
- Plumas Lassen Administrative Study: The SNFPA ROD authorized the Study, and anticipated use of Pilot Project group selection to be part of the treatments investigated. Difficulties in developing the Study, together with the realization in Spring 2002 that an Environmental Impact Statement for the entire study would be required, precipitated a change in the FY02 program of work and delaying over 20,000 acres of HFQLG projects scheduled in FY02.
- SNFPA Review Team: The Regional Forester's SNFPA Review Team, charged in part with seeking improved compatibility of SNFPA with the Pilot Project, has had minimal direct impact on Pilot Project implementation thus far. The Team's Findings and Recommendations, due out in March 2003, could significantly alter Standards and Guidelines for fuels treatments and group selection in FY04 and beyond.
- Fiscal Year 2002 National Forest Fire Suppression Costs: $1.3 million of FY02 HFQLG funding was withdrawn to help cover the anticipated $1 billion shortfall in National Forest Fire Suppression funding, in order to avoid an Anti-Deficiency Act violation.

Chronological Summary of FY02 Events and Activities:

- October 2001: The SDEIS was released.

- November 2001: The Chief of the Forest Service upheld the SNFPA EIS Record of Decision, but also directed the Pacific Southwest Regional Forester to include the Pilot Project as one of the three points requiring further review. The Quincy Library Group voted to "suspend regular public meetings because the Sierra Nevada Framework has effectively killed our project and until it is removed there is no effective way to implement our project as designed by the QLG and passed by Congress". The Regional Office awarded a contract for a cumulative effects analysis for the Administrative Study.

- December 2001: The action plan and timeline for the SNFPA review was released.

- March 2002: A revised Draft Plumas Lassen Administrative Study was released, and a revised group selection strategy for the Administrative Study was finalized. Also, the Plumas Forest Project and the Forest Preservation Council filed a lawsuit challenging the Crystal Adams DFPZ and Group Selection project planned on the Plumas National Forest.

- April 2002: The Quincy Library Group resumed public meetings when USDA Deputy Undersecretary Dave Tenny visited the Pilot Project.

- June 2002: The environmental analysis for the Administrative Study was initiated.

- July 2002: All National Forests were directed by the Chief to defer spending due to the cost of wildfire suppression throughout the nation. Approximately $1.3 million of HFQLG funds were contributed to national fire suppression activities.

Regular work on project implementation, administration, and monitoring continued to take place throughout the summer, as well as field trips, meetings, and forums with QLG and other interested people. Also, Forest Service staff within the Pilot Project forests worked with local Fire Safe Councils and newly formed Resource Advisory Committees (RACs) to align efforts with the National Fire Plan and the President's Healthy Forest Initiative with HFQLG.

Environmental Impacts

No adverse environmental impacts resulting from Pilot Project activities were documented in FY02. However, initial monitoring for soil compaction revealed that 53% of sampled units exceed the compaction threshold prior to treatment. Without mitigation, a high percentage of treatment units will likely exceed detrimental compaction thresholds, as was anticipated in the HFQLG EIS.

Economic Benefit Summary for FY02

In FY02, business and organizational revenue, including dollars spent directly by the Forest Service and its employees, as well as secondary benefits, totaled $13.6 million in the Core Area (Lassen, Plumas, and Sierra Counties) and $17.3 million in the Peripheral Area (Butte, Nevada, Shasta, Tehama, Yuba, and Washoe Counties), for a total of $30.9 million. Labor income was $5.0 million in the Core Area and $7.6 million in the Peripheral Area, totaling $12.6 million. The Pilot Project supported 194 jobs in the Core Area, and another 264 jobs in the Peripheral Area, totaling 458 jobs.

FY03 Pilot Project Activities

At the start of FY03, forty vegetation management projects were planned for accomplishment, including 33,800 acres of DFPZs, 1,600 acres of group selection, and 2,900 acres of individual tree selection. Sawlog volume estimates were predicted to be approximately 62,848 hundred cubic feet (CCF) or 31.4 million board feet (MMBF) (See Appendix D, Second Implementation Plan Update). Seven of the FY03 projects, with 11,300 acres of accomplishment and including all 1,600 acres of GS, are contingent on completion of the Administrative Study EIS decision in Summer 2003. Now the Record of Decision for the Study EIS is expected no sooner than November 2003. Accomplishment of the seven HFQLG projects in the Study area will be postponed, and the FY03 program will be revised.

Twenty-three riparian restoration projects are planned in FY03, with an expected 1,300 acres of accomplishment. These projects will include meadow restoration and enhancement, stream channel improvement, road relocation, road closure, and slope stabilization.

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Introduction

The *Herger-Feinstein Quincy Library Group Pilot Project Status Report, Fiscal Year 2002* is the fourth annual status report required by the Herger-Feinstein Quincy Library Group Forest Recovery Act of 1998 (HFQLG Act). It covers the period from October 1, 2001 to September 30, 2002 (FY02) and describes how, and to what extent, the specific mandates of the Act were accomplished.

This annual report discloses the status of Pilot Project implementation and accomplishment during FY02, as required by Sections 401 (j)(1)(A-G) of the HFQLG Act (see Appendix A).

Use of Funds

This section describes total expenditures, as required by Section 401 (j)(1)(A) and (B) of the HFQLG Act:

(A) A complete accounting of the use of funds made available under subsection (f)(1)(A) until such funds are fully expended.

(B) A complete accounting of the use of funds and accounts made available under subsection (f) (1) for the previous fiscal year, including a schedule of the amounts drawn from each account used to perform resource management activities described in subsection (d).

Alternative 2 of the HFQLG Final Environmental Impact Statement (FEIS) estimated that full implementation of the HFQLG Act would cost $31 million per year.

Fiscal Year 2002

Table 2 below shows how funding was allocated for implementation of the Pilot Project in FY02. Fund codes identify the primary purpose of appropriated funds. The Pilot Project uses three fund codes. National Forest Timber Management (NFTM) fund code is used for planning, preparing and administering timber sales; the Wildland Fire Hazardous Fuels (WFHF) fund code is used for planning, preparing, implementing, and administering fuels reduction projects associated with the DFPZs; and the National Forest Vegetation and Watershed (NFVW) fund code is used to fund planning, preparing, and implementing vegetation management projects as well as watershed and riparian restoration projects.

Table 2. FY02 Funding for Pilot Project Implementation.

Fund Code	Enacted Funding
NFTM	**5.6**
WFHF	**17.5**
NFVW	**3.1**
Total to Project	**$26.2**

Funds presented in millions of dollars
NFTM = National Forest timber management
WFHF = Hazardous Fuels Reduction
NFVW = National Forest vegetation and watershed management

Table 3 tracks the expenditure of funds in Table 2. FY02 project expenditures include: 1) administering and monitoring projects from prior years; 2) implementing projects planned in prior fiscal years; 3) planning and accomplishing FY02 projects; 4) planning for projects for FY03 and beyond; 5) responding to appeals; 6) portions of the analysis, preparation, and publication of the Plumas/Lassen Administrative Study EIS; 7) responding to litigation; and 8) analysis, preparation and publication of the final Supplemental EIS. A detailed accounting of project specific expenditures is attached in Appendix C.

Table 3. Summary of Pilot Project Use of FY02 Funds by National Forest/Unit.

Forest/Unit	WFHF	NFTM	NFVW	**Total**
Lassen	$3.3	$1.7	$0.9	$5.9
Plumas	$7.4	$1.1	$1.1	$9.6
Tahoe	$1.3	$0.2	$0.1	$1.6
HFQLG Implementation Team	$1.2	$0.0	$0.1	$1.3
TOTAL PROJECT EXPENDITURE	***13.2***	***$3.0***	***$2.2***	***$18.4***
12% Indirect Cost	**-**	**-**	**-**	***$3.1***
Fire Suppression Transfer	**-**	**-**	**-**	***$1.3***
Unobligated Balance	**-**	**-**	**-**	***$3.4***
Total FY02 Budget				**$26.2**

Funds presented in millions of dollars.

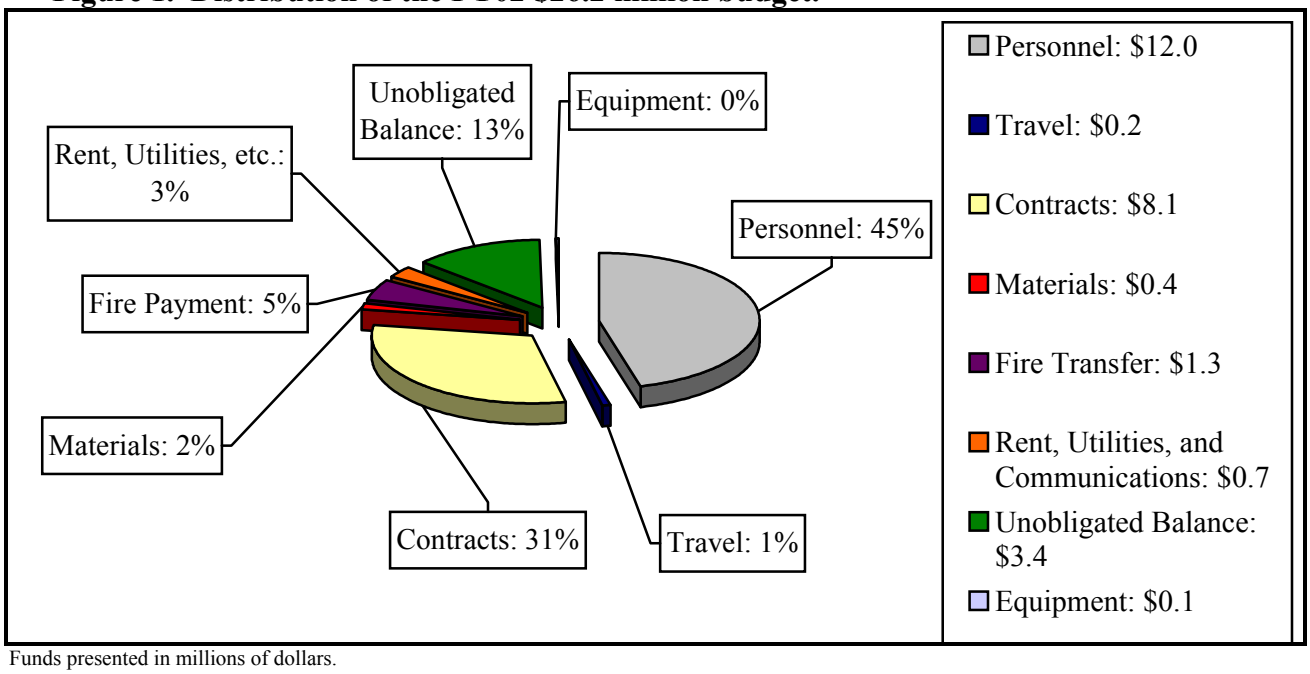
Indirect costs are described as expenses for general administration support, office space, rental agreements, communications, and other expenses. The HFQLG Act requires that indirect costs will not exceed a maximum of 12% of the HFQLG annual budget. In FY02 the 12% indirect cost was $3.1 million. An estimated 77% of indirect expenses went toward personnel and 23% to communications, rent, and utilities.

In July 2002 the Secretary of Agriculture used authority given by the Congress to use any funds available to the Forest Service for fire suppression activities. At the national level, a borrowing strategy was developed and implemented to transfer approximately $1 billion from various accounts to pay for suppression costs during this extraordinary wild fire season. All National Forests were directed by the Chief to defer spending. As a result some implementation of projects and contract awards were deferred until FY03. Approximately $1.3 million of HFQLG funds were contributed to national fire suppression activities. At the end of FY02, an unobligated balance of approximately $3.4 million was realized. Unobligated hazardous fuels funds (WFHF) will be returned to the Pilot Project. A portion of the National Forest funds (NFTM and NFVW) may also be returned.

Figure 1 displays the FY02 $26.2 million budget and expenditures. Expense categories include:

1. Personnel expenses: salaries, benefits, unemployment compensation, and other related costs to government.
2. Travel expenses: mileage, per diem, training, and long-term detail costs.
3. Contract expenses: contractual services to develop and implement resource management activities.
4. Materials expenses: supplies and other miscellaneous expenses.
5. Equipment expenses: vehicles, capitalized equipment, contracts for equipment, etc.
6. Utilities, Rent, and Communications expenses: electricity, telephones, rental agreements, etc.

Figure 1. Distribution of the FY02 $26.2 million budget.



Funds presented in millions of dollars.

Previous Fiscal Years

Table 4. Funding and Expenditures for Pilot Project During FY99 - FY02.

Fiscal Year	Enacted	Expenditure
1999	8.0	2.0
2000	12.2	7.2
2001	26.2	28.2
2002	26.2	21.5

Funds presented in millions of dollars.

In FY99 the Forest Service completed the HFQLG EIS and the Forest Supervisors signed the Record of Decision in August as required by the HFQLG Act. The FY99 implementation cost (primarily the cost of the EIS) was approximately $2.0 million. The $6.0 million unobligated balance was returned to the Pilot Project in FY00.

All funds were not expended in FY00, and a $5 million unobligated balance was realized. This $5 million was retained by the Forest Service to help offset the nation-wide deficit in fire suppression.

An additional expenditure of $2.0 million occurred in FY01 when the number of projects ready to be awarded to contractors totaled more than the original $26.2 million FY01 allocation. The Regional Office approved additional Title IV funds to cover all hazardous fuels reduction contracts ready to award, which in turn allowed for implementation of the Pilot Project to the fullest possible extent.

Fiscal Year 2002 Accomplishments

(C) A description of total acres treated for each of the resource management activities required under subsection (d), forest health improvements, fire risk reductions, water yield increases, and other natural resource-related benefits achieved by the implementation of the resource management activities described in subsection (d).

Acres Accomplished

In FY02, a total of 17,636 acres of Defensible Fuel Profile Zones (DFPZs), 1,171 acres of Group Selection (GS), 824 acres of Individual Tree Selection (ITS), and 838 acres of riparian restoration were accomplished; for a total of 20,469 acres. Table 5 is a summary of these accomplishments.

Table 5. Summary of FY02 Accomplishments.

DFPZ Acres	GS Acres	ITS Acres	Sawlog Volume (CCF)	Biomass Volume (CCF)		Riparian Restoration Acres
17,636	**1,171**	**824**	**40,609**	**40,747**		**838**

The Pilot Project reports accomplishment when a timber sale is advertised, a service contract is awarded or a force account crew completes work on the ground. There are three types of contracts: Timber Sale (TS), Service Contract with embedded Timber Sale (STS), and Service Contract (SC). A TS is an agreement whereby a purchaser pays the Forest Service for sawlogs and biomass chips, a STS is a service contract with an embedded timber sale, and a SC is an agreement where the Forest Service pays the contractor to perform activities such as cutting and piling brush or small diameter trees with hand tools or mechanical equipment. Finally, a project can also be accomplished with a force account (FA) crew, which is a group of Forest Service employees that complete work on the ground.

In FY02, the Pilot Project advertised seventeen timber sales (TS), awarded nine service contracts with an embedded timber sale (STS), and awarded one service contract (SC). Force account (FA) crews accomplished five projects. A detailed list of FY02 projects can be found in Appendix D, the Second Implementation Plan Update.

Sawlog volume is measured in hundred cubic feet (CCF), and is also measured in thousand board feet (MBF). To convert CCF to MBF, divide CCF by 2 CCF/MBF. In FY02, the Pilot Project sold 40,609 CCF, which is approximately equal to 20,305 MBF or 20.3 million board feet (MMBF). In general a standard log truck hauls approximately 5 MBF or 10 CCF/load. Approximately 4,000 log truck loads represent 20.3 MMBF.

Biomass is measured in CCF and is also measured in Green Tons (GT). To convert CCF to GT, multiply CCF by 2.4 GT/CCF. In FY02, the Pilot Project sold 40,707 CCF of biomass which is approximately equal to 97,697 Green Tons. In general a standard chip truck hauls approximately 25GT or 10 CCF/load. Approximately 97,700 GT represent 3,900 chip truck loads. Table 6 summarizes all DFPZ, GS, and ITS HFQLG projects (FY99through FY02) reported as accomplished.

Table 6. Summary of Accomplishments by Project Type: FY99 through FY02.

PROJECT TYPE	Number of Projects	DFPZ Acres	GS Acres	ITS Acres	Sawlog Volume CCF	Biomass Volume CCF
FY99: Timber Sale	1	640	0	172	4,785	4,278
FY99 TOTAL:	**1**	**640**	**0**	**172**	**4,785**	**4,278**
FY00: Timber Sale	5	5,419	200	772	41,874	48,562
Service Contract with embedded TS	2	665	0	0	2,548	15,955
Service Contract	2	1,024	0	0	0	0
Force Account Crew	1	50	0	0	0	0
FY00 TOTAL:	**10**	**7,158**	**200**	**772**	**44,422**	**64,517**
FY01: Timber Sale	11	11,122	1,949	528	77,823	107,317
Service Contract with embedded TS	11	17,071	0	0	13,961	49,470
Service Contract	11	9,172	0	0	0	0
Force Account Crew	3	1,056	0	0	0	0
FY01 TOTAL:	**36**	**38,421**	**1,949**	**528**	**91,784**	**145,560**
FY02: Timber Sale	17	5,111	1,019	824	36,050	25,238
Service Contract with embedded TS	9	9,767	152	0	4,559	15,509
Service Contract	1	1,179	0	0	0	0
Force Account Crew	5	1,579	0	0	0	0
FY02 TOTAL:	**32**	**17,636**	**1,171**	**824**	**40,609**	**40,747**
PILOT PROJECT TOTAL	**79**	**63,855**	**3,320**	**2,296**	**181,600**	**255,102**

Map 1, in Appendix E, shows the locations of DFPZ and GS projects accomplished in FY02.

Riparian Restoration Projects

Eighteen projects to improve forest health through riparian restoration were accomplished on 838 acres in FY02. Riparian or watershed restoration projects are considered accomplished when a service contract is awarded or force account crew completes the work on the ground. The FY02 riparian restoration activities included meadow restoration and enhancement, stream channel improvement, road relocation, road closure, slope stabilization, and aspen enhancement, Map 3, in Appendix E, shows the locations of these riparian restoration projects.

Treated Acres by Year

The Pilot Project has accomplished 79 projects (FY00 through FY02) for 64,000 acres of DFPZs, 3,300 acres of GS, and 2,300 acres of ITS. The Pilot Project has accomplished 40 riparian restoration projects for 1,900 acres. Most projects, though reported as accomplished, are under contracts which extend for several years. Thus, the number of acres *treated* on the ground each year through the activities of harvest, prescribed fire, and riparian restoration work varies and are not the same as the number reported as *accomplished* each year.

Pictured below are before and after treatments which occurred in FY02 in a stand within the Bridge Thin DFPZ Timber Sale. This DFPZ, located on the Eagle Lake Ranger District of the Lassen National Forest, was reported as accomplished in FY00 and the contract terminates in March 2005.

- **Picture 1. Eastside Mixed Conifer Type Prior to Harvesting, May 2002. Bridge Thin DFPZ, Eagle Lake Ranger District, Lassen National Forest.**

- **Picture 2. Eastside Mixed Conifer Type After Harvesting, August 2002. Bridge Thin DFPZ, Eagle Lake Ranger District, Lassen National Forest.**

Multiple activities often occur on any given acre. Activities within the boundary of a DFPZ project may include mechanical harvest, machine piling, hand thinning, hand piling, pile burning and then prescribed burning. For example, in FY01 the Antelope-Border DFPZ STS was awarded and the Pilot Project reported 2,100 acres of DFPZ accomplished. However, in FY01, 120 acres were manually thinned by chainsaws. In FY02, 1,025 acres were treated by mechanical harvest, an additional 440 acres were hand thinned, 82 acres were hand piled, and 601 acres were prescribed burned. Prescribed burning will continue until the contract terminates in FY05. When the project is over, there may be as many as 4,200 acres of treatments tracked through various activities on the Antelope Border project, but the DFPZ remains at 2,100 acres of accomplishment. Table 7 summarizes the on-the-ground treatments that have taken place from FY00 through FY02:

Table 7. Summary of On-the-Ground Treatments by Fiscal Year, FY00 to FY02.

Fiscal Year	DFPZ ACRES		GS ACRES	ITS ACRES		FUELS TREATMENT ACRES				Total Acres
	Mech Treatment	Hand Treatment	Group Selection	Mech Treatment	Hand Treatment	Mech Pile	Hand Pile	Rx Burn	Pile Burn	
FY00	316	0	0	64	0	0	50	0	0	430
FY01	3,443	661	17	256	0	360	645	1,383	70	6,885
FY02	9,820	5,612	486	785	0	0	2,803	2,260	1,465	23,231
TOTAL ON-THE-GROUND TREATMENTS: FY99 THROUGH FY02										**30,546**

Forest Health Improvements

A primary component of Pilot Project activities is creation of DFPZs. DFPZs are designed to interrupt crown fire and provide a relatively safe location for fire crews to take action against wildfires. Other benefits from Pilot Project activities include: 1) Increasing diversity of tree species; 2) Increasing spacing between trees (i.e. thinning) so that more growing space, water,

and soil nutrients are available to each tree; 3) Enhancing, restoring, and improving meadows and wet areas; 4) Reducing soil erosion from roads, and 5) Improving degraded streams.

Pictured below are before and after treatments which occurred in FY02 in a stand within the Signal Thin DFPZ Timber Sale. This DFPZ is located on the Eagle Lake Ranger District of the Lassen National Forest. The treatments met the objective of improving stand health and vigor by reducing the density of trees from approximately 300 per acre to 100 per acre. This increased spacing provides more growing space, water, and soil nutrients to the remaining trees and reduces the intensity of fire.

- **Picture 3. Eastside Pine Type Prior to Harvesting, May 2002. Signal Thin DFPZ Timber Sale, Eagle Lake Ranger District, Lassen National Forest.**

- **Picture 4. Eastside Pine Type After Harvesting, September 2002. Signal Thin DFPZ Timber Sale, Eagle Lake Ranger District, Lassen National Forest.**

Fire Risk Reductions

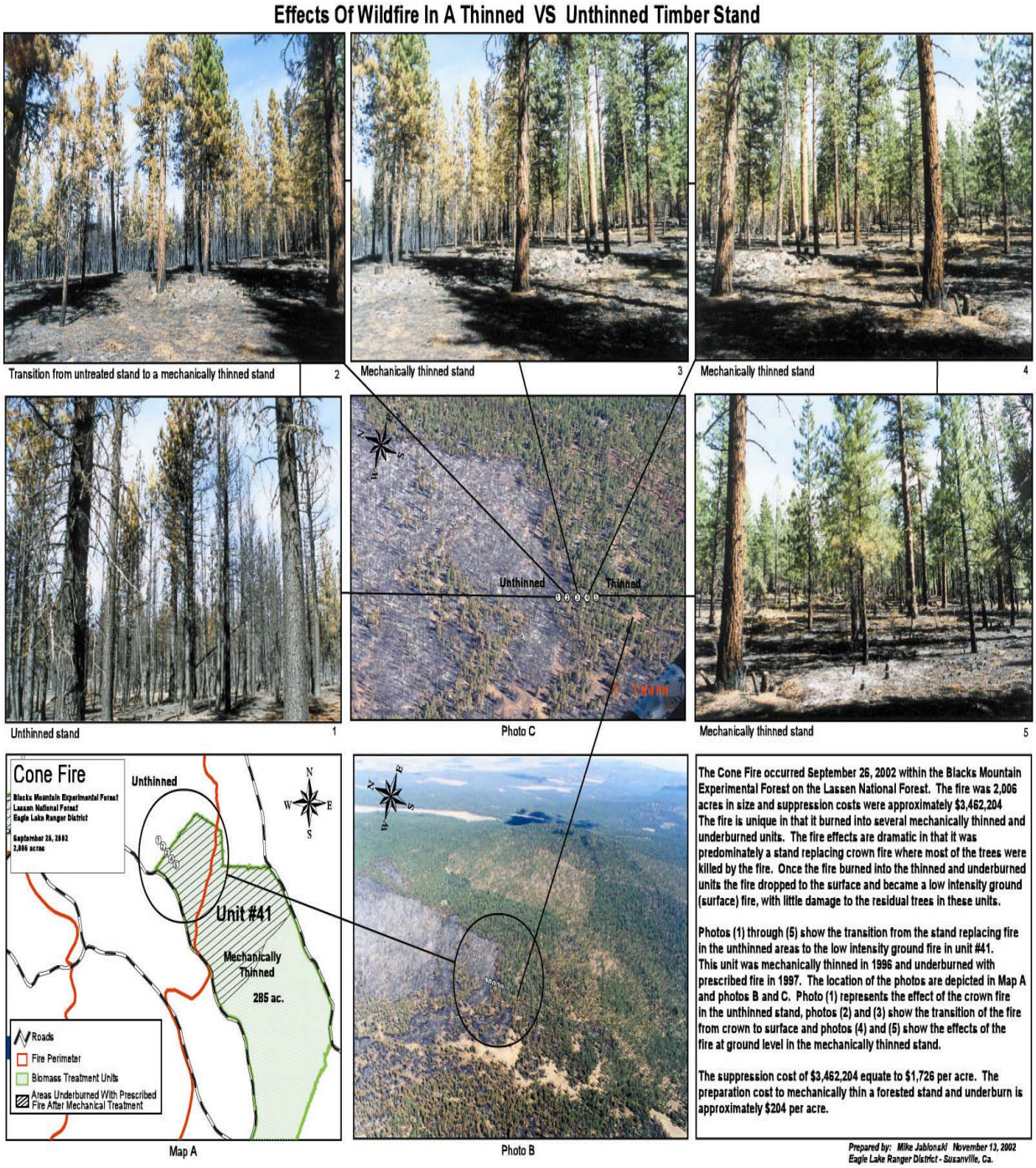
DFPZ effectiveness is measured by how useful the defensible zone is in containing and controlling wildfire spread and how successful it is in reducing fire size and intensity. Additionally, the purpose of the DFPZs is to create a zone where firefighters can more safely attack a wildfire. Trees are thinned to allow heat to dissipate through the canopy, and to allow air tanker drops to reach the ground. Thinned stands are a safer place for fire crews to apply direct suppression tactics such as fireline construction and indirect suppression tactics such as fireline burnout. Firefighter safety is first priority.

Although not included in the HFQLG land-base, the Blacks Mountain Experimental Forest on the Lassen National Forest has been implementing fuel reduction treatments similar to those of the Pilot Project for many years in partnership with the Eagle Lake Ranger District. The Cone fire began in September 2002 and grew to 2,006 acres. Cost of suppression was approximately $3.5 million, or $1,726 per acre. The cost of mechanically thinning with a timber sale and underburning in this location was approximately $204 per acre.

This fire is unique in that it burned into several treatment areas that had previously been mechanically thinned. The objective of the thinnings, similar to the Pilot Project objectives, was to remove the smaller, suppressed and/or diseased trees while leaving the larger, healthier trees (a thinning from below). The thinnings occurred in 1995 and 1996 with a follow-up underburn (prescribed fire) in 1997 and 1998. Because it is within the Experimental Forest the fire provides an opportunity to study the effects of wildfire in an area that has a considerable amount of existing research. The fire effects are dramatic, since the fire was predominantly a stand-replacing crown fire (most of the trees were killed by the fire) until it burned into the thinned and underburned units. When it reached those units it became a cooler, more controllable ground fire that allowed fire crews to contain the fire at these locations.

Picture 5 below is a photograph of a poster designed by the Eagle Lake Ranger District to display the effects of the Cone Fire.

- **Picture 5. Cone Burn Area, September 2002. Blacks Mountain Experimental Forest, Eagle Lake Ranger District, Lassen National Forest.**



Other Natural Resource-Related Benefits Through Monitoring

Other natural resource-related benefits associated with the Pilot Project include monitoring the activities required by the HFQLG Act. Pilot Project monitoring will also facilitate the Final Report required by the Act (Sec. 401(k)(1)). More details about the Final Report can be found in the Act located in Appendix A.

The HFQLG Pilot Project Monitoring Plan was initiated in FY00 and provides a structure, in the form of questions, to gain information about: 1) habitat concerns, 2) effects of implementing Pilot Project activities, 3) effectiveness of those activities, and 4) economic well-being. The Monitoring Plan, which includes a full description of these questions and their monitoring protocols, is available from the Pilot Project office located at the Plumas National Forest Supervisor's Office.

The Habitat Concerns section includes methods to assess habitat connectivity, old forest habitat, and aquatic/riparian dependent species monitoring. This section addresses the requirement in the 1999 HFQLG ROD that states that "over the course of the Pilot Project, suitable habitat for old forest-dependent species and aquatic/riparian-dependent species (including amphibians) shall not be reduced by more than ten percent below 1999 levels."

The Implementation Monitoring section has three levels of assessment: project evaluations, interagency project reviews, and topic specific questions. This section provides information about the degree to which treatments are implemented according to standards and guidelines set forth in the HFQLG EIS, each forest's land management plan, and site-specific direction. There are ten topic specific questions concerning forest structure, best management practices, soil quality, sensitive plants, noxious weeds, and air quality. These questions include information on objectives, scale, monitoring protocol, and estimated cost.

In the Effectiveness Monitoring section, twenty-one topic specific questions address: 1) old forest values and old forest-dependent species, 2) watershed effects, 3) wildfire protection and fuels reduction, 4) threatened, endangered, and sensitive plants, and 5) noxious weeds. These questions assess the degree to which implemented treatments meet resource objectives. All the topic specific questions also include information on objectives, scale, monitoring protocol, and estimated cost.

The Economic Well-Being section of the Monitoring Plan is currently being developed. The time delay between the implementation of activities and economic and social responses is likely to make evaluation difficult. The contract for collecting and analyzing data to address this section was awarded to the Center for Economic Development, in Chico, CA.

The following are summaries of FY02 monitoring activities and results:

Habitat Concerns

The HFQLG Record of Decision (ROD) requires that habitat connectivity be maintained to allow movement of old forest or aquatic/riparian-dependent species between areas of suitable habitat. It further requires that suitable habitat for old forest-dependent species and aquatic/riparian-dependent species shall not be reduced by more than 10% below 1999 levels. California Wildlife Habitat Relationship (CWHR) labels 5M, 5D, and 6 are used to represent habitat required by old forest-dependent species.

Each project planned in FY02 was evaluated to determine the reduction, if any, in the vegetation strata in CWHR labels 5D, 5M and 6. The vegetation strata CWHR size class 5 represents a single-story, predominantly large tree stand (greater than 24-inch Diameter at Breast Height (DBH)). Density class D has a 60-100% canopy cover and density class M has a 40-59% cover. CWHR size class 6 represents a multi-layered stand where CWHR size class 5 is over a distinct layer of size class 4 (11" - 24" DBH) or size class 3 (6" - 11" DBH) and where total tree canopy closure is 60% or greater.

Reductions are documented and a cumulative total is tracked to make sure no greater than a 10 percent reduction occurs over the life of the Pilot Project. FY02 monitoring indicated that 1,512 acres within the Pilot Project will have a reduction in one of these CWHR size classes as a result of project implementation. Cumulative total for the Pilot Project is 1,522 acres. This represents less than 1 percent of the acres of CWHR class 5M and 6 within the Pilot Project area.

Implementation and Effectiveness Monitoring:

In FY02, project evaluations were combined with interagency reviews as each district conducted at least one on-site evaluation of at least one of the projects implemented within the last year. These included vegetation management or riparian/watershed improvement projects. The reviews took place at the project site and specialists from other agencies as well as the public were invited to participate. The primary purpose of these reviews is for District Rangers to interact with the inter-disciplinary team to make an on-site assessment of the outcomes from the various treatments. In FY02, eight project evaluation/interagency reviews took place. These reviews were to be documented and signed by the District Ranger and placed in the monitoring project file.

Topic Specific Questions:

Forest Service and contracted personnel collected pre-treatment data for both implementation and effectiveness monitoring questions. The information gathered includes:

Stand structure attributes (Questions 1-4)**:** Information regarding tree size, canopy cover, surface fuels, ladder fuels, and understory structure and composition has been collected from 70 units randomly selected across the Pilot Project. This will serve as baseline data for comparison with post harvest conditions. The distribution of the plots across the districts is proportional to the amount of DFPZ to be constructed on each district. Most of the implementation projects consist of a mechanical or hand treatment followed by prescribed burning. The first stage of work has been completed in many of the units. Some were scheduled for burning this past fall, and will be available for the first post-treatment monitoring in the summer of 2003.

Best Management Practice (BMP) Implementation and Effectiveness During Project Activities (Question 5 and 21)**:** Six BMPs were selected for on-site evaluations. They are Streamside Protection (T01), Timber Skid Trails (T02), Timber Landings (T04), Roads and Road Crossings (E08-09), Road Decommissioning (E10), and Prescribed Fire (F25). Forty-two evaluations were completed on five of the Ranger Districts within the HFQLG Pilot Project area. Implementation and effectiveness ratings were generally high. Most problems identified were associated with existing road system channel crossings.

Pictured below is an example of a Timber Skid Trail from the Skippy DFPZ on the Tahoe National Forest:

- **Picture 6. Skippy DFPZ, November 2001. Sierraville Ranger District, Tahoe National Forest.**

Soil Quality Standards (Question 6)**:** Information on soil density, soil displacement, soil cover, and large woody material has been collected from 92 units randomly selected across the Pilot Project. This will serve as the baseline data for comparison with post harvest conditions when the same transects are resampled. Sixty-three units will be treated with DFPZ prescriptions and 29 units will be treated with group selection prescriptions. In FY02, 59 of the 92 units were monitored for pre-treatment condition. The following is a summary of the results of this years' soil quality monitoring:

- *Soil Compaction*: The threshold that indicates a significant impairment to soil productivity is 15 percent or more of an activity area having detrimental compaction. Based on FY02 baseline monitoring of existing condition (legacy compaction), 42% of the units had 15 percent or more detrimental compaction. An additional 42% of the units had a lesser level of detrimental compaction, and the remaining 16% had no detrimental compaction.

- *Soil Displacement*: The threshold for detrimental displacement is loss of either 2 inches or ½ (if total depth is less than 2") of the humus-enriched topsoil, from a 1-meter square or larger area. Twenty-seven percent of the units monitored in FY02 have more than 10 percent displacement within the unit.

- *Soil Cover:* The standard is for fine organic matter to cover over 50 percent of an area. All sampled units met or exceeded the standard.

- *Large woody Material*: The standard is for 5 logs/acre, at least 20 inches in diameter and 10 feet long. No logs were present in 18% of the monitored units, 36% of the units had 1-4 logs/acre, and the remaining 46% of units met the standard.

Pictured below is an example of large woody material from the Bridge Thin DFPZ on the Lassen National Forest.

- **Picture 7. Bridge Thin DFPZ After Harvest, August 2002. Eagle Lake Ranger District, Lassen National Forest.**

Threatened and Endangered Species (TES) plants and noxious weeds (Question 7 & 8)**:** Implementation monitoring of sensitive plant resource areas and noxious weed areas was initiated in FY02. The purpose of implementation monitoring is to gauge the success of applying the resource management activities as designed. The following is a summary of the results of this years' TES plants and noxious weeds monitoring:

- *Sensitive Plants*: Eighteen plant populations were monitored. Ten sites required avoidance. One activity area with a population was impacted due to failure to flag the location for avoidance. However, the impacted area was treated by manual removal of thinned material and no significant impact to the sensitive plant was detected.

- *Noxious Weeds*: One unit within a DFPZ project had an occurrence of noxious weeds documented in the project record. Information on the occurrence was not communicated to the contractor, and equipment was moved without cleaning from the

area with Canada thistle to other areas within the project. Problems occurred in communication between botanists, sale planners, and sale administrators due to personnel changes and changes in unit boundaries and numbers. Implementation meetings and joint field visits have been taking place to improve communication between groups.

Smoke Management (Question 9)**:** Eleven projects on the Plumas NF were implemented in accordance with the Forest's Smoke Management Plan (SMP). Over approximately sixty-six days of prescribed burning there were two days when smoke impacted a smoke sensitive area. When this occurred, new ignitions were halted per the SMP until air quality improved. There were three complaints. No Class I Airsheds were impacted. Eight projects on the Sierraville RD were implemented in accordance with their SMP. Over approximately 16 days of prescribed burning there were no smoke impacts to a smoke sensitive area. No Class I Airsheds were impacted. One project on the Lassen NF was implemented and it complied with the Forest's SMP. No Class I Airshed was impacted.

Protection of Small Aquatic Habitats (Question 10)**:** Both presence/absence and disturbance evaluations were conducted on 30 randomly selected units for springs, seeps, or other small aquatic habitats. First, project maps were checked to determine whether any of these features were identified during project planning. Then the units were assessed in the field to determine if identified features were protected and whether any other features detected in the field were protected. No additional features were found and all identified features were protected.

California Spotted Owl (Questions 11-14)**:** The mitigation in the HFQLG ROD required "At the site-specific project level, defensible fuel profile zones, group selection harvest areas, and individual tree selection harvest areas will be designed and implemented to completely avoid suitable California spotted owl habitat, including nesting habitat and foraging habitat". Hence, no project activities have occurred within these habitats. In FY02, intensive surveys of owls commenced as part of the proposed Plumas Lassen Administrative Study. The surveys were conducted to elicit territorial responses. Follow-up visits will be conducted following all detections to determine status (nonterritorial single, territorial single, pair, reproductive pair) and reproductive success. Territories will be monitored annually to determine occupancy and reproduction. Pictured below is a California Spotted Owl.

- **Picture 8. California Spotted Owl.**

Abundance and Distribution of Forest Carnivore Habitat (Question 15)**:** In 2001, researchers from the Pacific Southwest Experiment Station (PSW) selected three large landscapes to check for presence or absence of forest carnivores using the track-plate inventory method. Researchers placed 150 track plates in three separate areas, with the goal of determining presence or absence of American pine marten. No marten were detected. PSW researchers were unable to continue the effort in FY02 and collected no additional data. However, the Plumas Lassen Administrative Study will likely incorporate this monitoring into their investigations for FY03 and beyond.

- **Picture 9. American Pine Marten.**

Landbird Surveys (Question 16): Landbird monitoring is being completed through a Challenge Cost/Share agreement with Point Reyes Bird Observatory (PRBO). Fourteen Transects have been established on the Almanor Ranger District of the Lassen National Forest to track species diversity over time. PRBO specialists have been collecting base information for migratory landbirds in seven different habitat types within the Plumas Lassen Administrative Study Treatment Unit 1 (TU1) project area. Data collection must occur over a period of years before correlations can be made between treatment and bird populations. However, current data (including preliminary FY02 data) shows that the dense fir forests that compose many of the areas likely to be treated have few of the habitat characteristics preferred by the majority of migratory landbirds. Further data collection will help to corroborate the theory that thinning dense stands (generating a more open canopy) increases bird richness and diversity.

Effect of Activities on Indicators of Watershed Condition (Question17)**:** No trends or effects have been detected.

Trends in Channel Conditions, Riparian Attributes, and Macro-invertebrates in Sub-watersheds with High Concentrations of HFQLG Activities (Question 18 & 19)**:** Twenty-three reaches of streams across the Pilot project have been inventoried, of which sixteen were pre-project baseline, and seven were reference streams. All the reference streams have been sampled previously, and two of the pre-project streams have prior year data. This data will be compared to baseline data when the stream reaches are sampled after project implementation.

Water Yield and Soil Moisture (Question 20)**:** Four separate locations will be selected for collecting pre-harvest soil moisture. Each year one of the locations is selected for sampling. In FY02 the second of four locations for pre-harvest soil moisture was measured on the Almanor Ranger Districts' Prattville DFPZ project. This baseline data will be compared to post harvest conditions. The Pilot Project will award a contract to model water yield.

Amphibian Persistence (Question 22)**:** Forty-six streams across the Pilot Project were selected and surveyed for the presence of amphibians. These streams are resurveyed every other year of the Pilot Project to check for species persistence. No survey occurred in FY02. Survey will occur in FY03.

Trend in Large Fire Frequency (Question 23)**:** There has not been an opportunity to collect data on this question.

Trend in Severity of Large Fires on Acres Burned (Question 24)**:** Although the 2,000-acre Cone Fire was not within the HFQLG land base, the Blacks Mountain Experimental Forest is within the Pilot Project's exterior boundary. Data collection began in early FY03 and monitoring results are expected to be published next year.

Effect of Treatments on Fire Behavior and Suppression (Question 25)**:** There has not been an opportunity to collect data on this question within the Pilot Project land base, however the Cone Fire will provide monitoring data that will display effects.

Prescribed Fires Activities and Air Quality Standards (Question 26)**:** Over the Pilot project, Stationary Air Quality Management District monitors did not record any violations of air quality associated with any prescribed burns. One smoke sensitive area was impacted. No portable recorders were set-up in any smoke sensitive areas. Based on previous data recorded from prescribe burn projects and wildfires it is unlikely standards were exceeded.

Prescribed Fires and Nuisance Complaints in Terms of Air Quality (Question 27)**:** The Plumas NF burned 5,045 acres over a 66-day period. Three complaints were registered from one area, which was impacted from two different projects being burned concurrently. One complaint was for health and two for poor visibility. As a result one of the projects discontinued burning until air quality improved and the other limited the number of acres ignited. The Sierraville Ranger District burned approximately 720 acres over a 16-day period. There were no complaints. The Lassen NF burned one project consisting of 1,000 acres. There were no complaints.

Response of TES Plant Species Response to Resource Management Activities (Question 28)**:** This monitoring commences three years after a project has been completed. That time has not been reached for any HFQLG project.

Elimination or Containment of New and Existing Noxious Weeds (Question 29-31)**:** This monitoring commences three years after a project has been completed. That time has not been reached for any HFQLG project.

Sierra Nevada Forest Plan Amendment

The Sierra Nevada Forest Plan Amendment (SNFPA) decision of January 2001 applied new standards and guidelines to the Pilot Project area. Direction in the SNFPA Record of Decision (ROD) concerning the California spotted owl replaced the mitigation measure from the HFQLG ROD, and changed prescriptions for DFPZ construction. The SNFPA ROD estimated that up to 90% of the DFPZs could be constructed as planned, but with a smaller upper diameter limit and greater canopy cover requirement than envisioned in the Pilot Project. Group selections, not envisioned by the SNFPA, were to be allowed in the Pilot Project only if they were planned outside of spotted owl habitat and implemented by February 11, 2002. The Pilot Project forests awarded timber sale contracts for 1,949 acres of group selection in FY01, and 1,171 acres of group selection in FY02. As confirmed in the SNFPA ROD, the Pilot Project continues to utilize the SAT (Scientific Advisory Team, 1993) riparian protection guidelines identified in the HFQLG legislation.

The SNFPA ROD withstood administrative appeals, but the Regional Forester was directed to review the decision, in part to "determine if additional opportunities exist to harmonize the goals of these two efforts" (SNFPA and HFQLG). To that end the Regional Forester chartered a Review Team, whose findings and recommendations will be reported back to him by March 2003. In his charter, the Regional Forester stated he is committed to continuing implementation of the Pilot Project beyond its legislated 5-year expiration date (September 8, 2004). In the FY03 Omnibus Appropriations Act, the Congress has extended the expiration of the HFQLG Pilot Project another five years. This extension, along with continued funding will allow the work envisioned in the Act to be completed.

The Quincy Library Group (QLG), which filed an administrative appeal on the SNFPA decision, continues to express strong views about the negative impact of the SNFPA direction on implementation of the Pilot Project. At their January 23, 2003 meeting, they voted to pursue litigation against the SNFPA decision. On March 12, 2003, the Quincy Library Group filed suit against the Forest Service.

Plumas Lassen Administrative Study

The Plumas Lassen Administrative Study (the Study) is a product of the January 2001 SNFPA Record of Decision. The intent of the Study is to examine in a scientifically credible manner the effects of limited silvilcultural treatments on California spotted owl habitat and population dynamics. The Study, led by Pacific Southwest Research Station scientists, includes the HFQLG group selection provisions in the treatments to be examined. The Study has five research modules: Effects on and subsequent response of 1) the California spotted owl; 2) Small mammals (prey-base for the spotted owl); 3) Fire and fuels; 4) Vegetation growth and change; and 5) Land birds.

In Spring 2002, as refinements were being made on the Draft Study Plan, the Forest Service determined that the Study required an Environmental Impact Statement. An interdisciplinary team was assembled. Approximately 20,000 acres of FY02 HFQLG projects within the Study area were delayed until after the EIS decision is made. The Final EIS and ROD are now expected to be published in November 2003.

Quincy Library Group (QLG) members have steadfastly opposed the Study, based on several concerns. They believe that a Research Study can be advantageous only if it is designed so that it does not interfere with full implementation of the Pilot Project, it is done in full conformity with the Act, and it is done without diversion of any resources from Pilot Project implementation.

In FY02, Region 5 allocated $750,000 of non-HFQLG funding to the Study. This was matched by PSW, for a total of $1.5 million non-HFQLG funding to the Study. These funds covered developing the Study Plan and planning and implementing the initial investigations. They did not include any funds for planning, developing, or implementing the HFQLG projects which are to be studied.

In FY02, the Plumas and Lassen National Forests spent approximately $2.4 million of HFQLG funds planning and developing HFQLG projects in the Study area. The activities funded, including the EIS team, are necessary for HFQLG project completion, independent of the Study. The Study's EIS Team estimates that the EIS and ROD will supply information, analysis, and decision support for as many as 50 individual HFQLG projects, and immediate decisions for up to 19 projects.

Appeals and Litigation

In March 2002, after their appeal was denied, the Plumas Forest Project and the Forest Preservation Council filed a lawsuit against the Crystal Adams DFPZ and Group Selection project on the Plumas National Forest. The challenge alleges threats to viability of several sensitive species, claims that the project's Environmental Assessment is inadequate, and that an Environmental Impact Statement should be prepared. Additionally, the complaint asserts violations to NEPA and NFMA. Settlement discussions between plaintiffs, Department of Justice, and the Forest Service resulted in a Settlement Agreement in February 2003.

In FY02, two of the three DFPZ Environmental Assessments and Decision Notices were appealed. Both appeals were denied. No appeals were filed for the two riparian restoration Environmental Assessments and Decision Notices that were released.

HFQLG Supplemental Environmental Impact Statement

In October 2001, Pilot Project Forests released a Draft Supplemental EIS concerning maintenance of DFPZs. This met the requirements of a June 2001 court ruling on the Californians for Alternatives to Toxics (CATs) lawsuit. The Draft Supplemental EIS analyzed a number of maintenance options for DFPZs, including herbicide use. A Final Supplemental EIS and ROD is expected to be released in June 2003.

Coordinating with Other Fuels Reduction Initiatives

The Pilot Project coordinated with other fuels reduction efforts that in FY02 including the National Fire Plan (NFP), the local Resource Advisory Councils (RACs), the President's Healthy Forest Initiative, and the local Fire Safe Councils (FSCs). The majority of coordination involved aligning the Pilot Project fuel reduction projects with projects desired by private property owners. Private property owners work with the RACs and FSCs to identify, prioritize, and fund projects on their land as well as National Forest lands. The Pilot Project has also provided data, maps, and expertise to further the goals of the NFP and the Healthy Forest Initiative.

Public Involvement

More than a dozen field trips to HFQLG projects took place in FY02. The majority of these site visits were to fulfill monitoring requirements. The seven District Rangers in the Pilot Project are committed to including the public in all HFQLG projects, thus meeting the National Environmental Policy Act (NEPA) direction. Each Ranger encourages and facilitates public involvement in decisions which affect the quality of the environment.

- **Picture 10. Public Field Trip, April 2002. Mount Hough Ranger District, Plumas National Forest.**

Implementation Plan Update

The HFQLG Implementation Plan was initiated in FY00 and released in FY01 (November 2000). This plan displayed and prioritized HFQLG resource management activities needed to accomplish the Pilot Project within a five-year period. The plan assumed full funding, estimated at $31 million annually, for the period FY01 through FY04.

The Implementation Plan is a working document requiring revision and adaptation based on funding levels and changes in National and Regional direction. Accordingly, the Implementation Plan has been updated annually. The first update was released in January 2002 and reflected the projected FY02 budget of $26.2 million. It projected full funding of $31 million for FY03 and FY04, and projected completion of the network of DFPZs under those assumptions. It recognized changes due to implementation of the Administrative Study (the Study) authorized by the Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision, but it did not recognize the disruption to the FY02 program which occurred as Pilot Project Forests transitioned to implementation of HFQLG along with implementation of the Study. Actual DFPZ accomplishment for FY02 was 17,636 acres, while the accomplishment of DFPZs projected by the first update of the Implementation Plan was 43,706 acres.

The second annual Implementation Plan Update reflects actual accomplishments from FY99 through FY02. For FY03, the plan reflects a program of work commensurate with the expected $26.2 million budget. The updated Plan also acknowledges that, assuming an annual budget of $26.2 million, the Pilot Project cannot be completed in its original five-year time frame. The updated Plan estimates an annual $26.2 million budget from FY03 through FY06, and predicts completion of the network of DFPZs in FY06. Group selection is still assumed to be restricted to the Study area, and consequently annual accomplishment of group selections falls far short of the 8,700 acre yearly target.

See Appendix D for the second Implementation Plan Update.

Environmental Impacts

The HFQLG Pilot Project seeks to improve environmental health with prescribed silviculture treatments and riparian restoration projects. The HFQLG Monitoring Plan provides guidance for identifying and monitoring any adverse environmental impacts caused by HFQLG projects. Section (j)(1)(G) of the HFQLG Act requires:

(G) A Description of any adverse environmental impacts from the pilot project.

Monitoring in FY02, including initial soils monitoring, did not reveal any adverse environmental impacts from Pilot Project activities. Although no adverse soil quality impacts have been documented to date, existing condition (pretreatment) compaction surveys give cause for concern. 53% of units planned for treatments exceed the 15% detrimental compaction threshold prior to any Pilot Project activity. Another 24% of the monitored units have between 5% and 14% detrimental compaction. Recent Forest Health Pilot monitoring found additional compaction of 5% to 15% as a result of fuels treatments.

Without mitigation activity, a high percentage of treatment units can be expected to exceed detrimental compaction thresholds. The HFQLG EIS (Environmental Consequences, p. 3-11) identified this effect of implementing the Pilot Project.

Economic Benefits, Revenues and Expenditures

Economic Benefits

Section (j)(1)(D) of the HFQLG Act requires:

(D) A description of the economic benefits to local communities achieved by the implementation of the pilot project.

The Forest Service contracted with the Center for Economic Development (CED) to analyze the economic benefits of HFQLG funds spent to implement the Pilot Project in FY02. CED received data from the Pilot Project and utilized a model-based economic impact software program, IMPLAN, to estimate total benefits for two areas. The Core Area consists of Lassen, Plumas, and Sierra Counties. The Extended Area is comprised of the Core Area plus the Peripheral Area Counties of Butte, Nevada, Shasta, Tehama, Yuba, and Washoe (NV).

In FY02, the Forest Service expended $21.5 million for Pilot Project implementation. Direct expenditures (personnel, travel, contracts, materials, equipment, and contractual obligations) totaled $18.4 million. Indirect expenditures (overhead costs, expended as personnel, communications/rents/utilities) were $3.1 million. Expenditure categories are shown in Table 8.

Table 8. Budget for and Direct and Indirect Expenditures Related to Planning and Implementation of the HFQLG Act, FY02.

Expenditure Category	Expenditure
Personnel	$7,795,303
Travel	$143,472
Contracts	$4,106,953
Materials	$363,129
Equipment	$127,027
Direct allocated expenditures	**$12,535,884**
Contractual obligations	$3,996,601
Unallocated obligations[1]	$1,880,432
Total obligations	**$5,877,033**
Total direct expenditures	**$18,412,917**
Indirect	$3,144,000
Total Expenditures	**$21,556,917**
Unobligated balance (which includes $1.3 mm contribution to FY02 Fire Suppression)	$4,643,083
Total Allocation	**$26,200,000**

Source: USDA Forest Service, HFQLG Pilot Project
[1]Obligations in need of classification by CED

CED further refined their estimates for modeling benefits and developed Direct, Indirect, and Total Assumed Expenditures, by category, as shown in Table 9.

Table 9. Total Assumed Expenditures by Account.

Account	Direct Allocated Expenditures and Obligations	Assumed Distribution of Unallocated Obligations	Distribution of Indirect Expenses	Total Assumed Expenditures
Personnel	$ 7,795,303	$ 1,739,074	$ 2,420,880	$ 11,955,257
Travel	$ 143,472	$ 32,008	$ 0	$ 175,480
Contracts	$ 8,103,554	$ 0	$ 0	$ 8,103,554
Materials	$ 363,129	$ 81,011	$ 0	$ 444,140
Equipment	$ 127,027	$ 28,339	$ 0	$ 155,366
Comm., Rent, & Utilities	$ 0	$ 0	$ 723,120	$ 723,120
Total Expenditures	$ 16,532,485	$ 1,880,432	$ 3,144,000	$ 21,556,917

CED then analyzed each of the expenditure categories and estimated the amounts expended in the Core Area and Extended Area (Core plus Peripheral). See Appendix E for details. The expenditures were further categorized by industry, as well as by location (Core, Peripheral and Extended Areas), as shown below in Table 10.

Table 10. Assumed Direct HFQLG Expenditures by Area and Industry, FY02.

Industry	IMPLAN Sector	Exp. to Core Area	Exp. to Peripheral Area	Exp. to Extended Area	Exp. Outside of Extended Area	Total Expenditures
Miscellaneous Livestock	9	$ 25,000	$ 50,000	$ 75,000	$ 0	$ 75,000
Agricultural, forestry, and fishing services	26	$ 25,000	$ 2,358,496	$ 2,383,496	$ 310,062	$ 2,693,558
Landscape and horticultural services	27	$ 0	$ 15,260	$ 15,260	$ 0	$ 15,260
New highways and streets	51	495,995	$ 23,723	$ 519,718	$ 0	$ 519,718
Logging camps and logging contractors	133	$404,820	$ 394,395	$ 799,215	$ 0	$ 799,215
General sawmills and planing mills	134	$553,068	$ 0	$ 553,068	$ 0	$ 553,068
Communications, except radio and TV	441	$ 52,306	$ 0	$ 52,306	$ 188,734	$ 241,040
Electric services	443	$ 17,435	$ 0	$ 17,435	$ 62,911	$ 80,347
Gas production and distribution	444	$ 17,435	$ 0	$ 17,435	$ 62,911	$ 80,347
Water supply and sewerage systems	445	$ 17,435	$ 0	$ 17,435	$ 62,911	$ 80,347
Automotive dealers and service stations	451	$ 60,834	$ 29,774	$ 90,608	$ 90,608	$ 181,216
Furniture and home furnishings	453	$ 19,421	$ 19,421	$ 38,841	$ 38,841	$ 77,683
Eating and drinking places	454	$ 10,529	$ 2,632	$ 13,161	$ 13,161	$ 26,322
Miscellaneous retail	455	$ 444,140	$ 0	$ 444,140	$ 0	$ 444,140
Real estate	462	$ 52,306	$ 0	$ 52,306	$ 188,734	$ 241,040
Hotels and lodging places	463	$ 18,250	$ 4,562	$ 22,812	$ 22,812	$ 45,625
Other business services	470	$ 8,160	$ 64,855	$ 73,015	$ 143,072	$ 216,087
Engineering and architectural services	506	$ 0	$ 229,406	$ 229,406	$ 0	$ 229,406
Management and consulting services	508	$ 101,174	$ 719,510	$ 820,684	$ 1,578,917	$ 2,399,601
Research, develop., and testing services	509	$ 43,763	$ 162,517	$ 206,280	$ 208,946	$ 415,226
Households 40-50K	10007	11,489,002	$179,329	11,668,331	$ 286,926	$1,955,257
Other or undetermined	n/a	$ 0	$ 0	$ 0	$ 187,415	$ 187,415
Total Expenditures		**13,856,073**	**4,253,880**	**18,109,953**	**$ 3,446,964**	**21,556,917**

Source: California State University, Chico, Center for Economic Development

Direct, Indirect, and Total Benefits

Direct impacts shown in Table 10 were entered into the economic models, with Core Area expenditures entered into the Core Area model, and Extended Area expenditures (Core plus Peripheral) entered into the Extended Area model. The models generated Direct and Indirect Economic Benefits for both the Core Area and the Extended Area.

Direct Economic Benefit is the estimated sum of payroll spent within the Core or Extended Area plus HFQLG payments to businesses in the same area. Indirect Economic Benefit includes dollars collected by businesses and organizations due to direct revenue being re-spent in the region.

Both Direct and Indirect Benefits include a Jobs (full and part-time) component, and a Business and Organization Revenue component. Business and organization revenue includes all earnings for businesses, nonprofits, and local government, and is further subdivided by the following four categories:

- **Labor income** is all wage, salary, and proprietary income; any health, life, retirement, and other benefits; and non-cash compensation.
- **Property income** consists largely of payments for land and other commodities for rent, and also includes royalties, dividends, and corporate profits.
- **Business taxes** includes excise and property taxes, fees, licenses, and sales taxes paid by businesses, but does not include capital gains or other taxes on business profits or income.
- **Other business expenses** are payments to other organizations and businesses and other operating expenses.

Table 11. Core Area Economic Benefit of Planning and Implementing HFQLG.

	Local Direct Benefit	Indirect Benefit	Total Benefit
Business & organization revenue	$ 8,081,013	$ 5,517,532	$ 13,598,545
Labor income	$ 2,498,853	$ 2,493,914	$ 4,992,767
Property income	$ 1,551,372	$ 934,433	$ 2,485,805
Business taxes	$ 524,711	$ 232,513	$ 757,224
Other business expenses	$ 3,506,077	$ 1,856,672	$ 5,362,749
Jobs (full- and part-time)	109	84	193

Source: California State University, Chico, Center for Economic Development

In the Core Area in FY02, the total economic benefit due to HFQLG implementation was $13.6 million ($8.1 direct and $5.5 indirect). HFQLG accounted for 193 total jobs (109 direct and 84 indirect).

Table 12. Extended Area Benefit of Planning and Implementing HFQLG, FY02.

	Local Direct Benefit	Indirect Benefit	Total Benefit
Business & organization revenue	$ 13,928,141	$ 17,004,331	$ 30,932,472
Labor income	$ 5,350,217	$ 7,262,988	$ 12,613,205
Property income	$ 2,306,066	$ 2,766,998	$ 5,073,064
Business taxes	$ 759,577	$ 814,543	$ 1,574,120
Other business expenses	$ 5,512,281	$ 6,159,802	$ 11,672,083
Jobs (full- and part-time)	239	219	458

The Extended area includes both the Core Area and Peripheral Area. The estimated total FY02 economic benefit in the Extended Area from HFQLG implementation was $30.9 million ($13.9 direct and $17.0 indirect). HFQLG also accounted for 458 total jobs (239 direct and 219 indirect) in the Extended Area.

Appendix F contains the Center for Economic Development's full analysis and estimates of economic benefits.

Revenues and Expenses

Section (j)(1)(E) of the HFQLG Act requires:

(E) A comparison of the revenues generated by, and the costs incurred in, the implementation of the resource management activities described in subsection (d) on the Federal lands included in the pilot project area with revenues and costs during each of the fiscal years 1992 through 1997 for timber management of such lands before their inclusion in the pilot project.

The Center for Economic Development (CED) analyzed revenues and costs for FY02 Pilot Project activities. Their complete report is in Appendix G.

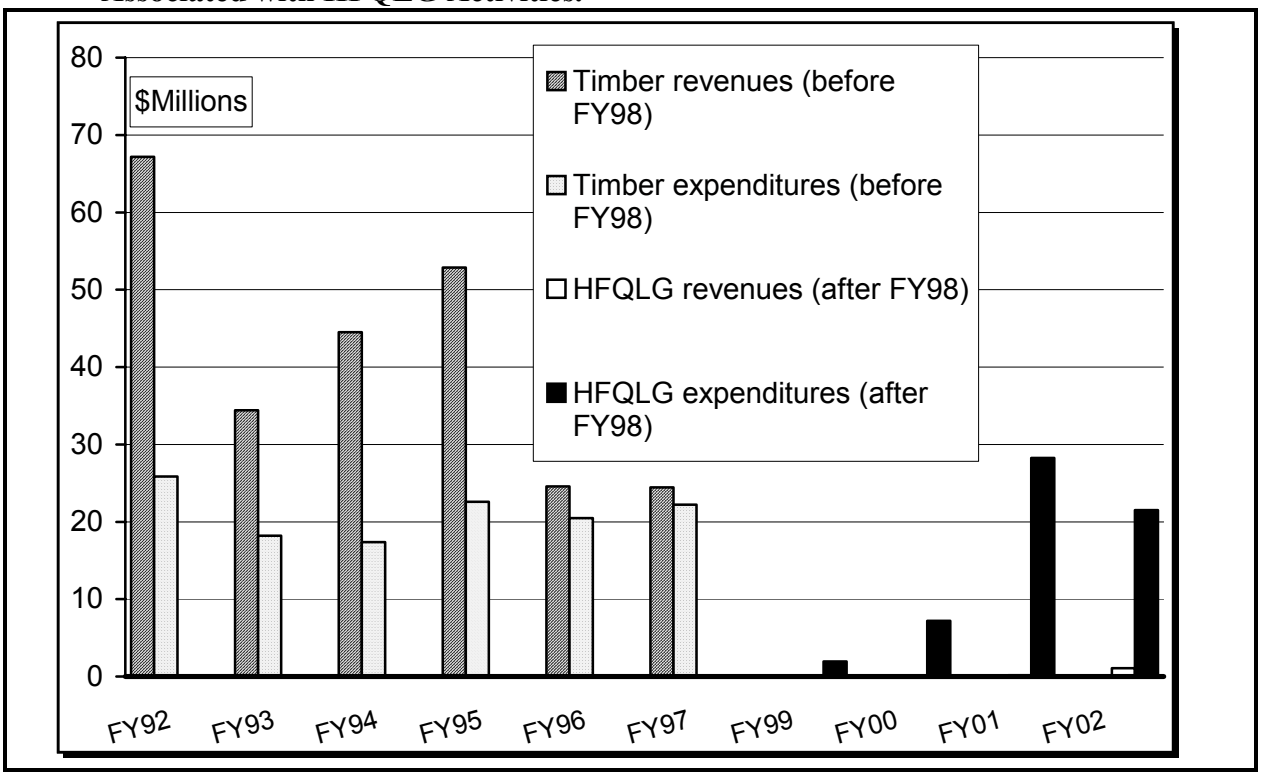
During FY02, Pilot Project revenues generated from timber sales rose to approximately $1.1 million. Revenues were realized from actual harvest on fifteen timber sales, and nine service contracts with nested timber sales that were under contract and active in FY02.

The Forest Service spent $21.5 million for planning and implementing projects within the Pilot Project. Seventeen timber sales were advertised and nine service contracts with nested timber sales were awarded.

Figure 2 and Table 13 display FY92 to FY97 revenues and expenses associated with timber management activities prior to the HFQLG Act and FY99 to FY02 revenues and expenses associated with the HFQLG Act. For the six-year period FY92 to FY97, timber management revenues in the Pilot Project area averaged $41.3 million per year. For the same time period, timber management expenses averaged $21.1 million per year. By contrast, for the first three years of Pilot Project implementation (FY00 to FY02), HFQLG revenues averaged $0.4 million per year and HFQLG expenses averaged $19.0 million per year.

These statistics demonstrate that implementation of the Pilot Project has not yet come close to meeting the expectations of the Quincy Library Group or the projections of the HFQLG EIS in generating revenue.

Figure 2. FY92 to FY97 Revenues and Expenses Associated with Timber Management Activities, and FY99 to FY02 Revenues and Expenses Associated with HFQLG Activities.



Note: The HFQLG Act required a comparison of FY92 - FY97; therefore, no figures for FY98 are displayed.

Sawlog and Biomass Volume

Biomass volume sold and awarded (see Table 14) to contractors in FY02 reached 32,615 CCF and sawlog volume sold and awarded amounted to 32,581 CCF. Total biomass volume sold and awarded over the last four years (1999 through 2002) reached an accumulated total of 139,825 CCF and sawlog volumes sold and awarded reached a total of 111,394 CCF. When totaled together, the above volumes add up to 251,219 equivalent CCF for the pilot project.

Actual harvest production of sawlogs and biomass from the Pilot Project for FY02, from projects that were sold or awarded in FY02 or previously, was 80,879 equivalent CCF in biomass and sawlog volumes combined.

Acres Harvested and Treated

Acres harvested (see Table 14) are derived from thinning in DFPZs, thinning (using individual tree selection prescriptions) outside of DFPZs, and group selection. For "total area harvested" the acre is counted only once after harvest is complete regardless of the number of harvest stages (i.e. removing sawlogs in one stage and biomass in another). For "total area treated", an acre could be counted more than once; once for mechanical treatment if harvest or mastication took place, and additional times for individual treatments such as for hand thinning, hand piling, mechanical piling, and prescribed burning.

Total area harvested increased to 11,091 acres in FY02, and the total area treated in implementation of the HFQLG Act in FY02 reached 23,231 acres. The "total area treated" includes areas where mechanical removal of underbrush occurs without timber harvest. Both figures show significant increases over previous years, primarily due to project contracts that were active in FY02, that may have been awarded or advertised in previous years.

Table 13. FY92 to FY97 Revenues and Expenses Associated with Timber Management Activities, and FY99 To FY02 Revenues and Expenses Associated with HFQLG Activities.

	FY92	*FY93*	*FY94*	*FY95*	*FY96*	*FY97*	*FY99*	*FY00*	*FY01*	*FY02*
TIMBER MANAGEMENT REVENUES AND EXPENSES							*HFQLG REVENUES & EXPENSES*			
Revenues(Thousands $)	67,187	34,408	44,501	52,873	24,590	24,465	0	15	175	1,073
Expenses (Thousand $)	25,856	18,194	17,376	22,596	20,490	22,207	1,943	7,182	28,267	21,557
TIMBER MANAGEMENT ACTIVITIES:							*HFQLG ACTIVITIES*			
Regeneration (Acres)	8,634	7,853	8,206	7,531	9,063	15,591	N/A	N/A	N/A	N/A
Site preparation (Acres)	6,176	5,264	4,667	2,363	3,321	3,321	N/A	N/A	N/A	N/A
Timber stand improvement (Acres)	10,045	10,600	8,740	13,866	15,062	22,646	N/A	N/A	N/A	N/A
DFPZ (Acres)	N/A	N/A	N/A	N/A	N/A	N/A	640	5,545	38,421	15,903
Group selection (Acres)	N/A	N/A	N/A	N/A	N/A	N/A	0	200	1,949	1,171
Individual tree selection (Acres)	N/A	N/A	N/A	N/A	N/A	N/A	172	944	528	824
Biomass volume offered (CCF)	N/A	N/A	N/A	N/A	N/A	N/A	4,278	45,030	145,558	40,747
Biomass volume sold & awarded (CCF)	N/A	N/A	N/A	N/A	N/A	N/A	4,278	41,992	60,940	32,615
Sawlog volume offered (CCF)	426,000	424,000	375,000	555,200	374,200	383,000	4,785	34,777	91,784	40,609
Sawlog volume sold & awarded (CCF)	329,400	535,200	332,600	316,400	242,600	353,400	4,785	30,169	43,859	32,581
Total area harvested (Acres)	55,689	70,885	57,922	47,317	38,917	32,223	0	380	3,716	11,091
Total area treated (Acres)	N/A	N/A	N/A	N/A	N/A	N/A	0	430	6,885	23,231
Notes: The Act required a comparison of FY92 - FY97; therefore, no figures for FY98 are displayed.										

Fiscal Year 2003 Activities

Section (j)(1)(F) of the HFQLG Act requires:

(F) A proposed schedule for the resource management activities to be undertaken in the pilot project area during the 1-year period beginning on the date of submittal of the report.

The proposed Program of Work for FY03 includes accomplishing approximately 33,800 acres of DFPZs, 1,600 acres of group selection, and 2,900 acres of individual tree selection. Table 15 is a summary of the Proposed FY03 HFQLG Program by Project Type:

Table 14. Proposed FY03 Program of Work by Project Type.

Project Type	Number of Projects	DFPZ Acres	GS Acres	ITS Acres	Sawlog Volume CCF	Biomass Volume CCF
Timber Sale	18	8,090	1,633	2,727	35,086	37,709
Service Contract with embedded timber sale	18	23,804	0	149	27,762	34,048
Service Contract	2	943	0	0	0	0
Force Account Crew	2	1,010	0	0	0	0
TOTALS FOR FY03	**40**	**33,847**	**1,633**	**2,876**	**62,848**	**71,757**

At the start of FY03, forty vegetation management projects were planned for accomplishment, including 33,800 acres of DFPZs, 1,600 acres of group selection, and 2,900 acres of individual tree selection. Sawlog volume estimates were predicted to be approximately 99 hundred cubic feet (CCF) or 49 million board feet (MMBF). Seven of the FY03 projects, with 11,300 acres of accomplishment and including all 1,600 acres of GS, are contingent on completion of the Administrative Study EIS decision in Summer 2003. Now the Record of Decision for the Study EIS is expected no sooner than November 2003. Accomplishment of the seven HFQLG projects in the Study area will be postponed, and the FY03 program will be revised.

A detailed description of the FY03 program can be found in Appendix D. Map 2 in Appendix E shows the locations of the planned FY03 DFPZs and GS.

The FY03 program of work also includes: 1) Administering current contracts; 2) Implementation of projects planned in previous years; 3) Environmental analysis for Administrative Study projects; 4) Implementation of FY03 riparian management projects; 5) Out-year data collection and planning; 6) Completion of the SEIS for DFPZ maintenance; and 6) Development of a work plan and schedule for the Plan Amendment/Revision required by Section 401 (i) of the HFQLG Act. All work will be conducted at a level commensurate with the $26.2 million FY03 projected available funding.

Twenty-three riparian restoration projects are planned in FY03, with an expected 1,300 acres of accomplishment. These projects will include meadow restoration and enhancement, stream channel improvement, road relocation, road closure, and slope stabilization. Map 3 in Appendix E shows the locations of these riparian restoration projects.

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