Originally Processed With FOIA(s): 1998-0004-F[1]

FOIA Number: S

FOIA MARKER

This is not a textual record. This is used as an administrative marker by the George Bush Presidential Library Staff.

Record Group/Collection:	George H.W. Bush Presidential Records
Collection/Office of Origin:	Chief of Staff, White House Office of
Series:	Sununu, John, Files
Subseries:	Issues Files

OA/ID Number:	29172
Folder ID Number:	29172-003

Folder Title:
Spotted Owl (1990) [2]

Stack:	Row:	Section:	Shelf:	Position:
G	15	25	4	3

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01a. Memo	From Roger Porter to John Sununu Re: Log Exports (1 pp.)	5/22/90	P/5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed:	12/13/2004	**OA/ID Number:**	29172-003
FOIA/SYS Case #:	1998-0004-F[1]	**Appeal Case #:**	
Re-review Case #:	2005-0426-S	**Appeal Disposition:**	
P-2/P-5 Review Case #:		**Disposition Date:**	
AR Case #:		**MR Case #:**	
AR Disposition:		**MR Disposition:**	
AR Disposition Date:		**MR Disposition Date:**	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

Spotted Owl

THE WHITE HOUSE

WASHINGTON

May 22, 1990

MEMORANDUM FOR ROGER PORTER

FROM: ED ROGERS

SUBJECT: LOG EXPORTS

Wayne Berman wants Governor Sununu to get into the mix on this issue. It it something that the Governor should be concerned with right now?

Please advise.

Many thanks.

CC: Governor Sununu

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01b. Memo	From Wayne Berman to Edward M. Rogers, Jr. Re: Log Exports (1 pp.)	5/21/90	~~P5~~	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By ___ (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1] **Re-review Case #:** 2005-0426-S **P-2/P-5 Review Case #:**	**Appeal Case #:** **Appeal Disposition:** **Disposition Date:**
AR Case #: **AR Disposition:** **AR Disposition Date:**	**MR Case #:** **MR Disposition:** **MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

U.S. DEPARTMENT OF COMMERCE
Immediate Office of the Secretary

May 21, 1990

To : Edward M. Rogers, Jr.
The White House

From: Wayne L. Berman
Counsellor to the Secretary

Attached is the Log Export information I promised to send to you.

As you can see, it's an issue we need to address very soon. If you have any question, please call me at: 377-4246.

Best regards.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01c. Paper	From Wayne Berman to Edward M. Rogers, Jr. Re: Log Exports (2 pp.)	5/21/90	P5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JF (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1]	**Appeal Case #:**
Re-review Case #: 2005-0426-S	**Appeal Disposition:**
P-2/P-5 Review Case #:	**Disposition Date:**
AR Case #:	**MR Case #:**
AR Disposition:	**MR Disposition:**
AR Disposition Date:	**MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Congressional and Intergovernmental Affairs
Washington, D.C. 20230

It is incumbent upon the Department of Commerce to respond to a July, 1989 petition filed by the Northwest Independent Forest Manufacturers who seek a finding under the Export Administration Act that log exports are causing domestic short supply. The *Manufacturers* seek to prohibit exports of unprocessed logs from state lands in Oregon and Washington. [Current status: comment period extended until 7/1/90.]

This is a highly divisive issue, involving private and government interests at local, state and Federal levels. The sawmills and wood processors support the petition, but the large log exporters, the ports, labor unions and the Washington State lands agency oppose it. Five federal agencies are involved (State, Commerce, USTR, Agriculture, and Interior). Our attempts to act on the short supply petition are complicated by a number of factors:

- <u>Spotted Owl:</u> In April 1990, a report of the Advisory Committee of Interagency Scientists on the Spotted Owl, which advises Agriculture and Interior, recommended that the owl be declared an endangered species. The Advisory Committee reports are non-binding, but usually adopted. If the owl is found to be an endangered species, approximately 2 billion board feet of Federal timber in which the owl resides would be set aside. This could result in the loss of 25,000 jobs. [Status: Interior is expected to make a decision in June.]

- <u>Adams-Hatfield Amendment:</u> The Adams-Hatfield amendment to the FY 1990 Interior Appropriations bill (PL 101-121) directs the Department of Agriculture to put into effect a conservation management plan for the spotted owl, which would result in the 2 billion board feet reduction. [Status: plan must be in effect by 9/30/90].

- <u>Packwood Amendment:</u> This amendment, contained in the "mini-trade bill" (H.R. 1594), as a response to this situation would prohibit the export of logs from Federal and State lands in Washington and Oregon. [Status: bill is in conference.]

- <u>Miller Amendment:</u> This amendment, supported by the entire delegations of Oregon and Washington (including Speaker Foley) would prohibit timber exports from all Federal and State lands except Washington State where it limits exports to 25%. We feel this is the provision with the best chance of enactment.

  There is consensus through the Trade Policy Review Group that we will not take a position on pending bills. [Status: provision has been approved by three House Committees (Agriculture, Interior and Foreign Affairs) either as a separate bill or an amendment to other legislation].

Conclusion: The ultimate action on the short supply question lies within the jurisdiction of the Commerce Secretary, although the factors outlined above have a crucial relationship. It is apparent that if one or more of the above transpires, we would be forced to make a finding of short supply, an action which could lead to restrictions of unprocessed timber exports from private lands, as well as public.

This issue demands close scrutiny and inter-agency coordination due to the severe economic dislocation which might be caused by any such actions, and the current congressional debate.

SLADE GORTON
WASHINGTON
730 HART SENATE OFFICE BUILDING
(202) 224-3441

COMMITTEES:
AGRICULTURE
ARMED SERVICES
COMMERCE, SCIENCE, AND TRANSPORTATION
INDIAN AFFAIRS

United States Senate

WASHINGTON, DC 20510-4701

Date: May 17, 1990

To: Governor Sununu

From: Slade Gorton

Subject: The President's message on the Spotted Owl crisis

On Saturday (May 19) a timber rally will be held in Kelso Washington to focus attention on the potential job losses related to the proposed Spotted Owl set asides. People from five Northwest states will attend. The crowd size is expected to be between 10,000 - 20,000. I suggest that the President send a telegram indicating his awareness of their plight.

Suggested telegram:

You are gathered here today to make a loud, clear statement to your elected leaders about the importance of your jobs, your families, your communities, and your way of life. I want you to know I share your values, and I will do everything I can to help.

I don't believe that we face an all-or-nothing choice. We can save the Spotted Owl, and we will. But America must not abandon you, or decimate a vital industry. People and families and communities will always rank first with me.

Thank you for being in Kelso today. We can thank God that we live in America where you are free to have your voice heard. I hear your voice."

The telegram should be sent to:
Sherrie Dailey, c/o Kelso Police Department - 101 South Fourth - Kelso, Washington 98626

Speech in Portland

The President will be in Portland Oregon on May 21. I suggest that he address the Spotted Owl crisis at that time. I believe that this is a unique opportunity to do two important things. First, given the visibility of this issue today he can cement a large constituency of blue collar, working people in the Northwest. I have told you that I believe that this issue has the potential to realign partisan loyalties in the Northwest. Second, I believe that by speaking in Portland the President can redefine the debate from one of just owls vs. jobs.

3206 JACKSON FEDERAL BUILDING
915 SECOND AVENUE
SEATTLE, WA 98174
(206) 442-0350

130 FEDERAL BUILDING
500 WEST 12TH STREET
VANCOUVER, WA 98660
(206) 696-7838

697 U.S. COURT HOUSE
W. 920 RIVERSIDE AVENUE
SPOKANE, WA 99201
(509) 353-2507

Finally, please note that these suggested remarks are more detailed than the President may wish to use; I felt this would be easier to edit than to expand.

Suggested theme for President's speech:
I know that the Northwest faces a crisis. You face a crisis because of the national debate over the proper use of the Northwest's forests. One group in this debate are people who care about the preservation of old growth forests, the prime Spotted Owl habitat. Another group in the debate are those people whose living depends on productive jobs in the forest products sector.

It is important to remember that these two groups, as important as they are, are not the only people who will be affected by the resolution of this issue. We all have a stake in how we manage our national forests. Timber harvested from our northwest national forests represents almost half of the lumber produced here. That lumber provides renewable, biodegradable products for people all over America.

Perhaps most important is the fact that northwest lumber provides the basic material for housing. If we shut down timber production from our national forests housing throughout the nation will become less affordable.

Some people have compared cutting trees in the Northwest to stripping the rainforests in South America or SouthEast Asia. We must understand that in the Pacific Northwest, forests, when harvested, are replanted. The law requires replanting. That is why a strong forest products industry still thrives here after more than 100 years of timber harvesting.

But, the issue of the rainforests in South America and Southeast Asia raises an important point. If we stop harvesting trees here in the Northwest, where trees are replanted for future generations, where will the world get its supplies of forest products? The answer is that if we stop harvesting trees here in the Northwest, more lumber will be produced in places where replanting does not take place.

It is our policy to preserve millions of acres of old growth forests forever. Over 40% of the Northwest's prime old growth, Spotted Owl habitat, representing millions of acres, is already preserved forever in our National Parks and Wilderness areas. These forests will never be used for commercial timber harvest. These forests will be preserved forever.

Today this issue is brought to a crisis by the Thomas committee's proposal to set aside 8.4 million acres of land in order to expand the numbers and range of the Spotted Owl. That propsal recommends that areas be set aside which have never been inhabited by Spotted Owls. They would be set aside in the hope that someday owls may live there. The proposal would mean the loss of jobs of as many as 35,000 working people. I said two weeks ago that we need to find a balance between saving the Spotted Owl and old growth forests and keeping jobs and a healthy forest products industry. I am not going to walk away from the working people of the Northwest.

We need to find a position that finds a "harmony" between the desire of Americans for preservation of species and forest ecosystems and the needs of working Americans for employment and community stability.

Americans will not tolerate, and I will not allow, the Spotted Owl to become extinct. But I also care about the children of the families who depend on a healthy forest products industry.

I allow the destruction of jobs for 35,000 working people in the Northwest. That would bring disaster. Economic dislocation of that magnitude would bring suffering to families, children and communities. The fabric of our social service network would be stretched to the breaking point. State and local funds for education and children would decline. Everyone in the Northwest would feel the consequences.

We can find an answer to this crisis that preserves the Spotted Owl from extinction and preserves a way of life for families and communities.

I must have the help of Congress to meet this crisis. With the leadership of Mark Hatfield, Slade Gorton, Bob Packwood and others in Congress we can find the answer to this crisis. Of Course, this will need the bipartisan support of Congress including Speaker Foley, Les Aucoin and Norm Dicks.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
02a. Memo	From Bob Packwood to John Sununu Re: Log Export Bill (1 pp.)	5/11/90	~~P-5~~	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By [initials] (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1] **Re-review Case #:** 2005-0426-S **P-2/P-5 Review Case #:**	**Appeal Case #:** **Appeal Disposition:** **Disposition Date:**
AR Case #: **AR Disposition:** **AR Disposition Date:**	**MR Case #:** **MR Disposition:** **MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

BOB PACKWOOD
OREGON

United States Senate

WASHINGTON, DC 20510

141064
Guidance

May 11, 1990

The Honorable John Sununu
Chief of Staff
The White House
Washington, D.C. 20510

Dear John:

You asked for a short memo on my log export bill.

In my judgment, not only is the substance of the bill good, but it is certainly a winner politically for the administration.

Sincerely,

Bob

BOB PACKWOOD

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
02b. Memo	From Bob Packwood to John Sununu Re: Log Exports (4 pp.)	5/11/90	~~P5~~	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1]	**Appeal Case #:**
Re-review Case #: 2005-0426-S	**Appeal Disposition:**
P-2/P-5 Review Case #:	**Disposition Date:**
AR Case #:	**MR Case #:**
AR Disposition:	**MR Disposition:**
AR Disposition Date:	**MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

May 11, 1990

MEMO

FROM: SENATOR PACKWOOD

TO: JOHN SUNUNU

SUBJECT: LOG EXPORTS

This memorandum responds to your request for additional information on my log export bill.

As you know, the Northwest faces a crippling economic blow if the spotted owl is listed as an endangered species. This threat has galvanized public opinion in support of banning log exports from federal and state lands.

Events have moved very quickly. On April 24, the Senate added my log export amendment to the CBI bill, 81-17. Since then, similar log export bills have been approved by the House Committees on Foreign Affairs, Interior and Agriculture. In substance, the bills would:

1. Make permanent the current ban on log exports from federal lands in the western states;

2. Tighten the rules on circumventing the federal ban; and

3. With respect to state lands[1] in the western states, either:

    a. authorize the states to ban log exports from state lands (Packwood amendment); or

    b. require the states to ban all log exports from state lands (with a 75 percent ban for Washington State) (House bill).

The conference on the CBI bill (including log exports) begins next week. We'll have to address a number of technical issues, but I'm confident the substance of the bill I've described above

---

[1] A 1984 Supreme Court decision precludes the states from banning log exports absent an explicit Congressional authorization.

will remain intact and be sent to the President for his signature. I strongly urge the President to sign it, for the following reasons:

1. <u>States' rights</u>: States should be able to decide what to do with their own timber -- just like the federal government and private timberland owners are able to decide what to do with <u>their</u> timber.

(If the Administration opposes different states having different policies, I'd be amenable to a federally mandated ban, as in the House bill)

2. <u>Environment</u>: This bill is strongly supported by all the national environmental groups.

3. <u>Non-protectionist, GATT-consistent</u>: The bill is consistent with U.S. obligations under the General Agreement on Tariffs and Trade, which permits "conservation of exhaustible natural resources..."

4. <u>Pacific Northwest</u>: This is an issue of profound political and economic importance to the Pacific Northwest. The President will likely hear an earful when he's in Portland May 21.

5. <u>Veto-proof</u>: It would be impossible to sustain a veto of this bill, which is strongly supported by a broad coalition of the timber industry, environmentalists, and organized labor.

6. This bill is extremely important to me personally.

John, I hope you can help me on this one. Please call if you have any questions.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03a. Memo	From David Bates to John Sununu Re: Northern Spotted Owl (5 pp.)	5/14/90	P5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1] **Re-review Case #:** 2005-0426-S **P-2/P-5 Review Case #:**	**Appeal Case #:** **Appeal Disposition:** **Disposition Date:**
AR Case #: **AR Disposition:** **AR Disposition Date:**	**MR Case #:** **MR Disposition:** **MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

THE WHITE HOUSE

WASHINGTON

May 14, 1990

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: DAVID Q. BATES

SUBJECT: Northern Spotted Owl

This memorandum and its attachments are intended: (1) to provide background on the possible listing of the northern spotted owl as threatened under the Endangered Species Act (ESA); (2) to outline federal actions that are required by the ESA or that may be contemplated in connection with listing the owl as threatened; and (3) to request your guidance regarding implementation of an appropriate process for managing this issue.

The Owl and its Habitat -- Old-Growth Forests.

The northern spotted owl lives primarily in old-growth forests located in Washington, Oregon and northern California. The listing decision would primarily affect rural communities in those states, and particularly in Oregon. A decision to list the owl would affect timber sales on land held by the Agriculture and Interior departments and possibly affect timber harvests on private lands. Listing of the owl as a threatened species is considered all but certain.

The controversy over the owl is considered by some a "stalking horse" for a larger effort to preserve old-growth timber in the Pacific Northwest and an example of a new tactic of environmentalists -- seeking to identify a species that could be eligible for protection under the ESA and using it as a tool to influence federal multiple-use land management.

Chronology of Critical Dates and Decisions.

The U.S. Fish and Wildlife Service (FWS) has proposed to list the spotted owl as a threatened species under the ESA. Benchmark dates and decisions include:

- June 23, 1989. Publication of a FWS rule proposing to list the owl as a threatened species under the ESA. The final decision on whether to list the owl must be based solely on biological evidence and will not take into account the economic effects of the listing.

- o Fall 1989. Establishment by Congress of a temporary fix to the owl and old-growth controversy and the litigation surrounding federal timber sales in the Pacific Northwest. In section 318 of last year's appropriation for the Interior Department, Congress: (a) provided for continued timber harvests at reduced levels for FY 1990; (b) mandated establishment of an interagency scientific committee (the "Thomas Committee") to gather information about the owl and propose a conservation plan; and (c) required USDA to establish before the end of FY 1990 a conservation plan to preserve the owl.

- o April 4, 1989. Release of the Thomas Committee report. The interagency committee, chaired by Jack Ward Thomas, included representatives from the FWS, U.S. Forest Service (USFS), Bureau of Land Management (BLM), and National Park Service (NPS).

- o April 4. Secretaries Lujan and Yeutter commissioned an interdepartmental committee to assess the economic effects of implementing the Thomas Committee report.

- o May 3. Release of the Interior-USDA report, "Economic Effects of Implementing a Conservation Strategy for the Northern Spotted Owl." USDA and Interior staff briefed appropriate Members of Congress on the report.

- o June 1 (approximately). Deadline by which USDA must publish a notice of proposed rulemaking to implement the section 318 requirement for a USFS conservation plan. If the FWS elects to list the owl under the ESA, the USDA conservation plan is rendered moot. It is anticipated that the USDA conservation plan, which would not apply to BLM or private lands, will resemble the plan recommended by the Thomas Committee.

- o June 23. Deadline for FWS listing decision. The ESA provides for a possible six-month delay of the final decision if the scientific data is incomplete or conflicting, which in this instance is very unlikely. A one-month "cooling off period" is provided under federal law before the decision is implemented.

- o July 23. Implementation of the listing decision. Private civil suits, however, may effectively stop logging in the owl habitat immediately following the June 23 listing announcement.

<u>ESA Requirements Subsequent to a Listing</u>.

If the owl is listed, FWS must develop a temporary conservation plan that would provide for <u>protection</u> of the owl. It is anticipated that within a year FWS would put into place a permanent conservation plan to provide for <u>recovery</u> of the owl. The Thomas Committee report is a plan for protection, not recovery. It is reasonable to expect that the initial FWS conservation plan would incorporate the broad features of the Thomas Committee plan and that the economic effects of the initial plan would roughly track the data released on May 3 by the Interior and Agriculture Departments. The permanent conservation plan would, however, impose an even more restrictive standard for preservation of old-growth forests and would have higher economic costs.

The Interior Department anticipates that the preliminary economic effects of a listing would be felt quickly, within a matter of weeks after July 23. Interior anticipates that an ESA listing would supplant projected timber contracts within the owl's habitat.

The ESA does contain provision for appeal to the Endangered Species Committee could consider economic variables. This committee, described at Tab 2, pages 3-4, is comprised of the Secretaries of Interior (who serves as chairman), Agriculture and the Army, the Administrators of EPA and NOAA, the Chairman of CEA, and representatives of the affected states. The committee can exempt federal actions (e.g., timber sales) from the provisions of the ESA and has broader discretion than FWS to take note of economic factors. Such committees have rendered decisions in only two situations since passage of the ESA, exempting the Grayrocks Dam in Wyoming (involving the whooping crane) and denying an exemption for the Tellico Dam in Tennessee (involving the snail darter), although Congress subsequently reversed the committee's decision regarding the Tellico Dam.

The Endangered Species Committee cannot, however, provide a quick, comprehensive plan to mitigate the economic effects of a listing; it may take up to nine months for an appeal to be referred to the committee and resolved by it.

<u>Economic Effects of a Listing</u>.

The economic effects of implementing a conservation plan similar to the Thomas Committee recommendation are summarized at Tab 1, pages 8-9 and described fully in the document contained at Tab 3.

In short, under the Thomas Committee plan federal timber harvests in the Pacific Northwest would decrease 48 percent by 1995. This would result in a loss of 13,000 jobs by 1995 and 28,000 jobs by 2000 (this is premised on an offsetting increase in timber harvests on private lands, but this could be jeopardized due to possible restrictions on private lands if the owl is listed). It would also result in lost annual revenues to the federal Treasury of $229 million by 2000, and lost annual federal timber payments to states and counties of $95 million by 2000. To repeat, the final conservation plan would likely impose greater restrictions on timber sales than the Thomas Committee recommendations. Higher economic costs are therefore likely.

On a national basis, much of the adverse regional impact would be offset from federal and private timber harvest increases in non-old-growth areas in response to higher stumpage prices. See Tab 1, pages 8-9 for additional discussion.

<u>Options for Mitigating the Effects of a Listing</u>.

As you know, Washington Governor Booth Gardner has written to the President about the owl listing. He advises a gradual phase-in of a conservation plan, which may require Congressional amendment of the ESA, and a partial restriction on the export of logs from state lands. He is also developing an economic recovery plan for which we do not yet have details or cost estimates. Initial Congressional planning covers a wide range of options. It is likely the President will be questioned closely about this issue on his trip to Portland on May 21. The spotted owl has been a significant campaign issue in the Oregon Governor's race.

There is no simple short-term solution to this issue. The ESA affords the Administration no significant room to maneuver before June 23. There are several possible approaches to this issue:

- Attempt administratively to phase-in a conservation plan over several years and cushion the effect of the listing. It is unlikely this approach would withstand court challenge.

- Allow the consultation process required under the ESA to go forward and look to the Endangered Species Committee to craft a compromise policy solution.

- Let Congress decide how to mitigate the economic effects of a listing. Congressional inaction would produce significant short-term economic dislocations in the region, but Congressional action could ultimately prove quite expensive and include provisions unacceptable to the Administration.

- Develop an Administration program to mitigate the effects a listing, which might include extended unemployment benefits, retraining and readjustment assistance, increased family support, economic development grants and loans, or increased federal timber payments to the affected areas. Such a program might also include a ban on timber exports (although this could run counter to trade commitments).

- o Seek amendments to the ESA to provide limited exemptions to the act for the spotted owl.

The ESA itself presents a broader policy question of whether the Administration should support amendments to allow greater weight to economic effects of making listing decisions or other modifications. Reauthorization of the ESA is scheduled for 1993. There are hundreds of species currently under consideration for listing under the ESA. Although few of those listing decisions would result in the serious consequences faced here, they present the potential for recurrent battles over specific projects (such as the Animas-La Plata water project in southwestern Colorado, which has just been delayed) and, as noted above, the opportunity for environmentalists to seek control of federal development and land management policy.

At the same time, it must be noted that the ESA is viewed as sacrosanct by the environmental community and any attempt to amend its provisions would result in a very heated political battle. Proof of this was afforded Friday in an ABC Evening News report of a remark in Colorado by Lujan that the ESA may need fine tuning. ABC carried a strong denunciation of Lujan's view by environmental and Congressional spokesmen. Over the weekend Secretary Lujan's statements on the ESA were widely reported (see Tab 4).

<u>Decisions</u>.

This paper has not aimed to lay out all options, only to provide an introduction to this issue. If the Administration elects to undertake a broader assessment of the ESA, a Domestic Policy Council review may be appropriate. That work could include an assessment of the numerous pending ESA actions.

In the short run, you may find it useful to assemble senior White House staff to review this issue and chart options. A preliminary meeting could, if you want, include Secretaries Lujan and Yeutter. Lujan and Yeutter hope to meet together on this issue next week, but Yeutter is out of the country until Thursday.

Attachments

Prepared by OMB

MAY 8 1990

BACKGROUND ON THE NORTHERN SPOTTED OWL AND OLD-GROWTH FORESTS

The controversy surrounding the northern spotted owl is much more than the decline in the owl's population. It represents the merging of two important issues to the environmental community -- each of which alone is a bellwether issue, but combined represent a decision that will determine the direction of environmental and preservation movements in the Pacific Northwest for years to come. It is the merger of those forces dedicated to the protection of old-growth forests and those dedicated to the protection of threatened or endangered species.

At the heart of this movement, and the greatest risk posed by it, is the overarching purpose to attack the policy of "multiple-use management" on public lands. Similar to the wilderness battles of the 1970s and 1980s, the environmental community has chosen old growth and spotted owls as the latest tools in their attempt to constrain use of Federal natural resources and move the multiple-use management of the national forests toward the singular, preservation philosophy most consistent with the National Park Service (NPS).

Old-Growth Forests

The Pacific Northwest contains large stands of old-growth timber, typically associated with Douglas-fir forests that are more than 200 years old (and are known to be as old as 800 years), stand over 150 feet high and are at least 32 inches in diameter. They are the last remaining "original" forests in the United States. Original stands in the East, South, and Southeast have usually been fully harvested at least twice, or lost to fire. The Pacific Northwest has been protected from fire by the moist climate of that area. Large fires are rare and usually short-lived in this region.

As an economic resource, species like Douglas-fir are typically harvested between 40-80 years, which represent the years of their most vigorous growth. Growth slows considerably after 100 years. Therefore, old-growth stands are not a "renewable" resource. Once harvested, their replacement will not occur as a matter of resource economics. In the South, trees may be harvested between 25 and 50 years after being planted.

Since most remaining old-growth stands are now on Federal (and to a lesser extent State and private) lands managed by Interior and Agriculture, the struggle between those dedicated to preserving old growth and those dedicated to the economic use of a natural resource is being played out in the courts, principally under the National Environmental Policy Act (NEPA).

The environmental community most frequently cites the relationship between old-growth forests and biological diversity as the reason behind their cause. Federal lands, and particularly Forest Service lands, significantly contribute to the conservation of biological diversity through the protection of species whose habitats elsewhere have been disrupted or eliminated. In this respect, old-growth stands on Federal land represent a sanctuary for those species dependent on that community type. These stands may be the last remaining refuge for some species, an important addition to the habitat of others, or simply the most productive lands remaining for currently widespread species.

While majestic and beautiful, the old-growth forests are also the most economic to harvest. Their immense size yields high quality and quantities of wood fiber and pulp, and yield the greatest economic return on a board foot basis.

Needless to say, the Pacific Northwest is one of the few areas in which Federal timber harvests reap significant net revenues -- so great in fact that it more than offsets the significant losses the Federal Government incurs in most other timber harvests nationwide.

Also, the Pacific Northwest timber communities, almost all of which are rural, are hardly disinterested observers of this longstanding battle. They receive 25 percent of all gross receipts from a harvest from Forest Service land (50 percent from Bureau of Land Management (BLM) lands) and have local economies that are based on timber production. Education and highway programs in these communities are financed for the most part by shared timber receipts.

The preservation versus economic use of the remaining old-growth stands has been and will continue to be a struggle. Its emotional significance should not be underestimated at the local and national level. The environmental community has waged an intensive battle in the courts: forest-by-forest and harvest-by-harvest.

Overall, environmental groups have been highly successful tying up planned harvests for years or overturning forest plans completely. NEPA has been a very useful tool for them. However, this intensity has also fostered more radical, violent efforts to preserve old-growth stands, in the form of groups like Earth First. In large measure due to environmental group litigation and political clout, the old-growth stands in the Pacific Northwest are hardly in jeopardy of disappearing. Of an estimated 6.2 million acres of Forest Service old-growth stands, 3.2 million acres are now set aside in wilderness or other protected areas, and are no longer available for harvest.

The Northern Spotted Owl

To this already contentious issue, we must now add the northern spotted owl, whose range includes, almost exclusively, old-growth forest:

- There are three subspecies of spotted owls: northern, California, and Mexican. The northern subspecies occurs only in Washington, Oregon, northern California, and part of British Columbia.

- The northern spotted owl is a medium-sized owl with dark brown coloring, whitish spots on the head and neck, and white mottling on the abdomen and breast. Mostly nocturnal, it forages in forests on small mammals such as squirrels, mice, and woodrats. During the day, it roosts in trees, frequently close to the nest site.

- Pairs of owls tend to occupy the same territory for years as long as suitable habitat is present. One to three eggs, usually two, are laid in March or April. The female incubates the eggs and broods the young, while the male provides most of the food.

- Before the early 1970s, little was known about the spotted owl in the Pacific Northwest, except that it was a resident of a variety of forest types. Early research indicated an association with mature and old-growth forests. Recent research has determined that owls are found primarily in old-growth forests that have never been logged, and that owl numbers are declining in areas subjected to considerable harvest.

- Population trends from the 1970s to the present are not available. Current estimates indicate that there are between 2,000 and 3,000 pairs of owls. Extrapolation from the numerous scientific studies suggests that eliminating old-growth forests generally results in a decrease in northern spotted owl population. No study has reached an opposite conclusion. In fact, the correlation is so high that the northern spotted owl is considered by the Fish and Wildlife Service (FWS) as an indicator species for the health of old-growth forests.

- Based on the bulk of observed scientific data, the northern spotted owl needs old-growth forests for two reasons: (1) The owls nest in the old-growth trees with large cavities and broken tops; and (2) old-growth forests' high canopy provides essential protection from natural predators while the owls hunt for mice and woodrats. For example, the great horned owl is a predator of juvenile northern spotted owls.

The principal environmental groups that have been active in litigation include the Audubon Society, Oregon Natural Resources Council, Sierra Club, Wilderness Society, and Natural Resources Defense Council. The legal arguments are that the Federal land management agencies are in violation of NEPA, the Migratory Bird Treaty Act, the Federal Land Policy and Management Act, the National Forest Management Act, and the Oregon and California Grant Lands Act. The legal relief being sought is compliance with those statutes through completion of adequate EISs and planning guidelines. Administrative actions challenging specific plans and protests on specific sales have also been used as a tool to protect the northern spotted owl as well as old-growth forests.

Interior Response to the Northern Spotted Owl Issue

In 1982, the FWS undertook its first status review of the species and began an intensive biological evaluation of the owl, its habitat and the number of mating pairs in existence. Monitors were put in place, captured birds were equipped with signal emitters, and the Forest Service, BLM, and the NPS poured funds and personnel into spotting, tracking, recording, and understanding the bird.

After six years, the FWS prepared an assessment for release to the public in October 1988. However, prior to its release, then Interior's Assistant Secretary for Fish, Wildlife and Parks, Becky Norton-Dunlop, changed many of the scientific findings and deleted some data and replaced it with other data that, in combination, downplayed the threat to the owl and caused the FWS not to list the owl as threatened or endangered. Also, James Cason, then Interior's Deputy Assistant Secretary for Land and Minerals Management, which includes the BLM, argued strongly against the scientists about the need to protect the owl as threatened.

Without commenting on the merits of the arguments, it is obvious that the scientific community, FWS staff, the environmental community, and Congress were very concerned about the changes made to the FWS Report.

Current Status

Four related actions resulted after the decision by Interior to overturn the FWS recommendations:

- Additional regional litigation in Federal court against BLM and the Forest Service essentially shut down timber sales in western Washington and Oregon due to the northern spotted owl.

- The U.S. District Court for the Western District of Washington in Seattle held that the decision by the FWS not to list was arbitrary and capricious, and directed the FWS to undertake a supplemental status review for the species and to complete a new finding. This judicial order led to a decision by the FWS to "seek threatened status" for the northern spotted owl in June 1989.

- The FWS 1989 notice of intent to list the northern spotted owl as a threatened species throughout the owl's range in turn triggered a one-year evaluation and comment period under the Endangered Species Act (ESA). A final listing decision is required by June 23, 1990. It is only possible to extend the deadline by six months if the available scientific data is incomplete or conflicting, which in this instance is very unlikely.

- Because the environmentalists had been successful in shutting down timber sales, Congress included a short-term fix to the old-growth issue in the FY 1990 Interior Appropriations Act. In that Act, Section 318 mandated a specific timber sale volume to be offered by Forest Service and BLM in FY 1989-90 and limited judicial review. Section 318 also directed that an independent, interagency scientific committee (ISC) be established to make recommendations on an appropriate protection level for the owl.

<u>The ISC Report</u>

The ISC Report "A Conservation Strategy for the Northern Spotted Owl" was released on April 4, 1990. The scientific committee concluded that the owl is imperiled over significant portions of its range where logging and natural disturbances have significantly reduced the amount of suitable old-growth habitat. The ISC recommended establishing a network of large blocks of habitat to be protected from disturbance. These habitat blocks, called Habitat Conservation Areas (HCAs), would generally be capable of supporting up to 20 pairs of spotted owls and range from 50 acres to 145,000 acres in size. The resulting impact of these quasi-wilderness areas would reduce harvest levels on Forest Service and BLM lands by approximately 50 percent over current planned levels.

The principal impact of the ISC Report will be felt by the Forest Service which, pursuant to the FY 1990 Appropriations Act must, in effect, adopt some plan that is reasonably close to the ISC's recommendations. Specifically, under Section 318, the

Forest Service is required to use the ISC recommendations to review and revise its guidance for preparation of Forest Management Plans by September 30, 1990. This guidance would outline direction for the management of the northern spotted owl relative to planned timber sales, and, in essence, locks the Forest Service into implementing the ISC strategy or something very close to it.

The BLM, however, is not legally bound to the ISC report and BLM's Director has stated that BLM will reject its recommendations as too burdensome on local economies.

Relative to the upcoming listing decision, the primary influence of the ISC Report is not the HCAs but the scientific conclusions it reached about the owl, and the extent to which this report will reinforce or contradict other evidence developed as part of the FWS analysis for the listing decision.

The ISC concluded that:

- The northern spotted owl is imperiled over significant portions of its range because of continuing losses of habitat from logging and natural disturbances.
- Current management strategies are inadequate to ensure the viability of the owl.
- By some estimates, the northern spotted owl habitat area has been reduced by about 60 percent since 1800.
- HCAs of varying sizes should be established, in which disturbances to the owls' habitat would be limited.
- If these recommendations are implemented, there is a high probability of retaining a viable, well-distributed population of northern spotted owls over the next century.

The Listing Decision and its Implications

Under the Endangered Species Act (ESA), a species is considered endangered when there is a high probability that the species will become extinct if no action is taken. In turn, a species is considered threatened if there is a high probability the species will become endangered if no action is taken.

All indications are that the FWS believes the science is unambiguous, and the high probability is that the owl will be listed as a threatened species by June 23rd. Once the listing is made, a series of events will be triggered:

1. Critical Habitat

At the time of listing, the FWS is required to make a determination as to whether it will also designate "critical habitat" for the species. A critical habitat determination is based on the best scientific information available, taking into account economic effects and other social factors. The FWS could use the ISC Report to designate critical habitat, or make its own independent determination. The FWS may exclude any area from critical habitat if the economic or social benefits to the local communities from an exclusion outweigh the benefits of protecting the owl. The exclusion may not, however, result in a jeopardy to the species.

If the FWS decides not to designate critical habitat areas, it would instead review each and every Forest Service and BLM management plan to ensure that a proposed action would not jeopardize the existence of the owl.

2. Development of a Recovery Plan

The key element of a listing decision is the development of a plan that will restore the species and allow it to be removed from the "threatened" list. The HCAs recommended in the ISC report might be used as a viable recovery plan, representing the best science and most thorough effort, even though, in the short run, a decline in population is expected under the HCAs. To increase the population, however, even greater areas of old-growth timber may have to be set aside. Therefore, the HCAs in the ISC Report should be viewed as the minimum protection level if the decision is made to list the species as threatened and the ISC recommended strategy is not implemented.

3. Consultations

Under the ESA, Federal agencies must consult with the FWS, to ensure that a proposed action will not jeopardize the continued existence of the species. The FWS is required to recommend a reasonable and prudent alternative to non-jeopardy. Consultations occur frequently between the FWS and other Federal agencies; in the vast majority of cases, the agencies work out reasonable compromises.

4. Exemption Process

When consultation results in an impasse between a Federal agency and the FWS, the agency can request an exemption from a ruling by the FWS that the proposed action will threaten the viability of the species. Under the ESA, an exemption decision rests with a cabinet-level committee colloquially called the "God Squad": the Secretaries of the Interior (Chairman), Agriculture, and Army; the Administrator of NOAA; the Administrator of EPA; the Chairman of CEA; and one individual appointed by the President from each affected State. Under the exemption process, economic factors can be used in the determination to exempt a proposed project or action, but cannot be the only factor considered.

There have been two instances in the past where the committee has met on an exemption request. Both were Federal dam projects: (1) the snail darter won at Tellico Dam (TN), and (2) the whooping crane lost at Grayrocks Dam (WY) (although some crane habitat concessions were required in granting that exemption).

Economic Impacts of Protecting the Owl

After release of the ISC Report in April, Agriculture and Interior prepared a follow-up report on the economic effects of implementing the recommendations. The analysis of the economic impacts was released on May 3, 1990.

The Agriculture/Interior report indicates that implementing the ISC strategy would cause significant and widespread adverse economic effects throughout the Pacific Northwest. A detailed breakdown is attached but in summary,

- o Annual timber harvests from Federal lands would be reduced by 2.4 billion board feet by 1995 (50 percent below current projections).

- o Net job losses would be about 13,000 by 1995 (-25 percent) and 28,000 by 2000.

- o Net annual revenue losses to the Federal Government would run about $150 million by 1995 (-19 percent), inclusive of the effects of rising timber prices.

- o Federal Payments to States and Counties from shared timber receipts would decline by about $65 million per year by 1995.

- o About 80 percent of the reduction in receipts and other adverse effects would occur in Oregon.

However, on a national basis, much of the adverse impact will be offset from Federal and private timber harvest increases in non-old-growth areas in response to higher stumpage prices. The loss of timber is estimated to raise stumpage prices nationwide during the next decade between 1-2 percent per year in the near term, and are not expected to decline due to excess demand until well past the year 2000.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03b. Paper	Background of Northern Spotted Owl Issue Options paragraphs ~~redacted~~ bottom of p. 9, all of p. 10 and p. 11 (3 pp.)	5/8/90	~~P-5~~	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1]	**Appeal Case #:**
Re-review Case #: 2005-0426-S	**Appeal Disposition:**
P-2/P-5 Review Case #:	**Disposition Date:**
AR Case #:	**MR Case #:**
AR Disposition:	**MR Disposition:**
AR Disposition Date:	**MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

Some of the effects of a rise in stumpage prices are:

- o Rising timber prices will help offset the decline in Federal receipts by $350 million by 1995, as compared with constant-price assumptions.
- o Private timber harvests will increase, up nearly 12 percent in the Pacific Northwest alone, at least through 1995.
- o Many currently below-cost timber harvests will become profitable for the Federal Government for the first time.
- o Shared receipts sharing from timber revenues for all communities not affected by the set-asides of the HCAs will significantly increase as a result of higher stumpage prices, leaving many communities far better off than under current conditions.

In addition, the adverse effects noted above do not assume a ban on the export of logs. If the Federal ban is extended and expanded to include State timber as well (as proposed in H.R. 1594, the so-called Mini Trade Bill and other stand-alone bills dealing with log exports), the effect would be to add back an estimated 2,000 jobs. If such a ban were extended to private lands as well, an additional 13,000 jobs would be added, for an estimated total gain of 15,000 jobs.

The Call for Compensation

Based on discussions with the FWS, of the hundreds of candidate species awaiting listing under the ESA there are none that would cause more than local economic dislocations. Nevertheless, many small towns and timber mills will be severely affected by the northern spotted owl listing, and calls for economic and social mitigation programs are already being heard.

In fact, Agriculture and Interior have been working on some options. No cost estimates are included, but the effect on the deficit and trade policy could be significant. These options run the gamut from trade restrictions, to family support, to increased revenue sharing on remaining timber sales. Examples include:

- o Put in place an export ban on all (private, State and Federal) unprocessed timber in the Pacific Northwest.
- o Extend unemployment compensation benefits beyond the current 26-week limit if the job is lost because of the owl listing. It is similar in concept to the Byrd Amendment to compensate miners that would lose jobs due to the Acid Rain Amendments.

- o Provide retraining programs and other readjustment services to dislocated workers.

- o Provide additional family support in the form of Aid to Families with Dependent Children, Community Service Block Grants, Emergency Community Services Homeless Grants, and Low Income Home Energy Assistance.

- o Provide economic development grants and loans to distressed communities or counties.

- o Raise National Forest receipt-sharing payments from 25 to 50 percent in affected areas.

Developing programs to protect the affected local communities poses tremendous problems of both precedent and practical implementation. For example:

- o The amount of old growth harvested will very likely decline anyway -- due to successful intervention by the environmental community to protect those trees. The loss of these lands to harvest and the resulting impacts on timber-dependent communities are inevitable even if the Federal Government decides not to list the species as threatened.

- o As with coal miners who might be affected by Acid Rain Amendments, timber jobs in the Pacific Northwest are constantly being lost due to productivity increases. Since it will be impossible to determine which jobs were lost solely due to the listing decision, only a broad-based, very expensive compensation scheme would work.

- o Many programs to aid dislocated workers already exist and work, if used. Further, compensation programs tend to preserve the status quo, not facilitate a transition, for example, from timber harvesting to recreation management.

- o Doubling the current share of Forest Service gross receipts to 50 percent would reduce Federal receipts ultimately arriving at the Treasury by as much as $300 million per year.

- o Once begun, the "me too" syndrome will be impossible to avoid. Other local areas affected by other listing decisions or even other similar Federal actions (Acid Rain Amendments and Defense Department base closures) will demand similar compensation.

Next Steps

It is our understanding that the Administration will very shortly call a high-level meeting to determine if, and to what extent, some of these measures should be proposed at the time a listing decision is announced next month. Once listed, the environmental community will move immediately to enjoin current forest timber harvest plans and, for the first time, enjoin private and State harvests as well. Because there is already a limited amount of raw timber reportedly in the sale and processing pipeline due to existing environmental litigation, the effects of the decision might well be felt within the next year. Hence, it will be argued, there is a need to move quickly with a compensation program.

Prepared by the Department of the Interior

DRAFT 5/8/90 4:00pm

Memorandum

Subject: Executive Summary on the Northern Spotted Owl

I. BRIEF HISTORY

The Northern Spotted Owl Controversy

The northern spotted owl of Washington, Oregon and Northern California lives primarily in dense, mature and old-growth forests, commonly dominated by Douglas fir. The current Northern Spotted Owl population is estimated to be approximately 2,400 pairs. About 350 pairs are estimated to be located on Bureau of Land Management (BLM) lands. National Forest System lands have an estimated 270 pairs of owls on wilderness and other reserved lands in Washington and Oregon, and 1,020 pairs on other U.S. Forest Service (USFS) lands in Washington, Oregon, and Northern California managed for multiple use purposes. The remaining owl pairs occur on other ownerships.

Demands from some public sectors for preservation of old-growth forests have increased since the 1970's. Since there are other species besides the spotted owl that depend on old-growth habitat, preservation of the spotted owl is viewed by some as only the immediate focus of a larger controversy over management of the Pacific Northwest old-growth forests.

Beginning in 1973, and continuing through the 1980's, biologists from government agencies, universities, and private groups developed and refined guidelines for managing spotted owl habitat. BLM forest plans released in the early 1980's already included provisions to exclude timber harvesting in the immediate area surrounding owl nesting sites (around 300 acres each).

Key Events in the Northern Spotted Owl Listing Process

The U.S. Fish and Wildlife Service (FWS) received two petitions in 1987 to list the owl as an endangered species. Following "not warranted" findings on the petitions, environmental groups filed suit against the FWS, charging political interference in the decision.

In 1988, the Seattle District Court directed the FWS to reanalyze and supplement its status review and petition finding. The FWS found that listing the owl as threatened throughout its range was warranted, and published a proposal to list on June 23, 1989.

A committee composed of Fish and Wildlife Service scientists is currently evaluating the biological status of the owl before a final listing decision is made. The committee is reviewing over 20,000 public comments that have been received.

By June 23, 1990, after review of all scientific evidence, the FWS must either issue a final listing rule, withdraw its proposal because evidence no longer supports listing, or extend its evaluation for six months because of legitimate scientific questions regarding the completeness or accuracy of information upon which to base a decision.

II. CURRENT STATUS

Section 318

In response to court-ordered prohibitions on timber harvesting and a policy stalemate, Section 318 of the FY 90 Interior Appropriations Act (Public Law 101-121) was adopted to resolve temporarily the timber controversy in Western Oregon. It assures a stable level of timber offering for FY 90 yet prescribes a level of protection for the spotted owl, including the preservation of old growth habitat.

Interagency Scientific Committee Report ("Thomas Report")

An Interagency Agreement between the BLM, the FWS, the National Park Service, and the USFS authorized establishment of a Committee of scientists to re-evaluate the current management status of the northern spotted owl. (This Committee is separate from the listing decision committee.) The USFS and BLM are directed by Section 318 to consider the the Committee's report in their timber harvest planning.

After release of the Thomas Report in April 1990, the USFS and the BLM established an interagency working group to study the economic effects of adopting the proposals for protection of the northern spotted owl as recommended in the report. The BLM-USFS study shows that, overall, the declines in Federal timber harvests in the Pacific Northwest would be 48 percent. The reduction in Federal timber harvests is projected to cause the net loss of 13,000 jobs in 1995 (when allowing for offsetting timber harvest increases from private lands), increasing to 28,000 lost jobs in the year 2000. Losses of Federal timber payments to States and counties would equal $95 million annually by the year 2000--a decline of 30 percent, and revenue losses to the Federal treasury would be $229 million annually by 2000--a decline of 22 percent.

III. THE ENDANGERED SPECIES PROCESS

Listing Process

Under the Endangered Species Act (ESA), species are listed solely on the basis of biological status. A listing is a rule, and prior to listing, the FWS publishes a proposed rule in the Federal Register. Within one year of the publication of a proposed listing, the FWS must decide whether or not to list. If there is substantial disagreement among scientists knowledgeable about the proposed species regarding the sufficiency or accuracy of the available data relevant to the listing determination, the FWS Director can delay the final listing decision for six months.

Prohibitions on Taking

Once listed, a species is broadly protected against "taking", defined to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. In particular, the ESA prohibits Federal agencies from authorizing, funding, or carrying out any action which is likely to jeopardize the continued existence of a listed species or adversely affect its habitat.

Consultation Process

In order to fulfill its ESA responsibilities, a Federal agency whose proposed actions may affect a listed species must first consult with the FWS. During consultation, the FWS determines the degree of impact, and the parties consider ways of modifying the proposed action so that jeopardy to the species can be avoided. The statutory deadline for completing consultation is 90 days, although a 60-day extension (renewable) is possible by mutual agreement of the parties. If the FWS finds jeopardy, the Federal agencies must either apply to the Endangered Species Committee for an exemption or abandon the project.

Exemption Process - The Endangered Species ("God") Committee

If consultation results in a jeopardy opinion, an administrative appeals process exists by which worthwhile projects may be granted exemptions from the requirements of the ESA. The Endangered Species Committee is charged with considering all reasonable and prudent alternatives to the proposed project which are consistent with conserving the species. These alternatives are broader than those examined during consultation, when only alternatives within the purview of the action agency or the permit applicant could be examined. At the exemption phase, the cost of conserving the species is fully examined.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03c. Paper	Executive Summary on the Northern Spotted Owl Options paragraphs ~~redacted~~ bottom of p. 5, all of p. 6 and p. 7 (3 pp.)	05/08/90	~~P/5~~	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1] **Re-review Case #:** 2005-0426-S **P-2/P-5 Review Case #:**	**Appeal Case #:** **Appeal Disposition:** **Disposition Date:**
AR Case #: **AR Disposition:** **AR Disposition Date:**	**MR Case #:** **MR Disposition:** **MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

The Endangered Species Committee is a cabinet-level administrative court, chaired by the Secretary of the Interior. By statute, the other members of the Committee are the Secretaries of Agriculture and the Army, the Administrators of EPA and NOAA, the Chairman of the Council of Economic Advisors, and a Presidential appointee nominated by the Governor(s) of the affected State(s).

In order to grant an exemption the Endangered Species Committee must find that:

- o There are no reasonable and prudent alternatives to the proposed action;
- o The benefits of the proposed action clearly outweigh the benefits of alternative courses of action consistent with conserving the species;
- o The action is of national or regional significance and is in the public interest.

In granting an exemption, the Endangered Species Committee must establish reasonable mitigation measures. The time required for the Endangered Species Committee to process an exemption is 190 days.

Since 1978, there have been five applications for ESA exemption. In three of these cases, the applicants withdrew before completion of the process. In the other two cases, the Committee issued an exemption to the Grayrocks Dam and Reservoir (Nebraska) and denied an exemption to the Tellico Dam and Reservoir (Tennessee). Congress subsequently overrode the Tellico decision, and ordered that the Dam be built.

IV. ALTERNATIVE COURSES OF ACTION

The following represent courses of action that the Federal government could take, either individually or in combination, to conserve the spotted owl and mitigate economic impacts.

1. Hold Evidentiary Hearing Prior to Listing - The Northwest Forest Resource Council, a trade organization representing the timber industry, has requested that the FWS convene a formal evidentiary hearing on the listing process before reaching a decision on the owl's listing to examine the scientific sufficiency of the data.

2. Hold Evidentiary Hearing on Thomas Report - An evidentiary hearing could be held to examine the scientific research, data and conservation recommendations of the Thomas Report. The results of the hearing could then be used for BLM and USFS timber planning, as part of the consultation process, or for other purposes.

3. Invoke Six Month Extension Provision - Under the provisions of Section 4 of the ESA, the Secretary could order a six month extension of the period for making a decision on listing the spotted owl as an endangered species. This would extend the listing decision period to December, 1990.

4. Legislative Resolution - Congress may choose to enact a solution to the issue (either temporary or permanent), for example, by applying the Section 318 concept to apply on a longer term basis, or by choosing to incorporate mitigative measures such as economic assistance for affected parties.

5. Appeal to the Endangered Species Committee - If the owl is listed, the Committee could fashion a policy solution for preserving habitat that would reflect not only the biological requirements of the species but also the economic consequences of various policies.

6. Focus Concern on Old Growth - The major political issue over timber harvest in the Pacific Northwest is the preservation of old growth, not the spotted owl. Strategies to focus planning on this management issue could be developed.

7. Implement the Thomas Report - The Thomas Report could be implemented either as a result of the listing of the spotted owl, or as a USFS and BLM response to the report.

8. Initiate a Phased Implementation of the Thomas Report - The owl conservation actions recommended in the Thomas Report could be implemented in phases over a period that might be several years.

9. Develop a Contingency Plan to Use if Section 318 Expires - A contingency plan or strategy could be developed as the basis for a proposal concerning timber harvesting and owl protective measures to be instituted when Section 318 expires on September 30 and if Congress does not enact a successor provision.

10. Hold Evidentiary Hearing After Listing - A post-listing hearing would be to evaluate scientific information as a basis for making Section 7 consultations.

11. Streamline Aspects of the Consultation Process - The current consultation process requires affected agencies to submit proposals for FWS consideration after listing. It may be possible to expedite the process through a collaborative framework involving BLM, USFS, and FWS. In developing such a framework, care would have to be taken to ensure that the intent of the law and regulations is met.

12. Develop Administration Position on Log Exports - Interest in log export restrictions has increased since the release of the Thomas Report. The joint BLM-USFS report on the economic effects of implementing the Thomas Report will further increase the pressure for restrictions.

13. Economic Mitigation - Under existing authorizations, the Administration could seek appropriations to help mitigate loss of jobs and state/local revenues to Washington/ Oregon/ Northern California.

Withdrawal/Redaction Sheet
(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
04. Report	By USDA Forest Service, USDI Bureau of Land Management Re: Economic Effects of Implementing a Conservation Strategy for the Northern Spotted Owl (64 pp.)	5/1/90	P-5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: Spotted Owl (1990) [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 5/12/05

Date Closed: 12/13/2004	**OA/ID Number:** 29172-003
FOIA/SYS Case #: 1998-0004-F[1]	**Appeal Case #:**
Re-review Case #: 2005-0426-S	**Appeal Disposition:**
P-2/P-5 Review Case #:	**Disposition Date:**
AR Case #:	**MR Case #:**
AR Disposition:	**MR Disposition:**
AR Disposition Date:	**MR Disposition Date:**

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

Economic Effects

of

Implementing a Conservation Strategy

for the

Northern Spotted Owl

May 1, 1990

USDA Forest Service
USDI Bureau of Land Management

TABLE OF CONTENTS

Executive Summary

EXECUTIVE SUMMARY

In response to the findings of the Interagency Scientific Committee that was appointed to study the northern spotted owl, the Secretaries of Agriculture and Interior, through the Chief of the Forest Service and the Director of the Bureau of Land Management, formed an interagency working group. The charge to this group was to analyze the economic impacts of implementing the recommendations of the Interagency Scientific Committee.

ECONOMIC IMPACT

The analysis of economic impacts in Washington, Oregon, and California compares implementation of current plans for National Forests and Bureau of Land Management Districts with implementation of the spotted owl conservation strategy. "Current plans" for the Forest Service are final Forest Plans or draft Forest Plans where plans have not been finalized. For the Bureau of Land Management, the currently planned sale level by District are used.

The analysis considers the dynamics of the timber market economy. The effects of a timber supply reduction on Federal lands in Washington, Oregon, and California were analyzed nationally in terms of changes in price, consumption, trade, and interregional shifts in supply. The resulting effects on regional prices were examined to estimate potential response of private supply.

Changes in prices will also affect revenues to the Federal Treasury and payments to counties in the three affected States. The analysis shows that rising prices will substantially offset reductions in timber volume. However, since the national economic situation in the future is uncertain, an analysis of the effect on revenues to the Treasury and payments to counties if prices remain constant was also done and shown here for comparison.

In summary, the analysis shows:

- o Timber harvest on Federal lands will decline by 2.4 billion board feet by 1995 and remain at that level under the Interagency Scientific Committee recommendations. (Table I).
- o Private harvest increases in response to higher stumpage prices will reduce the effects of the Federal decline by about half in the near term (1995), but this increase cannot be sustained, and by 2000, timber harvest from Federal and private ownerships combined will be 2.7 billion board feet below the current level. (Table II)
- o Current planned Federal harvest levels would support about 53,000 jobs in total; about half of these are direct employment in the forest industry. The loss of jobs by 1995 in response to the Federal harvest volume reduction would be about 25,500 jobs. (Table III)
- o The private harvest response would mitigate the employment effect in 1995 and net job loss would be about 13,300. Private owners will not be able to sustain this higher level of production. By the year 2,000, therefore, job loss as compared with the present will be about 28,000.
- o Rising prices will help offset loss in revenues to the Treasury, but by 1995, implementation of the conservation strategy will mean a decline of $148 million and by 2000, a decline of $229 million as compared with revenues from currently planned levels of harvest. (Table IV)

- o Since the future of the economy is uncertain, revenue loss was also estimated using constant prices over the decade of the 1990's. Under this scenario, returns to the Treasury would be $501 million lower in 1995 and 2000. (Table V)
- o Payments to States and counties will decline despite rising prices, particularly in Oregon as a result of large declines in revenues from BLM lands. In total, the decline would be about $65 million per year by 1995 and $86 million per year by 2000 under the rising price scenario. (Table VI)
- o As with revenues, the decline in payments to States/counties will be greater if constant prices are assumed. Under this scenario, about $172 million in revenue will be lost by these State and local governments. (Table VII)

Table I--Volume of Timber Offered for Sale on Federal Lands After Implementation of the Interagency Scientific Committee Conservation Strategy

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans[1/]		Actual or Projected Final Plans plus ISC Strategy	
		1995	2000	1995	2000
		(Millions of 1989 Dollars)			
Washington					
Forest Service	943	752	752	419	419
Subtotal	943	752	752	419	419
Oregon					
Forest Service	2,209	1,848	1,848	1,362	1,362
Bureau of Land Mgmt.	1,176	1,176	1,176	443	443
Subtotal	3,385	3,024	3,024	1,805	1,805
California					
Forest Service	690	600	600	392	392
Bureau of Land Mgmt.	9	9	9	3	3
Subtotal	699	609	609	395	395
Total	5,027	4,385	4,385	2,619	2,619

1/ The timber volume used for projected final plans could change up to plus or minus 10 percent in actual final plans. A mid-point of this range is shown in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table II--Changes in Timber Harvest on Public and Private Lands After Implementation of the Interagency Scientific Committee Conservation Strategy.

	Current Plans	Implementation of the ISC Strategy 1995	2000
Federal Lands Affected by the ISC Strategy			
Washington	943	-524	-524
Oregon	3385	-1580	-1580
California	699	-304	-304
Subtotal	5018	-2408	-2408
Private Lands			
Western Washington and Oregon	7235	585	-295
Eastern Oregon and Washington	630	375	35
California	2115	185	---
Subtotal	9980	1145	-260
Net Change		-1263	-2668

Table III--Changes in Timber-Based Employment That Would Result from Implementation of the Northern Spotted Owl Conservation Strategy

	Change from Current Level With Implementation of ISC Strategy	
	1995	2000
Washington		
Forest Service	-5,853	-5,853
Bureau of Land Mgmt.		
Total	-5,853	-5,853
Oregon		
Forest Service	-8,569	-8,569
Bureau of Land Mgmt.	-7,669	-7,669
Total	-16,238	-16,238
Northern California		
Forest Service	-3,257	-3,257
Bureau of Land Mgmt.	-60	-60
Total	-3,317	-3,317
Total Public	-25,409	-25,409
Private lands		
Western WA & OR	+6,201	-3,127
Eastern WA & OR	+3,975	+371
California	+1,961	------
Total	+12,137	-2,756
Net Change	-13,272	-28,165

Table IV--Timber-Based Revenue After Implementation of the Interagency Scientific Committee--Rising Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans[1/]		Actual or Projected Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Millions of 1989 Dollars)				
Washington					
Forest Service	151	166	156	114	97
Subtotal	151	166	156	114	97
Oregon					
Forest Service	468	539	532	501	453
Bureau of Land Mgmt.	305	394	410	185	175
Subtotal	773	933	942	686	628
California					
Forest Service	99	107	103	75	68
Bureau of Land Mgmt.	1	2	2	1	1
Subtotal	100	109	105	76	69
Total	1024	1208	1203	876	795

1/ Numbers for projected final plans are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers shown here are for the midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table V--Timber-Based Revenue After Implementation of the Interagency Scientific Committee--Constant Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans 1/		Actual or Projected Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Millions of 1989 Dollars)				
Washington					
Forest Service	151	119	119	64	64
Subtotal	151	119	119	64	64
Oregon					
Forest Service	468	402	402	292	292
Bureau of Land Mgmt.	305	305	305	110	110
Subtotal	773	707	707	402	402
California					
Forest Service	99	88	88	56	56
Bureau of Land Mgmt.	1	1	1	2/	2/
Subtotal	100	89	89	56	56
Total	1024	915	915	523	523

1/ Numbers for projected final plans are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers shown here are for the midpoint of this range in order to assess the impact of implementing the ISC strategy.

2/ Less than one million.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table VI--Payment to States After Implementation of the Northern Spotted Owl Conservation Strategy - Rising Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans 1995	Actual or Projected Final Plans 1/ 1995	Actual or Projected Final Plans 1/ 2000	Actual or Projected Final Plans plus ISC Strategy 1995	Actual or Projected Final Plans plus ISC Strategy 2000
	(Thousands of 1989 Dollars)				
Washington					
Forest Service	36,496	39,565	37,446	27,115	23,213
Subtotal	36,496	39,565	37,446	27,115	23,213
Oregon					
Forest Service	99,340	114,528	112,807	105,696	94,863
Bureau of Land Mgmt.	161,705	205,100	213,048	95,703	91,118
Subtotal	261,045	319,628	325,855	201,399	185,981
California					
Forest Service	21,919	23,963	22,989	16,761	15,271
Bureau of Land Mgmt.	54	67	64	24	22
Subtotal	22,973	24,030	23,053	16,785	15,293
Total	319,574	383,223	386,354	245,299	224,487

1/ Numbers for projected final plans are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers shown here are for the midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table VII--Payment to States After Implementation of the Northern Spotted Owl Conservation Strategy - Constant Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans[1]		Actual or Projected Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
		(Thousands of 1989 Dollars)			
Washington					
Forest Service	36,496	28,481	28,481	15,354	15,354
Subtotal	36,496	28,481	28,481	15,354	15,354
Oregon					
Forest Service	99,340	85,087	85,087	61,334	61,334
Bureau of Land Mgmt.	161,705	161,705	161,705	58,333	58,333
Subtotal	261,045	246,792	246,792	119,667	119,667
California					
Forest Service	21,919	19,483	19,483	12,415	12,415
Bureau of Land Mgmt.	54	54	54	18	18
Subtotal	21,973	19,537	19,537	12,433	12,433
Total	319,514	294,810	294,810	147,454	147,454

1/ Numbers for projected final plans are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers shown here are for the midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Introduction

INTRODUCTION

The purpose of this report is to describe anticipated economic effects that would result from implementation of the conservation strategy for the Northern Spotted Owl recommended by the Interagency Scientific Committee.

Over the past several years, there has been tremendous interest in the northern spotted owl, its habitat, and its relationship to timber production in the Pacific Northwest. As part of the effort to gather thorough and timely information on the issue, an Interagency Scientific Committee was established to address the conservation of the northern spotted owl. This Committee was established through a 1988 agreement between the USDA Forest Service, the USDI Bureau of Land Management, the USDI National Park Service, and the USDI Fish and Wildlife Service. The Committee's charter was subsequently incorporated into Section 318 of Public Law 101-121 in October 1989.

After many months of gathering and analyzing information, the Committee released a report entitled "A Conservation Strategy for the Northern Spotted Owl" on April 3, 1990. The proposed strategy in that report has since been analyzed by the Bureau of Land Management and the Forest Service to determine the economic effects if the strategy were fully implemented. This report describes the estimated economic effects of implementing the owl conservation strategy.

To estimate and describe possible effects, it was necessary to make certain assumptions and envision certain scenarios. For example, timber price responses to a reduction in timber supply are uncertain, so effects with the expected price change and effects with no price change are both shown. This provide a range in which the reader can project and consider his or her own assumptions and predictions. Numbers in the report generally were not rounded off, but were left as developed from the analysis. This specificity should not be interpreted as an indication of high precision; instead the numbers should be used as an estimate of the direciton and magnitude of changes.

The report was prepared by the Forest Service, USDA, and the Bureau of Land Management, USDI. The following team provided leadership in completing the report:

Interagency Economic Effects Team

Tom Hamilton, Forest Service, Team Leader
Joe Zimmer, Bureau of Land Management, Team Leader
Phil Stanbro, Bureau of Land Management
Mel Berg, Bureau of Land Management
Dave Darr, Forest Service
Bill Levere, Forest Service
Richard Haynes, Forest Service
Bill Lange, Forest Service
Al Fox, Forest Service
Mike Skinner, Forest Service
Don Eagleston, Forest Service
Bob Biesterfeldt, Forest Service

Economic Analysis

ECONOMIC ANALYSIS

TIMBER HARVEST VOLUME

This section of the report focuses on the current timber situation in Washington, Oregon, and California, and expected economic impacts if the Conservation Strategy recommended by the Interagency Scientific Committee is implemented. The report concentrates on dollar and employment impacts in the affected areas of these three States. However, it also examines the effect nationally of a reduction in Federal timber harvest in Washington, Oregon, and California.

The data for adjusted timber harvest levels are the latest available from the Forest Service and Bureau of Land Management. The starting point for these analyses is the allowable sale quantity (ASQ) in existing plans. For the Forest Service, this is a combination of final Forest Plans, or draft Forest Plans for forests where plans have not been finalized. For the Bureau of Land Management, the starting point is the currently planned sale level by district. These starting point levels are lower than recent harvest levels. For example, for Forest Service Region 6 (Washington and Oregon), the starting point level is about 4 billion board feet; in recent years, harvest has exceeded 5 billion in these two States. The starting point was selected for two reasons. First, it represents currently planned outputs from these Federal lands and associated employment effects were a part of the planning process. Second, it approximates historic levels of harvest. Figure 1 shows the harvest for Forest Service and Bureau of Land Management lands for the period, 1980-1988. During this period, there was a substantial amount of fluctuation in timber harvest from 2.3 to 5.5 billion board feet per year on National Forests and from 0.3 to 1.4 billion on BLM lands. However, the average harvest was 4.1 billion and 0.9 billion, respectively--about the same as the starting point level in the analysis.

The analysis shown here is based on the change from this starting point volume if the Conservation Strategy recommended by the Interagency Scientific Committee were fully implemented. For the Forest Service, an interim step is also shown. This interim step shows a timber volume for projected final plans for those forests where plans are still in draft stage. These projected volumes could change up to plus or minus 10 percent in actual final plans. The mid-point of this range is used in this report in order to assess the impact of implementing the ISC strategy.

The Bureau of Land Management is now preparing new resource management plans for its Western Oregon districts. Because these plans are not scheduled to be completed until 1991, no resulting timber harvest levels can be predicted. Base-line levels for the BLM are, therefore, considered to be continuation of the existing plans developed in the late 1970's and early 1980's for the purpose of this study.

Table 1 shows the changes in ASQ volume for forests and districts affected by the Spotted Owl Conservation Strategy. In total, the reduction on Forest Service and Bureau of Land Management lands would be 2.4 billion board feet, a decrease of 48 percent from the currently planned level. The ASQ reduction on Federal lands affected by the ISC Conservation Strategy would be 55 percent in Washington, 46 percent in Oregon, and 43 percent in California.

About 1 billion board feet of timber are harvested on State lands in these three States each year. No analyses of timber volume reduction for these lands were made in this study.

Figure 1 Volume of timber harvested from USDA Forest Service PNW REGION and Bureau of Land Management in WA&OR

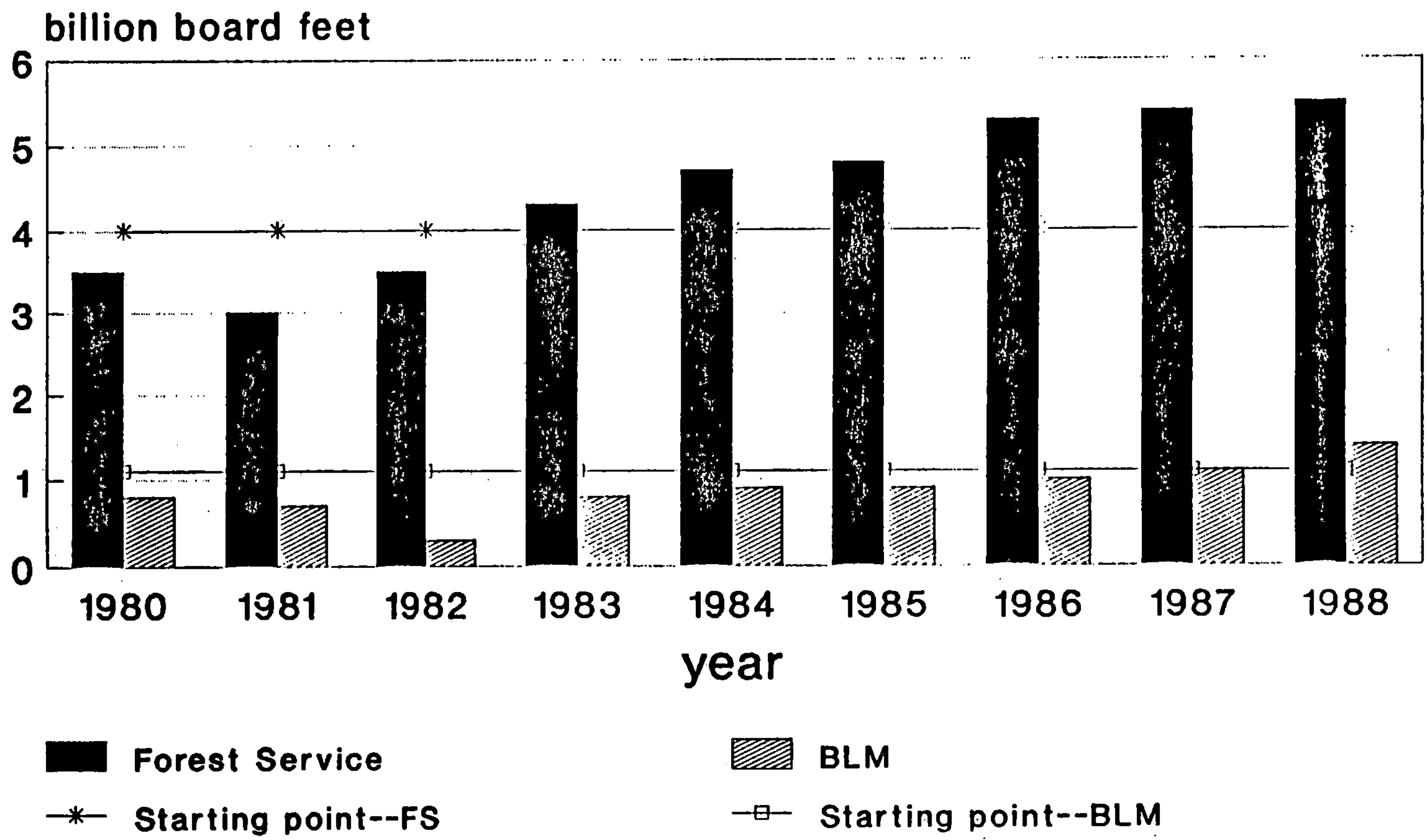


Table 1--Volume of Timber Offered for Sale on Federal Lands After Implementation of the Interagency Scientific Committee Conservation Stretegy.

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans		Actual or Projected Final Plans plus ISC Strategy	
		1995	2000	1995	2000
		(Million Board Feet)			
Washington National Forests					
Gifford Pinchot 1/	388	334	334	189	189
Mt. Baker-Snoqualmie 1/	170	108	108	45	45
Okanogan	63	63	63	59	59
Olympic 1/	186	132	132	43	43
Wenatchee	136	136	136	83	83
Subtotal	943	752	752	419	419
Oregon National Forests					
Deschutes 1/	202	100	100	91	91
Mt. Hood 1/	255	193	193	154	154
Rogue River 1/	137	120	120	85	85
Siskiyou	160	160	160	119	119
Suislaw	335	335	335	198	198
Umpqua 1/	340	334	334	273	273
Willamette 1/	568	491	491	333	333
Winema 1/	199	115	115	110	110
Oregon BLM Districts					
Salem	239	239	239	62	62
Eugene	223	223	223	59	59
Roseburg	247	247	247	103	103
Medford	213	213	213	123	123
Coos Bay	254	254	254	96	96
Subtotal	3,385	3,024	3,024	1,805	1,805
California National Forests					
Klamath 1/	200	142	142	110	110
Mendocino 1/	93	84	84	66	66
Shasta-Trinity 1/	226	224	224	129	129
Six Rivers 1/	175	150	150	92	92
California BLM District					
Ukiah	9	9	9	3	3
Subtotal	699	609	609	395	395
Total Public	5,027	4,385	4,385	2,619	2,619

1/ The timber volume shown for projected final plans in these forests could change up to plus or minus 10 percent in actual final plans. A mid-point of this range is shown in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

In cooperation with the Fish and Wildlife Service, interested tribes in the northern spotted owl study area are being briefed on the results of the study. At this time, the effects of the study's recommendations on the Bureau of Indian Affairs' timber sales program and its ability to comply have not been fully evaluated. It is possible, however, that additional fiscal resources, both human and financial, may be needed to comply with the study recommendations, should they be adopted by the Bureau of Indian Affairs. Likewise, the effects on the annual allowable harvest level and tribal revenues will be evaluated. In the event it is determined that impacts on tribes and on Indian forestry programs will occur, the information will be provided.

The remaining large ownership, private lands, is examined as part of the analysis that follows. Timber production on these lands has historically responded directly to economic conditions and could help mitigate short-term effects of reduced public timber availability. The analysis will examine this potential response and the associated effects on employment.

MARKET IMPACTS OF ALTERNATIVE FEDERAL TIMBER FLOWS

Federal timber in Washington, Oregon, and California comes from timberlands managed by the U.S.D.A. Forest Service and the U.S.D.I Bureau of Land Management (BLM). Although the legislative mandates for stewardship differ between the two agencies, implementation of the ISC report will cause changes on all Federal timberlands. This section highlights the various economic effects of alternative federal timber flows. Regional and national effects on product and timber markets are reported.

Impacts of alternative flows of federal timber are estimated as changes from a base-line projection of future timber markets, given the assumptions in the 1989 RPA Timber Assessment. The model used for the projections is the Timber Assessment Market Model–TAMM (Adams and Haynes 1980 and Haynes and Adams 1985). It provides an integrated structure for considering the behavior of prices, consumption, and production in both stumpage and product markets.

Projections from TAMM reflect the consequences of balancing the supply of timber and the demand for the final products made from that timber. The projections recognize that production and consumption are sensitive to both product prices and production costs. They also recognize that different types of landowners have different propensities for harvesting and managing their timberlands. Private harvests are treated as price and inventory responsive while public harvests are treated as fixed at predetermined levels. TAMM also includes an inventory projection system for private timberlands.

In the past decade, TAMM has been used widely within the USDA Forest Service and by interest groups to estimate the market impacts of various policies and issues. The present version serves best as an indicator of long-term trends. For example, in the 1989 RPA Timber Assessment, it was used to make projections to the year 2040. TAMM is used in this analysis to examine market impacts for the 1990's. In comparing alternative ASQ levels for Federal timber, emphasis is on differences from the base-line projection rather than the projections themselves.

Our analysis begins with a summary of historical trends and the findings in the base-line projection. Then, assumptions are changed and market impacts are estimated as differences from the base-line projection.

U.S. Roundwood Consumption Increasing
Total U.S. consumption (figure 2) of softwood roundwood from growing stock was 14.3 billion cubic feet in 1986. This was roughly 75 percent above the average consumption in the early 1950's. It is expected to remain about at this level through 2000 and then to increase to 17.5 billion cubic feet by 2040, with the largest increase in pulpwood. In the near term, rising prices help slow the growth in consumption, but in the longer term a slowing of domestic markets (especially for residential construction) and increasing use of hardwoods accounts for slower projected growth in demand for softwood timber. The United States will remain a net importer of softwood forest products. This is especially the case for softwood lumber imports from Canada.

Figure 3 shows long-term trends in softwood harvest by major U.S. region. After World War II, strong demand for forest products and declining private harvests brought expanded markets for public timber. On Federal timberlands, management policies shifted from the custodial posture of the inter-war years toward an active program of timber sales. National Forest harvest more than doubled in the 15 years after 1950. By the late 1960's, the harvest was approaching the maximum levels under existing management plans, and the Forest Service adopted a nondeclining even-flow approach to the computation of allowable cuts. Harvest has gradually declined over the past 20 years. Harvest on BLM timberlands (primarily in Oregon) have been roughly constant for the past 15 years.

U.S. Product Demand
Only limited growth in demand for solid-wood products will take place in the future. As the population ages, growth in real GNP slows and new housing construction is stable to declining. Consumption increments come almost entirely from increased wood use in residential upkeep and alteration, nonresidential construction, and manufacturing. U.S. lumber consumption rises to 56 billion board feet by 2040 (the 1987 peak was 50.6 billion feet). Plywood consumption returns to 23 billion square feet by 2040 (the current level is 21 billion feet) after a period of modest substitution-induced decline over the next 20 years. In the fiber products sector, growth in consumption slows in line with GNP and also because of assumed increases in the use of recycled fibers. For western Washington and western Oregon, pulp output is projected to grow by roughly 20 percent over the 50-year projection period.

Costs and Technology
Real non-wood costs (output basis) for solid-wood mills fall by less than 0.5 percent per year as labor productivity continues to improve and use of other materials and energy falls. Recovery (product output per cubic foot of log input) rises at roughly 0.1 percent year over the 50-year projection. This is a far slower rate than observed in the 1980's due to rapidly declining future log size and quality.

International Markets and Log Exports
After 1984, the value of the U.S. dollar dropped sharply against the Japanese yen. This plus a good housing market in Japan stimulated Japanese imports of softwood logs and lumber from the Pacific Northwest. In addition, China entered the market for U.S. logs in the early 1980's with the Pacific Northwest being the source of much of the supply. Thus, Washington and Oregon had additional sources of demands for logs not shared by other U.S. regions. As a result, softwood lumber and plywood manufacturers in the Pacific

Figure 2 U.S. softwood roundwood consumption by product, 1952-2040

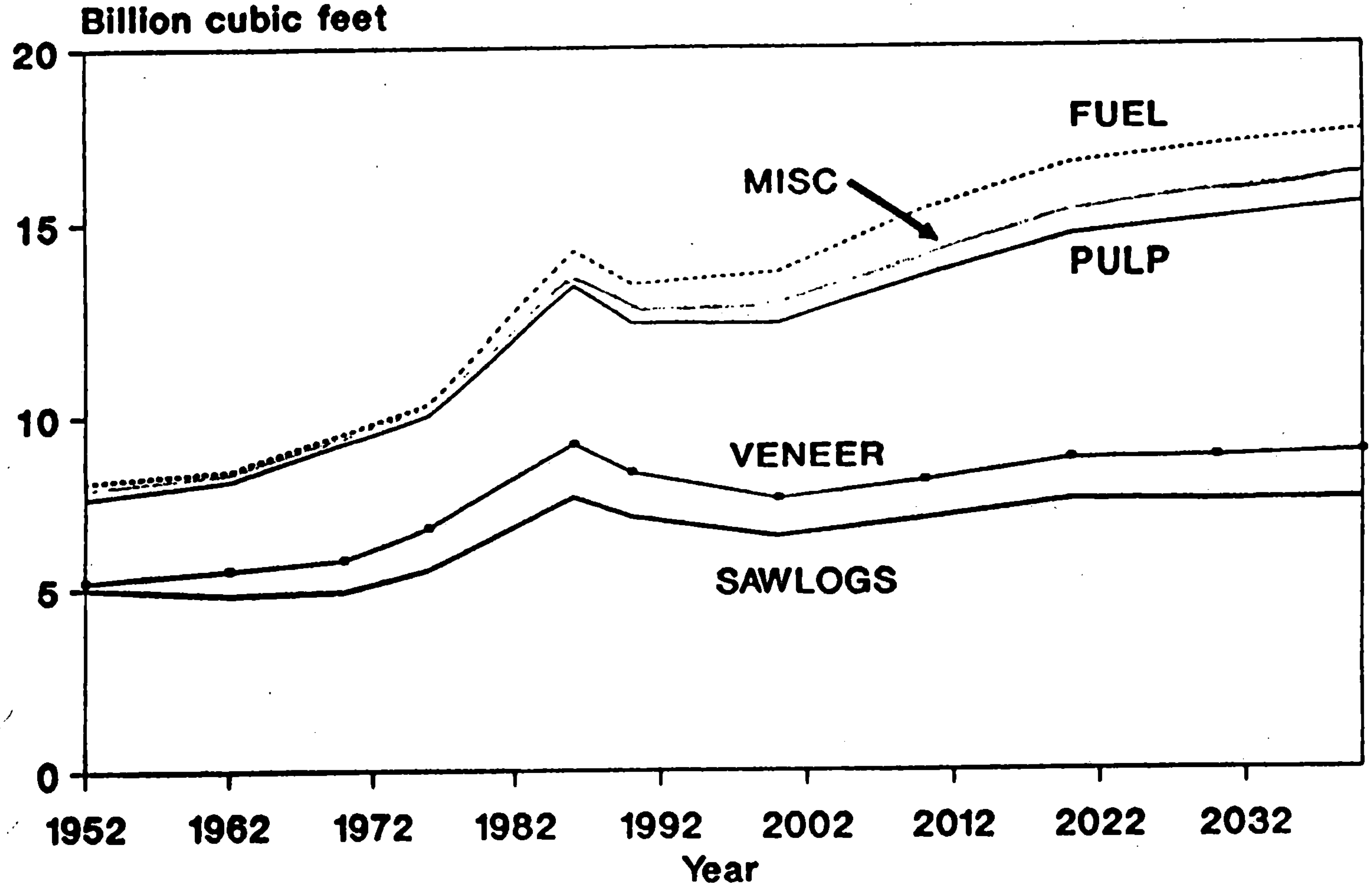
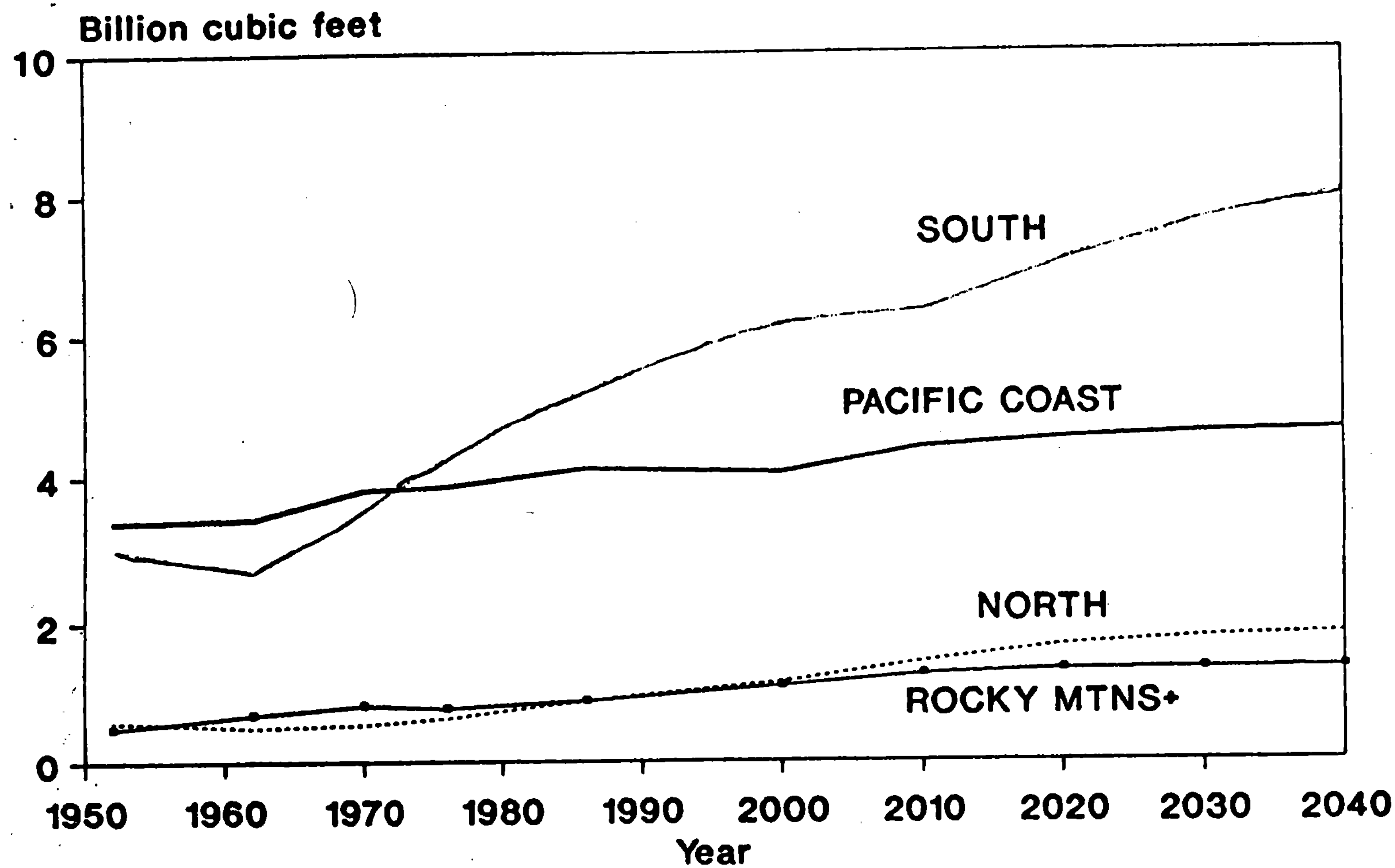


Figure 3 U.S. softwood timber harvest by region, 1952-2040



Northwest have to compete against log exporters for raw material supplies to a much larger extent than manufacturers in other regions of the country.

Canadian softwood lumber producers will experience gradually rising delivered wood costs as haul distances increase and stand densities fall. The real Canadian-U.S. exchange rate is expected to change little from the current level. In the base case, exports of lumber and plywood grow little over the projection period. Log exports fall from the 1984-1988 average level of 3.1 billion board feet per year (1988 peak level of 3.6 billion feet) to an average of 2.5 billion board feet by 2000. Limitations in product and declining log export volumes derive from the assumption of increased competition from Canada,the Southern Hemisphere, and the Soviet Union.

Growth in Softwood Harvest is in the South
In figure 3, there are two trends to note. First, the three West Coast States together and the South are expected to remain the two most important timber producing regions in the United States. Second, the South overtook the Pacific Coast in the mid 1970s. Equally important is the share of Federal harvest which in 1986 constituted 21 percent of total harvests. By 2000, this fraction is expected to drop to 19.4 percent. Thereafter, this fraction continues to decline, reaching 16.4 percent by 2040.

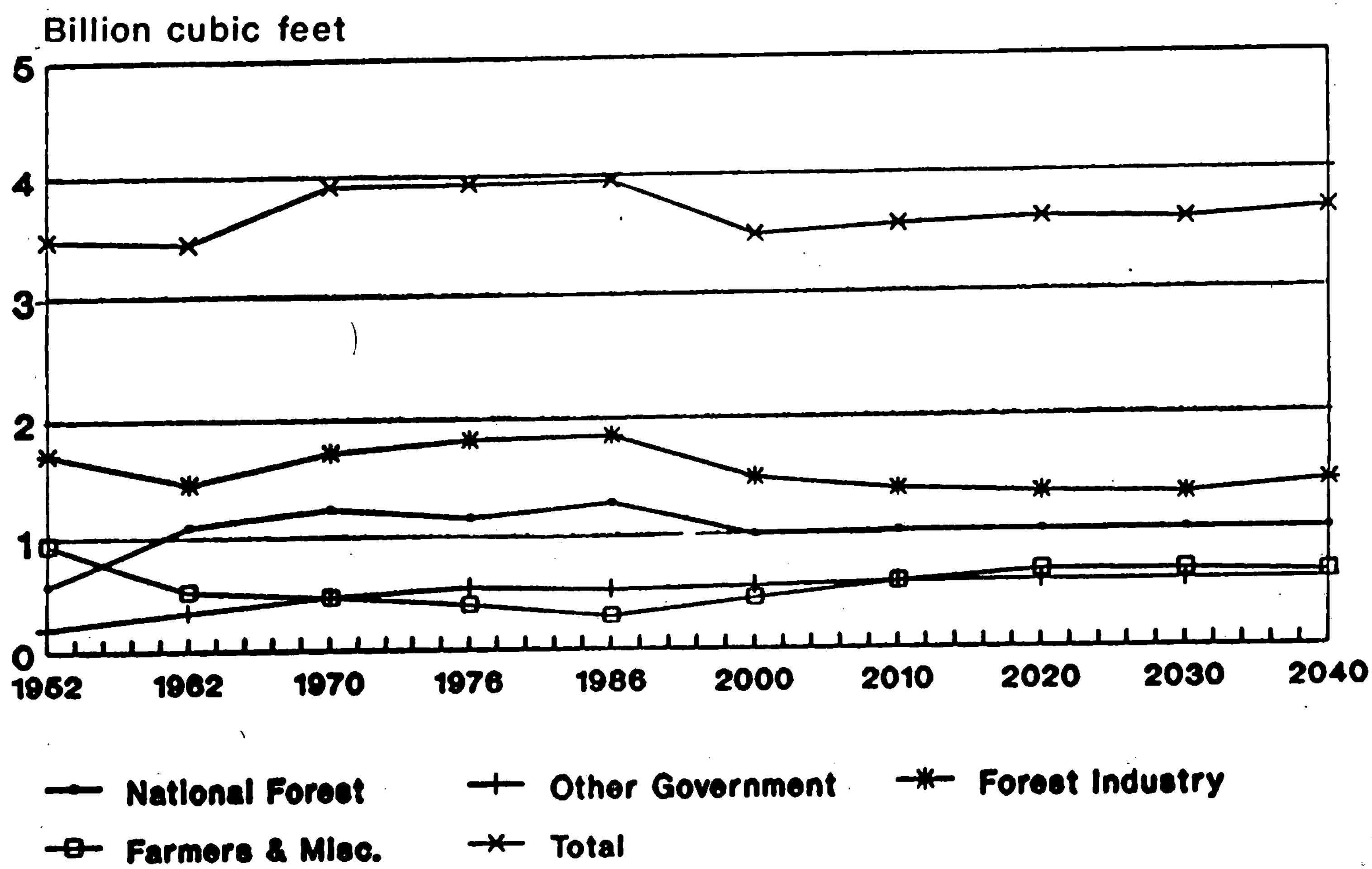
Total Pacific Coast Harvest Projected to Level Off After Decline in 2000
For the Pacific Coast, harvests over the last three years have been at all time highs. Figure 4 shows softwood harvest by owner. The smallest ownership class (in terms of harvest) is the nonindustrial private timberland. Harvest on this ownership had been declining from the early 1950s until 1986. After that, harvest in western Washington and western Oregon started to increase. The share of federal timber has changed over the past several decades from 18 percent in 1952 to 39 percent in 1986. The share is expected to slowly decline in the future to 34 percent by 2040.

Industries Differ Between Washington/Oregon and California
The industry differs between the two areas primarily in the absolute size of the lumber industry and in the concentration of the softwood plywood industry in western Washington and western Oregon. The Douglas-fir subregion also contains roughly 8 million tons of pulp and paper production. There is only a small pulp and paper industry in California that focuses on conversion. Solid-wood products are expected to continue their dominance of the forest products industry in the Pacific Coast region. The exception is the plywood industry where production in the Douglas-fir subregion is expected to drop as a consequence of competition from oriented strand boards and in California where production has declined because of competitive pressures from other plywood producing areas.

Pacific Coast Must Compete With South and Canada
Output of the solid-wood products industries (lumber and plywood) in the Pacific Coast regions has fluctuated with periodic construction cycles but has shown essentially no upward or downward trend since the mid-1960's (except for the clear drop in plywood production in California). Growth in U.S. consumption over the past two decades has been met by the South in the case of plywood and by the South and Canada in the case of softwood lumber.

The Pacific Coast's share of aggregate national and virtually all regional markets has fallen steadily. These trends are a reflection of the region's high production costs relative to its key North American competitors. As a result of increases in both delivered wood and nonwood costs, the region emerged as the high cost lumber and plywood producer in

Figure 4 Total removals of softwood timber from WA, OR, and CA, by ownership, 1952-2040



North America in the early 1970's. The recession of 1980-82 brought a sharp drop in delivered wood costs due both to declining stumpage prices and reduction in log and haul costs. This change helped to narrow the cost differential with the South but did little to overcome the strong wood cost advantage of interior British Columbia in the case of lumber. Reductions in work force and improvements in recovery efficiency also have acted to lower nonwood costs, but the region remains the high cost producer in both lumber and plywood.

Fiber Products Industries Expanding

The fiber products industry in western Washington and western Oregon has expanded steadily as paper and board facilities have been integrated with pulping operations. Recent increases have come in newsprint and unbleached kraft (linerboard and packaging) grades, with stable to declining output in fine and other papers. Production is from otherwise unused residues from solidwood production, from wastepaper, and from roundwood, chipped in the woods or at other remote locations.

Log Exports Have Been a Growth Sector

Log exports have comprised the most significant growth sector especially in western Washington and western Oregon, consuming some 20 percent of total regional harvest by 1980. After peaking in the late 1970's, log exports from this region fell in the 1980-82 recession. They subsequently recovered to all time highs in 1988 and 1989. Despite the sharp drop in volumes in the early 1980's, export prices did not fall as rapidly as domestic prices and exports remained a key revenue source for some regional firms during the recession. In the recovery, the People's Republic of China (PRC) has emerged as the second largest importer. Logs exported to the PRC are roughly the same quality as those used in domestic mills.

Stumpage Prices Expected to Increase

As a consequence of this increasing pressure on domestic timber inventories, timber prices are expected to continue to increase in real terms. Stumpage prices during the next decade are expected to increase by 1.2 percent per year in the Douglas-fir subregion and 2.5 percent per year in the South. Also embodied in these projections are improvements in technology that will decrease employment by 13 percent over the next 15 years.

There are differences in harvest and industry trends between California and Washington/Oregon. Total timber harvest (sawtimber and nonsawtimber) in Washington/Oregon reached all time high levels during the last three years while those in California have been stable but below those seen in the early 1950s.

Special Issues not Included in Analysis

There are many current issues whose resolution could lead to changes in the base-line projection. The following issues were considered, but not included in the base-line analysis because their resolution is uncertain or their potential effects on timber supplies are uncertain:

- o Roadless areas
- o Below cost timber sale programs
- o New perspectives
- o Effect of recycling on Canadian timber supplies

- o Productivity of nonindustrial private forest lands
- o Paper and board recycling

Roadless Areas

It has been suggested that timber harvesting be banned on existing roadless areas in National Forests. Implementation of the ISC report will have this effect in the Pacific Northwest. The ASQ for the Alaska Region would be reduced from 75 million cubic feet to 13 million. In Pacific Southwest, the reduction would be about 15 million cubic feet, for the Rocky Mountain Regions, 10 million cubic feet, for the Southern Region, 10 million cubic feet, and for the Northern Region, no effect. For the contiguous States, the ASQ would decline 123 million cubic feet or about 7 percent of the National Forest ASQ after taking account of the recommendations of the ISC report.

Below Cost Timber Sale Programs

It has been suggested that all below cost timber sale programs be eliminated. The main effects of this action would be in the Rocky Mountain regions where the ASQ would decline 135 million cubic feet or 32 percent of the total National Forest ASQ for these regions. The ASQ for Pacific Southwest would decline 15 million cubic feet, for the Southern Region, 25 million cubic feet and for the Northern Region, 10 million cubic feet. For the contiguous States, the total decline is 185 million cubic feet--10 percent of the ASQ for all National Forests.

There is the possibility that implementation of the ISC report recommendations would raise stumpage prices enough to substantially eliminate below cost timber sale programs. The prices for many of the below cost timber programs are within $10 per thousand board feet of the cost.

New Perspectives

The silvicultural practices associated with the new perspectives in forestry concept will have as an effect an increase in logging costs. The extent of application of new perspectives on National Forests is yet to be determined. The increase in logging costs may be enough to result in emergence of additional below cost programs. These higher costs would be offset somewhat by higher stumpage prices associated with implementation of the ISC report recommendations, however.

Effect of Recycling on Canadian Timber Supplies

The potential effects of recycling on the North American timber industries are many and complex. Among the most complex and important is the potential effect of recycling on the Canadian timber resource. The United States relies on Canada for some 9 million tons of newsprint per year--More than one-half of consumption. If recycling in the United States results in mandated percentages of recycling in newsprint, the Canadian industry would find it difficult to acquire enough wastepaper to meet the requirement. This would provide new opportunities for the U.S. newsprint industry. It would also provide additional roundwood volumes for the solid wood segment of the Canadian industry. This may affect the outlook for imports of softwood lumber from Canada.

One response to implementation of the ISC report is to increase imports of softwood lumber from Canada. In the absence of a nationwide overview of timber demand and supply relationships in Canada, there has developed different opinions about long-term timber supply prospects in Canada. One view has it that Canada is near the ceiling on timber supply and that significant, sustained increases in production would be difficult. A second view is that there are significant volumes of softwood timber that are currently economically inaccessible. Sustained increases in roundwood prices such as from implementation of the ISC report would make these roundwood volumes economically accessible. In addition, Canada sells some 3 billion board feet of softwood lumber to offshore markets. Significant increases in prices in the United States would tend to draw lumber away from offshore markets. For the purposes of analysis of impacts of implementation of the ISC report, it was assumed that Canada will continue to be as responsive in the future as it has been in the past to increases in roundwood and softwood lumber prices in the United States.

Productivity of Nonindustrial Private Forest Lands

Private forest land can offset some, but not all, of the reduction in ASQ on National Forests. In the base-line projection, forest industry land is assumed to be managed intensively and some intensification of management is assumed to be the case for nonindustrial private forest lands as reflected by remeasurement of forest inventory plots. These assumptions lead to the establishment of 50 million acres of southern pine plantations by 2040 as compared with 20 million today. These additional plantations have major effects on the long-term supply/demand outlook, but not in the short term.

State and local control of harvesting and management activities on privately owned forest land may be becoming more common. The effects of these controls are under study, but no explicit consideration of them is given in the base line projection. Although they may lead to short-term decreases in supplies, in the long term, they may lead to long-term supply increases in response to increased management of private lands. The three proposed initiatives now under consideration in California to limit various silvicultural and final harvest practices (a form of State control) also were not considered in the various projections. If any or all three of the initiatives pass, then harvest response from private timberlands in California will be less than shown in the projections.

Paper and Board Recycling

The American Paper Institute (API) recently announced that the paper industry would increase the recovery of paper and board products from a current rate of 33 percent today to a recovery rate of 40 percent by 1995. The API recycling goal has the effect of "freeing up" timber in the South and other regions that would have have otherwise been used in pulp and paper production. The API recycling goal was analyzed. Effects on the Pacific Northwest and Southwest are significant only after the year 2000. Revenue from timber sales in these regions would decline relative to the base scenario no more than two percent in the year 2000 as a result of the API recycling goal.

Harvest by Ownership for Washington and Oregon

The U.S. timber industries in the 1980's were affected by the strong business cycle that characterized the decade. The early years were characterized by slowing economic growth and high interest rates that caused a severe recession in the home building industry. However, beginning in 1983 and continuing through 1989, there was an unprecedented period of high wood consumption in the United States. These sustained high levels of consumption increased domestic harvest and imports of lumber from Canada.

The recession also caused structural shifts in timber sale programs for the Forest Service, the Bureau of Land Management, and the State of Washington Department of Natural

Resources. The late 1970's was a time of high inflation that was reflected in part in high bids for timber harvesting rights for these three agencies. In western Washington and western Oregon, there was no escalation clause in Federal contracts permitting changes in the bid price according to market conditions. Contracts stipulated that the purchaser pay the bid price. Contracts for State of Washington timber sales were similar to those used by Federal Agencies. When the recession came, markets did not support the high prices bid for timber in previous years. When the 3 to 5 year contracts started to become due, purchasers appealed for relief. Under the terms of relief legislation, purchasers could avoid having to fulfill original contracts if they met specified circumstances. In addition, timber sale contracts were changed in 1983-84 to try to avoid a repeat of the conditions that led to the buy-back of timber sale contracts.

The harvest of timber on private timberland has also been affected by structural change. By the end of the 1980's, much of the old-growth timber on forest industry land was harvested and an increasing proportion of the harvest is composed of second-growth timber from northwest Oregon and the Puget Sound region. This transition to second-growth timber was one of the driving forces behind the change to modern technology in mill processing.

Thus, timber harvest by owner in the Pacific Northwest in the 1980's was determined in part by the market and in part by the political process within an environment that was unique in the United States. The effects of these forces are reflected in the harvest patterns for these ownerships shown in table 2. In general, markets have been good for timber products and it is within this context that alternative scenarios are presented for the future.

Finally, Forest Service sales programs in the last 15 years have averaged 1.8 and 4.9 billion board feet in the Pacific Southwest and Northwest Regions. These sales programs have been relatively constant (figure 5) and uninfluenced by economic cycles during the period. Harvest levels, though, are much more variable. For example, harvest in the Pacific Northwest has ranged from from 2.5 to 5.5 billion board feet. Harvest levels have averaged 1.7 and 4.4 billion board feet in the Pacific Southwest and Northwest Regions, respectively, during this period. Different harvest than sales levels results from a number of factors including the build up of uncut volume during 1980-1983, reporting inconsistencies between cut and sold, and timber appraisal practices.

Effects of Changes in Assumptions

The basic approach used in this economic analysis is one referenced to as scenario planning (Wack 1985). There are four scenarios in the analysis. All employ the same assumptions as for the base-line projection regarding trends in demand determinants for solidwood and fiber products, nonwood production costs, technology, nonindustrial harvest response, and trade with countries other than Canada. The four scenarios are compared with a base-line projection that assumes total Forest Service ASQ of 4.9 billion board feet for the Pacific Northwest Region and the northern California Forests of the Pacific Southwest Region. For the Bureau of Land Management, an ASQ of 1.2 billion board feet is assumed.

The 4 scenarios are termed plans, owls, logx1 and logx2.

Plans

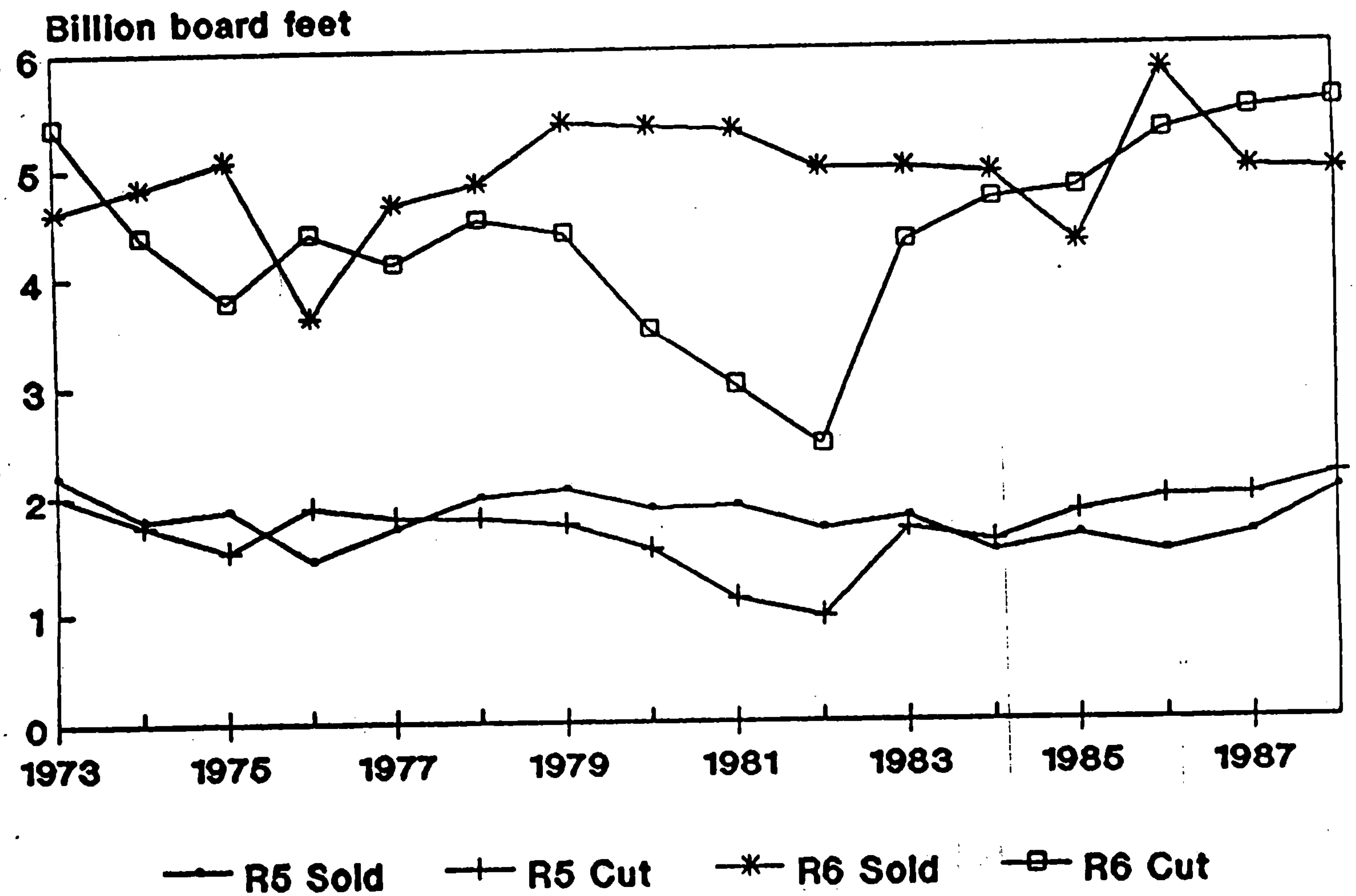
This scenario uses a timber value for projected final plans for those forests where plans are still in draft stage. These projected volumes could change up to plus or minus 10 percent in actual final plans. The mid-point of this range is used in this report in order to

Table 2 Washington and Oregon timber harvest by ownership, 1980-1989

(in million board feet, Scribner scale)

State and year	Private	State	National Forest	Bureau of Land Management	Bureau of Indian Affairs	Other public	Total
Washington:							
1980	3,507	745	1,089	0	336	43	5,720
1981	3,265	468	875	1	260	20	4,890
1982	3,740	440	728	1	152	18	5,079
1983	4,025	549	1,240	8	238	28	6,088
1984	3,545	795	1,189	2	205	66	5,802
1985	3,561	1,013	1,128	5	213	43	5,963
1986	3,989	1,064	1,232	4	235	32	6,556
1987	4,367	970	1,423	5	238	35	7,037
1988	4,406	826	1,486	0	271	56	7,045
1989 (est.)	4,670	842	1,400	0	280	50	7,242
Oregon:							
1980	3,134	186	2,399	797	105	19	6,639
1981	2,702	216	1,981	677	95	24	5,695
1982	3,440	175	1,688	312	126	17	5,758
1983	3,374	257	2,902	789	112	31	7,464
1984	3,078	249	3,164	920	101	38	7,550
1985	3,332	268	3,480	891	121	34	8,127
1986	3,494	225	3,850	1,042	104	28	8,743
1987	3,281	199	3,451	1,115	117	52	8,215
1988	3,259	270	3,487	1,439	121	39	8,615
1989 (est.)	3,487	250	3,300	1,181	125	40	8,383

Figure 5 Timber cut and sold in Forest Service Regions 5 and 6



assess the impact of implementing the ISC strategy. In this scenario, ASQ levels by 1992 for the National Forests in the Pacific Southwest Region and for the Pacific Northwest Region are expected to be 0.6 and 3.4 billion board feet, respectively. The ASQ for the Bureau of Land Management is assumed to be unchanged from the base-line projection.

Owls

This scenario reflects estimates made by each Region of the impacts of the Spotted Owl Conservation Strategy. In this scenario, ASQ levels by 1992 for the National Forests in the Pacific Southwest Region and for the Pacific Northwest Region are expected to be 0.4 and 2.6 billion board feet, respectively. The ASQ for the Bureau of Land Management is assumed to be 0.4 billion board feet.

Logx1 and Logx2

These scenarios refer to two levels of log export restrictions. In 1989, log exports from the Washington and Oregon customs districts were 2.36 and 1.26 billion board feet, respectively. LOGX1 is a restriction of log exports from state and federal timberlands located west of the 100th Meridian and in the contiguous States. Essentially, this proposal extends the current restriction on Federal lands to include State lands. This restriction would affect from 0.6 to 1.0 billion board feet in the Douglas-fir subregion depending on the provision covering substitution. LOGX2 is a total elimination of all softwood log exports from lands west of the 100th Meridian and in the contiguous States.

Scenarios and Combinations
The specific scenarios and their combinations are:

1. Plans
2. Plans, owls
3. Plans, owls, logx1
4. Plans, owls, logx2

General Economic Framework and Expected Economic Impacts
Reductions in public harvest, relative to levels in the base scenario, would raise projected stumpage prices and stimulate some partially compensating response in private harvest. The extent and duration of this private substitution will depend on the price sensitivity of private supply and the availability of inventory above minimum harvest age.

Market equilibrium in these regional markets insure that adjustments will be made for changes in the component parts of regional timber supply functions. Four component parts are considered in regional timber supply functions. Each component part represents different collective behavior on the part of a specific ownership (National Forest, other Government [including BLM], forest industry, and other private). The two private ownerships are assumed to have different reactions in terms of responding to changes in price and available inventory levels. Harvest levels on public lands are assumed to be set by policy action rather than market forces or inventory conditions.

Economic Impacts
A general summary of projections for selected variables is given in the following tabulation.

U.S. softwood lumber consumption, softwood lumber imports from Canada, softwood plywood consumption, softwood lumber price index, softwood plywood price index, softwood timber harvest, regional softwood stumpage prices, and regional production of softwood lumber and plywood for the base analysis and four scenarios, 1988, 1991, 1995, and 2000

U.S. softwood lumber consumption by base and scenario (MMBF)

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	47,922	47,922	47,922	47,922	47,922
1991	48,410	48,354	48,300	48,273	47,793
1995	47,719	47,268	46,902	46,975	47,172
2000	45,240	44,722	44,637	44,652	44,710

U.S. softwood lumber imports from Canada by base and scenario (MMBF)

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	14,885	14,885	14,885	14,885	14,885
1991	14,726	14,881	14,977	14,910	14,531
1995	13,510	13,795	14,491	14,300	13,253
2000	10,118	11,212	13,693	13,073	10,358

U.S. softwood plywood consumption by base and scenario (MMSF, 3/8")

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	19,579	19,579	19,579	19,579	19,579
1991	18,995	18,973	18,952	18,960	18,980
1995	17,921	17,800	17,810	17,750	17,747
2000	17,052	16,836	16,696	16,659	16,832

U.S. softwood lumber price index by base and scenario (1967=100)

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	123.8	123.8	123.8	123.8	123.8
1991	136.5	138.0	139.6	140.0	143.4
1995	145.7	153.0	158.7	157.5	152.0
2000	143.3	149.2	148.1	149.1	148.5

U.S. softwood plywood price index by base and scenario (1967=100)

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	99.3	99.3	99.3	99.3	99.3
1991	103.7	104.7	106.6	106.2	102.8
1995	122.0	124.2	122.6	125.4	129.0
2000	107.6	113.5	117.4	118.7	113.4

U.S. softwood timber harvest by base and scenario (MMCF)

	BASE	+PLANS	+OWLS	+LOGX1	+LOGX2
1988	7,453	7,453	7,453	7,453	7,453
1991	7,382	7,352	7,333	7,302	7,059
1995	7,289	7,191	7,063	7,054	6,985
2000	7,217	6,993	6,655	6,698	6,860

Base softwood stumpage prices by region (1967$/MBF)

	NO	SO	RK	PNW-E	PNW-W	PSW
1988	13.31	39.83	8.45	27.27	42.51	30.07
1991	13.74	41.68	8.88	36.16	52.85	48.37
1995	14.17	45.51	16.30	32.83	55.54	61.22
2000	14.35	53.74	26.07	42.80	49.19	63.67

Base + plans softwood stumpage prices by region (1967$/MBF)

	NO	SO	RK	PNW-E	PNW-W	PSW
1988	13.31	39.83	8.45	27.27	42.51	30.07
1991	13.74	42.35	10.55	50.03	57.05	53.63
1995	14.17	50.15	21.67	61.59	71.76	75.06
2000	14.35	63.27	31.23	50.80	65.98	75.35

Base + plans + owls softwood stumpage prices by region (1967$/MBF)

	NO	SO	RK	PNW-E	PNW-W	PSW
1988	13.31	39.83	8.45	27.27	42.51	30.07
1991	13.74	43.12	11.18	52.43	63.90	56.62
1995	14.17	55.46	24.73	68.88	92.95	82.83
2000	14.35	67.29	30.33	53.03	78.23	78.41

Base + plans + owls + logx1 softwood stumpage prices by region (1967$/MBF)

	NO	SO	RK	PNW-E	PNW-W	PSW
1988	13.31	39.83	8.45	27.27	42.51	30.07
1991	13.74	43.23	11.48	52.48	59.71	56.68
1995	14.17	54.02	24.36	67.16	89.03	82.75
2000	14.35	66.51	32.67	54.79	76.74	78.68

Base + plans + owls + logx2 softwood stumpage prices by region (1967$/MBF)

	NO	SO	RK	PNW-E	PNW-W	PSW
1988	13.31	39.83	8.45	27.27	42.51	30.07
1991	13.74	47.27	13.37	54.99	42.52	57.68
1995	14.17	51.58	25.38	63.57	60.98	78.40
2000	14.35	63.11	35.75	53.09	70.10	75.71

Base regional production of softwood lumber by region (MMBF)

	PNW-W	PNW-E	PSW
1988	9,322	2,884	5,179
1991	9,097	2,939	5,054
1995	8,718	3,048	4,944
2000	8,711	3,435	4,672

Base + plans regional production of softwood lumber by region (MMBF)

	PNW-W	PNW-E	PSW
1988	9,322	2,884	5,179
1991	9,050	2,824	4,929
1995	8,287	2,840	4,546
2000	7,959	2,873	4,079

Base + plans + owls regional production of softwood lumber by region (MMBF)

	PNW-W	PNW-E	PSW
1988	9,322	2,884	5,179
1991	8,896	2,816	4,882
1995	7,203	2,852	4,395
2000	6,035	2,820	3,755

Base + plans + owls + logx1 regional production of softwood lumber (MMBF)

	PNW-W	PNW-E	PSW
1988	9,322	2,884	5,179
1991	9,059	2,818	4,884
1995	7,635	2,835	4,389
2000	6,638	2,846	3,775

Base + plans + owls + logx2 regional production of softwood lumber (MMBF)

	PNW-W	PNW-E	PSW
1988	9,322	2,884	5,179
1991	10,613	2,853	4,877
1995	10,728	2,828	4,289
2000	10,664	2,871	3,776

Base regional production of softwood plywood (MMS, 3/8")

	PNW-W	PNW-E	PSW
1988	7,638	768	196
1991	7,308	691	169
1995	6,799	691	221
2000	6,023	695	185

Base + plans regional production of softwood plywood (MMSF,3/8")

	PNW-W	PNW-E	PSW
1988	7,638	768	196
1991	7,286	674	168
1995	6,571	558	215
2000	5,384	596	182

Base + plans + owls regional production of softwood plywood (MMSF,3/8")

	PNW-W	PNW-E	PSW
1988	7,638	768	196
1991	7,232	679	171
1995	6,093	572	196
2000	4,657	603	194

Base + plans + owls + logx1 regional production of softwood plywood (MMSF,3/8")

	PNW-W	PNW-E	PSW
1988	7,638	768	196
1991	7,276	674	164
1995	6,255	560	209
2000	4,788	598	197

Base + plans + owls + logx2 regional production of softwood plywood (MMSF,3/8")

	PNW-W	PNW-E	PSW
1988	7,638	768	196
1991	7,472	654	150
1995	7,031	451	206
2000	5,996	476	183

The various scenarios were constructed by assuming that reductions in Federal harvest flows started in FY1991 and that policy changes took effect in 1991. For most variables, there are only small impacts in FY1991 because of remaining Federal timber under contract and the speed of most economic adjustment processes. It takes several years for the declines in National Forest harvest flows to reach their full economic impacts. Immediate reactions to implementation of the ISC report are difficult to estimate because of the uncertainty as to how the implementation may be carried out.

Plans Scenario

Compared with the base projection, harvest levels from National Forests in the three West Coast States decline 18 percent. These harvest declines lead to increases in stumpage prices. Higher stumpage prices reduce the competitiveness of producers in the Pacific Northwest and Pacific Southwest regions relative to producers in other regions, thereby forcing downward adjustments in regional lumber and plywood production. Falling lumber and plywood production eventually lead to lower stumpage prices. In the face of rising wood costs, the region's competitive position deteriorates, profits fall, and solidwood output and capacity decline. By the mid 1990's, lumber output in the plans scenario is 1.0 billion board feet below the level in the base projection. Plywood production is also lower.

These higher stumpage prices lead to higher harvest on private timberlands, especially in the Pacific Northwest region, that offset some of the reduction in Federal harvest. In 1995, 18 percent of the reduction in Federal harvest is offset in the Pacific Southwest Region and 51 percent for the Pacific Northwest Region.

In the Pacific Northwest Region, private timberland owners are unable to sustain harvest increases (stimulated by higher prices in the early 1990's) past 1995.

Harvest reductions in the Pacific Southwest and Pacific Northwest Regions have only modest impacts on other domestic regions and final product markets. While there is some response to higher product prices, the bulk of the long-term adjustment is borne within the two regions and by lower domestic consumption and expanded lumber imports. By 2000, lumber prices are 4 percent higher while consumption is 1 percent lower.

Plans Plus Owls Scenario

This scenario includes additional reductions resulting from implementation of the ISC recommendations. These harvest declines lead to rapid increases in stumpage prices. Higher stumpage prices reduce the competitiveness of producers in the Pacific Northwest and Pacific Southwest regions relative to producers in other regions, thereby forcing downward adjustments in regional lumber and plywood production. Rapidly falling lumber and plywood production eventually lead to lower stumpage prices. In the Douglas-fir subregion, stumpage price growth accelerates from roughly 1.2 percent in the base projection to 4.6 percent in the plans plus owls scenario. In the face of rising wood costs, the region's competitive position deteriorates, profits fall, and solidwood output and capacity drop. By the mid 1990's, lumber output is below the levels in the base projection. Plywood production is also lower.

Higher stumpage prices lead to higher harvest on private timberlands that offset some of the reduction in Federal harvest especially in the Pacific Northwest region. Table 3 shows the same information as Table 1 for Federal lands, but also shows the expected timber harvest response on private lands. In total, the increase in private harvest by 1995 would offset about half the reduction in Federal harvest. However, this level of harvest could not be sustained on private lands, and by 2000 the harvest reduction on Federal and private lands combined will be about 10 percent greater than on Federal lands alone.

In the Pacific Northwest Region, private timberland owners are unable to sustain harvest increases (stimulated by higher prices in the early 1990's) past 1995. Forest industry harvest levels for this scenario fall below the levels for the base projection by 2000.

Harvest reductions in the Pacific Southwest and Pacific Northwest Regions have only modest impacts on other domestic regions and final product markets. While there is some response to higher product prices, the bulk of the long-term adjustment is borne within the two regions and by lower domestic consumption and expanded lumber imports. The most severe impacts within the two regions are in the lumber industry where production falls by 30 percent by 2000. This amounts to a loss of 4.2 billion board feet of production in the Pacific Southwest and Pacific Northwest Regions combined. This reduced production leads to increased imports from Canada (3.6 billion board feet), slight increases in production of other U.S. regions, and a drop in U.S. consumption of 0.6 billion board feet. Southern lumber production while increasing early in the decade (0.3 billion board feet in 1995) cannot sustain those increases. By 2000, lumber prices are 3 percent higher while consumption is 1 percent lower.

Plans Plus Owls Plus Logx1 Scenario

This scenario assumes implementation of elimination of softwood log exports from public lands west of the 100th Meridian. In this scenario, log exports were reduced by 500 million board feet because of restrictions on timber from state timberlands. We assumed further that this reduction would lead to a slight increase in both log exports from private timberlands and lumber exports from the region.

The restriction does lead to lower stumpage prices, decreased lumber imports from Canada, and increased lumber production in the Douglas-fir subregion--6 percent by 1995 as compared with the plans plus owls scenario. Its impacts are almost all in the Douglas-fir subregion, but within the subregion its impacts are most evident in western Washington.

Plans Plus Owls Plus Logx2 Scenario

This scenario assumes a complete restriction of log exports from both public and private timberlands west of the 100th Meridian and in the contiguous States. These log export restrictions were assumed to be implemented in 1991. The impact of this scenario focuses almost completely on western Washington and western Oregon that in 1988 accounted for 86 percent of the total log exports.

Such a restriction would lead to a significant increase in regional competitiveness of the Douglas-fir subregion relative to other producing regions. Stumpage prices drop by a third relative to the plans plus owls scenario and to just slightly more than those in the base plus plans scenario. Stumpage prices in the rest of the Pacific Northwest and Pacific Southwest Regions drop by smaller amounts. In this scenario, these lower stumpage prices lead to increased regional and national lumber production, increased lumber exports (partly to offset the loss in log exports), and reductions in lumber imports relative to the plans plus owls scenario.

In this scenario, we assumed that lumber exports increased during the 1990's by 2 billion board feet from the Douglas-fir subregion. Lumber imports from Canada fall from the levels associated with the plans and plans plus owls scenarios to about those levels observed in the base scenario. Lumber production in the Douglas-fir subregion increases by 50 percent over the levels achieved in the plans plus owls scenario and 23 percent over the base scenario. This simulation improves the competitive position of the Douglas-fir region relative to the the rest of Washington and Oregon and California where lumber production drops slightly.

implementation of the Interagency Scientific Committee Conservation Strategy.

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans 1995	Actual or Projected Final Plans 2000	Actual or Projected Final Plans plus ISC Strategy 1995	Actual or Projected Final Plans plus ISC Strategy 2000
	(Million Board Feet)				
Washington National Forests					
Gifford Pinchot 1/	388	334	334	189	189
Mt. Baker-Snoqualmie 1/	170	108	108	45	45
Okanogan	63	63	63	59	59
Olympic 1/	186	132	132	43	43
Wenatchee	136	136	136	83	83
Subtotal	943	752	752	419	419
Oregon National Forests					
Deschutes 1/	202	100	100	91	91
Mt. Hood 1/	255	193	193	154	154
Rogue River 1/	137	120	120	85	85
Siskiyou	160	160	160	119	119
Suislaw	335	335	335	198	198
Umpqua 1/	340	334	334	273	273
Willamette 1/	568	491	491	333	333
Winema 1/	199	115	115	110	110
Oregon BLM Districts					
Salem	239	239	239	62	62
Eugene	223	223	223	59	59
Roseburg	247	247	247	103	103
Medford	213	213	213	123	123
Coos Bay	254	254	254	96	96
Subtotal	3,385	3,024	3,024	1,805	1,805
California National Forests					
Klamath 1/	200	142	142	110	110
Mendocino 1/	93	84	84	66	66
Shasta-Trinity 1/	226	224	224	129	129
Six Rivers 1/	175	150	150	92	92
California BLM District					
Ukiah	9	9	9	3	3
Subtotal	699	609	609	395	395
Total Public	5,018	4,406	4,406	2,625	2,625
Private Lands 2/					
Western Washington & Oregon	7,235	7,505	7,270	7,820	6,940
Eastern Washington & Oregon	630	935	650	1,005	665
California	2,115	2,240	2,140	2,300	--
	9.980	10,680	10,060	10,220	7,605

1/ The timber volume shown for projected final plans in these forests could change up to plus or minus 10 percent in actual final plans. A mid-point of this range is shown in order to assess the impact of implementing the ISC strategy.

2/ Actual harvest shown for private lands in the "current plans" column.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

REGIONAL AND LOCAL EFFECTS

Background

This section of the report presents:

- Estimated effects on employment caused by changes in timber harvest levels on National Forests and BLM Districts assuming full implementation of the ISC Strategy.
- Estimated changes in Federal revenue from National Forests and BLM Districts assuming full implementation of the ISC Strategy.
- Estimated changes in payments to States and counties from Federal revenues generated on National Forests and BLM Districts assuming full implementation of the ISC Strategy.

Employment is affected by technology and other factors that change over time. The employment multipliers used in this study represent past gains in efficiency; however, no attempt was made to project this into the future. The emphasis is on change in employment from reduced timber availability; potential future gains in efficiency would apply to any level of timber supply. This information was developed using historical relationships. The IMPLAN input-output economic modeling system was the primary tool used in the analysis.

Number of jobs was estimated in two steps. First, the change in the demand for processed wood materials using harvested timber was estimated. Second, changes in employment associated with meeting this level of demand were estimated. The second step, estimating jobs, involved the use of the IMPLAN economic modeling system.

The first step, estimating the demand for products manufactured and exported from a "local" area per million board feet of timber harvested, used the value of products sold by sawmills as the primary information source. The product values were based upon timber appraisal estimates from detailed mill studies periodically performed by the Forest Service. The value of products per unit of harvest multiplied by the harvest level was used as the estimate of demand for wood products.

The second step, estimating the number of jobs affected by meeting the demand for wood products, was accomplished using called IMPLAN. The IMPLAN system is a software and database package that scales the national input-output model of the U.S. economy built by the U.S. Department of Commerce's Bureau of Economic Analysis down to fit a desired grouping of counties. Primary data used to scale the national model down to fit local areas is the data series from the various economic censuses taken by the U.S. Department of Commerce and payroll and employment data collected by the States and reported to the Department of Commerce. Supplemental data compiled by Dun and Bradstreet is also used in this process.

IMPLAN models are general economic "input-output" systems used to estimate the economic consequences of delivering products to meet demand by tracing supply requirements backward through all affected business linkages. At each stage of these backward linkages, persons are employed to produce the required products. IMPLAN models are usually constructed for a "local" economy (individual or groups of counties) affected by the activities of a particular National Forest. As a result, not all possible supply linkages are contained in these "local" economies. The total number of jobs gained or lost as a result of various levels of harvest from the National Forests are estimated as the sum of all jobs affected in the "local" economy through the backward supply linkages needed to deliver wood products to export (final) demand.

The information presented here includes the employment effects of processing the timber harvest through the economy. These effects can be estimated in three components:

- o The direct effect on the sector(s) either exporting processed wood products from the economic area or selling these products to final consumers within the area,
- o The indirect effect on the other production, trade and service sectors within the economy that provide the successive rounds of production inputs needed to manufacture the processed wood products sold to export or final consumption, and
- o The induced effect of the consumer spending within the economic area associated with the jobs supporting the direct and indirect production.

The models were used to develop the relationship between the processing of the timber harvest and the total employment supported by it. These relationships provide a way to examine the employment implications of the expected harvest. Two factors could alter these estimates. First, the mix of future processing (lumber, plywood, pulp, log exports, etc.) is not known. In addition, the multipliers are based upon past production technology which will continue to change in the future, changing the relationship between timber harvest and the number of jobs supported. Improvements in processing efficiency have continually reduced the labor requirements per million board feet of timber and these improvements are expected to continue into the future.

Economic Areas
Economic areas made up of groups of counties were identified for each forest and District with spotted owls. An IMPLAN model was constructed for each of these economic areas. The rule used to delineate these areas in Washington and Oregon was that approximately 80 percent of the Forests' timber harvest historically has received primary processing within the area. Primary processing is defined as plywood and veneer, lumber, particle board, and other similar manufacturing. In California, a similar rule based on log flows to mills and the relative importance to local mills was used.

In Washington and Oregon, the Forests and Districts economic areas are:

Forest Service

o Mt. Baker-Snoqualmie - Whatcom, Skagit, Snohomish, King, and Pierce Counties, Washington.

o Olympic - Clallam, Jefferson, Grays Harbor, and Mason Counties, Washington

o Gifford Pinchot - Lewis, Cowlitz, Clark, Skamania, and Klicitat Counties, Washington.

o Okanogan - Okanogan County, Washington.

o Wenatchee - Chelan, Kittitas, Yakima, and Douglas Counties, Washington

o MT. Hood - Multnomah, Clackamas, Hood River, and Wasco Counties, Oregon.

o Siuslaw - Tillamook, Polk, Lincoln, Benton, and Lane Counties, Oregon.

o Willamette - Marion, Linn, and Lane Counties, Oregon.

o Umpqua - Douglas County, Oregon.

o Siskiyou- Coos, Curry, Josephine, and Jackson Counties, Oregon.

o Rogue River - Jackson, and Josephine Counties, Oregon.

o Winema - Klamath County, Oregon.

o Deschutes - Deschutes County, Oregon.

Bureau of Land Management

o Salem - Benton, Clackamas, Columbia, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Washington, and Yamhill Counties, Oregon.

o Eugene - Lane County, Oregon.

o Roseburg - Douglas County, Oregon.

o Coos Bay - Coos and Curry Counties, Oregon.

o Medford and Lakeview - Jackson, Josephine, and Klamath Counties, Oregon.

California

In California, economic effects are centered in the north coast and north central areas of the State. The north coast area affected includes Del Norte, Humboldt, and Mendocino counties. The north central area most affected includes Glenn, Tehama, Shasta, Trinity, and Siskiyou counties. The Six Rivers National Forest primarily affects the north coast area. The Mendocino National Forest affects both the north coast and north central areas. The Klamath and Shasta-Trinity National Forests primarily affect the north central area. A major portion of the timber from the Klamath National Forest is milled in southern Oregon counties.

Employment Effects

Table 4 displays projected employment effects. Effects are shown in two steps. The first step is the employment effect expected from implementing the projected final plans for the Forest Service and existing plans for the Bureau of Land Management. The second step shows employment effects after implementing the ISC Recomendations on affected National Forests and BLM Districts.

Implementation of the estimated final plans for the Forest Service would result in a decline in employment of 6,247 people. Implementation of the ISC Recommendations would result in a further decline of 19,162 people for a total decline in employment of 25,409 people for the three West Coast States as compared with estimated employment at the level associated with current plans. It is important to keep in mind that these employment estimates are for both direct and indirect employment associated with timber harvest on just those National Forests and BLM Districts affected by the ISC Recommendations. It does not include private and other public ownerships, nor does it include Forest Service and BLM lands not affected by the ISC Conservation Strategy.

Scientific Committee Conservation Strategy

Forests and Districts Affected by ISC Strategy	Current Plans 1995	Actual or Projected Final Plans 1995	Actual or Projected Final Plans 2000	Actual or Projected Final Plans plus ISC Strategy 1995	Actual or Projected Final Plans plus ISC Strategy 2000
	(Number of Employees)				
Washington National Forests					
Gifford Pinchot 1/	4,687	4,035	4,035	2,283	2,283
Mt. Baker-Snoqualmie 1/	1,943	1,234	1,234	514	514
Okanogan	592	592	592	555	555
Olympic 1/	1,843	1,100	1,100	426	426
Wenatchee	1,452	1,452	1,452	886	886
Subtotal	10,518	8,414	8,414	4,665	4,665
Oregon National Forests					
Deschutes 1/	1,380	683	683	615	615
Mt. Hood 1/	2,924	2,106	2,106	1,680	1,680
Rogue River 1/	1,345	1,178	1,178	835	835
Siskiyou	1,872	1,872	1,872	1,392	1,392
Siuslaw	4,087	4,087	4,087	2,416	2,416
Umpqua 1/	3,492	3,430	3,430	2,804	2,804
Willamette 1/	6,157	5,322	5,322	3,610	3,610
Winema 1/	1,485	858	858	821	821
Oregon BLM Districts					
Salem	2,470	2,470	2,470	641	641
Eugene	4,473	4,473	4,473	654	654
Roseburg	2,612	2,612	2,612	1,089	1,089
Medford	2,525	2,525	2,525	1,458	1,458
Coos Bay	2,300	2,300	2,300	869	869
Subtotal	35,122	31,918	31,918	18,884	18,884
California National Forests					
Klamath 1/	1,980	1,420	1,420	1,100	1,100
Mendocino 1/	809	731	731	505	505
Shasta-Trinity 1/	2,621	2,621	2,621	1,544	1,544
Six Rivers 1/	2,100	1,800	1,800	1,104	1,104
California BLM District					
Ukiah	90	90	90	30	30
Subtotal	7,600	6,662	6,662	4,283	4,283
Total	53,240	46,993	46,993	27,831	27,831

1/ Numbers for projected final plans for these forests are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers are based on a midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

For comparison, in 1988 about 250,000 people were employed in the forest products industries in Washington, Oregon, and California. Employment figures shown in this report include direct industry employment and jobs that support this direct employment. Estimates range from 40-60 percent of total employment that could be classified as forest industry employment. Therefore, roughly, half of the employment figures shown here, about 12-13,000 jobs are forestry industry. For perspective, this would account for 5 percent of total industry employment in the three States. However, since employment impacts are concentrated in certain areas, the percentage would be much greater in these localities.

On a State-by-State basis, the largest loss of jobs from Federal harvest reductions will be in the State of Oregon; 16,238 fewer jobs will be available. In Washington, employment will decline by 5,853 jobs; and in California, job loss will total 3,317.

Based on available inventories, an increase in harvest on private lands could be expected during the early 1990's in response to higher stumpage prices. Table 5 shows that this private response could provide employment for 12,137 people in 1995. However, by the year 2000 the capability of private lands to offset reductions in Federal timber harvest will have been exhausted, and the net effect will be employment levels even lower than the initial impact caused by reduced Federal harvests. Employment as compared with current planned levels of harvest on Federal lands will be down an addition 2,756 people in the year 2000. Thus, harvest response on private lands will mitigate the employment impact in 1995 to a loss of 13,272 jobs; but by 2000, the loss will be even greater than from Federal harvest reductions alone and losses will total 28,165 jobs.

An additional increment of reduced employment is expected to occur in the Federal sector. The Forest Service estimates that employment would be reduced by about 1,300 positions in Washington and Oregon and about 200 positions in California. The Bureau of Land Management should not be greatly affected in the near future (through 1992) due to the need for redesigning proposed sales, backlog on reforestation and timber stand improvement work, and developing land use plans. As the land use plans are completed, further impacts on employment will be analyzed. Reduction in Federal employment is a significant consideration. Many of these people live and work in the same rural communities where forest industries are a dominant part of the economy. Their loss will place an added burden on communities.

As the figures indicate, no subarea fares well. All may experience significant reductions in their employment base. It is difficult to point to any single area or community as being particularly adversely affected so widespread are the effects. When the Forest Service and BLM potential harvest reductions are looked at together, it is obvious that Oregon, starting with the west central area to the foothills of the Cascades and southward to the California state line, will be faced with significant economic disruption. The combined effect of the Willamette, Siuslaw, and Umpqua National Forests and the Eugene, Salem, and Roseburg Districts of the Bureau of Land Management harvest reductions may affect 12,000 jobs. The combined effect of FS and BLM reductions in the Southwestern Oregon coast and Rogue River Valley may affect an additional 3,500 jobs.

In Washington, starting with the Olympic Peninsula and continuing southward and westward to the Cowlitz River Valley and into the Columbia Gorge, about 3800 jobs may be affected. While the effects in Northwest Washington may be more widely dispersed through areas with significantly diverse economies and urban populations, the reduction in jobs will significantly affect individual communities in the rural areas.

Table 5--Changes in Timber-Based Employment That Would Result from Implementation of the Northern Spotted Owl Conservation Strategy

	Change from Current Level With Implementation of ISC Strategy 1995	2000
Washington		
Forest Service	-5,853	-5,853
Bureau of Land Mgmt.	------	-
Total	-5,853	-5,853
Oregon		
Forest Service	-8,569	-8,569
Bureau of Land Mgmt.	-7,669	-7,669
Total	-16,238	-16,238
Northern California		
Forest Service	-3,257	-3,257
Bureau of Land Mgmt.	-60	-60
Total	-3,317	-3,317
Total Public	-25,409	-25,409
Private lands		
Western WA & OR	+6,201	-3,127
Eastern WA & OR	+3,975	+371
California	+1,961	------
Total	+12,137	-2,756
Net Change	-13,272	-28,165

Employment effects in California are centered in the north coast and north central areas of the State. Private timber supplies account for approximately 85 percent of the logs available to mills in the north coast area, while federal timber supplies account for 15 percent. In the north central area, federal supplies account for about 50 percent of the logs available to mills. As a result, overall employment effects will be felt more strongly in this area. Individual companies without access to private timber supplies will be particularly affected in both areas.

Employment effects will be more intense in Trinity and Siskiyou Counties than in the other affected counties in California. Employment related to the harvesting and processing of federal timber are a much larger share of the total economy in these two counties than in other affected counties. In these two counties, employment related to the processing of Federal timber accounts for between 10 and 20 percent of total employment.

Timber-based Revenues

Timber harvest throughout the area is an important source of Federal revenue. Table 6 shows estimates of timber-based revenue to the US Treasury. These estimates were made using recent prices and projected changes in stumpage prices from the TAMM analysis discussed previously. The possible reductions in Federal harvest caused by implementation of the ISC Recommendations are large and, as a result, significant increases in stumpage prices are expected. The analysis shows that implementation of the ISC recommendation by the Forest Service and BLM would reduce timber-based revenue by about $148 million in the three West Coast States in 1995, and $229 million in 2000.

Revenues would decline about $28 million from Forest Service lands and $120 million from Bureau of Land Management lands in 1995. In 2000, the decline in revenues from Forest Service lands would be $99 million and on Bureau of Land Management lands, $130 million.

Future economic conditions are uncertain; therefore, for comparison Table 7 shows revenues from Federal timber harvest assuming no change in price during the entire decade. Under this scenario, implementation of the ISC recommendation would have a larger downward effect on revenues because there is no price offset to volume reductions. In total, revenues to the Treasury would decline by $501 million in 1995 and 2000 (both price and volume are constant after 1995).

Payments to Counties

Revenue sharing, commonly refered to as "payments to counties," is estimated using projected changes in harvest, and forest- or district- specific long-term stumpage prices. Total revenue is estimated for each forest or district, and county shares are estimated based on the percent of a National Forest's acreage in each county or established O&C ratios. It is important to remember that, for the purposes of this report, the only payments to counties that are considered are those associated with National Forests and BLM Districts affected by the ISC Recommendations.

Table 6--Timber-Based Revenue After Implementation of the Interagency Scientific Committee Conservation Strategy--Rising Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans		Actual or Projected Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Millions of 1989 Dollars)				
Washington National Forests					
Gifford Pinchot[1/]	71	79	82	58	55
Mt. Baker-Snoqualmie[1/]	32	26	27	14	13
Okanogan	7	12	8	13	8
Olympic[1/]	27	21	22	11	10
Wenatchee	15	28	18	19	11
Subtotal	151	166	156	114	97
Oregon National Forests					
Deschutes[1/]	22	21	13	21	12
Mt. Hood[1/]	53	50	51	51	49
Rogue River[1/]	26	29	31	27	26
Siskiyou	37	48	50	46	44
Siuslaw	85	109	113	84	80
Umpqua[1/]	76	97	101	102	97
Willamette[1/]	125	139	144	122	116
Winema[1/]	42	46	29	49	29
Oregon BLM Districts					
Salem	73	94	98	32	30
Eugene	68	88	92	30	29
Roseburg	50	64	67	35	33
Medford	45	59	61	44	42
Coos Bay	69	89	92	44	41
Subtotal	773	933	942	686	628
California National Forests					
Klamath[1/]	21	18	18	16	14
Mendocino[1/]	11	12	12	9	9
Shasta-Trinity[1/]	38	46	44	30	27
Six Rivers[1/]	29	31	29	21	19
California BLM District					
Ukiah	1	2	2	1	1
Subtotal	100	109	105	76	69
Total	1024	1208	1203	876	795

1/ Numbers for projected final plans for these forests are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers are based on a midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table 7--Timber-Based Revenue After Implementation of the Interagency Scientific Committee Conservation Strategy - Constant Price Assumption

Forests and Districts Affected by ISC Strategy	Current Plans	Actual or Projected Final Plans		Actual or Projected Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Millions of 1989 Dollars)				
Washington National Forests					
Gifford Pinchot 1/	71	61	61	35	35
Mt. Baker-Snoqualmie 1/	32	20	20	8	8
Okanogan	7	7	7	6	6
Olympic 1/	27	16	16	6	6
Wenatchee	15	15	15	9	9
Subtotal	151	119	119	64	64
Oregon National Forests					
Deschutes 1/	22	11	11	10	10
Mt. Hood 1/	53	38	38	31	31
Rogue River 1/	26	23	23	16	16
Siskiyou	37	37	37	28	28
Suislaw	85	85	85	50	50
Umpqua 1/	76	75	75	61	61
Willamette 1/	125	108	108	73	73
Winema 1/	42	25	25	23	23
Oregon BLM Districts					
Salem	73	73	73	19	19
Eugene	68	68	68	18	18
Roseburg	50	50	50	21	21
Medford	45	45	45	26	26
Coos Bay	69	69	69	26	26
Subtotal	773	707	707	402	402
California National Forests					
Klamath 1/	21	15	15	12	12
Mendocino 1/	11	10	10	7	7
Shasta-Trinity 1/	38	38	38	22	22
Six Rivers 1/	29	25	25	15	15
California BLM District					
Ukiah	1	1	1	1/	1/
Subtotal	100	89	89	56	56
Total	1,024	915	915	523	523

1/ Less than one million.

1/ Numbers for projected final plans for these forests are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers are based on a midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

With Stumpage Price Increase

Table 8 shows estimates of payments to counties in 1995 for implementation of the ISC Recommendations by the Forest Service and the Bureau of Land Management.

The following tabulation shows changes in payments at the State level for 1995 and 2000. This change reflects the reduction in timber harvest from current planning levels to the level in the ISC Conservation Strategy, and accounts for the expected rise in stumpage prices as a result of this harvest reduction.

	Washington	Oregon	California	Total
		(million dollars)		
		1995		
Forest Service	-9.4	+6.9	-5.2	-7.7
Bureau of Land Management	—	*-66.0*	*1/*	*-66.0*
Total	-9.4	-59.1	-5.2	-73.7
		2000		
Forest Service	-13.3	-4.5	-6.6	-24.4
Bureau of Land Management	—	*-70.6*	*1/*	*-70.6*
Total	-13.3	-75.1	-6.6	-95.0

1/ Less than $0.1 million.

Because of the larger proportional payments by the BLM (O&C lands), 50 percent of receipts as compared with 25 percent by the Forest Service, and because of the large timber volume reductions on BLM lands, most of the loss in payments to States is from the BLM. Forest Service payments actually show an increase in Oregon in 1995 due to the sharp expected increase in stumpage prices. In total, payments to the three States are expected to be about $74 million lower in 1995 and $95 million lower in 2000. About 80 percent of the reduction will be in the State of Oregon.

Without Stumage Price Increase

The previous analysis is based on an assumed significant rise in stumpage prices associated with a reduction in the volume of Federal timber available for harvest. For comparison, Table 9 and the following tabulation show the comparable statistics using no change in stumpage prices from the 1989 average harvest value.

Table 8--Payments to States After Implementation of the Interagency Scientific Committee Conservation Strategy - Rising Price Assumption

	Current Plans	Final Plans		Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Thousands of 1989 Dollars)				
Washington National Forests					
Gifford Pinchot 1/	16,976	18,851	19,582	13,810	13,148
Mt. Baker-Snoqualmie 1/	7,469	6,121	6,359	3,302	3,144
Okanogan	1,553	2,920	1,848	3,054	1,803
Olympic 1/	7,264	5,592	5,809	2,804	2,670
Wenatchee	3,234	6,080	3,849	4,145	2,448
Subtotal	36,496	39,565	37,446	27,115	23,213
Oregon National Forests					
Deschutes 1/	4,571	4,254	2,693	4,277	2,525
Mt. Hood 1/	11,354	10,548	10,957	10,896	10,374
Rogue River 1/	5,568	6,291	6,535	5,769	5,493
Siskiyou	6,951	8,967	9,314	8,633	8,220
Siuslaw	21,267	27,435	28,498	20,992	19,986
Umpqua 1/	13,017	16,495	17,134	17,454	16,618
Willamette 1/	26,551	29,608	30,755	25,995	24,750
Winema 1/	10,062	10,932	6,920	11,680	6,897
Oregon BLM Districts					
Salem	38,809	50,064	52,004	16,813	16,007
Eugene	35,575	45,892	47,670	15,718	14,965
Roseburg	25,873	33,376	34,669	18,018	17,154
Medford	24,256	31,290	32,502	23,391	22,271
Coos Bay	37,192	44,478	46,202	21,763	20,720
Subtotal	261,045	319,628	325,855	201,399	185,981
California National Forests					
Klamath 1/	4,229	3,731	3,579	3,172	2,890
Mendocino 1/	2,494	2,771	2,658	21005	1,913
Shasta-Trinity 1/	8,204	10,091	9,681	6,527	5,947
Six Rivers 1/	6,991	7,371	7,071	4,962	4,521
California BLM District					
Ukiah	54	67	64	24	22
Subtotal	21,973	24,030	23,053	16,785	15,293
Total	319,514	383,223	386,354	245,299	224,487

1/ Numbers for projected final plans for these forests are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers are based on a midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

Table 9--Payments to States After Implementation of the Interagency Scientific Committee Conservation Strategy - Constant Price Assumption

	Current Plans	Final Plans		Final Plans plus ISC Strategy	
	1995	1995	2000	1995	2000
	(Thousands of 1989 Dollars)				
Washington National Forests					
Gifford Pinchot 1/	16,976	14,614	14,614	8,269	8,269
Mt. Baker-Snoqualmie 1/	7,469	4,745	4,745	1,977	1,977
Okanogan	1,553	1,553	1,553	1,454	1,454
Olympic 1/	7,264	4,335	4,335	1,679	1,679
Wenatchee	3,234	3,234	3,234	1,974	1,974
Subtotal	36,496	28,481	28,481	15,354	15,354
Oregon National Forests					
Deschutes 1/	4,571	2,263	2,263	2,036	2,036
Mt. Hood 1/	11,354	8,177	8,177	6,525	6,525
Rogue River 1/	5,568	4,877	4,877	3,455	3,455
Siskiyou	6,951	6,951	6,951	5,170	5,170
Suislaw	21,267	21,267	21,267	12,570	12,570
Umpqua 1/	13,017	12,787	12,787	10,452	10,452
Willamette 1/	26,551	22,952	22,952	15,566	15,566
Winema 1/	10,062	5,815	5,815	5,562	5,562
Oregon BLM Districts					
Salem	38,809	38,809	38,809	10,068	10,068
Eugene	35,375	35,575	35,575	9,412	9,412
Roseburg	25,873	25,873	25,873	10,789	10,789
Medford	24,256	24,256	24,256	14,007	14,007
Coos Bay	37,192	37,192	37,192	14,057	14,057
Subtotal	261,044	246,792	246,792	119,667	119,667
California National Forests					
Klamath 1/	4,229	3,033	3,033	2,350	2,350
Mendocino 1/	2,494	2,252	2,252	1,555	1,555
Shasta-Trinity 1/	8,204	8,204	8,204	4,835	4,835
Six Rivers 1/	6,991	5,992	5,992	3,675	3,675
California BLM District					
Ukiah	54	54	54	18	18
Subtotal	21,973	19,537	19,537	12,433	12,433
Total	319,514	294,810	294,810	147,454	147,454

1/ Numbers for projected final plans for these forests are based on projected timber volumes that could change up to plus or minus 10 percent in actual final plans. The numbers are based on a midpoint of this range in order to assess the impact of implementing the ISC strategy.

NOTE: Final BLM new plan sale levels will not be known until the new plans are completed in 1992. Existing plan levels are carried into years 1995 and 2000 for comparative purposes only.

	Washington	Oregon	California	Total
	---------(million dollars)------------			
		1995		
Forest Service	-21.1	-38.0	-9.5	-68.6
Bureau of Land Management	---	*-103.9*	*1/*	*-103.4*
Total	-21.1	-141.4	-9.5	-172.0
		2000		
Forest Service	-21.1	-38.0	-9.5	-68.6
Bureau of Land Management	---	*-103.4*	*1/*	*-103.4*
Total	-21.1	-141.4	-9.5	-172.0

1/ Less than $0.1 million.

With this constant price scenario, the decline in payments to States would be almost double the amount shown with rising prices. Slightly more than 80 percent of this decline would occur in the State of Oregon and in that State, three-quarters of the reduction would be attributed to BLM lands.

Table 10 demonstrates the distribution of payments to counties using the constant price assumption in 1995. The table shows the relative magnitude of impacts by county for Washington and Oregon. While these distributions are based on the timber volume distribution in 1995 at constant price, the table can be used to estimate proportionally county-by-county impacts at varying price levels.

The table shows the largest reduction for any one county is estimated to occur in Douglas County, Oregon, followed closely by Jackson and Lane Counties, Oregon. These counties are in the south-central part of the State. The degree to which counties will be affected by these revenue losses depends on the structure and strength of the local economy. Less populated counties with smaller tax bases may be less able to absorb or offset reductions than counties with larger populations and tax bases.

General Effects on Counties and Communities

Changes in timber supply will affect employment and income in timber processing and in supporting industries throughout the range of owl habitat. The effects will be most keenly felt by individuals losing employment and by the communities in which they live. The duration of the effects will depend on the availability of other employment; the skills, abilities, and willingness of individuals to relocate and take new jobs; family considerations; and many other factors.

For some parts of the three affected States, such as in or near urban areas, opportunities for making adjustments will be easier than in other areas. The communities that are most vulnerable are those beyond commuting distance from urban centers that are growing and offer opportunities for employment. In some cases, individuals will need to acquire new skills to help themselves through a transition. Such training is not equally available in all communities that may be affected. Some individuals may choose to move to a new area. The housing market in the communities they live in will be an important factor in their ability to move. The closer communities are to urban areas with diversified and growing economies, the more active the housing market is likely to be.

Table 10--Change in Estimated 1995 Payments to Counties after Implementation of the ISC Spotted Owl Conservation Strategy

[Thousand of 1989 dollars]

	Forest Service			Bureau of Land Management			
Area	Current plans	Owl cons.	Change	Current plans	Owl cons.	Change	Total change
Oregon	99,341	105,695	6,354	161,706	91,917	-69,789	-63,435
Benton	569	577	8	4,544	2,582	-1,962	-1,954
Clackmas	5,198	5,380	182	8,975	5,101	-3,874	-3,692
Columbia				3,331	1,894	-1,437	-1,437
Coos	724	827	103	9,541	5,423	-4,118	-4,015
Curry	4,277	5,451	1,174	5,902	3,355	-2,547	-1,373
Deschutes	2,831	2,185	-645				-645
Douglas	15,007	19,373	4,367	40,507	23,026	-17,481	-13,114
Hood River	2,164	2,239	75				75
Jackson	3,743	4,016	273	25,339	14,404	-10,935	-10,662
Jefferson	521	417	-104				-104
Josephine	2,300	2,899	600	19,534	11,103	-8,431	-7,831
Klamath	11,739	11,056	-683	3,784	2,151	-1,633	-2,316
Lake	499	386	-113				-113
Lane	26,202	27,017	814	24,692	14,036	-10,656	-9,842
Lincoln	5,933	6,010	77	582	331	-251	-174
Linn	7,722	7,759	38	4,269	2,426	-1,843	-1,805
Marion	2,937	2,972	35	2,361	1,342	-1,019	-984
Multnomah	736	761	25	1,763	1,003	-760	-735
Polk	11	10	-1	3,493	1,986	-1,507	-1,508
Tillamook	3,221	3,262	41	906	514	-392	-351
Wasco	2,122	2,197	75				75
Washington				1,019	579	-440	-440
Yamhill	888	900	12	1,164	661	-503	-491
Washington	36,497	27,115	-9,382				-9,382
Chelan	2,587	2,789	202				202
Callam	2,441	996	-1,445				-1,445
Clark	19	16	-3				-3
Cowlitz	281	242	-39				-39
Grays Harbor	753	307	-446				-446
Jefferson	3,295	1,346	-1,950				-1,950
King	821	383	-438				-438
Kittitas	783	761	-22				-22
Klickitat	122	106	-16				-16
Lewis	5,194	4,400	-794				-794
Mason	774	316	-458				-458
Okanogan	1,553	2,568	1,015				1,015
Pierce	319	148	-171				-171
Skagit	1,272	595	-677				-677
Skamania	11,024	9,483	-1,541				-1,541
Snohomishs	1,549	724	-825				-825
Whatcom	2,053	961	-1,092				-1,092
Yakima	1,655	973	-682				-682

The ability of individuals and communities to adjust is therefore heavily influenced by their geographic location with respect to urban areas. In addition, adjustments are likely to be easier in communities that: (1) are not primarily dependent on a single mill for the bulk of their basic employment and income and (2) have some diversity in basic income, either through business diversification or some other source of economic growth, such as an increase of retirees.

Local effects will also be greatly influenced by the efficiency and determination of existing wood processing and production industries. Some operations may continue to operate profitably on a greater share of the reduced timber supply as less efficient operations close down.

Given considerations as described above, on the maps in Appendix I the cross-hatched areas in the three States may be most vulnerable to social and economic effects resulting from potential reductions in timber supply. The red dots on the maps are those communities where: (1) a large share of employment is in the timber industry, (2) the timber industry is dependent on National Forest and Bureau of Land Management timber for a large share of its log supplies, and (3) other sectors of the economy are not experiencing healthy economic growth. The most vulnerable areas are rural and straddle the Coast and Cascade ranges of Washington, Oregon, and California.

Social and Other Impacts
There are many social and other impacts associated with the reductions in Federal timber harvest analyzed in this report. Most of them are difficult to quantify. The brief discussion here mainly lays out the kinds of impacts to be expected.

The major social impacts of reducing the ASQ for Federal lands is the loss of over 25,000 direct and indirect jobs. This will directly affect the lifestyles of those with timber-dependent livelihoods and perhaps cause localized shifts in populations. The severity of impacts will vary by community, depending on the amount of reduction in timber harvesting and upon the degree to which particular communities are dependent on forest resources.

In rural areas where jobs are threatened, community cohesion will accelerate rapidly for a time as common adversity is confronted in response to the collective perception that jobs and livelihood are being sacrificed to protect old growth timber. This cohesion will likely result in further entrenchment of the belief that the forests are not being fully utilized and that environmentalists are "taking over". In these affected communities, the attitude toward the Forest Service and Bureau of Land Management will decline. They will see these agencies as giving in to the pressures of an elitist society. On the positive side, community cohesion will be useful as individuals struggle to help pull each other through the crisis. They will look to new entrepreneurs with mixed feelings--eager for job opportunities, but resistant to changing their traditional way of earning a living. In communities hit hardest, and after a period of unsuccessful job hunting, community cohesion will likely decline. The decline will stem from a rift in these communities between those who already have found work and those who have not. In severe cases of community dysfunction, increased rates of domestic disputes, divorce, acts of violence, delinquency, vandalism, suicide, alcoholism, and other social problems are to be expected.

In urban areas, a reduction in community cohesion is expected as old growth forests become preserved at the expense of timber harvest. Urban residents' perceptions that the resource use is out of balance will have been addressed. They will have been heard and their wants, needs, and desires on this issue will have been satisfied for a time. Without a common cause, cohesion will diminish, especially among the environmentally oriented subsets of the urban populations, who will move on to other issues. Some disorientation in urban communities' facilities and services is possible if large numbers of dislocated workers relocate there from rural areas.

Small population shifts may take place in some rural areas in the short term. Over the long term, larger out-migrations may occur in areas which have not adapted to the changing mix of resource use. Shifts will occur mostly where there are major harvest reductions and where there are no urban areas within work-driving distance. The central tendency will be for the rural displaced workers to remain in their same communities, even if they have to commute long distances to find jobs. While the regional shift is not likely to be significant, some small remote communities may feel the impact, primarily in the form of a significantly reduced tax base.

Reduced income and employment associated with a lower Federal timber sale program have implications for other parts of the economy in the three West Coast States. For example, tax revenues will fall, as will real estate values.

Tax revenue derived from income taxes at the state level would decline as income is reduced. Reduced income would also cause a reduction in consumer purchases, resulting in a reduction in revenue generated from state and county sale taxes.

Lower employment in the region implies some relocation of workers and their families to other regions of the country. One result of this relocation would be a decline in residential and commercial real estate values. This decline in real estate values would result in a decline in property taxes collected by state and local governments.

Tax revenues generated from business would also decline under a scenario of lower Federal timber sales. This revenue decline would be the result of declines in tax revenue from the wood products industry as production falls and from tax revenue declines from service industries in the region.

Summary of Economic Impacts and Implications for Mitigation Measures

The analysis of economic impacts has identified the size and geographic distribution of the following effects:

- o Employment
- o Federal revenues from timber sales
- o Federal payments from timber sale revenues to counties

The analysis acknowledges that there will be some market-oriented mitigation of impacts. For example, in the short term, private timber harvest will increase because of higher stumpage prices and this will tend to offset a portion of the decline in employment and income associated with implementation of the ISC recommendations. Implementation of the ISC recommendations will lead to higher stumpage prices in the three West Coast states and this will tend to offset a portion of the decline in payments to counties from timber revenues.

In general, the effects on employment and income will be pervasive throughout the rural and timber-dependent communities in western Washington, western Oregon, and northern California.

General orders of magnitude for effects are:

o Federal harvest will support 25,000 fewer jobs in the three States. About half of this will be offset by increased harvest on private lands in the short-term, but by the end of the decade employment effects will be even greater.

o $148 million decline in Federal revenue from timber sales by 1995, and $229 million decline by 2000.

o About $74 million decline in payments to counties from Federal timber sale revenue in 1995 growing to $95 million by 2000.

Literature Cited

Adams, D. M. and R. W. Haynes. 1980. The 1980 Softwood Timber Assessment Market Model: Structure, Projections and Policy Simulations. Forest Science 26(3), Monograph 22.

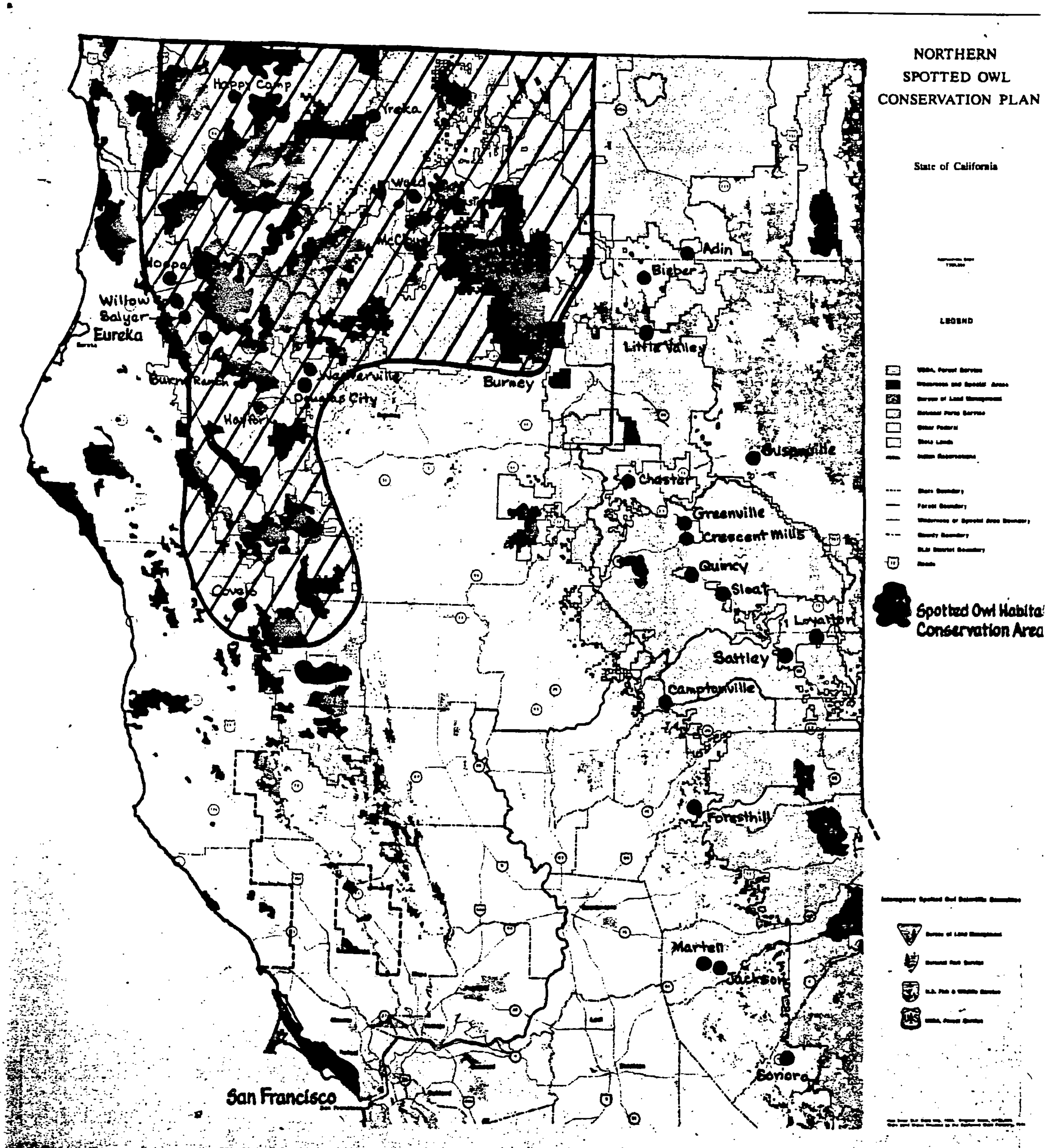
Haynes, R. W. and D. M. Adams. 1985. Simulations of the Effects of Alternative Assumptions on Demand-Supply Determinants on the Timber Situation in the United States. USDA, Forest Service, Forest Resources Economics Research. Wash., D. C. U. S. Gov't. Printing Office.

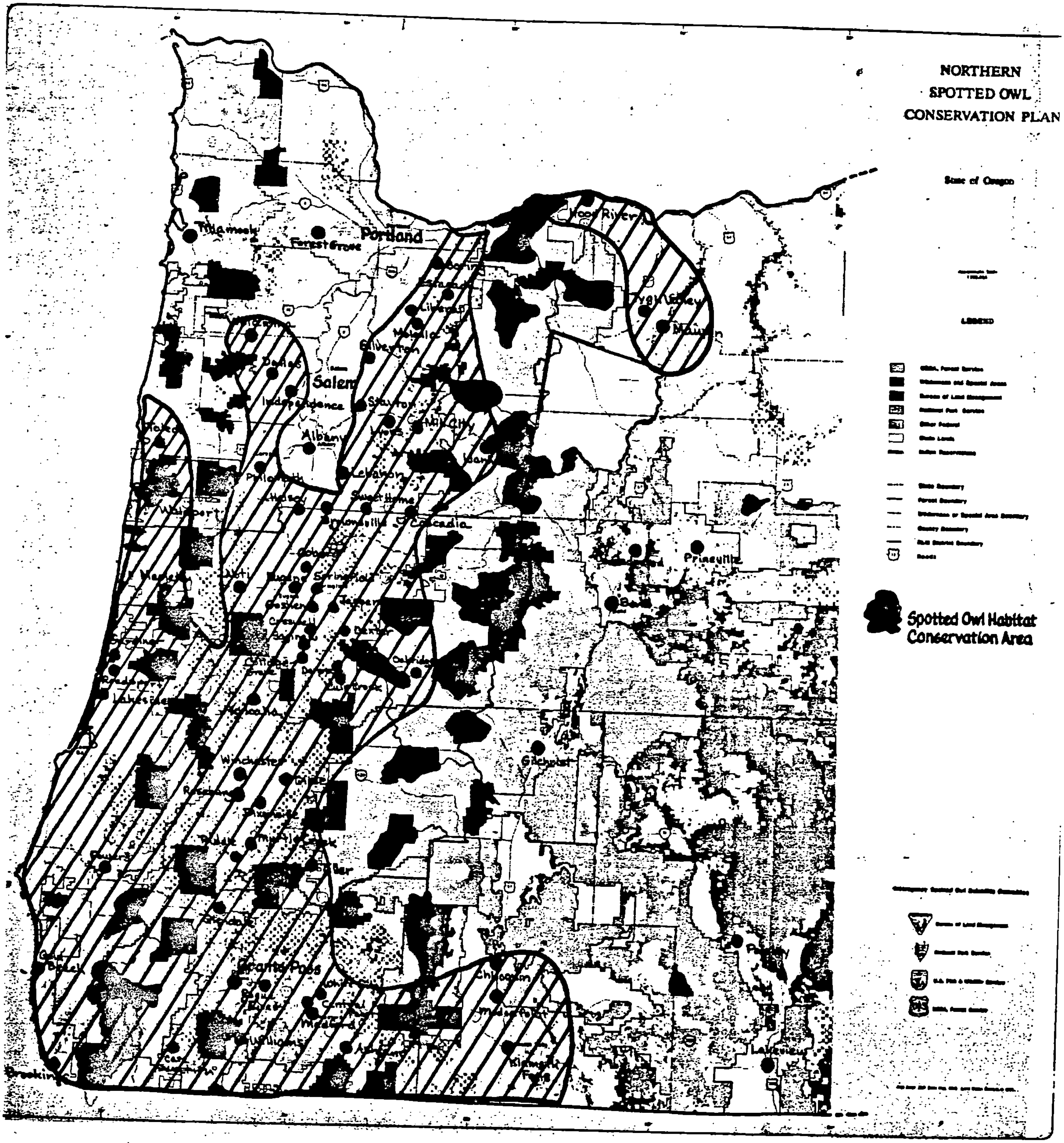
Wack, P. 1985. Scenarios: Uncharted waters Ahead. Harvard Business Review. 63(6):139-150.

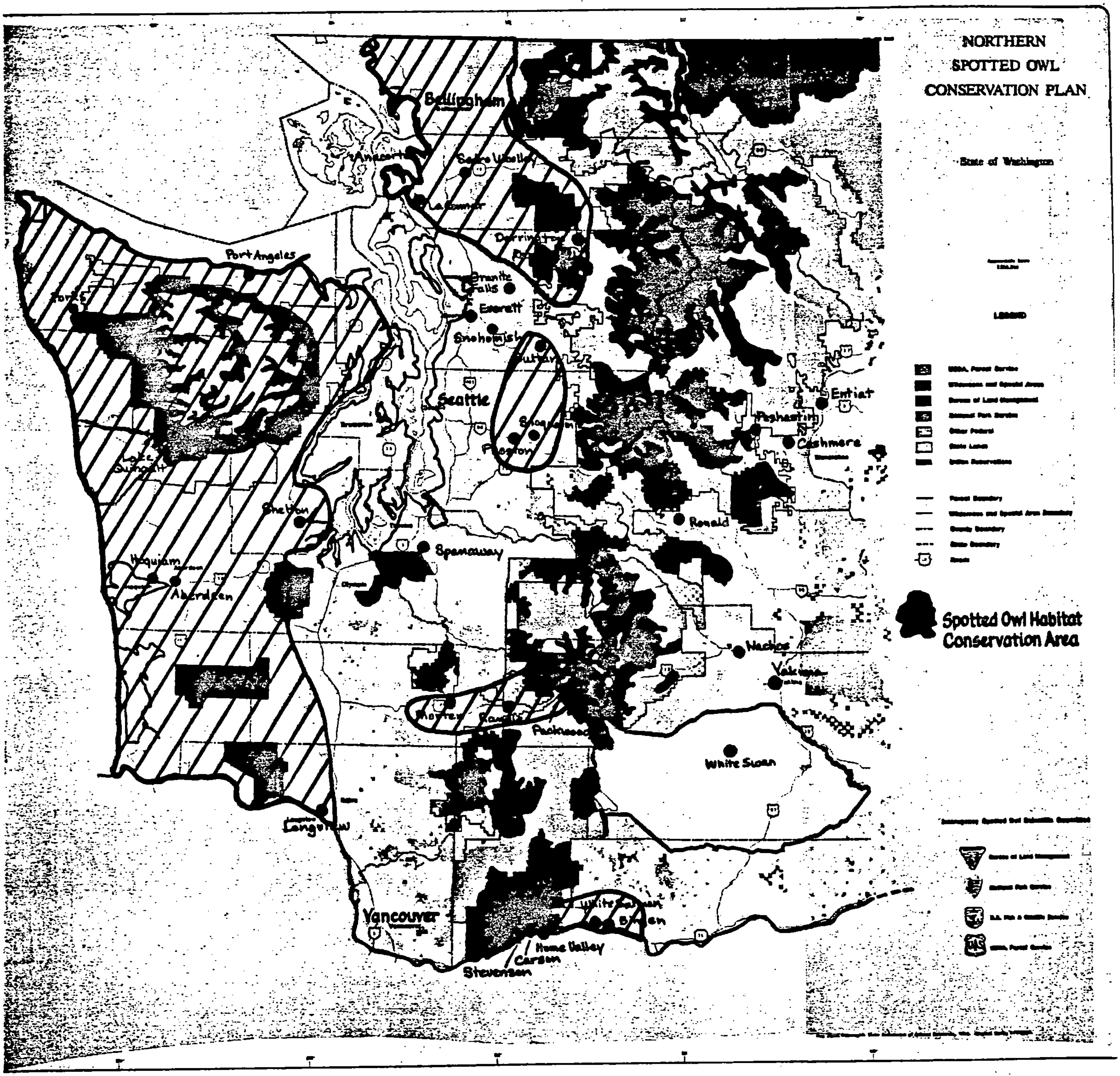
APPENDIX I

This appendix contains three maps. The maps were taken from the Interagency Scientific Committee report "A Conservation Strategy for the Northern Spotted Owl." In that report, the maps displayed land ownership patterns and the distribution of Spotted Owl Habitat Conservation Areas. This information is retained here.

Two additional pieces of information have been added. The cross-hatching shows areas in the three States that may be most vulnerable to social and economic effects resulting from potential reductions in Federal timber supply. The red dots on the maps are those communities where: (1) a large share of employment is in the timber industry, (2) the timber industry is dependent on National Forest and Bureau of Land Management timber for a large share of its log supplies, and (3) other sectors of the economy are not experiencing healthy economic growth. The most vulnerable areas are rural and straddle the Coast and Cascade ranges of Washington, Oregon, and California.


NORTHERN
SPOTTED OWL
CONSERVATION PLAN
State of California
LEGEND
Spotted Owl Habitat
Conservation Area
Happy Camp
Yreka
Weed
Hoopa
Willow
Salyer
Eureka
Weaverville
Douglas City
Burney
Hayfork
Covelo
Adin
Bieber
Little Valley
Susanville
Chester
Greenville
Crescent Mills
Quincy
Sloat
Loyalton
Sattley
Camptonville
Foresthill
Martell
Jackson
Sonora
San Francisco


NORTHERN
SPOTTED OWL
CONSERVATION PLAN
State of Oregon
Spotted Owl Habitat Conservation Area
Portland
Salem
Albany
Independence
Silverton
Lebanon
Sweet Home
Prineville
Grants Pass
Tillamook
Forest Grove
Hood River



NORTHERN
SPOTTED OWL
CONSERVATION PLAN
State of Washington
Spotted Owl Habitat
Conservation Area
Bellingham
Port Angeles
Forks
Lake Quinault
Seattle
Everett
Snohomish
Granite Falls
Darrington
Sultan
Shelton
Hoquiam
Aberdeen
Longview
Spanaway
Vancouver
Stevenson
Carson
Home Valley
Entiat
Cashmere
Peshastin
Ronald
Naches
Yakima
White Swan
Packwood

Washington Post May 12, 1990

Lujan: Endangered Species Act 'Too Tough,' Needs Changes

By John Lancaster
Washington Post Staff Writer

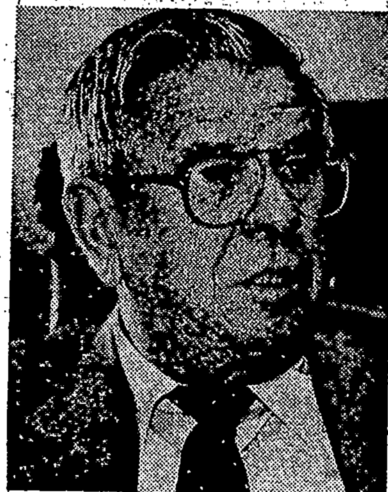
Interior Secretary Manuel Lujan Jr. said in a newspaper interview published yesterday that the nation's primary law protecting endangered animals and plants should be weakened and questioned the need to "save every subspecies."

In an interview in Colorado Thursday with the Denver Post, Lujan expressed concern that the 17-year-old Endangered Species Act is threatening jobs and economic development. He cited the example of a Colorado reservoir project that threatens the endangered Colorado squawfish and suggested in that case he might seek an exemption to the law.

"It's just too tough an act, I think," Lujan was quoted as saying. "We've got to change it."

The remarks by the nation's top conservation official found a sympathetic audience among some conservative western lawmakers and industry representatives, but they touched off a furor among environmentalists and their congressional allies at a time of growing concern over the accelerating loss of species to human activities worldwide.

They also revived criticism, which Lujan's aides have worked hard to dispel, that the former New Mexico congressmen is insensitive to environmental concerns and out of step with President Bush's pledge to be "the environmental president."



SECRETARY MANUEL LUJAN JR.
... cites concerns with recent cases

"I think there would be very little enthusiasm in the Congress" for Lujan's proposal, said Sen. John H. Chafee (R-R.I.), ranking minority leader on the Senate Environment and Public Works Committee. "We have recognized, and we lecture other nations on, the importance of preserving biological diversity. We inherited this world and I don't

See LUJAN, A4, Col. 4

continued

Lujan Calls Endangered Species Act 'Too Tough,' Citing Colorado Project

LUJAN, From A1

think we have the right to lay waste to it before passing it on to our children."

White House spokesman Stephen Hart said Lujan was "representing his personal opinion" and that the administration is not considering a proposal to amend the Endangered Species Act when it is reconsidered by Congress in 1993.

Interior's Fish and Wildlife Service is responsible for enforcing the Endangered Species Act, which thus far has been applied to 1,073 plants, animals and fish, according to a Fish and Wildlife spokesman. The law requires the agency to protect species listed as endangered from any activity that would jeopardize their existence.

Interior officials said Lujan's remarks arose out of frustration with a series of recent cases involving the law, including the planned Animas-La Plata water-storage complex in southwestern Colorado that he announced earlier this week would be delayed indefinitely due to the presence of the squawfish, a member of the minnow family now on the endangered species list.

In the interview, Lujan noted that squawfish exist elsewhere, and suggested that he might consider seeking an exemption to the act if alternatives cannot be found that will allow the project to be built without jeopardizing the fish.

Lujan also expressed concern that protection of the spotted owl in the Pacific Northwest could cost thousands of timber industry jobs, and he cited the case of the endangered Mount Graham red squirrel, which is holding up a planned astrophysical complex atop Mount Graham, Arizona.

"The red squirrel is the best example," Lujan told the newspaper. "Nobody's told me the difference between a red squirrel, a black one or a brown one."

"Do we have to save every subspecies?" Lujan asked. "Do we have to save [an endangered species] in every locality where it exists?"

Lujan made his comments in an interview at Colorado's Mesa Verde National Park, where he is meeting with the private National Park Foundation.

Lujan's spokesman, Steven Goldstein, said Lujan was on a tour of the park and could not be reached for further comment. Goldstein said Lujan does not want to weaken the Endangered Species Act, but would like Congress to consider allowing the department more flexibility under a few special circumstances.

"There's a big difference between changing and weakening," Goldstein said. "It amounts to a clarification" of the law.

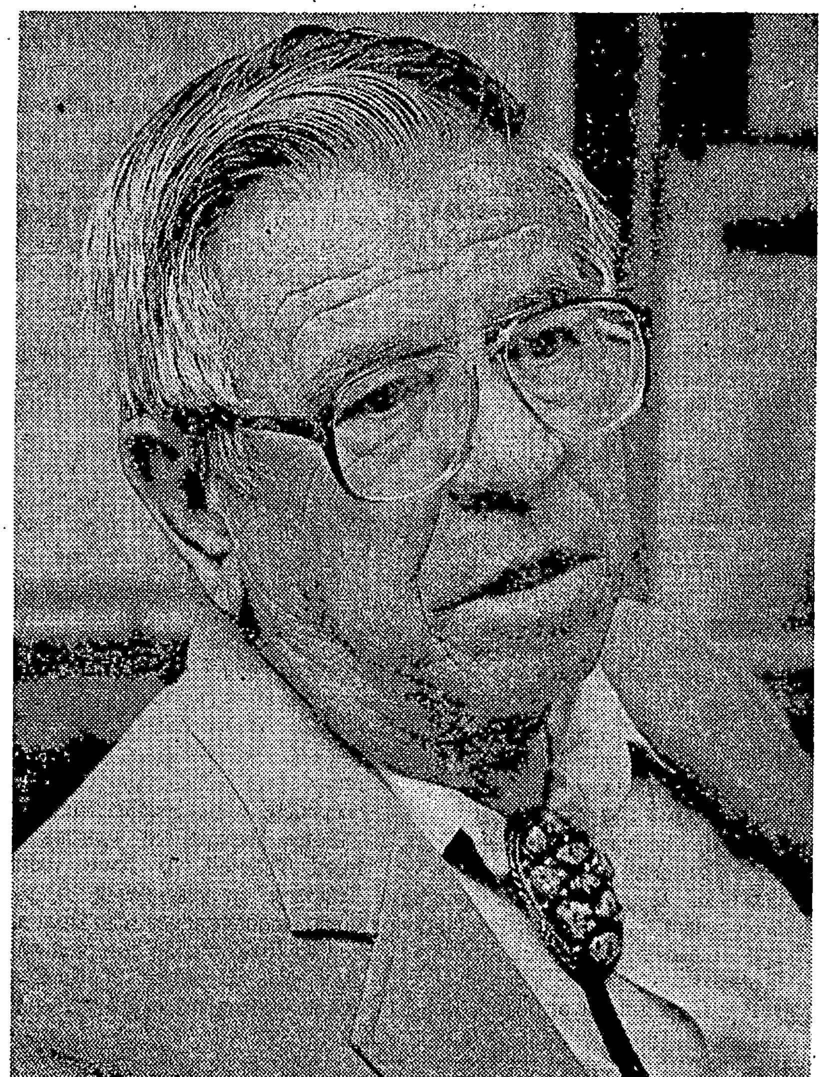
While Congress has yet to signal any groundswell of support for amending the Endangered Species Act, Lujan's remarks struck a sympathetic chord among conservative western lawmakers who share his concern for local economies based on natural resources such as timber.

"When you apply the Endangered Species Act, everything else takes a back seat," said a spokesman for Sen. James A. McClure (R-Idaho). "Economics is a very legitimate and important concern."

Mark Rey, executive director of the American Forest Resource Alliance, a timber industry group, said the controversy over the spotted owl "is an example of the problems you create when you use an endangered species as a surrogate for a broader objective, in this case preservation of forest land."

Citing a Forest Service estimate that 28,000 loggers will lose their jobs if they are prohibited from cutting "old-growth" forests in the Pacific Northwest, Lujan told the Denver paper, "We are caught between two things."

Under the law, he said, "One may only consider biological facts, not economic facts." And once a species is listed, he told the paper, "I am obliged to protect them wherever they exist."



BY CRAIG HERNDON—THE WASHINGTON POST

White House terms Interior Secretary Lujan's remarks his "personal opinion."

New York Times May 12, 1990

Interior Secretary Lujan Questioning Species Act

By WARREN E. LEARY
Special to The New York Times

WASHINGTON, May 11 — Interior Secretary Manuel Lujan Jr. says Congress should consider modifying the Endangered Species Act so that protection of animals and plants is balanced against benefits to society from certain kinds of development.

Mr. Lujan's spokesman, Steven Goldstein, said the Secretary thinks Congress should determine whether the law is being used for its intended purpose, protecting wildlife, or as a tool against development. "It is the Secretary's opinion that the Endangered Species Act should be used as a shield but not as a sword," Mr. Goldstein said.

Mr. Lujan's assessment was originally made in an interview on Thursday with The Denver Post. Mr. Lujan was attending a conference today at Mesa Verde National Park, near Durango, Colo., and not available for interviews to elaborate on his proposal, Mr. Goldstein said.

Environmentalists immediately criticized the remarks, saying that the Secretary was supposed to be the primary protector of wildlife.

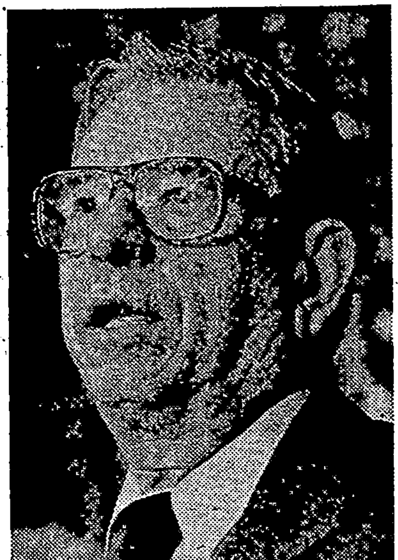
Lack of Commitment Charged

"The Secretary of the Interior seems to be equating the Environmental Species Act, one of the most critical laws on the books, with the law that says you shouldn't remove the tags from your mattress," said Peter Dykstra, a spokesman for Greenpeace. "The fact that the act is unambiguous is the very reason for its success."

The National Wildlife Federation and others said Mr. Lujan's remarks demonstrated that the Bush Administration was not showing leadership on the environment and lacked commitment to endangered wildlife.

In the interview with The Denver Post, Mr. Lujan said he had been frustrated by the use of the law to stop beneficial development projects.

He was quoted as saying that a subspecies of red squirrel was holding up construction of a $200 million telescope on Mount Graham in Arizona and that 16 squawfish had stopped a needed water project in the Southwest.



The New York Times
Interior Secretary Manuel Lujan.

The Endangered Species Act: A shield or a sword?

Misuse of Federal Act Cited

"There are people who make it their life's work protecting endangered species and their motives are laudable and sincere," said Mr. Goldstein. "But there are others who occasionally use the Endangered Species Act to stop economic progress or development because they oppose a particular project, and that's what Mr. Lujan's upset about."

The spokesman said it would be inaccurate to say that Mr. Lujan wants to weaken the law, just because he wants to make it more flexible. For example, Mr. Goldstein said, if an endangered species exists in more than one region, do all habitats need equal protection? Or if there are numerous subspecies of an endangered animal, does each need to be preserved where it is found, or could some be moved?

In The Denver Post interview, Mr. Lujan cited the Mount Graham red squirrel as an example of a subspecies that was blocking construction of an astronomical observatory. He was quoted as saying: "Do we have to save every subspecies? The red squirrel is the best example. Nobody's told me the difference between a red squirrel, a black one or a brown one."

The Secretary was quoted as saying that he was required to enforce the law and would do so, but that the law was "too tough" and should be changed.

Jay D. Hair, president of the National Wildlife Federation, said: "We are incensed that the very Cabinet official whose job it is to be the country's front-line protector of endangered wildlife would make such outrageous statements.

Mr. Hair said fewer than 100 of the Mount Graham red squirrels remain today and Mr. Lujan's comments about them were "insensitive at best."

Faith Campbell, a senior scientist with the Natural Resources Defense Council, said Mr. Lujan's suggestions evoked those of former Interior Secretary James G. Watt.

"Congress and the American public rejected Mr. Watt's efforts to weaken the Endangered Species Act and we expect them to reject Secretary Lujan's proposals as well," she said.

Sydney J. Butler of the Wilderness Society said: "Species and subspecies are being eliminated at a faster rate now than at any time since the disappearance of the dinosaurs. Mr. Lujan has an immense responsibility to save endangered wildlife, and he, more than anyone, should understand the requirements of the law."

New York Times May 13, 1990

2 OREGONS COLLIDE IN GOVERNOR'S RACE

Clash Between Environmental Interests and Old Timber Industry Fuels Contest

By TIMOTHY EGAN

Special to The New York Times

PORTLAND, Ore., May 10 — Ever since Neil Goldschmidt, long considered one of the leading Democratic lights of the West, made his surprise announcement that he would not seek a second term as Governor of Oregon, the list of candidates to succeed him has been as varied as this state's scenery.

But the talk of the governor's race has been about something that will not appear on the primary ballot on Tuesday: the northern spotted owl, a small nocturnal bird whose existence experts say is threatened by logging, the state's leading industry.

Last month, a panel of Federal scientists recommended curtailing logging on Federal lands by about 30 percent to protect the owl. The move could cripple some of Oregon's struggling mill towns and put thousands of loggers out of work.

But in an indication of just how much this growing state has changed in recent years, the proposal to protect the owl was hailed by the state's leading newspapers and is supported by at least half the people of Oregon, some polls show.

How to Reconcile Two Oregons

Trying to reconcile the two Oregons — one dependent on the traditional industry of cutting old trees, the other involving an environmentally concerned, mostly urban population — is the toughest task facing the next governor.

The leading contenders are Barbara Roberts, a Democrat who is Secretary of State and who is running unopposed in the primary, and David Frohnmayer, the State Attorney General, who is well ahead of six little-known rivals in the Republican primary.

The 49-year-old Mr. Goldschmidt has been a dominant force in Oregon politics for 20 years; he was Mayor of Portland at the age of 33 and Secretary of Transportation under President Jimmy Carter at 39. Even his closest advisers had expected him to seek re-election, and the state was shocked when he announced in February that he would not seek a second term, explaining that his marriage was breaking up and that he wanted to devote time to his personal life.

During Mr. Goldschmidt's time in office, Oregon has emerged from a long recession associated with the timber industry and has further developed other segments of its economy through international trade, tourism, agriculture and hundreds of new businesses, most of them high-tech. The state has also become a haven for people who have fled the urban woes of California for cities in the Northwest.

Significant Changes

Oregon, Washington and Idaho were among the nation's top five states in job growth over the last two years. As the population has increased to slightly less than 3 million from 2.6 million in the past five years, the political makeup has also changed.

"Californians aren't moving here because they want to cut down trees," said Paddy McGuire, executive director of the state's Democratic Party. "They're moving here because they want to live by them."

The 49-year-old Mr. Frohnmayer, whose brother John is chairman of the National Endowment for the Arts, had announced plans to run for governor before Mr. Goldschmidt bowed out.

A Harvard graduate, Rhodes scholar at Oxford and former law professor at the University of Oregon, Mr. Frohnmayer calls himself "a Republican moderate who defies ideological labels." A father of five, born in Medford, he has attracted criticism from the right wing of his party in Oregon by supporting abortion rights.

He says the spotted owl recommendation, if carried out, would be "catastrophic" for Oregon. When he proposed further study of the issue, Ms. Roberts responded, "The patient is bleeding to death and Dave wants to get a second opinion."

'Restore One Oregon'

Although one-sixth of Mr. Frohnmayer's recent campaign contributions came from the timber industry, he says he wants to be a bridge between environmentalists and loggers. In recent polls, he leads all other candidates by a gap of about 12 points.

"I want to restore one Oregon," he said.

Ms. Roberts, who is 53, is a fourth-generation Oregonian, known as an energetic and feisty campaigner. Mr. Frohnmayer plans to spend about $3 million on the race and may have twice as much money as Ms. Roberts, but she says her energy will carry her to the Governor's mansion.

She has accused Mr. Frohnmayer of pandering to fears about losing logging jobs. Referring to a recent loggers' rally in Portland, where spotted owls were hung in effigy and fights broke out between timber workers and environmentalists, Ms. Roberts said: "How is Dave Frohnmayer supposed to be a bridge when he took part in the biggest environmental-bashing rally I've seen in years? They worked those poor timber workers into a froth."

She said the solution to the timber crunch was to get the mill towns to do more, like making furniture and finished wood products with the state's timber.

"I'm not talking about putting timber workers on welfare, but we have to face reality," she said. "This is the fastest-growing region in the country. There will be good, family-wage jobs from construction, building sewers and other things if we diversify."