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Assessment of the BLM Exemption Request for Sales Ruled to Jeopardize the Northern Spotted Owl

Including a statement of conclusions by Tom Walsh, Oregon
Representative on the Endangered Species Committee

Brian J. Greber

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Assessment of the BLM
exemption request for sales

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The Author

Brian J. Greber is Associate Professor, Departments of Forest Resources and Forest Products, College of Forestry, Oregon State University (OSU), Corvallis.

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Acknowledgements

The contributions of Ann Hanus of the Oregon Department of Forestry, Charles Bruce of the Oregon Department of Fish and Wildlife, and K. Norman Johnson of the College of Forestry at Oregon State University were of paramount importance in preparing this report. Although their advice never took the form of formal reports, their inputs to Tom Walsh also were substantial. Ann's efforts to coordinate the numerous activities surrounding the process are especially appreciated.

Thanks are also extended to Jon Goldstein of the U.S. Department of the Interior, who prepared much of the economic analysis in the summary of the hearing record by the Secretary of the Interior.

I appreciate Tom Walsh's confidence in me, not only in asking me to assist him, but also in giving me an unimpeded course to say, write, and do what I felt was appropriate.

Despite the contributions from others, the technical accuracy of the information and its interpretation remain the responsibility of the author.

Preface

In September of 1991, the Bureau of Land Management asked the Secretary of the Interior to convene the Endangered Species Committee (popularly referred to as the "God Squad"). The purpose of this historic request was to obtain an "exemption" from harvest restrictions on 44 timber sales in Oregon that the U.S. Fish and Wildlife Service had ruled would jeopardize the continued existence of the northern spotted owl.

The Secretary determined that the request was consistent with provisions in the Endangered Species Act and convened the Committee. In accord with the Act, the committee was composed of the Secretary of the Interior, the Secretary of Agriculture, the Secretary of the Army, the Administrator of the Environmental Protection Agency, the Head of the National Oceanic and Atmospheric Administration, the Chairman of the Council of Economic Advisers, and a representative from the impacted state (Oregon).

Tom Walsh was nominated as the state representative by Governor Barbara Roberts of Oregon and was appointed by President George Bush. Walsh requested that George Brown, Dean of the College of Forestry at Oregon State University, allow professors K. Norman Johnson and Brian Greber to serve as advisers during the committee process. They served in this capacity along with Ann Hanus,

Assistant State Forester, and Charles Bruce, wildlife biologist with the Oregon Department of Fish and Wildlife.

The Committee convened on May 14, 1992. In preparation for the Committee meeting, Greber prepared a report that summarized much of the information deemed important to the Committee decision. The report was meant to supplement the staff reports done by the Department of Interior and to synthesize the information in the manner most consistent with pertinent decision criteria in the Act.

Greber's report is reproduced here to provide a historic record of some of the information that was used by Walsh in his deliberations and to serve as a potential template for future Endangered Species Committee analyses. Walsh's summary and conclusions are also reproduced in an appendix. This appendix is provided to show the manner in which he interpreted the information in the report.

The contents of the report were restricted by law to analysis, summary, and interpretation of the information in evidentiary hearings in January 1992. In addition, the nature of the proceedings precluded external review and comment. This report therefore has not undergone formal peer review or extensive editing. Typographical errors, however, have been eliminated since distribution of the original report.

Abbreviations and Terms Used in Text and Tables

Term	Explanation
BLM	Bureau of Land Management
CBWR	Refers to lands granted for construction of the Coos Bay Wagon Road and subsequently reconveyed to the U.S. government
critical habitat	Specific areas within the geographical area occupied by a threatened or endangered species at the time of listing on which are found those physical or biological features essential to conservation of the species and which may require special management considerations or protection, and areas outside the geographical area occupied by the species that are essential for the conservation of the species
discount rate	Alternative rate of return that could be earned on other investments; used for computing the present-day cash equivalents (i.e., present value) of various investments
50-11-40 rule	This rule states: "For every quarter township, timber harvest shall be permitted only when 50 percent of the forest landscape consists of forest stands with a mean (diameter breast height) of 11 inches and a canopy closure of 40 percent...Where the quarter township contains multiple ownerships, the percentage is computed separately for each owner..." (Thomas <i>et al.</i> 1990)
FWS, USFWS	U.S. Fish and Wildlife Service
FY	Fiscal year
HCA	Northern spotted owl habitat conservation area proposed by the ISC
I-5	Interstate Highway 5
ISC	Interagency Scientific Committee
jeopardy	Refers to the determination by USFWS that an action will threaten the continued existence of a threatened or endangered species or result in destruction or adverse modification of its critical habitat
log-scale	
long-log	Refers to the system of measuring timber where processed logs are assumed to be 32 feet in length; application of the Scribner Decimal-C approximation method is implicit
short-log	Refers to the system of measuring timber where processed logs are assumed to be 16 feet in length; application of the Scribner Decimal-C approximation method is implicit
MBF	Thousand board feet
MMBF	Million board feet
O&C	Refers to lands granted to Oregon and California Railroad Company and subsequently revested to the U.S. government
"safety net"	For FY91, Congress guaranteed the O&C counties 90 percent of average revenues received in FY88-FY90, and for FY92, 90 percent of revenues received in FY86-FY91
take	Refers to the potential for an action to harass, harm, or kill a threatened or endangered species; the action can involve either direct harm to the species or indirect harm through modification of habitat

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Introduction

Reaching a decision in the Bureau of Land Management (BLM) exemption request requires that a systematic assessment be conducted of the Endangered Species Act exemption guidelines and the facts presented within the evidentiary hearings and the supporting exhibits. The purpose of this report is to serve as background to assist Tom Walsh (member, Endangered Species Committee) in his deliberations. The purpose of this report is not to recommend a position to Mr. Walsh, and the report intentionally avoids conclusions regarding the request itself.

This report is based upon the facts in the evidence, and some of the analyses in the Secretary of the Interior's report (1992) on the request. This report is intended to supplement the Secretary's report and the hearing evidence. At times, interpretations and caveats have been introduced by the author. Such extensions are solely the responsibility of the author.

The objective is to distill much of the discussion down to the most critical in terms of the decision before the committee. In that the committee's charge is narrowly defined to 4 exemption criteria and 44 specific timber sales, the scope of this report is limited to factors related to these criteria and sales.

Background on the Exemption Request

When the 1991 BLM sales plans were submitted to the U.S. Fish and Wildlife Service (USFWS), 52 sales were ruled to constitute jeopardy to the northern spotted owl because of impact on habitat. The BLM applied for exemption of 44 sales on the basis that they were crucial sales in order to achieve its mandate under the O&C Act—a mandate that the BLM states is to (a) provide at least 500 MMBF of timber sales per year and (b) provide an annual sales offering of the annual sustained yield capacity.

The 44 sales were ruled as jeopardy based upon violation of the 50-11-40 rule, "take" of habitat, or both. The breakdown of these sales appears in Appendix A. Although the rationale for these decisions could be discussed in much more detail, it is not required, as the jeopardy call itself is not at issue.

In order to convene the Endangered Species Committee, the BLM had to demonstrate to the Secretary that it had achieved three thresholds:

- (a) carried out consultation responsibilities in good faith and made, as the Act states, a "reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action,"
- (b) conducted necessary biological assessments, and
- (c) not made any irreversible or irretrievable commitment of resources.

The Secretary ruled that these thresholds had been met and forwarded the process to the Committee.

Review of Exemption Criteria in the Endangered Species Act

Exemption may be granted for the agency action if the Committee deems, on the basis of the Secretary's report, the hearing record, and other testimony or evidence that it may receive, that four threshold criteria have been reached. The Act states these criteria as:

- 1. There are no **reasonable or prudent alternatives** to the agency action.
- 2. The benefits of such action clearly outweigh the benefits of **alternative courses of action** consistent with conserving the species or its habitat, and such action is in the public interest.
- 3. The action is of **regional or national significance**.
- 4. The agency has not made any irreversible or irretrievable **commitment of resources**.

For exemption to be granted, it would appear that one would have to answer "yes" to all four of the criteria. Furthermore, the Federal Register notice of 11/13/91 noted that "the Bureau of Land Management has the burden of going forward with the evidence concerning the criteria for exemption."

Commitment of resources (criterion 4) appears moot, in that the sites have not been modified since the U.S. Fish and Wildlife's jeopardy ruling, and the sales have not been transacted. This leaves the Committee with three fundamental judgments.

Reasonable and prudent alternatives (criterion 1) has been interpreted to refer to alternatives within "the jurisdiction and authority of the action agency," i.e., BLM (quotations from Federal Register notice of 11/13/91). In addition, reasonable and prudent alternatives have been interpreted in this Register notice as those "that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the [BLM]'s legal authority and jurisdiction, that are economically and technologically feasible, and that the Director of the Fish and Wildlife Service believes would avoid the likelihood of [jeopardy]." From BLM hearing documents, it must be concluded that the intended purpose of the BLM was to attempt to be as close as possible to the 750 MMBF sales target in FY91 and FY92, in order to fulfill its interpretation of the O&C mandate. Implicit is the argument that these harvests will lead to some level of community stability.

Reasonable and prudent alternatives appear to be based on biological and managerial issues, i.e., is there some other management action that the agency could undertake to get some or most of its intended volume, without a jeopardy call?

Alternative courses of action (criterion 2) has been broadly interpreted to mean any possible alternative action, including those outside the agency's jurisdiction, e.g., U.S. Forest Service alternatives, private forest regulations, or foreign trade policies. As stated in the Federal Register (11/13/91), these alternatives "need not be limited to the objectives of the proposed project or the [BLM]'s jurisdiction."

Addressing alternative courses of action actually entails two components: (a) identifying potential alternative courses of action and (b) comprehensive benefit cost analyses that address market and nonmarket benefits and costs.

Regional and national significance (criterion 3) sounds deceptively simple. Significance can be interpreted to have traditional economic ramifications, or it may take on more sociological aspects that lie outside the traditional economic realm. The difficulty with this criterion is that it is highly influenced by scope, both geographic and temporal. In addition, there is no yardstick for establishing what level of impacts is "significant."

Alternative courses of action and regional and national significance should be closely linked, as the alternatives addressed logically must deal

with the issues of concern under regional and national significance.

If the four criteria are met and the Committee grants exemption, then mitigation and enhancement measures may be recommended to increase the probability of species conservation.

Summary of Information Needed

Based on the preceding discussion, there appear to be four major categories of information needed in order for the committee to make a decision:

- (a) identification of "reasonable and prudent alternatives" that may allow the BLM to achieve its intended purpose of the harvests without resulting in a jeopardy call for the owl.
- (b) identification of public policy alternatives—these include no-harvest options and other public policies with benefits potentially exceeding the benefits of exempting the timber sales.
- (c) comprehensive benefit-cost analyses of the exemption sales and alternative courses of action.
- (d) an assessment of the national and regional significance of the exemption sales.

Again, the Federal Register (11/13/91) notes that the burden lies with the Bureau of Land Management to provide this information.

Defining Regions for Economic Analysis

No one issue is apt to be more contentious than the delineation of regions. The Act requires that, for exemption to be considered, the actions of the agency (in this case, the BLM) must be of regional or national significance. The magnitudes of impacts can be greatly altered by the regional delineation, as well as by the manner in which impacts are stated. A basic guideline of economic impact analysis is—the larger the economic region, the larger the absolute impacts and the smaller the relative (percentage) impacts. This highlights that the regional delineation must be defined appropriately for the policy purpose for which it is being cast and that all numbers should be presented in both an absolute and a relative sense.

The logical geographic boundary for these analyses starts from the businesses that are apt to be displaced. Then, radiating out from these business centers, the geographic area should cover the towns comprising the business and retail service centers that are most tied to the activities of these impacted businesses. It should be recognized that economic data availability often forces the use of county boundaries—unfortunately, these do not always coincide well with economic boundaries.

Western Oregon, as a whole, captures the majority of ripple effects in the economy of Oregon. Recent studies of Oregon's timber communities and timber supply used county groupings and suggested them as the best representations of local economies (Figure 1, from Greber *et al.* 1990). For the purposes of evaluating the exemption sales it is useful to define the county groupings as Coos/Curry, Jackson/Josephine, Douglas, and Linn/Lane and to combine all other western Oregon counties.

The Jackson/Josephine grouping comprises the Medford and Grants Pass economic influence centers. Douglas County reflects the isolated nature of Roseburg in the middle of Douglas County. The

Linn/Lane grouping contains the Albany-Eugene I-5 corridor. The Coos/Curry grouping is an isolated, unique coastal economy. The remaining counties' statistics are dominated by the metropolitan influences of Portland and Salem.

This breakdown is used for three reasons. First, historic log flows indicate that timber harvested within these county groupings is primarily used within the mills in these counties. With the exception of Douglas County, over 80 percent of logs harvested within the groupings stayed in the originating grouping for processing; Douglas historically averaged about 70 percent (Sessions *et al.* 1990). Second, displaced workers within the principal towns in these county groupings would likely relocate, rather than attempt to commute to another area, if they could not find work in their hometown. Third, the groupings tend to have a well-identified retail and service "hub" that serves many of the needs of local businesses and consumers.

Weaknesses in this breakdown include the inclusion of coastal Lane and Douglas counties within the influence of the inland areas and the fact that no economy is truly "closed."

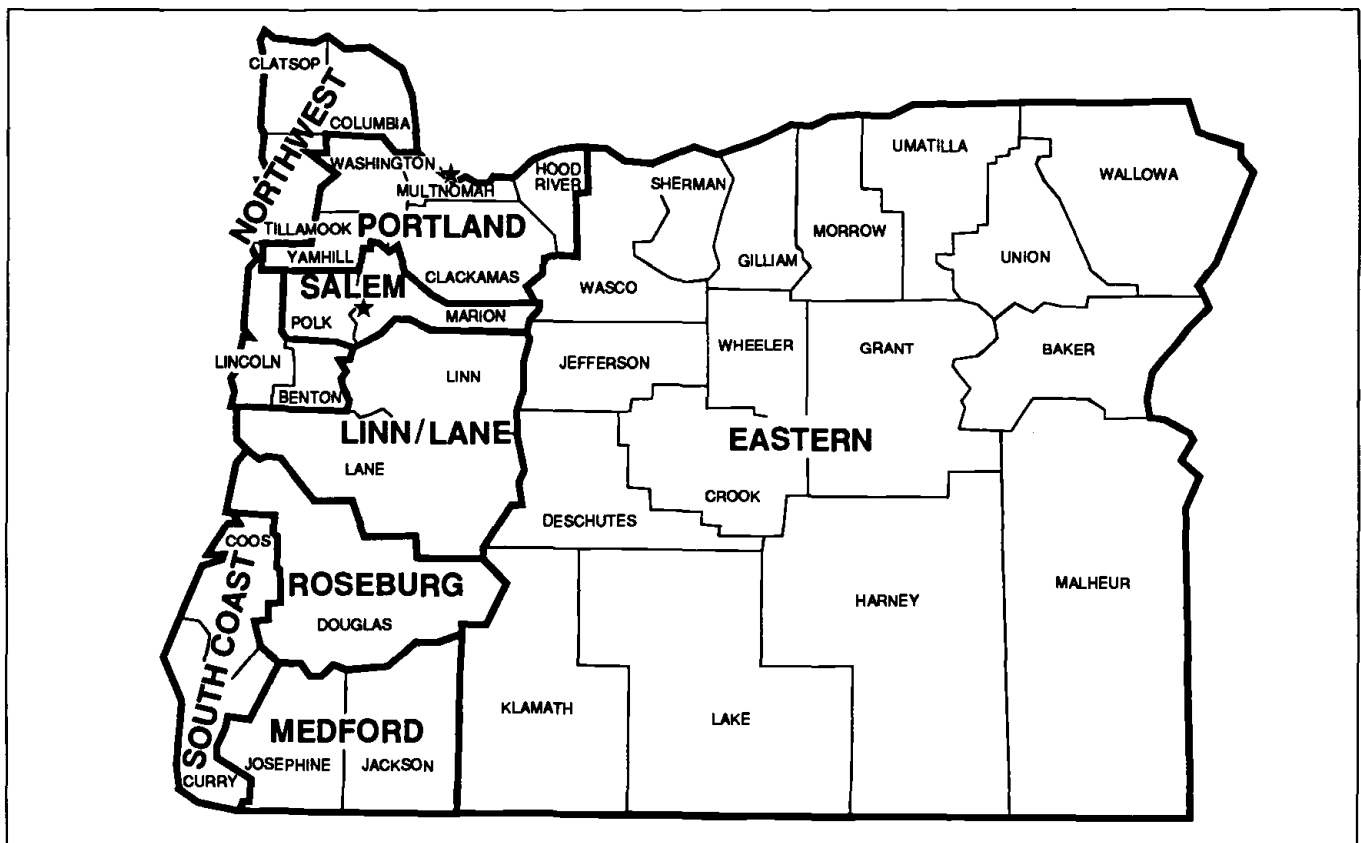


Figure 1. County groupings for economic analysts.

Background on Bureau of Land Management Harvests

The BLM states (in its summary brief, 1992) that the 1937 O&C Act provides it with a mandate to (a) provide at least 500 MMBF of timber sales per year and (b) provide an annual sales offering of the annual sustained-yield capacity. The most recent plans (1983) established this level at approximately 1,183 MMBF. The BLM then modified the cut down to 1,176 MMBF because of land withdrawals in 1984 and 1986. Planners, in fact, reduced scheduled harvests down to 950 MMBF for sale in FY91. (It is presumed that this was scheduled, as it is consistent with the 1989 and 1990 volumes prescribed in the 1989 Interior Appropriation Bill's "Section 318").

Upon release of the ISC report in early 1990, the BLM state director instructed the agency to not harvest in HCA's. This resulted in a removal of 200 MMBF from sales in HCA's. This resulted in a new harvest target level of 750 MMBF—a level adopted for FY91 and FY92. The BLM summary brief states that "The interim allowable harvest levels are sustainable for the next two years" and would maintain adequate flexibility to adopt a long-term owl management plan. The BLM contends that offering 750 MMBF in FY91 and FY92 is necessary to fulfill its mandate under the O&C Act and that these 44 sales are required to strive for the 750 MMBF sales level. In addition, the agency indicates that it could not even achieve the 500 MMBF level if the ISC strategy were to be adopted (it estimates 400-500 MMBF would be forthcoming).

In summary, between 1983 and 1990, the BLM changed harvest targets downwards several times: 1,183 MMBF to 1,176 MMBF to 950 MMBF to 750 MMBF.

In FY91, the BLM was targeting harvests in western Oregon of approximately 735 MMBF (see Table 1). Planners actually proposed sales totaling approximately 710 MMBF. Of this volume, 456 MMBF were approved by USFWS, 35 MMBF ruled in jeopardy sales that were not contested, and 219 MMBF ruled in jeopardy sales for which exemption has been requested. The highest proportion of sales ruled to constitute jeopardy occurred in the Douglas and Coos/Curry areas.

In FY92, the BLM was again targeting harvests of almost 735 MMBF, yet only 582 MMBF were brought forward by planners (Table 2). Of this

volume, 412 MMBF were approved and 170 MMBF were ruled to be in sales that constitute jeopardy calls. Note that 97 MMBF of the approved sales volume are in areas that have been included in the USFWS-designated northern spotted owl critical habitat—these acres apparently may require further consultation. The FY92 sales volume may therefore be less than the 412 MMBF referenced above. Further consultation with the USFWS may have the largest impact on Douglas County sales programs.

The future beyond FY92 is cloudy. The 1983 plans called for harvest of approximately 1168 MMBF (Table 3). Assessments of the impacts of the ISC strategy on BLM harvests indicate a reduction to 440 MMBF of sales per year. It has been suggested that the harvests could be as high as 607 MMBF if the 50-11-40 rule were not adopted by the BLM.

It is evident that, regardless of the course of action in FY91, FY92, and beyond, BLM harvests will be lower than historic levels (Table 4). BLM lands, however, are not the only source of timber in the region. Given National Forest adoption of the ISC, harvests in western Oregon on national forest, state, county, and private lands are apt to range from 5309 MMBF to 6081 MMBF (Table 5). The lower bound reflects private owners harvesting at their sustainable levels, and the upper bound implies a significant market response to all public timber withdrawals. Thus the jeopardy sales in the exemption request amount to roughly 3.5 percent of potential western Oregon harvests ("potential" includes the BLM's approved sales of 456 MMBF with the other harvests of 5309 to 6080 MMBF). In the Coos/Curry area this reaches 6 percent to 9 percent, and, in Douglas County, 11 percent to 13 percent.

Background on the Economy of Western Oregon

In 1991, there were 51.2 thousand employees in western Oregon timber industries (Table 6). This represents 27.7 percent of the manufacturing employment and 4.7 percent of the total employment (Table 7). Generally, it has been contended that there are one to two other jobs in the region supported per timber job through the "indirect" (business spending) and "induced" (worker spending) ripple effects through the economy.

The Coos/Curry and Douglas areas could be contended to be highly timber dependent: Coos/Curry with 12 percent of total employment and 70 percent of manufacturing employment in timber industries, and Douglas with 24 percent of total employment and 87 percent of manufacturing employment in timber industries.

Western Oregon unemployment stood at 5.65 percent in 1991 (U.S. unemployment stood at 6.7 percent). This varied greatly by area within western Oregon and was held down by the lower unemployment levels of the northern metropolitan communities. In the areas where the 44 sales are located, the unemployment levels were quite high—reaching 10 percent or more in the Coos/Curry and Douglas regions.

County governments in western Oregon can be highly dependent on timber receipts. Throughout western Oregon, BLM receipts accounted for approximately 8.7 percent of the budgets of county governments in 1988-89 (Table 8). The southern Oregon areas in 1988-89 were highly dependent, with Coos/Curry at 26 percent, Douglas at 30 percent, and Jackson/Josephine at 33 percent.

Assessment of Reasonable and Prudent Alternatives

Alternatives that have been addressed in testimony include:

- delay sales of the tracts,
- harvest only the portion of the tracts that would not violate the 50-11-40 rule,
- substitute some of FY92 sales,
- accelerate the future sales program (i.e., beyond 1992), and
- use harvesting techniques other than clear-cutting.

In various forms, the BLM countered these as not being "reasonable or prudent." Alternatives that involved moving planned sales through time were countered as not being consistent with the BLM's intended purpose (implicitly stated as sustainable harvests and community stability). Alternative silviculture was challenged on economic and technological grounds.

In addressing reasonable and prudent alternatives, it should be recognized that the harvest

targets for FY91 and FY92 appear somewhat arbitrary—they are not based upon long-term harvest scheduling considerations, nor are they derived from some estimate of the stability needs of the local communities, nor are they legislatively mandated. The BLM should soon have new estimates of sustained yields, as it is currently in the process of updating its 10-year plans to recompute its annual sustained yield capacity.

The approved sales in FY92 are less than those in FY91 (412 MMBF versus 456 MMBF, Tables 1 and 2). In that the target volumes by the agency are equivalent in these years, it would be difficult to argue for an exemption in one year without the other following suit. Also note that these volumes roughly equal the 440 MMBF that has been estimated to be likely if the BLM were to adopt the ISC (Table 3).

Every county grouping, except Douglas, could have the volume being considered for exemption substituted for with FY92 sales, e.g., Coos/Curry exemption volume equals 39 MMBF and the approved sales in FY92 total 64 MMBF (Tables 1 and 2). Douglas County, however, comes up 6 MMBF short.

Note that if 219 MMBF were pulled from FY92 to FY91, then the sales remaining in FY92 would only total 194 MMBF (Tables 1 and 2). This volume would be 541 MMBF less than the target volume, 450 MMBF less than the FY91 sales, and 388 MMBF less than the proposed FY92 sales. Depending upon the reference volume used, the BLM would then need to pull from 388 to 541 MMBF forward from FY93. This is roughly equal to or greater than the volume that the USFWS has approved in FY91 and FY92. If sales were pulled forward in each county grouping, then Douglas County (the most economically distressed area) would have its entire FY92 sales program transferred to FY91.

It would appear that the list of reasonable and prudent alternatives included in the testimony is not exhaustive. For example, potentials were not discussed for reassessing the ODFW agreement areas for protecting the northern spotted owl (which were established prior to the owl being listed as threatened at the federal level).

Identification of Alternative Courses of Action

Conceivably, the list of policy alternatives outside the jurisdiction of the agency is unbounded.

Those that have received the most attention, however, are the following:

- do not harvest the stands,
- permanently reduce the assessed allowable sales quantity (ASQ),
- limit log exports,
- encourage increased private harvests,
- modify other federal management plans (i.e., Forest Service),
- promote other types of economic opportunities or training for impacted workers and communities, and
- encourage the use of substitute building materials.

The desirability of many of these policies hinges on philosophical views regarding international trade policy and domestic materials policies. Within the large realm of international trade policy, trade restrictions were not rigorously assessed in the record. The alternatives dealing with raw material policies do not directly assist the regional issues that are apt to be of concern. Harvest reductions are contended by BLM to be in violation of its O&C mandate. Modification of other federal management for increased timber production does not appear viable in light of the already declining harvest levels on the national forests, brought about by changing management emphases and spotted owl management activities.

Some private harvest increases might be expected throughout the nation—this response is addressed in the benefit cost assessment. Economic programs for workers might also help, but the record was scant on details of these programs.

Some other alternative courses of action do, however, appear to be possible for western and southwestern Oregon. As indicated in the BLM's final brief, the agency appears mandated under the O&C Act to harvest at either 500 MMBF or at its annual sustained yield capacity. In light of current land-management planning concerns, an alternative appears to be for the agency to operate under a 500 MMBF target in the interim while long-term plans are drafted. It must be cautioned, however, that it is uncertain how this O&C mandate may interface with the Endangered Species Act.

Also, from Lane County south, there are over 370 thousand acres of low-stocked private lands

(many originating from before the passage of the Oregon Forest Practices Act) that could be rehabilitated (Table 9). These areas represent about 12 percent of private lands in southern Oregon and offer the potential for generating jobs for the present and timber for the future (Greber *et al.* 1990)

In terms of maintaining adequate funds to local governments, a potential alternative is continuation of some form of a Congressional safety net for county revenues. Such a program could assist in retaining important county services.

Regional Economic Concerns

Introduction

There are many issues of concern to the communities that could be impacted by the sales in the exemption request. These issues include the effects on employment, income, and local government finances, as well as the social well-being implicit in all of these items.

Employment

The Secretary's report adopted employment multipliers from the testimony, which in turn were adopted from Sessions *et al.* (1990) and Greber *et al.* (1990). Actually, these two studies portray a range of multipliers that vary with the magnitude of the harvest impact and the overall health of the economy. The multipliers used in the Secretary's report were 5.7 timber jobs per MMBF (long-log scale) and 7.8 other economy-wide jobs per MMBF (long-log scale), for a total of 13.5 jobs per MMBF. It was noted in the Johnson *et al.* (1991) report that the range of this multiplier is 10.7-13.6 jobs per MMBF—thus, this figure is at the high end of the range. However, the Johnson *et al.* report also noted that these "other job" multipliers could be approximately 10 percent conservative because of omission of proprietors. Thus, the use of 13.5 jobs per MMBF appears reasonable. Before the multipliers are used, however, the timber volume must be converted from "short log scale" to "long log scale" by a factor of about 0.82.

It also should be noted that these multipliers are economy-wide multipliers for Oregon, and it would not be entirely appropriate to apply them to smaller

sub-regions in the state. In that the majority of the economic activity is in western Oregon, they are likely appropriate for use in western Oregon as a whole. Disaggregation of the impacts to sub-regions is, however, much more difficult.

Throughout western Oregon, the jobs supported by the 219 MMBF in these exemption sales would be roughly 1023 timber industry jobs and 1399 jobs in other sectors of the economy through indirect and induced effects (Table 6). Note that these are "man-years" of labor and the impacts need not all take place in 1 year if the harvests are spread over several years. The Secretary's report suggests that the impacts may be distributed over 3 years, with a maximum of 60 percent of these impacts realized in any 1 year. It is difficult to speculate whether this historic harvest distribution through contract periods would be appropriate given current timber shortages; thus, it remains useful to look at the impacts in a 1-year sense.

As the Secretary's report notes, the job impacts should be regarded as displacing (or hiring) one worker for 1 year, regardless of how it is assumed that the displacement (or hiring) is spread through time. The 219 MMBF in question thus cannot be viewed as supporting these job totals indefinitely.

Throughout western Oregon, these exemption sales impacts represent 2 percent of the timber industry jobs and 0.22 percent of the economy-wide jobs (Table 7). It is also useful to look at these jobs as percent of unemployed—as one could view these sales as having the potential to re-employ the unemployed, or failure to execute these sales as having the potential to add to the ranks of the unemployed. Throughout western Oregon these jobs represent 3.2 percent of the unemployed in 1991. If one views these as additions to the unemployed, then the unemployment rate would rise from 5.65 percent to 5.83 percent; through rehiring, these would lower the unemployment rate to 5.47 percent (the difference being 3.2 percent of 5.65 percent, from Tables 6 and 7).

The job impacts in the county groupings are dependent upon how one spreads the indirect and induced impacts through the communities. Table 6 shows a range of impacts generated by (a) distributing the ripple effects by the proportion of sectoral employment in each county grouping and (b) using the region-wide impact multiplier within the county groupings.

From Table 6 and Table 7, it is evident that Douglas County is the most impacted. Of the 1023 timber jobs, 584 are estimated to be in Douglas County. This represents over 7.5 percent of the timber employment in the county. Depending upon how one distributes the ripple effects, total job losses could range from 767 to 1382 (2.4 percent to 4.3 percent of the total). In terms of potential implications for county unemployment, the jobs supported by these sales represent 17 percent to 30.7 percent of the current number of people unemployed in Douglas County.

While the Coos/Curry grouping is not as dramatically impacted as Douglas County in absolute numbers of jobs, it is still evident that disruptions in percentage terms are fairly large.

Income

There are several components to income impacts. First is the lost income while an individual is out of work. Second is the potential for re-employment at a lower wage. Third is the potential impact of changes in unemployment on region-wide (or sub-regional) wages and salaries.

This analysis will focus upon the lost income while an individual is out of work. On one hand, this approach underestimates the income effect, but, on the other hand, this approach ignores unemployment benefits. Given annual forest industry wages of \$29,800 per timber industry employee and \$19,000 per other employee (Greber *et al.* 1990, adjusted for inflation to 1991), then the income effect of these sales is roughly \$57,600,000. This income is out of total state wage and salary income of about \$28,800,000,000 in 1991 and is a total impact, as opposed to an annual impact.

Disaggregation of the income impacts to geographic areas is difficult to determine because of a lack of county-level income data. In percentage terms, however, the impacts are apt to mirror those for employment.

County Revenue

The revenue-sharing distributions to county governments would total roughly \$31 million (Table 8). These dollars represent approximately 4 percent of county budgets in western Oregon.

Because of the distribution formula, the Jackson/Josephine grouping would actually shoulder the greatest impact, with budget impacts of \$8.8 million (roughly 15 percent of historic budgets). Douglas would be impacted by some \$7.9 million (14 percent), and Coos/Curry, \$3.2 million (roughly 12 percent).

Of some uncertainty is whether or not these levels of potential decrease will actually be realized. The current legislative "safety net" could potentially prohibit this level of decline if continued past FY92. Relative to the 1988-89 budget year for the counties, however, these counties will still be receiving approximately 90 to 94 percent of their past revenues—because of stumpage price escalation in the region. They will not, however, enjoy the higher revenues of the 2 years following.

Miscellaneous Other Impacts

A variety of other impacts may be felt at the local level. It is possible that home and business asset values may decline. At the same time that funds to local governments may be declining, the social service needs and costs may be increasing.

As many have pointed out in the testimony, these regions have been undergoing significant changes. Natural tendencies towards economic diversification have been evident in many of the sub-regions. Douglas County is the one county that has not experienced much diversification in its manufacturing base. The host of other public forest management policies are also playing a role in shaping the future of these communities.

Distributional Issues

If one were to be able to do a comprehensive benefit cost analysis, it is uncertain what the outcome would be. One aspect that is clear, however, is that the gains or losses are not equally spread throughout all of the nation or even all of Oregon. A disproportionate amount of the *per capita* gain from exempting the sales or the *per capita* loss from not exempting the sales is going to fall on the citizens and businesses in southwestern Oregon.

National Benefits and Costs

Introduction

Economic efficiency analysis is based upon the premise that actions whose total benefits exceed total costs are essentially justifiable. The "best" action is that action that generates the greatest net benefits. Benefits and costs need to be broadly defined and recognized to include both market-priced and non-market-priced values. Market-priced values are those associated with goods and services that are bought, sold, or leased. Non-market values are those associated with goods or services that people view as having value, but they are not bought, sold, or leased; e.g., outdoor recreation has value, but not a market-determined price.

Priced Benefits and Costs

The principal priced economic benefits and costs are the economic "rents," i.e., the returns to natural resources (e.g., stumpage), capital (asset values), and labor (wages). The rationale behind using "economic rents" for benefit cost analysis is reviewed in the Secretary's report. There are, of course, ancillary benefits and costs that need to be considered beyond rents, e.g., potential impacts upon social service or agency costs.

The need to recognize the BLM stumpage value is obvious. Non-BLM timber values also need to be considered because of the potential for market responses from other landowners in response to BLM marketing decisions. The stumpage values represent the liquidation value of the current stand of timber—although this value might be captured at some later date and the present value computed.

The returns to timber land ("land rent," as reflected by the present value of future rotations) are realized at the time that the timber is harvested and a new rotation is established. The impact of harvest timing on "land rent" needs to be taken into consideration.

Other financial returns to natural resources, e.g., campground fees, fisheries values, and range value, can be influenced by the decisions on how to manage the timber on the forest lands and need to

be recognized in a comprehensive benefit-cost analysis.

Asset values capture the return to the capital investment that firms and individuals make. It should be realized that changing the supply of raw materials to the market place can change the value of capital assets of firms if these assets are not easily transferable among industries or transportable among regions. Personal asset values can be influenced by the level of economic activity in a region. Also, private timber land values can be swayed by the changes in federal timber-management policy.

Wages can be thought of as the "rents" paid to labor. Just as changing of the level or type of use of a natural resource represents a change in economic value, changing the level or type of use of labor represents a change in economic value. In the last section, it was noted that there were many components of wage impacts that may result from changes in the level of activity in the timber sector.

Other priced benefits and costs include changes in an agency's operating costs from conducting (or failing to conduct) an operation. In addition, many governmental social programs result in a variety of societal benefits and costs; these programs may in turn be dependent upon the level of economic activity occurring in an economy.

To represent the implications of the current decision framework, the benefits and costs of the proposed action and four alternatives are portrayed in Tables 10 and 11. The proposed action is assumed to be to sell and harvest immediately, although this assumption likely overstates the value of exemption. The four alternatives considered for the 44 BLM sales are (1) never harvest these tracts, (2) delay harvest for 10 years, (3) delay harvest for 20 years, and (4) delay the harvest for 40 years.

The Table 10 analysis uses a 4 percent real discount rate, and Table 11, an 8.5 percent real discount rate. The tables summarize only the marginal changes in timber harvest associated with the action and the alternatives.

The key assumptions underlying these calculations are noted in the footnotes to the tables. It should be noted that, if harvest is delayed or does not take place, then 46 percent of the volume in the exemption sales (101 MMBF, out of 219 MMBF) could be offset in the current time period by private owner responses throughout the U.S. (This esti-

mate is from the Secretary's report.) It is also assumed that the value of harvesting the timber in the current period defines the maximum possible discounted value of harvesting the timber in a future period; if this condition did not hold, then the timber would not be harvested.

From Tables 10 and 11 it is evident that many factors have not been recognized within the hearing record (as indicated by the N/A's, for not available). Many of these items are, in fact, very difficult to value. The lack of information means that a complete benefit-cost analysis cannot be done. However, of the market-priced items for which values are available, the exemption requests have a value \$42 to \$128 million more than the alternatives with a 4 percent discount rate, and \$72 to \$128 million more with an 8.5 percent interest rate.

Non-priced Benefits and Costs

There are a variety of non-priced benefits and costs associated with forest management actions. These include experience values for participatory recreation, options values as they relate to future opportunities, existence values, social values, aesthetic values, and ecological/environmental values. The record includes some discussion of existence values and some discussion of recreation values, but it is difficult to use this information to infer the values for these 44 specific sites. Table 12 thus summarizes the information that is on the record. It must be realized that, although untabulated, many of these values do exist, but they are not part of the record (and in fact may not be estimable).

Summary of National Benefits and Costs

While the recorded priced benefits of proceeding with the sales in the exemption request exceed the benefits of not harvesting, it is uncertain how other factors might influence the assessment of priced values. In light of the uncertainty and missing information surrounding the non-market priced benefits and costs, it would be incorrect to conclude categorically that the total benefits of the agency action clearly outweigh the benefits of the alternative course of action (i.e., to not harvest).

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Tables

Table 1. 1991 BLM timber sales program in western Oregon (volumes in MMBF, short-log).

FY 1991 Program	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Target (Approx.)	61.0	223.0	188.0	144.0	119.0	735.0
Proposed (Approx.)	96.2	246.3	191.2	82.6	93.3	709.6
Approved	48.9	109.7	154.1	74.0	69.5	456.2
Denied/Uncontested	8.1	11.8	0.0	8.6	6.3	34.8
Exemption Details						
50-11-40	12.4	82.6	15.1	0.0	13.5	123.6
Take	26.8	42.2	22.0	0.0	4.0	95.0
Total	39.2	124.8	37.1	0.0	17.5	218.6
Within Crit. Hab.						
50-11-40	0.0	21.5	0.0	0.0	0.0	21.5
Take	12.7	4.5	8.6	0.0	0.0	25.8
Total	12.7	26.0	8.6	0.0	0.0	47.3

1. Target volumes based upon memos from state director, abstracted from resource area targets.
2. Proposed volumes may have slight errors resulting from translating from resource areas to counties.
3. Approved sales are those ruled as non-jeopardy to the northern spotted owl by USFWS.
4. Exemption includes sales violating 50-11-40 and sales involving "take" of owls or habitat.
The "take" sales include some that violated both 50-11-40 and "take" considerations.
5. Some of the sales in the exemption application are also in USFWS critical habitat designation.

Table 2. 1992 BLM timber sales program in western Oregon (volumes in MMBF, short-log).

FY 1992 Program	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Target (Approx.)	119.0	222.0	190.0	103.0	100.0	734.0
Proposed (Approx.)	102.0	219.0	127.0	42.0	92.0	582.0
Approved sales	64.0	119.0	119.0	42.0	68.0	412.0
Within Crit. Hab.	0.0	54.0	39.0	0.0	4.0	97.0
No Crit. Hab.	64.0	65.0	80.0	42.0	64.0	315.0
Disallowed	38.0	100.0	8.0	0.0	24.0	170.0

1. Target volumes based upon memos from state director, abstracted from resource area targets.
2. Proposed volumes may have slight errors resulting from translating from resource areas to counties.
3. Approved sales are those ruled as non-jeopardy to the northern spotted owl by USFWS.
4. Disallowed sales are those ruled as jeopardy to the northern spotted owl by USFWS.
5. Some of the sales approved by USFWS were in the USFWS critical habitat designation and are noted.

Table 3. Details on 1993+ BLM timber sales program (volumes in MMBF, short-log).

FY 1993 & beyond	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Old plans	164.0	383.0	242.0	173.0	206.0	1168.0
ISC	78.0	163.4	53.7	91.5	53.7	440.2
ISC without 50-11-40	117.6	264.4	140.3	129.0	123.7	600.4

1. Old plans correspond to those drafted in 1983 (Sessions *et al.* 1990).
2. ISC strategy estimate from Greber *et al.* (1990).
3. Adoption of ISC HCA's without the 50-11-40 rule, estimated using Johnson *et al.* (1991).
4. Volumes may have slight errors resulting from translating from resource areas to counties.

Table 4. BLM harvest history (volumes in MMBF, short-log).

	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Avg 1983-89	166	415	256	171	208	1206

1. From Greber *et al.* (1990).

Table 5. Potential from National Forests, other public, and private owners (MMBF, short-log).

Other sources	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Base levels	458.5	863.4	1346.3	335.4	2304.9	5308.5
Maximum response	581.7	1034.1	1609.8	376.8	2478.0	6080.5

1. Base levels assume National Forests and state adopt ISC, private harvest at sustainable levels.
2. Maximum response assumes private harvest increases resulting from public short-fall.
3. From Greber *et al.* (1990).

Table 6. 1991 employment in western Oregon and related impacts with exemption sales.

1991 Actuals	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Total	25,000	32,100	148,030	72,260	821,900	1,099,290
Timber	2,900	7,630	14,380	6,250	20,050	51,210
Other manufacturing	1,240	1,180	14,710	4,920	111,900	133,950
Unemployment (%)	9.97%	10.03%	6.84%	7.94%	4.93%	5.65%
Unemployment (#)	3,440	4,500	13,090	8,000	46,590	75,620
Job impacts of exemption						
With distributed ripple effects						
Timber	184	584	173	0	82	1,023
Other	68	183	436	298	414	1,399
Total	252	767	609	298	496	2,421
With isolated ripple effects						
Timber	184	584	173	0	82	1,023
Other	251	799	237	0	112	1,399
Total	435	1,382	410	0	194	2,422

1. Total represents nonagricultural wage and salary employment.
2. Timber includes logging, sawmilling, plywood, paper, and value-added products.
3. Unemployment based upon all categories of employment.
4. Distributed other jobs as in Greber *et al.*'s (1990) ISC with private price response.
5. Isolated ripple effects place whole multiplier in county groupings.

Table 7. 1991 employment in western Oregon and related impacts with exemption sales (%).

1991 Actuals	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Timber, % of total	11.60%	23.77%	9.71%	8.65%	2.44%	4.66%
Timber, % of manufacturing	70.05%	86.61%	49.43%	55.95%	15.20%	27.66%
Job impacts of exemption						
With distributed ripple effects						
Timber %	6.33%	7.65%	1.21%	0.00%	0.41%	2.00%
Total %	1.01%	2.39%	0.41%	0.41%	0.06%	0.22%
Total as a % of unemp.	7.32%	17.03%	4.65%	3.72%	1.07%	3.20%
With isolated ripple effects						
Timber %	6.33%	7.65%	1.21%	0.00%	0.41%	2.00%
Total %	1.74%	4.31%	0.28%	0.00%	0.02%	0.22%
Total as a % of unemp.	12.64%	30.72%	3.14%	0.00%	0.42%	3.20%

Table 8. Historic county revenues and related impacts with exemption sales.

	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
1988-89 Budget total (millions)	27.3	56.7	134.2	57.4	493.5	769.1
BLM receipt (Est.)	7.1	17.1	12.3	18.9	11.9	67.3
BLM % of total	26.0%	30.2%	9.1%	32.9%	2.4%	8.7%
FY91 BLM receipts	6.4	16.0	11.4	17.7	11.1	62.7
FY91 exemption rec's	3.2	7.9	5.6	8.8	5.5	31.1
FY91 receipts						
% budget	23.3%	28.3%	8.5%	30.9%	2.3%	8.1%
% history	89.6%	93.8%	93.4%	93.8%	93.4%	93.2%
Exemption receipts						
% budget	11.9%	14.0%	4.2%	15.2%	1.1%	4.0%
% history	45.7%	46.4%	46.1%	46.3%	46.1%	46.2%
% FY91 rec's	51.1%	49.5%	49.4%	49.4%	49.4%	49.6%

1. Budgets from Greber *et al.* (1990).

2. Historic BLM contributions from data in Greber *et al.* (1990) and Hackworth and Greber (1988).

3. FY91 receipts use 5% of harvests from CBWR lands and 4.5% of these receipts to counties.

Also CBWR distribution assumes 88% to Coos and 12% to Douglas.

Table 9. Private forest land areas in western Oregon (thousand acres).

	Coos/Curry	Douglas	Linn/Lane	Jack./Joseph.	Others	Total
Nonindustrial						
Adequate stock	111.1	212.6	161.5	214.9	567.5	1,267.6
Low stocking	91.3	54.5	44.8	38.8	218.2	447.6
Total	202.4	267.1	206.3	253.7	785.7	1,715.2
Industrial						
Adequate stock	626.1	780.5	595.9	356.4	1,919.2	4,278.1
Low stocking	75.4	31.0	27.9	13.6	82.0	229.9
Total	550.7	749.5	568.0	342.8	1,837.2	4,048.2
All private						
Adequate stock	737.2	993.1	757.4	571.3	2,486.7	5,545.7
Low stocking	166.7	85.5	72.7	52.4	300.2	677.5
Total	753.1	1,016.6	774.3	596.5	2,622.9	5,763.4

1. From Greber *et al.* (1990).

2. Low stocking includes both unstocked and commercially unmanageable lands.

Table 10. Benefit-cost analysis of priced items (4% discount rate, million \$).

Item	Present value of item at given timing of harvest of the 44 exemption sales				
	Now	Never	10-years	20-years	40-years
BLM stumpage	69.1	0.0	46.7	31.5	14.4
Non-BLM stumpage	31.8	31.8	31.8	31.8	31.8
BLM land rent	2.1	0.0	1.4	1.0	0.4
Non-BLM land rent	1.0	1.0	1.0	1.0	1.0
Other resources	N/A	N/A	N/A	N/A	N/A
Asset values	N/A	N/A	N/A	N/A	N/A
Wages	83.3	26.3	64.8	52.3	38.1
Others	N/A	N/A	N/A	N/A	N/A
Total reported	187.3	59.0	145.7	117.6	85.7
Actual total	N/A	N/A	N/A	N/A	N/A

1. BLM stumpage value based upon immediate harvest, \$316/MBF, 219 MMBF, and 0 percent growth per acre (because of maturity of stands). The growth rate assumption may underestimate the stumpage value from delaying harvest.
2. Non-BLM volume of harvest based upon the 101 MMBF national price response used in the Secretary's report, \$316/MBF. See note 5.
3. BLM land rent is discounted value of future timber stands. Assumes \$316/MBF, an 80-year rotation, and 46.2 MBF/acre. Assumed 30% management costs, as in Secretary's report. Based on 4510 acres.
4. Non-BLM land rent is discounted value of future timber stands. Assumes \$316/MBF, a 45-year rotation, and 23.9 MBF/acre (from Greber *et al.* 1990). Assumes 30% management costs as in Secretary's report. Based on 4207 acres of timber to provide the stated volume offset.
5. The non-BLM land rent plus harvest sum in the "Harvest Now" scenario is an upper bound based on the assumption that private harvest would occur now if current harvest value equals or exceeds the discounted value of the timber stands if harvested in a future period.
6. Wages assume 5.7 timber jobs/MBF, 7.8 other economy-wide jobs/MBF, and private timber growth rates equal to the interest rate. Income equals \$29,800 per timber employee and \$19,000 per other employee. This low growth rate likely underestimates wage in the "Harvest Now" scenario.

Table 11. Benefit-cost analysis of priced items (8.5% discount rate, million \$).

Item	Present value of item at given timing of harvest of the 44 exemption sales				
	Now	Never	10-years	20-years	40-years
BLM stumpage	69.1	0.0	30.6	13.5	2.6
Non-BLM stumpage	31.8	31.8	31.8	31.8	31.8
BLM land rent	2.1	0.0	0.9	0.4	0.1
Non-BLM land rent	1.0	1.0	1.0	1.0	1.0
Other resources	N/A	N/A	N/A	N/A	N/A
Asset values	N/A	N/A	N/A	N/A	N/A
Wages	83.3	26.3	51.5	37.4	28.4
Others	N/A	N/A	N/A	N/A	N/A
Total reported	187.3	59.0	115.7	84.1	63.9
Actual total	N/A	N/A	N/A	N/A	N/A

1. BLM stumpage value based upon immediate harvest, \$316/MBF, 219 MMBF, and 0% growth per acre (because of maturity of stands). The growth rate assumption may underestimate the stumpage value from delaying harvest.
2. Non-BLM volume of harvest based upon the 101 MMBF national price response used in the Secretary's report, \$316/MBF. See note 5.
3. BLM land rent is discounted value of future timber stands. Assumes \$316/MBF, an 80-year rotation, and 46.2 MBF/acre. Assumed 30% management costs, as in Secretary's report. Based on 4510 acres.
4. Non-BLM land rent is discounted value of future timber stands. Assumes \$316/MBF, a 45-year rotation, and 23.9 MBF/acre (from Greber *et al.* 1990). Assumes 30% management costs, as in Secretary's report. Based on 4207 acres of timber to provide the stated volume offset.
5. The non-BLM land rent plus harvest sum in the "Harvest Now" scenario is an upper bound based on the assumption that private harvest would occur now if current harvest value equals or exceeds the discounted value of the timber stands if harvested in a future period.
6. Wages assume 5.7 timber jobs/MBF, 7.8 other economy-wide jobs/MBF, and private timber growth rates equal to the interest rate. Income equals \$29,800 per timber employee and \$19,000 per other employee. This high growth rate likely overestimates wage in the "Harvest Now" scenario.

Table 12. Benefit-cost analysis of non-priced factors.

Item	Present value of item at given timing of harvest of the 44 exemption sales				
	Now	Never	10-years	20-years	40-years
Recreation experience	N/A	N/A	N/A	N/A	N/A
Existence values	N/A	N/A	N/A	N/A	N/A
Social values	N/A	N/A	N/A	N/A	N/A
Environmental	N/A	N/A	N/A	N/A	N/A
Total reported	N/A	N/A	N/A	N/A	N/A
Actual total	N/A	N/A	N/A	N/A	N/A

Appendices

Appendix A

Exemption Sales Summary

Reason	County	MBF	Value (\$)	Acres	MBF/AC	\$/AC	\$/MBF	Number
50-11-40	Coos	12,413	3,263,137	208	59.68	15,688.16	262.88	4
	Douglas	82,569	28,939,021	1,782	46.34	16,239.63	350.48	14
	Lane	15,137	2,215,908	182	83.17	12,175.32	146.39	4
	Lincoln	6,047	1,683,480	78	77.53	21,583.08	278.40	1
	Yamhill	7,483	2,232,883	223	33.56	10,012.93	298.39	2
	sub-total	123,649	38,334,429	2,473	50.00	15,501.18	310.03	25
Take	Douglas	15,537	4,656,299	309	50.28	15,068.93	299.69	4
	Polk	4,012	1,364,795	51	78.67	26,760.69	340.18	1
	sub-total	19,549	6,021,094	360	54.30	16,725.26	308.00	5
50-11-40 & Take	Coos	26,797	8,998,267	454	59.02	19,819.97	335.79	3
	Douglas	26,693	9,649,411	728	36.67	13,254.69	361.50	5
	Lane	21,964	6,022,505	495	44.37	12,166.68	274.20	6
	sub-total	75,454	24,670,183	1,677	44.99	14,710.90	326.96	14
All	Coos	39,210	12,261,404	662	59.23	18,521.76	312.71	7
	Douglas	124,799	43,244,731	2,819	44.27	15,340.45	346.52	23
	Lane	37,101	8,238,413	677	54.80	12,169.00	222.05	10
	Lincoln	6,047	1,683,480	78	77.53	21,583.08	278.40	1
	Polk	4,012	1,364,795	51	78.67	26,760.69	340.18	1
	Yamhill	7,483	2,232,883	223	33.56	10,012.93	298.39	2
	Total	218,652	69,025,706	4,510	48.48	15,305.03	315.69	44

Reason	County	MBF	Value	Acres	Number
50-11-40	Coos	5.68%	4.73%	4.61%	9.09%
	Douglas	37.76%	41.92%	39.51%	31.82%
	Lane	6.92%	3.21%	4.04%	9.09%
	Lincoln	2.77%	2.44%	1.73%	2.27%
	Yamhill	3.42%	3.23%	4.94%	4.55%
	sub-total	56.55%	55.54%	54.83%	56.82%
Take	Douglas	7.11%	6.75%	6.85%	9.09%
	Polk	1.83%	1.98%	1.13%	2.27%
	sub-total	8.94%	8.72%	7.98%	11.36%
50-11-40 & Take	Coos	12.26%	13.04%	10.07%	6.82%
	Douglas	12.21%	13.98%	16.14%	11.36%
	Lane	10.05%	8.73%	10.98%	13.64%
	sub-total	34.51%	35.74%	37.18%	31.82%
All	Coos	17.93%	17.76%	14.68%	15.91%
	Douglas	57.08%	62.65%	62.51%	52.27%
	Lane	16.97%	11.94%	15.01%	22.73%
	Lincoln	2.77%	2.44%	1.73%	2.27%
	Polk	1.83%	1.98%	1.13%	2.27%
	Yamhill	3.42%	3.23%	4.94%	4.55%
	Total	100.00%	100.00%	100.00%	100.00%

Appendix B

Analysis, Summary, and Conclusions Regarding the BLM Request to Exempt 44 Timber Sales in Western Oregon

Tom Walsh

Oregon Representative on the Endangered Species Committee

May 13, 1992

The management of Pacific Northwest forests has had a long, contentious history. The proceedings of this Endangered Species Committee, meeting on the application of the BLM to exempt 44 timber sales in Western Oregon from the requirements of the federal Endangered Species Act, is yet another chapter. While our attention is focused on these 44 sales, there is a greater need to move toward resolution and stability—for the sake of both our economic and environmental well-being. The Northwest depends on our forests, for not only wood products, but also for water quantity and quality, assorted fish, wildlife, and plant species, and recreation.

The 44 sales constitute part of 1 year's sales program by the BLM. The larger and more pressing issue of sustainability and long-term community stability will not be resolved by simply voting to exempt these sales. This process can be helpful, however, if it moves us one step closer to a comprehensive solution that will continue long-term community stability and sustainability. In the deliberations of the Endangered Species Committee, we need to address some of the important procedural issues, as well as examine and answer the four criteria.

In order to grant an exemption, the Committee must find that the 44 sales meet *all* of the four criteria. Congress constructed these strict criteria because they did not want an exemption to be granted lightly. In addition, Congress placed the burden of proof on the agency requesting the exemption.

The conclusions in this report were arrived at by analyzing the record of the evidentiary hearing, reviewing internal staff analyses based on the record, listening to people at the 2-day public hearing in Portland, and reading the Secretary's Report.

This report summarizes the analysis, conclusions, and recommendations of the Oregon representative to the Endangered Species Committee. The report will be divided into (1) an assessment of each of the criteria, followed by conclusions; (2) summary conclusions; and (3) recommendations gained from this experience which might serve to govern future actions in the management of Pacific Northwest natural resources.

Part I: Detailed Analysis

1. *There are no reasonable or prudent alternatives to the agency action.*

Congress did not directly define "reasonable and prudent alternatives" in the Endangered Species Act. According to the Conference Report on the 1978 amendments, the Endangered Species Committee should focus on a wider variety of alternatives, not just those alternatives that would arise in a Section 7 consultation. The Committee's search "should not be limited to the original project objectives or the acting agency's jurisdiction." The Conference Committee report said that only those alternatives "which are both technically capable of being constructed and prudent to implement" need be considered under section 7(h)(1)(A)(i) and (ii).

BLM argued that there are no reasonable and prudent alternatives, since any of the proposed alternatives would conflict with the agency's intended purpose of the proposed action, would not be consistent with the scope of the agency's legal authority and jurisdiction, and would not be economically and technologically feasible. In contrast, FWS and Portland Audubon Society *et al.* (PAS) presented a strong case that an alternative that addresses the short term does exist—moving future years' sales forward.

Although using FY92 sales is a short-term alternative, it nevertheless means that there is evidence of a reasonable and prudent alternative. It makes no difference that such a substitute action does not provide a truly long-range solution, or that such substitutions could not go on year after year. The question is: Did an alternative exist for the disallowed FY91 sales? The answer is "yes", and therefore the criterion that "no reasonable and prudent alternatives exist" has not been met. In addition, the agency is technically capable of constructing and implementing this prudent alternative.

With regard to the 30 sales (out of the 44 total sales) existing in Coos and Douglas counties, the proposed harvest totals 164 MMBF. The approved FY92 sales within these same two counties contain 183 MMBF. As shown on the attached Exhibit A, the geographic locations of the approved FY92 sales are in sufficiently close proximity to the disallowed FY91 sales to constitute a reasonable and prudent alternative.

The record furthermore shows the absence of a cooperative effort between BLM and FWS to determine if reasonable and prudent alternatives existed. Active cooperation would have revealed potential opportunities such as identifying or modifying other sales that would not jeopardize the spotted owl, or releasing some of the Oregon Fish and Wildlife (ODFW) agreement lands.

CONCLUSION: A reasonable and prudent alternative existed; therefore, this criterion has not been met for granting an exemption.

2. The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest.

Some alternative courses of action appear to be rational for this impacted region. Potential alternative actions include (1) returning to the mandated O&C Act level of 500 MMBF, (2) determining if there are other programs that would benefit the region economically, (3) rehabilitating low-stocked lands, and (4) maintaining a safety net for county revenues.

BLM appears directed under the O&C Act to harvest at either 500 MMBF or at their determined annual sustained yield capacity. The agency clearly rescinded its 1983 plans by revising harvest targets downward from 1,183 MMBF to 750 MMBF. BLM failed to provide evidence that its current 750

MMBF target level of harvest is necessarily sustainable, a precursor to community stability, or legally mandated. Since BLM has not established a new long-term sustained yield after it discarded its target of 1,183 MMBF from the 1983 plans, this Committee member believes that one obvious alternative is that the BLM return to the O&C Act and operate under a 500 MMBF target in the interim while seeking interagency cooperation to develop long-term plans.

BLM should review the forest operations in the region to determine whether there may be logical opportunities that would benefit the region economically, e.g., stream and road rehabilitation, increased silvicultural activity, and recreation enhancement. Such activities could improve the environment, be financially prudent, and provide employment opportunities in the region.

From Lane County south, there are over 370,000 acres of low-stocked private, mostly non-industrial lands that should be rehabilitated—thus generating jobs for the present and timber for the future. These low-stocked lands represent 12 percent of the private lands and originated largely before the passage of the Oregon Forest Practices Act in 1971. A public policy boosting technical assistance and cost-sharing dollars that is aimed at the rehabilitation of these lands would greatly assist communities in the near-term, and would add substantially to long-term sustainable harvest yields.

Maintaining the Congressional safety net for county revenues will provide some stability for important county services. This should be continued at least until the new 10-year plans are implemented.

Assessing the benefits and costs of harvesting the 44 sales and the alternatives is truly difficult in light of the large number of non-market ecological and social values associated with forest management actions. While it is likely that the market benefits of the proposed action are greater than the alternative courses of action, it is not clear—and BLM did not present convincing evidence—that the sum of all benefits and costs "clearly outweigh the benefits of the alternative courses of action."

CONCLUSION: Alternative courses of action are available and no conclusive analysis has been provided for the Committee to determine that the benefits of the intended action clearly outweigh the benefits of alternative courses of

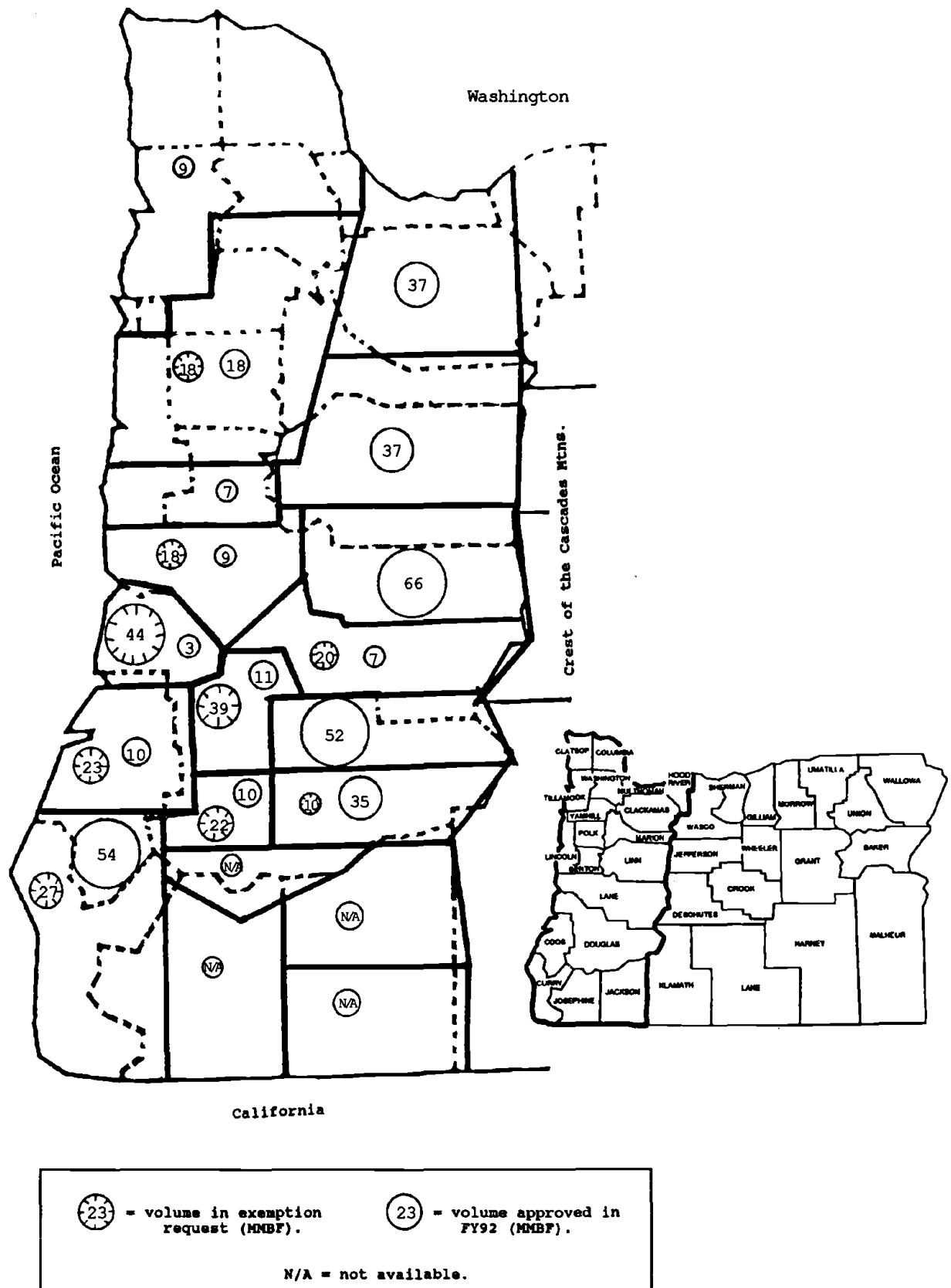


Exhibit A. Volumes of exemption sales and approved FY92 sales by BLM resource area in western Oregon.

action; therefore, this criterion has not been met for granting an exemption.

3. *The action is of regional or national significance.*

The 44 sales provide 0.6 percent of the total U.S. domestic merchantable timber and a national value of \$64 million. If we contrast this against the size of the national economy and the federal budget, these numbers appear quite small. By any reasonable standard, this does not constitute a measure of national significance.

The "region" is most appropriately defined as western Oregon, where all of the BLM harvesting takes place and most of the processing occurs. The natural boundaries of the region—the Cascade range on the east, the Pacific Ocean on the west—, historic transportation routes running north-south, reasonable and feasible travel distances for raw materials and workers, and cultural acceptance all argue for this definition of "region."

The effects of the 44 proposed sales on the total western Oregon economy appear small. The 218 MMBF comprise 3.5 percent of the total western Oregon timber harvest; 2,420 jobs associated with the 44 sales equal 0.2 percent of total non-farm western Oregon employment. The effects, however, on the rural western Oregon economy and its communities are clearly significant.

Particularly in highly timber-dependent Coos and Douglas Counties, where direct timber-related jobs amount to 18.4 percent of their total employment, individuals and firms and even entire communities are experiencing large disruptions due to changes taking place in over-all timber supply management. The impact of the loss of 218 MMBF only exacerbates an already grim status for the rural regional economy.

BLM sales provide sizeable contributions to financing local government services. Abrupt changes in timber sale programs can force changes in the level of local government services provided or in the tax burden assumed by residents. Local governments in the affected counties are under considerable fiscal pressure because of declining timber-related employment and the effects of new state tax constraints.

CONCLUSION: The intended action is not of national significance. The action is of regional significance; therefore, this criterion has been met for granting an exemption.

4. *Neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources.*

The intent of this criterion is to prevent the granting of an exemption in any case where the responsible agency has proceeded precipitously without regard to the species endangered and is, in effect, asking for an "after-the-fact" approval for its actions.

In this case, the BLM has not proceeded with any harvest activities on the 44 sales.

CONCLUSION: No irreversible actions have been taken by the agency; therefore, this criterion has been met for granting an exemption.

Part II: Summary Conclusions

Summarizing the four criteria found in the act:

1. There are no reasonable and prudent alternatives to the agency action.

Met ☐ Not Met ☒

2. The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest.

Met ☐ Not Met ☒

3. The action is of regional or national significance.

Met ☒ Not Met ☐

4. Neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources.

Met ☒ Not Met ☐

Since none of the 44 sales, either individually or as a group, meet the requirements of all of the four criteria, no exemption should be granted. This does not mean, however, that the Committee cannot recommend actions that might be helpful in moving toward a resolution which will provide long-term sustainability and community stability.

Part III: Recommendations

The long-term balanced management of Pacific Northwest natural resources will require energies, insights, and cooperation significantly beyond those which exist today. The competing and legitimate demands exceed the supply capabilities of nearly all our resources. A change from the fractured, acrimonious, and litigious patterns of the past two decades will be required of all participants. Since the days of the Louisiana Purchase, we have fought over the West's resources, but, as the armies grow weary and the certainty of victory for none looms large, it is time for a truce.

The objectives of that truce should be stability and long-term sustainability for all inhabitants of this great corner of America. Cutting across political jurisdictions, deeded ownerships, narrow single-purpose uses, and outmoded mandates, we should strive to find a solution as visionary and as sweeping as Thomas Jefferson's original purchase and as conservationally sound as Teddy Roosevelt's significant reforms of nearly a century ago.

Important as they are, the issues of BLM timber sales are but a fraction of the total picture. It is the owl today, the salmon tomorrow; it is federal lands today, perhaps all lands tomorrow. Piecemeal approaches will not work and will only lead to continued hardship and frustration for the human resource of the Northwest's small communities, to say nothing of the scattered degradation of the region's finite natural resources.

Perhaps along the lines of the Northwest Power Planning Act, we might find a solution—formulated by the Congress as broad, national policy, but wrestled and refined by all public and private interests of the region. The essence of our answer should be resource conservation, avoiding rigorously the polar positions of wanton exploitation or pristine preservation. It should explore and balance a century-long vista of human and natural resource needs and aspirations and limitations. It should be based on the ethic that every species and every resource is finite, that in intelligent balance we can find reasonable accommodation and sustainable bounty.

For almost two hundred years, we have accepted and prospered from the gifts of this region. It is now our time to give something back.

Greber, B.J. 1992. ASSESSMENT OF THE BLM EXEMPTION REQUEST FOR SALES RULED TO JEOPARDIZE THE NORTHERN SPOTTED OWL, INCLUDING A STATEMENT OF CONCLUSIONS BY TOM WALSH, OREGON REPRESENTATIVE ON THE ENDANGERED SPECIES COMMITTEE. Forest Research Laboratory, Oregon State University, Corvallis. Papers in Forest Policy 2. 24 p.

In September 1991, the Bureau of Land Management asked the Secretary of the Interior to convene the Endangered Species Committee. The Bureau wanted permission to proceed with 44 timber sales in Oregon that the U.S. Fish and Wildlife Service had ruled would jeopardize the continued existence of the northern spotted owl. The Secretary convened the Committee. Tom Walsh was appointed to the Committee as Oregon's representative and requested that Brian Greber advise him during the committee process. Before the Committee meeting on May 14, 1992, Greber prepared a summary report of the information deemed important to the Committee's decision. The report is reproduced here to provide a historic record of information used by Walsh in his deliberations and to serve as a potential template for future Endangered Species Committee analyses. Walsh's summary and conclusions are also reproduced in an appendix.

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