

Editor's note: 90 I.D. 189

IN RE LICK GULCH TIMBER SALE

IBLA 81-394 Decided April 28, 1983

Appeal from a decision of the Medford, Oregon, District Manager,
Bureau of Land Management, denying a protest to a proposed timber sale. OR 81-10.

Affirmed as modified.

1. Oregon and California Railroad and Reconveyed Coos Bay Grant Lands: Timber Sales--Timber Sales and Disposals--Words and Phrases

"Sustained yield." As used in sec. 1 of the Act of Aug. 28, 1937, 43 U.S.C. § 1181a (1976), the term 'sustained yield' means that the level of timber harvesting established should be such that, considering present levels of silviculture techniques, a constant amount of timber will be annually available on an indefinite basis.

2. Oregon and California and Reconveyed Coos Bay Grant Lands: Timber Sales--Timber Sales and Disposals--Rules of Practice: Appeals: Generally

A party challenging a decision to harvest timber on the grounds that the lands involved will not regenerate within the time contemplated by the applicable rules bears the burden of establishing both the factual predicates and the ultimate conclusion.

3. Oregon and California Railroad and Reconveyed Coos Bay Grant Lands: Timber Sales--Timber Sales and Disposals--Rules of Practice: Appeals: Generally

A party who challenges a decision to sell timber on the ground that timber harvesting will adversely affect water quality, plant and animal life, recreational values, or the economic stability of surrounding communities must show not only that some adverse effect will result because of timber harvesting, but that these effects are of sufficient magnitude so as to render the decision to harvest contrary to the applicable laws and regulations.

4. Act of Oct. 15, 1966--Oregon and California Railroad and Reconveyed Coos Bay Grant Lands: Timber Sales

Where the evidence establishes that BLM failed to conduct a cultural resource inventory in conformity with the applicable rules and regulations prior to offering timber for sale, BLM will be required to conduct a complete and proper cultural resource inventory before entry onto the land for harvesting is permitted.

APPEARANCES: Diane Albrechtsen, president, Threatened and Endangered Little Applegate Valley; John L. Smith, secretary-manager for Southern Oregon Timber Industries Association, intervenor; Don Lawton, Esq., Assistant Regional Solicitor, Pacific Northwest Region, for Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE BURSKI

Diane Albrechtsen, president of the Threatened and Endangered Little Applegate Valley (TELAV), has appealed from a decision of the Medford District Manager, Bureau of Land Management (BLM), dated January 28, 1981, denying a protest to the proposed sale of timber in Lick Gulch, sale OR 81-10.

The proposed Lick Gulch sale is a Small Business Administration (SBA) set-aside sale, involving 12 separate units, 8 of which were to be partial cuts and the remaining 4, totaling 58 acres, were to be clearcut. The estimated recoverable volume from the sale was 2,317 Mbf (thousand board feet). Notice of the proposed sale was dated on November 19, 1980, with the actual sale to occur on December 18, 1980.

On December 16, 1980, however, appellant filed a protest to the sale.

Pursuant to established procedures relating to timber sales (see Elaine Mikels, 41 IBLA 305, 307 (1979)), the District Office proceeded to receive the bids, giving due notice to prospective bidders, however, that no contract could be awarded until the protest had been adjudicated. The high bidder was the Robert Dollar Lumber Company of Glendale, Oregon, with a high bid of \$291,935.

By decision of January 28, 1981, the District Manager denied appellant's protest. Appellant timely filed a notice of appeal. Subsequently, Southern Oregon Timber Industries Association was granted leave to intervene in this appeal in support of the timber sale.

The parties to this appeal have filed extensive briefs with the Board. These documents consist of a statement of reasons (SR) in support of the appeal together with an appendix (AP), an answer (AN) filed by BLM, a reply brief (RP) filed by appellant, a rebuttal (RB) filed by BLM, and a surrebuttal (SB) by appellant. The total amount of briefing involved is well in excess of 500 pages, not counting hundreds of pages in appendices and charts. In addition, the Final Timber Management Environmental Impact Statement (EIS)

for the Jackson-Klamath Sustained Yield Units (JKSYU), was submitted as an attachment to BLM's answer.

We will discuss the major issues pressed on this appeal individually, but first we wish to establish the principles which will guide our review of the decision on appeal.

The areas involved are within the revested grant lands of the Oregon and California Railroad, generally referred to as O&C lands. Because of its bearing on some of the contentions made on appeal, we will set forth, at some length, the history of these lands.

[1] By the Act of July 25, 1866, 14 Stat. 239, and the Act of May 4, 1870, 16 Stat. 94, Congress granted various lands in the State of Oregon to aid in the construction of a railroad between Sacramento, California, and Portland, Oregon. The 1870 Act expressly provided that the land granted by that Act could only be sold to "actual settlers" at a maximum price of \$2.50 per acre in units not to exceed 160 acres.

In approximately 1894, however, the Southern Pacific Railroad (Southern Pacific), which had acquired the Oregon and California grant, commenced selling the grant lands in units in excess of 1,000 acres for prices ranging from \$5 to \$40 per acre. After Edward H. Harriman gained control of the Southern Pacific in 1901, an announcement was published that, effective January 1, 1903, the O&C grant lands would be closed to further sales, and would be held by Southern Pacific for their stumpage value.

As a result of these clear violations of the terms of the O&C grant, and the resultant outcry of the citizens of Oregon, the Federal Government brought suit in 1908 to recover the unsold lands, pursuant to a joint resolution of Congress. See Act of April 30, 1908, 35 Stat. 571. This suit culminated in the Supreme Court decision in Oregon & California R.R. v. United States, 238 U.S. 393 (1915). In that decision, the Court held that the proviso limiting sales to actual settlers for \$2.50 per acre was an enforceable covenant which the railroad had clearly violated, and the Court afforded Congress a reasonable time to deal with the matter by legislation.

Congress responded with the adoption of the Revestment Act, also known as the Ferris-Chamberlain Act, Act of June 9, 1916, 39 Stat. 218, in which it declared all unsold lands revested in the United States and provided for a payment to the Oregon and California Railroad at the rate of \$2.50 per acre for each acre earned by actual construction, less monies already received by sale of the lands. Section 2 of the Act provided for classification of the revested lands as either powersite lands, timberlands, or agricultural lands. Of subsequent importance to this appeal was section 4 of that Act. With reference to timberlands, that section provided:

That [timberlands] shall not be disposed of until the Secretary of the Interior has determined and announced that the merchantable timber thereon has been removed, and thereupon said lands shall fall into class three [agricultural lands] and be disposed of in the manner hereinafter provided for the disposal of lands of that class.

The effect of this section was that once timber had been removed from a parcel of land in class two (timberland), such cutover land was properly classified

as class three (agricultural lands) and subject to entry and settlement under the general homestead laws. See Circular No. 892, 51 L.D. 631 (1926). Thus, while under the Revestment Act the Government would receive the value of the timber growing thereon, no attempt was made to retain the land in Federal ownership for future growing and harvesting of timber.

As a consequence of this policy, lands which had historically been capable of supporting timber growth were being removed from permanent forest production. Eventually, concern was engendered that future shortages of timber and other forest products would inevitably result as more and more timberland was lost from the permanent forest base. See H.R. Rep. No. 1119, 75th Cong., 2d Sess. 2 (1937). Accordingly, in 1937, Congress adopted the Act of August 28, 1937, 50 Stat. 874, 43 U.S.C. §§ 1181a-1181f (1976), commonly known as the O&C Act. Section 1 of the Act provided, inter alia:

Notwithstanding any provisions in the Acts of June 9, 1916 (39 Stat. 218), and February 26, 1919 (40 Stat. 1179), as amended, such portions of the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands as are or may hereafter come under the jurisdiction of the Department of the Interior, which have heretofore or may hereafter be classified as timberlands, and power-site lands valuable for timber, shall be managed, except as provided in section 1181c of this title, for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principal [sic] of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities. Provided, That nothing in this section shall be construed to interfere with the use and development of power sites as may be authorized by law.

Thus, timberlands, as well as powersite lands valuable for timber, were set aside to be managed 'for permanent forest production' under the principle

of "sustained yield." Such management is, of course, to be carried out in a way consistent with the goals not only of providing a permanent source of timber, but also so as to maximize protection of watersheds, regulation of streamflow, and to provide recreational facilities, all in such a manner so as to contribute to the economic stability of local communities.

The O&C Act did not, itself define the term "sustained yield." Its meaning, however, was not particularly arcane. In Circular No. 1448, 3 FR 1796 (July 7, 1938), the Department noted that the O&C Act

laid the foundation and framework of a new forest policy for the revested and reconveyed Oregon grant lands. This measure provides for the conservation of land, water, forest, and forage on a permanent basis; the prudent utilization of these resources for the purposes to which they are best adapted; and the realization of the highest current values consistent with undiminished future returns. It seeks, through the application of the policy of sustained-yield management, to provide perpetual forests which will serve as a foundation for continuing industries and permanent communities.

Thus, lands to which the O&C Act properly applies (timberlands and powersite lands valuable for timber) are managed for the dominant purpose of timber production while recognizing that complementary values such as watershed protection and economic stability for local communities will necessarily result through proper implementation of the concept of sustained yield.

"Sustained yield" in essence means that the level of harvesting established should be such that, considering present levels of silviculture techniques, a constant amount of timber will be annually available on an indefinite basis. This does not, of course, mean either that the same amount of timber must be harvested each year or that each specific parcel of land

must exhibit the exact regenerative powers which the modular norm contemplates. Rather, in the first instance, recognition that present conditions do not represent the optimum model on which ultimate productivity is based (as where an excess of old growth timber exists) may authorize an initial level of harvesting above the final sustained yield capacity level. See Cascade Holistic Economic Consultants, 60 IBLA 293 (1981). Then, too, consideration of future increases in yield due to present or proposed management techniques can also permit a temporary increase in the present allowable cut. 1/

Insofar as the regenerative qualities of each specific parcel is concerned the cycle of the sustained yield period (be it 80 or 800 years) merely assumes the norm of growth for the entire sustained yield unit. In other words, the mere fact that one parcel may regenerate more slowly than another is inconsequential provided ultimate reforestation occurs in conformity with the sustained yield expectations.

It is important here to note that BLM has adopted a Timber Production Capability Classification (TPCC) System which classifies all land managed by BLM in western Oregon into various categories. The two prime categories are forest land and nonforest land. Forest land is land which is now, or is capable of becoming, at least 10 percent stocked with forest trees and which has not been developed for nontimber use. The category of forest land is, itself subdivided into noncommercial forest lands and commercial forest lands. This latter category consists of all forest land that "is capable of yielding at

1/ This is referred to as the allowable cut effect (ACE).

least 20 cubic feet of wood per acre per year of commercial coniferous tree species." BLM Manual 5250.05C2. Commercial forest lands are themselves subdivided into problem and nonproblem sites.

Lands are classified as problem sites because of (1) adverse location, (2) the existence of fragile areas, or (3) the existence of areas where reforestation presents problems. Such problem sites may be included in the timber production base subject to restrictions which necessitate or prohibit certain management practices.

In addition, the EIS noted that analysis of TPCC data had disclosed wide variations in the productive capacities of commercial forest lands. As a result, three management classes for these lands were established: (1) High intensity forest management lands, (2) low intensity forest management lands, and (3) limited forest management lands. The latter two categories consist of lands where the regeneration period is expected to be in excess of at least 5 years, with category 3 lands being deemed to be considerably in excess of 5 years with ultimate successful reforestation uncertain. See EIS at 1-8 to 1-10. Only high intensity lands are included in the permanent forest base for purposes of determining the allowable cut for maintenance of sustained yield. All lands included in this appeal have been classified as high intensity lands though, as we will discuss, infra, TELAV takes great exception to this classification.

In reforestation terminology, regeneration refers to the renewal of the tree crop, whether by natural or artificial means (EIS at G-7). The "regeneration period" is simply "the time it takes for a new coniferous timber

stand to become established following the final harvest cut" (EIS at G-8). For land classified as high intensity forest management lands, such as those in the instant appeal, the regeneration period is basically 5 years (EIS at 1-8).

Thus, all lands involved are expected to regenerate in 5 years. In addition, however, we note that all of the sites involved have been classified as problem sites because of difficulties associated with reforestation due to inadequate moisture. Thus, as BLM itself recognizes, special reforestation techniques are required. TELAV questions whether any special reforestation techniques are contemplated and suggests that, even if they are, the techniques will prove inadequate to establish regeneration, particularly in light of past experiences in the area.

[2] The bulk of TELAV's argument is directed to its contention that the land embraced by the sale is incapable of regeneration for a variety of reasons, chief of which include deficient soils, extreme temperatures, steepness of slopes, and inadequate rainfall. It has submitted extensive documentation of its claims both in the form of prepared studies as well as analysis of past BLM practices in the Little Applegate Valley area. We will examine these contentions separately.

In its statement of reasons, TELAV argued that the soils which were indicated to be present, viz., Manzanita or Manita (716), Beekman (718), Vannoy (776), and Colestine (781), all possess high regeneration hazard. TELAV also contended that soils in the 701 series are present in the sale area, and that the major soil components of the sale site ~~(the BDA sites,~~

718 Beekman, and 781 Colestine) are best characterized as shallow soils. See SR at 12-17.

In its answer, BLM insisted that 701 soils are not a major component of the sites, making up less than 5 percent of the sale area and occurring primarily as inclusions on ridge tops and finger ridge noses. ^{2/} In addition, BLM noted that, by definition, Colestine (781), Vannoy (776), and Beekman (718) are classified as moderately deep, i.e., 20 to 40 inches in depth, while Manzanita is classified as deep, i.e., 40 to 60 inches. ^{3/}

In response to these arguments by BLM, TELAV submitted a report entitled "On Site Investigation of Soil Depths in the Lick Gulch Timber Sale Area," dated August 1981, and prepared by C. B. Thomas of Northwest Biological Consulting. A total of 23 test holes were drilled on 9 units. Nine holes encountered gravel, rock, or hardpan soil at a depth of 0 to 8 inches, an additional 10 holes were drilled to a depth of 9 to 16 inches before encountering gravel or hardpan, while only 4 holes bottomed out between 17 to 24 inches of depth. See RP, Appendix AA. Noting that this report also indicated that some areas indicated gravel content of up to 50 percent, TELAV argued that insofar as moisture retention ability was concerned the soils were the equivalent of only one quarter as deep as they were technically defined (RP at 29).

^{2/} BLM noted that the general soils map for the JKSYU had indicated that the area contained 701 series soils (see EIS at 2-8), but argued that the detailed soil map prepared for this sale made no mention of the 701 series, and, in effect, superseded the general map found in the EIS.

^{3/} For some unexplained reason, BLM, having discussed the Vannoy 776 soils, proceeded to contend that "776 soils were never identified in the area." See AN at 13. While it may be true that the EIS did not mention the 776 series, the soils report for the timber sale clearly showed the presence of Vannoy soils throughout the area to be cut.

TELAV reiterated its belief that the soils in the area were, in fact, both shallow and rocky (RP at 44).

Apparently as a result of the soil analysis presented by TELAV in its reply brief, BLM submitted a report on the results of an intensive soil investigation of the Lick Gulch Timber Sale area. ^{4/} A total of 45 random samples were taken. The tabulated results indicated that soil in excess of 20 inches should exist on 97.8 percent of the total acreage. Included in this submission was a letter from the leader of the Soil Survey Party of the Soil Conservation Service, Department of Agriculture, attesting that "the soil survey of the Lick Gulch Timber Sale, which was made by your staff, is accurate and complete."

In its surrebuttal, TELAV suggested that the variance in results reached by the studies might be explained by the fact that BLM had studied the soils after the rainy season had begun and further suggested that the BLM sampling plots favored areas close to the ridge tops. TELAV argued that its study had avoided ridge tops and stated 'because the deepest soils are located just below the ridge tops' that sampling of those areas would give readings of deeper soils than if the study had avoided them. See SB, Appendix at 1. ^{5/} In any event, while noting its disagreement with the BLM studies, TELAV stated "it is useless to argue these points when the reason for the studies is an

^{4/} This report noted that its purpose was to supplement the soil survey undertaken during the preparatory stages of the sale, which had been the basis of the soil map included in the timber sale file.

^{5/} We are constrained to point out to appellant that, according to its own submissions, ridge tops were avoided in its samplings because they "commonly have unusually thin soils" (RP, Appendix AA) (emphasis supplied).

attempt to predict if the area will successfully regenerate--and the proof that it will not is available for all to see" (SB at 2).

We recognize, of course, that the vast majority of the contentions of the parties relate to the question of regeneration. Regeneration, however, is dependent on a number of variables. TELAV has contended that virtually every one of these relevant components, including the soils present on the sites, militates against successful regeneration. One of the methods by which the ultimate question of regenerative capacity can be approached is by incremental analysis. We will, therefore, examine each variable to determine how it will affect the final outcome. To the extent that TELAV has contended that the sale sites contain shallow or deficient soils which will retard or foreclose regeneration, we find that they have failed to overcome the Government's showings. Considering the entire record submitted with this appeal, we find that the soils are as the Government described them. 6/

6/ We would emphasize a point made in our order of Nov. 6, 1981. By letter of Oct. 29, 1981, appellant had filed an objection to a request by BLM for an extension of time to respond to appellant's reply brief. BLM had requested such an extension because of its desire to perform the soil survey discussed in the text. TELAV objected on the ground that BLM should have performed the survey earlier and argued that "it is unreasonable for BLM to attempt to present this information at this time." We overruled this objection noting that "it is the Board's duty to make sure that it has as complete record as possible in deciding appeals to it." We wish to reiterate this point.

The entire purpose of the appellate system in this Department is to afford aggrieved parties a forum in which their grievances can be adjudicated at the Departmental level. The filing of a proper appeal stays the effect of the decision appealed (43 CFR 4.21(a)) until the Board determines the matter brought to it. The Board, in essence, makes the determination for the Secretary of the Interior. As his direct delegate, the Board, no less than the Secretary, himself, is required to consider all relevant information tendered both by an appellant and by BLM. Just as an appellant can submit studies to support its prior assertions, so, too, can the Bureau submit data to support its contentions. The time frame in which the data is generated is irrelevant to appeals such as the instant one, since, until the Board acts, there is no decision for the Department. In rendering decisions for the Department the Board has the right to expect as complete a record as the parties can provide.

We next turn to the question of the impact of extreme temperatures together with limited rainfall. There is no argument that the area of the Little Applegate drainage lies in the rain shadow of the Coast Range. There is, however, some dispute as to the amount of rainfall received at the site. Thus, TELAV argues that the annual rainfall could not be expected to exceed 22 inches based on readings taken at the nearby Buncom NOAA Weather Station. See AP, Appendix D at 1. BLM, on the other hand, based on a map by the Oregon State Water Resources Board, contends that the mean annual precipitation for the Lick Gulch sites is between 25 to 30 inches. See RB, Attachment 5. ^{7/}

With its surrebuttal brief, TELAV submitted a report prepared by Philip Williams and Associates, entitled "An Evaluation of the Impacts of Future Land Use on the Hydrology of the Little Applegate River Watershed, Oregon" (Williams Report). We note that the precipitation map provided therein indicates that the average annual rainfall for the Lick Creek timber sites is between 30 to 35 inches. See SB, Appendix B at 10. Based on all the submissions, we feel that the evidence is overwhelming that rainfall can be expected to average between 25 to 30 inches over the area involved in this appeal, as contended by BLM.

We realize that this level of rainfall is in the low range. BLM has itself recognized this in classifying the land as RMR, which indicates not only that reforestation difficulties due to inadequate moisture are expected to occur, but also that these areas are "restricted," which means that special techniques are required to ensure adequate reforestation. See BLM Manual

^{7/}In its rebuttal brief, BLM also submitted a precipitation map prepared by the Army Corps of Engineers which indicated that the mean annual precipitation for the site area ran from 34 to 38 inches (RP, Attachment 5).

5250.05E, and 5250, Appendix 6. We will discuss, *infra*, TELAV's criticisms directed to the "special techniques" which BLM has indicated will be utilized. We wish merely to note, here, that the record supports BLM's argument as to the amount of rainfall in the sale areas.

In reference to other climatic conditions, TELAV argued in its statement of reasons that the "summer climate is desertlike, with weeks of temperatures above 100 degrees F, with low humidity and 50 to 60 degree F temperature differentials each day" (SR at 17). A more moderate description was provided in the Williams Report. The report notes that almost all of BLM's lands are in the lower middle elevations, and characterizes the lower elevation as "Mediterranean." See also EIS at 3-1. The Williams Report described this land as experiencing "dry summers and winter rains, with average winter temperatures above freezing," and also noted that at the Medford airport the average high for August was more than 90 degrees in 21 of the last 31 years. Williams Report at 8, 11.

While TELAV's statement of reasons may have exaggerated the climate conditions to a certain extent, there is no question that the high summer temperatures contribute to certain regeneration problems particularly on southerly and westerly aspects. This is because soil temperatures in excess of 125 to 150 degrees Fahrenheit will normally prove lethal to emergent seedlings. In recognition of this, BLM has limited clearcutting to those units having northerly or northeasterly exposures, and provided for a two stage shelterwood cut for those units with a more westerly or southerly exposure. 8/ TELAV, however, suggests that while the northern aspects may be

8/ These clearcut units are Nos. 6, 10, 11, and 12.

cooler than those with a southern exposure, the northern regions are still "hot." See RP at 27, 32.

We note that BLM submitted with its answer a copy of a report prepared by employees of the Forest Service, Department of Agriculture, under the direction of Don Minore, Principal Plant Ecologist at Corvallis, Oregon, entitled "Environment, Vegetation, and Regeneration After Timber Harvest in the Applegate Area of Southwestern Oregon [Minore Report]." ^{9/} Table 2 of this report consists of a chart which shows the correlation between aspect, soil depth, slope, and elevation as they relate to clearcut regeneration in the Little Applegate area, based on 40 sample clearcut plots. This chart, according to BLM, indicates that all four sale sites scheduled to be clearcut might be expected to achieve stocking at 60 percent or better. ^{10/} Minore Report at 15.

In its Reply brief, TELAV took issue with some of the conclusions of the Minore Report. In regard to the areas to be clearcut, TELAV noted that the only clearcut plot in the Little Applegate drainage showed an average stocking of 32 percent, and took particular note that the report stated "our relative

^{9/} It is not surprising, inasmuch as virtually every statement made by either party to this appeal is controverted someplace in the record, that there exists two slightly differing copies of this report in the record before us. The Minore Report submitted by BLM is Attachment 2A of its answer. TELAV's copy appears as an attachment to its reply brief at pages 6 through 42. While we have noticed substantive differences, a review of both convinces us that TELAV's version, even though TELAV termed it the "original" version, is a later, more complete copy. Accordingly, references in the text of this decision will be to TELAV's version. The TELAV version is also paginated and references will be to internal pagination of the report rather than to the attachment page number.

^{10/} As we shall show, the notations found on the BLM copy of the Minore Report, which purportedly indicate where the four clearcut units fall on the chart, are simply wrong.

stocking percentages indicates the relative severity of clearcut environments, not the potential stocking rates that would be obtained if

current reforestation technology were properly applied" 11/ (RP at 18 (emphasis supplied by TELAV)).

To the extent that TELAV suggests that the data generated by the Minore Report does not support BLM's decision to clearcut four units in Lick Gulch, we disagree.

Of the 40 sample clearcut units studied in the Minore Report, the sole clearcut unit which TELAV argues was in the Little Applegate watershed was No. 35. However, our review of the map suggests that clearcut unit No. 46, which showed a stocking rate of 87 percent, is also in the Little Applegate drainage. 12/ In any event, even were we to agree that the only unit in the Little Applegate watershed was No. 35, it scarcely undermines BLM's conclusions. The Minore Report used existing data to develop a correlation between various factors and successful regeneration. Unit No. 35 had an aspect azimuth of 100 degrees and a slope of 67 percent. Table 2, which correlated such factors, indicated that clearcutting should not be attempted on such a site, without regard to other variables such as elevations or soil depth. Thus, the results obtained on unit No. 35 are actually consistent with the premise of the Minore Report, and the unit's failure to regenerate

11/ This statement does not appear in the copy of the Minore Report submitted by TELAV.

12/ Admittedly, the small size of the map provided in the Minore Report (Figure 1 at 3) makes it difficult to determine whether unit No. 46 is in the Little Applegate or Bear Creek drainage, though it appears to us that it is properly in the Little Applegate. We would note that Appendix 1 of the Minore Report contains handwritten notations, apparently placed thereon by appellant, relating to four watersheds. The notation "LA" stands for Little Applegate, while "BC" stands for Bear Creek. The "BC" next to unit No. 46 was clearly written on top of a "LA" notation. Thus, TELAV, itself, was apparently uncertain of the proper designation of this unit.

no way calls into question BLM's decision to clearcut the four units in the Lick Gulch timber sale.

Secondly, as we interpret the quotation from the Minore Report, the study actually suggests that potential stocking rates would be greater than that indicated in the report if modern techniques 'were properly applied.' Assuming the recommendations in the report are adhered to and modern techniques are applied, the potential restocking rate would, in fact, be the probable minimum of the actual restocking percentage achieved. Insofar as the areas that are to be clearcut are concerned, we find that the temperatures and moisture levels at the sites are not likely to prohibit regeneration.

Concerning the partial cuts, the Minore Report did recognize a positive correlation between aspect and lower temperatures with respect to release of trees at 35 to 45 years (breast height age) after a partial cut, and also noted a negative correlation with respect to the radiation index. It concluded, however, that all three correlations were weak, and did not include either aspect or radiation in its computations for estimating regeneration success on partial cuts. See Minore Report at 15-16, 20-21. The report noted, instead, the regeneration estimates for partial cuts were best derived by correlating percentages of rock cover with a table for indicator species at assigned values. See Minore Report at 27. This correlation, however, merely establishes relative success of natural post harvest regeneration. A low figure does not preclude successful regeneration. Rather, as the report notes, "if the calculated stocking percent derived from figure 2 is low, immediate post harvest underplanting will be necessary." Id. at 33. In any event, our review of the documentation in this record fails to establish

that climatic conditions are present within the Lick Gulch area which would, by itself, preclude successful regeneration in either the clearcut or partial cut areas.

Finally, the last major individual component in controversy is the percentage of slope on the timber sale sites. TELAV did not really argue that the various slopes were so great as to, by themselves, prohibit the harvesting of timber. Rather, it was TELAV's contention that the steep slopes, when combined with other factors, in particular the shallow soils which TELAV alleged were present (but see discussion, supra), aggravated all of the regeneration problems (SR at 22-24). TELAV expressly objected to tractor logging on units Nos. 1 and 8, both of which, TELAV contended, contain slopes in excess of 35 percent. See AP, Appendix F.

In its answer, BLM disputed TELAV's argument that the slope was severe, and pointed out that tractor logging in units Nos. 1 and 8 was to be confined to benched areas with slopes under 35 percent (AN at 18). In its rebuttal, BLM submitted, in conjunction with its soil survey, information concerning slope gradients which indicated that the mean slope for the timber sales areas was 55.6 percent and noted that this was "normal for the Medford District and Western Oregon forest sites" (RB at 3 and Attachment 2). 13/

13/ We also note that the maximum gradient on any specific sample site was 75 percent, occurring on two sample sites, in unit No. 4 out of a total of 45 readings taken on all 12 units. See RB, Attachment 2. This survey can be contrasted with an earlier BLM submission which indicated slopes of approximately 70 percent on units 6, 10, and 11. See AN, Attachment 4. The specific gradients for these units in the later submission were: 66 percent for unit 6, 65 percent for unit 10, and 62 percent for unit 11.

These estimates contrast with 13 readings in excess of 80 percent in the report prepared by Northwest Biological Consulting and submitted by TELAV. See RP, Appendix AA. However, the Williams Report, also submitted by

Our review of the submissions leads us to the conclusion that the slope gradients are not so severe as to, by themselves, militate against the regeneration of the cut areas. Thus, neither the soils, nor the climate, nor the steepness of slope, in and of themselves, justify the conclusion that successful regeneration will not occur. The ultimate question, however, is whether a combination of the factors of aspect, soil depth, slope gradient, and elevation make regeneration feasible in the clearcut areas.

In its rebuttal, BLM submitted a table purportedly showing the comparative relative stocking which could be expected from the Lick Gulch sites. See RB, Attachment 3. The tabulated results, however, predicted relative stocking would be below 60 percent for every unit to be clearcut. By unit, the estimated clearcut relative stocking was 52 percent for unit 6, 54 percent for unit 10, 51 percent for unit 11, and 48 percent for unit 12. Inasmuch as one of the premises of the Minore Report was that clearcutting should not be attempted unless relative stocking could be estimated to exceed 60 percent, these tabulations scarcely supported BLM's decision to clearcut.

In transmitting this data to the Oregon State Director, the Medford District Manager attempted to justify this disparity by arguing that "these predictions are based on past management, which included less efficient practices (such as seeding), poor off-site planting stock, time gaps which allowed competing vegetation to take command of the units, or dependence on natural

fn. 13 (continued)

TELAV, noted that, for the entire Little Applegate watershed, the average slope is between 50 percent and 70 percent. While an exact comparison of plate 4 of the Williams Report, which shows slope gradients, to the specific units of the timber sale is impossible, due to the small scale of the plate map, our analysis convinces us that the plate tends to corroborate the BLM slope readings. See Williams Report at 14.

"regeneration." RB, Attachment 1. He argued, therefore, that more modern silviculture practices would "significantly" increase relative stocking. Id.

The simple fact, however, is that BLM made a crucial mathematical error in tabulating its results in Attachment 3. The Minore Report provided two separate regression equations, one in terms of inches and feet, and the other in terms of centimeters and meters. 14/ The field data was generated in inches and feet. In computing relative stocking, BLM decided to convert the inches and feet into centimeters and meters. There are 2.54 centimeters in each inch. Thus, BLM should have multiplied the number of inches in its soil depth computation by 2.54. Instead, for some inexplicable reason, BLM divided the number of inches by 2.54. As a result, the value of soil depth (which is positively correlated to regeneration) was markedly distorted on the downside. When the computation is correctly made the unit values become 66.69 percent for unit 6, 72.72 percent for unit 10, 67.97 percent for unit 11, and 68.27 percent for unit 12. All of these figures are above the 60 percent relative restocking level the Minore Report maintains is the minimum necessary to justify clearcutting. Therefore, we find that the site specific data of Attachment 3 does, in fact, support BLM's determination to clearcut the four units.

15/

14/ The two equations are: (1) Stocking percent = 33.7623 + 31.1419 (clearcut aspect code) + .54355 (soil depth, in.) - .000186056 (elevation in feet x slope percent). $r^2 = .515$; (2) stocking percent = 33.7623 + 31.1419 (clearcut aspect code) + .213996 (soil depth, cm) - .000610418 (elevation in meters x slope percent). $r^2 = .515$.

15/ Not only were BLM's tabulations in Attachment 3 totally wrong, the data used therein contradicts the relative placement of the clearcut units on BLM's copy of the Minore Report. AN, Attachment 2A. Thus, BLM placed units 6 and 10 in the elevation range of 2,200 to 3,100 feet, when the actual samples in Attachment 3 of the rebuttal show elevations of 3,560 and 3,720, respectively. The slope for units 11 and 12 was shown to be less than 56 percent, but the actual slope readings for these two units were 62 percent,

Both parties have supplied this Board with voluminous documentation relating to past success, or lack thereof, in regeneration of prior timber harvests in the Little Applegate watershed and nearby environs. In addition, both parties have addressed the silvicultural prescriptions for the areas to be cut as to their effectiveness in aiding regeneration. Before discussing these submissions, however, we wish to examine the relevancy of such documentation.

That evidence of past regeneration is of some relevance is clear. To the extent that past cuts have failed to regenerate where the harvesting occurred in conditions similar to the specific physical circumstances of the instant sale sites, when those sites were treated in a manner similar to that presently contemplated by the silvicultural prescription for the sale sites in Lick Gulch, the success or failure of reforestation attempts is of particular import. But to the extent that each former site varies more and more from the Lick Gulch sites, or where past treatment cannot be considered comparable with that proposed herein, the relevance of regeneration success or failure becomes increasingly attenuated. For example, the fact that a clearcut site with an aspect of 180 degrees, an elevation of 4,000 feet, a slope in excess of 60 percent, and soil depth below 25 inches, did not regenerate is simply not probative in any way as to the question of whether the sites in the Lick Gulch sale will regenerate. Only comparable sites treated by comparable methods have any real relevance to the ultimate question of

fn. 15 (continued)

thereby placing them in a different category. We would suggest that, if BLM is not willing to take sufficient time and care to assure that its tabulations and submissions are accurate, it, at least, refrain from submitting erroneous ones which serve only to clutter up the record and confuse the adjudication of appeals.

regeneration. With this in mind, we will examine the documentation submitted by the parties on this issue.

As we have indicated, the relevance of past reforestation experience in determining the likelihood of successful regeneration at the instant sites is directly related to the extent to which the physical characteristics of the past sale sites, as well as subsequent silviculture prescriptions, coincide with the physical characteristics and prescriptions for the instant sites. Both BLM, in its rebuttal (RB, Attachment 3), and appellant, in its surrebuttal brief (SB, Appendix A), have provided this Board with an analysis of past success in regeneration. While BLM provided a list of 38 sites, TELAV has submitted a total of 83 sites for our consideration. [FN16] Since TELAV's submission is the more complete of the two, we will generally refer to its numbering system. 17/

Initially, however, with respect to the clearcut areas (43 in all), we wish to point out certain difficulties in correlating the data submitted on these past harvests with other submissions tendered relating to the instant sales, particularly the Minore Report. Thus, there is no information on soil depth in these regeneration studies. Moreover, both aspect and slope data are given on a different basis than used in the Minore Report. Aspect is given only in terms of cardinal points (north, south, etc.). While the

16/ TELAV contends that it has supplied data on 44 sites omitted by BLM. Actually, it has added only 41 new sites, since it has subdivided four BLM sites into eight sites. These subdivided sites are 3, 19, 26, and 27. In addition, TELAV misnumbered BLM site 12 as 39-2-04-002 when it was actually 39-2-04-102. Thus, TELAV's site T-12 is not a new site, but is the BLM site 12 correctly identified.

17/ A number prefixed by the letter "T" indicates a site submitted by TELAV and not contained in BLM's submission. Those numbers without a prefix were contained in both submissions.

breakdown in the Minore Report for slope percentages were between 30 to 55 percent and 56 percent to 80 percent, the data of these submissions is quantified as "gentle" (10 to 34 percent), "moderate" (35 to 64 percent), and "steep" (65+). It is therefore impossible to determine precise comparability between any site in the past studies with the Minore Report predictions as to success in regeneration of clearcut areas.

Nevertheless, certain sites are clearly not similar to those in Lick Gulch. Thus, we have eliminated from consideration all sites which do not have a north aspect, a total of 13. 18/ Data from five additional sites were discarded because of a combination of excessive slope gradient (65 percent or greater) together with high elevation levels (ranging from 3,800 to 4,300 feet to 4,700 to 5,000 feet). 19/ Finally, site No. 37 was eliminated since, even though its slope was deemed 'moderate' its elevation was between 4,400 to 5,200 feet, and, thus, beyond the Minore Report top limit of 4,800 feet. 20/

Of the remaining 23 sites, fully 16 have questionable components. Thus, site Nos. 6, 7, 9, 19A, 19B, 20, 21, T-5, T-6, T-7, T-16, and T-17 all have slopes in excess of 65 percent at elevations above 3,000 feet and thus regenerative success could only be predicted to occur if soil depth was greater than 25 inches. Similarly, site Nos. 25, 26A, 26B, and 38, while possessed of "moderate" slopes have elevations in excess of 4,000 feet which

18/ These sites are Nos. 22a, 27a, 27b, 29, 31, 33, 35, 36, T-4, T-23, T-26, and T-31.

19/ These sites are Nos. 15, 16, 28, 32, and T-25. In addition, we have been forced to eliminate No. T-15, since no data was submitted relating to the elevation of this site.

20/ We recognize that 4,800 feet was the top limit of the Minore Report simply because it examined no data from above that elevation. However, it is also clear from that report that as relative elevation increased, chances of regeneration decreased.

makes the specific aspect of critical importance in determining likelihood of regeneration, if soil depth is under 25 inches. Because of the absence of soil depth information we can afford these results only limited weight.

We will, therefore, concentrate our analysis on the following sites: 3A, 3B, 4, 5, 18, 24, and 30. All of these sites appear both in BLM and TELAV's submissions. BLM considers all of these sites to have met target stocking standards. TELAV disputes this contention.

TELAV's attack is two-pronged. First, it suggests that BLM is attempting to mislead the Board through its use of terminology such as "target" stocking levels. Secondly, it suggests that the vast majority of these sites should have been considered backlogged because of the time it took to reach "stocked-established" status. Because of the stress TELAV has placed on the precise terminology relating to reforestation, it is necessary to define the relevant terms prior to discussing TELAV's contentions.

A stand of timber is said to be "established" if it consists of suitable growing trees, having survived at least one growing season, and "which are past the time when considerable juvenile mortality occurs." BLM Manual 5705.05H (Oregon State Office Supplement). ^{21/} "Stocking" is an expression of the number of uniformly spaced, suitable trees per acre. Depending on the site class (which can vary from I to V in a decreasing level of presumed productivity) different stocking rates are established for either "target" or "minimum" goals. All parcels in the sale, and, indeed, in the general

^{21/} All of the citations to the BLM Manual in the discussion on reforestation will be the Supplement prepared by the Oregon State Office. The BLM Manual number will be followed by the notation "(OSO)."

submissions of both parties, are site class IV or V (the lower end of the scale). We will concentrate on these two site classes. The target stocking standard for class IV is 245 trees per acre, and for class V is 200 trees per acre. Minimum stocking standards are 150 and 100 trees per acre, respectively. Before examining the specific data, however, we wish to make a few general observations.

Much has been submitted related to the question of whether most of these sites are or should have been classified as "backlog." Under present standards, units are considered "backlogged" if the reforestation units are understocked and had been denuded more than 6 years earlier. See BLM Manual 5705.12B3 (OSO). TELAV suggests that every one of the seven sites we are intensively examining should have been backlogged. BLM, on the other hand, notes that the 5-year standard for the regeneration period was not developed until 1972. All of the clearcut sites under analysis (in fact, every clearcut site submitted except one) 22/ were cut prior to 1970.

When the 5-year standard was adopted, BLM states:

Older cutting units, where established regeneration had not been successfully achieved in the last 5 years were not summarily withdrawn, but classified according to the judgment of the area manager. Usually there was strong evidence the reforestation treatments were not carried out in the most effective manner. Seasonal, biological and administrative delays and constraints often render reforestation treatments ineffective. These failures do not diminish the reforestation potential of the areas.

(RB at 1). Thus, BLM did not automatically apply the new standards to the

22/ This was site No. T-34, which was not cut until October 1980, and had not yet been planted. Site No. 34 was also listed by both BLM and TELAV as having been clearcut in October 1975. Actually, however, a review of the reforestation record card (RRC) for this site shows that it was cut in October 1965.

cuts, but, rather, determined by other factors whether or not to withdraw the individual units.

We wish to point out that while the term "backlogged" and "withdrawn" may seem interchangeable they do not mean the same thing. "Backlog" is a stocking category, not an indication of whether or not the stand is established. This is clear from the Solution to Operations and Reforestation Monitoring Systems Manual (STORMS). As STORMS notes, the four basic classifications are: (1) Understocked current categories, (2) understocked backlog categories, (3) stocked unestablished, and (4) stocked established. As we shall show, many of the study sites which TELAV has suggested should have been classified as "backlogged" were properly classified as stocked-unestablished during the period in question.

"Withdrawn," on the other hand, is a management category which removes the land from the permanent forest base. Land which is properly in the understocked backlog categories may eventually be 'withdrawn' because of a failure to meet minimum stocking standards, but land can be withdrawn for other reasons as well, such as a failure to become established. TELAV's contention that all of the study units should have been "backlogged" is technically not correct. We do recognize, however, that the failure of a past site to regenerate within 5 years, quite independent of whether the site should or should not be considered "backlogged," does bear on the likelihood of successful

regeneration at the Lick Gulch sites. But a problem develops in time computation, which can best be explained by an illustration. Parcel 3A, consisting of 12 acres, was clearcut in 1960. The initial survey was conducted in March 1961 and showed the unit as understocked carrying only 34 trees per acre. The unit was then planted with bare root Douglas fir seedlings in fiscal year 1962. A preestablishment survey in October 1962 classified the acreage as stocked-unestablished with 456 trees per acre. Subsequent surveys in 1964, 1966, and 1971, all continued the classification as stocked-unestablished with stocking rates variously of 354, 422, and 476 trees per acre. In January 1976, a survey returned the 12 acres as stocked-established with 210 trees per acre. TELAV suggests that this unit required 16 years to finally establish. See SB, Appendix A at 21.

TELAV's figure, of course, represents the entire period of time from the clearcut to the 1976 survey. We believe, however, that this total may distort the real picture. Inasmuch as we are only concerned with plantation regeneration, we feel the starting date should be the date of the first planting. Second, when a survey classifies land as stocked-established it is declaring what presently exists; the date of the survey is thus not coterminous with the date the stand became stocked-established. Regeneration, however, is concerned with when the stand will become stocked-established, not when BLM will discover this fact. Accordingly, we believe the fairest system of time allocation possible is to split the difference in time between the date of the survey which classified the land as stocked-established and the survey immediately prior in time. We also will begin our time computations as of the initial date of planting. The results of this computation are shown on the following chart:

Unit	#Year Cut	Year First Planted	Year of Penultimate Survey	Year Classified as Stocked-Established	Computed Time
3A	1960	1962	1971	1976	10-1/2
3B	1960	1962	1971	1976	10-1/2
4	1960	1962	1971	1976	10-1/2
5 *	1965	1966	1973	1975	7
18	1964	1964	1967	1974	6-1/2
24	1964	1965	1970	1976	8
30	1959	1961	1972	1975	12-1/2

* In 1979 this unit was reclassified as stocked-unestablished pending release treatment.

This chart, while substantially lowering the total time of theregeneration period from that calculated by TELAV, nevertheless shows a regeneration period in excess of 5 years for every single sample. The question becomes the extent to which we can rely on the assurances of BLM that the failures of the past were occasioned by past management practices which were 'less efficient' than those contemplated today. In addition, BLM suggests that its silviculture prescriptions will result in regeneration results greater than that shown in the past.

TELAV strongly disputes these contentions. Thus, TELAV argues:

BLM Medford is charging previous BLM Medford administrations with mismanagement. The removal of area and district managers from areas of controversy, allowing new administrations to admit that previous administrations did a bad job, while promising to do better themselves, is a technique with which the public is all too familiar. BLM Medford's former District Manager, George Francis, complained that the administration which preceded him did a bad job. The administration which has replaced Mr. Francis

apparently feels that Mr. Francis did a bad job. There is little consolation in this for the public. The fact is, it is left with a bad job.

(SB at 7).

We are not unsympathetic with TELAV's concerns. We recognize that it can become all too easy to blame the mistakes of the past on prior management practices and to suggest that none of the negative results that characterized such activities will recur simply because more enlightened management policies will be pursued in the future. On the other hand, we cannot blind ourselves to the fact that knowledge concerning silviculture regimens has increased over the years, based, in part, on lessons gleaned from the very management activities of the past which are presently decried. Indeed, a number of the units of our sample exhibit precisely the type of management activities which BLM has suggested led to poor regeneration results.

A number of the units show a 2-year period between clearcutting and replanting, a period of time which would permit encroachment of competing vegetation. On only three of the units (18, 24, and 30) did any site preparation occur prior to planting, and on one unit seeding rather than planting was originally used. ^{23/} All in all, the specified criticisms of the District Manager are disclosed on the study sites. In light of this, we cannot say that the mere fact that past clearcuts have not regenerated within a 5-year period automatically forecloses any clearcutting in the Little Applegate watershed. Indeed, the past should never be viewed as a fixed

^{23/} This was unit No. 5. The seeding proved unsuccessful and was followed thw next year by planting.

absolute guide since such an approach necessarily concretizes any former mistakes for all time, and cannot make allowance for subsequent technical advances.

Another factor which BLM contends supports its decision is the special silviculture prescription which will be applicable on these sites. 24/ Specifically, the silviculture prescription for the clearcut units provides for gross yarding of unmerchantable material for site scarification purposes and restrictive burning of residual slash 25/ (AN at 16).

TELAV suggests that the only advantage of gross yarding would be to make any subsequent burn cooler, and takes particular exception to the proposed burning of 91 percent of the sales area, noting that inasmuch as the area is already classified as restricted because of inadequate moisture, burning can only exacerbate the general problems encountered in the area. See RP at 33-45. 26/ TELAV, in fact, questions whether burning of the slash

24/ We would point out here that the silviculture prescription units have a different numbering system than that used on the sale sites. Thus, silviculture prescription (SP) unit 1 consists of sale sites (SS) 1 and 9, SP unit 2 consists of SS units 2 and 8, SP unit 4 consists of SS units 3 and 4, SP unit 6 consists of SS units 6 and 10, SP unit 10 is SS unit 5, SP unit 15 is SS unit 7, SP unit 16 is SS unit 12, and SP unit 17 is SS unit 11. In order to minimize confusion, all subsequent references to silviculture prescription will be made in terms of sale sites.

25/ While the Answer actually said that gross yarding would be of merchantable material, this is clearly a mistake. Gross yarding is, by definition, the "yarding of unmerchantable logging residue to the concentration points" (EIS, G-4). The individual silviculture prescriptions indicate that yarding was to take place of all unmerchantable material down to 8 feet by 8 inches. See AN, Attachment 8.

26/ While BLM subsequently alleged that the silviculture prescription called for multiple species planting (see RB at 3), TELAV correctly pointed out that only 4 units (2, 3, 4, and 8) would be planted with anything other than Douglas fir seedlings. All clearcut units were to be planted only with Douglas fir.

is a useful technique for site preparation any place in the Little Applegate watershed.

Insofar as the utility of burning is concerned, this is an area in which reasonable minds may differ. Clearly, burning will have some incremental effect on increasing soil temperatures and reciprocally decreasing the amount of available moisture, in addition to increasing sedimentation in adjacent water bodies (an issue examined infra). BLM has attempted to mitigate this result by mandating gross yarding to 'cool' the burn and placing limitations on the time periods in which burning may be accomplished. Appellant has simply not convinced us that BLM's silviculture prescriptions are inadequate to ensure the likelihood of regeneration. See generally, A.C.O.T.S., 61 IBLA 396 (1982).

TELAV also argued that various of the mitigating measures provided for in the Environmental Analysis Record (EAR) were not replicated in the actual sales contract. See SR at 117-18. TELAV originally listed seven separate measures not provided for in the contract which had been required in the EAR. BLM generally countered these allegations by pointing out specific contract provisions which arguably covered the EAR recommendations. 27/

27/ In one notable regard, however, there was a disagreement over whether a mitigating measure had, in fact, been adopted by the EAR. Thus, TELAV argued that the EAR had provided that 'in units 1 and 13 tractor yarding would be restricted to conditions when the average soil moisture content of the surface six inches is below 20% by weight' but that no such provision appeared in the sales contract (SR at 118). In response, BLM pointed out that not only had unit 13 been dropped from the sale, but the mitigating measure (measure 'i') had not been accepted as a recommended mitigating measure (AN at 48-49). In its Reply, TELAV argued: "mitigating measure i) in the EAR was accepted as a Recommended Mitigating Measure. The EAR states "All of the above mitigating measures would be recommended except for the following: j), n), and dd)." (RP at 65). While literally true, this statement by TELAV is grossly misleading.

The real crux of this disagreement lies in the reliance by BLM on general contract provisions, such as 41(F)(8), which provides that "slash shall be disposed of in accordance with the written instructions of the Authorized Officer," in lieu of specific provisions delineating the requirements of the EAR. While we recognize that inclusion of the specific mitigating provisions recommended by the EAR might be more time consuming, we agree with TELAV that, as a general rule, it should nevertheless be done. Explicit provisions serve the purpose of both notifying the purchaser of the specific requirements and of assuring that the authorized officer is cognizant of the same.

But while we hold that this is the better procedure, failure to spell out these requirements, herein, is not fatal. The requirements relating to mitigation are in the case file and, after this appeal, it is scarcely credible that either the purchaser or the authorized officer could be ignorant of what was required. We have seen no indication that these measures will not be scrupulously undertaken and hereby expressly so direct.

While our analysis has concentrated thus far on the clearcut sites, much of it is equally applicable to the partial cuts. We do wish, however,

fn. 27 (continued)

A review of the EAR shows that the Recommended Mitigating measures are found at IV.A.3. That section reads, in relevant part: "All of the above mitigating measures would be recommended except for the following: (j) Tractor yarding would be restricted to 20% or less soil moisture conditions and it is felt that this would be sufficient to reduce compaction." While the letter identification used is "j," the substance of the restriction described is clearly "i" in the "Possible Mitigating Measures," as BLM contended. Just as the submission of erroneous data tabulations by BLM scarcely aids in the adjudication of appeals (see n.15, *supra*), so, too, grossly misleading arguments presented by an appellant do nothing to advance decisionmaking.

to directly address the documentation submitted in relation to past reforestation success as it relates to partial cuts.

A total of 30 separate partial cuts were represented in TELAV's Second Reply. An analysis of these cuts, however, discloses that they are of little probative assistance in predicting success in the Lick Gulch sites. Nine of the sites were not planted until 1981, and no usable data concerning their regeneration is available. 28/ An additional eight sites were surveyed the same year they were planted and were deemed stocked-unestablished, but have not been surveyed since. 29/ The absence of subsequent surveys makes it impossible to ascertain their present status, and the fact that they were originally classified "unestablished" is not relevant since in less than a year they could scarcely be deemed "established." See, e.g., BLM Manual 5705.12B2 (OSO).

The remaining sites disclose equally inconclusive results. Three are classified as stocked-established (T-24, T-32, and T-33), though TELAV emphasizes that they are not within the Little Applegate watershed. Three other sites, all cut in 1975 and planted in 1978 (T-12, T-9, and T-11) were classified as of 1980 as stocked-unestablished. Two sites cut in 1972 and planted in 1975 (T-18 and T-19) were classified as understocked in 1977. And six sites cut in 1958 were classified as understocked when last surveyed in 1973. We find nothing in this data which impels a conclusion one way or the other.

28/ These sites are Nos. 1, 10, T-1, T-2, T-3, T-8, T-13, and T-14.

29/ These sites are Nos. 13, 14, 17, 20, T-20, T-21, T-22, and T-37.

The Minore Report also developed a multiple regression equation to predict relative success on regeneration of partial cuts. Unlike the clear-cut equation where the relevant variables were aspect, soil depth, elevation, and slope, the Minore Report based its predicted stocking rates on rock cover and the presence of specific vegetation on the partial cut sites. 30/

BLM's rebuttal contained computed estimated stocking percentages for six of the eight sites designated for partial cutting. See RB, Attachment 3. The predicted relative stocking rate varied from 39 percent on unit 3 to 78 percent on unit 5, with an overall predicted stocking percentage of 60.33 percent. We do note that the predicted relative stocking rate for units 1 and 3 are relatively low, 45 and 39 percent, respectively. However, two things must be kept in mind. The Minore Report data on partial cuts was developed based on studies of stands which had undergone natural regeneration. See Minore Report at 14. All units in the Lick Gulch sale will be planted after the harvest, with the exception of units 1 and 9, which are undergoing an overstory removal, not a regeneration cut.

Second, while the Minore Report suggested an absolute proscription on clearcutting sites where less than 60 percent relative stocking could be predicted, low figures obtained on proposed partial cut sites were to be interpreted as requiring "immediate post-harvest underplanting."

Minore

30/ Rock cover was broken down into six classes and accorded numerical values of zero to five. Since rock cover was negatively correlated to regeneration success, the greater the number assigned to the class, the more likely regeneration difficulties would arise. A vegetation indices table was developed (Table 6) to assign relative value to indicator species. The equation derived was "Stocking % = 17.744 - 5.5548 (rock cover class) + . 475793 (vegetation index)². r²=.636."

Report at 33. Such planting is proposed for all units undergoing a regeneration cut. Considering all relevant data, we are unable to find that TELAV has established that the proposed partial cuts will not have established regeneration within 5 years. In sum, therefore, we conclude that the units involved in the Lick Gulch sale are likely to achieve regeneration within the 5-year period contemplated in the EIS.

[3] While the bulk of TELAV's submissions centered on regeneration, other issues received considerable attention. Among these were watershed protection, streamflow and water quality, the economic stability of surrounding communities, recreational values, whether the provisions of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4331 (1976), were followed, impacts on animals and plant species and the adequacy of the cultural resource inventory. We will address each of these concerns, though necessarily in less detail than we have examined the issue of regeneration.

We shall deal with TELAV's arguments concerning watershed protection together with the issue of streamflow and water quality. TELAV argues that various operations prescribed by BLM, in particular burning of the slash and tractor yarding, will necessarily increase erosion and result in elevated sedimentation levels in Lick Creek. See generally SR at 33-59. In addition, TELAV argued that the EAR indicated that the proposed action would increase water temperatures and was therefore not allowable (RP at 41-42).

BLM responded by noting that Lick Creek was classified as a class II stream, i.e., "any headwater streams or minor drainages that generally have limited or no direct value for angling or other recreation" (AN at 28). The

Medford District has subdivided this category into "Important Class II" and "Other Class II." Lick Creek has been placed in the "Other Class II" category which "includes ephemeral intermittent and perennial streams that have no direct fisheries value but have an important impact on downstream water quality." Id. 31.

The multiple use recommendations for 'Other Class II' streams require provision for a riparian zone of variable width on both sides of streams that exhibit a significant amount of riparian vegetation. As BLM notes, specific practices are recommended:

whenever possible protect all hardwoods, brush, non-commercial conifers, non-merchantable conifers. If necessary, leave merchantable conifers to meet long-term goals of aquatic and terrestrial wildlife and water quality. Priority merchantable "leave" trees should be those in the streambottom and on slopes immediately adjacent to the stream.

When necessary and practical use directional felling within a tree length [sic] of all intermittent and perennial streams to protect stream-bank stability and vegetation on streambanks.

Provide complete suspension across all intermittent and perennial streams whenever practical. If complete suspension cannot be attained, yarding corridors will be designated.

(AN at 29-30).

BLM suggests that it has followed these guidelines in the instant sale. Thus, one end suspension of logs is mandated on all sites to be cable yarded and a limitation on the period of the year in which tractor yarding can occur is provided for the two units (1 and 8) where tractor yarding is prescribed.

31/ BLM alleges that the purpose of this bifurcation is to afford greater protection to streams that can support resident fish populations.

See Contract, sections 41(B)(6) and 41(B)(8). The sales contract forbids yarding across Lick Creek in units 2, 3, and 4, and provides that in unit 4 a temporary crossing shall be installed, which must be removed upon completion of the cut of unit 8 (Contract sections 41(B)(6) and 41(D)(2)). In addition, in units 1, 2, 3, 4, 8, and 9, through which Lick Creek flows or is immediately adjacent, and which have established riparian habitat, all trees designated for cutting within 150 feet of the stream are to be felled away from the stream (Contract section 41(B)(15)). Finally, all of Lick Creek within the sales sites is to be cleared of all debris 1-inch in diameter and 1-foot long or greater (Contract section 41(D)(1)).

While recognizing that these measures are provided for, TELAV suggests that, given the steepness of the slopes and the erosive qualities of the soils, 32/ they will simply not work. In particular, it argued that only 37 percent of trees in unit 2 in the creek or on the adjacent banks were to be left (see AP, Appendix M), and that the BLM wildlife report recognized that trees between the stream and road would most probably roll into the alder and streambed when they are bucked. 33/

32/ The EAR classified the surface erosion hazard of the Colestine, Manzanita, and Vannoy soils as moderate and the Beekman soils as low to moderate (EAR at 4).

33/ TELAV also argued that the Wildlife Report stated 'taking timber on steep side slopes will degrade 30' no entry buffer,' but argued that no mention of this was made in the EAR (SR at 49). This is simply not true. The preliminary wildlife report did suggest that a 25- to 30-foot buffer be established on some portions of drainages with extremely steep banks, but in the addendum to the report the author expressly stated "The areas I was going to identify for buffers (as mentioned in the preliminary report) where slope was excessive were in Unit 5a and this unit has been omitted from the present sale plan." Moreover, the EAR did mention the 30-foot buffer as a "possible mitigating measure." See IV.2.(U)(4) "A 30 foot buffer would be maintained where extremely steep banks exist (shown on Attachment B)" (EAR at 8). This became a recommended mitigating measure. See SR at 118. TELAV's contention on this point is clearly without merit. Indeed, TELAV expressly alluded to this provision subsequently in its statement of reasons.

TELAV has not expressly stated that trees growing in the drainage bottom are marked for harvesting. Such trees may not be felled consistent with the EAR. See EAR at 7 (mitigating measure IV.2.U.1). Indeed the EAR expressly mandated that "all trees growing in the drainage bottom or on the adjacent cutbank would be left." Id. We suspect that the source of contention relates to the areal extent of the cutbank. On the basis of the record before us, it is simply impossible to independently establish the physical limits of the cutbanks. Appellant has not shown that any of the trees designated for removal have been so designated in violation of the EAR.

Nor has TELAV established that soil erosion and the consequential increase in sedimentation is of such a level as to prohibit timber harvesting. Admittedly, an inevitable consequence of the harvesting of timber will be a residual increase in erosion as well as an increase in streamflow. But the measures proposed by BLM will, we believe, substantially mitigate adverse effects generated by timber harvesting. We do not find that the proposed sale will have significant long term impacts on either the Little Applegate water quality generally or the Lick Creek streamflow in particular.

TELAV contends that the sale will result in an elevation of the temperature of Lick Creek and is, therefore, contrary to Oregon water quality standards. TELAV alleges that temperature elevation will result because of damage to riparian vegetation caused by falling trees or during yarding which will result in reduced shade (RP at 41-42, citing the EAR). Increased stream temperature "decreases the water's ability to hold dissolved oxygen, and therefore the ability of the stream to support fish." Williams Report at 48. TELAV argues that, based on its sampling, the water temperature of Lick Creek

was 67.2 degrees on August 10, 1981, and, therefore, under the Oregon State Water Quality Standards, Department of Environmental Quality (DEQ), Chapter 340, no elevation of temperatures can be allowed. See SB at 15.

The cited provision of Chapter 340 reads as follows:

No measurable increases shall be allowed outside of the assigned mixing zone, as measured relative to a control point immediately upstream from a discharge when stream temperatures are 58 degrees F. or greater; or more than 0.5 degrees F. increase due to a single-source discharge when receiving water temperatures are 57.5 degrees F. or less; or more than 2 degrees F. increase due to all sources combined when stream temperatures are 56 degrees F., or less, except for specifically limited duration activities which may be authorized by DEQ under such conditions as DEQ and the Department of Fish and Wildlife may prescribe and which are necessary to accommodate legitimate uses or activities where temperatures in excess of this standard are unavoidable and all practical preventive techniques have been applied to minimize temperature rises. The Director shall hold a public hearing when a request for an exception to the temperature standard for a planned activity or discharge will in all probability adversely affect the beneficial use.

340-41-365(2)(b)(A). TELAV points out that no public hearing has been held and, thus, the timber sale is contrary to these guidelines.

The problem with TELAV's analysis, however, is that this provision is not applicable to timber harvesting. Rather, it is directed to point source discharges. 34/ This is expressly recognized in an earlier provision of the

34/ A "point source" is defined in the Federal Water Pollution Control Act as follows: "The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." Act of Oct. 18, 1972, 86 Stat. 886, 33 U.S.C. § 1362(14) (1976).

*301 DEQ standards which provides that "programs for control of pollution from nonpoint source when developed by the Department * * * shall, as applicable, be incorporated into this plan via the same process used to adopt the plan unless other procedures are established by law" (340-41-120(5)) (emphasis supplied). In the absence of specific programs for nonpoint sources of pollution, the only relevant provision is 340-41-026(7) which states 'logging and forest management activities shall be conducted in accordance with the Oregon Forest Practices Act so as to minimize adverse effects on water quality.'" The efforts undertaken by BLM show that it has, indeed, attempted to minimize adverse effects on water quality and we reject TELAV's argument based thereon.

In criticizing the economic basis of these sales, TELAV makes two interdependent arguments. First, it contends that timber production is declining in relative economic importance in the area while, at the same time, tourism and other related activities, including fishing and hunting, are increasing. [FN35] As noted earlier, among the goals to be achieved under the O&C Act is provision for recreational facilities as well as contributions to economic stability. BLM recognizes the relevance of these goals in its policy statement on multiple use management of the O&C grant lands. See RB, Attachment 4. Thus, its general policy is:

Lands classified as nonsuitable for timber production on a sustainable basis will be used to the fullest extent possible to meet nontimber needs. Where nonsuitable lands are inadequate to accommodate authorized nontimber needs, suitable lands will

35/ We discuss the specific arguments relating to the effect of the proposed timber sale on fish and wildlife infra.

be substituted where a reduced level of timber production will serve with nontimber needs. Only when authorized nontimber needs cannot be met by a combination of the above will suitable lands be excluded from timber harvest.

(RB, Attachment 4 at 1-4).

BLM notes that its land use allocation process identified land where timber production was to be limited or totally avoided in order to preserve or enhance recreational or scenic values, but contends that Lick Gulch was not so identified because it is scattered with cutting units and logging roads and possesses no special scenic values (AN at 37). Moreover, BLM notes that the view from Little Applegate Road of the sites designated for harvesting is oblique and the resulting visual degradation will be minimal (AN at 38).

Lick Gulch is presently classified as Visual Resource Management (VRM) classes III and IV. 36/ The Visual Contrast Rating Worksheet which was prepared for this sale showed a maximum element contrast of 2 (moderate) with a maximum total feature contrast rating of 13, three points below the permissible contrast rating of 16 for class III and seven points below the level permissible for class IV.

36/ VRM class III is described as an area where "contrast to the basic elements (form, line, color, texture) caused by management activity may be evident and begin to attract attention in the characteristic landscape. However, the changes should remain subordinate to the existing characteristic landscape." BLM Manual 8411.61C4.

Class IV is described as an area where "contrasts may attract attention and be a dominant feature of the landscape in terms of scale; however, the change should repeat the basic elements (form, line, color, texture) inherent in the characteristic landscape." BLM Manual 8411.61C5.

Nevertheless, TELAV contends that sales activities will impair user enjoyment of three BLM recreational sites in the area and also intrude upon the view from neighboring hiking trails. While BLM admits that noise associated with timber harvesting will probably diminish recreational enjoyment in nearby lands, BLM argues that such diminution will be of relatively short duration. Insofar as the longer lasting visual impacts are concerned, BLM merely noted that they are within the acceptable ranges for the VRM rating of the land.

We find ourselves in substantial agreement with BLM. The entire purpose of the VRM classification system is to establish different categories of lands in terms of scenic values in order to differentiate between lands with high scenic value from those with lesser scenic values, since all BLM lands are presumed to have some scenic value. VRM classes III and IV represent that lowest possible permanent ratings on the visual index. If the proposed activities are not permissible on this land, they would be impermissible on any land, which, of course, would terminate timber harvesting, or at least clearcutting, on all Federal land. Contrary to TELAV's argument, BLM has employed a specific management tool, the contrast worksheet, to measure the visual impact and found it to be within the acceptable range for this class of land. TELAV has failed to persuade us that the harvesting of this timber will have significant adverse effects on the recreational values presently available in Lick Gulch. 37/

37/ In any event, even if a proposed activity exceeds the degree of contrast prescribed for an area, it is not automatically prohibited. Rather, a decision may be made by the District Manager to proceed with the proposal while attempting to reduce the impacts as much as possible. See BLM Manual 8431.33A.

TELAV also criticized the proposed sale on a more traditional economic basis. Thus, it contended that the timber in Lick Gulch could not be harvested and regenerated at a profit to the Government. In addition, it argued that, insofar as the return to Jackson County was concerned, the \$87,600 which it received (assuming a subsequent overstory removal on the partial cut unit) would be prorated out, over the 80 years of the sustained yield cycle, as \$1,095 per year or .011 percent per year of Jackson County's annual O&C income. 38/

BLM, on the other hand, notes that under the allowable cut plan, each acre of the permanent forest base is presumed to be supporting an output of 445 bf per year. Therefore, BLM contends that, at current stumpage prices, the acreage in the Lick Gulch sale is providing an annuity of approximately \$20,000.

In essence, BLM is employing a macroeconomic analysis which looks to the acreage in Lick Gulch as merely a constituent component of the entire timber management program. TELAV is using a microeconomic analysis limiting its focus to the specific cash flow generated by the Lick Gulch sale. We are unable to determine how either approach is particularly relevant to this appeal.

38/ We are unable to ascertain the basis for appellant's assertion that Jackson County receives 40 percent of 50 percent of the total revenues. Without making a foray into the relatively complicated procedure and history of O&C disbursements (but see Skoko v. Andrus, 638 F.2d 1154 (9th Cir. 1979)), we note that section 201 of the O&C Act clearly provides that the counties receive 50 percent of all revenues. See sec. 201 of the Act of Aug. 28, 1937, as amended, 43 U.S.C. § 1181f (1976).

The fact that overall the timber management program may be premised on sound economic principles, the point argued by BLM, does not really address the question whether the harvesting of the particular areas at issue is economically viable. Insofar as the microeconomic analysis used by TELAV is concerned, the percentage of income that this sale provides to Jackson County is equally irrelevant to the ultimate question of whether this harvest is economic. Total income is always derived from smaller increments. If the mere fact that each individual component was miniscule in relation to the total was sufficient to justify the exclusion of that component, the end result might well be a total of zero. ^{39/}

We are aware that TELAV has attempted to question the economics of cutting the specific land involved in the sale by arguing that reforestation attempts will prove so costly that BLM will expend far more money than it will receive from the sale. This argument, of course, is premised on assumptions relating to regeneration which we have already rejected.

We also note that TELAV has submitted various studies criticizing any timber harvesting on lands with a stocking site class of III, IV, or V as uneconomic. See AP, Appendix K; SB, Appendix D. We do not wish to denigrate these studies. They are, we feel, probative of the ultimate question of whether the decision made by BLM to harvest the instant sites is economically justifiable. They represent, however, a judgment with which BLM's experts obviously disagree. While we are not unwilling to overturn a decision of

^{39/} Indeed, the essential fallacy of TELAV's approach can be seen in the fact that, by merely increasing the amount of timber to be cut in this sale, the percentage return to Jackson County is also increased. This result, however, hardly means that the timber harvest is therefore more economic.

BLM, even where such a decision is based on the admitted expertise of the Bureau, we must, as a practical matter, give great deference to its collective judgment. Thus, only where we are clearly convinced that an error has been made will we proceed to overturn the judgment of BLM. While the documentation provided by TELAV as it relates to the economics of the policy of harvesting lands in classes IV or V may engender doubts as to the correctness of that policy, it has failed to convince us that the policy is clearly wrong. 40/ We thus must reject its contentions on this point.

TELAV contends that the provisions of NEPA were not followed. See SR at 101-125. While recognizing the general adequacy of the EIS for JKSYU, TELAV contends that the EAR prepared for the Lick Gulch sale was deficient in a number of ways, including a lack of an interdisciplinary approach, insufficient public involvement, and an inadequate consideration of alternatives. We disagree.

40/ As an example of the difficulties inherent in attempting to quantify economic returns, we note that a study commissioned by appellant and prepared by the Cascade Holistic Economic Consultants (CHEC) analyzed the economic viability of managing the land in the Grouse Creek sale for sustained yield of timber. The CHEC study is found at AP, Appendix K. The conclusion of the report was that at a level of return above 5 percent, sustained yield could not economically be maintained, and that even at 5 percent the benefit-cost ratio would be low. While the study was prepared for the Grouse Creek sale, the economic principles and conclusions would, of course, have a wider applicability.

The problem we perceive with the CHEC study lies not in its internal computations but rather in its initial premises. Thus, the CHEC study presupposes that the land has already been harvested and analyzes merely subsequent regeneration costs and ultimate returns from post-harvest regeneration. If, however, one looks at the Lick Gulch sites and seeks to determine whether it would be economic to harvest and regenerate, the answer would be positive at all levels of return presupposed in the CHEC study. In effect, the CHEC study eliminates all present value of timber on the land.

The record clearly establishes that an interdisciplinary approach was utilized. TELAV's only specific allegation on this point was that the three Upper Carnegie units (units 7, 11, and 12) were not surveyed by anyone except a forester (SR at 103). This is factually untrue. See AN at 43. TELAV's general assertions that the fieldwork conducted by BLM did not constitute a "true" interdisciplinary approach cannot be given credence.

The question of the adequacy of public involvement is raised primarily over the inclusion of the three Upper Carnegie units in the Lick Gulch sale. As originally proposed, the sale did not include these units, but did include a proposed unit 13. As even BLM has recognized, the inclusion of unit 13 in the proposed sale, which had been classified as low intensity forest land and was a critical deer winter range, was a mistake. See AN at 42. The EAR also recommended, as a possible alternative, inclusion of the three Upper Carnegie units. It is to these units that TELAV addresses its contention of inadequate public participation.

A review of the various contentions of the parties shows that TELAV is essentially correct in its assertion that, for the purposes of site specific comments, there was no opportunity for public comment on the three Upper Carnegie units until after the EAR was made available. However, the EAR was made available for review, pursuant to public notice, for a period between June 23 and 27, 1980. See AN, Attachment 6. Views of the public were solicited. In point of fact, the decisions to select alternative A (deletion of unit 13), and alternative B (addition of the Upper Carnegie units) were not made until September 22, 1980, more than 3 months after the EAR was made available. Moreover, as BLM notes, interested parties are able to submit

comments up until the actual sales date, in this case December 18, 1980. We feel that more than adequate provision was made for public comments.

TELAV suggests that there was an inadequate consideration of alternatives. The alternatives to the sale as proposed were the elimination of unit 13 (alternative A), and the addition of the Upper Carnegie units (alternative B). In addition, in his decision selecting alternatives, the area manager expressly considered a "no action" alternative and rejected it.

Appellant suggests that deletion of unit 13, given the fact that it was low intensity land and a crucial winter deer range was scarcely an alternative; rather, it was required. Alternative B, TELAV argues, was simply not an "alternative," but an "addition" to the proposed harvest. TELAV also contends that the EAR failed to consider "a proposal to selectively log the area for uneven aged stands" (SR at 120).

Insofar as unit 13 is concerned, BLM admits that as low intensity land containing a crucial winter deer range it could not properly be harvested and thus adoption of alternative A was required. This fact, however, does not necessarily invalidate the EAR process. Indeed, the whole purpose of site specific EARs is to examine individual parcels to determine their suitability for harvesting. The generation of information which resulted in the exclusion of unit 13 is consistent with the real purposes behind the formulation of the EAR.

Alternative B is, indeed, an addition to the proposed action rather than an alternative thereto. But on both this point and in its allegation relating to the failure of BLM to consider selective logging, TELAV's complaint is misdirected.

The Lick Gulch EAR cannot be read as an isolated document. Rather, it must be reviewed in conjunction with the EIS prepared for the JKSYU. The EIS is the controlling document insofar as policy choices are concerned. The EAR is merely a site specific appendage which develops data to which the general policy of the EIS is applied.

The EIS, itself, discussed single tree selection in its description of the proposed action. Thus, it stated: "Single tree selection would average 90 acres annually on high intensity lands during the proposal period. Maintenance of a multi-storied stand is a major objective of this harvest method. It would be applied primarily to frost pockets and areas of heavy gopher infestation" (EIS at 1-29). Appellant does not allege the existence of either frost pockets or heavy gopher infestation. To the extent that TELAV disagrees with this policy determination which, in effect, limits use of single tree selection, its disagreement resides not with the EAR but with the EIS.

Moreover, a review of TELAV's statements concerning NEPA discloses a misinterpretation of the scope of the law. NEPA is not intended to prohibit actions which result in environmental degradation. Rather, its purpose is to ensure that decisionmakers are aware of the full range of consequences which may result from proposed activities. See James River Flood Control

Association v. Watt, 553 F. Supp. 1284, 1295 (D.S.D. 1982). As the Supreme Court has noted "NEPA does set forth significant substantive goals for the Nation, but its mandate to the agencies is essentially procedural. * * * It is to insure a fully informed and well-considered decision * * *." Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 558 (1978) (citations omitted.) See also Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980).

When the EAR and the EIS are considered with the addition of the admittedly voluminous submissions made in this appeal, it is clear that all environmental considerations have been exhaustively explored. NEPA requires no more.

TELAV suggests that the sale will adversely affect wildlife in the area, specifically deer and anadromous fish. In addition, TELAV argues that the sale violates the Endangered Species Act, 16 U.S.C. § 1536 (1976), pointing primarily to the presence of two "rare" plants, both cypripedium fasciculatum.

Insofar as anadromous fish are concerned, there is absolutely no evidence that Lick Creek is now, or has ever been, a spawning ground for such fish (TELAV's speculation to the contrary, notwithstanding). To th extent that TELAV's argument is directed to possible damage to anadromous fish spawning grounds in the Little Applegate River, such damage is, itself, dependent upon the extent of sedimentation increases in Lick Creek occasioned by timber harvesting activities. We have noted above that there will, inevitably, be an elevation in the sedimentation in Lick Creek as a result of the proposed sale. But, as we also noted, the mitigating measures proposed by

BLM will substantially lessen the level of increased sedimentation which will result. We reiterate our earlier finding that, based upon the evidence presented in the appeal, this timber sale will not have a significant adverse impact on the water quality of the Little Applegate River.

With respect to deer habitat, certain areas in the proposed sale (units 1, 2, 3, 4, 8, and 9) are crucial deer winter range. The EAR noted that the sale "would decrease thermal cover now existing for wildlife and the number of snags available for cavity nesters would also decrease" (EAR at 6). While various mitigating measures were adopted (see EAR at IV.2.W, IV.2.X, IV.2.Y), it was recognized that "thermal and protective cover for wildlife * * * would be reduced but impacts would not be long-term." See EAR at 9. This admission of short-term impacts, however, can scarcely be said to require BLM to forego the timber sale.

Any sale of standing timber, by definition, will dissipate thermal cover, though the extent of the dissipation will be dependent upon the methods to be used in harvesting the timber. Thus, the mere fact that thermal cover will be lessened cannot, ipso facto, invalidate a timber sale. The timber sale as proposed herein is consistent with the Medford District's management framework plan--wildlife recommendations. See AN, Attachment 5. While certain adverse effects may be anticipated, TELAV has failed to establish that the proposed timber sale will have impacts on wildlife sufficient to require that the sale be canceled.

TELAV's argument relating to the Endangered Species Act, supra, is based both on what TELAV alleges was an inadequate reconnaissance of the 12

timber sale area together with the admitted existence of two cypripedium fasciculatum which were uncovered during the field work. TELAV's position on the inadequacy of the reconnaissance seems to be that since a number of threatened and endangered plants are known to exist in the JKSYU, the failure to find any in the Lick Gulch sites shows that the biological survey was inadequate. This is classically circular reasoning, the end result being that threatened and endangered species will always be presumed to exist on any given site since if they are found, they are obviously present, whereas if they are not discovered, it is because a proper survey was not conducted. We reject this analysis.

The issues revolving around the admitted presence of cypripedium fasciculatum, a member of the orchid family, are even more convoluted. A great deal of argument has gone back and forth over whether the plant had ever been proposed for threatened or endangered status, with BLM strenuously arguing that it was not, while TELAV, pointing to such documents as the EIS (EIS at 2-18), equally vigorously arguing the opposing view. Our research has proven inconclusive on this point. We have been unable to find any publication by the Department which proposed cypripedium fasciculatum for threatened or endangered status. On the other hand, in a notice published in the Federal Register on December 15, 1980, cypripedium fasciculatum is listed as a taxon "no longer being considered as Endangered or Threatened." 45 FR 82480-81, 82548 (emphasis supplied). This clearly implies that, at one time, it was being considered for threatened or endangered status. In any event, we consider the emphasis placed on this question fundamentally misdirected.

There is no question that, as of now, cypripedium fasciculatum is not listed or proposed for listing as a threatened or endangered plant. The reason it was dropped from consideration was that it was proved to be more abundant or widespread than had previously been thought. Thus, the procedural consultations which TELAV argues should have been undertaken, are clearly not required now. While we recognize that cypripedium fasciculatum is protected under the Orego wildflower law, BLM has, in fact, provided for a 100-foot buffer around these plants to protect them. We fail to see, nor has TELAV suggested, what further steps, relating to the timber harvest, BLM should take in relation to these two plants.

[4] The last issue which we will examine relates to the cultural resource inventory which took place on the Lick Gulch sites. TELAV argues that only a "token" survey was conducted on these sites (SR at 137). It also notes that the 1-page cultural resource report failed to disclose any search of literature or inquiry to the National Register for Historic Places or relevant state historical societies. 41/

BLM's response is as follows:

41/ TELAV also challenged the qualifications of the individual who conducted the survey. BLM has not shown that the individual who conducted the survey was qualified as a 'professional cultural resource employee' within the meaning of BLM Manual 8111.41A. While we recognize that experience may well qualify an individual employee, there was no showing that the specific employee herein was qualified. If, in fact, he was not a qualified cultural resource professional the mere fact that the district cultural resource specialist reviewed the work is insufficient under the manual to satisfy inventory requirements. Such an employee must be under the 'direct supervision' of a professionally qualified cultural resource specialist. See BLM Manual 8111.42A.

Protestors complain "only 40% of area was surveyed." In western Oregon, especially in timbered areas we have found that a 100% survey is impracticable; that is, very few if any additional sites are found and the time involved is totally beyond our constraints of funding. The following points are made regarding cultural surveys in Western Oregon forested areas:

1) archeological sites will not be found, even if they exist, in areas where the ground is covered by duff and leaf litter, when the usual pedestrian survey is employed. In these areas we can find sites only after some disturbance has occurred.

2) Our broad knowledge of the area and the resource, allow us to predict where significant sites will occur.

Therefore, on all timber sales both BLM and USFS personnel are conducting surveys based on an 'initiative' and 'opportunistic' approach. That is, special attention is paid to areas where sites may occur such as near springs, streams, terraces, or good natural travel routes; and also areas where some previous disturbance such as a footpath or vehicular traffic has revealed the mineral surface of the soil.

* * * * *

A cultural resources overview based on a comprehensive literature search was completed in 1978. We are routinely advised of all new nominations to the National Register. The districts cultural resource specialists are in frequent contact with the State Historic Preservation office and those individuals doing research in this area. Formal inquiries of the sort mentioned, on each sale, would serve no purpose and generate a vast amount of paperwork.

(AN at 56-57). Leaving aside BLM's rather remarkable assertion that it can

"predict" where significant sites will be found, the fact remains that the

survey described by BLM does not comport with the requirements of the law or the BLM Manual.

As we noted in Western Slope Gas Co., 40 IBLA 280 (1979), the effect of the 1976 amendments to the National Historic Preservation Act, Act of

October 15, 1966, 80 Stat. 915, 16 U.S.C. §§ 470-70m (1970), was to require the Secretary to consider the effect of any action licensed by the Department upon any site or object "eligible for inclusion in the National Register." See Act of September 28, 1976, 90 Stat. 1320, 16 U.S.C. § 470f (1976). Prior to this time, in order to determine whether any proposed action would impact a site listed on the National Register, a simple inquiry would have sufficed. But by adding the phrase "or eligible for inclusion" it became necessary to establish a procedure by which such potential sites could be discovered before they were injured by licensed activities. Thus evolved the cultural resources inventory.

Three separate types of inventory of varying degrees of intensity are provided for in the BLM Manual (classes I, II, and III). Thus, a class I inventory, which normally covers an entire district, is an "Existing Data Inventory," which merely entails a review and compilation of known cultural resource data. Its purpose is to provide a general overview of the cultural resources of the district.

A class II inventory consists of a field inventory on a sample basis. Its objectives "are to identify and record, from surface and exposed profile indications, all cultural resources sites within a portion of a defined area." BLM Manual 8111.13A1. While the manual notes that "under constraints of time, manpower, and funding, a sampling approach is cost effective," the manual also expressly states that "since the method is not designed to completely inventory an area, it cannot be used for site-specific cultural

resource clearance unless the site-specific area coincides with previous intensively inventoried sampling units." BLM Manual 8111.13A2.

The class III inventory is the intensive field inventory, i.e., a complete surface inventory of a specific area. Such an inventory requires actual ground coverage of the entire area. Indeed, the manual is quite explicit as to the methods to be followed in the survey. See BLM Manual 8111.14B3.

At best, BLM conducted a class II survey, though the report submitted is woefully inadequate even for that purpose. 42/ But, as we noted above, a class II survey is insufficient to provide site-specific cultural resource clearance. Moreover, the EIS expressly provided "[e]ach proposed ground-disturbing activity * * * would be preceded by a complete field survey for cultural resources as part of the environmental assessment reports which precede each site specific timber sale" (EIS at 3-51 (citing BLM Manual 8100)). We find that TELAV's objections to the cultural resource survey which occurred herein are well-taken, and that BLM did fulfill its obligations under the relevant laws and manual provisions.

While we are not unmindful of the economics of the matter, the cost of compliance is not sufficient to justify a failure to comply. We must point

42/ Thus, a class II survey report is required to contain an abstract outlining the report, a brief discussion of the cultural history of the area, a statement of the sampling technique. BLM Manual 8111.13D3. None of this appears in the report.

out, however, that an intensive survey is a one-shot event. Once having established that no sites eligible for inclusion in the National Register exist in the area no further cultural inventory work will usually be needed. See BLM Manual 8111.14A. In addition, we note that in many other fields, such as oil and gas leasing, it is a common practice for BLM to require the applicant to pay for the cost of the necessary survey. BLM Medford may, indeed, choose to pass this cost along to future timber sale applicants. 43/ But not having done so in the instant case, it falls to BLM to absorb the costs of the cultural resource survey. BLM is directed, prior to any entry by the timber purchaser, to make a complete class III survey of lands involved in the timber sale in accordance with the procedures outlined in the manual. Should any cultural resource sites or artifacts be discovered BLM shall fully comply with the applicable procedures relating thereto, including, if necessary, the entering of negotiations with the timber purchaser to modify the contract.

Appellant has raised various other contentions in the course of this appeal. 44/ We have considered all of these arguments and have rejected them.

43/ This is not accomplished by section 41(D)(2)(EO-2) of the timber sale contract. This section merely relates to the discovery of a cultural resource site or prehistoric artifacts during operations on the land. It does not entail an initial cultural resources survey.

44/ An inordinate emphasis was placed in the briefs on the question of whether the Little Applegate area should have been designated as an area of critical environmental concern (ACEC). See generally 43 CFR Part 1600. There is no question, however, that it has not been so designated. We would point out that ACEC designation is part of land use classification under 43 CFR Part 2400. As such, questions relating to designation of ACEC' are not properly subject to review by this Board, either directly or collaterally. See 43 CFR 4.410.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed as modified to require a complete class III cultural resource inventory of the subject lands.

James L. Burski

Administrative Judge

We concur:

Douglas E. Henriques
Administrative Judge

C. Randall Grant, Jr.
Administrative Judge

