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*A Critical Review of the Social and Economic Analyses in
the "Upper Columbia Basin Ecosystem Management
Project Draft Environmental Impact Statement"
Reported presented to Governor Philip E. Batt*

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Executive Summary

The social and economic information and analysis contained in the Upper Columbia River Basin Draft Environmental Impact Statement (DEIS) released in May 1997 contains two major conclusions. First, smaller, resource-dependent rural economies and social systems are not diversified and will be impacted by changing public land policies. Conversely, larger, regional economies and social systems are more diversified and will absorb the impacts of changing public land policies. Second, the majority of the social and economic changes currently occurring in the Basin are due to forces beyond the control of federal agencies. The social organization of rural communities and the changing economic structure of the West are partially due to the presence of federal public lands, but the policies implemented on those lands have a minimal role to play in ongoing changes.

A great deal of analysis is conducted and presented in the DEIS and its background documentation to support these overall conclusions. However, they are fundamentally at odds with one another. This inconsistency prevents the authors of the DEIS from actually assessing, in any concrete fashion, the social and economic implications of ecosystem management (ESM) for Idaho and the rest of the Basin. A concrete assessment of policies like ESM requires an admission that such policies are inextricably tied to the social and economic organization of communities.

Our major concern with ESM is its potential impact on social and economic stratification. The DEIS identifies counties that will certainly experience significant change, and this change is very likely to produce increased social and economic stratification within and between Idaho communities. Data and analysis are presented that only hint at this issue, but it is sidestepped in the DEIS. Ultimately, the enormous effort to gather and analyze social and economic data, the

resources used to hire outside researchers, and the overwhelming task of gathering citizen input is wasted in the DEIS. Our core conclusions are presented below.

Core Conclusions

- 1) The DEIS and its supporting documentation contain a comprehensive and detailed effort to describe the social and economic context of ecosystem management. This constitutes the greatest agency effort with these issues that we have seen.
- 2) The DEIS is approximately 1300 pages in length. The supporting documents we thought important in understanding the social and economic assessments total approximately 2800 pages. Idaho citizens should not be asked to read over 4000 pages of material to gain an understanding of the implications of proposed federal land management policies.
- 3) The social and economic analyses in the DEIS are not used to draw conclusions about the impacts of ecosystem management on rural communities and their social or economic systems. The strongest conclusion in the DEIS is that “economically vulnerable areas are expected to bear the most social and economic costs of changing land management strategies” (DEIS, Summary, p. 31). We conclude that a 4000 page effort is not necessary to reach such an obvious conclusion.
- 4) The community resiliency scales that form the heart of the social assessment should be removed from the DEIS. The authors pool responses from non-random samples of community “leaders” in order to calculate these measures. Non-random samples of 3 to 9 “leaders” per community is an invalid statistical basis for their additional analysis, even across the broad area of the Basin. The authors make no attempt to statistically validate their approach, and instead describe the community data as if it were a regional sample (DEIS, Ch.

2:191). As presented, the community resiliency data does not meet minimum empirical standards for social science research, and all analysis in the DEIS derived from it should be withdrawn.

- 4) A useful analysis of the resiliency data will recognize the limitations inherent in the approach. A valid analysis of this data could be conducted, and would provide insight into the community social organization of the Basin. However, as this data is analyzed and presented in the DEIS and supporting documents, it is without empirical merit.
- 5) The economic assessment relies heavily on non-market measures to estimate economic benefits. These "willingness-to-pay" estimates are used throughout the DEIS yet none of the estimates are actually derived from within the Basin. It strikes us as opportunistic that such estimates are used to estimate the economic benefits of proposed actions, but social costs such as reduced economic opportunities, increased social stratification, and the elimination of jobs that pay a "living wage" could not also be estimated.
- 6) The overall approach to economics in the DEIS is heavily biased toward the fashionable judgement that recreation ought to be the industry of the future for rural Idaho. This is as much a matter of normative tone as it is of empirical method. More importantly, no consistent economic methods are applied across industries, including recreation, in order to compare outcomes from any of the alternatives. For example, economic multipliers are provided for mining, ranching and timber, but not for recreation.
- 7) All jobs and industries are treated alike in the DEIS. The implications of differences in pay, type of work, and location are not addressed. In addition, industry structure is not considered. Seasonality of jobs, lack of health benefits, and fiscal implications for local government are not addressed in the DEIS.

- 8) No attempt is made to account for differing locations of economic activity. Just as all jobs and industries are not comparable, the money derived from economic activities is not spread evenly between communities. Where people earn money and where they spend it has direct implications for understanding such industries as ranching, agriculture, recreation and mining. This issue is ignored in the DEIS.
- 9) Finally, the overall point of the social and economic assessment appears to be that most communities [and most of the population] are sufficiently “resilient” to absorb whatever policy alternatives are implemented. This frame of reference addresses only half of the pertinent question. The other half of the question, which is sorely neglected in the DEIS, asks what impacts those policies might have for the overall social and economic well being of Idaho communities. More directly, a clear implication of ESM is a shift in the local and regional distribution of economic and social benefits from public lands. Changing travel patterns, the focus on “restoration jobs”, and the uncritically generous estimation of jobs from recreation are all choices made by the authors during the policy analysis. These choices gloss over how those policies will redistribute social and economic opportunities. Shifting rural economies to a higher number of lower paying jobs might well cause the migration of young people out of the area seeking better opportunities, and encourage the in-migration of the financially enabled seeking amenity experiences. Such a shift will significantly alter the social and economic landscape of communities in Idaho. Issues such as these are not addressed in the DEIS.

Given these general conclusions, the DEIS offers little insight into how ecosystem management will affect Idaho communities and the state as a whole. We agree with an outside reviewer,

commenting on the evaluation of the alternatives: "Is this all we can say after two years of work?"

Introduction

The social and economic assessments contained in the Draft Environmental Impact Statement for the Upper Columbia River Basin Ecosystem Management Project could provide an excellent contribution to our knowledge of rural communities in both Idaho and the affected area. Federal agencies rarely, if ever, undertake assessments of social and economic conditions at this scale, or with this level of detail. Given the scope of this project, the draft environmental impact statement (DEIS) represents an unprecedented effort on the part of its authors.

Despite the effort, the DEIS actually says very little about potential social and economic outcomes of ecosystem management (ESM). Therefore, we evaluate both the DEIS and the methods and data used in its supporting documentation. Much of the information in the DEIS and other documents is interesting, but of little use in evaluating alternatives. Therefore, we focus our critique on those areas we feel require additional work in order for the DEIS to become an effective document.

Social Assessment

The social assessment contained in the DEIS may form an excellent contribution to our understanding of rural communities in the affected area. A considerable amount of primary and secondary data is presented and analyzed. We focus on the primary community data because it plays a central role in the social assessment as presented in the DEIS.

Many of the conceptual pieces necessary for a community assessment are present in the resiliency framework of the DEIS. Important community dimensions like cohesion, autonomy, and quality of life are included. However, when viewed as a whole, the conceptual framework is haphazard. Many dimensions of community action known to contribute to a community's ability

to absorb change are not included. Community integration, social networks, community power structures, stratification, and ethnicity are obvious in the literature and are easily implemented.

We focus on how the empirical information is gathered, analyzed, and presented in the DEIS. Socioeconomic resiliency plays a prominent role in the social assessment and we focus our evaluation on its empirical validity.

Socioeconomic Resiliency

The DEIS defines resiliency as “The ability of a community to respond to externally induced changes such as larger economic or social forces” (DEIS, Ch. 2:160). This definition is a contortion of a variety of sociological ideas. Outside reviewers contended that resiliency is actually a renaming of the “community capacity” concept used in the FEMAT process (FEMAT, 1993). The authors even state that it is “similar to the concept of community capacity” (DEIS, Ch. 2:195). Resiliency actually sounds like a direct appropriation of a much older sociological term: “community action” which is a capacity that emerges from an adequate social foundation for community (Wilkinson, 1991). Perhaps the choice of terms can be interpreted as an attempt to mirror the general ecological concept of resiliency. As measured in the DEIS, socioeconomic resiliency has two basic components: economic resiliency and community resiliency. Each is dealt with separately.

Economic Resiliency

Economic resiliency is apparently defined very much like general resiliency (Quigley and Arbelbide: 1810). We find little in the DEIS to separate economic resiliency from the economic diversity measures employed in the supporting documentation. Two estimates of economic

diversity are employed in the social assessment. One is derived from county data and the other from community-level data.

The county data is derived from the IMPLAN database and is from 1991 (Quigley and Arbelbide: 1810). Using this data, diversity is measured via the Shannon-Weaver index. This index ranges from 0.0 to 1.0, where values close to 1.0 indicate the highest possible diversity, and values close to 0.0 indicate very low diversity. This index is commonly used in ecology for estimating different types of diversity given the number and abundance of species.

The Shannon-Weaver index is used to categorize counties in the affected area, and is assumed to correlate highly with resiliency. The working assumption is that highly diverse local economies will rebound from change better and/or faster than those economies with limited diversity. This is intuitively appealing but it is not placed into an overall framework to test the proposed alternatives, nor are its implications for community well-being explored. This approach assumes that having a large number of sectors in a community implies that people can readily move from one sector to another in the event of economic change. Occupational mobility of this type does take place in communities, and produces three general choices for people in Idaho. First, they can choose to move into one or more low-wage, seasonal jobs in service sectors. Second, if they have sufficient capital and the appropriate skills, they might start their own business. Third, they can move to another community. In our experience, it is rare to see recently unemployed timber workers or ranch hands immediately find work at the same rate of pay in their community. In addition, the temporal dimension of the implied occupational mobility is not discussed. Approximately how long should people wait between jobs?

The community economic diversity data is calculated from phone book entries for local businesses, which are counted and then employment numbers from other sources (including

IMPLAN) are allocated algebraically to those businesses (Harris, Brown, and McLaughlin:60-61). The community data is from 1995. This data is also used in the DEIS to compare the perceptions of community leaders about their local economy to the "actual economic profiles of each community" (DEIS, Ch. 2:198). However, this exercise clarifies nothing about communities. In addition, the data are "ground truthed" by some of the same people asked to identify the dependency of the community. Thus, some of the sources for the "ground truthing" are then described as having an inaccurate understanding of their local economics. Ultimately, it is unclear from the DEIS which measure, county or community, is used to calculate the overall socio-economic resiliency discussed in the DEIS.

Community Resiliency

Community resiliency plays a major role in the social assessment. As mentioned above, this term is redundant after community capacity, but appears to be used because it sounds ecological. We find this portion of the DEIS particularly troubling. The conceptual and theoretical issues presented in the DEIS and supporting documentation are almost adequate. What troubles us more is the empirical veracity, particularly the statistical validity, of the measures used to evaluate communities. One reviewer mentioned that the overall approach is common for projects of this size and scope, but empirical and statistical limitations inherent in such an approach are usually respected (Krannich, 1997). They were not respected in the community assessment for the DEIS.

The community assessment relies on two assumptions we think are invalid. We critique each assumption by evaluating its empirical validity. Again, the concepts and theories applied are not at issue here: the empirical validity of the analysis is the issue.

Assumption 1: The first assumption is that opinions from community “leaders” adequately represent or mirror the opinions of all community members. Rural community researchers recognize that the use of opinion leaders or key informants is a valid approach for many research settings, but we also recognize the limitations inherent in the approach. Assuming that key informants’ opinions mirror those of the general population requires some form of statistical test to establish its validity. Consider the situation where leaders or others are not representative of community members: both research conclusions and, potentially, public policies will be erroneous (see Nix, Singh, and Cheatham, 1974; Molnar and Smith, 1982; Krannich and Humphries, 1986; Allen and Gibson, 1987; Ayres and Potter, 1989; Lewis, 1990; Bridger and Maines, 1992; Luloff and Hodges, 1992). The scope of this research (198 communities) makes this assumption inherently dangerous. Yet, the researchers providing the community data for the DEIS defend this assumption on two grounds.

1) The authors argue that gathering the opinions of community “opinion leaders” is valid because the alternative is to ask other people who are not as knowledgeable about their community. This point is made as follows:

“The intent of the process was to gather as accurate and valid information from community residents as possible, and it was assumed that active and involved citizens would be the most knowledgeable and thus provide the most accurate description of their communities’ characteristics and conditions. (The alternative would be to collect information from less involved or uninvolved residents whose input would be based on *ignorance or, worse, misinformation*. An analogy would be wanting to obtain specific medical and legal information and trying to get it from “the man on the street” instead of a doctor or a lawyer.)” (Harris, Brown, McLaughlin:54) [Emphasis ours].

The key informants were sought from a list of eight roles in a community. These ranged from elected officials to someone involved in historical preservation, to a newcomer (arrived within

the last three years). As social scientists, we find it alarming that any group of key informants are automatically categorized as knowledgeable (including “newcomers”) simply because a researcher interviews them, while the entire remainder of the community is labeled as “ignorant” because they were not interviewed. Again, the researchers explicitly ignored both the professional literature and the peer reviewers in pursuing this strategy and point of view. No where in the DEIS or its documentation is this approach or point of view critically evaluated.

2) The researchers also assert that these leader’s opinions alone are valid by citing a study of Chelan County, Washington. The demographic characteristics of those interviewed in Chelan County are compared to those of a survey sample of county residents. The authors concluded that the characteristics are sufficiently alike and therefore the opinions of leaders are adequately similar to residents. Three important issues are not addressed by this argument. First, we examined the Chelan County study and find that questions directly comparable between it and the community resiliency scale are few. The authors’ assertion of comparability is severely reduced accordingly. Essentially they insist that because the demographics are alike, then the opinions are alike. This is patently wrong. Second, this analysis is conducted for only one county in the study area. This begs the question of how representative Chelan County is to the remainder of the UCRB. Again, this constitutes an enormous assumption on the part of the authors. The tenuous nature of this assumption was highlighted by an outside reviewer, and the authors chose to sidestep the criticism. Third, the survey used to support the assumption that leaders and residents “agree” on community issues has two weaknesses that eliminate its utility. The response rate on the survey was 32% - this data is clearly below accepted standards for general sample, survey research and its conclusions are likewise statistically invalid. In addition, 60% of the respondents identified Wenatchee as their primary community, though it represents

about 53% of the Chelan County's population. Accepted approaches to rural community surveys usually increase the sample size in small communities to insure its adequacy. In this study, the opposite holds true and the largest community is over sampled. These issues lead us to argue that this survey is invalid as is the assertion that Chelan County, Washington is representative of the entire Basin.

Assumption 2: The second vital assumption in the social resiliency work is that data gathered from a small group of "opinion leaders" can be used as if it were a statistically valid sample. The researchers have 198 purposive or nonrandom samples drawn with very small numbers from each community. We find no evidence that these samples were then tested to prove they could be pooled or aggregated. Accepted procedure would be to either explicitly test these samples to see if they are drawn from the same population, or to draw inference only with respect to a particular community and avoid comparisons between communities. There are a handful of procedures useful in this situation (O'Brian, 1991). One reviewer made such a suggestion, and went so far as to include a copy of a paper on how to evaluate small sample statistical validity (Krannich, 1997; Krannich and Humphries, 1986). These suggestions were ignored and the data used in the DEIS were simply added together to form a pool of over 1300 respondents. Statistical analyses were then performed on these data and used to create community resiliency scales. These scales were not used in the DEIS at the community level. To avoid the certain public anger this would engender, the scales were aggregated to the county level. We argue that the statistical basis of these resiliency scales is invalid. Whether or not to pool this data, let alone aggregate it to the county level as done in the DEIS, is a statistical decision subject to statistical tests. The DEIS uses invalid data to categorize communities and

the people that live in them. This data should be withdrawn until such a time that its validity is adequately determined and the limitations of the approach used are recognized and respected.

Economic Assessment

Estimating the benefits and costs of alternative management strategies for an area this extensive presents some problems. The scope of the alternatives, the length of the planning horizon (50 years) and the geographic area to be covered potentially expose the DEIS to many criticisms. However, we believe that four critical issues relating to the economic assessment need to be raised and addressed through this review. First, the evaluation of long term benefits and costs is biased due to the heavy reliance upon non-market measures of economic benefit. Second, there is no provision for including estimates of costs (market or non-market, agency or private, direct or indirect) in the analysis. Third, and most critical, the tabulation of benefits includes no estimate of when they will accrue to society during the 50 year planning horizon nor are they discounted to present value terms. Fourth, the DEIS makes significant, and we believe erroneous, assumptions about how community economies function. These four points are covered in the following discussion.

Non-Market Benefits

Estimates of willingness-to-pay are often used to value items which have no direct ties to market transactions. Items such as carbon storage, various classes of recreation, roadless areas, air quality and others are valued using these approaches in both the supplementary documents and in the DEIS. We will not question the magnitude of non-market values included in the paper, but will attempt to address some of the methodological issues behind them, as well as the implications of their eventual use in determining policy in the DEIS. Values used in the analysis

for roadless areas are derived from published reports by Walsh et al. (1996) and Pope and Jones (1990). Willingness-to-pay values from these studies are apparently expressed in terms of dollars per person and ranged from \$37/person to \$65/person. It is unclear from the report whether these values are annual willingness-to-pay or a total for the planning horizon (50 years). Willingness-to-pay values for recreational use (13 different recreational activities displayed values ranging from \$2.39 to \$54.66/person activity day), carbon storage and range, as well as timber and wood chips are also presented and used to derive a "market basket" value per acre for BLM- and FS-administered lands in the region. This approach results in non-market values dominating the total value prescribed for the different market baskets. In other words, roadless existence values account for 47 % of the total 1995 value of the market basket from BLM- and FS-administered lands in the Basin. By comparison, timber accounts for 11.50 % of the total.

When values of this magnitude are derived from non-market items, policy makers should be aware of their source. First, roadless area values are implied from a national study and a study in Utah (Walsh, et al., 1996; Pope and Jones, 1990). It is uncertain whether these values are within the realm of possibility for the Basin. As is stated in the paper "There are no estimates of the willingness-to-pay for the existence value of unroaded areas in the ...Basin" (Quigley and Arbelbide:1821). Second, there may be substantial differences between stated and actual willingness-to-pay figures. A recent study by Loomis et al. (1996) states "The results reject equality of hypothetical and actual willingness-to-pay, but the differences are smaller than in other experiments with hypothetical WTP being two times larger than actual WTP" (p. 450) [our emphasis]. In other words, people have a tendency to overstate their willingness-to-pay until it comes time to make a market decision. Does this mean that we automatically deflate willingness-to-pay values used in the paper and the DEIS by a factor of two? Until studies are

completed within the Basin in relation to roadless areas with the goal of determining actual willingness-to-pay, we do not know. Are people actually willing to pay an additional \$65/person through taxes or user fees to support roadless areas?

Willingness-to-pay estimates are provided for range livestock grazing, even though there are market transactions in the livestock area which could be used to estimate these values. Hof, et al. (1989) attempted to apply contingent valuation to address public land forage values. Their conclusion is that this technique is not applicable to public forage due to response bias in terms of both price and quantity of the resource. In terms of market transactions, USDA-National Agricultural Statistics Service (NASS) reports private grazing lease rates for dry land grazing in most of the western states on an annual basis. Lease rates reported for Oregon and Idaho are presented in the following table. It would appear that these values are more defensible than the "personal communication" citation from the Forest Service in the DEIS.

Table 1. Private land lease rates for Oregon and Idaho, 1992-1996. (\$/AUM)

Year	Oregon Lease Rate	Idaho Lease Rate	Average
1992	9.28	9.49	9.39
1993	9.75	9.25	9.50
1994	9.00	9.70	9.35
1995	10.20	10.10	10.15
1996	10.00	10.20	10.10
5 Year Average	9.64	9.85	9.75

Source: USDA-NASS. Agricultural Prices various issues.

Finally, the contingency valuation issue raises a sociological point. Recent research notes that willingness to pay for two public goods (saving sea birds from oil spills, and teaching English to immigrants) fell by over half when respondents were reminded that payment would be spread out over millions of households (Green, Kahneman, and Kunreuther, 1994). The researchers note: "When alerted to the fact that funding for the non-market good was to be a collective effort, subjects apparently recognized that people are under greater obligation to

contribute something, but less obligation to contribute something substantial” (p. 64). They conclude that WTP estimates are better viewed as attitudes toward the good in question, rather than as reservation prices for that good. With respect to the EIS, the use of WTP numbers to establish estimates for the actual value of natural resources remains an open question. We argue that the estimates reflected in the DEIS are better interpreted as attitudes rather than economic valuations.

Costs of Ecosystem Management

There is a general lack of consideration of the expenses associated with ecosystem management. As stated in Quigley and Arbelbide (p. 1830), with regard to agency costs of ecosystem management “...it is impossible to estimate its budgetary costs.” Market basket values, apparently estimated using a “proxy” for net economic value, were derived using willingness-to-pay estimates less the actual value of products received. Thus, the economic analysis becomes nothing more than an exercise of tabulating the value of different market baskets of benefits, without regard to direct or indirect costs (agency or private). This is an incomplete economic analysis.

It is unclear how the transition is made from the supporting material to the DEIS, as the support material contains no tabulation of costs but the DEIS contains such a section in Chapter 4 (p. 215-219). This section of the DEIS is based upon current agency costs for activity levels, converted, in many cases, to a dollar-per-acre basis. Comparisons are made to the current situation (Alternatives 1 and 2), by only looking at relative costs for a period of ten years. It does not appear that discounting (or, at least a tabulation of costs, by year) has been undertaken. Many issues regarding policy shifts to ecosystem management are swept under the carpet with this

cursory analysis of costs. Are there efficiencies that can be gained in terms of costs, from the movement to an ecosystem or watershed? How will the agencies pay for the over 2000 "restoration" jobs persistently mentioned in the analysis? Which group or groups (rural communities, recreationists, ranchers, loggers, miners, etc.) bear most of the costs of the different alternatives? Who gains from these proposals? Can the "winners" compensate the "losers"? These are critical issues which must be addressed in consideration of the proposals made in the DEIS. They have not been answered, nor is information provided in the DEIS that citizens and policy-makers can use to reach their own conclusions.

Lack of Discounting or Presentation of Benefit Flows Over Time

The analysis specified in the DEIS and supporting documents does not discount future benefits to present value. Rather a summation of total benefits over the 50-year planning horizon is undertaken to form the market baskets of economic activity. "The reason for this is to avoid the controversy over which discount rate is appropriate to use and to let decision makers choose how to distribute benefits and costs between human generations." (Quigley and Arbelbide:1818). Risk, uncertainty, inflation and the time value of money must all be considered in evaluating streams of benefits or costs for a period of 50 years. The only way to do that is to discount future benefits (and costs, if considered) to present value terms. The basic concept is that \$1 received or paid today is not equal to \$1 received or paid 50 years from now. To not discount these benefits over time because of the fear of "controversy over which discount rate is appropriate" sidesteps responsibility for a difficult analysis. At the very minimum, discounting with several rates (low, medium and high) should have been undertaken.

The authors should also display flows of benefits over the entire planning horizon. Some management alternatives may result in the stream of benefits being skewed toward the present, while others only show benefits near the end of the planning horizon. These are completely different scenarios and summing dollars across years cannot capture the difference. To illustrate this point, consider the alternative of receiving \$1 million a year from now or \$1 million 50 years in the future. Which do you take? At 5 percent discount rate, the \$1 million is actually worth \$925,000 in year 1 and \$87,000 in year 50, both expressed in 1997 dollars (or present value). In other words, one could invest \$87,000 today at 5 percent and accrue \$1 million 50 year hence.

Community Economics

A major theme in the DEIS and supporting documents is that the society and economy of the Basin are shifting from extractive, basic industries (timber, mining, grazing) to "passive industries" such as recreation and existence values. This trend is obviously occurring. However, to advocate land management policies that promote or speed this process also creates an obligation to confront the possible outcomes of those policies. The authors of the DEIS have failed to adequately meet this responsibility.

For their analysis, the authors state: "No evidence exists to support the view that a dollar earned from exporting manufactured goods is better than a dollar earned from exporting anything else" (Quigley and Arbelbide:1812). This statement is required to maintain logical consistency within the overall value-based assumption in the DEIS: the recreation industry ought to be facilitated, if not encouraged, as a vital part of ecosystem management policies.

We absolutely recognize the importance of recreation to economies like Idaho. That is not our point. Rather, we are of the mind that the people of the Basin deserve an honest analysis

of the social and economic implications of changes in their local economies, regardless of industry. Therefore, we disagree with the uncritical recreation advocacy in the DEIS for three reasons.

First, no attempt is made to discuss or analyze the implications of different economic sectors for local occupational structures. Having a job is better than not having a job. Few people would argue with this assertion. However, chefs are paid more than dishwashers and equipment operators in a mine are paid more than the janitor cleaning the mine's offices. Treating these jobs as equivalent masks very real differences. The distribution of jobs based on such factors as wages, seasonality, and whether or not employees live in the community partially determine the economic impact of occupational structures on local communities. These issues are not addressed.

Our second disagreement concerns the structure of industries. Different industries have different labor force needs, cost and return structures, and different levels of value-added for local economies. Like occupational structure, the economic structure of different industries produce differing impacts for communities. The primary unfounded assumption in this regard is that jobs are the measure of importance. We believe that this is overstated in many regards, across industries, by not reducing seasonal jobs in industries such as agriculture, timber and recreation to full time equivalents. In addition, the income generated by those jobs may actually leave the area when the season is over. River guides and harvest workers will not inject money into local economies throughout the year. In our own work, we have found that many recreation proprietors, such as those owning lucrative permits for whitewater, do not live in the communities to which the DEIS is assigning their jobs. Moreover, we have also found that most of their employees are not local and spend a fraction of their money locally. On the other hand,

using employment numbers to estimate the “importance” of ranching is a weak approach.

Ranches do not have numerous employees. However, a substantial portion of their input costs reflects local purchases. Using employment numbers to compare this sector to almost any other is specious in this regard. Thus, the jobs are not equivalent because industries do not function in the same fashion.

Third, the authors of the DEIS gloss over the spatial distribution of economic activities from public lands in the Basin. The mere presence of public lands attracts in-migrants. However, this assumption does not automatically translate to increased economic activity, particularly recreation. We are unclear how the DEIS actually views this issue. They note that the average expenditures per person, per day for resident non-motorized boating are \$381.65, while nonresidents spend \$36.99 (Quigley and Arbelbide:1861). In addition, the same exact numbers are used for these values across all of the BEA regions in the analysis. The use of such numbers appears awkward: do nonresidents spend about 10% of what residents spend, and are the dollars the same across the Basin? Communities are not that uniform, and neither are their economies. In many Idaho counties with significant public land bases, recreation dollars are spent in urban centers while counties absorb the activity and frequently the fiscal burdens associated with that activity (Godfrey, 1996). The same issue confronts timber, mining, government, and other sectors. The spatial arrangement of economic activity guides its social and economic impacts. Understanding the impacts of ecosystem management requires an understanding of these spatial arrangements.

These basic issues are not merely details over which we wish to quibble. In our experiences working with communities and local governments throughout the state of Idaho, we conclude that these issues matter because they affect people in Idaho communities. In a document

as important as this DEIS, advocating one form of economic development over others without honestly evaluating magnitude and distribution of costs and benefits is inadequate public policy.

Conclusion

In both the social and economic assessments, the authors of the DEIS refuse to recognize the distinction between the development of community and development in a community. Development of a community results from policies that strengthen community integration, reduce stratification, and increase well being. Development in a community results from activities that do nothing to strengthen the social fabric of that community. In this sense, the DEIS focuses, including its social assessment, on describing development in communities. They state that “range accounts for 1 percent, recreation 87 percent and timber 12 percent” of the 220,000 jobs associated with agency activities at current levels within the Basin (DEIS, Ch. 2:185). The authors of this estimate fail to evaluate the community impacts of both the validity of their own calculations, and policies derived with that calculation. In doing so, they also fail the people of those communities.

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