

**Guiding Principles for
Reasonable, Practical,
and Defensible**

Economic Analyses

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1. Use professional/scientific integrity

(40 CFR 1502.24). The analysis should meet:

- CEQ's requirement for rigorous and objective analysis,
- Hard look doctrine that has emerged from NEPA case law
- Agency internal guidelines for economic analysis.
- The economic analysis should be prepared and reviewed by a qualified and experienced economist.

2. Understand how economic analysis fits into the RMP process.

Guidance is available from:

- BLM course 1610-12 (Social and Economic Aspects of Planning)
- BLM/FS course 1610-11 (Economic Impact of Federal Natural Resource Management Decisions)
- H-1601-1, Appendix D (Social Science Consideration in Land Use Planning Decisions)

Economist should:

- Understand BLM land uses that contribute to local economic impacts
- Know BLM Land Use Planning Handbook H-1601-1, especially Appendix C (Program/Resource-Specific Decision Guidance) for each BLM resource/program and
- Appendix D (Social Science Considerations in Land Use Planning Decisions)
- Clarify what data are needed from other resource specialists at each step of the planning process and when those data need to be available to the economist.

3. Conduct meaningful and relevant community economic workshops.

- Identify land uses that influence economic activity, e.g. employment, income, response coefficients
- Identify relevant economic /demographic trends
- Clarify proposals, initiatives, and developments that influence BLM land uses or economic activity
- Define the economic study area
- Identifying additional issues, data sources, relevant studies, and appropriate contacts
- Introduce EPS
- Validate economic indicators.

Workshop success depends on:

- Promoting/Marketing the workshop adequately
- Knowing the local economy and BLM land uses
- Relating BLM land uses and BLM management decisions
- Scheduling after relevant BLM land use data are available for economic analysis
- Reviewing best practices for Economic Strategies Workshops Compiled at the Social Science Workshop (2005)

4. Use a template and Appendix D. Review and learn from other RMPs and EISs.

Check economic:

- Issues
- Assumptions
- Methodology
- Cause and effect relationships
- Indicators

Learn from other's experience, avoid mistakes, and build on a solid template.

5. Base the economic analysis on credible and consistent **RESOURCE** data.

Request resource data from ID team members

EARLY and **OFTEN**.

Resource specialists should:

- Understand what the economist expects from them
- See what data were used in other RMPs
- Understand analysis limitations if data are not provided
- Use professional/scientific integrity
- Work with the economist to determine appropriate data
- Know if the economist gets resource data directly from other sources

6. Base the economic impact analysis on credible economic methodology.

- Local Economic Impact Analysis:
- **Input/Output analysis**, e.g., IMPLAN/FEAST (local employment, income, economic diversity, response coefficients, economic stability, dependency on BLM land uses)
- **Public Revenues**, e.g., FEAST (federal revenues, state/local revenues)
- **Other**, e.g., economic stability, economic dependency, economic diversity, and economic growth

Non-Market Valuation Analyses:

- **Market Price Method** (*Estimates economic values for products/services that are bought and sold in commercial markets*), e.g. consumer surplus associated with the difference between the price of a private AUM and the BLM grazing fee.
- **Productivity Methods** (*Estimate the value of contributions to the production of commercially marketed goods*), e.g. water quality affects the cost of purifying municipal drinking water. The economic benefits of improved water quality can be measured by decreased cost of providing clean drinking water.
- **Hedonic Pricing Method** (*Estimates how management could affect market price of other goods*), e.g. commonly applied to variations in housing prices associated with environmental quality such as air pollution, water pollution, or noise.
- **Travel Cost Method** (*Estimates economic values of sites or ecosystems used for recreation*), e.g. “willingness to pay” to visit a site/or preserve an ecosystem can be based on the number of trips that people make at different travel costs.

Non-Market Valuation Analyses cont.:

- **Damage Cost Avoided, Replacement Cost, and Substitute Cost Methods** (*Estimate the value of avoided damages, costs of replacing ecosystem services, or costs of providing substitute services*), e.g. *valuing erosion protection by measuring cost of removing eroded sediment from downstream areas.*
- **Contingent Valuation Method** (*Estimates the “non-use” values or “willingness to pay” for specific environmental services, based on a hypothetical scenario*), e.g. *what is the value of protecting a remote site? Few people actually visit the site; but what would be their “willingness to pay” to preserve the site.*
- **Contingent Choice Method** (*Estimates value by asking people to make tradeoffs among ecosystem characteristics*). *Does not ask “willingness to pay”; this is inferred from tradeoffs.*
- **Benefit Transfer Method** (*Estimates values by transferring existing benefit estimates from studies already completed for another location or issue*), e.g. *estimates the values of land tenure adjustment and recreation developments that will provide additional recreation opportunities.*

7. Provide a comparative analysis of impacts among alternatives. *Environmental impacts, including economic impacts, of all alternatives should be presented in comparative form (CEQ 1502.14 and 1502.16(d)).*

Based on:

- *Reasonably Foreseeable Development (RFD) scenario*
- *Reasonably Foreseeable Future Actions (RFFA)*

Table 2. Summary Comparison of Impacts

Economics				
	Alternative A	Alternative B	Alternative C	Alternative D
Agricultural and Livestock Use	<p>BLM would continue to provide about 17 percent of the total livestock forage needs in the PA and economic dependency of livestock producers on BLM forage would remain unchanged. About 760 operators would continue to have grazing permits on 1,030 allotments. Less than half of the farms/ranches in the Planning Area would hold grazing permits. Since the amount of authorized use would remain unchanged, dependency on BLM forage for each county would also remain relatively unchanged. The economic dependency of individual livestock producers on BLM forage would also remain unchanged and BLM forage would continue to provide a critical element of some livestock producers' complement of grazing, forage, and hay production. Livestock grazing would support approximately 110 jobs and \$2.34 million in labor and proprietor's income (Table 4-8). Farm/ranch related labor and proprietor's income would continue to account for approximately one percent of total income in the eight-county study area and less than three percent of employment. Annual federal revenues from livestock grazing fees would be about \$476,000 annually, of which about \$70,000 would be distributed to the counties. The difference between market prices for livestock grazing and the fee charged by the BLM represents an annual consumer surplus to the grazing permittees of an estimated \$5.19 million.</p>			
Minerals Development (common)	<p>Federal minerals leased for oil/gas exploration, development, and production would increase from 1.629 million acres to about 2.178 million acres when areas deferred from leasing are available after RMP revision. Annual leasing revenues would increase from \$3.5 million to \$4.4 million. About 70 percent of federal natural gas production would occur in Phillips County and almost 70 percent of federal oil production would occur in Toole County. The amount of sand/gravel produced (about 38,500 short tons per year) and associated royalties (about \$16,000) would remain unchanged. Minerals related activities would be the largest contributor to local employment and income of all major BLM land/mineral uses.</p>			
Minerals Development	<p>Federal oil/gas production would increase by 3.7 % over current levels. Annual production of 18.93 million MCF of natural gas, 174,000 bbl of oil, 38,500 short tons of sand / gravel, and 65,000 short tons of bentonite would support about 1,020 local jobs and \$61.7 million in income. Total annual federal revenues from mineral leasing, production, and sales would be about \$28.2 million; of which about \$11.9 million would be distributed to the state and counties. Net residential property sales could be reduced by an average of 22% if a well is drilled near the property when it is being sold.</p>	<p>Federal oil/gas production would increase by 3.6 % over current levels. Annual production of 18.91 million MCF of natural gas, 174,000 bbl of oil, 38,500 short tons of sand / gravel, and 65,000 short tons of bentonite would support about 1,020 local jobs and \$63.8 million in income. Total annual federal revenues from mineral leasing, production, and sales would be about \$28.1 million; of which about \$11.8 million would be distributed to the state and counties. Residential property sales would least likely be affected because wells would not be drilled within 0.25 miles of residential property.</p>	<p>Federal oil/gas production would increase by 4.2 % over current levels. Annual production of 19.02 million MCF of natural gas, 175,000 bbl of oil, 38,500 short tons of construction sand / gravel, and 65,000 short tons of bentonite would support about 1,030 local jobs and \$64.3 million in income. Total annual federal revenues from mineral leasing, production, and sales would be about \$28.3 million; of which about \$12.0 million would be distributed to the state and counties. Residential property sales would be affected less than with Alternative A or D because wells would not be drilled within 500 feet of residential property.</p>	<p>Federal oil/gas production would increase by 4.6 % over current levels. Annual production of 19.09 million MCF of natural gas, 175,000 bbl of oil, 38,500 short tons of construction sand / gravel, and 65,000 short tons of bentonite would support about 1,040 local jobs and \$64.7 million in income. Total annual federal revenues from mineral leasing, production, and sales would be about \$28.4 million; of which about \$12.0 million would be distributed to the state and counties. Effects on residential property sales would be similar to Alternative A.</p>

- 8. Anticipate developments that will influence BLM land uses and economic indicators.**
- 9. Establish a network of contacts to discuss the economic analysis.**
- 10. Coordinate with adjacent offices to ensure consistency.**
- 11. Keep good records.**

12. Have a contingency plan.

- *Reimbursable and Advance Collection Agreement through an Intra-Governmental Order (IGO).*

Contacts are:

- *BLM- Delilah Jordahl, Social Scientist, Bureau of Land Management, Division of Resource Services, National Operations Center;*
- *FS TEAMS Enterprise- Barbara Ott, Social Scientist, FS TEAMS Enterprise;*
- *USGS- Lynne Koontz, Economist, Policy Analysis & Science Assistance Program, Fort Collins Science Center.*

13. What does a good job look like?

- Social and Economic Aspects of Planning Course (1610-12),
- Economic Impact of Federal Natural Resource Management Decisions (Course 1610-11),
- Review other RMPs,
- Ask other economists.

Best Practices for Social Analysis

**BLM National Planning Conference
Portland, Oregon – March 2009**

Rob Winthrop

Presented by John Cossa

Bureau of Land Management, Washington, D.C.

**#1: Define the social
context**

#1

- **In a land use plan involving energy development, Alternative A is projected to yield 75 fewer jobs over a given period than Alternative B.**
- **Is the difference significant? What do you need to know to answer the question?**

#2: Distinguish social and economic effects

#2

- **In eastern Oregon (rural and sparsely populated), the cost of double-walled underground storage tanks required by EPA reportedly forced a number of gas stations to close.**
- **What are the potential economic impacts?
What are the potential social impacts?**

**#3: Understand relevant
aspects of social organization**

#3

- **In the Pacific Northwest, intense competition over commercial mushroom gathering (sometimes including violence between groups of gatherers) can pose a significant land management challenge.**
- **What would you need to know to foster more sustainable harvesting practices?**

**#4: Emphasize relevance
over precision**

#4

- **“To be scientifically sound, socio-economic data should be quantitative whenever possible.”**
- **Do you agree? Why?**

**#5: Use your local
knowledge**

#5

- **What potential socio-economic impacts would you examine in analyzing the effects of a 20 percent reduction in AUMs across a planning area?**

**#6: Recognize affected
groups and communities
outside a planning area**

#6

- **The Fun-Time Field Office includes a sand dune that serves as a major OHV recreational area. Is this relevant to the socio-economic “affected environment”?**

#7: Look for indirect effects

#7

- **The Boomtown Field Office anticipates that a proposed oil and gas field development will require an additional 850 workers. What non-economic questions should the county commissioners be asking?**

**#8: Examine the
interaction of social and
economic variables.**

#8

- **The Birkenstock Field Office may designate a large area bordering local communities for conservation uses, with no surface occupancy for mineral development.**
- **How might local environmental attitudes affect support for this decision?**
- **How might these attitudes affect the economic impacts of this decision?**

[Soc analysis – RW – Plan conf 1-23-09.ppt]