

## **APPENDIX 17. EXPLANATION OF EXISTENCE VALUE CALCULATIONS FROM CHAPTER IV ECONOMIC ANALYSES**

The economic analysis of the Chapter IV alternatives includes a calculation of “existence values” associated with the proposed alternatives. This appendix is intended to provide an explanation of what existence values are and how they are calculated. A parallel, more technical explanation of this subject is included in the discussion of economic effects associated with Alternative 1. It should be noted that the following description of existence values and their calculation within this analysis is intentionally general and non-technical, and is intended simply as a layman’s description of the techniques used in this report for those not familiar with the concept of existence values.

Conservation and other advocacy organizations demonstrate that individuals in the economy attach an economic value to such things as preserving endangered species, open spaces, and wilderness areas. This economic value is demonstrated through the simple fact that individuals are willing to donate money to organizations working towards these goals. Some of this demonstrated value is due to the fact that people anticipate “using” the resources they are paying to help preserve through activities such as hiking, hunting, or wildlife viewing. This portion of the value is known in economics as “use value”. Some people, however, may never intend to make any direct use of a resource, but still attach a value to the preservation of that resource. They may hold this value for a number of reasons: 1) they may want to preserve the resource for future generations (bequest value); 2) they may want to hold open the option to use the resource in some way in the future although they have no immediate plans to do so (option value); or 3) they may simply feel that preservation of a resource is the “right” thing to do, and thus attach a value to it (existence value). The term existence value as used in this analysis collectively includes existence, option, and bequest values, but does not include any aspect of use value.

People demonstrate their existence values in the marketplace by contributing to organizations such as the Nature Conservancy, Ducks Unlimited, or Defenders of Wildlife. However, whether people enjoy existence values of resources is not contingent upon whether they donate money to support a cause. The fact that some individuals are willing to donate money is just the most obvious manifestation of these existence values.

Given the fact that existence values exist, the problem facing economists is how to measure these values without actually collecting the monetary equivalent of these values. The technique used in this analysis, contingent valuation, is the only method available to economists to measure existence values. This method has been used in hundreds of applications worldwide in the past two decades. Contingent valuation is recognized by governmental regulatory agencies such as the Department of Interior, and the National Oceanic and Atmospheric Administration as the appropriate tool for use in measuring non-use values such as existence value.

In measuring the existence value associated with grizzly reintroduction to the Bitterroot Ecosystem, a sample of respondents was contacted by phone and surveyed on their knowledge and attitudes

about grizzly bears and the grizzly reintroduction into the BE issue (Duda and Young 1995). One question in this survey asked respondents how much they would be willing to contribute to either support or oppose grizzly reintroduction in the BE. The average donation amount stated by the two distinct groups of respondents (those supporting and those opposing reintroduction), was used as a measure of existence value. When these average existence values were multiplied by the estimated number of people in the country who supported or opposed reintroduction, the result was an estimate of total existence values for those supporting reintroduction, and negative existence value for the group opposing reintroduction. The net economic existence value associated with grizzly reintroduction in the BE was calculated by subtracting the value for the group opposing reintroduction from the value for the group supporting reintroduction.

A necessary next step in the estimation of existence values was to make an adjustment to the stated values based on the understanding that people may *say* they are willing to contribute more to a cause than they are actually willing to contribute. To adjust for this probable overstatement, the net economic existence value estimates were reduced on the order of 70% to 75%. Finally, these lump-sum existence value estimates were annualized over a perpetual time horizon at a 7% rate. The resulting existence value was reported in the summary cost and benefits tables for the alternatives.

### **Literature Cited**

Duda, M. D. and K. C. Young. 1995. The public and grizzly bear reintroduction in the Bitterroot Mountains of Central Idaho. Responsive Management, Harrisonburg, Virginia. 141 pp.

**APPENDIX 17A. SURVEY QUESTIONS FROM, “*The Public and Grizzly Bear Reintroduction in the Bitterroot Mountains of Central Idaho*”  
(Duda and Young 1995) PERTINENT TO FEIS ECONOMIC ANALYSIS**

The Idaho Department of Fish and Game as a member of the Interagency Grizzly Bear Committee contracted with Responsive Management in 1995 to perform a survey of public attitudes toward grizzly bear reintroduction in the Bitterroot Mountains. The study was carried out as part of the initial public involvement process for preparing an Environmental Impact Statement for grizzly bear recovery in the Bitterroot Ecosystem. The following questions were asked during a telephone survey performed by Responsive Management in June 1995. The data collected from the answers to these questions was used in a portion of the Economic Analysis for this FEIS (see FEIS Chapter 4, “*Economic Effect on the Value Potential Visitors Place on Grizzly Bears*”). The entire telephone survey questions and the results of the survey are documented in the report by Responsive Management, The Public and Grizzly Bear Reintroduction in the Bitterroot Mountains of Central Idaho (Duda and Young 1995).

**USFWS Grizzly Bear Reintroduction Survey  
Responsive Management**

23. In general, do you support or oppose reintroducing grizzly bears to the Bitterroot Mountains?

(PROMPT FOR DEGREE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Strongly support  
☐ 2. Moderately support  
☐ 3. Neither support nor oppose  
☐ 4. Moderately oppose  
☐ 5. Strongly oppose  
☐ 6. Don't know

43. Suppose that public funding for reintroduction of grizzly bears was very limited and private funds were essential for grizzly bear recovery. Donors would have the satisfaction of knowing grizzly bears have been restored in the Bitterroot Mountains, although reintroduction might require closing some logging roads in the area at certain times of year.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$5 to support grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

44. Suppose that public funding for reintroduction of grizzly bears was very limited and private funds were essential for grizzly bear recovery. Donors would have the satisfaction of knowing grizzly bears have been restored in the Bitterroot Mountains, although reintroduction might require closing some logging roads in the area at certain times of year.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$10 to support grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

*Appendix 17A - Public Survey Questions Pertinent to Economic Analysis*

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

45. Suppose that public funding for reintroduction of grizzly bears was very limited and private funds were essential for grizzly bear recovery. Donors would have the satisfaction of knowing grizzly bears have been restored in the Bitterroot Mountains, although reintroduction might require closing some logging roads in the area at certain times of year.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$25 to support grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

46. Suppose that public funding for reintroduction of grizzly bears was very limited and private funds were essential for grizzly bear recovery. Donors would have the satisfaction of knowing grizzly bears have been restored in the Bitterroot Mountains, although reintroduction might require closing some logging roads in the area at certain times of year.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$50 to support grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

47. Suppose that public funding for reintroduction of grizzly bears was very limited and private funds were essential for grizzly bear recovery. Donors would have the satisfaction of knowing grizzly bears have been restored in the Bitterroot Mountains, although reintroduction might require closing some logging roads in the area at certain times of year.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$100 to support grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

48. Would you be willing to purchase a lifetime membership in such a trust fund if it cost \$1?

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

## Chapter 6 - Appendix 17A

49. What is the main reason you would NOT support a trust fund to help re-establish grizzly bears?

52. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$2 to oppose grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

53. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$5 to oppose grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

54. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$10 to oppose grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes  
☐ 2. No  
☐ 3. Don't know

55. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$25 to oppose grizzly bear recovery in the Bitterroot Mountains?

## *Appendix 17A - Public Survey Questions Pertinent to Economic Analysis*

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Don't know

56. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$50 to oppose grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Don't know

57. Suppose that, private funds were essential to oppose grizzly bear recovery. Donors would have the satisfaction of knowing there would be no grizzly bears in the Bitterroot Mountains, although other wildlife populations will not get the benefits reintroduction of grizzly bears might provide.

If this were the case, would you be willing to purchase a lifetime membership in a trust fund for \$100 to oppose grizzly bear recovery in the Bitterroot Mountains?

We are not asking for donations we simply want to know if people would be willing to do that.

(OTHER WILDLIFE BENEFITS BECAUSE CLOSING SOME LOGGING ROADS AT CERTAIN TIMES OF YEAR REDUCES HUMAN CONTACT WITH WILDLIFE)

(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Don't know

56. Would you be willing to purchase a lifetime membership in such a trust fund if it cost \$1?  
(CHECK ONLY ONE ANSWER)

- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Don't know

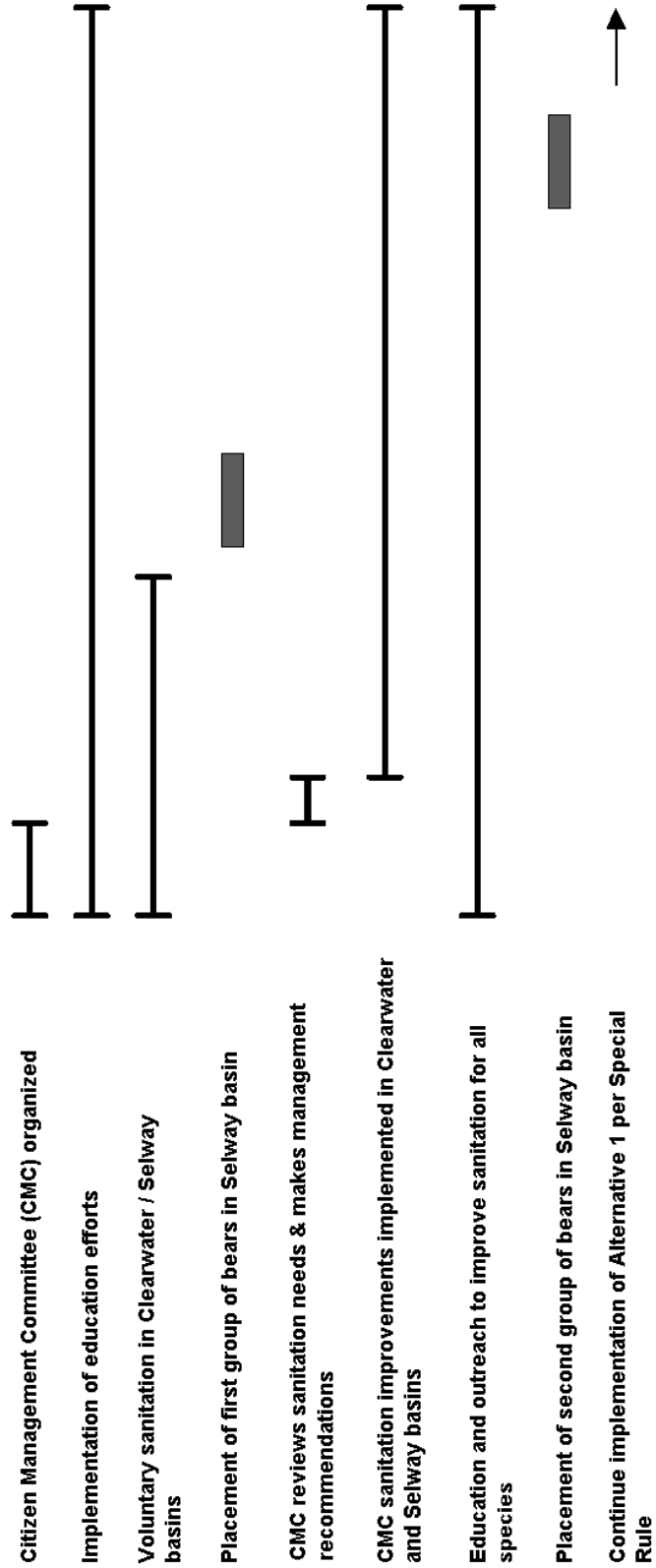
59. What is the main reason you would NOT support a trust fund to OPPOSE re-establishing grizzly bears?
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## **APPENDIX 18. EXPECTED TIMELINE TO COMMENCE IMPLEMENTATION OF THE PREFERRED ALTERNATIVE AND INITIAL IMPLEMENTATION-ASSOCIATED SANITATION EFFORTS TO MINIMIZE CONFLICTS**

The USFWS vision for the implementation of Alternative 1 includes a “phase-in” period to establish the Citizen Management Committee, implement sanitation standards, install sanitation equipment, and perform public outreach information and education activities. This first year of implementation would be a joint effort of the CMC and management agencies and would serve to lessen social impacts and potential conflicts from the reintroduction of grizzly bears to the BE.

Figure 6-7 illustrates an expected timeline for the implementation of this alternative. During the first year, the CMC would be organized after the Record of Decision is signed and the NEPA process is completed. Information and education efforts would commence immediately. A broad outreach program would be initiated to inform the public about plans to reintroduce grizzly bears to the BE, and to educate the public about grizzly bears and their management. A voluntary sanitation program would be implemented during the first year of the program. The CMC would review sanitation needs and make recommendations regarding the sanitation improvements for the BE during approximately the first six months. Placement of the first reintroduced bears is expected to occur between June-August of the second year. This reintroduction would likely be in the Selway watershed of the Selway-Bitterroot Wilderness Area. Before the placement of the first bears, CMC sanitation improvements would begin to be made in the Clearwater and Selway watersheds. Education and outreach activities to improve sanitation for all species would begin in the first year, and continue for the remainder of the reintroduction phase. Placement of the second group of reintroduced grizzly bears would occur in the third year in the Selway watershed of the Selway-Bitterroot Wilderness. The CMC would continue to monitor and make management recommendations to improve sanitation, and insure the success of the reintroduction program. Reintroductions of grizzly bears would continue per guidance of the special rule.

Year 1					Year 2					Year 3									
M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D



**Figure 6-7. Expected time line to commence implementation of Alternative 1 and initial implementation-associated sanitation efforts to minimize conflicts.**