

to the non-snowmobile visitors to Yellowstone, thereby effectively assigning zero cost impact to this group. These net benefit estimates therefore

may understate the cost estimate. The total present value of net benefits ranges from negative to positive for Alternatives 2 and 4 in this valuation

case, and are entirely negative for Alternative 3.

TABLE 1.—TOTAL PRESENT VALUE OF NET BENEFITS FOR YELLOWSTONE NATIONAL PARK ONLY, 2003–2004 TO 2012–2013

| | Total present value of net benefits ^a |
|-------------------------------------|--|
| Alternative 2: | |
| Discounted at 3% ^b | –\$89,310,000 to +\$9,660,000 |
| Discounted at 7% ^c | –\$73,470,000 to +\$6,880,000 |
| Alternative 3: | |
| Discounted at 3% ^b | –\$70,360,000 to –\$25,130,000 |
| Discounted at 7% ^c | –\$57,920,000 to –\$21,750,000 |
| Alternative 4: | |
| Discounted at 3% ^b | –\$56,750,000 to +\$5,430,000 |
| Discounted at 7% ^c | –\$46,730,000 to +\$3,470,000 |

^a The range in net benefits reflects the different values obtained for snowmobile visitors using the estimates from two economic valuation models, and the different scenarios analyzed for impacts to businesses.

^b The economics literature supports a 3% annual discount rate in the valuation of public goods (e.g., Freeman 1993). Federal rulemakings also support a 3% annual discount rate in the valuation of lost natural resource use (61 FR 453; 61 FR 20584).

^c Office of Management and Budget Circular A–94 (revised January 2003).

TABLE 2.—AMORTIZED NET BENEFITS PER YEAR FOR YELLOWSTONE NATIONAL PARK ONLY, 2003–2004 TO 2012–2013

| | Amortized net benefits per year ^a |
|-------------------------------------|--|
| Alternative 2: | |
| Discounted at 3% ^b | –\$10,470,000 to +\$1,130,000 |
| Discounted at 7% ^c | –\$10,460,000 to +\$979,000 |
| Alternative 3: | |
| Discounted at 3% ^b | –\$8,249,000 to –\$2,946,000 |
| Discounted at 7% ^c | –\$8,247,000 to –\$3,096,000 |
| Alternative 4: | |
| Discounted at 3% ^b | –\$6,653,000 to +\$637,000 |
| Discounted at 7% ^c | –\$6,653,000 to +\$493,000 |

^a This is the total present value of net benefits reported in Table 1 amortized over the ten-year analysis timeframe at the indicated discount rate.

^b The economics literature supports a 3% annual discount rate in the valuation of public goods (e.g., Freeman 1993). Federal rulemakings also support a 3% annual discount rate in the valuation of lost natural resource use (61 FR 453; 61 FR 20584).

^c Office of Management and Budget Circular A–94 (revised January 2003).

Table 3 presents the total present value of net benefits for both Yellowstone and Grand Teton National Parks. In this valuation case, the non-snowmobile visitors to Grand Teton National Park are assigned the same unit

costs as non-snowmobile visitors to Yellowstone National Park. This valuation case may overstate the cost impacts to non-snowmobile visitors to Grand Teton National Park since they are believed to be less than the costs

imposed on non-snowmobile visitors to Yellowstone. The amortized net benefits per year over the 10-year timeframe of the analysis for this valuation case are presented in Table 4.

TABLE 3.—TOTAL PRESENT VALUE OF NET BENEFITS FOR YELLOWSTONE AND GRAND TETON NATIONAL PARKS, 2003–2004 TO 2012–2013

| | Total present value of net benefits ^a |
|-------------------------------------|--|
| Alternative 2: | |
| Discounted at 3% ^b | –\$254,717,000 to –\$140,490,000 |
| Discounted at 7% ^c | –\$208,342,000 to –\$116,011,000 |
| Alternative 3: | |
| Discounted at 3% ^b | –\$164,143,000 to –\$120,253,000 |
| Discounted at 7% ^c | –\$134,319,000 to –\$99,504,000 |
| Alternative 4: | |
| Discounted at 3% ^b | –\$141,679,000 to –\$64,572,000 |
| Discounted at 7% ^c | –\$116,060,000 to –\$54,211,000 |

^a The range in net benefits reflects the different values obtained for snowmobile visitors using the estimates from two economic valuation models, and the different scenarios analyzed for impacts to businesses.

^b The economics literature supports a 3% annual discount rate in the valuation of public goods (e.g., Freeman 1993). Federal rulemakings also support a 3% annual discount rate in the valuation of lost natural resource use (61 FR 453; 61 FR 20584).

^c Office of Management and Budget Circular A–94 (revised January 2003).