

様式 2

事業費集計表
(治山事業)

事業名： 民有林直轄治山事業
 施行箇所： 松川入地区

都道府県名： 長野

(単位:千円)

| 年度 | 事業費 | | | 年度 | 事業費 | | |
|-------|-----------|----------|-----------|-------|-----|----------|---------------|
| | 事業費 | 割引率 | 現在価値額 | | 事業費 | 割引率 | 現在価値額 |
| H 4 | | × 2.2788 | | H 6 5 | 0 | × 0.2083 | 0 |
| H 5 | 459,332 | × 2.1911 | 1,006,442 | H 6 6 | 0 | × 0.2003 | 0 |
| H 6 | 558,730 | × 2.1068 | 1,177,132 | H 6 7 | 0 | × 0.1926 | 0 |
| H 7 | 430,922 | × 2.0258 | 872,962 | H 6 8 | 0 | × 0.1852 | 0 |
| H 8 | 469,658 | × 1.9479 | 914,847 | H 6 9 | 0 | × 0.1780 | 0 |
| H 9 | 637,671 | × 1.8730 | 1,194,358 | H 7 0 | 0 | × 0.1712 | 0 |
| H 1 0 | 735,758 | × 1.8009 | 1,325,027 | H 7 1 | 0 | × 0.1646 | 0 |
| H 1 1 | 682,793 | × 1.7317 | 1,182,393 | H 7 2 | 0 | × 0.1583 | 0 |
| H 1 2 | 696,309 | × 1.6651 | 1,159,424 | H 7 3 | 0 | × 0.1522 | 0 |
| H 1 3 | 645,987 | × 1.6010 | 1,034,225 | H 7 4 | 0 | × 0.1463 | 0 |
| H 1 4 | 472,882 | × 1.5395 | 728,002 | H 7 5 | 0 | × 0.1407 | 0 |
| H 1 5 | 417,773 | × 1.4802 | 618,388 | H 7 6 | 0 | × 0.1353 | 0 |
| H 1 6 | 341,559 | × 1.4233 | 486,141 | H 7 7 | 0 | × 0.1301 | 0 |
| H 1 7 | 317,541 | × 1.3686 | 434,587 | H 7 8 | 0 | × 0.1251 | 0 |
| H 1 8 | 466,456 | × 1.3159 | 613,809 | H 7 9 | 0 | × 0.1203 | 0 |
| H 1 9 | 356,312 | × 1.2653 | 450,842 | H 8 0 | 0 | × 0.1157 | 0 |
| H 2 0 | 360,395 | × 1.2167 | 438,493 | H 8 1 | 0 | × 0.1112 | 0 |
| H 2 1 | 363,578 | × 1.1699 | 425,350 | H 8 2 | 0 | × 0.1069 | 0 |
| H 2 2 | 293,199 | × 1.1249 | 329,820 | H 8 3 | 0 | × 0.1028 | 0 |
| H 2 3 | 293,486 | × 1.0816 | 317,434 | H 8 4 | 0 | × 0.0989 | 0 |
| H 2 4 | 273,515 | × 1.0400 | 284,456 | H 8 5 | 0 | × 0.0951 | 0 |
| H 2 5 | 916,765 | × 1.0000 | 916,765 | H 8 6 | 0 | × 0.0914 | 0 |
| H 2 6 | 1,187,292 | × 0.9615 | 1,141,581 | H 8 7 | 0 | × 0.0879 | 0 |
| H 2 7 | 1,187,292 | × 0.9246 | 1,097,770 | H 8 8 | 0 | × 0.0845 | 0 |
| H 2 8 | 1,187,292 | × 0.8890 | 1,055,503 | H 8 9 | 0 | × 0.0813 | 0 |
| H 2 9 | 1,187,292 | × 0.8548 | 1,014,897 | H 9 0 | 0 | × 0.0781 | 0 |
| H 3 0 | 1,187,292 | × 0.8219 | 975,835 | | | | |
| H 3 1 | 1,187,292 | × 0.7903 | 938,317 | | | | |
| H 3 2 | 1,187,292 | × 0.7599 | 902,223 | | | | |
| H 3 3 | 1,187,292 | × 0.7307 | 867,554 | | | | |
| H 3 4 | 1,187,292 | × 0.7026 | 834,191 | | | | |
| H 3 5 | 1,187,292 | × 0.6756 | 802,134 | | | | |
| H 3 6 | 1,187,292 | × 0.6496 | 771,265 | | | | |
| H 3 7 | 1,187,292 | × 0.6246 | 741,583 | | | | |
| H 3 8 | 1,187,292 | × 0.6006 | 713,088 | | | | |
| H 3 9 | 1,187,292 | × 0.5775 | 685,661 | | | | |
| H 4 0 | 1,187,291 | × 0.5553 | 659,303 | | | | |
| H 4 1 | 0 | × 0.5339 | 0 | | | | |
| H 4 2 | 0 | × 0.5134 | 0 | | | | |
| H 4 3 | 0 | × 0.4936 | 0 | | | | |
| H 4 4 | 0 | × 0.4746 | 0 | | | | |
| H 4 5 | 0 | × 0.4564 | 0 | | | | |
| H 4 6 | 0 | × 0.4388 | 0 | | | | |
| H 4 7 | 0 | × 0.4220 | 0 | | | | |
| H 4 8 | 0 | × 0.4057 | 0 | | | | |
| H 4 9 | 0 | × 0.3901 | 0 | | | | |
| H 5 0 | 0 | × 0.3751 | 0 | | | | |
| H 5 1 | 0 | × 0.3607 | 0 | | | | |
| H 5 2 | 0 | × 0.3468 | 0 | | | | |
| H 5 3 | 0 | × 0.3335 | 0 | | | | |
| H 5 4 | 0 | × 0.3207 | 0 | | | | |
| H 5 5 | 0 | × 0.3083 | 0 | | | | |
| H 5 6 | 0 | × 0.2965 | 0 | | | | |
| H 5 7 | 0 | × 0.2851 | 0 | | | | |
| H 5 8 | 0 | × 0.2741 | 0 | | | | |
| H 5 9 | 0 | × 0.2636 | 0 | | | | |
| H 6 0 | 0 | × 0.2534 | 0 | | | | |
| H 6 1 | 0 | × 0.2437 | 0 | | | | |
| H 6 2 | 0 | × 0.2343 | 0 | | | | |
| H 6 3 | 0 | × 0.2253 | 0 | | | | |
| H 6 4 | 0 | × 0.2166 | 0 | | | | |
| | | | | 合 計 | | | 29,111,802 |
| | | | | C = | | | 29,111,802 千円 |

$$B = \sum_{t=1}^{T-1} \frac{t}{T \times (1+i)^t} + \sum_{t=T}^Y \frac{1}{(1+i)^t} \times \frac{(f1-f2) \times \alpha \times A \times U}{360}$$

- U: 治水ダムの単位雨量流出量当たりの年間減価償却費(円/m³/sec) 3,520,000
- 出典:「ダム年鑑2012」
- f1: 事業実施前の流出係数 浸透能小 急 要整備森林(裸地) 0.90
- 出典:「治山設計」(山口伊佐夫著,1979)
- f2: 事業実施後、T年経過後の流出係数 浸透能小 急 整備済森林 0.65
- 出典:「治山設計」(山口伊佐夫著,1979)
- T: 事業実施後、流出係数が安定するのに必要な年数 15
- α: 100年確率時雨量(mm/h) 87
- 出典:「治山提要(雨量強度表)」
- A: 事業対象区域面積(ha) 3.96 ~ 241.73
- 360: 単位合わせのための調整値
- Y: 評価期間 86

| 年度 | 社会的割引率 | 事業対象区域面積 | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|----------|--------|--------|--------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 3.96 | 0.26 | 55 | 121 |
| 1994 | 2.1068 | 8.79 | 0.85 | 181 | 381 |
| 1995 | 2.0258 | 12.49 | 1.68 | 357 | 723 |
| 1996 | 1.9479 | 16.55 | 2.79 | 593 | 1,155 |
| 1997 | 1.8730 | 22.06 | 4.26 | 906 | 1,697 |
| 1998 | 1.8009 | 28.42 | 6.14 | 1,306 | 2,352 |
| 1999 | 1.7317 | 34.32 | 8.43 | 1,793 | 3,105 |
| 2000 | 1.6651 | 40.31 | 11.12 | 2,365 | 3,938 |
| 2001 | 1.6010 | 45.89 | 14.20 | 3,020 | 4,835 |
| 2002 | 1.5395 | 49.98 | 17.50 | 3,722 | 5,730 |
| 2003 | 1.4802 | 53.58 | 21.10 | 4,487 | 6,642 |
| 2004 | 1.4233 | 56.53 | 24.88 | 5,291 | 7,531 |
| 2005 | 1.3686 | 59.26 | 28.80 | 6,125 | 8,383 |
| 2006 | 1.3159 | 63.30 | 33.04 | 7,027 | 9,247 |
| 2007 | 1.2653 | 66.37 | 37.46 | 7,967 | 10,081 |
| 2008 | 1.2167 | 69.49 | 41.82 | 8,894 | 10,821 |
| 2009 | 1.1699 | 72.63 | 46.09 | 9,802 | 11,467 |
| 2010 | 1.1249 | 75.17 | 50.25 | 10,687 | 12,022 |
| 2011 | 1.0816 | 77.68 | 54.33 | 11,554 | 12,497 |
| 2012 | 1.0400 | 80.05 | 58.21 | 12,379 | 12,874 |
| 2013 | 1.0000 | 82.98 | 62.18 | 13,224 | 13,224 |
| 2014 | 0.9615 | 86.23 | 66.43 | 14,127 | 13,583 |
| 2015 | 0.9246 | 89.84 | 70.98 | 15,095 | 13,957 |
| 2016 | 0.8890 | 93.73 | 75.82 | 16,124 | 14,334 |
| 2017 | 0.8548 | 97.98 | 81.08 | 17,243 | 14,739 |
| 2018 | 0.8219 | 102.53 | 86.81 | 18,462 | 15,174 |
| 2019 | 0.7903 | 107.44 | 93.00 | 19,778 | 15,631 |
| 2020 | 0.7599 | 112.63 | 99.69 | 21,201 | 16,111 |
| 2021 | 0.7307 | 118.13 | 106.81 | 22,715 | 16,598 |
| 2022 | 0.7026 | 123.98 | 114.41 | 24,331 | 17,095 |
| 2023 | 0.6756 | 130.13 | 122.48 | 26,047 | 17,597 |
| 2024 | 0.6496 | 136.63 | 131.00 | 27,859 | 18,097 |
| 2025 | 0.6246 | 143.43 | 140.06 | 29,786 | 18,604 |
| 2026 | 0.6006 | 150.58 | 149.63 | 31,821 | 19,112 |
| 2027 | 0.5775 | 158.03 | 159.73 | 33,969 | 19,617 |
| 2028 | 0.5553 | 165.83 | 169.98 | 36,149 | 20,074 |
| 2029 | 0.5339 | 173.93 | 179.55 | 38,184 | 20,386 |
| 2030 | 0.5134 | 182.28 | 188.43 | 40,073 | 20,573 |
| 2031 | 0.4936 | 190.93 | 196.63 | 41,817 | 20,641 |
| 2032 | 0.4746 | 200.03 | 204.15 | 43,416 | 20,605 |
| 2033 | 0.4564 | 209.53 | 210.98 | 44,868 | 20,478 |
| 2034 | 0.4388 | 219.48 | 217.13 | 46,176 | 20,262 |
| 2035 | 0.4220 | 229.83 | 222.60 | 47,340 | 19,977 |
| 2036 | 0.4057 | 240.53 | 227.38 | 48,356 | 19,618 |
| 2037 | 0.3901 | 251.63 | 231.48 | 49,228 | 19,204 |
| 2038 | 0.3751 | 263.08 | 234.90 | 49,955 | 18,738 |
| 2039 | 0.3607 | 274.83 | 237.63 | 50,536 | 18,228 |
| 2040 | 0.3468 | 286.93 | 239.68 | 50,972 | 17,677 |
| 2041 | 0.3335 | 299.33 | 241.05 | 51,263 | 17,096 |
| 2042 | 0.3207 | 312.08 | 241.73 | 51,408 | 16,487 |
| 2043 | 0.3083 | 325.13 | 241.73 | 51,408 | 15,849 |
| 2044 | 0.2965 | 338.43 | 241.73 | 51,408 | 15,242 |
| 2045 | 0.2851 | 352.03 | 241.73 | 51,408 | 14,656 |
| 2046 | 0.2741 | 365.98 | 241.73 | 51,408 | 14,091 |
| 2047 | 0.2636 | 380.23 | 241.73 | 51,408 | 13,551 |
| 2048 | 0.2534 | 394.83 | 241.73 | 51,408 | 13,027 |
| 2049 | 0.2437 | 409.73 | 241.73 | 51,408 | 12,528 |
| 2050 | 0.2343 | 424.98 | 241.73 | 51,408 | 12,045 |
| 2051 | 0.2253 | 440.53 | 241.73 | 51,408 | 11,582 |
| 2052 | 0.2166 | 456.33 | 241.73 | 51,408 | 11,135 |
| 2053 | 0.2083 | 472.43 | 241.73 | 51,408 | 10,708 |
| 2054 | 0.2003 | 488.78 | 241.73 | 51,408 | 10,297 |

$$B = \sum_{t=1}^Y \frac{(f_1 - f_2) \times t \times \alpha \times A \times U}{Y \times 360 \times (1+i)^t}$$

| | | |
|------|--|-----------------------|
| U: | 治水ダムの単位雨量流出量当たりの年間減価償却費(円/㎡/sec) 出典:「ダム年鑑2012」 | 3,520,000 |
| f1: | 保全効果区域において事業を実施しない場合の将来の流出係数 出典:「治山設計」(山口伊佐夫著,1979) | 浸透能小 急 要整備森林(疎林) 0.75 |
| f2: | 保全効果区域内の現在の流出係数 出典:「治山設計」(山口伊佐夫著,1979) | 浸透能小 急 整備済森林 0.65 |
| α: | 100年確率時雨量(mm/h) 治山提要(雨量強度表) | 87 |
| A: | 保全効果区域面積(ha) | 1,290.83 |
| 360: | 単位合わせのための調整値 | |
| Y: | 評価期間 | 86 |

| 年度 | 社会的割引率 | t/Y | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|------|----------|--------|--------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 0.01 | 21.18 | 21 | 46 |
| 1994 | 2.1068 | 0.02 | 46.93 | 93 | 196 |
| 1995 | 2.0258 | 0.03 | 66.80 | 198 | 401 |
| 1996 | 1.9479 | 0.05 | 88.45 | 350 | 682 |
| 1997 | 1.8730 | 0.06 | 117.85 | 582 | 1,090 |
| 1998 | 1.8009 | 0.07 | 151.77 | 901 | 1,623 |
| 1999 | 1.7317 | 0.08 | 183.25 | 1,269 | 2,198 |
| 2000 | 1.6651 | 0.09 | 215.35 | 1,704 | 2,837 |
| 2001 | 1.6010 | 0.10 | 245.13 | 2,183 | 3,495 |
| 2002 | 1.5395 | 0.12 | 266.93 | 2,641 | 4,066 |
| 2003 | 1.4802 | 0.13 | 286.19 | 3,114 | 4,609 |
| 2004 | 1.4233 | 0.14 | 301.93 | 3,583 | 5,100 |
| 2005 | 1.3686 | 0.15 | 316.57 | 4,072 | 5,573 |
| 2006 | 1.3159 | 0.16 | 338.08 | 4,682 | 6,161 |
| 2007 | 1.2653 | 0.17 | 354.50 | 5,259 | 6,654 |
| 2008 | 1.2167 | 0.19 | 371.12 | 5,872 | 7,144 |
| 2009 | 1.1699 | 0.20 | 387.88 | 6,523 | 7,631 |
| 2010 | 1.1249 | 0.21 | 401.40 | 7,147 | 8,040 |
| 2011 | 1.0816 | 0.22 | 414.93 | 7,797 | 8,433 |
| 2012 | 1.0400 | 0.23 | 427.53 | 8,459 | 8,797 |
| 2013 | 1.0000 | 0.24 | 469.80 | 9,759 | 9,759 |
| 2014 | 0.9615 | 0.26 | 524.53 | 11,414 | 10,975 |
| 2015 | 0.9246 | 0.27 | 579.27 | 13,177 | 12,183 |
| 2016 | 0.8890 | 0.28 | 634.00 | 15,053 | 13,382 |
| 2017 | 0.8548 | 0.29 | 688.74 | 17,032 | 14,559 |
| 2018 | 0.8219 | 0.30 | 743.48 | 19,119 | 15,714 |
| 2019 | 0.7903 | 0.31 | 798.21 | 21,321 | 16,850 |
| 2020 | 0.7599 | 0.33 | 852.95 | 23,625 | 17,953 |
| 2021 | 0.7307 | 0.34 | 907.68 | 26,036 | 19,025 |
| 2022 | 0.7026 | 0.35 | 962.42 | 28,556 | 20,063 |
| 2023 | 0.6756 | 0.36 | 1,017.15 | 31,193 | 21,074 |
| 2024 | 0.6496 | 0.37 | 1,071.89 | 33,929 | 22,040 |
| 2025 | 0.6246 | 0.38 | 1,126.62 | 36,773 | 22,968 |
| 2026 | 0.6006 | 0.40 | 1,181.36 | 39,726 | 23,859 |
| 2027 | 0.5775 | 0.41 | 1,236.09 | 42,796 | 24,715 |
| 2028 | 0.5553 | 0.42 | 1,290.83 | 45,965 | 25,524 |
| 2029 | 0.5339 | 0.43 | 1,290.83 | 47,239 | 25,221 |
| 2030 | 0.5134 | 0.44 | 1,290.83 | 48,524 | 24,912 |
| 2031 | 0.4936 | 0.45 | 1,290.83 | 49,797 | 24,580 |
| 2032 | 0.4746 | 0.47 | 1,290.83 | 51,071 | 24,238 |
| 2033 | 0.4564 | 0.48 | 1,290.83 | 52,345 | 23,890 |
| 2034 | 0.4388 | 0.49 | 1,290.83 | 53,630 | 23,533 |
| 2035 | 0.4220 | 0.50 | 1,290.83 | 54,904 | 23,169 |
| 2036 | 0.4057 | 0.51 | 1,290.83 | 56,177 | 22,791 |
| 2037 | 0.3901 | 0.52 | 1,290.83 | 57,462 | 22,416 |
| 2038 | 0.3751 | 0.53 | 1,290.83 | 58,736 | 22,032 |
| 2039 | 0.3607 | 0.55 | 1,290.83 | 60,010 | 21,646 |
| 2040 | 0.3468 | 0.56 | 1,290.83 | 61,283 | 21,253 |
| 2041 | 0.3335 | 0.57 | 1,290.83 | 62,568 | 20,866 |
| 2042 | 0.3207 | 0.58 | 1,290.83 | 63,842 | 20,474 |
| 2043 | 0.3083 | 0.59 | 1,290.83 | 65,116 | 20,075 |
| 2044 | 0.2965 | 0.60 | 1,290.83 | 66,400 | 19,688 |
| 2045 | 0.2851 | 0.62 | 1,290.83 | 67,674 | 19,294 |
| 2046 | 0.2741 | 0.63 | 1,290.83 | 68,948 | 18,899 |
| 2047 | 0.2636 | 0.64 | 1,290.83 | 70,222 | 18,511 |
| 2048 | 0.2534 | 0.65 | 1,290.83 | 71,506 | 18,120 |
| 2049 | 0.2437 | 0.66 | 1,290.83 | 72,780 | 17,736 |
| 2050 | 0.2343 | 0.67 | 1,290.83 | 74,054 | 17,351 |
| 2051 | 0.2253 | 0.69 | 1,290.83 | 75,328 | 16,971 |
| 2052 | 0.2166 | 0.70 | 1,290.83 | 76,612 | 16,594 |
| 2053 | 0.2083 | 0.71 | 1,290.83 | 77,886 | 16,224 |
| 2054 | 0.2003 | 0.72 | 1,290.83 | 79,160 | 15,856 |
| 2055 | 0.1926 | 0.73 | 1,290.83 | 80,445 | 15,494 |
| 2056 | 0.1852 | 0.74 | 1,290.83 | 81,718 | 15,134 |

$$B = \sum_{t=1}^{T-1} \frac{t}{T \times (1+i)^t} + \sum_{t=T}^Y \frac{1}{(1+i)^t} \times \frac{(D2-D1) \times A \times P \times U \times 10}{365 \times 86400}$$

| | | |
|--------|---|---------------|
| A: | 事業対象区域面積 (ha) | 3.96 ~ 241.73 |
| P: | 年間平均降雨量 (mm/年) 松川ダム降水量観測記録1975~2011 | 1,998 |
| D1: | 事業実施前の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.51 |
| D2: | 事業実施後、T年経過後の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.56 |
| T: | 事業実施後、流出係数が安定するのに必要な年数 | 15 |
| U: | 開発流量当りの利水ダム年間減価償却費 (円/m ³ /S) 出典:「ダム年鑑2012」 | 1,038,000,000 |
| Y: | 評価期間 | 86 |
| 10: | 単位合わせのための調整値 | |
| 365: | 1年間の日数 | |
| 86400: | 1日の秒数 | |

| 年度 | 社会的割引率 | 事業対象区域面積 | 事業効果面積 | 効果額 | 現在価値化 |
|-------|--------|----------|--------|-------|-------|
| 1,992 | 2.2788 | | | | |
| 1,993 | 2.1911 | 3.96 | 0.26 | 9 | 20 |
| 1,994 | 2.1068 | 8.79 | 0.85 | 28 | 59 |
| 1,995 | 2.0258 | 12.49 | 1.68 | 55 | 111 |
| 1,996 | 1.9479 | 16.55 | 2.79 | 92 | 179 |
| 1,997 | 1.8730 | 22.06 | 4.26 | 140 | 262 |
| 1,998 | 1.8009 | 28.42 | 6.14 | 202 | 364 |
| 1,999 | 1.7317 | 34.32 | 8.43 | 277 | 480 |
| 2,000 | 1.6651 | 40.31 | 11.12 | 366 | 609 |
| 2,001 | 1.6010 | 45.89 | 14.20 | 467 | 748 |
| 2,002 | 1.5395 | 49.98 | 17.50 | 575 | 885 |
| 2,003 | 1.4802 | 53.58 | 21.10 | 694 | 1,027 |
| 2,004 | 1.4233 | 56.53 | 24.88 | 818 | 1,164 |
| 2,005 | 1.3686 | 59.26 | 28.80 | 947 | 1,296 |
| 2,006 | 1.3159 | 63.30 | 33.04 | 1,086 | 1,429 |
| 2,007 | 1.2653 | 66.37 | 37.46 | 1,232 | 1,559 |
| 2,008 | 1.2167 | 69.49 | 41.82 | 1,375 | 1,673 |
| 2,009 | 1.1699 | 72.63 | 46.09 | 1,516 | 1,774 |
| 2,010 | 1.1249 | 75.17 | 50.25 | 1,652 | 1,858 |
| 2,011 | 1.0816 | 77.68 | 54.33 | 1,786 | 1,932 |
| 2,012 | 1.0400 | 80.05 | 58.21 | 1,914 | 1,991 |
| 2,013 | 1.0000 | 82.98 | 62.18 | 2,045 | 2,045 |
| 2,014 | 0.9615 | 86.23 | 66.43 | 2,184 | 2,100 |
| 2,015 | 0.9246 | 89.48 | 70.98 | 2,334 | 2,158 |
| 2,016 | 0.8890 | 92.73 | 75.82 | 2,493 | 2,216 |
| 2,017 | 0.8548 | 95.98 | 81.08 | 2,666 | 2,279 |
| 2,018 | 0.8219 | 99.23 | 86.81 | 2,854 | 2,346 |
| 2,019 | 0.7903 | 102.48 | 93.00 | 3,058 | 2,417 |
| 2,020 | 0.7599 | 105.73 | 99.69 | 3,278 | 2,491 |
| 2,021 | 0.7307 | 109.98 | 106.81 | 3,512 | 2,566 |
| 2,022 | 0.7026 | 114.23 | 114.41 | 3,762 | 2,643 |
| 2,023 | 0.6756 | 118.48 | 122.48 | 4,027 | 2,721 |
| 2,024 | 0.6496 | 122.73 | 131.00 | 4,308 | 2,798 |
| 2,025 | 0.6246 | 126.98 | 140.06 | 4,605 | 2,876 |
| 2,026 | 0.6006 | 131.23 | 149.63 | 4,920 | 2,955 |
| 2,027 | 0.5775 | 135.48 | 159.73 | 5,252 | 3,033 |
| 2,028 | 0.5553 | 139.73 | 169.98 | 5,589 | 3,104 |
| 2,029 | 0.5339 | 143.98 | 179.55 | 5,904 | 3,152 |
| 2,030 | 0.5134 | 148.23 | 188.43 | 6,196 | 3,181 |
| 2,031 | 0.4936 | 152.48 | 196.63 | 6,466 | 3,192 |
| 2,032 | 0.4746 | 156.73 | 204.15 | 6,713 | 3,186 |
| 2,033 | 0.4564 | 160.98 | 210.98 | 6,937 | 3,166 |
| 2,034 | 0.4388 | 165.23 | 217.13 | 7,140 | 3,133 |
| 2,035 | 0.4220 | 169.48 | 222.60 | 7,320 | 3,089 |
| 2,036 | 0.4057 | 173.73 | 227.38 | 7,477 | 3,033 |
| 2,037 | 0.3901 | 177.98 | 231.48 | 7,612 | 2,969 |
| 2,038 | 0.3751 | 182.23 | 234.90 | 7,724 | 2,897 |
| 2,039 | 0.3607 | 186.48 | 237.63 | 7,814 | 2,819 |
| 2,040 | 0.3468 | 190.73 | 239.68 | 7,881 | 2,733 |
| 2,041 | 0.3335 | 194.98 | 241.05 | 7,926 | 2,643 |
| 2,042 | 0.3207 | 199.23 | 241.73 | 7,949 | 2,549 |
| 2,043 | 0.3083 | 203.48 | 241.73 | 7,949 | 2,451 |
| 2,044 | 0.2965 | 207.73 | 241.73 | 7,949 | 2,357 |
| 2,045 | 0.2851 | 211.98 | 241.73 | 7,949 | 2,266 |
| 2,046 | 0.2741 | 216.23 | 241.73 | 7,949 | 2,179 |
| 2,047 | 0.2636 | 220.48 | 241.73 | 7,949 | 2,095 |
| 2,048 | 0.2534 | 224.73 | 241.73 | 7,949 | 2,014 |
| 2,049 | 0.2437 | 228.98 | 241.73 | 7,949 | 1,937 |
| 2,050 | 0.2343 | 233.23 | 241.73 | 7,949 | 1,862 |

$$B = \sum_{t=1}^Y \frac{t \times (D_2 - D_1) \times A \times P \times U \times 10}{365 \times 86400 \times Y \times (1+i)^t}$$

| | | |
|--------|---|---------------|
| A: | 保全効果区域面積 (ha) | 1,290.83 |
| P: | 年間平均降雨量 (mm/年) 松川ダム降水量観測記録1975~2011 | 1,998 |
| D1: | 保全効果区域を放置した場合に想定される将来の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.51 |
| D2: | 保全効果区域内の現在の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.56 |
| U: | 開発流量当りの利水ダム年間減価償却費 (円/m ³ /S) 出典:「ダム年鑑2012」 | 1,038,000,000 |
| Y: | 評価期間 | 86 |
| 10: | 単位合わせのための調整値 | |
| 365: | 1年間の日数 | |
| 86400: | 1日の秒数 | |

| 年度 | 社会的割引率 | t/Y | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|--------|----------|--------|-------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 0.0116 | 21.18 | 8 | 18 |
| 1994 | 2.1068 | 0.0233 | 46.93 | 36 | 76 |
| 1995 | 2.0258 | 0.0349 | 66.80 | 77 | 156 |
| 1996 | 1.9479 | 0.0465 | 88.45 | 135 | 263 |
| 1997 | 1.8730 | 0.0581 | 117.85 | 225 | 421 |
| 1998 | 1.8009 | 0.0698 | 151.77 | 348 | 627 |
| 1999 | 1.7317 | 0.0814 | 183.25 | 490 | 849 |
| 2000 | 1.6651 | 0.0930 | 215.35 | 659 | 1,097 |
| 2001 | 1.6010 | 0.1047 | 245.13 | 844 | 1,351 |
| 2002 | 1.5395 | 0.1163 | 266.93 | 1,021 | 1,572 |
| 2003 | 1.4802 | 0.1279 | 286.19 | 1,204 | 1,782 |
| 2004 | 1.4233 | 0.1395 | 301.93 | 1,385 | 1,971 |
| 2005 | 1.3686 | 0.1512 | 316.57 | 1,574 | 2,154 |
| 2006 | 1.3159 | 0.1628 | 338.08 | 1,810 | 2,382 |
| 2007 | 1.2653 | 0.1744 | 354.50 | 2,033 | 2,572 |
| 2008 | 1.2167 | 0.1860 | 371.12 | 2,270 | 2,762 |
| 2009 | 1.1699 | 0.1977 | 387.88 | 2,522 | 2,950 |
| 2010 | 1.1249 | 0.2093 | 401.40 | 2,763 | 3,108 |
| 2011 | 1.0816 | 0.2209 | 414.93 | 3,014 | 3,260 |
| 2012 | 1.0400 | 0.2326 | 427.53 | 3,270 | 3,401 |
| 2013 | 1.0000 | 0.2442 | 469.80 | 3,772 | 3,772 |
| 2014 | 0.9615 | 0.2558 | 524.53 | 4,412 | 4,242 |
| 2015 | 0.9246 | 0.2674 | 579.27 | 5,093 | 4,709 |
| 2016 | 0.8890 | 0.2791 | 634.00 | 5,818 | 5,172 |
| 2017 | 0.8548 | 0.2907 | 688.74 | 6,584 | 5,628 |
| 2018 | 0.8219 | 0.3023 | 743.48 | 7,390 | 6,074 |
| 2019 | 0.7903 | 0.3140 | 798.21 | 8,241 | 6,513 |
| 2020 | 0.7599 | 0.3256 | 852.95 | 9,132 | 6,939 |
| 2021 | 0.7307 | 0.3372 | 907.68 | 10,064 | 7,354 |
| 2022 | 0.7026 | 0.3488 | 962.42 | 11,038 | 7,755 |
| 2023 | 0.6756 | 0.3605 | 1,017.15 | 12,057 | 8,146 |
| 2024 | 0.6496 | 0.3721 | 1,071.89 | 13,115 | 8,520 |
| 2025 | 0.6246 | 0.3837 | 1,126.62 | 14,214 | 8,878 |
| 2026 | 0.6006 | 0.3953 | 1,181.36 | 15,356 | 9,223 |
| 2027 | 0.5775 | 0.4070 | 1,236.09 | 16,543 | 9,554 |
| 2028 | 0.5553 | 0.4186 | 1,290.83 | 17,768 | 9,867 |
| 2029 | 0.5339 | 0.4302 | 1,290.83 | 18,260 | 9,749 |
| 2030 | 0.5134 | 0.4419 | 1,290.83 | 18,756 | 9,629 |
| 2031 | 0.4936 | 0.4535 | 1,290.83 | 19,249 | 9,501 |
| 2032 | 0.4746 | 0.4651 | 1,290.83 | 19,741 | 9,369 |
| 2033 | 0.4564 | 0.4767 | 1,290.83 | 20,234 | 9,235 |
| 2034 | 0.4388 | 0.4884 | 1,290.83 | 20,730 | 9,096 |
| 2035 | 0.4220 | 0.5000 | 1,290.83 | 21,223 | 8,956 |
| 2036 | 0.4057 | 0.5116 | 1,290.83 | 21,715 | 8,810 |
| 2037 | 0.3901 | 0.5233 | 1,290.83 | 22,212 | 8,665 |
| 2038 | 0.3751 | 0.5349 | 1,290.83 | 22,704 | 8,516 |
| 2039 | 0.3607 | 0.5465 | 1,290.83 | 23,196 | 8,367 |
| 2040 | 0.3468 | 0.5581 | 1,290.83 | 23,689 | 8,215 |
| 2041 | 0.3335 | 0.5698 | 1,290.83 | 24,185 | 8,066 |
| 2042 | 0.3207 | 0.5814 | 1,290.83 | 24,678 | 7,914 |
| 2043 | 0.3083 | 0.5930 | 1,290.83 | 25,170 | 7,760 |
| 2044 | 0.2965 | 0.6047 | 1,290.83 | 25,667 | 7,610 |
| 2045 | 0.2851 | 0.6163 | 1,290.83 | 26,159 | 7,458 |
| 2046 | 0.2741 | 0.6279 | 1,290.83 | 26,651 | 7,305 |
| 2047 | 0.2636 | 0.6395 | 1,290.83 | 27,144 | 7,155 |
| 2048 | 0.2534 | 0.6512 | 1,290.83 | 27,640 | 7,004 |
| 2049 | 0.2437 | 0.6628 | 1,290.83 | 28,133 | 6,856 |
| 2050 | 0.2343 | 0.6744 | 1,290.83 | 28,625 | 6,707 |
| 2051 | 0.2253 | 0.6860 | 1,290.83 | 29,117 | 6,560 |
| 2052 | 0.2166 | 0.6977 | 1,290.83 | 29,614 | 6,414 |

$$B = \sum_{t=1}^{T-1} \frac{t}{T \times (1+i)^t} + \sum_{t=T}^Y \frac{1}{(1+i)^t} \times (D2-D1) \times A \times P \times u \times 10$$

$$u = \frac{U_x \times Q_x + U_y \times Q_y}{Q_x + Q_y}$$

| | | |
|-----|---|---------------|
| Qx: | 全貯留量のうち生活用水使用相当量 | 22.00 億 |
| Qy: | 全貯留量 - Qx | 62.14 億 |
| A: | 事業対象区域面積 (ha) | 3.96 ~ 241.73 |
| P: | 年間平均降雨量 (mm/年) 松川ダム降水量観測記録1975~2011 | 1,998 |
| T: | 事業実施後、貯留率が安定するのに必要な年数 | 15 |
| D1: | 事業実施前の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.51 |
| D2: | 事業実施後、T年経過後の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.56 |
| Ux: | 単位当たりの上水道給水原価 (円/m ³) 「長野県営水道事業経営ビジョン(末端給水事業)」より | 170.80 |
| Uy: | 単位当たりの雨水浄化費 (円/m ³) 出典:「地球環境・人間生活にかかる農業及び森林の多面的な機能の評価に関する調査研究報告書」(三菱総合研究所H13.11)「雨水利用ハンドブック」 | 68.60 |
| u: | 単位当たりの水質浄化費 (U _x と U _y を用いて Q _x と Q _y で比例按分して算出) | 95.32 |
| Y: | 評価期間 | 86 |
| 10: | 単位合わせのための調整値 | |

| 年度 | 社会的割引率 | 事業対象区域面積 | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|----------|--------|--------|-------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 3.96 | 0.26 | 25 | 55 |
| 1994 | 2.1068 | 8.79 | 0.85 | 81 | 171 |
| 1995 | 2.0258 | 12.49 | 1.68 | 160 | 324 |
| 1996 | 1.9479 | 16.55 | 2.79 | 266 | 518 |
| 1997 | 1.8730 | 22.06 | 4.26 | 406 | 760 |
| 1998 | 1.8009 | 28.42 | 6.14 | 585 | 1,054 |
| 1999 | 1.7317 | 34.32 | 8.43 | 803 | 1,391 |
| 2000 | 1.6651 | 40.31 | 11.12 | 1,059 | 1,763 |
| 2001 | 1.6010 | 45.89 | 14.20 | 1,352 | 2,165 |
| 2002 | 1.5395 | 49.98 | 17.50 | 1,666 | 2,565 |
| 2003 | 1.4802 | 53.58 | 21.10 | 2,009 | 2,974 |
| 2004 | 1.4233 | 56.53 | 24.88 | 2,369 | 3,372 |
| 2005 | 1.3686 | 59.26 | 28.80 | 2,742 | 3,753 |
| 2006 | 1.3159 | 63.30 | 33.04 | 3,146 | 4,140 |
| 2007 | 1.2653 | 66.37 | 37.46 | 3,567 | 4,513 |
| 2008 | 1.2167 | 69.49 | 41.82 | 3,982 | 4,845 |
| 2009 | 1.1699 | 72.63 | 46.09 | 4,389 | 5,135 |
| 2010 | 1.1249 | 75.17 | 50.25 | 4,785 | 5,383 |
| 2011 | 1.0816 | 77.68 | 54.33 | 5,174 | 5,596 |
| 2012 | 1.0400 | 80.05 | 58.21 | 5,543 | 5,765 |
| 2013 | 1.0000 | 82.98 | 62.18 | 5,921 | 5,921 |
| 2014 | 0.9615 | 86.23 | 66.43 | 6,326 | 6,082 |
| 2015 | 0.9246 | 89.84 | 70.98 | 6,759 | 6,249 |
| 2016 | 0.8890 | 93.73 | 75.82 | 7,220 | 6,419 |
| 2017 | 0.8548 | 97.98 | 81.08 | 7,721 | 6,600 |
| 2018 | 0.8219 | 102.53 | 86.81 | 8,266 | 6,794 |
| 2019 | 0.7903 | 107.48 | 93.00 | 8,856 | 6,999 |
| 2020 | 0.7599 | 112.73 | 99.69 | 9,493 | 7,214 |
| 2021 | 0.7307 | 118.23 | 106.81 | 10,171 | 7,432 |
| 2022 | 0.7026 | 123.98 | 114.41 | 10,895 | 7,655 |
| 2023 | 0.6756 | 129.98 | 122.48 | 11,663 | 7,880 |
| 2024 | 0.6496 | 136.23 | 131.00 | 12,474 | 8,103 |
| 2025 | 0.6246 | 142.73 | 140.06 | 13,337 | 8,330 |
| 2026 | 0.6006 | 149.48 | 149.63 | 14,249 | 8,558 |
| 2027 | 0.5775 | 156.48 | 159.73 | 15,210 | 8,784 |
| 2028 | 0.5553 | 163.73 | 169.98 | 16,186 | 8,988 |
| 2029 | 0.5339 | 171.23 | 179.55 | 17,098 | 9,129 |
| 2030 | 0.5134 | 178.98 | 188.43 | 17,943 | 9,212 |
| 2031 | 0.4936 | 186.98 | 196.63 | 18,724 | 9,242 |
| 2032 | 0.4746 | 195.23 | 204.15 | 19,440 | 9,226 |
| 2033 | 0.4564 | 203.73 | 210.98 | 20,091 | 9,170 |
| 2034 | 0.4388 | 212.48 | 217.13 | 20,676 | 9,073 |
| 2035 | 0.4220 | 221.48 | 222.60 | 21,197 | 8,945 |
| 2036 | 0.4057 | 230.73 | 227.38 | 21,652 | 8,784 |
| 2037 | 0.3901 | 240.23 | 231.48 | 22,043 | 8,599 |
| 2038 | 0.3751 | 250.00 | 234.90 | 22,368 | 8,390 |
| 2039 | 0.3607 | 260.00 | 237.63 | 22,628 | 8,162 |
| 2040 | 0.3468 | 270.23 | 239.68 | 22,824 | 7,915 |
| 2041 | 0.3335 | 280.73 | 241.05 | 22,954 | 7,655 |
| 2042 | 0.3207 | 291.48 | 241.73 | 23,019 | 7,382 |

$$B = \sum_{t=1}^Y \frac{t \times (D_2 - D_1) \times A \times P \times u \times 10}{Y \times (1 + i)^t}$$

$$u = \frac{U_x \times Q_x + U_y \times Q_y}{Q_x + Q_y}$$

| | | |
|-----|--|----------|
| Qx: | 全貯留量のうち生活用水使用相当量 | 22.00 億 |
| Qy: | 全貯留量 - Qx | 62.14 億 |
| A: | 保全効果区域面積 (ha) | 1,290.83 |
| P: | 年間平均降雨量 (mm/年) 松川ダム降水量観測記録1975~2011 | 1,998 |
| D1: | 保全効果区域を放置した場合に想定される将来の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.51 |
| D2: | 保全効果区域内の現在の貯留率 出典:「森林の間伐と水収支」(近嵐ら、1987) | 0.56 |
| Ux: | 単位当たりの上水道給水原価 (円/m ³) 「長野県営水道事業経営ビジョン(末端給水事業)」より | 170.80 |
| Uy: | 単位当たりの雨水浄化費 (円/m ³) 出典:「地球環境・人間生活にかかる農業及び森林の多面的な機能の評価に関する調査研究報告書」(三菱総合研究所.H13.11)「雨水利用ハンドブック」 | 68.60 |
| u: | 単位当たりの水質浄化費 (U _x と U _y を用いて Q _x と Q _y で比例按分して算出) | 95.32 |
| Y: | 評価期間 | 86 |
| 10: | 単位合わせのための調整値 | |

| 年度 | 社会的割引率 | t/Y | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|--------|----------|--------|--------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 0.0116 | 21.18 | 23 | 50 |
| 1994 | 2.1068 | 0.0233 | 46.93 | 104 | 219 |
| 1995 | 2.0258 | 0.0349 | 66.80 | 222 | 450 |
| 1996 | 1.9479 | 0.0465 | 88.45 | 392 | 764 |
| 1997 | 1.8730 | 0.0581 | 117.85 | 652 | 1,221 |
| 1998 | 1.8009 | 0.0698 | 151.77 | 1,009 | 1,817 |
| 1999 | 1.7317 | 0.0814 | 183.25 | 1,420 | 2,459 |
| 2000 | 1.6651 | 0.0930 | 215.35 | 1,907 | 3,175 |
| 2001 | 1.6010 | 0.1047 | 245.13 | 2,444 | 3,913 |
| 2002 | 1.5395 | 0.1163 | 266.93 | 2,956 | 4,551 |
| 2003 | 1.4802 | 0.1279 | 286.19 | 3,486 | 5,160 |
| 2004 | 1.4233 | 0.1395 | 301.93 | 4,011 | 5,709 |
| 2005 | 1.3686 | 0.1512 | 316.57 | 4,558 | 6,238 |
| 2006 | 1.3159 | 0.1628 | 338.08 | 5,241 | 6,897 |
| 2007 | 1.2653 | 0.1744 | 354.50 | 5,887 | 7,449 |
| 2008 | 1.2167 | 0.1860 | 371.12 | 6,573 | 7,997 |
| 2009 | 1.1699 | 0.1977 | 387.88 | 7,302 | 8,543 |
| 2010 | 1.1249 | 0.2093 | 401.40 | 8,000 | 8,999 |
| 2011 | 1.0816 | 0.2209 | 414.93 | 8,728 | 9,440 |
| 2012 | 1.0400 | 0.2326 | 427.53 | 9,470 | 9,849 |
| 2013 | 1.0000 | 0.2442 | 469.80 | 10,925 | 10,925 |
| 2014 | 0.9615 | 0.2558 | 524.53 | 12,777 | 12,285 |
| 2015 | 0.9246 | 0.2674 | 579.27 | 14,750 | 13,638 |
| 2016 | 0.8890 | 0.2791 | 634.00 | 16,850 | 14,980 |
| 2017 | 0.8548 | 0.2907 | 688.74 | 19,066 | 16,298 |
| 2018 | 0.8219 | 0.3023 | 743.48 | 21,402 | 17,590 |
| 2019 | 0.7903 | 0.3140 | 798.21 | 23,867 | 18,862 |
| 2020 | 0.7599 | 0.3256 | 852.95 | 26,446 | 20,096 |
| 2021 | 0.7307 | 0.3372 | 907.68 | 29,145 | 21,296 |
| 2022 | 0.7026 | 0.3488 | 962.42 | 31,966 | 22,459 |
| 2023 | 0.6756 | 0.3605 | 1,017.15 | 34,917 | 23,590 |
| 2024 | 0.6496 | 0.3721 | 1,071.89 | 37,981 | 24,672 |
| 2025 | 0.6246 | 0.3837 | 1,126.62 | 41,164 | 25,711 |
| 2026 | 0.6006 | 0.3953 | 1,181.36 | 44,469 | 26,708 |
| 2027 | 0.5775 | 0.4070 | 1,236.09 | 47,907 | 27,666 |
| 2028 | 0.5553 | 0.4186 | 1,290.83 | 51,454 | 28,572 |
| 2029 | 0.5339 | 0.4302 | 1,290.83 | 52,880 | 28,233 |
| 2030 | 0.5134 | 0.4419 | 1,290.83 | 54,318 | 27,887 |
| 2031 | 0.4936 | 0.4535 | 1,290.83 | 55,744 | 27,515 |
| 2032 | 0.4746 | 0.4651 | 1,290.83 | 57,170 | 27,133 |
| 2033 | 0.4564 | 0.4767 | 1,290.83 | 58,596 | 26,743 |
| 2034 | 0.4388 | 0.4884 | 1,290.83 | 60,034 | 26,343 |
| 2035 | 0.4220 | 0.5000 | 1,290.83 | 61,460 | 25,936 |
| 2036 | 0.4057 | 0.5116 | 1,290.83 | 62,886 | 25,513 |
| 2037 | 0.3901 | 0.5233 | 1,290.83 | 64,324 | 25,093 |
| 2038 | 0.3751 | 0.5349 | 1,290.83 | 65,750 | 24,663 |
| 2039 | 0.3607 | 0.5465 | 1,290.83 | 67,175 | 24,230 |
| 2040 | 0.3468 | 0.5581 | 1,290.83 | 68,601 | 23,791 |
| 2041 | 0.3335 | 0.5698 | 1,290.83 | 70,039 | 23,358 |
| 2042 | 0.3207 | 0.5814 | 1,290.83 | 71,465 | 22,919 |
| 2043 | 0.3083 | 0.5930 | 1,290.83 | 72,891 | 22,472 |
| 2044 | 0.2965 | 0.6047 | 1,290.83 | 74,329 | 22,039 |

$$B = \sum_{t=1}^{T-1} \frac{t}{T \times (1+i)^t} + \sum_{t=T}^Y \frac{1}{(1+i)^t} \times \frac{(V1-V2) \times A \times U}{1.0}$$

| | | |
|-----|--|----------------|
| U: | 1m3の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m3) | 5,600 |
| 出典: | 「砂防便覧」平成20年版 | |
| V1: | 事業実施前における1ha当りの年間浸食土砂量(m3) | 山腹崩壊地 多 600.00 |
| 出典: | 「治山全体調査の考え方進め方」森林の公益的機能に関する文献要約集「森林水文」 | |
| V2: | 事業実施後における1ha当りの年間浸食土砂量(m3) | 整備済森林 1.30 |
| 出典: | 「治山全体調査の考え方進め方」森林の公益的機能に関する文献要約集「森林水文」 | |
| A: | 事業対象区域面積(ha) | 3.96 ~ 241.73 |
| T: | 事業実施後、流出係数が安定するのに必要な年数 | 15 |
| Y: | 評価期間 | 86 |

| 年度 | 社会的割引率 | 事業対象区域面積 | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|----------|--------|---------|---------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 3.96 | 0.26 | 872 | 1,911 |
| 1994 | 2.1068 | 8.79 | 0.85 | 2,850 | 6,004 |
| 1995 | 2.0258 | 12.49 | 1.68 | 5,633 | 11,411 |
| 1996 | 1.9479 | 16.55 | 2.79 | 9,354 | 18,221 |
| 1997 | 1.8730 | 22.06 | 4.26 | 14,283 | 26,752 |
| 1998 | 1.8009 | 28.42 | 6.14 | 20,586 | 37,073 |
| 1999 | 1.7317 | 34.32 | 8.43 | 28,263 | 48,943 |
| 2000 | 1.6651 | 40.31 | 11.12 | 37,282 | 62,078 |
| 2001 | 1.6010 | 45.89 | 14.20 | 47,609 | 76,222 |
| 2002 | 1.5395 | 49.98 | 17.50 | 58,673 | 90,327 |
| 2003 | 1.4802 | 53.58 | 21.10 | 70,742 | 104,712 |
| 2004 | 1.4233 | 56.53 | 24.88 | 83,416 | 118,726 |
| 2005 | 1.3686 | 59.26 | 28.80 | 96,558 | 132,149 |
| 2006 | 1.3159 | 63.30 | 33.04 | 110,774 | 145,768 |
| 2007 | 1.2653 | 66.37 | 37.46 | 125,593 | 158,913 |
| 2008 | 1.2167 | 69.49 | 41.82 | 140,211 | 170,595 |
| 2009 | 1.1699 | 72.63 | 46.09 | 154,527 | 180,781 |
| 2010 | 1.1249 | 75.17 | 50.25 | 168,474 | 189,516 |
| 2011 | 1.0816 | 77.68 | 54.33 | 182,153 | 197,017 |
| 2012 | 1.0400 | 80.05 | 58.21 | 195,162 | 202,968 |
| 2013 | 1.0000 | 87.98 | 62.18 | 208,472 | 208,472 |
| 2014 | 0.9615 | 98.23 | 66.43 | 222,721 | 214,146 |
| 2015 | 0.9246 | 108.48 | 70.98 | 237,976 | 220,033 |
| 2016 | 0.8890 | 118.73 | 75.82 | 254,203 | 225,986 |
| 2017 | 0.8548 | 128.98 | 81.08 | 271,839 | 232,368 |
| 2018 | 0.8219 | 139.23 | 86.81 | 291,050 | 239,214 |
| 2019 | 0.7903 | 149.48 | 93.00 | 311,803 | 246,418 |
| 2020 | 0.7599 | 159.73 | 99.69 | 334,233 | 253,984 |
| 2021 | 0.7307 | 169.98 | 106.81 | 358,104 | 261,667 |
| 2022 | 0.7026 | 180.23 | 114.41 | 383,585 | 269,507 |
| 2023 | 0.6756 | 190.48 | 122.48 | 410,641 | 277,429 |
| 2024 | 0.6496 | 200.73 | 131.00 | 439,206 | 285,308 |
| 2025 | 0.6246 | 210.98 | 140.06 | 469,582 | 293,301 |
| 2026 | 0.6006 | 221.23 | 149.63 | 501,667 | 301,301 |
| 2027 | 0.5775 | 231.48 | 159.73 | 535,530 | 309,269 |
| 2028 | 0.5553 | 241.73 | 169.98 | 569,895 | 316,463 |
| 2029 | 0.5339 | 241.73 | 179.55 | 601,981 | 321,398 |
| 2030 | 0.5134 | 241.73 | 188.43 | 631,753 | 324,342 |
| 2031 | 0.4936 | 241.73 | 196.63 | 659,245 | 325,403 |
| 2032 | 0.4746 | 241.73 | 204.15 | 684,458 | 324,844 |
| 2033 | 0.4564 | 241.73 | 210.98 | 707,357 | 322,838 |
| 2034 | 0.4388 | 241.73 | 217.13 | 727,976 | 319,436 |
| 2035 | 0.4220 | 241.73 | 222.60 | 746,315 | 314,945 |
| 2036 | 0.4057 | 241.73 | 227.38 | 762,341 | 309,282 |
| 2037 | 0.3901 | 241.73 | 231.48 | 776,088 | 302,752 |
| 2038 | 0.3751 | 241.73 | 234.90 | 787,554 | 295,412 |
| 2039 | 0.3607 | 241.73 | 237.63 | 796,707 | 287,372 |
| 2040 | 0.3468 | 241.73 | 239.68 | 803,580 | 278,682 |
| 2041 | 0.3335 | 241.73 | 241.05 | 808,173 | 269,526 |
| 2042 | 0.3207 | 241.73 | 241.73 | 810,453 | 259,912 |
| 2043 | 0.3083 | 241.73 | 241.73 | 810,453 | 249,863 |
| 2044 | 0.2965 | 241.73 | 241.73 | 810,453 | 240,299 |
| 2045 | 0.2851 | 241.73 | 241.73 | 810,453 | 231,060 |
| 2046 | 0.2741 | 241.73 | 241.73 | 810,453 | 222,145 |
| 2047 | 0.2636 | 241.73 | 241.73 | 810,453 | 213,635 |
| 2048 | 0.2534 | 241.73 | 241.73 | 810,453 | 205,369 |
| 2049 | 0.2437 | 241.73 | 241.73 | 810,453 | 197,507 |
| 2050 | 0.2343 | 241.73 | 241.73 | 810,453 | 189,889 |
| 2051 | 0.2253 | 241.73 | 241.73 | 810,453 | 182,595 |
| 2052 | 0.2166 | 241.73 | 241.73 | 810,453 | 175,544 |
| 2053 | 0.2083 | 241.73 | 241.73 | 810,453 | 168,817 |
| 2054 | 0.2003 | 241.73 | 241.73 | 810,453 | 162,334 |
| 2055 | 0.1926 | 241.73 | 241.73 | 810,453 | 156,093 |
| 2056 | 0.1852 | 241.73 | 241.73 | 810,453 | 150,096 |
| 2057 | 0.1780 | 241.73 | 241.73 | 810,453 | 144,261 |
| 2058 | 0.1712 | 241.73 | 241.73 | 810,453 | 138,750 |

$$B = \sum_{t=1}^Y \frac{(V_1 - V_2) \times A \times U}{Y \times 1.0 \times (1+i)^t}$$

| | | |
|-----|--|----------------|
| U: | 1m ³ の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m ³) 出典:「砂防便覧」平成20年版 | 5,600 |
| V1: | 事業を実施しない場合に想定される保全効果区域における将来の年間浸食土砂量(m ³) 出典:「治山全体調査の考え方進め方」 「森林の公益的機能に関する文献要約集」 「森林水文」 | 山腹崩壊地 中 400.00 |
| V2: | 保全効果区域における現在の1ha当りの年間浸食土砂量(m ³) 出典:「治山全体調査の考え方進め方」 「森林の公益的機能に関する文献要約集」 「森林水文」 | 整備済森林 1.30 |
| A: | 保全効果区域面積(ha) | 1,290.83 |
| Y: | 評価期間 | 86 |

| 年度 | 社会的割引率 | t/Y | 事業効果面積 | 効果額 | 現在価値化 |
|------|--------|--------|----------|-----------|---------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 0.0116 | 21.18 | 549 | 1,203 |
| 1994 | 2.1068 | 0.0233 | 46.93 | 2,441 | 5,143 |
| 1995 | 2.0258 | 0.0349 | 66.80 | 5,205 | 10,544 |
| 1996 | 1.9479 | 0.0465 | 88.45 | 9,183 | 17,888 |
| 1997 | 1.8730 | 0.0581 | 117.85 | 15,288 | 28,634 |
| 1998 | 1.8009 | 0.0698 | 151.77 | 23,652 | 42,595 |
| 1999 | 1.7317 | 0.0814 | 183.25 | 33,304 | 57,673 |
| 2000 | 1.6651 | 0.0930 | 215.35 | 44,716 | 74,457 |
| 2001 | 1.6010 | 0.1047 | 245.13 | 57,303 | 91,742 |
| 2002 | 1.5395 | 0.1163 | 266.93 | 69,312 | 106,706 |
| 2003 | 1.4802 | 0.1279 | 286.19 | 81,726 | 120,971 |
| 2004 | 1.4233 | 0.1395 | 301.93 | 94,040 | 133,847 |
| 2005 | 1.3686 | 0.1512 | 316.57 | 106,870 | 146,262 |
| 2006 | 1.3159 | 0.1628 | 338.08 | 122,888 | 161,708 |
| 2007 | 1.2653 | 0.1744 | 354.50 | 138,037 | 174,658 |
| 2008 | 1.2167 | 0.1860 | 371.12 | 154,121 | 187,519 |
| 2009 | 1.1699 | 0.1977 | 387.88 | 171,214 | 200,303 |
| 2010 | 1.1249 | 0.2093 | 401.40 | 187,578 | 211,006 |
| 2011 | 1.0816 | 0.2209 | 414.93 | 204,647 | 221,346 |
| 2012 | 1.0400 | 0.2326 | 427.53 | 222,029 | 230,910 |
| 2013 | 1.0000 | 0.2442 | 469.80 | 256,149 | 256,149 |
| 2014 | 0.9615 | 0.2558 | 524.53 | 299,575 | 288,041 |
| 2015 | 0.9246 | 0.2674 | 579.27 | 345,841 | 319,765 |
| 2016 | 0.8890 | 0.2791 | 634.00 | 395,078 | 351,224 |
| 2017 | 0.8548 | 0.2907 | 688.74 | 447,028 | 382,120 |
| 2018 | 0.8219 | 0.3023 | 743.48 | 501,813 | 412,440 |
| 2019 | 0.7903 | 0.3140 | 798.21 | 559,604 | 442,255 |
| 2020 | 0.7599 | 0.3256 | 852.95 | 620,072 | 471,193 |
| 2021 | 0.7307 | 0.3372 | 907.68 | 683,368 | 499,337 |
| 2022 | 0.7026 | 0.3488 | 962.42 | 749,506 | 526,603 |
| 2023 | 0.6756 | 0.3605 | 1,017.15 | 818,700 | 553,114 |
| 2024 | 0.6496 | 0.3721 | 1,071.89 | 890,521 | 578,482 |
| 2025 | 0.6246 | 0.3837 | 1,126.62 | 965,169 | 602,845 |
| 2026 | 0.6006 | 0.3953 | 1,181.36 | 1,042,662 | 626,223 |
| 2027 | 0.5775 | 0.4070 | 1,236.09 | 1,123,256 | 648,680 |
| 2028 | 0.5553 | 0.4186 | 1,290.83 | 1,206,431 | 669,931 |
| 2029 | 0.5339 | 0.4302 | 1,290.83 | 1,239,863 | 661,963 |
| 2030 | 0.5134 | 0.4419 | 1,290.83 | 1,273,583 | 653,858 |
| 2031 | 0.4936 | 0.4535 | 1,290.83 | 1,307,015 | 645,143 |
| 2032 | 0.4746 | 0.4651 | 1,290.83 | 1,340,447 | 636,176 |
| 2033 | 0.4564 | 0.4767 | 1,290.83 | 1,373,879 | 627,038 |
| 2034 | 0.4388 | 0.4884 | 1,290.83 | 1,407,599 | 617,654 |
| 2035 | 0.4220 | 0.5000 | 1,290.83 | 1,441,031 | 608,115 |
| 2036 | 0.4057 | 0.5116 | 1,290.83 | 1,474,463 | 598,190 |
| 2037 | 0.3901 | 0.5233 | 1,290.83 | 1,508,183 | 588,342 |
| 2038 | 0.3751 | 0.5349 | 1,290.83 | 1,541,615 | 578,260 |
| 2039 | 0.3607 | 0.5465 | 1,290.83 | 1,575,047 | 568,119 |
| 2040 | 0.3468 | 0.5581 | 1,290.83 | 1,608,479 | 557,821 |
| 2041 | 0.3335 | 0.5698 | 1,290.83 | 1,642,199 | 547,673 |
| 2042 | 0.3207 | 0.5814 | 1,290.83 | 1,675,631 | 537,375 |
| 2043 | 0.3083 | 0.5930 | 1,290.83 | 1,709,063 | 526,904 |
| 2044 | 0.2965 | 0.6047 | 1,290.83 | 1,742,783 | 516,735 |
| 2045 | 0.2851 | 0.6163 | 1,290.83 | 1,776,215 | 506,399 |
| 2046 | 0.2741 | 0.6279 | 1,290.83 | 1,809,647 | 496,024 |
| 2047 | 0.2636 | 0.6395 | 1,290.83 | 1,843,079 | 485,836 |
| 2048 | 0.2534 | 0.6512 | 1,290.83 | 1,876,799 | 475,581 |
| 2049 | 0.2437 | 0.6628 | 1,290.83 | 1,910,231 | 465,523 |
| 2050 | 0.2343 | 0.6744 | 1,290.83 | 1,943,663 | 455,400 |
| 2051 | 0.2253 | 0.6860 | 1,290.83 | 1,977,095 | 445,440 |
| 2052 | 0.2166 | 0.6977 | 1,290.83 | 2,010,815 | 435,543 |
| 2053 | 0.2083 | 0.7093 | 1,290.83 | 2,044,247 | 425,817 |
| 2054 | 0.2003 | 0.7209 | 1,290.83 | 2,077,678 | 416,159 |
| 2055 | 0.1926 | 0.7326 | 1,290.83 | 2,111,399 | 406,655 |
| 2056 | 0.1852 | 0.7442 | 1,290.83 | 2,144,831 | 397,223 |
| 2057 | 0.1780 | 0.7558 | 1,290.83 | 2,178,262 | 387,731 |
| 2058 | 0.1712 | 0.7674 | 1,290.83 | 2,211,694 | 378,642 |
| 2059 | 0.1646 | 0.7791 | 1,290.83 | 2,245,414 | 369,595 |
| 2060 | 0.1583 | 0.7907 | 1,290.83 | 2,278,846 | 360,741 |

$$B = \sum_{t=11}^Y \frac{V \times U}{(1+i)^t}$$

$$V = 0.01 \times A \times R \times N \times H \times 10,000$$

| | | |
|---------|---|----------------|
| U: | 1m3の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m3) 出典:「砂防便覧」平成20年版 | 5.600 |
| V: | 崩壊見込み量(m3/年) | 0.00 ~ 464.56 |
| A: | 事業対象区域面積(ha) | 3.96 ~ 241.73 |
| R: | 流域内崩壊率 出典:「治山全体調査」S42からS46 | 100 天竜川 0.0406 |
| N: | 雨量比=50年確率日雨量/既往最大日雨量 「H24治山実施設計報告書」より | 0.9466 |
| H: | 平均崩壊深(m) 「H24全体計画調査報告書」より | 0.5 |
| Y: | 評価期間 | 86 |
| 10,000: | 単位合わせのための調整値 | |

| 年度 | 社会的割引率 | 事業対象区域面積 | 崩壊見込み量 | 効果額 | 現在価値化 |
|------|--------|----------|--------|-------|-------|
| 1992 | 2.2788 | | | | |
| 1993 | 2.1911 | 3.96 | 0.00 | 0 | 0 |
| 1994 | 2.1068 | 8.79 | 0.00 | 0 | 0 |
| 1995 | 2.0258 | 12.49 | 0.00 | 0 | 0 |
| 1996 | 1.9479 | 16.55 | 0.00 | 0 | 0 |
| 1997 | 1.8730 | 22.06 | 0.00 | 0 | 0 |
| 1998 | 1.8009 | 28.42 | 0.00 | 0 | 0 |
| 1999 | 1.7317 | 34.32 | 0.00 | 0 | 0 |
| 2000 | 1.6651 | 40.31 | 0.00 | 0 | 0 |
| 2001 | 1.6010 | 45.89 | 0.00 | 0 | 0 |
| 2002 | 1.5395 | 49.98 | 0.00 | 0 | 0 |
| 2003 | 1.4802 | 53.58 | 7.61 | 43 | 64 |
| 2004 | 1.4233 | 56.53 | 16.89 | 95 | 135 |
| 2005 | 1.3686 | 59.26 | 24.00 | 134 | 183 |
| 2006 | 1.3159 | 63.30 | 31.80 | 178 | 234 |
| 2007 | 1.2653 | 66.37 | 42.39 | 237 | 300 |
| 2008 | 1.2167 | 69.49 | 54.61 | 306 | 372 |
| 2009 | 1.1699 | 72.63 | 65.95 | 369 | 432 |
| 2010 | 1.1249 | 75.17 | 77.46 | 434 | 488 |
| 2011 | 1.0816 | 77.68 | 88.18 | 494 | 534 |
| 2012 | 1.0400 | 80.05 | 96.04 | 538 | 560 |
| 2013 | 1.0000 | 87.98 | 102.96 | 577 | 577 |
| 2014 | 0.9615 | 98.23 | 108.63 | 608 | 585 |
| 2015 | 0.9246 | 108.48 | 113.88 | 638 | 590 |
| 2016 | 0.8890 | 118.73 | 121.64 | 681 | 605 |
| 2017 | 0.8548 | 128.98 | 127.54 | 714 | 610 |
| 2018 | 0.8219 | 139.23 | 133.54 | 748 | 615 |
| 2019 | 0.7903 | 149.48 | 139.57 | 782 | 618 |
| 2020 | 0.7599 | 159.73 | 144.45 | 809 | 615 |
| 2021 | 0.7307 | 169.98 | 149.27 | 836 | 611 |
| 2022 | 0.7026 | 180.23 | 153.82 | 861 | 605 |
| 2023 | 0.6756 | 190.48 | 169.06 | 947 | 640 |
| 2024 | 0.6496 | 200.73 | 188.76 | 1,057 | 687 |
| 2025 | 0.6246 | 210.98 | 208.46 | 1,167 | 729 |
| 2026 | 0.6006 | 221.23 | 228.16 | 1,278 | 768 |
| 2027 | 0.5775 | 231.48 | 247.86 | 1,388 | 802 |
| 2028 | 0.5553 | 241.73 | 267.56 | 1,498 | 832 |
| 2029 | 0.5339 | 241.73 | 287.26 | 1,609 | 859 |
| 2030 | 0.5134 | 241.73 | 306.96 | 1,719 | 883 |
| 2031 | 0.4936 | 241.73 | 326.66 | 1,829 | 903 |
| 2032 | 0.4746 | 241.73 | 346.36 | 1,940 | 921 |
| 2033 | 0.4564 | 241.73 | 366.06 | 2,050 | 936 |
| 2034 | 0.4388 | 241.73 | 385.76 | 2,160 | 948 |
| 2035 | 0.4220 | 241.73 | 405.46 | 2,271 | 958 |
| 2036 | 0.4057 | 241.73 | 425.16 | 2,381 | 966 |
| 2037 | 0.3901 | 241.73 | 444.86 | 2,491 | 972 |
| 2038 | 0.3751 | 241.73 | 464.56 | 2,602 | 976 |
| 2039 | 0.3607 | 241.73 | 464.56 | 2,602 | 939 |
| 2040 | 0.3468 | 241.73 | 464.56 | 2,602 | 902 |
| 2041 | 0.3335 | 241.73 | 464.56 | 2,602 | 868 |
| 2042 | 0.3207 | 241.73 | 464.56 | 2,602 | 834 |
| 2043 | 0.3083 | 241.73 | 464.56 | 2,602 | 802 |
| 2044 | 0.2965 | 241.73 | 464.56 | 2,602 | 771 |
| 2045 | 0.2851 | 241.73 | 464.56 | 2,602 | 742 |
| 2046 | 0.2741 | 241.73 | 464.56 | 2,602 | 713 |
| 2047 | 0.2636 | 241.73 | 464.56 | 2,602 | 686 |
| 2048 | 0.2534 | 241.73 | 464.56 | 2,602 | 659 |
| 2049 | 0.2437 | 241.73 | 464.56 | 2,602 | 634 |
| 2050 | 0.2343 | 241.73 | 464.56 | 2,602 | 610 |

$$B = \sum_{t=1}^Y \frac{(V1 - V2) \times U}{(1+i)^t}$$

| | | |
|-----|--|----------------|
| U: | 1m3の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m ³) 出典:「砂防便覧」平成20年版 | 5,600 |
| V1: | 事業を実施しない場合に想定される保全効果区域における将来の年間浸食土砂量(m ³) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」 | 山腹崩壊地 中 400.00 |
| V2: | 保全効果区域における現在の1ha当りの年間浸食土砂量(m ³) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」 | 整備済森林 1.30 |
| A: | 保全効果区域面積(ha) | 1,290.83 |
| Y: | 評価期間 | 86 |

| 年度 | 社会的割引率 | 整備期間係数 | 効果額 | 現在価値化 |
|------|--------|--------|-------|-------|
| 1992 | 2.2788 | | | |
| 1993 | 2.1911 | 0.0164 | 37 | 81 |
| 1994 | 2.1068 | 0.0364 | 81 | 171 |
| 1995 | 2.0258 | 0.0517 | 115 | 233 |
| 1996 | 1.9479 | 0.0685 | 153 | 298 |
| 1997 | 1.8730 | 0.0913 | 204 | 382 |
| 1998 | 1.8009 | 0.1176 | 263 | 474 |
| 1999 | 1.7317 | 0.1420 | 317 | 549 |
| 2000 | 1.6651 | 0.1668 | 372 | 619 |
| 2001 | 1.6010 | 0.1899 | 424 | 679 |
| 2002 | 1.5395 | 0.2068 | 462 | 711 |
| 2003 | 1.4802 | 0.2217 | 495 | 733 |
| 2004 | 1.4233 | 0.2339 | 522 | 743 |
| 2005 | 1.3686 | 0.2452 | 547 | 749 |
| 2006 | 1.3159 | 0.2619 | 585 | 770 |
| 2007 | 1.2653 | 0.2746 | 613 | 776 |
| 2008 | 1.2167 | 0.2875 | 642 | 781 |
| 2009 | 1.1699 | 0.3005 | 671 | 785 |
| 2010 | 1.1249 | 0.3110 | 694 | 781 |
| 2011 | 1.0816 | 0.3214 | 718 | 777 |
| 2012 | 1.0400 | 0.3312 | 739 | 769 |
| 2013 | 1.0000 | 0.3640 | 813 | 813 |
| 2014 | 0.9615 | 0.4064 | 907 | 872 |
| 2015 | 0.9246 | 0.4488 | 1,002 | 926 |
| 2016 | 0.8890 | 0.4912 | 1,097 | 975 |
| 2017 | 0.8548 | 0.5336 | 1,191 | 1,018 |
| 2018 | 0.8219 | 0.5760 | 1,286 | 1,057 |
| 2019 | 0.7903 | 0.6184 | 1,381 | 1,091 |
| 2020 | 0.7599 | 0.6608 | 1,475 | 1,121 |
| 2021 | 0.7307 | 0.7032 | 1,570 | 1,147 |
| 2022 | 0.7026 | 0.7456 | 1,665 | 1,170 |
| 2023 | 0.6756 | 0.7880 | 1,759 | 1,188 |
| 2024 | 0.6496 | 0.8304 | 1,854 | 1,204 |
| 2025 | 0.6246 | 0.8728 | 1,949 | 1,217 |
| 2026 | 0.6006 | 0.9152 | 2,043 | 1,227 |
| 2027 | 0.5775 | 0.9576 | 2,138 | 1,235 |
| 2028 | 0.5553 | 1.0000 | 2,233 | 1,240 |
| 2029 | 0.5339 | 1.0000 | 2,233 | 1,192 |
| 2030 | 0.5134 | 1.0000 | 2,233 | 1,146 |
| 2031 | 0.4936 | 1.0000 | 2,233 | 1,102 |
| 2032 | 0.4746 | 1.0000 | 2,233 | 1,060 |
| 2033 | 0.4564 | 1.0000 | 2,233 | 1,019 |
| 2034 | 0.4388 | 1.0000 | 2,233 | 980 |
| 2035 | 0.4220 | 1.0000 | 2,233 | 942 |
| 2036 | 0.4057 | 1.0000 | 2,233 | 906 |
| 2037 | 0.3901 | 1.0000 | 2,233 | 871 |
| 2038 | 0.3751 | 1.0000 | 2,233 | 838 |
| 2039 | 0.3607 | 1.0000 | 2,233 | 805 |
| 2040 | 0.3468 | 1.0000 | 2,233 | 774 |
| 2041 | 0.3335 | 1.0000 | 2,233 | 745 |
| 2042 | 0.3207 | 1.0000 | 2,233 | 716 |
| 2043 | 0.3083 | 1.0000 | 2,233 | 688 |
| 2044 | 0.2965 | 1.0000 | 2,233 | 662 |
| 2045 | 0.2851 | 1.0000 | 2,233 | 637 |
| 2046 | 0.2741 | 1.0000 | 2,233 | 612 |
| 2047 | 0.2636 | 1.0000 | 2,233 | 589 |
| 2048 | 0.2534 | 1.0000 | 2,233 | 566 |
| 2049 | 0.2437 | 1.0000 | 2,233 | 544 |
| 2050 | 0.2343 | 1.0000 | 2,233 | 523 |
| 2051 | 0.2253 | 1.0000 | 2,233 | 503 |
| 2052 | 0.2166 | 1.0000 | 2,233 | 484 |
| 2053 | 0.2083 | 1.0000 | 2,233 | 465 |
| 2054 | 0.2003 | 1.0000 | 2,233 | 447 |
| 2055 | 0.1926 | 1.0000 | 2,233 | 430 |
| 2056 | 0.1852 | 1.0000 | 2,233 | 414 |
| 2057 | 0.1780 | 1.0000 | 2,233 | 397 |
| 2058 | 0.1712 | 1.0000 | 2,233 | 382 |
| 2059 | 0.1646 | 1.0000 | 2,233 | 368 |
| 2060 | 0.1583 | 1.0000 | 2,233 | 353 |

$$B = \sum_{t=1}^{T-1} \frac{t}{T \times (1+i)^t} + \sum_{t=T}^Y \frac{1}{(1+i)^t} \times (C1 - C2) \times A \times 0.3 \times \frac{44}{12} \times U$$

$$C1 = \frac{s \times e1}{30}$$

$$C2 = \frac{s \times e2}{30}$$

| | | |
|--------|---|---|
| U: | 二酸化炭素に関する原単位(円/t-CO2) 出典:「二酸化炭素地中貯留技術研究開発成果報告書」(財)地球環境産業技術研究機構(平成18年3月) | 6,046 |
| C1: | 事業を実施しない場合の年間流出土砂量に含まれる炭素量(t-C/ha) ①事業対象区域 ②保全効果区域 | 17.06 0.57 |
| C2: | 事業を実施した場合の年間流出土砂量に含まれる炭素量(t-C/ha) ①事業対象区域 ②保全効果区域 | 0.04 0.04 |
| T: | 事業実施後、流出係数が安定するのに必要な年数 | 15 |
| Y: | ①侵食深が30cmに達するまでの年数(To) 又は ①事業対象区域 ②評価期間内に侵食深が30cmに達しない場合は評価期間 ②保全効果区域 | 5.00 86.00 |
| A: | ①事業対象区域面積(ha) 又は ②保全効果区域面積(ha) | 3.96 ~ 241.73 1,290.83 |
| s: | 単位面積当たりの土壌平均炭素蓄積量(t-C/ha) 出典:「日本国温室効果ガスインベントリ報告書」(2011年4月)(国立環境研究所温室効果ガスインベントリオフィス編) | 85.31 |
| 44/12: | 炭素から二酸化炭素への換算係数 | |
| e1:: | 事業を実施しない場合の侵食深(cm/年) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」 | ①事業対象区域 山腹崩壊地 多 6.000 ②保全効果区域 荒廃地等 0.200 |
| e2:: | 事業を実施した場合の侵食深(cm/年) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」 | ①事業対象区域 整備済森林 0.013 ②保全効果区域 整備済森林 0.013 |
| 30: | 土壌炭素の測定深度(cm) | |
| 0.3: | 流出土砂排出炭素係数 | |

| 年度 | 社会的割引率 | 事業対象区域 | | | | 保全効果区域 | | | |
|------|--------|----------|--------|-------|-------|----------|-------|-------|--|
| | | 事業対象区域面積 | 効果対象面積 | 効果額 | 現在価値化 | 効果対象面積 | 効果額 | 現在価値化 | |
| 1992 | 2.2788 | | | | | | | | |
| 1993 | 2.1911 | 3.96 | 0.26 | 30 | 66 | 0.00 | 0 | 0 | |
| 1994 | 2.1068 | 8.79 | 0.85 | 96 | 202 | 1.41 | 5 | 11 | |
| 1995 | 2.0258 | 12.49 | 1.68 | 190 | 385 | 4.54 | 16 | 32 | |
| 1996 | 1.9479 | 16.55 | 2.79 | 315 | 614 | 8.99 | 32 | 62 | |
| 1997 | 1.8730 | 22.06 | 4.26 | 482 | 903 | 14.88 | 52 | 97 | |
| 1998 | 1.8009 | 28.42 | 4.57 | 517 | 931 | 22.73 | 80 | 144 | |
| 1999 | 1.7317 | 34.32 | 4.66 | 527 | 913 | 32.85 | 116 | 201 | |
| 2000 | 1.6651 | 40.31 | 5.28 | 598 | 996 | 45.07 | 159 | 265 | |
| 2001 | 1.6010 | 45.89 | 5.88 | 666 | 1,066 | 59.42 | 209 | 335 | |
| 2002 | 1.5395 | 49.98 | 5.91 | 669 | 1,030 | 75.75 | 267 | 411 | |
| 2003 | 1.4802 | 53.58 | 5.47 | 619 | 916 | 93.55 | 330 | 488 | |
| 2004 | 1.4233 | 56.53 | 4.98 | 564 | 803 | 112.62 | 397 | 565 | |
| 2005 | 1.3686 | 59.26 | 4.25 | 481 | 658 | 132.74 | 468 | 641 | |
| 2006 | 1.3159 | 63.30 | 3.55 | 401 | 528 | 153.84 | 542 | 713 | |
| 2007 | 1.2653 | 66.37 | 3.28 | 371 | 469 | 176.38 | 622 | 787 | |
| 2008 | 1.2167 | 69.49 | 3.14 | 355 | 432 | 200.00 | 705 | 858 | |
| 2009 | 1.1699 | 72.63 | 3.23 | 365 | 427 | 223.33 | 787 | 921 | |
| 2010 | 1.1249 | 75.17 | 3.38 | 382 | 430 | 246.06 | 867 | 975 | |
| 2011 | 1.0816 | 77.68 | 2.99 | 338 | 366 | 268.37 | 946 | 1,023 | |
| 2012 | 1.0400 | 80.05 | 2.88 | 326 | 339 | 290.13 | 1,023 | 1,064 | |
| 2013 | 1.0000 | 87.98 | 3.07 | 348 | 348 | 310.78 | 1,095 | 1,095 | |
| 2014 | 0.9615 | 98.23 | 3.73 | 422 | 406 | 331.98 | 1,170 | 1,125 | |
| 2015 | 0.9246 | 108.48 | 5.10 | 578 | 534 | 354.73 | 1,250 | 1,156 | |
| 2016 | 0.8890 | 118.73 | 7.00 | 793 | 705 | 379.00 | 1,336 | 1,188 | |
| 2017 | 0.8548 | 128.98 | 9.48 | 1,073 | 917 | 404.93 | 1,427 | 1,220 | |
| 2018 | 0.8219 | 139.23 | 10.25 | 1,160 | 953 | 433.06 | 1,527 | 1,255 | |
| 2019 | 0.7903 | 149.48 | 10.25 | 1,160 | 917 | 463.55 | 1,634 | 1,291 | |
| 2020 | 0.7599 | 159.73 | 10.25 | 1,160 | 881 | 496.64 | 1,751 | 1,331 | |
| 2021 | 0.7307 | 169.98 | 10.25 | 1,160 | 848 | 532.41 | 1,877 | 1,372 | |
| 2022 | 0.7026 | 180.23 | 10.25 | 1,160 | 815 | 570.38 | 2,011 | 1,413 | |
| 2023 | 0.6756 | 190.48 | 10.25 | 1,160 | 784 | 610.92 | 2,153 | 1,455 | |
| 2024 | 0.6496 | 200.73 | 10.25 | 1,160 | 754 | 653.99 | 2,305 | 1,497 | |
| 2025 | 0.6246 | 210.98 | 10.25 | 1,160 | 725 | 699.59 | 2,466 | 1,540 | |
| 2026 | 0.6006 | 221.23 | 10.25 | 1,160 | 697 | 747.94 | 2,636 | 1,583 | |
| 2027 | 0.5775 | 231.48 | 10.25 | 1,160 | 670 | 799.04 | 2,817 | 1,627 | |
| 2028 | 0.5553 | 241.73 | 10.25 | 1,160 | 644 | 852.95 | 3,007 | 1,670 | |
| 2029 | 0.5339 | 241.73 | 9.57 | 1,083 | 578 | 907.69 | 3,200 | 1,708 | |
| 2030 | 0.5134 | 241.73 | 8.20 | 928 | 476 | 958.77 | 3,380 | 1,735 | |
| 2031 | 0.4936 | 241.73 | 6.15 | 696 | 344 | 1,006.21 | 3,547 | 1,751 | |

