

様式 2

事業費集計表  
(森林整備事業)

事業名： 水源林造成事業  
 施行箇所： 天竜川広域流域 50年経過契約地

(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         |
| S 3 9 |           | × 7.3910 |            | H 3 7 | 0   | × 0.6756 | 0             |
| S 4 0 | 2,233,862 | × 7.1067 | 15,875,387 | H 3 8 | 0   | × 0.6496 | 0             |
| S 4 1 | 572,569   | × 6.8333 | 3,912,536  | H 3 9 | 0   | × 0.6246 | 0             |
| S 4 2 | 450,508   | × 6.5705 | 2,960,063  | H 4 0 | 0   | × 0.6006 | 0             |
| S 4 3 | 337,882   | × 6.3178 | 2,134,671  | H 4 1 | 0   | × 0.5775 | 0             |
| S 4 4 | 245,631   | × 6.0748 | 1,492,159  | H 4 2 | 0   | × 0.5553 | 0             |
| S 4 5 | 232,377   | × 5.8412 | 1,357,361  | H 4 3 | 0   | × 0.5339 | 0             |
| S 4 6 | 0         | × 5.6165 | 0          | H 4 4 | 0   | × 0.5134 | 0             |
| S 4 7 | 99,750    | × 5.4005 | 538,700    | H 4 5 | 0   | × 0.4936 | 0             |
| S 4 8 | 0         | × 5.1928 | 0          | H 4 6 | 0   | × 0.4746 | 0             |
| S 4 9 | 90,502    | × 4.9931 | 451,886    | H 4 7 | 0   | × 0.4564 | 0             |
| S 5 0 | 8,656     | × 4.8010 | 41,557     | H 4 8 | 0   | × 0.4388 | 0             |
| S 5 1 | 277,166   | × 4.6164 | 1,279,509  | H 4 9 | 0   | × 0.4220 | 0             |
| S 5 2 | 0         | × 4.4388 | 0          | H 5 0 | 0   | × 0.4057 | 0             |
| S 5 3 | 412,589   | × 4.2681 | 1,760,971  | H 5 1 | 0   | × 0.3901 | 0             |
| S 5 4 | 0         | × 4.1039 | 0          | H 5 2 | 0   | × 0.3751 | 0             |
| S 5 5 | 50,797    | × 3.9461 | 200,450    | H 5 3 | 0   | × 0.3607 | 0             |
| S 5 6 | 0         | × 3.7943 | 0          | H 5 4 | 0   | × 0.3468 | 0             |
| S 5 7 | 105,323   | × 3.6484 | 384,260    | H 5 5 | 0   | × 0.3335 | 0             |
| S 5 8 | 0         | × 3.5081 | 0          | H 5 6 | 0   | × 0.3207 | 0             |
| S 5 9 | 213,419   | × 3.3731 | 719,884    |       |     |          |               |
| S 6 0 | 157,985   | × 3.2434 | 512,409    |       |     |          |               |
| S 6 1 | 0         | × 3.1187 | 0          |       |     |          |               |
| S 6 2 | 0         | × 2.9987 | 0          |       |     |          |               |
| S 6 3 | 0         | × 2.8834 | 0          |       |     |          |               |
| H 1   | 0         | × 2.7725 | 0          |       |     |          |               |
| H 2   | 299,155   | × 2.6658 | 797,487    |       |     |          |               |
| H 3   | 0         | × 2.5633 | 0          |       |     |          |               |
| H 4   | 0         | × 2.4647 | 0          |       |     |          |               |
| H 5   | 0         | × 2.3699 | 0          |       |     |          |               |
| H 6   | 0         | × 2.2788 | 0          |       |     |          |               |
| H 7   | 0         | × 2.1911 | 0          |       |     |          |               |
| H 8   | 0         | × 2.1068 | 0          |       |     |          |               |
| H 9   | 0         | × 2.0258 | 0          |       |     |          |               |
| H 1 0 | 0         | × 1.9479 | 0          |       |     |          |               |
| H 1 1 | 0         | × 1.8730 | 0          |       |     |          |               |
| H 1 2 | 0         | × 1.8009 | 0          |       |     |          |               |
| H 1 3 | 0         | × 1.7317 | 0          |       |     |          |               |
| H 1 4 | 0         | × 1.6651 | 0          |       |     |          |               |
| H 1 5 | 0         | × 1.6010 | 0          |       |     |          |               |
| H 1 6 | 0         | × 1.5395 | 0          |       |     |          |               |
| H 1 7 | 0         | × 1.4802 | 0          |       |     |          |               |
| H 1 8 | 0         | × 1.4233 | 0          |       |     |          |               |
| H 1 9 | 0         | × 1.3686 | 0          |       |     |          |               |
| H 2 0 | 0         | × 1.3159 | 0          |       |     |          |               |
| H 2 1 | 0         | × 1.2653 | 0          |       |     |          |               |
| H 2 2 | 0         | × 1.2167 | 0          |       |     |          |               |
| H 2 3 | 0         | × 1.1699 | 0          |       |     |          |               |
| H 2 4 | 0         | × 1.1249 | 0          |       |     |          |               |
| H 2 5 | 0         | × 1.0816 | 0          |       |     |          |               |
| H 2 6 | 0         | × 1.0400 | 0          |       |     |          |               |
| H 2 7 | 0         | × 1.0000 | 0          |       |     |          |               |
| H 2 8 | 0         | × 0.9615 | 0          |       |     |          |               |
| H 2 9 | 0         | × 0.9246 | 0          |       |     |          |               |
| H 3 0 | 0         | × 0.8890 | 0          |       |     |          |               |
| H 3 1 | 0         | × 0.8548 | 0          |       |     |          |               |
| H 3 2 | 32,492    | × 0.8219 | 26,705     |       |     |          |               |
| H 3 3 | 0         | × 0.7903 | 0          |       |     |          |               |
| H 3 4 | 0         | × 0.7599 | 0          |       |     |          |               |
| H 3 5 | 0         | × 0.7307 | 0          |       |     |          |               |
| H 3 6 | 0         | × 0.7026 | 0          |       |     |          |               |
|       |           |          |            | 合 計   |     |          | 34,445,995    |
|       |           |          |            | C =   |     |          | 34,445,995 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/㎡/sec) 3,730,000  
出典:「ダム年鑑2015」
- f1: 事業実施前の流出係数 

|      |   |           |
|------|---|-----------|
| 浸透能大 | 急 | 要整備森林(疎林) |
|------|---|-----------|

 0.55  
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 

|      |   |       |
|------|---|-------|
| 浸透能大 | 急 | 整備済森林 |
|------|---|-------|

 0.45  
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) 66.93  
出典:気象統計情報(気象庁)
- A: 事業対象区域面積(ha) 1,026.99 ~ 1,026.99
- 360: 単位合わせのための調整値
- Y: 評価期間 80

事業効果面積: 経過年ごとに発生する事業対象区域面積に対して、それぞれ流出係数等の安定する期間(t/T)を考慮して面積に換算して年度毎に累計した面積

| 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    |
|------|--------|----------|----------|--------|---------|
| 1964 | 7.3910 |          |          |        |         |
| 1965 | 7.1067 | 1,026.99 | 68.47    | 4,748  | 33,743  |
| 1966 | 6.8333 | 1,026.99 | 136.93   | 9,496  | 64,889  |
| 1967 | 6.5705 | 1,026.99 | 205.40   | 14,244 | 93,590  |
| 1968 | 6.3178 | 1,026.99 | 273.86   | 18,992 | 119,988 |
| 1969 | 6.0748 | 1,026.99 | 342.33   | 23,740 | 144,216 |
| 1970 | 5.8412 | 1,026.99 | 410.80   | 28,488 | 166,404 |
| 1971 | 5.6165 | 1,026.99 | 479.26   | 33,236 | 186,670 |
| 1972 | 5.4005 | 1,026.99 | 547.73   | 37,984 | 205,133 |
| 1973 | 5.1928 | 1,026.99 | 616.19   | 42,732 | 221,899 |
| 1974 | 4.9931 | 1,026.99 | 684.66   | 47,480 | 237,072 |
| 1975 | 4.8010 | 1,026.99 | 753.13   | 52,228 | 250,747 |
| 1976 | 4.6164 | 1,026.99 | 821.59   | 56,976 | 263,024 |
| 1977 | 4.4388 | 1,026.99 | 890.06   | 61,724 | 273,980 |
| 1978 | 4.2681 | 1,026.99 | 958.52   | 66,472 | 283,709 |
| 1979 | 4.1039 | 1,026.99 | 1,026.99 | 71,220 | 292,280 |
| 1980 | 3.9461 | 1,026.99 | 1,026.99 | 71,220 | 281,041 |
| 1981 | 3.7943 | 1,026.99 | 1,026.99 | 71,220 | 270,230 |
| 1982 | 3.6484 | 1,026.99 | 1,026.99 | 71,220 | 259,839 |
| 1983 | 3.5081 | 1,026.99 | 1,026.99 | 71,220 | 249,847 |
| 1984 | 3.3731 | 1,026.99 | 1,026.99 | 71,220 | 240,232 |
| 1985 | 3.2434 | 1,026.99 | 1,026.99 | 71,220 | 230,995 |
| 1986 | 3.1187 | 1,026.99 | 1,026.99 | 71,220 | 222,114 |
| 1987 | 2.9987 | 1,026.99 | 1,026.99 | 71,220 | 213,567 |
| 1988 | 2.8834 | 1,026.99 | 1,026.99 | 71,220 | 205,356 |
| 1989 | 2.7725 | 1,026.99 | 1,026.99 | 71,220 | 197,457 |
| 1990 | 2.6658 | 1,026.99 | 1,026.99 | 71,220 | 189,858 |
| 1991 | 2.5633 | 1,026.99 | 1,026.99 | 71,220 | 182,558 |
| 1992 | 2.4647 | 1,026.99 | 1,026.99 | 71,220 | 175,536 |
| 1993 | 2.3699 | 1,026.99 | 1,026.99 | 71,220 | 168,784 |
| 1994 | 2.2788 | 1,026.99 | 1,026.99 | 71,220 | 162,296 |
| 1995 | 2.1911 | 1,026.99 | 1,026.99 | 71,220 | 156,050 |
| 1996 | 2.1068 | 1,026.99 | 1,026.99 | 71,220 | 150,046 |
| 1997 | 2.0258 | 1,026.99 | 1,026.99 | 71,220 | 144,277 |
| 1998 | 1.9479 | 1,026.99 | 1,026.99 | 71,220 | 138,729 |
| 1999 | 1.8730 | 1,026.99 | 1,026.99 | 71,220 | 133,395 |
| 2000 | 1.8009 | 1,026.99 | 1,026.99 | 71,220 | 128,260 |
| 2001 | 1.7317 | 1,026.99 | 1,026.99 | 71,220 | 123,332 |
| 2002 | 1.6651 | 1,026.99 | 1,026.99 | 71,220 | 118,588 |
| 2003 | 1.6010 | 1,026.99 | 1,026.99 | 71,220 | 114,023 |
| 2004 | 1.5395 | 1,026.99 | 1,026.99 | 71,220 | 109,643 |
| 2005 | 1.4802 | 1,026.99 | 1,026.99 | 71,220 | 105,420 |
| 2006 | 1.4233 | 1,026.99 | 1,026.99 | 71,220 | 101,367 |
| 2007 | 1.3686 | 1,026.99 | 1,026.99 | 71,220 | 97,472  |
| 2008 | 1.3159 | 1,026.99 | 1,026.99 | 71,220 | 93,718  |
| 2009 | 1.2653 | 1,026.99 | 1,026.99 | 71,220 | 90,115  |
| 2010 | 1.2167 | 1,026.99 | 1,026.99 | 71,220 | 86,653  |
| 2011 | 1.1699 | 1,026.99 | 1,026.99 | 71,220 | 83,320  |
| 2012 | 1.1249 | 1,026.99 | 1,026.99 | 71,220 | 80,115  |
| 2013 | 1.0816 | 1,026.99 | 1,026.99 | 71,220 | 77,032  |
| 2014 | 1.0400 | 1,026.99 | 1,026.99 | 71,220 | 74,069  |
| 2015 | 1.0000 | 1,026.99 | 1,026.99 | 71,220 | 71,220  |
| 2016 | 0.9615 | 1,026.99 | 1,026.99 | 71,220 | 68,478  |
| 2017 | 0.9246 | 1,026.99 | 1,026.99 | 71,220 | 65,850  |
| 2018 | 0.8890 | 1,026.99 | 1,026.99 | 71,220 | 63,315  |
| 2019 | 0.8548 | 1,026.99 | 1,026.99 | 71,220 | 60,879  |
| 2020 | 0.8219 | 1,026.99 | 1,026.99 | 71,220 | 58,536  |
| 2021 | 0.7903 | 1,026.99 | 1,026.99 | 71,220 | 56,285  |
| 2022 | 0.7599 | 1,026.99 | 1,026.99 | 71,220 | 54,120  |
| 2023 | 0.7307 | 1,026.99 | 1,026.99 | 71,220 | 52,040  |
| 2024 | 0.7026 | 1,026.99 | 1,026.99 | 71,220 | 50,039  |

|      |        |          |          |        |           |
|------|--------|----------|----------|--------|-----------|
| 2025 | 0.6756 | 1,026.99 | 1,026.99 | 71,220 | 48,116    |
| 2026 | 0.6496 | 1,026.99 | 1,026.99 | 71,220 | 46,265    |
| 2027 | 0.6246 | 1,026.99 | 1,026.99 | 71,220 | 44,484    |
| 2028 | 0.6006 | 1,026.99 | 1,026.99 | 71,220 | 42,775    |
| 2029 | 0.5775 | 1,026.99 | 1,026.99 | 71,220 | 41,130    |
| 2030 | 0.5553 | 1,026.99 | 1,026.99 | 71,220 | 39,548    |
| 2031 | 0.5339 | 1,026.99 | 1,026.99 | 71,220 | 38,024    |
| 2032 | 0.5134 | 1,026.99 | 1,026.99 | 71,220 | 36,564    |
| 2033 | 0.4936 | 1,026.99 | 1,026.99 | 71,220 | 35,154    |
| 2034 | 0.4746 | 1,026.99 | 1,026.99 | 71,220 | 33,801    |
| 2035 | 0.4564 | 1,026.99 | 1,026.99 | 71,220 | 32,505    |
| 2036 | 0.4388 | 1,026.99 | 1,026.99 | 71,220 | 31,251    |
| 2037 | 0.4220 | 1,026.99 | 1,026.99 | 71,220 | 30,055    |
| 2038 | 0.4057 | 1,026.99 | 1,026.99 | 71,220 | 28,894    |
| 2039 | 0.3901 | 1,026.99 | 1,026.99 | 71,220 | 27,783    |
| 2040 | 0.3751 | 1,026.99 | 1,026.99 | 71,220 | 26,715    |
| 2041 | 0.3607 | 1,026.99 | 1,026.99 | 71,220 | 25,689    |
| 2042 | 0.3468 | 1,026.99 | 1,026.99 | 71,220 | 24,699    |
| 2043 | 0.3335 | 1,026.99 | 1,026.99 | 71,220 | 23,752    |
| 2044 | 0.3207 | 1,026.99 | 1,026.99 | 71,220 | 22,840    |
| 合計   |        |          |          |        | 9,573,484 |

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

|        |  |                     |
|--------|--|---------------------|
| A:     | 事業対象区域面積 (ha)  | 1,026.99 ~ 1,026.99 |
| P:     | 年間平均降雨量 (mm/年)<br>出典: 気象統計情報 (気象庁)                         | 1,829               |
| D1:    | 事業実施前の貯留率<br>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<br>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 <sup>3</sup> /S)<br>出典: 「ダム年鑑2015」 | 1,038,000,000       |
| Y:     | 評価期間   | 80                  |
| 10:    | 単位合わせのための調整値   | 10                  |
| 365:   | 1年間の日数   | 365                 |
| 86400: | 1日の秒数  | 86,400              |

事業効果面積: 経過年ごとに発生する事業対象区域面積に対して、それぞれ流出係数等の安定する期間 (t/T) を考慮して面積に換算して年度毎に累計した面積

| 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   |
|------|--------|----------|----------|--------|---------|
| 1964 | 7.3910 |          |          |        |         |
| 1965 | 7.1067 | 1,026.99 | 68.47    | 2,061  | 14,647  |
| 1966 | 6.8333 | 1,026.99 | 136.93   | 4,122  | 28,167  |
| 1967 | 6.5705 | 1,026.99 | 205.40   | 6,184  | 40,632  |
| 1968 | 6.3178 | 1,026.99 | 273.86   | 8,245  | 52,090  |
| 1969 | 6.0748 | 1,026.99 | 342.33   | 10,306 | 62,607  |
| 1970 | 5.8412 | 1,026.99 | 410.80   | 12,367 | 72,238  |
| 1971 | 5.6165 | 1,026.99 | 479.26   | 14,429 | 81,040  |
| 1972 | 5.4005 | 1,026.99 | 547.73   | 16,490 | 89,054  |
| 1973 | 5.1928 | 1,026.99 | 616.19   | 18,551 | 96,332  |
| 1974 | 4.9931 | 1,026.99 | 684.66   | 20,612 | 102,918 |
| 1975 | 4.8010 | 1,026.99 | 753.13   | 22,674 | 108,858 |
| 1976 | 4.6164 | 1,026.99 | 821.59   | 24,735 | 114,187 |
| 1977 | 4.4388 | 1,026.99 | 890.06   | 26,796 | 118,942 |
| 1978 | 4.2681 | 1,026.99 | 958.52   | 28,857 | 123,165 |
| 1979 | 4.1039 | 1,026.99 | 1,026.99 | 30,919 | 126,888 |
| 1980 | 3.9461 | 1,026.99 | 1,026.99 | 30,919 | 122,009 |
| 1981 | 3.7943 | 1,026.99 | 1,026.99 | 30,919 | 117,316 |
| 1982 | 3.6484 | 1,026.99 | 1,026.99 | 30,919 | 112,805 |
| 1983 | 3.5081 | 1,026.99 | 1,026.99 | 30,919 | 108,467 |
| 1984 | 3.3731 | 1,026.99 | 1,026.99 | 30,919 | 104,293 |
| 1985 | 3.2434 | 1,026.99 | 1,026.99 | 30,919 | 100,283 |
| 1986 | 3.1187 | 1,026.99 | 1,026.99 | 30,919 | 96,427  |
| 1987 | 2.9987 | 1,026.99 | 1,026.99 | 30,919 | 92,717  |
| 1988 | 2.8834 | 1,026.99 | 1,026.99 | 30,919 | 89,152  |
| 1989 | 2.7725 | 1,026.99 | 1,026.99 | 30,919 | 85,723  |
| 1990 | 2.6658 | 1,026.99 | 1,026.99 | 30,919 | 82,424  |
| 1991 | 2.5633 | 1,026.99 | 1,026.99 | 30,919 | 79,255  |
| 1992 | 2.4647 | 1,026.99 | 1,026.99 | 30,919 | 76,206  |
| 1993 | 2.3699 | 1,026.99 | 1,026.99 | 30,919 | 73,275  |
| 1994 | 2.2788 | 1,026.99 | 1,026.99 | 30,919 | 70,458  |
| 1995 | 2.1911 | 1,026.99 | 1,026.99 | 30,919 | 67,747  |
| 1996 | 2.1068 | 1,026.99 | 1,026.99 | 30,919 | 65,140  |
| 1997 | 2.0258 | 1,026.99 | 1,026.99 | 30,919 | 62,636  |
| 1998 | 1.9479 | 1,026.99 | 1,026.99 | 30,919 | 60,227  |
| 1999 | 1.8730 | 1,026.99 | 1,026.99 | 30,919 | 57,911  |
| 2000 | 1.8009 | 1,026.99 | 1,026.99 | 30,919 | 55,682  |
| 2001 | 1.7317 | 1,026.99 | 1,026.99 | 30,919 | 53,542  |
| 2002 | 1.6651 | 1,026.99 | 1,026.99 | 30,919 | 51,483  |
| 2003 | 1.6010 | 1,026.99 | 1,026.99 | 30,919 | 49,501  |
| 2004 | 1.5395 | 1,026.99 | 1,026.99 | 30,919 | 47,600  |
| 2005 | 1.4802 | 1,026.99 | 1,026.99 | 30,919 | 45,766  |
| 2006 | 1.4233 | 1,026.99 | 1,026.99 | 30,919 | 44,007  |
| 2007 | 1.3686 | 1,026.99 | 1,026.99 | 30,919 | 42,316  |
| 2008 | 1.3159 | 1,026.99 | 1,026.99 | 30,919 | 40,686  |
| 2009 | 1.2653 | 1,026.99 | 1,026.99 | 30,919 | 39,122  |
| 2010 | 1.2167 | 1,026.99 | 1,026.99 | 30,919 | 37,619  |
| 2011 | 1.1699 | 1,026.99 | 1,026.99 | 30,919 | 36,172  |
| 2012 | 1.1249 | 1,026.99 | 1,026.99 | 30,919 | 34,781  |
| 2013 | 1.0816 | 1,026.99 | 1,026.99 | 30,919 | 33,442  |
| 2014 | 1.0400 | 1,026.99 | 1,026.99 | 30,919 | 32,156  |
| 2015 | 1.0000 | 1,026.99 | 1,026.99 | 30,919 | 30,919  |
| 2016 | 0.9615 | 1,026.99 | 1,026.99 | 30,919 | 29,729  |
| 2017 | 0.9246 | 1,026.99 | 1,026.99 | 30,919 | 28,588  |
| 2018 | 0.8890 | 1,026.99 | 1,026.99 | 30,919 | 27,487  |
| 2019 | 0.8548 | 1,026.99 | 1,026.99 | 30,919 | 26,430  |
| 2020 | 0.8219 | 1,026.99 | 1,026.99 | 30,919 | 25,412  |

|      |        |          |          |        |           |
|------|--------|----------|----------|--------|-----------|
| 2021 | 0.7903 | 1,026.99 | 1,026.99 | 30,919 | 24,435    |
| 2022 | 0.7599 | 1,026.99 | 1,026.99 | 30,919 | 23,495    |
| 2023 | 0.7307 | 1,026.99 | 1,026.99 | 30,919 | 22,593    |
| 2024 | 0.7026 | 1,026.99 | 1,026.99 | 30,919 | 21,724    |
| 2025 | 0.6756 | 1,026.99 | 1,026.99 | 30,919 | 20,889    |
| 2026 | 0.6496 | 1,026.99 | 1,026.99 | 30,919 | 20,085    |
| 2027 | 0.6246 | 1,026.99 | 1,026.99 | 30,919 | 19,312    |
| 2028 | 0.6006 | 1,026.99 | 1,026.99 | 30,919 | 18,570    |
| 2029 | 0.5775 | 1,026.99 | 1,026.99 | 30,919 | 17,856    |
| 2030 | 0.5553 | 1,026.99 | 1,026.99 | 30,919 | 17,169    |
| 2031 | 0.5339 | 1,026.99 | 1,026.99 | 30,919 | 16,508    |
| 2032 | 0.5134 | 1,026.99 | 1,026.99 | 30,919 | 15,874    |
| 2033 | 0.4936 | 1,026.99 | 1,026.99 | 30,919 | 15,262    |
| 2034 | 0.4746 | 1,026.99 | 1,026.99 | 30,919 | 14,674    |
| 2035 | 0.4564 | 1,026.99 | 1,026.99 | 30,919 | 14,111    |
| 2036 | 0.4388 | 1,026.99 | 1,026.99 | 30,919 | 13,567    |
| 2037 | 0.4220 | 1,026.99 | 1,026.99 | 30,919 | 13,048    |
| 2038 | 0.4057 | 1,026.99 | 1,026.99 | 30,919 | 12,544    |
| 2039 | 0.3901 | 1,026.99 | 1,026.99 | 30,919 | 12,062    |
| 2040 | 0.3751 | 1,026.99 | 1,026.99 | 30,919 | 11,598    |
| 2041 | 0.3607 | 1,026.99 | 1,026.99 | 30,919 | 11,152    |
| 2042 | 0.3468 | 1,026.99 | 1,026.99 | 30,919 | 10,723    |
| 2043 | 0.3335 | 1,026.99 | 1,026.99 | 30,919 | 10,311    |
| 2044 | 0.3207 | 1,026.99 | 1,026.99 | 30,919 | 9,916     |
| 合計   |        |          |          |        | 4,156,154 |

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

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

- Qx: 全貯留量のうち生活用水使用相当量 21.60 億  
出典:「日本の水資源(平成26年版)」(国土交通省)
- Qy: 全貯留量-Qx 305.19 億
- A: 事業対象区域面積(ha) 1,026.99 ~ 1,026.99
- P: 年間平均降雨量(mm/年) 1,829  
出典:気象統計情報(気象庁)
- 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 0.51  
出典:「森林の間伐と水収支」(近嵐ら、1987)
- D2: 事業実施後、T年経過後の貯留率 0.56  
出典:「森林の間伐と水収支」(近嵐ら、1987)
- Ux: 単位当たりの上水道供給単価(円/m3) 142.91  
出典:「地方公営企業年鑑(平成25年度版)」(総務省)
- Uy: 単位当たりの雨水浄化費(円/m3) 68.60  
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」
- u: 単位当たりの水質浄化費(UxとUyを用いてQxとQyで比例按分して算出) 73.51
- Y: 評価期間 80
- 10: 単位合わせのための調整値

事業効果面積: 経過年ごとに発生する事業対象区域面積に対して、それぞれ流出係数等の安定する期間(t/T)を考慮して面積に換算して年度毎に累計した面積

| 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   |
|------|--------|----------|----------|--------|---------|
| 1964 | 7.3910 |          |          |        |         |
| 1965 | 7.1067 | 1,026.99 | 68.47    | 4,603  | 32,712  |
| 1966 | 6.8333 | 1,026.99 | 136.93   | 9,207  | 62,914  |
| 1967 | 6.5705 | 1,026.99 | 205.40   | 13,810 | 90,739  |
| 1968 | 6.3178 | 1,026.99 | 273.86   | 18,414 | 116,336 |
| 1969 | 6.0748 | 1,026.99 | 342.33   | 23,017 | 139,824 |
| 1970 | 5.8412 | 1,026.99 | 410.80   | 27,621 | 161,340 |
| 1971 | 5.6165 | 1,026.99 | 479.26   | 32,224 | 180,986 |
| 1972 | 5.4005 | 1,026.99 | 547.73   | 36,828 | 198,890 |
| 1973 | 5.1928 | 1,026.99 | 616.19   | 41,431 | 215,143 |
| 1974 | 4.9931 | 1,026.99 | 684.66   | 46,034 | 229,852 |
| 1975 | 4.8010 | 1,026.99 | 753.13   | 50,638 | 243,113 |
| 1976 | 4.6164 | 1,026.99 | 821.59   | 55,241 | 255,015 |
| 1977 | 4.4388 | 1,026.99 | 890.06   | 59,845 | 265,640 |
| 1978 | 4.2681 | 1,026.99 | 958.52   | 64,448 | 275,071 |
| 1979 | 4.1039 | 1,026.99 | 1,026.99 | 69,052 | 283,383 |
| 1980 | 3.9461 | 1,026.99 | 1,026.99 | 69,052 | 272,486 |
| 1981 | 3.7943 | 1,026.99 | 1,026.99 | 69,052 | 262,004 |
| 1982 | 3.6484 | 1,026.99 | 1,026.99 | 69,052 | 251,929 |
| 1983 | 3.5081 | 1,026.99 | 1,026.99 | 69,052 | 242,241 |
| 1984 | 3.3731 | 1,026.99 | 1,026.99 | 69,052 | 232,919 |
| 1985 | 3.2434 | 1,026.99 | 1,026.99 | 69,052 | 223,963 |
| 1986 | 3.1187 | 1,026.99 | 1,026.99 | 69,052 | 215,352 |
| 1987 | 2.9987 | 1,026.99 | 1,026.99 | 69,052 | 207,066 |
| 1988 | 2.8834 | 1,026.99 | 1,026.99 | 69,052 | 199,105 |
| 1989 | 2.7725 | 1,026.99 | 1,026.99 | 69,052 | 191,447 |
| 1990 | 2.6658 | 1,026.99 | 1,026.99 | 69,052 | 184,079 |
| 1991 | 2.5633 | 1,026.99 | 1,026.99 | 69,052 | 177,001 |
| 1992 | 2.4647 | 1,026.99 | 1,026.99 | 69,052 | 170,192 |
| 1993 | 2.3699 | 1,026.99 | 1,026.99 | 69,052 | 163,646 |
| 1994 | 2.2788 | 1,026.99 | 1,026.99 | 69,052 | 157,356 |
| 1995 | 2.1911 | 1,026.99 | 1,026.99 | 69,052 | 151,300 |
| 1996 | 2.1068 | 1,026.99 | 1,026.99 | 69,052 | 145,479 |
| 1997 | 2.0258 | 1,026.99 | 1,026.99 | 69,052 | 139,886 |
| 1998 | 1.9479 | 1,026.99 | 1,026.99 | 69,052 | 134,506 |
| 1999 | 1.8730 | 1,026.99 | 1,026.99 | 69,052 | 129,334 |
| 2000 | 1.8009 | 1,026.99 | 1,026.99 | 69,052 | 124,356 |
| 2001 | 1.7317 | 1,026.99 | 1,026.99 | 69,052 | 119,577 |
| 2002 | 1.6651 | 1,026.99 | 1,026.99 | 69,052 | 114,978 |
| 2003 | 1.6010 | 1,026.99 | 1,026.99 | 69,052 | 110,552 |
| 2004 | 1.5395 | 1,026.99 | 1,026.99 | 69,052 | 106,306 |
| 2005 | 1.4802 | 1,026.99 | 1,026.99 | 69,052 | 102,211 |
| 2006 | 1.4233 | 1,026.99 | 1,026.99 | 69,052 | 98,282  |
| 2007 | 1.3686 | 1,026.99 | 1,026.99 | 69,052 | 94,505  |
| 2008 | 1.3159 | 1,026.99 | 1,026.99 | 69,052 | 90,866  |
| 2009 | 1.2653 | 1,026.99 | 1,026.99 | 69,052 | 87,371  |
| 2010 | 1.2167 | 1,026.99 | 1,026.99 | 69,052 | 84,016  |
| 2011 | 1.1699 | 1,026.99 | 1,026.99 | 69,052 | 80,784  |
| 2012 | 1.1249 | 1,026.99 | 1,026.99 | 69,052 | 77,677  |

|      |        |          |          |        |           |
|------|--------|----------|----------|--------|-----------|
| 2013 | 1.0816 | 1,026.99 | 1,026.99 | 69,052 | 74,687    |
| 2014 | 1.0400 | 1,026.99 | 1,026.99 | 69,052 | 71,814    |
| 2015 | 1.0000 | 1,026.99 | 1,026.99 | 69,052 | 69,052    |
| 2016 | 0.9615 | 1,026.99 | 1,026.99 | 69,052 | 66,393    |
| 2017 | 0.9246 | 1,026.99 | 1,026.99 | 69,052 | 63,845    |
| 2018 | 0.8890 | 1,026.99 | 1,026.99 | 69,052 | 61,387    |
| 2019 | 0.8548 | 1,026.99 | 1,026.99 | 69,052 | 59,026    |
| 2020 | 0.8219 | 1,026.99 | 1,026.99 | 69,052 | 56,754    |
| 2021 | 0.7903 | 1,026.99 | 1,026.99 | 69,052 | 54,572    |
| 2022 | 0.7599 | 1,026.99 | 1,026.99 | 69,052 | 52,473    |
| 2023 | 0.7307 | 1,026.99 | 1,026.99 | 69,052 | 50,456    |
| 2024 | 0.7026 | 1,026.99 | 1,026.99 | 69,052 | 48,516    |
| 2025 | 0.6756 | 1,026.99 | 1,026.99 | 69,052 | 46,652    |
| 2026 | 0.6496 | 1,026.99 | 1,026.99 | 69,052 | 44,856    |
| 2027 | 0.6246 | 1,026.99 | 1,026.99 | 69,052 | 43,130    |
| 2028 | 0.6006 | 1,026.99 | 1,026.99 | 69,052 | 41,473    |
| 2029 | 0.5775 | 1,026.99 | 1,026.99 | 69,052 | 39,878    |
| 2030 | 0.5553 | 1,026.99 | 1,026.99 | 69,052 | 38,345    |
| 2031 | 0.5339 | 1,026.99 | 1,026.99 | 69,052 | 36,867    |
| 2032 | 0.5134 | 1,026.99 | 1,026.99 | 69,052 | 35,451    |
| 2033 | 0.4936 | 1,026.99 | 1,026.99 | 69,052 | 34,084    |
| 2034 | 0.4746 | 1,026.99 | 1,026.99 | 69,052 | 32,772    |
| 2035 | 0.4564 | 1,026.99 | 1,026.99 | 69,052 | 31,515    |
| 2036 | 0.4388 | 1,026.99 | 1,026.99 | 69,052 | 30,300    |
| 2037 | 0.4220 | 1,026.99 | 1,026.99 | 69,052 | 29,140    |
| 2038 | 0.4057 | 1,026.99 | 1,026.99 | 69,052 | 28,014    |
| 2039 | 0.3901 | 1,026.99 | 1,026.99 | 69,052 | 26,937    |
| 2040 | 0.3751 | 1,026.99 | 1,026.99 | 69,052 | 25,901    |
| 2041 | 0.3607 | 1,026.99 | 1,026.99 | 69,052 | 24,907    |
| 2042 | 0.3468 | 1,026.99 | 1,026.99 | 69,052 | 23,947    |
| 2043 | 0.3335 | 1,026.99 | 1,026.99 | 69,052 | 23,029    |
| 2044 | 0.3207 | 1,026.99 | 1,026.99 | 69,052 | 22,145    |
| 合計   |        |          |          |        | 9,282,048 |



|      |        |          |          |         |            |
|------|--------|----------|----------|---------|------------|
| 2029 | 0.5775 | 1,026.99 | 1,026.99 | 107,546 | 62,108     |
| 2030 | 0.5553 | 1,026.99 | 1,026.99 | 107,546 | 59,720     |
| 2031 | 0.5339 | 1,026.99 | 1,026.99 | 107,546 | 57,419     |
| 2032 | 0.5134 | 1,026.99 | 1,026.99 | 107,546 | 55,214     |
| 2033 | 0.4936 | 1,026.99 | 1,026.99 | 107,546 | 53,085     |
| 2034 | 0.4746 | 1,026.99 | 1,026.99 | 107,546 | 51,041     |
| 2035 | 0.4564 | 1,026.99 | 1,026.99 | 107,546 | 49,084     |
| 2036 | 0.4388 | 1,026.99 | 1,026.99 | 107,546 | 47,191     |
| 2037 | 0.4220 | 1,026.99 | 1,026.99 | 107,546 | 45,384     |
| 2038 | 0.4057 | 1,026.99 | 1,026.99 | 107,546 | 43,631     |
| 2039 | 0.3901 | 1,026.99 | 1,026.99 | 107,546 | 41,954     |
| 2040 | 0.3751 | 1,026.99 | 1,026.99 | 107,546 | 40,341     |
| 2041 | 0.3607 | 1,026.99 | 1,026.99 | 107,546 | 38,792     |
| 2042 | 0.3468 | 1,026.99 | 1,026.99 | 107,546 | 37,297     |
| 2043 | 0.3335 | 1,026.99 | 1,026.99 | 107,546 | 35,867     |
| 2044 | 0.3207 | 1,026.99 | 1,026.99 | 107,546 | 34,490     |
| 合計   |        |          |          |         | 14,456,498 |

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

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

- 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) 5,600  
出典:「砂防便覧」平成20年版
- V: 崩壊見込み量(m3/年) 0.00 ~ 3,077.89
- A: 事業対象区域面積(ha) 1,026.99 ~ 1,026.99
- R: 流域内崩壊率 0.0375  
出典:「治山全体調査」S42からS46
- N: 雨量比=50年確率日雨量/既往最大日雨量 0.7992  
出典:気象統計情報(気象庁)
- H: 平均崩壊深(m) 1.0  
出典:都道府県等への聞き取り
- Y: 評価期間 80
- 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  |
|------|--------|----------|----------|--------|--------|
| 1964 | 7.3910 |          |          |        |        |
| 1965 | 7.1067 | 1,026.99 | 0.00     | 0      | 0      |
| 1966 | 6.8333 | 1,026.99 | 0.00     | 0      | 0      |
| 1967 | 6.5705 | 1,026.99 | 0.00     | 0      | 0      |
| 1968 | 6.3178 | 1,026.99 | 0.00     | 0      | 0      |
| 1969 | 6.0748 | 1,026.99 | 0.00     | 0      | 0      |
| 1970 | 5.8412 | 1,026.99 | 0.00     | 0      | 0      |
| 1971 | 5.6165 | 1,026.99 | 0.00     | 0      | 0      |
| 1972 | 5.4005 | 1,026.99 | 0.00     | 0      | 0      |
| 1973 | 5.1928 | 1,026.99 | 0.00     | 0      | 0      |
| 1974 | 4.9931 | 1,026.99 | 0.00     | 0      | 0      |
| 1975 | 4.8010 | 1,026.99 | 3,077.89 | 17,236 | 82,750 |
| 1976 | 4.6164 | 1,026.99 | 3,077.89 | 17,236 | 79,568 |
| 1977 | 4.4388 | 1,026.99 | 3,077.89 | 17,236 | 76,507 |
| 1978 | 4.2681 | 1,026.99 | 3,077.89 | 17,236 | 73,565 |
| 1979 | 4.1039 | 1,026.99 | 3,077.89 | 17,236 | 70,735 |
| 1980 | 3.9461 | 1,026.99 | 3,077.89 | 17,236 | 68,015 |
| 1981 | 3.7943 | 1,026.99 | 3,077.89 | 17,236 | 65,399 |
| 1982 | 3.6484 | 1,026.99 | 3,077.89 | 17,236 | 62,884 |
| 1983 | 3.5081 | 1,026.99 | 3,077.89 | 17,236 | 60,466 |
| 1984 | 3.3731 | 1,026.99 | 3,077.89 | 17,236 | 58,139 |
| 1985 | 3.2434 | 1,026.99 | 3,077.89 | 17,236 | 55,903 |
| 1986 | 3.1187 | 1,026.99 | 3,077.89 | 17,236 | 53,754 |
| 1987 | 2.9987 | 1,026.99 | 3,077.89 | 17,236 | 51,686 |
| 1988 | 2.8834 | 1,026.99 | 3,077.89 | 17,236 | 49,698 |
| 1989 | 2.7725 | 1,026.99 | 3,077.89 | 17,236 | 47,787 |
| 1990 | 2.6658 | 1,026.99 | 3,077.89 | 17,236 | 45,948 |
| 1991 | 2.5633 | 1,026.99 | 3,077.89 | 17,236 | 44,181 |
| 1992 | 2.4647 | 1,026.99 | 3,077.89 | 17,236 | 42,482 |
| 1993 | 2.3699 | 1,026.99 | 3,077.89 | 17,236 | 40,848 |
| 1994 | 2.2788 | 1,026.99 | 3,077.89 | 17,236 | 39,277 |
| 1995 | 2.1911 | 1,026.99 | 3,077.89 | 17,236 | 37,766 |
| 1996 | 2.1068 | 1,026.99 | 3,077.89 | 17,236 | 36,313 |
| 1997 | 2.0258 | 1,026.99 | 3,077.89 | 17,236 | 34,917 |
| 1998 | 1.9479 | 1,026.99 | 3,077.89 | 17,236 | 33,574 |
| 1999 | 1.8730 | 1,026.99 | 3,077.89 | 17,236 | 32,283 |
| 2000 | 1.8009 | 1,026.99 | 3,077.89 | 17,236 | 31,040 |
| 2001 | 1.7317 | 1,026.99 | 3,077.89 | 17,236 | 29,848 |
| 2002 | 1.6651 | 1,026.99 | 3,077.89 | 17,236 | 28,700 |
| 2003 | 1.6010 | 1,026.99 | 3,077.89 | 17,236 | 27,595 |
| 2004 | 1.5395 | 1,026.99 | 3,077.89 | 17,236 | 26,535 |
| 2005 | 1.4802 | 1,026.99 | 3,077.89 | 17,236 | 25,513 |
| 2006 | 1.4233 | 1,026.99 | 3,077.89 | 17,236 | 24,532 |
| 2007 | 1.3686 | 1,026.99 | 3,077.89 | 17,236 | 23,589 |
| 2008 | 1.3159 | 1,026.99 | 3,077.89 | 17,236 | 22,681 |
| 2009 | 1.2653 | 1,026.99 | 3,077.89 | 17,236 | 21,809 |
| 2010 | 1.2167 | 1,026.99 | 3,077.89 | 17,236 | 20,971 |
| 2011 | 1.1699 | 1,026.99 | 3,077.89 | 17,236 | 20,164 |
| 2012 | 1.1249 | 1,026.99 | 3,077.89 | 17,236 | 19,389 |
| 2013 | 1.0816 | 1,026.99 | 3,077.89 | 17,236 | 18,642 |
| 2014 | 1.0400 | 1,026.99 | 3,077.89 | 17,236 | 17,925 |
| 2015 | 1.0000 | 1,026.99 | 3,077.89 | 17,236 | 17,236 |
| 2016 | 0.9615 | 1,026.99 | 3,077.89 | 17,236 | 16,572 |
| 2017 | 0.9246 | 1,026.99 | 3,077.89 | 17,236 | 15,936 |
| 2018 | 0.8890 | 1,026.99 | 3,077.89 | 17,236 | 15,323 |
| 2019 | 0.8548 | 1,026.99 | 3,077.89 | 17,236 | 14,733 |
| 2020 | 0.8219 | 1,026.99 | 3,077.89 | 17,236 | 14,166 |
| 2021 | 0.7903 | 1,026.99 | 3,077.89 | 17,236 | 13,622 |
| 2022 | 0.7599 | 1,026.99 | 3,077.89 | 17,236 | 13,098 |

|      |        |          |          |        |           |
|------|--------|----------|----------|--------|-----------|
| 2023 | 0.7307 | 1,026.99 | 3,077.89 | 17,236 | 12,594    |
| 2024 | 0.7026 | 1,026.99 | 3,077.89 | 17,236 | 12,110    |
| 2025 | 0.6756 | 1,026.99 | 3,077.89 | 17,236 | 11,645    |
| 2026 | 0.6496 | 1,026.99 | 3,077.89 | 17,236 | 11,197    |
| 2027 | 0.6246 | 1,026.99 | 3,077.89 | 17,236 | 10,766    |
| 2028 | 0.6006 | 1,026.99 | 3,077.89 | 17,236 | 10,352    |
| 2029 | 0.5775 | 1,026.99 | 3,077.89 | 17,236 | 9,954     |
| 2030 | 0.5553 | 1,026.99 | 3,077.89 | 17,236 | 9,571     |
| 2031 | 0.5339 | 1,026.99 | 3,077.89 | 17,236 | 9,202     |
| 2032 | 0.5134 | 1,026.99 | 3,077.89 | 17,236 | 8,849     |
| 2033 | 0.4936 | 1,026.99 | 3,077.89 | 17,236 | 8,508     |
| 2034 | 0.4746 | 1,026.99 | 3,077.89 | 17,236 | 8,180     |
| 2035 | 0.4564 | 1,026.99 | 3,077.89 | 17,236 | 7,867     |
| 2036 | 0.4388 | 1,026.99 | 3,077.89 | 17,236 | 7,563     |
| 2037 | 0.4220 | 1,026.99 | 3,077.89 | 17,236 | 7,274     |
| 2038 | 0.4057 | 1,026.99 | 3,077.89 | 17,236 | 6,993     |
| 2039 | 0.3901 | 1,026.99 | 3,077.89 | 17,236 | 6,724     |
| 2040 | 0.3751 | 1,026.99 | 3,077.89 | 17,236 | 6,465     |
| 2041 | 0.3607 | 1,026.99 | 3,077.89 | 17,236 | 6,217     |
| 2042 | 0.3468 | 1,026.99 | 3,077.89 | 17,236 | 5,977     |
| 2043 | 0.3335 | 1,026.99 | 3,077.89 | 17,236 | 5,748     |
| 2044 | 0.3207 | 1,026.99 | 3,077.89 | 17,236 | 5,528     |
| 合計   |        |          |          |        | 2,013,348 |

$$B = \sum_{t=1}^Y \frac{V2 - V1}{Y \times (1+i)^t} \times D \times BEF \times (1 + R) \times 0.5 \times \frac{44}{12} \times U$$

- U: 二酸化炭素に関する原単位(円/CO2-ton) 6,046  
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)
- V1: 事業を実施しない場合の評価最終年の当該森林の見込蓄積量(m3) スギ 44,758  
ヒノキ 25,821  
マツ 28,170  
カラマツ 17,969  
広葉樹 29,152  
0
- V2: 事業を実施する場合の評価最終年の当該森林の見込蓄積量(m3) スギ 89,516  
ヒノキ 51,643  
マツ 56,339  
カラマツ 35,938  
広葉樹 58,304  
0
- Y: 評価期間 80
- D: 容積密度(t/m3) スギ 0.314  
ヒノキ 0.407  
マツ 0.451  
カラマツ 0.404  
広葉樹 0.624  
0
- BEF: バイオマス拡大係数(地上部バイオマス量/幹バイオマス量) 樹齢20年越 スギ 1.23  
出典:「日本国温室効果ガスインベントリ報告書」(2015年4月)(国立環境 樹齢20年越 ヒノキ 1.24  
研究所温室効果ガスインベントリオフィス編) 樹齢20年越 マツ 1.23  
樹齢20年越 カラマツ 1.15  
樹齢20年越 広葉樹 1.26  
樹齢20年越 0
- R: 地上部に対する地下部の比率(地下部バイオマス量/地上部バイオマス量) スギ 0.25  
出典:「日本国温室効果ガスインベントリ報告書」(2015年4月)(国立環境 ヒノキ 0.26  
研究所温室効果ガスインベントリオフィス編) マツ 0.26  
カラマツ 0.29  
広葉樹 0.26  
0
- 0.5: 植物中の炭素含有率
- 44/12: 炭素から二酸化炭素への換算係数

| 年度   | 社会的割引率 | スギ     |       | ヒノキ    |       | マツ     |       | カラマツ   |       | 広葉樹    |       | 事業効果蓄積 | 効果額 |
|------|--------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-----|
|      |        | 事業効果蓄積 | 効果額   | 事業効果蓄積 | 効果額   | 事業効果蓄積 | 効果額   | 事業効果蓄積 | 効果額   | 事業効果蓄積 | 効果額   |        |     |
| 1964 | 7.3910 |        |       |        |       |        |       |        |       |        |       |        |     |
| 1965 | 7.1067 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1966 | 6.8333 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1967 | 6.5705 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1968 | 6.3178 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1969 | 6.0748 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1970 | 5.8412 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1971 | 5.6165 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1972 | 5.4005 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1973 | 5.1928 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1974 | 4.9931 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1975 | 4.8010 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1976 | 4.6164 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1977 | 4.4388 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1978 | 4.2681 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1979 | 4.1039 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1980 | 3.9461 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1981 | 3.7943 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1982 | 3.6484 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1983 | 3.5081 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1984 | 3.3731 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1985 | 3.2434 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1986 | 3.1187 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1987 | 2.9987 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1988 | 2.8834 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1989 | 2.7725 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1990 | 2.6658 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1991 | 2.5633 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1992 | 2.4647 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1993 | 2.3699 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1994 | 2.2788 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1995 | 2.1911 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1996 | 2.1068 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |
| 1997 | 2.0258 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |        |     |

|      |        |        |       |        |       |        |       |        |       |        |       |  |  |
|------|--------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--|--|
| 1998 | 1.9479 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 1999 | 1.8730 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2000 | 1.8009 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2001 | 1.7317 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2002 | 1.6651 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2003 | 1.6010 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2004 | 1.5395 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2005 | 1.4802 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2006 | 1.4233 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2007 | 1.3686 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2008 | 1.3159 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2009 | 1.2653 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2010 | 1.2167 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2011 | 1.1699 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2012 | 1.1249 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2013 | 1.0816 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2014 | 1.0400 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2015 | 1.0000 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2016 | 0.9615 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2017 | 0.9246 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2018 | 0.8890 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2019 | 0.8548 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2020 | 0.8219 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2021 | 0.7903 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2022 | 0.7599 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2023 | 0.7307 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2024 | 0.7026 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2025 | 0.6756 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2026 | 0.6496 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2027 | 0.6246 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2028 | 0.6006 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2029 | 0.5775 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2030 | 0.5553 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2031 | 0.5339 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2032 | 0.5134 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2033 | 0.4936 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2034 | 0.4746 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2035 | 0.4564 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2036 | 0.4388 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2037 | 0.4220 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2038 | 0.4057 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2039 | 0.3901 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2040 | 0.3751 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2041 | 0.3607 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2042 | 0.3468 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2043 | 0.3335 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 2044 | 0.3207 | 559.48 | 2,993 | 322.77 | 2,276 | 352.12 | 2,729 | 224.61 | 1,491 | 364.40 | 4,001 |  |  |
| 合計   |        |        |       |        |       |        |       |        |       |        |       |  |  |

|      |        | 合計     |        |
|------|--------|--------|--------|
| 年度   | 社会的割引率 | 効果額    | 現在価値化  |
| 1964 | 7.3910 |        |        |
| 1965 | 7.1067 | 13,490 | 95,869 |
| 1966 | 6.8333 | 13,490 | 92,181 |
| 1967 | 6.5705 | 13,490 | 88,636 |
| 1968 | 6.3178 | 13,490 | 85,227 |
| 1969 | 6.0748 | 13,490 | 81,949 |
| 1970 | 5.8412 | 13,490 | 78,798 |
| 1971 | 5.6165 | 13,490 | 75,767 |
| 1972 | 5.4005 | 13,490 | 72,853 |
| 1973 | 5.1928 | 13,490 | 70,051 |
| 1974 | 4.9931 | 13,490 | 67,357 |
| 1975 | 4.8010 | 13,490 | 64,765 |
| 1976 | 4.6164 | 13,490 | 62,275 |
| 1977 | 4.4388 | 13,490 | 59,879 |
| 1978 | 4.2681 | 13,490 | 57,577 |
| 1979 | 4.1039 | 13,490 | 55,362 |
| 1980 | 3.9461 | 13,490 | 53,233 |
| 1981 | 3.7943 | 13,490 | 51,185 |
| 1982 | 3.6484 | 13,490 | 49,217 |
| 1983 | 3.5081 | 13,490 | 47,324 |
| 1984 | 3.3731 | 13,490 | 45,503 |
| 1985 | 3.2434 | 13,490 | 43,753 |
| 1986 | 3.1187 | 13,490 | 42,071 |
| 1987 | 2.9987 | 13,490 | 40,452 |
| 1988 | 2.8834 | 13,490 | 38,897 |
| 1989 | 2.7725 | 13,490 | 37,401 |
| 1990 | 2.6658 | 13,490 | 35,962 |
| 1991 | 2.5633 | 13,490 | 34,579 |
| 1992 | 2.4647 | 13,490 | 33,249 |
| 1993 | 2.3699 | 13,490 | 31,970 |
| 1994 | 2.2788 | 13,490 | 30,741 |
| 1995 | 2.1911 | 13,490 | 29,558 |
| 1996 | 2.1068 | 13,490 | 28,421 |
| 1997 | 2.0258 | 13,490 | 27,328 |
| 1998 | 1.9479 | 13,490 | 26,277 |
| 1999 | 1.8730 | 13,490 | 25,267 |
| 2000 | 1.8009 | 13,490 | 24,294 |
| 2001 | 1.7317 | 13,490 | 23,361 |
| 2002 | 1.6651 | 13,490 | 22,462 |

|      |        |        |           |
|------|--------|--------|-----------|
| 2003 | 1.6010 | 13,490 | 21,597    |
| 2004 | 1.5395 | 13,490 | 20,768    |
| 2005 | 1.4802 | 13,490 | 19,968    |
| 2006 | 1.4233 | 13,490 | 19,200    |
| 2007 | 1.3686 | 13,490 | 18,462    |
| 2008 | 1.3159 | 13,490 | 17,751    |
| 2009 | 1.2653 | 13,490 | 17,069    |
| 2010 | 1.2167 | 13,490 | 16,413    |
| 2011 | 1.1699 | 13,490 | 15,782    |
| 2012 | 1.1249 | 13,490 | 15,175    |
| 2013 | 1.0816 | 13,490 | 14,591    |
| 2014 | 1.0400 | 13,490 | 14,030    |
| 2015 | 1.0000 | 13,490 | 13,490    |
| 2016 | 0.9615 | 13,490 | 12,971    |
| 2017 | 0.9246 | 13,490 | 12,473    |
| 2018 | 0.8890 | 13,490 | 11,993    |
| 2019 | 0.8548 | 13,490 | 11,531    |
| 2020 | 0.8219 | 13,490 | 11,087    |
| 2021 | 0.7903 | 13,490 | 10,661    |
| 2022 | 0.7599 | 13,490 | 10,251    |
| 2023 | 0.7307 | 13,490 | 9,857     |
| 2024 | 0.7026 | 13,490 | 9,478     |
| 2025 | 0.6756 | 13,490 | 9,114     |
| 2026 | 0.6496 | 13,490 | 8,763     |
| 2027 | 0.6246 | 13,490 | 8,426     |
| 2028 | 0.6006 | 13,490 | 8,102     |
| 2029 | 0.5775 | 13,490 | 7,790     |
| 2030 | 0.5553 | 13,490 | 7,491     |
| 2031 | 0.5339 | 13,490 | 7,202     |
| 2032 | 0.5134 | 13,490 | 6,926     |
| 2033 | 0.4936 | 13,490 | 6,659     |
| 2034 | 0.4746 | 13,490 | 6,402     |
| 2035 | 0.4564 | 13,490 | 6,157     |
| 2036 | 0.4388 | 13,490 | 5,919     |
| 2037 | 0.4220 | 13,490 | 5,693     |
| 2038 | 0.4057 | 13,490 | 5,473     |
| 2039 | 0.3901 | 13,490 | 5,262     |
| 2040 | 0.3751 | 13,490 | 5,060     |
| 2041 | 0.3607 | 13,490 | 4,866     |
| 2042 | 0.3468 | 13,490 | 4,678     |
| 2043 | 0.3335 | 13,490 | 4,499     |
| 2044 | 0.3207 | 13,490 | 4,326     |
| 合計   |        |        | 2,384,457 |

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

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

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

- U: 二酸化炭素に関する原単位(円/t-CO2) 6,046  
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)
- 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 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 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 80  
②評価期間内に侵食深が30cmに達しない場合は評価期間
- A: ①事業対象区域面積(ha) 又は 1,026.99 ~ 1,026.99  
②保全効果区域面積(ha)
- s: 単位面積当たりの土壌平均炭素蓄積量(t-C/ha) 85.33  
出典:「日本国温室効果ガスインベントリ報告書」(2015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)
- 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) ①事業対象区域 0.200  
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 | 荒地等 |  |
|---------|-----|--|
- e2:: 事業を実施した場合の侵食深(cm/年) ①事業対象区域 0.013  
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 |  |
|---------|-------|--|
- 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   |          |       |        | 効果対象面積 | 効果額 | 現在価値化 |
|------|--------|----------|----------|-------|--------|--------|-----|-------|
|      |        | 事業対象区域面積 | 効果対象面積   | 効果額   | 現在価値化  |        |     |       |
| 1964 | 7.3910 |          |          |       |        |        |     |       |
| 1965 | 7.1067 | 1,026.99 | 68.47    | 241   | 1,713  |        |     |       |
| 1966 | 6.8333 | 1,026.99 | 136.93   | 483   | 3,300  |        |     |       |
| 1967 | 6.5705 | 1,026.99 | 205.40   | 724   | 4,757  |        |     |       |
| 1968 | 6.3178 | 1,026.99 | 273.86   | 965   | 6,097  |        |     |       |
| 1969 | 6.0748 | 1,026.99 | 342.33   | 1,207 | 7,332  |        |     |       |
| 1970 | 5.8412 | 1,026.99 | 410.80   | 1,448 | 8,458  |        |     |       |
| 1971 | 5.6165 | 1,026.99 | 479.26   | 1,689 | 9,486  |        |     |       |
| 1972 | 5.4005 | 1,026.99 | 547.73   | 1,931 | 10,428 |        |     |       |
| 1973 | 5.1928 | 1,026.99 | 616.19   | 2,172 | 11,279 |        |     |       |
| 1974 | 4.9931 | 1,026.99 | 684.66   | 2,413 | 12,048 |        |     |       |
| 1975 | 4.8010 | 1,026.99 | 753.13   | 2,655 | 12,747 |        |     |       |
| 1976 | 4.6164 | 1,026.99 | 821.59   | 2,896 | 13,369 |        |     |       |
| 1977 | 4.4388 | 1,026.99 | 890.06   | 3,137 | 13,925 |        |     |       |
| 1978 | 4.2681 | 1,026.99 | 958.52   | 3,379 | 14,422 |        |     |       |
| 1979 | 4.1039 | 1,026.99 | 1,026.99 | 3,620 | 14,856 |        |     |       |
| 1980 | 3.9461 | 1,026.99 | 1,026.99 | 3,620 | 14,285 |        |     |       |
| 1981 | 3.7943 | 1,026.99 | 1,026.99 | 3,620 | 13,735 |        |     |       |
| 1982 | 3.6484 | 1,026.99 | 1,026.99 | 3,620 | 13,207 |        |     |       |
| 1983 | 3.5081 | 1,026.99 | 1,026.99 | 3,620 | 12,699 |        |     |       |
| 1984 | 3.3731 | 1,026.99 | 1,026.99 | 3,620 | 12,211 |        |     |       |
| 1985 | 3.2434 | 1,026.99 | 1,026.99 | 3,620 | 11,741 |        |     |       |
| 1986 | 3.1187 | 1,026.99 | 1,026.99 | 3,620 | 11,290 |        |     |       |
| 1987 | 2.9987 | 1,026.99 | 1,026.99 | 3,620 | 10,855 |        |     |       |
| 1988 | 2.8834 | 1,026.99 | 1,026.99 | 3,620 | 10,438 |        |     |       |
| 1989 | 2.7725 | 1,026.99 | 1,026.99 | 3,620 | 10,036 |        |     |       |
| 1990 | 2.6658 | 1,026.99 | 1,026.99 | 3,620 | 9,650  |        |     |       |
| 1991 | 2.5633 | 1,026.99 | 1,026.99 | 3,620 | 9,279  |        |     |       |
| 1992 | 2.4647 | 1,026.99 | 1,026.99 | 3,620 | 8,922  |        |     |       |
| 1993 | 2.3699 | 1,026.99 | 1,026.99 | 3,620 | 8,579  |        |     |       |
| 1994 | 2.2788 | 1,026.99 | 1,026.99 | 3,620 | 8,249  |        |     |       |
| 1995 | 2.1911 | 1,026.99 | 1,026.99 | 3,620 | 7,932  |        |     |       |
| 1996 | 2.1068 | 1,026.99 | 1,026.99 | 3,620 | 7,627  |        |     |       |
| 1997 | 2.0258 | 1,026.99 | 1,026.99 | 3,620 | 7,333  |        |     |       |
| 1998 | 1.9479 | 1,026.99 | 1,026.99 | 3,620 | 7,051  |        |     |       |
| 1999 | 1.8730 | 1,026.99 | 1,026.99 | 3,620 | 6,780  |        |     |       |
| 2000 | 1.8009 | 1,026.99 | 1,026.99 | 3,620 | 6,519  |        |     |       |
| 2001 | 1.7317 | 1,026.99 | 1,026.99 | 3,620 | 6,269  |        |     |       |
| 2002 | 1.6651 | 1,026.99 | 1,026.99 | 3,620 | 6,028  |        |     |       |
| 2003 | 1.6010 | 1,026.99 | 1,026.99 | 3,620 | 5,796  |        |     |       |

|      |        |          |          |       |         |  |  |   |
|------|--------|----------|----------|-------|---------|--|--|---|
| 2004 | 1.5395 | 1,026.99 | 1,026.99 | 3,620 | 5,573   |  |  |   |
| 2005 | 1.4802 | 1,026.99 | 1,026.99 | 3,620 | 5,358   |  |  |   |
| 2006 | 1.4233 | 1,026.99 | 1,026.99 | 3,620 | 5,152   |  |  |   |
| 2007 | 1.3686 | 1,026.99 | 1,026.99 | 3,620 | 4,954   |  |  |   |
| 2008 | 1.3159 | 1,026.99 | 1,026.99 | 3,620 | 4,764   |  |  |   |
| 2009 | 1.2653 | 1,026.99 | 1,026.99 | 3,620 | 4,580   |  |  |   |
| 2010 | 1.2167 | 1,026.99 | 1,026.99 | 3,620 | 4,404   |  |  |   |
| 2011 | 1.1699 | 1,026.99 | 1,026.99 | 3,620 | 4,235   |  |  |   |
| 2012 | 1.1249 | 1,026.99 | 1,026.99 | 3,620 | 4,072   |  |  |   |
| 2013 | 1.0816 | 1,026.99 | 1,026.99 | 3,620 | 3,915   |  |  |   |
| 2014 | 1.0400 | 1,026.99 | 1,026.99 | 3,620 | 3,765   |  |  |   |
| 2015 | 1.0000 | 1,026.99 | 1,026.99 | 3,620 | 3,620   |  |  |   |
| 2016 | 0.9615 | 1,026.99 | 1,026.99 | 3,620 | 3,481   |  |  |   |
| 2017 | 0.9246 | 1,026.99 | 1,026.99 | 3,620 | 3,347   |  |  |   |
| 2018 | 0.8890 | 1,026.99 | 1,026.99 | 3,620 | 3,218   |  |  |   |
| 2019 | 0.8548 | 1,026.99 | 1,026.99 | 3,620 | 3,094   |  |  |   |
| 2020 | 0.8219 | 1,026.99 | 1,026.99 | 3,620 | 2,975   |  |  |   |
| 2021 | 0.7903 | 1,026.99 | 1,026.99 | 3,620 | 2,861   |  |  |   |
| 2022 | 0.7599 | 1,026.99 | 1,026.99 | 3,620 | 2,751   |  |  |   |
| 2023 | 0.7307 | 1,026.99 | 1,026.99 | 3,620 | 2,645   |  |  |   |
| 2024 | 0.7026 | 1,026.99 | 1,026.99 | 3,620 | 2,543   |  |  |   |
| 2025 | 0.6756 | 1,026.99 | 1,026.99 | 3,620 | 2,446   |  |  |   |
| 2026 | 0.6496 | 1,026.99 | 1,026.99 | 3,620 | 2,352   |  |  |   |
| 2027 | 0.6246 | 1,026.99 | 1,026.99 | 3,620 | 2,261   |  |  |   |
| 2028 | 0.6006 | 1,026.99 | 1,026.99 | 3,620 | 2,174   |  |  |   |
| 2029 | 0.5775 | 1,026.99 | 1,026.99 | 3,620 | 2,091   |  |  |   |
| 2030 | 0.5553 | 1,026.99 | 1,026.99 | 3,620 | 2,010   |  |  |   |
| 2031 | 0.5339 | 1,026.99 | 1,026.99 | 3,620 | 1,933   |  |  |   |
| 2032 | 0.5134 | 1,026.99 | 1,026.99 | 3,620 | 1,859   |  |  |   |
| 2033 | 0.4936 | 1,026.99 | 1,026.99 | 3,620 | 1,787   |  |  |   |
| 2034 | 0.4746 | 1,026.99 | 1,026.99 | 3,620 | 1,718   |  |  |   |
| 2035 | 0.4564 | 1,026.99 | 1,026.99 | 3,620 | 1,652   |  |  |   |
| 2036 | 0.4388 | 1,026.99 | 1,026.99 | 3,620 | 1,588   |  |  |   |
| 2037 | 0.4220 | 1,026.99 | 1,026.99 | 3,620 | 1,528   |  |  |   |
| 2038 | 0.4057 | 1,026.99 | 1,026.99 | 3,620 | 1,469   |  |  |   |
| 2039 | 0.3901 | 1,026.99 | 1,026.99 | 3,620 | 1,412   |  |  |   |
| 2040 | 0.3751 | 1,026.99 | 1,026.99 | 3,620 | 1,358   |  |  |   |
| 2041 | 0.3607 | 1,026.99 | 1,026.99 | 3,620 | 1,306   |  |  |   |
| 2042 | 0.3468 | 1,026.99 | 1,026.99 | 3,620 | 1,255   |  |  |   |
| 2043 | 0.3335 | 1,026.99 | 1,026.99 | 3,620 | 1,207   |  |  |   |
| 2044 | 0.3207 | 1,026.99 | 1,026.99 | 3,620 | 1,161   |  |  |   |
| 合計   |        |          |          |       | 486,602 |  |  | 0 |

$$B = \sum_{t=1}^Y \frac{V_t \times @}{(1+i)^t}$$

Y: 評価期間 80

Vt主: 人工林 主伐量 t年後における伐採材積(m3)  
出典:人工林分密度管理図((一社)日本森林技術協会)、  
森林整備センター収穫予測表((研)森林総合研究所)等

@: 人工林 主伐材 木材市場価格(円/m3)  
出典:「山林素地及び山元立木価格調((一財)日本不動産研究所)」(平成27年3月末現

|      |                  |
|------|------------------|
| スギ   | 0.00 ~ 71,613.16 |
| ヒノキ  | 0.00 ~ 38,731.93 |
| マツ   | 0.00 ~ 40,845.78 |
| カラマツ | 0.00 ~ 26,953.74 |
| 広葉樹  | 0.00 ~ 58,303.72 |
| 0    |                  |

|      |       |
|------|-------|
| スギ   | 1,789 |
| ヒノキ  | 6,139 |
| マツ   | 1,522 |
| カラマツ | 3,902 |
| 広葉樹  | 0     |
| 0    | 0     |

|      |        | スギ        |         | ヒノキ       |         | マツ        |        | カラマツ      |         | 広葉樹       |     |
|------|--------|-----------|---------|-----------|---------|-----------|--------|-----------|---------|-----------|-----|
| 年度   | 社会的割引率 | 事業効果材積    | 効果額     | 事業効果材積    | 効果額     | 事業効果材積    | 効果額    | 事業効果材積    | 効果額     | 事業効果材積    | 効果額 |
| 2044 | 0.3207 | 71,613.16 | 128,116 | 38,731.93 | 237,775 | 40,845.78 | 62,167 | 26,953.74 | 105,173 | 58,303.72 | 0   |

|      |        | 合計     |     |         |         |
|------|--------|--------|-----|---------|---------|
| 年度   | 社会的割引率 | 事業効果材積 | 効果額 | 効果額     | 現在価値化   |
| 2044 | 0.3207 |        |     | 533,231 | 171,007 |
| 合計   |        |        |     |         | 171,007 |