

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： 相模川広域流域 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 7 |         | × 7.3910 |           | H 3 5 | 0   | × 0.6756 | 0            |
| S 3 8 | 621,875 | × 7.1067 | 4,419,479 | H 3 6 | 0   | × 0.6496 | 0            |
| S 3 9 | 157,609 | × 6.8333 | 1,076,990 | H 3 7 | 0   | × 0.6246 | 0            |
| S 4 0 | 135,420 | × 6.5705 | 889,777   | H 3 8 | 0   | × 0.6006 | 0            |
| S 4 1 | 100,617 | × 6.3178 | 635,678   | H 3 9 | 0   | × 0.5775 | 0            |
| S 4 2 | 70,468  | × 6.0748 | 428,079   | H 4 0 | 0   | × 0.5553 | 0            |
| S 4 3 | 65,837  | × 5.8412 | 384,567   | H 4 1 | 0   | × 0.5339 | 0            |
| S 4 4 | 0       | × 5.6165 | 0         | H 4 2 | 0   | × 0.5134 | 0            |
| S 4 5 | 27,571  | × 5.4005 | 148,897   | H 4 3 | 0   | × 0.4936 | 0            |
| S 4 6 | 0       | × 5.1928 | 0         | H 4 4 | 0   | × 0.4746 | 0            |
| S 4 7 | 22,576  | × 4.9931 | 112,724   | H 4 5 | 0   | × 0.4564 | 0            |
| S 4 8 | 3,338   | × 4.8010 | 16,026    | H 4 6 | 0   | × 0.4388 | 0            |
| S 4 9 | 71,264  | × 4.6164 | 328,983   | H 4 7 | 0   | × 0.4220 | 0            |
| S 5 0 | 0       | × 4.4388 | 0         | H 4 8 | 0   | × 0.4057 | 0            |
| S 5 1 | 103,266 | × 4.2681 | 440,750   | H 4 9 | 0   | × 0.3901 | 0            |
| S 5 2 | 0       | × 4.1039 | 0         | H 5 0 | 0   | × 0.3751 | 0            |
| S 5 3 | 15,229  | × 3.9461 | 60,095    | H 5 1 | 0   | × 0.3607 | 0            |
| S 5 4 | 0       | × 3.7943 | 0         | H 5 2 | 0   | × 0.3468 | 0            |
| S 5 5 | 27,467  | × 3.6484 | 100,211   | H 5 3 | 0   | × 0.3335 | 0            |
| S 5 6 | 0       | × 3.5081 | 0         | H 5 4 | 0   | × 0.3207 | 0            |
| S 5 7 | 54,238  | × 3.3731 | 182,950   |       |     |          |              |
| S 5 8 | 39,752  | × 3.2434 | 128,932   |       |     |          |              |
| S 5 9 | 0       | × 3.1187 | 0         |       |     |          |              |
| S 6 0 | 0       | × 2.9987 | 0         |       |     |          |              |
| S 6 1 | 0       | × 2.8834 | 0         |       |     |          |              |
| S 6 2 | 0       | × 2.7725 | 0         |       |     |          |              |
| S 6 3 | 75,138  | × 2.6658 | 200,303   |       |     |          |              |
| H 1   | 0       | × 2.5633 | 0         |       |     |          |              |
| H 2   | 0       | × 2.4647 | 0         |       |     |          |              |
| H 3   | 0       | × 2.3699 | 0         |       |     |          |              |
| H 4   | 0       | × 2.2788 | 0         |       |     |          |              |
| H 5   | 0       | × 2.1911 | 0         |       |     |          |              |
| H 6   | 0       | × 2.1068 | 0         |       |     |          |              |
| H 7   | 0       | × 2.0258 | 0         |       |     |          |              |
| H 8   | 0       | × 1.9479 | 0         |       |     |          |              |
| H 9   | 0       | × 1.8730 | 0         |       |     |          |              |
| H 1 0 | 0       | × 1.8009 | 0         |       |     |          |              |
| H 1 1 | 0       | × 1.7317 | 0         |       |     |          |              |
| H 1 2 | 0       | × 1.6651 | 0         |       |     |          |              |
| H 1 3 | 0       | × 1.6010 | 0         |       |     |          |              |
| H 1 4 | 0       | × 1.5395 | 0         |       |     |          |              |
| H 1 5 | 0       | × 1.4802 | 0         |       |     |          |              |
| H 1 6 | 0       | × 1.4233 | 0         |       |     |          |              |
| H 1 7 | 0       | × 1.3686 | 0         |       |     |          |              |
| H 1 8 | 0       | × 1.3159 | 0         |       |     |          |              |
| H 1 9 | 0       | × 1.2653 | 0         |       |     |          |              |
| H 2 0 | 0       | × 1.2167 | 0         |       |     |          |              |
| H 2 1 | 0       | × 1.1699 | 0         |       |     |          |              |
| H 2 2 | 0       | × 1.1249 | 0         |       |     |          |              |
| H 2 3 | 0       | × 1.0816 | 0         |       |     |          |              |
| H 2 4 | 0       | × 1.0400 | 0         |       |     |          |              |
| H 2 5 | 0       | × 1.0000 | 0         |       |     |          |              |
| H 2 6 | 0       | × 0.9615 | 0         |       |     |          |              |
| H 2 7 | 0       | × 0.9246 | 0         |       |     |          |              |
| H 2 8 | 0       | × 0.8890 | 0         |       |     |          |              |
| H 2 9 | 0       | × 0.8548 | 0         |       |     |          |              |
| H 3 0 | 10,569  | × 0.8219 | 8,687     |       |     |          |              |
| H 3 1 | 0       | × 0.7903 | 0         |       |     |          |              |
| H 3 2 | 0       | × 0.7599 | 0         |       |     |          |              |
| H 3 3 | 0       | × 0.7307 | 0         |       |     |          |              |
| H 3 4 | 0       | × 0.7026 | 0         |       |     |          |              |
|       |         |          |           | 合 計   |     |          | 9,563,128    |
|       |         |          |           | C =   |     |          | 9,563,128 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) 3,520,000  
出典:「ダム年鑑2012」
- 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) 79.74  
出典:気象統計情報(気象庁)
- A: 事業対象区域面積(ha) 339.56 ~ 339.56
- 360: 単位合わせのための調整値
- Y: 評価期間 80

| 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   |
|------|--------|----------|--------|--------|---------|
| 1962 | 7.3910 |          |        |        |         |
| 1963 | 7.1067 | 339.56   | 22.64  | 1,765  | 12,543  |
| 1964 | 6.8333 | 339.56   | 45.27  | 3,530  | 24,122  |
| 1965 | 6.5705 | 339.56   | 67.91  | 5,295  | 34,791  |
| 1966 | 6.3178 | 339.56   | 90.55  | 7,060  | 44,604  |
| 1967 | 6.0748 | 339.56   | 113.19 | 8,825  | 53,610  |
| 1968 | 5.8412 | 339.56   | 135.82 | 10,590 | 61,858  |
| 1969 | 5.6165 | 339.56   | 158.46 | 12,355 | 69,392  |
| 1970 | 5.4005 | 339.56   | 181.10 | 14,120 | 76,255  |
| 1971 | 5.1928 | 339.56   | 203.74 | 15,885 | 82,488  |
| 1972 | 4.9931 | 339.56   | 226.37 | 17,650 | 88,128  |
| 1973 | 4.8010 | 339.56   | 249.01 | 19,415 | 93,211  |
| 1974 | 4.6164 | 339.56   | 271.65 | 21,180 | 97,775  |
| 1975 | 4.4388 | 339.56   | 294.29 | 22,945 | 101,848 |
| 1976 | 4.2681 | 339.56   | 316.92 | 24,710 | 105,465 |
| 1977 | 4.1039 | 339.56   | 339.56 | 26,475 | 108,651 |
| 1978 | 3.9461 | 339.56   | 339.56 | 26,475 | 104,473 |
| 1979 | 3.7943 | 339.56   | 339.56 | 26,475 | 100,454 |
| 1980 | 3.6484 | 339.56   | 339.56 | 26,475 | 96,591  |
| 1981 | 3.5081 | 339.56   | 339.56 | 26,475 | 92,877  |
| 1982 | 3.3731 | 339.56   | 339.56 | 26,475 | 89,303  |
| 1983 | 3.2434 | 339.56   | 339.56 | 26,475 | 85,869  |
| 1984 | 3.1187 | 339.56   | 339.56 | 26,475 | 82,568  |
| 1985 | 2.9987 | 339.56   | 339.56 | 26,475 | 79,391  |
| 1986 | 2.8834 | 339.56   | 339.56 | 26,475 | 76,338  |
| 1987 | 2.7725 | 339.56   | 339.56 | 26,475 | 73,402  |
| 1988 | 2.6658 | 339.56   | 339.56 | 26,475 | 70,577  |
| 1989 | 2.5633 | 339.56   | 339.56 | 26,475 | 67,863  |
| 1990 | 2.4647 | 339.56   | 339.56 | 26,475 | 65,253  |
| 1991 | 2.3699 | 339.56   | 339.56 | 26,475 | 62,743  |
| 1992 | 2.2788 | 339.56   | 339.56 | 26,475 | 60,331  |
| 1993 | 2.1911 | 339.56   | 339.56 | 26,475 | 58,009  |
| 1994 | 2.1068 | 339.56   | 339.56 | 26,475 | 55,778  |
| 1995 | 2.0258 | 339.56   | 339.56 | 26,475 | 53,633  |
| 1996 | 1.9479 | 339.56   | 339.56 | 26,475 | 51,571  |
| 1997 | 1.8730 | 339.56   | 339.56 | 26,475 | 49,588  |
| 1998 | 1.8009 | 339.56   | 339.56 | 26,475 | 47,679  |
| 1999 | 1.7317 | 339.56   | 339.56 | 26,475 | 45,847  |
| 2000 | 1.6651 | 339.56   | 339.56 | 26,475 | 44,084  |
| 2001 | 1.6010 | 339.56   | 339.56 | 26,475 | 42,386  |
| 2002 | 1.5395 | 339.56   | 339.56 | 26,475 | 40,758  |
| 2003 | 1.4802 | 339.56   | 339.56 | 26,475 | 39,188  |
| 2004 | 1.4233 | 339.56   | 339.56 | 26,475 | 37,682  |
| 2005 | 1.3686 | 339.56   | 339.56 | 26,475 | 36,234  |
| 2006 | 1.3159 | 339.56   | 339.56 | 26,475 | 34,838  |
| 2007 | 1.2653 | 339.56   | 339.56 | 26,475 | 33,499  |
| 2008 | 1.2167 | 339.56   | 339.56 | 26,475 | 32,212  |
| 2009 | 1.1699 | 339.56   | 339.56 | 26,475 | 30,973  |
| 2010 | 1.1249 | 339.56   | 339.56 | 26,475 | 29,782  |
| 2011 | 1.0816 | 339.56   | 339.56 | 26,475 | 28,635  |
| 2012 | 1.0400 | 339.56   | 339.56 | 26,475 | 27,534  |
| 2013 | 1.0000 | 339.56   | 339.56 | 26,475 | 26,475  |
| 2014 | 0.9615 | 339.56   | 339.56 | 26,475 | 25,456  |
| 2015 | 0.9246 | 339.56   | 339.56 | 26,475 | 24,479  |
| 2016 | 0.8890 | 339.56   | 339.56 | 26,475 | 23,536  |
| 2017 | 0.8548 | 339.56   | 339.56 | 26,475 | 22,631  |
| 2018 | 0.8219 | 339.56   | 339.56 | 26,475 | 21,760  |
| 2019 | 0.7903 | 339.56   | 339.56 | 26,475 | 20,923  |
| 2020 | 0.7599 | 339.56   | 339.56 | 26,475 | 20,118  |
| 2021 | 0.7307 | 339.56   | 339.56 | 26,475 | 19,345  |
| 2022 | 0.7026 | 339.56   | 339.56 | 26,475 | 18,601  |
| 2023 | 0.6756 | 339.56   | 339.56 | 26,475 | 17,887  |
| 2024 | 0.6496 | 339.56   | 339.56 | 26,475 | 17,198  |

|      |        |        |        |        |           |
|------|--------|--------|--------|--------|-----------|
| 2025 | 0.6246 | 339.56 | 339.56 | 26,475 | 16,536    |
| 2026 | 0.6006 | 339.56 | 339.56 | 26,475 | 15,901    |
| 2027 | 0.5775 | 339.56 | 339.56 | 26,475 | 15,289    |
| 2028 | 0.5553 | 339.56 | 339.56 | 26,475 | 14,702    |
| 2029 | 0.5339 | 339.56 | 339.56 | 26,475 | 14,135    |
| 2030 | 0.5134 | 339.56 | 339.56 | 26,475 | 13,592    |
| 2031 | 0.4936 | 339.56 | 339.56 | 26,475 | 13,068    |
| 2032 | 0.4746 | 339.56 | 339.56 | 26,475 | 12,565    |
| 2033 | 0.4564 | 339.56 | 339.56 | 26,475 | 12,083    |
| 2034 | 0.4388 | 339.56 | 339.56 | 26,475 | 11,617    |
| 2035 | 0.4220 | 339.56 | 339.56 | 26,475 | 11,172    |
| 2036 | 0.4057 | 339.56 | 339.56 | 26,475 | 10,741    |
| 2037 | 0.3901 | 339.56 | 339.56 | 26,475 | 10,328    |
| 2038 | 0.3751 | 339.56 | 339.56 | 26,475 | 9,931     |
| 2039 | 0.3607 | 339.56 | 339.56 | 26,475 | 9,550     |
| 2040 | 0.3468 | 339.56 | 339.56 | 26,475 | 9,182     |
| 2041 | 0.3335 | 339.56 | 339.56 | 26,475 | 8,829     |
| 2042 | 0.3207 | 339.56 | 339.56 | 26,475 | 8,491     |
| 合計   |        |        |        |        | 3,558,805 |

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

|        |  |                 |
|--------|--|-----------------|
| A:     | 事業対象区域面積 (ha)  | 339.56 ~ 339.56 |
| P:     | 年間平均降雨量 (mm/年)<br>出典: 気象統計情報 (気象庁)                         | 1,727           |
| 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2012」 | 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          |

| 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  |
|-------|--------|----------|--------|-------|--------|
| 1,962 | 7.3910 |          |        |       |        |
| 1,963 | 7.1067 | 339.56   | 22.64  | 643   | 4,570  |
| 1,964 | 6.8333 | 339.56   | 45.27  | 1,286 | 8,788  |
| 1,965 | 6.5705 | 339.56   | 67.91  | 1,930 | 12,681 |
| 1,966 | 6.3178 | 339.56   | 90.55  | 2,573 | 16,256 |
| 1,967 | 6.0748 | 339.56   | 113.19 | 3,216 | 19,537 |
| 1,968 | 5.8412 | 339.56   | 135.82 | 3,859 | 22,541 |
| 1,969 | 5.6165 | 339.56   | 158.46 | 4,503 | 25,291 |
| 1,970 | 5.4005 | 339.56   | 181.10 | 5,146 | 27,791 |
| 1,971 | 5.1928 | 339.56   | 203.74 | 5,789 | 30,061 |
| 1,972 | 4.9931 | 339.56   | 226.37 | 6,432 | 32,116 |
| 1,973 | 4.8010 | 339.56   | 249.01 | 7,075 | 33,967 |
| 1,974 | 4.6164 | 339.56   | 271.65 | 7,719 | 35,634 |
| 1,975 | 4.4388 | 339.56   | 294.29 | 8,362 | 37,117 |
| 1,976 | 4.2681 | 339.56   | 316.92 | 9,005 | 38,434 |
| 1,977 | 4.1039 | 339.56   | 339.56 | 9,648 | 39,594 |
| 1,978 | 3.9461 | 339.56   | 339.56 | 9,648 | 38,072 |
| 1,979 | 3.7943 | 339.56   | 339.56 | 9,648 | 36,607 |
| 1,980 | 3.6484 | 339.56   | 339.56 | 9,648 | 35,200 |
| 1,981 | 3.5081 | 339.56   | 339.56 | 9,648 | 33,846 |
| 1,982 | 3.3731 | 339.56   | 339.56 | 9,648 | 32,544 |
| 1,983 | 3.2434 | 339.56   | 339.56 | 9,648 | 31,292 |
| 1,984 | 3.1187 | 339.56   | 339.56 | 9,648 | 30,089 |
| 1,985 | 2.9987 | 339.56   | 339.56 | 9,648 | 28,931 |
| 1,986 | 2.8834 | 339.56   | 339.56 | 9,648 | 27,819 |
| 1,987 | 2.7725 | 339.56   | 339.56 | 9,648 | 26,749 |
| 1,988 | 2.6658 | 339.56   | 339.56 | 9,648 | 25,720 |
| 1,989 | 2.5633 | 339.56   | 339.56 | 9,648 | 24,731 |
| 1,990 | 2.4647 | 339.56   | 339.56 | 9,648 | 23,779 |
| 1,991 | 2.3699 | 339.56   | 339.56 | 9,648 | 22,865 |
| 1,992 | 2.2788 | 339.56   | 339.56 | 9,648 | 21,986 |
| 1,993 | 2.1911 | 339.56   | 339.56 | 9,648 | 21,140 |
| 1,994 | 2.1068 | 339.56   | 339.56 | 9,648 | 20,326 |
| 1,995 | 2.0258 | 339.56   | 339.56 | 9,648 | 19,545 |
| 1,996 | 1.9479 | 339.56   | 339.56 | 9,648 | 18,793 |
| 1,997 | 1.8730 | 339.56   | 339.56 | 9,648 | 18,071 |
| 1,998 | 1.8009 | 339.56   | 339.56 | 9,648 | 17,375 |
| 1,999 | 1.7317 | 339.56   | 339.56 | 9,648 | 16,707 |
| 2,000 | 1.6651 | 339.56   | 339.56 | 9,648 | 16,065 |
| 2,001 | 1.6010 | 339.56   | 339.56 | 9,648 | 15,446 |
| 2,002 | 1.5395 | 339.56   | 339.56 | 9,648 | 14,853 |
| 2,003 | 1.4802 | 339.56   | 339.56 | 9,648 | 14,281 |
| 2,004 | 1.4233 | 339.56   | 339.56 | 9,648 | 13,732 |
| 2,005 | 1.3686 | 339.56   | 339.56 | 9,648 | 13,204 |
| 2,006 | 1.3159 | 339.56   | 339.56 | 9,648 | 12,696 |
| 2,007 | 1.2653 | 339.56   | 339.56 | 9,648 | 12,208 |
| 2,008 | 1.2167 | 339.56   | 339.56 | 9,648 | 11,739 |
| 2,009 | 1.1699 | 339.56   | 339.56 | 9,648 | 11,287 |
| 2,010 | 1.1249 | 339.56   | 339.56 | 9,648 | 10,853 |
| 2,011 | 1.0816 | 339.56   | 339.56 | 9,648 | 10,435 |
| 2,012 | 1.0400 | 339.56   | 339.56 | 9,648 | 10,034 |
| 2,013 | 1.0000 | 339.56   | 339.56 | 9,648 | 9,648  |
| 2,014 | 0.9615 | 339.56   | 339.56 | 9,648 | 9,277  |
| 2,015 | 0.9246 | 339.56   | 339.56 | 9,648 | 8,921  |
| 2,016 | 0.8890 | 339.56   | 339.56 | 9,648 | 8,577  |
| 2,017 | 0.8548 | 339.56   | 339.56 | 9,648 | 8,247  |
| 2,018 | 0.8219 | 339.56   | 339.56 | 9,648 | 7,930  |
| 2,019 | 0.7903 | 339.56   | 339.56 | 9,648 | 7,625  |
| 2,020 | 0.7599 | 339.56   | 339.56 | 9,648 | 7,332  |

|       |        |        |        |       |           |
|-------|--------|--------|--------|-------|-----------|
| 2.021 | 0.7307 | 339.56 | 339.56 | 9,648 | 7,050     |
| 2.022 | 0.7026 | 339.56 | 339.56 | 9,648 | 6,779     |
| 2.023 | 0.6756 | 339.56 | 339.56 | 9,648 | 6,518     |
| 2.024 | 0.6496 | 339.56 | 339.56 | 9,648 | 6,267     |
| 2.025 | 0.6246 | 339.56 | 339.56 | 9,648 | 6,026     |
| 2.026 | 0.6006 | 339.56 | 339.56 | 9,648 | 5,795     |
| 2.027 | 0.5775 | 339.56 | 339.56 | 9,648 | 5,572     |
| 2.028 | 0.5553 | 339.56 | 339.56 | 9,648 | 5,358     |
| 2.029 | 0.5339 | 339.56 | 339.56 | 9,648 | 5,151     |
| 2.030 | 0.5134 | 339.56 | 339.56 | 9,648 | 4,953     |
| 2.031 | 0.4936 | 339.56 | 339.56 | 9,648 | 4,762     |
| 2.032 | 0.4746 | 339.56 | 339.56 | 9,648 | 4,579     |
| 2.033 | 0.4564 | 339.56 | 339.56 | 9,648 | 4,403     |
| 2.034 | 0.4388 | 339.56 | 339.56 | 9,648 | 4,234     |
| 2.035 | 0.4220 | 339.56 | 339.56 | 9,648 | 4,071     |
| 2.036 | 0.4057 | 339.56 | 339.56 | 9,648 | 3,914     |
| 2.037 | 0.3901 | 339.56 | 339.56 | 9,648 | 3,764     |
| 2.038 | 0.3751 | 339.56 | 339.56 | 9,648 | 3,619     |
| 2.039 | 0.3607 | 339.56 | 339.56 | 9,648 | 3,480     |
| 2.040 | 0.3468 | 339.56 | 339.56 | 9,648 | 3,346     |
| 2.041 | 0.3335 | 339.56 | 339.56 | 9,648 | 3,218     |
| 2.042 | 0.3207 | 339.56 | 339.56 | 9,648 | 3,094     |
| 合計    |        |        |        |       | 1,296,908 |

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

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

- Qx: 全貯留量のうち生活用水使用相当量 51.90 億  
出典:「日本の水資源(平成25年度版)」(国土交通省)
- Qy: 全貯留量-Qx 75.76 億
- A: 事業対象区域面積(ha) 339.56 ~ 339.56
- P: 年間平均降雨量(mm/年) 1,727  
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給水原価(円/m3) 106.29  
出典:「地方公営企業年鑑(平成23年度版)」(総務省)等
- 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) 83.92
- Y: 評価期間 80
- 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   |
|------|--------|----------|--------|--------|---------|
| 1962 | 7.3910 |          |        |        |         |
| 1963 | 7.1067 | 339.56   | 22.64  | 1,640  | 11,655  |
| 1964 | 6.8333 | 339.56   | 45.27  | 3,280  | 22,413  |
| 1965 | 6.5705 | 339.56   | 67.91  | 4,920  | 32,327  |
| 1966 | 6.3178 | 339.56   | 90.55  | 6,560  | 41,445  |
| 1967 | 6.0748 | 339.56   | 113.19 | 8,200  | 49,813  |
| 1968 | 5.8412 | 339.56   | 135.82 | 9,840  | 57,477  |
| 1969 | 5.6165 | 339.56   | 158.46 | 11,480 | 64,477  |
| 1970 | 5.4005 | 339.56   | 181.10 | 13,120 | 70,855  |
| 1971 | 5.1928 | 339.56   | 203.74 | 14,760 | 76,646  |
| 1972 | 4.9931 | 339.56   | 226.37 | 16,400 | 81,887  |
| 1973 | 4.8010 | 339.56   | 249.01 | 18,040 | 86,610  |
| 1974 | 4.6164 | 339.56   | 271.65 | 19,680 | 90,851  |
| 1975 | 4.4388 | 339.56   | 294.29 | 21,320 | 94,635  |
| 1976 | 4.2681 | 339.56   | 316.92 | 22,959 | 97,991  |
| 1977 | 4.1039 | 339.56   | 339.56 | 24,599 | 100,952 |
| 1978 | 3.9461 | 339.56   | 339.56 | 24,599 | 97,070  |
| 1979 | 3.7943 | 339.56   | 339.56 | 24,599 | 93,336  |
| 1980 | 3.6484 | 339.56   | 339.56 | 24,599 | 89,747  |
| 1981 | 3.5081 | 339.56   | 339.56 | 24,599 | 86,296  |
| 1982 | 3.3731 | 339.56   | 339.56 | 24,599 | 82,975  |
| 1983 | 3.2434 | 339.56   | 339.56 | 24,599 | 79,784  |
| 1984 | 3.1187 | 339.56   | 339.56 | 24,599 | 76,717  |
| 1985 | 2.9987 | 339.56   | 339.56 | 24,599 | 73,765  |
| 1986 | 2.8834 | 339.56   | 339.56 | 24,599 | 70,929  |
| 1987 | 2.7725 | 339.56   | 339.56 | 24,599 | 68,201  |
| 1988 | 2.6658 | 339.56   | 339.56 | 24,599 | 65,576  |
| 1989 | 2.5633 | 339.56   | 339.56 | 24,599 | 63,055  |
| 1990 | 2.4647 | 339.56   | 339.56 | 24,599 | 60,629  |
| 1991 | 2.3699 | 339.56   | 339.56 | 24,599 | 58,297  |
| 1992 | 2.2788 | 339.56   | 339.56 | 24,599 | 56,056  |
| 1993 | 2.1911 | 339.56   | 339.56 | 24,599 | 53,899  |
| 1994 | 2.1068 | 339.56   | 339.56 | 24,599 | 51,825  |
| 1995 | 2.0258 | 339.56   | 339.56 | 24,599 | 49,833  |
| 1996 | 1.9479 | 339.56   | 339.56 | 24,599 | 47,916  |
| 1997 | 1.8730 | 339.56   | 339.56 | 24,599 | 46,074  |
| 1998 | 1.8009 | 339.56   | 339.56 | 24,599 | 44,300  |
| 1999 | 1.7317 | 339.56   | 339.56 | 24,599 | 42,598  |
| 2000 | 1.6651 | 339.56   | 339.56 | 24,599 | 40,960  |
| 2001 | 1.6010 | 339.56   | 339.56 | 24,599 | 39,383  |
| 2002 | 1.5395 | 339.56   | 339.56 | 24,599 | 37,870  |
| 2003 | 1.4802 | 339.56   | 339.56 | 24,599 | 36,411  |
| 2004 | 1.4233 | 339.56   | 339.56 | 24,599 | 35,012  |
| 2005 | 1.3686 | 339.56   | 339.56 | 24,599 | 33,666  |
| 2006 | 1.3159 | 339.56   | 339.56 | 24,599 | 32,370  |
| 2007 | 1.2653 | 339.56   | 339.56 | 24,599 | 31,125  |
| 2008 | 1.2167 | 339.56   | 339.56 | 24,599 | 29,930  |
| 2009 | 1.1699 | 339.56   | 339.56 | 24,599 | 28,778  |
| 2010 | 1.1249 | 339.56   | 339.56 | 24,599 | 27,671  |
| 2011 | 1.0816 | 339.56   | 339.56 | 24,599 | 26,606  |
| 2012 | 1.0400 | 339.56   | 339.56 | 24,599 | 25,583  |

|      |        |        |        |        |           |
|------|--------|--------|--------|--------|-----------|
| 2013 | 1.0000 | 339.56 | 339.56 | 24,599 | 24,599    |
| 2014 | 0.9615 | 339.56 | 339.56 | 24,599 | 23,652    |
| 2015 | 0.9246 | 339.56 | 339.56 | 24,599 | 22,744    |
| 2016 | 0.8890 | 339.56 | 339.56 | 24,599 | 21,869    |
| 2017 | 0.8548 | 339.56 | 339.56 | 24,599 | 21,027    |
| 2018 | 0.8219 | 339.56 | 339.56 | 24,599 | 20,218    |
| 2019 | 0.7903 | 339.56 | 339.56 | 24,599 | 19,441    |
| 2020 | 0.7599 | 339.56 | 339.56 | 24,599 | 18,693    |
| 2021 | 0.7307 | 339.56 | 339.56 | 24,599 | 17,974    |
| 2022 | 0.7026 | 339.56 | 339.56 | 24,599 | 17,283    |
| 2023 | 0.6756 | 339.56 | 339.56 | 24,599 | 16,619    |
| 2024 | 0.6496 | 339.56 | 339.56 | 24,599 | 15,980    |
| 2025 | 0.6246 | 339.56 | 339.56 | 24,599 | 15,365    |
| 2026 | 0.6006 | 339.56 | 339.56 | 24,599 | 14,774    |
| 2027 | 0.5775 | 339.56 | 339.56 | 24,599 | 14,206    |
| 2028 | 0.5553 | 339.56 | 339.56 | 24,599 | 13,660    |
| 2029 | 0.5339 | 339.56 | 339.56 | 24,599 | 13,133    |
| 2030 | 0.5134 | 339.56 | 339.56 | 24,599 | 12,629    |
| 2031 | 0.4936 | 339.56 | 339.56 | 24,599 | 12,142    |
| 2032 | 0.4746 | 339.56 | 339.56 | 24,599 | 11,675    |
| 2033 | 0.4564 | 339.56 | 339.56 | 24,599 | 11,227    |
| 2034 | 0.4388 | 339.56 | 339.56 | 24,599 | 10,794    |
| 2035 | 0.4220 | 339.56 | 339.56 | 24,599 | 10,381    |
| 2036 | 0.4057 | 339.56 | 339.56 | 24,599 | 9,980     |
| 2037 | 0.3901 | 339.56 | 339.56 | 24,599 | 9,596     |
| 2038 | 0.3751 | 339.56 | 339.56 | 24,599 | 9,227     |
| 2039 | 0.3607 | 339.56 | 339.56 | 24,599 | 8,873     |
| 2040 | 0.3468 | 339.56 | 339.56 | 24,599 | 8,531     |
| 2041 | 0.3335 | 339.56 | 339.56 | 24,599 | 8,204     |
| 2042 | 0.3207 | 339.56 | 339.56 | 24,599 | 7,889     |
| 合計   |        |        |        |        | 3,306,662 |



|      |        |        |        |        |           |
|------|--------|--------|--------|--------|-----------|
| 2029 | 0.5339 | 339.56 | 339.56 | 35,559 | 18,985    |
| 2030 | 0.5134 | 339.56 | 339.56 | 35,559 | 18,256    |
| 2031 | 0.4936 | 339.56 | 339.56 | 35,559 | 17,552    |
| 2032 | 0.4746 | 339.56 | 339.56 | 35,559 | 16,876    |
| 2033 | 0.4564 | 339.56 | 339.56 | 35,559 | 16,229    |
| 2034 | 0.4388 | 339.56 | 339.56 | 35,559 | 15,603    |
| 2035 | 0.4220 | 339.56 | 339.56 | 35,559 | 15,006    |
| 2036 | 0.4057 | 339.56 | 339.56 | 35,559 | 14,426    |
| 2037 | 0.3901 | 339.56 | 339.56 | 35,559 | 13,872    |
| 2038 | 0.3751 | 339.56 | 339.56 | 35,559 | 13,338    |
| 2039 | 0.3607 | 339.56 | 339.56 | 35,559 | 12,826    |
| 2040 | 0.3468 | 339.56 | 339.56 | 35,559 | 12,332    |
| 2041 | 0.3335 | 339.56 | 339.56 | 35,559 | 11,859    |
| 2042 | 0.3207 | 339.56 | 339.56 | 35,559 | 11,404    |
| 合計   |        |        |        |        | 4,779,875 |

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

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

- 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 ~ 746.90
- A: 事業対象区域面積(ha) 339.56 ~ 339.56
- R: 流域内崩壊率 0.0169  
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 0.8677  
出典:気象統計情報(気象庁)
- H: 平均崩壊深(m) 1.5  
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  |
|------|--------|----------|--------|-------|--------|
| 1962 | 7.3910 |          |        |       |        |
| 1963 | 7.1067 | 339.56   | 0.00   | 0     | 0      |
| 1964 | 6.8333 | 339.56   | 0.00   | 0     | 0      |
| 1965 | 6.5705 | 339.56   | 0.00   | 0     | 0      |
| 1966 | 6.3178 | 339.56   | 0.00   | 0     | 0      |
| 1967 | 6.0748 | 339.56   | 0.00   | 0     | 0      |
| 1968 | 5.8412 | 339.56   | 0.00   | 0     | 0      |
| 1969 | 5.6165 | 339.56   | 0.00   | 0     | 0      |
| 1970 | 5.4005 | 339.56   | 0.00   | 0     | 0      |
| 1971 | 5.1928 | 339.56   | 0.00   | 0     | 0      |
| 1972 | 4.9931 | 339.56   | 0.00   | 0     | 0      |
| 1973 | 4.8010 | 339.56   | 746.90 | 4,183 | 20,083 |
| 1974 | 4.6164 | 339.56   | 746.90 | 4,183 | 19,310 |
| 1975 | 4.4388 | 339.56   | 746.90 | 4,183 | 18,568 |
| 1976 | 4.2681 | 339.56   | 746.90 | 4,183 | 17,853 |
| 1977 | 4.1039 | 339.56   | 746.90 | 4,183 | 17,167 |
| 1978 | 3.9461 | 339.56   | 746.90 | 4,183 | 16,507 |
| 1979 | 3.7943 | 339.56   | 746.90 | 4,183 | 15,872 |
| 1980 | 3.6484 | 339.56   | 746.90 | 4,183 | 15,261 |
| 1981 | 3.5081 | 339.56   | 746.90 | 4,183 | 14,674 |
| 1982 | 3.3731 | 339.56   | 746.90 | 4,183 | 14,110 |
| 1983 | 3.2434 | 339.56   | 746.90 | 4,183 | 13,567 |
| 1984 | 3.1187 | 339.56   | 746.90 | 4,183 | 13,046 |
| 1985 | 2.9987 | 339.56   | 746.90 | 4,183 | 12,544 |
| 1986 | 2.8834 | 339.56   | 746.90 | 4,183 | 12,061 |
| 1987 | 2.7725 | 339.56   | 746.90 | 4,183 | 11,597 |
| 1988 | 2.6658 | 339.56   | 746.90 | 4,183 | 11,151 |
| 1989 | 2.5633 | 339.56   | 746.90 | 4,183 | 10,722 |
| 1990 | 2.4647 | 339.56   | 746.90 | 4,183 | 10,310 |
| 1991 | 2.3699 | 339.56   | 746.90 | 4,183 | 9,913  |
| 1992 | 2.2788 | 339.56   | 746.90 | 4,183 | 9,532  |
| 1993 | 2.1911 | 339.56   | 746.90 | 4,183 | 9,165  |
| 1994 | 2.1068 | 339.56   | 746.90 | 4,183 | 8,813  |
| 1995 | 2.0258 | 339.56   | 746.90 | 4,183 | 8,474  |
| 1996 | 1.9479 | 339.56   | 746.90 | 4,183 | 8,148  |
| 1997 | 1.8730 | 339.56   | 746.90 | 4,183 | 7,835  |
| 1998 | 1.8009 | 339.56   | 746.90 | 4,183 | 7,533  |
| 1999 | 1.7317 | 339.56   | 746.90 | 4,183 | 7,244  |
| 2000 | 1.6651 | 339.56   | 746.90 | 4,183 | 6,965  |
| 2001 | 1.6010 | 339.56   | 746.90 | 4,183 | 6,697  |
| 2002 | 1.5395 | 339.56   | 746.90 | 4,183 | 6,440  |
| 2003 | 1.4802 | 339.56   | 746.90 | 4,183 | 6,192  |
| 2004 | 1.4233 | 339.56   | 746.90 | 4,183 | 5,954  |
| 2005 | 1.3686 | 339.56   | 746.90 | 4,183 | 5,725  |
| 2006 | 1.3159 | 339.56   | 746.90 | 4,183 | 5,504  |
| 2007 | 1.2653 | 339.56   | 746.90 | 4,183 | 5,293  |
| 2008 | 1.2167 | 339.56   | 746.90 | 4,183 | 5,089  |
| 2009 | 1.1699 | 339.56   | 746.90 | 4,183 | 4,894  |
| 2010 | 1.1249 | 339.56   | 746.90 | 4,183 | 4,705  |
| 2011 | 1.0816 | 339.56   | 746.90 | 4,183 | 4,524  |
| 2012 | 1.0400 | 339.56   | 746.90 | 4,183 | 4,350  |
| 2013 | 1.0000 | 339.56   | 746.90 | 4,183 | 4,183  |
| 2014 | 0.9615 | 339.56   | 746.90 | 4,183 | 4,022  |
| 2015 | 0.9246 | 339.56   | 746.90 | 4,183 | 3,868  |
| 2016 | 0.8890 | 339.56   | 746.90 | 4,183 | 3,719  |
| 2017 | 0.8548 | 339.56   | 746.90 | 4,183 | 3,576  |
| 2018 | 0.8219 | 339.56   | 746.90 | 4,183 | 3,438  |
| 2019 | 0.7903 | 339.56   | 746.90 | 4,183 | 3,306  |
| 2020 | 0.7599 | 339.56   | 746.90 | 4,183 | 3,179  |

|      |        |        |        |       |         |
|------|--------|--------|--------|-------|---------|
| 2021 | 0.7307 | 339.56 | 746.90 | 4,183 | 3,057   |
| 2022 | 0.7026 | 339.56 | 746.90 | 4,183 | 2,939   |
| 2023 | 0.6756 | 339.56 | 746.90 | 4,183 | 2,826   |
| 2024 | 0.6496 | 339.56 | 746.90 | 4,183 | 2,717   |
| 2025 | 0.6246 | 339.56 | 746.90 | 4,183 | 2,613   |
| 2026 | 0.6006 | 339.56 | 746.90 | 4,183 | 2,512   |
| 2027 | 0.5775 | 339.56 | 746.90 | 4,183 | 2,416   |
| 2028 | 0.5553 | 339.56 | 746.90 | 4,183 | 2,323   |
| 2029 | 0.5339 | 339.56 | 746.90 | 4,183 | 2,233   |
| 2030 | 0.5134 | 339.56 | 746.90 | 4,183 | 2,148   |
| 2031 | 0.4936 | 339.56 | 746.90 | 4,183 | 2,065   |
| 2032 | 0.4746 | 339.56 | 746.90 | 4,183 | 1,985   |
| 2033 | 0.4564 | 339.56 | 746.90 | 4,183 | 1,909   |
| 2034 | 0.4388 | 339.56 | 746.90 | 4,183 | 1,836   |
| 2035 | 0.4220 | 339.56 | 746.90 | 4,183 | 1,765   |
| 2036 | 0.4057 | 339.56 | 746.90 | 4,183 | 1,697   |
| 2037 | 0.3901 | 339.56 | 746.90 | 4,183 | 1,632   |
| 2038 | 0.3751 | 339.56 | 746.90 | 4,183 | 1,569   |
| 2039 | 0.3607 | 339.56 | 746.90 | 4,183 | 1,509   |
| 2040 | 0.3468 | 339.56 | 746.90 | 4,183 | 1,451   |
| 2041 | 0.3335 | 339.56 | 746.90 | 4,183 | 1,395   |
| 2042 | 0.3207 | 339.56 | 746.90 | 4,183 | 1,341   |
| 合計   |        |        |        |       | 488,621 |

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

- 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 16,783  
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の1/2を想定) ヒノキ 17,935  
マツ 13,494  
カラマツ 1,885  
広葉樹 3,651  
前生広葉樹等 35
- 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 33,566  
出典:人工林分密度管理図((一社)日本森林技術協会)、 ヒノキ 35,869  
森林農地整備センター収穫予測表((独)森林総合研究所)等 マツ 26,988  
カラマツ 3,769  
広葉樹 7,302  
前生広葉樹等 71
- Y: 評価期間 80
- D: 容積密度(t/m3) スギ 0.314  
出典:「日本国温室効果ガスインベントリ報告書」(2012年4月)(国立環境 ヒノキ 0.407  
研究所温室効果ガスインベントリオフィス編) マツ 0.451  
カラマツ 0.404  
広葉樹 0.624  
前生広葉樹等 0.624
- 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」(2012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 前生広葉樹等 1.26
- 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」(2012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  
前生広葉樹等 0.26
- 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    |     | 前生広葉樹等 |     |
|------|--------|--------|-------|--------|-------|--------|-------|--------|-----|--------|-----|--------|-----|
|      |        | 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 |
| 1962 | 7.3910 |        |       |        |       |        |       |        |     |        |     |        |     |
| 1963 | 7.1067 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1964 | 6.8333 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1965 | 6.5705 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1966 | 6.3178 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1967 | 6.0748 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1968 | 5.8412 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1969 | 5.6165 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1970 | 5.4005 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1971 | 5.1928 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1972 | 4.9931 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1973 | 4.8010 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1974 | 4.6164 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1975 | 4.4388 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1976 | 4.2681 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1977 | 4.1039 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1978 | 3.9461 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1979 | 3.7943 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1980 | 3.6484 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1981 | 3.5081 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1982 | 3.3731 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1983 | 3.2434 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1984 | 3.1187 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1985 | 2.9987 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1986 | 2.8834 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1987 | 2.7725 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1988 | 2.6658 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1989 | 2.5633 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1990 | 2.4647 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1991 | 2.3699 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1992 | 2.2788 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1993 | 2.1911 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1994 | 2.1068 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |
| 1995 | 2.0258 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56  | 156 | 45.63  | 501 | 0      | 501 |

|      |        |        |       |        |       |        |       |       |     |       |     |   |     |
|------|--------|--------|-------|--------|-------|--------|-------|-------|-----|-------|-----|---|-----|
| 1996 | 1.9479 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 1997 | 1.8730 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 1998 | 1.8009 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 1999 | 1.7317 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2000 | 1.6651 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2001 | 1.6010 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2002 | 1.5395 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2003 | 1.4802 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2004 | 1.4233 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2005 | 1.3686 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2006 | 1.3159 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2007 | 1.2653 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2008 | 1.2167 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2009 | 1.1699 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2010 | 1.1249 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2011 | 1.0816 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2012 | 1.0400 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2013 | 1.0000 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2014 | 0.9615 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2015 | 0.9246 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2016 | 0.8890 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2017 | 0.8548 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2018 | 0.8219 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2019 | 0.7903 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2020 | 0.7599 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2021 | 0.7307 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2022 | 0.7026 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2023 | 0.6756 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2024 | 0.6496 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2025 | 0.6246 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2026 | 0.6006 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2027 | 0.5775 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2028 | 0.5553 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2029 | 0.5339 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2030 | 0.5134 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2031 | 0.4936 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2032 | 0.4746 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2033 | 0.4564 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2034 | 0.4388 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2035 | 0.4220 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2036 | 0.4057 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2037 | 0.3901 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2038 | 0.3751 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2039 | 0.3607 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2040 | 0.3468 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2041 | 0.3335 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 2042 | 0.3207 | 209.79 | 1,122 | 224.18 | 1,580 | 168.68 | 1,307 | 23.56 | 156 | 45.63 | 501 | 0 | 501 |
| 合計   |        |        |       |        |       |        |       |       |     |       |     |   |     |

| 年度   | 社会的割引率 | 合計    |        |
|------|--------|-------|--------|
|      |        | 効果額   | 現在価値化  |
| 1962 | 7.3910 |       |        |
| 1963 | 7.1067 | 5,167 | 36,720 |
| 1964 | 6.8333 | 5,167 | 35,308 |
| 1965 | 6.5705 | 5,167 | 33,950 |
| 1966 | 6.3178 | 5,167 | 32,644 |
| 1967 | 6.0748 | 5,167 | 31,388 |
| 1968 | 5.8412 | 5,167 | 30,181 |
| 1969 | 5.6165 | 5,167 | 29,020 |
| 1970 | 5.4005 | 5,167 | 27,904 |
| 1971 | 5.1928 | 5,167 | 26,831 |
| 1972 | 4.9931 | 5,167 | 25,799 |
| 1973 | 4.8010 | 5,167 | 24,807 |
| 1974 | 4.6164 | 5,167 | 23,853 |
| 1975 | 4.4388 | 5,167 | 22,935 |
| 1976 | 4.2681 | 5,167 | 22,053 |
| 1977 | 4.1039 | 5,167 | 21,205 |
| 1978 | 3.9461 | 5,167 | 20,389 |
| 1979 | 3.7943 | 5,167 | 19,605 |
| 1980 | 3.6484 | 5,167 | 18,851 |
| 1981 | 3.5081 | 5,167 | 18,126 |
| 1982 | 3.3731 | 5,167 | 17,429 |
| 1983 | 3.2434 | 5,167 | 16,759 |
| 1984 | 3.1187 | 5,167 | 16,114 |
| 1985 | 2.9987 | 5,167 | 15,494 |
| 1986 | 2.8834 | 5,167 | 14,899 |
| 1987 | 2.7725 | 5,167 | 14,326 |
| 1988 | 2.6658 | 5,167 | 13,774 |
| 1989 | 2.5633 | 5,167 | 13,245 |
| 1990 | 2.4647 | 5,167 | 12,735 |
| 1991 | 2.3699 | 5,167 | 12,245 |
| 1992 | 2.2788 | 5,167 | 11,775 |
| 1993 | 2.1911 | 5,167 | 11,321 |
| 1994 | 2.1068 | 5,167 | 10,886 |
| 1995 | 2.0258 | 5,167 | 10,467 |
| 1996 | 1.9479 | 5,167 | 10,065 |
| 1997 | 1.8730 | 5,167 | 9,678  |
| 1998 | 1.8009 | 5,167 | 9,305  |
| 1999 | 1.7317 | 5,167 | 8,948  |
| 2000 | 1.6651 | 5,167 | 8,604  |

|      |        |       |         |
|------|--------|-------|---------|
| 2001 | 1.6010 | 5.167 | 8.272   |
| 2002 | 1.5395 | 5.167 | 7.955   |
| 2003 | 1.4802 | 5.167 | 7.648   |
| 2004 | 1.4233 | 5.167 | 7.354   |
| 2005 | 1.3686 | 5.167 | 7.072   |
| 2006 | 1.3159 | 5.167 | 6.799   |
| 2007 | 1.2653 | 5.167 | 6.538   |
| 2008 | 1.2167 | 5.167 | 6.287   |
| 2009 | 1.1699 | 5.167 | 6.045   |
| 2010 | 1.1249 | 5.167 | 5.812   |
| 2011 | 1.0816 | 5.167 | 5.589   |
| 2012 | 1.0400 | 5.167 | 5.374   |
| 2013 | 1.0000 | 5.167 | 5.167   |
| 2014 | 0.9615 | 5.167 | 4.968   |
| 2015 | 0.9246 | 5.167 | 4.777   |
| 2016 | 0.8890 | 5.167 | 4.593   |
| 2017 | 0.8548 | 5.167 | 4.417   |
| 2018 | 0.8219 | 5.167 | 4.247   |
| 2019 | 0.7903 | 5.167 | 4.083   |
| 2020 | 0.7599 | 5.167 | 3.926   |
| 2021 | 0.7307 | 5.167 | 3.776   |
| 2022 | 0.7026 | 5.167 | 3.630   |
| 2023 | 0.6756 | 5.167 | 3.491   |
| 2024 | 0.6496 | 5.167 | 3.356   |
| 2025 | 0.6246 | 5.167 | 3.227   |
| 2026 | 0.6006 | 5.167 | 3.103   |
| 2027 | 0.5775 | 5.167 | 2.984   |
| 2028 | 0.5553 | 5.167 | 2.869   |
| 2029 | 0.5339 | 5.167 | 2.759   |
| 2030 | 0.5134 | 5.167 | 2.653   |
| 2031 | 0.4936 | 5.167 | 2.550   |
| 2032 | 0.4746 | 5.167 | 2.452   |
| 2033 | 0.4564 | 5.167 | 2.358   |
| 2034 | 0.4388 | 5.167 | 2.267   |
| 2035 | 0.4220 | 5.167 | 2.180   |
| 2036 | 0.4057 | 5.167 | 2.096   |
| 2037 | 0.3901 | 5.167 | 2.016   |
| 2038 | 0.3751 | 5.167 | 1.938   |
| 2039 | 0.3607 | 5.167 | 1.864   |
| 2040 | 0.3468 | 5.167 | 1.792   |
| 2041 | 0.3335 | 5.167 | 1.723   |
| 2042 | 0.3207 | 5.167 | 1.657   |
| 合計   |        |       | 913.302 |

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

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

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

- 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 339.56 ~ 339.56  
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) 85.31  
出典:「日本国温室効果ガスインベントリ報告書」(2012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 |        |     |       |
| 1962 | 7.3910 |          |        |       |       |        |     |       |
| 1963 | 7.1067 | 339.56   | 22.64  | 80    | 569   |        |     |       |
| 1964 | 6.8333 | 339.56   | 45.27  | 160   | 1,093 |        |     |       |
| 1965 | 6.5705 | 339.56   | 67.91  | 239   | 1,570 |        |     |       |
| 1966 | 6.3178 | 339.56   | 90.55  | 319   | 2,015 |        |     |       |
| 1967 | 6.0748 | 339.56   | 113.19 | 399   | 2,424 |        |     |       |
| 1968 | 5.8412 | 339.56   | 135.82 | 479   | 2,798 |        |     |       |
| 1969 | 5.6165 | 339.56   | 158.46 | 559   | 3,140 |        |     |       |
| 1970 | 5.4005 | 339.56   | 181.10 | 638   | 3,446 |        |     |       |
| 1971 | 5.1928 | 339.56   | 203.74 | 718   | 3,728 |        |     |       |
| 1972 | 4.9931 | 339.56   | 226.37 | 798   | 3,984 |        |     |       |
| 1973 | 4.8010 | 339.56   | 249.01 | 878   | 4,215 |        |     |       |
| 1974 | 4.6164 | 339.56   | 271.65 | 958   | 4,423 |        |     |       |
| 1975 | 4.4388 | 339.56   | 294.29 | 1,037 | 4,603 |        |     |       |
| 1976 | 4.2681 | 339.56   | 316.92 | 1,117 | 4,767 |        |     |       |
| 1977 | 4.1039 | 339.56   | 339.56 | 1,197 | 4,912 |        |     |       |
| 1978 | 3.9461 | 339.56   | 339.56 | 1,197 | 4,723 |        |     |       |
| 1979 | 3.7943 | 339.56   | 339.56 | 1,197 | 4,542 |        |     |       |
| 1980 | 3.6484 | 339.56   | 339.56 | 1,197 | 4,367 |        |     |       |
| 1981 | 3.5081 | 339.56   | 339.56 | 1,197 | 4,199 |        |     |       |
| 1982 | 3.3731 | 339.56   | 339.56 | 1,197 | 4,038 |        |     |       |
| 1983 | 3.2434 | 339.56   | 339.56 | 1,197 | 3,882 |        |     |       |
| 1984 | 3.1187 | 339.56   | 339.56 | 1,197 | 3,733 |        |     |       |
| 1985 | 2.9987 | 339.56   | 339.56 | 1,197 | 3,589 |        |     |       |
| 1986 | 2.8834 | 339.56   | 339.56 | 1,197 | 3,451 |        |     |       |
| 1987 | 2.7725 | 339.56   | 339.56 | 1,197 | 3,319 |        |     |       |
| 1988 | 2.6658 | 339.56   | 339.56 | 1,197 | 3,191 |        |     |       |
| 1989 | 2.5633 | 339.56   | 339.56 | 1,197 | 3,068 |        |     |       |
| 1990 | 2.4647 | 339.56   | 339.56 | 1,197 | 2,950 |        |     |       |
| 1991 | 2.3699 | 339.56   | 339.56 | 1,197 | 2,837 |        |     |       |
| 1992 | 2.2788 | 339.56   | 339.56 | 1,197 | 2,728 |        |     |       |
| 1993 | 2.1911 | 339.56   | 339.56 | 1,197 | 2,623 |        |     |       |
| 1994 | 2.1068 | 339.56   | 339.56 | 1,197 | 2,522 |        |     |       |
| 1995 | 2.0258 | 339.56   | 339.56 | 1,197 | 2,425 |        |     |       |
| 1996 | 1.9479 | 339.56   | 339.56 | 1,197 | 2,332 |        |     |       |
| 1997 | 1.8730 | 339.56   | 339.56 | 1,197 | 2,242 |        |     |       |
| 1998 | 1.8009 | 339.56   | 339.56 | 1,197 | 2,156 |        |     |       |
| 1999 | 1.7317 | 339.56   | 339.56 | 1,197 | 2,073 |        |     |       |
| 2000 | 1.6651 | 339.56   | 339.56 | 1,197 | 1,993 |        |     |       |
| 2001 | 1.6010 | 339.56   | 339.56 | 1,197 | 1,916 |        |     |       |

|      |        |        |        |       |         |  |  |   |
|------|--------|--------|--------|-------|---------|--|--|---|
| 2002 | 1.5395 | 339.56 | 339.56 | 1,197 | 1,843   |  |  |   |
| 2003 | 1.4802 | 339.56 | 339.56 | 1,197 | 1,772   |  |  |   |
| 2004 | 1.4233 | 339.56 | 339.56 | 1,197 | 1,704   |  |  |   |
| 2005 | 1.3686 | 339.56 | 339.56 | 1,197 | 1,638   |  |  |   |
| 2006 | 1.3159 | 339.56 | 339.56 | 1,197 | 1,575   |  |  |   |
| 2007 | 1.2653 | 339.56 | 339.56 | 1,197 | 1,515   |  |  |   |
| 2008 | 1.2167 | 339.56 | 339.56 | 1,197 | 1,456   |  |  |   |
| 2009 | 1.1699 | 339.56 | 339.56 | 1,197 | 1,400   |  |  |   |
| 2010 | 1.1249 | 339.56 | 339.56 | 1,197 | 1,347   |  |  |   |
| 2011 | 1.0816 | 339.56 | 339.56 | 1,197 | 1,295   |  |  |   |
| 2012 | 1.0400 | 339.56 | 339.56 | 1,197 | 1,245   |  |  |   |
| 2013 | 1.0000 | 339.56 | 339.56 | 1,197 | 1,197   |  |  |   |
| 2014 | 0.9615 | 339.56 | 339.56 | 1,197 | 1,151   |  |  |   |
| 2015 | 0.9246 | 339.56 | 339.56 | 1,197 | 1,107   |  |  |   |
| 2016 | 0.8890 | 339.56 | 339.56 | 1,197 | 1,064   |  |  |   |
| 2017 | 0.8548 | 339.56 | 339.56 | 1,197 | 1,023   |  |  |   |
| 2018 | 0.8219 | 339.56 | 339.56 | 1,197 | 984     |  |  |   |
| 2019 | 0.7903 | 339.56 | 339.56 | 1,197 | 946     |  |  |   |
| 2020 | 0.7599 | 339.56 | 339.56 | 1,197 | 910     |  |  |   |
| 2021 | 0.7307 | 339.56 | 339.56 | 1,197 | 875     |  |  |   |
| 2022 | 0.7026 | 339.56 | 339.56 | 1,197 | 841     |  |  |   |
| 2023 | 0.6756 | 339.56 | 339.56 | 1,197 | 809     |  |  |   |
| 2024 | 0.6496 | 339.56 | 339.56 | 1,197 | 778     |  |  |   |
| 2025 | 0.6246 | 339.56 | 339.56 | 1,197 | 748     |  |  |   |
| 2026 | 0.6006 | 339.56 | 339.56 | 1,197 | 719     |  |  |   |
| 2027 | 0.5775 | 339.56 | 339.56 | 1,197 | 691     |  |  |   |
| 2028 | 0.5553 | 339.56 | 339.56 | 1,197 | 665     |  |  |   |
| 2029 | 0.5339 | 339.56 | 339.56 | 1,197 | 639     |  |  |   |
| 2030 | 0.5134 | 339.56 | 339.56 | 1,197 | 615     |  |  |   |
| 2031 | 0.4936 | 339.56 | 339.56 | 1,197 | 591     |  |  |   |
| 2032 | 0.4746 | 339.56 | 339.56 | 1,197 | 568     |  |  |   |
| 2033 | 0.4564 | 339.56 | 339.56 | 1,197 | 546     |  |  |   |
| 2034 | 0.4388 | 339.56 | 339.56 | 1,197 | 525     |  |  |   |
| 2035 | 0.4220 | 339.56 | 339.56 | 1,197 | 505     |  |  |   |
| 2036 | 0.4057 | 339.56 | 339.56 | 1,197 | 486     |  |  |   |
| 2037 | 0.3901 | 339.56 | 339.56 | 1,197 | 467     |  |  |   |
| 2038 | 0.3751 | 339.56 | 339.56 | 1,197 | 449     |  |  |   |
| 2039 | 0.3607 | 339.56 | 339.56 | 1,197 | 432     |  |  |   |
| 2040 | 0.3468 | 339.56 | 339.56 | 1,197 | 415     |  |  |   |
| 2041 | 0.3335 | 339.56 | 339.56 | 1,197 | 399     |  |  |   |
| 2042 | 0.3207 | 339.56 | 339.56 | 1,197 | 384     |  |  |   |
| 合計   |        |        |        |       | 160,905 |  |  | 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)、  
森林農地整備センター収穫予測表((独)森林総合研究所)等

スギ 0.00 ~ 26,853.12  
ヒノキ 0.00 ~ 26,901.86  
マツ 0.00 ~ 19,566.30  
カラマツ 0.00 ~ 2,826.92  
広葉樹 0.00 ~ 7,301.54  
前生広葉樹等 0.00 ~ 0.00

@: 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24年3月末現

スギ 1,898  
ヒノキ 7,260  
マツ 1,236  
カラマツ 3,351  
広葉樹 0  
前生広葉樹等 0

| 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 |
| 1962 | 7.3910 |        |     |        |     |        |     |        |     |        |     |
| 1963 | 7.1067 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1964 | 6.8333 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1965 | 6.5705 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1966 | 6.3178 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1967 | 6.0748 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1968 | 5.8412 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1969 | 5.6165 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1970 | 5.4005 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1971 | 5.1928 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1972 | 4.9931 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1973 | 4.8010 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1974 | 4.6164 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1975 | 4.4388 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1976 | 4.2681 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1977 | 4.1039 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1978 | 3.9461 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1979 | 3.7943 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1980 | 3.6484 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1981 | 3.5081 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1982 | 3.3731 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1983 | 3.2434 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1984 | 3.1187 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1985 | 2.9987 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1986 | 2.8834 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1987 | 2.7725 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1988 | 2.6658 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1989 | 2.5633 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1990 | 2.4647 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1991 | 2.3699 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1992 | 2.2788 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1993 | 2.1911 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1994 | 2.1068 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1995 | 2.0258 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1996 | 1.9479 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1997 | 1.8730 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1998 | 1.8009 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 1999 | 1.7317 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2000 | 1.6651 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2001 | 1.6010 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2002 | 1.5395 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2003 | 1.4802 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2004 | 1.4233 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2005 | 1.3686 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2006 | 1.3159 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2007 | 1.2653 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2008 | 1.2167 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2009 | 1.1699 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2010 | 1.1249 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2011 | 1.0816 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2012 | 1.0400 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2013 | 1.0000 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2014 | 0.9615 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2015 | 0.9246 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2016 | 0.8890 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2017 | 0.8548 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2018 | 0.8219 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2019 | 0.7903 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2020 | 0.7599 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |
| 2021 | 0.7307 | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   | 0.00   | 0   |

|      |        |           |        |           |         |           |        |          |       |          |   |
|------|--------|-----------|--------|-----------|---------|-----------|--------|----------|-------|----------|---|
| 2022 | 0.7026 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2023 | 0.6756 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2024 | 0.6496 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2025 | 0.6246 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2026 | 0.6006 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2027 | 0.5775 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2028 | 0.5553 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2029 | 0.5339 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2030 | 0.5134 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2031 | 0.4936 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2032 | 0.4746 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2033 | 0.4564 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2034 | 0.4388 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2035 | 0.4220 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2036 | 0.4057 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2037 | 0.3901 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2038 | 0.3751 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2039 | 0.3607 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2040 | 0.3468 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2041 | 0.3335 | 0.00      | 0      | 0.00      | 0       | 0.00      | 0      | 0.00     | 0     | 0.00     | 0 |
| 2042 | 0.3207 | 26,853.12 | 50,967 | 26,901.86 | 195,308 | 19,566.30 | 24,184 | 2,826.92 | 9,473 | 7,301.54 | 0 |
| 合計   |        |           |        |           |         |           |        |          |       |          |   |

| 年度   | 前生広葉樹等 |        |     | 合計  |       |
|------|--------|--------|-----|-----|-------|
|      | 社会的割引率 | 事業効果材積 | 効果額 | 効果額 | 現在価値化 |
| 1962 | 7.3910 |        |     |     |       |
| 1963 | 7.1067 | 0.00   | 0   | 0   | 0     |
| 1964 | 6.8333 | 0.00   | 0   | 0   | 0     |
| 1965 | 6.5705 | 0.00   | 0   | 0   | 0     |
| 1966 | 6.3178 | 0.00   | 0   | 0   | 0     |
| 1967 | 6.0748 | 0.00   | 0   | 0   | 0     |
| 1968 | 5.8412 | 0.00   | 0   | 0   | 0     |
| 1969 | 5.6165 | 0.00   | 0   | 0   | 0     |
| 1970 | 5.4005 | 0.00   | 0   | 0   | 0     |
| 1971 | 5.1928 | 0.00   | 0   | 0   | 0     |
| 1972 | 4.9931 | 0.00   | 0   | 0   | 0     |
| 1973 | 4.8010 | 0.00   | 0   | 0   | 0     |
| 1974 | 4.6164 | 0.00   | 0   | 0   | 0     |
| 1975 | 4.4388 | 0.00   | 0   | 0   | 0     |
| 1976 | 4.2681 | 0.00   | 0   | 0   | 0     |
| 1977 | 4.1039 | 0.00   | 0   | 0   | 0     |
| 1978 | 3.9461 | 0.00   | 0   | 0   | 0     |
| 1979 | 3.7943 | 0.00   | 0   | 0   | 0     |
| 1980 | 3.6484 | 0.00   | 0   | 0   | 0     |
| 1981 | 3.5081 | 0.00   | 0   | 0   | 0     |
| 1982 | 3.3731 | 0.00   | 0   | 0   | 0     |
| 1983 | 3.2434 | 0.00   | 0   | 0   | 0     |
| 1984 | 3.1187 | 0.00   | 0   | 0   | 0     |
| 1985 | 2.9987 | 0.00   | 0   | 0   | 0     |
| 1986 | 2.8834 | 0.00   | 0   | 0   | 0     |
| 1987 | 2.7725 | 0.00   | 0   | 0   | 0     |
| 1988 | 2.6658 | 0.00   | 0   | 0   | 0     |
| 1989 | 2.5633 | 0.00   | 0   | 0   | 0     |
| 1990 | 2.4647 | 0.00   | 0   | 0   | 0     |
| 1991 | 2.3699 | 0.00   | 0   | 0   | 0     |
| 1992 | 2.2788 | 0.00   | 0   | 0   | 0     |
| 1993 | 2.1911 | 0.00   | 0   | 0   | 0     |
| 1994 | 2.1068 | 0.00   | 0   | 0   | 0     |
| 1995 | 2.0258 | 0.00   | 0   | 0   | 0     |
| 1996 | 1.9479 | 0.00   | 0   | 0   | 0     |
| 1997 | 1.8730 | 0.00   | 0   | 0   | 0     |
| 1998 | 1.8009 | 0.00   | 0   | 0   | 0     |
| 1999 | 1.7317 | 0.00   | 0   | 0   | 0     |
| 2000 | 1.6651 | 0.00   | 0   | 0   | 0     |
| 2001 | 1.6010 | 0.00   | 0   | 0   | 0     |
| 2002 | 1.5395 | 0.00   | 0   | 0   | 0     |
| 2003 | 1.4802 | 0.00   | 0   | 0   | 0     |
| 2004 | 1.4233 | 0.00   | 0   | 0   | 0     |
| 2005 | 1.3686 | 0.00   | 0   | 0   | 0     |
| 2006 | 1.3159 | 0.00   | 0   | 0   | 0     |
| 2007 | 1.2653 | 0.00   | 0   | 0   | 0     |
| 2008 | 1.2167 | 0.00   | 0   | 0   | 0     |
| 2009 | 1.1699 | 0.00   | 0   | 0   | 0     |
| 2010 | 1.1249 | 0.00   | 0   | 0   | 0     |
| 2011 | 1.0816 | 0.00   | 0   | 0   | 0     |
| 2012 | 1.0400 | 0.00   | 0   | 0   | 0     |
| 2013 | 1.0000 | 0.00   | 0   | 0   | 0     |
| 2014 | 0.9615 | 0.00   | 0   | 0   | 0     |
| 2015 | 0.9246 | 0.00   | 0   | 0   | 0     |
| 2016 | 0.8890 | 0.00   | 0   | 0   | 0     |
| 2017 | 0.8548 | 0.00   | 0   | 0   | 0     |
| 2018 | 0.8219 | 0.00   | 0   | 0   | 0     |
| 2019 | 0.7903 | 0.00   | 0   | 0   | 0     |
| 2020 | 0.7599 | 0.00   | 0   | 0   | 0     |
| 2021 | 0.7307 | 0.00   | 0   | 0   | 0     |
| 2022 | 0.7026 | 0.00   | 0   | 0   | 0     |
| 2023 | 0.6756 | 0.00   | 0   | 0   | 0     |
| 2024 | 0.6496 | 0.00   | 0   | 0   | 0     |
| 2025 | 0.6246 | 0.00   | 0   | 0   | 0     |
| 2026 | 0.6006 | 0.00   | 0   | 0   | 0     |

|      |        |      |   |         |        |
|------|--------|------|---|---------|--------|
| 2027 | 0.5775 | 0.00 | 0 | 0       | 0      |
| 2028 | 0.5553 | 0.00 | 0 | 0       | 0      |
| 2029 | 0.5339 | 0.00 | 0 | 0       | 0      |
| 2030 | 0.5134 | 0.00 | 0 | 0       | 0      |
| 2031 | 0.4936 | 0.00 | 0 | 0       | 0      |
| 2032 | 0.4746 | 0.00 | 0 | 0       | 0      |
| 2033 | 0.4564 | 0.00 | 0 | 0       | 0      |
| 2034 | 0.4388 | 0.00 | 0 | 0       | 0      |
| 2035 | 0.4220 | 0.00 | 0 | 0       | 0      |
| 2036 | 0.4057 | 0.00 | 0 | 0       | 0      |
| 2037 | 0.3901 | 0.00 | 0 | 0       | 0      |
| 2038 | 0.3751 | 0.00 | 0 | 0       | 0      |
| 2039 | 0.3607 | 0.00 | 0 | 0       | 0      |
| 2040 | 0.3468 |      |   | 0       | 0      |
| 2041 | 0.3335 |      |   | 0       | 0      |
| 2042 | 0.3207 |      |   | 279,932 | 89,774 |
| 合計   |        |      |   |         | 89,774 |