

様式3-様式4

費用集計表
(森林整備事業)

事業名： 水源林造成事業
施工箇所： 淀川広域流域 50年経過契約地

(単位:千円)

| 年度 | 事業費 | 割引率 | デフレーター | 現在価値額 | 年度 | 事業費 | 割引率 | デフレーター | 現在価値額 |
|------|---------|----------|--------|-----------|------|--------------|----------|--------|-------|
| 1969 | | × 7.3910 | | | 2030 | 0 | × 0.6756 | | 0 |
| 1970 | 484,413 | × 7.1067 | | 3,442,578 | 2031 | 0 | × 0.6496 | | 0 |
| 1971 | 116,492 | × 6.8333 | | 796,025 | 2032 | 0 | × 0.6246 | | 0 |
| 1972 | 93,681 | × 6.5705 | | 615,531 | 2033 | 0 | × 0.6006 | | 0 |
| 1973 | 69,407 | × 6.3178 | | 438,500 | 2034 | 0 | × 0.5775 | | 0 |
| 1974 | 51,594 | × 6.0748 | | 313,423 | 2035 | 0 | × 0.5553 | | 0 |
| 1975 | 47,621 | × 5.8412 | | 278,164 | 2036 | 0 | × 0.5339 | | 0 |
| 1976 | 0 | × 5.6165 | | 0 | 2037 | 0 | × 0.5134 | | 0 |
| 1977 | 20,261 | × 5.4005 | | 109,420 | 2038 | 0 | × 0.4936 | | 0 |
| 1978 | 0 | × 5.1928 | | 0 | 2039 | 0 | × 0.4746 | | 0 |
| 1979 | 18,770 | × 4.9931 | | 93,720 | 2040 | 0 | × 0.4564 | | 0 |
| 1980 | 1,662 | × 4.8010 | | 7,979 | 2041 | 0 | × 0.4388 | | 0 |
| 1981 | 57,626 | × 4.6164 | | 266,025 | 2042 | 0 | × 0.4220 | | 0 |
| 1982 | 0 | × 4.4388 | | 0 | 2043 | 0 | × 0.4057 | | 0 |
| 1983 | 85,771 | × 4.2681 | | 366,079 | 2044 | 0 | × 0.3901 | | 0 |
| 1984 | 0 | × 4.1039 | | 0 | 2045 | 0 | × 0.3751 | | 0 |
| 1985 | 10,043 | × 3.9461 | | 39,631 | 2046 | 0 | × 0.3607 | | 0 |
| 1986 | 0 | × 3.7943 | | 0 | 2047 | 0 | × 0.3468 | | 0 |
| 1987 | 21,899 | × 3.6484 | | 79,896 | 2048 | 0 | × 0.3335 | | 0 |
| 1988 | 0 | × 3.5081 | | 0 | 2049 | 0 | × 0.3207 | | 0 |
| 1989 | 44,373 | × 3.3731 | | 149,675 | | | | | |
| 1990 | 32,848 | × 3.2434 | | 106,539 | | | | | |
| 1991 | 0 | × 3.1187 | | 0 | | | | | |
| 1992 | 0 | × 2.9987 | | 0 | | | | | |
| 1993 | 0 | × 2.8834 | | 0 | | | | | |
| 1994 | 0 | × 2.7725 | | 0 | | | | | |
| 1995 | 61,162 | × 2.6658 | | 163,046 | | | | | |
| 1996 | 0 | × 2.5633 | | 0 | | | | | |
| 1997 | 0 | × 2.4647 | | 0 | | | | | |
| 1998 | 0 | × 2.3699 | | 0 | | | | | |
| 1999 | 0 | × 2.2788 | | 0 | | | | | |
| 2000 | 0 | × 2.1911 | | 0 | | | | | |
| 2001 | 0 | × 2.1068 | | 0 | | | | | |
| 2002 | 0 | × 2.0258 | | 0 | | | | | |
| 2003 | 0 | × 1.9479 | | 0 | | | | | |
| 2004 | 0 | × 1.8730 | | 0 | | | | | |
| 2005 | 0 | × 1.8009 | | 0 | | | | | |
| 2006 | 0 | × 1.7317 | | 0 | | | | | |
| 2007 | 0 | × 1.6651 | | 0 | | | | | |
| 2008 | 0 | × 1.6010 | | 0 | | | | | |
| 2009 | 0 | × 1.5395 | | 0 | | | | | |
| 2010 | 89,601 | × 1.4802 | | 132,627 | | | | | |
| 2011 | 0 | × 1.4233 | | 0 | | | | | |
| 2012 | 0 | × 1.3686 | | 0 | | | | | |
| 2013 | 0 | × 1.3159 | | 0 | | | | | |
| 2014 | 0 | × 1.2653 | | 0 | | | | | |
| 2015 | 0 | × 1.2167 | | 0 | | | | | |
| 2016 | 0 | × 1.1699 | | 0 | | | | | |
| 2017 | 0 | × 1.1249 | | 0 | | | | | |
| 2018 | 0 | × 1.0816 | | 0 | | | | | |
| 2019 | 0 | × 1.0400 | | 0 | | | | | |
| 2020 | 0 | × 1.0000 | | 0 | | | | | |
| 2021 | 0 | × 0.9615 | | 0 | | | | | |
| 2022 | 0 | × 0.9246 | | 0 | | | | | |
| 2023 | 0 | × 0.8890 | | 0 | | | | | |
| 2024 | 0 | × 0.8548 | | 0 | | | | | |
| 2025 | 86,623 | × 0.8219 | | 71,195 | | | | | |
| 2026 | 0 | × 0.7903 | | 0 | | | | | |
| 2027 | 0 | × 0.7599 | | 0 | | | | | |
| 2028 | 0 | × 0.7307 | | 0 | | | | | |
| 2029 | 0 | × 0.7026 | | 0 | | | | | |
| | | | | | 合 計 | 7,470,053 | | | |
| | | | | | C = | 7,470,053 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: 治水ダムの単位流量調節量当たりの年間減価償却費(円/㎡/sec) 4,190,000
出典:「ダム年鑑2019」
- 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 10
- α: 100年確率時雨量(mm/h) 80.80
出展:気象統計情報(気象庁):本広域流域内の気象庁HP観測所データ(上野観測所ほか14観測所)を使用。本データは、各観測所の気象データ(2015~2019年)を基に確率雨量計算にて算定。事業箇所が所在する市町村に所在する15観測所の平均値にて算定。
- A: 事業対象区域面積(ha) 209.73 ~ 209.73
- 360: 単位合わせのための調整値
- Y: 評価期間 80
- t: 経過年数(治山事業の便益の算出に当たっては、各年度の事業費の累計を用いている。)
※社会的割引率を考慮するために用いる(1+i)^t(年数)とは異なる。
- i: 社会的割引率(0.04)

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 ha | 事業効果面積 ha | 効果額 千円 | 現在価値化 千円 |
|------|--------|-------------|-----------|--------|----------|
| 1969 | 7.3910 | | | | |
| 1970 | 7.1067 | 209.73 | 20.97 | 1,972 | 14,014 |
| 1971 | 6.8333 | 209.73 | 41.95 | 3,945 | 26,957 |
| 1972 | 6.5705 | 209.73 | 62.92 | 5,917 | 38,878 |
| 1973 | 6.3178 | 209.73 | 83.89 | 7,889 | 49,841 |
| 1974 | 6.0748 | 209.73 | 104.87 | 9,862 | 59,910 |
| 1975 | 5.8412 | 209.73 | 125.84 | 11,834 | 69,125 |
| 1976 | 5.6165 | 209.73 | 146.81 | 13,806 | 77,541 |
| 1977 | 5.4005 | 209.73 | 167.78 | 15,779 | 85,214 |
| 1978 | 5.1928 | 209.73 | 188.76 | 17,751 | 92,177 |
| 1979 | 4.9931 | 209.73 | 209.73 | 19,723 | 98,479 |
| 1980 | 4.8010 | 209.73 | 209.73 | 19,723 | 94,690 |
| 1981 | 4.6164 | 209.73 | 209.73 | 19,723 | 91,049 |
| 1982 | 4.4388 | 209.73 | 209.73 | 19,723 | 87,546 |
| 1983 | 4.2681 | 209.73 | 209.73 | 19,723 | 84,180 |
| 1984 | 4.1039 | 209.73 | 209.73 | 19,723 | 80,941 |
| 1985 | 3.9461 | 209.73 | 209.73 | 19,723 | 77,829 |
| 1986 | 3.7943 | 209.73 | 209.73 | 19,723 | 74,835 |
| 1987 | 3.6484 | 209.73 | 209.73 | 19,723 | 71,957 |
| 1988 | 3.5081 | 209.73 | 209.73 | 19,723 | 69,190 |
| 1989 | 3.3731 | 209.73 | 209.73 | 19,723 | 66,528 |
| 1990 | 3.2434 | 209.73 | 209.73 | 19,723 | 63,970 |
| 1991 | 3.1187 | 209.73 | 209.73 | 19,723 | 61,510 |
| 1992 | 2.9987 | 209.73 | 209.73 | 19,723 | 59,143 |
| 1993 | 2.8834 | 209.73 | 209.73 | 19,723 | 56,869 |
| 1994 | 2.7725 | 209.73 | 209.73 | 19,723 | 54,682 |
| 1995 | 2.6658 | 209.73 | 209.73 | 19,723 | 52,578 |
| 1996 | 2.5633 | 209.73 | 209.73 | 19,723 | 50,556 |
| 1997 | 2.4647 | 209.73 | 209.73 | 19,723 | 48,611 |
| 1998 | 2.3699 | 209.73 | 209.73 | 19,723 | 46,742 |
| 1999 | 2.2788 | 209.73 | 209.73 | 19,723 | 44,945 |
| 2000 | 2.1911 | 209.73 | 209.73 | 19,723 | 43,215 |
| 2001 | 2.1068 | 209.73 | 209.73 | 19,723 | 41,552 |
| 2002 | 2.0258 | 209.73 | 209.73 | 19,723 | 39,955 |
| 2003 | 1.9479 | 209.73 | 209.73 | 19,723 | 38,418 |
| 2004 | 1.8730 | 209.73 | 209.73 | 19,723 | 36,941 |
| 2005 | 1.8009 | 209.73 | 209.73 | 19,723 | 35,519 |
| 2006 | 1.7317 | 209.73 | 209.73 | 19,723 | 34,154 |
| 2007 | 1.6651 | 209.73 | 209.73 | 19,723 | 32,841 |
| 2008 | 1.6010 | 209.73 | 209.73 | 19,723 | 31,577 |
| 2009 | 1.5395 | 209.73 | 209.73 | 19,723 | 30,364 |
| 2010 | 1.4802 | 209.73 | 209.73 | 19,723 | 29,194 |
| 2011 | 1.4233 | 209.73 | 209.73 | 19,723 | 28,072 |
| 2012 | 1.3686 | 209.73 | 209.73 | 19,723 | 26,993 |
| 2013 | 1.3159 | 209.73 | 209.73 | 19,723 | 25,953 |
| 2014 | 1.2653 | 209.73 | 209.73 | 19,723 | 24,956 |
| 2015 | 1.2167 | 209.73 | 209.73 | 19,723 | 23,997 |
| 2016 | 1.1699 | 209.73 | 209.73 | 19,723 | 23,074 |
| 2017 | 1.1249 | 209.73 | 209.73 | 19,723 | 22,186 |
| 2018 | 1.0816 | 209.73 | 209.73 | 19,723 | 21,332 |
| 2019 | 1.0400 | 209.73 | 209.73 | 19,723 | 20,512 |
| 2020 | 1.0000 | 209.73 | 209.73 | 19,723 | 19,723 |
| 2021 | 0.9615 | 209.73 | 209.73 | 19,723 | 18,964 |
| 2022 | 0.9246 | 209.73 | 209.73 | 19,723 | 18,236 |

| | | | | | |
|------|--------|--------|--------|--------|-----------|
| 2023 | 0.8890 | 209.73 | 209.73 | 19,723 | 17,534 |
| 2024 | 0.8548 | 209.73 | 209.73 | 19,723 | 16,859 |
| 2025 | 0.8219 | 209.73 | 209.73 | 19,723 | 16,210 |
| 2026 | 0.7903 | 209.73 | 209.73 | 19,723 | 15,587 |
| 2027 | 0.7599 | 209.73 | 209.73 | 19,723 | 14,988 |
| 2028 | 0.7307 | 209.73 | 209.73 | 19,723 | 14,412 |
| 2029 | 0.7026 | 209.73 | 209.73 | 19,723 | 13,857 |
| 2030 | 0.6756 | 209.73 | 209.73 | 19,723 | 13,325 |
| 2031 | 0.6496 | 209.73 | 209.73 | 19,723 | 12,812 |
| 2032 | 0.6246 | 209.73 | 209.73 | 19,723 | 12,319 |
| 2033 | 0.6006 | 209.73 | 209.73 | 19,723 | 11,846 |
| 2034 | 0.5775 | 209.73 | 209.73 | 19,723 | 11,390 |
| 2035 | 0.5553 | 209.73 | 209.73 | 19,723 | 10,952 |
| 2036 | 0.5339 | 209.73 | 209.73 | 19,723 | 10,530 |
| 2037 | 0.5134 | 209.73 | 209.73 | 19,723 | 10,126 |
| 2038 | 0.4936 | 209.73 | 209.73 | 19,723 | 9,735 |
| 2039 | 0.4746 | 209.73 | 209.73 | 19,723 | 9,361 |
| 2040 | 0.4564 | 209.73 | 209.73 | 19,723 | 9,002 |
| 2041 | 0.4388 | 209.73 | 209.73 | 19,723 | 8,654 |
| 2042 | 0.4220 | 209.73 | 209.73 | 19,723 | 8,323 |
| 2043 | 0.4057 | 209.73 | 209.73 | 19,723 | 8,002 |
| 2044 | 0.3901 | 209.73 | 209.73 | 19,723 | 7,694 |
| 2045 | 0.3751 | 209.73 | 209.73 | 19,723 | 7,398 |
| 2046 | 0.3607 | 209.73 | 209.73 | 19,723 | 7,114 |
| 2047 | 0.3468 | 209.73 | 209.73 | 19,723 | 6,840 |
| 2048 | 0.3335 | 209.73 | 209.73 | 19,723 | 6,578 |
| 2049 | 0.3207 | 209.73 | 209.73 | 19,723 | 6,325 |
| 合計 | | | | | 2,915,988 |

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

| | | |
|--------|--|-----------------|
| A: | 事業対象区域面積 (ha) | 209.73 ~ 209.73 |
| P: | 年間平均降水量 (mm/年) 出展: 気象統計情報(気象庁): 本広域流域内の気象庁HP観測所データ(上野観測所ほか13観測所)を使用。本データは、気象庁HP公表の年降水量の平年値(1981~2010年)を基に算定。事業箇所が所在する市町村に所在する14観測所の平均値にて算定。 | 1,632 |
| D1: | 事業実施前の貯留率 出典: 「森林の間伐と水収支」(近嵐ら、1987) | 0.51 |
| D2: | 事業実施後、T年経過後の貯留率 出典: 「森林の間伐と水収支」(近嵐ら、1987) | 0.56 |
| T: | 事業実施後、流出係数が安定するのに必要な年数 | 10 |
| U: | 開発水量当りの利水ダム年間減価償却費 (円/m ³ /S) 出典: 「ダム年鑑2019」 | 1,058,000,000 |
| Y: | 評価期間 | 80 |
| t: | 経過年数(治水事業の便益の算出に当たっては、各年度の事業費の累計を用いている。) ※社会的割引率を考慮するために用いる(1+i) ^t (年数)とは異なる。 | |
| i: | 社会的割引率(0.04) | |
| 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 ha | 事業効果面積 ha | 効果額 千円 | 現在価値化 千円 |
|------|--------|-------------|-----------|--------|----------|
| 1969 | 7.3910 | | | | |
| 1970 | 7.1067 | 209.73 | 20.97 | 574 | 4,079 |
| 1971 | 6.8333 | 209.73 | 41.95 | 1,148 | 7,845 |
| 1972 | 6.5705 | 209.73 | 62.92 | 1,722 | 11,314 |
| 1973 | 6.3178 | 209.73 | 83.89 | 2,297 | 14,512 |
| 1974 | 6.0748 | 209.73 | 104.87 | 2,871 | 17,441 |
| 1975 | 5.8412 | 209.73 | 125.84 | 3,445 | 20,123 |
| 1976 | 5.6165 | 209.73 | 146.81 | 4,019 | 22,573 |
| 1977 | 5.4005 | 209.73 | 167.78 | 4,593 | 24,804 |
| 1978 | 5.1928 | 209.73 | 188.76 | 5,167 | 26,831 |
| 1979 | 4.9931 | 209.73 | 209.73 | 5,742 | 28,670 |
| 1980 | 4.8010 | 209.73 | 209.73 | 5,742 | 27,567 |
| 1981 | 4.6164 | 209.73 | 209.73 | 5,742 | 26,507 |
| 1982 | 4.4388 | 209.73 | 209.73 | 5,742 | 25,488 |
| 1983 | 4.2681 | 209.73 | 209.73 | 5,742 | 24,507 |
| 1984 | 4.1039 | 209.73 | 209.73 | 5,742 | 23,565 |
| 1985 | 3.9461 | 209.73 | 209.73 | 5,742 | 22,659 |
| 1986 | 3.7943 | 209.73 | 209.73 | 5,742 | 21,787 |
| 1987 | 3.6484 | 209.73 | 209.73 | 5,742 | 20,949 |
| 1988 | 3.5081 | 209.73 | 209.73 | 5,742 | 20,144 |
| 1989 | 3.3731 | 209.73 | 209.73 | 5,742 | 19,368 |
| 1990 | 3.2434 | 209.73 | 209.73 | 5,742 | 18,624 |
| 1991 | 3.1187 | 209.73 | 209.73 | 5,742 | 17,908 |
| 1992 | 2.9987 | 209.73 | 209.73 | 5,742 | 17,219 |
| 1993 | 2.8834 | 209.73 | 209.73 | 5,742 | 16,556 |
| 1994 | 2.7725 | 209.73 | 209.73 | 5,742 | 15,920 |
| 1995 | 2.6658 | 209.73 | 209.73 | 5,742 | 15,307 |
| 1996 | 2.5633 | 209.73 | 209.73 | 5,742 | 14,718 |
| 1997 | 2.4647 | 209.73 | 209.73 | 5,742 | 14,152 |
| 1998 | 2.3699 | 209.73 | 209.73 | 5,742 | 13,608 |
| 1999 | 2.2788 | 209.73 | 209.73 | 5,742 | 13,085 |
| 2000 | 2.1911 | 209.73 | 209.73 | 5,742 | 12,581 |
| 2001 | 2.1068 | 209.73 | 209.73 | 5,742 | 12,097 |
| 2002 | 2.0258 | 209.73 | 209.73 | 5,742 | 11,632 |
| 2003 | 1.9479 | 209.73 | 209.73 | 5,742 | 11,185 |
| 2004 | 1.8730 | 209.73 | 209.73 | 5,742 | 10,755 |
| 2005 | 1.8009 | 209.73 | 209.73 | 5,742 | 10,341 |
| 2006 | 1.7317 | 209.73 | 209.73 | 5,742 | 9,943 |
| 2007 | 1.6651 | 209.73 | 209.73 | 5,742 | 9,561 |
| 2008 | 1.6010 | 209.73 | 209.73 | 5,742 | 9,193 |
| 2009 | 1.5395 | 209.73 | 209.73 | 5,742 | 8,840 |
| 2010 | 1.4802 | 209.73 | 209.73 | 5,742 | 8,499 |
| 2011 | 1.4233 | 209.73 | 209.73 | 5,742 | 8,173 |
| 2012 | 1.3686 | 209.73 | 209.73 | 5,742 | 7,859 |
| 2013 | 1.3159 | 209.73 | 209.73 | 5,742 | 7,556 |
| 2014 | 1.2653 | 209.73 | 209.73 | 5,742 | 7,265 |
| 2015 | 1.2167 | 209.73 | 209.73 | 5,742 | 6,986 |
| 2016 | 1.1699 | 209.73 | 209.73 | 5,742 | 6,718 |
| 2017 | 1.1249 | 209.73 | 209.73 | 5,742 | 6,459 |
| 2018 | 1.0816 | 209.73 | 209.73 | 5,742 | 6,211 |

| | | | | | |
|------|--------|--------|--------|-------|---------|
| 2019 | 1.0400 | 209.73 | 209.73 | 5,742 | 5,972 |
| 2020 | 1.0000 | 209.73 | 209.73 | 5,742 | 5,742 |
| 2021 | 0.9615 | 209.73 | 209.73 | 5,742 | 5,521 |
| 2022 | 0.9246 | 209.73 | 209.73 | 5,742 | 5,309 |
| 2023 | 0.8890 | 209.73 | 209.73 | 5,742 | 5,105 |
| 2024 | 0.8548 | 209.73 | 209.73 | 5,742 | 4,908 |
| 2025 | 0.8219 | 209.73 | 209.73 | 5,742 | 4,719 |
| 2026 | 0.7903 | 209.73 | 209.73 | 5,742 | 4,538 |
| 2027 | 0.7599 | 209.73 | 209.73 | 5,742 | 4,363 |
| 2028 | 0.7307 | 209.73 | 209.73 | 5,742 | 4,196 |
| 2029 | 0.7026 | 209.73 | 209.73 | 5,742 | 4,034 |
| 2030 | 0.6756 | 209.73 | 209.73 | 5,742 | 3,879 |
| 2031 | 0.6496 | 209.73 | 209.73 | 5,742 | 3,730 |
| 2032 | 0.6246 | 209.73 | 209.73 | 5,742 | 3,586 |
| 2033 | 0.6006 | 209.73 | 209.73 | 5,742 | 3,449 |
| 2034 | 0.5775 | 209.73 | 209.73 | 5,742 | 3,316 |
| 2035 | 0.5553 | 209.73 | 209.73 | 5,742 | 3,189 |
| 2036 | 0.5339 | 209.73 | 209.73 | 5,742 | 3,066 |
| 2037 | 0.5134 | 209.73 | 209.73 | 5,742 | 2,948 |
| 2038 | 0.4936 | 209.73 | 209.73 | 5,742 | 2,834 |
| 2039 | 0.4746 | 209.73 | 209.73 | 5,742 | 2,725 |
| 2040 | 0.4564 | 209.73 | 209.73 | 5,742 | 2,621 |
| 2041 | 0.4388 | 209.73 | 209.73 | 5,742 | 2,520 |
| 2042 | 0.4220 | 209.73 | 209.73 | 5,742 | 2,423 |
| 2043 | 0.4057 | 209.73 | 209.73 | 5,742 | 2,330 |
| 2044 | 0.3901 | 209.73 | 209.73 | 5,742 | 2,240 |
| 2045 | 0.3751 | 209.73 | 209.73 | 5,742 | 2,154 |
| 2046 | 0.3607 | 209.73 | 209.73 | 5,742 | 2,071 |
| 2047 | 0.3468 | 209.73 | 209.73 | 5,742 | 1,991 |
| 2048 | 0.3335 | 209.73 | 209.73 | 5,742 | 1,915 |
| 2049 | 0.3207 | 209.73 | 209.73 | 5,742 | 1,841 |
| 合計 | | | | | 848,919 |

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

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

- Qx: 全貯留量のうち生活用水使用相当量 11.36 億立方
- Qy: 全貯留量 - Qx 94.88 億立方
- A: 事業対象区域面積 (ha) 209.73 ~ 209.73
- P: 年間平均降水量 (mm/年) 1,632
出展: 気象統計情報(気象庁): 本広域流域内の気象庁HP観測所データ(上野観測所ほか13観測所)を使用。本データは、気象庁HP公表の年降水量の平年値(1981~2010年)を基に算定。事業箇所が所在する市町村に所在する14観測所の平均値にて算定。
- T: 事業実施後、貯留率が安定するのに必要な年数 10
- 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) 120.95
出展: 地方公営企業年鑑(平成30年度版)(総務省): 総務省HP「地方公営企業年鑑(平成30年度版)」のデータを使用。本データは、「地方公営企業年鑑」に記載の本広域流域内の平成30年度上水道供給単価を基に算定。事業箇所が所在する伊賀市等12市町村の平均値にて算定。
- Uy: 単位当たりの雨水浄化費(円/m3) 120.00
出典: 「南山ほか(2007)再生水利用の促進に関する調査」他
- 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) 120.10
- t: 経過年数(治山事業の便益の算出に当たっては、各年度の事業費の累計を用いている。)
※社会的割引率を考慮するために用いる(1+i)^tのt(年数)とは異なる。
- i: 社会的割引率(0.04)
- 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 ha | 事業効果面積 ha | 効果額 千円 | 現在価値化 千円 |
|------|--------|-------------|-----------|--------|----------|
| 1969 | 7.3910 | | | | |
| 1970 | 7.1067 | 209.73 | 20.97 | 2,055 | 14,604 |
| 1971 | 6.8333 | 209.73 | 41.95 | 4,111 | 28,092 |
| 1972 | 6.5705 | 209.73 | 62.92 | 6,166 | 40,514 |
| 1973 | 6.3178 | 209.73 | 83.89 | 8,222 | 51,945 |
| 1974 | 6.0748 | 209.73 | 104.87 | 10,277 | 62,431 |
| 1975 | 5.8412 | 209.73 | 125.84 | 12,332 | 72,034 |
| 1976 | 5.6165 | 209.73 | 146.81 | 14,388 | 80,810 |
| 1977 | 5.4005 | 209.73 | 167.78 | 16,443 | 88,800 |
| 1978 | 5.1928 | 209.73 | 188.76 | 18,499 | 96,062 |
| 1979 | 4.9931 | 209.73 | 209.73 | 20,554 | 102,628 |
| 1980 | 4.8010 | 209.73 | 209.73 | 20,554 | 98,680 |
| 1981 | 4.6164 | 209.73 | 209.73 | 20,554 | 94,885 |
| 1982 | 4.4388 | 209.73 | 209.73 | 20,554 | 91,235 |
| 1983 | 4.2681 | 209.73 | 209.73 | 20,554 | 87,727 |
| 1984 | 4.1039 | 209.73 | 209.73 | 20,554 | 84,352 |
| 1985 | 3.9461 | 209.73 | 209.73 | 20,554 | 81,108 |
| 1986 | 3.7943 | 209.73 | 209.73 | 20,554 | 77,988 |
| 1987 | 3.6484 | 209.73 | 209.73 | 20,554 | 74,989 |
| 1988 | 3.5081 | 209.73 | 209.73 | 20,554 | 72,105 |
| 1989 | 3.3731 | 209.73 | 209.73 | 20,554 | 69,331 |
| 1990 | 3.2434 | 209.73 | 209.73 | 20,554 | 66,665 |
| 1991 | 3.1187 | 209.73 | 209.73 | 20,554 | 64,102 |
| 1992 | 2.9987 | 209.73 | 209.73 | 20,554 | 61,635 |
| 1993 | 2.8834 | 209.73 | 209.73 | 20,554 | 59,265 |
| 1994 | 2.7725 | 209.73 | 209.73 | 20,554 | 56,986 |
| 1995 | 2.6658 | 209.73 | 209.73 | 20,554 | 54,793 |
| 1996 | 2.5633 | 209.73 | 209.73 | 20,554 | 52,686 |
| 1997 | 2.4647 | 209.73 | 209.73 | 20,554 | 50,659 |
| 1998 | 2.3699 | 209.73 | 209.73 | 20,554 | 48,711 |
| 1999 | 2.2788 | 209.73 | 209.73 | 20,554 | 46,838 |
| 2000 | 2.1911 | 209.73 | 209.73 | 20,554 | 45,036 |
| 2001 | 2.1068 | 209.73 | 209.73 | 20,554 | 43,303 |
| 2002 | 2.0258 | 209.73 | 209.73 | 20,554 | 41,638 |
| 2003 | 1.9479 | 209.73 | 209.73 | 20,554 | 40,037 |
| 2004 | 1.8730 | 209.73 | 209.73 | 20,554 | 38,498 |
| 2005 | 1.8009 | 209.73 | 209.73 | 20,554 | 37,016 |
| 2006 | 1.7317 | 209.73 | 209.73 | 20,554 | 35,593 |
| 2007 | 1.6651 | 209.73 | 209.73 | 20,554 | 34,224 |
| 2008 | 1.6010 | 209.73 | 209.73 | 20,554 | 32,907 |
| 2009 | 1.5395 | 209.73 | 209.73 | 20,554 | 31,643 |

| | | | | | |
|------|--------|--------|--------|--------|-----------|
| 2010 | 1.4802 | 209.73 | 209.73 | 20,554 | 30,424 |
| 2011 | 1.4233 | 209.73 | 209.73 | 20,554 | 29,255 |
| 2012 | 1.3686 | 209.73 | 209.73 | 20,554 | 28,130 |
| 2013 | 1.3159 | 209.73 | 209.73 | 20,554 | 27,047 |
| 2014 | 1.2653 | 209.73 | 209.73 | 20,554 | 26,007 |
| 2015 | 1.2167 | 209.73 | 209.73 | 20,554 | 25,008 |
| 2016 | 1.1699 | 209.73 | 209.73 | 20,554 | 24,046 |
| 2017 | 1.1249 | 209.73 | 209.73 | 20,554 | 23,121 |
| 2018 | 1.0816 | 209.73 | 209.73 | 20,554 | 22,231 |
| 2019 | 1.0400 | 209.73 | 209.73 | 20,554 | 21,376 |
| 2020 | 1.0000 | 209.73 | 209.73 | 20,554 | 20,554 |
| 2021 | 0.9615 | 209.73 | 209.73 | 20,554 | 19,763 |
| 2022 | 0.9246 | 209.73 | 209.73 | 20,554 | 19,004 |
| 2023 | 0.8890 | 209.73 | 209.73 | 20,554 | 18,273 |
| 2024 | 0.8548 | 209.73 | 209.73 | 20,554 | 17,570 |
| 2025 | 0.8219 | 209.73 | 209.73 | 20,554 | 16,893 |
| 2026 | 0.7903 | 209.73 | 209.73 | 20,554 | 16,244 |
| 2027 | 0.7599 | 209.73 | 209.73 | 20,554 | 15,619 |
| 2028 | 0.7307 | 209.73 | 209.73 | 20,554 | 15,019 |
| 2029 | 0.7026 | 209.73 | 209.73 | 20,554 | 14,441 |
| 2030 | 0.6756 | 209.73 | 209.73 | 20,554 | 13,886 |
| 2031 | 0.6496 | 209.73 | 209.73 | 20,554 | 13,352 |
| 2032 | 0.6246 | 209.73 | 209.73 | 20,554 | 12,838 |
| 2033 | 0.6006 | 209.73 | 209.73 | 20,554 | 12,345 |
| 2034 | 0.5775 | 209.73 | 209.73 | 20,554 | 11,870 |
| 2035 | 0.5553 | 209.73 | 209.73 | 20,554 | 11,414 |
| 2036 | 0.5339 | 209.73 | 209.73 | 20,554 | 10,974 |
| 2037 | 0.5134 | 209.73 | 209.73 | 20,554 | 10,552 |
| 2038 | 0.4936 | 209.73 | 209.73 | 20,554 | 10,145 |
| 2039 | 0.4746 | 209.73 | 209.73 | 20,554 | 9,755 |
| 2040 | 0.4564 | 209.73 | 209.73 | 20,554 | 9,381 |
| 2041 | 0.4388 | 209.73 | 209.73 | 20,554 | 9,019 |
| 2042 | 0.4220 | 209.73 | 209.73 | 20,554 | 8,674 |
| 2043 | 0.4057 | 209.73 | 209.73 | 20,554 | 8,339 |
| 2044 | 0.3901 | 209.73 | 209.73 | 20,554 | 8,018 |
| 2045 | 0.3751 | 209.73 | 209.73 | 20,554 | 7,710 |
| 2046 | 0.3607 | 209.73 | 209.73 | 20,554 | 7,414 |
| 2047 | 0.3468 | 209.73 | 209.73 | 20,554 | 7,128 |
| 2048 | 0.3335 | 209.73 | 209.73 | 20,554 | 6,855 |
| 2049 | 0.3207 | 209.73 | 209.73 | 20,554 | 6,592 |
| 合計 | | | | | 3,038,841 |

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

- U: 下流のダムに堆積した1㎡の土砂を除去するコスト(円/㎡) 4,115
出典:一社ダム水源地土砂対策技術研究会資料ほか
- V1: 事業実施前における1ha当りの年間流出土砂量(m3) 20.00
出典:「治山全体調査の考え方進め方」

| | |
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| 荒廢地等 | |
|------|--|

「森林の公益的機能に関する文献要約集」

| | |
|------|--|
| 森林水文 | |
|------|--|
- V2: 事業実施後における1ha当りの年間流出土砂量(m3) 1.30
出典:「治山全体調査の考え方進め方」

| | |
|-------|--|
| 整備済森林 | |
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「森林の公益的機能に関する文献要約集」

| | |
|------|--|
| 森林水文 | |
|------|--|
- A: 事業対象区域面積(ha) 209.73 ~ 209.73
- T: 事業実施後、流出係数が安定するのに必要な年数 10
- Y: 評価期間 80
- t: 経過年数(治山事業の便益の算出に当たっては、各年度の事業費の累計を用いている。
※社会的割引率を考慮するために用いる(1+i)^tのt(年数)とは異なる。
- i: 社会的割引率(0.04)

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 ha | 事業効果面積 ha | 効果額 千円 | 現在価値化 千円 |
|------|--------|-------------|-----------|--------|----------|
| 1969 | 7.3910 | | | | |
| 1970 | 7.1067 | 209.73 | 20.97 | 1,614 | 11,470 |
| 1971 | 6.8333 | 209.73 | 41.95 | 3,228 | 22,058 |
| 1972 | 6.5705 | 209.73 | 62.92 | 4,842 | 31,814 |
| 1973 | 6.3178 | 209.73 | 83.89 | 6,456 | 40,788 |
| 1974 | 6.0748 | 209.73 | 104.87 | 8,069 | 49,018 |
| 1975 | 5.8412 | 209.73 | 125.84 | 9,683 | 56,560 |
| 1976 | 5.6165 | 209.73 | 146.81 | 11,297 | 63,450 |
| 1977 | 5.4005 | 209.73 | 167.78 | 12,911 | 69,726 |
| 1978 | 5.1928 | 209.73 | 188.76 | 14,525 | 75,425 |
| 1979 | 4.9931 | 209.73 | 209.73 | 16,139 | 80,584 |
| 1980 | 4.8010 | 209.73 | 209.73 | 16,139 | 77,483 |
| 1981 | 4.6164 | 209.73 | 209.73 | 16,139 | 74,504 |
| 1982 | 4.4388 | 209.73 | 209.73 | 16,139 | 71,638 |
| 1983 | 4.2681 | 209.73 | 209.73 | 16,139 | 68,883 |
| 1984 | 4.1039 | 209.73 | 209.73 | 16,139 | 66,233 |
| 1985 | 3.9461 | 209.73 | 209.73 | 16,139 | 63,686 |
| 1986 | 3.7943 | 209.73 | 209.73 | 16,139 | 61,236 |
| 1987 | 3.6484 | 209.73 | 209.73 | 16,139 | 58,882 |
| 1988 | 3.5081 | 209.73 | 209.73 | 16,139 | 56,617 |
| 1989 | 3.3731 | 209.73 | 209.73 | 16,139 | 54,438 |
| 1990 | 3.2434 | 209.73 | 209.73 | 16,139 | 52,345 |
| 1991 | 3.1187 | 209.73 | 209.73 | 16,139 | 50,333 |
| 1992 | 2.9987 | 209.73 | 209.73 | 16,139 | 48,396 |
| 1993 | 2.8834 | 209.73 | 209.73 | 16,139 | 46,535 |
| 1994 | 2.7725 | 209.73 | 209.73 | 16,139 | 44,745 |
| 1995 | 2.6658 | 209.73 | 209.73 | 16,139 | 43,023 |
| 1996 | 2.5633 | 209.73 | 209.73 | 16,139 | 41,369 |
| 1997 | 2.4647 | 209.73 | 209.73 | 16,139 | 39,778 |
| 1998 | 2.3699 | 209.73 | 209.73 | 16,139 | 38,248 |
| 1999 | 2.2788 | 209.73 | 209.73 | 16,139 | 36,778 |
| 2000 | 2.1911 | 209.73 | 209.73 | 16,139 | 35,362 |
| 2001 | 2.1068 | 209.73 | 209.73 | 16,139 | 34,002 |
| 2002 | 2.0258 | 209.73 | 209.73 | 16,139 | 32,694 |
| 2003 | 1.9479 | 209.73 | 209.73 | 16,139 | 31,437 |
| 2004 | 1.8730 | 209.73 | 209.73 | 16,139 | 30,228 |
| 2005 | 1.8009 | 209.73 | 209.73 | 16,139 | 29,065 |
| 2006 | 1.7317 | 209.73 | 209.73 | 16,139 | 27,948 |
| 2007 | 1.6651 | 209.73 | 209.73 | 16,139 | 26,873 |
| 2008 | 1.6010 | 209.73 | 209.73 | 16,139 | 25,839 |
| 2009 | 1.5395 | 209.73 | 209.73 | 16,139 | 24,846 |
| 2010 | 1.4802 | 209.73 | 209.73 | 16,139 | 23,889 |
| 2011 | 1.4233 | 209.73 | 209.73 | 16,139 | 22,971 |
| 2012 | 1.3686 | 209.73 | 209.73 | 16,139 | 22,088 |
| 2013 | 1.3159 | 209.73 | 209.73 | 16,139 | 21,237 |
| 2014 | 1.2653 | 209.73 | 209.73 | 16,139 | 20,421 |
| 2015 | 1.2167 | 209.73 | 209.73 | 16,139 | 19,636 |
| 2016 | 1.1699 | 209.73 | 209.73 | 16,139 | 18,881 |
| 2017 | 1.1249 | 209.73 | 209.73 | 16,139 | 18,155 |
| 2018 | 1.0816 | 209.73 | 209.73 | 16,139 | 17,456 |
| 2019 | 1.0400 | 209.73 | 209.73 | 16,139 | 16,785 |
| 2020 | 1.0000 | 209.73 | 209.73 | 16,139 | 16,139 |
| 2021 | 0.9615 | 209.73 | 209.73 | 16,139 | 15,518 |
| 2022 | 0.9246 | 209.73 | 209.73 | 16,139 | 14,922 |
| 2023 | 0.8890 | 209.73 | 209.73 | 16,139 | 14,348 |
| 2024 | 0.8548 | 209.73 | 209.73 | 16,139 | 13,796 |
| 2025 | 0.8219 | 209.73 | 209.73 | 16,139 | 13,265 |
| 2026 | 0.7903 | 209.73 | 209.73 | 16,139 | 12,755 |
| 2027 | 0.7599 | 209.73 | 209.73 | 16,139 | 12,264 |
| 2028 | 0.7307 | 209.73 | 209.73 | 16,139 | 11,793 |

| | | | | | |
|------|--------|--------|--------|--------|-----------|
| 2029 | 0.7026 | 209.73 | 209.73 | 16,139 | 11,339 |
| 2030 | 0.6756 | 209.73 | 209.73 | 16,139 | 10,904 |
| 2031 | 0.6496 | 209.73 | 209.73 | 16,139 | 10,484 |
| 2032 | 0.6246 | 209.73 | 209.73 | 16,139 | 10,080 |
| 2033 | 0.6006 | 209.73 | 209.73 | 16,139 | 9,693 |
| 2034 | 0.5775 | 209.73 | 209.73 | 16,139 | 9,320 |
| 2035 | 0.5553 | 209.73 | 209.73 | 16,139 | 8,962 |
| 2036 | 0.5339 | 209.73 | 209.73 | 16,139 | 8,617 |
| 2037 | 0.5134 | 209.73 | 209.73 | 16,139 | 8,286 |
| 2038 | 0.4936 | 209.73 | 209.73 | 16,139 | 7,966 |
| 2039 | 0.4746 | 209.73 | 209.73 | 16,139 | 7,660 |
| 2040 | 0.4564 | 209.73 | 209.73 | 16,139 | 7,366 |
| 2041 | 0.4388 | 209.73 | 209.73 | 16,139 | 7,082 |
| 2042 | 0.4220 | 209.73 | 209.73 | 16,139 | 6,811 |
| 2043 | 0.4057 | 209.73 | 209.73 | 16,139 | 6,548 |
| 2044 | 0.3901 | 209.73 | 209.73 | 16,139 | 6,296 |
| 2045 | 0.3751 | 209.73 | 209.73 | 16,139 | 6,054 |
| 2046 | 0.3607 | 209.73 | 209.73 | 16,139 | 5,821 |
| 2047 | 0.3468 | 209.73 | 209.73 | 16,139 | 5,597 |
| 2048 | 0.3335 | 209.73 | 209.73 | 16,139 | 5,382 |
| 2049 | 0.3207 | 209.73 | 209.73 | 16,139 | 5,176 |
| 合計 | | | | | 2,386,100 |

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

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

- U: 下流のダムに堆積した1㎡の土砂を除去するコスト(円/㎡) 4,115
出典:一社ダム水源土砂対策技術研究会資料ほか
- V: 崩壊見込み量(m3/年) 0.00 ~ 101.92
- A: 事業対象区域面積(ha) 209.73 ~ 209.73
- R: 流域内崩壊率 0.0032
出展「治山全体調査」S42からS46:本流域内の淀川流域ほか1流域を使用。事業箇所が所在する2流域の平均値にて算定。
- N: 雨量比=50年確率日雨量/既往最大日雨量 1.1682
出展:気象統計情報(気象庁):本広域流域内の気象庁HP観測所データ(上野観測所ほか14観測所)を使用。50年確率日雨量は、各観測所の気象データ(2015~2019年)を基に確率雨量計算にて算定。既往最大日雨量は、観測開始~2019年までの最大値。事業箇所が所在する市町村に所在する15観測所の平均値にて算定。
- L: 事業対象区域の周囲(m)(治山事業のみ算定対象)
周囲面積 L×H/10,000 (ha)
- H: 平均崩壊深(m) 1.3
出展:三重県、滋賀県、京都府、大阪府、奈良県への聞き取り。
- Y: 評価期間 80
- i: 社会的割引率(0.04)
- 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 ha | 崩壊見込み量 m³/年 | 効果額 千円 | 現在価値化 千円 |
|------|--------|-------------|-------------|--------|----------|
| 1969 | 7.3910 | | | | |
| 1970 | 7.1067 | 209.73 | 0.00 | 0 | 0 |
| 1971 | 6.8333 | 209.73 | 0.00 | 0 | 0 |
| 1972 | 6.5705 | 209.73 | 0.00 | 0 | 0 |
| 1973 | 6.3178 | 209.73 | 0.00 | 0 | 0 |
| 1974 | 6.0748 | 209.73 | 0.00 | 0 | 0 |
| 1975 | 5.8412 | 209.73 | 0.00 | 0 | 0 |
| 1976 | 5.6165 | 209.73 | 0.00 | 0 | 0 |
| 1977 | 5.4005 | 209.73 | 0.00 | 0 | 0 |
| 1978 | 5.1928 | 209.73 | 0.00 | 0 | 0 |
| 1979 | 4.9931 | 209.73 | 0.00 | 0 | 0 |
| 1980 | 4.8010 | 209.73 | 101.92 | 419 | 2,012 |
| 1981 | 4.6164 | 209.73 | 101.92 | 419 | 1,934 |
| 1982 | 4.4388 | 209.73 | 101.92 | 419 | 1,860 |
| 1983 | 4.2681 | 209.73 | 101.92 | 419 | 1,788 |
| 1984 | 4.1039 | 209.73 | 101.92 | 419 | 1,720 |
| 1985 | 3.9461 | 209.73 | 101.92 | 419 | 1,653 |
| 1986 | 3.7943 | 209.73 | 101.92 | 419 | 1,590 |
| 1987 | 3.6484 | 209.73 | 101.92 | 419 | 1,529 |
| 1988 | 3.5081 | 209.73 | 101.92 | 419 | 1,470 |
| 1989 | 3.3731 | 209.73 | 101.92 | 419 | 1,413 |
| 1990 | 3.2434 | 209.73 | 101.92 | 419 | 1,359 |
| 1991 | 3.1187 | 209.73 | 101.92 | 419 | 1,307 |
| 1992 | 2.9987 | 209.73 | 101.92 | 419 | 1,256 |
| 1993 | 2.8834 | 209.73 | 101.92 | 419 | 1,208 |
| 1994 | 2.7725 | 209.73 | 101.92 | 419 | 1,162 |
| 1995 | 2.6658 | 209.73 | 101.92 | 419 | 1,117 |
| 1996 | 2.5633 | 209.73 | 101.92 | 419 | 1,074 |
| 1997 | 2.4647 | 209.73 | 101.92 | 419 | 1,033 |
| 1998 | 2.3699 | 209.73 | 101.92 | 419 | 993 |
| 1999 | 2.2788 | 209.73 | 101.92 | 419 | 955 |
| 2000 | 2.1911 | 209.73 | 101.92 | 419 | 918 |
| 2001 | 2.1068 | 209.73 | 101.92 | 419 | 883 |
| 2002 | 2.0258 | 209.73 | 101.92 | 419 | 849 |
| 2003 | 1.9479 | 209.73 | 101.92 | 419 | 816 |
| 2004 | 1.8730 | 209.73 | 101.92 | 419 | 785 |
| 2005 | 1.8009 | 209.73 | 101.92 | 419 | 755 |
| 2006 | 1.7317 | 209.73 | 101.92 | 419 | 726 |
| 2007 | 1.6651 | 209.73 | 101.92 | 419 | 698 |
| 2008 | 1.6010 | 209.73 | 101.92 | 419 | 671 |
| 2009 | 1.5395 | 209.73 | 101.92 | 419 | 645 |
| 2010 | 1.4802 | 209.73 | 101.92 | 419 | 620 |
| 2011 | 1.4233 | 209.73 | 101.92 | 419 | 596 |
| 2012 | 1.3686 | 209.73 | 101.92 | 419 | 573 |
| 2013 | 1.3159 | 209.73 | 101.92 | 419 | 551 |
| 2014 | 1.2653 | 209.73 | 101.92 | 419 | 530 |
| 2015 | 1.2167 | 209.73 | 101.92 | 419 | 510 |
| 2016 | 1.1699 | 209.73 | 101.92 | 419 | 490 |
| 2017 | 1.1249 | 209.73 | 101.92 | 419 | 471 |
| 2018 | 1.0816 | 209.73 | 101.92 | 419 | 453 |
| 2019 | 1.0400 | 209.73 | 101.92 | 419 | 436 |
| 2020 | 1.0000 | 209.73 | 101.92 | 419 | 419 |
| 2021 | 0.9615 | 209.73 | 101.92 | 419 | 403 |

| | | | | | |
|------|--------|--------|--------|-----|--------|
| 2022 | 0.9246 | 209.73 | 101.92 | 419 | 387 |
| 2023 | 0.8890 | 209.73 | 101.92 | 419 | 372 |
| 2024 | 0.8548 | 209.73 | 101.92 | 419 | 358 |
| 2025 | 0.8219 | 209.73 | 101.92 | 419 | 344 |
| 2026 | 0.7903 | 209.73 | 101.92 | 419 | 331 |
| 2027 | 0.7599 | 209.73 | 101.92 | 419 | 318 |
| 2028 | 0.7307 | 209.73 | 101.92 | 419 | 306 |
| 2029 | 0.7026 | 209.73 | 101.92 | 419 | 294 |
| 2030 | 0.6756 | 209.73 | 101.92 | 419 | 283 |
| 2031 | 0.6496 | 209.73 | 101.92 | 419 | 272 |
| 2032 | 0.6246 | 209.73 | 101.92 | 419 | 262 |
| 2033 | 0.6006 | 209.73 | 101.92 | 419 | 252 |
| 2034 | 0.5775 | 209.73 | 101.92 | 419 | 242 |
| 2035 | 0.5553 | 209.73 | 101.92 | 419 | 233 |
| 2036 | 0.5339 | 209.73 | 101.92 | 419 | 224 |
| 2037 | 0.5134 | 209.73 | 101.92 | 419 | 215 |
| 2038 | 0.4936 | 209.73 | 101.92 | 419 | 207 |
| 2039 | 0.4746 | 209.73 | 101.92 | 419 | 199 |
| 2040 | 0.4564 | 209.73 | 101.92 | 419 | 191 |
| 2041 | 0.4388 | 209.73 | 101.92 | 419 | 184 |
| 2042 | 0.4220 | 209.73 | 101.92 | 419 | 177 |
| 2043 | 0.4057 | 209.73 | 101.92 | 419 | 170 |
| 2044 | 0.3901 | 209.73 | 101.92 | 419 | 163 |
| 2045 | 0.3751 | 209.73 | 101.92 | 419 | 157 |
| 2046 | 0.3607 | 209.73 | 101.92 | 419 | 151 |
| 2047 | 0.3468 | 209.73 | 101.92 | 419 | 145 |
| 2048 | 0.3335 | 209.73 | 101.92 | 419 | 140 |
| 2049 | 0.3207 | 209.73 | 101.92 | 419 | 134 |
| 合計 | | | | | 48,942 |

| | | | | | | | | | | | | | |
|------|--------|--------|-------|--------|-------|-------|-----|-------|-----|--|--|--|--|
| 2005 | 1.8009 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2006 | 1.7317 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2007 | 1.6651 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2008 | 1.6010 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2009 | 1.5395 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2010 | 1.4802 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2011 | 1.4233 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2012 | 1.3686 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2013 | 1.3159 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2014 | 1.2653 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2015 | 1.2167 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2016 | 1.1699 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2017 | 1.1249 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2018 | 1.0816 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2019 | 1.0400 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2020 | 1.0000 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2021 | 0.9615 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2022 | 0.9246 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2023 | 0.8890 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2024 | 0.8548 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2025 | 0.8219 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2026 | 0.7903 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2027 | 0.7599 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2028 | 0.7307 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2029 | 0.7026 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2030 | 0.6756 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2031 | 0.6496 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2032 | 0.6246 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2033 | 0.6006 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2034 | 0.5775 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2035 | 0.5553 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2036 | 0.5339 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2037 | 0.5134 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2038 | 0.4936 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2039 | 0.4746 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2040 | 0.4564 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2041 | 0.4388 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2042 | 0.4220 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2043 | 0.4057 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2044 | 0.3901 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2045 | 0.3751 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2046 | 0.3607 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2047 | 0.3468 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2048 | 0.3335 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 2049 | 0.3207 | 253.58 | 1.260 | 159.61 | 1.044 | 30.46 | 219 | 10.28 | 100 | | | | |
| 合計 | | | | | | | | | | | | | |

| 年度 | 合計 | | |
|------|--------|-------|--------|
| | 社会的割引率 | 効果額 | 現在価値化 |
| 1969 | 7.3910 | | |
| 1970 | 7.1067 | 2,623 | 18,641 |
| 1971 | 6.8333 | 2,623 | 17,924 |
| 1972 | 6.5705 | 2,623 | 17,234 |
| 1973 | 6.3178 | 2,623 | 16,572 |
| 1974 | 6.0748 | 2,623 | 15,934 |
| 1975 | 5.8412 | 2,623 | 15,321 |
| 1976 | 5.6165 | 2,623 | 14,732 |
| 1977 | 5.4005 | 2,623 | 14,166 |
| 1978 | 5.1928 | 2,623 | 13,621 |
| 1979 | 4.9931 | 2,623 | 13,097 |
| 1980 | 4.8010 | 2,623 | 12,593 |
| 1981 | 4.6164 | 2,623 | 12,109 |
| 1982 | 4.4388 | 2,623 | 11,643 |
| 1983 | 4.2681 | 2,623 | 11,195 |
| 1984 | 4.1039 | 2,623 | 10,765 |
| 1985 | 3.9461 | 2,623 | 10,351 |
| 1986 | 3.7943 | 2,623 | 9,952 |
| 1987 | 3.6484 | 2,623 | 9,570 |
| 1988 | 3.5081 | 2,623 | 9,202 |
| 1989 | 3.3731 | 2,623 | 8,848 |
| 1990 | 3.2434 | 2,623 | 8,507 |
| 1991 | 3.1187 | 2,623 | 8,180 |
| 1992 | 2.9987 | 2,623 | 7,866 |
| 1993 | 2.8834 | 2,623 | 7,563 |
| 1994 | 2.7725 | 2,623 | 7,272 |
| 1995 | 2.6658 | 2,623 | 6,992 |
| 1996 | 2.5633 | 2,623 | 6,724 |
| 1997 | 2.4647 | 2,623 | 6,465 |
| 1998 | 2.3699 | 2,623 | 6,216 |
| 1999 | 2.2788 | 2,623 | 5,977 |
| 2000 | 2.1911 | 2,623 | 5,747 |
| 2001 | 2.1068 | 2,623 | 5,526 |
| 2002 | 2.0258 | 2,623 | 5,314 |
| 2003 | 1.9479 | 2,623 | 5,109 |
| 2004 | 1.8730 | 2,623 | 4,913 |
| 2005 | 1.8009 | 2,623 | 4,724 |
| 2006 | 1.7317 | 2,623 | 4,542 |
| 2007 | 1.6651 | 2,623 | 4,368 |
| 2008 | 1.6010 | 2,623 | 4,199 |
| 2009 | 1.5395 | 2,623 | 4,038 |

| | | | |
|------|--------|-------|---------|
| 2010 | 1.4802 | 2.623 | 3.883 |
| 2011 | 1.4233 | 2.623 | 3.733 |
| 2012 | 1.3686 | 2.623 | 3.590 |
| 2013 | 1.3159 | 2.623 | 3.452 |
| 2014 | 1.2653 | 2.623 | 3.319 |
| 2015 | 1.2167 | 2.623 | 3.191 |
| 2016 | 1.1699 | 2.623 | 3.069 |
| 2017 | 1.1249 | 2.623 | 2.951 |
| 2018 | 1.0816 | 2.623 | 2.837 |
| 2019 | 1.0400 | 2.623 | 2.728 |
| 2020 | 1.0000 | 2.623 | 2.623 |
| 2021 | 0.9615 | 2.623 | 2.522 |
| 2022 | 0.9246 | 2.623 | 2.425 |
| 2023 | 0.8890 | 2.623 | 2.332 |
| 2024 | 0.8548 | 2.623 | 2.242 |
| 2025 | 0.8219 | 2.623 | 2.156 |
| 2026 | 0.7903 | 2.623 | 2.073 |
| 2027 | 0.7599 | 2.623 | 1.993 |
| 2028 | 0.7307 | 2.623 | 1.917 |
| 2029 | 0.7026 | 2.623 | 1.843 |
| 2030 | 0.6756 | 2.623 | 1.772 |
| 2031 | 0.6496 | 2.623 | 1.704 |
| 2032 | 0.6246 | 2.623 | 1.638 |
| 2033 | 0.6006 | 2.623 | 1.575 |
| 2034 | 0.5775 | 2.623 | 1.515 |
| 2035 | 0.5553 | 2.623 | 1.457 |
| 2036 | 0.5339 | 2.623 | 1.400 |
| 2037 | 0.5134 | 2.623 | 1.347 |
| 2038 | 0.4936 | 2.623 | 1.295 |
| 2039 | 0.4746 | 2.623 | 1.245 |
| 2040 | 0.4564 | 2.623 | 1.197 |
| 2041 | 0.4388 | 2.623 | 1.151 |
| 2042 | 0.4220 | 2.623 | 1.107 |
| 2043 | 0.4057 | 2.623 | 1.064 |
| 2044 | 0.3901 | 2.623 | 1.023 |
| 2045 | 0.3751 | 2.623 | 984 |
| 2046 | 0.3607 | 2.623 | 946 |
| 2047 | 0.3468 | 2.623 | 910 |
| 2048 | 0.3335 | 2.623 | 875 |
| 2049 | 0.3207 | 2.623 | 841 |
| 合計 | | | 463.637 |

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

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

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

- U: 二酸化炭素に関する原単位(円/t-CO2) 5,500
出典: 東京都層量削減義務による排出量取引制度における仲値(アーガス・メディア・リミテッド(Argus Media Limited)による平成28年5月23日査定価格)
- 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 10
- 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 209.73 ~ 209.73
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) 85.48
出典: 「日本国温室効果ガスインベントリ報告書」(2020年4月) 温室効果ガスインベントリオフィス(GIO)編
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」
- 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」
- t: 経過年数(治山事業の便益の算出に当たっては、各年度の事業費の累計を用いている。) ※社会的割引率を考慮するために用いる(1+i)^tのt(年数)とは異なる。
- i: 社会的割引率(0.04)
- 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 | | | | 現在価値化千円 | 現在価値化千円 |
|------|--------|-------------|-----------|--------|---------|---------|---------|
| | | 事業対象区域面積 ha | 効果対象面積 ha | 効果額 千円 | 現在価値化千円 | | |
| 1969 | 7.3910 | | | | | | |
| 1970 | 7.1067 | 209.73 | 20.97 | 67 | 476 | | |
| 1971 | 6.8333 | 209.73 | 41.95 | 135 | 922 | | |
| 1972 | 6.5705 | 209.73 | 62.92 | 202 | 1,327 | | |
| 1973 | 6.3178 | 209.73 | 83.89 | 269 | 1,699 | | |
| 1974 | 6.0748 | 209.73 | 104.87 | 336 | 2,041 | | |
| 1975 | 5.8412 | 209.73 | 125.84 | 404 | 2,360 | | |
| 1976 | 5.6165 | 209.73 | 146.81 | 471 | 2,645 | | |
| 1977 | 5.4005 | 209.73 | 167.78 | 538 | 2,905 | | |
| 1978 | 5.1928 | 209.73 | 188.76 | 605 | 3,142 | | |
| 1979 | 4.9931 | 209.73 | 209.73 | 673 | 3,360 | | |
| 1980 | 4.8010 | 209.73 | 209.73 | 673 | 3,231 | | |
| 1981 | 4.6164 | 209.73 | 209.73 | 673 | 3,107 | | |
| 1982 | 4.4388 | 209.73 | 209.73 | 673 | 2,987 | | |
| 1983 | 4.2681 | 209.73 | 209.73 | 673 | 2,872 | | |
| 1984 | 4.1039 | 209.73 | 209.73 | 673 | 2,762 | | |
| 1985 | 3.9461 | 209.73 | 209.73 | 673 | 2,656 | | |
| 1986 | 3.7943 | 209.73 | 209.73 | 673 | 2,554 | | |
| 1987 | 3.6484 | 209.73 | 209.73 | 673 | 2,455 | | |
| 1988 | 3.5081 | 209.73 | 209.73 | 673 | 2,361 | | |
| 1989 | 3.3731 | 209.73 | 209.73 | 673 | 2,270 | | |
| 1990 | 3.2434 | 209.73 | 209.73 | 673 | 2,183 | | |
| 1991 | 3.1187 | 209.73 | 209.73 | 673 | 2,099 | | |
| 1992 | 2.9987 | 209.73 | 209.73 | 673 | 2,018 | | |
| 1993 | 2.8834 | 209.73 | 209.73 | 673 | 1,941 | | |
| 1994 | 2.7725 | 209.73 | 209.73 | 673 | 1,866 | | |
| 1995 | 2.6658 | 209.73 | 209.73 | 673 | 1,794 | | |
| 1996 | 2.5633 | 209.73 | 209.73 | 673 | 1,725 | | |
| 1997 | 2.4647 | 209.73 | 209.73 | 673 | 1,659 | | |
| 1998 | 2.3699 | 209.73 | 209.73 | 673 | 1,595 | | |
| 1999 | 2.2788 | 209.73 | 209.73 | 673 | 1,534 | | |
| 2000 | 2.1911 | 209.73 | 209.73 | 673 | 1,475 | | |
| 2001 | 2.1068 | 209.73 | 209.73 | 673 | 1,418 | | |
| 2002 | 2.0258 | 209.73 | 209.73 | 673 | 1,363 | | |
| 2003 | 1.9479 | 209.73 | 209.73 | 673 | 1,311 | | |

| | | | | | | | | |
|------|--------|--------|--------|-----|--------|--|--|---|
| 2004 | 1.8730 | 209.73 | 209.73 | 673 | 1,261 | | | |
| 2005 | 1.8009 | 209.73 | 209.73 | 673 | 1,212 | | | |
| 2006 | 1.7317 | 209.73 | 209.73 | 673 | 1,165 | | | |
| 2007 | 1.6651 | 209.73 | 209.73 | 673 | 1,121 | | | |
| 2008 | 1.6010 | 209.73 | 209.73 | 673 | 1,077 | | | |
| 2009 | 1.5395 | 209.73 | 209.73 | 673 | 1,036 | | | |
| 2010 | 1.4802 | 209.73 | 209.73 | 673 | 996 | | | |
| 2011 | 1.4233 | 209.73 | 209.73 | 673 | 958 | | | |
| 2012 | 1.3686 | 209.73 | 209.73 | 673 | 921 | | | |
| 2013 | 1.3159 | 209.73 | 209.73 | 673 | 886 | | | |
| 2014 | 1.2653 | 209.73 | 209.73 | 673 | 852 | | | |
| 2015 | 1.2167 | 209.73 | 209.73 | 673 | 819 | | | |
| 2016 | 1.1699 | 209.73 | 209.73 | 673 | 787 | | | |
| 2017 | 1.1249 | 209.73 | 209.73 | 673 | 757 | | | |
| 2018 | 1.0816 | 209.73 | 209.73 | 673 | 728 | | | |
| 2019 | 1.0400 | 209.73 | 209.73 | 673 | 700 | | | |
| 2020 | 1.0000 | 209.73 | 209.73 | 673 | 673 | | | |
| 2021 | 0.9615 | 209.73 | 209.73 | 673 | 647 | | | |
| 2022 | 0.9246 | 209.73 | 209.73 | 673 | 622 | | | |
| 2023 | 0.8890 | 209.73 | 209.73 | 673 | 598 | | | |
| 2024 | 0.8548 | 209.73 | 209.73 | 673 | 575 | | | |
| 2025 | 0.8219 | 209.73 | 209.73 | 673 | 553 | | | |
| 2026 | 0.7903 | 209.73 | 209.73 | 673 | 532 | | | |
| 2027 | 0.7599 | 209.73 | 209.73 | 673 | 511 | | | |
| 2028 | 0.7307 | 209.73 | 209.73 | 673 | 492 | | | |
| 2029 | 0.7026 | 209.73 | 209.73 | 673 | 473 | | | |
| 2030 | 0.6756 | 209.73 | 209.73 | 673 | 455 | | | |
| 2031 | 0.6496 | 209.73 | 209.73 | 673 | 437 | | | |
| 2032 | 0.6246 | 209.73 | 209.73 | 673 | 420 | | | |
| 2033 | 0.6006 | 209.73 | 209.73 | 673 | 404 | | | |
| 2034 | 0.5775 | 209.73 | 209.73 | 673 | 389 | | | |
| 2035 | 0.5553 | 209.73 | 209.73 | 673 | 374 | | | |
| 2036 | 0.5339 | 209.73 | 209.73 | 673 | 359 | | | |
| 2037 | 0.5134 | 209.73 | 209.73 | 673 | 346 | | | |
| 2038 | 0.4936 | 209.73 | 209.73 | 673 | 332 | | | |
| 2039 | 0.4746 | 209.73 | 209.73 | 673 | 319 | | | |
| 2040 | 0.4564 | 209.73 | 209.73 | 673 | 307 | | | |
| 2041 | 0.4388 | 209.73 | 209.73 | 673 | 295 | | | |
| 2042 | 0.4220 | 209.73 | 209.73 | 673 | 284 | | | |
| 2043 | 0.4057 | 209.73 | 209.73 | 673 | 273 | | | |
| 2044 | 0.3901 | 209.73 | 209.73 | 673 | 263 | | | |
| 2045 | 0.3751 | 209.73 | 209.73 | 673 | 252 | | | |
| 2046 | 0.3607 | 209.73 | 209.73 | 673 | 243 | | | |
| 2047 | 0.3468 | 209.73 | 209.73 | 673 | 233 | | | |
| 2048 | 0.3335 | 209.73 | 209.73 | 673 | 224 | | | |
| 2049 | 0.3207 | 209.73 | 209.73 | 673 | 216 | | | |
| 合計 | | | | | 99,490 | | | 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) スギ 0.00 ~ 32,458.82
 出典:人工林林分密度管理図((一社)日本森林技術協会)、 ヒノキ 0.00 ~ 19,153.44
 森林整備センター収穫予測表((国研)森林研究・整備機構)等 マツ 0.00 ~ 3,532.77
- @: 人工林 主伐材 木材市場価格(円/m3) スギ 2,362
 出展:山林素地価格及び山元立木価格調((一財)日本不動産研究所)(2020年3月末現在):三重県、滋賀
 県、京都府、大阪府、奈良県の価格の平均値にて算定。 ヒノキ 5,295
 マツ 1,272
- i: 社会的割引率(0.04)

| | | スギ | | ヒノキ | | マツ | | | | | |
|------|--------|-----------------------|--------|-----------------------|---------|-----------------------|--------|-----------------------|--------|-----------------------|--------|
| 年度 | 社会的割引率 | 事業効果材積 m ³ | 効果額 千円 | 事業効果材積 m ³ | 効果額 千円 | 事業効果材積 m ³ | 効果額 千円 | 事業効果材積 m ³ | 効果額 千円 | 事業効果材積 m ³ | 効果額 千円 |
| 2049 | 0.3207 | 32,458.82 | 76,668 | 19,153.44 | 101,417 | 3,532.77 | 4,494 | | | | |

| | | | | 合計 | |
|------|--------|-----------------------|--------|---------|---------|
| 年度 | 社会的割引率 | 事業効果材積 m ³ | 効果額 千円 | 効果額 千円 | 現在価値化千円 |
| 2049 | 0.3207 | | | 182,579 | 58,553 |
| 合計 | | | | | 58,553 |