

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： 大淀川広域流域 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 6		× 7.3910		H 3 4	0	× 0.6756	0
S 3 7	2,034,717	× 7.1067	14,460,123	H 3 5	0	× 0.6496	0
S 3 8	576,446	× 6.8333	3,939,028	H 3 6	0	× 0.6246	0
S 3 9	443,089	× 6.5705	2,911,316	H 3 7	0	× 0.6006	0
S 4 0	338,587	× 6.3178	2,139,125	H 3 8	0	× 0.5775	0
S 4 1	249,711	× 6.0748	1,516,944	H 3 9	0	× 0.5553	0
S 4 2	228,115	× 5.8412	1,332,465	H 4 0	0	× 0.5339	0
S 4 3	0	× 5.6165	0	H 4 1	0	× 0.5134	0
S 4 4	90,798	× 5.4005	490,355	H 4 2	0	× 0.4936	0
S 4 5	0	× 5.1928	0	H 4 3	0	× 0.4746	0
S 4 6	77,962	× 4.9931	389,272	H 4 4	0	× 0.4564	0
S 4 7	10,101	× 4.8010	48,495	H 4 5	0	× 0.4388	0
S 4 8	249,369	× 4.6164	1,151,187	H 4 6	0	× 0.4220	0
S 4 9	0	× 4.4388	0	H 4 7	0	× 0.4057	0
S 5 0	429,138	× 4.2681	1,831,604	H 4 8	0	× 0.3901	0
S 5 1	0	× 4.1039	0	H 4 9	0	× 0.3751	0
S 5 2	64,337	× 3.9461	253,880	H 5 0	0	× 0.3607	0
S 5 3	0	× 3.7943	0	H 5 1	0	× 0.3468	0
S 5 4	107,760	× 3.6484	393,152	H 5 2	0	× 0.3335	0
S 5 5	0	× 3.5081	0	H 5 3	0	× 0.3207	0
S 5 6	221,943	× 3.3731	748,636				
S 5 7	168,902	× 3.2434	547,817				
S 5 8	0	× 3.1187	0				
S 5 9	0	× 2.9987	0				
S 6 0	0	× 2.8834	0				
S 6 1	0	× 2.7725	0				
S 6 2	360,629	× 2.6658	961,365				
S 6 3	0	× 2.5633	0				
H 1	0	× 2.4647	0				
H 2	0	× 2.3699	0				
H 3	0	× 2.2788	0				
H 4	0	× 2.1911	0				
H 5	0	× 2.1068	0				
H 6	0	× 2.0258	0				
H 7	0	× 1.9479	0				
H 8	0	× 1.8730	0				
H 9	0	× 1.8009	0				
H 1 0	0	× 1.7317	0				
H 1 1	0	× 1.6651	0				
H 1 2	0	× 1.6010	0				
H 1 3	0	× 1.5395	0				
H 1 4	0	× 1.4802	0				
H 1 5	0	× 1.4233	0				
H 1 6	0	× 1.3686	0				
H 1 7	0	× 1.3159	0				
H 1 8	0	× 1.2653	0				
H 1 9	0	× 1.2167	0				
H 2 0	0	× 1.1699	0				
H 2 1	0	× 1.1249	0				
H 2 2	0	× 1.0816	0				
H 2 3	0	× 1.0400	0				
H 2 4	0	× 1.0000	0				
H 2 5	0	× 0.9615	0				
H 2 6	0	× 0.9246	0				
H 2 7	0	× 0.8890	0				
H 2 8	0	× 0.8548	0				
H 2 9	37,659	× 0.8219	30,952				
H 3 0	0	× 0.7903	0				
H 3 1	0	× 0.7599	0				
H 3 2	0	× 0.7307	0				
H 3 3	0	× 0.7026	0				
				合 計			33,145,716
				C =			33,145,716 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) 3,740,000
- 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
- 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
- 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) 85.09
- A: 事業対象区域面積(ha) 1,661.77 ~ 1,661.77
- 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
1961	7.3910				
1962	7.1067	1,661.77	110.78	9,793	69,596
1963	6.8333	1,661.77	221.57	19,587	133,844
1964	6.5705	1,661.77	332.35	29,380	193,041
1965	6.3178	1,661.77	443.14	39,173	247,487
1966	6.0748	1,661.77	553.92	48,966	297,459
1967	5.8412	1,661.77	664.71	58,760	343,229
1968	5.6165	1,661.77	775.49	68,553	385,028
1969	5.4005	1,661.77	886.28	78,346	423,108
1970	5.1928	1,661.77	997.06	88,139	457,688
1971	4.9931	1,661.77	1,107.85	97,933	488,989
1972	4.8010	1,661.77	1,218.63	107,726	517,193
1973	4.6164	1,661.77	1,329.42	117,519	542,515
1974	4.4388	1,661.77	1,440.20	127,312	565,113
1975	4.2681	1,661.77	1,550.99	137,106	585,182
1976	4.1039	1,661.77	1,661.77	146,899	602,859
1977	3.9461	1,661.77	1,661.77	146,899	579,678
1978	3.7943	1,661.77	1,661.77	146,899	557,379
1979	3.6484	1,661.77	1,661.77	146,899	535,946
1980	3.5081	1,661.77	1,661.77	146,899	515,336
1981	3.3731	1,661.77	1,661.77	146,899	495,505
1982	3.2434	1,661.77	1,661.77	146,899	476,452
1983	3.1187	1,661.77	1,661.77	146,899	458,134
1984	2.9987	1,661.77	1,661.77	146,899	440,506
1985	2.8834	1,661.77	1,661.77	146,899	423,569
1986	2.7725	1,661.77	1,661.77	146,899	407,277
1987	2.6658	1,661.77	1,661.77	146,899	391,603
1988	2.5633	1,661.77	1,661.77	146,899	376,546
1989	2.4647	1,661.77	1,661.77	146,899	362,062
1990	2.3699	1,661.77	1,661.77	146,899	348,136
1991	2.2788	1,661.77	1,661.77	146,899	334,753
1992	2.1911	1,661.77	1,661.77	146,899	321,870
1993	2.1068	1,661.77	1,661.77	146,899	309,487
1994	2.0258	1,661.77	1,661.77	146,899	297,588
1995	1.9479	1,661.77	1,661.77	146,899	286,145
1996	1.8730	1,661.77	1,661.77	146,899	275,142
1997	1.8009	1,661.77	1,661.77	146,899	264,550
1998	1.7317	1,661.77	1,661.77	146,899	254,385
1999	1.6651	1,661.77	1,661.77	146,899	244,602
2000	1.6010	1,661.77	1,661.77	146,899	235,185
2001	1.5395	1,661.77	1,661.77	146,899	226,151
2002	1.4802	1,661.77	1,661.77	146,899	217,440
2003	1.4233	1,661.77	1,661.77	146,899	209,081
2004	1.3686	1,661.77	1,661.77	146,899	201,046
2005	1.3159	1,661.77	1,661.77	146,899	193,304
2006	1.2653	1,661.77	1,661.77	146,899	185,871
2007	1.2167	1,661.77	1,661.77	146,899	178,732
2008	1.1699	1,661.77	1,661.77	146,899	171,857
2009	1.1249	1,661.77	1,661.77	146,899	165,247
2010	1.0816	1,661.77	1,661.77	146,899	158,886
2011	1.0400	1,661.77	1,661.77	146,899	152,775
2012	1.0000	1,661.77	1,661.77	146,899	146,899
2013	0.9615	1,661.77	1,661.77	146,899	141,243
2014	0.9246	1,661.77	1,661.77	146,899	135,823
2015	0.8890	1,661.77	1,661.77	146,899	130,593
2016	0.8548	1,661.77	1,661.77	146,899	125,569
2017	0.8219	1,661.77	1,661.77	146,899	120,736
2018	0.7903	1,661.77	1,661.77	146,899	116,094
2019	0.7599	1,661.77	1,661.77	146,899	111,629
2020	0.7307	1,661.77	1,661.77	146,899	107,339
2021	0.7026	1,661.77	1,661.77	146,899	103,211
2022	0.6756	1,661.77	1,661.77	146,899	99,245
2023	0.6496	1,661.77	1,661.77	146,899	95,426

2024	0.6246	1,661.77	1,661.77	146,899	91,753
2025	0.6006	1,661.77	1,661.77	146,899	88,228
2026	0.5775	1,661.77	1,661.77	146,899	84,834
2027	0.5553	1,661.77	1,661.77	146,899	81,573
2028	0.5339	1,661.77	1,661.77	146,899	78,429
2029	0.5134	1,661.77	1,661.77	146,899	75,418
2030	0.4936	1,661.77	1,661.77	146,899	72,509
2031	0.4746	1,661.77	1,661.77	146,899	69,718
2032	0.4564	1,661.77	1,661.77	146,899	67,045
2033	0.4388	1,661.77	1,661.77	146,899	64,459
2034	0.4220	1,661.77	1,661.77	146,899	61,991
2035	0.4057	1,661.77	1,661.77	146,899	59,597
2036	0.3901	1,661.77	1,661.77	146,899	57,305
2037	0.3751	1,661.77	1,661.77	146,899	55,102
2038	0.3607	1,661.77	1,661.77	146,899	52,986
2039	0.3468	1,661.77	1,661.77	146,899	50,945
2040	0.3335	1,661.77	1,661.77	146,899	48,991
2041	0.3207	1,661.77	1,661.77	146,899	47,111
合計					19,746,358

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

- A: 事業対象区域面積 (ha) 1,661.77 ~ 1,661.77
- P: 年間平均降雨量 (mm/年)
出典: 気象統計情報 (気象庁) 2,646
- D1: 事業実施前の貯留率
出典: 「森林の間伐と水収支」(近嵐ら, 1987) 0.51
- D2: 事業実施後、T年経過後の貯留率
出典: 「森林の間伐と水収支」(近嵐ら, 1987) 0.56
- T: 事業実施後、流出係数が安定するのに必要な年数 15
- U: 開発流量当りの利水ダム年間減価償却費 (円/m³/S)
出典: 「ダム年鑑2011」 1,022,000,000
- Y: 評価期間 80
- 10: 単位合わせのための調整値
- 365: 1年間の日数
- 86400: 1日の秒数

年度	社会的割引率	事業対象区域面積	事業効果面積	効果額	現在価値化
1,961	7.3910				
1,962	7.1067	1,661.77	110.78	4,750	33,757
1,963	6.8333	1,661.77	221.57	9,499	64,910
1,964	6.5705	1,661.77	332.35	14,249	93,623
1,965	6.3178	1,661.77	443.14	18,998	120,026
1,966	6.0748	1,661.77	553.92	23,748	144,264
1,967	5.8412	1,661.77	664.71	28,497	166,457
1,968	5.6165	1,661.77	775.49	33,247	186,732
1,969	5.4005	1,661.77	886.28	37,996	205,197
1,970	5.1928	1,661.77	997.06	42,746	221,971
1,971	4.9931	1,661.77	1,107.85	47,496	237,152
1,972	4.8010	1,661.77	1,218.63	52,245	250,828
1,973	4.6164	1,661.77	1,329.42	56,995	263,112
1,974	4.4388	1,661.77	1,440.20	61,744	274,069
1,975	4.2681	1,661.77	1,550.99	66,494	283,803
1,976	4.1039	1,661.77	1,661.77	71,243	292,374
1,977	3.9461	1,661.77	1,661.77	71,243	281,132
1,978	3.7943	1,661.77	1,661.77	71,243	270,317
1,979	3.6484	1,661.77	1,661.77	71,243	259,923
1,980	3.5081	1,661.77	1,661.77	71,243	249,928
1,981	3.3731	1,661.77	1,661.77	71,243	240,310
1,982	3.2434	1,661.77	1,661.77	71,243	231,070
1,983	3.1187	1,661.77	1,661.77	71,243	222,186
1,984	2.9987	1,661.77	1,661.77	71,243	213,636
1,985	2.8834	1,661.77	1,661.77	71,243	205,422
1,986	2.7725	1,661.77	1,661.77	71,243	197,521
1,987	2.6658	1,661.77	1,661.77	71,243	189,920
1,988	2.5633	1,661.77	1,661.77	71,243	182,617
1,989	2.4647	1,661.77	1,661.77	71,243	175,593
1,990	2.3699	1,661.77	1,661.77	71,243	168,839
1,991	2.2788	1,661.77	1,661.77	71,243	162,349
1,992	2.1911	1,661.77	1,661.77	71,243	156,101
1,993	2.1068	1,661.77	1,661.77	71,243	150,095
1,994	2.0258	1,661.77	1,661.77	71,243	144,324
1,995	1.9479	1,661.77	1,661.77	71,243	138,774
1,996	1.8730	1,661.77	1,661.77	71,243	133,438
1,997	1.8009	1,661.77	1,661.77	71,243	128,302
1,998	1.7317	1,661.77	1,661.77	71,243	123,372
1,999	1.6651	1,661.77	1,661.77	71,243	118,627
2,000	1.6010	1,661.77	1,661.77	71,243	114,060
2,001	1.5395	1,661.77	1,661.77	71,243	109,679
2,002	1.4802	1,661.77	1,661.77	71,243	105,454
2,003	1.4233	1,661.77	1,661.77	71,243	101,400
2,004	1.3686	1,661.77	1,661.77	71,243	97,503
2,005	1.3159	1,661.77	1,661.77	71,243	93,749
2,006	1.2653	1,661.77	1,661.77	71,243	90,144
2,007	1.2167	1,661.77	1,661.77	71,243	86,681
2,008	1.1699	1,661.77	1,661.77	71,243	83,347
2,009	1.1249	1,661.77	1,661.77	71,243	80,141
2,010	1.0816	1,661.77	1,661.77	71,243	77,056
2,011	1.0400	1,661.77	1,661.77	71,243	74,093
2,012	1.0000	1,661.77	1,661.77	71,243	71,243
2,013	0.9615	1,661.77	1,661.77	71,243	68,500
2,014	0.9246	1,661.77	1,661.77	71,243	65,871
2,015	0.8890	1,661.77	1,661.77	71,243	63,335
2,016	0.8548	1,661.77	1,661.77	71,243	60,899
2,017	0.8219	1,661.77	1,661.77	71,243	58,555
2,018	0.7903	1,661.77	1,661.77	71,243	56,303
2,019	0.7599	1,661.77	1,661.77	71,243	54,138

2,020	0.7307	1,661.77	1,661.77	71,243	52,057
2,021	0.7026	1,661.77	1,661.77	71,243	50,055
2,022	0.6756	1,661.77	1,661.77	71,243	48,132
2,023	0.6496	1,661.77	1,661.77	71,243	46,279
2,024	0.6246	1,661.77	1,661.77	71,243	44,498
2,025	0.6006	1,661.77	1,661.77	71,243	42,789
2,026	0.5775	1,661.77	1,661.77	71,243	41,143
2,027	0.5553	1,661.77	1,661.77	71,243	39,561
2,028	0.5339	1,661.77	1,661.77	71,243	38,037
2,029	0.5134	1,661.77	1,661.77	71,243	36,576
2,030	0.4936	1,661.77	1,661.77	71,243	35,166
2,031	0.4746	1,661.77	1,661.77	71,243	33,812
2,032	0.4564	1,661.77	1,661.77	71,243	32,515
2,033	0.4388	1,661.77	1,661.77	71,243	31,261
2,034	0.4220	1,661.77	1,661.77	71,243	30,065
2,035	0.4057	1,661.77	1,661.77	71,243	28,903
2,036	0.3901	1,661.77	1,661.77	71,243	27,792
2,037	0.3751	1,661.77	1,661.77	71,243	26,723
2,038	0.3607	1,661.77	1,661.77	71,243	25,697
2,039	0.3468	1,661.77	1,661.77	71,243	24,707
2,040	0.3335	1,661.77	1,661.77	71,243	23,760
2,041	0.3207	1,661.77	1,661.77	71,243	22,848
合計					9,576,598

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

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

Qx:	全貯留量のうち生活用水使用相当量	155.00 億
Qy:	全貯留量 - Qx	1,707.30 億
A:	事業対象区域面積 (ha)	1,661.77 ~ 1,661.77
P:	年間平均降雨量 (mm/年) 出典: 気象統計情報 (気象庁)	2,646
T:	事業実施後、貯留率が安定するのに必要な年数	15
D1:	事業実施前の貯留率 出典: 「森林の間伐と水収支」(近嵐ら, 1987)	0.51
D2:	事業実施後、T年経過後の貯留率 出典: 「森林の間伐と水収支」(近嵐ら, 1987)	0.56
Ux:	単位当たりの上水道給水原価 (円/m ³) 出典: 「日本の水資源」	176.35
Uy:	単位当たりの雨水浄化費 (円/m ³) 出典: 「地球環境・人間生活にかかる農業及び森林の多面的な機能の評価に関する調査研究報告書」(三菱総合研究所, H13.11)「雨水利用ハンドブック」	68.60
u:	単位当たりの水質浄化費 (Ux と Uy を用いて Qx と Qy で比例按分して算出)	77.57
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
1961	7.3910				
1962	7.1067	1,661.77	110.78	11,369	80,796
1963	6.8333	1,661.77	221.57	22,737	155,369
1964	6.5705	1,661.77	332.35	34,106	224,093
1965	6.3178	1,661.77	443.14	45,474	287,296
1966	6.0748	1,661.77	553.92	56,843	345,310
1967	5.8412	1,661.77	664.71	68,211	398,434
1968	5.6165	1,661.77	775.49	79,580	446,961
1969	5.4005	1,661.77	886.28	90,948	491,165
1970	5.1928	1,661.77	997.06	102,317	531,312
1971	4.9931	1,661.77	1,107.85	113,685	567,641
1972	4.8010	1,661.77	1,218.63	125,054	600,384
1973	4.6164	1,661.77	1,329.42	136,422	629,779
1974	4.4388	1,661.77	1,440.20	147,791	656,015
1975	4.2681	1,661.77	1,550.99	159,159	679,307
1976	4.1039	1,661.77	1,661.77	170,528	699,830
1977	3.9461	1,661.77	1,661.77	170,528	672,921
1978	3.7943	1,661.77	1,661.77	170,528	647,034
1979	3.6484	1,661.77	1,661.77	170,528	622,154
1980	3.5081	1,661.77	1,661.77	170,528	598,229
1981	3.3731	1,661.77	1,661.77	170,528	575,208
1982	3.2434	1,661.77	1,661.77	170,528	553,091
1983	3.1187	1,661.77	1,661.77	170,528	531,826
1984	2.9987	1,661.77	1,661.77	170,528	511,362
1985	2.8834	1,661.77	1,661.77	170,528	491,700
1986	2.7725	1,661.77	1,661.77	170,528	472,789
1987	2.6658	1,661.77	1,661.77	170,528	454,594
1988	2.5633	1,661.77	1,661.77	170,528	437,114
1989	2.4647	1,661.77	1,661.77	170,528	420,300
1990	2.3699	1,661.77	1,661.77	170,528	404,134
1991	2.2788	1,661.77	1,661.77	170,528	388,599
1992	2.1911	1,661.77	1,661.77	170,528	373,644
1993	2.1068	1,661.77	1,661.77	170,528	359,268
1994	2.0258	1,661.77	1,661.77	170,528	345,456
1995	1.9479	1,661.77	1,661.77	170,528	332,171
1996	1.8730	1,661.77	1,661.77	170,528	319,399
1997	1.8009	1,661.77	1,661.77	170,528	307,104
1998	1.7317	1,661.77	1,661.77	170,528	295,303
1999	1.6651	1,661.77	1,661.77	170,528	283,946
2000	1.6010	1,661.77	1,661.77	170,528	273,015
2001	1.5395	1,661.77	1,661.77	170,528	262,528
2002	1.4802	1,661.77	1,661.77	170,528	252,416
2003	1.4233	1,661.77	1,661.77	170,528	242,713
2004	1.3686	1,661.77	1,661.77	170,528	233,385
2005	1.3159	1,661.77	1,661.77	170,528	224,398
2006	1.2653	1,661.77	1,661.77	170,528	215,769
2007	1.2167	1,661.77	1,661.77	170,528	207,481
2008	1.1699	1,661.77	1,661.77	170,528	199,501
2009	1.1249	1,661.77	1,661.77	170,528	191,827
2010	1.0816	1,661.77	1,661.77	170,528	184,443
2011	1.0400	1,661.77	1,661.77	170,528	177,349

2012	1.0000	1,661.77	1,661.77	170,528	170,528
2013	0.9615	1,661.77	1,661.77	170,528	163,963
2014	0.9246	1,661.77	1,661.77	170,528	157,670
2015	0.8890	1,661.77	1,661.77	170,528	151,599
2016	0.8548	1,661.77	1,661.77	170,528	145,767
2017	0.8219	1,661.77	1,661.77	170,528	140,157
2018	0.7903	1,661.77	1,661.77	170,528	134,768
2019	0.7599	1,661.77	1,661.77	170,528	129,584
2020	0.7307	1,661.77	1,661.77	170,528	124,605
2021	0.7026	1,661.77	1,661.77	170,528	119,813
2022	0.6756	1,661.77	1,661.77	170,528	115,209
2023	0.6496	1,661.77	1,661.77	170,528	110,775
2024	0.6246	1,661.77	1,661.77	170,528	106,512
2025	0.6006	1,661.77	1,661.77	170,528	102,419
2026	0.5775	1,661.77	1,661.77	170,528	98,480
2027	0.5553	1,661.77	1,661.77	170,528	94,694
2028	0.5339	1,661.77	1,661.77	170,528	91,045
2029	0.5134	1,661.77	1,661.77	170,528	87,549
2030	0.4936	1,661.77	1,661.77	170,528	84,173
2031	0.4746	1,661.77	1,661.77	170,528	80,933
2032	0.4564	1,661.77	1,661.77	170,528	77,829
2033	0.4388	1,661.77	1,661.77	170,528	74,828
2034	0.4220	1,661.77	1,661.77	170,528	71,963
2035	0.4057	1,661.77	1,661.77	170,528	69,183
2036	0.3901	1,661.77	1,661.77	170,528	66,523
2037	0.3751	1,661.77	1,661.77	170,528	63,965
2038	0.3607	1,661.77	1,661.77	170,528	61,509
2039	0.3468	1,661.77	1,661.77	170,528	59,139
2040	0.3335	1,661.77	1,661.77	170,528	56,871
2041	0.3207	1,661.77	1,661.77	170,528	54,688
合計					22,922,604

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

- U: 1m3の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m3) 5,600
- 出典:「砂防便覧」平成20年版
- V1: 事業実施前における1ha当りの年間浸食土砂量(m3) 20.00
- 出典:「治山全体調査の考え方進め方」森林の公益的機能に関する文献要約集「森林水文」
- V2: 事業実施後における1ha当りの年間浸食土砂量(m3) 1.30
- 出典:「治山全体調査の考え方進め方」森林の公益的機能に関する文献要約集「森林水文」
- A: 事業対象区域面積(ha) 1,661.77 ~ 1,661.77
- T: 事業実施後、流出係数が安定するのに必要な年数 15
- Y: 評価期間 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
1961	7.3910				
1962	7.1067	1,661.77	110.78	11,601	82,445
1963	6.8333	1,661.77	221.57	23,203	158,553
1964	6.5705	1,661.77	332.35	34,804	228,680
1965	6.3178	1,661.77	443.14	46,405	293,178
1966	6.0748	1,661.77	553.92	58,007	352,381
1967	5.8412	1,661.77	664.71	69,608	406,594
1968	5.6165	1,661.77	775.49	81,210	456,116
1969	5.4005	1,661.77	886.28	92,811	501,226
1970	5.1928	1,661.77	997.06	104,412	542,191
1971	4.9931	1,661.77	1,107.85	116,014	579,270
1972	4.8010	1,661.77	1,218.63	127,615	612,680
1973	4.6164	1,661.77	1,329.42	139,216	642,677
1974	4.4388	1,661.77	1,440.20	150,818	669,451
1975	4.2681	1,661.77	1,550.99	162,419	693,221
1976	4.1039	1,661.77	1,661.77	174,021	714,165
1977	3.9461	1,661.77	1,661.77	174,021	686,704
1978	3.7943	1,661.77	1,661.77	174,021	660,288
1979	3.6484	1,661.77	1,661.77	174,021	634,898
1980	3.5081	1,661.77	1,661.77	174,021	610,483
1981	3.3731	1,661.77	1,661.77	174,021	586,990
1982	3.2434	1,661.77	1,661.77	174,021	564,420
1983	3.1187	1,661.77	1,661.77	174,021	542,719
1984	2.9987	1,661.77	1,661.77	174,021	521,837
1985	2.8834	1,661.77	1,661.77	174,021	501,772
1986	2.7725	1,661.77	1,661.77	174,021	482,473
1987	2.6658	1,661.77	1,661.77	174,021	463,905
1988	2.5633	1,661.77	1,661.77	174,021	446,068
1989	2.4647	1,661.77	1,661.77	174,021	428,910
1990	2.3699	1,661.77	1,661.77	174,021	412,412
1991	2.2788	1,661.77	1,661.77	174,021	396,559
1992	2.1911	1,661.77	1,661.77	174,021	381,297
1993	2.1068	1,661.77	1,661.77	174,021	366,627
1994	2.0258	1,661.77	1,661.77	174,021	352,532
1995	1.9479	1,661.77	1,661.77	174,021	338,976
1996	1.8730	1,661.77	1,661.77	174,021	325,941
1997	1.8009	1,661.77	1,661.77	174,021	313,394
1998	1.7317	1,661.77	1,661.77	174,021	301,352
1999	1.6651	1,661.77	1,661.77	174,021	289,762
2000	1.6010	1,661.77	1,661.77	174,021	278,608
2001	1.5395	1,661.77	1,661.77	174,021	267,905
2002	1.4802	1,661.77	1,661.77	174,021	257,586
2003	1.4233	1,661.77	1,661.77	174,021	247,684
2004	1.3686	1,661.77	1,661.77	174,021	238,165
2005	1.3159	1,661.77	1,661.77	174,021	228,994
2006	1.2653	1,661.77	1,661.77	174,021	220,189
2007	1.2167	1,661.77	1,661.77	174,021	211,731
2008	1.1699	1,661.77	1,661.77	174,021	203,587
2009	1.1249	1,661.77	1,661.77	174,021	195,756
2010	1.0816	1,661.77	1,661.77	174,021	188,221
2011	1.0400	1,661.77	1,661.77	174,021	180,982
2012	1.0000	1,661.77	1,661.77	174,021	174,021
2013	0.9615	1,661.77	1,661.77	174,021	167,321
2014	0.9246	1,661.77	1,661.77	174,021	160,900
2015	0.8890	1,661.77	1,661.77	174,021	154,705
2016	0.8548	1,661.77	1,661.77	174,021	148,753
2017	0.8219	1,661.77	1,661.77	174,021	143,028
2018	0.7903	1,661.77	1,661.77	174,021	137,529
2019	0.7599	1,661.77	1,661.77	174,021	132,239
2020	0.7307	1,661.77	1,661.77	174,021	127,157
2021	0.7026	1,661.77	1,661.77	174,021	122,267
2022	0.6756	1,661.77	1,661.77	174,021	117,569
2023	0.6496	1,661.77	1,661.77	174,021	113,044
2024	0.6246	1,661.77	1,661.77	174,021	108,694
2025	0.6006	1,661.77	1,661.77	174,021	104,517
2026	0.5775	1,661.77	1,661.77	174,021	100,497
2027	0.5553	1,661.77	1,661.77	174,021	96,634

2028	0.5339	1,661.77	1,661.77	174,021	92,910
2029	0.5134	1,661.77	1,661.77	174,021	89,342
2030	0.4936	1,661.77	1,661.77	174,021	85,897
2031	0.4746	1,661.77	1,661.77	174,021	82,590
2032	0.4564	1,661.77	1,661.77	174,021	79,423
2033	0.4388	1,661.77	1,661.77	174,021	76,360
2034	0.4220	1,661.77	1,661.77	174,021	73,437
2035	0.4057	1,661.77	1,661.77	174,021	70,600
2036	0.3901	1,661.77	1,661.77	174,021	67,886
2037	0.3751	1,661.77	1,661.77	174,021	65,275
2038	0.3607	1,661.77	1,661.77	174,021	62,769
2039	0.3468	1,661.77	1,661.77	174,021	60,350
2040	0.3335	1,661.77	1,661.77	174,021	58,036
2041	0.3207	1,661.77	1,661.77	174,021	55,809
合計					23,392,114

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

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

U:	1m3の土砂を保全するために要する単位当たりの砂防ダム建設コスト(円/m3) 出典:「砂防便覧」平成20年版	5,600
V:	崩壊見込み量(m3/年)	0.00 ~ 455.17
A:	事業対象区域面積(ha)	1,661.77 ~ 1,661.77
R:	流域内崩壊率 出典:「治山全体調査」S42からS46	0.0015
N:	雨量比=50年確率日雨量/既往最大日雨量 出典:気象統計情報(気象庁)	0.9130
H:	平均崩壊深(m) 出典:都道府県等への聞き取り	2.0
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
1961	7.3910				
1962	7.1067	1,661.77	0.00	0	0
1963	6.8333	1,661.77	0.00	0	0
1964	6.5705	1,661.77	0.00	0	0
1965	6.3178	1,661.77	0.00	0	0
1966	6.0748	1,661.77	0.00	0	0
1967	5.8412	1,661.77	0.00	0	0
1968	5.6165	1,661.77	0.00	0	0
1969	5.4005	1,661.77	0.00	0	0
1970	5.1928	1,661.77	0.00	0	0
1971	4.9931	1,661.77	0.00	0	0
1972	4.8010	1,661.77	455.17	2,549	12,238
1973	4.6164	1,661.77	455.17	2,549	11,767
1974	4.4388	1,661.77	455.17	2,549	11,315
1975	4.2681	1,661.77	455.17	2,549	10,879
1976	4.1039	1,661.77	455.17	2,549	10,461
1977	3.9461	1,661.77	455.17	2,549	10,059
1978	3.7943	1,661.77	455.17	2,549	9,672
1979	3.6484	1,661.77	455.17	2,549	9,300
1980	3.5081	1,661.77	455.17	2,549	8,942
1981	3.3731	1,661.77	455.17	2,549	8,598
1982	3.2434	1,661.77	455.17	2,549	8,267
1983	3.1187	1,661.77	455.17	2,549	7,950
1984	2.9987	1,661.77	455.17	2,549	7,644
1985	2.8834	1,661.77	455.17	2,549	7,350
1986	2.7725	1,661.77	455.17	2,549	7,067
1987	2.6658	1,661.77	455.17	2,549	6,795
1988	2.5633	1,661.77	455.17	2,549	6,534
1989	2.4647	1,661.77	455.17	2,549	6,283
1990	2.3699	1,661.77	455.17	2,549	6,041
1991	2.2788	1,661.77	455.17	2,549	5,809
1992	2.1911	1,661.77	455.17	2,549	5,585
1993	2.1068	1,661.77	455.17	2,549	5,370
1994	2.0258	1,661.77	455.17	2,549	5,164
1995	1.9479	1,661.77	455.17	2,549	4,965
1996	1.8730	1,661.77	455.17	2,549	4,774
1997	1.8009	1,661.77	455.17	2,549	4,590
1998	1.7317	1,661.77	455.17	2,549	4,414
1999	1.6651	1,661.77	455.17	2,549	4,244
2000	1.6010	1,661.77	455.17	2,549	4,081
2001	1.5395	1,661.77	455.17	2,549	3,924
2002	1.4802	1,661.77	455.17	2,549	3,773
2003	1.4233	1,661.77	455.17	2,549	3,628
2004	1.3686	1,661.77	455.17	2,549	3,489
2005	1.3159	1,661.77	455.17	2,549	3,354
2006	1.2653	1,661.77	455.17	2,549	3,225
2007	1.2167	1,661.77	455.17	2,549	3,101
2008	1.1699	1,661.77	455.17	2,549	2,982
2009	1.1249	1,661.77	455.17	2,549	2,867
2010	1.0816	1,661.77	455.17	2,549	2,757
2011	1.0400	1,661.77	455.17	2,549	2,651
2012	1.0000	1,661.77	455.17	2,549	2,549
2013	0.9615	1,661.77	455.17	2,549	2,451
2014	0.9246	1,661.77	455.17	2,549	2,357
2015	0.8890	1,661.77	455.17	2,549	2,266
2016	0.8548	1,661.77	455.17	2,549	2,179
2017	0.8219	1,661.77	455.17	2,549	2,095
2018	0.7903	1,661.77	455.17	2,549	2,014
2019	0.7599	1,661.77	455.17	2,549	1,937

2020	0.7307	1,661.77	455.17	2,549	1,863
2021	0.7026	1,661.77	455.17	2,549	1,791
2022	0.6756	1,661.77	455.17	2,549	1,722
2023	0.6496	1,661.77	455.17	2,549	1,656
2024	0.6246	1,661.77	455.17	2,549	1,592
2025	0.6006	1,661.77	455.17	2,549	1,531
2026	0.5775	1,661.77	455.17	2,549	1,472
2027	0.5553	1,661.77	455.17	2,549	1,415
2028	0.5339	1,661.77	455.17	2,549	1,361
2029	0.5134	1,661.77	455.17	2,549	1,309
2030	0.4936	1,661.77	455.17	2,549	1,258
2031	0.4746	1,661.77	455.17	2,549	1,210
2032	0.4564	1,661.77	455.17	2,549	1,163
2033	0.4388	1,661.77	455.17	2,549	1,119
2034	0.4220	1,661.77	455.17	2,549	1,076
2035	0.4057	1,661.77	455.17	2,549	1,034
2036	0.3901	1,661.77	455.17	2,549	994
2037	0.3751	1,661.77	455.17	2,549	956
2038	0.3607	1,661.77	455.17	2,549	919
2039	0.3468	1,661.77	455.17	2,549	884
2040	0.3335	1,661.77	455.17	2,549	850
2041	0.3207	1,661.77	455.17	2,549	817
合計					297,749

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

U:	二酸化炭素に関する原単位(円/CO2-ton) 出典:「二酸化炭素地中貯留技術研究開発成果報告書」(財)地球環境産業技術研究機構(平成18年3月)		6,046	
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) (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)	スギ ヒノキ マツ 広葉樹 0 0	372,094 41,212 28,435 21,449 0 0	
V2:	事業を実施する場合の評価最終年の当該森林の見込蓄積量(m3) 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 ヒノキ マツ 広葉樹 0 0	744,187 82,424 56,871 42,899 0 0	
Y:	評価期間		80	
D:	容積密度(t/m3) 出典:「日本国温室効果ガスインベントリ報告書」(2011年4月)(国立環境研究所温室効果ガスインベントリオフィス編)	スギ ヒノキ マツ 広葉樹 0 0	0.314 0.407 0.458 0.646 0 0	
BEF:	バイオマス拡大係数(地上部バイオマス量/幹バイオマス量) 出典:「日本国温室効果ガスインベントリ報告書」(2011年4月)(国立環境研究所温室効果ガスインベントリオフィス編)	樹齢20年越 樹齢20年越 樹齢20年越 樹齢20年越 樹齢20年越 樹齢20年越	スギ ヒノキ マツ 広葉樹 0 0	1.23 1.24 1.23 1.33 0 0
R:	地上部に対する地下部の比率(地下部バイオマス量/地上部バイオマス量) 出典:「日本国温室効果ガスインベントリ報告書」(2011年4月)(国立環境研究所温室効果ガスインベントリオフィス編)	スギ ヒノキ マツ 広葉樹 0 0	0.25 0.26 0.26 0.26 0 0	
0.5:	植物中の炭素含有率			
44/12:	炭素から二酸化炭素への換算係数			

年度	社会的割引率	スギ		ヒノキ		マツ		広葉樹		事業効果蓄積	効果額	事業効果蓄積	効果額
		事業効果蓄積	効果額	事業効果蓄積	効果額	事業効果蓄積	効果額	事業効果蓄積	効果額				
1961	7.3910												
1962	7.1067	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1963	6.8333	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1964	6.5705	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1965	6.3178	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1966	6.0748	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1967	5.8412	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1968	5.6165	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1969	5.4005	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1970	5.1928	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1971	4.9931	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1972	4.8010	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1973	4.6164	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1974	4.4388	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1975	4.2681	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1976	4.1039	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1977	3.9461	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1978	3.7943	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1979	3.6484	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1980	3.5081	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1981	3.3731	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1982	3.2434	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1983	3.1187	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1984	2.9987	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1985	2.8834	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1986	2.7725	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1987	2.6658	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1988	2.5633	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1989	2.4647	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1990	2.3699	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1991	2.2788	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1992	2.1911	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1993	2.1068	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1994	2.0258	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				

1995	1.9479	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1996	1.8730	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1997	1.8009	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1998	1.7317	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
1999	1.6651	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2000	1.6010	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2001	1.5395	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2002	1.4802	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2003	1.4233	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2004	1.3686	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2005	1.3159	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2006	1.2653	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2007	1.2167	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2008	1.1699	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2009	1.1249	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2010	1.0816	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2011	1.0400	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2012	1.0000	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2013	0.9615	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2014	0.9246	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2015	0.8890	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2016	0.8548	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2017	0.8219	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2018	0.7903	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2019	0.7599	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2020	0.7307	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2021	0.7026	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2022	0.6756	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2023	0.6496	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2024	0.6246	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2025	0.6006	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2026	0.5775	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2027	0.5553	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2028	0.5339	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2029	0.5134	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2030	0.4936	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2031	0.4746	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2032	0.4564	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2033	0.4388	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2034	0.4220	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2035	0.4057	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2036	0.3901	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2037	0.3751	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2038	0.3607	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2039	0.3468	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2040	0.3335	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
2041	0.3207	4,651.17	24,884	515.15	3,632	355.44	2,797	268.12	3,217				
合計													

		合計	
年度	社会的割引率	効果額	現在価値化
1961	7.3910		
1962	7.1067	34,530	245,394
1963	6.8333	34,530	235,954
1964	6.5705	34,530	226,879
1965	6.3178	34,530	218,154
1966	6.0748	34,530	209,763
1967	5.8412	34,530	201,697
1968	5.6165	34,530	193,938
1969	5.4005	34,530	186,479
1970	5.1928	34,530	179,307
1971	4.9931	34,530	172,412
1972	4.8010	34,530	165,779
1973	4.6164	34,530	159,404
1974	4.4388	34,530	153,272
1975	4.2681	34,530	147,377
1976	4.1039	34,530	141,708
1977	3.9461	34,530	136,259
1978	3.7943	34,530	131,017
1979	3.6484	34,530	125,979
1980	3.5081	34,530	121,135
1981	3.3731	34,530	116,473
1982	3.2434	34,530	111,995
1983	3.1187	34,530	107,689
1984	2.9987	34,530	103,545
1985	2.8834	34,530	99,564
1986	2.7725	34,530	95,734
1987	2.6658	34,530	92,050
1988	2.5633	34,530	88,511
1989	2.4647	34,530	85,106
1990	2.3699	34,530	81,833
1991	2.2788	34,530	78,687
1992	2.1911	34,530	75,659
1993	2.1068	34,530	72,748
1994	2.0258	34,530	69,951
1995	1.9479	34,530	67,261
1996	1.8730	34,530	64,675
1997	1.8009	34,530	62,185
1998	1.7317	34,530	59,796
1999	1.6651	34,530	57,496

2000	1.6010	34,530	55,283
2001	1.5395	34,530	53,159
2002	1.4802	34,530	51,111
2003	1.4233	34,530	49,147
2004	1.3686	34,530	47,258
2005	1.3159	34,530	45,438
2006	1.2653	34,530	43,691
2007	1.2167	34,530	42,013
2008	1.1699	34,530	40,397
2009	1.1249	34,530	38,843
2010	1.0816	34,530	37,348
2011	1.0400	34,530	35,911
2012	1.0000	34,530	34,530
2013	0.9615	34,530	33,201
2014	0.9246	34,530	31,926
2015	0.8890	34,530	30,697
2016	0.8548	34,530	29,516
2017	0.8219	34,530	28,380
2018	0.7903	34,530	27,289
2019	0.7599	34,530	26,239
2020	0.7307	34,530	25,231
2021	0.7026	34,530	24,261
2022	0.6756	34,530	23,328
2023	0.6496	34,530	22,431
2024	0.6246	34,530	21,567
2025	0.6006	34,530	20,739
2026	0.5775	34,530	19,941
2027	0.5553	34,530	19,175
2028	0.5339	34,530	18,436
2029	0.5134	34,530	17,728
2030	0.4936	34,530	17,044
2031	0.4746	34,530	16,388
2032	0.4564	34,530	15,759
2033	0.4388	34,530	15,152
2034	0.4220	34,530	14,572
2035	0.4057	34,530	14,009
2036	0.3901	34,530	13,470
2037	0.3751	34,530	12,952
2038	0.3607	34,530	12,455
2039	0.3468	34,530	11,975
2040	0.3335	34,530	11,516
2041	0.3207	34,530	11,074
合計			6,103,445

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

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

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

U:	二酸化炭素に関する原単位(円/t-CO2) 出典:「二酸化炭素地中貯留技術研究開発成果報告書」(財)地球環境産業技術研究機構(平成18年3月)	6,046
C1:	事業を実施しない場合の年間流出土砂量に含まれる炭素量(t-C/ha) ①事業対象区域	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 ②評価期間内に侵食深が30cmに達しない場合は評価期間	80
A:	①事業対象区域面積(ha) 又は ②保全効果区域面積(ha)	1,661.77 ~ 1,661.77
s:	単位面積当たりの土壌平均炭素蓄積量(t-C/ha) 出典:「日本国温室効果ガスインベントリ報告書」(2011年4月)(国立環境研究所温室効果ガスインベントリオフィス編)	85.31
44/12:	炭素から二酸化炭素への換算係数	
e1::	事業を実施しない場合の侵食深(cm/年) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」	①事業対象区域 0.200
e2::	事業を実施した場合の侵食深(cm/年) 出典:「治山全体調査の考え方進め方」「森林の公益的機能に関する文献要約集」「森林水文」	①事業対象区域 0.013
30:	土壌炭素の測定深度(cm)	
0.3:	流出土砂排出炭素係数	

年度	社会的割引率	事業対象区域				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			
1961	7.3910							
1962	7.1067	1,661.77	110.78	391	2,779			
1963	6.8333	1,661.77	221.57	781	5,337			
1964	6.5705	1,661.77	332.35	1,172	7,701			
1965	6.3178	1,661.77	443.14	1,562	9,868			
1966	6.0748	1,661.77	553.92	1,953	11,864			
1967	5.8412	1,661.77	664.71	2,343	13,686			
1968	5.6165	1,661.77	775.49	2,734	15,356			
1969	5.4005	1,661.77	886.28	3,124	16,871			
1970	5.1928	1,661.77	997.06	3,515	18,253			
1971	4.9931	1,661.77	1,107.85	3,905	19,498			
1972	4.8010	1,661.77	1,218.63	4,296	20,625			
1973	4.6164	1,661.77	1,329.42	4,686	21,632			
1974	4.4388	1,661.77	1,440.20	5,077	22,536			
1975	4.2681	1,661.77	1,550.99	5,467	23,334			
1976	4.1039	1,661.77	1,661.77	5,858	24,041			
1977	3.9461	1,661.77	1,661.77	5,858	23,116			
1978	3.7943	1,661.77	1,661.77	5,858	22,227			
1979	3.6484	1,661.77	1,661.77	5,858	21,372			
1980	3.5081	1,661.77	1,661.77	5,858	20,550			
1981	3.3731	1,661.77	1,661.77	5,858	19,760			
1982	3.2434	1,661.77	1,661.77	5,858	19,000			
1983	3.1187	1,661.77	1,661.77	5,858	18,269			
1984	2.9987	1,661.77	1,661.77	5,858	17,566			
1985	2.8834	1,661.77	1,661.77	5,858	16,891			
1986	2.7725	1,661.77	1,661.77	5,858	16,241			
1987	2.6658	1,661.77	1,661.77	5,858	15,616			
1988	2.5633	1,661.77	1,661.77	5,858	15,016			
1989	2.4647	1,661.77	1,661.77	5,858	14,438			
1990	2.3699	1,661.77	1,661.77	5,858	13,883			
1991	2.2788	1,661.77	1,661.77	5,858	13,349			
1992	2.1911	1,661.77	1,661.77	5,858	12,835			
1993	2.1068	1,661.77	1,661.77	5,858	12,342			
1994	2.0258	1,661.77	1,661.77	5,858	11,867			
1995	1.9479	1,661.77	1,661.77	5,858	11,411			
1996	1.8730	1,661.77	1,661.77	5,858	10,972			
1997	1.8009	1,661.77	1,661.77	5,858	10,550			
1998	1.7317	1,661.77	1,661.77	5,858	10,144			
1999	1.6651	1,661.77	1,661.77	5,858	9,754			
2000	1.6010	1,661.77	1,661.77	5,858	9,379			

2001	1.5395	1,661.77	1,661.77	5,858	9,018			
2002	1.4802	1,661.77	1,661.77	5,858	8,671			
2003	1.4233	1,661.77	1,661.77	5,858	8,338			
2004	1.3686	1,661.77	1,661.77	5,858	8,017			
2005	1.3159	1,661.77	1,661.77	5,858	7,709			
2006	1.2653	1,661.77	1,661.77	5,858	7,412			
2007	1.2167	1,661.77	1,661.77	5,858	7,127			
2008	1.1699	1,661.77	1,661.77	5,858	6,853			
2009	1.1249	1,661.77	1,661.77	5,858	6,590			
2010	1.0816	1,661.77	1,661.77	5,858	6,336			
2011	1.0400	1,661.77	1,661.77	5,858	6,092			
2012	1.0000	1,661.77	1,661.77	5,858	5,858			
2013	0.9615	1,661.77	1,661.77	5,858	5,632			
2014	0.9246	1,661.77	1,661.77	5,858	5,416			
2015	0.8890	1,661.77	1,661.77	5,858	5,208			
2016	0.8548	1,661.77	1,661.77	5,858	5,007			
2017	0.8219	1,661.77	1,661.77	5,858	4,815			
2018	0.7903	1,661.77	1,661.77	5,858	4,630			
2019	0.7599	1,661.77	1,661.77	5,858	4,451			
2020	0.7307	1,661.77	1,661.77	5,858	4,280			
2021	0.7026	1,661.77	1,661.77	5,858	4,116			
2022	0.6756	1,661.77	1,661.77	5,858	3,958			
2023	0.6496	1,661.77	1,661.77	5,858	3,805			
2024	0.6246	1,661.77	1,661.77	5,858	3,659			
2025	0.6006	1,661.77	1,661.77	5,858	3,518			
2026	0.5775	1,661.77	1,661.77	5,858	3,383			
2027	0.5553	1,661.77	1,661.77	5,858	3,253			
2028	0.5339	1,661.77	1,661.77	5,858	3,128			
2029	0.5134	1,661.77	1,661.77	5,858	3,007			
2030	0.4936	1,661.77	1,661.77	5,858	2,892			
2031	0.4746	1,661.77	1,661.77	5,858	2,780			
2032	0.4564	1,661.77	1,661.77	5,858	2,674			
2033	0.4388	1,661.77	1,661.77	5,858	2,570			
2034	0.4220	1,661.77	1,661.77	5,858	2,472			
2035	0.4057	1,661.77	1,661.77	5,858	2,377			
2036	0.3901	1,661.77	1,661.77	5,858	2,285			
2037	0.3751	1,661.77	1,661.77	5,858	2,197			
2038	0.3607	1,661.77	1,661.77	5,858	2,113			
2039	0.3468	1,661.77	1,661.77	5,858	2,032			
2040	0.3335	1,661.77	1,661.77	5,858	1,954			
2041	0.3207	1,661.77	1,661.77	5,858	1,879			
合計					787,441			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 ~ 595,349.65
ヒノキ	0.00 ~ 61,818.09
マツ	0.00 ~ 41,231.22
広葉樹	0.00 ~ 42,898.81
0	
0	

@: 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	2,550
ヒノキ	5,255
マツ	2,286
広葉樹	0
0	0
0	0

年度	社会的割引率	スギ		ヒノキ		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		
1961	7.3910										
1962	7.1067	0.00	0	0.00	0	0.00	0	0.00	0		
1963	6.8333	0.00	0	0.00	0	0.00	0	0.00	0		
1964	6.5705	0.00	0	0.00	0	0.00	0	0.00	0		
1965	6.3178	0.00	0	0.00	0	0.00	0	0.00	0		
1966	6.0748	0.00	0	0.00	0	0.00	0	0.00	0		
1967	5.8412	0.00	0	0.00	0	0.00	0	0.00	0		
1968	5.6165	0.00	0	0.00	0	0.00	0	0.00	0		
1969	5.4005	0.00	0	0.00	0	0.00	0	0.00	0		
1970	5.1928	0.00	0	0.00	0	0.00	0	0.00	0		
1971	4.9931	0.00	0	0.00	0	0.00	0	0.00	0		
1972	4.8010	0.00	0	0.00	0	0.00	0	0.00	0		
1973	4.6164	0.00	0	0.00	0	0.00	0	0.00	0		
1974	4.4388	0.00	0	0.00	0	0.00	0	0.00	0		
1975	4.2681	0.00	0	0.00	0	0.00	0	0.00	0		
1976	4.1039	0.00	0	0.00	0	0.00	0	0.00	0		
1977	3.9461	0.00	0	0.00	0	0.00	0	0.00	0		
1978	3.7943	0.00	0	0.00	0	0.00	0	0.00	0		
1979	3.6484	0.00	0	0.00	0	0.00	0	0.00	0		
1980	3.5081	0.00	0	0.00	0	0.00	0	0.00	0		
1981	3.3731	0.00	0	0.00	0	0.00	0	0.00	0		
1982	3.2434	0.00	0	0.00	0	0.00	0	0.00	0		
1983	3.1187	0.00	0	0.00	0	0.00	0	0.00	0		
1984	2.9987	0.00	0	0.00	0	0.00	0	0.00	0		
1985	2.8834	0.00	0	0.00	0	0.00	0	0.00	0		
1986	2.7725	0.00	0	0.00	0	0.00	0	0.00	0		
1987	2.6658	0.00	0	0.00	0	0.00	0	0.00	0		
1988	2.5633	0.00	0	0.00	0	0.00	0	0.00	0		
1989	2.4647	0.00	0	0.00	0	0.00	0	0.00	0		
1990	2.3699	0.00	0	0.00	0	0.00	0	0.00	0		
1991	2.2788	0.00	0	0.00	0	0.00	0	0.00	0		
1992	2.1911	0.00	0	0.00	0	0.00	0	0.00	0		
1993	2.1068	0.00	0	0.00	0	0.00	0	0.00	0		
1994	2.0258	0.00	0	0.00	0	0.00	0	0.00	0		
1995	1.9479	0.00	0	0.00	0	0.00	0	0.00	0		
1996	1.8730	0.00	0	0.00	0	0.00	0	0.00	0		
1997	1.8009	0.00	0	0.00	0	0.00	0	0.00	0		
1998	1.7317	0.00	0	0.00	0	0.00	0	0.00	0		
1999	1.6651	0.00	0	0.00	0	0.00	0	0.00	0		
2000	1.6010	0.00	0	0.00	0	0.00	0	0.00	0		
2001	1.5395	0.00	0	0.00	0	0.00	0	0.00	0		
2002	1.4802	0.00	0	0.00	0	0.00	0	0.00	0		
2003	1.4233	0.00	0	0.00	0	0.00	0	0.00	0		
2004	1.3686	0.00	0	0.00	0	0.00	0	0.00	0		
2005	1.3159	0.00	0	0.00	0	0.00	0	0.00	0		
2006	1.2653	0.00	0	0.00	0	0.00	0	0.00	0		
2007	1.2167	0.00	0	0.00	0	0.00	0	0.00	0		
2008	1.1699	0.00	0	0.00	0	0.00	0	0.00	0		
2009	1.1249	0.00	0	0.00	0	0.00	0	0.00	0		
2010	1.0816	0.00	0	0.00	0	0.00	0	0.00	0		
2011	1.0400	0.00	0	0.00	0	0.00	0	0.00	0		
2012	1.0000	0.00	0	0.00	0	0.00	0	0.00	0		
2013	0.9615	0.00	0	0.00	0	0.00	0	0.00	0		
2014	0.9246	0.00	0	0.00	0	0.00	0	0.00	0		
2015	0.8890	0.00	0	0.00	0	0.00	0	0.00	0		
2016	0.8548	0.00	0	0.00	0	0.00	0	0.00	0		
2017	0.8219	0.00	0	0.00	0	0.00	0	0.00	0		
2018	0.7903	0.00	0	0.00	0	0.00	0	0.00	0		
2019	0.7599	0.00	0	0.00	0	0.00	0	0.00	0		
2020	0.7307	0.00	0	0.00	0	0.00	0	0.00	0		

2021	0.7026	0.00	0	0.00	0	0.00	0	0.00	0		
2022	0.6756	0.00	0	0.00	0	0.00	0	0.00	0		
2023	0.6496	0.00	0	0.00	0	0.00	0	0.00	0		
2024	0.6246	0.00	0	0.00	0	0.00	0	0.00	0		
2025	0.6006	0.00	0	0.00	0	0.00	0	0.00	0		
2026	0.5775	0.00	0	0.00	0	0.00	0	0.00	0		
2027	0.5553	0.00	0	0.00	0	0.00	0	0.00	0		
2028	0.5339	0.00	0	0.00	0	0.00	0	0.00	0		
2029	0.5134	0.00	0	0.00	0	0.00	0	0.00	0		
2030	0.4936	0.00	0	0.00	0	0.00	0	0.00	0		
2031	0.4746	0.00	0	0.00	0	0.00	0	0.00	0		
2032	0.4564	0.00	0	0.00	0	0.00	0	0.00	0		
2033	0.4388	0.00	0	0.00	0	0.00	0	0.00	0		
2034	0.4220	0.00	0	0.00	0	0.00	0	0.00	0		
2035	0.4057	0.00	0	0.00	0	0.00	0	0.00	0		
2036	0.3901	0.00	0	0.00	0	0.00	0	0.00	0		
2037	0.3751	0.00	0	0.00	0	0.00	0	0.00	0		
2038	0.3607	0.00	0	0.00	0	0.00	0	0.00	0		
2039	0.3468	0.00	0	0.00	0	0.00	0	0.00	0		
2040	0.3335	0.00	0	0.00	0	0.00	0	0.00	0		
2041	0.3207	595,349.65	1,518,142	61,818.09	324,854	41,231.22	94,255	42,898.81	0		
合計											

			合計		
年度	社会的割引率	事業効果材積	効果額	効果額	現在価値化
1961	7.3910			0	0
1962	7.1067			0	0
1963	6.8333			0	0
1964	6.5705			0	0
1965	6.3178			0	0
1966	6.0748			0	0
1967	5.8412			0	0
1968	5.6165			0	0
1969	5.4005			0	0
1970	5.1928			0	0
1971	4.9931			0	0
1972	4.8010			0	0
1973	4.6164			0	0
1974	4.4388			0	0
1975	4.2681			0	0
1976	4.1039			0	0
1977	3.9461			0	0
1978	3.7943			0	0
1979	3.6484			0	0
1980	3.5081			0	0
1981	3.3731			0	0
1982	3.2434			0	0
1983	3.1187			0	0
1984	2.9987			0	0
1985	2.8834			0	0
1986	2.7725			0	0
1987	2.6658			0	0
1988	2.5633			0	0
1989	2.4647			0	0
1990	2.3699			0	0
1991	2.2788			0	0
1992	2.1911			0	0
1993	2.1068			0	0
1994	2.0258			0	0
1995	1.9479			0	0
1996	1.8730			0	0
1997	1.8009			0	0
1998	1.7317			0	0
1999	1.6651			0	0
2000	1.6010			0	0
2001	1.5395			0	0
2002	1.4802			0	0
2003	1.4233			0	0
2004	1.3686			0	0
2005	1.3159			0	0
2006	1.2653			0	0
2007	1.2167			0	0
2008	1.1699			0	0
2009	1.1249			0	0
2010	1.0816			0	0
2011	1.0400			0	0
2012	1.0000			0	0
2013	0.9615			0	0
2014	0.9246			0	0
2015	0.8890			0	0
2016	0.8548			0	0
2017	0.8219			0	0
2018	0.7903			0	0
2019	0.7599			0	0
2020	0.7307			0	0
2021	0.7026			0	0
2022	0.6756			0	0
2023	0.6496			0	0
2024	0.6246			0	0
2025	0.6006			0	0

2026	0.5775			0	0
2027	0.5553			0	0
2028	0.5339			0	0
2029	0.5134			0	0
2030	0.4936			0	0
2031	0.4746			0	0
2032	0.4564			0	0
2033	0.4388			0	0
2034	0.4220			0	0
2035	0.4057			0	0
2036	0.3901			0	0
2037	0.3751			0	0
2038	0.3607			0	0
2039	0.3468			0	0
2040	0.3335			0	0
2041	0.3207			1,937,251	621,276
合計					621,276