

## 事業費集計表

事業名：森林環境保全整備事業  
 事業実施地区名：飛騨川森林計画区  
 （都道府県名：岐阜県）

事業実施主体： 中部森林管理局  
 岐阜森林管理署

(単位：千円)

| 年度   | 事業費     |   |      | 年度      | 事業費 |           |      |           |    |
|------|---------|---|------|---------|-----|-----------|------|-----------|----|
| 着手年度 |         | x | 1.00 | 54      | 0   | x         | 0.12 | 0         |    |
| 1    | 408,482 | x | 0.96 | 392,772 | 55  | 0         | x    | 0.12      | 0  |
| 2    | 384,744 | x | 0.92 | 355,718 | 56  | 0         | x    | 0.11      | 0  |
| 3    | 329,995 | x | 0.89 | 293,365 | 57  | 0         | x    | 0.11      | 0  |
| 4    | 320,193 | x | 0.85 | 273,702 | 58  | 0         | x    | 0.10      | 0  |
| 5    | 309,839 | x | 0.82 | 254,666 | 59  | 0         | x    | 0.10      | 0  |
| 6    | 99,110  | x | 0.79 | 78,328  | 60  | 325       | x    | 0.10      | 31 |
| 7    | 75,014  | x | 0.76 | 57,005  | 61  | 325       | x    | 0.09      | 30 |
| 8    | 50,918  | x | 0.73 | 37,205  | 62  | 325       | x    | 0.09      | 29 |
| 9    | 26,822  | x | 0.70 | 18,845  | 63  | 325       | x    | 0.08      | 27 |
| 10   | 19,093  | x | 0.68 | 12,899  | 64  | 325       | x    | 0.08      | 26 |
| 11   | 17,792  | x | 0.65 | 11,558  | 65  | 0         | x    | 0.08      | 0  |
| 12   | 17,792  | x | 0.62 | 11,113  | 66  | 163       | x    | 0.08      | 12 |
| 13   | 17,792  | x | 0.60 | 10,686  | 67  | 163       | x    | 0.07      | 12 |
| 14   | 17,792  | x | 0.58 | 10,275  | 68  | 163       | x    | 0.07      | 11 |
| 15   | 45,119  | x | 0.56 | 25,053  | 69  | 163       | x    | 0.07      | 11 |
| 16   | 66,007  | x | 0.53 | 35,242  | 70  | 163       | x    | 0.06      | 10 |
| 17   | 66,007  | x | 0.51 | 33,887  | 71  | 0         | x    | 0.06      | 0  |
| 18   | 66,007  | x | 0.49 | 32,582  | 72  | 0         | x    | 0.06      | 0  |
| 19   | 66,007  | x | 0.47 | 31,329  | 73  | 0         | x    | 0.06      | 0  |
| 20   | 22,313  | x | 0.46 | 10,183  | 74  | 0         | x    | 0.05      | 0  |
| 21   | 3,412   | x | 0.44 | 1,497   | 75  | 0         | x    | 0.05      | 0  |
| 22   | 3,412   | x | 0.42 | 1,439   | 76  | 0         | x    | 0.05      | 0  |
| 23   | 3,412   | x | 0.41 | 1,384   | 77  | 0         | x    | 0.05      | 0  |
| 24   | 3,412   | x | 0.39 | 1,331   | 78  | 0         | x    | 0.05      | 0  |
| 25   | 3,412   | x | 0.38 | 1,280   | 79  | 0         | x    | 0.05      | 0  |
| 26   | 16,463  | x | 0.36 | 5,938   | 80  | 325       | x    | 0.04      | 14 |
| 27   | 16,463  | x | 0.35 | 5,709   | 81  | 325       | x    | 0.04      | 14 |
| 28   | 16,463  | x | 0.33 | 5,490   | 82  | 325       | x    | 0.04      | 13 |
| 29   | 16,463  | x | 0.32 | 5,279   | 83  | 325       | x    | 0.04      | 13 |
| 30   | 70,771  | x | 0.31 | 21,820  | 84  | 325       | x    | 0.04      | 12 |
| 31   | 56,871  | x | 0.30 | 16,860  | 85  | 0         | x    | 0.04      | 0  |
| 32   | 56,871  | x | 0.29 | 16,211  | 86  | 0         | x    | 0.03      | 0  |
| 33   | 56,871  | x | 0.27 | 15,588  | 87  | 0         | x    | 0.03      | 0  |
| 34   | 56,871  | x | 0.26 | 14,989  | 88  | 0         | x    | 0.03      | 0  |
| 35   | 2,563   | x | 0.25 | 649     | 89  | 0         | x    | 0.03      | 0  |
| 36   | 1,425   | x | 0.24 | 347     | 90  | 0         | x    | 0.03      | 0  |
| 37   | 1,425   | x | 0.23 | 334     | 91  | 0         | x    | 0.03      | 0  |
| 38   | 1,425   | x | 0.23 | 321     | 92  | 0         | x    | 0.03      | 0  |
| 39   | 1,425   | x | 0.22 | 309     | 93  | 0         | x    | 0.03      | 0  |
| 40   | 33,208  | x | 0.21 | 6,917   | 94  | 0         | x    | 0.03      | 0  |
| 41   | 33,615  | x | 0.20 | 6,732   | 95  | 0         | x    | 0.02      | 0  |
| 42   | 33,591  | x | 0.19 | 6,469   | 96  | 0         | x    | 0.02      | 0  |
| 43   | 33,248  | x | 0.19 | 6,157   | 97  | 0         | x    | 0.02      | 0  |
| 44   | 32,842  | x | 0.18 | 5,847   | 98  | 0         | x    | 0.02      | 0  |
| 45   | 656     | x | 0.17 | 113     | 99  | 0         | x    | 0.02      | 0  |
| 46   | 163     | x | 0.16 | 27      | 100 | 0         | x    | 0.02      | 0  |
| 47   | 163     | x | 0.16 | 26      | 101 | 0         | x    | 0.02      | 0  |
| 48   | 163     | x | 0.15 | 25      | 102 | 0         | x    | 0.02      | 0  |
| 49   | 163     | x | 0.15 | 24      | 103 | 0         | x    | 0.02      | 0  |
| 50   | 163     | x | 0.14 | 23      | 104 | 0         | x    | 0.02      | 0  |
| 51   | 0       | x | 0.14 | 0       |     |           |      |           |    |
| 52   | 0       | x | 0.13 | 0       |     |           |      |           |    |
| 53   | 0       | x | 0.13 | 0       | 合計  | 2,988,308 |      | 2,135,813 |    |

C= 2,135,813 千円

1 水源かん養便益  
(1) 洪水防止便益

4,957,893

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

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/m<sup>3</sup>/sec)  
 f1: 事業実施前の流出係数  
 f2: 事業実施後、T年経過後の流出係数  
 T: 事業実施後、流出係数が安定するのに必要な年数  
 α: 100年確率時雨量(mm/h)  
 A: 事業対象区域面積(ha)  
 360: 単位合わせのための調整値  
 Y: 評価期間

3,740,000  
 0.65  
 0.55  
 15  
 221  
 表のとおり  
 360  
 50年、80年、100年  
 229,594

| 年度   | 経過年数 | 社会的割引率 | 事業対象区域面積(A) | t/T (平均値) | 事業効果面積   | 効果額(千円) | 現在価値化(千円) |
|------|------|--------|-------------|-----------|----------|---------|-----------|
| 2011 |      | 1.0000 |             |           |          |         |           |
| 2012 | 1    | 0.9615 | 406.20      | 0.0667    | 27.09    | 6.220   | 5.981     |
| 2013 | 2    | 0.9246 | 812.40      | 0.1000    | 81.24    | 18.652  | 17.246    |
| 2014 | 3    | 0.8890 | 1,218.60    | 0.1333    | 162.44   | 37.295  | 33.155    |
| 2015 | 4    | 0.8548 | 1,624.80    | 0.1667    | 270.85   | 62.186  | 53.157    |
| 2016 | 5    | 0.8219 | 2,031.00    | 0.2000    | 406.20   | 93.261  | 76.651    |
| 2017 | 6    | 0.7903 | 2,031.00    | 0.2867    | 541.67   | 124.364 | 98.285    |
| 2018 | 7    | 0.7599 | 2,031.00    | 0.3333    | 676.93   | 155.419 | 118.103   |
| 2019 | 8    | 0.7307 | 2,031.00    | 0.4000    | 812.40   | 186.522 | 136.292   |
| 2020 | 9    | 0.7026 | 2,031.00    | 0.4667    | 947.87   | 217.625 | 152.903   |
| 2021 | 10   | 0.6756 | 2,031.00    | 0.5333    | 1,083.13 | 248.680 | 168.008   |
| 2022 | 11   | 0.6496 | 2,031.00    | 0.6000    | 1,218.60 | 279.783 | 181.747   |
| 2023 | 12   | 0.6246 | 1,898.80    | 0.6574    | 1,248.27 | 286.595 | 179.007   |
| 2024 | 13   | 0.6006 | 1,766.60    | 0.7184    | 1,269.13 | 291.395 | 175.006   |
| 2025 | 14   | 0.5775 | 1,634.40    | 0.7838    | 1,281.04 | 294.119 | 169.854   |
| 2026 | 15   | 0.5553 | 1,502.20    | 0.8549    | 1,284.23 | 294.852 | 163.731   |
| 2027 | 16   | 0.5339 | 1,370.00    | 0.9200    | 1,260.40 | 289.380 | 154.500   |
| 2028 | 17   | 0.5134 | 1,370.00    | 0.9600    | 1,315.20 | 301.962 | 155.027   |
| 2029 | 18   | 0.4936 | 1,370.00    | 0.9867    | 1,351.78 | 310.361 | 153.194   |
| 2030 | 19   | 0.4746 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 149.283   |
| 2031 | 20   | 0.4564 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 143.558   |
| 2032 | 21   | 0.4388 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 138.022   |
| 2033 | 22   | 0.4220 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 132.738   |
| 2034 | 23   | 0.4057 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 127.611   |
| 2035 | 24   | 0.3901 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 122.604   |
| 2036 | 25   | 0.3751 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 117.795   |
| 2037 | 26   | 0.3607 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 113.156   |
| 2038 | 27   | 0.3468 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 108.684   |
| 2039 | 28   | 0.3335 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 104.369   |
| 2040 | 29   | 0.3207 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 100.194   |
| 2041 | 30   | 0.3083 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 96.154    |
| 2042 | 31   | 0.2965 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 92.242    |
| 2043 | 32   | 0.2851 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 88.452    |
| 2044 | 33   | 0.2741 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 84.777    |
| 2045 | 34   | 0.2636 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 81.211    |
| 2046 | 35   | 0.2534 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 77.750    |
| 2047 | 36   | 0.2437 | 1,370.00    | 1.0000    | 1,370.00 | 314.544 | 74.389    |
| 2048 | 37   | 0.2343 | 1,296.80    | 1.0000    | 1,296.80 | 297.737 | 69.760    |
| 2049 | 38   | 0.2253 | 1,223.60    | 1.0000    | 1,223.60 | 280.931 | 63.294    |
| 2050 | 39   | 0.2166 | 1,150.40    | 1.0000    | 1,150.40 | 264.125 | 57.209    |
| 2051 | 40   | 0.2083 | 1,077.20    | 1.0000    | 1,077.20 | 247.319 | 51.517    |
| 2052 | 41   | 0.2003 | 1,004.00    | 1.0000    | 1,004.00 | 230.512 | 46.172    |
| 2053 | 42   | 0.1926 | 996.40      | 1.0000    | 996.40   | 228.767 | 44.061    |
| 2054 | 43   | 0.1852 | 988.80      | 1.0000    | 988.80   | 227.023 | 42.045    |
| 2055 | 44   | 0.1780 | 981.20      | 1.0000    | 981.20   | 225.278 | 40.099    |
| 2056 | 45   | 0.1712 | 973.60      | 1.0000    | 973.60   | 223.533 | 38.289    |
| 2057 | 46   | 0.1646 | 966.00      | 1.0000    | 966.00   | 221.788 | 36.506    |
| 2058 | 47   | 0.1583 | 966.00      | 1.0000    | 966.00   | 221.788 | 35.109    |
| 2059 | 48   | 0.1522 | 966.00      | 1.0000    | 966.00   | 221.788 | 33.756    |
| 2060 | 49   | 0.1463 | 966.00      | 1.0000    | 966.00   | 221.788 | 32.448    |
| 2061 | 50   | 0.1407 | 966.00      | 1.0000    | 966.00   | 221.788 | 31.206    |
| 2062 | 51   | 0.1353 | 811.20      | 1.0000    | 811.20   | 186.247 | 25.199    |
| 2063 | 52   | 0.1301 | 656.40      | 1.0000    | 656.40   | 150.706 | 19.607    |
| 2064 | 53   | 0.1251 | 501.60      | 1.0000    | 501.60   | 115.164 | 14.407    |
| 2065 | 54   | 0.1203 | 346.80      | 1.0000    | 346.80   | 79.623  | 9.279     |
| 2066 | 55   | 0.1157 | 192.00      | 1.0000    | 192.00   | 44.082  | 5.100     |
| 2067 | 56   | 0.1112 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.902     |
| 2068 | 57   | 0.1069 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.712     |
| 2069 | 58   | 0.1028 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.532     |
| 2070 | 59   | 0.0989 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.360     |
| 2071 | 60   | 0.0951 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.192     |
| 2072 | 61   | 0.0914 | 192.00      | 1.0000    | 192.00   | 44.082  | 4.029     |
| 2073 | 62   | 0.0879 | 192.00      | 1.0000    | 192.00   | 44.082  | 3.875     |
| 2074 | 63   | 0.0845 | 192.00      | 1.0000    | 192.00   | 44.082  | 3.725     |
| 2075 | 64   | 0.0813 | 192.00      | 1.0000    | 192.00   | 44.082  | 3.584     |
| 2076 | 65   | 0.0781 | 192.00      | 1.0000    | 192.00   | 44.082  | 3.443     |
| 2077 | 66   | 0.0751 | 192.00      | 1.0000    | 192.00   | 44.082  | 3.311     |
| 2078 | 67   | 0.0722 | 191.20      | 1.0000    | 191.20   | 43.898  | 3.169     |
| 2079 | 68   | 0.0695 | 190.40      | 1.0000    | 190.40   | 43.715  | 3.038     |
| 2080 | 69   | 0.0668 | 189.60      | 1.0000    | 189.60   | 43.531  | 2.908     |
| 2081 | 70   | 0.0642 | 188.80      | 1.0000    | 188.80   | 43.347  | 2.783     |
| 2082 | 71   | 0.0617 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.663     |
| 2083 | 72   | 0.0594 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.564     |
| 2084 | 73   | 0.0571 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.465     |
| 2085 | 74   | 0.0549 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.370     |
| 2086 | 75   | 0.0528 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.279     |
| 2087 | 76   | 0.0508 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.193     |
| 2088 | 77   | 0.0488 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.106     |
| 2089 | 78   | 0.0469 | 188.00      | 1.0000    | 188.00   | 43.164  | 2.024     |
| 2090 | 79   | 0.0451 | 188.00      | 1.0000    | 188.00   | 43.164  | 1.947     |
| 2091 | 80   | 0.0434 | 188.00      | 1.0000    | 188.00   | 43.164  | 1.873     |
| 2092 | 81   | 0.0417 | 186.40      | 1.0000    | 186.40   | 42.796  | 1.785     |
| 2093 | 82   | 0.0401 | 184.80      | 1.0000    | 184.80   | 42.429  | 1.701     |
| 2094 | 83   | 0.0386 | 183.20      | 1.0000    | 183.20   | 42.062  | 1.624     |
| 2095 | 84   | 0.0371 | 181.60      | 1.0000    | 181.60   | 41.694  | 1.547     |
| 2096 | 85   | 0.0357 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.475     |
| 2097 | 86   | 0.0343 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.418     |
| 2098 | 87   | 0.0330 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.364     |
| 2099 | 88   | 0.0317 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.310     |
| 2100 | 89   | 0.0305 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.260     |
| 2101 | 90   | 0.0293 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.211     |
| 2102 | 91   | 0.0282 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.165     |
| 2103 | 92   | 0.0271 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.120     |
| 2104 | 93   | 0.0261 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.079     |
| 2105 | 94   | 0.0251 | 180.00      | 1.0000    | 180.00   | 41.327  | 1.037     |
| 2106 | 95   | 0.0241 | 180.00      | 1.0000    | 180.00   | 41.327  | 996       |
| 2107 | 96   | 0.0232 | 180.00      | 1.0000    | 180.00   | 41.327  | 959       |
| 2108 | 97   | 0.0223 | 180.00      | 1.0000    | 180.00   | 41.327  | 922       |
| 2109 | 98   | 0.0214 | 180.00      | 1.0000    | 180.00   | 41.327  | 884       |
| 2110 | 99   | 0.0206 | 180.00      | 1.0000    | 180.00   | 41.327  | 851       |
| 2111 | 100  | 0.0198 | 180.00      | 1.0000    | 180.00   | 41.327  | 818       |
| 2112 | 101  | 0.0190 | 144.00      | 1.0000    | 144.00   | 33.062  | 628       |
| 2113 | 102  | 0.0183 | 108.00      | 1.0000    | 108.00   | 24.796  | 454       |
| 2114 | 103  | 0.0176 | 72.00       | 1.0000    | 72.00    | 16.531  | 281       |
| 2115 | 104  | 0.0169 | 36.00       | 1.0000    | 36.00    | 8.265   | 140       |
| 合計   |      |        |             |           |          |         | 4,957,893 |

1 水源かん養便益  
(2) 流域貯水便益

1,258,291

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

(D2-D1) × A × P × U × 10

365 × 86,400

- A: 事業対象区域面積 (ha)
- P: 年間平均降雨量 (mm/年)
- D1: 事業実施前の貯留率
- D2: 事業実施後、T年経過後の貯留率
- T: 事業実施後、流出係数が安定するのに必要な年数
- U: 開発水量当りの利水ダム年間減価償却費 (円/m<sup>3</sup>/sec)
- Y: 評価期間
- 10: 単位合わせのための調整値
- 365: 1年間の日数
- 86,400: 1日の秒数

表のとおり

|               |
|---------------|
| 2,554         |
| 0.51          |
| 0.56          |
| 15            |
| 1,439,000,000 |
| 50年、80年、100年  |
| 58,270        |

| 年度    | 経過年数 | 社会的割引率 | 事業対象区域面積(A) | t/T (平均値) | 事業効果面積   | 効果額 (千円) | 現在価値化 (千円) |
|-------|------|--------|-------------|-----------|----------|----------|------------|
| 2,010 |      | 1.0000 |             |           |          |          |            |
| 2,011 | 1    | 0.9615 | 406.20      | 0.0667    | 27.09    | 1,579    | 1,518      |
| 2,012 | 2    | 0.9246 | 812.40      | 0.1000    | 81.24    | 4,734    | 4,377      |
| 2,013 | 3    | 0.8890 | 1,218.60    | 0.1333    | 162.44   | 9,465    | 8,414      |
| 2,014 | 4    | 0.8548 | 1,624.80    | 0.1667    | 270.85   | 15,782   | 13,490     |
| 2,015 | 5    | 0.8219 | 2,031.00    | 0.2000    | 406.20   | 23,669   | 19,454     |
| 2,016 | 6    | 0.7903 | 2,031.00    | 0.2667    | 541.67   | 31,563   | 24,944     |
| 2,017 | 7    | 0.7599 | 2,031.00    | 0.3333    | 676.93   | 39,445   | 29,974     |
| 2,018 | 8    | 0.7307 | 2,031.00    | 0.4000    | 812.40   | 47,339   | 34,591     |
| 2,019 | 9    | 0.7026 | 2,031.00    | 0.4667    | 947.87   | 55,232   | 38,806     |
| 2,020 | 10   | 0.6756 | 2,031.00    | 0.5333    | 1,083.13 | 63,114   | 42,640     |
| 2,021 | 11   | 0.6496 | 2,031.00    | 0.6000    | 1,218.60 | 71,006   | 46,127     |
| 2,022 | 12   | 0.6246 | 1,998.80    | 0.6574    | 1,248.27 | 72,737   | 45,432     |
| 2,023 | 13   | 0.6006 | 1,766.60    | 0.7184    | 1,269.13 | 73,952   | 44,416     |
| 2,024 | 14   | 0.5775 | 1,634.40    | 0.7838    | 1,281.04 | 74,646   | 43,108     |
| 2,025 | 15   | 0.5553 | 1,502.20    | 0.8549    | 1,284.23 | 74,832   | 41,554     |
| 2,026 | 16   | 0.5339 | 1,370.00    | 0.9200    | 1,260.40 | 73,444   | 39,212     |
| 2,027 | 17   | 0.5134 | 1,370.00    | 0.9600    | 1,315.20 | 76,637   | 39,345     |
| 2,028 | 18   | 0.4936 | 1,370.00    | 0.9867    | 1,351.78 | 78,768   | 38,880     |
| 2,029 | 19   | 0.4746 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 37,887     |
| 2,030 | 20   | 0.4564 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 36,434     |
| 2,031 | 21   | 0.4388 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 35,029     |
| 2,032 | 22   | 0.4220 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 33,688     |
| 2,033 | 23   | 0.4057 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 32,387     |
| 2,034 | 24   | 0.3901 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 31,142     |
| 2,035 | 25   | 0.3751 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 29,944     |
| 2,036 | 26   | 0.3607 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 28,795     |
| 2,037 | 27   | 0.3468 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 27,685     |
| 2,038 | 28   | 0.3335 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 26,623     |
| 2,039 | 29   | 0.3207 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 25,601     |
| 2,040 | 30   | 0.3083 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 24,612     |
| 2,041 | 31   | 0.2965 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 23,670     |
| 2,042 | 32   | 0.2851 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 22,760     |
| 2,043 | 33   | 0.2741 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 21,881     |
| 2,044 | 34   | 0.2636 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 21,043     |
| 2,045 | 35   | 0.2534 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 20,249     |
| 2,046 | 36   | 0.2437 | 1,370.00    | 1.0000    | 1,370.00 | 79,830   | 19,485     |
| 2,047 | 37   | 0.2343 | 1,296.80    | 1.0000    | 1,296.80 | 75,565   | 17,705     |
| 2,048 | 38   | 0.2253 | 1,223.60    | 1.0000    | 1,223.60 | 71,299   | 16,064     |
| 2,049 | 39   | 0.2166 | 1,150.40    | 1.0000    | 1,150.40 | 67,034   | 14,520     |
| 2,050 | 40   | 0.2083 | 1,077.20    | 1.0000    | 1,077.20 | 62,768   | 13,075     |
| 2,051 | 41   | 0.2003 | 1,004.00    | 1.0000    | 1,004.00 | 58,503   | 11,718     |
| 2,052 | 42   | 0.1926 | 996.40      | 1.0000    | 996.40   | 58,060   | 11,182     |
| 2,053 | 43   | 0.1852 | 988.80      | 1.0000    | 988.80   | 57,617   | 10,671     |
| 2,054 | 44   | 0.1780 | 981.20      | 1.0000    | 981.20   | 57,175   | 10,177     |
| 2,055 | 45   | 0.1712 | 973.60      | 1.0000    | 973.60   | 56,732   | 9,713      |
| 2,056 | 46   | 0.1646 | 966.00      | 1.0000    | 966.00   | 56,289   | 9,265      |
| 2,057 | 47   | 0.1583 | 966.00      | 1.0000    | 966.00   | 56,289   | 8,911      |
| 2,058 | 48   | 0.1522 | 966.00      | 1.0000    | 966.00   | 56,289   | 8,567      |
| 2,059 | 49   | 0.1463 | 966.00      | 1.0000    | 966.00   | 56,289   | 8,235      |
| 2,060 | 50   | 0.1407 | 966.00      | 1.0000    | 966.00   | 56,289   | 7,920      |
| 2,061 | 51   | 0.1353 | 811.20      | 1.0000    | 811.20   | 47,269   | 6,395      |
| 2,062 | 52   | 0.1301 | 656.40      | 1.0000    | 656.40   | 38,248   | 4,976      |
| 2,063 | 53   | 0.1251 | 501.60      | 1.0000    | 501.60   | 29,228   | 3,656      |
| 2,064 | 54   | 0.1203 | 346.80      | 1.0000    | 346.80   | 20,208   | 2,431      |
| 2,065 | 55   | 0.1157 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,294      |
| 2,066 | 56   | 0.1112 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,244      |
| 2,067 | 57   | 0.1069 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,196      |
| 2,068 | 58   | 0.1028 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,150      |
| 2,069 | 59   | 0.0989 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,106      |
| 2,070 | 60   | 0.0951 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,064      |
| 2,071 | 61   | 0.0914 | 192.00      | 1.0000    | 192.00   | 11,188   | 1,023      |
| 2,072 | 62   | 0.0879 | 192.00      | 1.0000    | 192.00   | 11,188   | 983        |
| 2,073 | 63   | 0.0845 | 192.00      | 1.0000    | 192.00   | 11,188   | 945        |
| 2,074 | 64   | 0.0813 | 192.00      | 1.0000    | 192.00   | 11,188   | 910        |
| 2,075 | 65   | 0.0781 | 192.00      | 1.0000    | 192.00   | 11,188   | 874        |
| 2,076 | 66   | 0.0751 | 192.00      | 1.0000    | 192.00   | 11,188   | 840        |
| 2,077 | 67   | 0.0722 | 191.20      | 1.0000    | 191.20   | 11,141   | 804        |
| 2,078 | 68   | 0.0695 | 190.40      | 1.0000    | 190.40   | 11,095   | 771        |
| 2,079 | 69   | 0.0668 | 189.60      | 1.0000    | 189.60   | 11,048   | 738        |
| 2,080 | 70   | 0.0642 | 188.80      | 1.0000    | 188.80   | 11,001   | 706        |
| 2,081 | 71   | 0.0617 | 188.00      | 1.0000    | 188.00   | 10,955   | 676        |
| 2,082 | 72   | 0.0594 | 188.00      | 1.0000    | 188.00   | 10,955   | 651        |
| 2,083 | 73   | 0.0571 | 188.00      | 1.0000    | 188.00   | 10,955   | 626        |
| 2,084 | 74   | 0.0549 | 188.00      | 1.0000    | 188.00   | 10,955   | 601        |
| 2,085 | 75   | 0.0528 | 188.00      | 1.0000    | 188.00   | 10,955   | 578        |
| 2,086 | 76   | 0.0508 | 188.00      | 1.0000    | 188.00   | 10,955   | 557        |
| 2,087 | 77   | 0.0488 | 188.00      | 1.0000    | 188.00   | 10,955   | 535        |
| 2,088 | 78   | 0.0469 | 188.00      | 1.0000    | 188.00   | 10,955   | 514        |
| 2,089 | 79   | 0.0451 | 188.00      | 1.0000    | 188.00   | 10,955   | 494        |
| 2,090 | 80   | 0.0434 | 188.00      | 1.0000    | 188.00   | 10,955   | 475        |
| 2,091 | 81   | 0.0417 | 186.40      | 1.0000    | 186.40   | 10,882   | 453        |
| 2,092 | 82   | 0.0401 | 184.80      | 1.0000    | 184.80   | 10,768   | 432        |
| 2,093 | 83   | 0.0386 | 183.20      | 1.0000    | 183.20   | 10,675   | 412        |
| 2,094 | 84   | 0.0371 | 181.60      | 1.0000    | 181.60   | 10,582   | 393        |
| 2,095 | 85   | 0.0357 | 180.00      | 1.0000    | 180.00   | 10,489   | 374        |
| 2,096 | 86   | 0.0343 | 180.00      | 1.0000    | 180.00   | 10,489   | 360        |
| 2,097 | 87   | 0.0330 | 180.00      | 1.0000    | 180.00   | 10,489   | 346        |
| 2,098 | 88   | 0.0317 | 180.00      | 1.0000    | 180.00   | 10,489   | 333        |
| 2,099 | 89   | 0.0305 | 180.00      | 1.0000    | 180.00   | 10,489   | 320        |
| 2,100 | 90   | 0.0293 | 180.00      | 1.0000    | 180.00   | 10,489   | 307        |
| 2,101 | 91   | 0.0282 | 180.00      | 1.0000    | 180.00   | 10,489   | 296        |
| 2,102 | 92   | 0.0271 | 180.00      | 1.0000    | 180.00   | 10,489   | 284        |
| 2,103 | 93   | 0.0261 | 180.00      | 1.0000    | 180.00   | 10,489   | 274        |
| 2,104 | 94   | 0.0251 | 180.00      | 1.0000    | 180.00   | 10,489   | 263        |
| 2,105 | 95   | 0.0241 | 180.00      | 1.0000    | 180.00   | 10,489   | 253        |
| 2,106 | 96   | 0.0232 | 180.00      | 1.0000    | 180.00   | 10,489   | 243        |
| 2,107 | 97   | 0.0223 | 180.00      | 1.0000    | 180.00   | 10,489   | 234        |
| 2,108 | 98   | 0.0214 | 180.00      | 1.0000    | 180.00   | 10,489   | 224        |
| 2,109 | 99   | 0.0206 | 180.00      | 1.0000    | 180.00   | 10,489   | 216        |
| 2,110 | 100  | 0.0198 | 180.00      | 1.0000    | 180.00   | 10,489   | 208        |
| 2,111 | 101  | 0.0190 | 144.00      | 1.0000    | 144.00   | 8,391    | 159        |
| 2,112 | 102  | 0.0183 | 108.00      | 1.0000    | 108.00   | 6,293    | 115        |
| 2,113 | 103  | 0.0176 | 72.00       | 1.0000    | 72.00    | 4,195    | 74         |
| 2,114 | 104  | 0.0169 | 36.00       | 1.0000    | 36.00    | 2,098    | 35         |
| 合計    |      |        |             |           |          |          | 1,258,291  |

1 水源かん養便益  
(3)水質浄化便益

2,142,643

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

- A: 事業対象区域面積 (ha)
- P: 年間平均降雨量 (mm/年)
- T: 事業実施後、貯留率が安定するのに必要な年数
- D1: 事業実施前の貯留率
- D2: 事業実施後、T年経過後の貯留率
- u: 単位当たりの水質浄化費
- Y: 評価期間
- 10: 単位合わせのための調整値

表のとおり

2,554

15

0.51

0.56

77.7

50年、80年、100年

10

99,223

| 年度    | 経過年数 | 社会的割引率 | 事業対象区域面積(A) | t/T (平均値) | 事業効果面積   | 効果額 (千円) | 現在価値化 (千円) |
|-------|------|--------|-------------|-----------|----------|----------|------------|
| 2,010 |      | 1.0000 |             |           |          |          |            |
| 2,011 | 1    | 0.9615 | 406.20      | 0.0667    | 27.09    | 2,688    | 2,585      |
| 2,012 | 2    | 0.9246 | 812.40      | 0.1000    | 81.24    | 8,061    | 7,453      |
| 2,013 | 3    | 0.8899 | 1,218.60    | 0.1333    | 162.44   | 16,113   | 14,329     |
| 2,014 | 4    | 0.8548 | 1,624.80    | 0.1667    | 270.35   | 26,875   | 22,973     |
| 2,015 | 5    | 0.8219 | 2,031.00    | 0.2000    | 406.20   | 40,304   | 33,126     |
| 2,016 | 6    | 0.7903 | 2,031.00    | 0.2667    | 541.67   | 53,746   | 42,475     |
| 2,017 | 7    | 0.7599 | 2,031.00    | 0.3333    | 676.93   | 67,167   | 51,040     |
| 2,018 | 8    | 0.7307 | 2,031.00    | 0.4000    | 812.40   | 80,609   | 58,901     |
| 2,019 | 9    | 0.7026 | 2,031.00    | 0.4667    | 947.87   | 94,051   | 66,080     |
| 2,020 | 10   | 0.6756 | 2,031.00    | 0.5333    | 1,083.13 | 107,471  | 72,607     |
| 2,021 | 11   | 0.6496 | 2,031.00    | 0.6000    | 1,218.60 | 120,913  | 78,545     |
| 2,022 | 12   | 0.6246 | 1,898.80    | 0.6574    | 1,248.27 | 123,857  | 77,361     |
| 2,023 | 13   | 0.6006 | 1,766.60    | 0.7184    | 1,269.13 | 125,927  | 75,632     |
| 2,024 | 14   | 0.5775 | 1,634.40    | 0.7838    | 1,281.04 | 127,109  | 73,405     |
| 2,025 | 15   | 0.5553 | 1,502.20    | 0.8549    | 1,284.23 | 127,425  | 70,759     |
| 2,026 | 16   | 0.5339 | 1,370.00    | 0.9200    | 1,260.40 | 125,061  | 66,770     |
| 2,027 | 17   | 0.5134 | 1,370.00    | 0.9600    | 1,315.20 | 130,498  | 66,998     |
| 2,028 | 18   | 0.4936 | 1,370.00    | 0.9867    | 1,351.78 | 134,128  | 66,206     |
| 2,029 | 19   | 0.4746 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 64,515     |
| 2,030 | 20   | 0.4564 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 62,041     |
| 2,031 | 21   | 0.4388 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 59,649     |
| 2,032 | 22   | 0.4220 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 57,365     |
| 2,033 | 23   | 0.4057 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 55,149     |
| 2,034 | 24   | 0.3901 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 53,029     |
| 2,035 | 25   | 0.3751 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 50,990     |
| 2,036 | 26   | 0.3607 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 49,032     |
| 2,037 | 27   | 0.3468 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 47,143     |
| 2,038 | 28   | 0.3335 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 45,335     |
| 2,039 | 29   | 0.3207 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 43,595     |
| 2,040 | 30   | 0.3083 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 41,909     |
| 2,041 | 31   | 0.2965 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 40,305     |
| 2,042 | 32   | 0.2851 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 38,755     |
| 2,043 | 33   | 0.2741 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 37,260     |
| 2,044 | 34   | 0.2636 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 35,833     |
| 2,045 | 35   | 0.2534 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 34,446     |
| 2,046 | 36   | 0.2437 | 1,370.00    | 1.0000    | 1,370.00 | 135,936  | 33,128     |
| 2,047 | 37   | 0.2343 | 1,296.80    | 1.0000    | 1,296.80 | 128,672  | 30,148     |
| 2,048 | 38   | 0.2253 | 1,223.60    | 1.0000    | 1,223.60 | 121,409  | 27,353     |
| 2,049 | 39   | 0.2166 | 1,150.40    | 1.0000    | 1,150.40 | 114,146  | 24,724     |
| 2,050 | 40   | 0.2083 | 1,077.20    | 1.0000    | 1,077.20 | 106,883  | 22,264     |
| 2,051 | 41   | 0.2003 | 1,004.00    | 1.0000    | 1,004.00 | 99,620   | 19,954     |
| 2,052 | 42   | 0.1926 | 996.40      | 1.0000    | 996.40   | 98,866   | 19,042     |
| 2,053 | 43   | 0.1852 | 988.80      | 1.0000    | 988.80   | 98,112   | 18,170     |
| 2,054 | 44   | 0.1780 | 981.20      | 1.0000    | 981.20   | 97,358   | 17,330     |
| 2,055 | 45   | 0.1712 | 973.60      | 1.0000    | 973.60   | 96,604   | 16,539     |
| 2,056 | 46   | 0.1646 | 966.00      | 1.0000    | 966.00   | 95,849   | 15,777     |
| 2,057 | 47   | 0.1583 | 966.00      | 1.0000    | 966.00   | 95,849   | 15,173     |
| 2,058 | 48   | 0.1522 | 966.00      | 1.0000    | 966.00   | 95,849   | 14,588     |
| 2,059 | 49   | 0.1463 | 966.00      | 1.0000    | 966.00   | 95,849   | 14,023     |
| 2,060 | 50   | 0.1407 | 966.00      | 1.0000    | 966.00   | 95,849   | 13,486     |
| 2,061 | 51   | 0.1353 | 811.20      | 1.0000    | 811.20   | 80,490   | 10,890     |
| 2,062 | 52   | 0.1301 | 656.40      | 1.0000    | 656.40   | 65,130   | 8,473      |
| 2,063 | 53   | 0.1251 | 501.60      | 1.0000    | 501.60   | 49,770   | 6,226      |
| 2,064 | 54   | 0.1203 | 346.80      | 1.0000    | 346.80   | 34,411   | 4,140      |
| 2,065 | 55   | 0.1157 | 192.00      | 1.0000    | 192.00   | 19,051   | 2,204      |
| 2,066 | 56   | 0.1112 | 192.00      | 1.0000    | 192.00   | 19,051   | 2,118      |
| 2,067 | 57   | 0.1069 | 192.00      | 1.0000    | 192.00   | 19,051   | 2,037      |
| 2,068 | 58   | 0.1028 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,958      |
| 2,069 | 59   | 0.0989 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,884      |
| 2,070 | 60   | 0.0951 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,812      |
| 2,071 | 61   | 0.0914 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,741      |
| 2,072 | 62   | 0.0879 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,675      |
| 2,073 | 63   | 0.0845 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,610      |
| 2,074 | 64   | 0.0813 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,549      |
| 2,075 | 65   | 0.0781 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,488      |
| 2,076 | 66   | 0.0751 | 192.00      | 1.0000    | 192.00   | 19,051   | 1,431      |
| 2,077 | 67   | 0.0722 | 191.20      | 1.0000    | 191.20   | 18,971   | 1,370      |
| 2,078 | 68   | 0.0695 | 190.40      | 1.0000    | 190.40   | 18,892   | 1,313      |
| 2,079 | 69   | 0.0668 | 189.60      | 1.0000    | 189.60   | 18,813   | 1,257      |
| 2,080 | 70   | 0.0642 | 188.80      | 1.0000    | 188.80   | 18,733   | 1,203      |
| 2,081 | 71   | 0.0617 | 188.00      | 1.0000    | 188.00   | 18,654   | 1,151      |
| 2,082 | 72   | 0.0594 | 188.00      | 1.0000    | 188.00   | 18,654   | 1,108      |
| 2,083 | 73   | 0.0571 | 188.00      | 1.0000    | 188.00   | 18,654   | 1,065      |
| 2,084 | 74   | 0.0549 | 188.00      | 1.0000    | 188.00   | 18,654   | 1,024      |
| 2,085 | 75   | 0.0528 | 188.00      | 1.0000    | 188.00   | 18,654   | 985        |
| 2,086 | 76   | 0.0508 | 188.00      | 1.0000    | 188.00   | 18,654   | 948        |
| 2,087 | 77   | 0.0488 | 188.00      | 1.0000    | 188.00   | 18,654   | 910        |
| 2,088 | 78   | 0.0469 | 188.00      | 1.0000    | 188.00   | 18,654   | 875        |
| 2,089 | 79   | 0.0451 | 188.00      | 1.0000    | 188.00   | 18,654   | 841        |
| 2,090 | 80   | 0.0434 | 188.00      | 1.0000    | 188.00   | 18,654   | 810        |
| 2,091 | 81   | 0.0417 | 186.40      | 1.0000    | 186.40   | 18,495   | 771        |
| 2,092 | 82   | 0.0401 | 184.80      | 1.0000    | 184.80   | 18,336   | 735        |
| 2,093 | 83   | 0.0386 | 183.20      | 1.0000    | 183.20   | 18,178   | 702        |
| 2,094 | 84   | 0.0371 | 181.60      | 1.0000    | 181.60   | 18,019   | 669        |
| 2,095 | 85   | 0.0357 | 180.00      | 1.0000    | 180.00   | 17,860   | 638        |
| 2,096 | 86   | 0.0343 | 180.00      | 1.0000    | 180.00   | 17,860   | 613        |
| 2,097 | 87   | 0.0330 | 180.00      | 1.0000    | 180.00   | 17,860   | 589        |
| 2,098 | 88   | 0.0317 | 180.00      | 1.0000    | 180.00   | 17,860   | 566        |
| 2,099 | 89   | 0.0305 | 180.00      | 1.0000    | 180.00   | 17,860   | 545        |
| 2,100 | 90   | 0.0293 | 180.00      | 1.0000    | 180.00   | 17,860   | 523        |
| 2,101 | 91   | 0.0282 | 180.00      | 1.0000    | 180.00   | 17,860   | 504        |
| 2,102 | 92   | 0.0271 | 180.00      | 1.0000    | 180.00   | 17,860   | 484        |
| 2,103 | 93   | 0.0261 | 180.00      | 1.0000    | 180.00   | 17,860   | 466        |
| 2,104 | 94   | 0.0251 | 180.00      | 1.0000    | 180.00   | 17,860   | 448        |
| 2,105 | 95   | 0.0241 | 180.00      | 1.0000    | 180.00   | 17,860   | 430        |
| 2,106 | 96   | 0.0232 | 180.00      | 1.0000    | 180.00   | 17,860   | 414        |
| 2,107 | 97   | 0.0223 | 180.00      | 1.0000    | 180.00   | 17,860   | 398        |
| 2,108 | 98   | 0.0214 | 180.00      | 1.0000    | 180.00   | 17,860   | 382        |
| 2,109 | 99   | 0.0206 | 180.00      | 1.0000    | 180.00   | 17,860   | 366        |
| 2,110 | 100  | 0.0198 | 180.00      | 1.0000    | 180.00   | 17,860   | 354        |
| 2,111 | 101  | 0.0190 | 144.00      | 1.0000    | 144.00   | 14,288   | 271        |
| 2,112 | 102  | 0.0183 | 108.00      | 1.0000    | 108.00   | 10,716   | 196        |
| 2,113 | 103  | 0.0176 | 72.00       | 1.0000    | 72.00    | 7,144    | 126        |
| 2,114 | 104  | 0.0169 | 36.00       | 1.0000    | 36.00    | 3,572    | 60         |
| 合計    |      |        |             |           |          |          | 2,142,643  |

2 山地保全便益  
(1)土砂流出防止便益

2,334,024

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

- 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)
- V1: 事業実施前における1ha当たりの年間流出土砂量(m3)
- V2: 事業実施後における1ha当たりの年間流出土砂量(m3)
- A: 事業対象区域面積(ha)
- T: 事業実施後、年間流出土砂量が安定するのに必要な年数
- Y: 評価期間

5,780  
20.0  
1.3  
表のとおり  
15  
50年、80年、100年  
108,086

| 年度   | 経過年数 | 社会的割引率 | 事業対象区域面積(A) | t/T (平均値) | 事業効果面積   | 効果額(千円) | 現在価値化(千円) |
|------|------|--------|-------------|-----------|----------|---------|-----------|
| 2010 | 0    | 1.0000 |             |           |          |         |           |
| 2011 | 1    | 0.9615 | 406.20      | 0.0667    | 27.09    | 2,928   | 2,815     |
| 2012 | 2    | 0.9246 | 812.40      | 0.1000    | 81.24    | 8,781   | 8,119     |
| 2013 | 3    | 0.8890 | 1,218.60    | 0.1333    | 162.44   | 17,557  | 15,608    |
| 2014 | 4    | 0.8548 | 1,624.80    | 0.1667    | 270.85   | 29,275  | 25,024    |
| 2015 | 5    | 0.8219 | 2,031.00    | 0.2000    | 406.20   | 43,905  | 36,086    |
| 2016 | 6    | 0.7903 | 2,031.00    | 0.2667    | 541.67   | 58,547  | 46,270    |
| 2017 | 7    | 0.7599 | 2,031.00    | 0.3333    | 676.93   | 73,167  | 55,600    |
| 2018 | 8    | 0.7307 | 2,031.00    | 0.4000    | 812.40   | 87,809  | 64,162    |
| 2019 | 9    | 0.7026 | 2,031.00    | 0.4667    | 947.87   | 102,451 | 71,982    |
| 2020 | 10   | 0.6756 | 2,031.00    | 0.5333    | 1,083.13 | 117,071 | 79,093    |
| 2021 | 11   | 0.6496 | 2,031.00    | 0.6000    | 1,218.60 | 131,714 | 85,561    |
| 2022 | 12   | 0.6246 | 1,898.80    | 0.6574    | 1,248.27 | 134,921 | 84,272    |
| 2023 | 13   | 0.6006 | 1,766.60    | 0.7184    | 1,269.13 | 137,175 | 82,387    |
| 2024 | 14   | 0.5775 | 1,634.40    | 0.7838    | 1,281.04 | 138,482 | 79,962    |
| 2025 | 15   | 0.5553 | 1,502.20    | 0.8549    | 1,284.23 | 138,807 | 77,080    |
| 2026 | 16   | 0.5339 | 1,370.00    | 0.9200    | 1,260.40 | 136,232 | 72,734    |
| 2027 | 17   | 0.5134 | 1,370.00    | 0.9600    | 1,315.20 | 142,155 | 72,982    |
| 2028 | 18   | 0.4936 | 1,370.00    | 0.9867    | 1,351.78 | 146,108 | 72,119    |
| 2029 | 19   | 0.4746 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 70,278    |
| 2030 | 20   | 0.4564 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 67,583    |
| 2031 | 21   | 0.4388 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 64,971    |
| 2032 | 22   | 0.4220 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 62,489    |
| 2033 | 23   | 0.4057 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 60,075    |
| 2034 | 24   | 0.3901 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 57,765    |
| 2035 | 25   | 0.3751 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 55,544    |
| 2036 | 26   | 0.3607 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 53,412    |
| 2037 | 27   | 0.3468 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 51,353    |
| 2038 | 28   | 0.3335 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 49,384    |
| 2039 | 29   | 0.3207 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 47,489    |
| 2040 | 30   | 0.3083 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 45,652    |
| 2041 | 31   | 0.2965 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 43,905    |
| 2042 | 32   | 0.2851 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 42,217    |
| 2043 | 33   | 0.2741 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 40,588    |
| 2044 | 34   | 0.2636 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 39,033    |
| 2045 | 35   | 0.2534 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 37,523    |
| 2046 | 36   | 0.2437 | 1,370.00    | 1.0000    | 1,370.00 | 148,078 | 36,087    |
| 2047 | 37   | 0.2343 | 1,296.80    | 1.0000    | 1,296.80 | 140,166 | 32,841    |
| 2048 | 38   | 0.2253 | 1,223.60    | 1.0000    | 1,223.60 | 132,254 | 29,797    |
| 2049 | 39   | 0.2166 | 1,150.40    | 1.0000    | 1,150.40 | 124,342 | 26,932    |
| 2050 | 40   | 0.2083 | 1,077.20    | 1.0000    | 1,077.20 | 116,430 | 24,252    |
| 2051 | 41   | 0.2003 | 1,004.00    | 1.0000    | 1,004.00 | 108,518 | 21,736    |
| 2052 | 42   | 0.1926 | 996.40      | 1.0000    | 996.40   | 107,697 | 20,742    |
| 2053 | 43   | 0.1852 | 988.80      | 1.0000    | 988.80   | 106,875 | 19,793    |
| 2054 | 44   | 0.1780 | 981.20      | 1.0000    | 981.20   | 106,054 | 18,878    |
| 2055 | 45   | 0.1712 | 973.60      | 1.0000    | 973.60   | 105,233 | 18,016    |
| 2056 | 46   | 0.1646 | 966.00      | 1.0000    | 966.00   | 104,411 | 17,186    |
| 2057 | 47   | 0.1583 | 966.00      | 1.0000    | 966.00   | 104,411 | 16,528    |
| 2058 | 48   | 0.1522 | 966.00      | 1.0000    | 966.00   | 104,411 | 15,891    |
| 2059 | 49   | 0.1463 | 966.00      | 1.0000    | 966.00   | 104,411 | 15,275    |
| 2060 | 50   | 0.1407 | 966.00      | 1.0000    | 966.00   | 104,411 | 14,691    |
| 2061 | 51   | 0.1353 | 811.20      | 1.0000    | 811.20   | 87,679  | 11,863    |
| 2062 | 52   | 0.1301 | 656.40      | 1.0000    | 656.40   | 70,948  | 9,230     |
| 2063 | 53   | 0.1251 | 501.60      | 1.0000    | 501.60   | 54,216  | 6,782     |
| 2064 | 54   | 0.1203 | 346.80      | 1.0000    | 346.80   | 37,484  | 4,509     |
| 2065 | 55   | 0.1157 | 192.00      | 1.0000    | 192.00   | 20,753  | 2,401     |
| 2066 | 56   | 0.1112 | 192.00      | 1.0000    | 192.00   | 20,753  | 2,308     |
| 2067 | 57   | 0.1069 | 192.00      | 1.0000    | 192.00   | 20,753  | 2,218     |
| 2068 | 58   | 0.1028 | 192.00      | 1.0000    | 192.00   | 20,753  | 2,133     |
| 2069 | 59   | 0.0989 | 192.00      | 1.0000    | 192.00   | 20,753  | 2,052     |
| 2070 | 60   | 0.0951 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,974     |
| 2071 | 61   | 0.0914 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,897     |
| 2072 | 62   | 0.0879 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,824     |
| 2073 | 63   | 0.0845 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,754     |
| 2074 | 64   | 0.0813 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,687     |
| 2075 | 65   | 0.0781 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,621     |
| 2076 | 66   | 0.0751 | 192.00      | 1.0000    | 192.00   | 20,753  | 1,559     |
| 2077 | 67   | 0.0722 | 191.20      | 1.0000    | 191.20   | 20,666  | 1,492     |
| 2078 | 68   | 0.0695 | 190.40      | 1.0000    | 190.40   | 20,580  | 1,430     |
| 2079 | 69   | 0.0668 | 189.60      | 1.0000    | 189.60   | 20,493  | 1,369     |
| 2080 | 70   | 0.0642 | 188.80      | 1.0000    | 188.80   | 20,407  | 1,310     |
| 2081 | 71   | 0.0617 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,254     |
| 2082 | 72   | 0.0594 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,207     |
| 2083 | 73   | 0.0571 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,160     |
| 2084 | 74   | 0.0549 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,116     |
| 2085 | 75   | 0.0528 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,073     |
| 2086 | 76   | 0.0508 | 188.00      | 1.0000    | 188.00   | 20,320  | 1,032     |
| 2087 | 77   | 0.0488 | 188.00      | 1.0000    | 188.00   | 20,320  | 992       |
| 2088 | 78   | 0.0469 | 188.00      | 1.0000    | 188.00   | 20,320  | 953       |
| 2089 | 79   | 0.0451 | 188.00      | 1.0000    | 188.00   | 20,320  | 916       |
| 2090 | 80   | 0.0434 | 188.00      | 1.0000    | 188.00   | 20,320  | 882       |
| 2091 | 81   | 0.0417 | 186.40      | 1.0000    | 186.40   | 20,147  | 840       |
| 2092 | 82   | 0.0401 | 184.80      | 1.0000    | 184.80   | 19,974  | 801       |
| 2093 | 83   | 0.0386 | 183.20      | 1.0000    | 183.20   | 19,801  | 764       |
| 2094 | 84   | 0.0371 | 181.60      | 1.0000    | 181.60   | 19,628  | 728       |
| 2095 | 85   | 0.0357 | 180.00      | 1.0000    | 180.00   | 19,455  | 695       |
| 2096 | 86   | 0.0343 | 180.00      | 1.0000    | 180.00   | 19,455  | 667       |
| 2097 | 87   | 0.0330 | 180.00      | 1.0000    | 180.00   | 19,455  | 642       |
| 2098 | 88   | 0.0317 | 180.00      | 1.0000    | 180.00   | 19,455  | 617       |
| 2099 | 89   | 0.0305 | 180.00      | 1.0000    | 180.00   | 19,455  | 593       |
| 2100 | 90   | 0.0293 | 180.00      | 1.0000    | 180.00   | 19,455  | 570       |
| 2101 | 91   | 0.0282 | 180.00      | 1.0000    | 180.00   | 19,455  | 549       |
| 2102 | 92   | 0.0271 | 180.00      | 1.0000    | 180.00   | 19,455  | 527       |
| 2103 | 93   | 0.0261 | 180.00      | 1.0000    | 180.00   | 19,455  | 508       |
| 2104 | 94   | 0.0251 | 180.00      | 1.0000    | 180.00   | 19,455  | 488       |
| 2105 | 95   | 0.0241 | 180.00      | 1.0000    | 180.00   | 19,455  | 469       |
| 2106 | 96   | 0.0232 | 180.00      | 1.0000    | 180.00   | 19,455  | 451       |
| 2107 | 97   | 0.0223 | 180.00      | 1.0000    | 180.00   | 19,455  | 434       |
| 2108 | 98   | 0.0214 | 180.00      | 1.0000    | 180.00   | 19,455  | 416       |
| 2109 | 99   | 0.0206 | 180.00      | 1.0000    | 180.00   | 19,455  | 401       |
| 2110 | 100  | 0.0198 | 180.00      | 1.0000    | 180.00   | 19,455  | 385       |
| 2111 | 101  | 0.0190 | 144.00      | 1.0000    | 144.00   | 15,564  | 296       |
| 2112 | 102  | 0.0183 | 108.00      | 1.0000    | 108.00   | 11,673  | 214       |
| 2113 | 103  | 0.0176 | 72.00       | 1.0000    | 72.00    | 7,782   | 137       |
| 2114 | 104  | 0.0169 | 36.00       | 1.0000    | 36.00    | 3,891   | 66        |
| 合計   |      |        |             |           |          |         | 2,334,024 |

3 環境保全便益 (1)炭素固定便益(樹木固定分)

B = Σ\_{t=1}^T (Y \* (V2-V1) / (Y \* (1+i)^t)) \* D \* BEF \* ((1+r) \* 0.5 \* 44/12 \* X)

- U: 二酸化炭素に関する原単位(円/CO2-ton)
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み蓄積量(m3)
V2: 事業を実施する場合の評価最終年の当該森林の見込み蓄積量(m3)
Y: 評価期間
D: 容積密度(t/m3)
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)
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)
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

6.046
付表参照
付表参照
50年、80年、100年
付表参照
付表参照
付表参照

付表

Table with columns: Y, 単層林, 複層林, 天然下種1類. Includes rows for V1, V2, BEF, R, D, and annual increment.

Main data table with columns: 年度, 経過年数, 社会的割引率, 蓄積増加量 (単層林, 複層林, 天然下種1類), 効果額 (単層林, 複層林, 天然下種1類), 効果額計(千円), 現在価値化(千円). Includes a total row at the bottom.

3 環境保全便益  
(1)炭素固定便益(森林土壌蓄積分)

112,471

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

$$C1 = \frac{S \times e1}{30} \quad C2 = \frac{S \times e2}{30}$$

- U: 二酸化炭素に関する原単位(円/CO2-ton)
- 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)
- 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)
- Y: 評価期間
- A: 事業対象区域面積(ha)
- s: 単位面積当たりの土壌平均炭素蓄積量(t-C/ha)
- 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)
- e2: 事業を実施した場合の侵食深(cm/年)
- 30: 土壌炭素の測定深度(cm)
- 0.3: 流出土壌排出炭素係数

6.046

50年、80年、100年  
表のとおり

84.21

0.200

0.013

3.491

| 年度   | 経過年数 | 社会的割引率 | 事業対象区域面積(A) | 効果額(千円) | 現在価値(千円) |
|------|------|--------|-------------|---------|----------|
| 2010 |      | 1.0000 |             |         |          |
| 2011 | 1    | 0.9615 | 406.20      | 1,418   | 1,363    |
| 2012 | 2    | 0.9246 | 812.40      | 2,836   | 2,622    |
| 2013 | 3    | 0.8890 | 1,218.60    | 4,254   | 3,782    |
| 2014 | 4    | 0.8548 | 1,624.80    | 5,672   | 4,848    |
| 2015 | 5    | 0.8219 | 2,031.00    | 7,090   | 5,827    |
| 2016 | 6    | 0.7903 | 2,031.00    | 7,090   | 5,603    |
| 2017 | 7    | 0.7599 | 2,031.00    | 7,090   | 5,388    |
| 2018 | 8    | 0.7307 | 2,031.00    | 7,090   | 5,181    |
| 2019 | 9    | 0.7026 | 2,031.00    | 7,090   | 4,981    |
| 2020 | 10   | 0.6756 | 2,031.00    | 7,090   | 4,790    |
| 2021 | 11   | 0.6496 | 2,031.00    | 7,090   | 4,606    |
| 2022 | 12   | 0.6246 | 1,898.80    | 6,629   | 4,140    |
| 2023 | 13   | 0.6006 | 1,766.60    | 6,167   | 3,704    |
| 2024 | 14   | 0.5775 | 1,634.40    | 5,706   | 3,295    |
| 2025 | 15   | 0.5553 | 1,502.20    | 5,244   | 2,912    |
| 2026 | 16   | 0.5339 | 1,370.00    | 4,783   | 2,554    |
| 2027 | 17   | 0.5134 | 1,370.00    | 4,783   | 2,456    |
| 2028 | 18   | 0.4936 | 1,370.00    | 4,783   | 2,361    |
| 2029 | 19   | 0.4746 | 1,370.00    | 4,783   | 2,270    |
| 2030 | 20   | 0.4564 | 1,370.00    | 4,783   | 2,183    |
| 2031 | 21   | 0.4388 | 1,370.00    | 4,783   | 2,099    |
| 2032 | 22   | 0.4220 | 1,370.00    | 4,783   | 2,018    |
| 2033 | 23   | 0.4057 | 1,370.00    | 4,783   | 1,940    |
| 2034 | 24   | 0.3901 | 1,370.00    | 4,783   | 1,866    |
| 2035 | 25   | 0.3751 | 1,370.00    | 4,783   | 1,794    |
| 2036 | 26   | 0.3607 | 1,370.00    | 4,783   | 1,725    |
| 2037 | 27   | 0.3468 | 1,370.00    | 4,783   | 1,659    |
| 2038 | 28   | 0.3335 | 1,370.00    | 4,783   | 1,595    |
| 2039 | 29   | 0.3207 | 1,370.00    | 4,783   | 1,534    |
| 2040 | 30   | 0.3083 | 1,370.00    | 4,783   | 1,475    |
| 2041 | 31   | 0.2965 | 1,370.00    | 4,783   | 1,418    |
| 2042 | 32   | 0.2851 | 1,370.00    | 4,783   | 1,364    |
| 2043 | 33   | 0.2741 | 1,370.00    | 4,783   | 1,311    |
| 2044 | 34   | 0.2636 | 1,370.00    | 4,783   | 1,261    |
| 2045 | 35   | 0.2534 | 1,370.00    | 4,783   | 1,212    |
| 2046 | 36   | 0.2437 | 1,370.00    | 4,783   | 1,166    |
| 2047 | 37   | 0.2343 | 1,296.80    | 4,527   | 1,061    |
| 2048 | 38   | 0.2253 | 1,223.60    | 4,272   | 962      |
| 2049 | 39   | 0.2166 | 1,150.40    | 4,016   | 870      |
| 2050 | 40   | 0.2083 | 1,077.20    | 3,761   | 783      |
| 2051 | 41   | 0.2003 | 1,004.00    | 3,505   | 702      |
| 2052 | 42   | 0.1926 | 996.40      | 3,478   | 670      |
| 2053 | 43   | 0.1852 | 988.80      | 3,452   | 639      |
| 2054 | 44   | 0.1780 | 981.20      | 3,425   | 610      |
| 2055 | 45   | 0.1712 | 973.60      | 3,399   | 582      |
| 2056 | 46   | 0.1646 | 966.00      | 3,372   | 555      |
| 2057 | 47   | 0.1583 | 966.00      | 3,372   | 534      |
| 2058 | 48   | 0.1522 | 966.00      | 3,372   | 513      |
| 2059 | 49   | 0.1463 | 966.00      | 3,372   | 493      |
| 2060 | 50   | 0.1407 | 966.00      | 3,372   | 474      |
| 2061 | 51   | 0.1353 | 811.20      | 2,832   | 383      |
| 2062 | 52   | 0.1301 | 656.40      | 2,291   | 298      |
| 2063 | 53   | 0.1251 | 501.60      | 1,751   | 219      |
| 2064 | 54   | 0.1203 | 346.80      | 1,211   | 146      |
| 2065 | 55   | 0.1157 | 192.00      | 670     | 78       |
| 2066 | 56   | 0.1112 | 192.00      | 670     | 75       |
| 2067 | 57   | 0.1069 | 192.00      | 670     | 72       |
| 2068 | 58   | 0.1028 | 192.00      | 670     | 69       |
| 2069 | 59   | 0.0989 | 192.00      | 670     | 66       |
| 2070 | 60   | 0.0951 | 192.00      | 670     | 64       |
| 2071 | 61   | 0.0914 | 192.00      | 670     | 61       |
| 2072 | 62   | 0.0879 | 192.00      | 670     | 59       |
| 2073 | 63   | 0.0845 | 192.00      | 670     | 57       |
| 2074 | 64   | 0.0813 | 192.00      | 670     | 54       |
| 2075 | 65   | 0.0781 | 192.00      | 670     | 52       |
| 2076 | 66   | 0.0751 | 192.00      | 670     | 50       |
| 2077 | 67   | 0.0722 | 191.20      | 667     | 48       |
| 2078 | 68   | 0.0695 | 190.40      | 665     | 46       |
| 2079 | 69   | 0.0668 | 189.60      | 662     | 44       |
| 2080 | 70   | 0.0642 | 188.80      | 659     | 42       |
| 2081 | 71   | 0.0617 | 188.00      | 656     | 40       |
| 2082 | 72   | 0.0594 | 188.00      | 656     | 39       |
| 2083 | 73   | 0.0571 | 188.00      | 656     | 37       |
| 2084 | 74   | 0.0549 | 188.00      | 656     | 36       |
| 2085 | 75   | 0.0528 | 188.00      | 656     | 35       |
| 2086 | 76   | 0.0508 | 188.00      | 656     | 33       |
| 2087 | 77   | 0.0488 | 188.00      | 656     | 32       |
| 2088 | 78   | 0.0469 | 188.00      | 656     | 31       |
| 2089 | 79   | 0.0451 | 188.00      | 656     | 30       |
| 2090 | 80   | 0.0434 | 188.00      | 656     | 28       |
| 2091 | 81   | 0.0417 | 186.40      | 651     | 27       |
| 2092 | 82   | 0.0401 | 184.80      | 645     | 26       |
| 2093 | 83   | 0.0386 | 183.20      | 640     | 25       |
| 2094 | 84   | 0.0371 | 181.60      | 634     | 24       |
| 2095 | 85   | 0.0357 | 180.00      | 628     | 22       |
| 2096 | 86   | 0.0343 | 180.00      | 628     | 22       |
| 2097 | 87   | 0.0330 | 180.00      | 628     | 21       |
| 2098 | 88   | 0.0317 | 180.00      | 628     | 20       |
| 2099 | 89   | 0.0305 | 180.00      | 628     | 19       |
| 2100 | 90   | 0.0293 | 180.00      | 628     | 18       |
| 2101 | 91   | 0.0282 | 180.00      | 628     | 18       |
| 2102 | 92   | 0.0271 | 180.00      | 628     | 17       |
| 2103 | 93   | 0.0261 | 180.00      | 628     | 16       |
| 2104 | 94   | 0.0251 | 180.00      | 628     | 16       |
| 2105 | 95   | 0.0241 | 180.00      | 628     | 15       |
| 2106 | 96   | 0.0232 | 180.00      | 628     | 15       |
| 2107 | 97   | 0.0223 | 180.00      | 628     | 14       |
| 2108 | 98   | 0.0214 | 180.00      | 628     | 13       |
| 2109 | 99   | 0.0206 | 180.00      | 628     | 13       |
| 2110 | 100  | 0.0198 | 180.00      | 628     | 12       |
| 2111 | 101  | 0.0190 | 144.00      | 503     | 10       |
| 2112 | 102  | 0.0183 | 108.00      | 377     | 7        |
| 2113 | 103  | 0.0176 | 72.00       | 251     | 4        |
| 2114 | 104  | 0.0169 | 36.00       | 126     | 2        |
| 合計   |      |        |             |         | 112,471  |

4 木材生産等便益  
(1)木材生産確保・増進便益

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

t: 年数  
Y: 評価期間  
V1: t年後における伐採材積(m3)  
@: 木材市場価格(円/m3)

50年、80年、100年  
付表のとおり  
付表のとおり

付表

| 樹種 | 単層林    | 複層林    | 天然下種1類 |
|----|--------|--------|--------|
| V1 | 377    | 271    | 54     |
| 歩留 | 0.53   | 0.53   | 0.53   |
| @  | 17,000 | 17,000 | 10,700 |

| 年度    | 経過年数 | 社会的割引率 | 伐採材積(素材)  |        |          | 効果額(千円) |       |         | 現在価値化(千円) |
|-------|------|--------|-----------|--------|----------|---------|-------|---------|-----------|
|       |      |        | 単層林       | 複層林    | 天然下種1類   | 単層林     | 複層林   | 天然下種1類  |           |
| 2,010 |      | 1.0000 |           |        |          |         |       |         |           |
| 2,011 | 1    | 0.9615 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,012 | 2    | 0.9246 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,013 | 3    | 0.8890 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,014 | 4    | 0.8548 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,015 | 5    | 0.8219 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,016 | 6    | 0.7903 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,017 | 7    | 0.7599 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,018 | 8    | 0.7307 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,019 | 9    | 0.7026 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,020 | 10   | 0.6756 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,021 | 11   | 0.6496 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,022 | 12   | 0.6246 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,023 | 13   | 0.6006 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,024 | 14   | 0.5775 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,025 | 15   | 0.5553 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,026 | 16   | 0.5339 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,027 | 17   | 0.5134 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,028 | 18   | 0.4936 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,029 | 19   | 0.4746 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,030 | 20   | 0.4564 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,031 | 21   | 0.4388 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,032 | 22   | 0.4220 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,033 | 23   | 0.4057 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,034 | 24   | 0.3901 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,035 | 25   | 0.3751 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,036 | 26   | 0.3607 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,037 | 27   | 0.3468 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,038 | 28   | 0.3335 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,039 | 29   | 0.3207 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,040 | 30   | 0.3083 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,041 | 31   | 0.2965 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,042 | 32   | 0.2851 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,043 | 33   | 0.2741 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,044 | 34   | 0.2636 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,045 | 35   | 0.2534 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,046 | 36   | 0.2437 | 13,456.00 | 0.00   | 0.00     | 228,752 | 0     | 228,752 | 55,747    |
| 2,047 | 37   | 0.2343 | 13,456.00 | 0.00   | 0.00     | 228,752 | 0     | 228,752 | 53,597    |
| 2,048 | 38   | 0.2253 | 13,456.00 | 0.00   | 0.00     | 228,752 | 0     | 228,752 | 51,538    |
| 2,049 | 39   | 0.2166 | 13,456.00 | 0.00   | 0.00     | 228,752 | 0     | 228,752 | 49,548    |
| 2,050 | 40   | 0.2083 | 13,456.00 | 0.00   | 0.00     | 228,752 | 0     | 228,752 | 47,649    |
| 2,051 | 41   | 0.2003 | 1,029.42  | 0.00   | 0.00     | 17,500  | 0     | 17,500  | 3,505     |
| 2,052 | 42   | 0.1926 | 1,029.42  | 0.00   | 0.00     | 17,500  | 0     | 17,500  | 3,371     |
| 2,053 | 43   | 0.1852 | 1,029.42  | 0.00   | 0.00     | 17,500  | 0     | 17,500  | 3,241     |
| 2,054 | 44   | 0.1780 | 1,029.42  | 0.00   | 0.00     | 17,500  | 0     | 17,500  | 3,115     |
| 2,055 | 45   | 0.1712 | 1,029.42  | 0.00   | 0.00     | 17,500  | 0     | 17,500  | 2,996     |
| 2,056 | 46   | 0.1646 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,057 | 47   | 0.1583 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,058 | 48   | 0.1522 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,059 | 49   | 0.1463 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,060 | 50   | 0.1407 | 30,930.59 | 0.00   | 0.00     | 525,820 | 0     | 525,820 | 73,983    |
| 2,061 | 51   | 0.1353 | 30,930.59 | 0.00   | 0.00     | 525,820 | 0     | 525,820 | 71,143    |
| 2,062 | 52   | 0.1301 | 30,930.59 | 0.00   | 0.00     | 525,820 | 0     | 525,820 | 68,409    |
| 2,063 | 53   | 0.1251 | 30,930.59 | 0.00   | 0.00     | 525,820 | 0     | 525,820 | 65,780    |
| 2,064 | 54   | 0.1203 | 30,930.59 | 0.00   | 0.00     | 525,820 | 0     | 525,820 | 63,256    |
| 2,065 | 55   | 0.1157 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,066 | 56   | 0.1112 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,067 | 57   | 0.1069 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,068 | 58   | 0.1028 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,069 | 59   | 0.0989 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,070 | 60   | 0.0951 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,071 | 61   | 0.0914 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,072 | 62   | 0.0879 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,073 | 63   | 0.0845 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,074 | 64   | 0.0813 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,075 | 65   | 0.0781 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,076 | 66   | 0.0751 | 0.00      | 108.01 | 0.00     | 0       | 1,836 | 1,836   | 138       |
| 2,077 | 67   | 0.0722 | 0.00      | 108.01 | 0.00     | 0       | 1,836 | 1,836   | 133       |
| 2,078 | 68   | 0.0695 | 0.00      | 108.01 | 0.00     | 0       | 1,836 | 1,836   | 128       |
| 2,079 | 69   | 0.0668 | 0.00      | 108.01 | 0.00     | 0       | 1,836 | 1,836   | 123       |
| 2,080 | 70   | 0.0642 | 0.00      | 108.01 | 0.00     | 0       | 1,836 | 1,836   | 118       |
| 2,081 | 71   | 0.0617 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,082 | 72   | 0.0594 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,083 | 73   | 0.0571 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,084 | 74   | 0.0549 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,085 | 75   | 0.0528 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,086 | 76   | 0.0508 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,087 | 77   | 0.0488 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,088 | 78   | 0.0469 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,089 | 79   | 0.0451 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,090 | 80   | 0.0434 | 0.00      | 229.81 | 0.00     | 0       | 3,907 | 3,907   | 170       |
| 2,091 | 81   | 0.0417 | 0.00      | 229.81 | 0.00     | 0       | 3,907 | 3,907   | 163       |
| 2,092 | 82   | 0.0401 | 0.00      | 229.81 | 0.00     | 0       | 3,907 | 3,907   | 157       |
| 2,093 | 83   | 0.0386 | 0.00      | 229.81 | 0.00     | 0       | 3,907 | 3,907   | 151       |
| 2,094 | 84   | 0.0371 | 0.00      | 229.81 | 0.00     | 0       | 3,907 | 3,907   | 145       |
| 2,095 | 85   | 0.0357 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,096 | 86   | 0.0343 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,097 | 87   | 0.0330 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,098 | 88   | 0.0317 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,099 | 89   | 0.0305 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,100 | 90   | 0.0293 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,101 | 91   | 0.0282 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,102 | 92   | 0.0271 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,103 | 93   | 0.0261 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,104 | 94   | 0.0251 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,105 | 95   | 0.0241 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,106 | 96   | 0.0232 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,107 | 97   | 0.0223 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,108 | 98   | 0.0214 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,109 | 99   | 0.0206 | 0.00      | 0.00   | 0.00     | 0       | 0     | 0       | 0         |
| 2,110 | 100  | 0.0198 | 0.00      | 0.00   | 1,036.04 | 0       | 0     | 11,086  | 220       |
| 2,111 | 101  | 0.0190 | 0.00      | 0.00   | 1,036.04 | 0       | 0     | 11,086  | 211       |
| 2,112 | 102  | 0.0183 | 0.00      | 0.00   | 1,036.04 | 0       | 0     | 11,086  | 203       |
| 2,113 | 103  | 0.0176 | 0.00      | 0.00   | 1,036.04 | 0       | 0     | 11,086  | 195       |
| 2,114 | 104  | 0.0169 | 0.00      | 0.00   | 1,036.04 | 0       | 0     | 11,086  | 187       |
| 合計    |      |        |           |        |          |         |       |         | 619,320   |



別紙様式 7

整理番号 13

便 益 集 計 表 ( 路 網 分 )

事業名: 森林環境保全整備事業  
事業実施地区名: 飛騨川森林計画区

事業実施主体: 中部森林管理局  
岐阜森林管理署

( 単位 : 千円 )

| 大 区 分       | 中 区 分       | 評価額       | 備 考 |
|-------------|-------------|-----------|-----|
| 木材生産等便益     | 木材生産等経費縮減便益 | 1,872,863 |     |
|             | 木材生産・確保増進便益 | 6,150,270 |     |
| 森林整備経費縮減等便益 | 造林作業経費縮減便益  | 92,190    |     |
|             | 森林管理等経費縮減便益 | 640       |     |
|             | 森林整備促進便益    | 437,248   |     |
| 維持管理費縮減便益   |             | 43,160    |     |
| 総便益 ( B )   |             | 8,596,371 |     |

( 伊勢谷林道新設 他 2 7 箇所 )

( 注 ) 便益額算定方法は、代表路線を表示しています。

4 木材生産等便益  
 (3) 生産確保・促進便益  
 路網整備による増進分

285,718 千円

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

|         |                           |  |         |        |       |        |         |   |   |   |         |        |   |        |
|---------|---------------------------|--|---------|--------|-------|--------|---------|---|---|---|---------|--------|---|--------|
| Y:      | 評価期間(年)                   | 44   |         |        |       |        |         |   |   |   |         |        |   |        |
| Vt:     | 林道を整備した場合のt年後における伐採材積(m3) | <table border="0"> <tr> <td>主伐(人工林)</td> <td>0</td> <td>~</td> <td>11,866</td> </tr> <tr> <td>主伐(天然林)</td> <td>0</td> <td>~</td> <td>0</td> </tr> <tr> <td>間伐(人工林)</td> <td>0</td> <td>~</td> <td>3,347</td> </tr> </table>              | 主伐(人工林) | 0      | ~     | 11,866 | 主伐(天然林) | 0 | ~ | 0 | 間伐(人工林) | 0      | ~ | 3,347  |
| 主伐(人工林) | 0                         | ~  | 11,866  |        |       |        |         |   |   |   |         |        |   |        |
| 主伐(天然林) | 0                         | ~  | 0       |        |       |        |         |   |   |   |         |        |   |        |
| 間伐(人工林) | 0                         | ~  | 3,347   |        |       |        |         |   |   |   |         |        |   |        |
| @:      | 木材市場価格(円/m3)              | <table border="0"> <tr> <td>主伐(人工林)</td> <td>17,000</td> <td>5,500</td> <td>11,500</td> </tr> <tr> <td>主伐(天然林)</td> <td>0</td> <td></td> <td>0</td> </tr> <tr> <td>間伐(人工林)</td> <td>17,000</td> <td></td> <td>17,000</td> </tr> </table> | 主伐(人工林) | 17,000 | 5,500 | 11,500 | 主伐(天然林) | 0 |   | 0 | 間伐(人工林) | 17,000 |   | 17,000 |
| 主伐(人工林) | 17,000                    | 5,500  | 11,500  |        |       |        |         |   |   |   |         |        |   |        |
| 主伐(天然林) | 0                         |  | 0       |        |       |        |         |   |   |   |         |        |   |        |
| 間伐(人工林) | 17,000                    |  | 17,000  |        |       |        |         |   |   |   |         |        |   |        |
|         | 伐採までに要した造林・保育等経費(円/m3)    | 5,500  |         |        |       |        |         |   |   |   |         |        |   |        |

便益算出表

(単位:円)

| 評価期間    | 経過年 | 年度  | 割引係数   | 伐採材積(m3) |         |         | 年効果額        | 効果発生割合 | 年発生効果額<br>= x | 現在価値<br>= x |
|---------|-----|-----|--------|----------|---------|---------|-------------|--------|---------------|-------------|
|         |     |     |        | 主伐(人工林)  | 主伐(天然林) | 間伐(人工林) |             |        |               |             |
| 1       | 1   | H23 | 1.0000 | 0        | 0       | 83      | 1,411,000   | 25%    | 352,750       | 339,169     |
| 2       | 2   | H24 | 0.9615 | 0        | 0       | 0       | 0           | 50%    | 0             | 0           |
| 3       | 3   | H25 | 0.9246 | 0        | 0       | 0       | 0           | 75%    | 1,568,250     | 1,394,174   |
| 4       | 4   | H26 | 0.8890 | 0        | 0       | 123     | 2,091,000   | 100%   | 0             | 0           |
| 5       | 5   | H27 | 0.8548 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 6       | 6   | H28 | 0.8219 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 7       | 7   | H29 | 0.7903 | 0        | 0       | 923     | 15,691,000  | 100%   | 15,691,000    | 12,400,597  |
| 8       | 8   | H30 | 0.7599 | 0        | 0       | 616     | 10,472,000  | 100%   | 10,472,000    | 7,957,673   |
| 9       | 9   | H31 | 0.7307 | 0        | 0       | 862     | 14,654,000  | 100%   | 14,654,000    | 10,707,678  |
| 10      | 10  | H32 | 0.7026 | 1,112    | 0       | 0       | 12,788,000  | 100%   | 12,788,000    | 8,984,844   |
| 11      | 11  | H33 | 0.6756 | 0        | 0       | 3,347   | 56,899,000  | 100%   | 56,899,000    | 38,440,964  |
| 12      | 12  | H34 | 0.6496 | 371      | 0       | 369     | 10,539,500  | 100%   | 10,539,500    | 6,846,459   |
| 13      | 13  | H35 | 0.6246 | 0        | 0       | 246     | 4,182,000   | 100%   | 4,182,000     | 2,612,077   |
| 14      | 14  | H36 | 0.6006 | 0        | 0       | 167     | 2,839,000   | 100%   | 2,839,000     | 1,705,103   |
| 15      | 15  | H37 | 0.5775 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 16      | 16  | H38 | 0.5553 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 17      | 17  | H39 | 0.5339 | 0        | 0       | 1,251   | 21,267,000  | 100%   | 21,267,000    | 11,354,451  |
| 18      | 18  | H40 | 0.5134 | 0        | 0       | 834     | 14,178,000  | 100%   | 14,178,000    | 7,278,985   |
| 19      | 19  | H41 | 0.4936 | 0        | 0       | 1,168   | 19,856,000  | 100%   | 19,856,000    | 9,800,922   |
| 20      | 20  | H42 | 0.4746 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 21      | 21  | H43 | 0.4564 | 11,866   | 0       | 918     | 152,065,000 | 100%   | 152,065,000   | 69,402,466  |
| 22      | 22  | H44 | 0.4388 | 0        | 0       | 501     | 8,517,000   | 100%   | 8,517,000     | 3,737,260   |
| 23      | 23  | H45 | 0.4220 | 0        | 0       | 334     | 5,678,000   | 100%   | 5,678,000     | 2,396,116   |
| 24      | 24  | H46 | 0.4057 | 742      | 0       | 0       | 8,533,000   | 100%   | 8,533,000     | 3,461,838   |
| 25      | 25  | H47 | 0.3901 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 26      | 26  | H48 | 0.3751 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 27      | 27  | H49 | 0.3607 | 5,562    | 0       | 0       | 63,963,000  | 100%   | 63,963,000    | 23,071,454  |
| 28      | 28  | H50 | 0.3468 | 3,708    | 0       | 0       | 42,642,000  | 100%   | 42,642,000    | 14,788,246  |
| 29      | 29  | H51 | 0.3335 | 5,191    | 0       | 0       | 59,696,500  | 100%   | 59,696,500    | 19,908,783  |
| 30      | 30  | H52 | 0.3207 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 31      | 31  | H53 | 0.3083 | 4,079    | 0       | 0       | 46,908,500  | 100%   | 46,908,500    | 14,461,891  |
| 32      | 32  | H54 | 0.2965 | 2,225    | 0       | 0       | 25,587,500  | 100%   | 25,587,500    | 7,586,694   |
| 33      | 33  | H55 | 0.2851 | 1,483    | 0       | 0       | 17,054,500  | 100%   | 17,054,500    | 4,862,238   |
| 34      | 34  | H56 | 0.2741 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 35      | 35  | H57 | 0.2636 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 36      | 36  | H58 | 0.2534 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 37      | 37  | H59 | 0.2437 | 0        | 0       | 308     | 5,236,000   | 100%   | 5,236,000     | 1,276,013   |
| 38      | 38  | H60 | 0.2343 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 39      | 39  | H61 | 0.2253 | 0        | 0       | 246     | 4,182,000   | 100%   | 4,182,000     | 942,205     |
| 40      | 40  | H62 | 0.2166 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 41      | 41  | H63 | 0.2083 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 42      | 42  | H64 | 0.2003 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 43      | 43  | H65 | 0.1926 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 44      | 44  | H66 | 0.1852 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 44      | 44  | H67 | 0.1780 | 0        | 0       | 0       | 0           | 100%   | 0             | 0           |
| 合計(便益額) |     |     |        |          |         |         |             |        |               | 285,718,305 |

岐阜森林管理署  
 飛騨川森林計画区  
 勢谷林業専用道 開設

5 森林整備経費縮減便益  
 (1) 造林作業経費縮減便益  
 作業道開設経費縮減便益

18,193 千円

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

|     |                        |        |
|-----|------------------------|--------|
| T:  | 整備期間(年)                | 4      |
| Y:  | 評価期間(年)                | 44     |
| Lt: | 林道が整備されない場合に必要作業道延長(m) | 1,000  |
| @:  | 作業道の開設単価(円/m)          | 10,000 |
| Ct: | 作業道の維持管理費用(円/m)        | 500    |

便益算出表 (単位:円)

| 評価期間    | 経過年 | 年度  | 割引係数   | 開設延長<br>m | 維持管理延長<br>m | 年効果額      | 現在価値<br>= x |
|---------|-----|-----|--------|-----------|-------------|-----------|-------------|
|         |     | H23 | 1.0000 |           |             |           |             |
| 1       | 1   | H24 | 0.9615 | 250       |             | 2,500,000 | 2,403,750   |
| 2       | 2   | H25 | 0.9246 | 250       | 250         | 2,625,000 | 2,427,075   |
| 3       | 3   | H26 | 0.8890 | 250       | 500         | 2,750,000 | 2,444,750   |
| 4       | 4   | H27 | 0.8548 | 250       | 750         | 2,875,000 | 2,457,550   |
| 5       | 5   | H28 | 0.8219 |           | 1,000       | 500,000   | 410,950     |
| 6       | 6   | H29 | 0.7903 |           | 1,000       | 500,000   | 395,150     |
| 7       | 7   | H30 | 0.7599 |           | 1,000       | 500,000   | 379,950     |
| 8       | 8   | H31 | 0.7307 |           | 1,000       | 500,000   | 365,350     |
| 9       | 9   | H32 | 0.7026 |           | 1,000       | 500,000   | 351,300     |
| 10      | 10  | H33 | 0.6756 |           | 1,000       | 500,000   | 337,800     |
| 11      | 11  | H34 | 0.6496 |           | 1,000       | 500,000   | 324,800     |
| 12      | 12  | H35 | 0.6246 |           | 1,000       | 500,000   | 312,300     |
| 13      | 13  | H36 | 0.6006 |           | 1,000       | 500,000   | 300,300     |
| 14      | 14  | H37 | 0.5775 |           | 1,000       | 500,000   | 288,750     |
| 15      | 15  | H38 | 0.5553 |           | 1,000       | 500,000   | 277,650     |
| 16      | 16  | H39 | 0.5339 |           | 1,000       | 500,000   | 266,950     |
| 17      | 17  | H40 | 0.5134 |           | 1,000       | 500,000   | 256,700     |
| 18      | 18  | H41 | 0.4936 |           | 1,000       | 500,000   | 246,800     |
| 19      | 19  | H42 | 0.4746 |           | 1,000       | 500,000   | 237,300     |
| 20      | 20  | H43 | 0.4564 |           | 1,000       | 500,000   | 228,200     |
| 21      | 21  | H44 | 0.4388 |           | 1,000       | 500,000   | 219,400     |
| 22      | 22  | H45 | 0.4220 |           | 1,000       | 500,000   | 211,000     |
| 23      | 23  | H46 | 0.4057 |           | 1,000       | 500,000   | 202,850     |
| 24      | 24  | H47 | 0.3901 |           | 1,000       | 500,000   | 195,050     |
| 25      | 25  | H48 | 0.3751 |           | 1,000       | 500,000   | 187,550     |
| 26      | 26  | H49 | 0.3607 |           | 1,000       | 500,000   | 180,350     |
| 27      | 27  | H50 | 0.3468 |           | 1,000       | 500,000   | 173,400     |
| 28      | 28  | H51 | 0.3335 |           | 1,000       | 500,000   | 166,750     |
| 29      | 29  | H52 | 0.3207 |           | 1,000       | 500,000   | 160,350     |
| 30      | 30  | H53 | 0.3083 |           | 1,000       | 500,000   | 154,150     |
| 31      | 31  | H54 | 0.2965 |           | 1,000       | 500,000   | 148,250     |
| 32      | 32  | H55 | 0.2851 |           | 1,000       | 500,000   | 142,550     |
| 33      | 33  | H56 | 0.2741 |           | 1,000       | 500,000   | 137,050     |
| 34      | 34  | H57 | 0.2636 |           | 1,000       | 500,000   | 131,800     |
| 35      | 35  | H58 | 0.2534 |           | 1,000       | 500,000   | 126,700     |
| 36      | 36  | H59 | 0.2437 |           | 1,000       | 500,000   | 121,850     |
| 37      | 37  | H60 | 0.2343 |           | 1,000       | 500,000   | 117,150     |
| 38      | 38  | H61 | 0.2253 |           | 1,000       | 500,000   | 112,650     |
| 39      | 39  | H62 | 0.2166 |           | 1,000       | 500,000   | 108,300     |
| 40      | 40  | H63 | 0.2083 |           | 1,000       | 500,000   | 104,150     |
| 41      | 41  | H64 | 0.2003 |           | 1,000       | 500,000   | 100,150     |
| 42      | 42  | H65 | 0.1926 |           | 1,000       | 500,000   | 96,300      |
| 43      | 43  | H66 | 0.1852 |           | 1,000       | 500,000   | 92,600      |
| 44      | 44  | H67 | 0.1780 |           | 1,000       | 500,000   | 89,000      |
| 合計(便益額) |     |     |        |           |             |           | 18,192,725  |

岐阜森林管理署  
 飛騨川森林計画区  
 伊勢谷林業専用道 開設



- 1 水源かん養便益
  - (1) 洪水防止便益
- 5 森林整備経費縮減等便益
  - (4) 森林整備促進便益
    - 水源かん養便益
      - ア 洪水防止便益

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

|      |  |              |
|------|--|--------------|
| U:   | 治山ダムの単位雨量流出量当たりの年間減価償却費 (円 / m3 / sec) | 3,740,000    |
| f1:  | 事業実施前の流出係数                             | 0.75         |
| f2:  | 事業実施後、T年計画後の流出係数                       | 0.65         |
| T:   | 事業実施後、流出係数が安定するのに必要な年数 (年)             | 15           |
| :    | 100年確率時雨量 (mm/h)                       | 221          |
| A:   | 事業対象区域面積 (ha)                          | 0.00 ~ 13.00 |
| Y:   | 評価期間 (年)                               | 44           |
| 360: | 単位合わせのための調整値                           |              |

便益算出表 (単位:円)

| 評価期間     | 経過年 | 年度  | 割引係数   | 事業対象区域面積 (ha) | 効果対象面積 | 年効果額      | 現在価値 = x  |
|----------|-----|-----|--------|---------------|--------|-----------|-----------|
| 1        | 1   | H23 | 1.0000 |               |        |           |           |
| 2        | 2   | H24 | 0.9615 | 0.00          | 0.00   | 0         | 0         |
| 3        | 3   | H25 | 0.9246 | 0.00          | 0.00   | 0         | 0         |
| 4        | 4   | H26 | 0.8890 | 0.00          | 0.00   | 0         | 0         |
| 5        | 5   | H27 | 0.8548 | 0.00          | 0.00   | 0         | 0         |
| 6        | 6   | H28 | 0.8219 | 0.00          | 0.00   | 0         | 0         |
| 7        | 7   | H29 | 0.7903 | 0.00          | 0.00   | 0         | 0         |
| 8        | 8   | H30 | 0.7599 | 0.00          | 0.00   | 0         | 0         |
| 9        | 9   | H31 | 0.7307 | 0.00          | 0.00   | 0         | 0         |
| 10       | 10  | H32 | 0.7026 | 0.00          | 0.00   | 0         | 0         |
| 11       | 11  | H33 | 0.6756 | 0.00          | 0.00   | 0         | 0         |
| 12       | 12  | H34 | 0.6496 | 0.00          | 0.00   | 0         | 0         |
| 13       | 13  | H35 | 0.6246 | 0.00          | 0.00   | 0         | 0         |
| 14       | 14  | H36 | 0.6006 | 0.00          | 0.00   | 0         | 0         |
| 15       | 15  | H37 | 0.5775 | 0.00          | 0.00   | 0         | 0         |
| 16       | 16  | H38 | 0.5553 | 0.00          | 0.00   | 0         | 0         |
| 17       | 17  | H39 | 0.5339 | 0.00          | 0.00   | 0         | 0         |
| 18       | 18  | H40 | 0.5134 | 0.00          | 0.00   | 0         | 0         |
| 19       | 19  | H41 | 0.4936 | 0.00          | 0.00   | 0         | 0         |
| 20       | 20  | H42 | 0.4746 | 0.00          | 0.00   | 0         | 0         |
| 21       | 21  | H43 | 0.4564 | 0.00          | 0.00   | 0         | 0         |
| 22       | 22  | H44 | 0.4388 | 5.00          | 0.33   | 75,766    | 33,246    |
| 23       | 23  | H45 | 0.4220 | 5.00          | 0.67   | 153,828   | 64,915    |
| 24       | 24  | H46 | 0.4057 | 9.00          | 1.27   | 291,585   | 118,296   |
| 25       | 25  | H47 | 0.3901 | 9.00          | 1.86   | 427,046   | 166,591   |
| 26       | 26  | H48 | 0.3751 | 9.00          | 2.47   | 567,098   | 212,718   |
| 27       | 27  | H49 | 0.3607 | 9.00          | 3.07   | 704,855   | 254,241   |
| 28       | 28  | H50 | 0.3468 | 9.00          | 3.66   | 840,316   | 291,422   |
| 29       | 29  | H51 | 0.3335 | 9.00          | 4.27   | 980,368   | 326,953   |
| 30       | 30  | H52 | 0.3207 | 9.00          | 4.87   | 1,118,125 | 358,583   |
| 31       | 31  | H53 | 0.3083 | 9.00          | 5.46   | 1,253,586 | 386,481   |
| 32       | 32  | H54 | 0.2965 | 9.00          | 6.07   | 1,393,638 | 413,214   |
| 33       | 33  | H55 | 0.2851 | 9.00          | 6.67   | 1,531,395 | 436,601   |
| 34       | 34  | H56 | 0.2741 | 9.00          | 7.26   | 1,666,856 | 456,885   |
| 35       | 35  | H57 | 0.2636 | 9.00          | 7.87   | 1,806,908 | 476,301   |
| 36       | 36  | H58 | 0.2534 | 9.00          | 8.47   | 1,944,665 | 492,778   |
| 37       | 37  | H59 | 0.2437 | 9.00          | 9.06   | 2,080,126 | 506,927   |
| 38       | 38  | H60 | 0.2343 | 9.00          | 9.65   | 2,206,350 | 484,146   |
| 39       | 39  | H61 | 0.2253 | 9.00          | 9.27   | 2,128,341 | 479,515   |
| 40       | 40  | H62 | 0.2166 | 12.00         | 9.20   | 2,112,269 | 457,517   |
| 41       | 41  | H63 | 0.2083 | 12.00         | 9.40   | 2,158,188 | 449,551   |
| 42       | 42  | H64 | 0.2003 | 13.00         | 9.67   | 2,220,178 | 444,702   |
| 43       | 43  | H65 | 0.1926 | 13.00         | 9.93   | 2,279,873 | 439,104   |
| 44       | 44  | H66 | 0.1852 | 13.00         | 10.20  | 2,341,863 | 433,713   |
|          |     | H67 | 0.1780 | 13.00         | 10.47  | 2,403,854 | 427,886   |
| 合計 (便益額) |     |     |        |               |        |           | 8,612,286 |

1,540 千円

- 1 水源かん養便益
  - (2) 流域貯水便益
- 5 森林整備経費縮減等便益
  - (4) 森林整備促進便益
    - イ 水源かん養便益
      - イ 流域貯水便益

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

- A: 事業対象区域面積 (ha) 0.00 ~ 13.00
- P: 年間平均降雨量 (mm / 年) 1,800
- D1: 事業実施前の貯留率 0.51
- D2: 事業実施後、T年経過後の貯留率 0.56
- T: 事業実施後、流出係数が安定するのに必要な年数(年) 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) 1,439,000,000
- Y: 評価期間(年) 44
- 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

便益算出表

| 評価期間    | 経過年 | 年度  | 割引係数   | 事業対象<br>区域面積 (ha) | 効果対象面積 | 年効果額    | 現在価値<br>= x |
|---------|-----|-----|--------|-------------------|--------|---------|-------------|
| 1       | 1   | H23 | 1.0000 | 0.00              | 0.00   | 0       | 0           |
| 1       | 1   | H24 | 0.9615 | 0.00              | 0.00   | 0       | 0           |
| 2       | 2   | H25 | 0.9246 | 0.00              | 0.00   | 0       | 0           |
| 3       | 3   | H26 | 0.8890 | 0.00              | 0.00   | 0       | 0           |
| 4       | 4   | H27 | 0.8548 | 0.00              | 0.00   | 0       | 0           |
| 5       | 5   | H28 | 0.8219 | 0.00              | 0.00   | 0       | 0           |
| 6       | 6   | H29 | 0.7903 | 0.00              | 0.00   | 0       | 0           |
| 7       | 7   | H30 | 0.7599 | 0.00              | 0.00   | 0       | 0           |
| 8       | 8   | H31 | 0.7307 | 0.00              | 0.00   | 0       | 0           |
| 9       | 9   | H32 | 0.7026 | 0.00              | 0.00   | 0       | 0           |
| 10      | 10  | H33 | 0.6756 | 0.00              | 0.00   | 0       | 0           |
| 11      | 11  | H34 | 0.6496 | 0.00              | 0.00   | 0       | 0           |
| 12      | 12  | H35 | 0.6246 | 0.00              | 0.00   | 0       | 0           |
| 13      | 13  | H36 | 0.6006 | 0.00              | 0.00   | 0       | 0           |
| 14      | 14  | H37 | 0.5775 | 0.00              | 0.00   | 0       | 0           |
| 15      | 15  | H38 | 0.5553 | 0.00              | 0.00   | 0       | 0           |
| 16      | 16  | H39 | 0.5339 | 0.00              | 0.00   | 0       | 0           |
| 17      | 17  | H40 | 0.5134 | 0.00              | 0.00   | 0       | 0           |
| 18      | 18  | H41 | 0.4936 | 0.00              | 0.00   | 0       | 0           |
| 19      | 19  | H42 | 0.4746 | 0.00              | 0.00   | 0       | 0           |
| 20      | 20  | H43 | 0.4564 | 0.00              | 0.00   | 0       | 0           |
| 21      | 21  | H44 | 0.4388 | 5.00              | 0.33   | 13,552  | 5,947       |
| 22      | 22  | H45 | 0.4220 | 5.00              | 0.67   | 27,515  | 11,611      |
| 23      | 23  | H46 | 0.4057 | 9.00              | 1.27   | 52,156  | 21,160      |
| 24      | 24  | H47 | 0.3901 | 9.00              | 1.86   | 76,385  | 29,798      |
| 25      | 25  | H48 | 0.3751 | 9.00              | 2.47   | 101,436 | 38,049      |
| 26      | 26  | H49 | 0.3607 | 9.00              | 3.07   | 126,077 | 45,476      |
| 27      | 27  | H50 | 0.3468 | 9.00              | 3.66   | 150,307 | 52,126      |
| 28      | 28  | H51 | 0.3335 | 9.00              | 4.27   | 175,358 | 58,482      |
| 29      | 29  | H52 | 0.3207 | 9.00              | 4.87   | 199,998 | 64,139      |
| 30      | 30  | H53 | 0.3083 | 9.00              | 5.46   | 224,228 | 69,129      |
| 31      | 31  | H54 | 0.2965 | 9.00              | 6.07   | 249,279 | 73,911      |
| 32      | 32  | H55 | 0.2851 | 9.00              | 6.67   | 273,919 | 78,094      |
| 33      | 33  | H56 | 0.2741 | 9.00              | 7.26   | 298,149 | 81,723      |
| 34      | 34  | H57 | 0.2636 | 9.00              | 7.87   | 323,200 | 85,196      |
| 35      | 35  | H58 | 0.2534 | 9.00              | 8.47   | 347,840 | 88,143      |
| 36      | 36  | H59 | 0.2437 | 9.00              | 9.06   | 372,070 | 90,673      |
| 37      | 37  | H60 | 0.2343 | 9.00              | 9.67   | 396,006 | 92,906      |
| 38      | 38  | H61 | 0.2253 | 9.00              | 9.27   | 380,694 | 85,770      |
| 39      | 39  | H62 | 0.2166 | 12.00             | 9.20   | 377,820 | 81,836      |
| 40      | 40  | H63 | 0.2083 | 12.00             | 9.40   | 386,033 | 80,411      |
| 41      | 41  | H64 | 0.2003 | 13.00             | 9.67   | 397,121 | 79,543      |
| 42      | 42  | H65 | 0.1926 | 13.00             | 9.93   | 407,799 | 78,542      |
| 43      | 43  | H66 | 0.1852 | 13.00             | 10.20  | 418,887 | 77,578      |
| 44      | 44  | H67 | 0.1780 | 13.00             | 10.47  | 429,975 | 76,536      |
| 合計(便益額) |     |     |        |                   |        |         | 1,540,472   |

岐阜森林管理署  
飛騨川森林計画区  
伊勢谷林業専用道 開設

2,623 千円

1 水源かん養便益  
(3) 水質浄化便益

5 森林整備経費縮減等便益

(4) 森林整備促進便益  
水源かん養便益  
水質浄化便益

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

$$u = \frac{Ux \times Qx + Uy \times Qy}{Qx + Qy}$$

|     |  |              |
|-----|--|--------------|
| Qx: | 全貯留量のうち生活用水使用相当量(m3)                       | 157.00 億     |
| Qy: | 全貯留量 - Qx(m3)                              | 1,707.25 億   |
| A:  | 事業対象区域面積 (ha)                              | 0.00 ~ 13.00 |
| P:  | 年間平均降雨量(mm / 年)                            | 1,800        |
| T:  | 事業実施後、貯留率が安定するのに必要な年数(年)                   | 15           |
| D1: | 事業実施前の貯留率                                  | 0.51         |
| D2: | 事業実施後、T年経過後の貯留率                            | 0.56         |
| Ux: | 単位当たりの上水道給水原価(円 / m3)                      | 177.45       |
| Uy: | 単位当たりの雨水浄化費(円 / m3)                        | 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)(円/m3) | 77.70        |
| Y:  | 評価期間(年)                                    | 44           |
| 10: | 単位合わせのための調整値                               |              |

便益算出表

(単位:円)

| 評価期間    | 経過年 | 年度  | 割引係数   | 事業対象<br>区域面積 (ha) | 効果対象面積 | 年効果額    | 現在価値<br>= X |
|---------|-----|-----|--------|-------------------|--------|---------|-------------|
| 1       | 1   | H23 | 1.0000 | 0.00              | 0.00   | 0       | 0           |
| 2       | 2   | H24 | 0.9615 | 0.00              | 0.00   | 0       | 0           |
| 3       | 3   | H25 | 0.9246 | 0.00              | 0.00   | 0       | 0           |
| 4       | 4   | H26 | 0.8890 | 0.00              | 0.00   | 0       | 0           |
| 5       | 5   | H27 | 0.8548 | 0.00              | 0.00   | 0       | 0           |
| 6       | 6   | H28 | 0.8219 | 0.00              | 0.00   | 0       | 0           |
| 7       | 7   | H29 | 0.7903 | 0.00              | 0.00   | 0       | 0           |
| 8       | 8   | H30 | 0.7599 | 0.00              | 0.00   | 0       | 0           |
| 9       | 9   | H31 | 0.7307 | 0.00              | 0.00   | 0       | 0           |
| 10      | 10  | H32 | 0.7026 | 0.00              | 0.00   | 0       | 0           |
| 11      | 11  | H33 | 0.6756 | 0.00              | 0.00   | 0       | 0           |
| 12      | 12  | H34 | 0.6496 | 0.00              | 0.00   | 0       | 0           |
| 13      | 13  | H35 | 0.6246 | 0.00              | 0.00   | 0       | 0           |
| 14      | 14  | H36 | 0.6006 | 0.00              | 0.00   | 0       | 0           |
| 15      | 15  | H37 | 0.5775 | 0.00              | 0.00   | 0       | 0           |
| 16      | 16  | H38 | 0.5553 | 0.00              | 0.00   | 0       | 0           |
| 17      | 17  | H39 | 0.5339 | 0.00              | 0.00   | 0       | 0           |
| 18      | 18  | H40 | 0.5134 | 0.00              | 0.00   | 0       | 0           |
| 19      | 19  | H41 | 0.4936 | 0.00              | 0.00   | 0       | 0           |
| 20      | 20  | H42 | 0.4746 | 0.00              | 0.00   | 0       | 0           |
| 21      | 21  | H43 | 0.4564 | 0.00              | 0.00   | 0       | 0           |
| 22      | 22  | H44 | 0.4388 | 5.00              | 0.33   | 23,077  | 10,126      |
| 23      | 23  | H45 | 0.4220 | 5.00              | 0.67   | 46,853  | 19,772      |
| 24      | 24  | H46 | 0.4057 | 9.00              | 1.27   | 88,811  | 36,031      |
| 25      | 25  | H47 | 0.3901 | 9.00              | 1.86   | 130,070 | 50,740      |
| 26      | 26  | H48 | 0.3751 | 9.00              | 2.47   | 172,727 | 64,790      |
| 27      | 27  | H49 | 0.3607 | 9.00              | 3.07   | 214,685 | 77,437      |
| 28      | 28  | H50 | 0.3468 | 9.00              | 3.66   | 255,944 | 88,761      |
| 29      | 29  | H51 | 0.3335 | 9.00              | 4.27   | 298,601 | 99,583      |
| 30      | 30  | H52 | 0.3207 | 9.00              | 4.87   | 340,559 | 109,217     |
| 31      | 31  | H53 | 0.3083 | 9.00              | 5.46   | 381,818 | 117,714     |
| 32      | 32  | H54 | 0.2965 | 9.00              | 6.07   | 424,475 | 125,857     |
| 33      | 33  | H55 | 0.2851 | 9.00              | 6.67   | 466,433 | 132,980     |
| 34      | 34  | H56 | 0.2741 | 9.00              | 7.26   | 507,692 | 139,158     |
| 35      | 35  | H57 | 0.2636 | 9.00              | 7.87   | 550,349 | 145,072     |
| 36      | 36  | H58 | 0.2534 | 9.00              | 8.47   | 592,307 | 150,091     |
| 37      | 37  | H59 | 0.2437 | 9.00              | 9.06   | 633,566 | 154,400     |
| 38      | 38  | H60 | 0.2343 | 9.00              | 9.66   | 674,125 | 158,000     |
| 39      | 39  | H61 | 0.2253 | 9.00              | 9.27   | 648,251 | 146,051     |
| 40      | 40  | H62 | 0.2166 | 12.00             | 9.20   | 643,356 | 139,351     |
| 41      | 41  | H63 | 0.2083 | 12.00             | 9.40   | 657,342 | 136,924     |
| 42      | 42  | H64 | 0.2003 | 13.00             | 9.67   | 676,223 | 135,447     |
| 43      | 43  | H65 | 0.1926 | 13.00             | 9.93   | 694,405 | 133,742     |
| 44      | 44  | H66 | 0.1852 | 13.00             | 10.20  | 713,286 | 132,101     |
|         |     | H67 | 0.1780 | 13.00             | 10.47  | 732,167 | 130,326     |
| 合計(便益額) |     |     |        |                   |        |         | 2,623,132   |

岐阜森林管理署  
飛騨川森林計画区  
伊勢谷林業専用道 開設





3 環境保全便益  
 (1) 炭素固定便益  
 樹木固定分

5 森林整備経費縮減等便益  
 (4) 森林整備促進便益  
 環境保全便益  
 ア 炭素固定便益  
 樹木固定分

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

|        |                                       |           |       |
|--------|---------------------------------------|-----------|-------|
| U:     | 二酸化炭素に関する原単位 (円/t-CO2)                |           | 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/ha)   | スギ        | 333   |
| 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/ha)    | スギ        | 412   |
| Y:     | 評価期間 (年)                              |           | 20    |
| D:     | 容積密度 (t/m3)                           | スギ        | 0.407 |
| 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年起 スギ | 1.24  |
| 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        | 0.26  |
| 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                       |           |       |

便益算出表

| 評価期間    | 経過年 | 年度  | 割引係数   | 事業対象<br>区域面積 (ha) | 蓄積量 (m <sup>3</sup> ) | 年効果額    | 現在価値<br>= x |
|---------|-----|-----|--------|-------------------|-----------------------|---------|-------------|
| 1       | 1   | H23 | 1.0000 | 0.00              | 0.00                  | 0       | 0           |
| 2       | 2   | H24 | 0.9615 | 0.00              | 0.00                  | 0       | 0           |
| 3       | 3   | H25 | 0.9246 | 0.00              | 0.00                  | 0       | 0           |
| 4       | 4   | H26 | 0.8890 | 0.00              | 0.00                  | 0       | 0           |
| 5       | 5   | H27 | 0.8548 | 0.00              | 0.00                  | 0       | 0           |
| 6       | 6   | H28 | 0.8219 | 0.00              | 0.00                  | 0       | 0           |
| 7       | 7   | H29 | 0.7903 | 0.00              | 0.00                  | 0       | 0           |
| 8       | 8   | H30 | 0.7599 | 0.00              | 0.00                  | 0       | 0           |
| 9       | 9   | H31 | 0.7307 | 0.00              | 0.00                  | 0       | 0           |
| 10      | 10  | H32 | 0.7026 | 0.00              | 0.00                  | 0       | 0           |
| 11      | 11  | H33 | 0.6756 | 0.00              | 0.00                  | 0       | 0           |
| 12      | 12  | H34 | 0.6496 | 0.00              | 0.00                  | 0       | 0           |
| 13      | 13  | H35 | 0.6246 | 0.00              | 0.00                  | 0       | 0           |
| 14      | 14  | H36 | 0.6006 | 0.00              | 0.00                  | 0       | 0           |
| 15      | 15  | H37 | 0.5775 | 0.00              | 0.00                  | 0       | 0           |
| 16      | 16  | H38 | 0.5553 | 0.00              | 0.00                  | 0       | 0           |
| 17      | 17  | H39 | 0.5339 | 0.00              | 0.00                  | 0       | 0           |
| 18      | 18  | H40 | 0.5134 | 0.00              | 0.00                  | 0       | 0           |
| 19      | 19  | H41 | 0.4936 | 0.00              | 0.00                  | 0       | 0           |
| 20      | 20  | H42 | 0.4746 | 0.00              | 0.00                  | 0       | 0           |
| 21      | 21  | H43 | 0.4564 | 0.00              | 0.00                  | 0       | 0           |
| 22      | 22  | H44 | 0.4388 | 5.00              | 11.29                 | 79,572  | 34,916      |
| 23      | 23  | H45 | 0.4220 | 5.00              | 11.29                 | 79,572  | 33,579      |
| 24      | 24  | H46 | 0.4057 | 9.00              | 20.32                 | 143,215 | 58,102      |
| 25      | 25  | H47 | 0.3901 | 9.00              | 20.32                 | 143,215 | 55,868      |
| 26      | 26  | H48 | 0.3751 | 9.00              | 20.32                 | 143,215 | 53,720      |
| 27      | 27  | H49 | 0.3607 | 9.00              | 20.32                 | 143,215 | 51,658      |
| 28      | 28  | H50 | 0.3468 | 9.00              | 20.32                 | 143,215 | 49,667      |
| 29      | 29  | H51 | 0.3335 | 9.00              | 20.32                 | 143,215 | 47,762      |
| 30      | 30  | H52 | 0.3207 | 9.00              | 20.32                 | 143,215 | 45,929      |
| 31      | 31  | H53 | 0.3083 | 9.00              | 20.32                 | 143,215 | 44,153      |
| 32      | 32  | H54 | 0.2965 | 9.00              | 20.32                 | 143,215 | 42,463      |
| 33      | 33  | H55 | 0.2851 | 9.00              | 20.32                 | 143,215 | 40,831      |
| 34      | 34  | H56 | 0.2741 | 9.00              | 20.32                 | 143,215 | 39,255      |
| 35      | 35  | H57 | 0.2636 | 9.00              | 20.32                 | 143,215 | 37,751      |
| 36      | 36  | H58 | 0.2534 | 9.00              | 20.32                 | 143,215 | 36,291      |
| 37      | 37  | H59 | 0.2437 | 9.00              | 20.32                 | 143,215 | 34,901      |
| 38      | 38  | H60 | 0.2343 | 9.00              | 20.32                 | 143,215 | 33,555      |
| 39      | 39  | H61 | 0.2253 | 9.00              | 20.32                 | 143,215 | 32,266      |
| 40      | 40  | H62 | 0.2166 | 12.00             | 27.09                 | 190,930 | 41,355      |
| 41      | 41  | H63 | 0.2083 | 12.00             | 27.09                 | 190,930 | 39,771      |
| 42      | 42  | H64 | 0.2003 | 13.00             | 29.35                 | 206,859 | 41,434      |
| 43      | 43  | H65 | 0.1926 | 13.00             | 29.35                 | 206,859 | 39,841      |
| 44      | 44  | H66 | 0.1852 | 13.00             | 29.35                 | 206,859 | 38,310      |
| 44      | 44  | H67 | 0.1780 | 13.00             | 29.35                 | 206,859 | 36,821      |
| 合計(便益額) |     |     |        |                   |                       |         | 1,010,199   |



【共通】

|                       |                |            |
|-----------------------|----------------|------------|
| 林野公共事業における事前評価の手法について | 林野庁森林整備部計画課長通知 | 平成22年3月31日 |
| 第四次国有林野施業実施計画書        | 中部森林管理局        | 平成24年3月31日 |

【費用】

|  |             |         |
|--|-------------|---------|
| 平成23年度公共工事設計労務単価表                      | 農林水産省・国土交通省 | 平成23年3月 |
| その他一般に公表されていない諸元については、林野庁業務資料及び森林管理局調べ |             |         |

【便益】

|  |                            |            |
|--|----------------------------|------------|
| 「ダム年鑑 2010」                                | (財団法人日本ダム協会)               |            |
| 「平成22年版日本の水資源について」                         | (国土交通省土地・水資源局水資源部)         |            |
| 「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)                  |            |
| 「雨水利用ハンドブック」                               | (社団法人雨水貯留浸透技術協会)           |            |
| 「砂防便覧」平成20年版                               | (社団法人全国治水砂防協会)             |            |
| 「日本国温室効果ガスインベントリ報告書」(2010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) |            |
| 「二酸化炭素地中貯留技術研究開発成果報告書」                     | (財団法人地球環境産業技術研究機構 平成18年3月) |            |
| 「森林の気象緩和機能」                                | (社団法人日本治山治水協会発行)           |            |
| 「過去の電力料金単価の推移」(平成21年度)                     | 資源エネルギー庁                   |            |
| 「建設物価」                                     | (財団法人建設物価調査会)              |            |
| 「積算資料」                                     | (財団法人経済調査会)                |            |
| 「平成20年住宅・土地統計調査」                           | 総務省統計局                     |            |
| 「費用便益分析マニュアル」(平成20年11月)                    | 国土交通省道路局 都市・地域整備局          | 平成20年11月   |
| 治山技術基準解説                                   | 日本治山治水協会                   |            |
| 治山事業執務提要                                   | 中部森林管理局                    | -          |
| 気象庁HP、気象統計情報(萩原)                           | 気象庁                        | 平成23年12月   |
| 飛騨川森林計画区国有林野施業実施計画書収穫予想表                   | 中部森林管理局                    | 平成24年3月31日 |
| その他一般に公表されていない諸元については、林野庁業務資料及び森林管理局調べ     |                            |            |