**Collateral benefits from public and private conservation lands: a comparison of ecosystem service capacities**

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**SUPPLEMENTARY MATERIAL**

**Table S1** Unstandardized values of ecosystem service models. Text below the table describes the relationship of these values to Table 3 in main text.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Conservation area* *Manager* | *RAW-Surface water run-off1* | *RAW- leaching2* | *Riparian filtration3* | *RAW-Soil Loss4* | *Caron storage5* | *Biodiversity support6* | *Recreational fishing7* |
| State  |  |  |  |  |  |  |  |
| VADCR  | 1.12 ± 0.3 | 9.46 ± 0.4 | 63.1 ± 1.4 | 35.67 ± 14.2 | 289.8 ± 8.3 | 222.0 ± 2.2 | 0.23 ± 0.009 |
| VDGIF | 0.54 ± 0.1 | 11.49 ± 0.4 | 70.5 ± 1.2 | 17.06 ± 2.9 | 355.1 ± 9.5 | 193.2 ± 3.0 | 0.17 ± 0.007 |
| NCDPR (SNAs) | 2.41 ± 1.0 | 8.55 ± 0.4 | 72.1 ± 1.5 | 1.25 ± 0.4 | 289.3 ± 27.4 | 150.6 ± 8.3 | 0.19 ± 0.020 |
| NCDENR | 0.32 ± 0.2 | 15.87 ± 1.3 | 60.5 ± 3.1 | 8.35 ± 7.3 | 332.2 ± 23.2 | 112.5 ± 5.9 | 0.02 ± 0.002 |
| Gap Status 1 | 0.72 ± 0.3 | 9.88 ± 0.6 | 66.4 ± 2.5 | 34.96 ± 15.5 | 287.4 ± 16.2 | 222.1 ± 3.8 | 0.20 ± 0.010 |
| Gap Status 2 | 0.91 ± 0.2 | 10.73 ± 0.3 | 66.4 ± 0.9 | 19.4 ± 5.0 | 331 ± 6.6 | 185.9 ± 2.5 | 0.17 ± 0.006 |
| Federal |  |  |  |  |  |  |  |
| USFWS-NWR | 1.87 ± 0.4 | 19.02 ± 0.6 | 64.9 ± 0.8 | 238.40 ± 62.8 | 360.5 ± 8.2 | 211.3 ± 3.0 | 0.18 ± 0.006 |
| USFS | 1.63 ± 0.5 | 21.99 ± 1.0 | 68.0 ± 0.6 | 1.67 ± 0.3 | 230.8 ± 5.5 | 212.1 ± 1.5 | 0.27 ± 0.005 |
| NPS | 0.98 ± 0.9 | 24.36 ± 2.5 | 70.7 ± 1.0 | 1.83 ± 0.7 | 254.5 ± 34.6 | 184 ± 21.1 | 0.23 ± 0.010 |
| Gap Status 1 | 1.61 ± 0.5 | 19.51 ± 0.9 | 66.7 ± 0.9 | 1.3 ± 0.2 | 269.5 ± 8.5 | 201.1 ± 2.7 | 0.22 ± 0.008 |
| Gap Status 2 | 1.83 ± 0.4 | 20.17 ± 0.6 | 65.6 ± 0.7 | 236.25 ± 62.2 | 334.7 ± 8.1 | 215.8 ± 2.8 | 0.21 ± 0.005 |
| Easement |  |  |  |  |  |  |  |
| Federal | 3.19 ± 1.0 | 8.85 ± 0.4 | 63.4 ± 2.7 | 119.6 ± 33.9 | 296.8 ± 36.2 | 209.1 ± 3.7 | 0.17 ± 0.007 |
| State | 0.51 ± 0.3 | 15.66 ± 1.5 | 66.0 ± 4.5 | 19.69 ± 18.2 | 282.1 ± 27.4 | 210.5 ± 7.9 | 0.22 ± 0.100 |
| NGO | 0.48 ± 0.2 | 19.33 ± 1.5 | 68.5 ± 3.5 | 7.75 ± 2.7 | 379.1 ± 24.9 | 156.3 ± 4.1 | 0.22 ± 0.004 |
| Gap Status 1 | 0.85 ± 0.4 | 12.84 ± 1.6 | 64.5 ± 4.75 | 26.77 ± 17.9 | 315.9 24.6 | 197.8 ± 10.0 | 0.18 ± 0.02 |
| Gap Status 2 | 1.74 ± 0.7 | 13.44 ± 0.7 | 67.0 ± 2.25 | 75.58 ± 25.9 | 302.5 9.1 | 185.4 ± 3.3 | 0.19 ± 0.005 |

1 Surface water run-off volume was standardized within conservation area type and then subtracted from 1 to obtain capacity of surface water regulation.

2 The New York Leaching Index was standardized within conservation area type and then subtracted from 1 to obtain capacity of groundwater protection

3 Riparian filtration was calculated as the mean percent effectiveness of nitrogen removal derived from Mayer (2007) estimates by riparian land cover.
4 Estimated soil loss (based on the RUSLE equation assuming P factor = 1) was standardized within conservation area type and then subtracted from 1 to obtain capacity of erosion control.

5 Carbon storage was calculated by adding values of soil organic carbon to above and below ground biomass carbon storage.

6 Biodiversity support was calculated as the sum of the maximum species richness of birds, amphibians, reptile, and mammals within each conservation area.

7 Freshwater recreational fishing was calculated as a unit less metric derived from the spatial combination of 8 factors (see Villamagna *et al.* 2014)

**Standardization equation**

We standardized capacity metrics to range from 0 for the lowest relative capacity observed for all conservation areas to 1 for the highest relative capacity. This enables us to compare relative capacity among all conservation areas, regardless of type, owner, or gap status and it weighted each ES equally in the composite ES measures for each conservation areas.

$$\frac{(observed capacity-minimum capacity)}{(maximum capacity-minimum capacity)}$$