

**Table S3.** Developed land and maximum potential for realized social costs of carbon (C) due to complete loss of total soil carbon (TSC) of developed land by soil order in the state of New York (USA) prior and through 2016.

Parameter	Total	Degree of Weathering and Soil Development						
		Slight			Moderate		Strong	
		Entisols	Inceptisols	Histosols	Alfisols	Mollisols	Spodosols	Ultisols
<b>Developed, open space (km<sup>2</sup>)</b>	6622.8	769.0	3889.8	41.0	1416.2	34.6	462.8	9.4
<b>Total soil carbon (TSC):</b>								
Minimum (kg)	$3.3 \times 10^{10}$	$2.8 \times 10^9$	$2.1 \times 10^{10}$	$2.6 \times 10^9$	$5.1 \times 10^9$	$3.7 \times 10^8$	$1.4 \times 10^9$	$1.8 \times 10^7$
Midpoint (kg)	$9.4 \times 10^{10}$	$9.8 \times 10^9$	$5.4 \times 10^{10}$	$5.8 \times 10^9$	$1.7 \times 10^{10}$	$8.7 \times 10^8$	$6.0 \times 10^9$	$6.7 \times 10^7$
Maximum (kg)	$1.7 \times 10^{11}$	$1.9 \times 10^{10}$	$1.0 \times 10^{11}$	$1.0 \times 10^{10}$	$3.1 \times 10^{10}$	$1.5 \times 10^9$	$1.2 \times 10^{10}$	$1.3 \times 10^8$
Minimum (SC-CO <sub>2</sub> , \$, USD)	$5.6 \times 10^9$	$4.8 \times 10^8$	$3.5 \times 10^9$	$4.5 \times 10^8$	$8.6 \times 10^8$	$6.3 \times 10^7$	$2.4 \times 10^8$	$3.0 \times 10^6$
Midpoint (SC-CO <sub>2</sub> , \$, USD)	$1.6 \times 10^{10}$	$1.7 \times 10^9$	$9.2 \times 10^9$	$9.9 \times 10^8$	$2.8 \times 10^9$	$1.5 \times 10^8$	$1.0 \times 10^9$	$1.1 \times 10^7$
Maximum (SC-CO <sub>2</sub> , \$, USD)	$2.9 \times 10^{10}$	$3.1 \times 10^9$	$1.7 \times 10^{10}$	$1.7 \times 10^9$	$5.3 \times 10^9$	$2.5 \times 10^8$	$2.1 \times 10^9$	$2.2 \times 10^7$
<b>Developed, medium intensity (km<sup>2</sup>)</b>	1665.3	421.2	931.1	5.2	283.7	6.2	17.7	0.2
<b>Total soil carbon (TSC):</b>								
Minimum (kg)	$8.0 \times 10^9$	$1.6 \times 10^9$	$4.9 \times 10^9$	$3.4 \times 10^8$	$1.0 \times 10^9$	$6.7 \times 10^7$	$5.5 \times 10^7$	$3.8 \times 10^5$
Midpoint (kg)	$2.3 \times 10^{10}$	$5.4 \times 10^9$	$1.3 \times 10^{10}$	$7.4 \times 10^8$	$3.3 \times 10^9$	$1.6 \times 10^8$	$2.3 \times 10^8$	$1.4 \times 10^6$
Maximum (kg)	$4.3 \times 10^{10}$	$1.0 \times 10^{10}$	$2.4 \times 10^{10}$	$1.3 \times 10^9$	$6.3 \times 10^9$	$2.6 \times 10^8$	$4.7 \times 10^8$	$2.8 \times 10^6$
Minimum (SC-CO <sub>2</sub> , \$, USD)	$1.3 \times 10^9$	$2.6 \times 10^8$	$8.3 \times 10^8$	$5.7 \times 10^7$	$1.7 \times 10^8$	$1.1 \times 10^7$	$9.2 \times 10^6$	$6.4 \times 10^4$
Midpoint (SC-CO <sub>2</sub> , \$, USD)	$3.9 \times 10^9$	$9.1 \times 10^8$	$2.2 \times 10^9$	$1.2 \times 10^8$	$5.6 \times 10^8$	$2.6 \times 10^7$	$3.8 \times 10^7$	$2.4 \times 10^5$
Maximum (SC-CO <sub>2</sub> , \$, USD)	$7.2 \times 10^9$	$1.7 \times 10^9$	$4.1 \times 10^9$	$2.2 \times 10^8$	$1.1 \times 10^9$	$4.4 \times 10^7$	$7.9 \times 10^7$	$4.7 \times 10^5$
<b>Developed, low intensity (km<sup>2</sup>)</b>	3043.4	586.4	1567.3	14.5	792.5	17.7	64.2	0.8
<b>Total soil carbon (TSC):</b>								
Minimum (kg)	$1.5 \times 10^{10}$	$2.2 \times 10^9$	$8.3 \times 10^9$	$9.4 \times 10^8$	$2.9 \times 10^9$	$1.9 \times 10^8$	$2.0 \times 10^8$	$1.5 \times 10^6$
Midpoint (kg)	$4.2 \times 10^{10}$	$7.5 \times 10^9$	$2.2 \times 10^{10}$	$2.1 \times 10^9$	$9.4 \times 10^9$	$4.4 \times 10^8$	$8.3 \times 10^8$	$5.7 \times 10^6$
Maximum (kg)	$7.8 \times 10^{10}$	$1.4 \times 10^{10}$	$4.0 \times 10^{10}$	$3.6 \times 10^9$	$1.8 \times 10^{10}$	$7.5 \times 10^8$	$1.7 \times 10^9$	$1.1 \times 10^7$
Minimum (SC-CO <sub>2</sub> , \$, USD)	$2.5 \times 10^9$	$3.6 \times 10^8$	$1.4 \times 10^9$	$1.6 \times 10^8$	$4.8 \times 10^8$	$3.2 \times 10^7$	$3.3 \times 10^7$	$2.6 \times 10^5$
Midpoint (SC-CO <sub>2</sub> , \$, USD)	$7.1 \times 10^9$	$1.3 \times 10^9$	$3.7 \times 10^9$	$3.5 \times 10^8$	$1.6 \times 10^9$	$7.5 \times 10^7$	$1.4 \times 10^8$	$9.6 \times 10^5$
Maximum (SC-CO <sub>2</sub> , \$, USD)	$1.3 \times 10^{10}$	$2.4 \times 10^9$	$6.8 \times 10^9$	$6.1 \times 10^8$	$3.0 \times 10^9$	$1.3 \times 10^8$	$2.9 \times 10^8$	$1.9 \times 10^6$
<b>Developed, high intensity (km<sup>2</sup>)</b>	706.1	216.6	388.0	1.1	93.2	2.5	4.7	0.0
<b>Total soil carbon (TSC):</b>								
Minimum (kg)	$3.3 \times 10^9$	$8.0 \times 10^8$	$2.1 \times 10^9$	$7.1 \times 10^7$	$3.4 \times 10^8$	$2.7 \times 10^7$	$1.5 \times 10^7$	0.0
Midpoint (kg)	$9.6 \times 10^9$	$2.8 \times 10^9$	$5.4 \times 10^9$	$1.6 \times 10^8$	$1.1 \times 10^9$	$6.3 \times 10^7$	$6.1 \times 10^7$	0.0
Maximum (kg)	$1.8 \times 10^{10}$	$5.2 \times 10^9$	$1.0 \times 10^{10}$	$2.7 \times 10^8$	$2.1 \times 10^9$	$1.1 \times 10^8$	$1.3 \times 10^8$	0.0
Minimum (SC-CO <sub>2</sub> , \$, USD)	$5.6 \times 10^8$	$1.3 \times 10^8$	$3.5 \times 10^8$	$1.2 \times 10^7$	$5.7 \times 10^7$	$4.6 \times 10^6$	$2.4 \times 10^6$	0.0
Midpoint (SC-CO <sub>2</sub> , \$, USD)	$1.6 \times 10^9$	$4.7 \times 10^8$	$9.2 \times 10^8$	$2.6 \times 10^7$	$1.9 \times 10^8$	$1.1 \times 10^7$	$1.0 \times 10^7$	0.0
Maximum (SC-CO <sub>2</sub> , \$, USD)	$3.0 \times 10^9$	$8.8 \times 10^8$	$1.7 \times 10^9$	$4.6 \times 10^7$	$3.5 \times 10^8$	$1.8 \times 10^7$	$2.1 \times 10^7$	0.0
<b>Total area (km<sup>2</sup>)</b>	12,037.6	1993.2	6776.2	61.9	2585.6	61.0	549.3	10.4
<b>Total soil carbon (TSC):</b>								
Minimum (kg)	$5.9 \times 10^{10}$	$7.4 \times 10^9$	$3.6 \times 10^{10}$	$4.0 \times 10^9$	$9.3 \times 10^9$	$6.6 \times 10^8$	$1.7 \times 10^9$	$2.0 \times 10^7$
Midpoint (kg)	$1.7 \times 10^{11}$	$2.6 \times 10^{10}$	$9.5 \times 10^{10}$	$8.8 \times 10^9$	$3.1 \times 10^{10}$	$1.5 \times 10^9$	$7.1 \times 10^9$	$7.4 \times 10^7$
Maximum (kg)	$3.1 \times 10^{11}$	$4.8 \times 10^{10}$	$1.7 \times 10^{11}$	$1.5 \times 10^{10}$	$5.7 \times 10^{10}$	$2.6 \times 10^9$	$1.5 \times 10^{10}$	$1.4 \times 10^8$
Minimum (SC-CO <sub>2</sub> , \$, USD)	$9.9 \times 10^9$	$1.2 \times 10^9$	$6.0 \times 10^9$	$6.7 \times 10^8$	$1.6 \times 10^9$	$1.1 \times 10^8$	$2.9 \times 10^8$	$3.3 \times 10^6$
Midpoint (SC-CO <sub>2</sub> , \$, USD)	2.8E+10	$4.3 \times 10^9$	$1.6 \times 10^{10}$	$1.5 \times 10^9$	$5.1 \times 10^9$	$2.6 \times 10^8$	$1.2 \times 10^9$	$1.2 \times 10^7$
Maximum (SC-CO <sub>2</sub> , \$, USD)	5.3E+10	$8.1 \times 10^9$	$2.9 \times 10^{10}$	$2.6 \times 10^9$	$9.7 \times 10^9$	$4.4 \times 10^8$	$2.5 \times 10^9$	$2.4 \times 10^7$