

Pleasant Valley Wetland Heritage Park

Carbon Sequestration Worksheet Dec 2022

A.			B.	C.	D.	E.	F.	G.
Species Characteristics (see Table 1)			Tree Age	Number of Age 0 Trees Planted	Survival Factor of Trees (See Table 2)	Number of surviving trees (C x D)	Annual Sequestration Rate (lbs/tree)	Carbon Sequestered (lbs) (E x F)
Name	Tree Type (H or C)	Growth Rate (S, M or F)						
Wetland Park								
Aspen, Quaking <i>Populus tremuloides</i>	H	F	2	3	0.798	2.394	2.7	6.4638
Aspen, Quaking <i>Populus tremuloides</i>	H	F	3	47	0.798	28.728	6.9	198.2232
Aspen, Quaking <i>Populus tremuloides</i>	H	F	4	7	0.678	4.746	8.5	40.341
Aspen, Quaking <i>Populus tremuloides</i>	H	F	7	1	0.63	0.63	13.6	8.568
Aspen, Quaking <i>Populus tremuloides</i>	H	F	8	1	0.616	0.616	15.5	9.548
Ash, green <i>Fraxinus pennsylvanica</i>	H	F	11	8	0.589	4.712	19.3	90.9416
Alpine Currant <i>Ribes alpinum</i>	H	M	2	1	0.736	0.736	3.5	2.576
Beebalm <i>Monarda</i>	H	M	3	4	0.706	2.824	4.3	12.1432
Birch, Paper <i>Betula papyrifera</i>	H	M	2	3	0.736	2.208	3.5	7.728
Birch, Paper <i>Betula papyrifera</i>	H	M	3	50	0.736	36.8	4.3	158.24
Birch, Paper <i>Betula papyrifera</i>	H	M	4	10	0.736	7.36	5.2	38.272
Birch, Paper <i>Betula papyrifera</i>	H	M	6	4	0.639	2.556	7.1	18.1476
Birch, Paper <i>Betula papyrifera</i>	H	M	8	2	0.603	1.206	9.1	10.9746
Birch, Paper <i>Betula papyrifera</i>	H	M	16	1	0.504	0.504	18.1	9.1224
Black Hawthorn <i>Crataegus douglasii</i>	H	M	3	5	0.706	3.53	4.3	15.179
Black Hawthorn <i>Crataegus douglasii</i>	H	M	4	2	0.678	1.356	5.2	7.0512
Black Hawthorn <i>Crataegus douglasii</i>	H	M	6	1	0.639	0.639	7.1	4.5369
Black Hawthorn <i>Crataegus douglasii</i>	H	M	7	1	0.621	0.621	8.1	5.0301
Black Hawthorn <i>Crataegus douglasii</i>	H	M	8	1	0.603	0.603	9.1	5.4873
Black Twinberry <i>Lonicera involucrata</i>	H	M	3	5	0.706	3.53	4.3	15.179
Cedar, red western <i>Thuja plicata</i>	C	M	3	6	0.706	4.236	2.5	10.59
Cedar, red western <i>Thuja plicata</i>	C	M	5	1	0.658	0.658	3.7	2.4346
Cedar, red western <i>Thuja plicata</i>	C	M	6	2	0.639	1.278	4.4	5.6232
Cedar, red western <i>Thuja plicata</i>	C	M	8	1	0.603	0.603	5.8	3.4974
Cedar, red western <i>Thuja plicata</i>	C	M	10	1	0.576	0.576	7.4	4.2624
Cedar, red western <i>Thuja plicata</i>	C	M	15	1	0.516	0.516	11.8	6.0888
Cherry, choke <i>Prunus virginiana</i>	H	M	2	12	0.736	8.832	3.5	30.912
Cherry, choke <i>Prunus virginiana</i>	H	M	3	47	0.706	33.182	4.3	142.6826
Cherry, choke <i>Prunus virginiana</i>	H	M	4	5	0.678	3.39	5.2	17.628
Cherry, choke <i>Prunus virginiana</i>	H	M	6	1	0.639	0.639	7.1	4.5369
Cherry, choke <i>Prunus virginiana</i>	H	M	10	1	0.576	0.576	11.2	6.4512
Cherry, choke <i>Prunus virginiana</i>	H	M	12	1	0.551	0.551	13.5	7.4385
Cherry, pin <i>Prunus pensylvanica</i>	H	M	7	1	0.621	0.621	8.1	5.0301
Douglas fir <i>Pseudotsuga menziesii</i>	C	F	2	1	0.658	0.658	3.1	2.0398

Douglas fir <i>Pseudotsuga menziesii</i>	C	F	3	16	0.706	11.296	4.1	46.3136
Hazelnut <i>Corylus cornuta</i>	H	M	3	1	0.706	0.706	4.3	3.0358
Highbush Cranberry <i>Viburnum opulus</i>	H	M	3	5	0.706	3.53	3.5	12.355
Oregon Grape, tall <i>Mahonia aquifolium</i>	H	M	3	12	0.706	8.472	4.3	36.4296
Juniper <i>Juniperus comunis</i>	C	M	2	7	0.736	5.152	2	10.304
Maple <i>Acer glabrum</i>	H	M	2	2	0.736	1.472	3.5	5.152
Maple <i>Acer glabrum</i>	H	M	3	16	0.706	11.296	4.3	48.5728
Maple <i>Acer glabrum</i>	H	M	4	1	0.678	0.678	5.2	3.5256
Maple <i>Acer glabrum</i>	H	M	5	1	0.658	0.658	6.1	4.0138
Pine Ponderosa <i>pinus ponderosa</i>	C	F	2	3	0.736	2.208	3.1	6.8448
Pine Ponderosa (yellow pine) <i>pinus ponder</i>	C	F	3	27	0.706	19.062	4.1	78.1542
Pine Ponderosa <i>pinus ponderosa</i>	C	F	4	4	0.678	2.712	5.2	14.1024
Pine, white eastern <i>pinus strobus</i>	C	F	4	2	0.678	1.356	5.2	7.0512
Pine, lodgepole <i>pinus contorta</i>	C	M	2	3	0.736	2.208	2	4.416
Pine, lodgepole <i>pinus contorta</i>	C	M	3	22	0.706	15.532	2.5	38.83
Service Berry <i>Amelanchier alnifolia</i>	H	F	3	3	0.706	2.118	6.9	14.6142
Service Berry <i>Amelanchier alnifolia</i>	H	F	4	1	0.678	0.678	8.5	5.763
Snowberry <i>Symphoricarpos albu s</i>	H	F	2	2	0.7336	1.4672	5.4	7.92288
Snowberry <i>Symphoricarpos albu s</i>	H	F	5	7	0.658	4.606	10.1	46.5206
Spiraea, Birch leaf <i>Spiraea betulifolia</i>	H	F	3	6	0.706	4.236	6.9	29.2284
Spruce, white <i>picea glauca</i>	C	M	2	5	0.736	3.68	2	7.36
Spruce, white <i>picea glauca</i>	C	M	3	4	0.706	2.824	2.5	7.06
Spruce, white <i>picea glauca</i>	C	M	5	4	0.658	2.632	3.7	9.7384
Skeena Cherry <i>Prunus avium</i>	H	M	6	1	0.639	0.639	7.1	4.5369
Skeena Cherry <i>Prunus avium</i>	H	M	7	1	0.621	0.621	8.1	5.0301
Stark Earliblaze Nectarine <i>Prunus persic</i>	H	M	4	1	0.678	0.678	5.2	3.5256
Stark Earliblaze Nectarine <i>Prunus persic</i>	H	M	8	1	0.603	0.603	9.1	5.4873
Stark Earliblaze Nectarine <i>Prunus persic</i>	H	M	12	1	0.551	0.551	13.5	7.4385
Waxberry <i>Morella rubra</i>	H	M	4	2	0.678	1.356	5.2	7.0512
Wild Rose <i>Rosa nutkana</i>	H	F	4	1	0.678	0.678	8.5	5.763
Willow, green <i>salix glauca</i>	H	F	12	21	0.873	18.333	23.3	427.1589
Dwarf Yellow Egg Plum <i>Prunus domestica</i>	H	M	6	1	0.639	0.639	7.1	4.5369
Dwarf Yellow Egg Plum <i>Prunus domestica</i>	H	M	8	1	0.603	0.603	9.1	5.4873
Wetland Pond								
Bulrush/Cattail <i>typha latifolia</i>	P	M	2	91.44	0.762	69.67728	2.7	188.129
Grassland areas	Hair bentgrass, fringed brome, tufted hairgrass						17000	315.86
Total amount of trees and shrubs				600				
	Total Pounds of Carbon Sequestered							2340.281
	Total Pounds of Equivalent Co2 Sequestered						x 3.67	8588.831
	Equivalent Co2 Sequestered in Kilograms						/2.2	3908.636
	Equivalent Co2 Sequestered in Short Tons						lbs/200	4.294
	Equivalent Co2 Sequestered in Tonnes						0.91	3.908
U.S. Department of Energy: Method of Calculating Carbon Sequestration by Trees April 1998								