

# Benefits and Costs Summary of Individual Trees

Location: Youngstown, Mahoning, Ohio, United States of America

Project: Swick park, Series: Swick park, Year: 2019

Generated: 7/19/2019



Tree ID	Species Name	DBH (in)	Structural Value (\$)	Carbon Storage (lb)	Carbon Storage (\$)	Annual benefits									
						Gross Carbon Sequestration (lb/yr)	Gross Carbon Sequestration (\$/yr)	Avoided Runoff (ft³/yr)	Avoided Runoff (\$/yr)	Carbon Avoided (lb/yr)	Carbon Avoided (\$/yr)	Pollution Removal (oz/yr)	Pollution Removal (\$/yr)	Energy Savings (\$/yr)	Total Annual Benefits (\$/yr)
1	American mountain ash	13.5	1,957.55	705.2	60.14	19.8	1.69	22.4	1.50	N/A	N/A	7.8	1.21	N/A	4.39
2	Northern red oak	25.1	8,223.14	3,483.2	297.03	53.0	4.52	50.3	3.36	N/A	N/A	17.5	2.71	N/A	10.59
3	Northern red oak	23.0	6,918.66	2,817.0	240.22	46.8	3.99	45.8	3.06	N/A	N/A	15.9	2.47	N/A	9.52
4	White oak	37.6	17,271.08	10,034.6	855.71	105.1	8.96	72.4	4.84	N/A	N/A	25.1	3.89	N/A	17.69
5	Pin oak	25.0	7,353.45	3,850.9	328.39	59.8	5.10	44.3	2.96	N/A	N/A	15.4	2.39	N/A	10.45
6	White oak	32.0	13,036.83	6,694.7	570.90	82.4	7.03	60.4	4.04	N/A	N/A	20.9	3.25	N/A	14.31
7	Northern red oak	32.0	13,036.83	6,283.9	535.86	74.9	6.39	68.9	4.61	N/A	N/A	23.9	3.71	N/A	14.70
8	Swamp white oak	40.0	18,979.99	12,148.6	1,035.98	118.9	10.14	80.2	5.36	N/A	N/A	27.8	4.32	N/A	19.82
9	Northern pin oak	30.0	10,510.28	6,051.0	516.00	78.4	6.68	59.8	3.99	N/A	N/A	20.7	3.22	N/A	13.90
10	Norway spruce	28.0	9,488.62	2,979.6	254.09	35.8	3.05	86.7	5.79	N/A	N/A	30.1	4.67	N/A	13.52
11	Callery pear	22.0	4,621.75	2,334.1	199.04	40.2	3.43	24.9	1.67	N/A	N/A	8.6	1.34	N/A	6.43
12	Callery pear	19.0	3,535.76	1,568.4	133.75	31.6	2.69	24.9	1.67	N/A	N/A	8.6	1.34	N/A	5.70
13	Callery pear	25.8	6,237.49	3,291.1	280.65	48.9	4.17	24.9	1.67	N/A	N/A	8.6	1.34	N/A	7.18
14	Callery pear	23.2	5,080.87	2,501.0	213.28	41.6	3.54	24.8	1.66	N/A	N/A	8.6	1.33	N/A	6.54
15	London plane	37.0	11,527.12	8,186.1	698.07	84.3	7.19	112.3	7.51	N/A	N/A	39.0	6.05	N/A	20.75
16	London plane	37.0	11,527.12	8,227.5	701.60	84.6	7.22	112.3	7.51	N/A	N/A	39.0	6.05	N/A	20.77
17	Pin oak	37.0	15,064.99	10,165.5	866.87	107.1	9.13	73.3	4.90	N/A	N/A	25.4	3.94	N/A	17.97
18	Sugar maple	9.0	1,096.45	347.4	29.62	14.1	1.20	17.1	1.14	N/A	N/A	5.9	0.92	N/A	3.26
19	Bitternut hickory	27.0	6,638.85	4,542.2	387.34	66.9	5.70	43.3	2.89	N/A	N/A	15.0	2.33	N/A	10.93
20	White oak	38.0	17,560.30	10,304.7	878.73	106.8	9.10	73.4	4.90	N/A	N/A	25.4	3.95	N/A	17.96
21	White oak	42.0	20,355.61	13,246.9	1,129.64	124.1	10.59	81.8	5.47	N/A	N/A	28.4	4.40	N/A	20.46
22	White oak	51.0	26,000.58	16,534.7	1,410.00	27.6	2.35	102.7	6.87	N/A	N/A	35.6	5.53	N/A	14.75
23	White oak	42.0	20,355.61	13,246.9	1,129.64	124.1	10.59	81.8	5.47	N/A	N/A	28.4	4.40	N/A	20.46
24	White oak	36.0	16,096.55	8,997.2	767.24	98.4	8.39	68.4	4.57	N/A	N/A	23.7	3.68	N/A	16.64
25	White oak	48.0	24,218.07	16,534.7	1,410.00	27.6	2.35	96.0	6.41	N/A	N/A	33.3	5.17	N/A	13.93
26	Northern red oak	25.0	8,158.44	3,449.6	294.16	52.7	4.49	50.1	3.35	N/A	N/A	17.4	2.70	N/A	10.53
27	Northern red oak	25.0	8,158.44	3,449.6	294.16	52.7	4.49	50.1	3.35	N/A	N/A	17.4	2.70	N/A	10.53
28	Northern red oak	55.0	28,223.01	16,534.7	1,410.00	27.6	2.35	121.6	8.13	N/A	N/A	42.2	6.55	N/A	17.02
29	London planetree	43.0	15,439.84	11,645.0	993.03	83.3	7.10	161.3	10.79	N/A	N/A	56.0	8.69	N/A	26.57
30	White oak	31.0	12,244.36	6,182.0	527.18	78.6	6.70	57.6	3.85	N/A	N/A	20.0	3.10	N/A	13.65
31	Red maple	15.0	2,646.17	962.7	82.09	23.9	2.04	38.7	2.59	N/A	N/A	13.4	2.08	N/A	6.71
32	Post oak	19.0	3,470.54	2,013.6	171.71	40.7	3.47	31.1	2.08	N/A	N/A	10.8	1.67	N/A	7.23

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						Gross Carbon Sequestration (lb/yr)	Gross Carbon Sequestration (\$/yr)	Avoided Runoff (ft <sup>3</sup> /yr)	Avoided Runoff (\$/yr)	Carbon Avoided (lb/yr)	Carbon Avoided (\$/yr)	Pollution Removal (oz/yr)	Pollution Removal (\$/yr)	Energy Savings (\$/yr)	
33	Northern red oak	12.0	1,946.65	579.9	49.45	18.5	1.58	24.4	1.63	N/A	N/A	8.5	1.31	N/A	4.52
34	Bur oak	39.0	18,275.65	9,879.0	842.43	99.0	8.45	78.2	5.23	N/A	N/A	27.1	4.21	N/A	17.88
35	White oak	39.0	18,275.65	10,998.8	937.93	111.0	9.47	75.9	5.08	N/A	N/A	26.3	4.09	N/A	18.63
36	Northern red oak	32.0	13,036.83	6,283.9	535.86	74.9	6.39	68.9	4.61	N/A	N/A	23.9	3.71	N/A	14.70
37	Swamp white oak	12.0	1,946.65	646.9	55.16	20.7	1.76	21.9	1.46	N/A	N/A	7.6	1.18	N/A	4.40
38	Slippery elm	7.0	349.70	121.9	10.40	6.6	0.57	14.8	0.99	N/A	N/A	5.1	0.80	N/A	2.35
39	Ginkgo	18.0	3,898.15	1,493.3	127.34	31.1	2.65	35.3	2.36	N/A	N/A	12.2	1.90	N/A	6.91
40	Northern red oak	25.0	8,158.44	3,449.6	294.16	52.7	4.49	50.1	3.35	N/A	N/A	17.4	2.70	N/A	10.53
41	Ginkgo	9.0	1,108.65	269.5	22.99	11.3	0.96	12.7	0.85	N/A	N/A	4.4	0.68	N/A	2.49
42	Red Ash	6.0	316.17	105.1	8.96	6.4	0.55	3.9	0.26	N/A	N/A	1.4	0.21	N/A	1.02
43	London planetree	26.0	6,621.63	3,561.1	303.67	51.7	4.41	93.8	6.27	N/A	N/A	32.5	5.05	N/A	15.73
44	London planetree	20.0	4,047.38	1,920.2	163.75	36.0	3.07	66.4	4.44	N/A	N/A	23.0	3.57	N/A	11.08
45	Pin oak	18.0	3,898.15	1,734.6	147.92	37.1	3.17	28.4	1.90	N/A	N/A	9.8	1.53	N/A	6.59
46	Northern red oak	38.5	17,919.35	9,847.9	839.79	97.5	8.31	86.8	5.80	N/A	N/A	30.1	4.67	N/A	18.79
47	Swamp white oak	24.0	7,525.64	3,543.6	302.18	57.0	4.86	45.3	3.03	N/A	N/A	15.7	2.44	N/A	10.33
48	American sycamore	13.0	1,968.17	689.5	58.80	19.8	1.68	42.2	2.82	N/A	N/A	14.7	2.27	N/A	6.78
49	Red Ash	4.0	140.52	40.7	3.47	3.7	0.31	2.5	0.17	N/A	N/A	0.9	0.14	N/A	0.62
50	Ginkgo	8.0	730.80	192.7	16.43	9.2	0.79	9.6	0.64	N/A	N/A	3.3	0.52	N/A	1.94
51	Littleleaf linden	18.0	3,338.52	908.0	77.43	18.7	1.60	40.6	2.71	N/A	N/A	14.1	2.18	N/A	6.49
52	White oak	22.0	6,337.52	2,614.3	222.94	46.9	4.00	35.7	2.39	N/A	N/A	12.4	1.92	N/A	8.31
53	Post oak	25.5	5,960.85	4,168.8	355.50	63.0	5.37	50.9	3.40	N/A	N/A	17.7	2.74	N/A	11.52
54	White oak	22.0	6,337.52	2,614.3	222.94	46.9	4.00	35.7	2.39	N/A	N/A	12.4	1.92	N/A	8.31
55	Northern red oak	20.5	5,514.23	2,130.0	181.64	39.7	3.39	39.1	2.62	N/A	N/A	13.6	2.11	N/A	8.11
56	White oak	45.0	22,336.42	15,751.1	1,343.18	137.7	11.75	88.9	5.94	N/A	N/A	30.8	4.78	N/A	22.47
57	Pin oak	26.3	8,119.01	4,425.0	377.34	65.1	5.55	47.4	3.17	N/A	N/A	16.4	2.55	N/A	11.27
58	Northern catalpa	13.5	1,592.22	690.8	58.91	19.5	1.66	21.4	1.43	N/A	N/A	7.4	1.15	N/A	4.24
59	Shumard oak	29.3	10,945.80	5,754.2	490.69	76.2	6.49	58.0	3.88	N/A	N/A	20.1	3.12	N/A	13.49
60	White oak	26.9	9,431.92	4,330.3	369.27	63.5	5.41	47.1	3.15	N/A	N/A	16.3	2.53	N/A	11.09
61	White ash	9.0	722.84	304.1	25.94	12.7	1.08	16.3	1.09	N/A	N/A	5.7	0.88	N/A	3.05
62	Red Ash	10.4	1,303.40	375.9	32.06	13.5	1.15	7.6	0.51	N/A	N/A	2.6	0.41	N/A	2.07
63	Red Ash	9.0	1,063.60	264.3	22.54	11.0	0.94	6.4	0.42	N/A	N/A	2.2	0.34	N/A	1.70
64	Red Ash	12.3	1,684.20	559.7	47.73	17.1	1.46	9.4	0.63	N/A	N/A	3.2	0.50	N/A	2.59

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						Gross Carbon Sequestration (lb/yr) (\$/yr)		Avoided Runoff (ft <sup>3</sup> /yr) (\$/yr)		Carbon Avoided (lb/yr) (\$/yr)		Pollution Removal (oz/yr) (\$/yr)		Energy Savings (\$/yr)		
65	Eastern white pine	21.5	5,485.17	1,099.3	93.74	19.1	1.63	32.1	2.15	N/A	N/A	11.1	1.73	N/A	5.51	
66	Eastern white pine	23.8	6,681.21	1,403.6	119.69	22.1	1.88	36.8	2.46	N/A	N/A	12.8	1.98	N/A	6.32	
67	red cedar spp	9.0	1,084.26	91.3	7.78	3.1	0.26	3.6	0.24	N/A	N/A	1.2	0.19	N/A	0.69	
68	Red pine	8.0	456.75	168.6	14.38	7.1	0.61	7.3	0.49	N/A	N/A	2.5	0.39	N/A	1.49	
69	Blue spruce	11.0	1,526.93	362.1	30.88	10.7	0.91	17.4	1.17	N/A	N/A	6.0	0.94	N/A	3.02	
70	Northern red oak	40.7	19,466.47	11,271.4	961.17	105.5	9.00	93.0	6.22	N/A	N/A	32.3	5.01	N/A	20.23	
71	Black gum	31.0	8,660.10	5,736.0	489.14	67.8	5.78	112.4	7.51	N/A	N/A	39.0	6.05	N/A	19.35	
72	White oak	24.5	7,838.81	3,425.0	292.07	55.1	4.70	41.8	2.79	N/A	N/A	14.5	2.25	N/A	9.75	
73	American sycamore	19.0	3,896.71	1,720.8	146.74	33.8	2.88	52.7	3.52	N/A	N/A	18.3	2.84	N/A	9.25	
74	White oak	37.1	16,907.06	9,703.1	827.43	103.0	8.78	71.1	4.75	N/A	N/A	24.7	3.83	N/A	17.36	
75	Sugar maple	14.2	2,394.77	993.4	84.71	25.4	2.17	38.6	2.58	N/A	N/A	13.4	2.08	N/A	6.83	
76	Pin oak	22.6	6,042.04	3,113.7	265.52	52.9	4.52	38.7	2.59	N/A	N/A	13.4	2.08	N/A	9.18	
77	Bur oak	29.0	10,947.94	4,720.9	402.58	63.7	5.43	57.2	3.82	N/A	N/A	19.8	3.08	N/A	12.34	
78	Northern red oak	37.0	16,833.93	8,941.6	762.50	92.1	7.85	82.7	5.53	N/A	N/A	28.7	4.45	N/A	17.84	
79	Shingle oak	40.0	16,972.60	12,601.9	1,074.63	122.3	10.43	80.2	5.36	N/A	N/A	27.8	4.32	N/A	20.11	
80	Northern red oak	35.0	15,348.14	7,812.3	666.20	85.1	7.26	77.2	5.16	N/A	N/A	26.8	4.15	N/A	16.57	
81	basswood spp	19.0	3,825.68	1,031.5	87.96	20.1	1.72	45.9	3.07	N/A	N/A	15.9	2.47	N/A	7.26	
82	Norway maple	8.0	639.45	224.7	19.17	9.8	0.84	18.7	1.25	N/A	N/A	6.5	1.01	N/A	3.09	
83	White oak	28.0	10,211.82	4,788.5	408.34	67.4	5.75	49.8	3.33	N/A	N/A	17.3	2.68	N/A	11.76	
84	Chisos red oak	20.0	4,707.81	2,346.9	200.13	44.9	3.83	35.4	2.36	N/A	N/A	12.3	1.90	N/A	8.09	
85	White oak	23.0	6,918.66	2,922.8	249.25	50.1	4.28	38.1	2.55	N/A	N/A	13.2	2.05	N/A	8.88	
86	Bur oak	25.0	8,158.44	3,261.2	278.10	51.1	4.36	47.8	3.20	N/A	N/A	16.6	2.58	N/A	10.13	
87	Northern red oak	29.4	11,249.61	5,114.7	436.16	66.4	5.66	62.3	4.16	N/A	N/A	21.6	3.35	N/A	13.17	
88	American sycamore	23.2	5,676.99	2,667.2	227.45	43.5	3.71	67.2	4.49	N/A	N/A	23.3	3.62	N/A	11.82	
89	Pin oak	33.0	12,384.42	7,792.6	664.52	91.5	7.80	63.6	4.25	N/A	N/A	22.1	3.42	N/A	15.48	
90	White oak	14.9	2,954.09	983.2	83.84	26.1	2.23	25.7	1.72	N/A	N/A	8.9	1.39	N/A	5.33	
91	Scarlet oak	39.2	16,472.52	11,030.5	940.63	110.2	9.40	78.8	5.26	N/A	N/A	27.3	4.24	N/A	18.90	
92	White oak	23.0	6,918.66	2,922.8	249.25	50.1	4.28	38.1	2.55	N/A	N/A	13.2	2.05	N/A	8.88	
93	Northern red oak	21.8	6,224.39	2,473.2	210.90	43.3	3.69	42.6	2.84	N/A	N/A	14.8	2.29	N/A	8.83	
94	American sycamore	19.1	3,934.98	1,667.3	142.18	33.0	2.81	53.0	3.54	N/A	N/A	18.4	2.85	N/A	9.21	
95	White oak	30.3	11,683.08	5,837.6	497.81	75.9	6.47	55.8	3.73	N/A	N/A	19.3	3.00	N/A	13.20	
96	White oak	30.4	11,763.59	5,886.1	501.94	76.3	6.51	56.2	3.76	N/A	N/A	19.5	3.03	N/A	13.29	

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						(lb/yr)	(\$/yr)	(ft <sup>3</sup> /yr)	(\$/yr)	(lb/yr)	(\$/yr)	(oz/yr)	(\$/yr)	(\$/yr)	
97	Ginkgo	10.5	1,444.42	447.9	38.20	15.6	1.33	16.6	1.11	N/A	N/A	5.8	0.89	N/A	3.33
<b>Total</b>			<b>835,598</b>	<b>454,127</b>	<b>38,726</b>	<b>5,182</b>	<b>442</b>	<b>4,968</b>	<b>332</b>	<b>N/A</b>	<b>N/A</b>	<b>1,723</b>	<b>267</b>	<b>N/A</b>	<b>1,041</b>