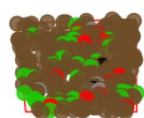# i-Tree Canopy v7.0

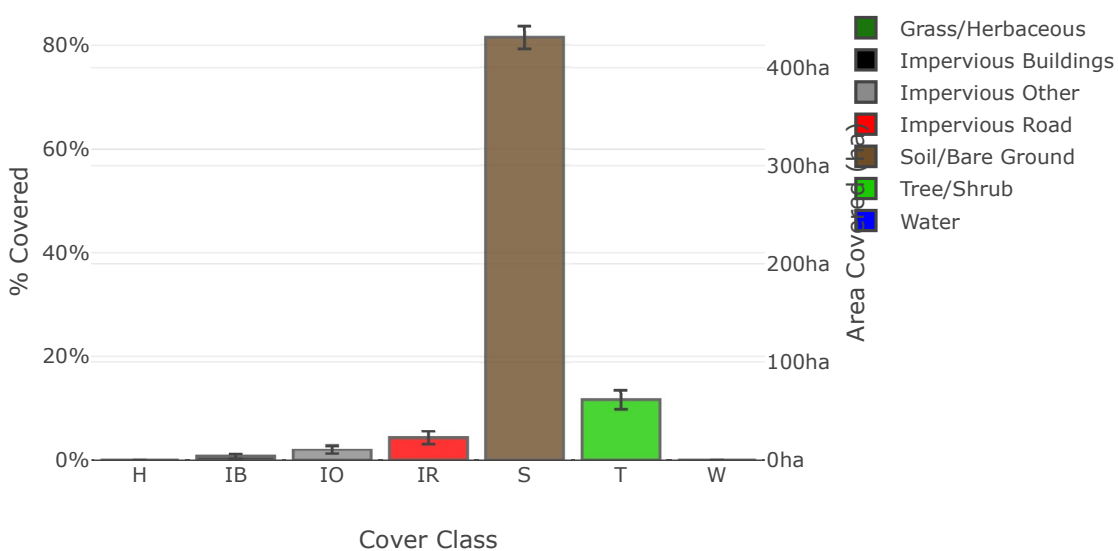## Cover Assessment and Tree Benefits Report

Estimated using random sampling statistics on 5/1/2020

Land Cover

Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ha) ± SE
H	Grass/Herbaceous		0	0.00 ± 0.00	0.00 ± 0.00
IB	Impervious Buildings		2	0.66 ± 0.47	3.50 ± 2.47
IO	Impervious Other		6	1.99 ± 0.81	10.50 ± 4.29

Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ha) ± SE
IR	Impervious Road		13	4.30 ± 1.17	22.75 ± 6.17
S	Soil/Bare Ground		246	81.46 ± 2.24	430.49 ± 11.82
T	Tree/Shrub		35	11.59 ± 1.84	61.25 ± 9.73
W	Water		0	0.00 ± 0.00	0.00 ± 0.00
Total			**302**	**100.00**	**528.48**

Tree Benefit Estimates: Carbon (Metric units)

Description	Carbon (t)	±SE	CO$_2$ Equiv. (t)	±SE	Value (USD)	±SE
Sequestered annually in trees	187.42	±29.79	687.20	±109.22	$17,617	±2,800
Stored in trees (Note: this benefit is not an annual rate)	4,706.80	±748.07	17,258.27	±2,742.93	$442,439	±70,319

Currency is in USD. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Carbon sequestered is based on 3.060 t/ha/yr. Carbon stored is based on 76.848 t/ha. Carbon is valued at $25.64/t. (Metric units: t = tonnes, metric tons, ha = hectares)

Tree Benefit Estimates: Air Pollution (Metric units)

Abbr.	Description	Amount (kg)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	168.82	±26.83	$5	±1
NO2	Nitrogen Dioxide removed annually	647.60	±102.93	$4	±1
O3	Ozone removed annually	3,132.08	±497.80	$78	±12
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	2,339.47	±371.82	$294	±47
PM2.5	Particulate Matter less than 2.5 microns removed annually	63.48	±10.09	$60	±10
SO2	Sulfur Dioxide removed annually	72.71	±11.56	$0	±0
Total		**6,424.16**	**±1,021.02**	**$441**	**±70**

Currency is in USD. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in kg/ha/yr @ $/kg/yr:
CO 2.756 @ $0.03 | NO2 10.573 @ $0.01 | O3 51.138 @ $0.02 | PM10* 38.197 @ $0.13 | PM2.5 1.036 @ $0.95 | SO2 1.187 @ $0.00 (Metric units: kg = kilograms, ha = hectares)

Tree Benefit Estimates: Hydrological (Metric units)

Abbr.	Benefit	Amount (kl)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	69.18	±10.99	$163	±26
E	Evaporation	25,049.85	±3,981.29	N/A	N/A
I	Interception	25,205.54	±4,006.03	N/A	N/A
T	Transpiration	109,602.68	±17,419.64	N/A	N/A
PE	Potential Evaporation	464,180.83	±73,774.34	N/A	N/A
PET	Potential Evapotranspiration	414,402.54	±65,862.85	N/A	N/A

Currency is in USD. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in kl/ha/yr @ $/kl/yr:
AVRO 1.129 @ $2.36 | E 408.990 @ N/A | I 411.532 @ N/A | T 1,789.486 @ N/A | PE 7,578.695 @ N/A | PET 6,765.964 @ N/A (Metric units: kl = kiloliters, ha = hectares)

About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.
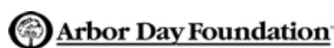
Use of this tool indicates acceptance of the EULA.