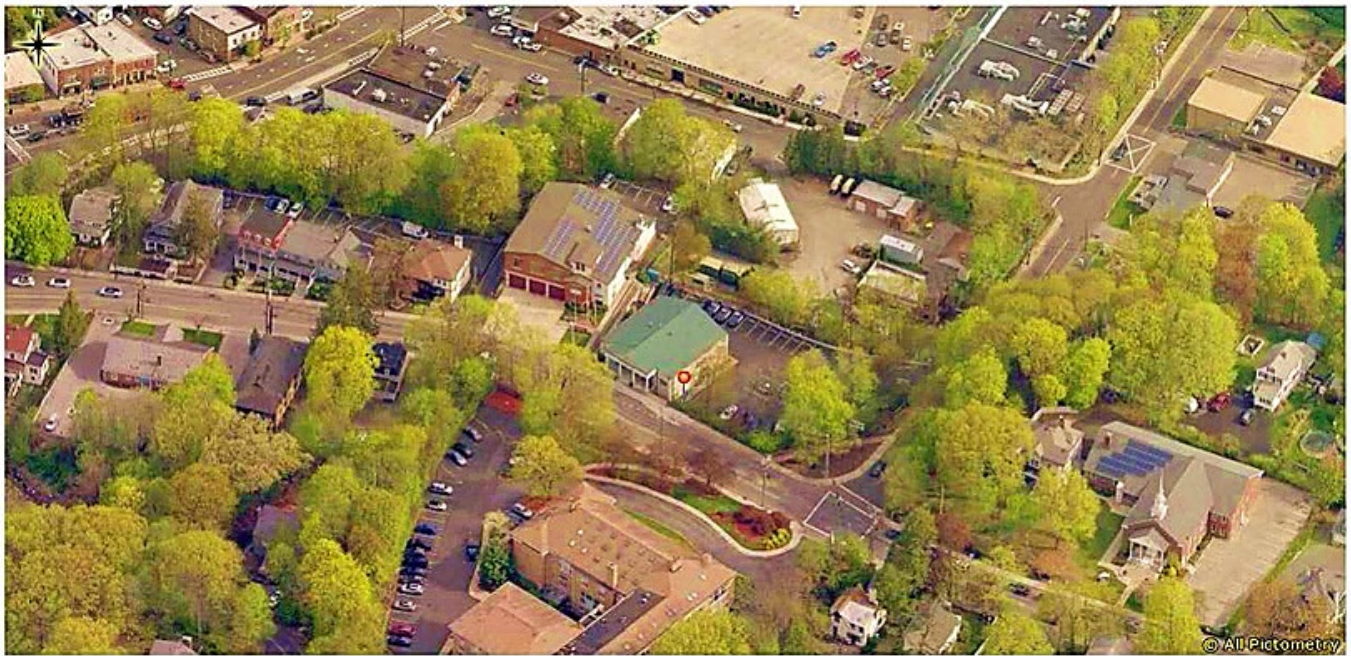


# NYSDEC HRE Project Urban Forest of Westchester County



## **Benefits of Tree Canopy**

### *Environmental:*

- sequester CO<sub>2</sub>, produce O<sub>2</sub>
- reduce heating & cooling costs
- reduce stormwater runoff
- reduce noise pollution

### *Social:*

- promote health & well being

### *Economic:*

- increase property value

# NYSDEC HRE Project

## Urban Forest of Westchester County

Dr. Andrew Reinmann, Department of Geography and Environmental Science at the Advanced Science Research Center City University of New York, was awarded a grant from the NYS DEC Hudson River Estuary (HRE) program to study “Urban Forest of Westchester County”. As forest fragmentation in urban settings increases, there are increased edge of forest areas created. Dr. Reinmann studies edge conditions such as soil microbial activity, moisture, temperature and rate of growth.

Dr. Reinmann’s work is facilitated by use of satellite maps organized in grids, generated in Google Earth Pro. In October 2020, members of the Ardsley High School Environmental Task Force (AHS ETF) contributed their efforts to the NYS DEC HRE research project. 30 X 30 meter sites were identified on the grid map and percent tree canopy cover data was supplied for each site. Four sites, with varying degrees of tree cover, were selected for the study. AHS ETF students did “ground truthing” of the satellite data in the field by measuring the circumference and photographing trees in grids located in the Village of Ardsley. Their measurements were compiled by Dr. Reinmann to create a digitized map with tree locations and sizes.

Thank you to Dr. Reinmann for providing a wonderful opportunity to contribute to the Urban Forest project.

Thank you to AHS Environmental Task Force:

Faculty Advisor:

Tara Bandman

AHS ETF Co-Chairs:

Lucia Harrison

Michael Fischgrund

Task Force Members:

Sam Sherman

Josh Weintraub

Sydney Byck

Ananya Sistla

Alina Randolph

Fiker Zewdie

Mel Boonchan

Waites Cobleigh

Luke Inoue

Thomas Sassalos

Zarni Win

Aston Hartwell

Alex Pak

Grace Zhou

Abby Isenberg



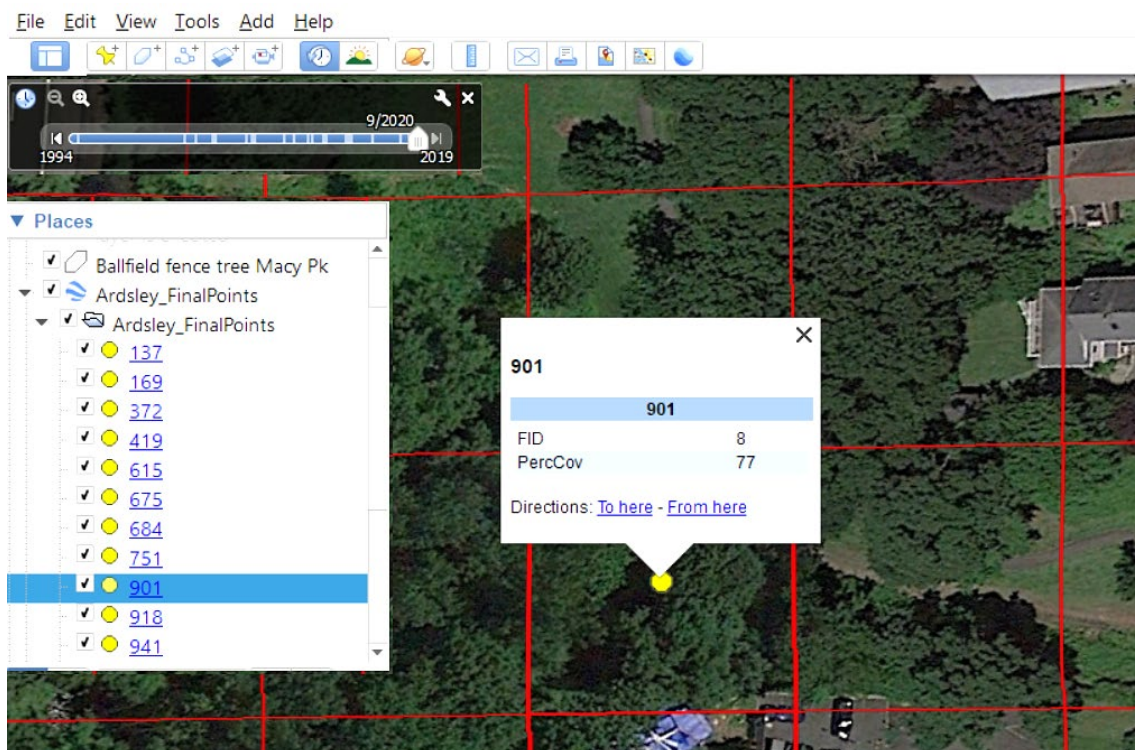
# NYSDEC HRE Project Urban Forest of Westchester County

Data supplied for choosing study locations:



Village of Ardsley Grid  
Google Earth Pro

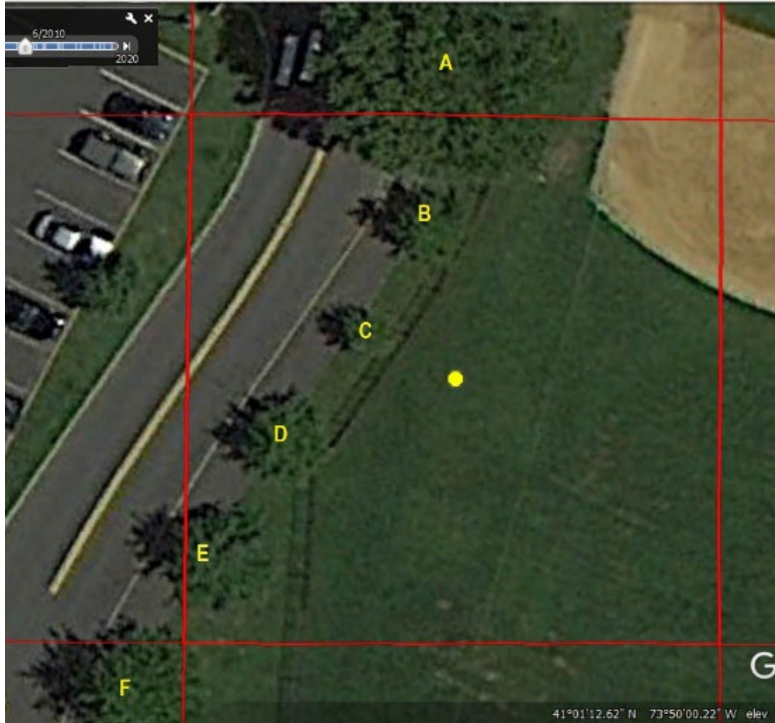
**yellow dots** =  
selected sites in Ardsley  
which contain information  
about tree canopy cover



Individual grid squares were selected from the “Places” menu  
Historical Imagery Tool was used to display tree canopy photo  
Clicking on the **yellow dot** displayed a drop down data sheet showing  
PercCov = % tree canopy cover for that grid square



# AHS Env Task Force Project: 10/14/2020



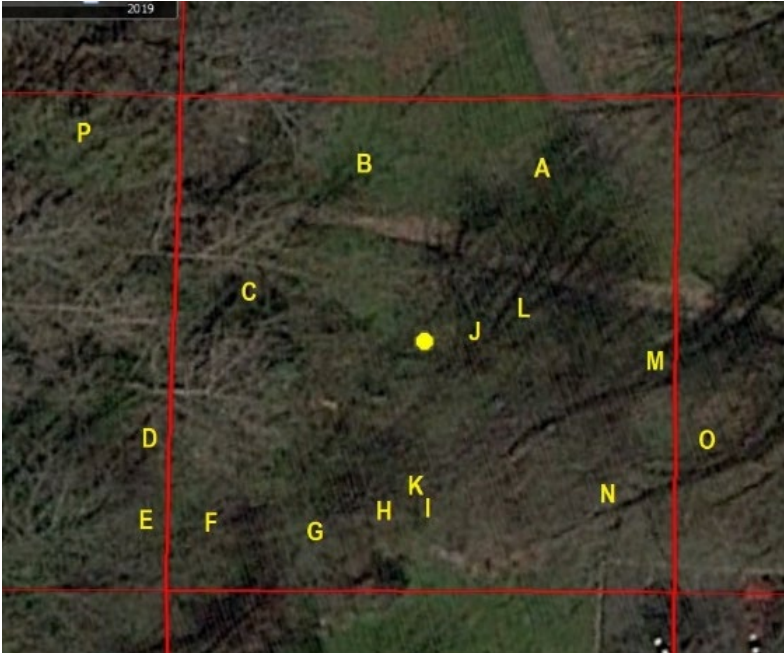
Sign in Sheet 10/14/2020 3 PM  
 NYSDEC HRE/CUNY Tree Canopy Survey  
 Grid 169 South AHS Baseball Field

TREE ID	PHOTO #s	CIRCUMFERENCE (meters)	Lat/Long 41 01 yy.yy 73 50 xx.xx
A	3161, 3162	2.15	13.04, 01.07
B	3168, 3169	1.01	12.76, 01.19
C	3170, 3171	0.86	12.59, 01.38
D	3174, 3175	1.04	12.43, 01.64
E	3177, 3178	1.04	12.25, 01.87
F	3180, 3181	1.19	12.05, 02.14





# AHS Env Task Force Project: 10/17/2020



Sign in Sheet 10/17/2020 9 AM  
NYSDEC HRE/CUNY Tree Canopy Survey  
Grid 901 South Macy Park

TREE ID	PHOTO #s	CIRCUMFERENCE (meters)	Lat/Long 41 00 yy.yy 73 50 xx.xx
A	3196, 3197	0.64	51.06, 46.33
B	3198, 3199	0.45, 0.56 (2 stems)	51.16, 46.74
C	3200, 3201	1.07	50.95, 47.13
D	3202, 3203	1.93	50.73, 47.46
E	3204, 3205	0.48	50.58, 47.48
F	3206, 3207	1.80	50.54, 47.32
G	3208, 3209	2.49	50.48, 47.08
H	3210, 3211	0.56	50.49, 46.90
I	3212, 3213	1.22	50.47, 46.78
J	3214, 3215	2.39	50.78, 46.57
K	3218, 3219	0.36	50.50, 46.79
L	3220, 3221	0.51	50.79, 46.47
M	3222, 3223	2.34	50.63, 46.14
N	3224, 3225	0.66	50.40, 46.34
O	3226, 3227	1.09	50.46, 46.05
P	3228, 3229	3.61	51.34, 47.45





# AHS Env Task Force Project: 10/20/2020



Sign in Sheet 10/20/2020 3 PM  
 NYSDEC HRE/CUNY Tree Canopy Survey  
 Grid 1383 Bonaventure & Fuller

TREE ID	PHOTO #s	CIRCUMFERENCE (meters)	Lat/Long 41 00 YY.YY 73 50 XX.XX
A	3238, 3239	0.94	33.89, 55.26
B	3240, 3241	0.66, 0.99 (2 stem)	33.84, 55.18
C	3242, 3243	0.46, 0.41 (2 stem)	33.76, 55.27
D	3244, 3245	2.67, 2.18 (2 stem)	33.40, 55.19
E	3246, 3247	1.42	33.50, 55.44
F	3248, 3249	0.43	33.38, 55.54
G	3252, 3253	0.73, 0.63 (2 stem)	33.22, 55.64
H	3254, 3255	0.28	33.22, 55.77
I	3256, 3257	1.14	33.20, 55.81
J	3258, 3259	1.24	33.17, 55.89
K	3260, 3261	0.99	33.08, 55.74
L	3265, 3266	0.56, 1.04 (2 stem)	33.63, 56.03
M	3267, 3268	0.89	33.53, 56.05
N	3269, 3270	0.30, 0.2 (2 stem)	33.50, 56.14
O	3271, 3272	1.19	33.42, 56.13
P	3273, 3274	0.33	33.32, 56.25
Q	3275, 3276	1.04	33.18, 56.31
R	3277, 3278	1.8	33.19, 56.45
S	3279, 3280	0.28	33.18, 56.53
T	3281, 3282	1.70	33.24, 56.72
U	3283, 3284	1.55	33.19, 56.78
V	3285, 3286	0.68, 0.66 (2 stem)	33.24, 56.98
W	3287, 3288	0.25, 0.30 (2 stem)	33.19, 56.87
X	3289, 3290	0.33	33.18, 56.94
Y	3291, 3292	1.52	33.44, 56.92
Z	3293, 3294	2.64	33.63, 56.94
AA	3295, 3296	0.94	34.06, 56.02





# AHS Env Task Force Project: 10/21/2020



Sign in Sheet 10/23/2020 3 PM  
NYSDEC HRE/CUNY Tree Canopy Survey  
Grid 675 Stonegate/St Barnabas

TREE ID	PHOTO #s	CIRCUMFERENCE (meters)	Lat/Long 41 00 yy.yy 73 50 xx.xx *41 01 yy.yy 73 50 xx.xx
A	3304, 3305	1.35, 1.19 (2 stems)	59.82, 39.19
B	3306, 3307	1.57	*01 00.47, 39.32
C	3308, 3309	2.24	*01 00.68, 38.75
D	3310, 3311	081, 0.46, 0.30, 0.33 (4 stems)	*01 00.85, 38.34
E	3312, 3313	2.57, 2.87 (2 stems)	*01 00.33, 37.91
F	3317, 3318	2.82	59.46, 38.00
G	3319, 3320	0.63	59.65, 38.17
H	3321, 3322	3.05	*01 00.13, 37.92
I	3323, 3324	0.86, 0.43 (2 stems)	*01 00.21, 38.44
J	3325, 3326	0.71	*01 00.06, 38.41
K	3327, 3328	0.53, 0.48, 0.74 (3 stems)	59.91, 38.42
L	3329, 3330	0.71	59.91, 38.33
M	3331, 3332	0.53	59.78, 38.33
N	3333, 3335	0.69	59.67, 38.33





# NYSDEC HRE Project

## Urban Forest of Westchester County

AHS Env Task Force project clusters of measured trees located on density map.

