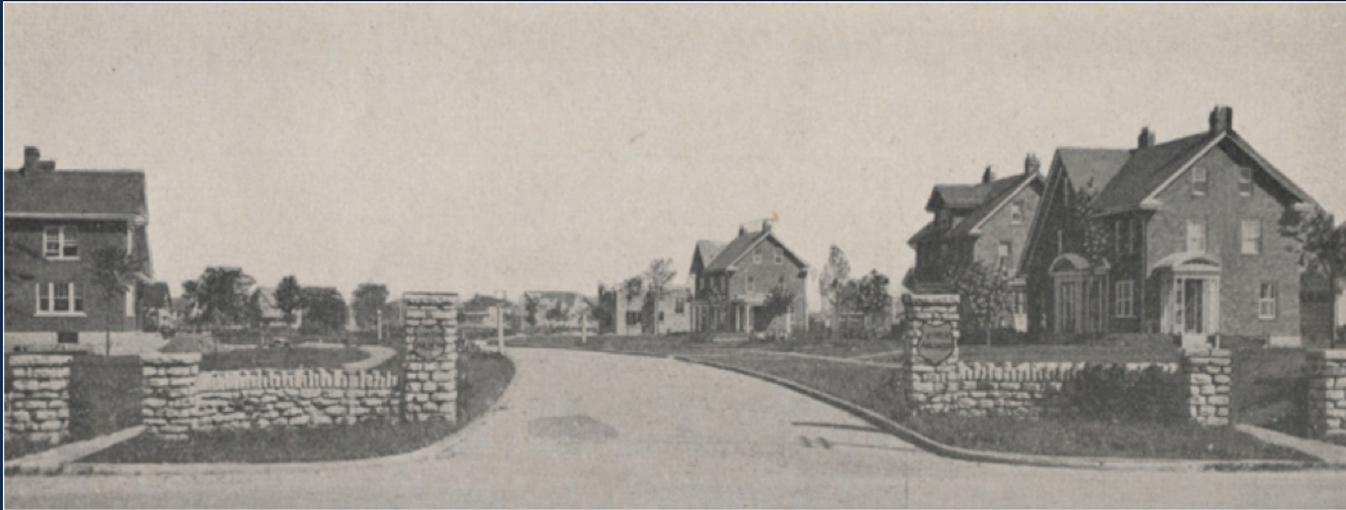


URBAN FORESTRY UPDATE 2016

- Parks & Forestry Division
 - Parks Maintenance
 - Horticulture
 - Forestry
 - Street tree maintenance, removal, and planting
 - Park tree maintenance, removal, and planting
 - Private property consultation and code enforcement

UA's Urban Forestry Program

- “From the earliest days, the streets of Arlington were lovely when the crabapple trees were in bloom”
 - History of Upper Arlington
- “The Thompsons... planted hundreds of trees on the bare fields even before the streets were installed.”
 - History of Upper Arlington



5th & Cambridge: 1918 & 2014

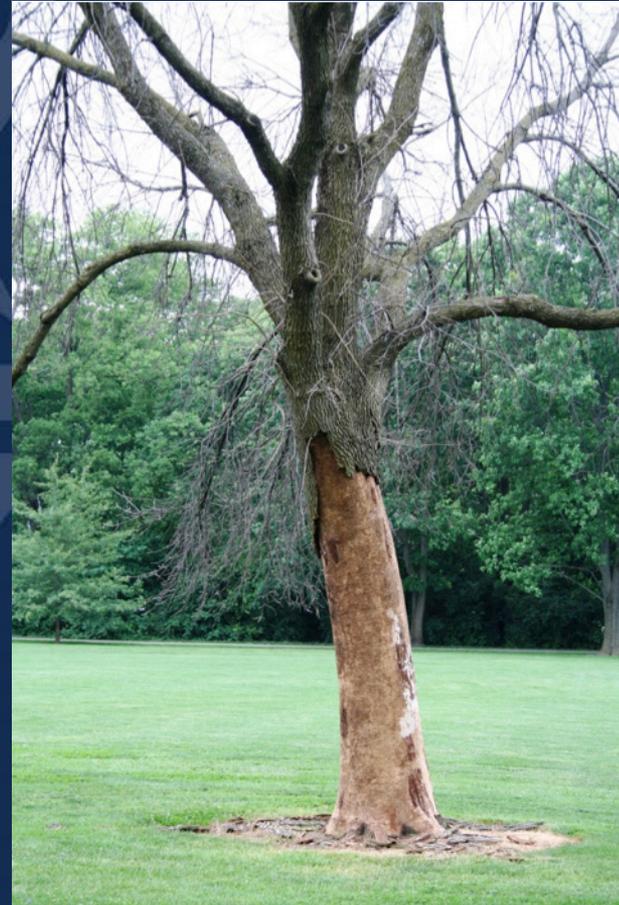
The Urban Forest



More History

- 1944: The Chadwick Plan was drafted by renowned Ohio State University Professor L.C. Chadwick (a response to Dutch elm disease)
- 1946: Council prohibited planting on public streets without a permit
- 1977: OSU Vegetation Study of city streets completed by UA Cultural Arts Comm.
- 1987: Constitutional Bicentennial Committee projects
- 1988: City Tree Commission created
- 1989: first city forester

2006 – Emerald Ash Borer Plan



1990: Tree City USA

2012: Accredited by Society of Municipal Arborists

- 1990: street tree inventory
 - 12,000 trees
 - Severe clearance problems (60%)
 - Priority removals, replacement, and planned maintenance
 - Education & outreach

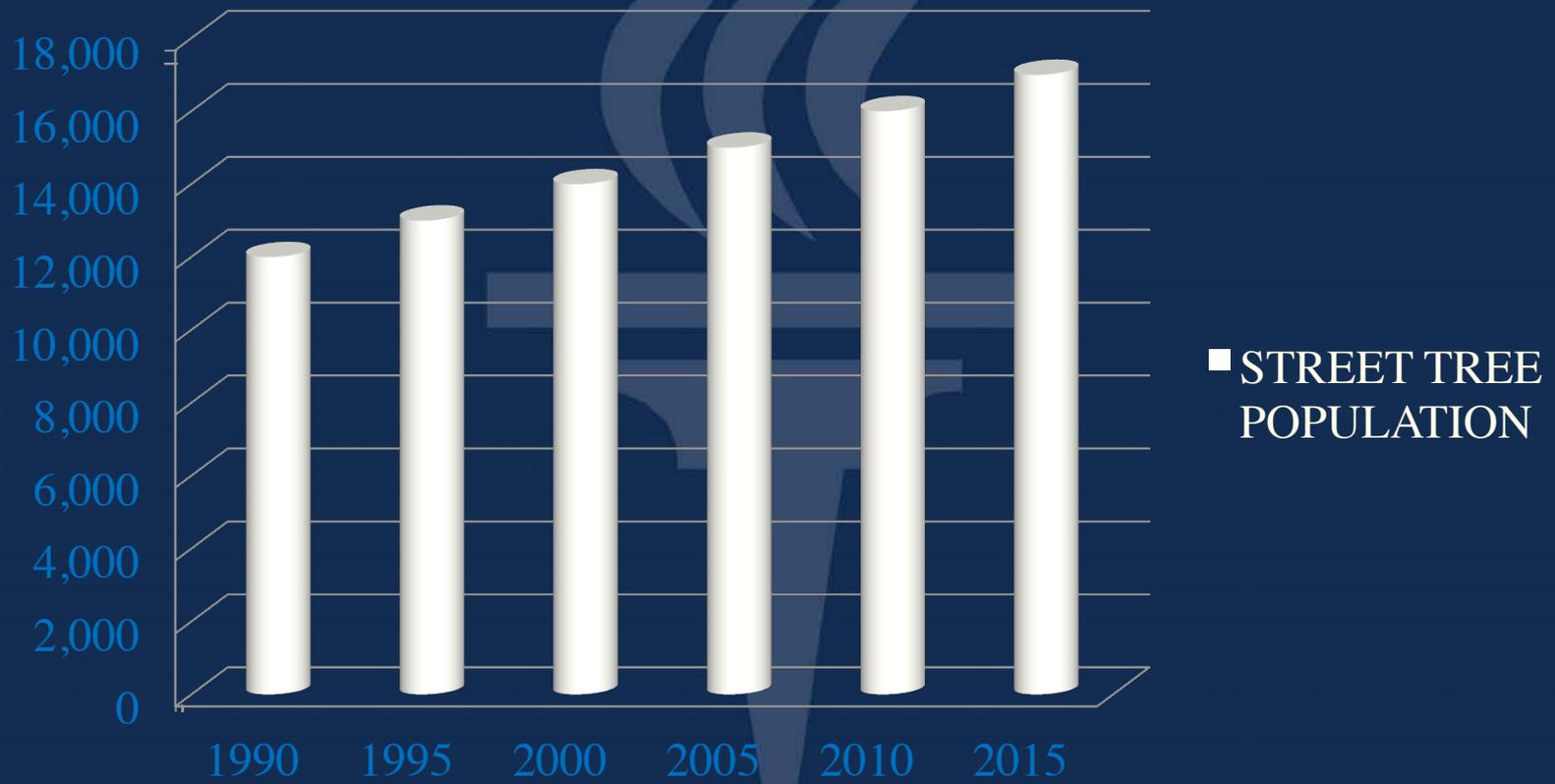


UA's Green Infrastructure

- 2016 inventory
 - 17,000+ street trees (45% increase in 25 years)
 - 6 year pruning cycle
 - 400 \pm removals/yr. (all replaced)
 - Net gain of \sim 200/yr. over 25 years



Street Trees 1990 - 2015



Street Tree Canopy – King Ave.



Street Tree Canopy – Reed Rd.



Street Tree Canopy – Kenny Rd.





Park Canopy

Northam Park -
1960s and 2013



Thompson Park, 1970s & Today



Thompson Park, 1970s & Today



Tree Population Still Increasing

Northam Park Phase II

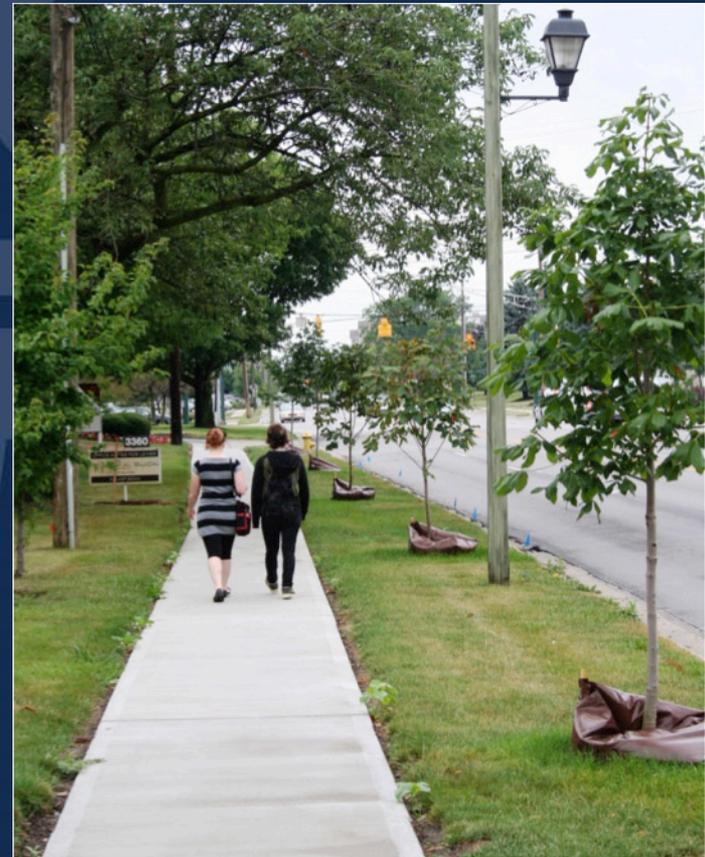
- 28 trees to be removed
- 62 trees to be planted
- Net increase = 34 trees

Tremont Rd. Reconstruction

- 106 trees removed
- 335 planted
- Net increase = 229 trees



Complete Streets & Walkable Neighborhoods



Trees Appreciate in Value

- Competitive advantage
- Environmental services & benefits
- Economic values
- Social benefits & public health



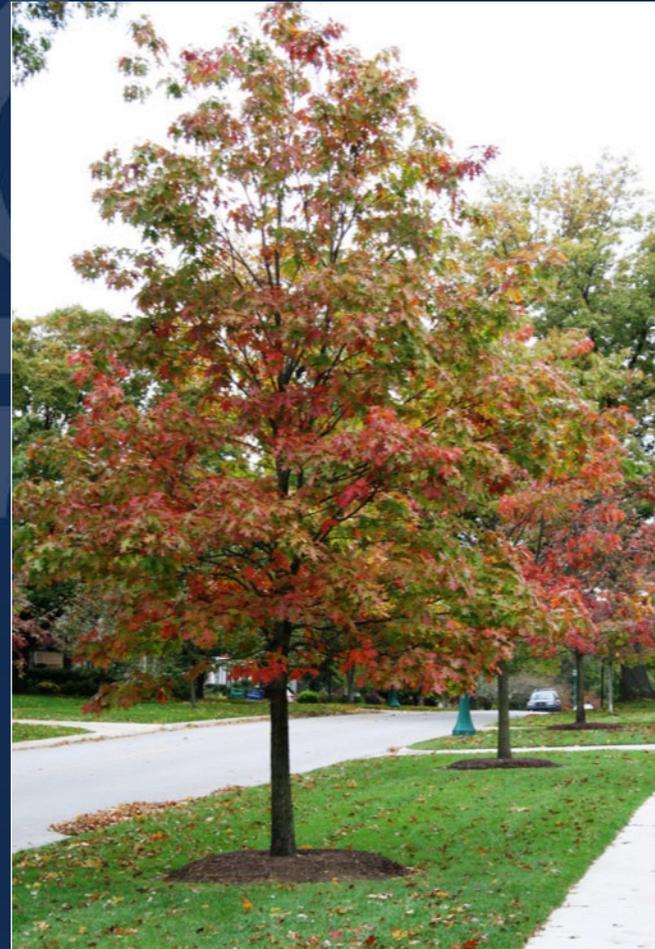
2015 Study at UC Davis

- The results indicated that more neighborhood tree cover, independent from green space access, was related to better overall health. This was primarily manifested by lower overweight/obesity and better social cohesion, and to a lesser extent by less type 2 diabetes, high blood pressure, and asthma



Large Trees Require Space

- Planning & design are critical elements



Urban Tree Canopy (UTC) Assessment 2016

- Parks & Forestry Division
- City Engineer's Office/GIS
- Upper Arlington Tree Commission
- Plan It Geo (Consultant)
- FLOW (Friends of the Lower Olentangy Watershed)

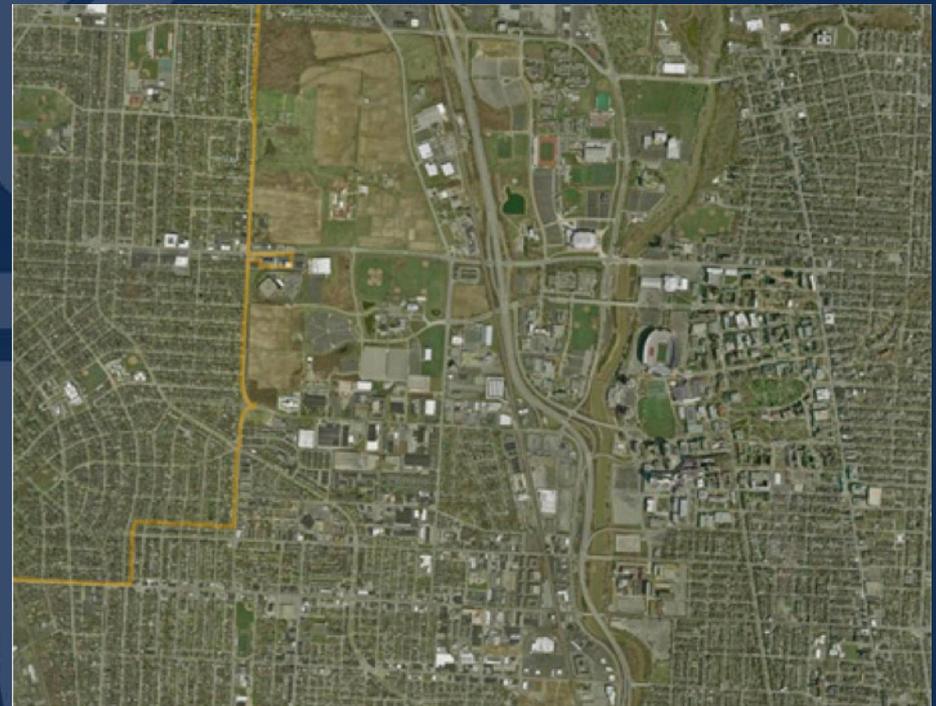
UTC vs. Street Tree Inventory

- 
- Top down look
 - Relies on remote imagery and analysis
 - Broad overview of community's trees
 - Used for comparison, planning, goal-setting, and programming
 - Bottom up look
 - Relies on in-person inspection of individual trees
 - Provides detailed data on trees, maintenance requests and work done
 - Used for day to day management

Land Use Changes



1938: Lane Ave. x NW Blvd.

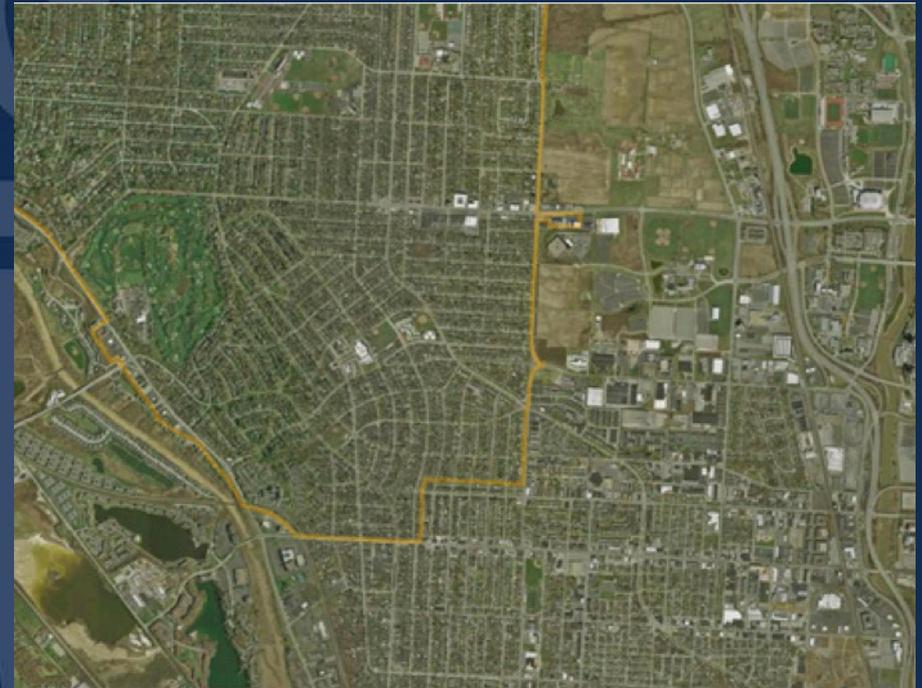


2015: Lane Ave. x NW Blvd.

Lane Ave. x NW Blvd.

1957

2015

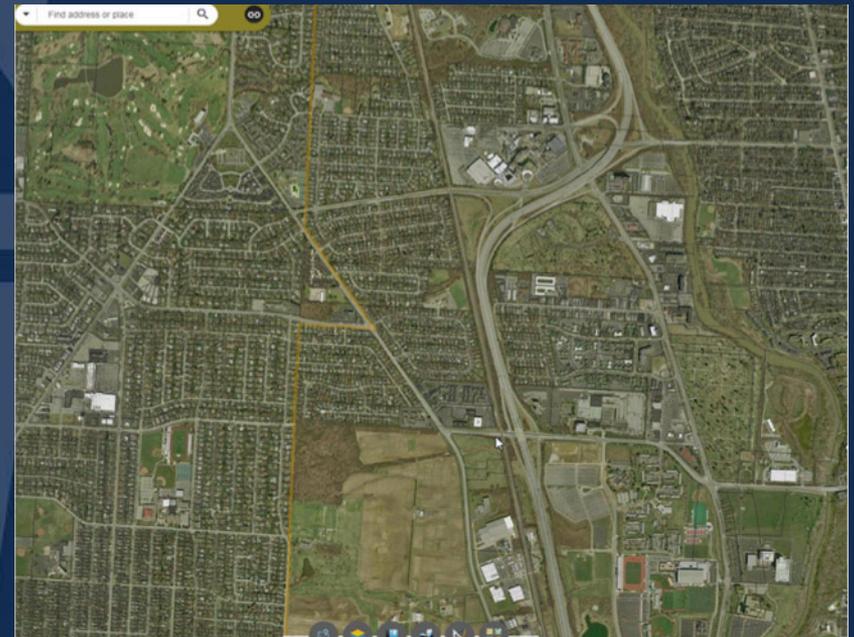


Tremont x Kenny (Municipal Services Center)

1938



2015

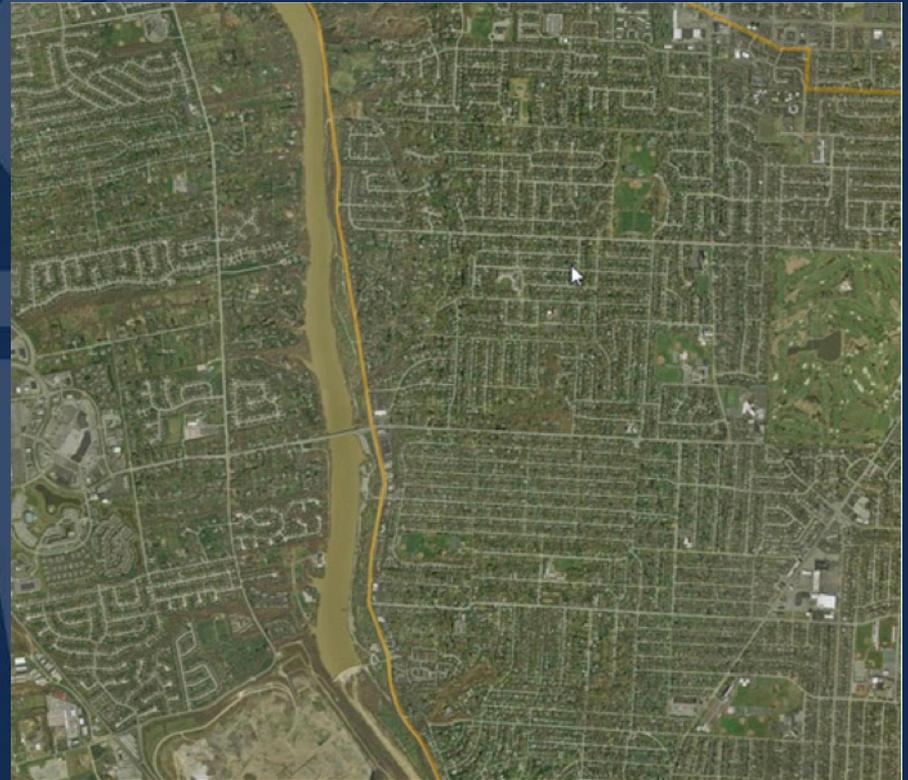


Most of UA was corn fields with little existing canopy.

Fishinger x Riverside

1957

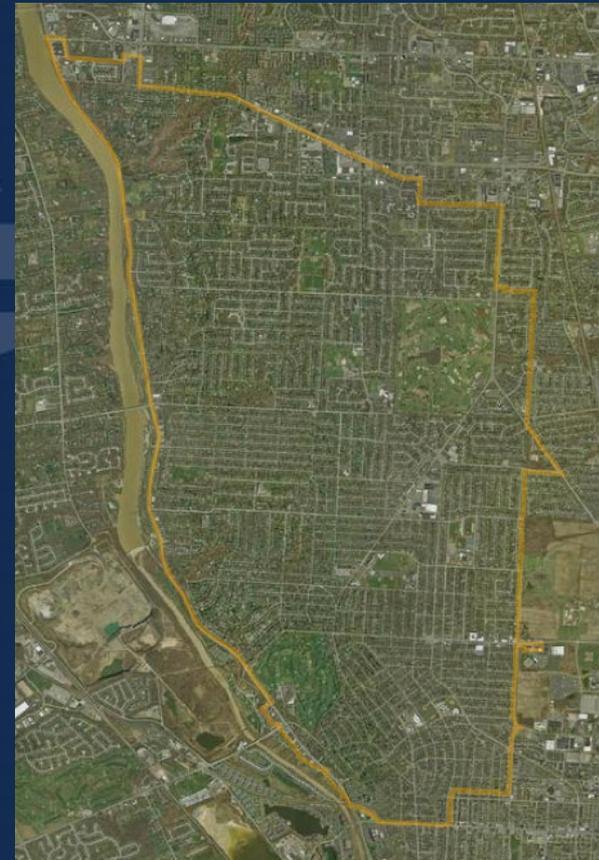
2015



Impervious surfaces replace agriculture upstream

Results of Urban Tree Canopy Assessment

- 35% canopy coverage
 - 2.5% in city parks
 - 11.8% in city street rights of way
- 14.2% of plantable area within rights of way
- 17% impervious
- 11% buildings
- 7% roads



How Do We Compare?

City	% Canopy	City	% Canopy
Las Vegas NV	12.9	St. Paul MN	32.5
Chicago IL	17.2	Wash. DC	35
Cleveland OH	18.9	Upper Arlington OH	35
Columbus OH	22	Louisville KY	37
Seattle WA	23	Akron OH	37
New York NY	24	Columbus OH (goal)	40%
South Bend IN	25.9	Atlanta GA	47.9

Many Factors to Consider

- Climate & region
- Age and history
- Land use
 - Residential
 - Commercial
 - Parks
 - Water
 - Schools/Institutional
 - Golf courses



Canopy Where It Is Ecologically Feasible, Economically Possible, & Socially Desirable



Upper Arlington, Ohio Urban Tree Canopy Mapbook by Management Area

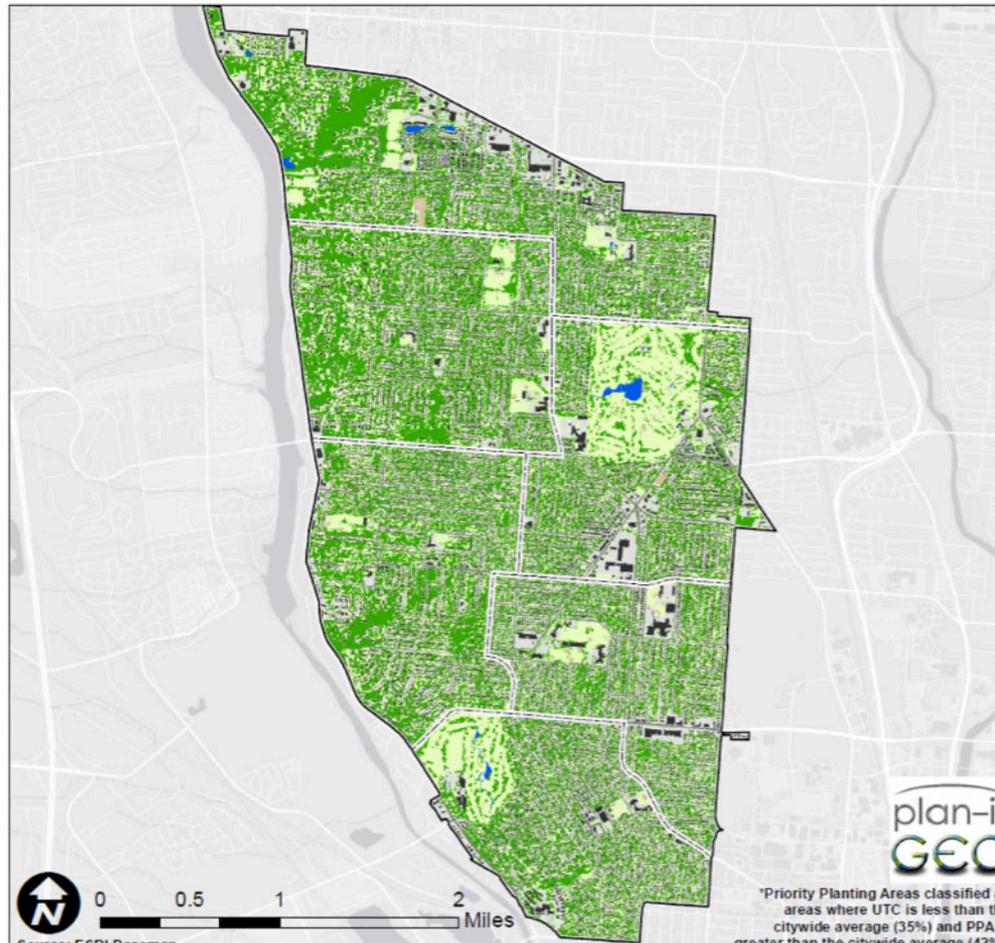
Imagery Source: 2013 National Agriculture Imagery Program (NAIP)

2015 Urban Tree Canopy Assessment

Key Mapbook Definitions:

Urban Tree Canopy (UTC):
Comprises forests and individual trees when viewed and mapped from above.

Possible Planting Area (PPA):
Area of grass and open space where canopy does not exist and it is biophysically possible to plant trees.



Legend & Data Layers

-  Study Boundary
-  Management Areas
-  Tree Canopy
-  Non-Canopy Vegetation
-  Impervious
-  Buildings
-  Roads
-  Water
-  Soil/Dry Vegetation

Priority Planting Parcels*

-  Priority Planting Parcels*

Urban Tree Canopy (%)

by Parcel

-  0% - 20%
-  21% - 30%
-  31% - 40%
-  41% - 85%

Possible Planting Area (%)

by Parcel

-  0% - 15%
-  16% - 30%
-  31% - 45%
-  46% - 100%

*Priority Planting Areas classified as areas where UTC is less than the citywide average (35%) and PPA is greater than the citywide average (42%).



0 0.5 1 2 Miles

Source: ESRI Basemap



Implications For The Future

- Public property
 - City rights of way, parks & misc. property
- Schools & libraries
- Private property
 - Owner occupied
 - Rentals/multi-family
- Commercial
 - Parking lots
 - Streetscapes



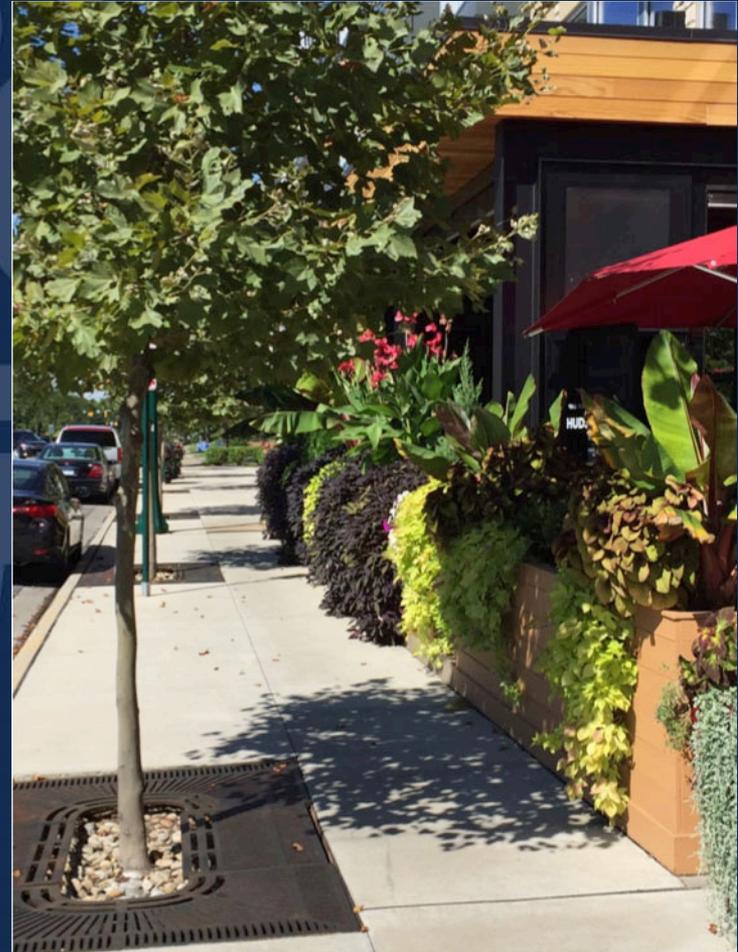
Remnant Forest Strategies

- Preserve and protect existing forests
 - Protection during development & construction (acquisition, easement, or code)
 - Maintenance and stewardship



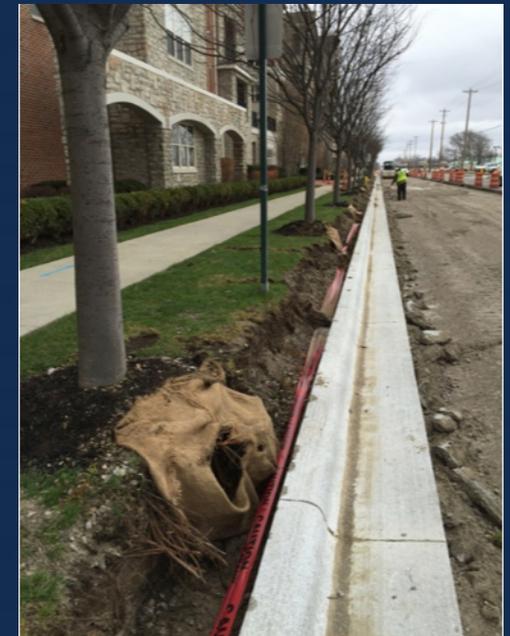
Development Strategies

- Preserve and protect existing trees during development & construction
- Require planting and landscaping as part of development & construction



Street Tree Strategies

- Planting within available rights of way (choose wisely)
- Protecting trees in rights of way
- Maintaining trees in rights of way to maximize lifespan
- Education



Trees on Private Property

- Represents the majority of trees in the community
- Minimal regulation in UA
- Minimal control by City
- Education & outreach (Tree Commission door hanger)



UA Is Well Positioned

- Staff and Tree Commission will be analyzing study results and setting goals
- Strategies for increasing canopy will be enhanced (planting and maintenance)
- The best time to plant a tree is yesterday...



But the next best time is tomorrow!

Continuing the Legacy

- Community support & partnerships
- City Council support
- Professional staffing
- Qualified contractors
- Wise planning & design
- An essential & valuable investment in the future of UA and its residents



Thank you!