

Advisory Committee Meeting #5

November 30th, 2011

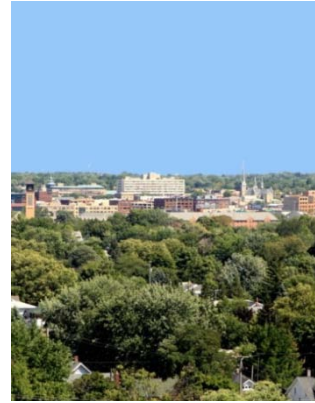
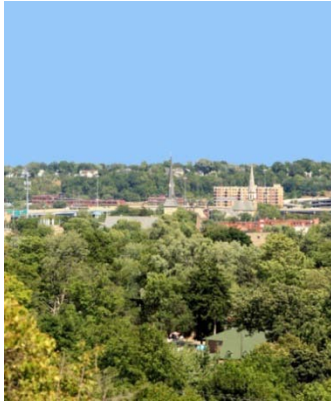
Time: 1:00-3:00 PM

Location: Washtenaw County Building, Lower Level Conference Room
200 N. Main St., Ann Arbor

Meeting Purpose: Advisory Committee Meeting #5 will be used to recap progress prior to the recess and to discuss the first set of benchmarking results and options for Ann Arbor’s plan.

- | | |
|---------|--|
| 5 min | Review agenda + Announcements |
| 10 min | Review schedule and where we left off <ul style="list-style-type: none">• Goals + objective topics |
| 100 min | Benchmarking discussion <ul style="list-style-type: none">• Overview of benchmarking• Topic: Canopy Goal• Topic: Tree Maintenance• Topic: Assessment + Monitoring• Topic: Funding (round 1) |
| 5 min | Next steps <ul style="list-style-type: none">• Subsequent topics |

Ann Arbor Urban and Community Forest Management Plan



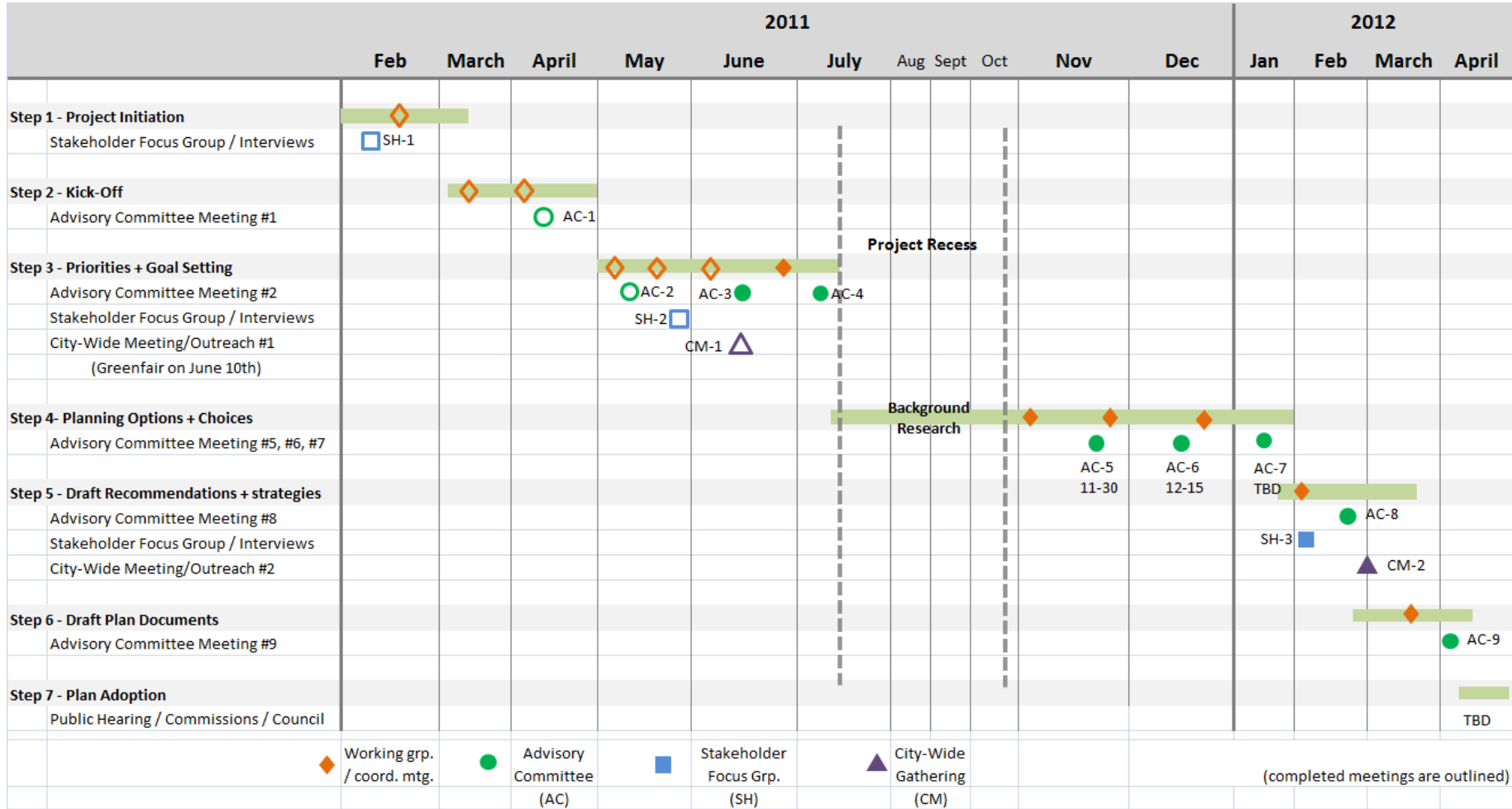
Advisory Committee #5

November 30, 2011



- Welcome Back + Announcements
- Review Schedule
 - Where we left off...
- Benchmarking Discussion
 - Overview of Benchmarking
 - Topic: Canopy Goals
 - Topic: Tree Maintenance
 - Topic: Assessment + Monitoring
 - Topic: Funding (round 1)
- Next Steps

Schedule



- **Goals**

- Developed a set of working goals to guide the planning process
- 8 goals across three categories (tree resource, management framework, community framework)

- **Objective *Topics***

- Identified 15 objective *topics* to guide benchmarking/researching activities and organize plan content
- *Reminder: many objectives will ultimately relate to multiple goals*

- **PAC Presentation**

- JJR presented to the Park's Advisory Commission to brief them on the current status and activities of the urban forest planning process.

TREE RESOURCE *GOALS*

1. Preserve, protect, maintain and expand Ann Arbor's tree canopy and urban forest.
2. Enhance and support the ecological functions of the urban forest
3. Promote amenity uses of the urban forest

RESOURCE MANAGEMENT GOALS

4. Ensure communication and coordination of management activities and policies among city units and other agencies / organizations whose activities impact City managed trees (DTE, AAPS, Contractors, UM)
5. Devise and implement sustainable funding strategies that recognize the economic, social and environmental value of trees, and support the urban forest.
6. Develop practices and policies to support a sustainable urban forest

COMMUNITY FRAMEWORK GOALS

7. Build and maintain community support and knowledge about the benefits of the urban forest and its management
8. Engage the community, both individuals and organizations, in the collective management of the urban forest

Benchmarking

Benchmarking Objective *Topics*

A – Tree planting overall / increasing the tree canopy

B – Tree maintenance + pruning

C – Species selection + invasive management

D – Assessment + monitoring

E – Ecological value of trees

F – Amenity uses for trees

G – City policies/coordination for public tree management

H – Funding strategies

I – Tree planting incentives + protection measures

J – Ordinances / requirement for managing private trees

K – Resident communication + notification about forestry activities

L – General outreach + education

M – Forest promotion + reporting

N – Resident Volunteering / stewardship

O – Partnerships with organizations

In each objective topic:

1. Conducted literature reviews, interviews, surveys, and web research for what other communities have done
2. Reviewed what Ann Arbor is doing today
3. Working Group discussed benchmarking results and potential options for Ann Arbor
4. Review options and direction with the Advisory Committee

Benchmarking

Benchmarking

- Grand Rapids Urban Forestry Plan
- Seattle Urban Forest Management Plan
- Portland Urban Forest Action Plan
- Baltimore, TreeBaltimore Program

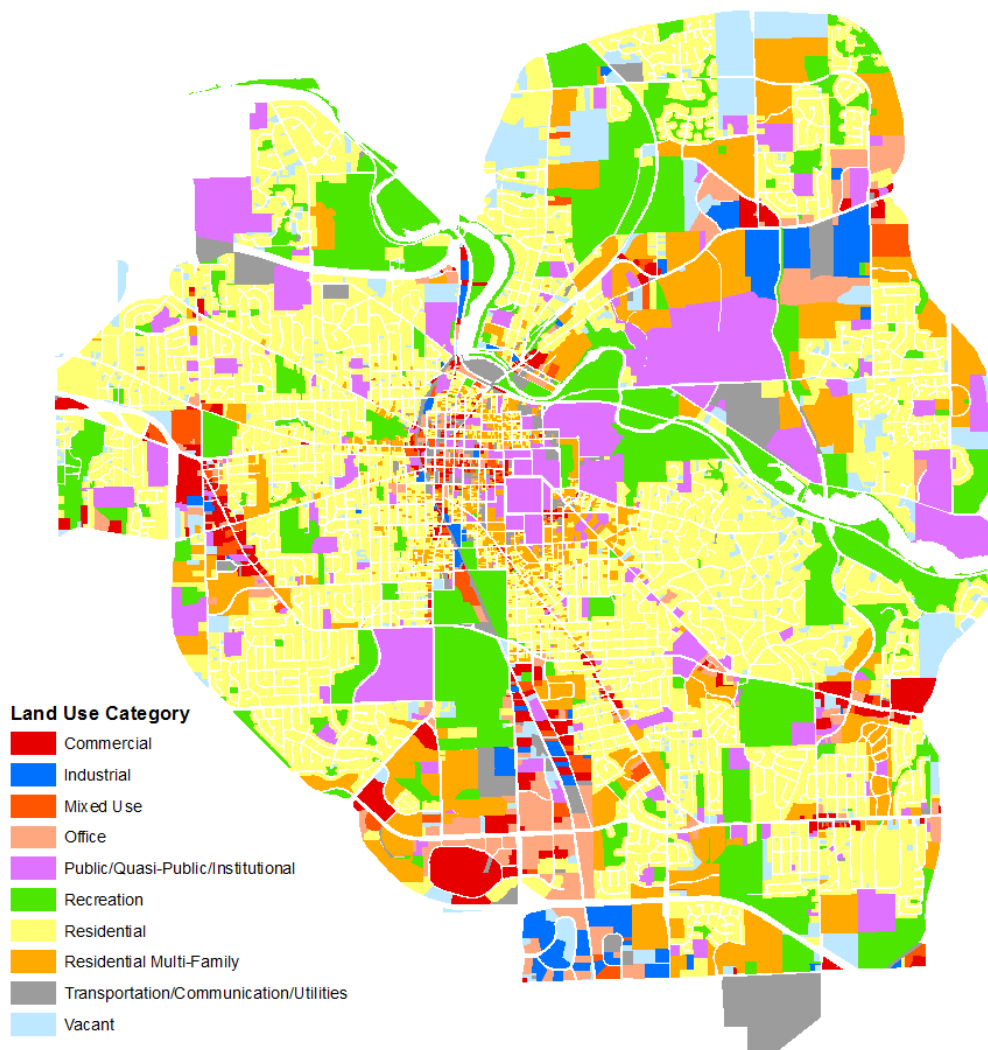
Benchmarking Communities

- **Grand Rapids Urban Forestry Plan**
 - *40% urban forest cover goal*
- **Seattle Urban Forest Management Plan**
 - *Building on the goal to achieve 30% canopy cover within 30-years (from 2007, at 22.9% canopy). 30% goal broken down into target's for each land use type.*
 - *Requirement of a 2:1 planting to removal ratio*
- **Portland Urban Forest Action Plan**
 - *Goal of 35-40% cover in residential areas; Commercial/ind./inst. areas, increase 10-15%*
 - *Natural areas, increase as feasible, no defined target*
 - *ROW's goal of 35%, Maintain a 2:1 planting to removal ratio, stocking level to 100%*
- **Baltimore, TreeBaltimore Program**
 - *40% urban forest cover goal*

Where does ANN ARBOR stand?

- City does not have a canopy goal
- City-wide Urban Tree Canopy analysis completed in 2010.

Map of Existing
Land Use (LU) Categories

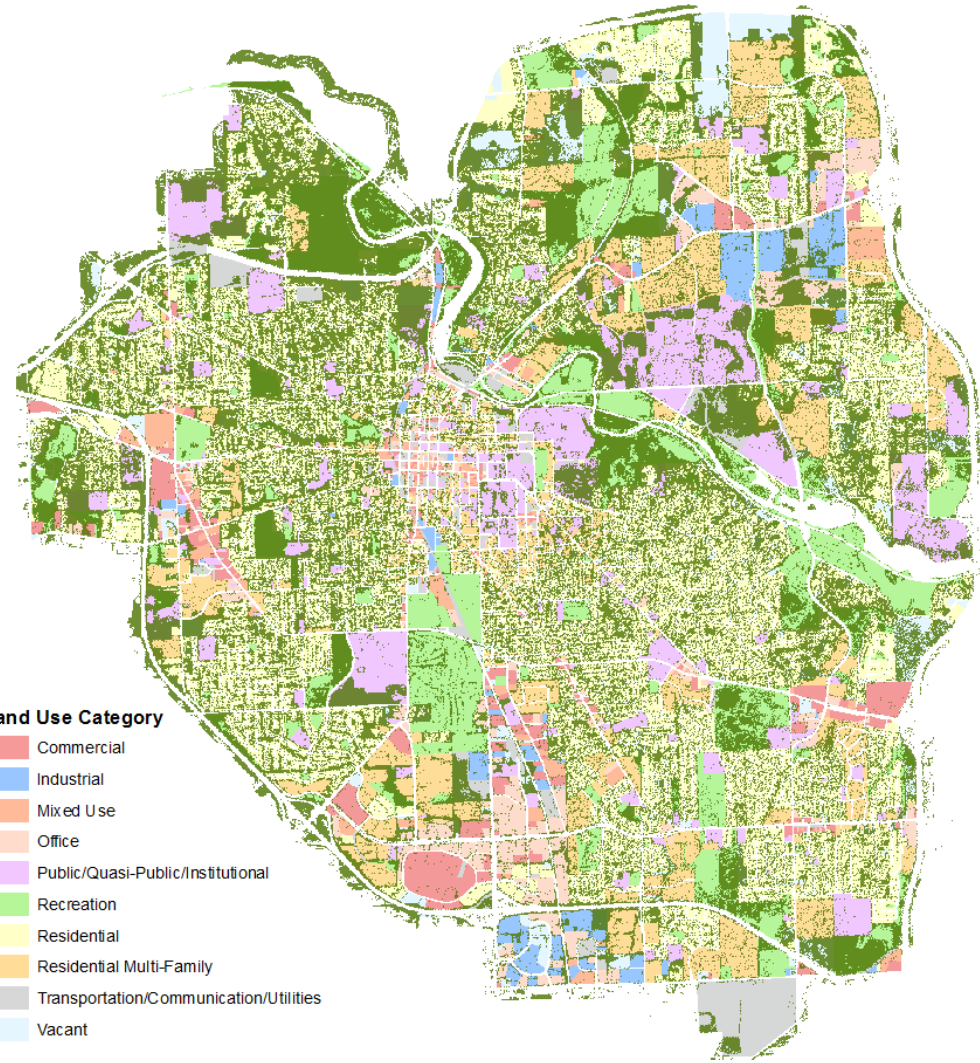


Tree Planting Overall / Increase Tree Canopy

Where does ANN ARBOR stand?

Canopy approximately 34% in non-ROW

Land Uses	Land Use Acres	Tree Canopy Acres	UTC %
Commercial	513	37	7.2%
Industrial	385	54	13.9%
Mixed Use	236	21	8.8%
Office	599	107	17.9%
Public / Int.	2376	647	27.2%
Rec. / Open Space	2817	1289	45.8%
Residential	5824	2338	40.2%
Residential Multi-Family	2013	428	21.3%
Vacant	953	497	52.1%
PROW	2688	593	22.1%
Totals	18403	6011	32.7%



Tree Planting Overall / Increase Tree Canopy

Where does ANN ARBOR stand?

The Maximum Possible Urban Tree Canopy is 78%

	Existing UTC %	Max UTC %	% Change	# of Trees Needed
Commercial	9.7%	75.2%	65.5%	23,296
Industrial	14.4%	78.4%	64.0%	14,933
Mixed Use	9.2%	72.1%	62.8%	10,224
Office	19.1%	80.2%	61.1%	22,158
Public / Int.	28.6%	84.4%	55.8%	78,697
Rec. / Open Space	47.8%	90.4%	42.5%	72,933
Residential	39.8%	84.0%	44.3%	149,369
Residential Multi-Family	27.7%	79.7%	52.0%	63,627
Vacant	62.4%	97.8%	35.5%	10,591
PROW	23.7%	43.8%	20.2%	35,602
TOTALS	33.6%	77.7%	44.2%	481,430

Option # 1:

Adopt a city-wide 40% canopy cover goal

Feedback + Considerations:

- 40% may be arbitrary? Where does the number come from?
- Is 40% relevant to Ann Arbor?
- Doesn't respond to "on the ground" differences between land uses

Option # 1:

Adopt a city-wide 40% canopy cover goal

Testing out the Idea:

Based on the current Citywide UTC of 32.9%- the urban tree canopy would need to be increased by 6% across all of the land use categories to achieve 40% canopy cover citywide.

	# of Trees Needed
Commercial	2,133
Industrial	1,400
Mixed Use	976
Office	2,176
Public / Int.	8,466
Rec. / Open Space	10,289
Residential	20,248
Residential Multi-Family	7,341
Vacant	1,793
PROW	10,596
TOTAL TREES NEEDED	65,418

Option # 2:

Develop land use specific canopy goals

Feedback + Considerations :

- Land use goals should be based on understanding realities of planting in different types of areas
- Goal needs to recognize that in areas with significant established canopy, maintenance may be prioritized over tree planting
- Some land uses (Public Right-of-Way) might be better suited with a different goal other than percent canopy cover (ex: 100% stocking level of street trees)

Option # 2:

Develop land use specific canopy goals

Testing out the idea:

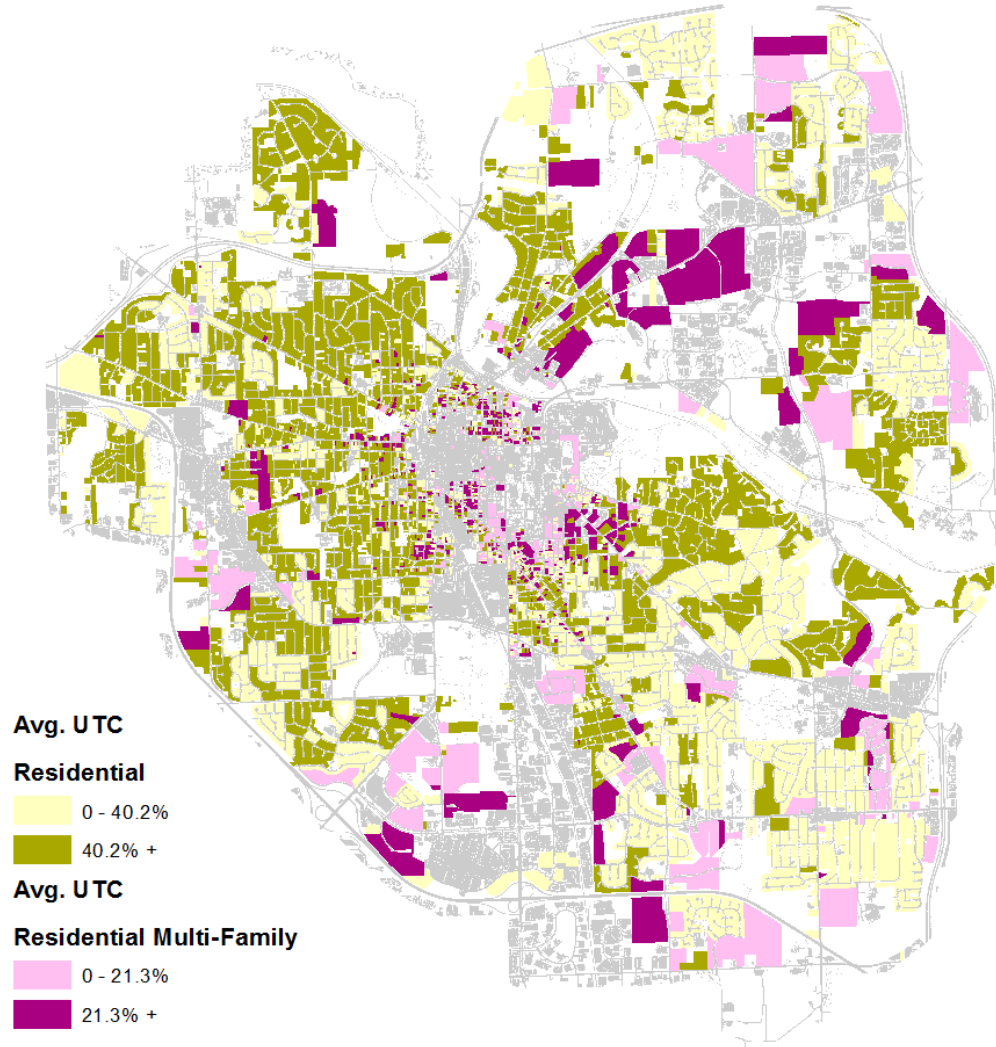
1. Determine existing canopy cover percentage for each LUC (Land Use Category)
2. Identify areas with ***above average*** canopy cover and ***below average*** canopy within each LUC.
3. Determine canopy cover %'s in above and below average areas.
4. Prioritize tree maintenance in areas with *above average* canopy cover, and look to balance maintenance and planting in below average areas.
5. Set the net canopy cover goal for each LUC to the ***above average*** canopy cover percent.

Option # 2:

Canopy Goal Example

- Residential Overall Canopy: **40.2%**
- Above average canopy: **50.5%**
- Below average canopy: **27.5%**
- Set a goal of 50% in residential areas
 - Requires 591 new acres of canopy
 - 35,000 new trees at 60 trees/acre

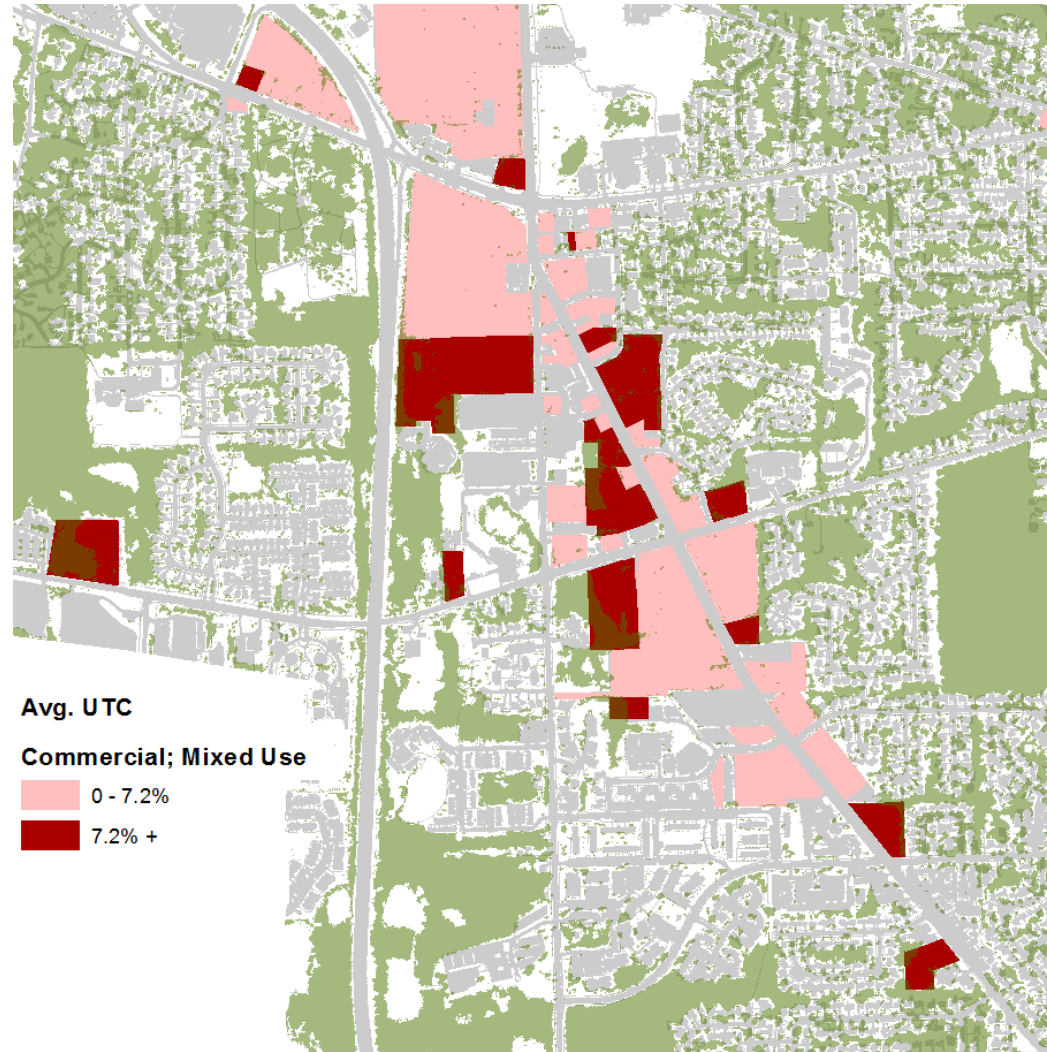
- Multi-Family Res. Overall Canopy: **21.3%**
- Above average canopy: **29.3%**
- Below average canopy: **13.9%**
- Set a goal of 30% in MF residential areas
 - Requires 169 new acres of canopy
 - 10,000 new trees at 60 trees/acre



Option # 2:

Canopy Goal Example

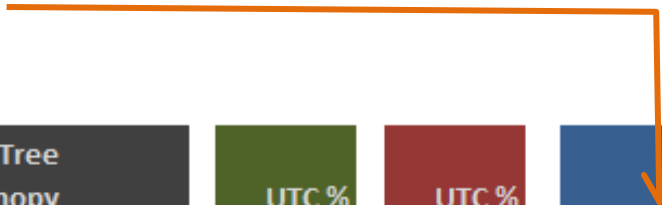
- Commercial Overall Canopy: **7.2%**
- Above average canopy: **15.6%**
- Below average canopy: **2.5%**
- Set a goal of 15% in commercial areas
 - Requires 41 new acres of canopy
 - 2480 new trees at 60 trees/acre



Tree Planting Overall / Increase Tree Canopy

Option # 2:

Setting Canopy Goals for Land Uses



Land Uses	Land Use Acres	Tree Canopy Acres	UTC %	UTC % Above	UTC % Below	GOAL	Acres of new UTC	# of trees
Commercial	513	37	7.2%	15.6%	2.5%	15.0%	41	2480
Industrial	385	54	13.9%	23.9%	6.8%	25.0%	41	2459
Mixed Use	236	21	8.8%	24.0%	4.1%	25.0%	38	2264
Office	599	107	17.9%	31.9%	8.7%	30.0%	77	4607
Public / Int.	2376	647	27.2%	42.2%	11.9%	40.0%	330	19798
Rec. / Open Space	2817	1289	45.8%	65.5%	18.6%	50.0%	372	22301
Residential	5824	2338	40.2%	50.5%	27.5%	50.0%	591	35433
Residential Multi-Family	2013	428	21.3%	29.3%	13.9%	30.0%	169	10131
Vacant	953	497	52.1%	69.4%	23.8%	50.0%	94	5670
PROW	2688	593	22.1%	41.3%	7.7%	20.0%	189	11348
Totals	18403	6011	32.7%				1942	116492

Benchmarking

Benchmarking

- American Public Works Association- *Urban Forestry Best Management Practices for Public Works Managers*
- City of Charlotte, North Carolina
- City of Columbus, Ohio
- City of Lansing, Michigan

Benchmarking Highlights

American Public Works Association- Urban Forestry BMPs- Level of Service

- **Lowest Level of Service- Reactive Management**
 - *Respond to emergencies and high priority complaints*
 - *Safety levels do get addressed*
 - *Lowest financial demands*
 - *Least efficient means of delivering service*
 - *Low citizen satisfaction*
 - *Leads to a poorly developed urban forestry program*
- **Adequate Service Level**
 - *Responds to emergencies and citizen requests- mostly request driven program*
 - *Resources to begin a routine maintenance program*
 - *Scheduled tree planting program*
- **High Level of Service- Proactive Management**
 - *Frequent, preventive tree pruning cycles*
 - *Comprehensive emergency response and clean-up*
 - *Insect and disease program*
 - *Public outreach and education*
 - *Highest annual costs*
 - *Results in safer, more sustainable urban forest with less storm damage, insect/disease threats*
 - *Maximized tree benefits*
 - *Highest citizen satisfaction*

Benchmarking Communities:

City of Charlotte, North Carolina

- *150,000 street trees*
- *Both reactive and proactive urban forestry program but mostly reactive*
 - *Respond to ~1400 service requests per year*
 - *Routine pruning- Forestry manager selects 1-3 neighborhoods to prune in each year*
 - *Routine pruning program ~3000 trees per year (completed by contractors and in-house crews)*

City of Columbus, OH

- *150,000 street trees*
- *Reactive program- in the early stages of dealing with emerald ash borer*
- *Does not have an updated tree inventory*

City of Lansing, MI

- *43,000 street trees*
- *Program primarily reactive but limited routine pruning*
- *City broken up into management units and work is done within each management unit*
- *Inventory not up to date. Generate work each year through a summer survey where each street of the City and a windshield survey is completed. Forestry supervisors identify trees to be removed and hazardous trees that need to be pruned.*

Tree Maintenance + Pruning

Where does ANN ARBOR stand?

- City has recent tree inventory that is updated regularly
- Pruning is done reactively through citizen requests, staff observations or emergency
- Current maintenance activities are focused on tree removal and tree planting

Current Maintenance Needs	Number of Trees	Current Maintenance Needs	Number of Trees
Priority 1 Removal	322	Priority 1 Prune	1030
Priority 2 Removal	595	Priority 2 Prune	2417
Priority 3 Removal	754	Small Routine Prune	3674
Total Removals	1674	Large Routine Prune	27,511
Stump Removal	1337	Training Prune	12,086
Tree Planting	7275	Total Pruning Needs	46,718

Other Considerations

- Education of private property owners
- Design standards for development

Option # 1:

Maintain Primarily Reactive Maintenance

- Continue the current program that focuses on reacting to maintenance needs.

Feedback + Considerations :

- A reactive program would not lead to a sustainable urban forest
- Inefficient mechanism for delivering services

Option # 2:

Shift to More Proactive Maintenance

- Develop a pruning cycle- break up city into management areas
- Continue to remove trees selected as priority removals
- Respond only to emergency service requests

Feedback + Considerations :

- Cost of implementing a 7-year pruning cycle
 - **First Cycle (7 years)**- estimate: \$55/tree or **\$340,010/year** to prune 6182 trees
 - Tree pruning during the first round of the pruning cycle will cost more because the trees will require more extensive pruning due to the absence of a pruning cycle prior to program initiation.
 - **Second Cycle (next 7 years)** - estimate \$25/tree or \$154,550/year to prune 6182 trees
- Return on investment- proactive vs. reactive management

Benchmarking

Benchmarking

- Minneapolis GreenPrints Program
- Redmond, WA
- Portland, OR
- National Urban Forest Health Monitoring System
- i-Tree Tools

Benchmarking Communities

- Minneapolis GreenPrints Program
 - *Urban Forest tracked as part of city's annual sustainability reporting **GreenPrint** program*
 - *Tracks planting on private land through City Trees program, public tree plantings, and removals/losses on a yearly basis.*
 - *Used i-Tree (once) to calculate + project canopy benefits*
- Redmond, WA
 - *Monitoring program of Adaptive management (see diagram below)*
 - *Community trained and participates in monitoring activities*
- Portland, OR
 - *Volunteers participate in a street tree inventorying operations on a cyclic basis (rotates around through different neighborhoods)*
 - *5-year cycle of canopy mapping*
 - *Annually tracks various performance measures related to UFC*

Where does ANN ARBOR stand?

- 2009 Street + Park Tree Inventory
 - Records updated by city staff during tree work
 - Tracks condition of existing trees and potential planting locations
 - 85% stocking level for existing trees – 7,275 potential planting sites
- 2010 Urban Tree Canopy Analysis
 - 32.9% canopy cover across the city

Option # 1:

Implement routine updates to the public tree inventory

Feedback + Considerations :

- Ideally, inventory would be updated every 3 years to provide for accurate description of tree health/condition (which can decline rapidly)
- Train residents to help conduct tree inventory vs. relying on a consultant for re-inventorying needs
- Implement a practice for “windshield surveys” on the city, assessing 1/3 of the city per year (similar to Lansing’s practices).

Option # 2:

Urban Canopy Monitoring

Feedback + Considerations :

- Canopy grows slowly, but a 10-year cycle would be beneficial to re-assess the tree canopy and re-assess benefits
- i-Tree tool might be used at on an informal basis for more frequent canopy assessments as new aerial imagery is available.

Option # 3:

Threat Assessment

Feedback + Considerations :

- National Forest Health Monitoring System
- Train residents to contribute to monitoring activities

Benchmarking

Benchmarking:

- City of Charlotte, North Carolina
- City of Columbus, Ohio
- City of Lansing, Michigan
- City of Chelsea, Massachusetts
- City of Redwood City, California
- City of Portland, Oregon
- City of Seattle, Washington
- City of Burlingame, California
- City of Cincinnati, Ohio (yearly street frontage special assessment)
- City of St. Louis, MO (property tax transfer tax funds urban forestry program)

Benchmarking Funding Sources:

General Fund	Gas Tax Funds
Parks Millage	Special Assessments
Street Millage	Act 51

Where does ANN ARBOR stand?

Forestry is funded from:

- Stormwater Utility fund
- Parks Millage
- Elizabeth Dean Fund (special projects)

Other Considerations

- Other potential sources:
 - Act 51 (Transportation taxes)
 - Metro Act (Telecommunications lines)
 - Special Assessments
 - Capital Improvement Project budgets
 - Utility bill donations
 - Sale of municipal wood products
 - Tree Millage
 - Private donations/corporate sponsorship/grants

Next Steps

Anticipated Topics for Advisory Committee Meeting 6

C – Species selection + invasive management

E – Ecological value of trees

F – Amenity uses for trees

G – City policies/coordination for public tree management

I – Tree planting incentives + protection measures

J – Ordinances / requirement for managing private trees

K – Resident communication + notification about forestry activities

L – General outreach + education

M – Forest promotion + reporting

N – Resident Volunteering / stewardship

O – Partnerships with organizations