Putting Canopy Data to Practice: Case Studies for Implementing UTC Goals in Virginia

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Presentation Overview

- Background, scope, and purpose of our project
- Our approach to locality consultation and technical assistance
- Our approach to developing analytical and decision-support tools for localities
- Outcomes and lessons learned from our project
Project Background

- UTC Assessments in 26 Virginia localities (focus on CBW)
- **Goal:** raise awareness about UTC and encourage UTC goal-setting by localities based on existing and possible UTC
- **End products:** UTC summary report and UTC geospatial data

![Bar chart showing UTC percent in various localities]
Project Background

- 2012 – 2014: VDOF, Va Tech, Plan-It Geo
- Technical assistance with UTC implementation planning
- **Goal**: tangible strategies and tactics for UTC conservation and enhancement based on UTC data and analytics
- **End products**: UTC analysis tools, locality strategic plans for UTC implementation, primer on UTC implementation planning

Fact-Finding and Context-Setting

Intensive Technical Assistance

Consultation

Analytical Tools

Reporting and Outreach
Locality Consultation & Technical Assistance

- **Fall 2012**: pilot survey of 26 Virginia localities to understand perceived value and use of UTC assessment

- **Winter 2013**: webinar for 26 Virginia localities to introduce our project and solicit participants for technical assistance

- **Spring/Summer 2013**: conference calls, web tool development /demos, and work sessions with localities

- **Fall 2013**: UTC implementation plans and UTC workshop

- **2014**: drafting of primer on UTC implementation for peer review and building website for project dissemination
### Locality Consultation & Technical Assistance

<table>
<thead>
<tr>
<th>Use of UTC assessment</th>
<th>% of localities reporting frequent use of UTC assessment</th>
<th>% of localities reporting infrequent use of UTC assessment</th>
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<tbody>
<tr>
<td>To develop a goal for urban tree canopy</td>
<td>52%</td>
<td>28%</td>
</tr>
<tr>
<td>For public education (e.g. awareness of UTC benefits, BMPs for residential owners)</td>
<td>44%</td>
<td>32%</td>
</tr>
<tr>
<td>For targeted tree planting projects</td>
<td>44%</td>
<td>32%</td>
</tr>
<tr>
<td>In applications for grants or other funding opportunities</td>
<td>44%</td>
<td>20%</td>
</tr>
<tr>
<td>For public engagement (e.g. volunteer recruitment, partnerships)</td>
<td>36%</td>
<td>32%</td>
</tr>
<tr>
<td>To inform policy decisions (e.g. zoning, taxation, ordinances, etc.)</td>
<td>16%</td>
<td>52%</td>
</tr>
<tr>
<td>To inform land use planning</td>
<td>12%</td>
<td>56%</td>
</tr>
<tr>
<td>To demonstrate compliance with environmental regulations (e.g. SIPs, MS4s)</td>
<td>12%</td>
<td>28%</td>
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REQUEST FOR APPLICATIONS

Technical Assistance in Urban Tree Canopy Cover Planning and Implementation

A Program Partnership Of:
Virginia Tech | Virginia Department of Forestry | Plan-It GEO

PROGRAM OVERVIEW

Between 2008 and 2012, assessments of urban tree canopy (UTC) were completed for 27 Virginia localities. These assessments were performed using high-resolution aerial imagery and computer-automated analysis techniques, providing information on the quantity and location of UTC within each locality. Knowing how much UTC there is and where it is located is powerful information. But many localities are unsure how to harness the power of this information to improve their urban forests.

Made possible by a grant from the US Forest Service, our program partners are now accepting applications from localities wishing to receive technical assistance with their UTC planning and implementation. Four localities will be selected for technical assistance during 2013. The assistance team, comprising urban forestry and geospatial experts, will work with localities to help them better understand UTC assessments and their applications. Themes will include UTC goal-setting, land prioritization for tree planting and tree conservation, use of UTC in master plans and zoning, use of UTC in regulatory compliance and tree conservation ordinances, and planning of tree planting programs.

ASSISTANCE ELIGIBILITY

- Must possess a UTC assessment performed by VDOF and its partners or by the locality
- Must commit personnel time to take ownership of developing the UTC implementation plan and work with the assistance team in writing the UTC implementation plan
- Must provide locality GIS data to the assistance team for use in tree planting and tree conservation analysis and provide feedback on development of UTC maps and tools for the locality
- Must submit a UTC implementation plan at the conclusion of the program
- Must attend a workshop at Virginia Tech in fall 2013 to report on the UTC implementation plan

APPLICATION PROCESS

- Complete the application form below
- Submit the application to arborist@vt.edu by 5:00 PM on March 15, 2013
- Questions? Contact Eric Wiseman | Urban Forestry Specialist, Virginia Tech | 540-231-5486

DATES and DEADLINES

- February 21, 2013: program kick-off webinar
- March 15, 2013: UTC Assistance applications due
- April 1, 2013: announcement of UTC Assistance awards
- April 18, 2013: planning conference call with selected localities
**Locality Consultation & Technical Assistance**

- **Town of Woodstock**
  - Pop: 3,952
  - Land area: 3.2 sq mi
  - UTC: 22%

- **City of Lexington**
  - Pop: 6,998
  - Land area: 2.5 sq mi
  - UTC: 44%

- **City of Newport News**
  - Pop: 183,412
  - Land area: 69 sq mi
  - UTC: 38%

- **City of VA Beach**
  - Pop: 448,479
  - Land area: 249 sq mi
  - UTC: 36%
Locality Consultation & Technical Assistance

Preparatory Assessment
UTC Implementation Plan Work Sessions (July 1-2, 2013)

The purpose of this assessment is to make observations and establish viewpoints on UTC conservation in your locality. Gathering this information will help you think critically about your UTC conservation efforts and prepare you for an efficient work session. This information will also help the project leaders understand your circumstances and perspectives so that we can better facilitate your UTC implementation planning.

Please fill out the form below and submit to the project leaders by June 24, 2013. A typed, digital document is preferred. Email to pwiseman@vt.edu.

<table>
<thead>
<tr>
<th>Helpful to achieving your goals</th>
<th>Harmful to achieving your goals</th>
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<tbody>
<tr>
<td><strong>STRENGTHS</strong></td>
<td><strong>WEAKNESSES</strong></td>
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<tr>
<th>Internal Origin (institutes, official government)</th>
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<tr>
<td>OPPORTUNITIES</td>
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<tr>
<th>External origin (entities, non-governmental organizations &amp; agencies)</th>
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## UTC Plan Evaluation Matrix | Work Session #2 | August 20-21, 2013

<table>
<thead>
<tr>
<th>DIMENSIONS OF PLAN</th>
<th>ASPECTS SHOWING STRENGTH</th>
<th>ASPECTS NEEDING IMPROVEMENT</th>
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<tbody>
<tr>
<td>Organization and Formatting</td>
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<tr>
<td>Provides Situational Context (S.W.O.T.)</td>
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<tr>
<td>Describes Scope and Intent of Plan</td>
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<tr>
<td>States UTC Vision and S.M.A.R.T. Goals</td>
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<tr>
<td>Identifies Strategies and Resources for Implementation</td>
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<tr>
<td>Describes Methods of Performance Tracking and Evaluation</td>
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Analytical & Decision-Support Tools

From the survey ...

- **Prioritize**: areas for planting projects or conservation
- **Calculate**: the impacts on goals and benefits; enter costs
- **Track**: changes in canopy (keep UTC data up-to-date)
Analytical & Decision-Support Tools

**Zoning**
- Base layer for analysis

**Prioritize**
- Planting
- Protection

**Filter**
- Zoning by land cover percentages

**Simulate**
- Grow-Out Canopy
- # of Trees
- Eco Benefits

**Track – Update**
- Gains/Losses
- Protect/Propose
- Costs/Metrics

**Plot – Inventory**
- Existing or new trees
- Search/Find
- Planting Projects
Analytical & Decision-Support Tools

- **Assess → Implement**: users, uses, and scales
- **We gave them Tools**: did they need **Answers** instead?
- **Strike a Balance**: functionality vs. time constraints/training
Project Outcomes & Lessons Learned

- **Newport News**: Seeking to strengthen the UTC component of their 2013 Sustainability Roadmap
- **Lexington**: No formal plan, but developing strategies for targeted tree planting in public spaces for water quality
- **VA Beach**: Specific Area Analysis of UTC and targeted UTC goals for city lands included in 2014 UF management plan
- **Woodstock**: used the "proposed projects" (polygon) editing tool to add some LID parking lot projects into the web map and then submitted a grant for funding

“Although we are a small community, we truly benefited from this project...our political officials saw the importance of tree canopy, not only for aesthetics, but for environmental and financial reasons...our proposed budget has been supported when environmental and enhancement budgets have diminished...[there is] more of a positive “buzz” about trees in Woodstock.”

~ Angela K. Clem, Assistant Town Manager, Woodstock, VA
Project Outcomes & Lessons Learned

- Each locality has a *unique context* (constraints, priorities, capabilities)

- Technical assistance must be shaped by *what the locality wants*, not what you want for the locality

- An *evolution* to analytical tools

- Implementation makes UTC assessment look *easy*

- If you build it, they may not come, at least not until *they’re* ready or the *tools are*
Acknowledgements

• Barbara White
• Paul Revell

• Anne Buckelew
• Julie Mawhorter

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