



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

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Eric Wiseman, PhD

Associate Professor of
Urban Forestry
Virginia Tech
vtuf@vt.edu
<http://urbanforestry.frec.vt.edu>

Ian Hanou

Owner and Director of
Business Development
Plan-It Geo
ianhanou@planitgeo.com
<http://www.planitgeo.com>



VirginiaTech
College of Natural Resources
and Environment



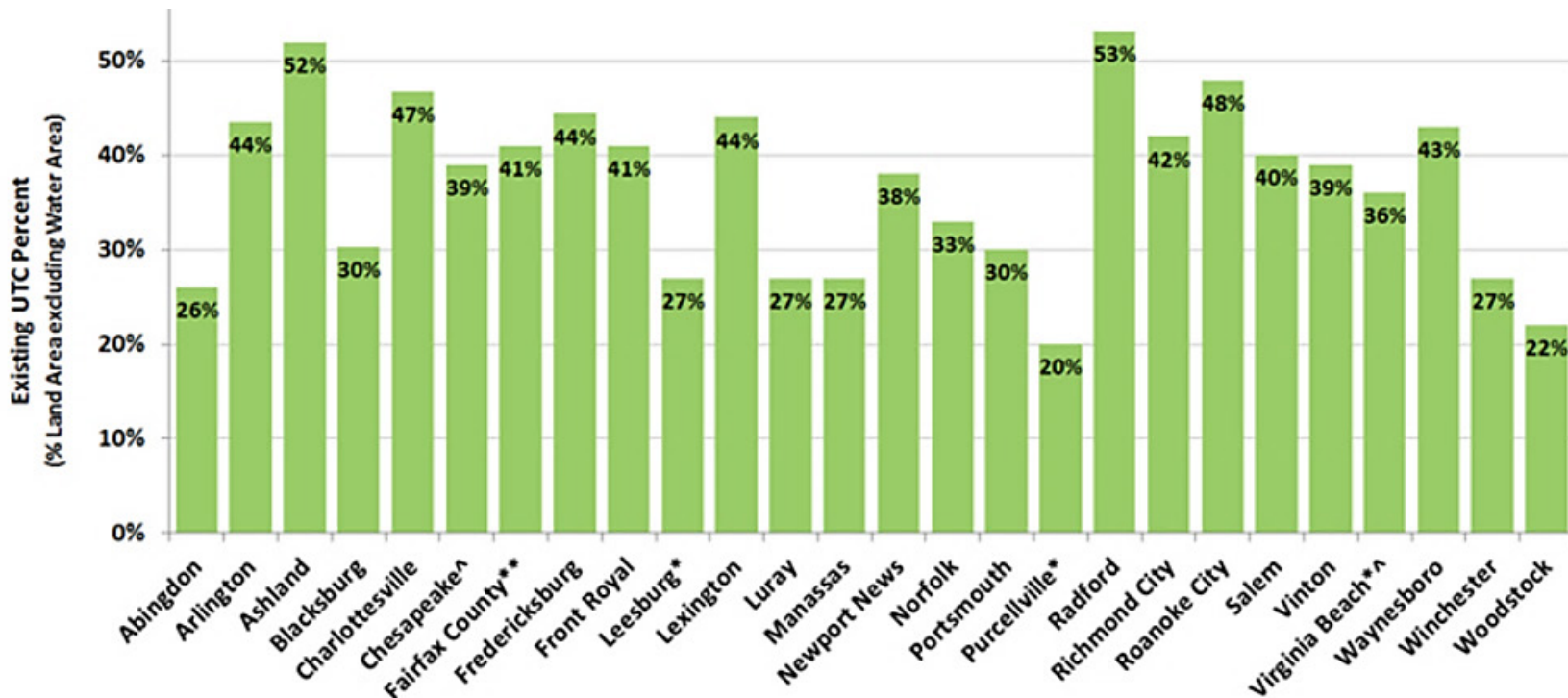
Presentation Overview

- 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

- 2008 – 2012: VDOF, Va Tech, VGEP, CEARS, SAL-UVT
- 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



OVERVIEW

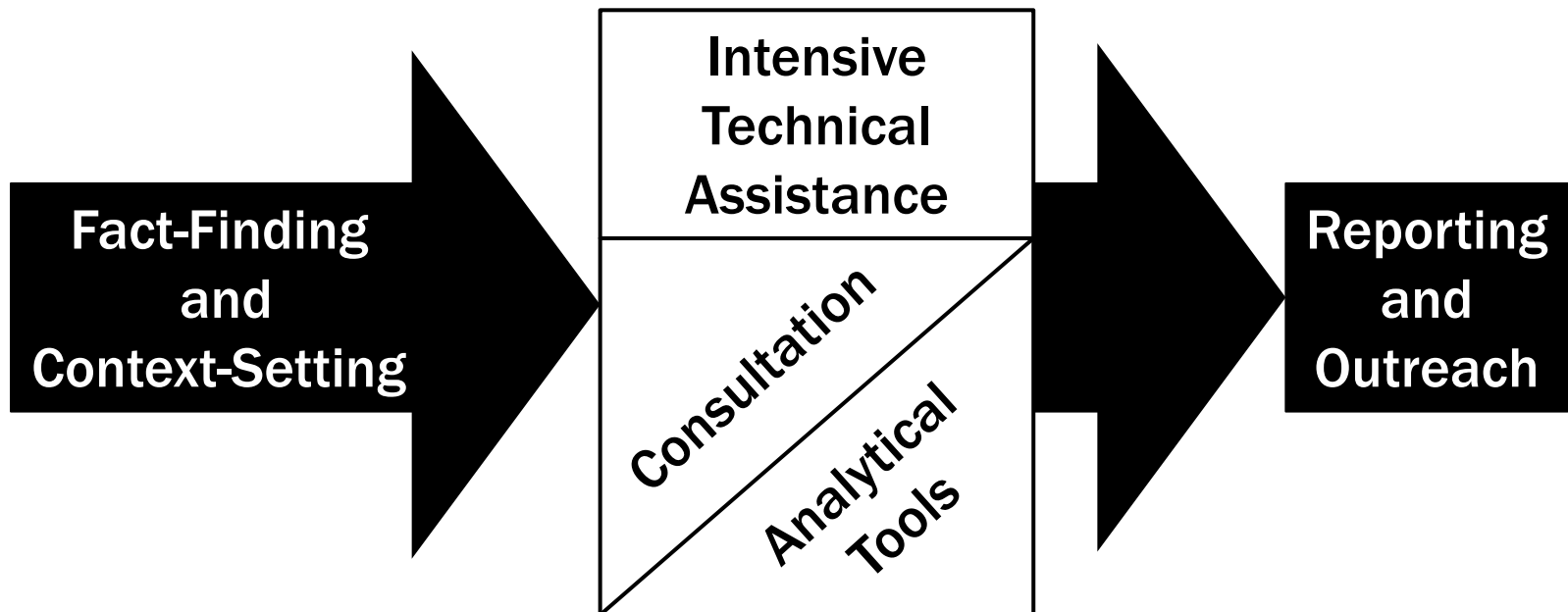
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Project Background

- 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



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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

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

Locality Consultation & Technical Assistance

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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 | 540-231-5148

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

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Town of Woodstock

Pop: 3,952

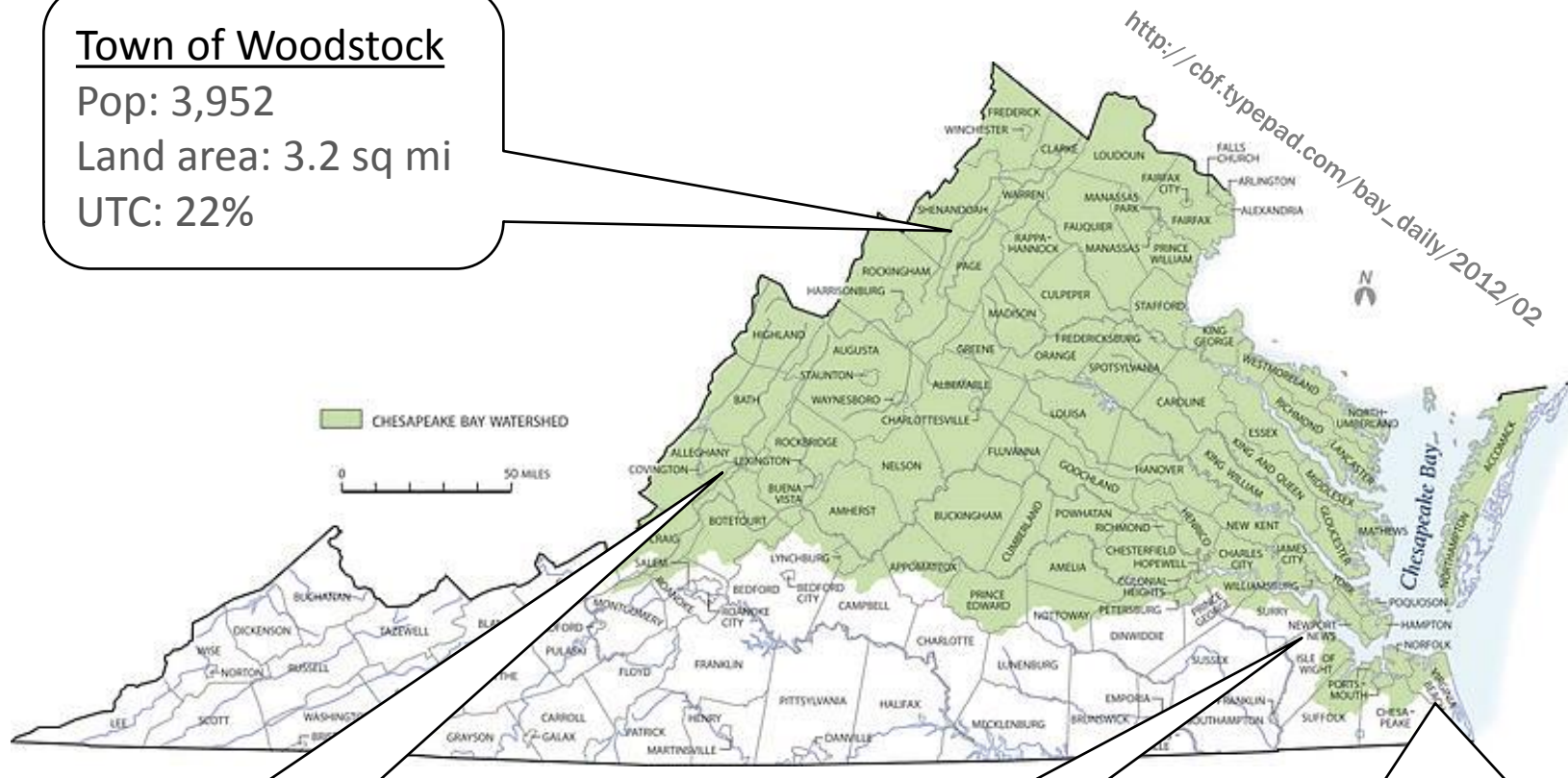
Land area: 3.2 sq mi

UTC: 22%

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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%

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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.

Part I: In the space below, provide a situational analysis of UTC conservation in your locality using the S.W.O.T. model (background on S.W.O.T. is [here](#)). Be inclusive at this stage – think about environmental, social, economic, legal, and organizational factors. Concise bulleted statements are preferred.

	Helpful to achieving your goals	Harmful to achieving your goals
	STRENGTHS	WEAKNESSES
Internal Origin (attributes of local government)		
External origin (attributes of tree resource & agents of change in the locality)	OPPORTUNITIES	THREATS

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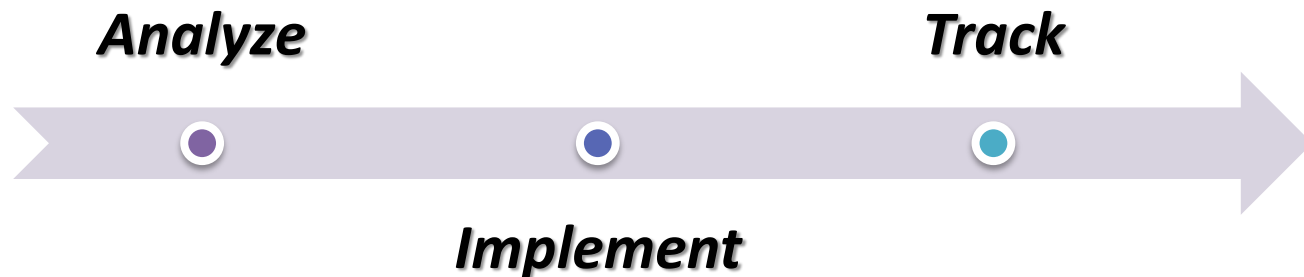
UTC Plan Evaluation Matrix Work Session #2 August 20-21, 2013		
DIMENSIONS OF PLAN	ASPECTS SHOWING STENGTH	ASPECTS NEEDING IMPROVEMENT
Organization and Formatting		
Provides Situational Context (S.W.O.T.)		
Describes Scope and Intent of Plan		
States UTC Vision and S.M.A.R.T. Goals		
Identifies Strategies and Resources for Implementation		
Describes Methods of Performance Tracking and Evaluation		

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)



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Analytical & Decision-Support Tools



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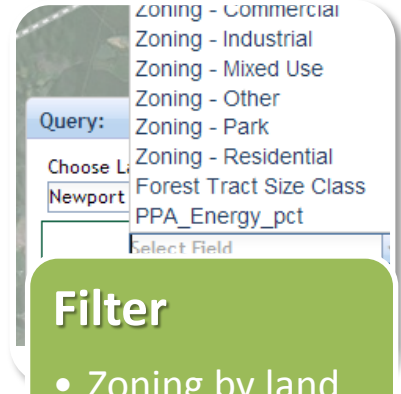
Zoning

- Base layer for analysis



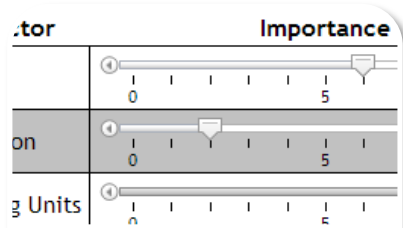
Prioritize

- Planting
- Protection



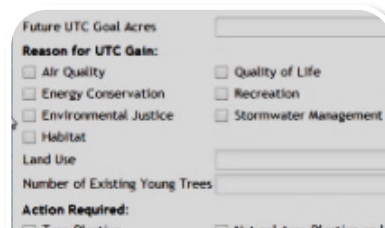
Filter

- Zoning by land cover percentages



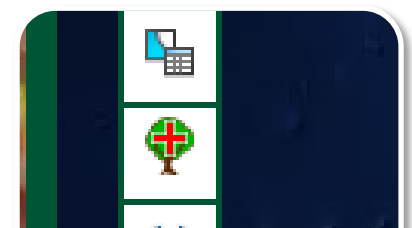
Simulate

- 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



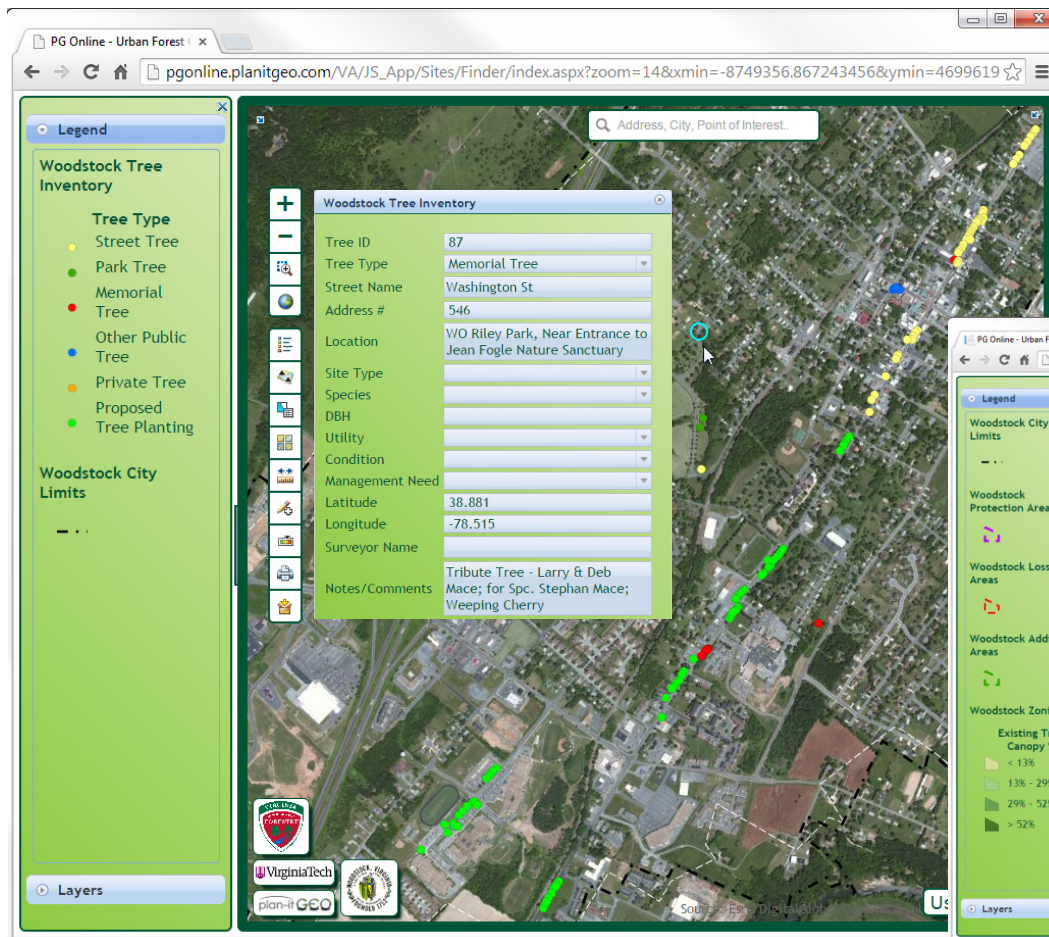
- Assess → Implement: users, uses, and scales
- We gave them **Tools**: did they need **Answers** instead?
- Strike a Balance: functionality vs. time constraints/training

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Welcome to Urban Forest Cloud.

Log in.

Use a local account to log in.

User name

Password

☐ Remember me?

Log in

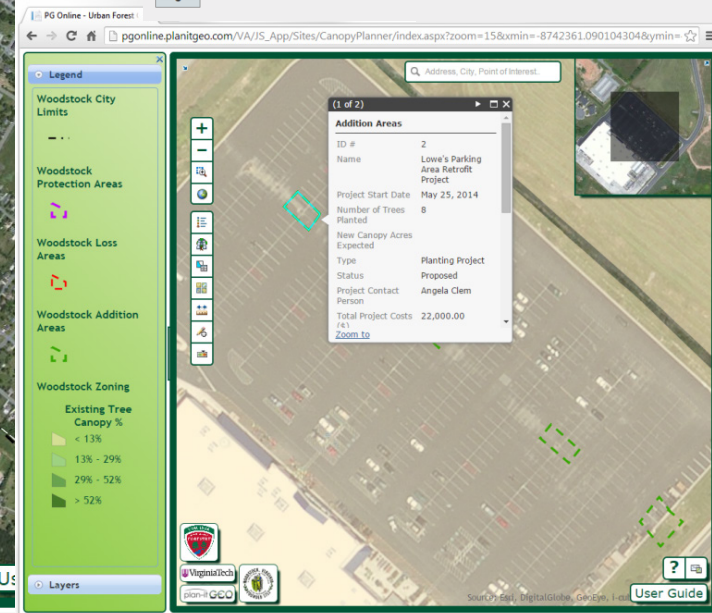
Continue to Urban Forest Cloud as a Guest.

Lexington, VA Guest Access

Newport News, VA Guest Access

Virginia Beach, VA Guest Access

Woodstock, VA Guest Access



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

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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
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- Julie Mawhorter



vtuf@vt.edu
<http://urbanforestry.frec.vt.edu>

ianhanou@planitgeo.com
<http://www.planitgeo.com>

