

Morris Arboretum Urban Forestry Program

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www.fs.fed.us/managing-land/urban-forests



Why? Education and Outreach Mission

Build public & private capacities:

Sustainable horticulture &
land management,

Conservation of biological
diversity,

Healthy ecosystem function.

*Education and Visitor Experience
Department Master Plan, 2015*



What? Urban Forestry Program Activities

Advocacy

- tree canopy

Community

- assistance

Education

- professional

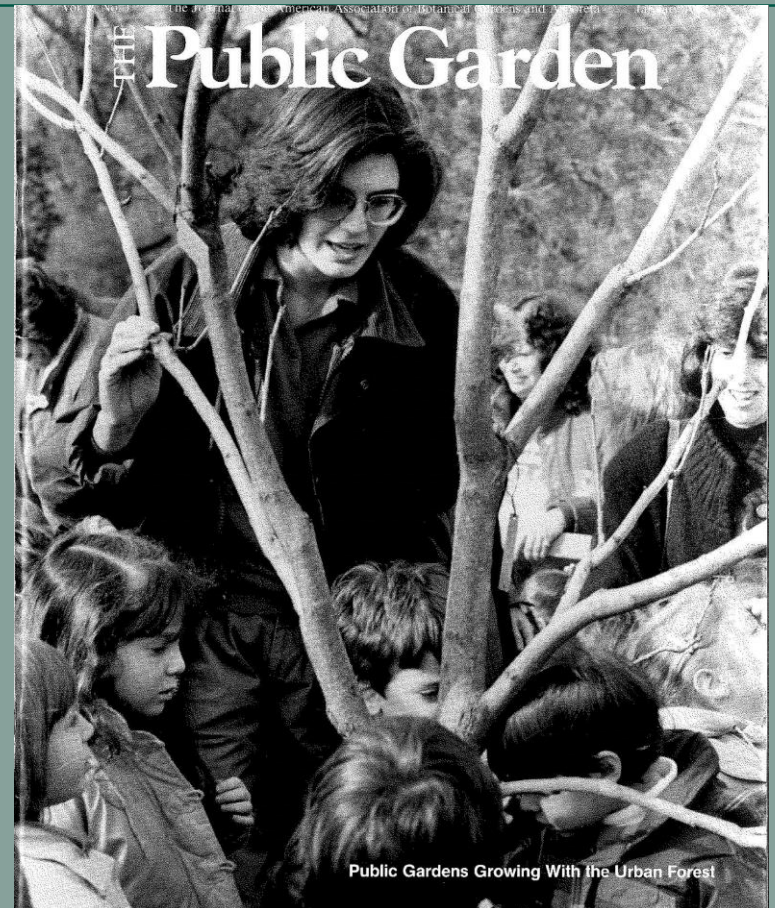
Revenue

- technical assistance



Urban Forestry Program Timeline (1976-1999)

- 1978:** Cooperative Forestry Assistance Act; Morris Arboretum Master Plan - **Center for Urban Forestry**
- 1979:** Arborist Classes
- 1988:** Horticulture Consulting, 0.5 FTE
- 1991:** (crisis); new Director; ISA Tree Academy, Tornado; **Arborist Consulting, 1 FTE;** *USDA FS Mid-Atlantic Center for Urban Forestry*
- 1995-96:** Urban Forestry Dept., 7 FTE



Urban Forestry issue of *The Public Garden*, January 1994; 17 APGA member Urban Forestry Programs are described

Urban Forestry Program Timeline (2000-present)

- 2000: 2 FTE Arborist Consulting;
USDA FS funding ends
- 2006: Arboriculture Consulting 2.3 FTE
- 2008: (Recession);**
School of Arboriculture launched
- 2014: Tree Canopy Conference**
- 2015: U Penn agreement;
GIS Tech hired; 3.5 FTE
- 2019: APGA Urban Forestry Session**

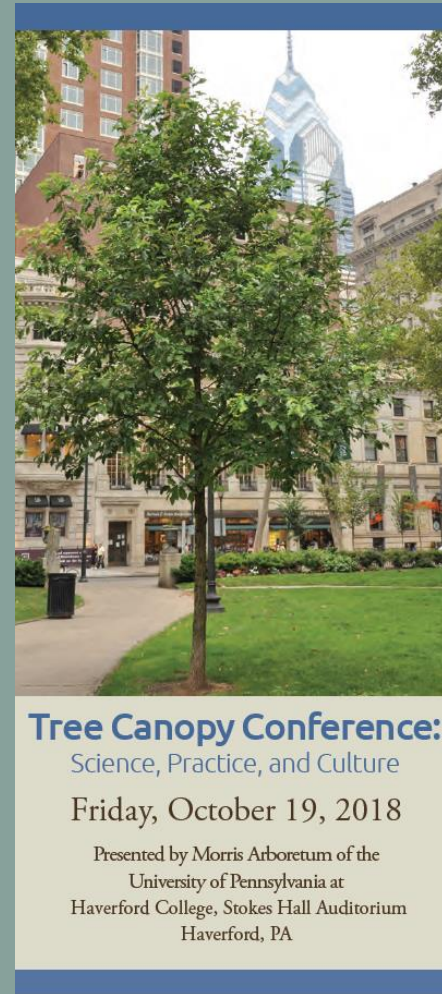


2018 Data Points, Education

4th Annual Conference,
150 Registered

28 Professional Classes,
342 Registered

E-blasts; social media;
public information



Urban Forestry Education, 2017-2018 averages

28 Classes

1 Conference

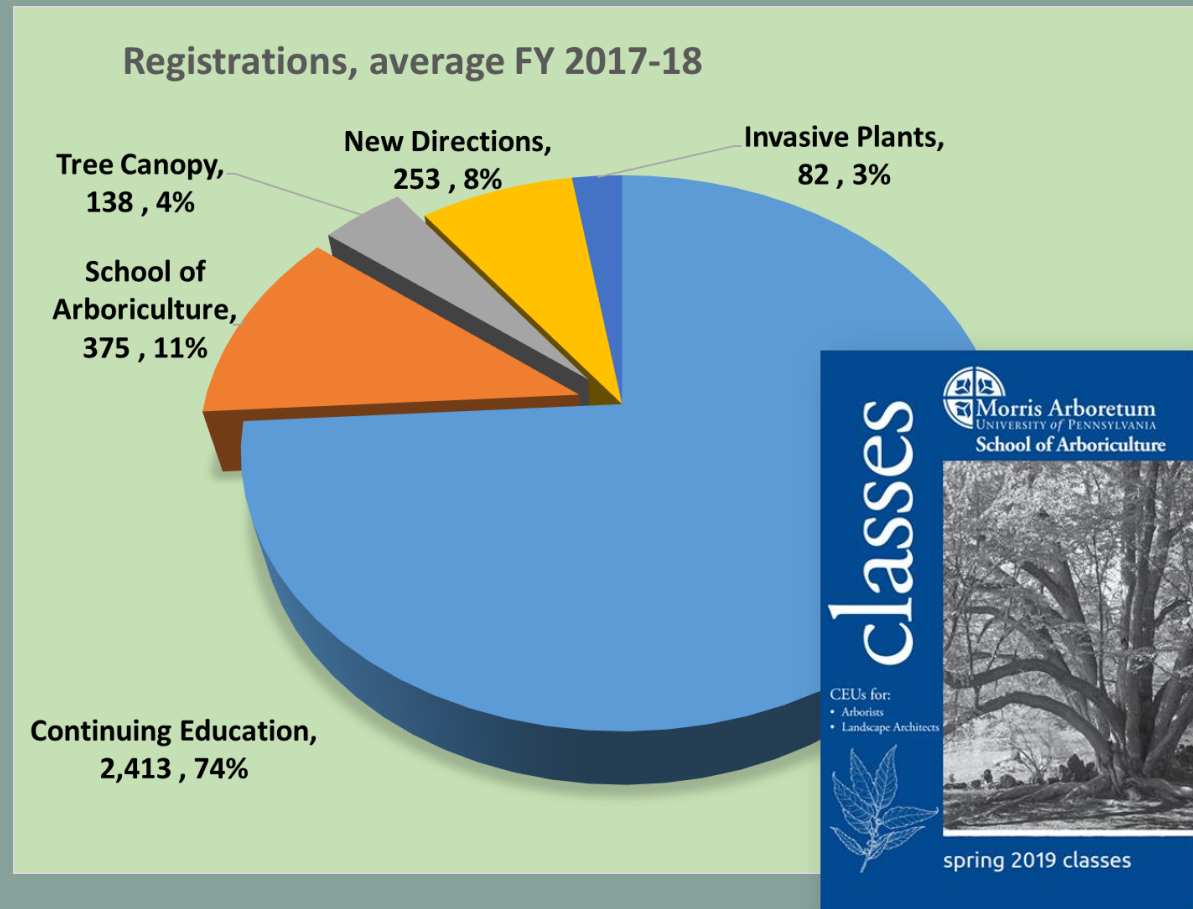
513 Registered

\$94,809 Revenue

47% Class Revenue

16% Class

Registration



2018 Data Points, Consulting

\$298,558 Revenue

\$ 39,000 Net income

10,000 Trees assessed

60 Clients

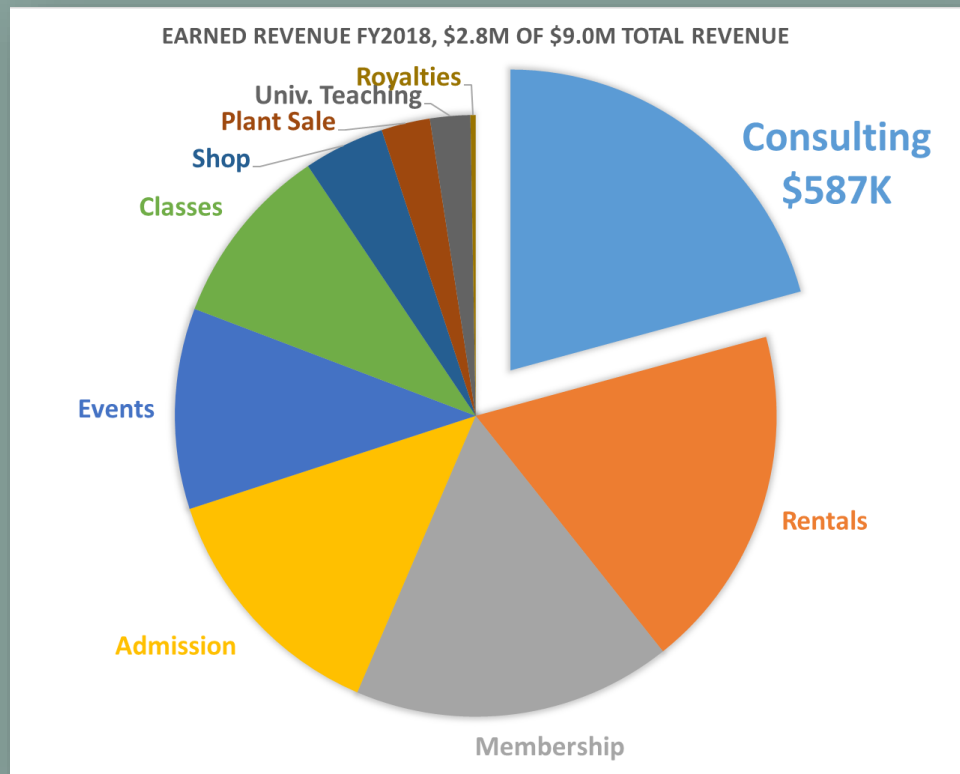
Professional networks



2018 Data Points: Earned Revenue, \$2.8M

\$299K U.F. Revenue (3.3% Total Revenue)

\$288K Other Consulting Earned Revenue



Department Director's View

Mission

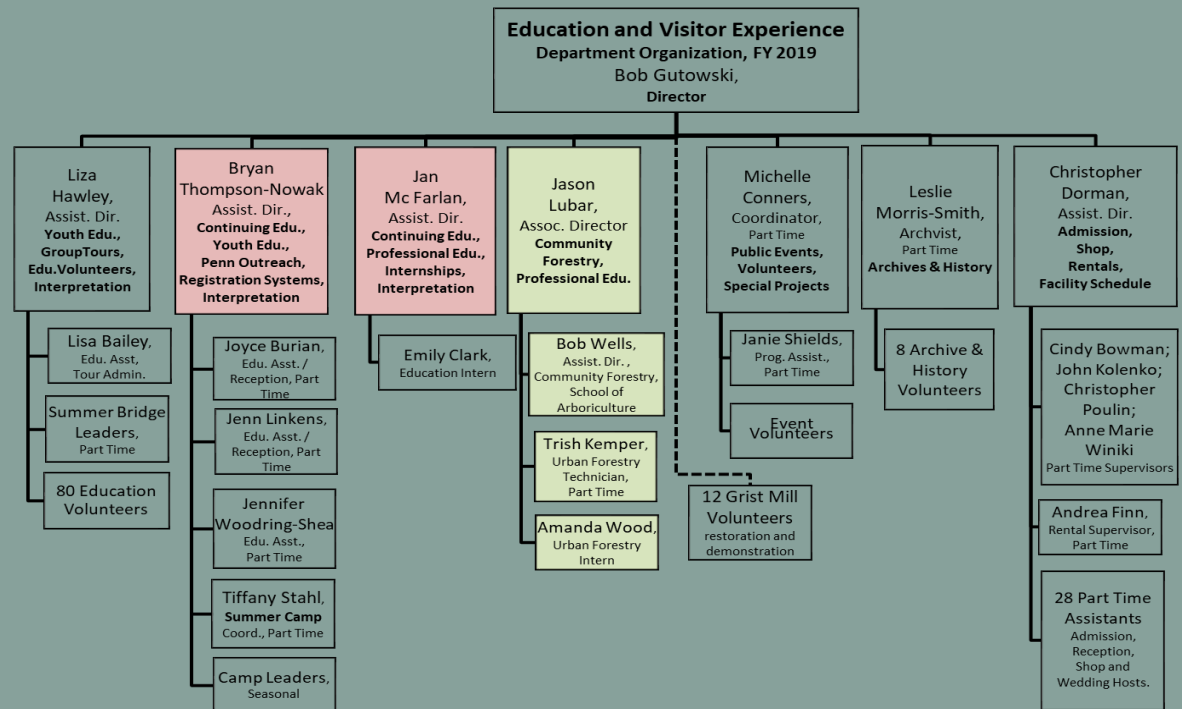
Strategic Plan

Adaptability

Organization

Goals

Accountability



Urban Forestry Consulting Revenue
FY 2012-18



Funding Compensation and Direct Expense

Urban Forestry Outreach employs **3.7** Full Time Equivalent (FTE) staff

- Three income sources fund the program

FUNDING, 3.7 FTE	Consulting	Class Fees	Endowment	TOTAL
Consulting Arborist	1.0			1.0
Consulting Arborist	0.8	0.2		1.0
GIS Technician	0.7			0.7
Urban Forestry Intern			1.0	1.0
TOTAL	2.5	0.2	1.0	3.7

Accountability – Effort Allocation – 3.7 FTE

1.2 FTEs' billable hours support

- 2.5 FTE, all direct program expenses, and UBT
- Nets over \$30,000 in operating support

Effort Allocation	% of Total	3.7 FTE	Total	HOURS			
				Arborist	Arborist	Tech.	Intern
PTO & Arboretum activities	27%	1.0	1,815	480	480	370	485
Professional Development	16%	0.6	1,045	90	180	45	730
Education programs	9%	0.3	606	180	370	40	16
Pro Bono outreach	10%	0.4	683	180	180	98	225
Consulting, administration	7%	0.2	450	223	122	70	36
Consulting, billable	31%	1.2	2,109	668	488	626	328
Total Hours, Total FTE	100%	3.7	6,708	1,820	1,820	1,248	1,820

Urban Forestry Program - Who we are



3.7
FTE's



Jason
Lubar

Trish
Kemper

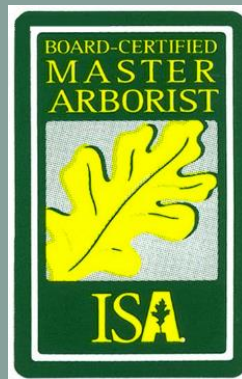
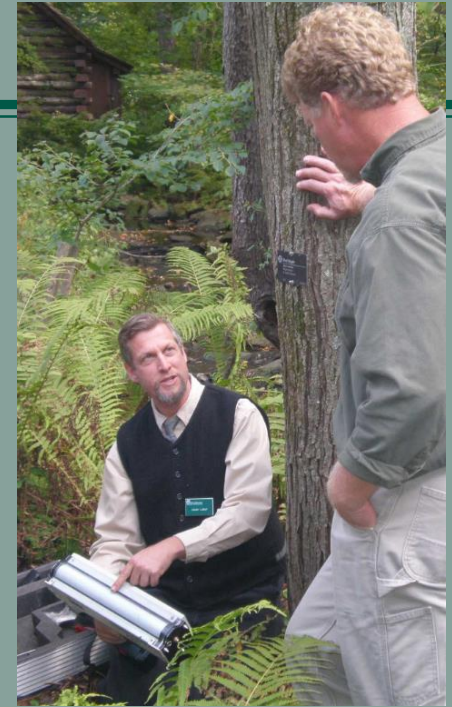
Bob
Wells

Amanda
Wood



Jason Lubar

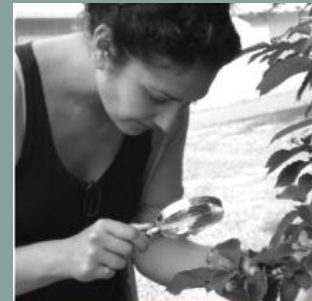
- Long tenure at Morris Arboretum
- ISA Board Certified Master Arborist
- Board Member/VP, PennDel ISA;
- Executive Committee & Treasurer: PA UCFC
- Instructor: TreeTender Teacher, professional Conferences, and Universities



The Morris Arboretum's Urban Forestry Consultants



- Tree & Natural Resource Inventory/assessment
- GIS/CAD Mapping
- Workshops, Courses, Training
- Cost Estimation and Planning
- Soil Testing and Tree Diagnostics
- Specification/Ordinance Writing/Development
- Expert Witness



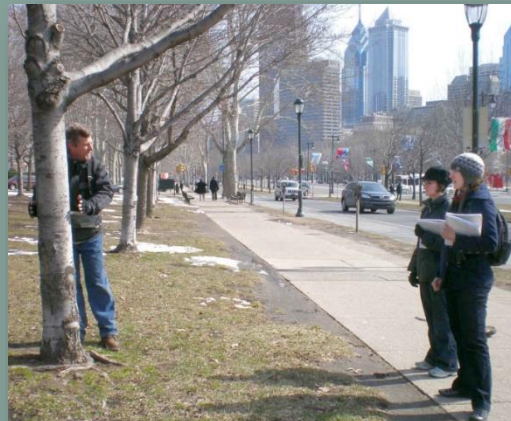
How does the Arboretum benefit?

- Provide fiscal support to the Department
- Promote Morris Arboretum's name and mission to a diverse audience
- Provide support to other Arboretum programs:
 - Provide public and professional classes and workshops
 - Answer public's questions
 - Grounds consulting and advice



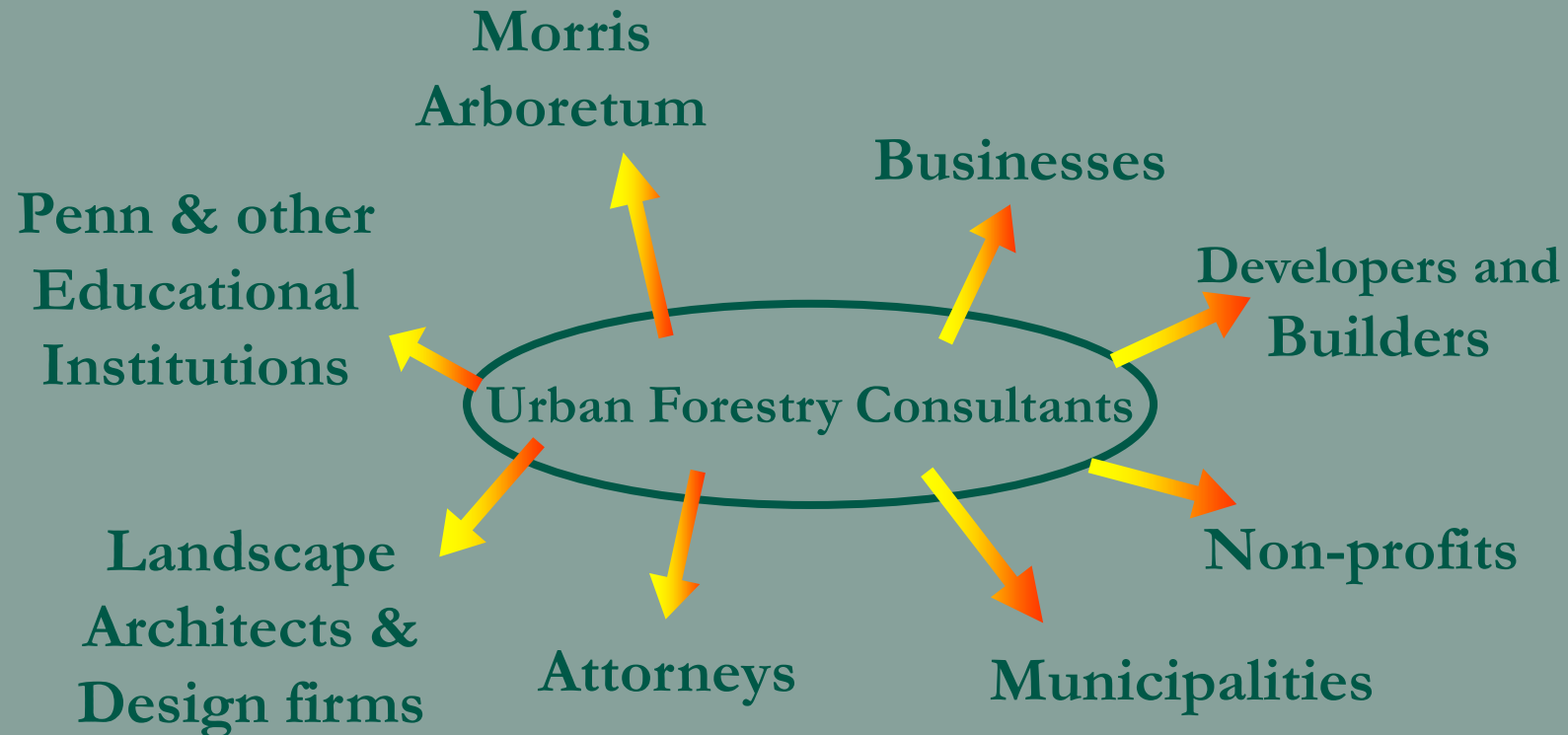
Why clients choose us

- Recognized experts in the field
- Array of services
- Impartial, unbiased party
- Name recognition
- Provided information works in most systems
- Help support a non-profit



Our Clients

...no individuals unless ...



Our Services: Tree Inventory & Assessment

Tree Number	Tree Code	Label	Loc o	#1 CBH	#2 CBH	#3 CBH	#4 CBH	#5 CBH	Tree Ht	Sprd	Life Exp	Re	dr str	dr sp	Pr G	Sp Pr	Gd Rt	C	Mt Sc dp	Fm	Pests
15	o15b			11	10	16	14	14	15	17	<15						x				
68	m68*		m	17					20	16	<5		2	ld	a1	cl, cd	x		dp	p	b
63	m63b		m	5	4	4	4	4	10	7	<5				b2	d					
82	m82c	un	m	35					38	28	<5	cr									
30	k30a		k	11	10	10	10	8	12	13	<5		1	ls					dp		
46	k46b		k	15	17	17			30	19	<5								dp, s	f	hes, hwa
123	ent110d	d, 123	ent	33					28	20	<5				a1	d	re		dp, c		
68	hc68a		hc	10					20	11	<5				a2	d			dp		tar spot, bleed canker
68	hc89a	68*	hc	11					15	12	<5	cr									bleeding canker



Our Services: Tree Mapping

Tree Number	Tree Code	Label	Loc	#1 CBH	#2 CBH	#3 CBH	#4 CBH	#5 CBH	Tree Ht	Spnd	Life Exp	Re	dr str	dr sp	Pr G	Sp Pr
15	o15b		o	11	10	16	14	14	15	17	<15					
68	m68*		m	17					20	16	<5		2	ld	a1	cl, c
63	m63b		m	5	4	4	4	4	10	7	<5				b2	d
82	m82c	un	m	35					38	28	<5	cr				
30	k30a		k	11	10	10	10	8	12	13	<5		1	ls		
46	k46b		k	15	17	17			30	19	<5					
123	ent110d	d, 123	ent	33					28	20	<5				a1	d re
68	hc68a		hc	10					20	11	<5				a2	d
68	hc89a	68*	hc	11					15	12	<5	cr				



Our Services: Tree and Risk Management Plans and Reports



Mt. CUBA
CENTER INC.

Tree Risk Management Plan



TREE MANAGEMENT PLAN FOR MARQUAND PARK, PRINCETON NJ



PennVet

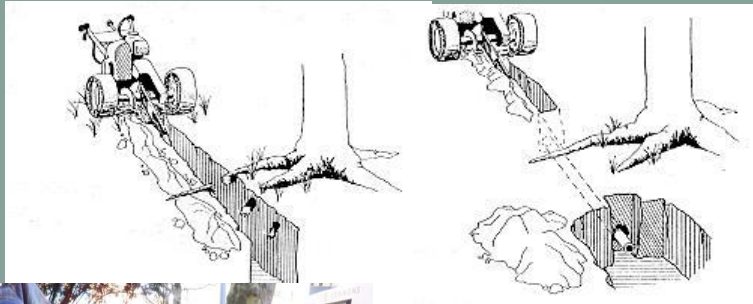
New Bolton Center Meadow Management Plan



Morris Arboretum
UNIVERSITY of PENNSYLVANIA



Our Services: Preserving Trees during Construction



Our Services: Cost Estimation

Fifteen Year Tree-Related Budget for Kut										
					Phase 1					
	actual	actual	actual	actual	YTD					
ONGOING MAINTENANCE	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY
Pruning (structural, maintenance, new hazards)							15,000	15,450	15,914	
Removal/stump grinding							8,500	8,755	9,018	
Cabling									1,000	
Lightning protection							3,000	2,000	500	
Tree ring maintenance							1,300	1,339	1,379	
Tree Inspections/Assessment					7,200					
IPM Program for Heritage and Legacy Trees							3,000	3,090	3,183	
Tree Planting							42,000	43,260	44,558	
Arbor Day Program							600	618	637	
Contingencies							2,000	2,060	2,122	
Software updates								1,000		
Arboretum Supplies						1,000	1,000	1,030	1,061	
Training & Professional Development					1,500	1,545	1,591	1,639	1,688	
Equipment/Chemicals					4,000	1,100	1,133	1,167	1,202	
Soil invigoration/decompaction						2,500	2,575	2,652	2,732	
Emerald Ash Borer treatments										
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ 12,700	\$ 6,145	\$ 81,699	\$ 84,060	\$ 84,992	\$
DEFERRED MAINTENANCE	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY
Pruning (Hazard)		40,932	7,565	22,410	13,000	31,845				
Removal/stump grinding					22,580	8,500				
Cabling					2,000					
Lightning protection										
Tree Inspections/Assessment	6,300	6,120	16,000							
Tree Planting			10,475	17,187	10,000	8,000				
Tree ring maintenance			900	1,200	1,300	1,300				
Contingencies					2,500	2,000				
Software updates			5,200							
Arboretum Supplies										
Training & Professional Development				1,100						
Equipment/Chemicals	1,000	1,000	1,000	1,000						
Soil invigoration/decompaction										
Emerald Ash Borer treatments										
TOTAL	\$ 7,300	\$ 48,052	\$ 41,140	\$ 42,897	\$ 51,380	\$ 51,645	\$ -	\$ -	\$ -	\$

- Pruning
- Removals
- Cabling
- Transplanting
- Planting
- PHC/IPM
- Others as needed

Our Services: Write Ordinances - Policies

Draft Changes-- Ordinance Number 108

Article I. Title, Purpose, and Scope

Section 1.01 Title

Ordinance 108 shall be known as the Upper Merion Township Shade Tree Ordinance.

[HISTORY: Enacted pursuant to the Act of May 1, 1933, as amended August 11, 1959,

P.L. 664 S1, as revised *Month, Date*, 2002, P.L. *Number Section*]

Section 1.02 Purpose

To pr
Uppe
aesth



Philadelphia Street Tree Inspection and Hazard Remediation Policy

1. Introduction

1.1. Background

1.2. Title

1.3. Purpose

- 1.3.1. Primary objectives: Public safety, Comprehensive tree management program, Inform decision-makers about the condition of the street tree resource.
- 1.3.2. It is the policy of Philadelphia's Parks and Recreation Department (PPR) to maintain the safety of its citizens and property from potentially hazardous street trees. PPR will strive to identify and eliminate egregious street tree hazards in the timeliest manner possible. When budgetary constraints limit the ability to eliminate all street tree hazards, priority shall be placed on trees deemed to be of a high risk. PPR will utilize an arboricultural industry standard rating system to determine the hazard potential of a street tree. PPR will administer this policy, and shall have final judgment in all matters concerning hazardous



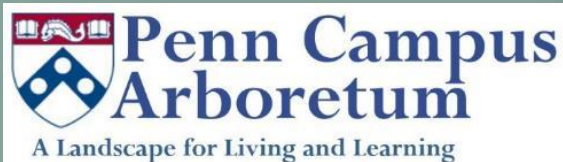
Tree Care, Replacement, Protection, and Inspection Policy



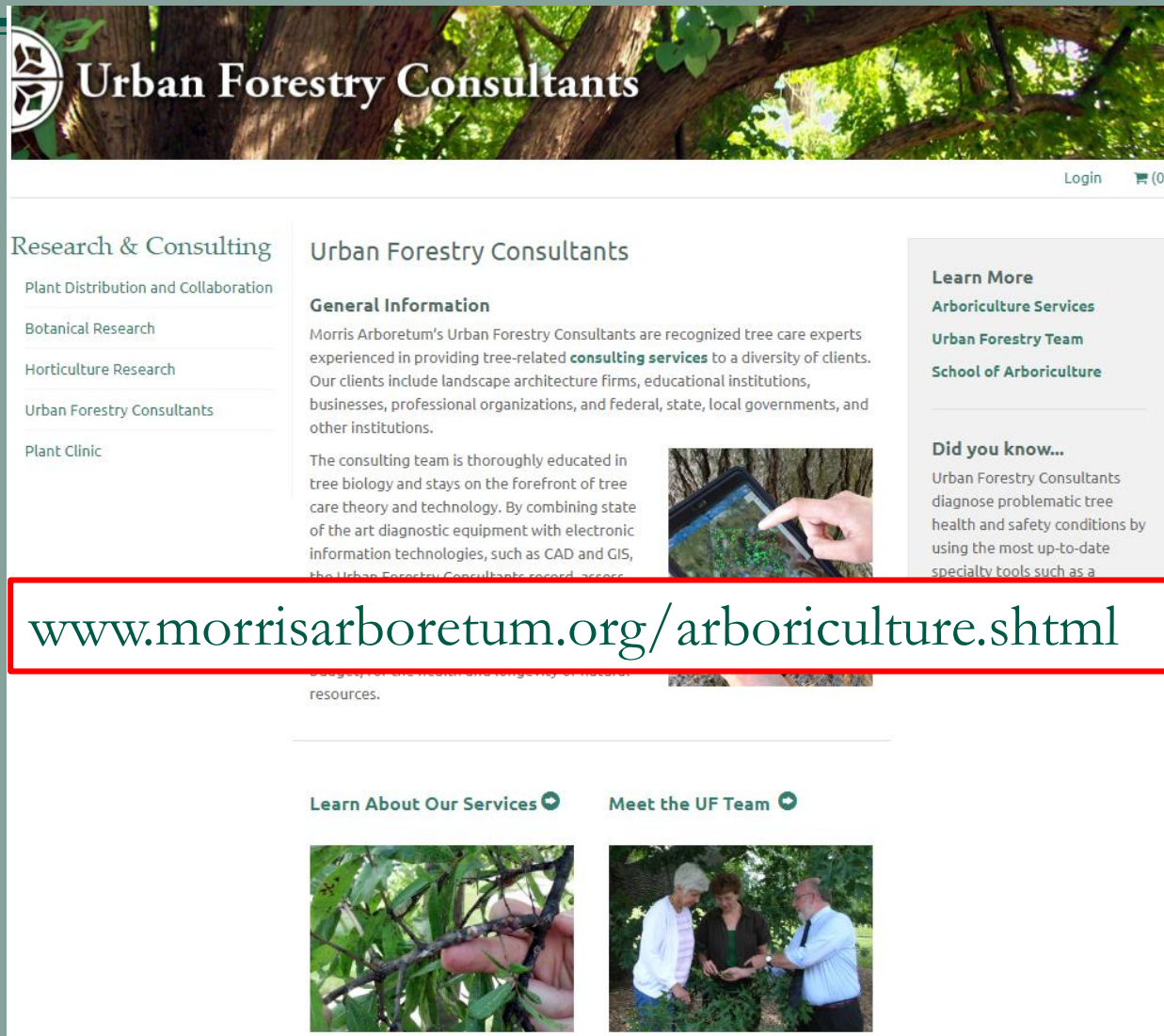
June 2018

Other Services:

- Expert witness
- Provide budgets and cost estimation for arboricultural work
- Pro bono outreach
- Arboretum creation
- Presentations, educations & training
- Natural Resource management plans
- Answer public's tree-related questions



Marketing?



Urban Forestry Consultants - The Future

- Transition P/T staff to F/T
- Outreach to a diverse audience, e.g. LA's and Engineers (Structural/PE's)
- Advocacy – be the Lorax – policy, blogs, ordinances
- CEU crossovers, **remote** and online learning
- Expand technology, GIS, CAD, drones



Urban Forestry Program Goals

- Increase public safety and wellbeing
- Better tree management and care
- More environmental, social, and economic benefits to all in our region
- Disseminate tree care knowledge
- Provide unbiased arboricultural consulting services and technical assistance

UNLESS someone like you cares a whole awful lot, trees will not survive during construction. They're not.



Questions? Discussion? Comments?

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