Newton Tree Ordinance:

Updates to better protect public health & the environment

Newton City Council Programs & Services Committee September 21, 2022

Agenda

- Thank you Marc Welch,
 Marie Lawlor & Jen Wilson!
 Mtg since Sept 2021
- Moratorium
- Why is ordinance is needed
- Current vs Proposal
- Photos
- FAQ
- Discussion



Temporary Moratorium: Why?

Why: To prevent a rush on tree removals to beat a stronger ordinance

- Have already seen examples since August 23 Boston Globe article
- Moratorium would give the City Council time to debate & deliberate without risking wholesale tree destruction in the meantime.
- Cambridge instituted a moratorium prior to their successful tree ordinance passage in June 2021.
- Newton's Urban Tree Commission voted to endorse the temporary moratorium (Sept. 16, 2022).

City Council Passes Legislation Protecting Trees in Cambridge



Cambridge Mayor Mark C. McGovern listens to comments from the audience regarding the proposed tree moratorium. The city council voted for the moratorium Monday evening at City Hall in Central Square. By Berndan J. Chapuis

By Declan J. Knieriem, Crimson Staff Writer

Cambridge City Council passed an amendment that will impose a one year moratorium on cutting down trees in the city as part of an ongoing conservation effort at its weekly meeting Monday.

Temporary Moratorium: what it would do

a) Effective [date], no tree having a diameter of six (6) inches or greater shall be removed on land identified in Sec. 21-82(a) nor on any exempt lot for a period of one year unless sooner repealed or amended by the City Council.

"land identified in Sec. 21-82(a)" means land not owned by local, state or federal government; i.e. is privately owned



Definition of "Exempt lot" under current tree ordinance

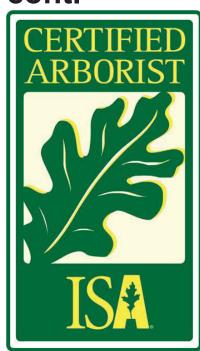
Exempt lot: A lot which meets all of the following criteria:

- (1) The lot is occupied and used primarily as a dwelling for up to four families at the time any protected tree(s) are removed.
- (2) The lot owner at the time of protected tree removal has owned the lot continuously for a minimum of ninety (90) days prior to the removal of any protected tree(s).
- (3) The existing structure on the lot remains occupied as a dwelling with a person or persons living in it for eighteen consecutive months from the date any protected tree(s) are removed.
- (4) The lot remains owned by the same person for eighteen consecutive months from the date any protected tree(s) are removed.

Temporary Moratorium, cont.

This limitation shall not apply to tree removal permits issued prior to its effective date, nor to removal of any tree determined by the tree warden to be dead, diseased, in danger of falling, dangerously close to existing structures, causing disruption of public utility service, causing drainage problems or passage problems upon rights-of-way, or posing a threat to pedestrian or vehicular safety.

Documentation shall be provided by a Certified Arborist utilizing industry-approved Risk Tree Evaluation method along with any additional forms or documentation required by the Tree Warden. The procedures of Sec. 21-84 shall apply to emergency removal of hazardous trees.



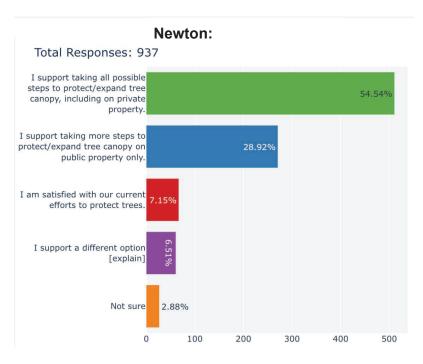
Temporary Moratorium, cont.

- (b) Regulations for projects with special permits remain in effect.
- (c) Any violation of the provisions of Sec. 21-91
 (a) shall be subject to the penalties set forth in Sec. 21-89 and shall be subject to the provisions of Sec. 21-85 and Sec. 21-86.

Sec. 21-85 = Tree replacement rules Sec. 21-86 = Tree replacement fund

Sec. 21-89 = Penalties

2021: Support for expanding tree protections



What will continue, without City Council action





BEFORE - August 28

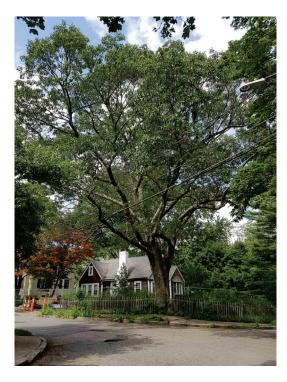
AFTER - September 4

56 Upland Rd, Waban



56 Upland Rd, Waban: 5 red oaks, 2 white pines, 1 hemlock, total over 900 years of age, cut in one day

40 Fernwood Rd, West Newton, July + Aug 2017





April 2022 webinar: "Trees as a Public Good"



State Senator Cynthia Creem:

 Filed "Municipal Reforestation Act" - to achieve 60% tree cover in every Mass city + town

"Trees are a vital public good. Trees aren't simply an aesthetic enhancement, but they are a critical piece of urban infrastructure... Trees help us deal with far more than just heat. They sequester carbon, filter the air, reduce energy bills, provide habitat for wildlife, remediate soil, absorb stormwater runoff, and promote better mental health."



 ${\it https://www.youtube.com/watch?v=MWUNFXxSK_w}$

TODAY: Mayor Wu major tree announcement



For Immediate Release: Wednesday, September 21, 2022 Contact: Press Office, 617-635-4461



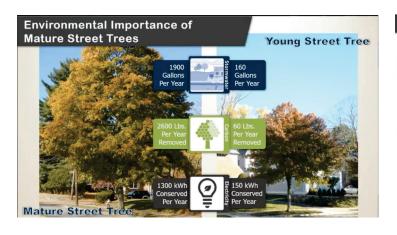
City of Boston Mayor Michelle Wu

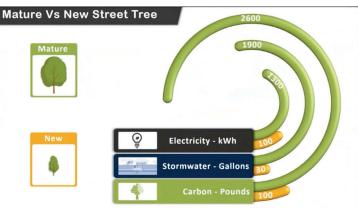
MAYOR WU ANNOUNCES NEW FORESTRY DIVISION AND URBAN FOREST PLAN TO ENHANCE AND PROTECT CITY'S TREE CANOPY

Arnold Arboretum of Harvard University to donate 10 dawn redwood trees to City to be planted across the City

BOSTON - Wednesday, September 21, 2022 - Today, Mayor Michelle Wu announced efforts to bolster the City of Boston's tree canopy to enhance livability and public health throughout Boston's neighborhoods. As part of today's announcement, Mayor Wu is launching a new Forestry Division within the Boston

April 2022 webinar: "Trees as a Public Good"





"Our average mature [30+ yrs] tree provides exponentially more benefit than our young trees. As a tree grows its benefits increase dramatically.... Our existing mature trees are critical to the environment. Efforts should be made to prolong mature street trees by regularly caring for them." - *Marc Welch, Newton City Forester*

Tree Ordinance update: Why necessary?

Newton is Losing Tree Canopy

Street Trees

- Over the last 50 years, Newton lost 50% of its street tree canopy
- Over 70% remaining street trees "fair" or "poor" condition

Canopy Coverage in Newton

- 48% of total land (2018 report)
 - 55.5% of tree canopy is on residential properties
- 20% loss of forested land in last 25 years

Why Tree Loss?

- Disease
- Gas leaks (80% of Newton's gas mains are leak prone)
- Storm damage
- Removal for development.

Data is not kept on loss of private trees, but private trees are subject to the same conditions as public trees.

Source: Newton Open Space and Recreation Plan. 2020-2027 (2020), pp. 59-60, 72; Newton Climate Vulnerability Assessment and Adaptation and Resiliency Action Plan (2018), pp. 29-30, 51





Newton's Open Space and Recreation Plan 2020-2027











Prepared per the requirements of the Mass. Exec. Office of Energy and Environmental Affair

Newton Climate Plan: Tree loss a "key concern"

"One key concern in Newton is the continued loss of trees to development and the loss of street trees to disease and gas leaks. Trees play a critical role in mitigating climate change and cooling local areas. Compromised water quality, extremes of water quantity, and resulting impacts on aquatic life are also of concern."

City of Newton
Climate Vulnerability Assessment and
Adaptation and Resiliency Action Plan

First Edition, April 2018



Prepared for City of Newton 1000 Commonwealth Avenue Newton, Massachusetts 02459 www.newtonma.gov Ruthanne Fuller, Mayor



Prepared by Metropolitan Area Planning Council 60 Temple Place, 6th Floor Boston, Massachusetts 02111 www.mape.org

Inequity in Tree Canopy Distribution

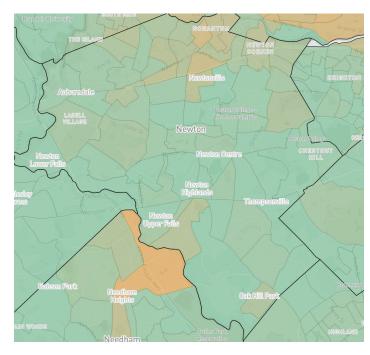
- Nonantum: 53

- Newtonville: 59 - 71

- Newton Upper Falls: 76 - 87

- Newton Centre: 91

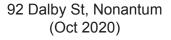
- Waban: 100



Source: https://www.treeequityscore.org/map/#13/42.34778/-71.20069

Inequity in tree canopy distribution, cont.



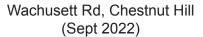




56 Upland Rd, Waban (July 2022)

Inequity in tree canopy distribution, cont.







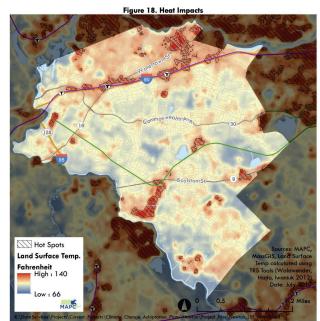
Upham St, West Newton (Sept 2022)

Trees cool the air

- Paved vs natural cover: 1–7°F higher in daytime, 2–5°F higher at night.
- Increased risk of heat-related illnesses.
- More trees = more shade = reduced energy consumption
 - Only 3 trees can save \$100–\$250 in energy costs annually!

Heat is a business issue too:

- 40% of Newton businesses are in "hot spots"
- ~1800 Newton employees work outside



Land Surface Temperature on July 13th, 2016, when high temperature at Logan Airport wa 92 degrees Fahrenheit.

Trees clean the air, reduce GHG emissions

Estimates of annual air pollution removal by Newton's total tree canopy:

- Carbon monoxide = 2,848 lbs.
- Nitrogen dioxide = 73,467 lbs.
- Ozone = 208,445 lbs.
- Sulfur dioxide = 15.158 lbs.
- Particulate matter = 36,881 lbs.

This cleaning function is especially important for those living within 500 feet of a highway (Mass Pike, Rte 9, 128)

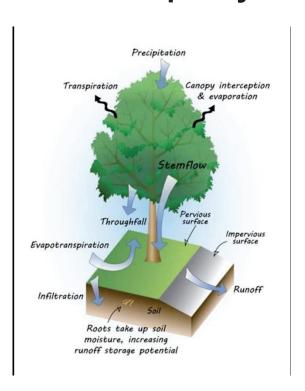
Source: Newton Climate Vulnerability Assessment and Adaptation and Resiliency Action Plan, pp. 26, 29



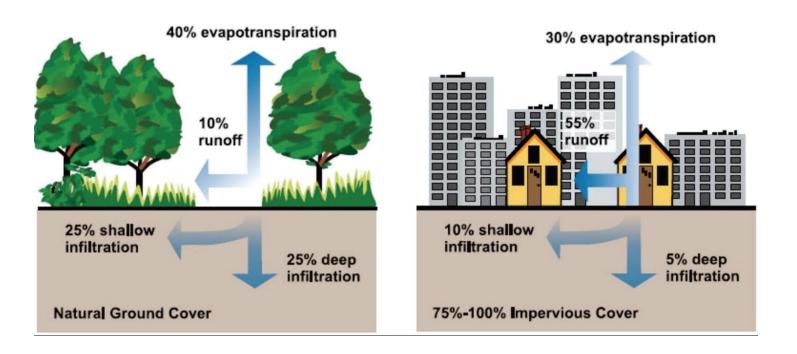
https://onetreeplanted.org/blogs/stories/how-trees-clean-air

Trees absorb stormwater, improve water quality

- Trees absorb water through their roots, and the water is used to nourish and build the tree's structure. Water that doesn't stay in the tree is released into the air through the leaves in a process known as evapotranspiration.
- 90M gallons of stormwater runoff per year are avoided due to Newton's tree canopy!
- Climate change means more intense storms that our stormwater pipes cannot handle – leading to more flooding



Natural cover vs. built environment

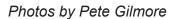


Trees provide habitat for wildlife













Trees buffer sound





September 2017

September 2019

Meg Ward, 957 Washington St, Newtonville:

I live directly across the street from the Mass Pike. There has always been a wall of foliage along the pike. In summer of 2018, DOT came into our neighborhoods and literally cut away ALL the trees and greenery. In a matter of hours, we were left with a barren view of a highway. I cannot underscore enough how profound the negative impact on our residence and neighborhood. The noise from traffic has become so amplified that you can't hold a conversation outside the house without raising your voice to near shouting. You could immediately feel the increase in heat as it radiated off the asphalt from the Pike. Our house felt like it was baking in an oven and my window air conditioner set on High was no longer sufficient for cooling my entire condo unit. Lastly, the air quality – which I didn't think could possibly get worse, did. Soot will accumulate on surfaces in a matter of hours, not days. I had to buy a second air purifier because having just one could no longer clean the air in my 586 square foot condo which is important as I suffer from asthma.

Trees provide mental health benefits





The health benefits of trees

A growing body of research shows that regularly spending time around trees provides a wide range of human health benefits, from lowering stress to improving cognition to boosting longevity, according to experts.

In a September 8, 2021, interview on WBUR's Radio Boston, Peter James, assistant professor in Harvard T.H. Chan School of Public Health's Department of Environmental Health, said that trees' effects on us "translate into long-term changes in the incidence of depression, anxiety, cognitive decline, and chronic diseases including cardiovascular disease and cancer."

Why can't we just provide replacement trees?



Marc Welch, "Environmental Importance of Mature Street Trees," webinar presentation, April 21, 2022

- "Mature" tree = at least 30 yrs old
- Cannot plant 30:1 ratio of replacement trees on most lots
- Lost eco- and health services compound Cut mature tree's services would have grown during those lost decades

We don't have 20 - 30 years!

 Time left to limit global warming to 1.5°C = 6 years, 303 days https://climateclock.world/science

How we measure trees: DBH & caliper inches



Caliper inches – for young trees Measure diameter 6" above ground



Diameter at Breast Height (DBH)

Measure diameter 4 ft 6 inches above ground (diameter tape does the math), or use a regular tape measure & divide by Pi (3.14159).

New tree



2" caliper

Mature tree



17" DBH

One new tree is like one branch of a mature tree!

2-inch young tree compared to 17-inch (average DBH of street tree)





Compare + Contrast of City Council Vs. Other Proposals

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge, MA
				Ordinance (2021)
Which Trees Are	Only trees 8" DBH or	Legacy Trees (55" DBH) or larger,	All trees 6" DBH or larger on all	Applies to trees 6"
Protected?	larger that are not on an	on all lots	lots	DBH or greater on
	exempt lot			all lots except
		Protected Trees 6" DBH and larger	See Sec. 21-81, Protected Tree;	projects of the
		that are on 3-family or larger	Sec. 21-82	Affordable
		residential lots and commercial lots		Housing Trust
		that do not require a special permit		
		Protected Trees 6" DBH and larger		
		that are on 1-2 family lots ONLY IF		
		construction is planned within 24		
		months		

59 inch DBHProtected in both proposals





47 inch DBH

Protected, but not for 1-2 family in mayor's proposal





Rules around exemptions

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge, MA Ordinance (2021)
Are there exemptions allowing unregulated cutting of Protected Trees?	Yes A "certificate of exemption" issued if owner occupancy requirements met	Yes An "exemption permit" issued for cutting all trees under 55" (4 feet 7 inches) DBH on 1-2 family residential lots if no construction is planned for 24 months	No	Yes Affordable Housing Projects are exempt
What Conditions Remove Properties from Tree Regulation?	If own & occupy 18 months before & after (or 90 days before & 21 months after) cutting trees	If own 1-2 family lots, no construction planned for 24 months after cutting trees, and cutting trees <i>less than</i> 55" DBH, ie Legacy Trees	All property owners in Newton must apply for a permit to cut trees	If building 100% affordable housing

Protections during construction

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge, MA Ordinance (2021)
What	Limited	Very good	Very good	Unclear
protections are				
there for trees	Protects area only	Creates a Tree Save Area that	Creates a Tree Save Area that	Creates a Tree
to remain during	under the dripline of	protects area under dripline or	protects area under dripline or	Save Area
construction?	trees; allows damage to roots extending beyond dripline that can kill trees	within radius of 1.5 ft for every inch of DBH, whichever is greater.	within radius of 1.5 ft for every inch of DBH, whichever is greater.	(dimensions not specified in ordinance)

"Protected Root Zone"

How Close Is Too Close? Defining The Protected Root Zone (PRZ)

The tree's Protected Root Zone (PRZ) can be identified as follows:

- Measure the diameter (width) of the trunk at chest height, to the nearest inch.
 To do this, either wrap a tape measure around the trunk and divide that number by 3 or hold a yard stick up to the trunk and approximate the distance.
- Multiply that number by 1.5 for mature or stressed trees or by 1.0 for young, healthy trees. Express the result in feet.
- 3. Measure that distance from the trunk of the tree. The area within this radius is the Protected Root Zone (PRZ).



PRZ radius (ft) = 1.0 or 1.5 × trunk diameter (in)

^{*}Adapted, with permission, from: Johnson, G. 1999. Protecting trees from construction damage: a homeowner's guide. St. Paul, MN: University of Minnesota Extension. 21 p.

Under the current ordinance, 'preserved' trees may not survive damage



432 Dedham St, Oak Hill

- 35" beech nominally preserved but raised grade over much of root zone deprives roots of oxygen
- Excavation for wall was within critical root zone

Protections for abutters' trees

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge, MA
				Ordinance (2021)
Are there	No	Yes	Yes	Unclear
protections for		Tree Save Area applies to trees on	Tree Save Area applies to trees	
abutters' trees?		lots abutting construction	on lots abutting construction	

Examples of abutter tree damage



224 Melrose, Auburndaletree roots damaged by10 Elberta Terr construction



30 Woodhaven Rd (left), 56 Upland Rd (rt), Waban, (where developer plans to raise grade 2 ft)

Notice to abutters required?

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge MA Ordinance (2021)
Is notice to abutters about tree cutting required?	No	No	Yes, for all permits Requires notifying abutters of tree permit applications and posting tree permits in public view on site.	Yes, for <u>Large</u> projects

Can trees be removed on private property?

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge MA Ordinance (2021)
Can trees be cut or removed on	Yes	Yes	Yes	Yes
private property, even if they are not dead or dangerous to people, structures, roadways, or utility projects?	On exempt lots: any and all trees without replacement, fee, or mitigation payment On non-exempt lots: any and all trees with replacement or payment of fee in lieu of replacement for cutting trees that are healthy and not dangerous	With exemption permit: any and all trees less than 55" DBH without replacement, fee, or mitigation payment With tree permit: any and all trees with permit fee and with replacement or payment in lieu of replacement for cutting trees that are healthy and not dangerous	With tree permit: any and all trees but only with permit fee, environmental mitigation payment, and replacement (or higher mitigation payment in lieu of replacement) for cutting trees that are healthy and not dangerous	With tree permit: any and all trees but only with a mitigation payment and/or replacement for cutting trees that are healthy and not dangerous Large (special permit) lots always
				pay and pay more than regular lots

Replacement requirements

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge MA (2021)
What are the	On exempt lots: none	With exemption permit: none	With tree permit: replacement (or	With tree permit:
replacement			higher mitigation payment in lieu	replacement (or
requirements	On non-exempt lots:	With tree permit: either	of replacement)	mitigation payment in
for cutting	inch-for-inch	replacement or payment in lieu		lieu of replacement)
health, non-	replacement or	of replacement	Replacement ratio varies by DBH	
dangerous	payment in lieu of		of cut trees	Replacement ratio
trees?	replacement	Replacement ratio varies by DBH	- for 6-24" (Protected), 1 to 1	varies by DBH of cut
	79	of cut trees	- for 25-39" (Significant), 1.5 to 1	trees
		- for 6-24" (Protected), 1 to 1	- for 40-54" (Landmark), 2 to 1	- 6-29", 1 to 1
		- for 25-39" (Significant), 1.5 to	- for <u>55"+</u> (Legacy), 3 to 1	- 30" +, 1.5 to 1
		1		
		- for 40-54" (Landmark), 2 to 1		
		- for <u>55"+</u> (Legacy), 3 to 1		

Costs for removing healthy, non-dangerous trees

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge MA (2021)
What are the	On exempt lots: none	With exemption permit: none	With tree permit: application fee	With tree permit:
costs to			and environmental mitigation	permit fee and
property	On non-exempt lots:	With tree permit: application fee	payment based on costs to City	sometimes mitigation
owners for	application fee, permit	and payment based on cost of	from tree loss: damages to public	payment
cutting healthy,	fee, and payment based	buying, installing & maintaining	health, loss of climate mitigation	
non-dangerous	on cost of buying &	new trees for five years (where	services, increased energy usage,	
trees?	installing new trees	is unspecified)	increased drainage and	Large projects must
	(where is unspecified)		infrastructure costs	pay at least \$5,000

Replacement tree protections; who decides appeals; stop-work orders

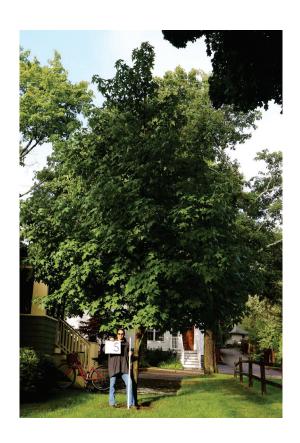
	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge MA (2021)
Are	Required to survive 18	Considered a Significant Tree	Considered a Significant Tree and	Protected for 10 years
replacement	months	(only relevant if property owner	protected for 10 years (if owner	(if owner applies to
trees given		applies to cut it; no longer	applies to cut, requires mitigation	cut, requires
special		required to survive any specified	payment without reduction and	mitigation payment
protection?		time)	higher replacement levels)	without reduction)
Who decides	Appeals go to mayor,	Appeals go to mayor, who shall	Appeals go to mayor and all	None mentioned
appeals of tree	who must notify the	seek input and consult with the	councilors of the ward, who jointly	
permit decisions	councilors from the	Ward Councilor (not at-large	decide	
and on what	ward of appeals	councilors from the ward)		
basis?	30000000	And the state of t	Decisions to be guided by	
	No guidance on basis	No guidance on basis for	reasonable safety and tree	
	for deciding appeals	deciding appeals	wellbeing provisions	
Can violations	Yes	Yes	Yes	Yes
result in an ISD	Tree warden can			
stop-work	request that the agency	Tree warden can request that	Tree warden can direct ISD to	City arborist can direct
order?	that approved external	the agency that approved	issue a stop work order	ISD to issue a stop
	work stop external	external work stop external work		work order
	work			

Examples of DBH

What size trees are protected now? What size trees will we protect?

5 inch DBHNo protection, now or proposed.





7 inch DBHNewly protected, but not for 1-2 family in mayor's proposal





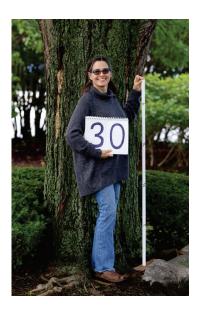
14 inch DBHProtected, but not for 1-2 family in mayor's proposal





30 inch DBH

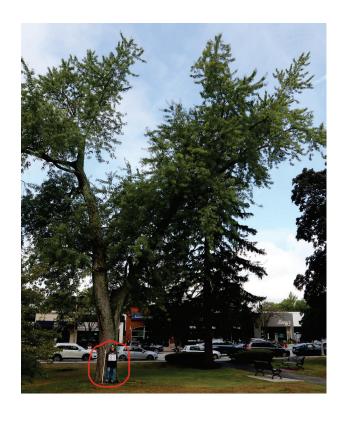
Protected, but not for 1-2 family mayor's proposal





35 inch DBHProtected, but not for 1-2 family in Administration proposal





42 inch DBHProtected, but not for 1-2 family in Administration proposal





47 inch DBHProtected, but not for 1-2 family in mayor's proposal





FAQ

Will the moratorium negatively impact affordable housing?

No, because we are not proposing any change for special permit or 40B projects, which is how all affordable housing projects are considered. In addition the large high-density projects that provide the most housing units do not seem to be a major cause of tree loss, because they tend to be large commercial sites like Northland, Trio, and Riverside that did not have many trees to begin with; in fact they often result in more trees being planted.

What if I want to expand my house and there is a healthy tree in the way?

You can still apply to remove it; you will have to pay a higher fee than before to better reflect the lost benefits from that tree.

FAQ, cont.

What about Norway maples?

Existing tree ordinances have never distinguished between species or treated invasive species differently, because aside from being invasive, they're doing the climate work that non-invasive trees do in terms of carbon sequestration, providing shade, absorbing storm water, cooling the air, filtering particulate pollution and so on. Sometimes the only screening for privacy or from sound that people have is Norway maples.

Would this ordinance strengthen protections for tree damage from gas leaks?

Gas utilities are regulated by the Mass. Dept of Public Utilities, not the City. Several years ago the City declined to join other municipalities in a lawsuit against National Grid, but negotiated a settlement for approximately 10% of damages.

FAQ, cont.

Will the moratorium require additional staffing?

The only applications to remove trees would be related to dead or dangerous trees, and documentation would have to be provided by a certified arborist, minimizing work for City staff.

Discussion





17 Regina Rd, Auburndale

2014 demo, and current 2022.

Compare and Contrast of Proposed Changes to the Newton Tree Ordinance (Chap 21, Art. III, Div. 3) September 12, 2022

	Current Ordinance	Administration Docket Item	City Council Docket Item	Cambridge, MA Ordinance (2021)
Which Trees Are	Only trees 8" DBH or	Legacy Trees, which are 4 feet, 7	All trees 6" DBH or larger on all	Applies to trees 6"
Protected?	larger that are not on an	inches in diameter at breast height	lots	DBH or greater on
	exempt lot (most 1-4	(55" DBH) or larger, on all lots		all lots except
	family lots are exempt,		See Sec. 21-81, Protected Tree;	projects of the
	depending on	Protected Trees 6" DBH and larger	Sec. 21-82	Affordable
	occupancy) and that do	that are on 3-family or larger		Housing Trust
	not require a special	residential lots and commercial lots		
	permit	that do not require a special permit		See Sec. 8.66.030,
				Significant Tree;
	See Sec. 21-81,	Protected Trees 6" DBH and larger		Sec. 8.66.040
	Protected Tree;	that are on 1-2 family lots ONLY IF		
	Sec. 21-82; Sec. 21-90b	construction is planned within 24		
		months		
		No trees on lots with special		
		permits are protected.		
		See Sec. 21-81, Protected Tree;		
		Sec. 21-82; Sec. 21-90b		
Are there	Yes	Yes	No	Yes
exemptions	A "certificate of	An "exemption permit" issued for		
allowing	exemption" issued if	cutting all trees under 55" (4 feet 7	See Sec. 21-82a	Affordable
unregulated	owner occupancy	inches) DBH on 1-2 family		Housing Projects
cutting of	requirements met	residential lots if no construction is		are exempt
Protected		planned for 24 months		
Trees?	See Sec. 21-82c			See Sec. 8.66.040
		See Sec. 21-82a		

What Conditions	If own & occupy 18	If own 1-2 family lots, no	Nothing	If building 100%
Remove	months before & after	construction planned for 24		affordable housing
Properties from	(or 90 days before & 21	months after cutting trees, and	All property owners in Newton	
Tree	months after) cutting	cutting trees less than 4 feet 7	must apply for a permit to cut	
Regulation?	trees	inches in diameter at breast height	trees	Sec. 8.66.040
		(55" DBH, so-called Legacy Trees)		
	If require a special		Sec. 21-82a; Sec. 21-90b	
	permit for construction	If require a special permit for		
		construction		
	Sec. 21-82c; Sec. 21-90b			
		Sec. 21-82a; Sec. 21-90b		
What	Limited	Very good	Very good	Unclear
protections are				
there for trees	Protects area only	Creates a Tree Save Area that	Creates a Tree Save Area that	Creates a Tree
to remain during	under the dripline of	protects area under dripline or	protects area under dripline or	Save Area
construction?	trees; allows damage to	within radius of 1.5 ft for every	within radius of 1.5 ft for every	(dimensions not
	roots extending beyond	inch of DBH, whichever is greater.	inch of DBH, whichever is	specified in
	dripline that can kill		greater.	ordinance)
	trees	Sec. 21-81		
			Sec. 21-81	Sec. 8.66.030
	Sec. 21-83e			
Are there	No	Yes	Yes	Unclear
protections for				
abutters' trees?		Tree Save Area applies to trees on	Tree Save Area applies to trees	
		lots abutting construction	on lots abutting construction	
		Sec. 21-81	Sec. 21-81	

Can trees be cut	Yes	Yes	Yes	Yes
or removed on				
private property,	On exempt lots: any and	With exemption permit: any and all	With tree permit: any and all	With tree permit:
even if they are	all trees without	trees less than 4 feet 7 inches (55")	trees but <i>only with</i> permit fee,	any and all trees
not dead or	replacement, fee, or	DBH without replacement, fee, or	environmental mitigation	but only with a
dangerous to	mitigation payment	mitigation payment	payment, and replacement (or	mitigation payment
people,			higher mitigation payment in lieu	and/or
structures,	On non-exempt lots:	With tree permit: any and all trees	of replacement) for cutting trees	replacement for
roadways, or	any and all trees with	with permit fee and with	that are healthy and not	cutting trees that
utility projects?	replacement or	replacement or payment in lieu of	dangerous	are healthy and not
	payment of fee in lieu of	replacement for cutting trees that		dangerous
	replacement for cutting	are healthy and not dangerous	All lots are subject to same	
	trees that are healthy		requirements	Large (special
	and not dangerous	On special permit lots: any and all		permit) lots always
		trees with no stated requirements	Sec. 21-83b & d; Sec. 21-90b	pay and pay more
	On special permit lots:			than regular lots
	any and all trees with	Sec. 21-83b & d; Sec. 21-90b		
	no stated requirements			Sec. 8.66.050; Sec.
				8.66.060; Sec.
	Sec. 21-83c; 21-90b			8.66.070
Is notice to	No	No	Yes, for all permits	Yes, for Large
abutters about				projects
tree cutting			Requires notifying abutters of	
required?			tree permit applications and	8.66.060a & b
			posting tree permits in public	
			view on site.	
			Sec. 21-83c & e	

What are the	On exempt lots: none	With exemption permit: none	With tree permit: replacement (or	With tree permit:
replacement			higher mitigation payment in lieu	replacement (or
requirements	On non-exempt lots:	With tree permit: either	of replacement)	mitigation payment
for cutting	inch-for-inch	replacement or payment in lieu		in lieu of
health, non-	replacement or	of replacement	Replacement ratio varies by DBH of	replacement)
dangerous	payment in lieu of		cut trees	
trees?	replacement	Replacement ratio varies by DBH	- for 6-24" (Protected), 1 to 1	Replacement ratio
		of cut trees	- for 25-39" (Significant), 1.5 to 1	varies by DBH of cut
	On special permit lots:	- for 6-24" (Protected), 1 to 1	- for 40-54" (Landmark), 2 to 1	trees
	none stated	- for 25-39" (Significant), 1.5 to 1	- for 55"+ (Legacy), 3 to 1	- 6-29", 1 to 1
		- for 40-54" (Landmark), 2 to 1		- 30" +, 1.5 to 1
	Sec. 21-85b; Sec. 21-	- for 55"+ (Legacy), 3 to 1	All lots are subject to the same	
	86b; Sec. 21-90b		requirements	All lots have same
		With special permit: none stated		requirements
			Sec. 21-85b; 21-86b & c; 21-90b	
		Sec. 21-85b; 21-86b; 21-90b		Sec. 8.66.060; Sec.
				8.66.070
What are the	On exempt lots: none	With exemption permit: none	With tree permit: application fee	With tree permit:
costs to			and environmental mitigation	permit fee and
property owners	On non-exempt lots:	With tree permit: application fee	payment based on costs to City	sometimes
for cutting	application fee, permit	and payment based on cost of	from tree loss: damages to public	mitigation payment
healthy, non-	fee, and payment based	buying, installing & maintaining	health, loss of climate mitigation	
dangerous	on cost of buying &	new trees for five years (where is	services, increased energy usage,	
trees?	installing new trees	unspecified)	increased drainage and	Large projects must
	(where is unspecified)		infrastructure costs	pay at least \$5,000
		With special permit: none stated		
	On special permit lots:		All lots are subject to the same	Sec. 8.66.050b;
	none stated	Sec. 21-83b; 21-86b; 21-90b	requirements	8.66.060d; 8.66.070; 8.66.150
	Sec. 21-82c; 21-83a; 21-		Sec. 21-81; 21-83d; 21-86b & c; 21-	
	86b; Sec. 21-90b		90b	

Are replacement	Required to survive 18	Considered a Significant Tree	Considered a Significant Tree and	Protected for 10
trees given	months	(only relevant if property owner	protected for 10 years (if owner	years (if owner
special		applies to cut it; no longer	applies to cut, requires mitigation	applies to cut,
protection?	Sec. 21-85b3	required to survive any specified	payment without reduction and	requires mitigation
		time)	higher replacement levels)	payment without
				reduction)
		Sec. 21-85d	Sec. 21-85d & e	
				Sec. 8.66.050c
Who decides	Appeals go to mayor,	Appeals go to mayor, who shall	Appeals go to mayor and all	None mentioned
appeals of tree	who must notify the	seek input and consult with the	councilors of the ward, who jointly	
permit decisions	councilors from the	Ward Councilor (not at-large	decide	
and on what	ward of appeals	councilors from the ward)		
basis?			Decisions to be guided by	
	No guidance on basis	No guidance on basis for deciding	reasonable safety and tree	
	for deciding appeals	appeals	wellbeing provisions	
	Sec. 21-83g	Sec. 21-83h	Sec. 21-83h	
Can violations	Yes	Yes	Yes	Yes
result in an ISD	Tree warden can			
stop-work	request that the agency	Tree warden can request that the	Tree warden can direct ISD to issue	City arborist can
order?	that approved external	agency that approved external	a stop work order	direct ISD to issue a
	work stop external work	work stop external work		stop work order
			Sec. 21-83g; Sec. 21-88b2	
	Sec. 21-88b2	Sec. 21-88b2		Sec. 8.66.120b