

Source: Parks and Recreation

Agenda Item No: REP 89-13

To: City Council

From: City Manager and Staff

Council Meeting Date: Jun 17, 2013

Re: Hazardous Tree Removal Report: Columbia Cosmopolitan Recreation Area & Stephens Lake Park

EXECUTIVE SUMMARY:

The Columbia Parks & Recreation Department is requesting Council approval to remove three hazardous trees at two locations within the park system due to their current state of decline and the hazard potential for park users. The first tree that is scheduled for removal is a Pin Oak tree located in Columbia Cosmopolitan Recreation Area in the parking lot adjacent to the Harris Shelter. It qualifies as a large tree due to its 41-inch Diameter at Breast Height (DBH) and is suggested for removal due to a live crown ratio of less than 25% and an increasing amount of deadwood throughout the tree. The second tree is a Black Oak located within Stephens Lake on the east side of the amphitheater. The Oak tree has a 37-inch DBH and the tree has less than 10% living crown due to a previous lightning strike and drought stress from the summer of 2012. The final tree is a Black Walnut tree located within Stephens Lake Park in the northwest corner of the park along the hard surface trail. The Walnut tree is dead in over 90% of the crown and has a high potential to drop large limbs onto the fitness trail. All three trees present a high risk of public safety as a large portion of each tree crown has expired and each tree is located within areas frequented by park users. Copies of the Tree Hazard Evaluation Forms and photos are attached.

DISCUSSION:

In February of 2009, the Columbia Parks & Recreation Department was asked by the City Council to develop a report relating to the removal of larger trees within the park system which may be perceived as significant to the public and/or the use of the park. The report recommended a policy which outlined the procedures to be followed whenever large trees were to be removed due to either being a public safety hazard or due to park development. The 2009 report is attached and in summary, the P&R tree removal procedure for hazardous trees now includes the following key elements:

- 1. Tree Hazard Evaluation Forms will be completed by the Department's certified International Society of Arboriculture Forester.
- 2. Trees larger than 20-inch Diameter at Breast Height (DBH) but smaller than 30-inch DBH must have the approval of the Park Development Superintendent and the Park Services Manager to be removed.
- 3. Trees larger than 30-inch DBH must have the approval of the P&R Director who will notify Council that the tree or trees will be removed.
- 4. Any size tree that presents an immediate danger to the public shall be removed immediately.

The Pin Oak tree that the Parks and Recreation Forestry staff is proposing to remove is located in Columbia Cosmopolitan Recreation Area in the parking lot next to Harris Shelter. The 41-inch DBH tree has visible signs of Hypoxlon Canker and has a live crown of less than 25% possessing a high potential for falling scaffolding branches and dead limbs from the crown and canopy. The mature Oak tree has had previous branch failures and final failure of the tree was due to drought conditions in the summer of 2012. Forestry staff has determined that the potential for failure is the key factor for the determination of removal due to the location of the tree near pedestrians and automobiles.

The second tree recommended for removal is a Black Walnut located in the northwest corner of Stephens Lake Park along the hard surface trail. The Walnut tree has grown to a mature height of 64 feet with a 30.5 inch diameter at breast height. The tree has approximately 10% living crown and has shown visible signs of wounds, decay and cavity in the branches and root crown. Forestry staff has observed falling limbs and deadwood in the tree over the last 2 years and blame the severe decline over the past year due to the severe drought of 2012. Staff is requesting permission to remove the failing tree due to the risk of failure and public safety due to the proximity to the Stephens Lake Park fitness trail.

The final tree recommended for removal by Forestry staff is a mature Black Oak tree located on the hillside east of the amphitheater at Stephens Lake Park. The tree has a 37" diameter at breast height and a total height of 50 feet. The Black Oak currently has a live crown of approximately 10% and exhibits signs of wounds and decay throughout the trunk and main scaffolding branches. The canopy loss of this Oak tree is due to a previous lighting strike and drought stress from the summer of 2012. The dead canopy has shown previous signs of failure and will continue to drop large, dead limbs if it is not removed. The removal of the tree is necessary due to the weakened state of the tree and the potential for the tree or large branches to fall on park patrons.

All three trees have reached a mature growing age and the majority of the dieback and canopy loss is due to reaching the mature growing age in conjunction with three straight summers with excessive heat and drought conditions. The severe drought of 2012 severely affected the overall health of each of these trees and is the main contributing factor for the tree loss. The forestry staff has already made arrangements to replace the Pin Oak tree at Columbia Cosmopolitan Park with a similar species suitable for the parking lot space as soon as the existing tree is removed. The Walnut tree at Stephens Lake Park will not be replaced because the Forestry staff has already added four Walnut trees to the location adjacent to the Walnut tree in anticipation for the failure of this tree. The Black Oak tree at Stephens Lake Park will be removed and staff will replace the tree with a new Oak tree after minor cleanup and grading to the location. As reported to Council in 2012, there are several trees located between Walnut Street and the Stephens trail that will eventually be lost to age, storms, disease, or other acts of nature, so additional trees have been planted as a replacement and investment toward the future. An early example of this investment is the 82 trees that were planted as part of a TRIM grant in 2004. Another 81 trees have been planted as a result of the community donating memorial and heritage trees to the park. Approximately 150 more trees have been planted as part of shoreline stabilization, tree collections (Maple, Nut, Oak, conifers) and other landscaping projects. The proposed Christy Welliver memorial improvements to the area west of the spraygrounds and beach will add an additional 19 shade and ornamental trees to Stephens Lake Park as well.

FISCAL IMPACT:

There is no fiscal impact to this report.

VISION IMPACT:

http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php

There is no vision impact to this report.

SUGGESTED COUNCIL ACTIONS:

Unless Council directs otherwise, park staff will proceed with the tree removal as outlined in this report.

FISCAL and VISION NOTES:						
City Fiscal Impact Enter all that apply		Program Impact		Mandates		
City's current net FY cost	\$0.00	New Program/ Agency?	No	Federal or State Mandated?		
Amount of funds already appropriated	\$0.00	Duplicates/Epands an existing program?	No	Vision Implementation impact		
Amount of budget amendment needed	\$0.00	Fiscal Impact on any local political subdivision?	No	Enter all that apply: Refer to Web site		
Estimated 2 year net costs:		Resources Required		Vision Impact?	No	
One Time	\$0.00	Requires add'l FTE Personnel?	No	Primary Vision, Strategy and/or Goal Item #		
Operating/ Ongoing	\$0.00	Requires add'l facilities?	No	Secondary Vision, Strategy and/or Goal Item #		
		Requires add'l capital equipment?	No	Fiscal year implementation Task #		

Parks Services Natural Resources Tree Hazard Evaluation Form

Site/Address: Cosmo Park, Harris Shelter Parking Lot	HAZARD RATING:
Map/Location:	3 + 3 + 2 = 8
Owner: ⊠public ☐ private ☐unknown ☐other	Failure + Size + Target = Hazard Potential of part Rating Rating
Date: 5/21/2013 Inspector: Nick Harper	Immediate action needed Needs further inspection ▼Dead tree
Date of last inspection:	XI Dead free
TREE CHARACTERISTICS	
Tree#: Species: Pin Oak	
DBH: 41" # of trunks: 1 Height: 60' Spread: 50'	
Form: generally symmetric minor asymmetry major asymmetry stump sprout stag-r	eaded
Crown class: Adominant Dcp-dominant Dintermediate Dsuppressed	
Live crown ration: 25 % Age class: □young ☑ mature □over-mature	
Pruning history: Crown cleaned Cexcessively thinned topped Crown raised Opolla	rded Crown reduced none
Special Value: ☐ specimen ☐ heritage/historic ☑ wildlife ☐ unusual ☐ street tree ☑ screen ☑ shace	le⊠indigenous □other
TREE HEALTH	4844
Foliage color: Inormal Inchlorotic Inecrotic Epicormics? In N	
Foliage density: Inormal Sparse ILeaf Size: Inormal Ismall	
Annual shoot growth: Dexcellent Daverage Door Twig dieback? DY	
Callus development: Dexcellent Daverage Dpoor Enone	
Major pests/diseases: Hypoxlon Canker	
SITE CONDITIONS	
Site character:	
Landscape type: □parkway □ raised bed □container ☑ open	
Irrigation: Enone Cadequate Cinadequate Cexcessive Citrunk wetted	
% dripline paved: □0% ☑10-25% □25-50% □75-100% Lifted?	□Y ⊠ N
% dripline w/fill soil: □ 0% 区 10-25% □ 25-50% □ 75-100%	
% dripline grade lowered: ⊠0% ☐ 10-25% ☐ 25-50% ☐ 75-100%	
Soil problems:drainage_shallow x pompadedbiroughtysalineaddcsmall volumedisease	
Obstructions light signag line-of-site view bverhead line underground utilitie traffid	
Wind (tree position) is single tred below canop above canop recently exposed windward, canopy ed	ge area prone to windthrow
TARGET	
TARGET	
Use under tree: ☐ building ☑ parking ☐ traffic ☐ pedestrian ☑ recreation ☑ landscape ☑ hard Can target be moved? ☐ Y ☑ N	iscape Lismaii reatures
Can target be moved? Y N Occupancy: Occupancy: Occupancy Occ	
Occupancy, eloccasional use in medium, intermittent use in request use	

TREE DEFECTS:				
Rate defect severity:	S severe defect, high	•		
	M defect of modera	•		
	L defect of low seve	erity		
LEAN: 0 deg. Fr	om vertical 🗵 natural	☐unnatural :	Soil heaving:	×Ν
Decay in plane of lean:				: □Y ⊠N
Compounding factors: _				ity: □s □M ⊠L
ROOT DEFECTS:		•		
	N Mushroom/conk	nresent: YXN II	D:	
Exposed roots: S S M				
			% Buttress woun	ded: Y N When:
Restricted root area:				X L
CROWN DEFECTS:		70.11.11	DDANOUS.	NAAD.
DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP
Poor taper				
Codominants/forks				
Multiple attachments				
Included bark				
Cracks/Splits		<u> </u>		
Girdling				
Wounds				
Decay				
Cavity Conks/Mushrooms				
Bleeding				
Deadwood/stubs				
Borers/termites/ants		×	× ×	
Cankers/galls		×	×	
Previous failure			×	
, ,ovides tellero			į.	
HAZARD RATING				
Part most likely to fail:				
Failure Potential: 1	2 🗵 3 Size	of Part:	⊠3 Target: [1 🗵 2 🔲 3
7777				9
Hazard Rating: ☐1				~
HAZARD ABATEMENT	•			
				n reduce II restructure III shape
Cable/Brace:				☐decay ☐aeriel ☐monitor
Remove tree: XY		olace? ⊠Y □N		et: 🔲 Y 🗵 N
Other:			·	
	P	-		
Effect on adjacent trees:	⋉ _{none}	evaluate		

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Has the potential to start dropping very large limbs.

Signature	1/1-		ISA#	Date _	5/21/2013
		P A			

Pin Oak tree at Columbia Cosmopolitan Recreation Area at the Harris shelter parking lot





Parks Services Natural Resources Tree Hazard Evaluation Form

Site/Address: Stephens Lake Park	HAZARD RATING:
Map/Location: On hill east of amphitheater.	3 + 3 + 3 = 9
Owner: Dublic Diprivate Dunknown Dother	Failure + Size + Target = Hazard Potential of part Rating Rating
Date: 5/3/2013 Inspector: Nick Harper, Eric Schmittel	Immediate action needed Needs further inspection
Date of last inspection:	☑ Dead tree
TREE CHARACTERISTICS	
Tree#: Species: Quercus velutina (Black Oak)	
DBH:37" # of trunks:2	
Form: ☑ generally symmetric ☐minor asymmetry ☐major asymmetry ☐stump sprout ☐stag-f	neaded
Crown class: dominant Co-dominant Cintermediate Csuppressed	
Live crown ration: 10 % Age class: □young ☑ mature □over-mature	
Pruning history: Crown cleaned Cexcessively thinned Corown raised Corown	
Special Value: ⊠specimen⊠heritage/historic ⊠wildlife ⊠unusual ⊡street tree ⊡screen ⊠shad	1eminalgenous mother
TREE HEALTH	
Foliage color: ⊠normal □chlorotic ⊠necrotic Epicormics? □Y ☒N	
Foliage density: Dnormal Sparse Cleaf Size: Snormal Dsmall	
Annual shoot growth: Dexcellent Daverage Door Drwig dieback? Y	
Callus development: □excellent □average □poor 図none	
Major pests/diseases: Boring insects (unidentified)	
SITE CONDITIONS	
Site character: Tresidence Commercial Dindustrial Epark Dopen space Dinatural	
Landscape type: parkway raised bed container open	
Irrigation: Inone Indequate Inadequate Inadequate Increasive Itrunk wetted	
% dripline paved: ⊠0% □10-25% □25-50% □75-100% Lifted? % dripline w/fill soil: ⊠0% □10-25% ⊠25-50% □75-100%	□Y □N
% dripline w/fill soil: ▼ 0% ■ 10-25% ■ 25-50% ■ 75-100% % dripline grade lowered: ■ 0% ■ 10-25% ■ 25-50% ■ 75-100%	
Soil problems: Trainage shallow from pacted froughty saline add small volume disease	e cented history of fail
Obstructions light signage line-of-site view overhead line underground utilities traffic	
Wind (tree position) single tree below cancp above cancp ecently exposed windward, cancpy edg	
TARGET	
Use under tree: ☐ building ☐ parking ☐ traffic ☑ pedestrian ☒ recreation ☒ landscape ☒ hard	iscape 🔲small features
Can target be moved?	
Occupancy: 🗆 cccasional use 🗵 medium, intermittent use 🗀 frequent use	

TREE DEFECTS:					
Rate defect severity:	⊠s severe defect, high	gh potential for failure			
·	☐M defect of modera	ite severity			
	☐L defect of low seve	erity			
1.5		·		_	
LEAN: 15 deg. Fr			Soil heaving: 🔲Y	⊠N	
Decay in plane of lean: Compounding factors:	⊠Y □N Roots	s exposed:	⊠N Soil cracking	: <u> </u>	
Compounding factors: _	ightening strike on eas	t side of tree.	Lean sever	ity: ☐S ☐M 区L	
ROOT DEFECTS:			D: Shelf fungus		
Suspect root rot: ☐ Y 🗵			D:		
Exposed roots: S S M		d: LIS KIM LIL 4(0	🖾 . 🗖	
Root pruned: 12				ded: 🖾Y 🗖 N When:	
Restricted root area:	JS MM LIL	Potential for root fail	ure: S M	X L	
CROWN DEFECTS:					
DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP	
Poor taper		<u></u>		177 (
Codominants/forks		×	×		
Multiple attachments			×		
Included bark					
Cracks/Splits		×	×		
Girdling					
Wounds	×	×	×		
Decay	×	×	×		
Cavity		×	×		
Conks/Mushrooms	×	×	×		
Bleeding					
Deadwood/stubs					
Borers/termites/ants	×	×	×		
Cankers/galls	X	×	×		
Previous failure			×		
	<u> </u>	<u> </u>			
HAZARD RATING					
Part most likely to fail:	arge limbs breaking off	, possible failure due t	to lightening strike		
Failure Potential: 1		of Part: 🔲1 🔲2		1 2 🛛 3	
-					
Hazard Rating: 1		□ 4 □ 5 □ 6	7 🗆 8	∑ 9	
HAZARD ABATEMENT				Name and a second	
Prune: ☐remove defective part ☐reduce end weight ☐crown clean ☐thin ☐raise canopy ☐crown reduce ☐restructure ☐ shape					
Cable/Brace:					
Remove tree: XY	□N Rep	olace? ⊠Y □N	Move targe	et: □Y 図N	
Other:					
mrr. A	反	[]			
Effect on adjacent trees:	⊠ _{none}	LJ evaluate			

COMMENTS

The canopy of this tree is over 90% dead due to a previous lightening strike and drought stress from the summer of 2012. This dead canopy has shown signs of previous failure and will continue to drop large dead limbs. We recommend the removal of this tree as soon as possible to prevent injury to park users.

Signature 5. 5/31/13

Black Oak tree at Stephens Lake Park on the hills east of the amphitheater





Parks Services Natural Resources Tree Hazard Evaluation Form

Site/Address: Stephens Lake Park	HAZARD RATING:
Map/Location: Northwest corner of park along hard surface trail	3 + 3 + 3 = 9
Owner: Dublic private Dunknown Dother	Failure + Size + Target = Hazard Potential of part Rating Rating
Date: 5/31/13 Inspector: Nick Harper, Eric Schmittel	Immediate action needed Needs further inspection
Date of last inspection:	Dead tree
TREE CHARACTERISTICS	4
Tree#: Species: Juglans nigra (Black Walnut)	
DBH:30.5 # of trunks:1 Height:64' Spread:30'	
Form: ☐ generally symmetric ☐ minor asymmetry ☐ stump sprout ☐ stag-h	neaded
Crown class: Adominant Co-dominant Cintermediate Suppressed	
Live crown ration: 10 % Age class: □young ☑ mature □over-mature	Enuma Samual
Pruning history: ⊠crown cleaned ⊠ excessively thinned □ topped □ crown raised □ polla	
Special Value: Specimen heritage/historic wildlife unusual street tree screen shace	dei∆lindigenous ∟lother
TREE HEALTH	
Foliage color: Inormal Inchlorotic Inecrotic Epicormics?	
Foliage density: Inormal Sparse Leaf Size: Inormal Ismall	
Annual shoot growth: Dexcellent Daverage Door Twig dieback? DY N	
Callus development: ☐excellent ☐average ☒poor ☒none Major pests/diseases:	
Wajor pesis/diseases.	
SITE CONDITIONS	
Site character: Tresidence Commercial Tindustrial Epark Copen space Cnatural	
Landscape type: □parkway □ raised bed □container ☑ open	
Irrigation: ⊠none □adequate □ inadequate □ excessive □ trunk wetted	
% dripline paved: □0% ☑10-25% □25-50% □75-100% Lifted?	□y □ N
% dripline w/fill soil: □ 0% □ 10-25% □ 25-50% □ 75-100%	
% dripline grade lowered: ☐0% ☐10-25% ☑25-50% ☐75-100%	
Soil problems:drainage_shallow x compactedbiroughtysaline_alkaline_acidic_small volumedisease	
Obstructions Ilight signage line-of-site view bverhead lines underground utilities traffic	
Wind (tree position) single tree below canop above canop recently exposed windward, canopy ed	ge_prea prone to writing from
TARGET	
Use under tree: ☐ building ☐ parking ☐ traffic ☑ pedestrian ☑ recreation ☐ landscape ☑ hard	dscape small features
Can target be moved?	
Occupancy: Doccasional use D medium, intermittent use E frequent use	

TREE DEFECTS:							
Rate defect severity:	S severe defect, high	h potential for failure					
	☐ M defect of modera	te severity					
	L defect of low severity						
0)	₽~~ 1			
LEAN: 0 deg. Fr			Soil heaving: DY				
Decay in plane of lean:	□Y ⊠N Roots	s exposed:		: <u>Y</u> <u>N</u> _			
Compounding factors: _			Lean sever	ity: □S □M ⊠L			
ROOT DEFECTS:							
Suspect root rot: □Y ⊠	N Mushroom/conk	present: ☒Y ☐N II	o: Auricularia auricula				
Exposed roots: LS LM	∠ Undetermine	d: ∐S ∐M ĽL					
Root pruned:	_ft from trunk Root	area affected:	% Buttress woun	ded: 🗵 Y 🔲 N When:			
Restricted root area:	_ Is □m ⊠l	Potential for root fail	ure: ☐S ☐M	X L			
CROWN DEFECTS:							
DEFECT	ROOT CROWN	TRUNK	BRANCHES	MAP			
Poor taper			. О				
Codominants/forks		×	×				
Multiple attachments							
Included bark							
Cracks/Splits							
Girdling							
Wounds	×		×				
Decay			×				
Cavity			×				
Conks/Mushrooms	1		×				
Bleeding							
Deadwood/stubs			×				
Borers/termites/ants			X				
Cankers/galls							
Previous failure			X				
HAZARD RATING							
Part most likely to fail: Dead branches in canopy.							
Failure Potential: ☐1 ☐2 ☒3 Size of Part: ☐1 ☐2 ☒3 Target: ☐1 ☐2 ☒3							
Hazard Rating: □1 □2 □3 □4 □5 □6 □7 □8 ☒9							
HAZARD ABATEMENT							
Prune: Dremove defective part Drectuce end weight Drown clean Dthin Draise cancpy Dcrown reduce Drestructure Dshape							
Cable/Brace: Inspect further: ☐ roct crown ☐ decay ☐ aeriel ☐ monitor							
Remove tree: Y N Replace? Y N Move target: Y N							
Other:							
		_					
Effect on adjacent trees	: 🔼 none						

COMMENTS

This tree has shown pervious limb failure and has a high potential for dropping large limbs onto a high use recreation trail.

Signature Signature

ISA# MW47754 Date 5/31/13

Black Walnut tree at Stephens Lake Park in the northwest corner of park along the hard surface trail



