

# Proposed Amendment to Tree Preservation

Tree Committee  
December 1, 2009

# Background

- Current canopy is about 38%; American Forests recommends 40%.
- Staff proposed a draft tree canopy ordinance with several % tree canopy requirements in the City and ETJ.
- Staff proposed a 41% tree preservation and a 35% tree canopy requirement for City and ETJ.

# Issues and concerns

- The current ordinance provides for enough preservation and tree canopy equal or better than the 40% recommended by American Forest.
- Although the issue is still debatable the numbers do not add up to the 40% canopy goal projection.
- Modifying the Tree Ordinance will trigger equal requirements in City and ETJ and we must have one single % across the board.

# Proposed Amendments

- Keep Current Ordinance with the Survey method
  - Significant trees (6” or greater):
    - 35% for residential & 40% for commercial
      - Mitigation at 1:1 ratio up to 80%
    - 80% preservation in floodplain
    - Percentages are *net*, exclude rights of way and easements
  - Heritage trees (24” or greater) preserved at 100%
    - Mitigation allowed at 3:1 ratio up to 80%

# Proposed Amendments Cont.

- Modify the Tree Stand Delineation Method to Tree Canopy:
  - Simplify the option to use tree canopy with 35% preservation and 35% tree canopy requirement.
  - Preservation does not have to be contiguous tree canopy.
  - Provide some incentives as originally proposed under this option.

# Proposed Amendments Cont.

- Keep requirements in environmentally sensitive areas and floodplains:
  - Require preservation of 80% of significant trees
  - Remove exclusion of rights of way and easements
  - Allow preservation to count toward requirements on remainder of site, except for floodplains.

# Proposed Amendments Cont.

- As noted, decrease the allowed mitigation from 90% to 80%.
- Increase the cost per inch from \$100 to \$200 for mitigation, but ratios remain.
- Impose the 35% tree canopy requirement across the board.
  - Canopy requirement may be defer to building phase and can use the current tree planting requirements for credit (2 trees per house, landscape and streetscape).
  - Tree Canopy requirement is based on gross not net, but preservation remains based on net.
  - Mitigation Fund shall pay for yearly Tree Canopy imagery.

# Analysis

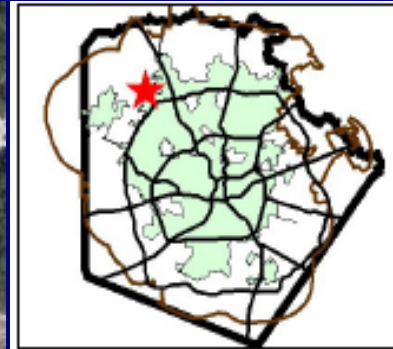
## Estimate of Impact on the remaining tree canopy area within the City Limits and the Extraterritorial Jurisdiction Area

		<u>Areas with 85 % tree canopy</u>		
<u>Current Ordinance</u>		Protected Area =	9895 ac	
ETJ total acres = 761354 ac		Buffer Area =	17588 ac	
Tree canopy acres = 315572 = 41.5%		Floodplain =	86746 ac	
		steep slopes =	26866 ac	
		Military =	32120 ac	
35 % preservation = preserved tree canopy			35351.21	
40 % preservation = Commercial			26934.26	
85 % existing tree canopy in protected areas			8411.096	
90 % preservation in floodplain			66360.69	
90 % preservation steep slopes			20552.49	
90 % preservation buffer area			13454.82	62.86 % existing canopy preserved
85 % existing tree canopy in military area			27301.79	
			<u>198366.4</u>	26.05 % overall canopy preserved
Bare ground and open space = 325942 ac				
18 % tree planting not counting towards preservation (street scape, parking shade, etc...)			58669.56	7.71 % total canopy increased
				34 % projected tree canopy

# Analysis Cont.

				<b>Areas with 85 % tree canopy</b>			
<b><u>Proposed Ordinance</u></b>				<b>Protected Area =</b>	<b>9895 ac</b>		
				<b>Buffer Area =</b>	<b>17588 ac</b>		
<b>ETJ total acres =</b>		<b>761354 ac</b>			<b>Floodplain =</b>	<b>86746 ac</b>	
				<b>steep slopes =</b>	<b>26866 ac</b>		
<b>Tree canopy acres</b>	<b>315572</b>	<b>=</b>	<b>41.5%</b>	<b>Military =</b>	<b>32120 ac</b>		
35 % preservation = Residential				35351.21 ac			
40 % preservation = Commercial				26934.26 ac			
85 % existing tree canopy in protected areas				8411.096 ac			
90 % preservation in floodplain				66360.69 ac			
90 % preservation steep slopes				20552.49 ac			
90 % preservation buffer area				13454.82 ac	62.86 % existing canopy preserved		
85 % existing tree canopy in military area				27301.79 ac			
				198366.4 ac	26.05 % overall canopy preserved		
Bare ground and open space		325942 ac					
35 % tree canopy requirement				114079.7 ac	14.98 % overall canopy increased		
				41.04 % projected tree canopy			

# Hypothetical Example I



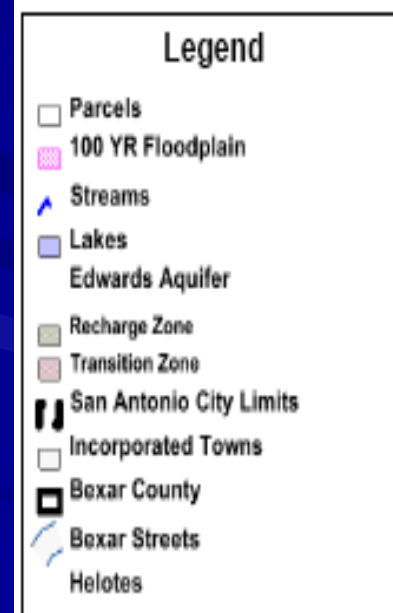
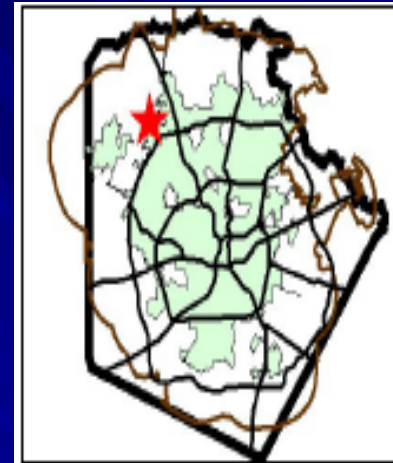
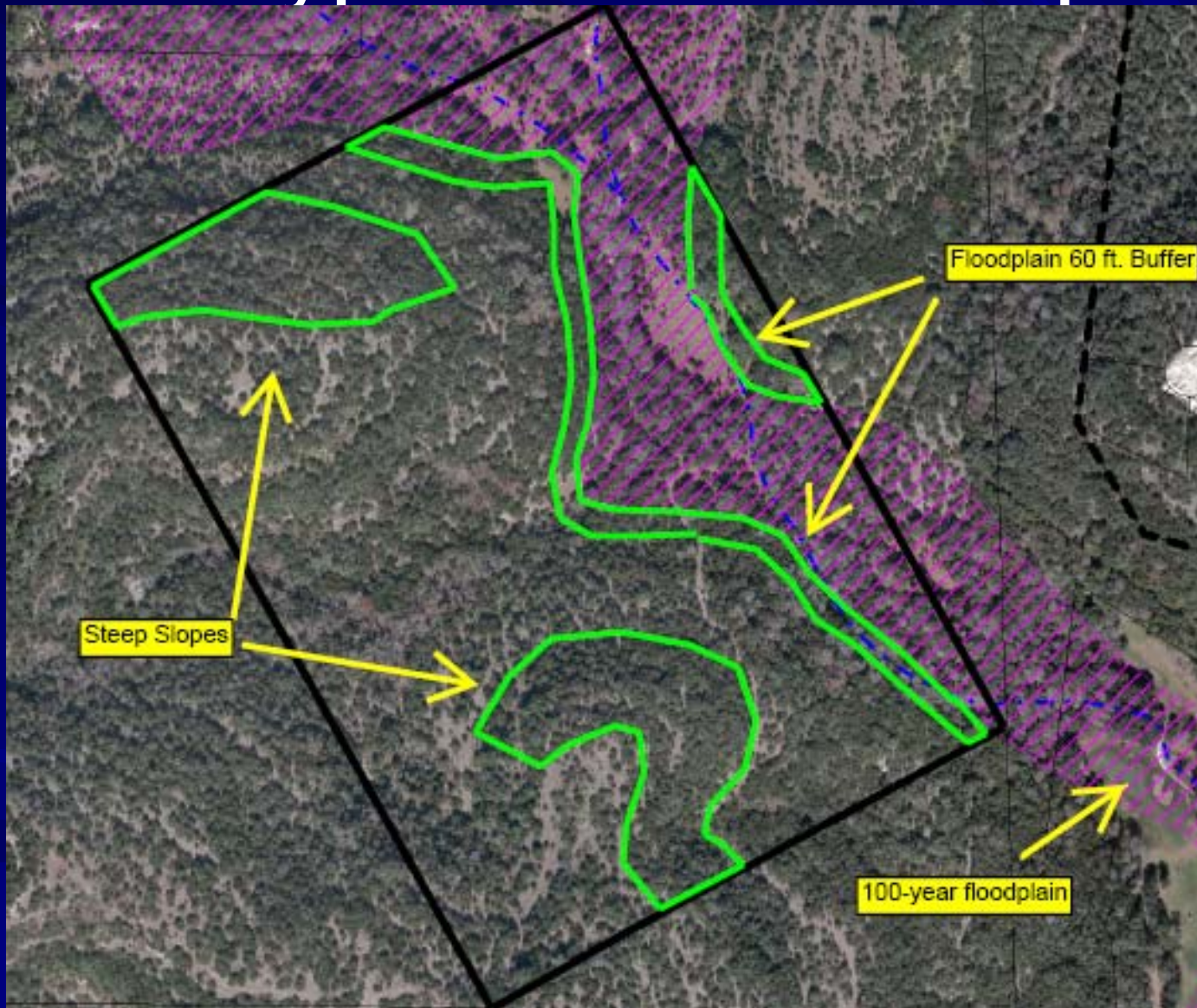
**Legend**

- Parcels
- ▨ 100 YR Floodplain
- ▲ Streams
- Lakes
- Edwards Aquifer
- Recharge Zone
- Transition Zone
- San Antonio City Limits
- Incorporated Towns
- Bexar County
- Bexar Streets
- Helotes

## Example I Cont. “residential land use”

		Existing Ordinance					Proposed Ordinance		
8		<b>8 acres</b>			8		<b>8 acres</b>		
7					7				
6					6				
5					5				
4					4				
3	Existing 36% Tree Canopy = 2.92 acres				3	Existing 36% Tree Canopy = 2.92 acres			
2					2	35% tree canopy goal = 2.8 acres (plant or pay)			
1	New Planting = 1.03 acres 35% Preservation Requirement = 1.02 acres				1	New Planting = 1.03 acres 35% Preservation Requirement = 1.02 acres			
	Mitigate up to 90% = preserve only 0.292 acres					Mitigate up to 80% = preserve only 0.584 acres			
<p>New Planting = 2 trees per dwelling            2 trees x 4 homes/acre x 8 acres = 64 trees = 1.03 acres            Based on 875 sq ft shade value at 80% credit</p>					<p>Lower mitigation to 80% = preserve 0.584 acres            35% tree canopy requirement in two steps            2 trees per dwelling, tree scape, etc.. are credited</p>				
<p>Required mitigation = 35% - 10% mandatory preservation            = 1.02 ac - .292 ac = 0.73 ac (plant or pay)</p>					<p>Step #1 Required mitigation = 35% - 20% mandatory            preservation = 1.03 ac - 0.584 ac = 0.45 ac</p>				
					<p>Step #2 Required mitigation for tree canopy goal =            2.8 ac -(1.03+1.02) ac = 0.75 ac (plant or pay)</p>				

# Hypothetical Example II



## Example II Cont. "residential land use"

Existing Ordinance				Proposed Ordinance			
<b>105</b>	<b>108.75 acres</b>			<b>105</b>	<b>108.75 acres</b>		
<b>100</b>				<b>100</b>			
	97.87 acres of tree canopy				97.87 acres of tree canopy		
<b>90</b>				<b>90</b>			
<b>80</b>				<b>80</b>			
<b>70</b>				<b>70</b>	35% Goal tree canopy cover = 30.36 acres (52.37 acres with floodplain)		
<b>60</b>				<b>60</b>			
	13.88 acres of new tree planting				13.88 acres of new tree planting		
<b>50</b>				<b>50</b>			
	35% tree canopy preservation = 26.55 acres (48.56 acres with floodplain)				35% tree canopy preservation = 26.55 acres		
<b>40</b>				<b>40</b>			
<b>30</b>	Mitigate up to 90% = preserve only 7.59 acres			<b>30</b>	Mitigate up to 80% = preserve only 15.17 acres		
	9.03 acres of canopy in ESA or 7.22 acres of tree canopy with 80% preservation				9.03 acres of canopy in ESA or 7.22 acres of tree canopy with 80% preservation		
<b>20</b>				<b>20</b>			
<b>10</b>	Floodplain Area = 22.01 acres			<b>10</b>	Floodplain Area =22.01 acres		
New Planting = 2 trees per dwelling				Lower maximum mitigation to 80%:			
2 trees x 4 homes/acre x 108 acres = 864 trees = 13.88 ac				20% mandatory = 0.20 x (97.87ac - 22.01ac) = 15.17 ac			
35% preservation requirement : 0.35 x (97.87 ac - 22.01 ac) = 26.55 ac				35% tree canopy requirement:			
10 % mandatory preservation : 0.10 x (97.87 ac - 22.01 ac) = 7.59 ac				0.35 x (108.75 ac - 22.01 ac) = 30.36 acres			

## Example II Cont.

Existing Ordinance					Proposed Ordinance				
<b>105</b>	<b>108.75 acres</b>				<b>105</b>	<b>108.75 acres</b>			
<b>100</b>	97.87 acres of tree canopy				<b>100</b>	97.87 acres of tree canopy			
<b>90</b>					<b>90</b>				
<b>80</b>					<b>80</b>				
<b>70</b>					<b>70</b>				
<b>60</b>					<b>60</b>	35% Goal tree canopy cover = 30.36 acres (52.37 acres with floodplain)			
52 50 48	13.88 acres of new planting				52 50 48	mitigate to reach 35% canopy goal			
<b>40</b>	35% tree canopy preservation = 26.55 acres  (48.56 acres with floodplain)				<b>40</b>	mitigate back to 35% preservation			
<b>30</b>	9.03 acres of canopy in ESA or 7.22 acres of tree canopy with 80% preservation				<b>30</b>	Mitigate up to 80% = preserve 6.14 acres plus ESA			
<b>20</b>	Floodplain Area = 22.01 acres				<b>20</b>	9.03 acres of canopy in ESA or 7.22 acres of tree canopy with 80% preservation			
<b>10</b>	Floodplain Area = 22.01 acres				<b>10</b>	Floodplain Area = 22.01 acres			
					Mandatory preservation 20% = 15.17 ac - 9.03 ac = 6.14 ac				
New Planting = 2 trees per dwelling									
2 trees x 4 homes/acre x 108 acres = 864 trees = 13.88 ac					Step #1	Required mitigation = 35% - 20% mandatory preservation = 26.55 ac - 15.17 ac = 11.38 ac			
Required mitigation = 35% - mandatory preservation (10% or ESA) = 26.55 ac - 9.03 ac = 17.52 ac (plant or pay)					Step #2	Required mitigation for tree canopy goal = 30.36 ac - 26.55 ac = 3.81 ac (plant or pay)			

# Questions

# Next Steps

- Staff will draft new language on existing ordinance reflecting latest proposed amendments.
- Committee to agree with draft and proceed to TAC, Planning Commission, Infrastructure and Growth.
- City Council - February 2010.

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