

This key can be used to help determine whether a proposed timber harvest will achieve a sustainable outcome. The sustainability key asks a series of paired questions or couplets that relate to the harvesting decisions that are being made for the stand. The key provides guidance by suggesting if the proposed operation will result in a potentially sustainable outcome, an uncertain outcome that should be reconsidered, or a potentially unsustainable outcome. This key is fully explained in the publication “**Managing Timber to Promote Sustainable Forests: A Second-Level Course for the Sustainable Forestry Initiative of Pennsylvania**”.

Item	Description	Go to:	
1 (TUSAF #4)	Residual overstory canopy greater than 50% (Partial cut)	Go to 13	
	Residual overstory canopy less than or equal to 50% (Regeneration Cut)	Go to 2	
2 (TUSAF #9)	Advance regeneration less than 70%	Go to 6	
	Advance regeneration greater than or equal to 70%	Go to 3	
Regeneration Harvest – Advanced regeneration present, abundant	3 (TUSAF #11)	Interfering plants overtopping desirable regeneration greater than or equal to 70%	Go to 4
		Interfering plants overtopping desirable regeneration on less than 70%	Go to 5
	4 (TUSAF #12)	Interference treatment planned in conjunction with harvest	Go to 5
		Interference treatment not planned	Delay harvest. Seek assistance.
	5 (TUSAF #13, 14)	Deer impact low or deer impact reduction planned (fencing or very aggressive hunting)	Treat and harvest. Follow up stand development. <b>Probably sustainable.</b>
Deer impact high and no deer impact treatment planned.		Seek assistance. Will seedlings overwhelm deer?	
Regeneration Harvest – Advanced regeneration inadequate	6 (TUSAF # 8)	One or more desirable seed source species lost or reduced in overstory to less than 15 large/30 small sawlog trees per acre with strong crowns	Delay harvest. Seek assistance.
		Desirable seed source species greater than or equal to 15 large/30 small sawlog trees with strong crowns retained	Go to 7
	7 (TUSAF # 10)	Fern ≥ 30% on 30% of plots or more	Go to 10
		Fern < 30% on at least 70% of plots	Go to 8
	8 (TUSAF # 10)	Grass/sedge ≥ 30% on 30% of plots or more	Go to 10
		Grass/sedge < 30% on at least 70% of plots	Go to 9
	9 (TUSAF # 10)	Woody interference ≥ 30% on 30% of plots or more	Go to 10
		Woody interference < 30% on at least 70% of plots	Go to 10
	10 (TUSAF # 11)	Any interference ≥ 30% on 30% of plots or more	Go to 11
		Any interference < 30% on at least 70% of plots	Go to 12
	11 (TUSAF # 12)	Interference treatment that conserves seedlings planned in conjunction with harvest.	Go to 12
Interference treatment not planned		Delay harvest. Desirable seedlings not likely competitive after harvest. Seek assistance	

	12  (TUSAF # 13, 14)	Deer impact low or deer impact reduction planned (fencing or aggressive hunting)	Consider waiting for more seedlings to develop after deer treatment.
		Deer impact high and no deer impact treatment planned.	Delay harvest. Scarce seedlings likely to disappear after harvest. Seek assistance.
Partial Cut – Check seed source	13  (TUSAF # 8)	One or more desirable seed source species lost or reduced in overstory to less than 15 large/30 small sawlog trees per acre	Delay harvest. Seek assistance.
		Desirable seed source species (greater than or equal to 15 large/30 small sawlog trees per acre with strong crowns) retained	Go to 14
Partial Cut – Check residual stand	14  (TUSAF # 6)	Average DBH retained or increased (less than or equal to 10% reduction)	Rate of growth likely sustained or improved. Go to 15.
		Average DBH reduced	Rate of growth likely slowed. Go to 15.
	15  (TUSAF # 7, 6, 8)	Timber quality sustained or improved by harvest, average DBH retained or increased (less than or equal to 10% reduction)	Future valuable harvest probable. <b>Probably sustainable.</b>
		Timber quality sustained or improved by harvest, average DBH reduced by more than 10%.	Future valuable harvest probable, though later than with diameter improvement. <b>Probably sustainable.</b>
Timber quality reduced by best trees removed and/or damage to residual, greater than or equal to 15 large/30 small strong-crowned trees of desirable species per acre retained as seed source.	Future valuable harvest at risk. Consider regenerating.		
<b>END</b>			
<b>KEY</b>			
<b>Probably sustainable</b>		<b>CAUTION – Reconsider</b>	<b>STOP! Seek assistance!</b>

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