NATURAL AREAS

Natural Areas	----------Criteria and Rating----------											---Relative Weights---		Comments
	Lowest Value				Neutral				Highest Value	Operation	Operation	Assigned Weight	Percent Weight	
Natural Areas Layers	1	2	3	4	5	6	7	8	9			1 to 5		
Areas with high biological value -- Group 1:														
Primary reserve design areas (uplands)					> 0.5 mi.	<0.5 mi	secondary sites	inside county significant SNHAs or other primary design areas (sphab, manat)	inside national, state or regionally significant SNHA	Map Algebra A (maximum of group)				Assumption: reserve design areas have high biological value. Three layers are mutually exclusive or nearly so; a cell gets the highest rating for any of the three. Buffer criteria relate to smoke from controlled burns
Primary reserve design areas (aquatic)					> 100'				inside or within 100 ft.	Map Algebra A				Aquatic areas have high biological value. Buffer criteria relate to smoke from controlled burns
Potential reserve design areas					outside	inside smaller medium potential patches	inside smaller high potential patches or in medium potential patches >200 acres	inside high potential patches >200 acres		Map Algebra A				Potential areas are rated lower than known areas to represent uncertainty. (Buffer criteria relate to smoke from controlled burns)
Group 1 Results (each cell receives highest rating from any one of 3 layers)														
Corridors and other high value areas -- Group 2:	1	2	3	4	5	6	7	8	9					
All conservation lands					outside		managed		protected		Map Algebra C (maximum)			Assumption: conservation of natural areas near other conserved areas heightens the benefits of conservation.
Larger conservation lands (>= 1,000 acres)					>0.5 mi.		<0.5 mi	<300'			Map Algebra C			Assumption: conservation of natural areas near other conserved areas heightens the benefits of conservation.
Smaller conservation lands (100 to 999 acres)					> 0.25 mi.		<0.25 mi	<300'			Map Algebra C			Assumption: for a conservation opportunity to gain benefits from being near existing conservation lands, it needs to be closer to smaller conservation lands than larger conservation lands.
RCW Regional Partitions (Act, Inact, Recruitment)					>.25 mi outside partiton boundary	< .25 mi outside partiton boundary	.25 to .5 mi from cluster center	< .25 mi from cluster center			Map Algebra C			Assumption: a location within a partition has more conservation value than a location outside of a partition. If data for partitions are not available, one of the other layers will contribute its value as the maximum for the group.
Corridors and proposed corridor study areas					outside	within corridor study area	inside known corridor				Map Algebra C			Assumption: a location within a corridor has more conservation value than a location outside of a corridor. If data for corridors are not available, omit from the group.
River/Stream Buffer (100 ft either side of a DWQ indexed stream)					outside		inside			Map Algebra B	Map Algebra C			Assumption: conservation of natural areas near streams heightens the benefits of conservation
Flood zones 100-year					outside		inside			Map Algebra B (maxiumum)	Map Algebra C			
Group 2 Results (each cell receives highest rating from any one of the layers)														
Group 1 Results											Map Algebra D (maximum)			Assumes that high value in one group is not diminished if value is not high in the other group.
Group 2 Results											Map Algebra D			Assumes that high value in one group is not diminished if value is not high in the other group.
													0.0	
Group 3 -- Areas not rated (cells not counted in final suitability results)														
Developed land	ide													Developed land is not rated in final map
Military bases	ide													Military bases are not rated in the final map
Waterbodies	ide													Waterbodies (lakes, ponds, wide streams) are not rated in final map
Lands managed for conservation & open space	ide													Lands already in permanent conservation or open space status including preserved farmland, state parks, riparian buffers, and others may not be counted depending on the summary desired.

Note: Assigned weight: 1 to 5 with 5 the most important for conservation of natural areas; relative weights may be changed when evaluating model results to achieve the best balance between the multiple factors.

Note: Cell size is 98.4 feet or 30 meters on a side or about 9,687 square feet or one-fifth acre. This is consistent with the lowest resolution of the available --land cover data (30-meter resolution); most of the data layers used in the model are mapped at a scale of 1:24,000 or better which implies precision to plus or minus 40 feet or less.

Sources: William B. Farris, CGIA and Division of Coastal Management, Land Suitability Analysis, 2003; Frederick Steiner, *The Living Landscape* ; Carteret County Land Suitability Analysis; Steiner et al, A Decade with LESA; NRCS Farmland Protection Program Attachment 3; CTNC project sessions, 2005, TRLC project sessions, 2006, Sustainable Sandhills focus group, 2007.