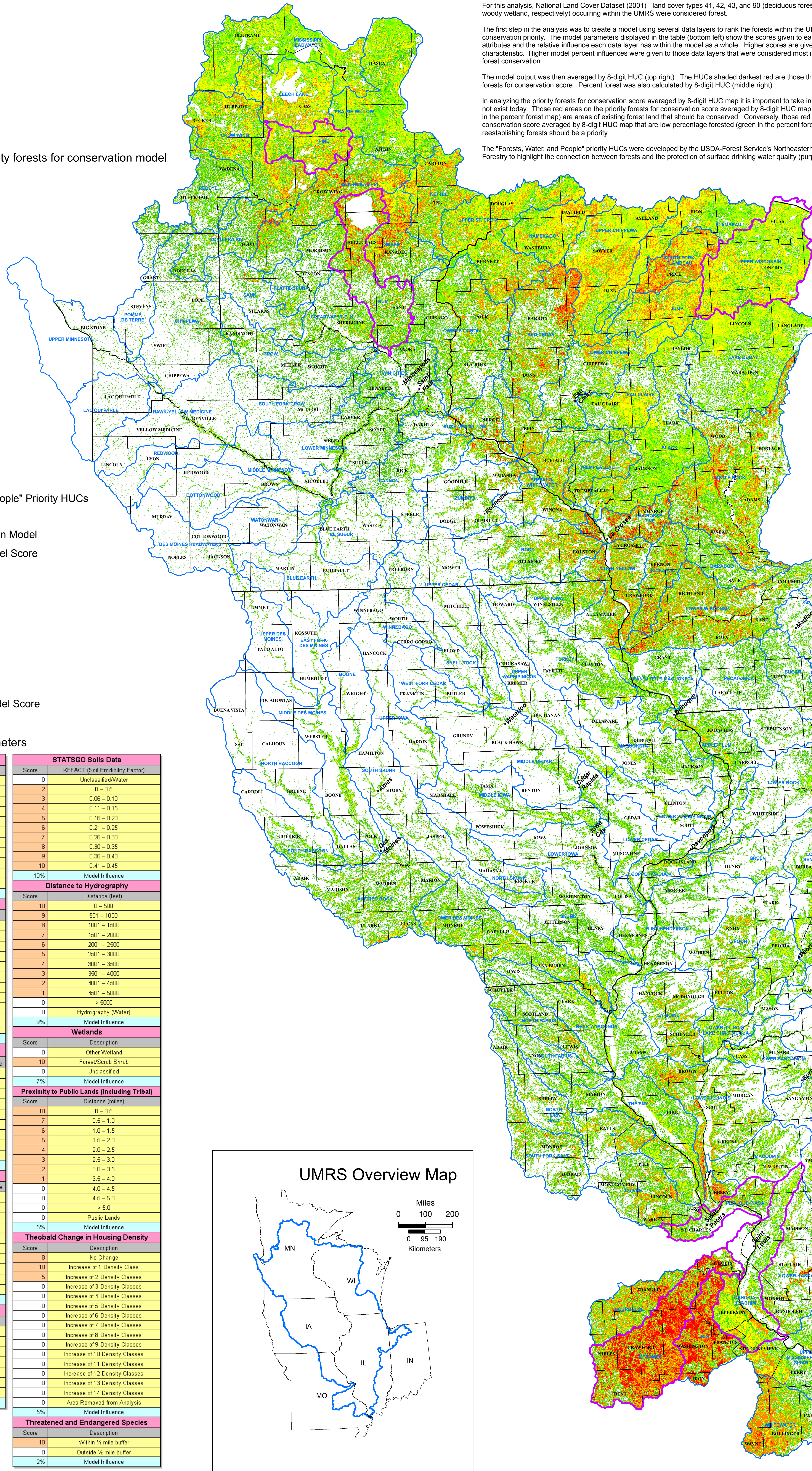


Upper Mississippi Forest Partnership

Priority Forests for Conservation (2001 Land Cover Update)



Priority forests for conservation model



For this analysis, National Land Cover Dataset (2001) - land cover types 41, 42, 43, and 90 (deciduous forest, evergreen forest, mixed, and woody wetland, respectively) occurring within the UMRS were considered forest.

The first step in the analysis was to create a model using several data layers to rank the forests within the UMRS that have the highest conservation priority. The model parameters displayed in the table (bottom left) show the scores given to each separate data layer's unique attributes and the relative influence each data layer has within the model as a whole. Higher scores are given to an attribute if it is the preferred characteristic. Higher model percent influences were given to those data layers that were considered most important in prioritizing areas for forest conservation.

The model output was then averaged by 8-digit HUC (top right). The HUCs shaded darkest red are those that have the highest mean priority forests for conservation score. Percent forest was also calculated by 8-digit HUC (middle right).

In analyzing the priority forests for conservation score averaged by 8-digit HUC map it is important to take into account where forests do or do not exist today. Those red areas on the priority forests for conservation score averaged by 8-digit HUC map that are currently forested (red in the percent forest map) are areas of existing forest land that should be conserved. Conversely, those red areas on the priority forests for conservation score averaged by 8-digit HUC map that are low percentage forested (green in the percent forest map) are areas where reestablishing forests should be a priority.

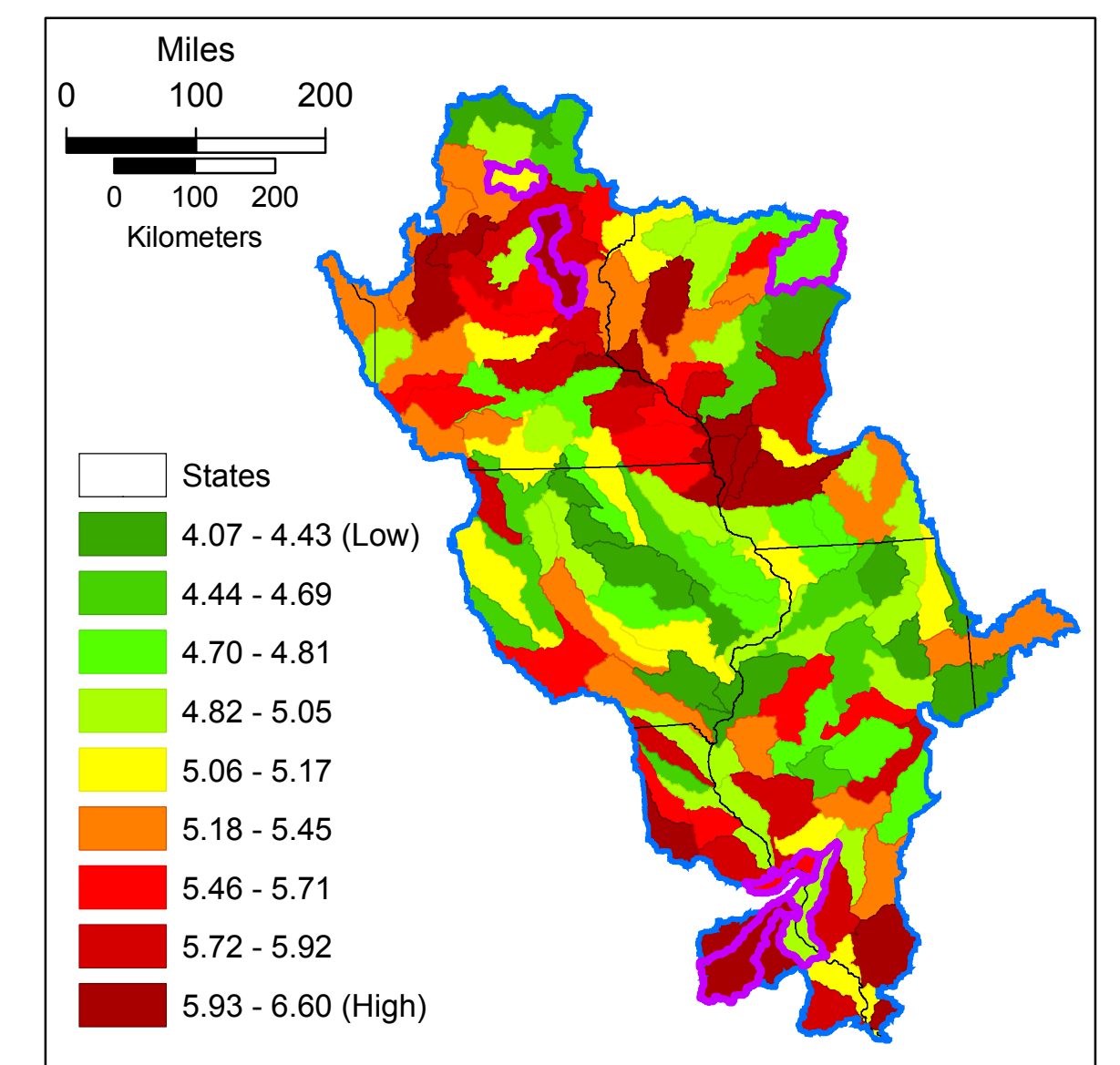
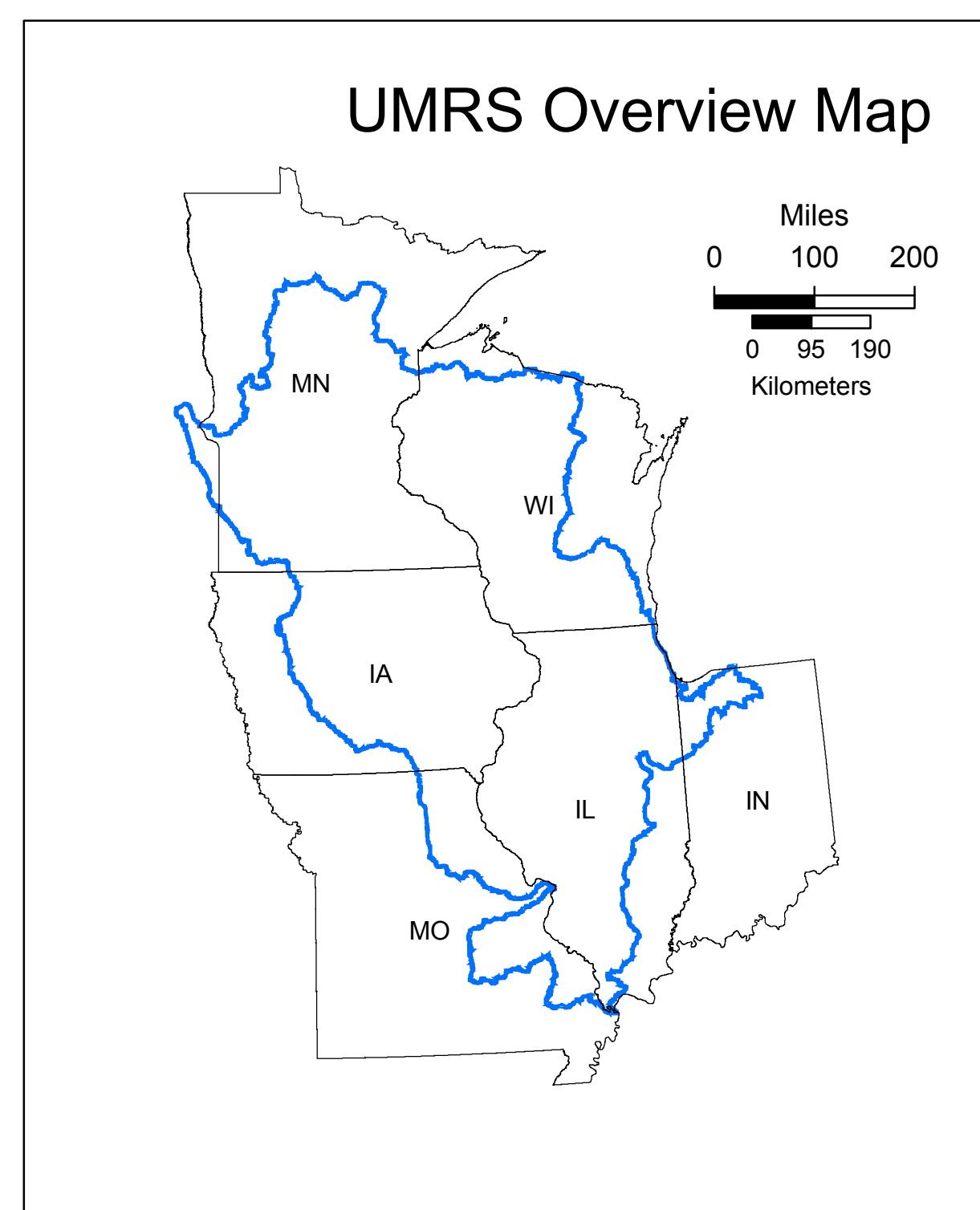
The "Forests, Water, and People" priority HUCs were developed by the USDA-Forest Service's Northeastern Area State and Private Forestry to highlight the connection between forests and the protection of surface drinking water quality (purple outline).

Legend

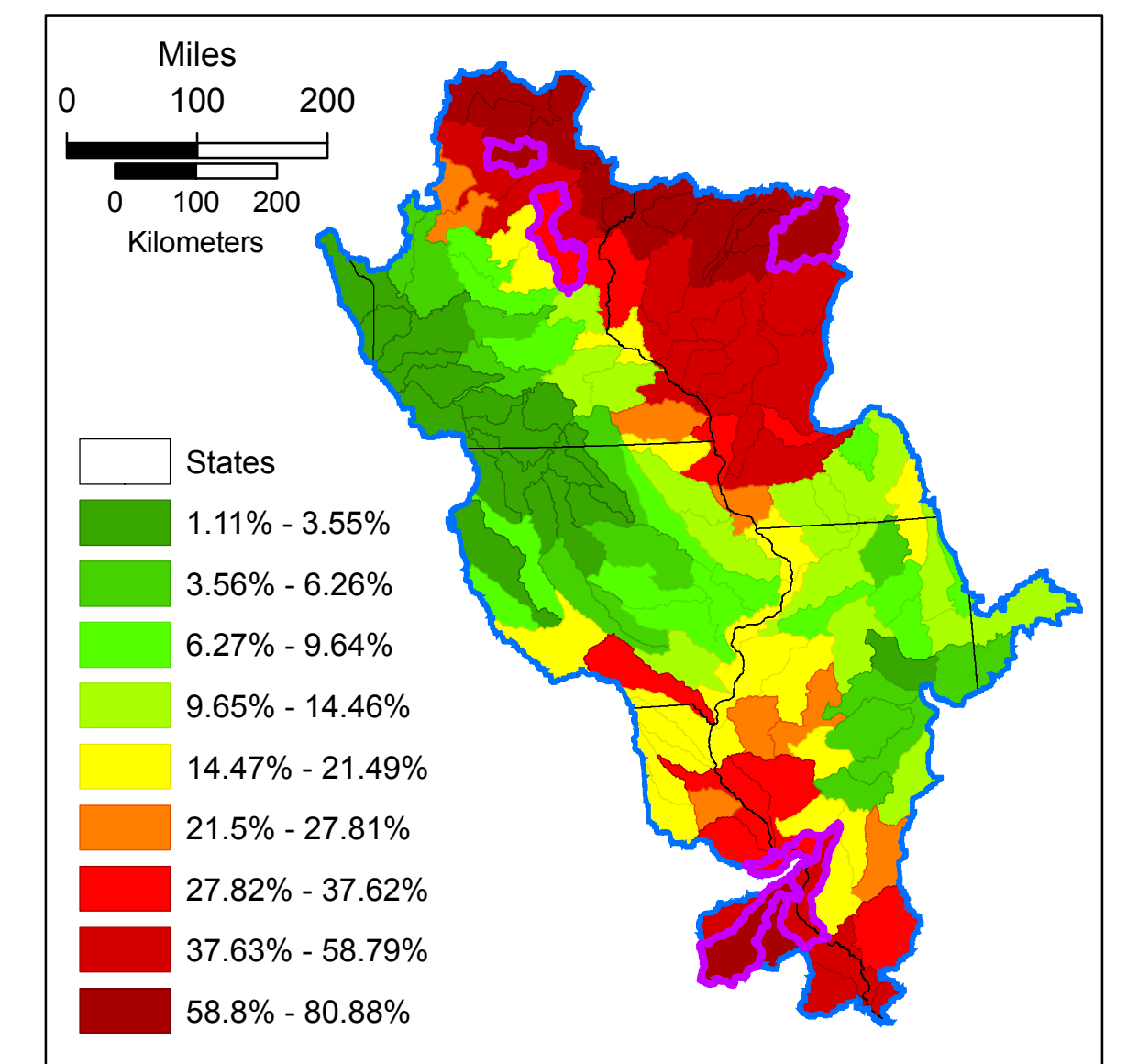
- Major Cities
 - ▭ States
 - ▭ Counties
 - ▭ "Forests, Water, and People" Priority HUCs
 - ▭ 8-Digit HUC
- Priority Forests for Conservation Model
- Low Priority Forest Model Score
 - High Priority Forest Model Score

Priority Forest Model Parameters

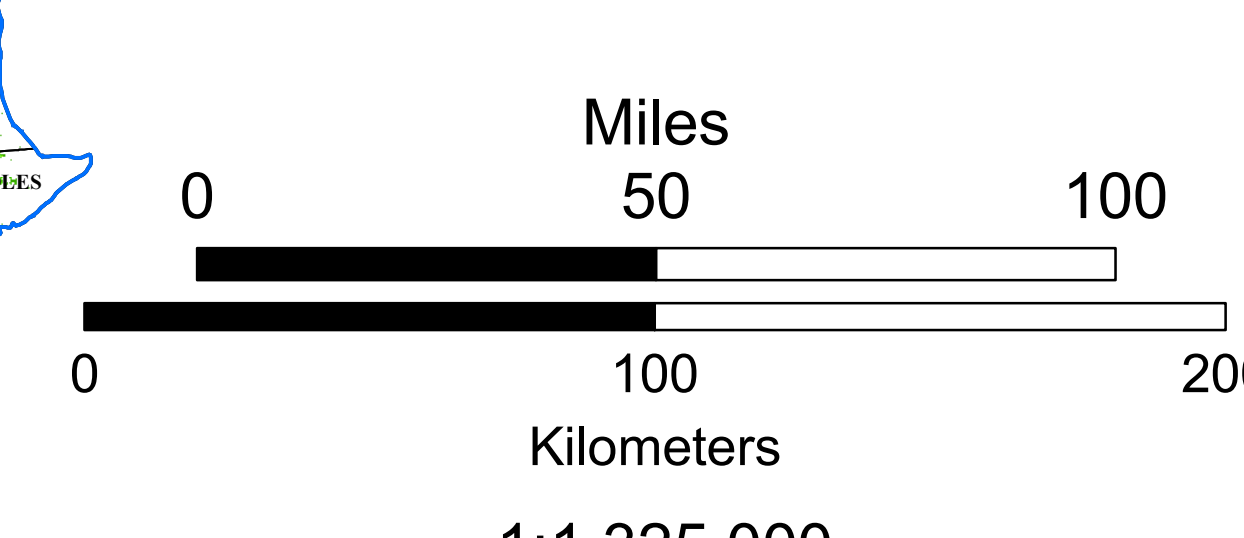
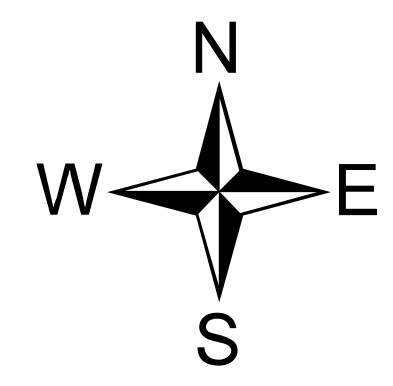
SPARROW Nitrogen Yield		STATSGO Soils Data	
Score	Kg/ha km ² /year	Score	KFFACT (Soil Erodibility Factor)
10	120 - 250	0	Unclassified/Water
9	251 - 500	2	0 - 0.5
8	501 - 750	3	0.06 - 0.10
7	751 - 1000	4	0.11 - 0.15
6	1001 - 1250	5	0.16 - 0.20
5	1251 - 1500	6	0.21 - 0.25
4	1501 - 1750	7	0.26 - 0.30
3	1751 - 2000	8	0.30 - 0.35
2	2001 - 2250	9	0.36 - 0.40
1	2251 - 2500	10	0.41 - 0.45
0	> 2500	10%	Model Influence
15%	Model Influence	Distance to Hydrography	
EPA drinking Water Intakes		Score	Distance (feet)
Score	Adjusted population of water consumers	10	0 - 500
0	0 - 25	9	501 - 1000
1	26 - 58	8	1001 - 1500
2	59 - 83	7	1501 - 2000
3	84 - 170	6	2001 - 2500
4	171 - 207	5	2501 - 3000
5	208 - 281	4	3001 - 3500
6	282 - 470	3	3501 - 4000
7	471 - 694	2	4001 - 4500
8	695 - 1017	1	4501 - 5000
9	1018 - 1541	0	> 5000
10	> 1541	9%	Hydrography (Water)
13%	Model Influence	9%	Model Influence
LINK Bottomland Forest Model Results		Wetlands	
Score	Mean Potential Species Occurrence Score	Score	Description
0	0	0	Other Wetland
1	1 - 10	10	Forest/Scrub Shrub
2	10 - 20	0	Unclassified
3	20 - 30	7%	Model Influence
4	30 - 40	Proximity to Public Lands (Including Tribal)	
5	40 - 50	Score	Distance (miles)
6	50 - 60	10	0 - 0.5
7	60 - 70	7	0.5 - 1.0
8	70 - 80	6	1.0 - 1.5
9	80 - 90	5	1.5 - 2.0
10	> 90	4	2.0 - 2.5
12%	Model Influence	3	2.5 - 3.0
LINK Upland Forest Model Results		2	3.0 - 3.5
Score	Mean Potential Species Occurrence Score	1	3.5 - 4.0
0	0	0	4.0 - 4.5
1	1 - 10	0	4.5 - 5.0
2	10 - 20	0	> 5.0
3	20 - 30	0	Public Lands
4	30 - 40	5%	Model Influence
5	40 - 50	Theobald Change in Housing Density	
6	50 - 60	Score	Description
7	60 - 70	8	No Change
8	70 - 80	10	Increase of 1 Density Class
9	80 - 90	5	Increase of 2 Density Classes
10	> 90	0	Increase of 3 Density Classes
12%	Model Influence	0	Increase of 4 Density Classes
Slope (Percent Rise)		0	Increase of 5 Density Classes
Score	Description	0	Increase of 6 Density Classes
0	0 - 2	0	Increase of 7 Density Classes
2	3 - 5	0	Increase of 8 Density Classes
6	6 - 10	0	Increase of 9 Density Classes
7	11 - 14	0	Increase of 10 Density Classes
8	15 - 18	0	Increase of 11 Density Classes
9	19 - 25	0	Increase of 12 Density Classes
10	26 - 163	0	Increase of 13 Density Classes
10%	Model Influence	0	Increase of 14 Density Classes
		0	Area Removed from Analysis
		5%	Model Influence
Threatened and Endangered Species		Score	Description
		10	Within 1/2 mile buffer
		0	Outside 1/2 mile buffer
		2%	Model Influence



Priority forests for conservation score averaged by 8-digit HUC



Percent forest (NLCD 2001) averaged by 8-digit HUC



Map Date: September 24, 2009

