



RESOURCES AT RISK

To identify areas with high resource conservation value that are not presently protected from land conversion or development, results of this study were evaluated in two ways. First, the mapped results of the Conservation Values Assessment (Figure 2-25, page 77) were overlaid on maps of the existing network of publicly and privately owned lands that are in some type of “permanent” conservation protection, such as Federal, State, county and local parks, forests and wildlife management areas, watershed and agricultural lands in conservation easement, and nonprofit land trust holdings (Figure 2-17, page 64). Military and watershed management lands serve as quasi-open space but were considered unprotected.

Major clusters and large contiguous tracts that are unprotected and had values of 4 or 5 from the Conservation Values Assessment were identified as “conservation focal areas” that deserve special consideration for protection through land purchase, conservation easements or other means (Figure 3-19). These conservation focal areas include high value lands that serve to connect existing publicly or privately owned conservation lands into larger local networks of open space as well as provide regional scale connectivity along the northeast-southwest axis of the broader Highlands area. The letters in the following list correspond to the locations shown in Figure 3-19.

- A. **Depot Hill/Pawling/West Mountain/Great Swamp** area in Putnam and Dutchess counties, New York. This forested upland and rich riverine wetlands complex anchors the northeast corner of the study area and continues north further into Dutchess County and northeast into Connecticut. This focal area was ranked highly in the Conservation Values Assessment due primarily to its value for water resources, productive forest land, and biodiversity.
- B. **East Hudson Highlands** in Dutchess and Putnam counties, New York. There are large tracts of forested ridges and valleys that could be connected to provide a contiguous expanse between Hudson Highlands State Park on the west to Breakneck Ridge on the north to Clarence Fahnestock State Park on the east and along the Appalachian Trail corridor to Camp Smith in the south. This focal area was ranked highly due to its value for productive forest land, biodiversity, and recreation.
- C. **Fort Defiance Hill and Canopus Valley**, Putnam and Westchester counties, New York. This corridor of upland ridges and forested valley connects Anthony’s Nose and Camp Smith in the south with Clarence Fahnestock State Park in the north and includes the Appalachian National Scenic Trail corridor. This focal area was ranked highly due to its value for biodiversity and recreation.
- D. **West end of New Croton Reservoir**, Westchester County, New York. There are large tracts of forested uplands (Dickerson Mountain, Salt Hill to Prickly Pear Hill) that would serve to connect Blue Mountain



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Reservation on the west and Franklin D. Roosevelt State Park on the north and Teatown Lake Reserve in the south. This focal area was ranked highly due to its value for water resources and biodiversity, and secondarily for recreation.

- E. **Tuxedo and Arden Farms** area, Orange County, New York. There are some major unprotected lands in high resource value zones adjacent to the existing Sterling Forest and Harriman State parks. This focal area was ranked highly due to its value for water resources, productive forest land, and biodiversity.
- F. **Ramapo Mountains and Torne Valley**, Bergen County, New Jersey, and Rockland County, New York. There are some major unprotected lands in high resource value zones surrounding the Wanaque Reservoir that would connect existing State and county parks and forests in these two heavily utilized recreational areas. This focal area was ranked highly due to its value for water resources, biodiversity, and recreation.
- G. **Wyanokie and Farny Highlands**, Passaic and Bergen counties, New Jersey. There are some major unprotected lands in nearby Wanaque and Split Rock reservoirs that would connect existing State and county parks and forests in these two heavily utilized recreational areas. This focal area was ranked highly due to its value for water resources and recreation, and secondarily for biodiversity and forest land.
- H. **Pequannock Watershed** area in Morris, Passaic, and Sussex counties, New Jersey. This critical watershed area serves as the core of the northern New Jersey Highlands and serves as a major hub connecting existing open space areas. Major gaps in conservation protection include the adjacent areas of Sparta Mountain and the Farny Highlands. This focal area was ranked highly due to its multiple values for water resources, forest land, biodiversity, and recreation.
- I. **Sparta Mountain/Lubber's Run** area in Morris and Sussex counties, New Jersey. The wooded ridges of Sparta Mountain and Lubber's Run valley provide an important greenway corridor connecting Mahlon Dickerson Reservation in the north and Allamuchy Mountain State Park in the south. Major gaps in conservation protection include the nearby areas of Mase Mountain. This focal area was ranked highly due to its value for productive forest land, biodiversity, and recreation.
- J. **Upper Pohatcong/Pequest** area in Warren County, New Jersey. These forested ridges and wetlands centered around the Pequest Wildlife Management Area serve as an important ground water recharge, wildlife habitat, and outdoor recreation area. This focal area was ranked highly due to its value for water resources and recreation and secondarily for its productive forest and farm land.
- K. **Scott Mountain/Musconetcong Ridge** area in Warren and Hunterdon counties, New Jersey. These forested ridges and the neighboring productive farmland of the Delaware, Pohatcong, and Musconetcong valleys form a large contiguous area of high-quality rural landscape. This focal area was ranked highly due to its value for biodiversity and productive farmland, and secondarily for forest land and recreation.

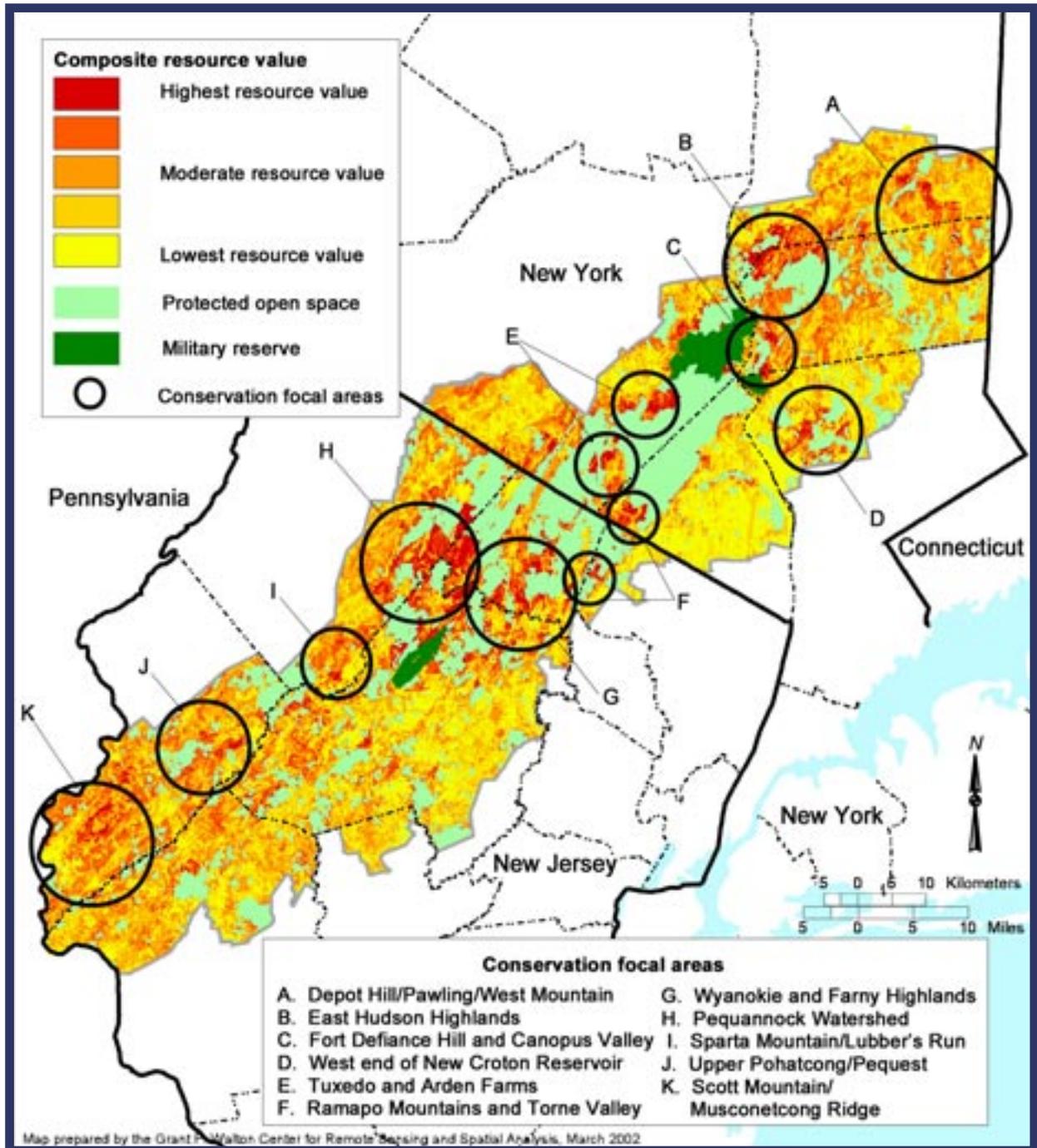


Figure 3-19. Conservation focal areas. Regional conservation focal areas are places in the Highlands where three conditions coincided: large contiguous tract or major cluster of land, a composite resource value of 4 or 5 from the Conservation Values Assessment, and absence of permanent protection.



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Table 3-7 lists the acreages of protected and unprotected lands by resource and conservation value. Additional high value lands in need of protection that were not identified as conservation focal areas are scattered throughout the Highlands. Protecting only the higher ranked lands with a conservation value of 4 or 5 is not necessarily sufficient to achieve the stated goals of maintaining Highlands water resources, biodiversity, recreational opportunities, and productive farmland and forestland. Lower ranked lands should also receive consideration in future land use planning, and in natural resource and watershed management decisions. This analysis does not provide an exhaustive compilation of all possible conservation focal areas in the Highlands. The data presented are intended for regional analyses and discussion; however, local-level data will be accessible through an interactive mapping Web site being developed by Rutgers University's Center for Remote Sensing and Spatial Analysis as part of the New York – New Jersey Highlands Technical Report.

As a second means of evaluating conservation priorities, we used the results of the econometric analysis to highlight those areas with the highest probability of change in the short term and then cross-tabulated them with the results of the conservation values assessment (Figure 3-20). The results were reclassified into four categories:

Category*	Acres	Percent**
I High likelihood of change, high conservation value	98,114	14.9
II Low likelihood of change, high conservation value	338,462	51.4
III High likelihood of change, low conservation value	86,531	13.1
IV Low likelihood of change, low conservation value	135,786	20.6

*Lands given a value of 3 or more in the Conservation Values Assessment were classified as having a high conservation value.

**Percent figures are based on the area of land determined to be available for future development in the study area.

Approximately 100,000 acres of the New York – New Jersey Highlands region was categorized as having a high likelihood of change and higher conservation value, and represents those areas that should be considered priorities for future open space purchases and land use planning. These Category I lands might also be expected to have higher per acre land purchase or easement costs due to high development pressure. This higher land cost as well as smaller parcel sizes are expected to complicate open space protection efforts. A much larger area of approximately 340,000 acres was categorized low likelihood of change, high conservation value in the short term (Category II). Many of the large tracts of high conservation value lands identified as conservation focal areas fall into this category and therefore represent opportunities for open space protection at a potentially lower cost per acre.



Table 3-7. Protected and unprotected land in the Highlands, by resource and conservation value

Resource and Conservation Value	Protected land*		Unprotected land**		Total acres
	Acres	Percent of total	Acres	Percent of total	
Quality water supply					
1 Lowest value	10,367.56	5.31	184,849.17	94.69	195,216.73
2 Lower value	140,774.02	26.32	394,145.43	73.68	534,919.45
3 Medium value	71,587.05	23.50	233,074.62	76.50	304,661.67
4 Higher value	37,248.98	15.66	200,540.17	84.34	237,789.15
5 Highest value	51,642.76	36.07	91,538.45	63.93	143,181.21
Totals	311,620.37	--	1,104,147.84	--	1,415,768.21
Productive forest					
1 Lowest value	12,015.72	11.62	91,374.11	88.38	103,389.83
2 Lower value	22,994.42	13.52	147,054.43	86.48	170,048.85
3 Medium value	23,009.10	21.99	81,605.45	78.01	104,614.55
4 Higher value	97,719.23	46.10	114,259.11	53.90	211,978.34
5 Highest value	87,894.75	55.71	69,889.96	44.29	157,784.71
Totals	243,633.22	--	504,183.06	--	747,816.28
Contiguous interior forest habitat***					
	197,527.62	47.46	218,654.82	52.54	416,182.44
Biodiversity					
1 Lowest value	25,136.74	15.10	141,362.92	84.90	166,499.66
2 Lower value	3,731.10	18.20	16,770.50	81.80	20,501.60
3 Medium value	33,158.94	15.77	177,136.77	84.23	210,295.71
4 Higher value	125,781.56	36.76	216,371.28	63.24	342,152.84
5 Highest value	89,321.63	44.91	109,566.60	55.09	198,888.23
Totals	277,129.97	--	661,208.07	--	938,338.04
Productive farmland					
1 Lowest value	2,129.42	9.15	21,149.66	90.85	23,279.08
2 Lower value	510.17	3.00	16,502.07	97.00	17,012.24
3 Medium value	4,347.13	8.57	46,375.14	91.43	50,722.27
4 Higher value	1,190.25	3.04	37,916.61	96.96	39,106.86
5 Highest value	9,586.07	90.19	1,042.81	9.81	10,628.88
Totals	17,763.04	--	122,986.29	--	140,749.33
Recreation					
1 Lowest value	597.35	0.39	152,149.70	99.61	152,747.05
2 Lower value	1,778.26	0.74	237,427.76	99.26	239,206.02
3 Medium value	2,291.99	0.61	372,797.39	99.39	375,089.38
4 Higher value	26,210.68	18.92	112,346.74	81.08	138,557.42
5 Highest value	280,132.73	83.06	57,138.34	16.94	337,271.07
Totals	311,011.01	--	931,859.93	--	1,242,870.94
Conservation values assessment					
1 Lowest value	745.24	0.24	313,449.57	99.76	314,194.81
2 Lower value	14,448.04	5.40	253,042.93	94.60	267,490.97
3 Medium value	39,367.51	13.37	255,042.92	86.63	294,410.43
4 Higher value	62,041.46	23.74	199,274.75	76.26	261,316.21
5 Highest value	195,073.06	69.50	85,614.10	30.50	280,687.16
Totals	311,675.31	--	1,106,424.27	--	1,418,099.58

*Protected land is presently in conservation ownership.

**Unprotected land is not permanently protected as open space or conservation land.

***Contiguous interior forest habitat was analyzed separately as a result of feedback received from the public and the work group for this study, due to the importance of interior forest in supporting habitat requirements for mammals and neotropical songbirds throughout the Highlands region.



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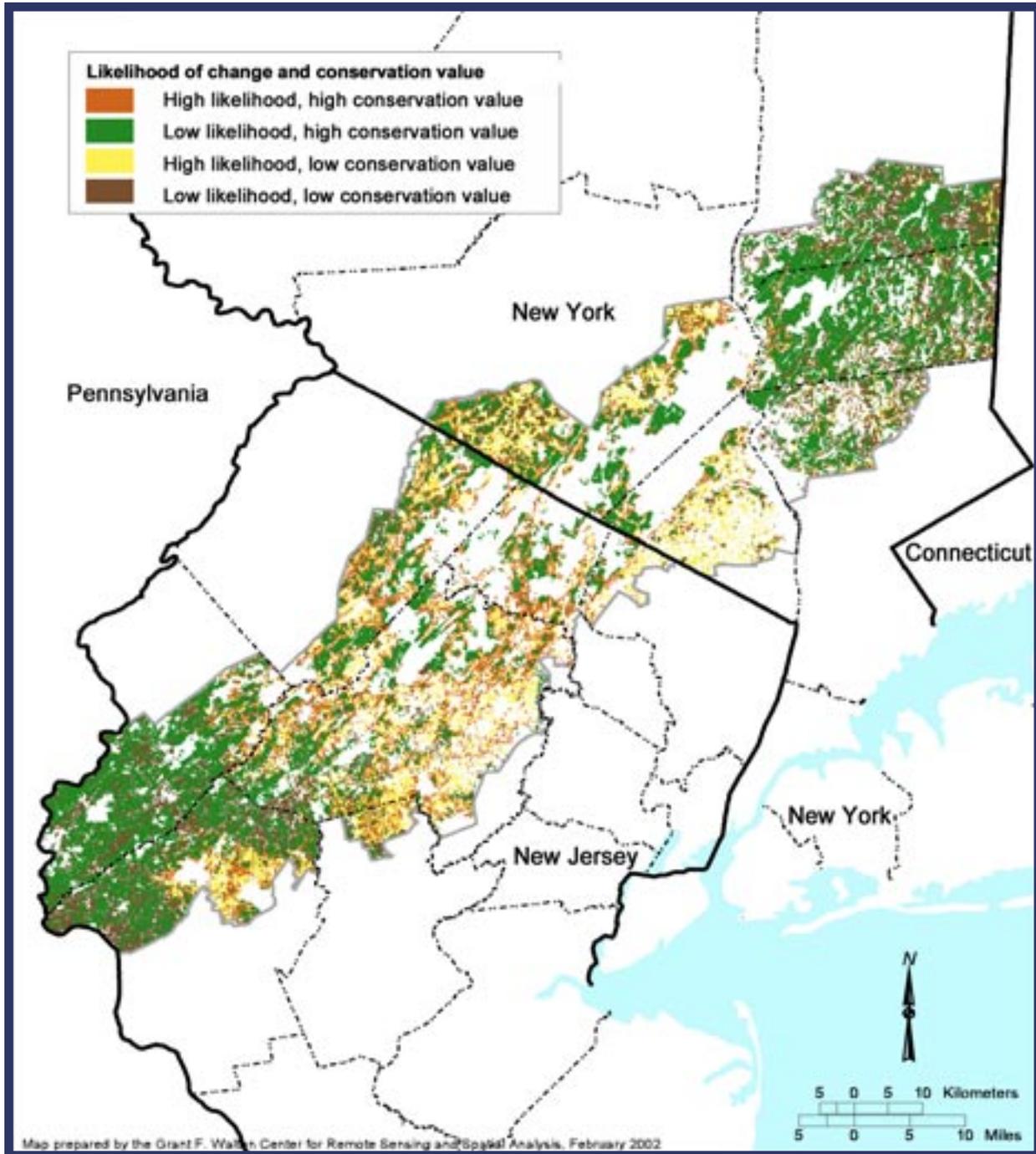


Figure 3-20. Conservation priorities. Land that had a value of 3 or more in the Conservation Values Assessment and the highest probability of change in the Econometric Analysis are considered priorities for conservation.

**KEY FINDINGS:**

- Of the land that ranked higher (value of 4) and highest (value of 5) in the Conservation Values Assessment, **the following amounts were determined to be unprotected:**
 - **Water—77 percent of the land most valued** for water resources or 292,000 acres are unprotected. If all watershed purveyor lands are considered “protected,” then this amount is lowered to 73 percent.
 - **Productive forest—50 percent of the land most valued** as productive forest or 184,000 acres are unprotected.
 - **Contiguous interior forest habitat—53 percent of all interior forests** or 219,000 acres are unprotected.
 - **Biodiversity—60 percent of the land most valued** for biodiversity or 326,000 acres are unprotected.
 - **Productive farmland—78 percent of the land most valued** as productive farmland or 39,000 acres are unprotected.
 - **Recreation—36 percent of the land most valued** for recreation or 169,500 acres are unprotected.
 - **Of the land that is highly valued for all five resources** (water, productive forest, biodiversity, productive farmland, and recreation) **53 percent** or 285,000 acres are unprotected.
- Combining the results of the Conservation Values Assessment and the Econometric Analysis shows that **15 percent** or 98,000 acres **of the New York – New Jersey Highlands has a high conservation value and a high likelihood of change.**



SECTION 3 REFERENCES

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