



RECREATION

Open spaces in The New York – New Jersey Highlands provide numerous opportunities for both passive and active outdoor recreation. The Highlands hills, forests, lakes, and streams give the metropolitan region's 20 million citizens a chance to escape to nature within a 1- to 2-hour drive from home. There are more than 311,000 acres of local, county, State, and Federal parks in the Highlands (Figure 2-17). The attendance at Highlands major outdoor recreational venues is over 14 million visitor days per year. This level of visitation is greater than the visitation at such famed national parks as Yellowstone, Yosemite, and Grand Canyon. The region's parks and trails provide outdoor enthusiasts everything from short walks to long-distance excursions (Figure 2-18).

The Highlands extensive network of rivers, streams, lakes, and reservoirs makes it one of the more popular fishing destinations in the region. In addition to the Highlands' publicly accessible waters, private lakes and beaches provide opportunities for boating and swimming (Figure 2-19). While hunting has decreased slightly in popularity, public participation in nonconsumptive uses of wildlife such as bird-watching and wildlife viewing is on the rise, and both New York and New Jersey have established a network of wildlife viewing sites open to the public. Developed recreational facilities such as downhill skiing areas and golf courses are another important component of the outdoor recreational picture.

Population projections to the year 2010 indicate that the demand and need for open space and outdoor recreation opportunities will remain high (New Jersey Department of Environmental Protection Green Acres Program 1999a). It is estimated that an additional 47,000 acres of public parkland are needed to meet the Balanced Land Use Guidelines suggested by the New Jersey model for the six core counties in New Jersey alone (New Jersey Department of Environmental Protection Green Acres Program 1999a). These calculations were based on the assumption of no additional development. New Jersey's projected Statewide deficit for the year 2010 is 270,000 acres. However, New Jersey looked beyond these figures and set the ambitious goal of preserving an additional 1 million acres within the next 10 years (New Jersey Department of Environmental Protection Green Acres Program 1999b). The Highlands region is identified as a high priority area for meeting these open space demands (New Jersey Department of Environmental Protection Green Acres Program 1999a).

Similarly, in New York State, the Highlands are a focal point of open space and greenway planning and protection. The Hudson River and Highlands area of New York were designated as part of the Hudson River Valley National Heritage Area in 1996, recognizing the importance of the history and the resources of the Hudson River Valley to the nation. In 1991, the State of New York passed the Hudson River Valley Greenway Act of 1991 to create a regional planning process to promote the protection of the region's natural and cultural resources.



RECREATION

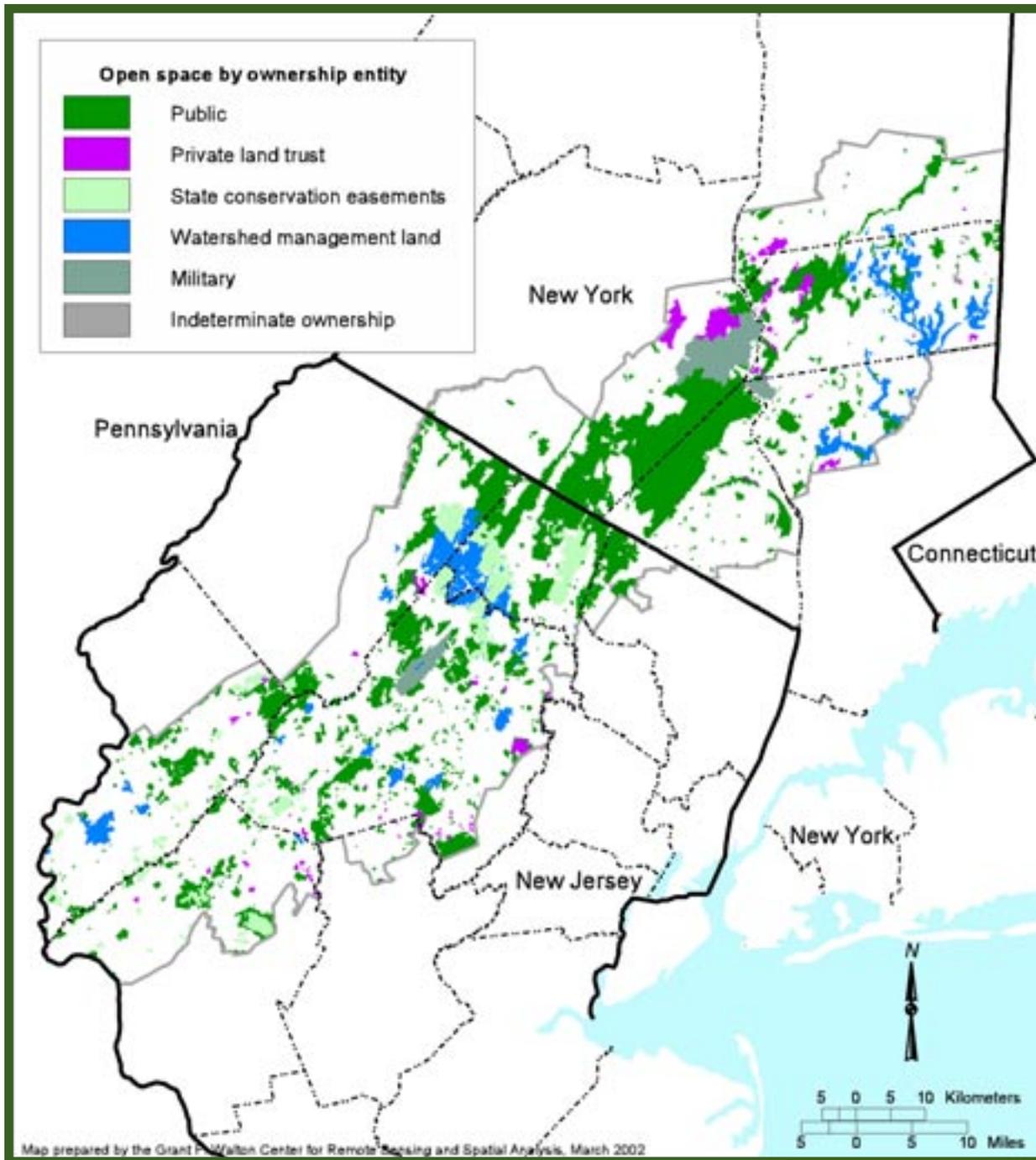


Figure 2-17. Ownership of open space. More than 311,000 acres of publicly and privately owned open space were found in the Highlands in 2001.

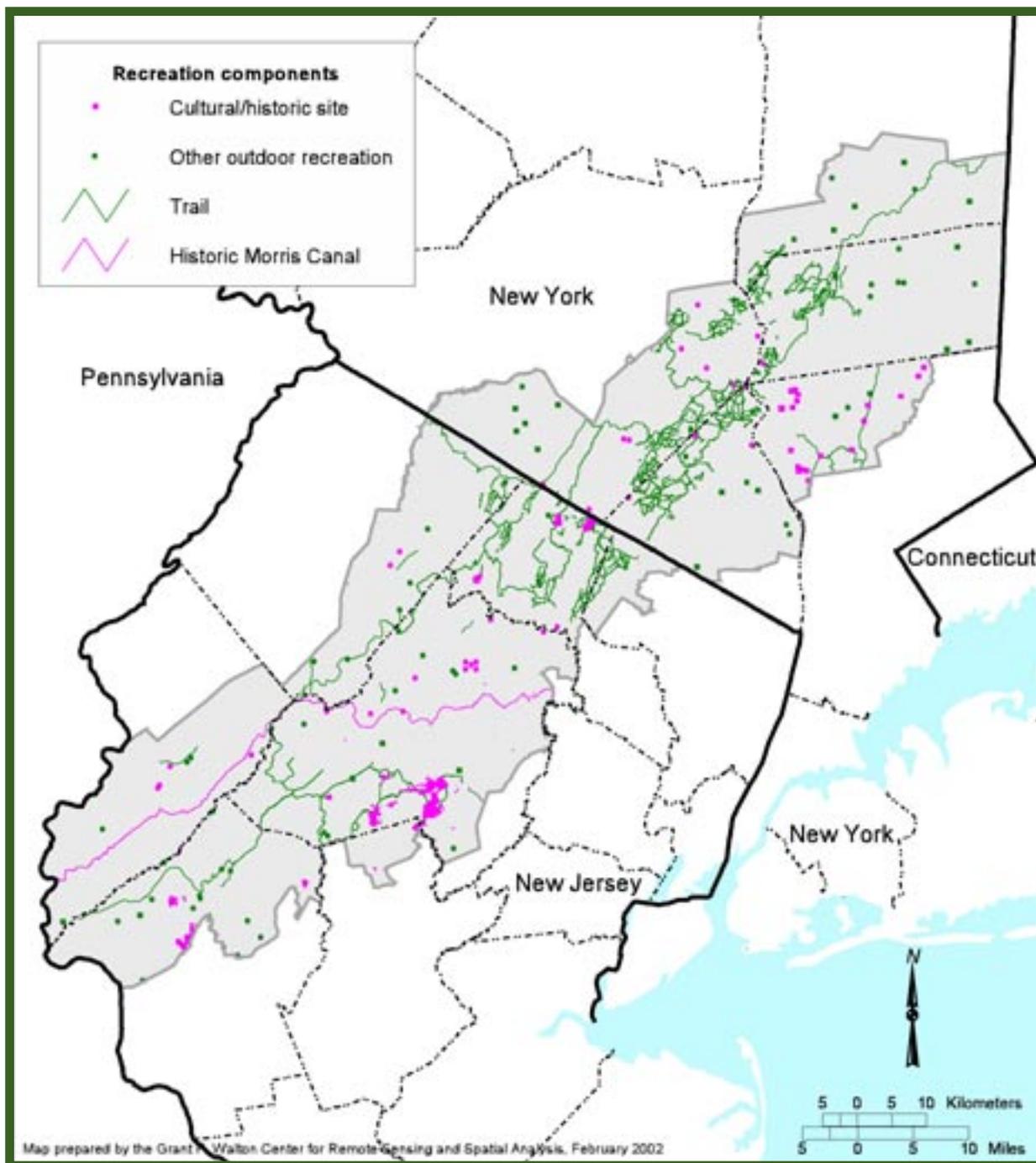


Figure 2-18. Trails, and cultural and historic sites. The Highlands contain a wealth of trails and cultural and historic sites.



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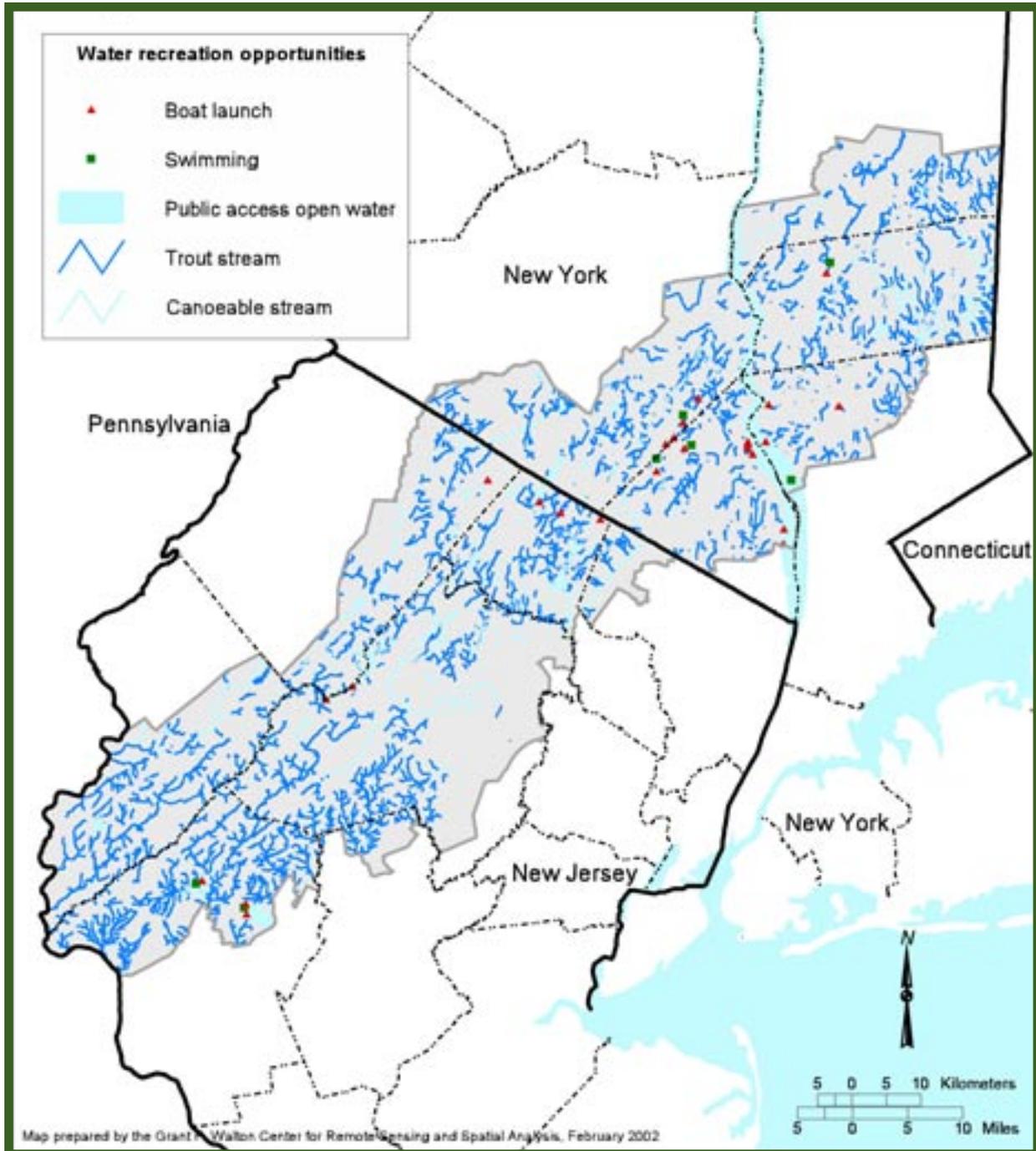


Figure 2-19. Water recreation resources. The opportunities for water-based recreation in the Highlands are many.



The Hudson River is also a designated American Heritage River, a Presidential Initiative to help communities revitalize their rivers and the adjacent shoreline. This is an umbrella initiative designed to more effectively use the Federal government's many resources through a plan that is designed and driven by local communities.

During the 1990's, a number of ambitious open-space efforts were initiated:

- Of special note was the acquisition of Sterling Forest Park through a partnership of Federal, State (both New York and New Jersey), and private entities. The initial purchase in 1998 of 15,280 acres has been supplemented by additional purchases, with more on the horizon. The park consists of nearly 20,000 acres of forest, lakes, streams and wetlands and contains significant historical and cultural resources.
- Through its Land Acquisition and Stewardship Program (initiated in 1997), the City of New York embarked on an ambitious campaign to purchase additional watershed lands to protect the water quality in the Croton Reservoir system. More than 4,500 acres have been protected to date. Where possible, compatible recreational uses such as hiking, fishing, and hunting will be allowed.
- The Pequannock Watershed lands (32,800 acres) in New Jersey, owned and managed by the City of Newark, provide important recreation and scenic values to the region. Since the 1992 Highlands Regional Study, New Jersey has purchased conservation easements to more than 15,500 acres of this land, protecting it from future development.

Recreation and open space are affected by the changes in population and land use in the Highlands. Land development, especially along major roadways and within the viewshed, can significantly affect the outdoor experience and its recreational economic value. Continued subdivision of land will make parkland acquisition more costly and access to private land less likely, and reduce the buffer that private open space provides to public parks.



RECREATION: KEY FINDINGS

KEY FINDINGS:

- **More than 20 percent of the Highlands is in publicly or privately protected open space.** Of these 311,700 acres 5 percent is in Federal ownership, 56 percent in State parks, forests, and wildlife management areas; 19 percent is in watershed management or other conservation easements; 10 percent is in county parkland; 5 percent is in local parkland; and 5 percent is in nonprofit land trusts. These figures are based on best available data and may underestimate the amount of open space in local parks and land trusts.
- **More than 23,500 acres of military lands** including the Picatinny Arsenal, West Point, and Camp Smith Military Reservations are in the Highlands. Although a percentage of these areas are not physically accessible, these lands provide scenic and wildlife values.
- **More than 14 million people visit the Highlands** each year for outdoor recreational opportunities. This total is for attendance at State parks and forests in Morris, Orange, and Westchester counties, and Morristown National Historic Park, and does not include other county parks or Federal or State wildlife management areas. The total visitation for these parks rose steadily during the 1990's (from approximately 8 million to more than 14 million).
- **Almost 350 miles of linear recreational features** including such notable regional hiking trails as the Appalachian Trail, Highlands Trail, and Long Path are located in the Highlands. Many of the region's long-distance rail-trails and county greenways are multiple-use trails supporting bicycling, cross country skiing, and horse-back riding—in addition to walking. There are also more than 620 miles of local hiking trails. **Approximately 25 percent of local hiking trails are on private lands.**
- The Highlands contains **numerous historical and cultural resources** including Revolutionary War sites, such as the Morristown National Historical Park, West Point and Stony Point Battlefields, remnants of an earlier industrial past such as the Morris Canal and iron forges, along with historic farms, homes, and villages. **While 165 sites were documented**, many more sites remain to be catalogued and mapped.
- With **1,860 miles of trout streams** in the Highlands, fishing is a popular recreational sport. The extensive network of cold-water trout fisheries throughout the Highlands makes it one of the more popular fishing destinations in the region. The region is also well-known for the warm and cold-water fisheries opportunities that the area's numerous lakes and reservoirs provide.



RECREATION: KEY FINDINGS

- **The Highlands contain 535 miles of canoeable rivers.** In addition, there are **dozens of lakes and reservoirs** with public boat ramps and a spectacular stretch of the Hudson River that **provide fishing and boating opportunities to the general public.**
- Hunting has been a very popular recreational activity in the Highlands. There are **approximately 25,000 acres of public open space accessible for both small game and deer hunting.** Additional lands are owned and managed by private individuals and gun clubs with the primary purpose of recreational hunting. However, in recent years the number of hunting licenses sold has been on the decline and there is **concern that** as the primary deer control mechanism, **continued decline of hunting will result in increased deer overpopulation problems.**
- Golf is an increasingly popular outdoor recreational activity. **There are more than 40 golf courses in the Highlands.** Golf courses can have negative environmental impacts and must be carefully planned to minimize conflicts with other resource values.
- **More than 140,000 acres** of the Highlands' ridges and valleys, including the nationally significant Hudson Valley, **have exceptional scenic value.** There are more than 170 recreational trail viewpoints and lookout towers available for scenic viewing of the Highlands.



CONSERVATION VALUES ASSESSMENT

CONSERVATION VALUES ASSESSMENT

A Conservation Values Assessment model was developed to translate conservation priorities into geographic information. The geographic locations of the natural resources described above were mapped using geographic information system (GIS) technology. This GIS-based model was used to integrate these various sources of information to provide a coherent picture of relative resource conservation value across the region, highlighting areas that are a priority for conservation management. This assessment of conservation values updates and expands on a 1999 Priority Area Assessment conducted by the Regional Plan Association (2001).

The GIS-based Conservation Values Assessment model weighed the conservation value of these various resources in two ways. First, the model was based on achieving the following goals for each of the five general resource types:

- Maintaining an adequate supply of high quality water;
- Conserving productive forest lands;
- Conserving areas of high biodiversity and habitat value;
- Conserving productive agricultural land; and
- Providing adequate recreational opportunities for natural, historic and cultural resource-based uses.

Second, individual resources within each of the five general resource areas were assigned a value ranging from 0 to 5 (highest value) based on the following rules:

1. The greater degree to which conservation of the landscape would directly protect a resource or reduce the likelihood of negative impacts was ranked higher.
2. Lands that protect human health (e.g., drinking water) were ranked higher than lands that protect ecosystem health (e.g., trout production waters), which were ranked higher than lands that provide a resource for human use (e.g., trout maintenance waters).
3. Lands for which a significant public investment (e.g., publicly owned park land) has been made were ranked higher than lands for which no public investment has been made.

Figures 2-20 to 2-24 show the results of the analysis for each resource type, and Table 2-6 lists the corresponding acres. The values for all five resource types were mapped together to determine where the resource values overlap, that is, where the values for the different resources are the same (Figure 2-25). For example, areas with the highest resource value are where all the resources have a conservation value of 5. The total number of acres for each conservation value are as follows:



CONSERVATION VALUES ASSESSMENT

Conservation value	Acres	Percent of Highlands region
1 (lowest)	314,195	22.1
2	267,491	18.9
3	294,410	20.8
4	261,316	18.4
5 (highest)	280,687	19.8

In Section 3 under Resources at Risk, the results of the Conservation Values Assessment are further analyzed using maps of the existing network of publicly and privately owned lands in the Highlands. The results identify major clusters and large contiguous tracts that are unprotected; and because they had values of 4 or 5 in the Conservation Values Assessment, may deserve special consideration for future open space protection.

Table 2-6. Conservation values and area of resources in the Highlands

Value*	Water		Forest		Biodiversity		Farmland		Recreation	
	acres	%	acres	%	acres	%	acres	%	acres	%
0**	2,466		670,751		480,242		1,278,043		175,744	
1	195,217	13.8	103,390	7.3	166,500	11.7	23,279	1.6	152,747	10.8
2	534,919	37.7	170,049	12.0	20,502	1.4	17,012	1.2	239,206	16.9
3	304,662	21.5	104,615	7.4	210,296	14.8	50,722	3.6	375,089	26.4
4	237,789	16.8	211,978	14.9	342,153	24.1	39,107	2.8	138,557	9.8
5	143,181	10.1	157,785	11.1	198,888	14.0	10,629	0.7	337,271	23.8

*Highest value is 5.

**Lands or areas that were already developed or were not considered pertinent for the analysis of a particular resource were not assigned a value. For example, water areas were not calculated as part of the total acreage for assessment of biodiversity, farmland, or forest land.



CONSERVATION VALUES ASSESSMENT

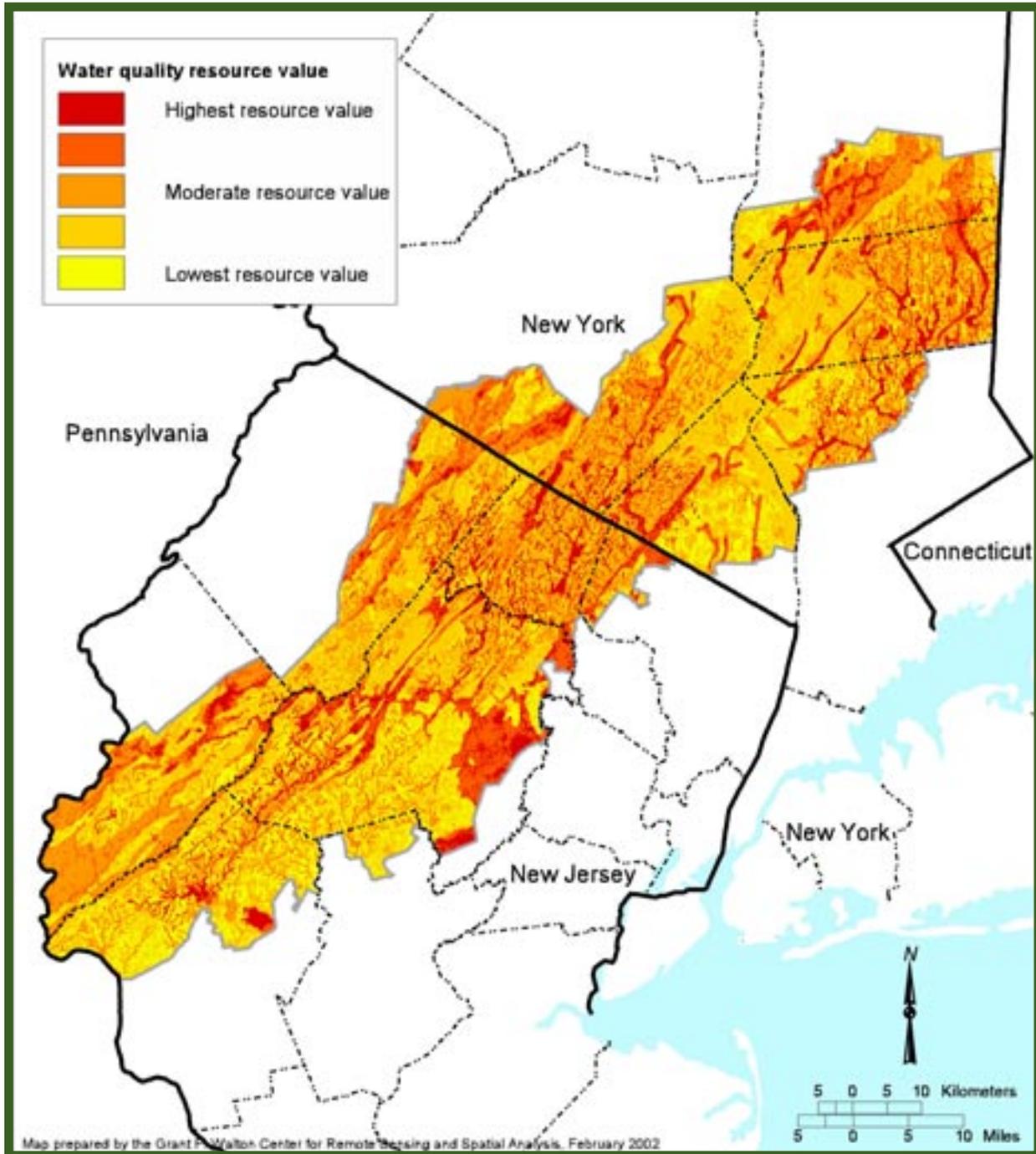


Figure 2-20. Water resource values. Almost half of the Highlands study area has medium to high value for the quality of its water resources, as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT

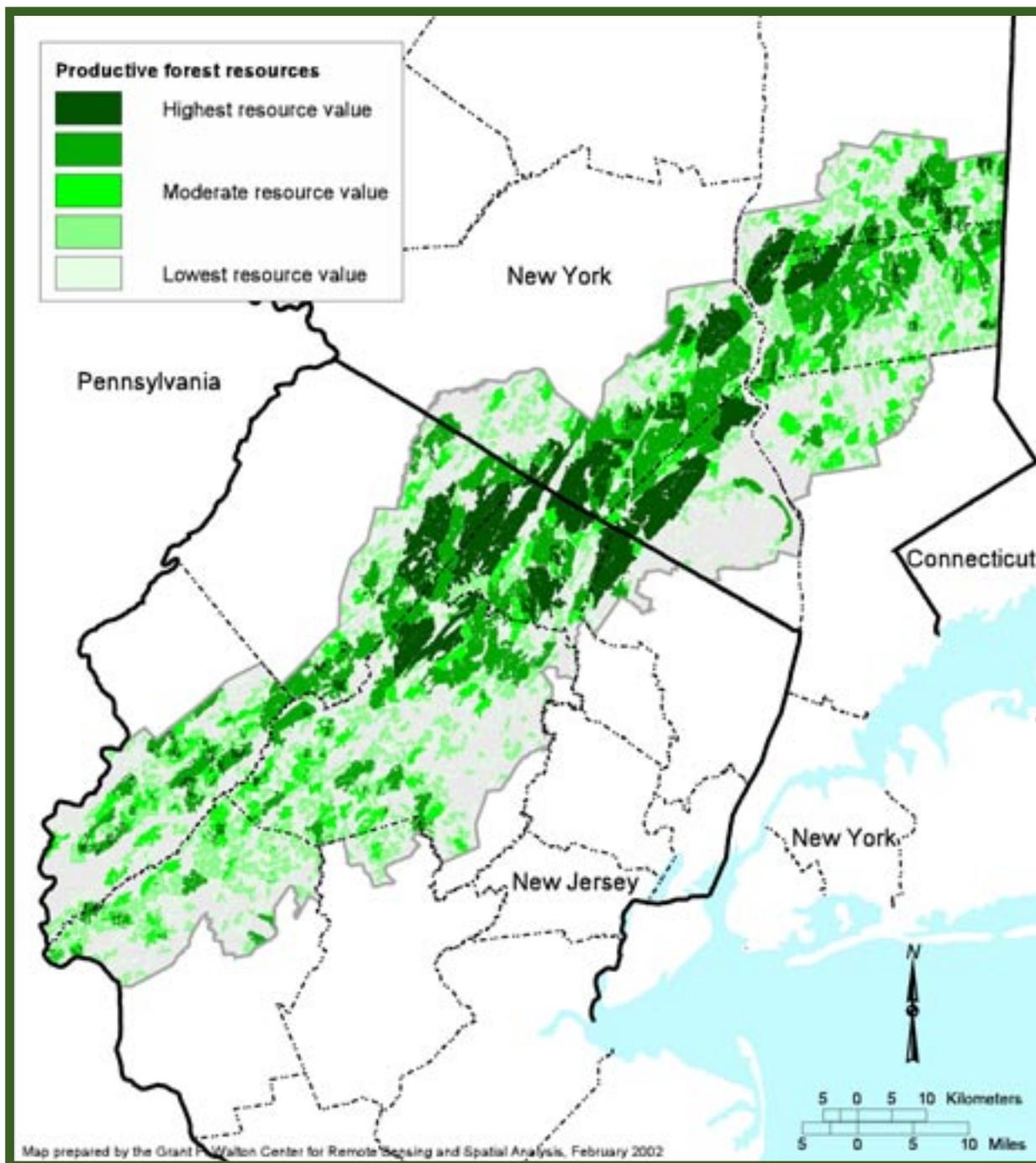


Figure 2-21. Forest resource values. About a third of the Highlands study area has medium to high value for its productive forest resources, as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT

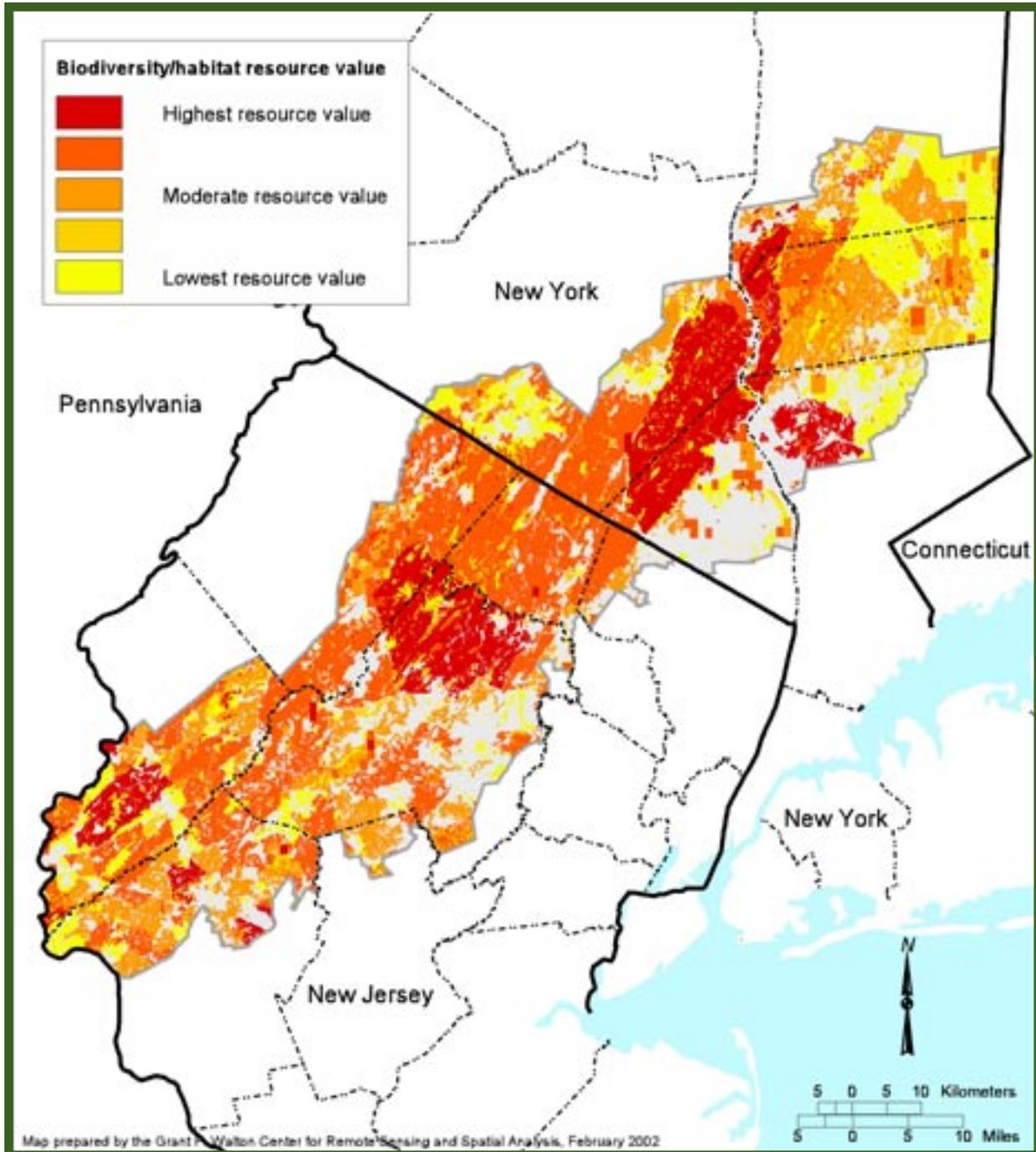


Figure 2-22. Biodiversity resource values. More than half of the Highlands study area is high value habitat that supports State or Federally listed threatened and endangered species, as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT

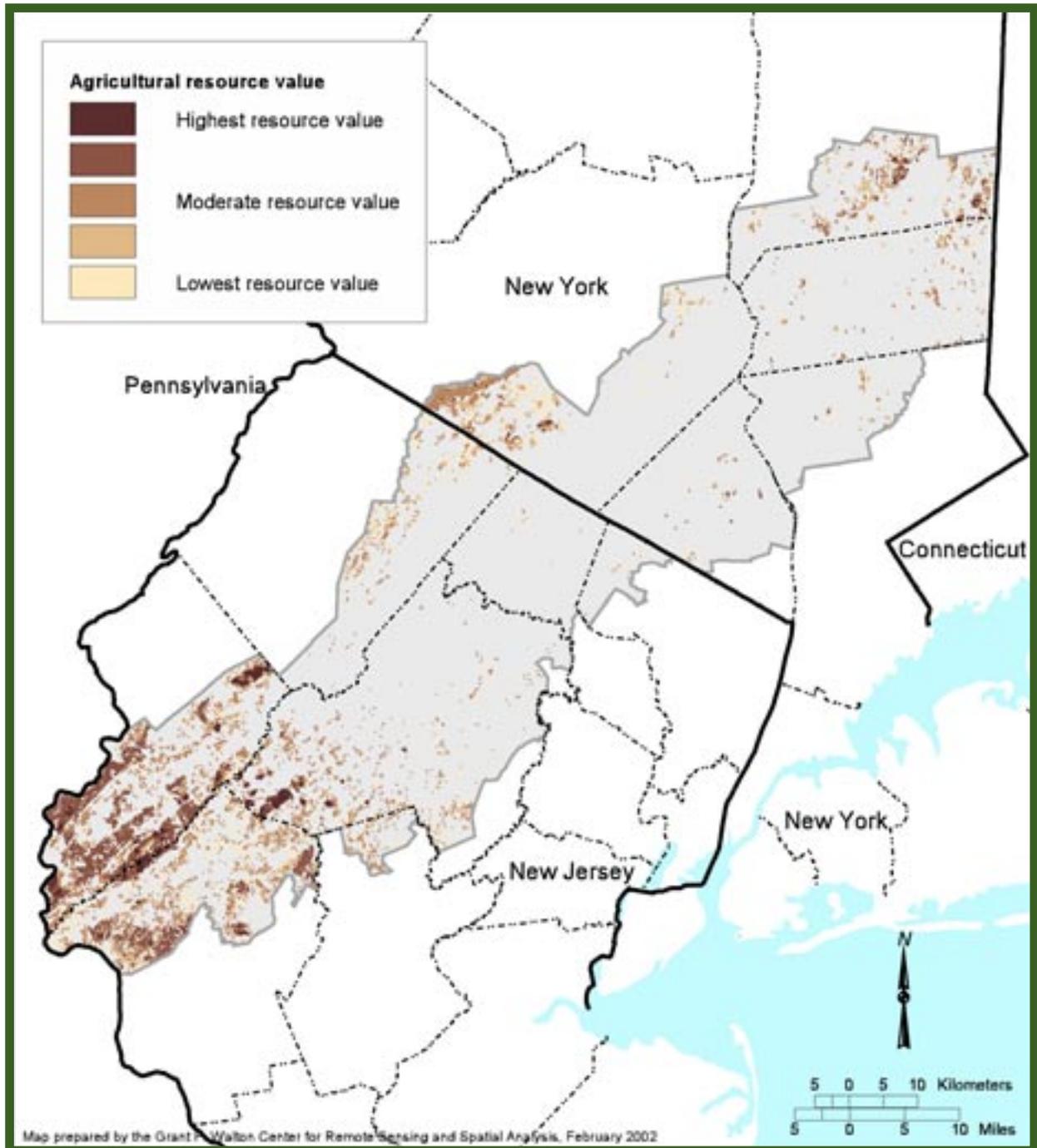


Figure 2-23. Farmland resource values. Over 100,000 acres (7 percent) of the Highlands study area has medium to high value for its productive farmland, as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT

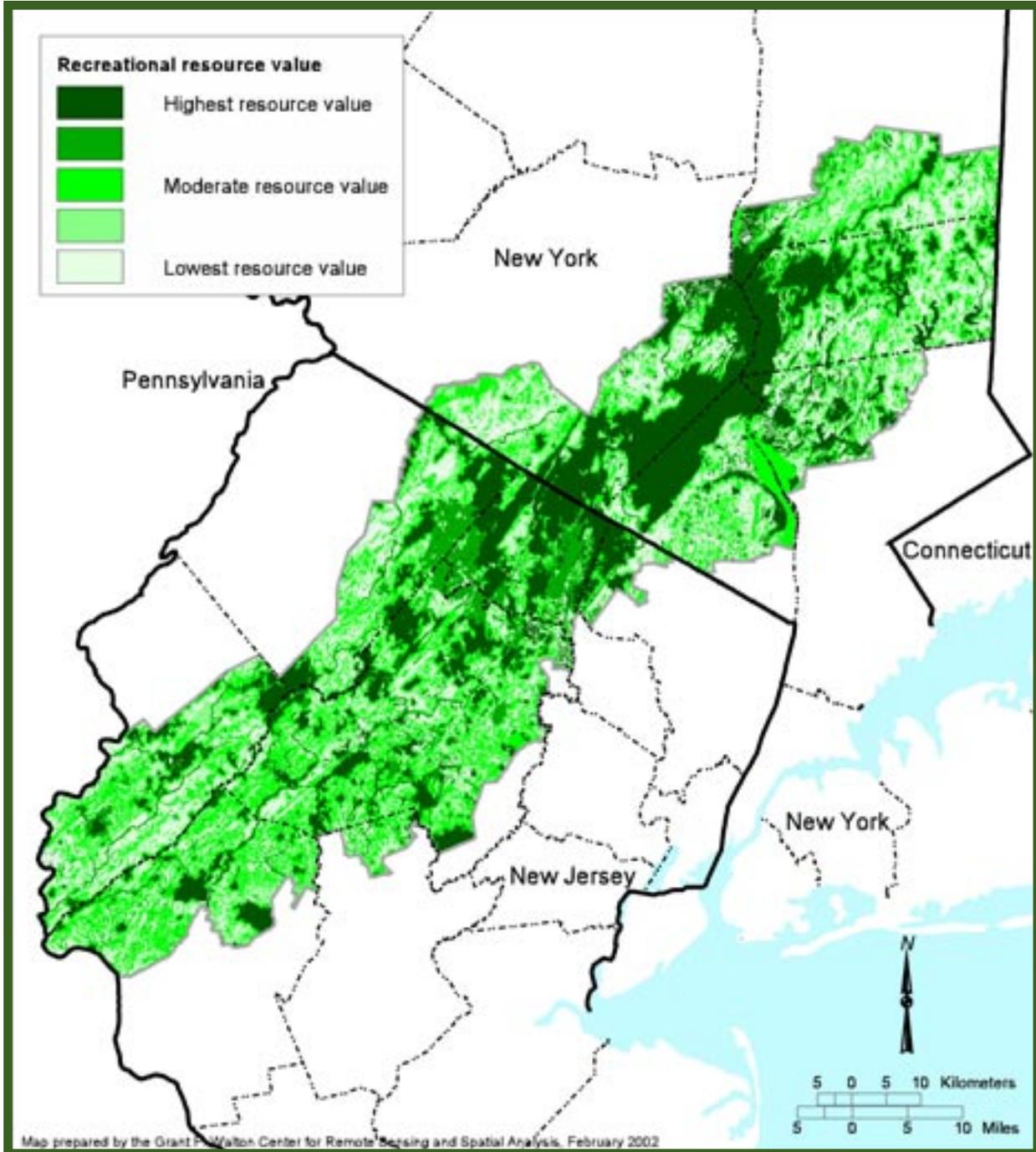


Figure 2-24. Recreation resource values. Sixty percent of the Highlands study area has medium to high value for recreation opportunities, historical and cultural sites, and open space, as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT

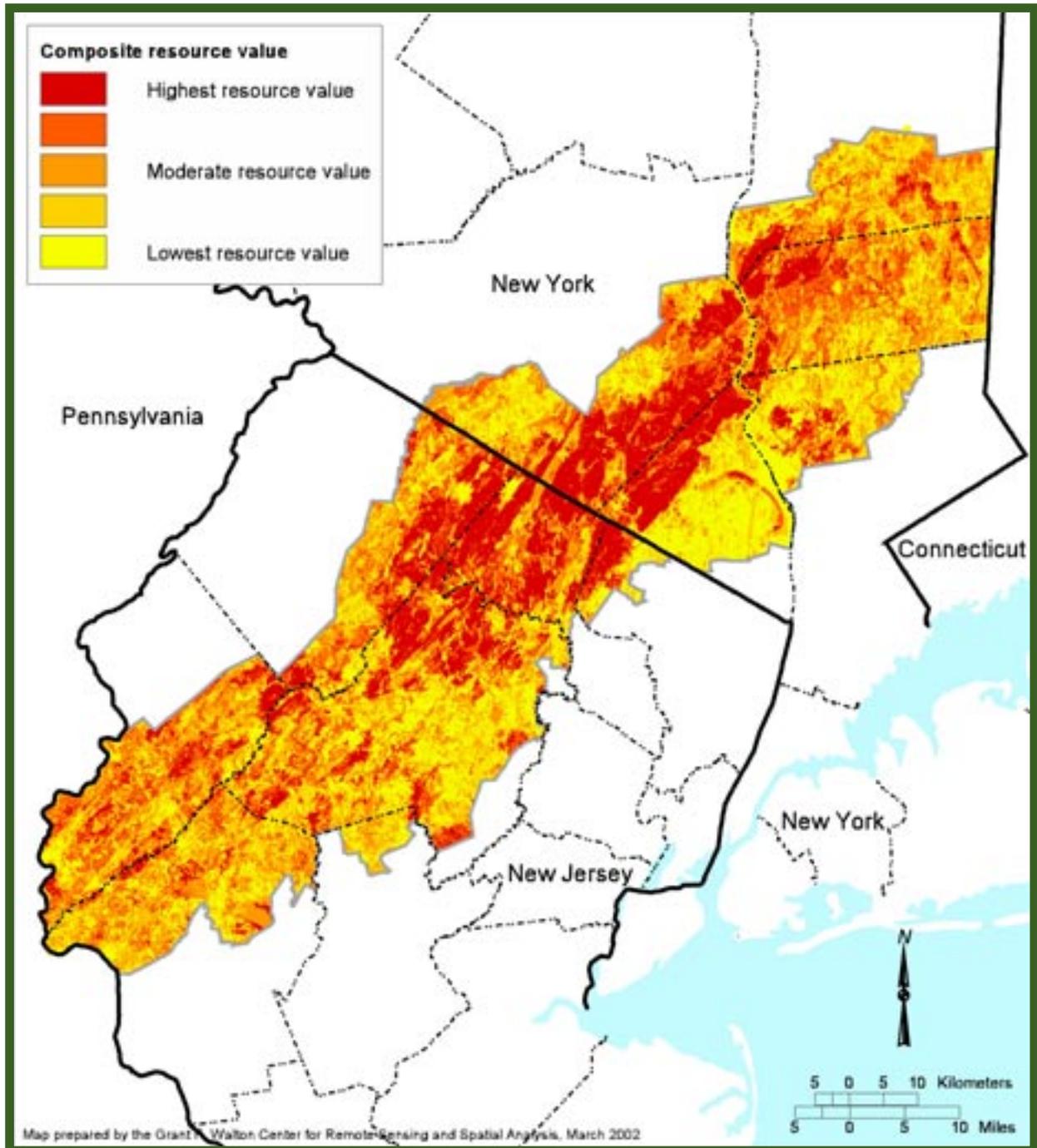


Figure 2-25. Composite conservation values. Over 500,000 acres (38 percent) of the Highlands study area has exceptional conservation value, that is, higher or highest value for all resource types (water, forest, biodiversity, farmland, and recreation), as determined by the Conservation Values Assessment.



CONSERVATION VALUES ASSESSMENT: KEY FINDINGS

KEY FINDINGS:

- **While all of the Highlands serves as watershed land, nearly 50 percent (685,632 acres) has medium to high values deserving special consideration.** A number of factors are important to conserving the quality and quantity of Highlands water, including restricting development and maintaining natural vegetation cover over sensitive aquifers, wellhead protection zones, reservoir catchment areas, steep slopes (greater than 15 percent), and riparian zones.
- **Thirty-three percent (474,378 acres) of the Highlands has medium to high value as productive forest land.** Many of the resources rely on the maintenance of intact productive forest systems. Management of Highlands forests to sustain this resource base for continued production of forest products such as timber, wildlife, water, and recreation is supported through the actions of private landowners and the conservation programs of private nonprofit land trusts and publicly owned forest lands.
- **Nearly 55 percent (748,723 acres) of the Highlands consists of habitat that supports State or Federally listed threatened and endangered species.** The Highlands support a diverse ecological system that is still largely intact and is home to a number of endangered and threatened animal and plant species. Large tracts of contiguous forests and accompanying wetland systems support a number of forest interior dependent species. Large tracts of grassland and farmland in the southern Highlands, as well as tracts interspersed elsewhere across the region, are home to rare grassland nesting birds. The region's large lakes, reservoirs, and rivers also provide critical habitat for a number of species, including our national symbol, the Bald Eagle.
- **Seven percent (100,548 acres) of the Highlands has medium to high value as productive farmland.** While comparatively small in overall area, farmland is still an integral component of the Highlands landscape, especially in the major river valleys of the Delaware, Musconetcong, Pohatcong, Pequest, and Raritan rivers in the south; and the Wallkill and Fishkill rivers in the north.
- **Sixty percent (850,917 acres) of the Highlands has medium to high value for recreation and open space.** As the New York City metropolitan area's backyard, the Highlands supports a variety of outdoor recreational pursuits, scenic landscapes for aesthetic enjoyment, and contains a wealth of important historical and cultural sites. An extensive network of public open space areas provides recreational and cultural experiences to millions of visitors annually.



CONSERVATION VALUES ASSESSMENT: KEY FINDINGS

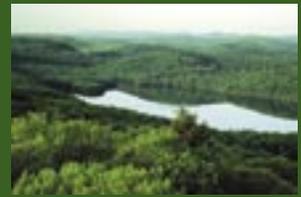
- **When all resource types were combined, 38 percent (542,456 acres) of the Highlands has exceptional conservation value (ranked Higher or Highest value).** These highest ranked areas include the central core of the Highlands stretching from Green Pond/Mase Mountains in the southwest up through the Pequannock watershed, Sterling Forest, Harriman and Bear Mountain, and then across the Hudson River through the Breakneck Ridge/East Mountain area to the Clarence Fahnestock State Park. There are several notable outlying areas including forested ridges and farmed valleys of the Musconetcong/Scott Mountain area in the southwest, the west end of the New Croton Reservoir in New York, and the Depot Hill/Pawling Mountain area in the northeast.



SECTION 2 REFERENCES

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