

Topography of Amenia

A M E N I A

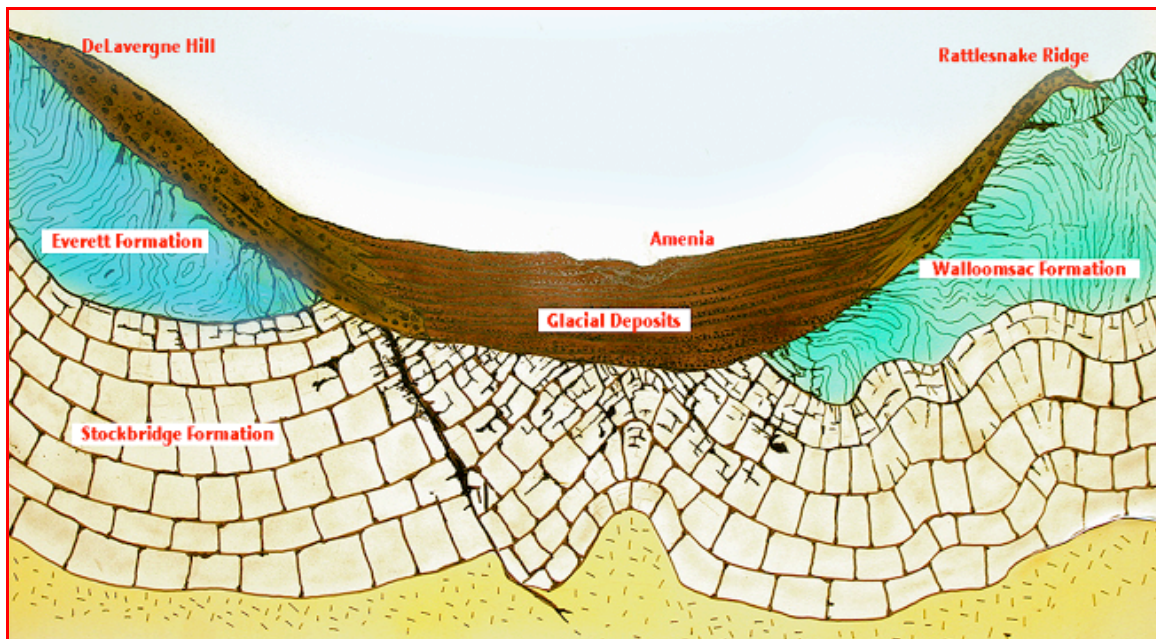


Amenia Open Space Inventory
May, 2007
D. Reagon

AMENIA CAC NATURAL RESOURCE INVENTORY 2005

The Topography of Amenia

The spectacular scenery of Amenia, from DeLavernge Hill to the cool recesses of Turkey and Bog Hollow, is largely the result of the bedrock “bones” of the area. In general, the valleys are composed of relatively soft limestones and marbles known as the Stockbridge formation, deposited in a primordial sea along the continental shelf of a long gone continent, and harder schists and gneisses of the Walloomsac and Everett formations which were formed as an ancient mountain range eroded away about 500 million years ago, forming the ridges. Subsequent colliding and rending of continents have folded, faulted, buried, and moved these rock formations to their present positions, while erosion has exposed them at the surface. Two million years ago the Earth entered a period of time known as the “Ice Age” and four glacial advances through the area carved away softer rocks, created rivers of meltwater, and deposited billions of tons of glacial till and outwash in the valleys. Geologists are still struggling to figure out all the details of this ongoing process.



This is a very generalized geological cross-section looking north up the Harlem Valley in the vicinity of Amenia. The diagram is not to scale. Modified from Fisher et al, 1961.

Topographic relief in Amenia is about 1,000 feet with the highest elevations being around 1,400 feet above sea level on the ridgeline east of the Smithfield valley and the lowest being just under 400 feet where the Tenmile River runs into the southern neighbor of Amenia, Dover Plains.

The geology has also shaped the transportation corridors through Amenia. NYS Route 22 follows the softer rocks of the Stockbridge formation in the northerly trending Harlem Valley. The Harlem Valley line of the Metro North Railroad follows the same

valley, which narrows down from over a mile wide to about one-fourth of a mile wide on the valley bottom at the south entrance to the hamlet of Wassaic where a large fault has moved the harder more resistant ridges close together, constricting the valley for about one half mile. A river, two roads, a railroad, and a village are compacted into this narrow water gap!



Aerial view looking north about one mile south of Wassaic. Rattlesnake Ridge trends diagonally across the photo. DeLavernge Hill is on the far ridgeline to the extreme left. D. Reagon photo

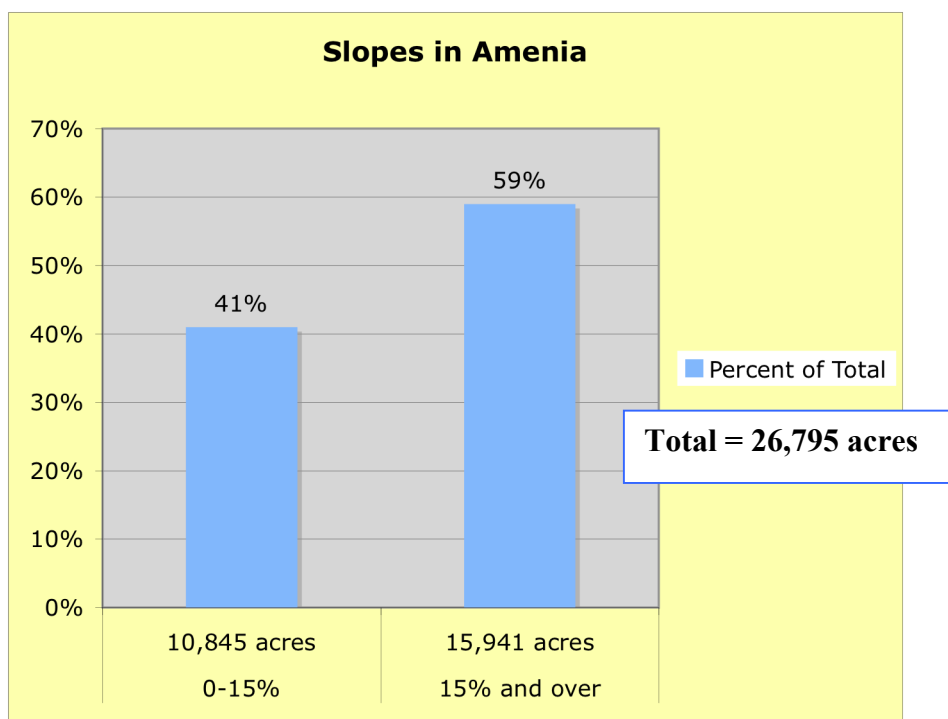
Roads that exit the valley to the west must travel up steep inclines such as DeLavernge Hill, Deep Hollow, Butts Hollow, and Plymouth Hill. It can be difficult to get out of town in the winter unless the traveler is going east into Connecticut where the roads follow less steep routes.

Steep Slopes

Because of the difficulty, environmental constraints, and expense of building on steep slopes most of the development in the Town has been in the valleys and on the more gentle slopes. According to the 1991 Master Plan for the Town of Amenia, slopes greater than 25% are considered not buildable and slopes between 15% and 25% require special site consideration. The new Comprehensive Plan and the new zoning that accompanies stresses the importance of regulating development on steep slopes. Article 121-36 in the zoning regulations gives specific language on steep slopes. The 25% limit of the 1991 plan has been raised to 30% in the 2007 plan.

Slopes in Amenia

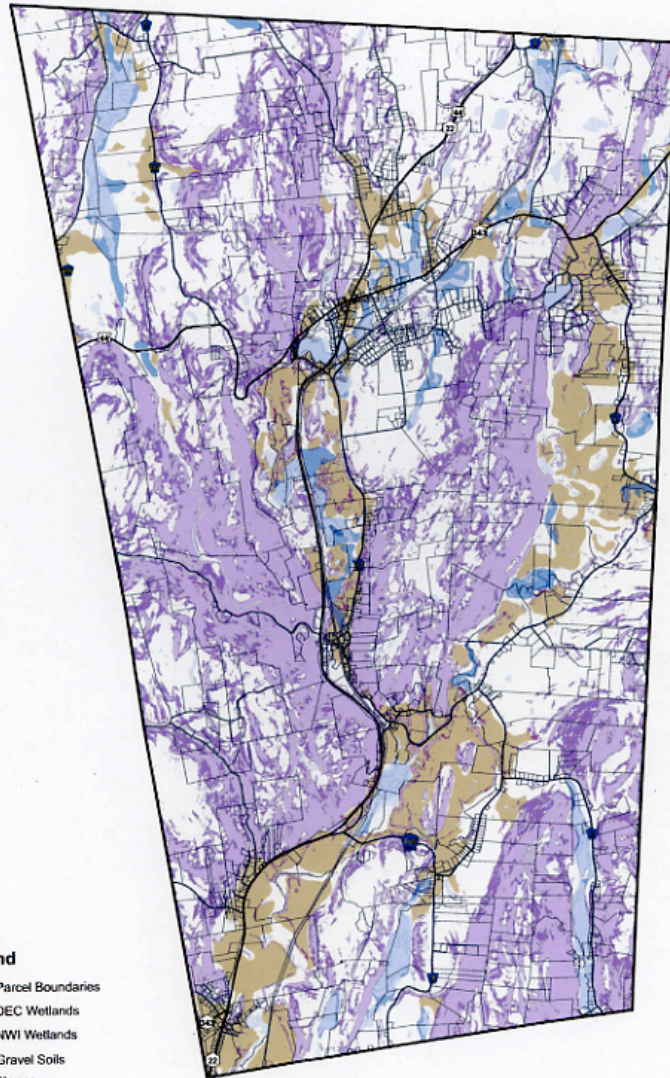
Percent Slopes	Acreage	Percent of Total
0-15	10,854	41
15 and over	15,941	59
Total	26,795	100
Source: 1969 Master Plan		



As level building lots in the Town become scarcer, steep slopes will be turned to as an alternative. With enough money, expertise, and imagination building on steep slopes will become more common.

Another feature of the new zoning will be to protect ridgelines from development. The Scenic Protection Overlay District language does not permit construction, within 40 feet of the “crest line” of a ridge except for antennae and the like. This will preserve the tree line continuity of ridges, which is so important in preserving scenic vistas.

Town of Amenia Steep Slopes



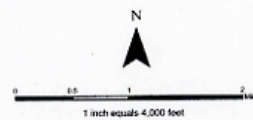
Legend

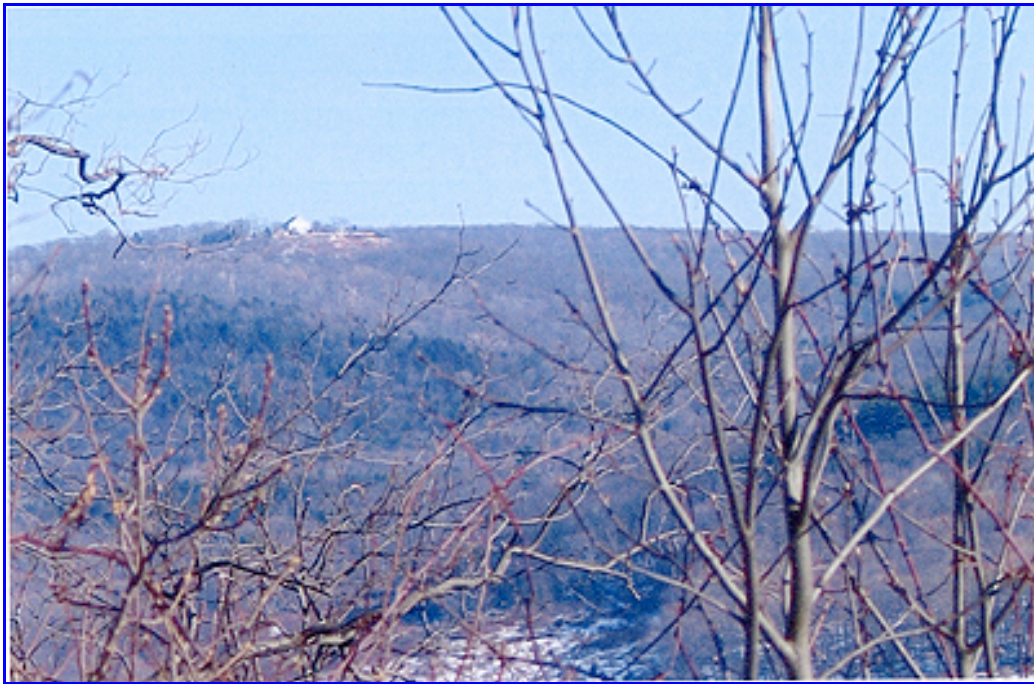
- Parcel Boundaries
- DEC Wetlands
- NWI Wetlands
- Gravel Soils

Steep Slopes

- 15% Grade
- 25% Grade

DEC Wetlands: NYS Dept of Environmental Conservation, 1999
 NWI Wetlands: US Fish & Wildlife Service, 1999
 Soil Survey: US Dept of Agriculture 1990
 Steep Slopes: USGS, 2003





House on ridgeline just over the Connecticut border. New Comprehensive Plan language would not allow this in Amenia.

D. Reagon photo



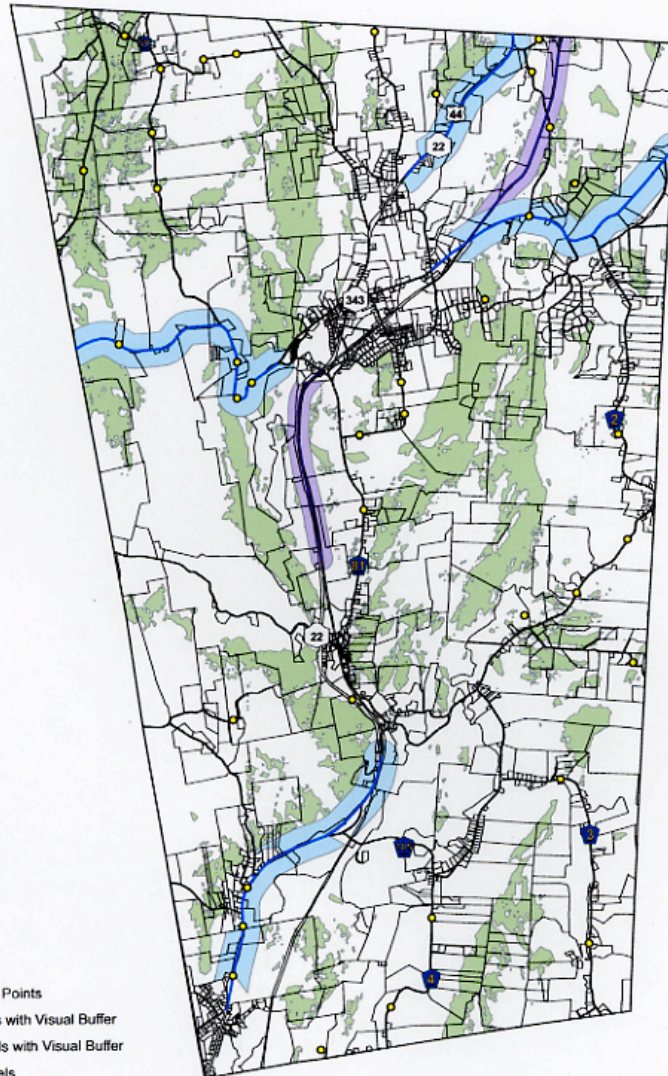
Aerial view of the Oblong Valley looking south. The valley bedrock is Stockbridge limestone covered with a thick layer of glacial sand and gravel.

D. Reagon photo

Town of Amenia

Scenic Protection Overlay District

Prepared by: Dutchess County Department of Planning & Development
October 2006



Legend

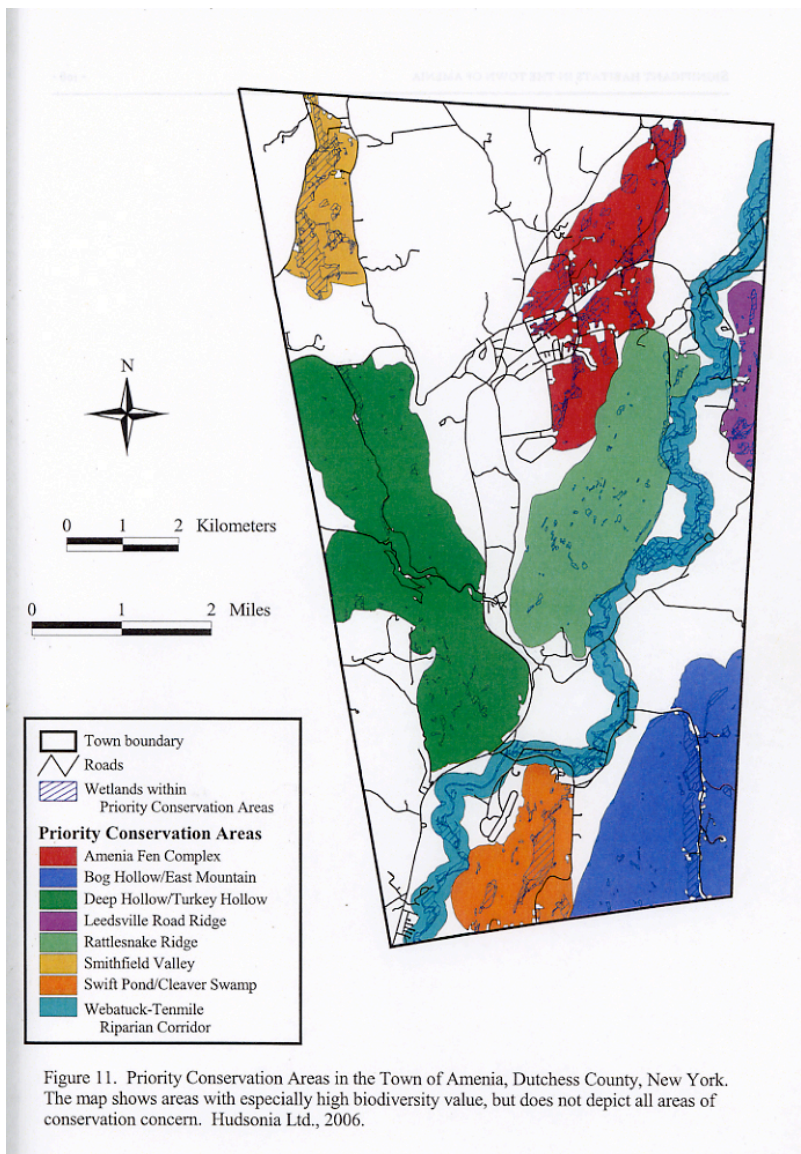
- View Points
- Trails with Visual Buffer
- Roads with Visual Buffer
- Parcels
- Trail Visual Buffer
- Road Visual Buffer
- Ridgeline Visual Buffer

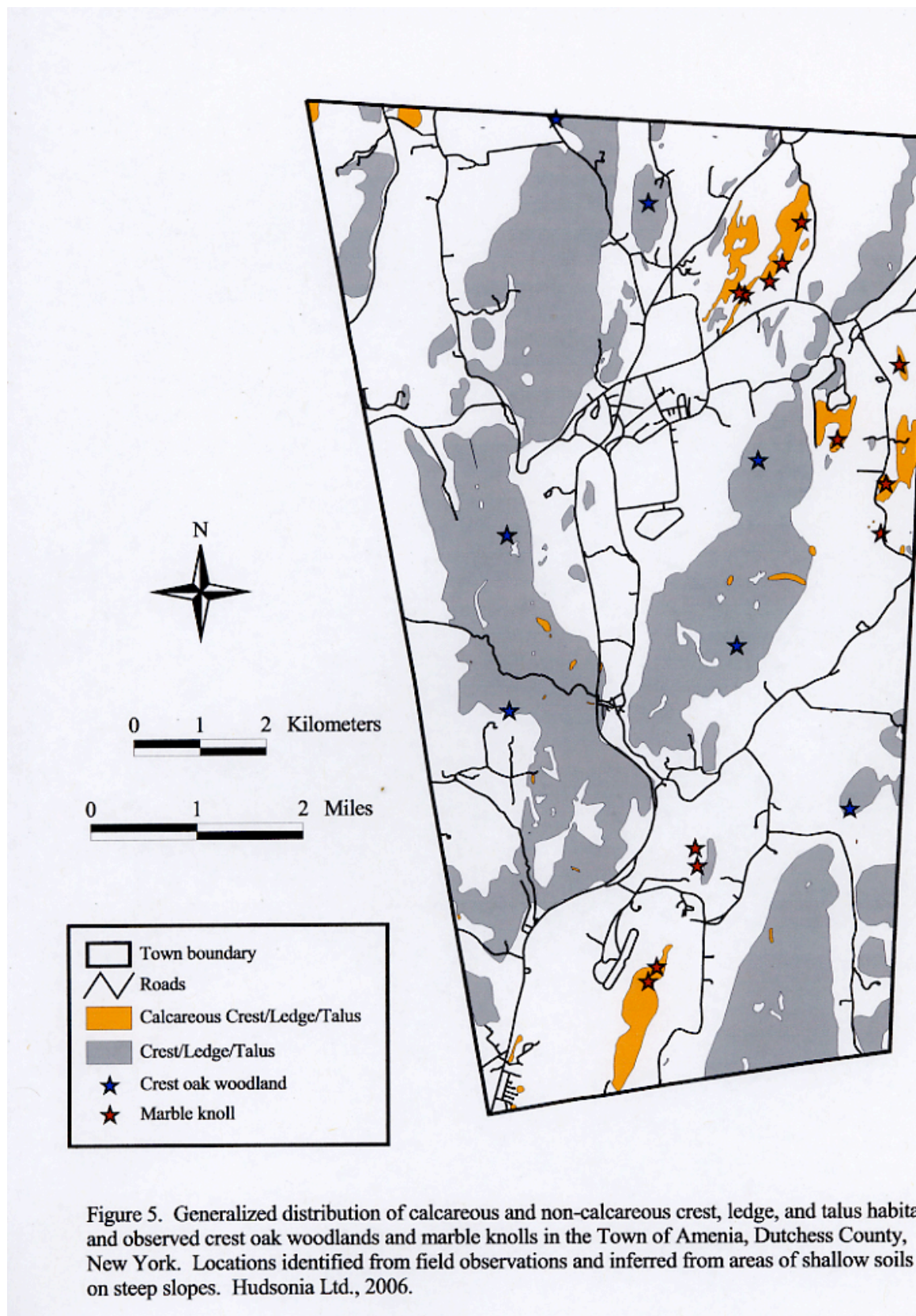
Ridgeline Visual Buffer includes areas with slopes over 25% and visibility from 3 or more View Points.



Hudsonia Report

In 2006 Hudsonia Ltd. of Annandale, NY completed a report titled Significant Habitats in the Town of Amenia, Dutchess County, New York. This report studies the biodiversity of Amenia which is tied, significantly, to the topography. Soon to be made easily available to the general public, this document is a must read for everyone in Town who is interested in the environment. Several of the maps in the study are included in the following pages of this report. By studying the maps it will be readily apparent the relationship between the topography and the environment in Amenia.





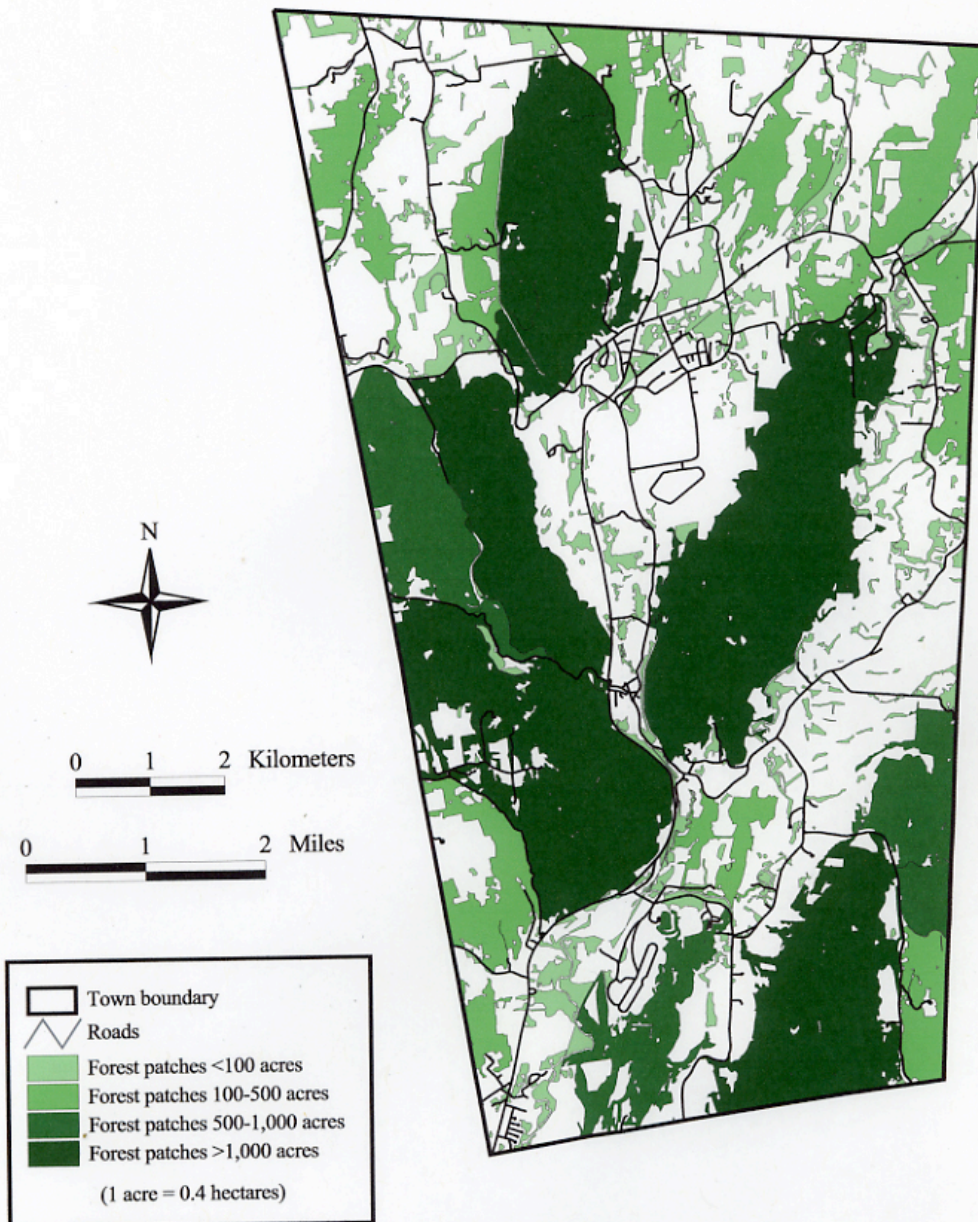


Figure 4. Contiguous forest patches (including hardwood, conifer, and mixed forests in uplands and swamps) in the Town of Amenia, Dutchess County, New York. Hudsonia Ltd., 2006.