Town of Copake

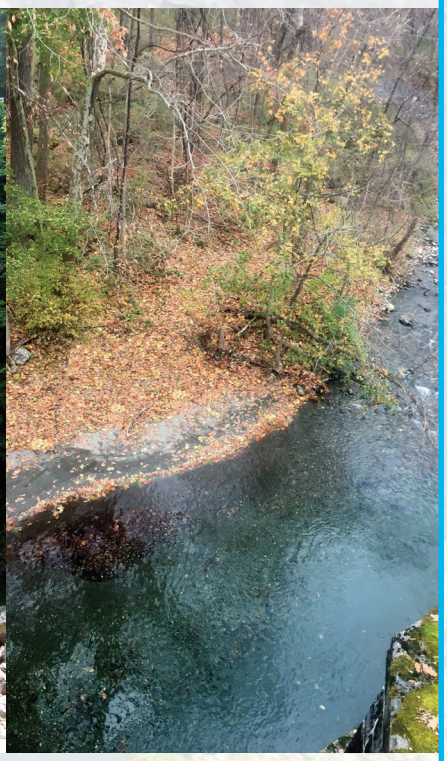
MAP ATLAS

for the

Waterfront and Community Revitalization Plan

for the Bash Bish Brook, Roeliff Jansen Kill & Taghkanic Creek

March 2021



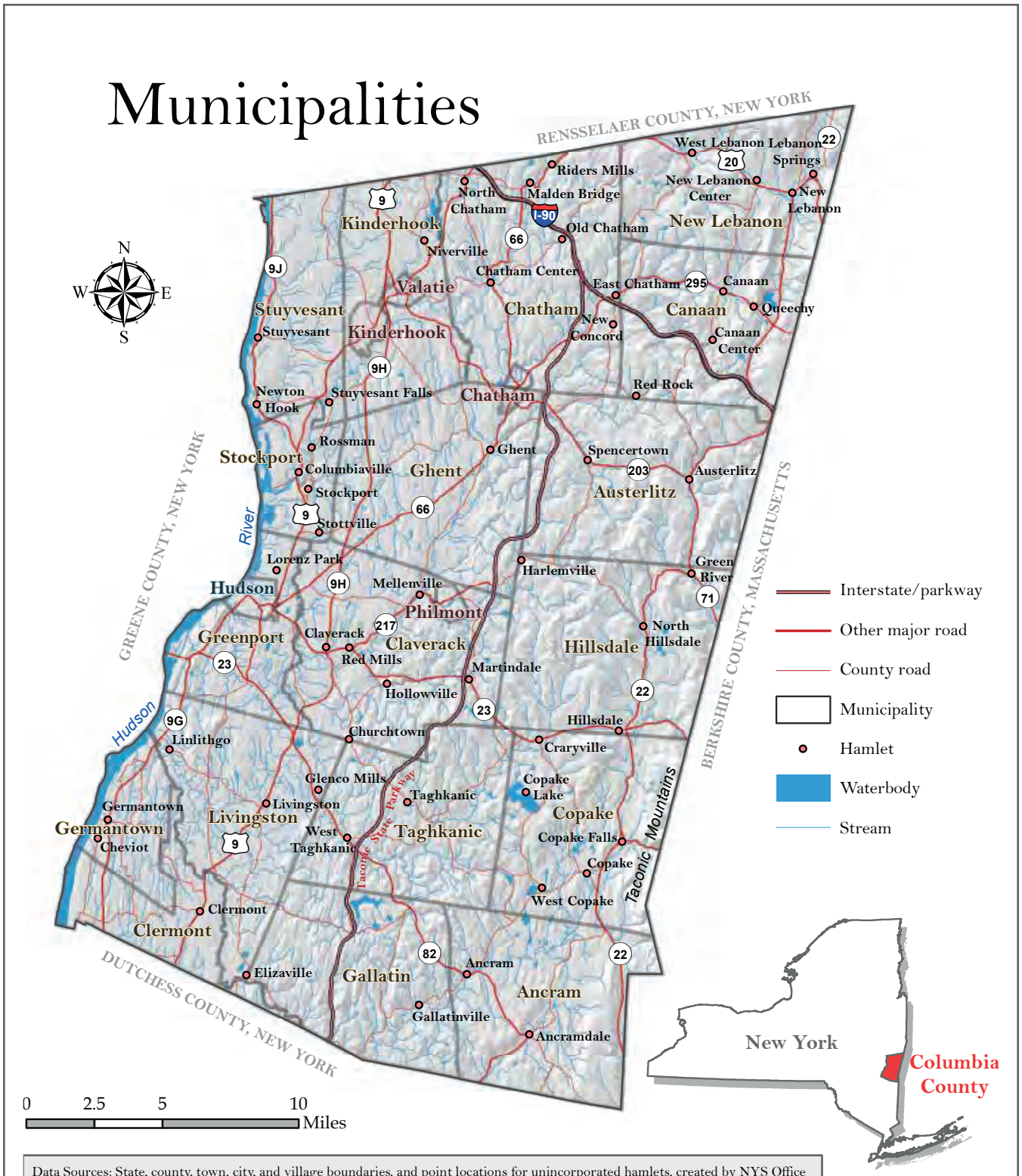
Planning for the Waterfront and Hamlet Revitalization Project is funded by the New York State Department of State under Title 11 of the Environmental Protection Fund.

NEW YORK STATE OF OPPORTUNITY. Department of State

List of Maps

Note on limitations of maps in this summary map atlas: Maps included here were created in a geographic information system or GIS. Information on the maps comes from different sources, produced at different times, at different scales, and for different purposes. Data is often collected or developed from remote sensing data (i.e., aerial photographs, satellite imagery) or derived from paper maps. For these reasons, GIS data often contain inaccuracies from the original data, plus any errors from converting it. Therefore, maps created in GIS are approximate and best used for planning purposes. They should not be substituted for site surveys. Any resource shown on a map should be verified for legal purposes, including environmental review.

MAPS
from the
Columbia County NY
2018 Natural Resources Inventory

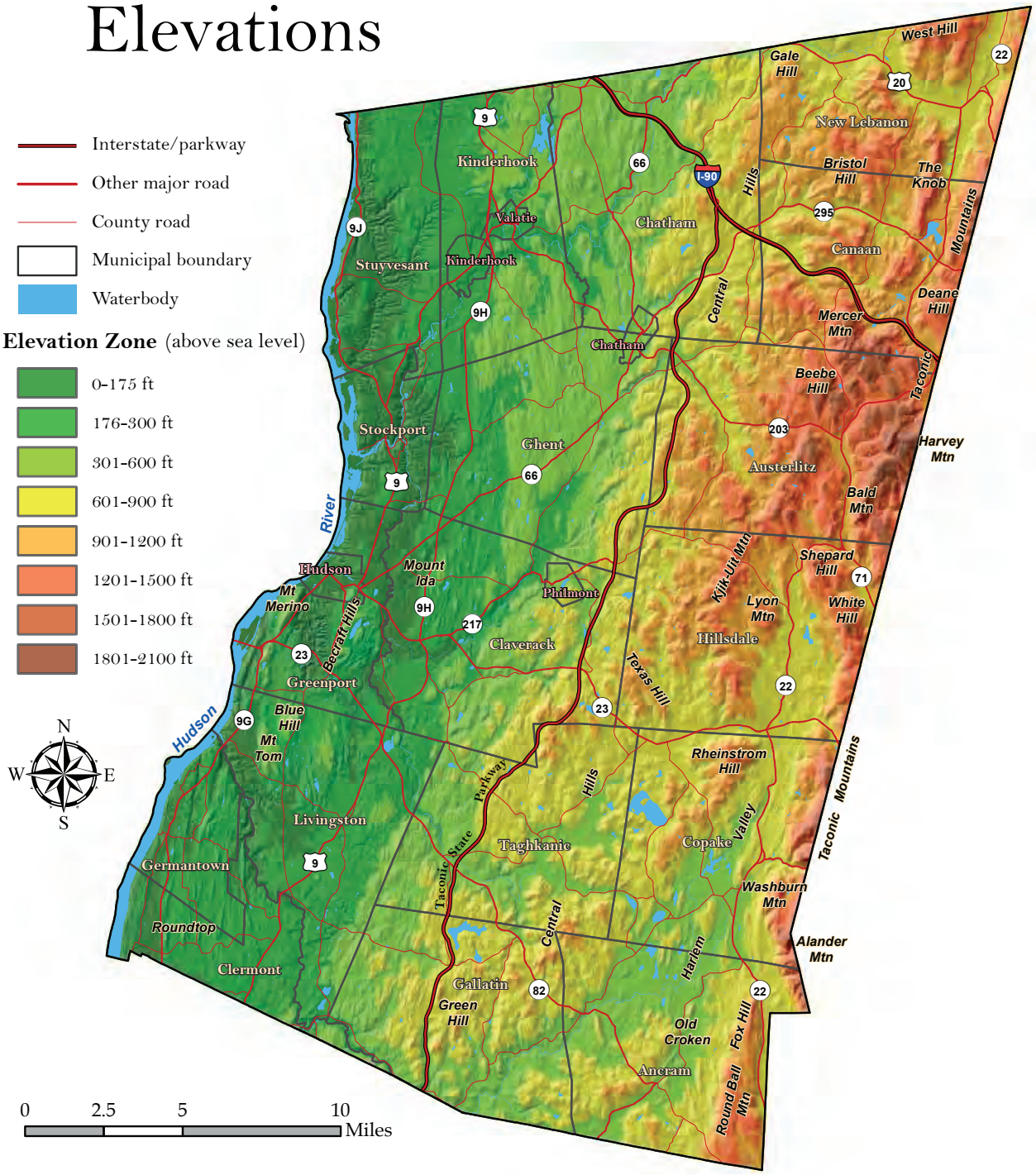


Data Sources: State, county, town, city, and village boundaries, and point locations for unincorporated hamlets, created by NYS Office of Information Technology Services, 2017, available from gis.ny.gov. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey (USGS), 2013, available from nhd.usgs.gov. Roads selected from the AllRoads dataset, New York GIS Program Office, 2017, available from gis.ny.gov. Basemap shows topographic relief; this hillshade layer was created by the Cornell Cooperative Extension Dutchess County GIS lab from a USGS digital elevation model (DEM).
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 1: Municipalities and hamlets in Columbia County, NY

Elevations

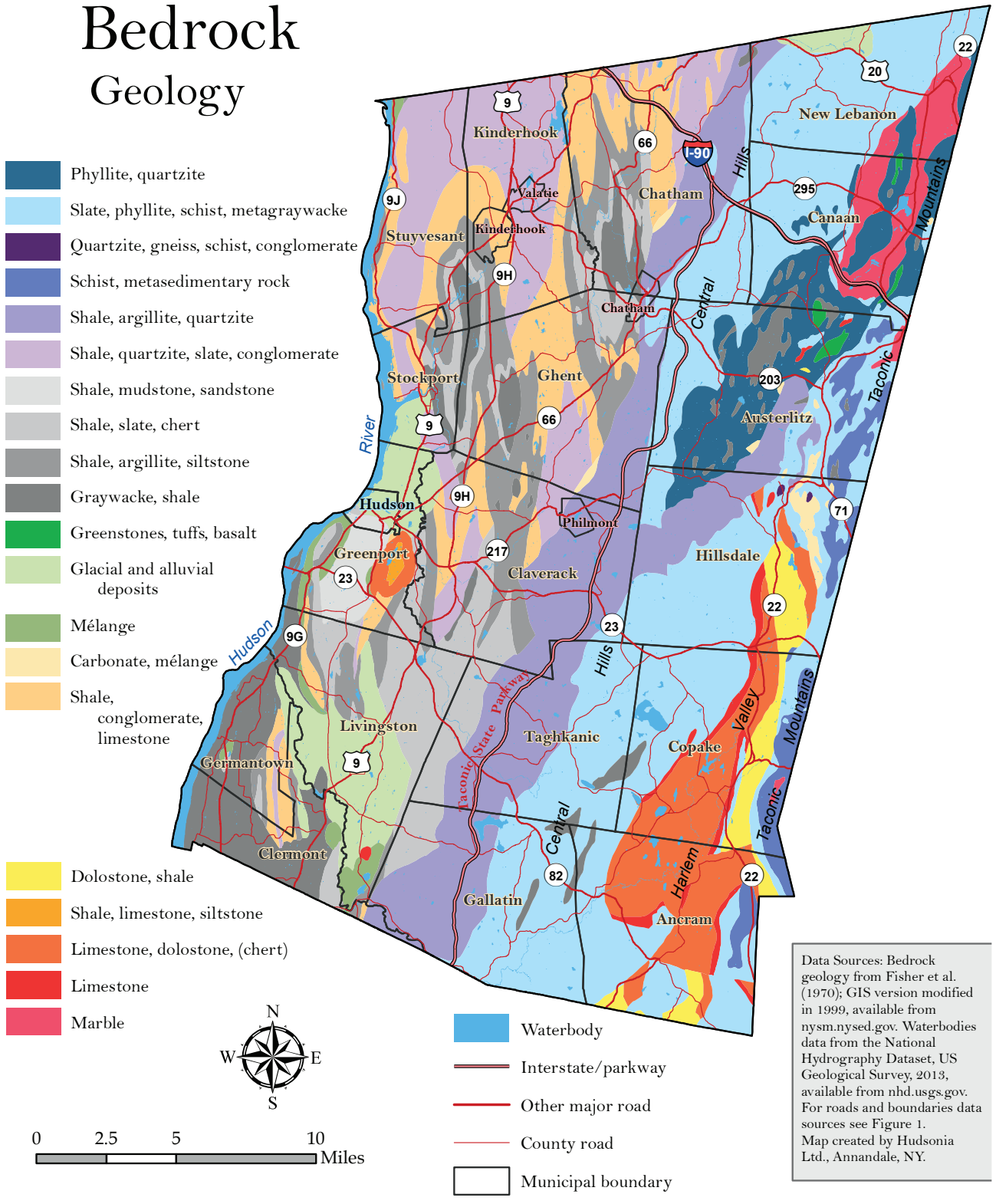


Data Sources: Elevation zones were classified from a US Geological Survey (USGS) digital elevation model (DEM) by Hudsonia. Basemap shows topographic relief; this hillshade layer was created by the Cornell Cooperative Extension Dutchess County GIS lab from from the same USGS DEM. Waterbodies data from the National Hydrography Dataset, USGS, 2013, available from nhd.usgs.gov. Roads selected from the AllRoads dataset, New York GIS Program Office, 2017, available from gis.ny.gov. Municipal boundaries created by NYS Office of Information Technology Services, 2017, available from gis.ny.gov.
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 2: Elevation Zones in Columbia County, NY

Bedrock Geology

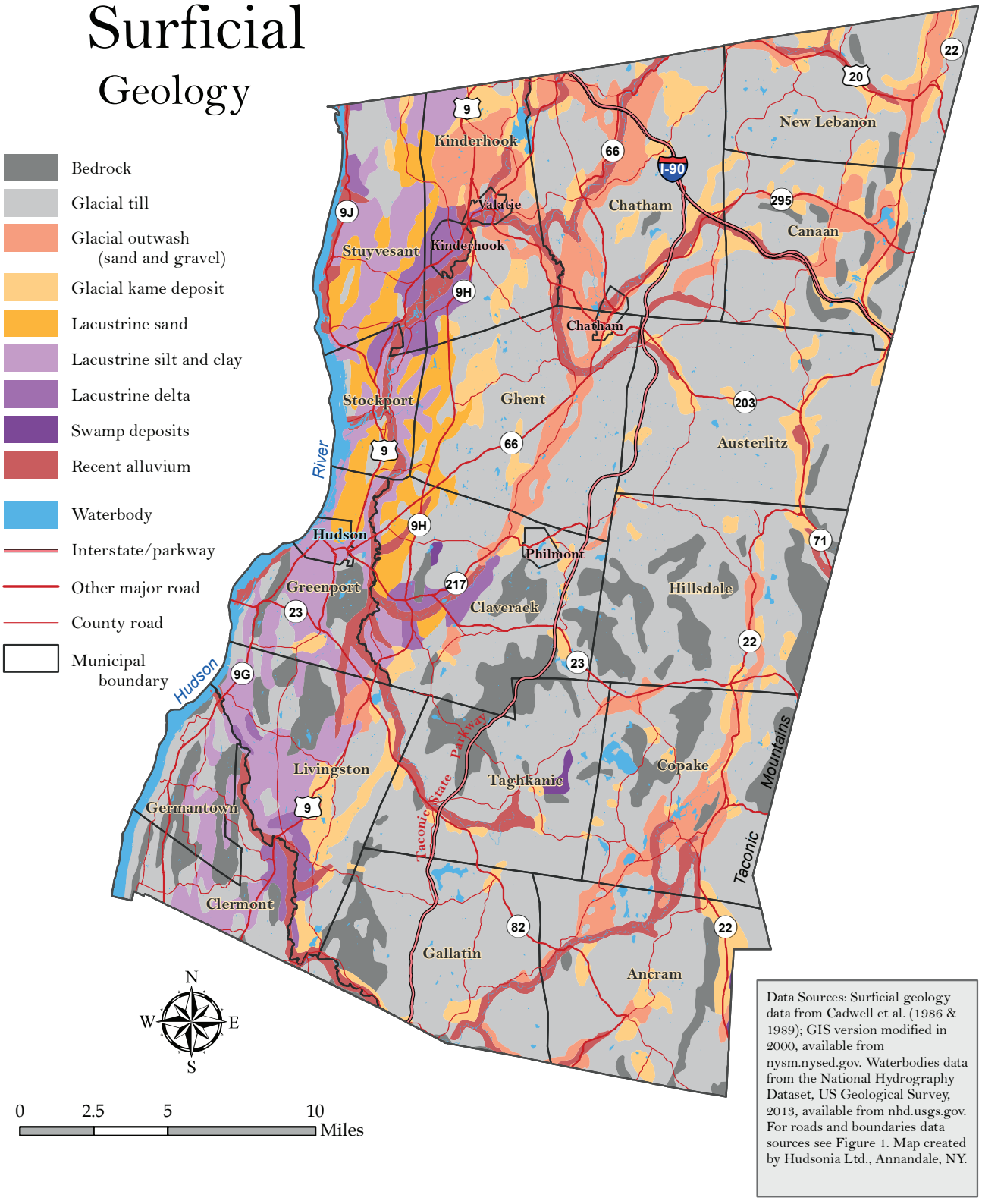


Data Sources: Bedrock geology from Fisher et al. (1970); GIS version modified in 1999, available from nysm.nysed.gov. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1.
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 3: Generalized Bedrock Geology of Columbia County, NY

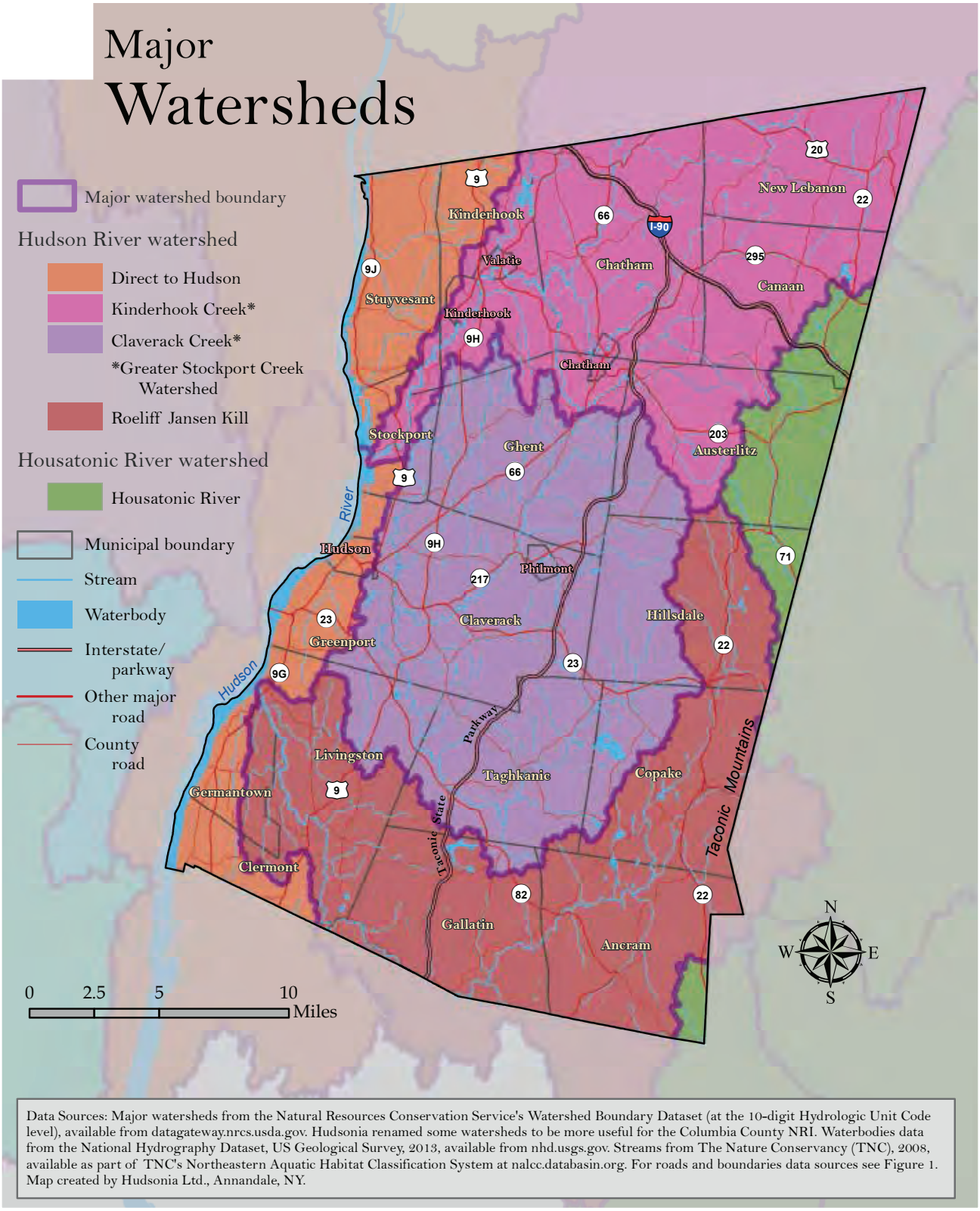
Surficial Geology



Data Sources: Surficial geology data from Cadwell et al. (1986 & 1989); GIS version modified in 2000, available from nysm.nysed.gov. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

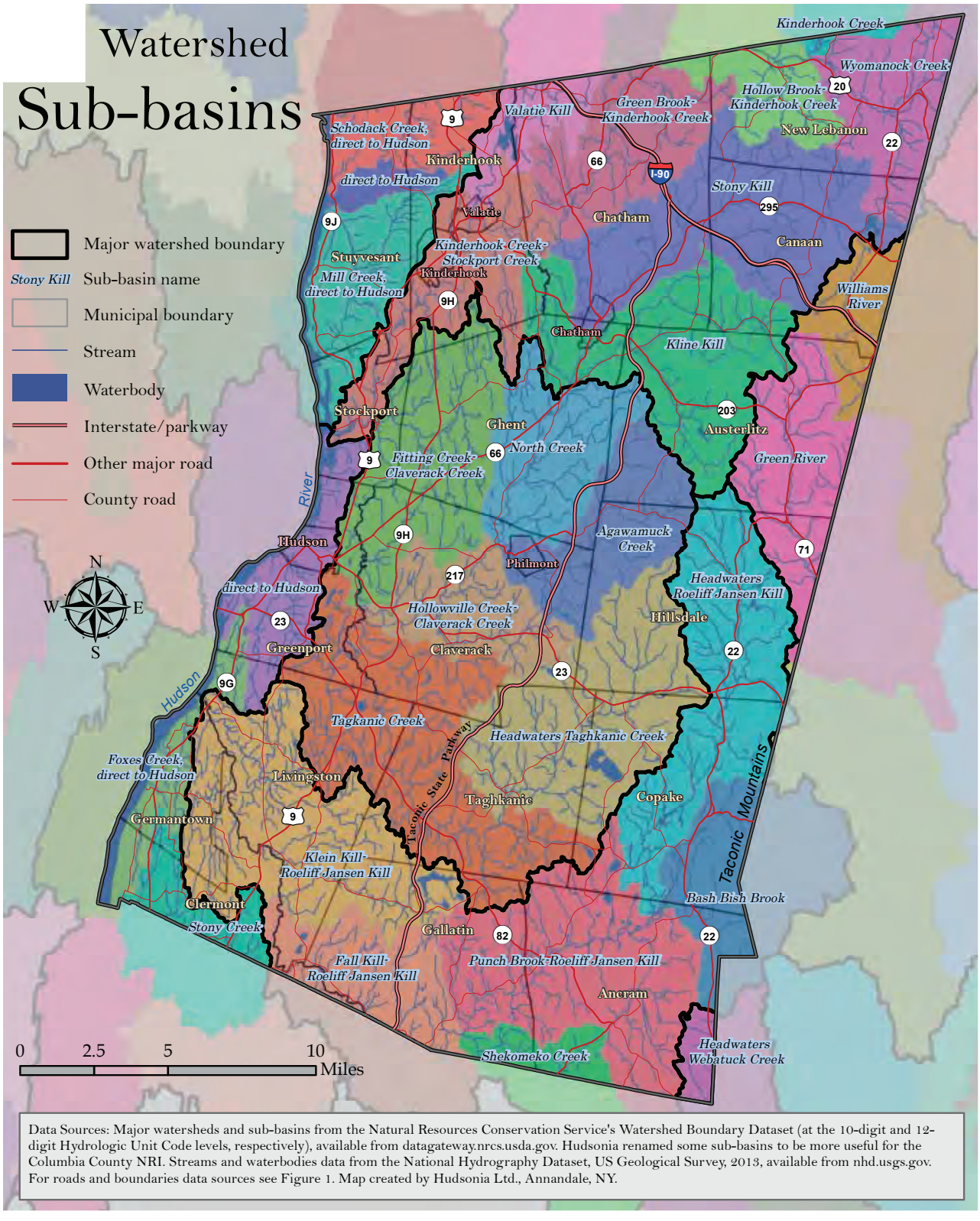
MAP 4: Surficial Geology of Columbia County, NY



Data Sources: Major watersheds from the Natural Resources Conservation Service's Watershed Boundary Dataset (at the 10-digit Hydrologic Unit Code level), available from datagateway.nrcs.usda.gov. Hudsonia renamed some watersheds to be more useful for the Columbia County NRI. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. Streams from The Nature Conservancy (TNC), 2008, available as part of TNC's Northeastern Aquatic Habitat Classification System at nalcc.databasin.org. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 5: Majory Watersheds in Columbia County, NY

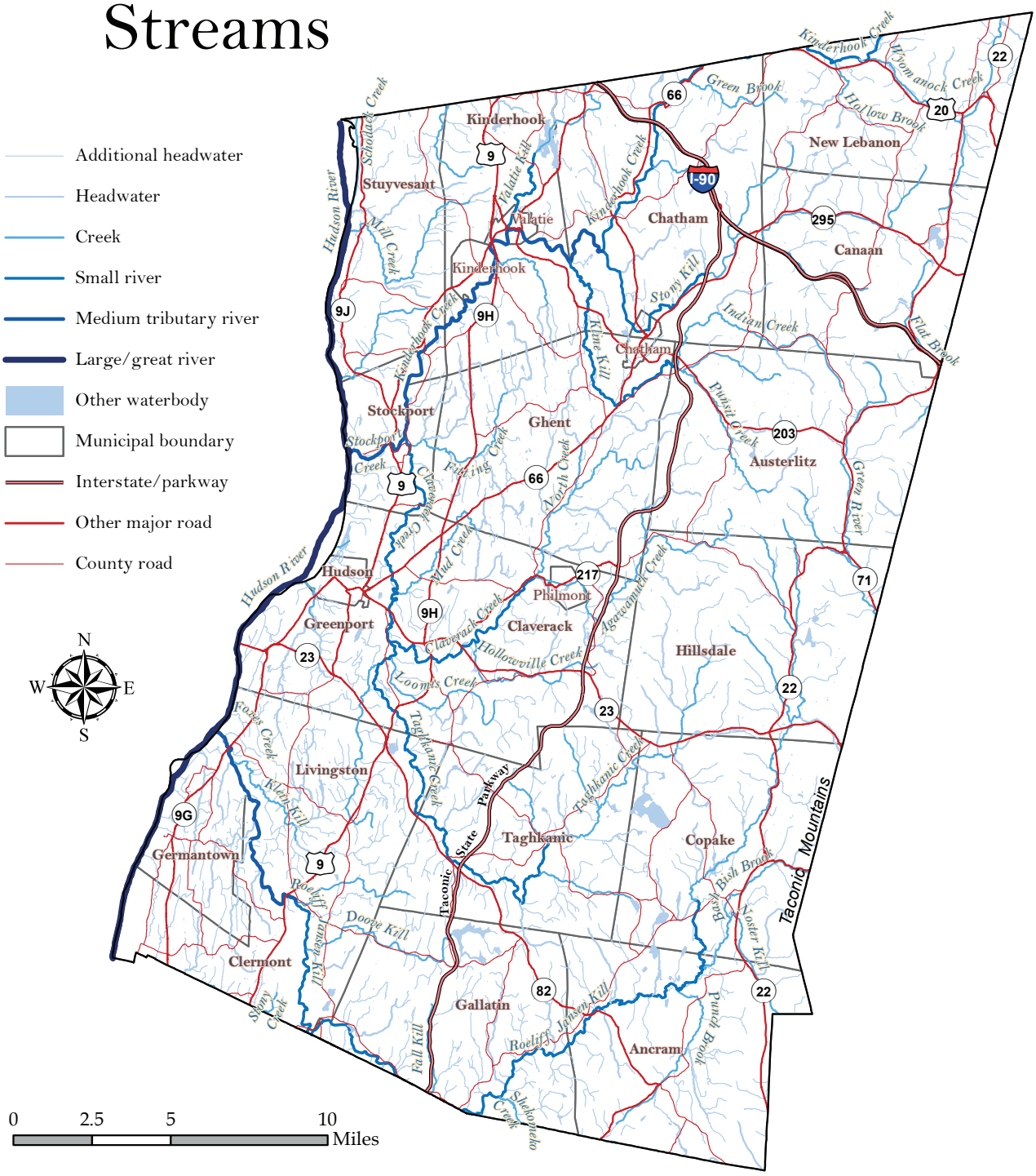


Data Sources: Major watersheds and sub-basins from the Natural Resources Conservation Service's Watershed Boundary Dataset (at the 10-digit and 12-digit Hydrologic Unit Code levels, respectively), available from datagateway.nrcs.usda.gov. Hudsonia renamed some sub-basins to be more useful for the Columbia County NRI. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 6: Watershed Sub-basins in Columbia County, NY

Streams

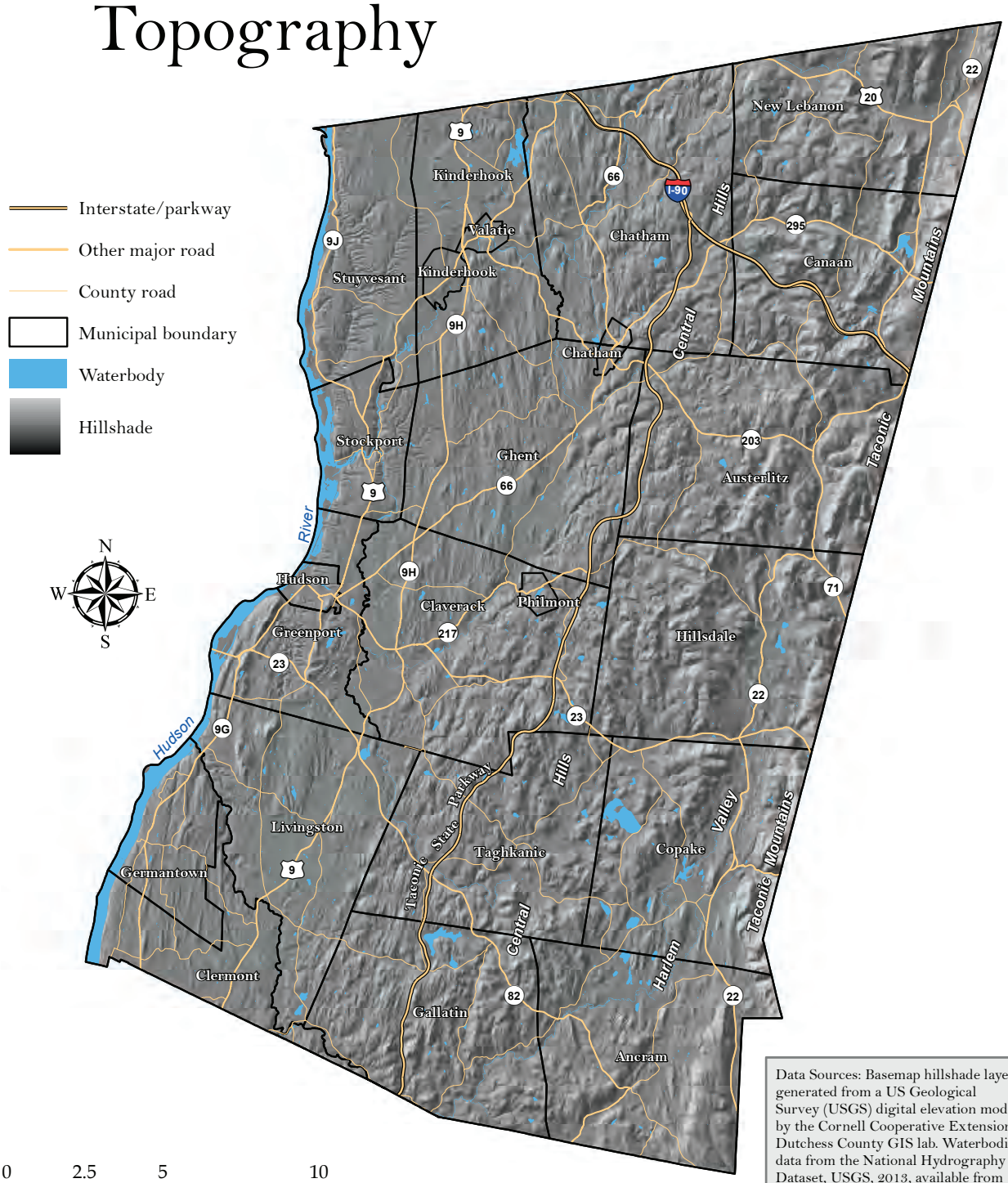


Data Sources: Major streams and size classification from The Nature Conservancy (TNC), 2008, available as part of TNC's Northeastern Aquatic Habitat Classification System at nalcc.databasin.org. Additional headwater streams and other waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 7: Streams and Rivers by Size in Columbia County, NY

Topography

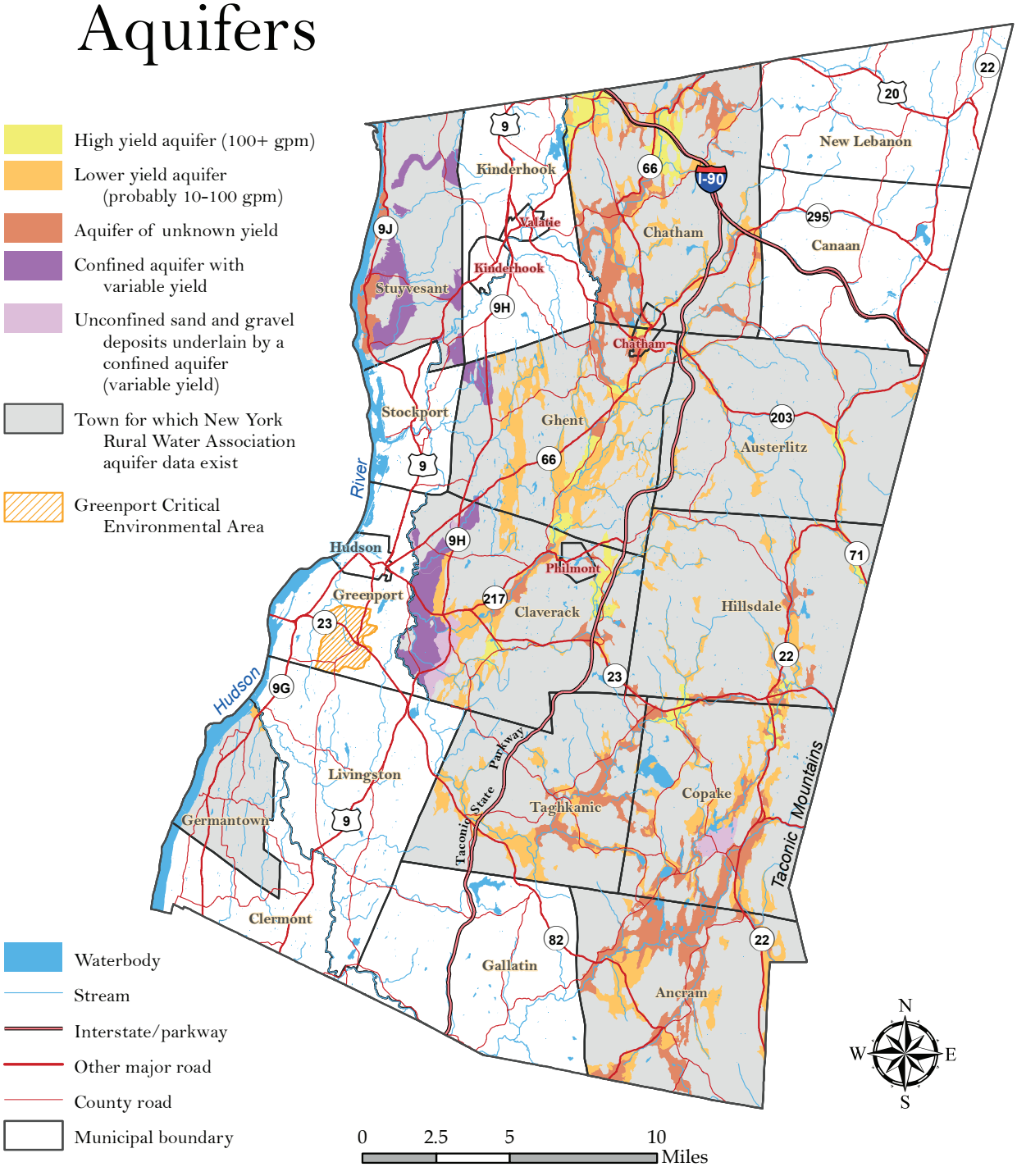


Data Sources: Basemap hillshade layer generated from a US Geological Survey (USGS) digital elevation model by the Cornell Cooperative Extension Dutchess County GIS lab. Waterbodies data from the National Hydrography Dataset, USGS, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 8: Topography of Columbia County, NY

Aquifers

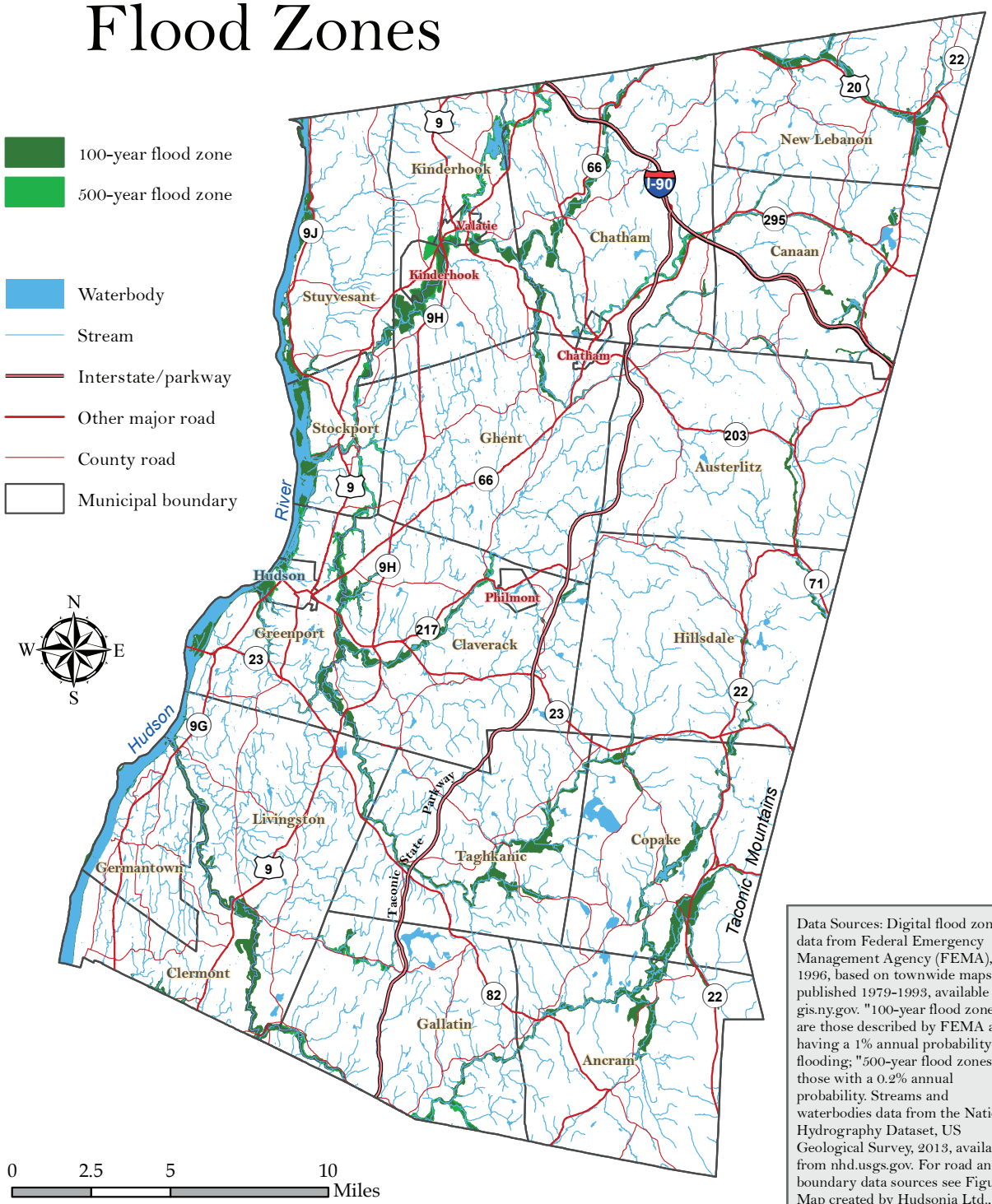


Data Sources: Unconsolidated aquifers in ten Columbia County towns delineated by Steven Winkley, New York Rural Water Association (NYRWA), on the basis of surficial geologic boundaries and available subsurface data; NYRWA, 2016, available from gis.ny.gov. Critical Environmental Areas data from NYSDEC, 2015, available from gis.ny.gov. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 9: Aquifers (unconsolidated) in Columbia County, NY

Flood Zones

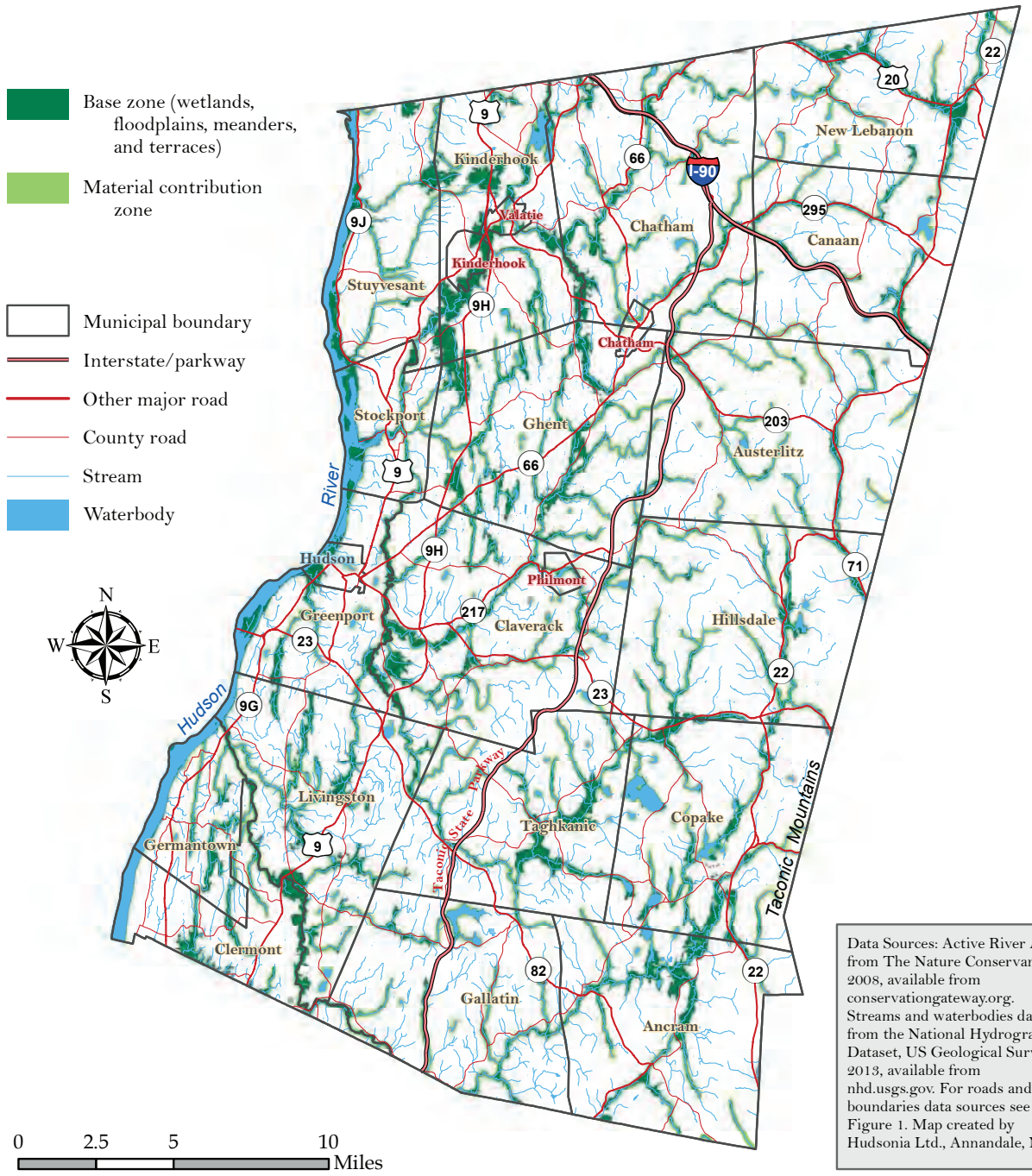


Data Sources: Digital flood zone data from Federal Emergency Management Agency (FEMA), 1996, based on townwide maps published 1979-1993, available from gis.ny.gov. "100-year flood zones" are those described by FEMA as having a 1% annual probability of flooding; "500-year flood zones" are those with a 0.2% annual probability. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For road and boundary data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 10: Flood Zones (Large Streams) in Columbia County, NY

Active River Areas

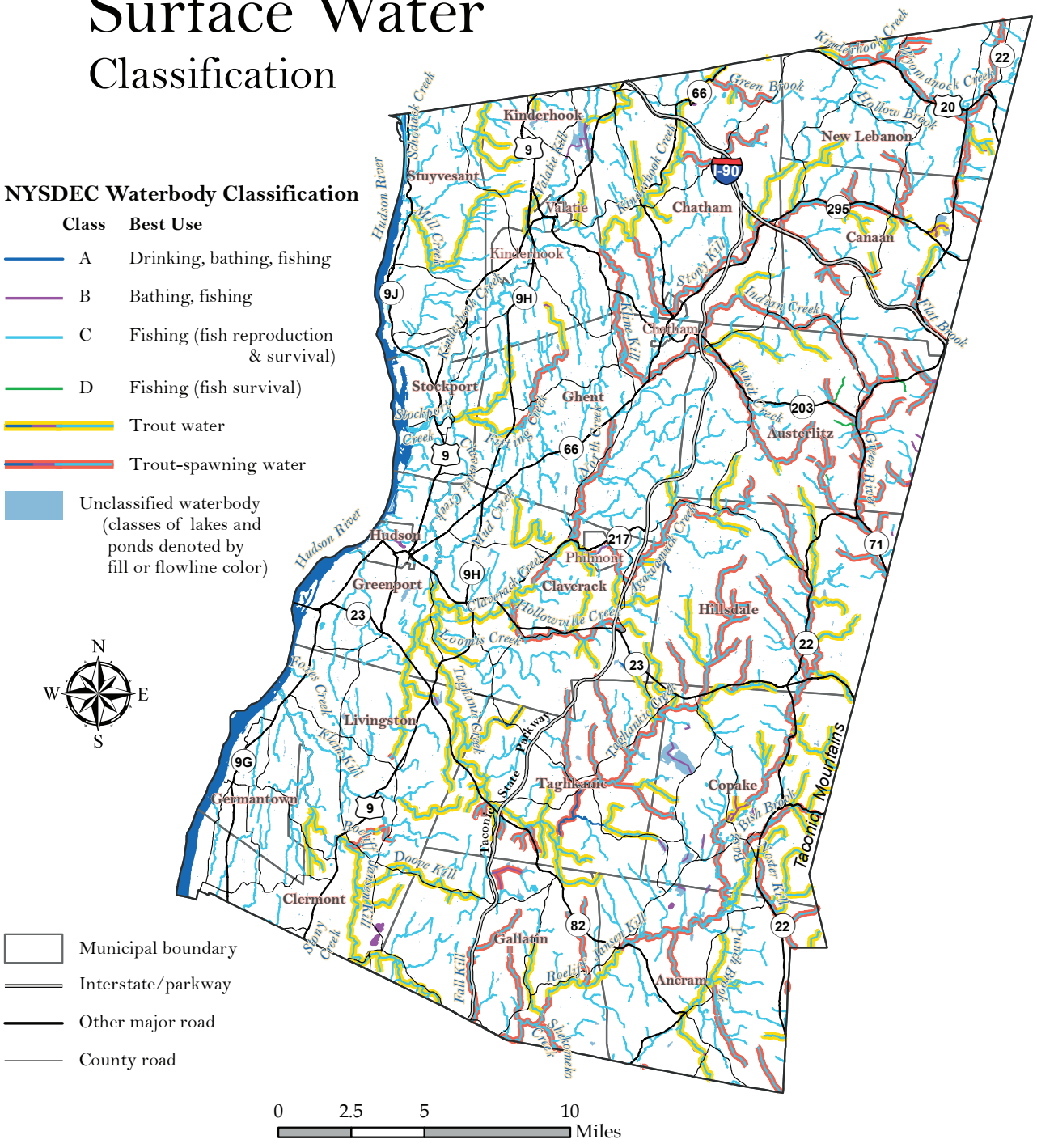


Data Sources: Active River Areas from The Nature Conservancy, 2008, available from conservationgateway.org. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 11: Active River Areas (ARAs) in Columbia County, NY

Surface Water
Classification

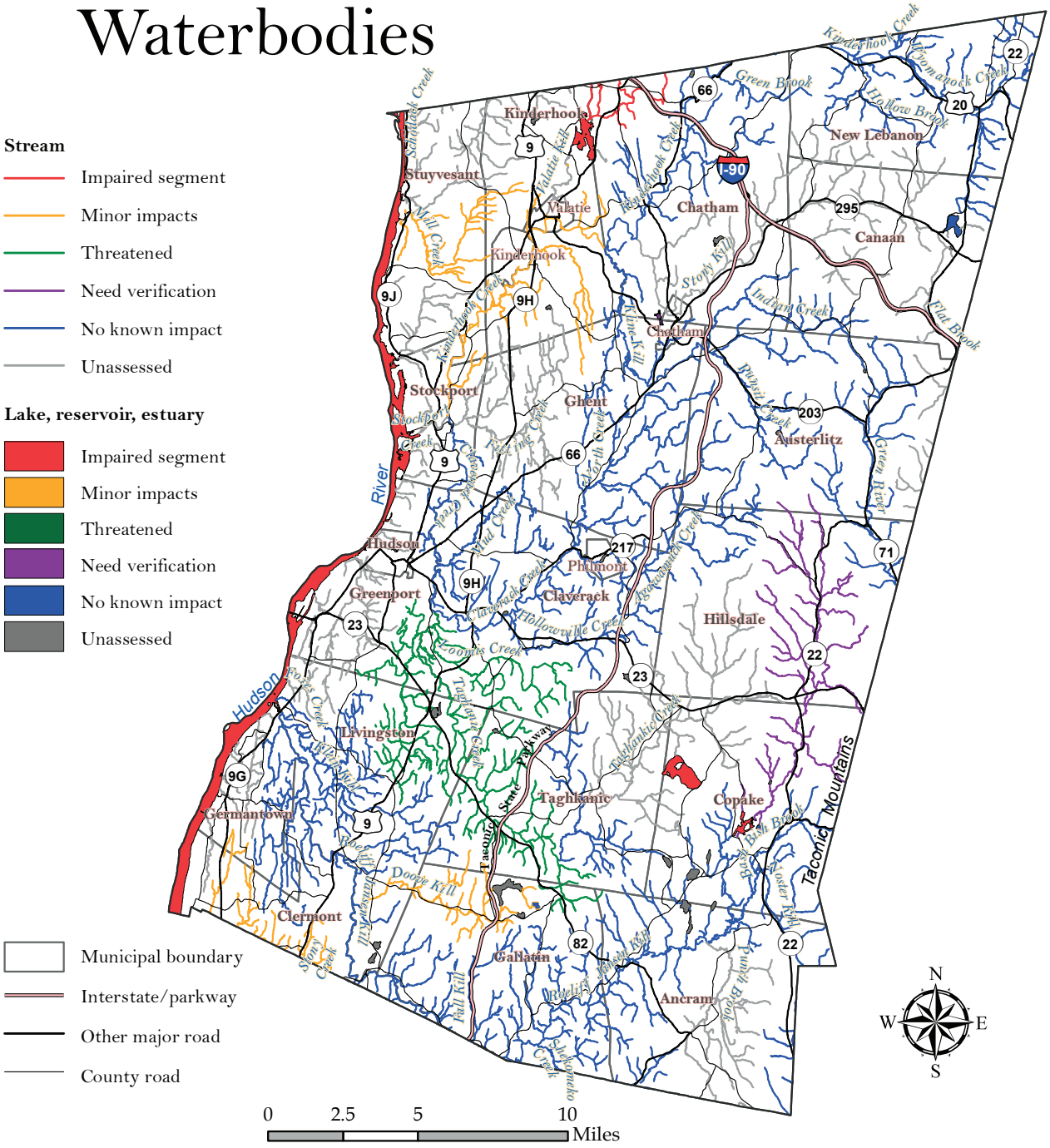


Data Sources:Water use classes of streams and other waterbodies created by the NYS Department of Environmental Conservation (NYSDEC), 2010, available from gis.ny.gov. For more information, contact the Hudson River Estuary Program at 845-256-3016. Other waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1.
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 12: Surface Water Classification by Use in Columbia County, NY

Priority (Impaired) Waterbodies

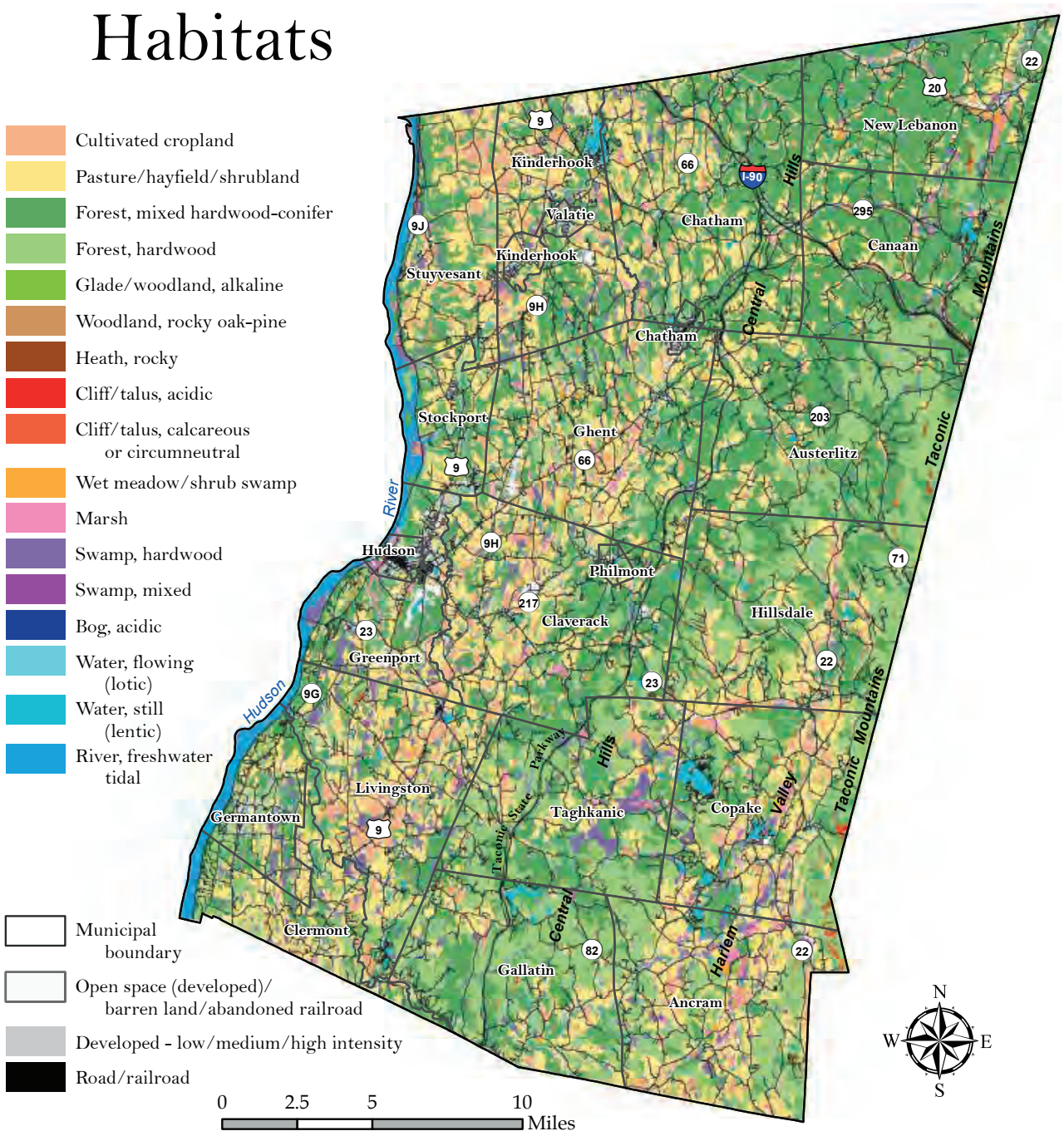


Data Sources: Waterbody inventory-priority waterbodies list created by the NYS Department of Environmental Conservation (NYSDEC), 2014, available from gis.ny.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 13: Impairment Level of Waterbodies in Columbia County, NY

Habitats

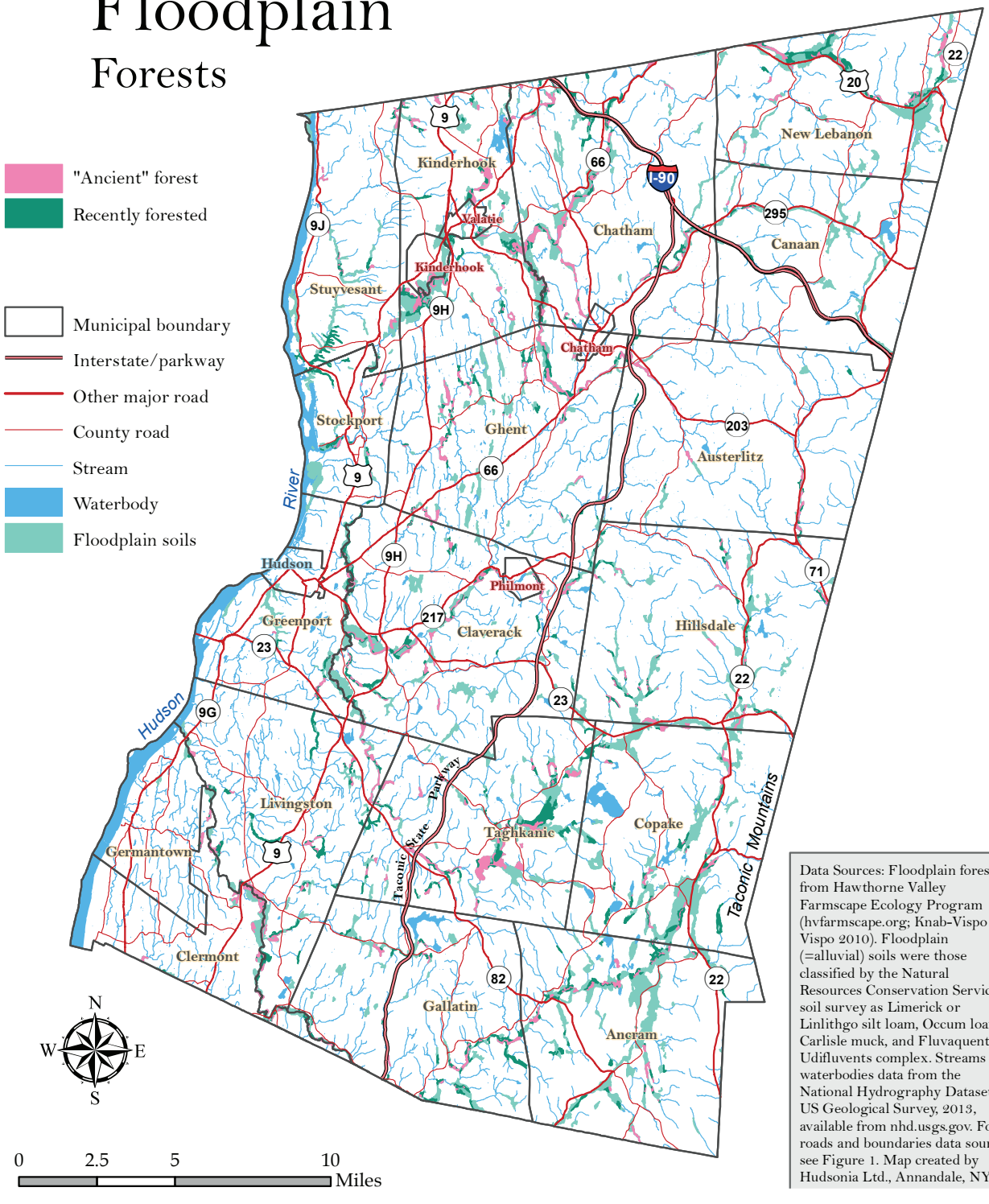


Data Sources: Habitat categories were derived from the "Northeast Ecological Systems" dataset; Hudsonia combined and/or renamed some categories. "Northeast Ecological Systems" is a 30-meter grid mapping upland and wetland wildlife habitats. Habitat types are drawn from the Northeastern Terrestrial Habitat Classification System, NatureServe's Ecological Systems Classification, augmented with information from individual state wildlife classifications and managers and combined with human-modified land types such as roads and agriculture. All mapping was done remotely, without field verification. This dataset was developed as part of the Designing Sustainable Landscapes project led by Kevin McGarigal of UMass Amherst and sponsored by the North Atlantic Landscape Conservation Cooperative (www.northatlanticlcc.org); sources include: The Nature Conservancy Ecological Systems Map, National Land Cover Database 2006, Bureau of Transportation Statistics roads, TIGER roads 2010, Open Street Map roads, National Hydrography dataset, and National Wetlands Inventory. Available from nalcc.databasin.org. For boundaries data source, see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 14: Generalized Habitats in Columbia County, NY

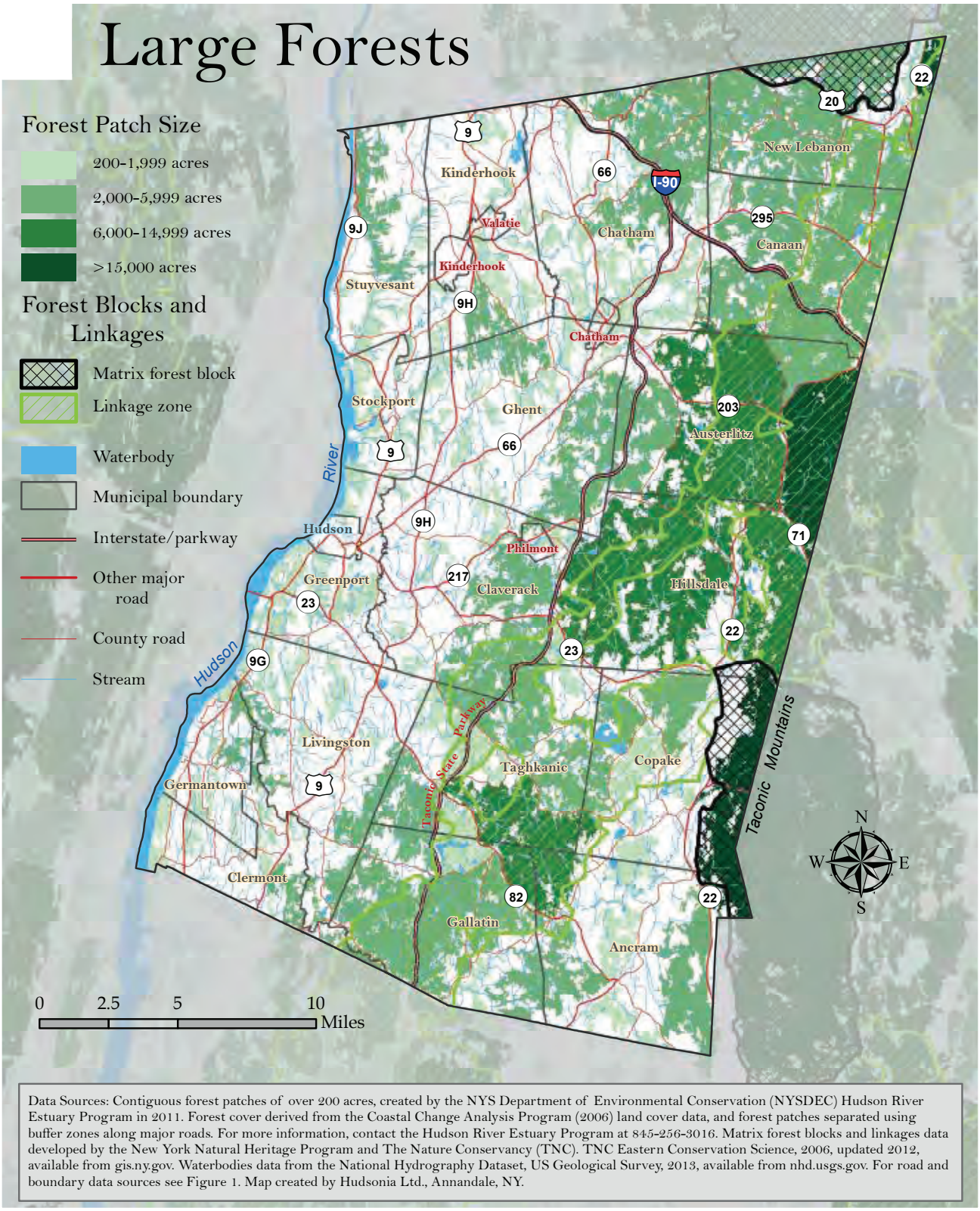
Floodplain Forests



Data Sources: Floodplain forests from Hawthorne Valley Farmscape Ecology Program (hvfarmscape.org; Knab-Vispo & Vispo 2010). Floodplain (=alluvial) soils were those classified by the Natural Resources Conservation Service soil survey as Limerick or Linlithgo silt loam, Occum loam, Carlisle muck, and Fluvaquents-Udifluvents complex. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 15: Floodplain Forests in Columbia County, NY

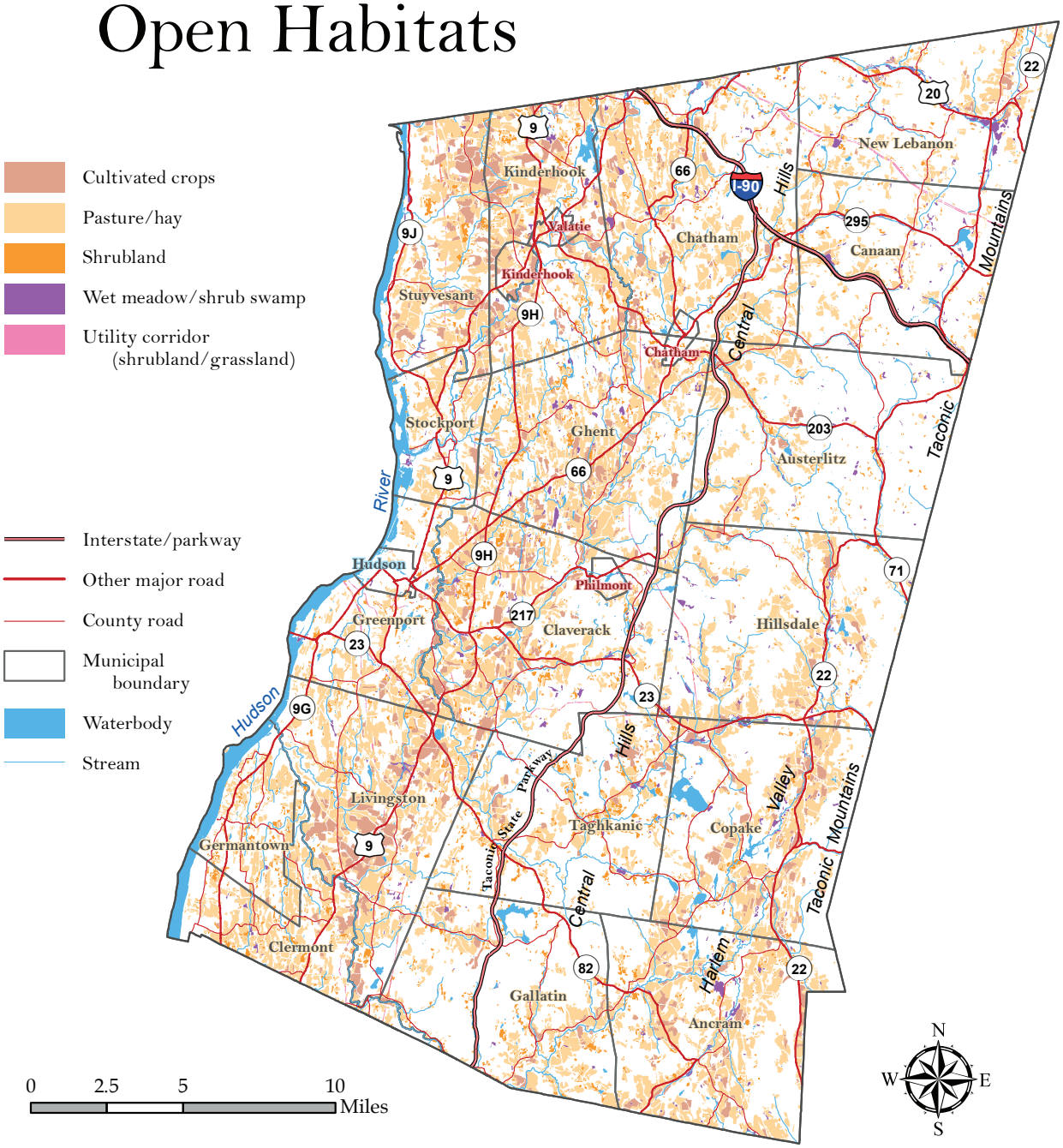


Data Sources: Contiguous forest patches of over 200 acres, created by the NYS Department of Environmental Conservation (NYSDEC) Hudson River Estuary Program in 2011. Forest cover derived from the Coastal Change Analysis Program (2006) land cover data, and forest patches separated using buffer zones along major roads. For more information, contact the Hudson River Estuary Program at 845-256-3016. Matrix forest blocks and linkages data developed by the New York Natural Heritage Program and The Nature Conservancy (TNC). TNC Eastern Conservation Science, 2006, updated 2012, available from gis.ny.gov. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For road and boundary data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 16: Large Patches of Contiguous Forest in Columbia County, NY

Open Habitats

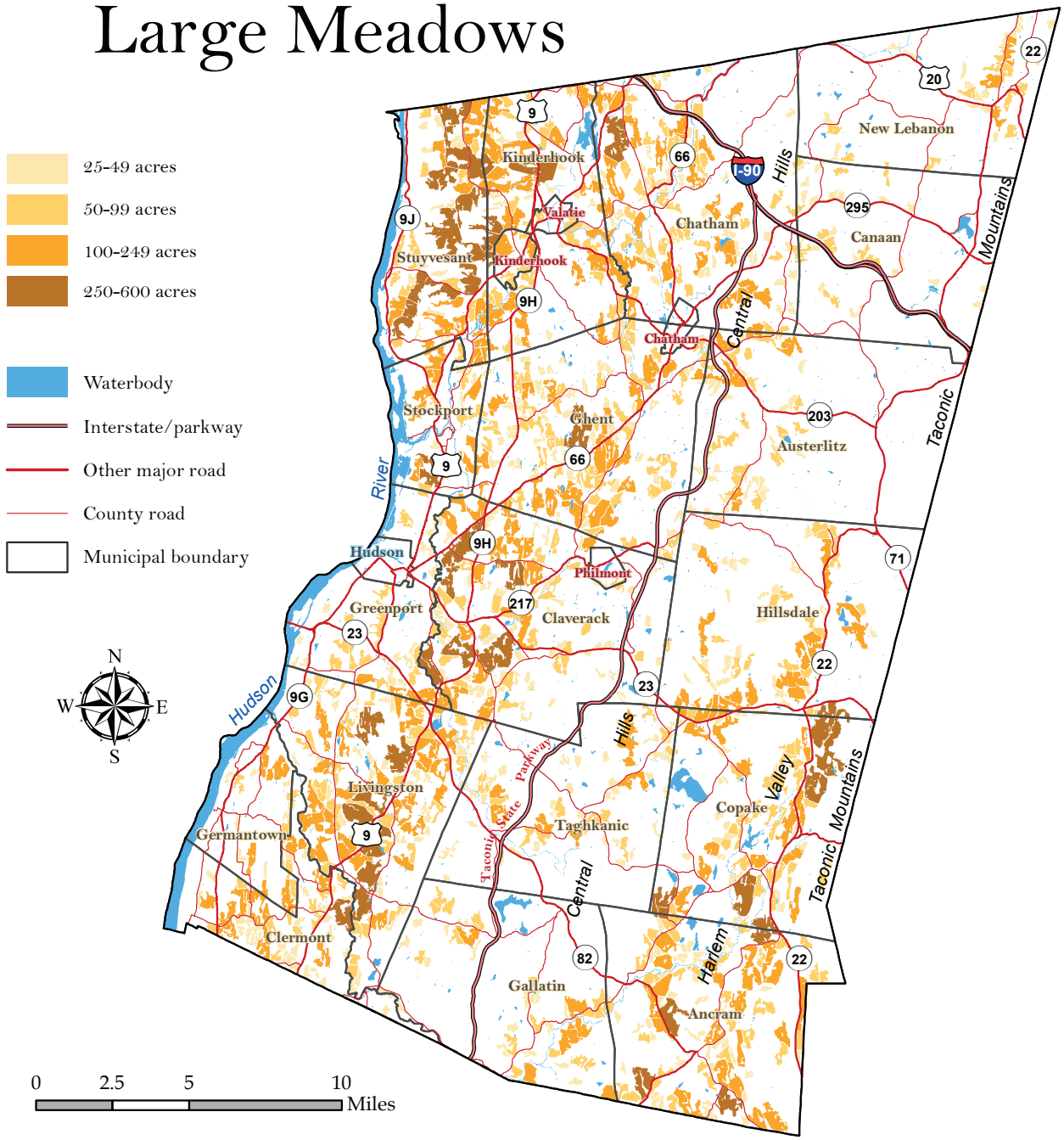


Data Sources: Open habitats except shrubland extracted from the "Northeast Ecological Systems" dataset (North Atlantic Landscape Conservation Cooperative, 2014, available from nalcc.databasin.org; including data fromThe Nature Conservancy's Northeast Terrestrial Wildlife Habitat Classification System, the National Land Cover Database (NLCD) 2006, National Hydrography dataset, and National Wetlands Inventory; all mapping was done remotely, without field verification). Shrubland from NLCD 2011, available from mrlc.gov. Streams from The Nature Conservancy's Northeastern Aquatic Habitat Classification System, 2008, available from nalcc.databasin.org. Waterbodies from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources, see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 17: Open (non-forested) Habitats in Columbia County, NY

Large Meadows

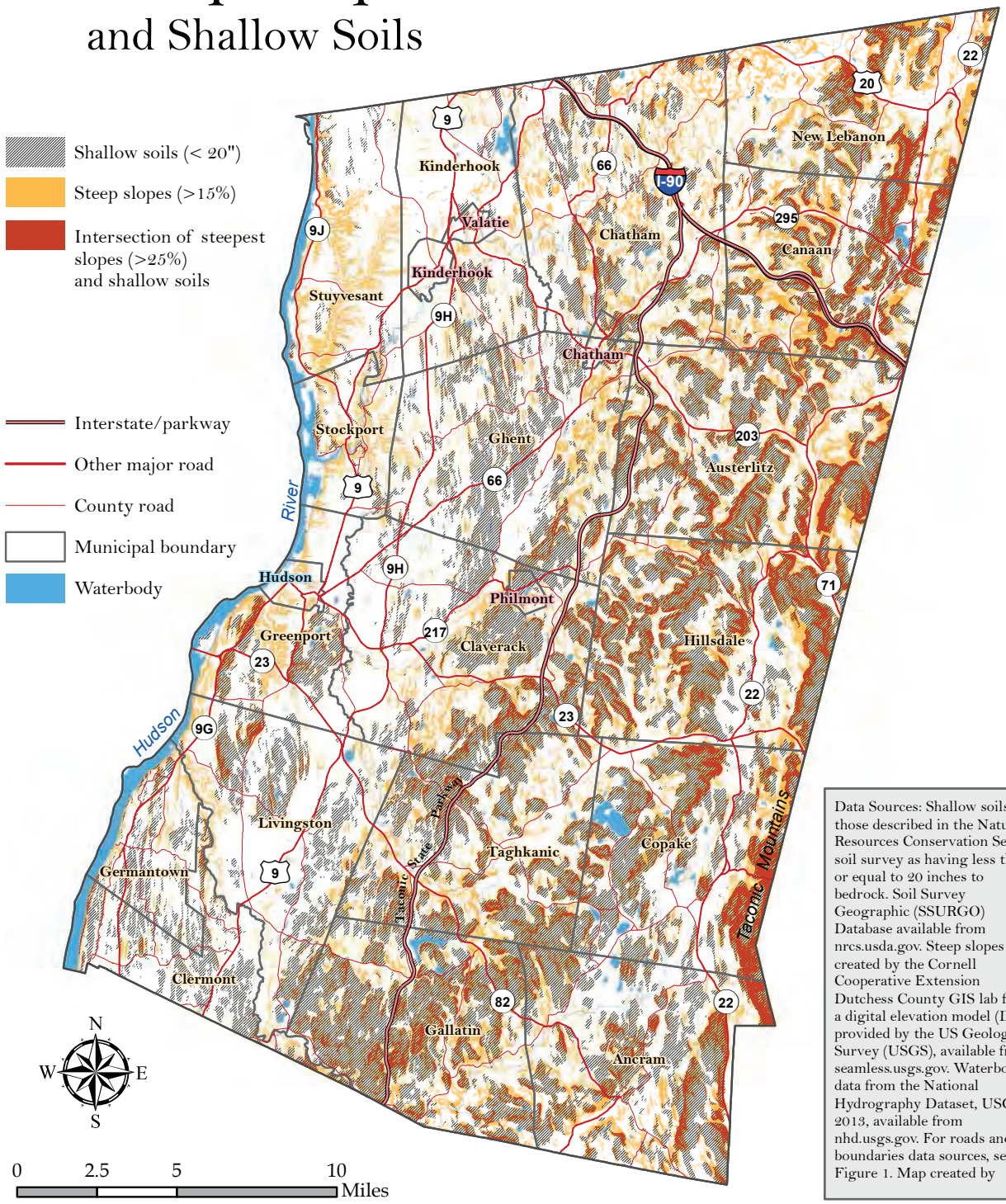


Data Sources: Hudsonia extracted "pasture/hay," "cultivated crops," and "wet meadows/shrub marsh" categories from the "Northeast Ecological Systems" dataset (North Atlantic Landscape Conservation Cooperative, 2014, available from nalcc.databasin.org; including data fromThe Nature Conservancy's Northeast Terrestrial Wildlife Habitat Classification System, the National Land Cover Database 2006, National Hydrography dataset, and National Wetlands Inventory; all mapping was done remotely, without field verification). These categories were merged and "exploded" and areas of resulting polygons were calculated. Waterbodies from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources, see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 18: Contiguous Large Meadows in Columbia County, NY

Steep Slopes
and Shallow Soils

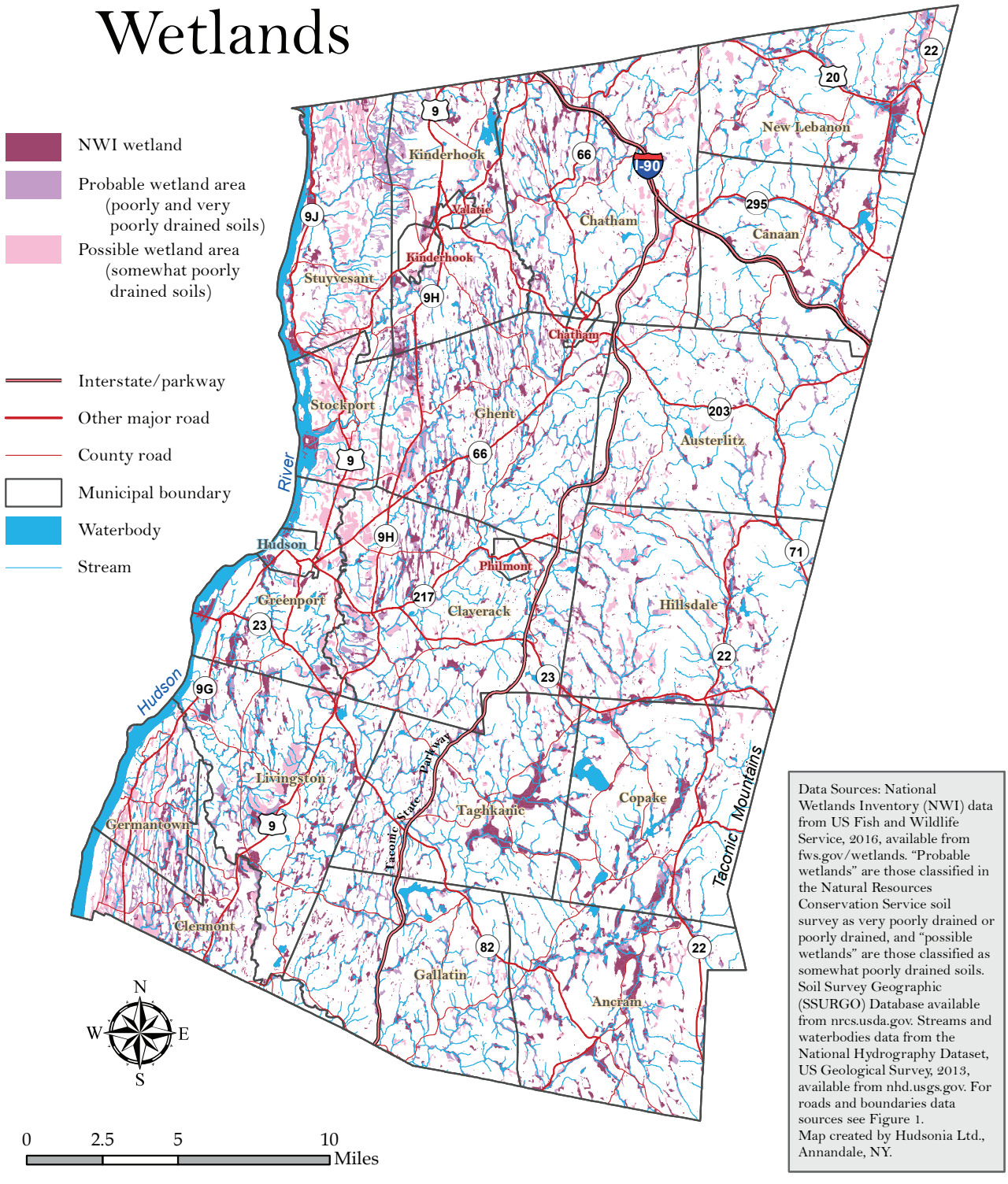


Data Sources: Shallow soils are those described in the Natural Resources Conservation Service soil survey as having less than or equal to 20 inches to bedrock. Soil Survey Geographic (SSURGO) Database available from nrcs.usda.gov. Steep slopes created by the Cornell Cooperative Extension Dutchess County GIS lab from a digital elevation model (DEM) provided by the US Geological Survey (USGS), available from seamless.usgs.gov. Waterbodies data from the National Hydrography Dataset, USGS, 2013, available from nhd.usgs.gov. For roads and boundaries data sources, see Figure 1. Map created by

Source: Columbia County Natural Resources Inventory, 2018

MAP 19: Steep Slopes and Shallow Soils in Columbia County, NY

Wetlands

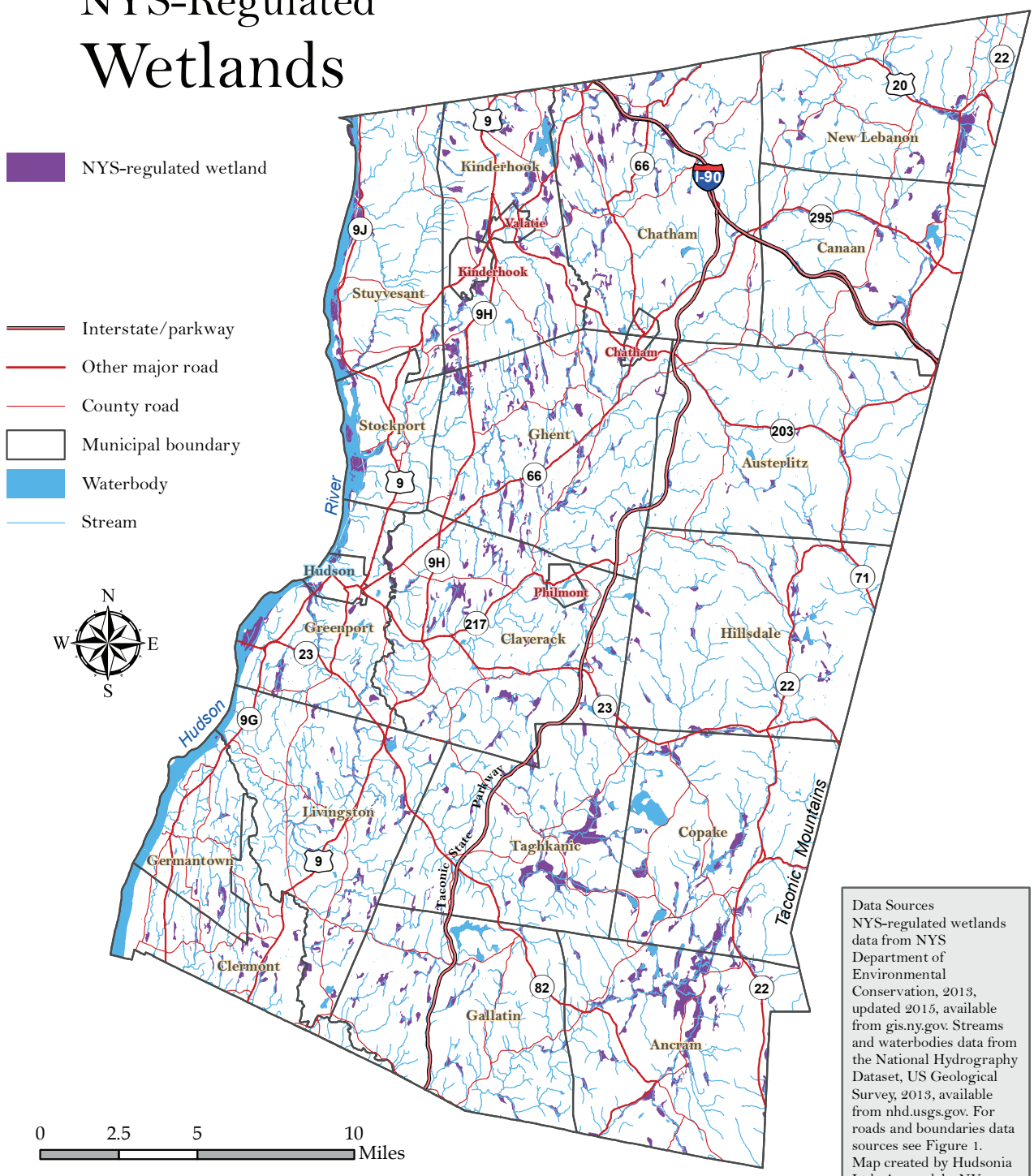


Data Sources: National Wetlands Inventory (NWI) data from US Fish and Wildlife Service, 2016, available from fws.gov/wetlands. "Probable wetlands" are those classified in the Natural Resources Conservation Service soil survey as very poorly drained or poorly drained, and "possible wetlands" are those classified as somewhat poorly drained soils. Soil Survey Geographic (SSURGO) Database available from nrcs.usda.gov. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1.
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 20: Wetlands in Columbia County, NY

NYS-Regulated Wetlands

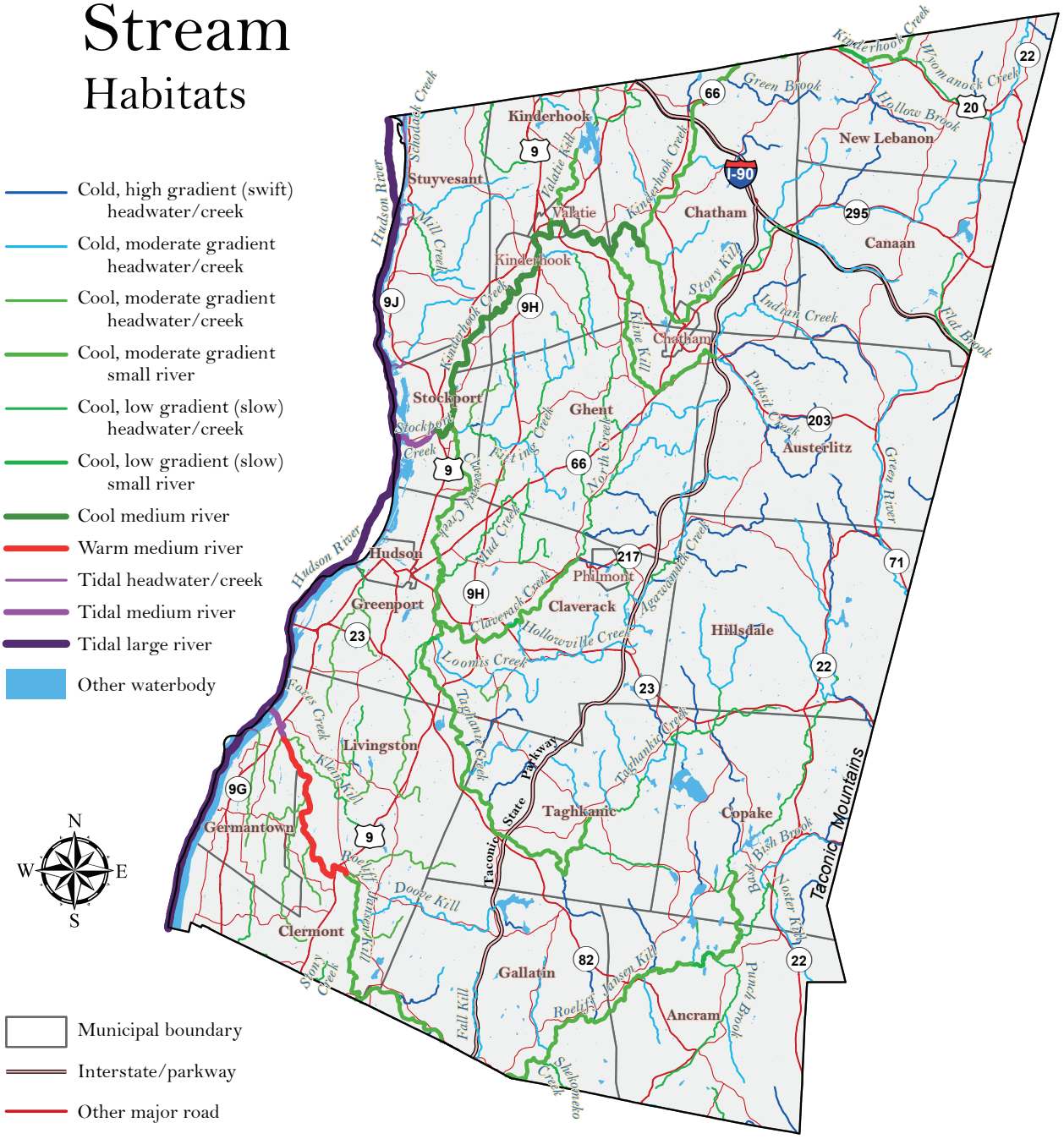


Data Sources
NYS-regulated wetlands data from NYS Department of Environmental Conservation, 2013, updated 2015, available from gis.ny.gov. Streams and waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 21: New York State-Regulated Wetlands in Columbia County, NY

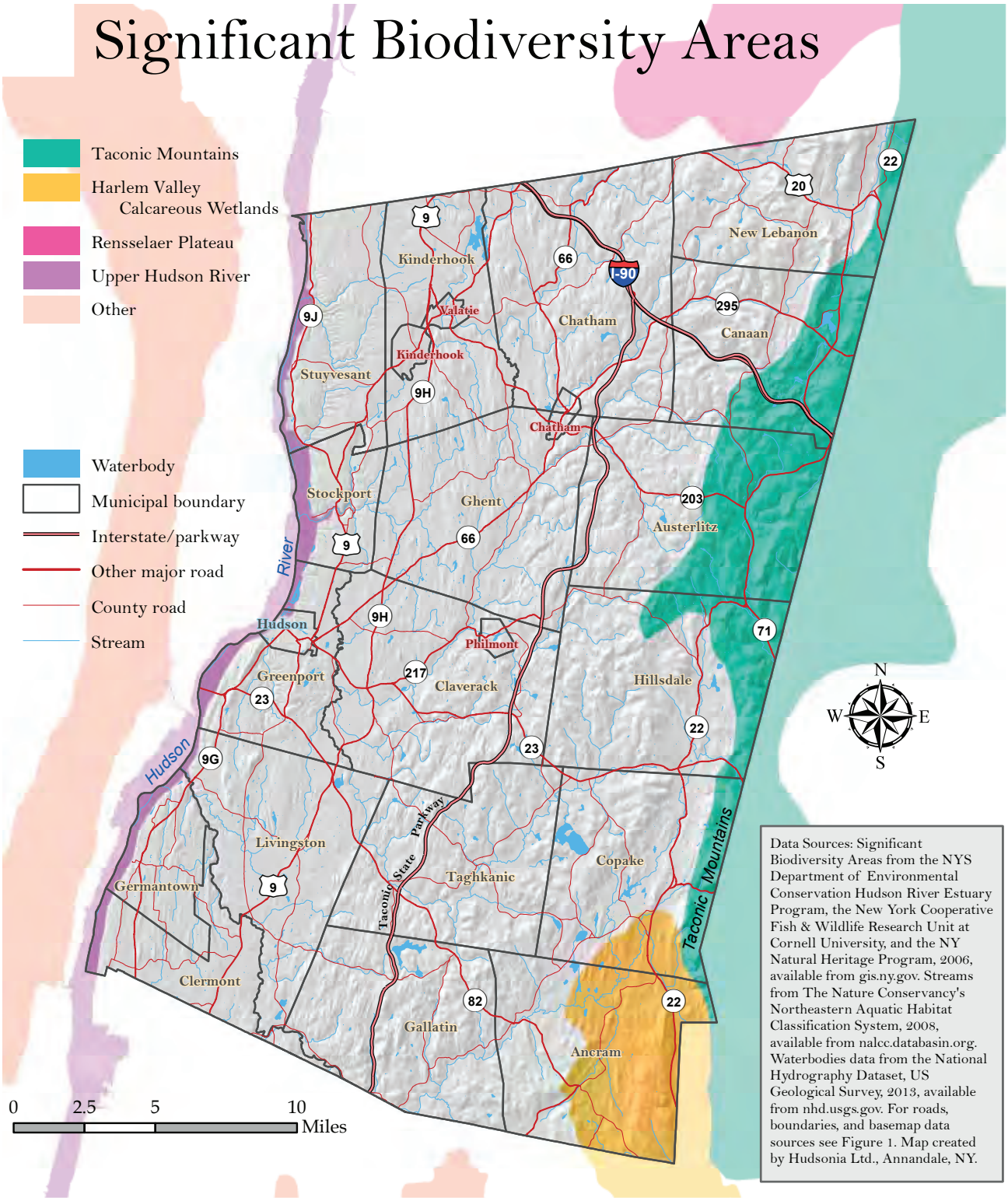
Stream Habitats



Data Sources: Simplified stream habitat types based on the Northeast Aquatic Habitat Classification System from The Nature Conservancy, 2008, available at nalcc.databasin.org. Tidal extent of streams was adjusted by Hudsonia, based on contours. Stream habitat classifications have not been field verified. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

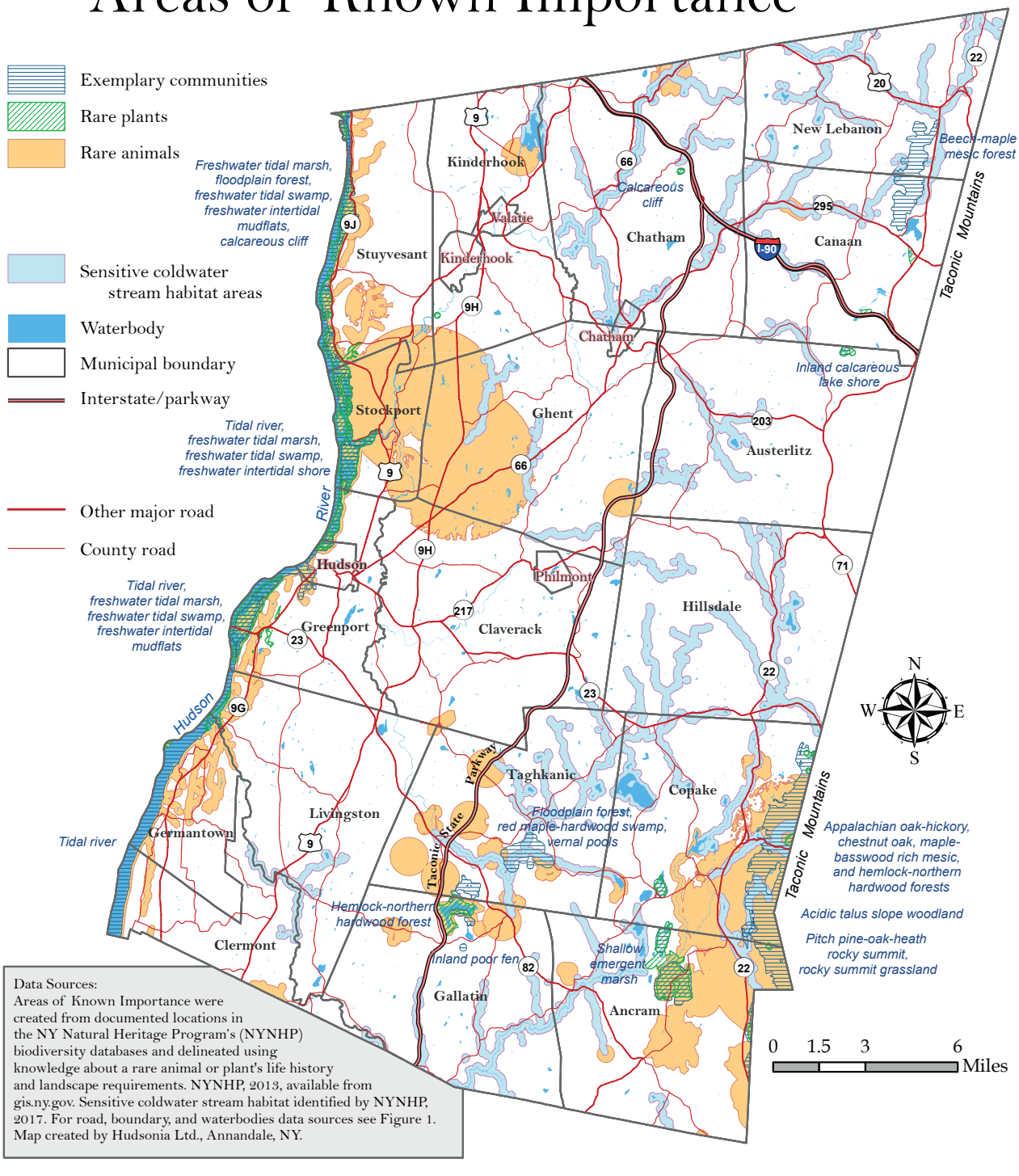
MAP 22: Stream Habitats by Size, Gradient & Temperature in Columbia County, NY



Source: Columbia County Natural Resources Inventory, 2018

MAP 23: Significant Biodiversity Areas (SBAs) in Columbia County, NY

Areas of Known Importance

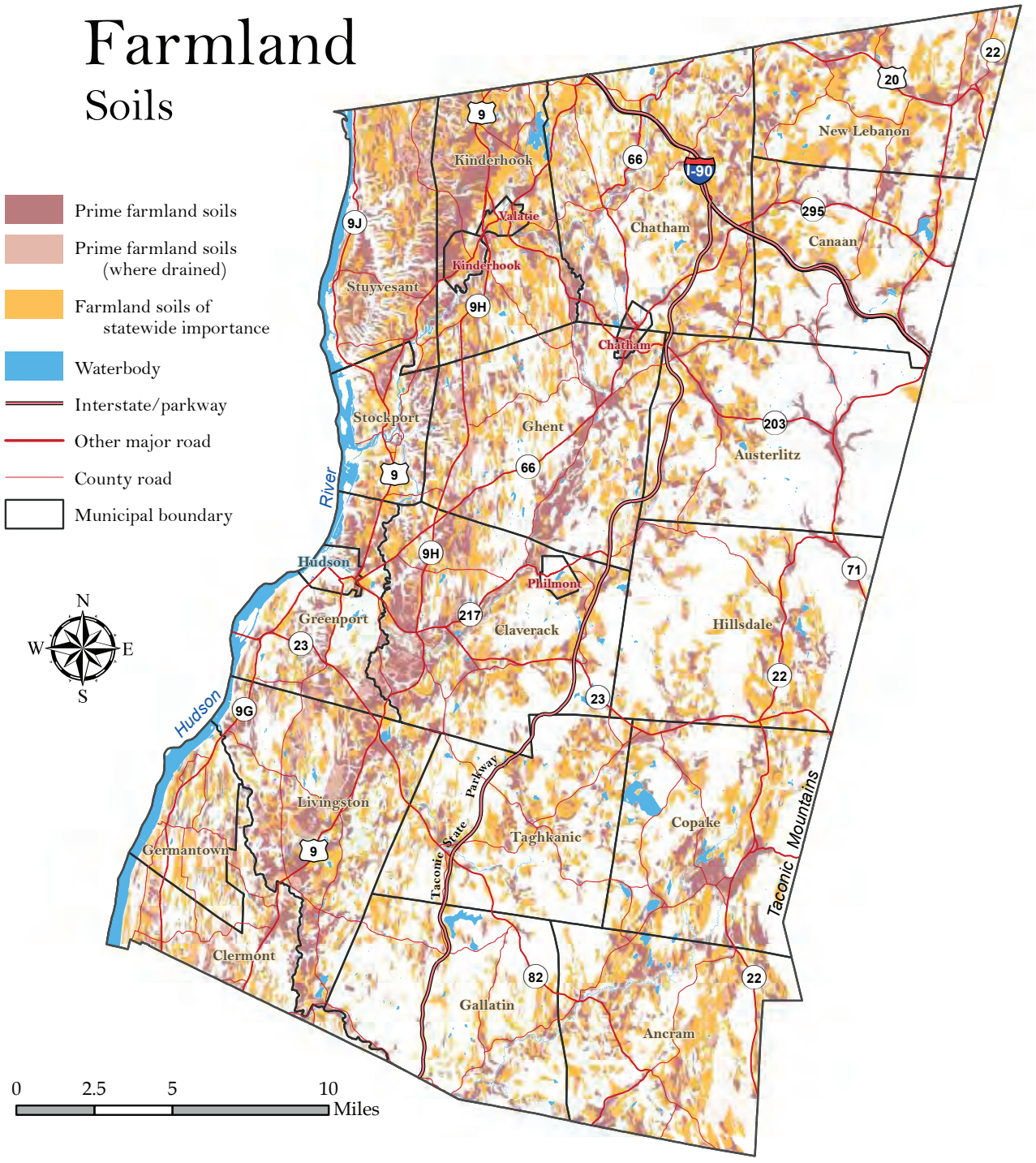


Data Sources:
Areas of Known Importance were created from documented locations in the NY Natural Heritage Program's (NYNHP) biodiversity databases and delineated using knowledge about a rare animal or plant's life history and landscape requirements. NYNHP, 2013, available from gis.ny.gov. Sensitive coldwater stream habitat identified by NYNHP, 2017. For road, boundary, and waterbodies data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 24: Areas of Known Ecological Importance in Columbia County, NY

Farmland
Soils

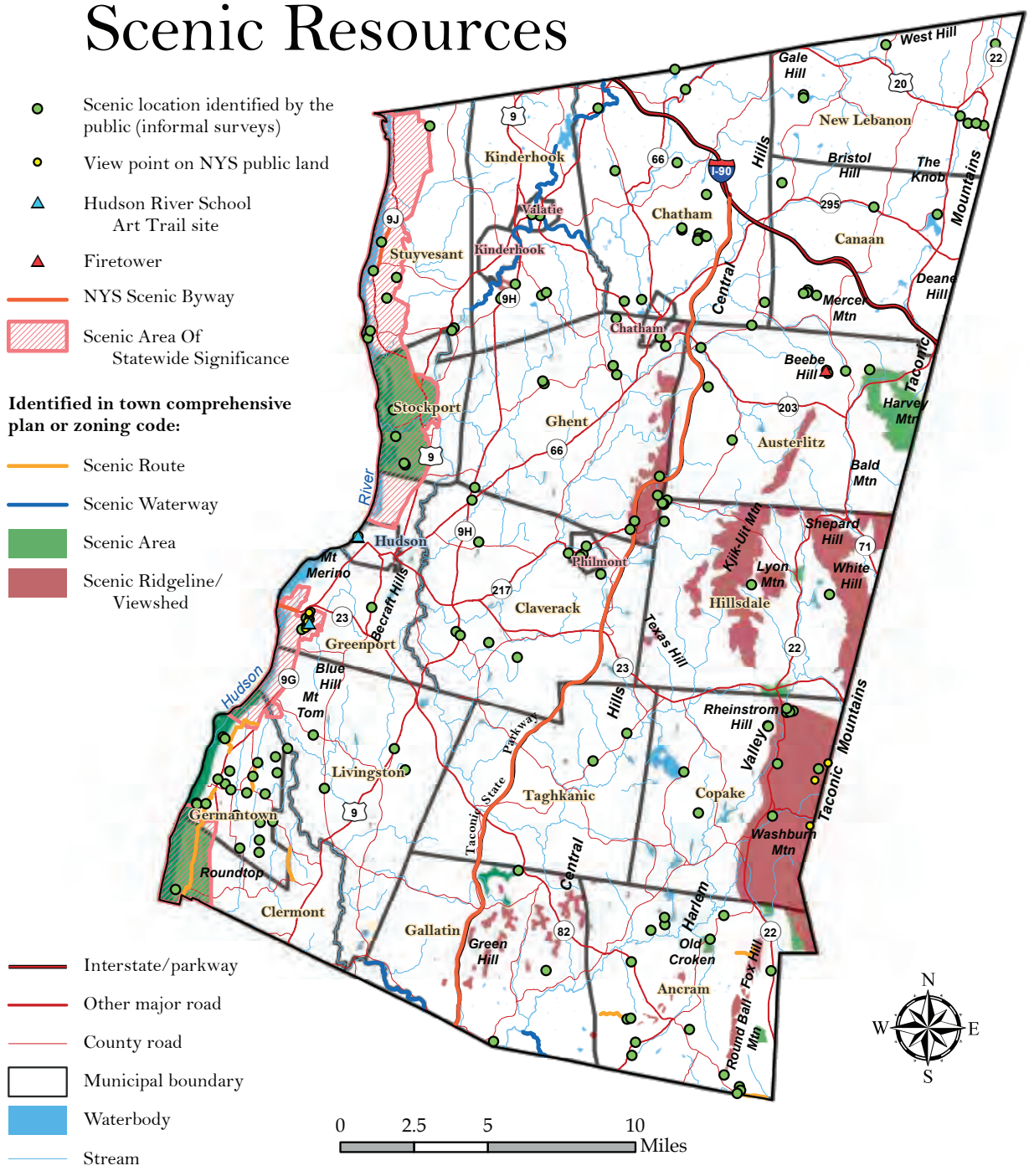


Data Sources: Prime farmland soils and soils of statewide importance are classified as such in the Natural Resources Conservation Service (NRCS) soil survey. Soil Survey Staff, NRCS, US Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Columbia County, NY, available from nrcs.usda.gov. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 25: Prime Farmland Soils of Columbia County, NY

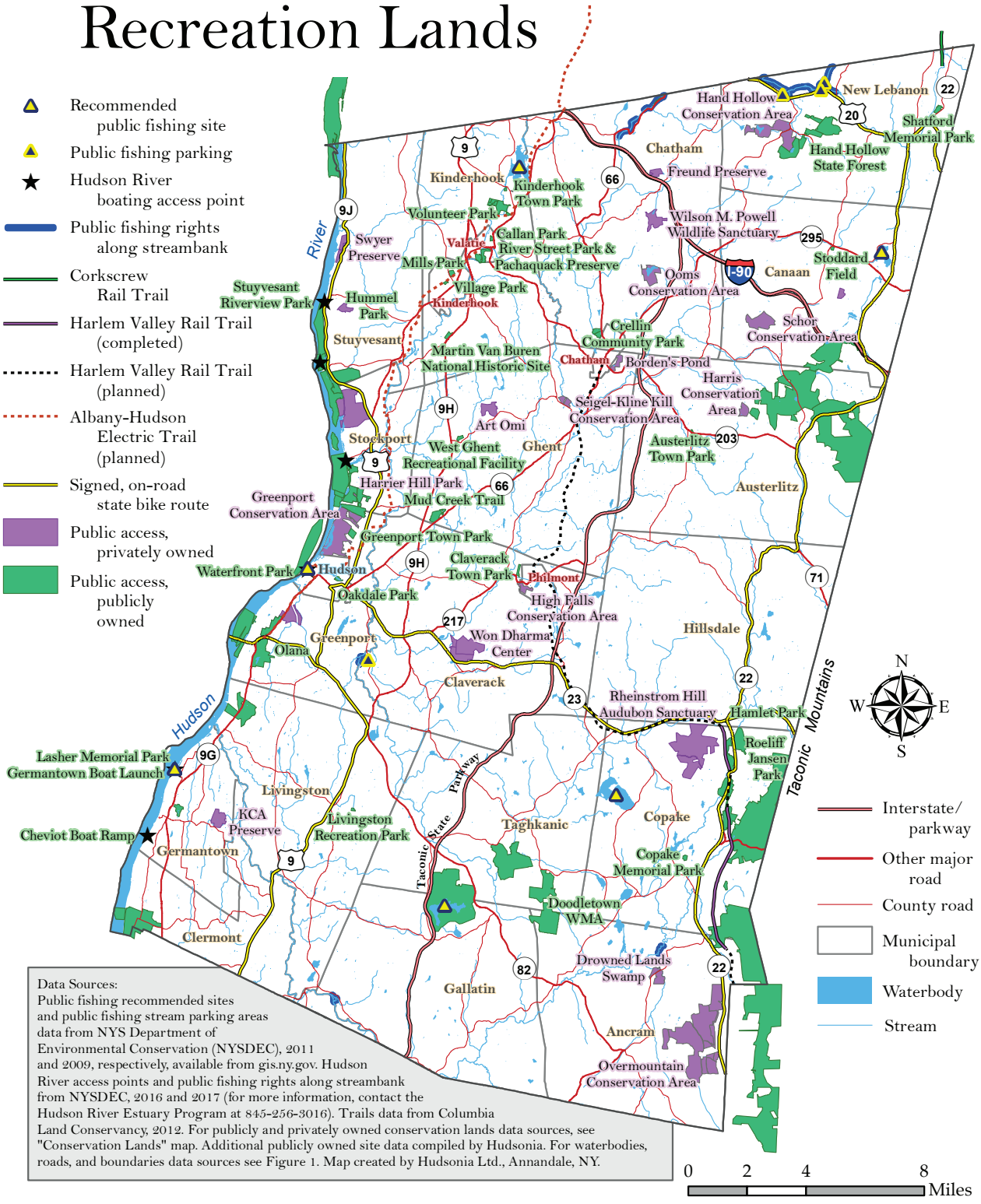
Scenic Resources



Data Sources: Scenic resource data compiled by the Columbia Land Conservancy, the NYS DEC Hudson River Estuary Program, and Hudsonia from different sources, including the public, town comprehensive plans, Community Environmental Associates, NYS OPRHP, NYS Department of Transportation, Hudson River Valley Greenway, and NYS Department of State. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. Streams from The Nature Conservancy, 2008, available at nalcc.databasin.org. For roads and boundaries data sources see Figure 1.
Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

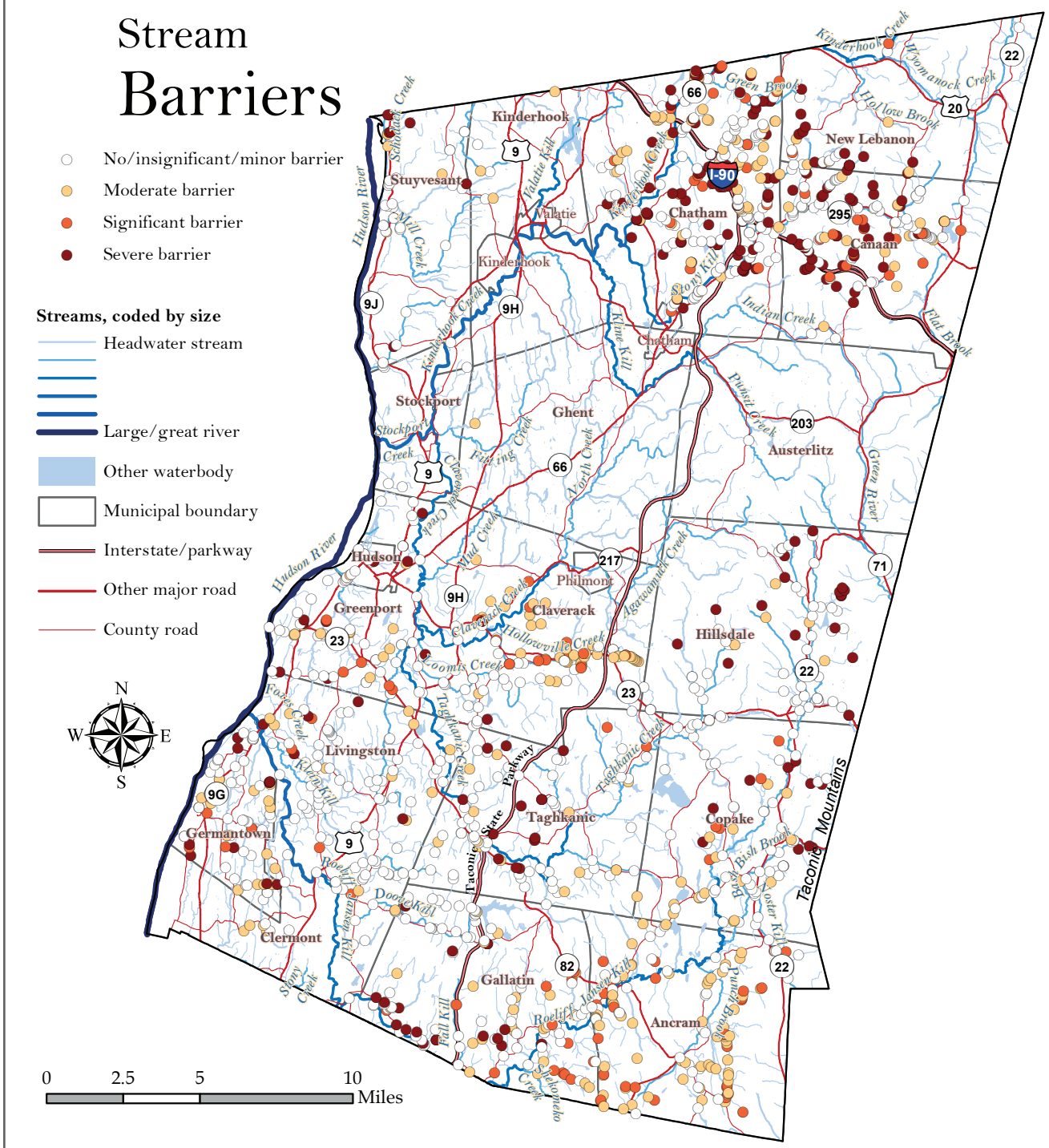
Recreation Lands



Data Sources:
Public fishing recommended sites and public fishing stream parking areas data from NYS Department of Environmental Conservation (NYSDEC), 2011 and 2009, respectively, available from gis.ny.gov. Hudson River access points and public fishing rights along streambank from NYSDEC, 2016 and 2017 (for more information, contact the Hudson River Estuary Program at 845-256-3016). Trails data from Columbia Land Conservancy, 2012. For publicly and privately owned conservation lands data sources, see "Conservation Lands" map. Additional publicly owned site data compiled by Hudsonia. For waterbodies, roads, and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 27: Public Access Recreation Lands in Columbia County, NY



Data Sources: Stream barriers from NAACC (after 2015) and UMass Stream Continuity Project (2015-2017) datasets, North Atlantic Aquatic Connectivity Collaborative, available from www.streamcontinuity.org. Major streams from The Nature Conservancy (TNC), 2008, available from nalcc.databasin.org. Additional headwater streams and other waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 28: Stream Barriers at Road Crossings in Columbia County, NY

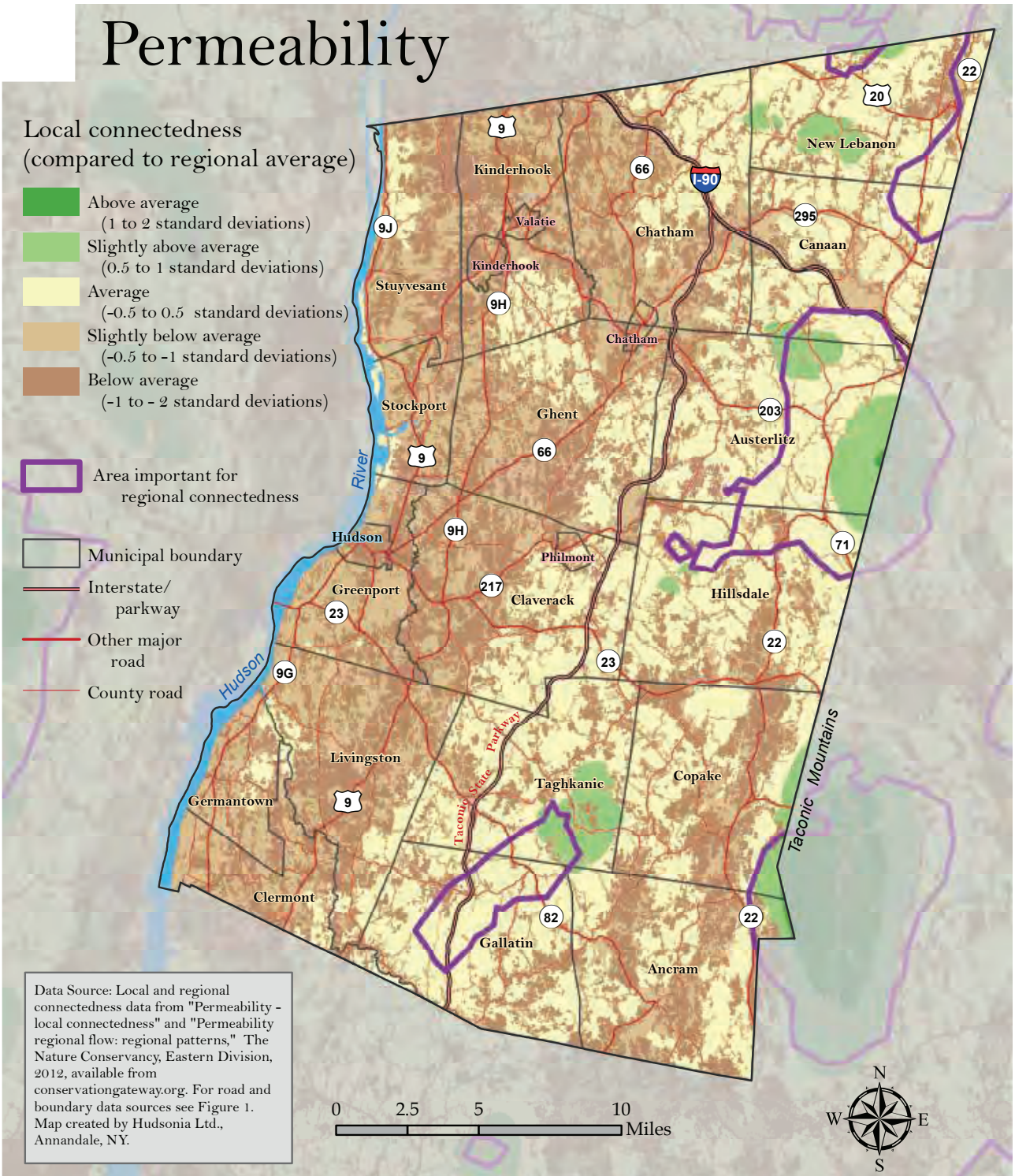


Figure 37. Permeability, the ability of a landscape to sustain ecological processes and allow movement or flow of organisms, in Columbia County, New York. Local connectedness describes the continuity of natural cover at the scale of a few kilometers. Areas important for regional connectedness are those where flow across a wider regional network is narrowly concentrated. Columbia County Natural Resources Inventory, 2018.

Source: Columbia County Natural Resources Inventory, 2018

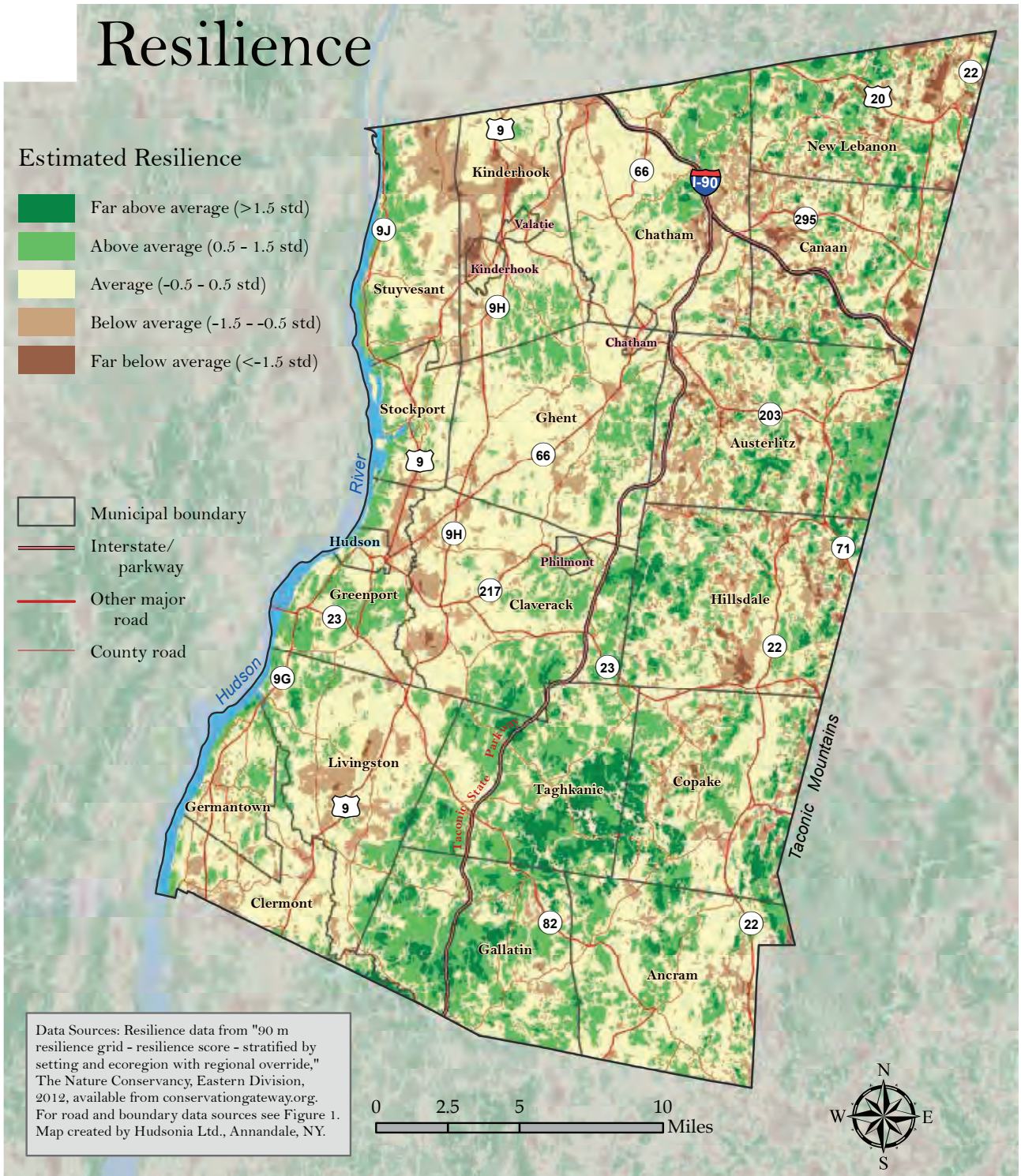
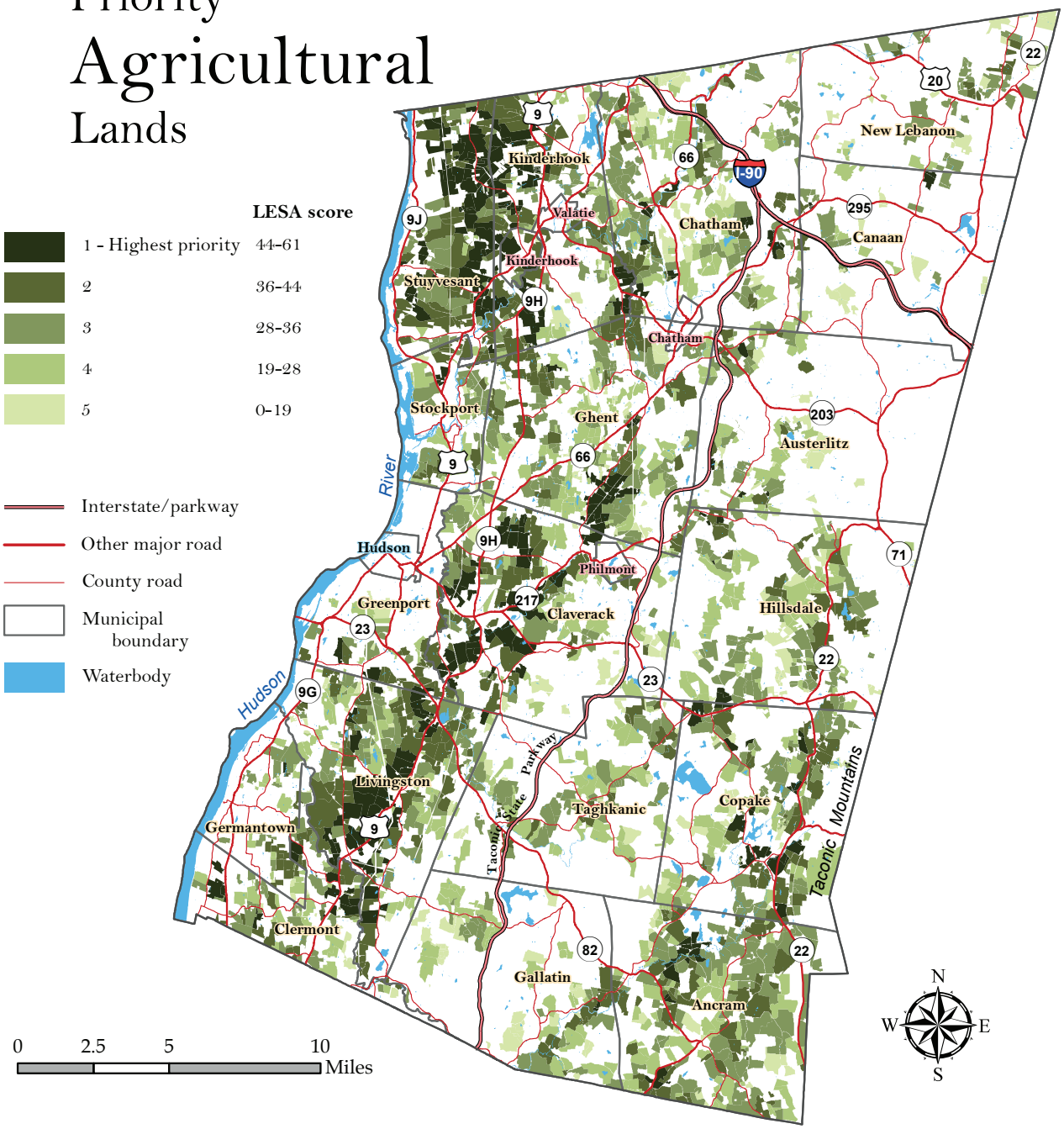


Figure 38. Local resilience of living systems in Columbia County, New York. Resilience is a general estimate of the ability of a living system to adjust to climate and other environmental changes, taking into account both the local connectedness of natural cover (which may help sustain ecological processes and allow movement of organisms) and the landscape complexity (as more varied elevations and landforms may help buffer changes in microclimate). Columbia County Natural Resources Inventory, 2018.

Source: Columbia County Natural Resources Inventory, 2018

MAP 30: Resilience of Living Systems in Columbia County, NY

Priority Agricultural Lands

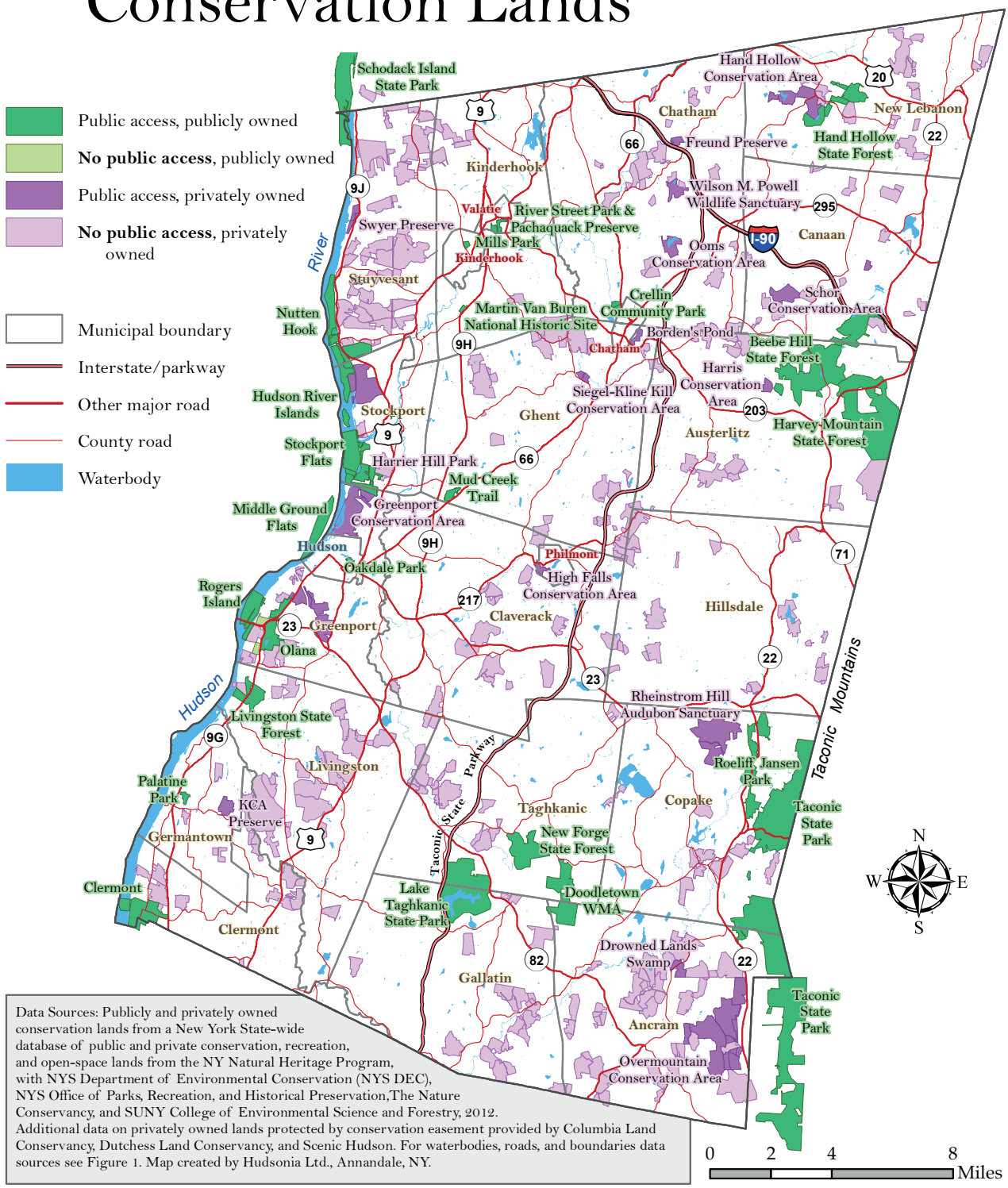


Data Sources: Priority agricultural lands from a Land Evaluation and Site Assessment (LESA) adapted for Columbia County by the County Agricultural and Farmland Protection Board and mapped by Don Meltz Planning and GIS. Original LESA created by Natural Resources Conservation Service. Assessment criteria include soil type, commitment to farming, long-term viability, development pressure, and open space (including scenic, historic, and natural resource) value. Waterbodies data from the National Hydrography Dataset, US Geological Survey, 2013, available from nhd.usgs.gov. For roads and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Figure 39. Priority agricultural lands in Columbia County, New York. Lands identified through a Land Evaluation and Site Assessment System (LESA) (see text). Columbia County Natural Resources Inventory, 2018.

Source: Columbia County Natural Resources Inventory, 2018

Conservation Lands

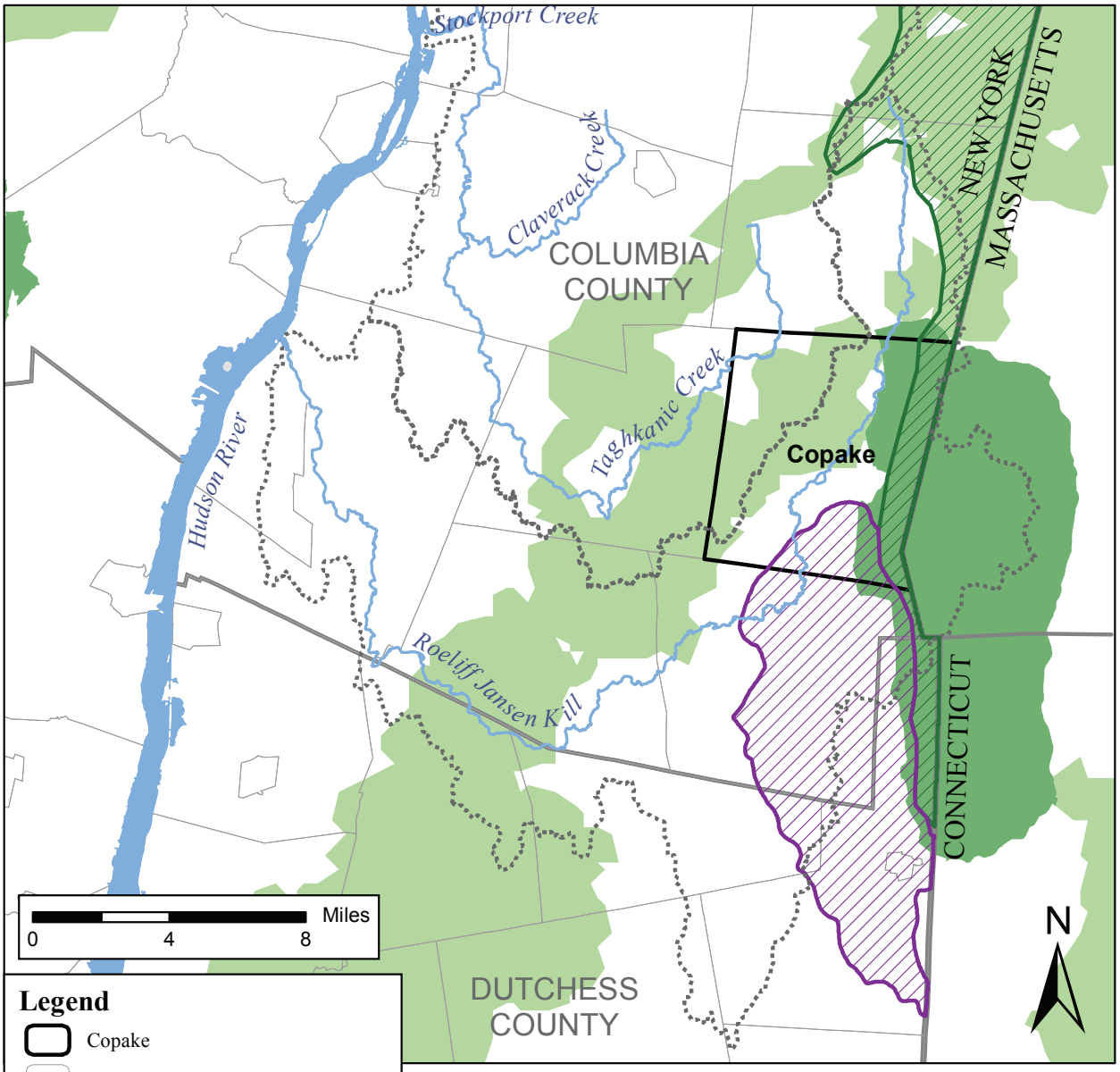


Data Sources: Publicly and privately owned conservation lands from a New York State-wide database of public and private conservation, recreation, and open-space lands from the NY Natural Heritage Program, with NYS Department of Environmental Conservation (NYS DEC), NYS Office of Parks, Recreation, and Historical Preservation,The Nature Conservancy, and SUNY College of Environmental Science and Forestry, 2012. Additional data on privately owned lands protected by conservation easement provided by Columbia Land Conservancy, Dutchess Land Conservancy, and Scenic Hudson. For waterbodies, roads, and boundaries data sources see Figure 1. Map created by Hudsonia Ltd., Annandale, NY.

Source: Columbia County Natural Resources Inventory, 2018

MAP 32: Conservation Lands in Columbia County, NY

MAPS
from the
NYSDEC
Habitat Summary
for the Town of Copake



This map shows the location of the Town of Copake, Columbia County in relation to its watersheds, important forest blocks, and significant biodiversity areas. This map was produced as part of a Habitat Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program Conservation and Land Use Specialist Ingrid Haeckel at ibhaecke@gw.dec.state.ny.us or (518) 402-8954. http://www.dec.ny.gov/lands/5094.html

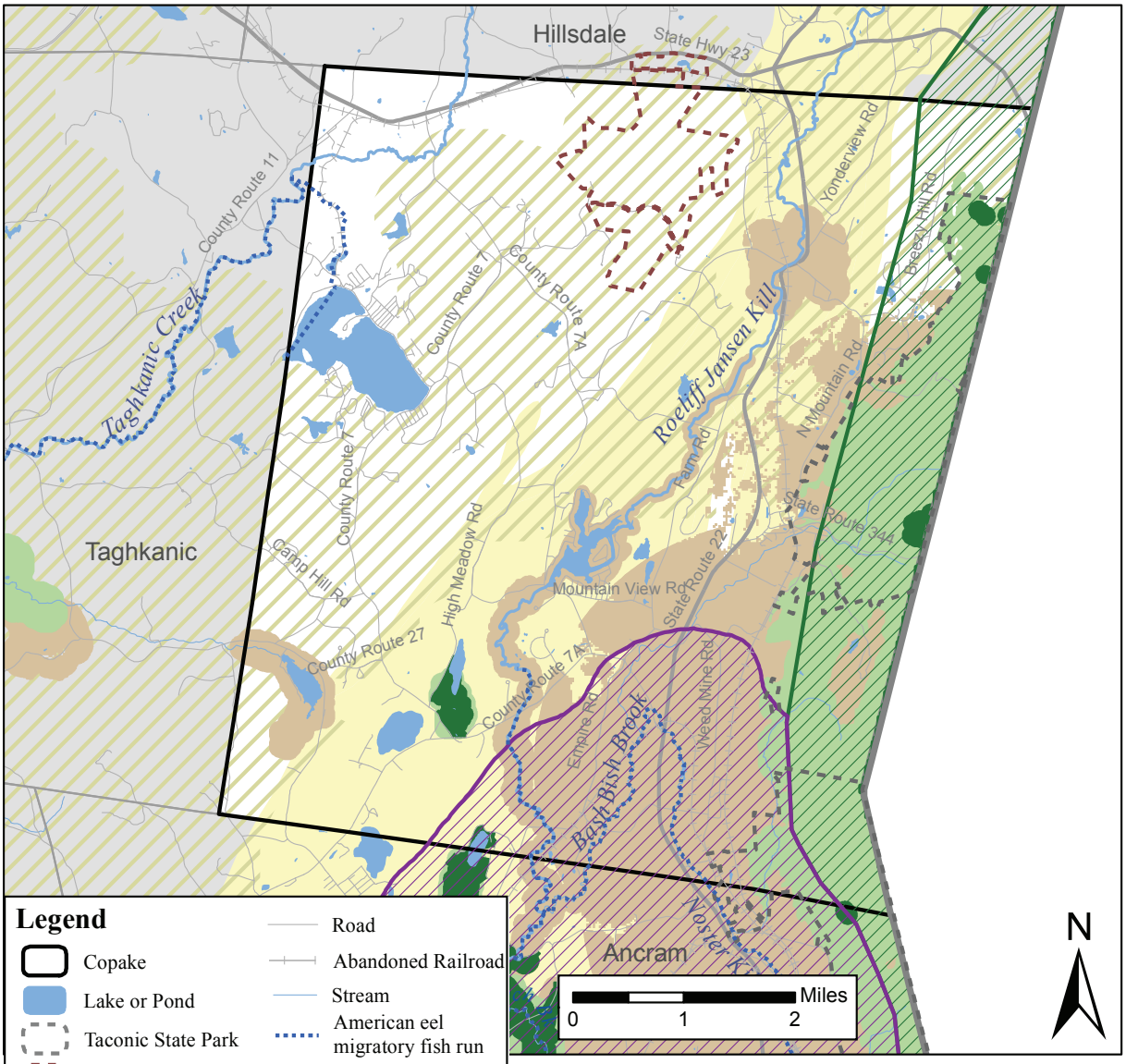
Data Sources:

New York State Department of Environmental Conservation
New York Natural Heritage Program
New York State Office of Cyber Security and Critical Infrastructure Coordination
US Geological Survey
The Nature Conservancy

Map Created March 2014

Source: NYSDEC Habitat Summary for the Town of Copake (2014)

MAP 33: Regional Context of Copake, NY



Legend

- Copake
- Lake or Pond
- Taconic State Park
- Rheinstrom Hill Audubon Sanctuary
- Regional forest linkage zone
- Calcium-rich bedrock
- Road
- Abandoned Railroad
- Stream
- American eel migratory fish run

Areas of known importance for:

- rare plants
- rare animals
- significant natural communities

Significant Biodiversity Areas

- Harlem Valley Calcareous Wetlands
- Taconic Mountains

This map shows the most significant *known* ecological features in the Town of Copake, Columbia County based on limited information. This map was produced as part of a Habitat Summary for the Town. Overlapping layers in the map may be turned off in Adobe Acrobat for customized viewing. For more information, please contact NYSDEC's Hudson River Estuary Program Conservation and Land Use Specialist Ingrid Haeckel at ibhaecke@gw.dec.state.ny.us or (518)402-8954. http://www.dec.ny.gov/lands/5094.html

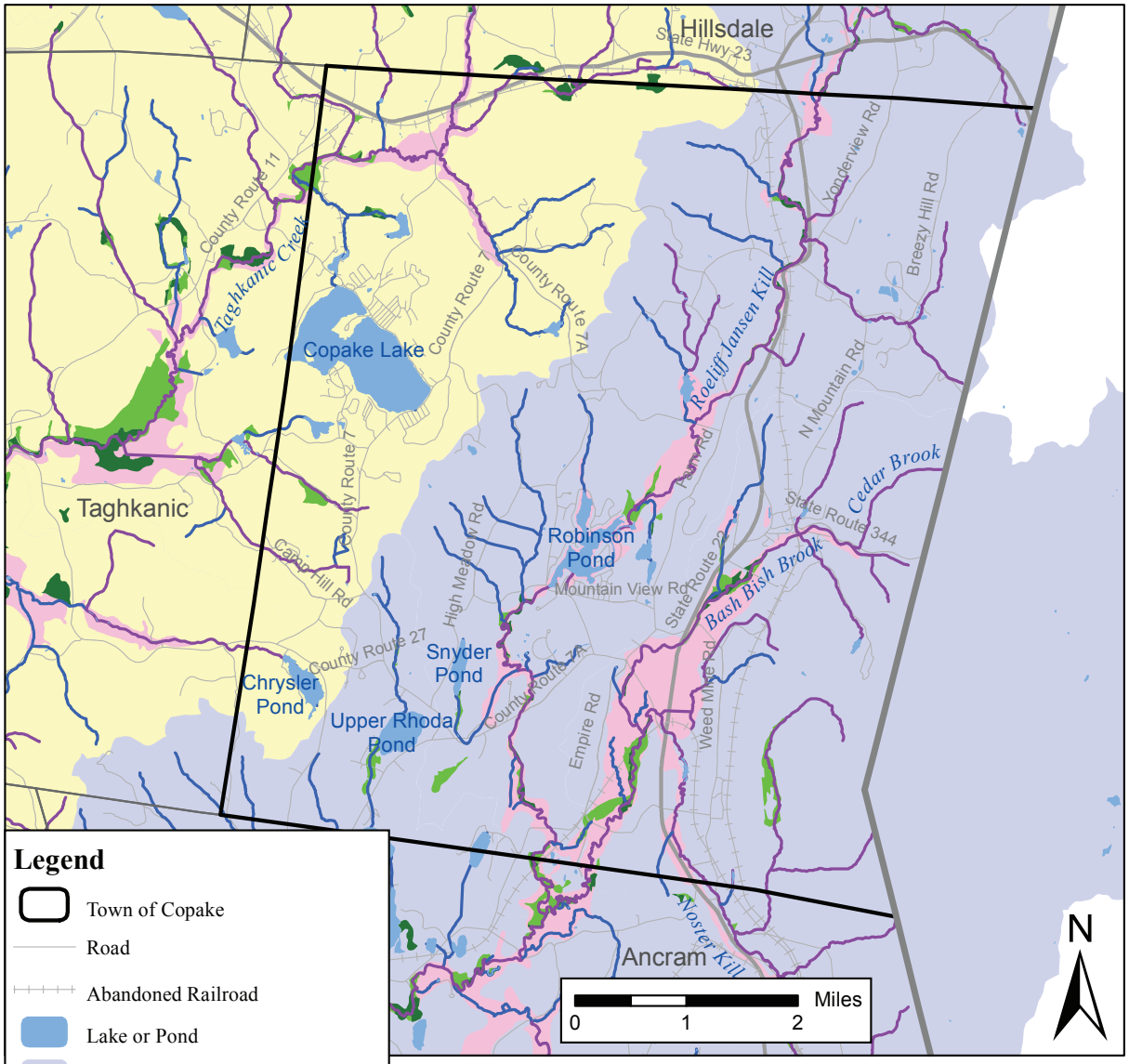
Data Sources:

New York State Department of Environmental Conservation
New York Natural Heritage Program
NYS Office of Cyber Security and Critical Infrastructure Coordination
US Geological Survey
The Nature Conservancy

March 2014

Source: NYSDEC Habitat Summary for the Town of Copake (2014)

MAP 34: Major Ecological Features in Copake, NY



Legend

- Town of Copake
- Road
- Abandoned Railroad
- Lake or Pond
- Roeliff Jansen Kill Watershed
- Greater Stockport Creek Watershed

Stream Habitat

- Coldwater
- Warmwater

Floodplain Features

- 100 Year Floodplain
- Legacy Floodplain Forest
- Reforested Floodplain

This map shows streams, floodplains, waterbodies, watersheds, and aquatic habitat data for the Town of Copake, Columbia County. The map also shows floodplain forests identified by the Farmscape Ecology Program. This map was produced as part of a Habitat Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program Conservation and Land Use Specialist Ingrid Haeckel at ibhaecke@gw.dec.state.ny.us or (518)402-8954.
http://www.dec.ny.gov/lands/5094.html

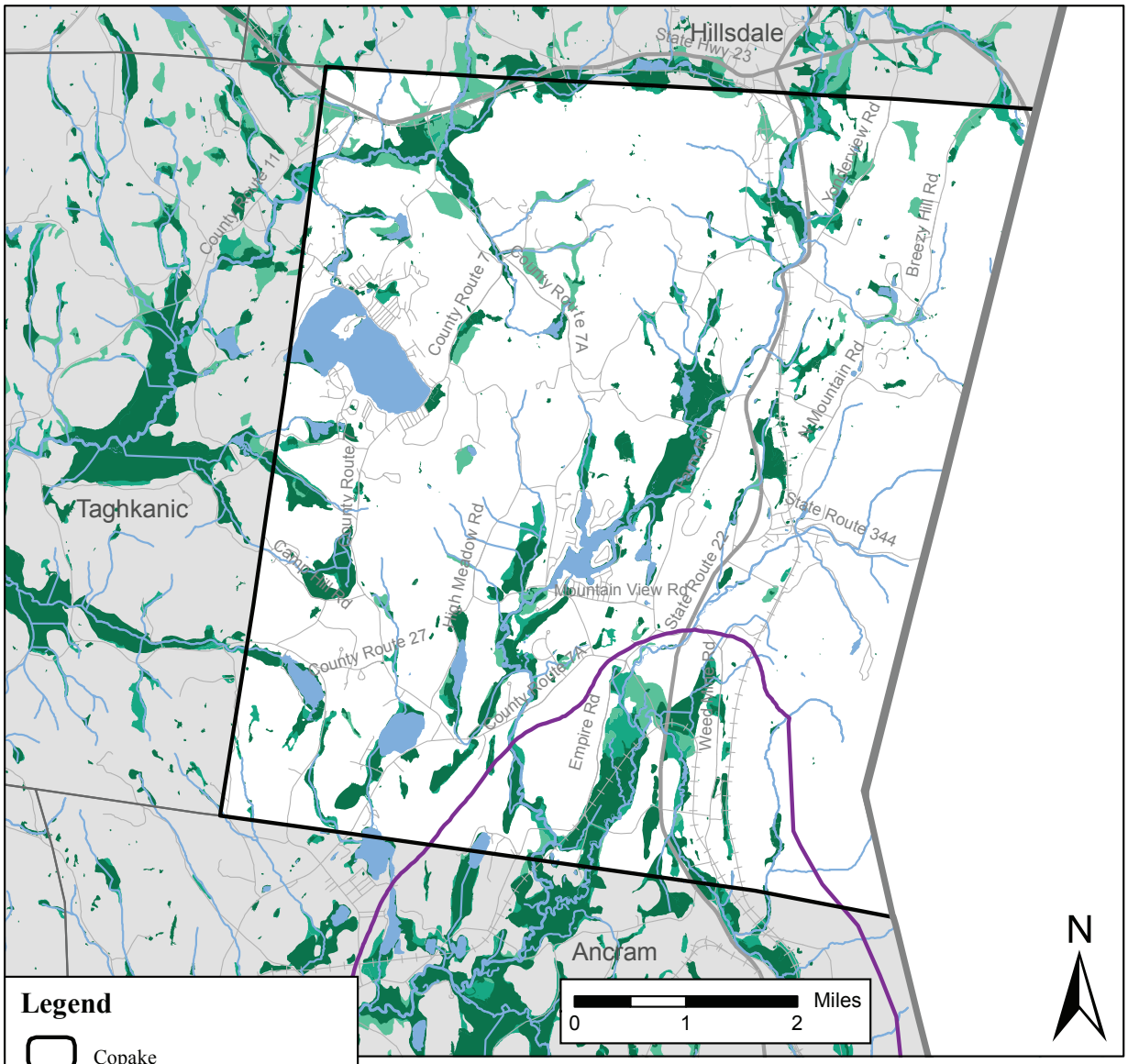
Data Sources: US Geological Survey
Federal Emergency Management Agency
New York State Department of Environmental Conservation
Natural Resources Conservation Service
New York State Office of Cyber Security and Critical Infrastructure Coordination
Hawthorne Valley Association
Farmscape Ecology Program

Map Created March 2014

Cornell University

Source: NYSDEC Habitat Summary for the Town of Copake (2014)

MAP 35: Streams and Watershed in Copake, NY



Legend

- Copake
- Road
- Abandoned Railroad
- Stream
- Lake or Pond
- Harlem Valley Calcareous Wetlands Significant Biodiversity Area
- Known wetland
- Probable wetland
- Possible wetland

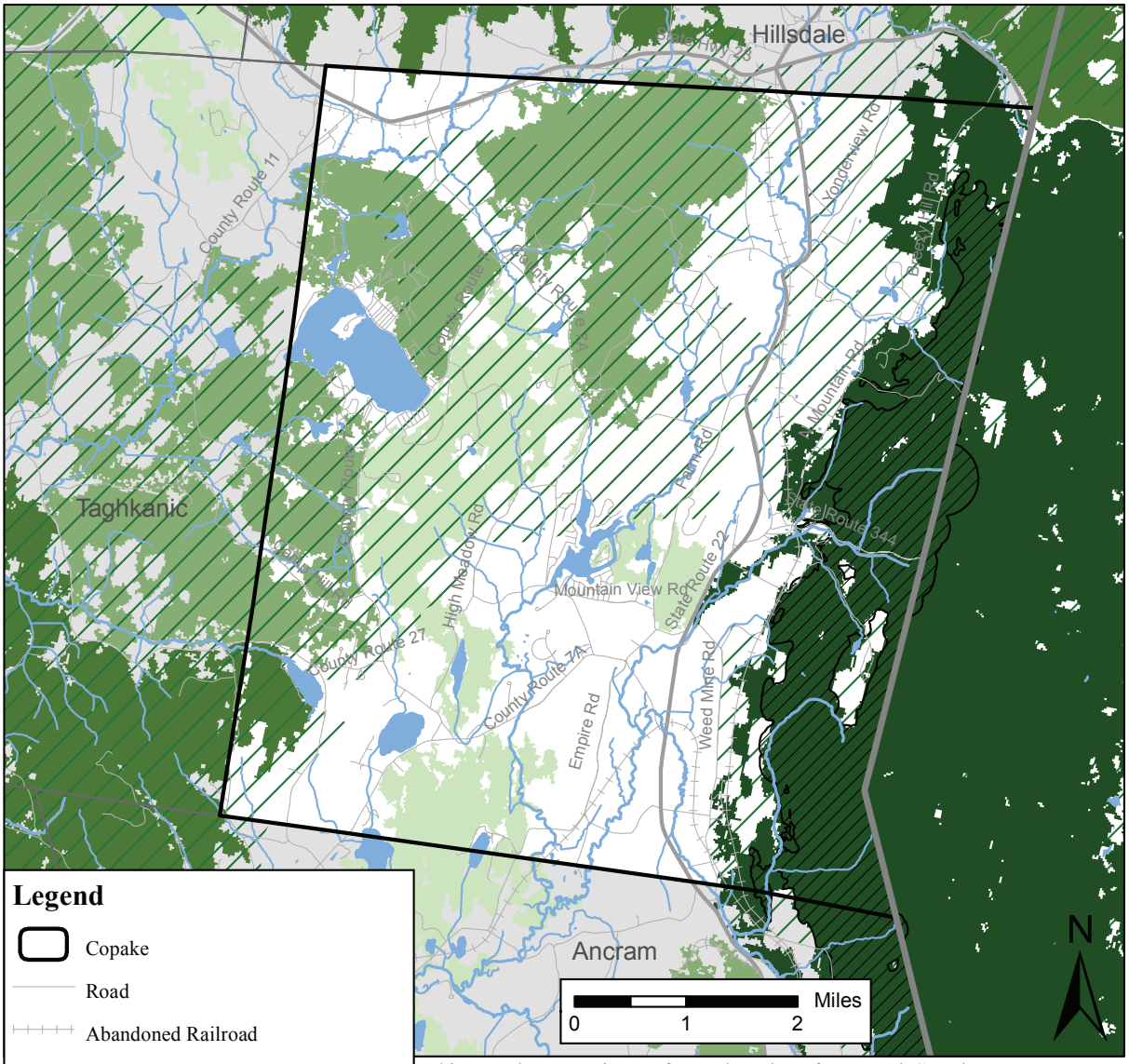
This map shows *known* wetlands from the National Wetlands Inventory and NYS Freshwater Wetland Map and potential wetlands in the Town of Copake, Columbia County, NY. Probable and possible wetlands were identified based on soil drainage class in the Columbia County Soil Survey; see habitat summary text for more details. This map was produced as part of a Habitat Summary for the town and is not intended for regulatory purposes. For more information, please contact NYSDEC's Hudson River Estuary Program Conservation and Land Use Specialist Ingrid Haeckel at (518)402-8954 or ibhaecke@gw.dec.state.ny.us. http://www.dec.ny.gov/lands/5094.html

Data Sources: US Fish and Wildlife Service, National Wetlands Inventory
New York State Department of Environmental Conservation, New York State Museum
Natural Resources Conservation Service
New York Natural Heritage Program
US Geological Survey

Map Created March 2014

Source: NYSDEC Habitat Summary for the Town of Copake (2014)

MAP 36: Wetlands in Copake, NY



Legend

- Copake
- Road
- Abandoned Railroad
- Stream
- Lake or Pond
- Significant forest type
- Regional forest linkage zone

Forest Patch Size (acres)

- Stepping Stone (200 - 1999)
- Locally Significant (2000 - 4999)
- Regionally Significant (5000 - 14999)
- Globally Signfiicant (>15000)

This map shows contiguous forested patches of New York State by acreage for the Town of Copake, Columbia County. The patches were developed using forest cover data from the Coastal Change Analysis Program and buffered roads. Major forest blocks and linkages were identified by the Nature Conservancy. This map was produced as part of a Habitat Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program Conservation and Land Use Specialist Ingrid Haeckel at (518)402-8954 or ibhaecke@gw.dec.state.ny.us. http://www.dec.ny.gov/lands/5094.html

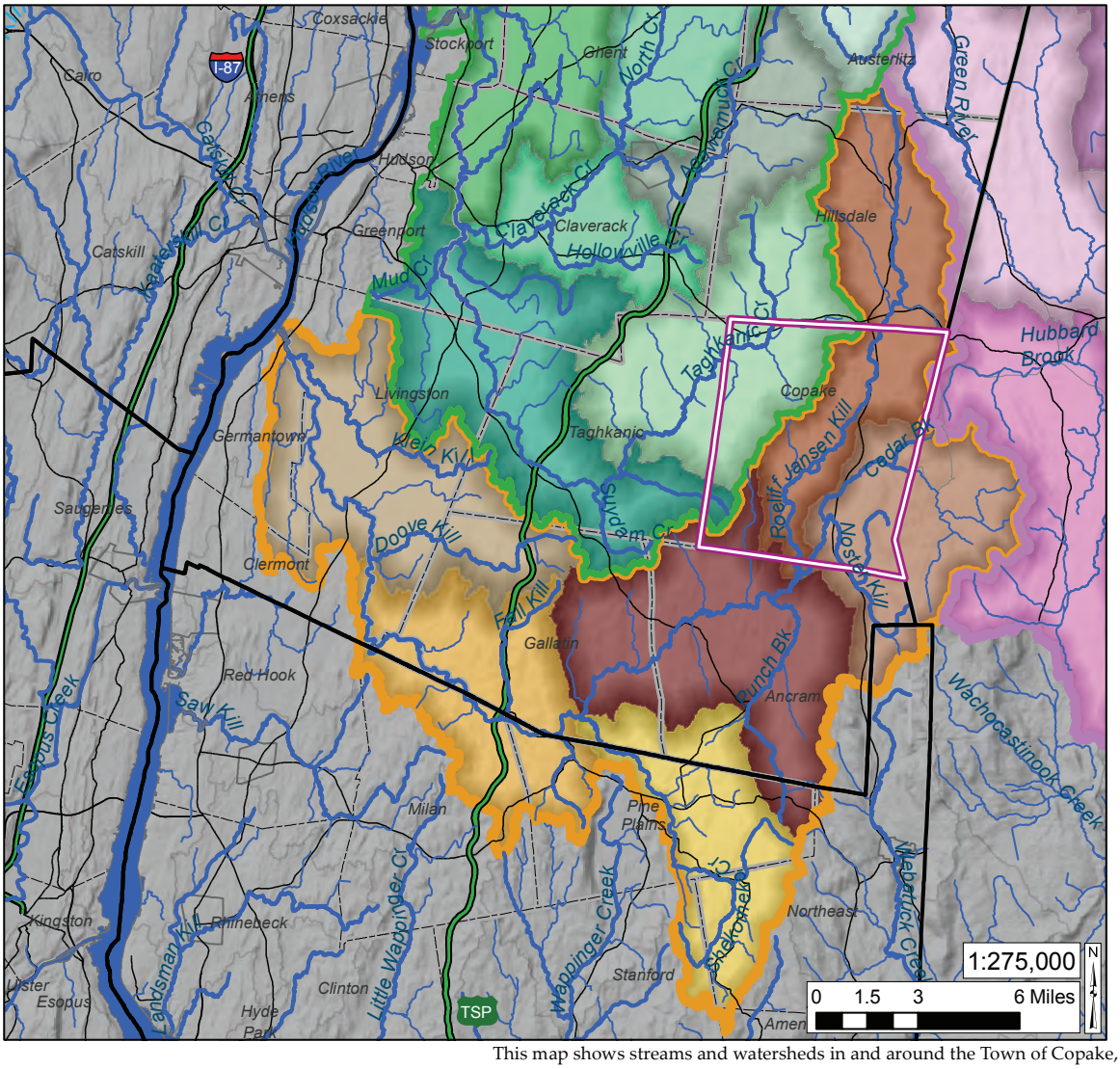
Data Sources: NOAA 2006 Coastal Change Analysis Program
New York State Department of Environmental Conservation
New York Natural Heritage Program
New York State Office of Cyber Security and Critical Infrastructure Coordination
The Nature Conservancy

Map Created March 2014

Source: NYSDEC Habitat Summary for the Town of Copake (2014)

MAP 37: Large Forests (200 acres and larger) in Copake, NY

MAPS
from the
NYSDEC
Water Resource Summary
for the Town of Copake



Legend

- Copake
- Major stream
- Greater Stockport Creek Watershed
- Roeliff Jansen Kill Watershed
- Williams River/Housatonic River Watershed

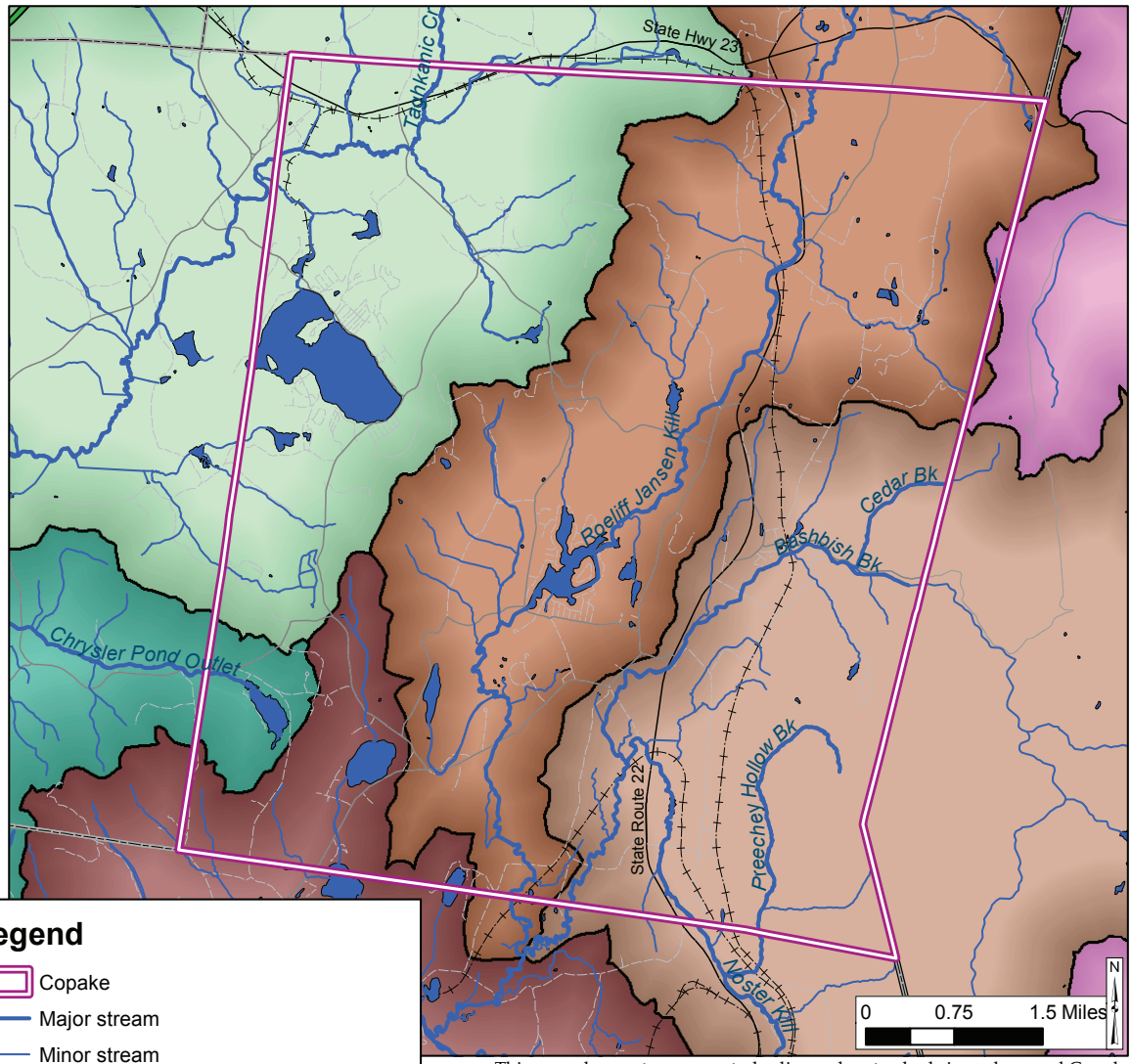
This map shows streams and watersheds in and around the Town of Copake, Columbia County. The Roeliff Jansen Kill and Greater Stockport Creek watersheds are shown, which flow into the Hudson River. The Williams River/Housatonic watershed is also shown, which flows into the Housatonic River. This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Data Sources:
Northeast Aquatic Habitat Classification System (EPA, USGS, and TNC) (2010) for minor streams
USGS National Hydrography Dataset for major streams and all Hydrologic Unit Code 10 watersheds and 12 subwatersheds (2008)
Map Created 2014

Hudson River Estuary | Water Resource Institute of New York State | Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 38: The Roeliff Jansen Kill and Greater Stockport Creek Watersheds, Subwatersheds and Major Streams in Copake, NY



Legend

- Copake
- Major stream
- Minor stream
- Railroad (abandoned)
- Subwatershed boundary

Roeliff Jansen Kill watersheds

- Bash Bish Brook
- Headwaters Roeliff Jansen Kill
- Punch Brook-Roeliff Jansen Kill

Greater Stockport Creek watersheds

- Headwaters Taghkanic Creek
- Loomis Creek-Claverack Creek

Housatonic watersheds

- Hubbard Brook

This map shows streams, waterbodies and watersheds in and around Copake, Columbia County. Subwatershed boundaries are shown. Due to limitations of the available data, many intermittent and some perennial streams are missing. This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

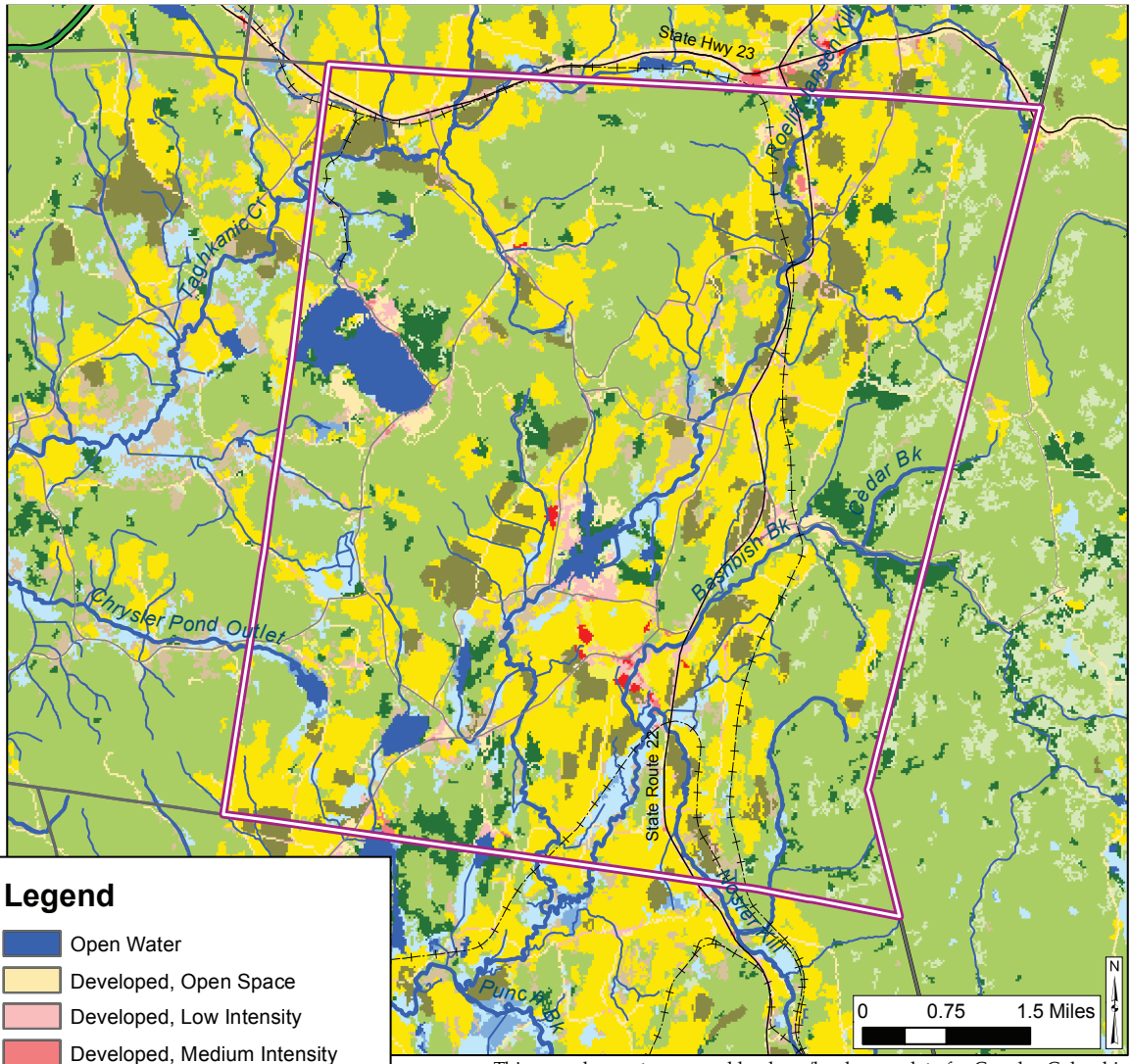
Data Sources:
TNC Northeast Aquatic Habitat Classification for streams (2008)
USGS National Hydrography Dataset for streams, waterbodies and Hydrologic Unit Code 12 subwatersheds (2008)
NYS Office of CSCIC (2011) for road data

Map Created 2014

Hudson River Estuary | Water Resource Institute of New York State | Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 39: Subwatersheds in Copake, NY



Legend

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

This map shows streams and land use/land cover data for Copake, Columbia County. Land use and land cover information is not appropriate for site scale planning. This map was produced as part of a Water Resources Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

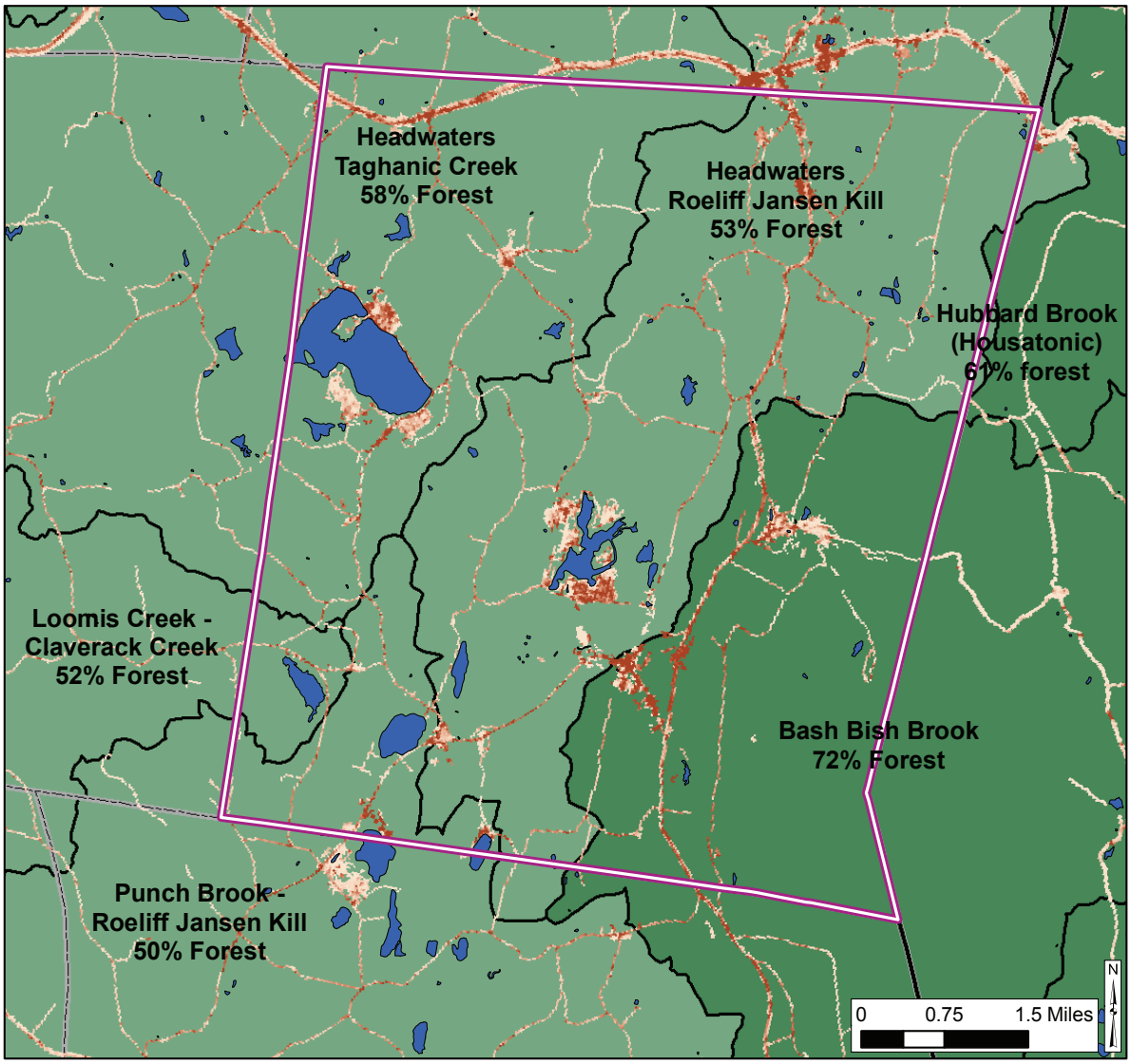
Data Sources:
USGS National Hydrography Dataset (2008) for streams
USGS National Landcover Database (2006) for land use and land cover data

Map Created 2014

Hudson River Estuary
Water Resource Institute of New York State
Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 40: Land Cover and Land Use, including Forests, Farmland and Impervious Cover in Copake, NY



Legend

Percent Impervious Cover

100% 0%

Subwatershed boundary

Percent forest cover by subwatershed

- 0 - 30
- 31 - 45
- 46 - 60
- 61 - 75
- 76 - 100

This map shows percent impervious cover, averaged in 30sq m grids, as well as percent forest cover averaged by subwatershed, for Copake, Columbia County. For both datasets, darker colors indicate higher percent cover values. **This map is not appropriate for site planning and is not a viable substitute for on-the-ground knowledge and site visits.** This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Data Sources:

USGS National Land Cover Database Land Cover and Percent Developed Imperviousness (2006) for forest cover and impervious cover

USGS National Hydrography Dataset for streams, waterbodies and Hydrologic Unit Code 12 subwatersheds (2008)

Map Created 2014

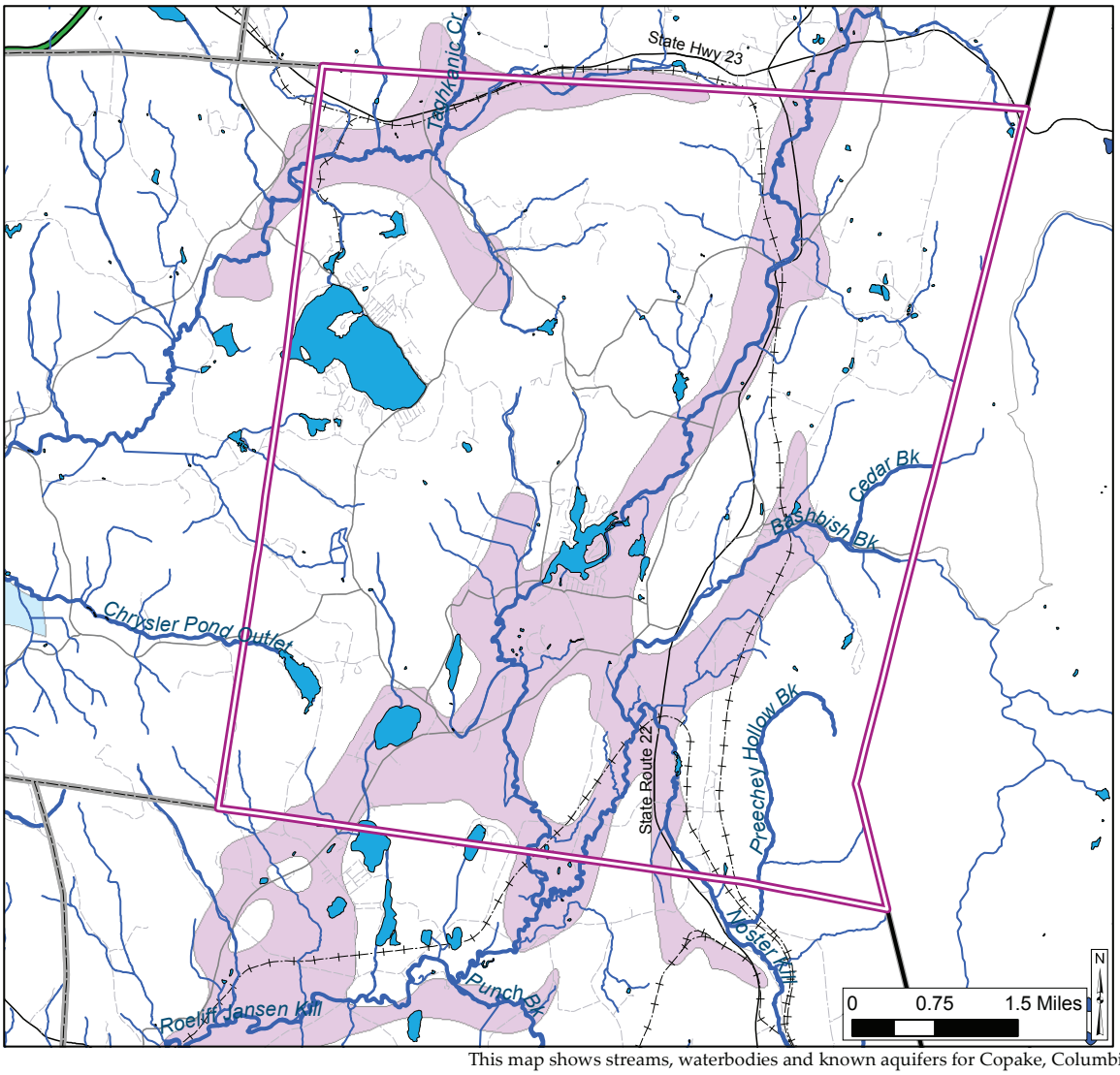
Hudson River Estuary

Water Resource Institute of New York State

Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 41: Impervious Cover and Forest Cover in Copake, NY



This map shows streams, waterbodies and known aquifers for Copake, Columbia County. Aquifers were defined as "High Yield" (>100 gpm) and as "Mid Yield (10 to 100 gpm). **Aquifers were mapped at a very course scale (1:250,000) and are for general information only; this map should not be used at the site plan scale.** This map was produced as part of a Water Resources Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Legend

- Copake
- Unconfined, High Yield
- Unconfined, Mid Yield

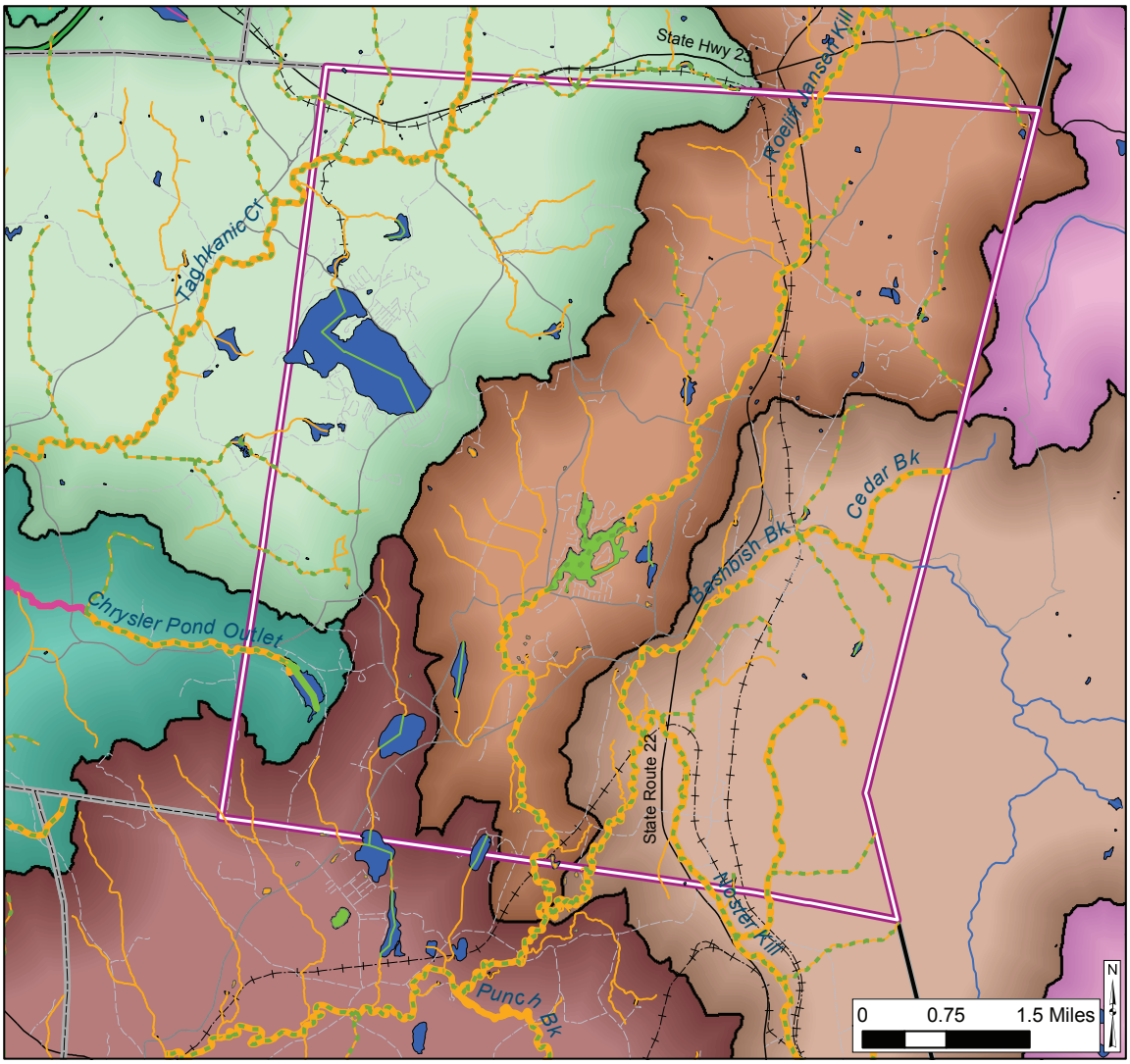
Data Sources:
NYSDEC Bureau of Water Resources Management (2008) for aquifer data
USGS National Hydrography Dataset (2008) for streams and waterbodies

Map Created 2014

Hudson River Estuary | Water Resource Institute of New York State | Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 42: Mapped Aquifers in Copake, NY



Legend

- Copake
- T and TS streams (trout, trout spawning)

NYSDEC Stream Classification

- A
- B
- C
- D

This map shows streams and their NYSDEC classification, waterbodies, and watersheds for Copake, Columbia County. See the accompanying summary for a description of stream classifications. Perennial streams that are not shown take on the classification of the waterbody they flow into. This is an unofficial version, however the stream segments are largely consistent with the official regulations. **This map is not appropriate for regulatory purposes, for the most recent information contact NYSDEC Region 4.** This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYS DEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Data Sources:

NYSDEC (2010) for stream classifications

USGS National Hydrography Dataset for waterbodies and Hydrologic Unit Code 12 subwatersheds (2008)

Map Created 2014

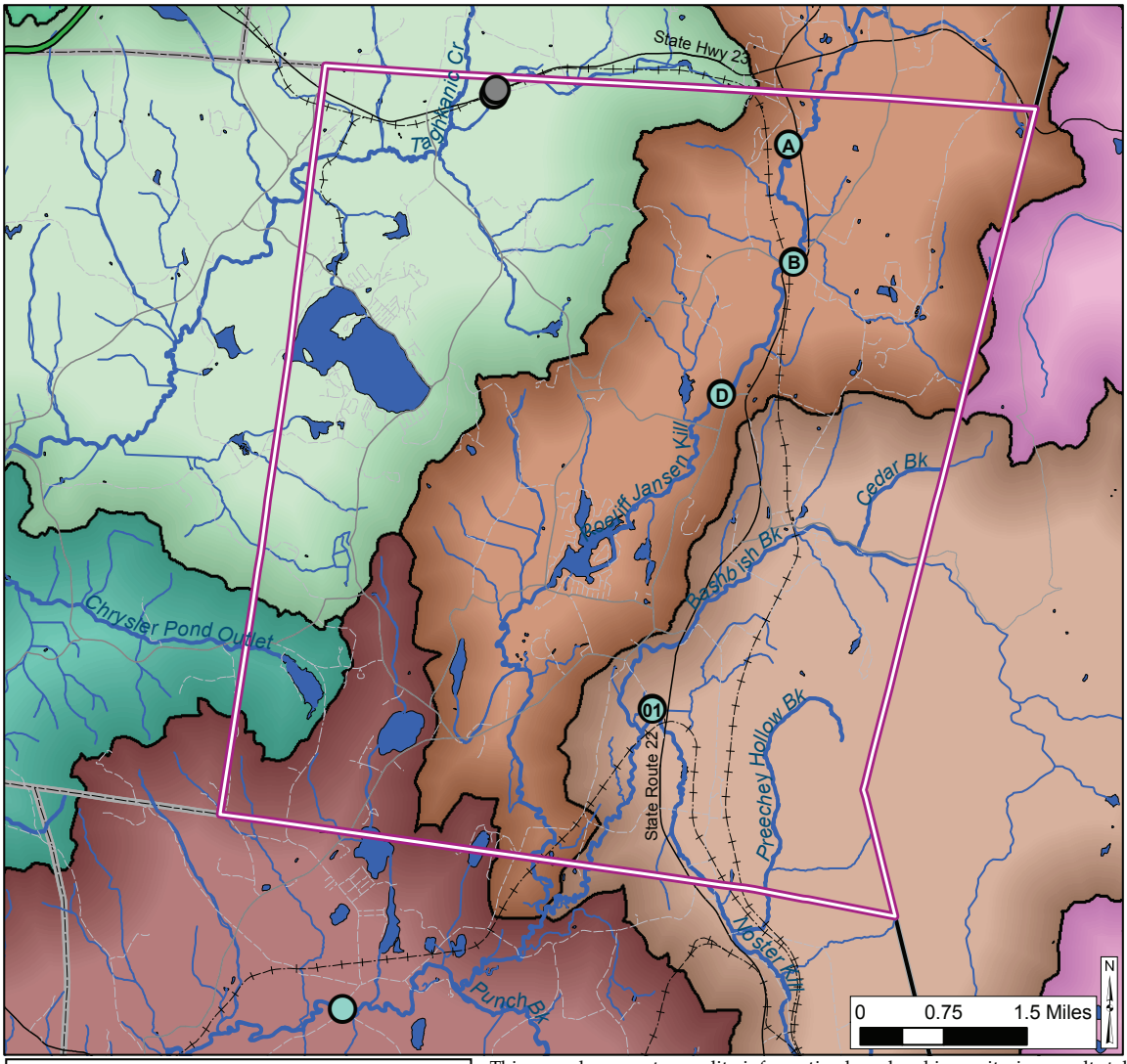
Hudson River Estuary

Water Resource Institute of New York State

Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 43: Waterbody Classifications in Copake, NY



Legend

Copake

Biomonitoring scores

(category of most recent sample)

- Non-impacted
- Slight
- Moderate
- Severe
- No Conclusion (WAVE project sample)

This map shows water quality information based on biomonitoring results taken at particular locations in Copake, Columbia County. See the accompanying summary for a description of biomonitoring results and sites labeled on the map. This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

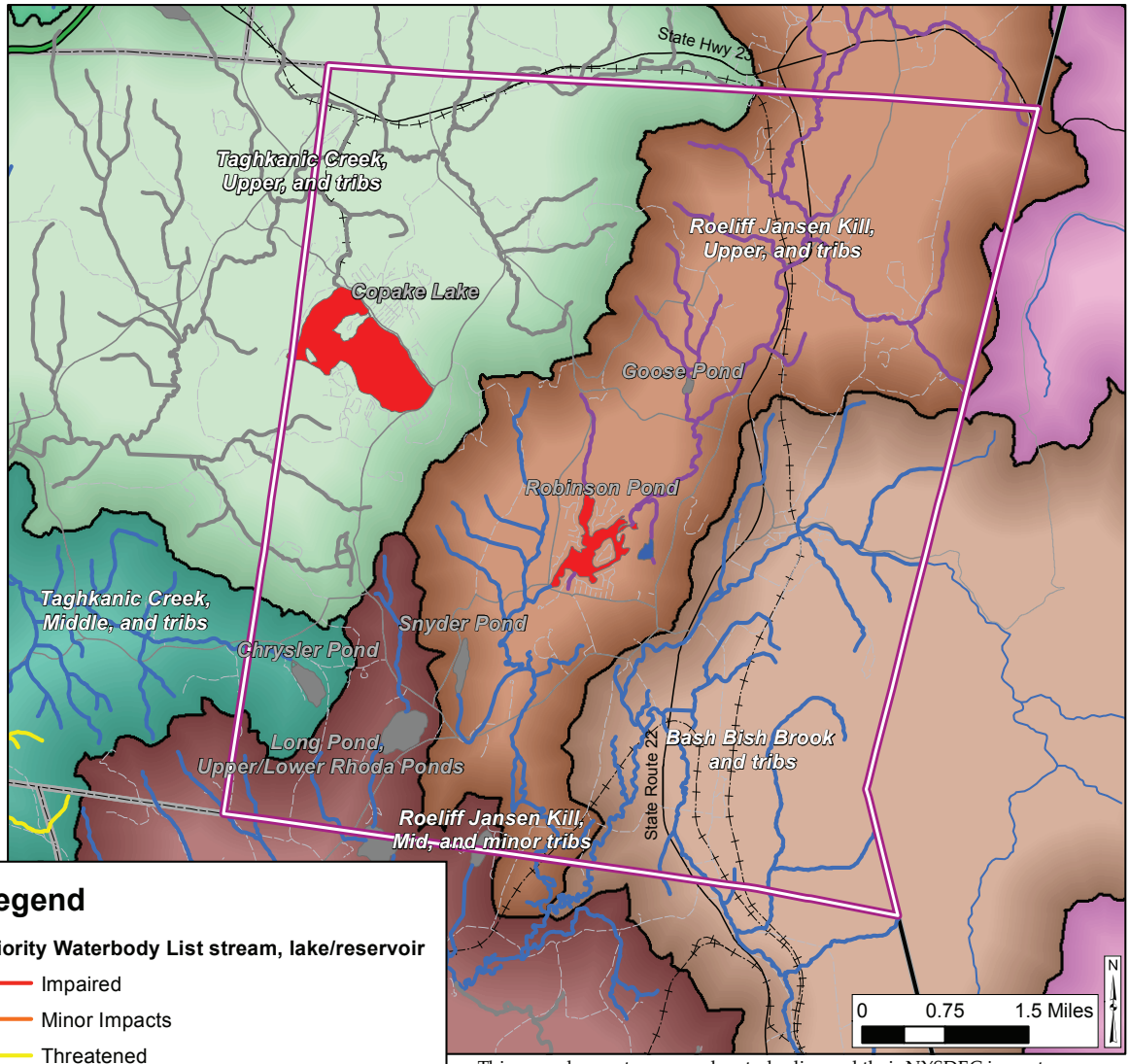
Data Sources:

New York State Department of Environmental Conservation, Division of Water, Stream Biomonitoring Unit for biomonitoring results (up to 2011)
except NYSDEC Division of Water WAVE program for WAVE results (2013)
USGS National Hydrography Datase for streams, waterbodies and Hydrologic Unit Code 12 watersheds (2008)
Map Created 2014

Hudson River Estuary | Water Resource Institute of New York State | Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 44: Biomonitoring Samples in Copake, NY



Legend

Priority Waterbody List stream, lake/reservoir

- Impaired
- Minor Impacts
- Threatened
- Threatened (Possible)
- Need Verification
- No Known Impact
- UnAssessed

- Impaired
- Minor Impacts
- Threatened
- Threatened (Possible)
- Need Verification
- No Known Impact
- UnAssessed

This map shows streams and waterbodies and their NYSDEC impact assessments from the Waterbody Inventory/Priority Waterbody List for Copake, Columbia County. These segments don't necessarily align with watershed boundaries. See Table 4 in the accompanying summary for a description of stream assessments and their impairment. **This map is not appropriate for regulatory purposes, for the most recent information contact NYSDEC Region 4.** This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Data Sources:

NYSDEC, Division of Water (2008) for Waterbody Inventory/Priority Waterbody List assessments

USGS National Hydrography Dataset (2008) for waterbodies and Hydrologic Unit Code 12 subwatershed boundaries

Map Created 2014

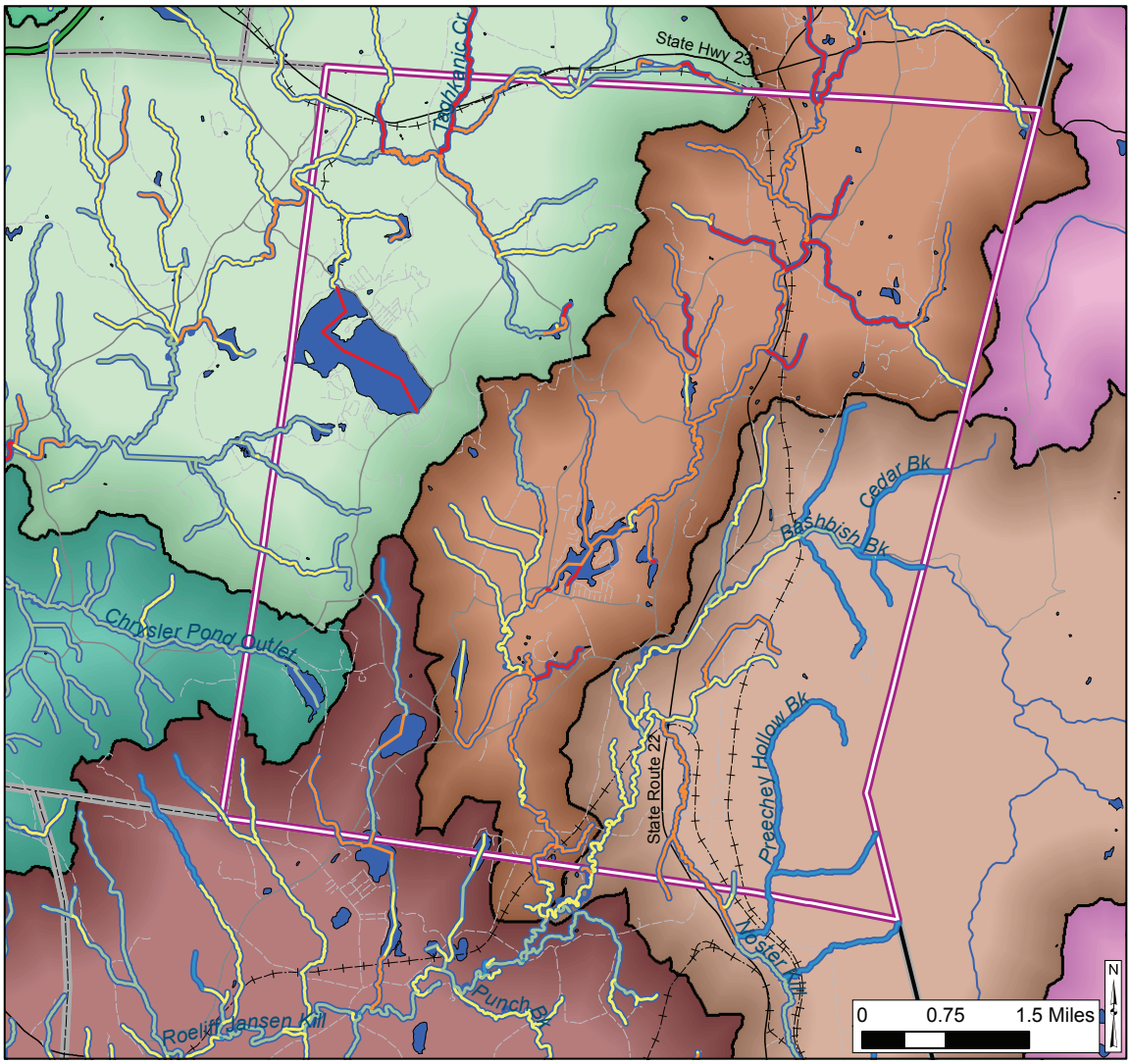
Hudson River Estuary

Water Resource Institute of New York State

Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

MAP 45: Waterbody Impairment (from Priority Waterbodies List) in Copake, NY



Legend

Copake

Stream Condition Index (draft)

- Highest
- High
- Average
- Low
- Lowest

This map shows the NYSDEC Hudson River Estuary Program's draft Stream Condition Index for streams in Copake, Columbia County. The draft Stream Condition Index synthesizes several stream health measures into one value, giving the town one way to compare among the various streams in town. This map was produced as part of a Water Resource Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Program watershed specialists at (845) 256-3016.

Data Sources:
NYSDEC Hudson River Estuary Program(2013) for draft Stream Condition Index
USGS National Hydrography Dataset (2008), waterbodies and Hydrologic Unit Code 12 subwatersheds

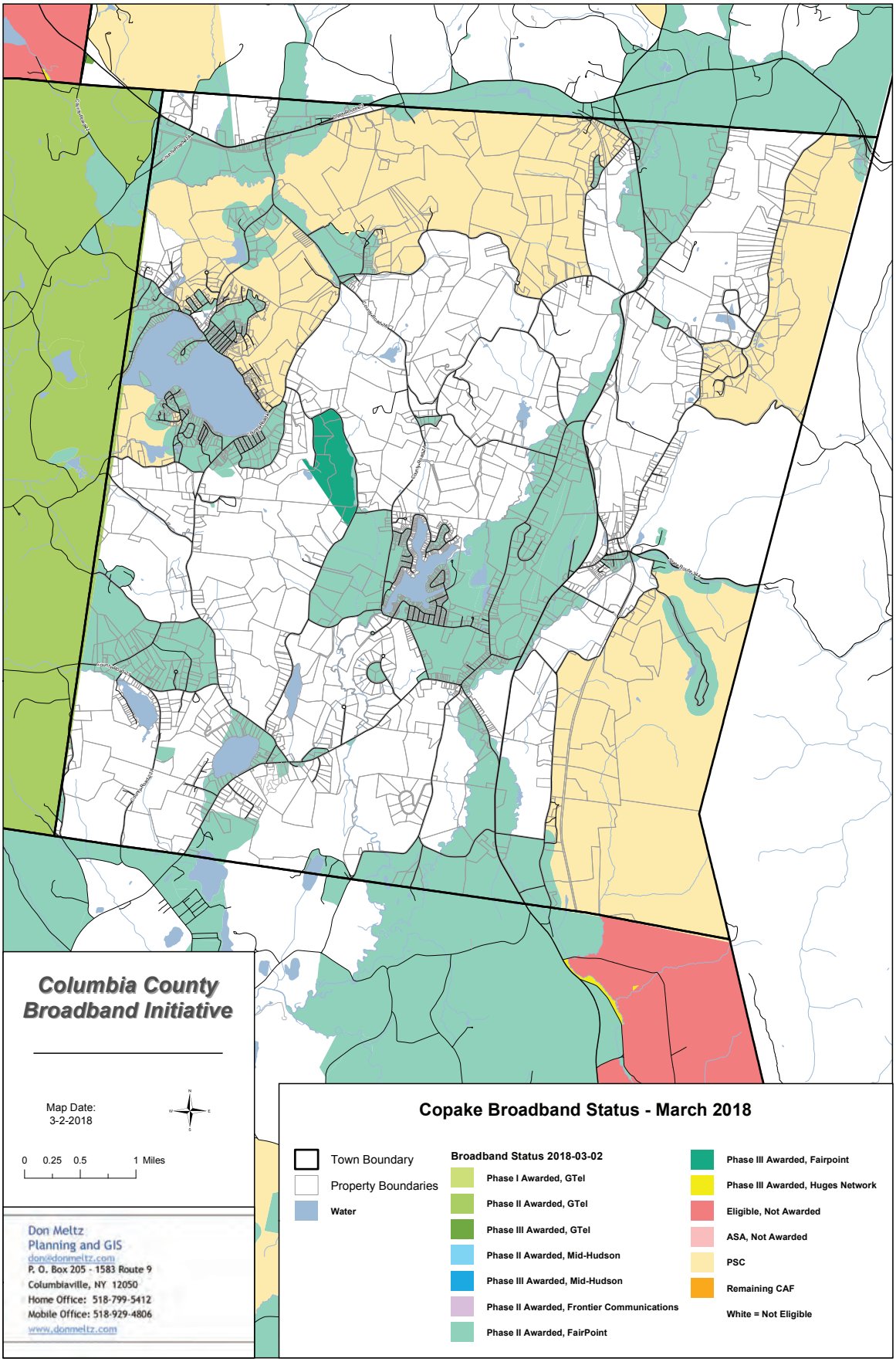
Map Created 2014

Hudson River Estuary | Water Resource Institute of New York State | Cornell University

Source: NYSDEC Water Resources Summary for the Town of Copake (2014)

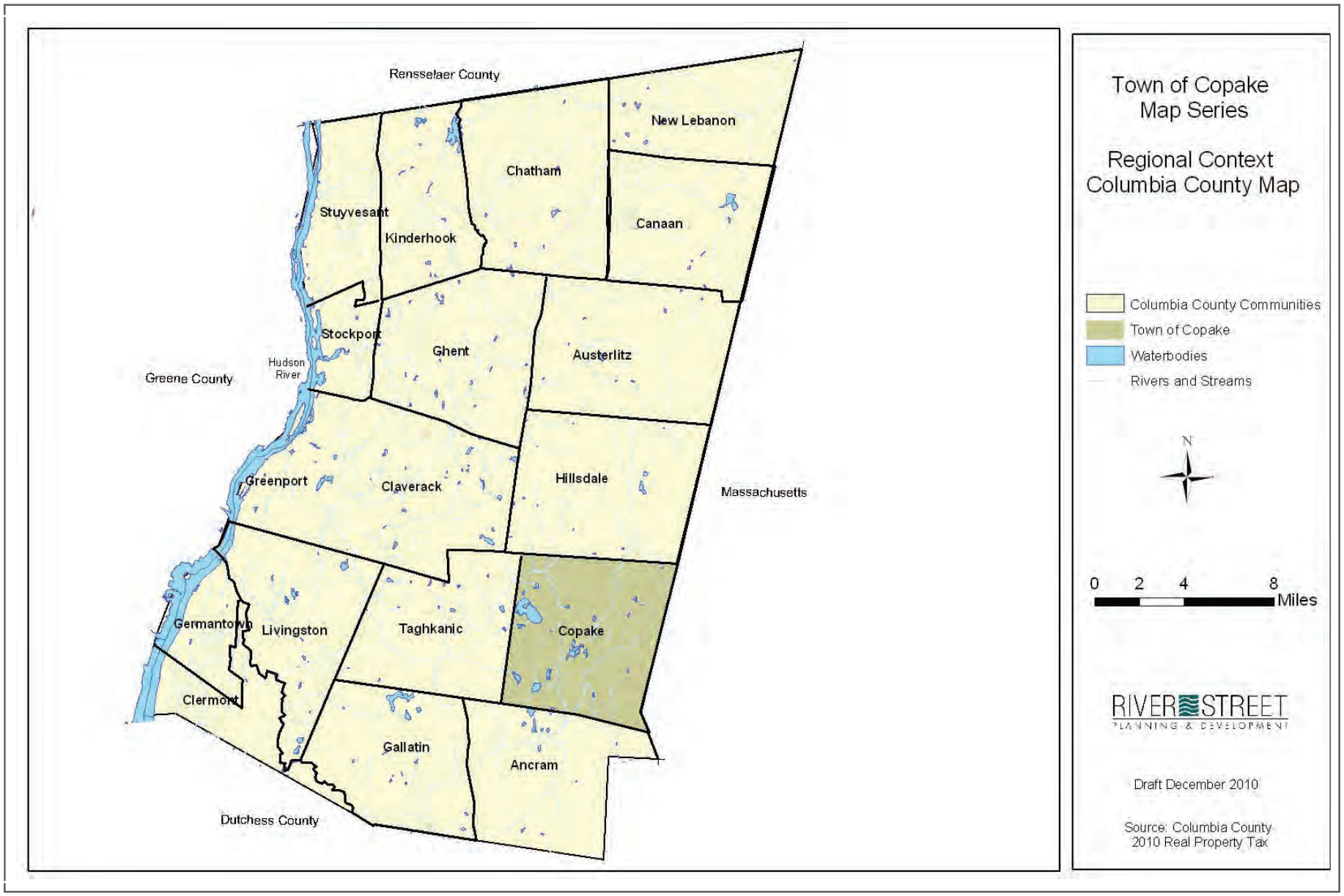
MAP 46: Stream Condition Index in Copake, NY

Maps
from the
Town of Copake
Comprehensive Plan



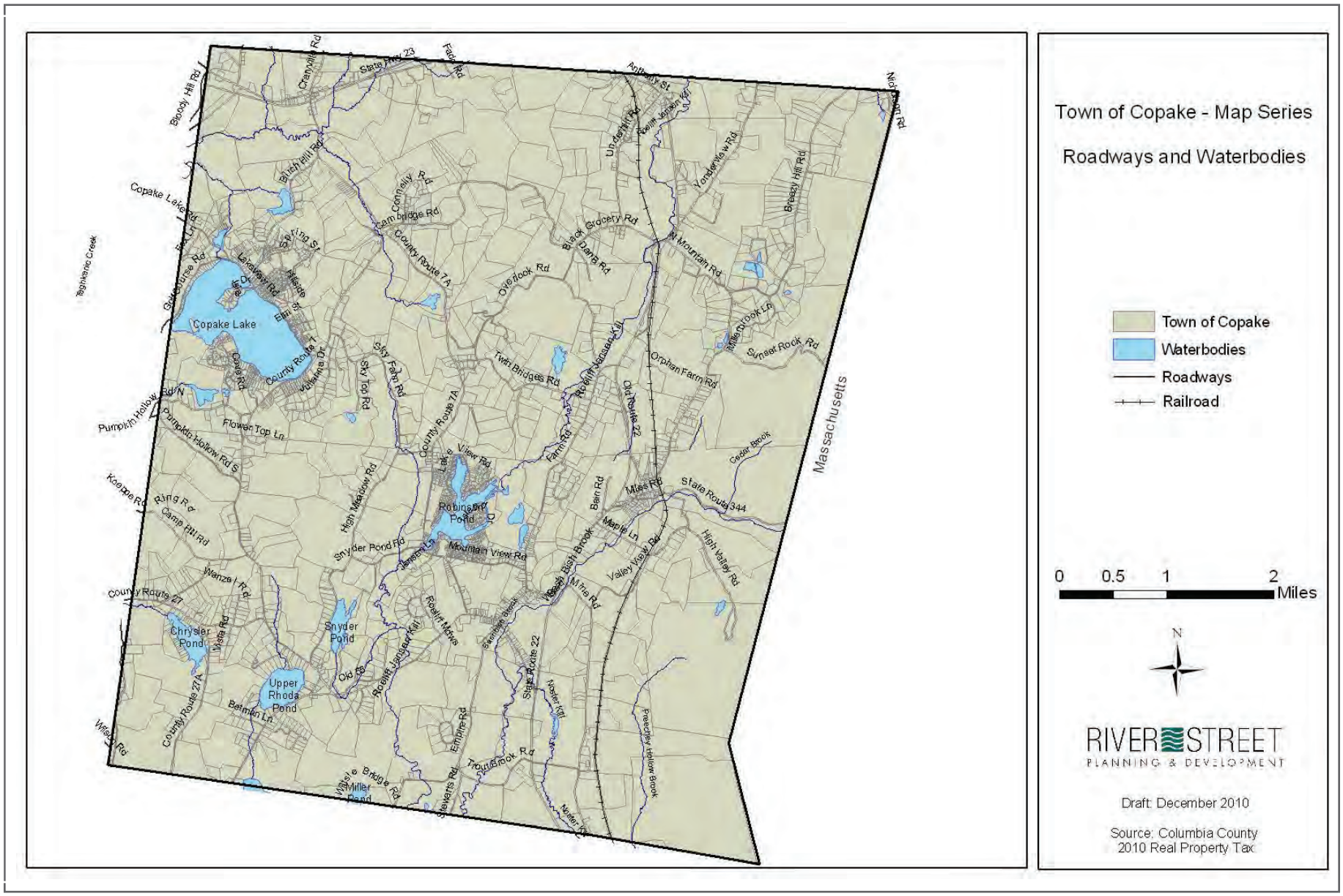
Source: Don Metz Planning and GIS (2018)

MAP 47: Broadband Status in Town of Copake



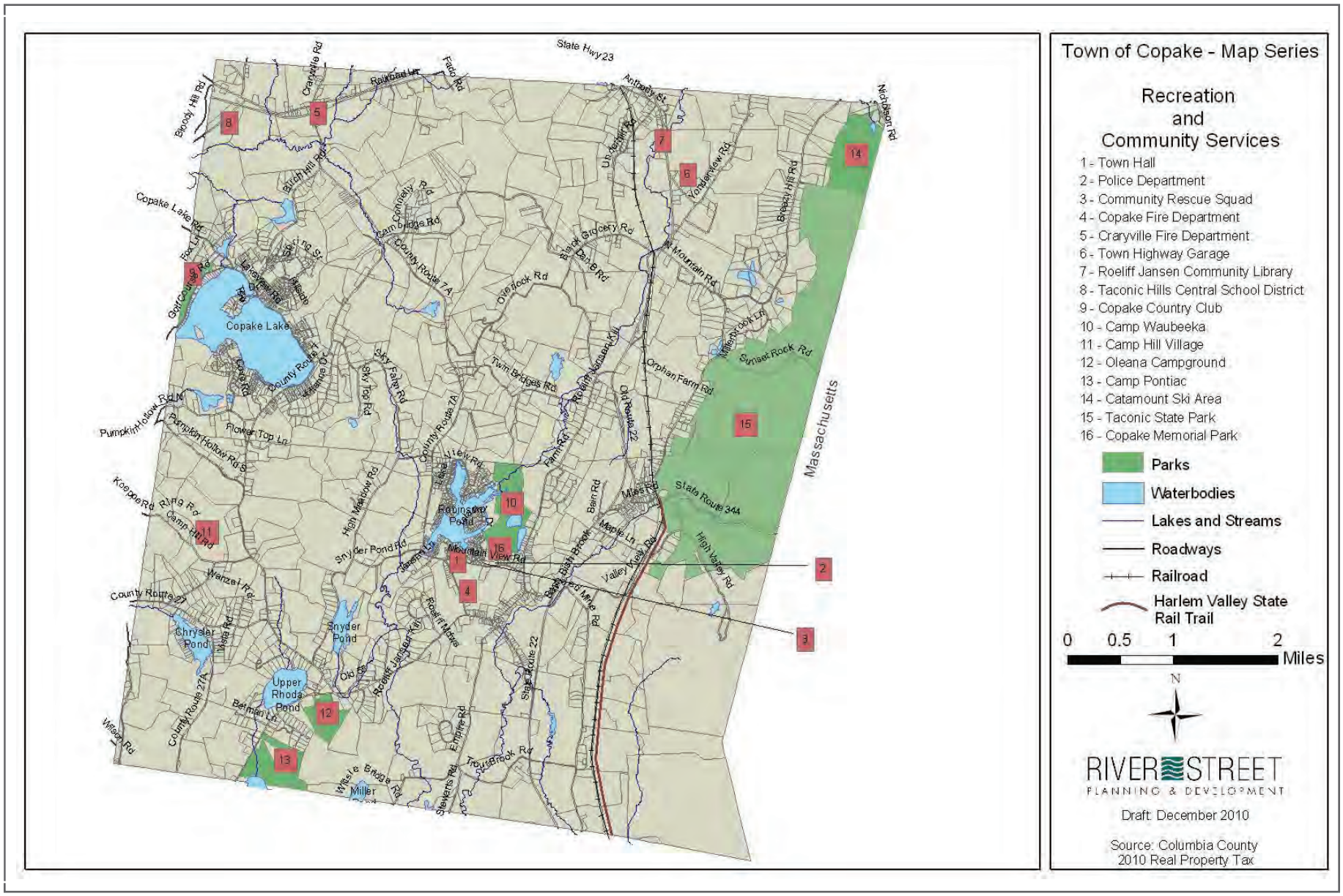
Source: Columbia County 2010 Real Property Tax

MAP 48: Regional Context, Columbia County



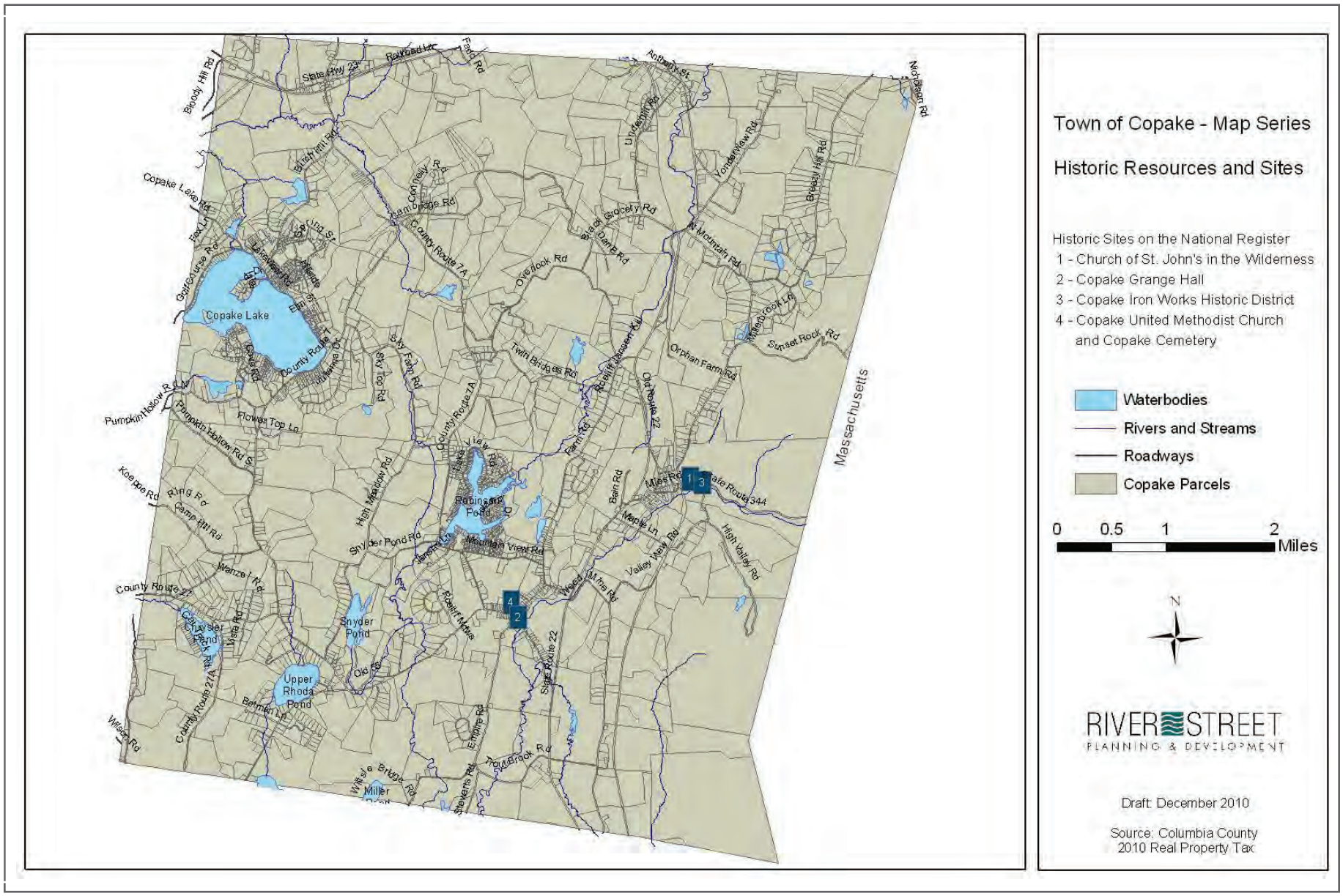
Source: Columbia County 2010 Real Property Tax

MAP 49: Roadways and Waterbodies in Town of Copake



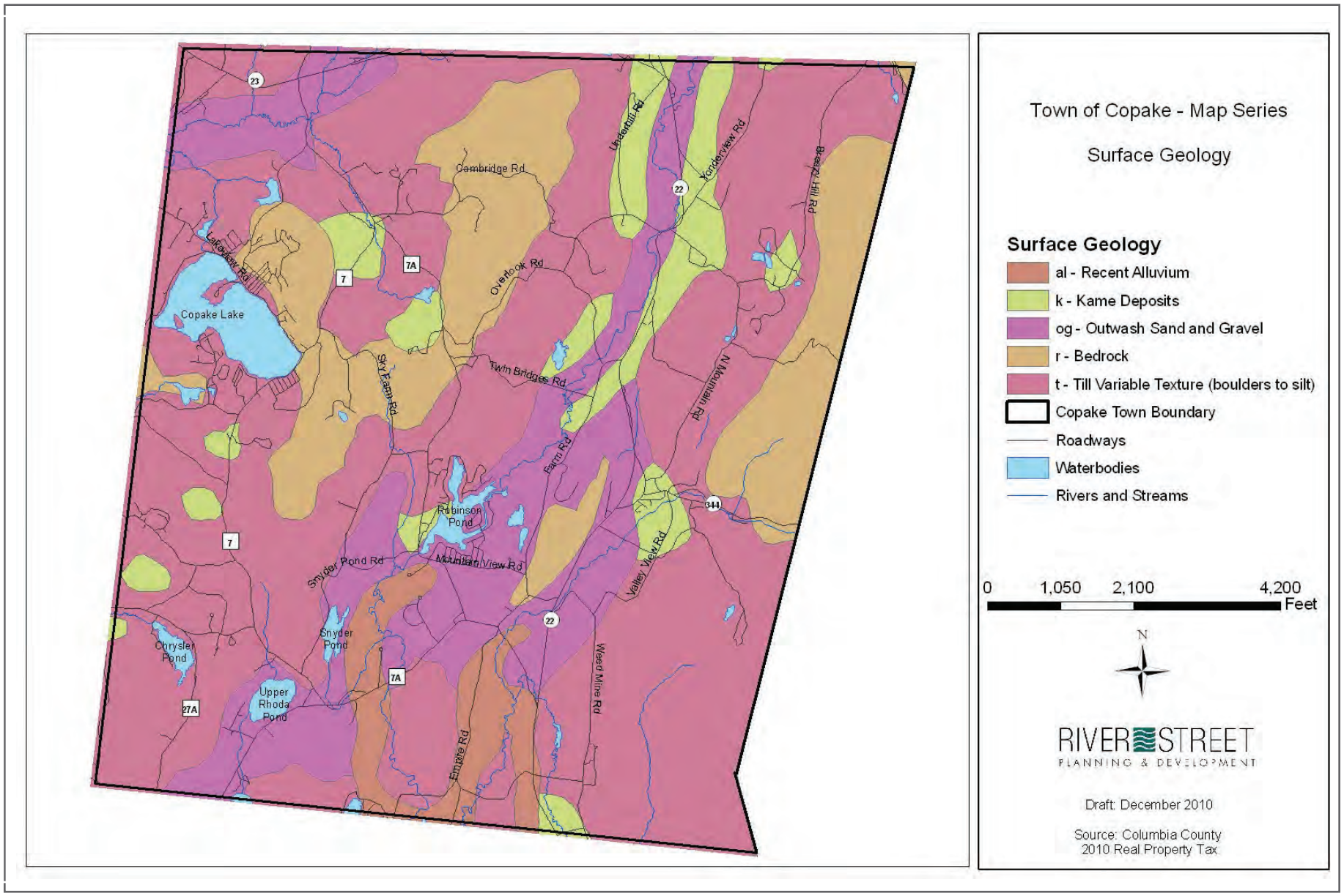
Source: Columbia County 2010 Real Property Tax

MAP 50: Recreation and Community Services



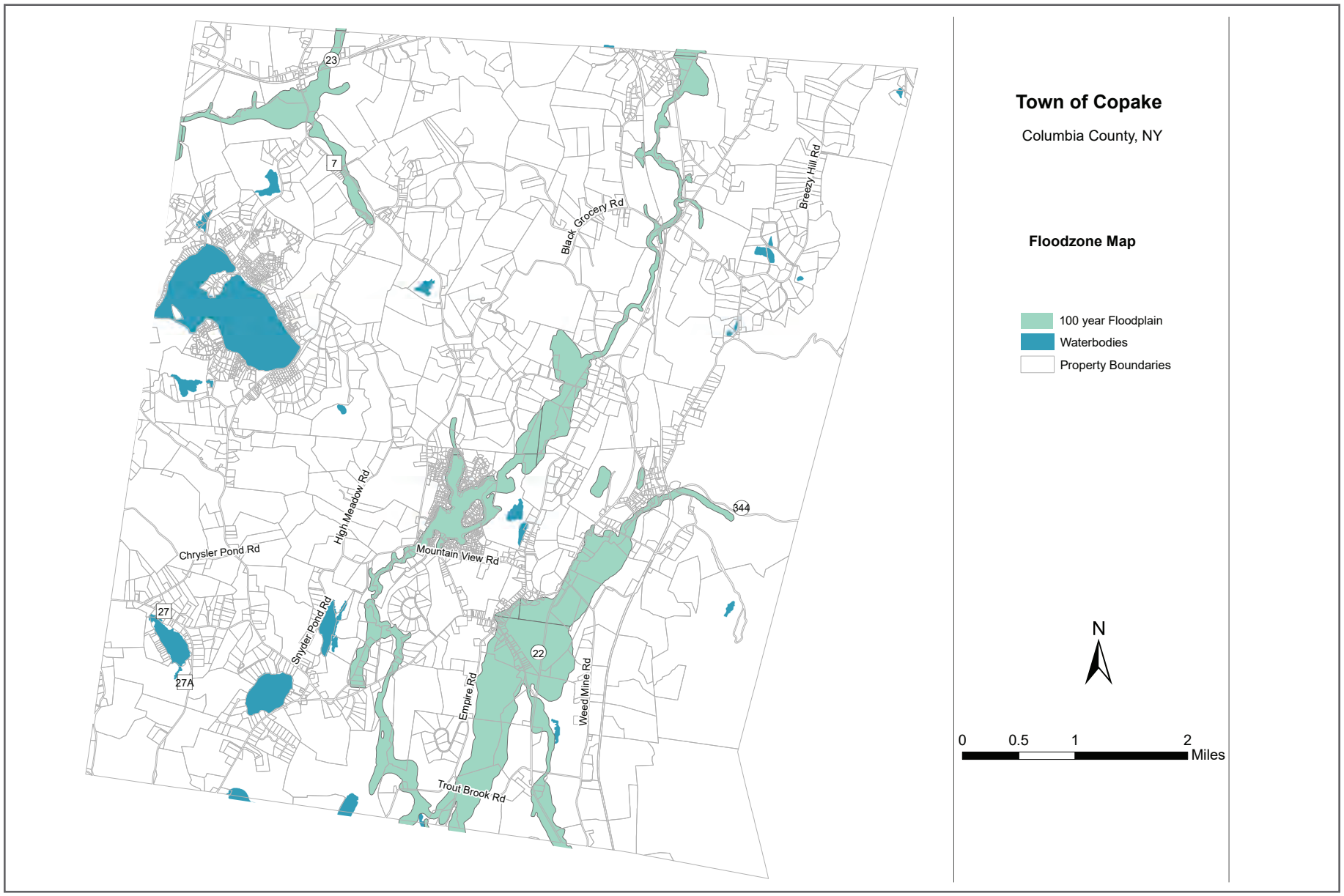
Source: Columbia County 2010 Real Property Tax

MAP 51: Historic Resources and Sites in Town of Copake



Source: Columbia County 2010 Real Property Tax

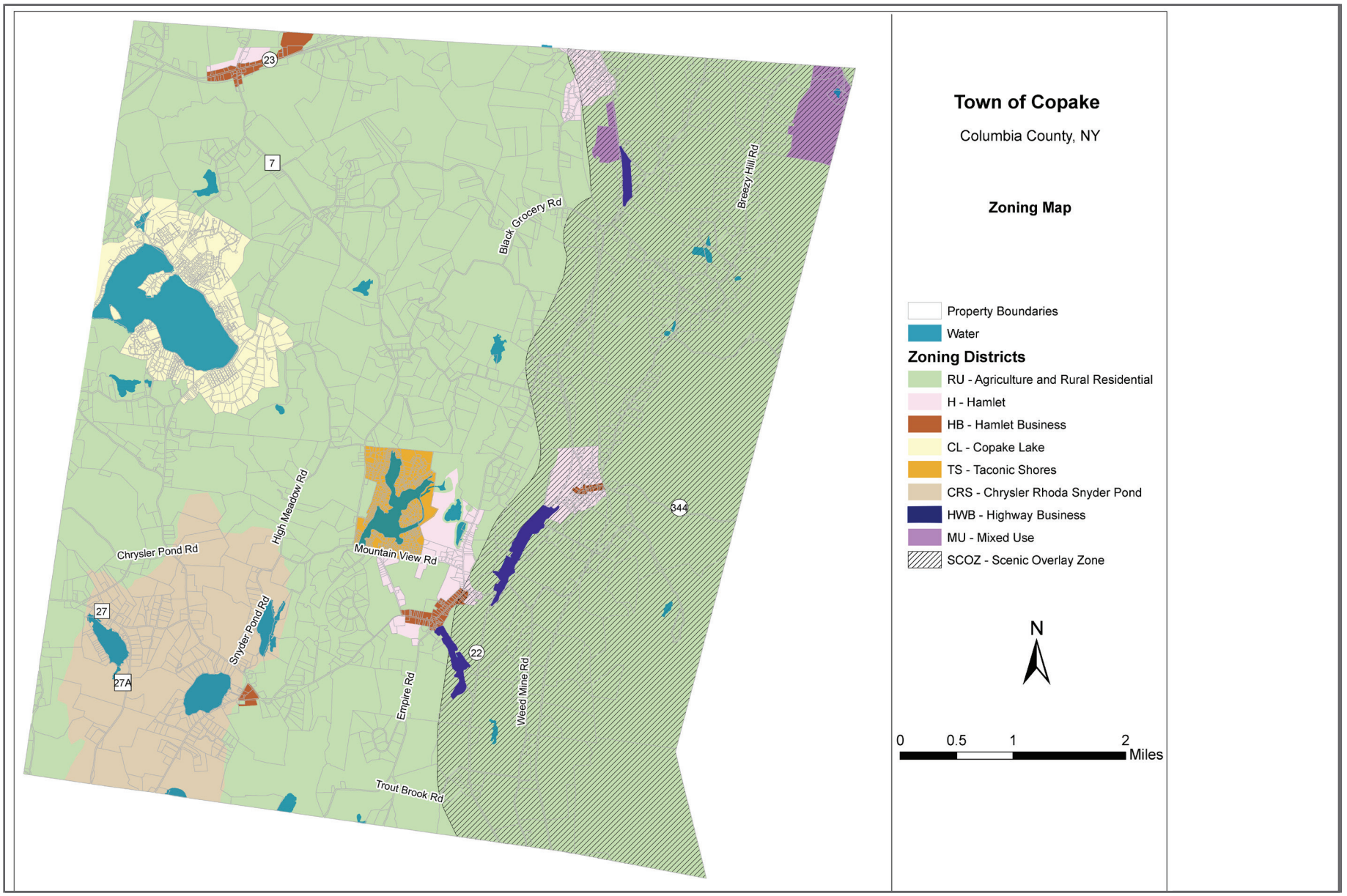
MAP 52: Surface Geology in Town of Copake



Source: River Street Planning and Development; Columbia County 2020 Real Property Tax

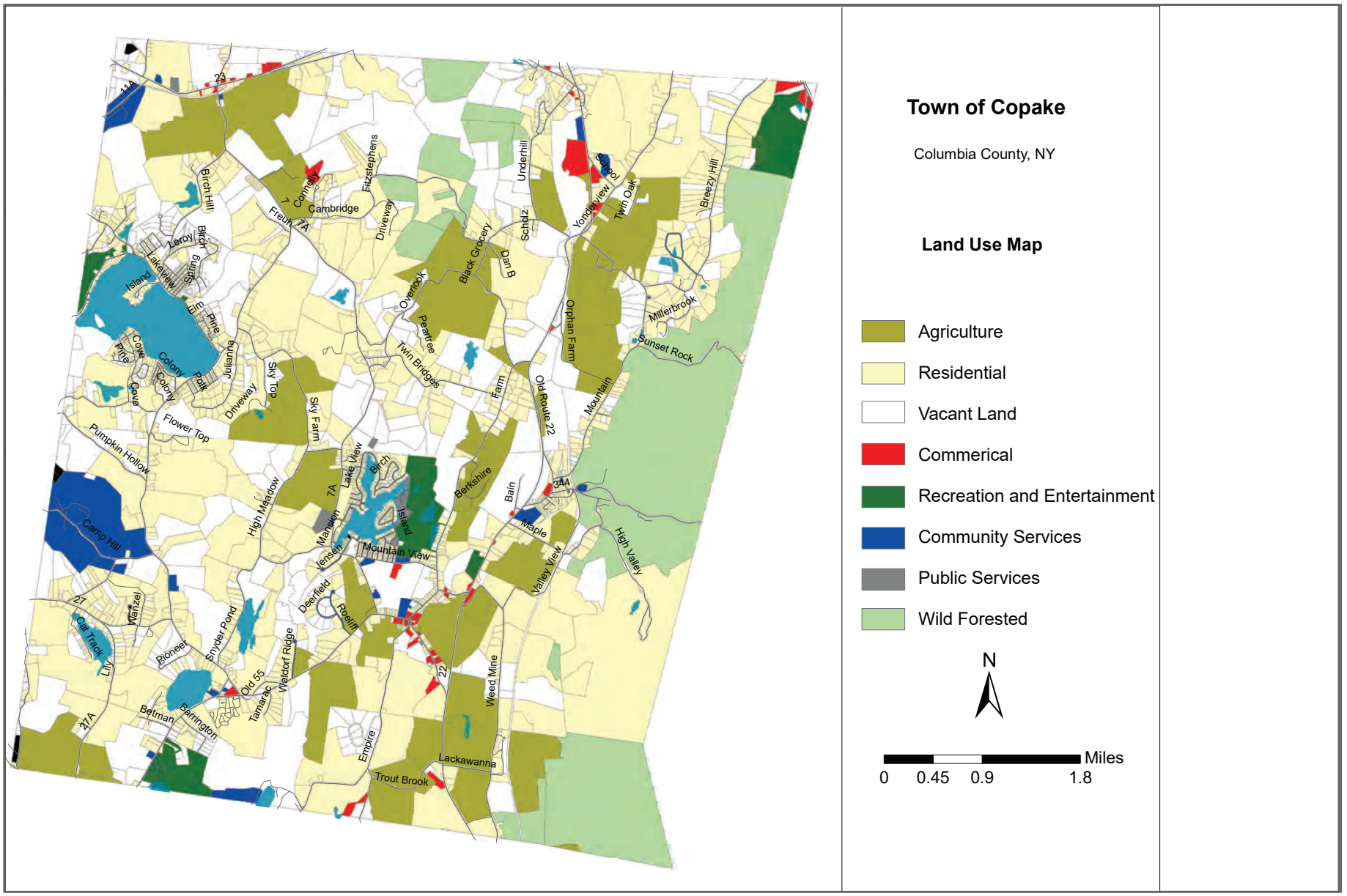
MAP 53: Town of Copake Flood Zones

Zoning and
Land Use Maps
for the
Town of Copake



Source: River Street Planning and Development 2020

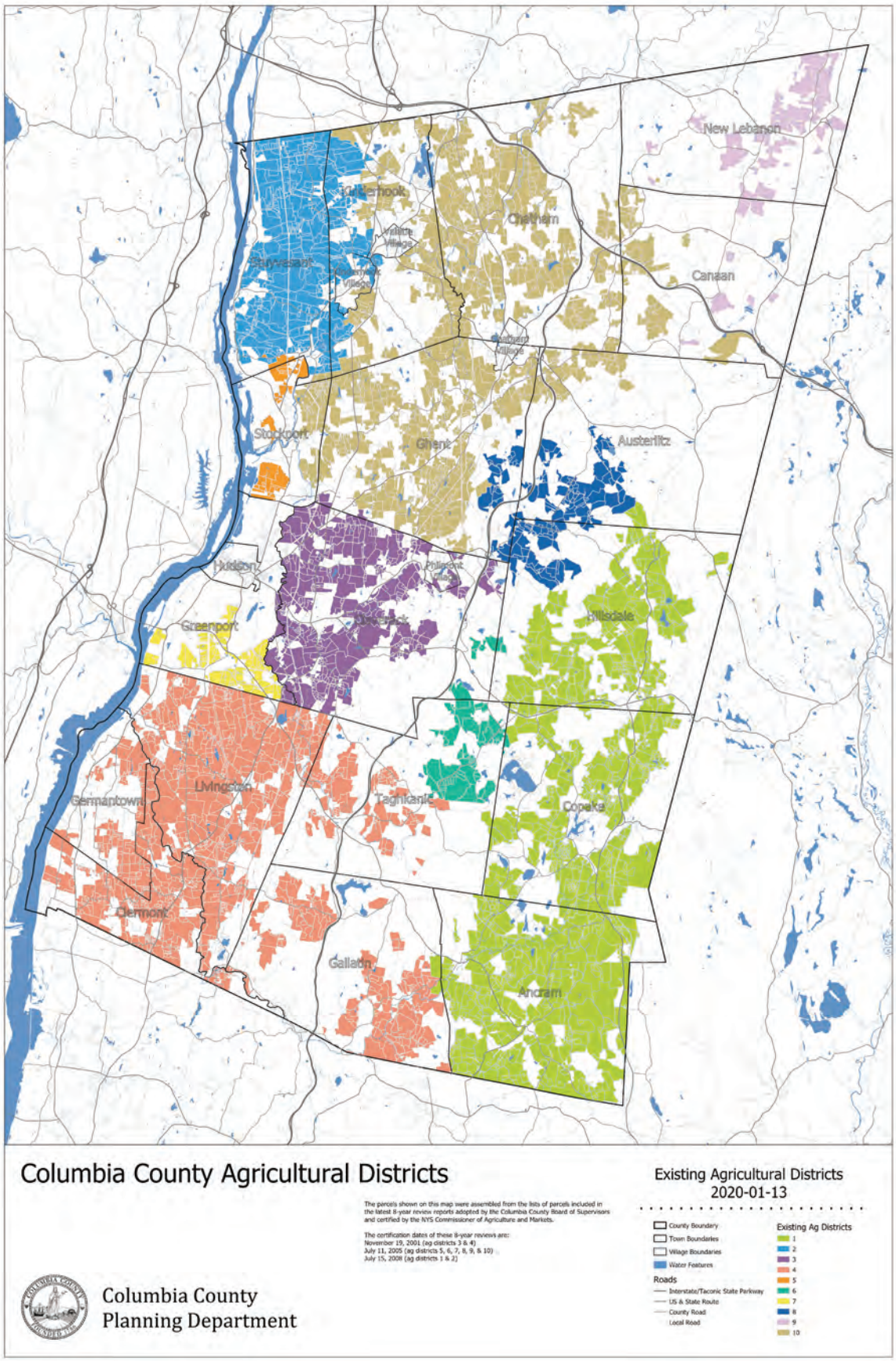
MAP 54: Town of Copake Zoning Districts



Source: *River Street Planning and Development; Columbia County 2020 Real Property Tax*

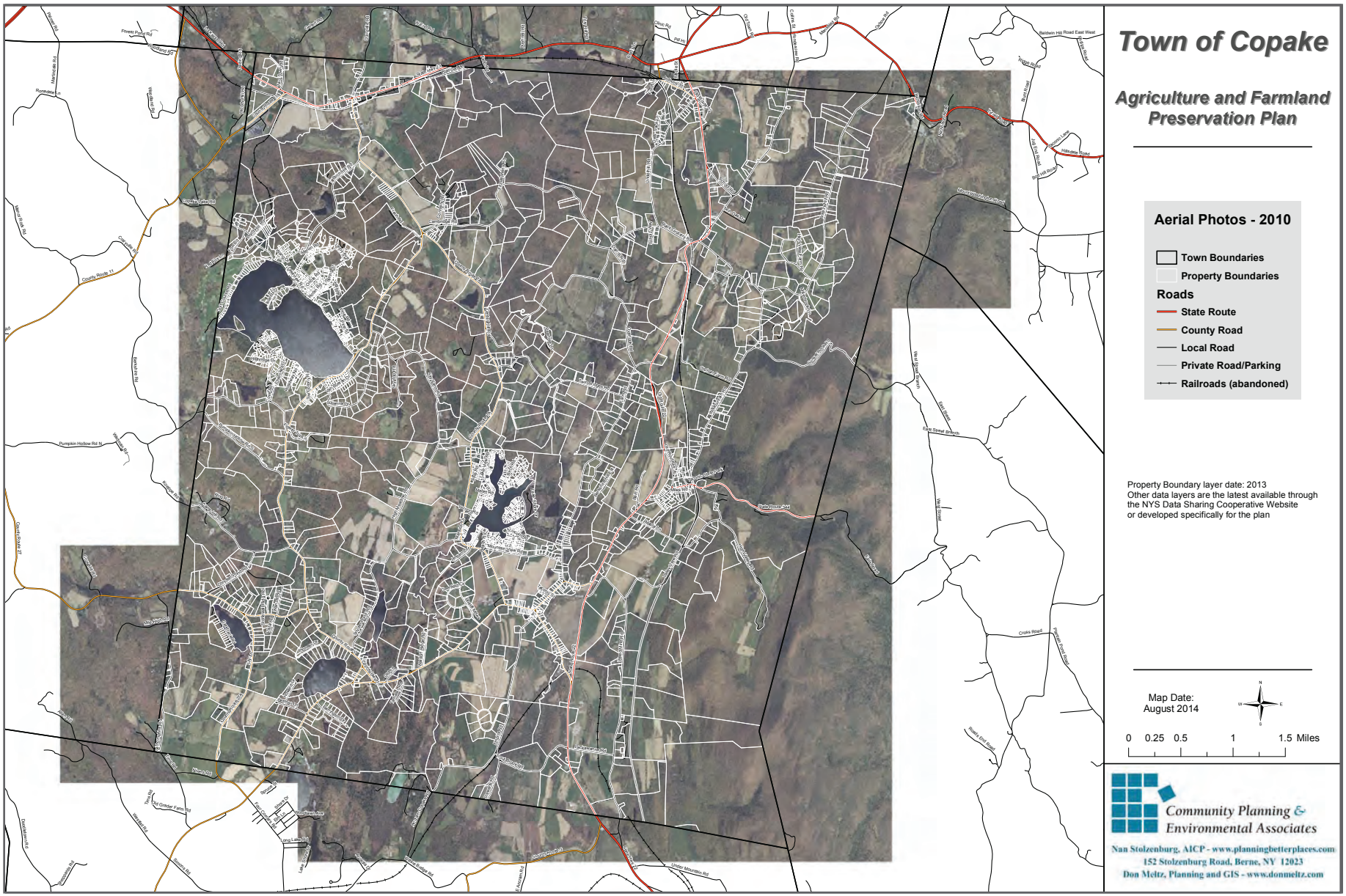
MAP 55: Town of Copake Land Use

Agricultural Maps
for the
Town of Copake



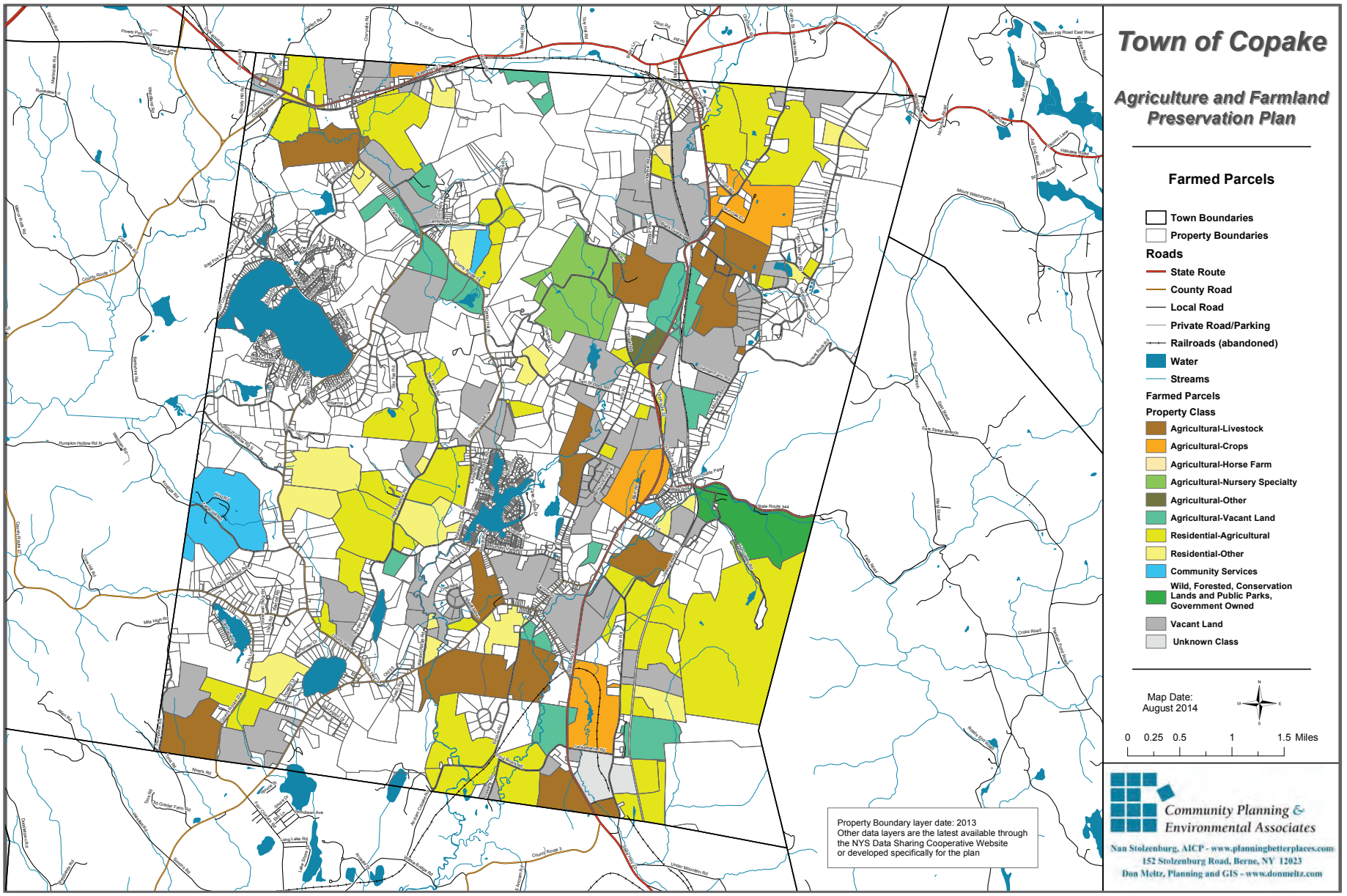
Source: Columbia County Planning Department

MAP 56: Columbia County Agricultural Districts



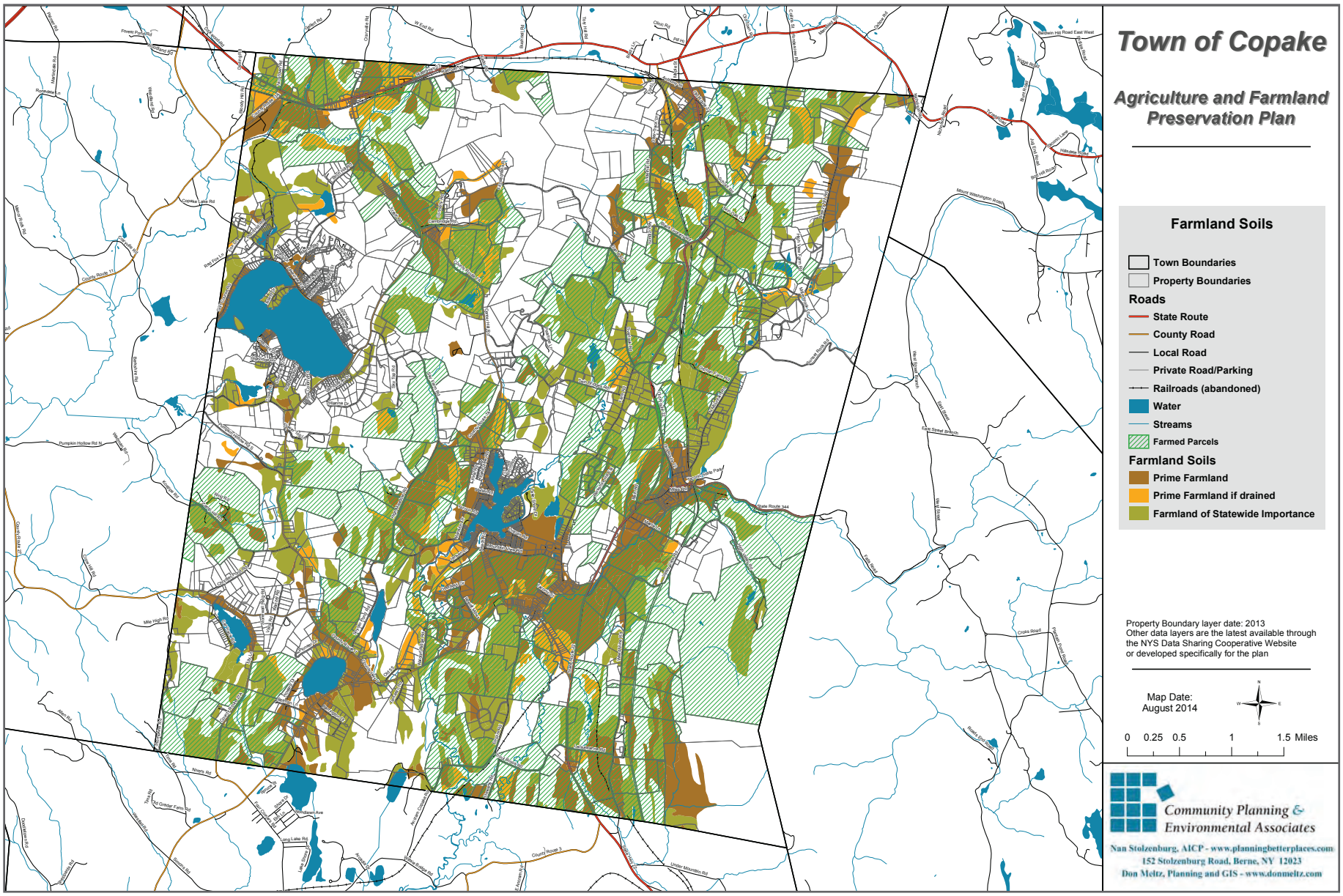
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 57: Agriculture and Farmland Preservation Plan - Aerial Photos



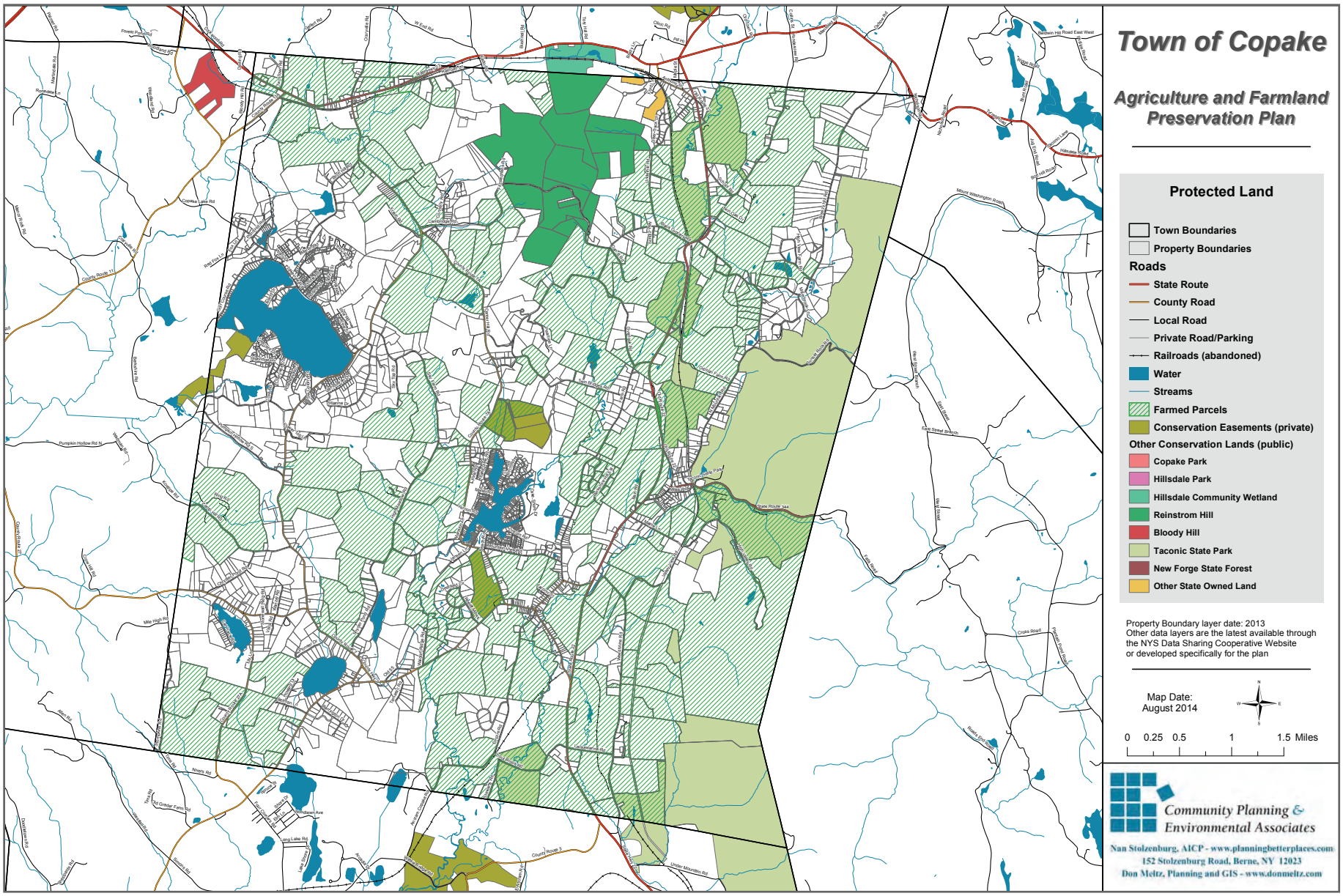
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 58: Agriculture and Farmland Preservation Plan - Farmed Parcels



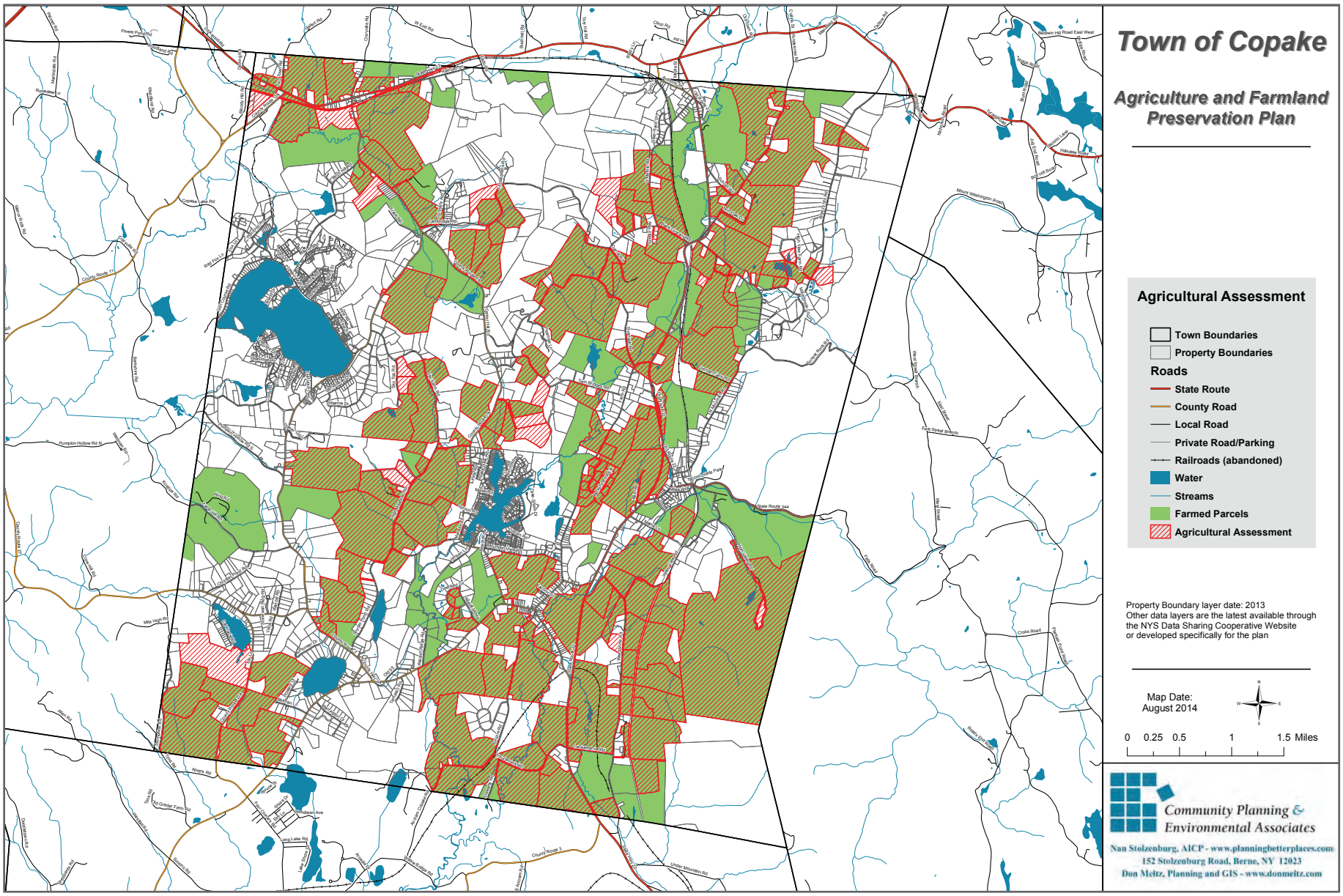
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 59: Agriculture and Farmland Preservation Plan - Farmland Soils



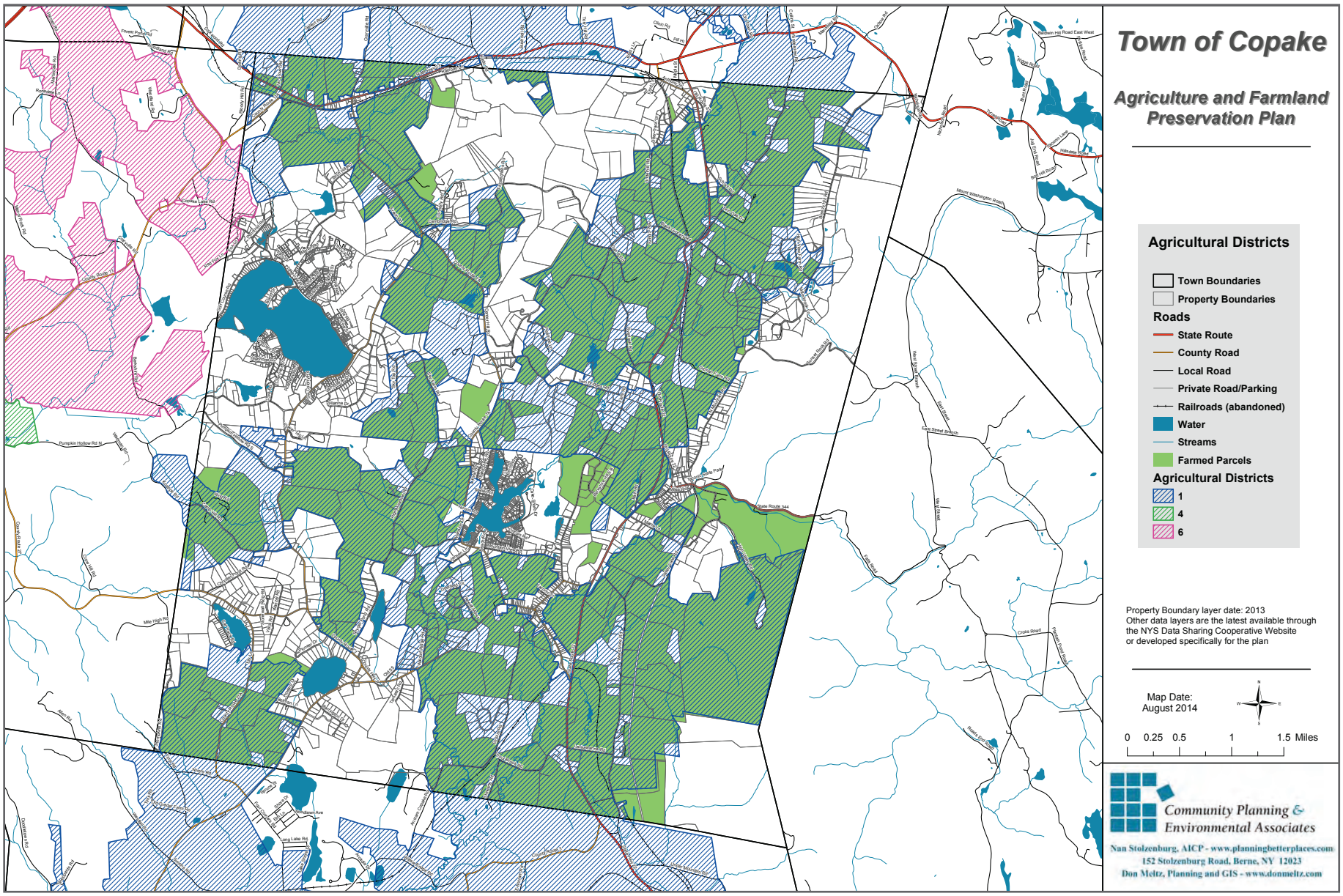
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 60: Agriculture and Farmland Preservation Plan - Protected Land



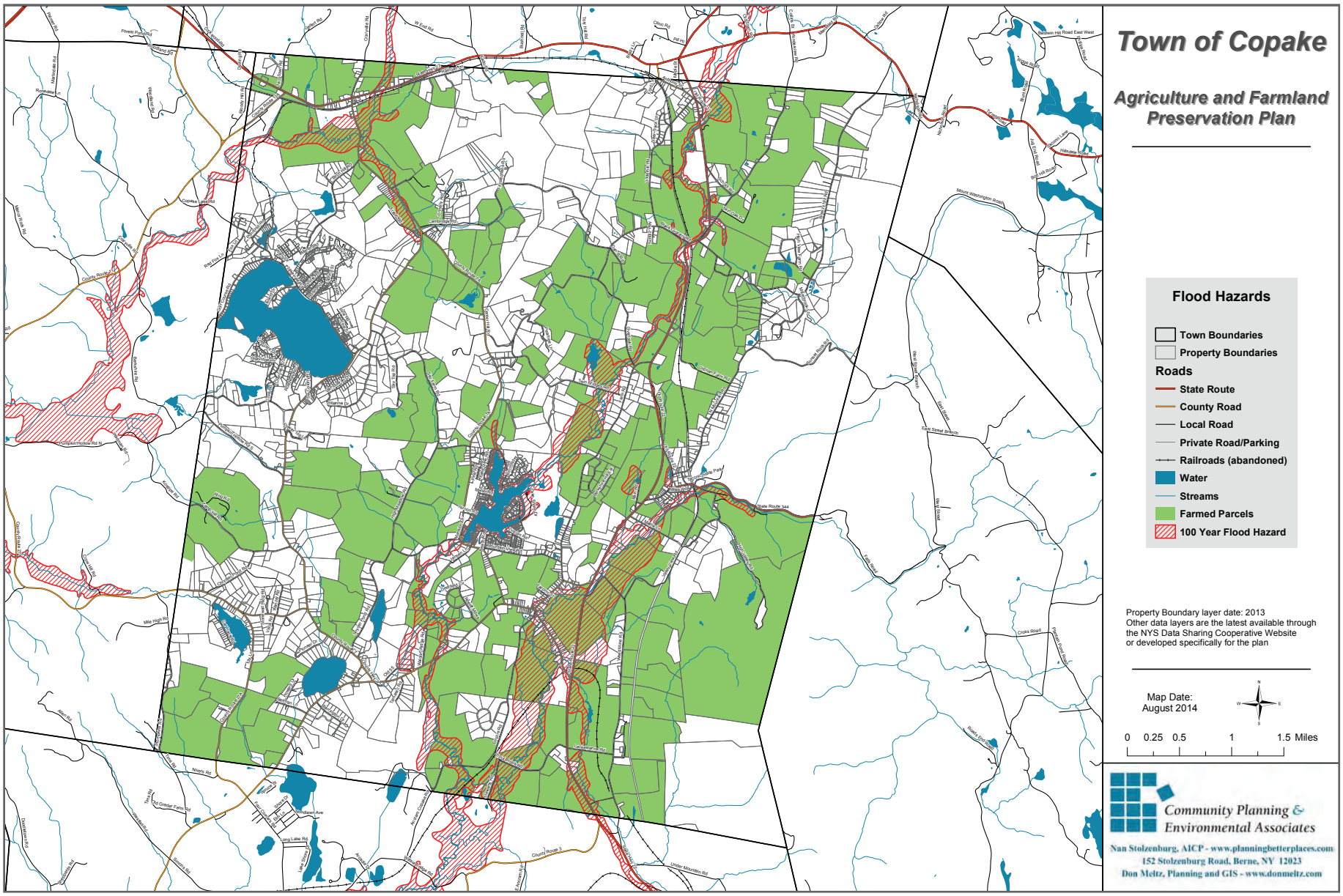
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 61: Agriculture and Farmland Preservation Plan - Agricultural Assessment



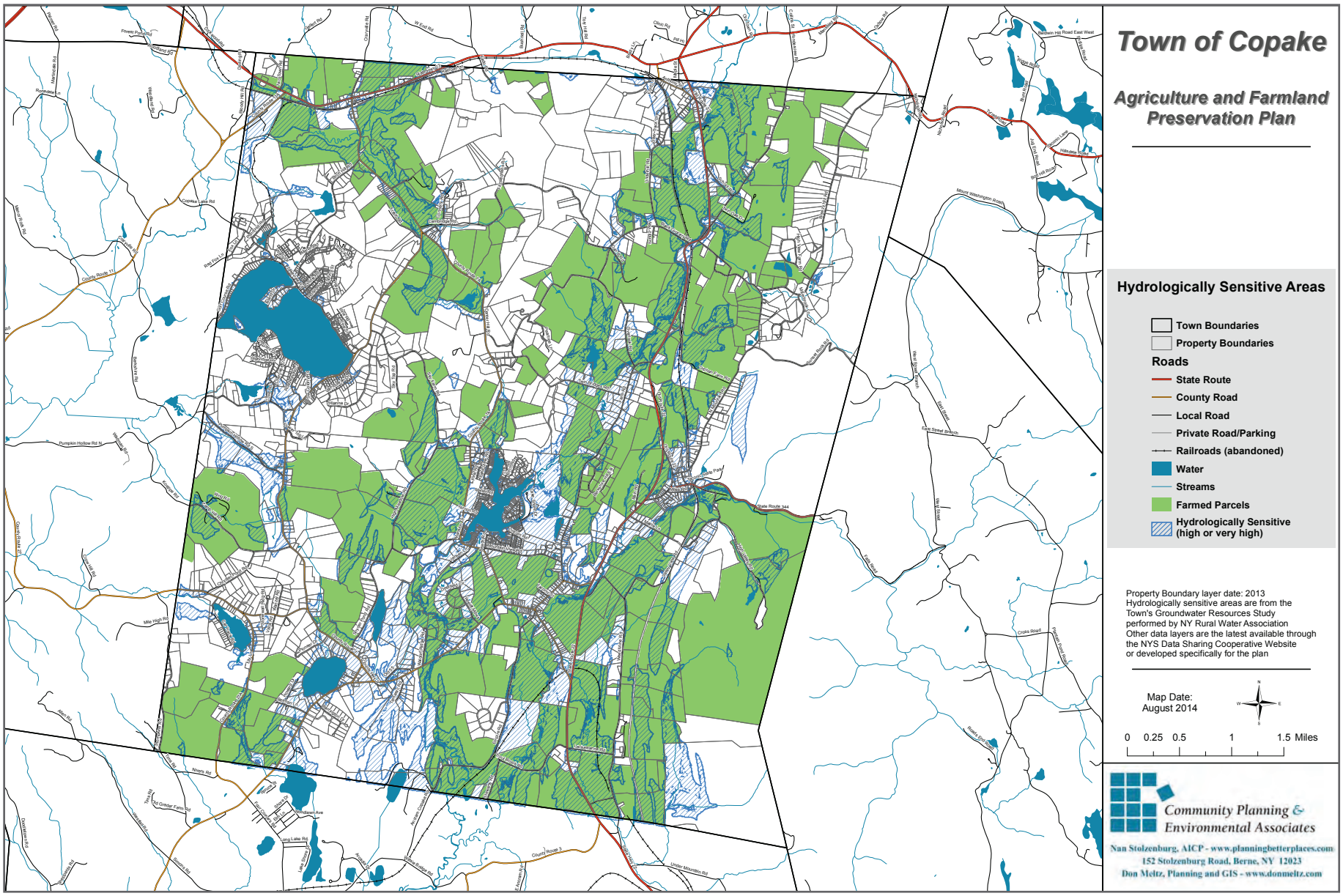
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 62: Agriculture and Farmland Preservation Plan - Agricultural Districts



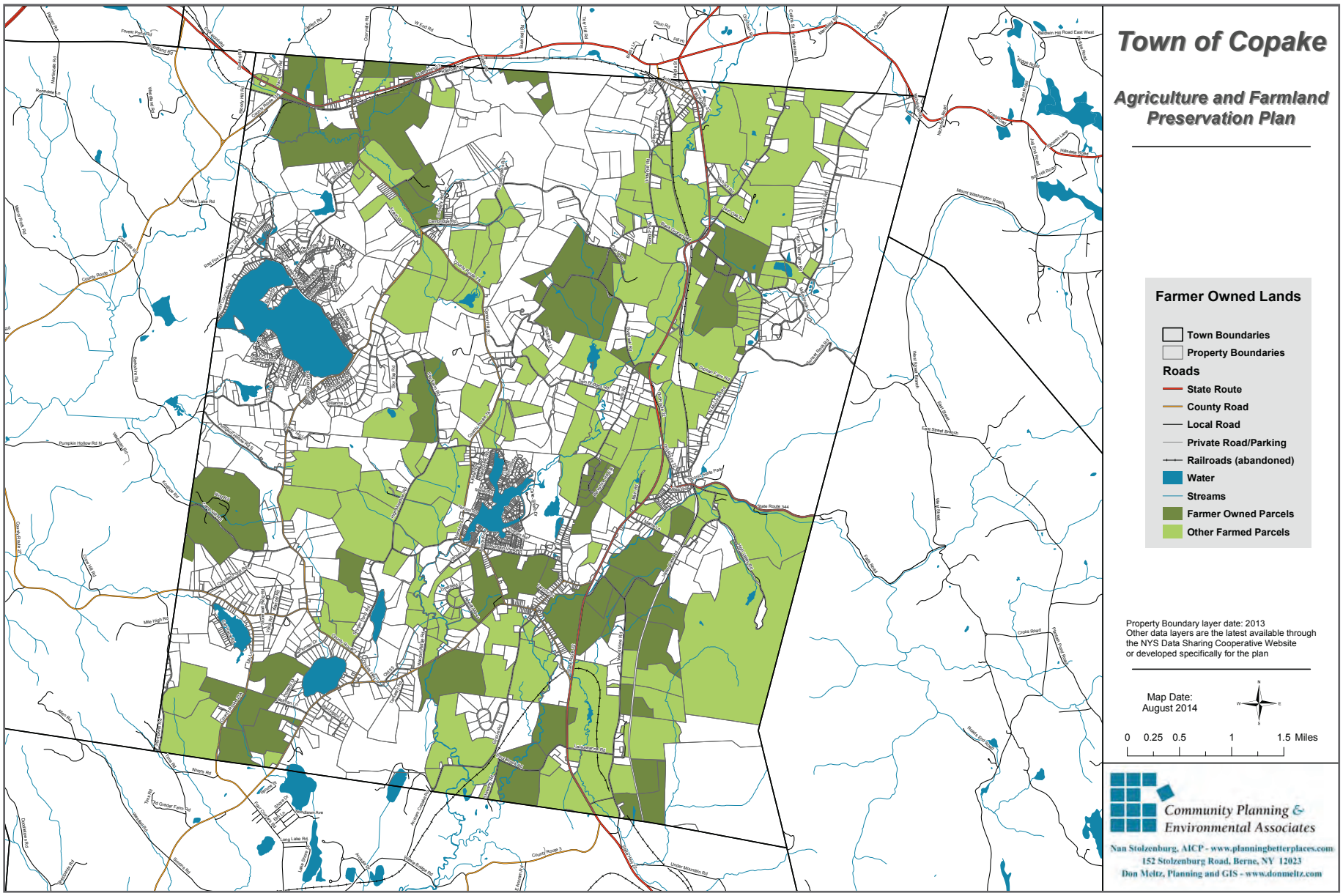
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 63: Agriculture and Farmland Preservation Plan - Flood Hazards



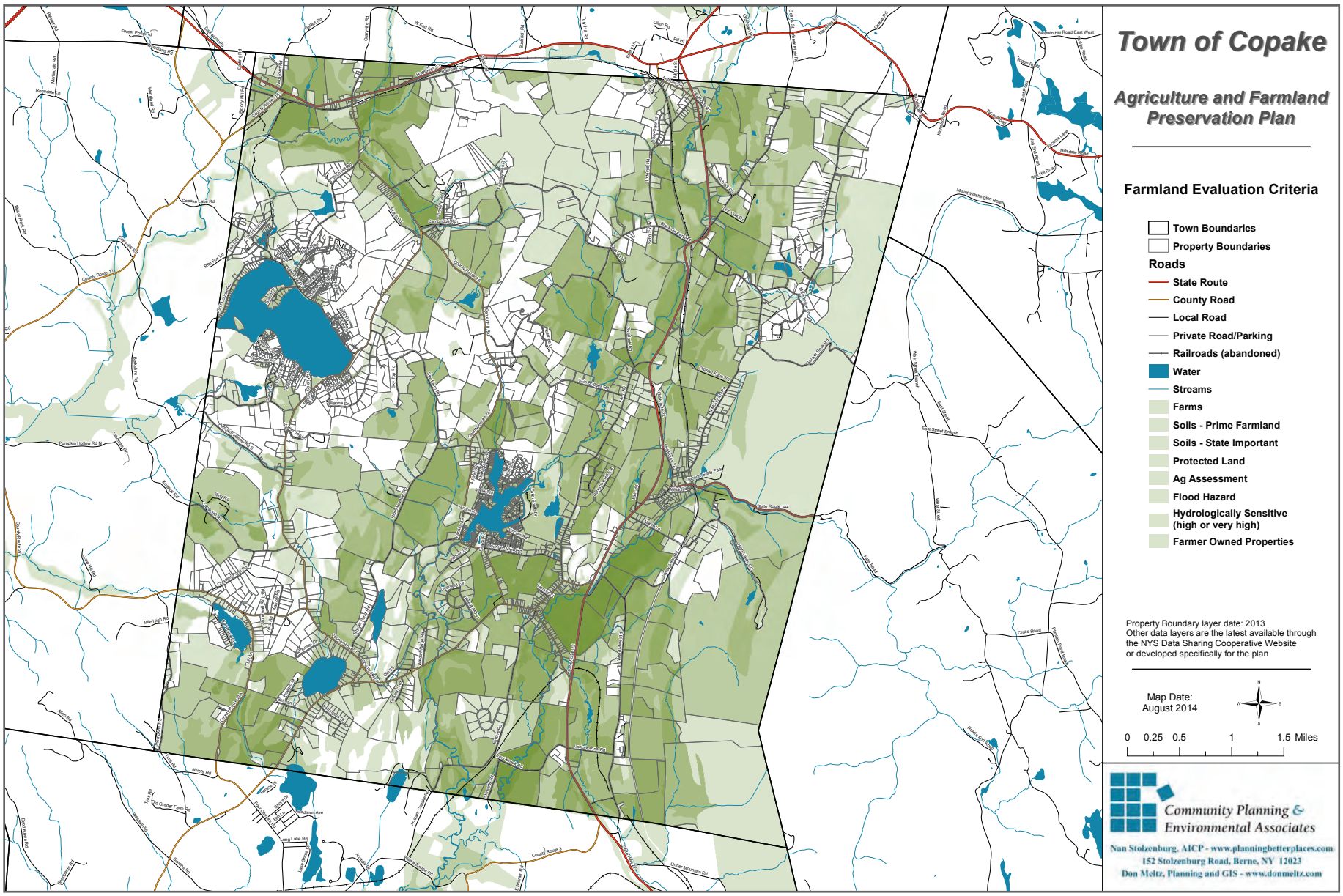
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 64: Agriculture and Farmland Preservation Plan - Hydrologically Sensitive Areas



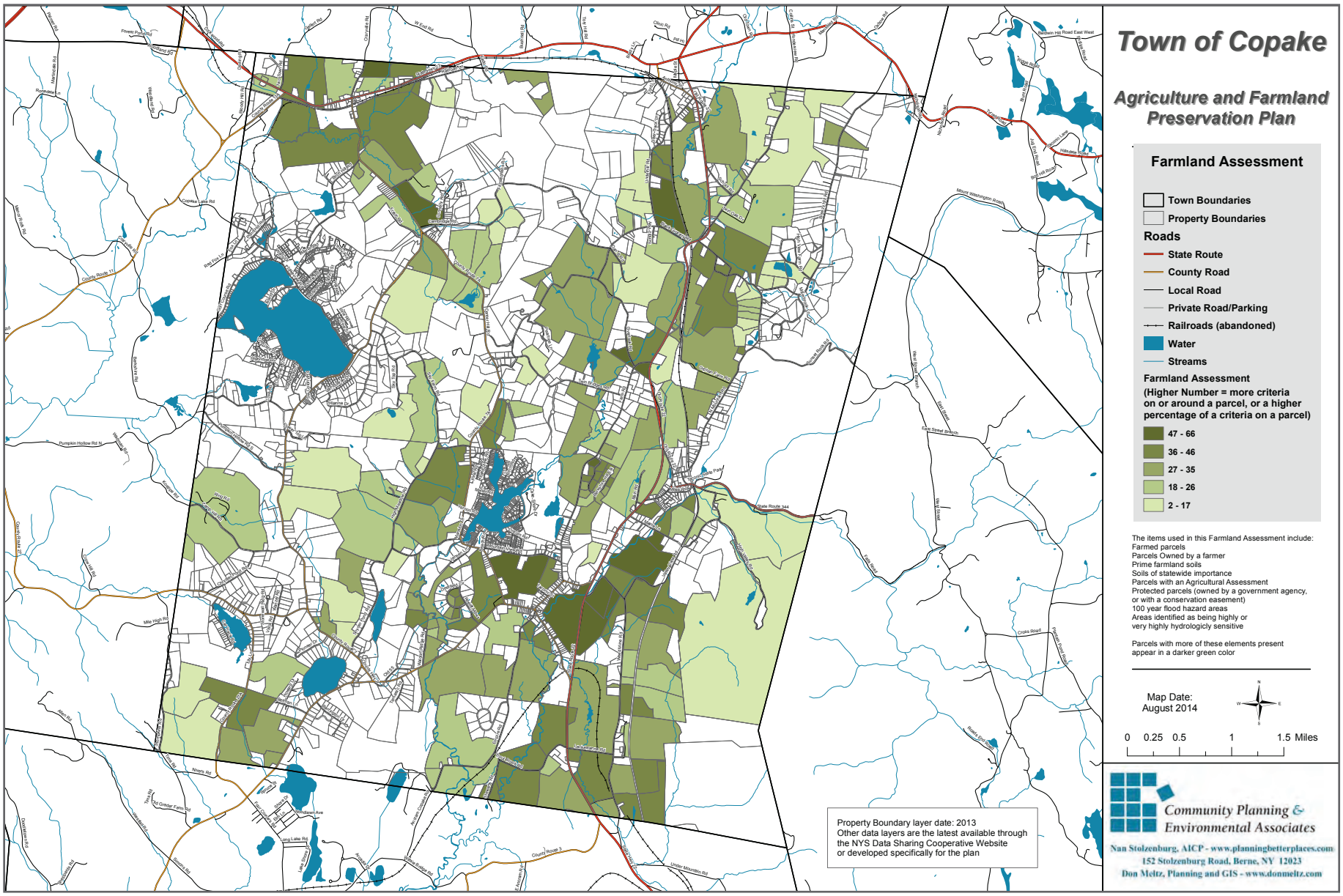
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 65: Agriculture and Farmland Preservation Plan - Farmer Owned Lands



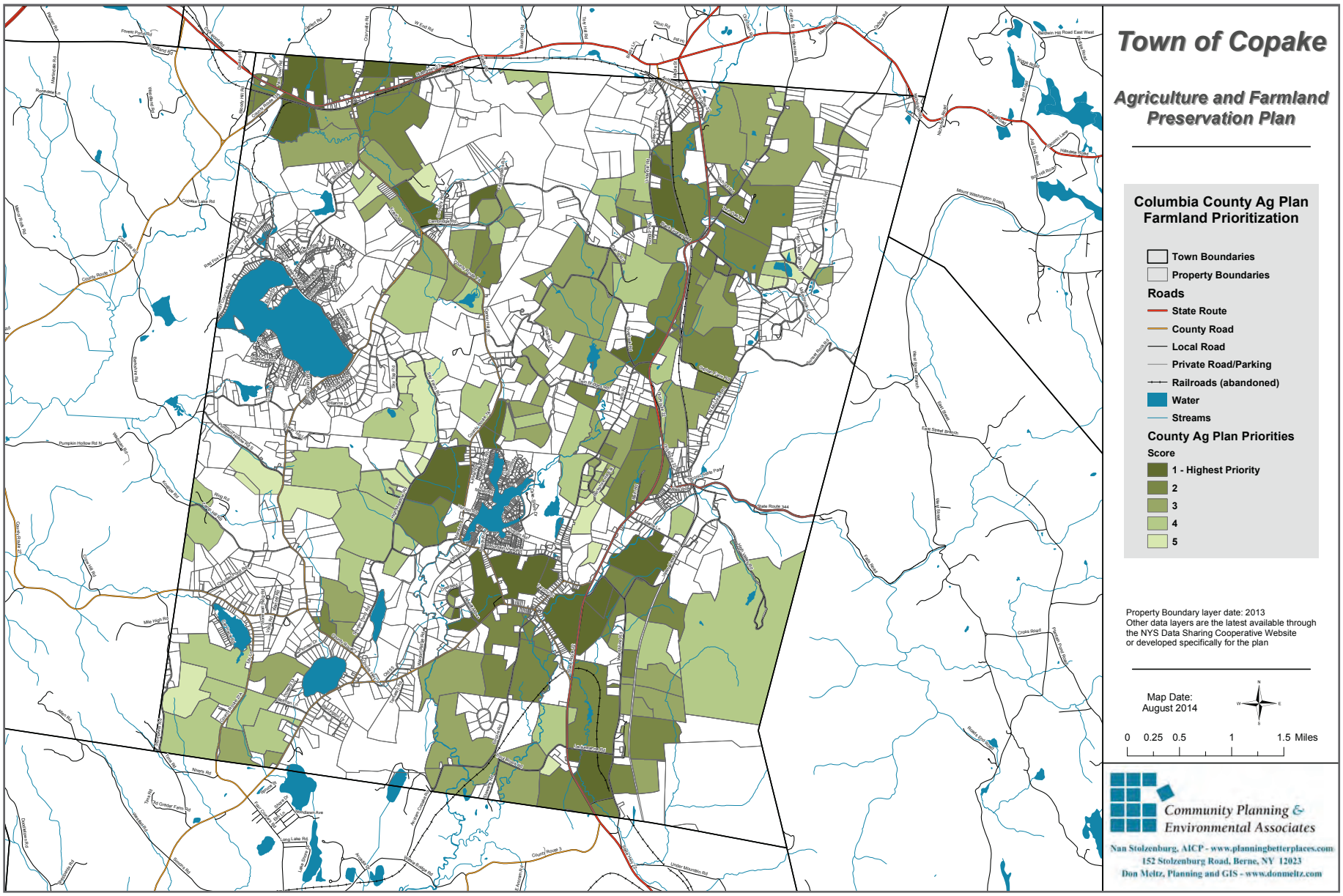
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 66: Agriculture and Farmland Preservation Plan - Farmland Evaluation Criteria



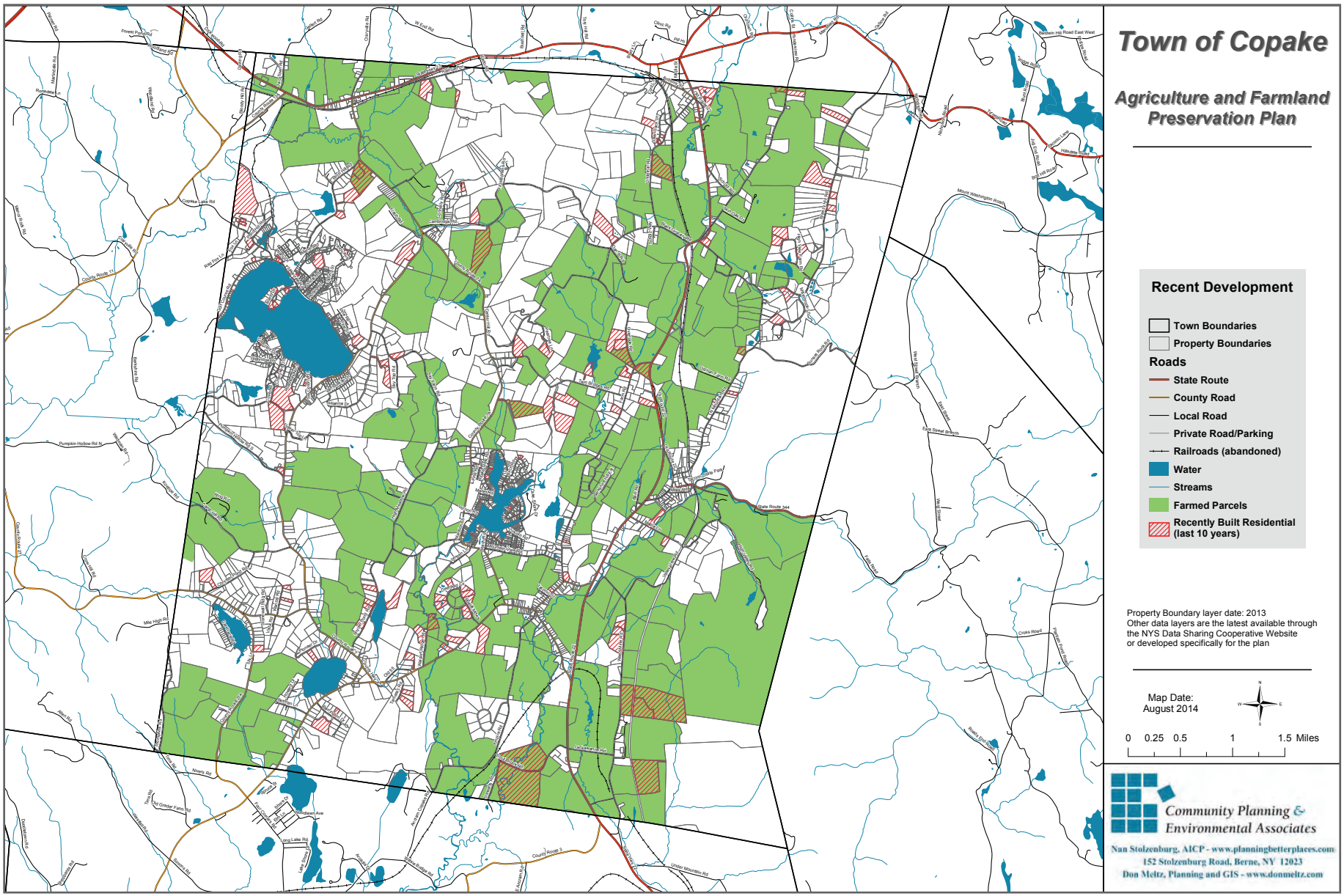
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 67: Agriculture and Farmland Preservation Plan - Farmland Assessment



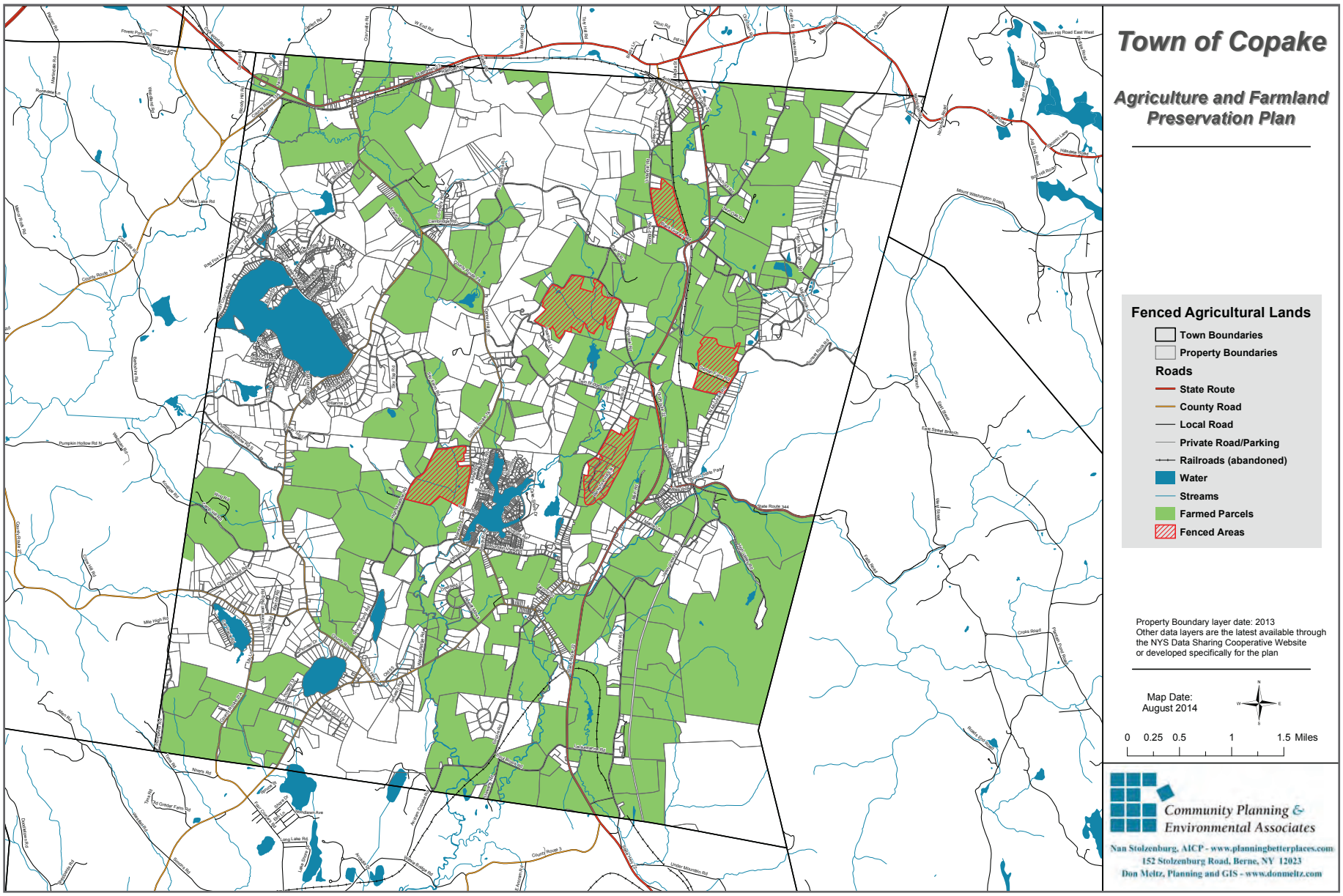
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 68: Agriculture and Farmland Preservation Plan - Columbia County Ag Plan Farmland Prioritization



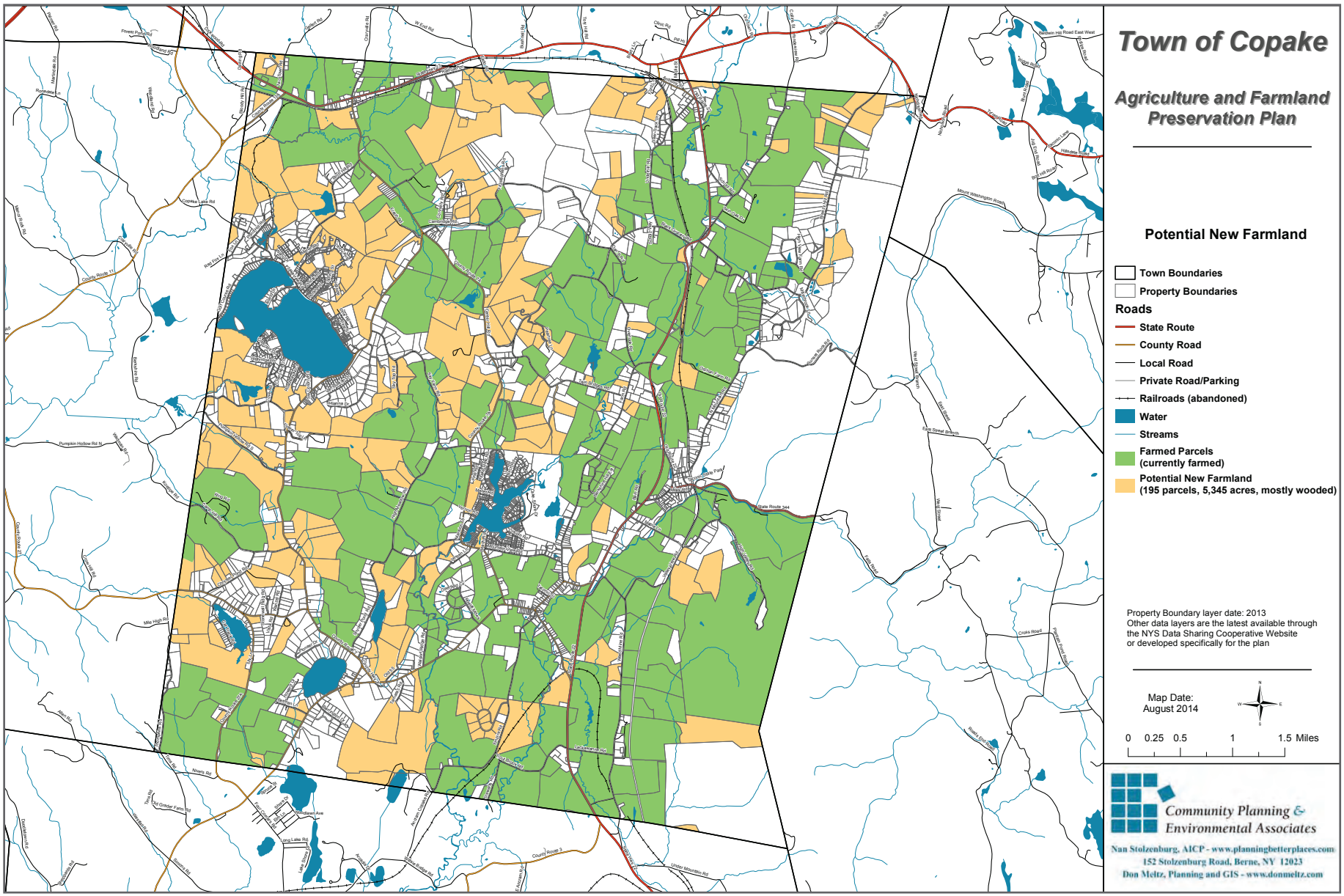
Source: Agriculture and Farmland Preservation Plan (2014)

MAP 69: Agriculture and Farmland Preservation Plan - Recent Development



Source: Agriculture and Farmland Preservation Plan (2014)

MAP 70: Agriculture and Farmland Preservation Plan - Fenced Agricultural Lands

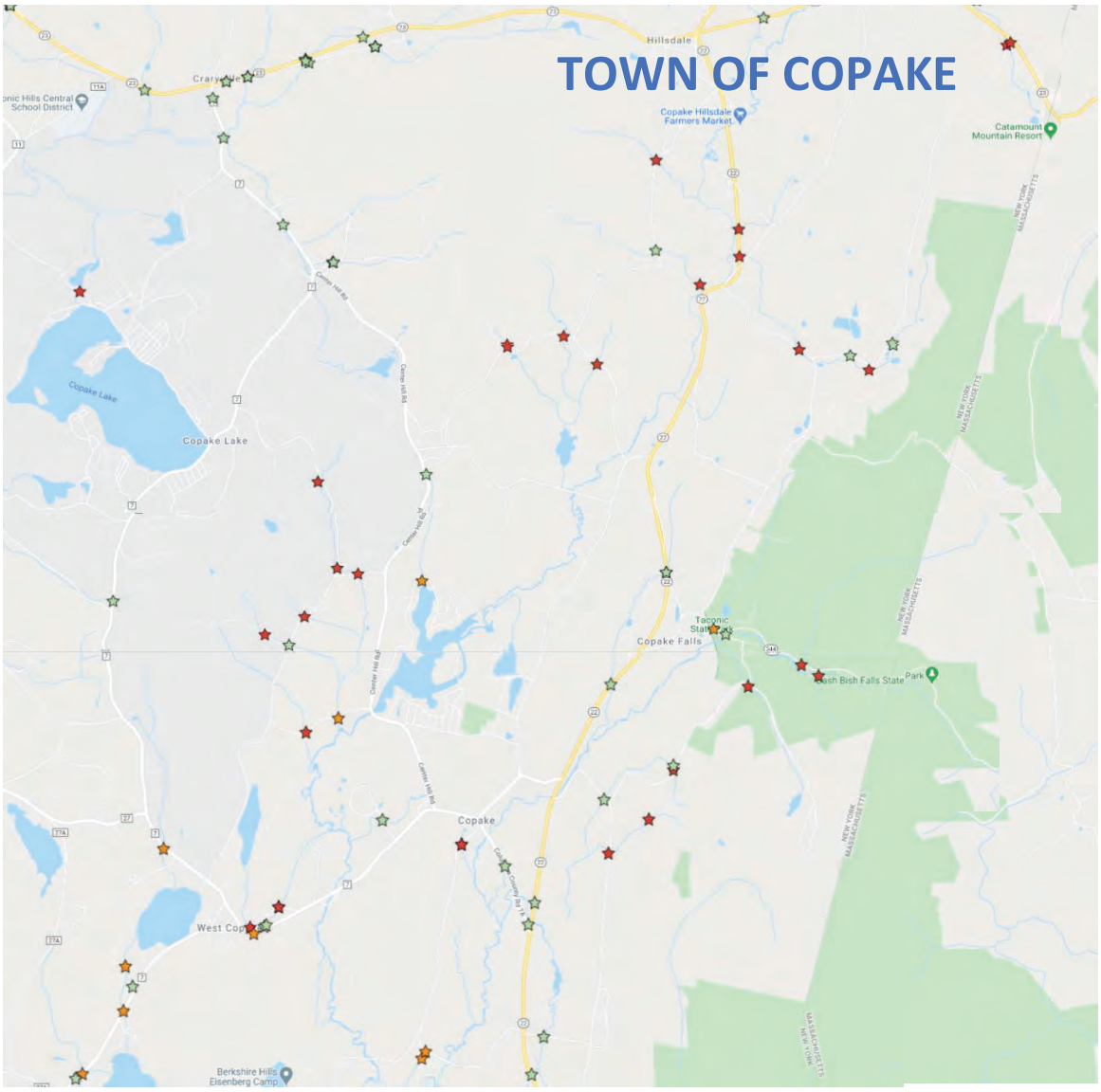


Source: Agriculture and Farmland Preservation Plan (2014)

MAP 71: Agriculture and Farmland Preservation Plan - Potential New Farmland

Aquatic Connectivity in the Hudson River Estuary Watershed

The Biologically Important Barriers and the Culverts Prioritization Project included the Water Resources Institute/NYSDEC Hudson River Estuary Program, and many partner organizations. Copake's culverts were inventoried and classified as insignificant, moderately significant, and significant are barriers to organisms and fragment streams. The inventory is accessible at at https://wri.cals.cornell.edu/hudson-river-estuary/watershed-management/aquatic-connectivity-and-barrier-removal-culvert-dams/



ROAD STREAM CROSSING: INSIGNIFICANT BARRIER

ROAD STREAM BARRIER: MODERATELY SIGNIFICANT BARRIER

ROAD STREAM BARRIER: SIGNIFICANT BARRIER

Source: https://wri.cals.cornell.edu/hudson-riverestuary/watershed-management/aquatic-connectivity-and-barrier-removal-culvert-dams/

MAP 72: Aquatic Connectivity in the Hudson River Estuary Watershed