



New York

By Manuel Olvera



NY Forests

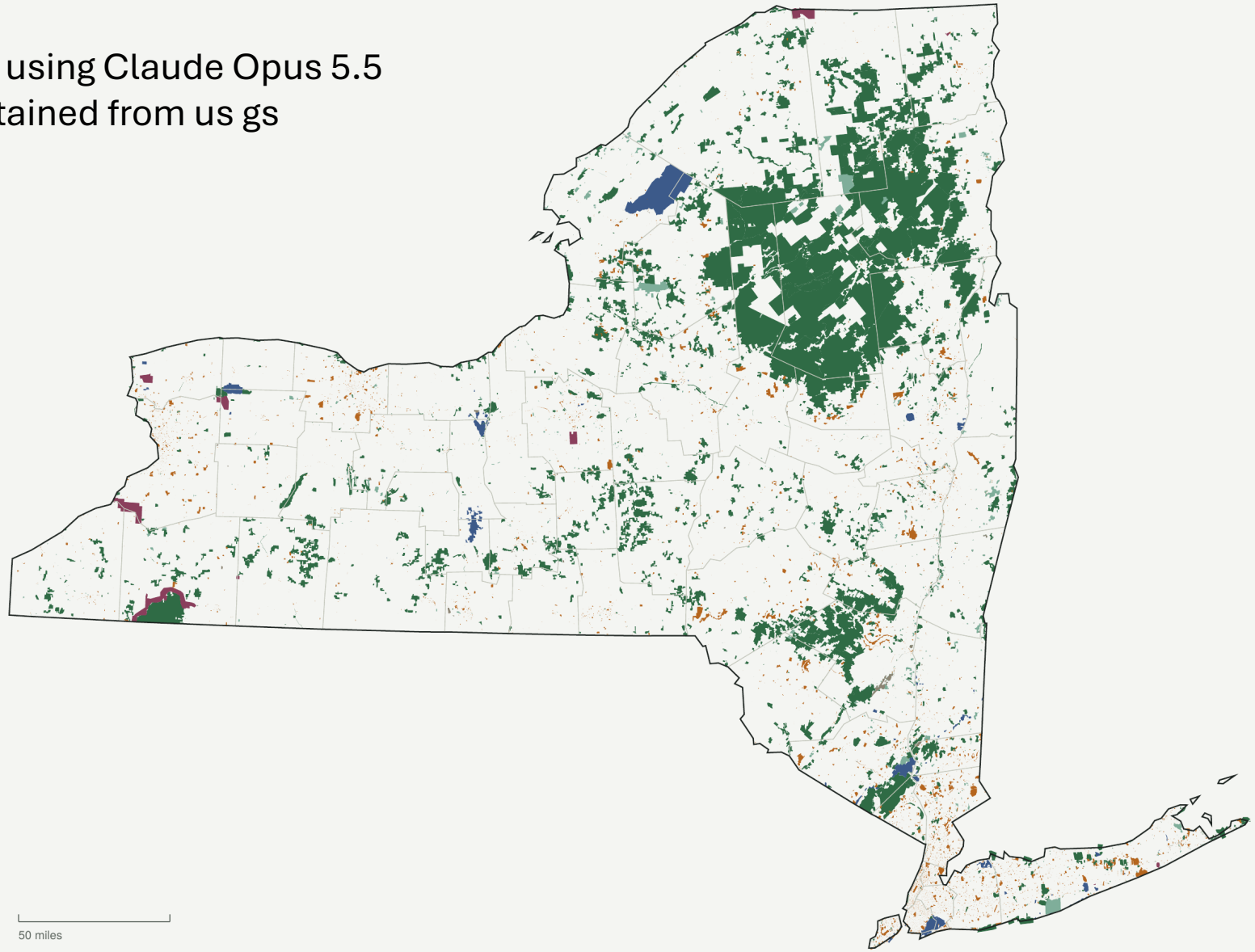
- 18.6 Million ac of forest
  63% of the state land area
- 75% Privately owned



NEW YORK STATE · LAND OWNERSHIP · USGS PAD-US 4.1

Who owns New York's land

Created using Claude Opus 5.5
Data obtained from us gs



Public land: 17.8% of the state

5,356,773 of 30.2 million land acres

PUBLIC

New York State — Forest Preserve, state forests & parks	4,509,849 ac	15.0%
Federal — Fort Drum, West Point, national forest, refuges	242,256 ac	0.8%
County, town & city — Parks, watershed land, special districts	475,414 ac	1.6%
Tribal nations — Reservations and tribe-owned land	129,254 ac	0.4%

PRIVATE

Land trusts & nonprofits — Privately owned conservation land	272,164 ac	0.9%
Other private preserves — Private or joint, listed in PAD-US	22,344 ac	0.1%
All other private land — Farms, homes, timberland, business	24,510,719 ac	81.3%

Source: USGS Gap Analysis Project, Protected Areas Database of the United States (PAD-US) 4.1, fee-ownership layer, New York. Boundaries simplified for display; not legal survey lines.

Private land is everything PAD-US does not list, which includes some small public holdings it skips (road corridors, school grounds), so the true public share is slightly higher.

The 300,000-acre Oneida treaty boundary is omitted: it is a legal designation, not land the Nation owns. Acreage figures are PAD-US GIS acres; NY land area 47,126 sq mi.

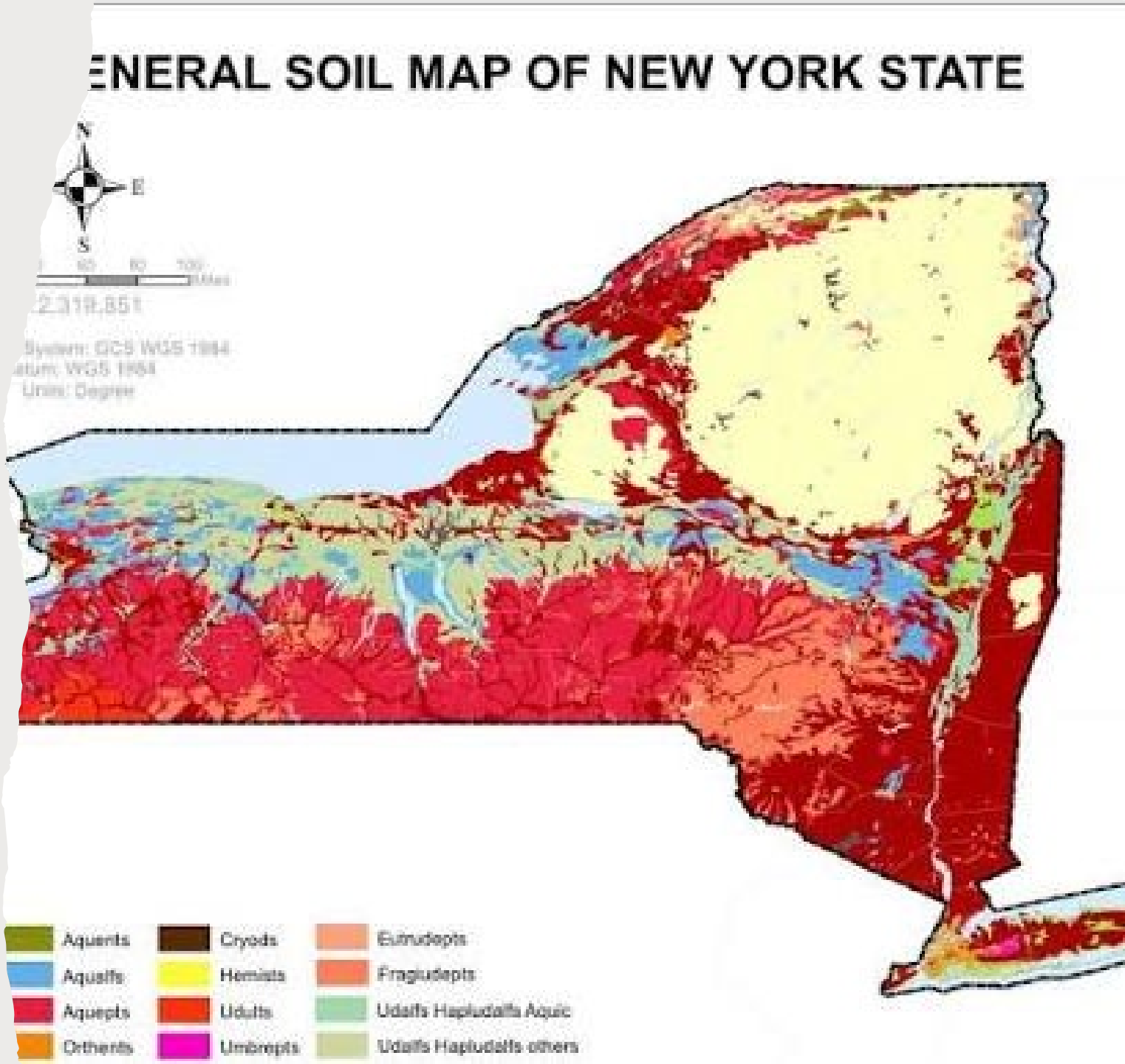
Topography and Climate

- Variable elevation
  Sea Level to 5,344 ft at Mt. Mercy
- Finger Lakes carved by glaciers
- Cold winters, warm summers
- About 41 inches of rain and snow a year
- Colder and wetter in the mountains



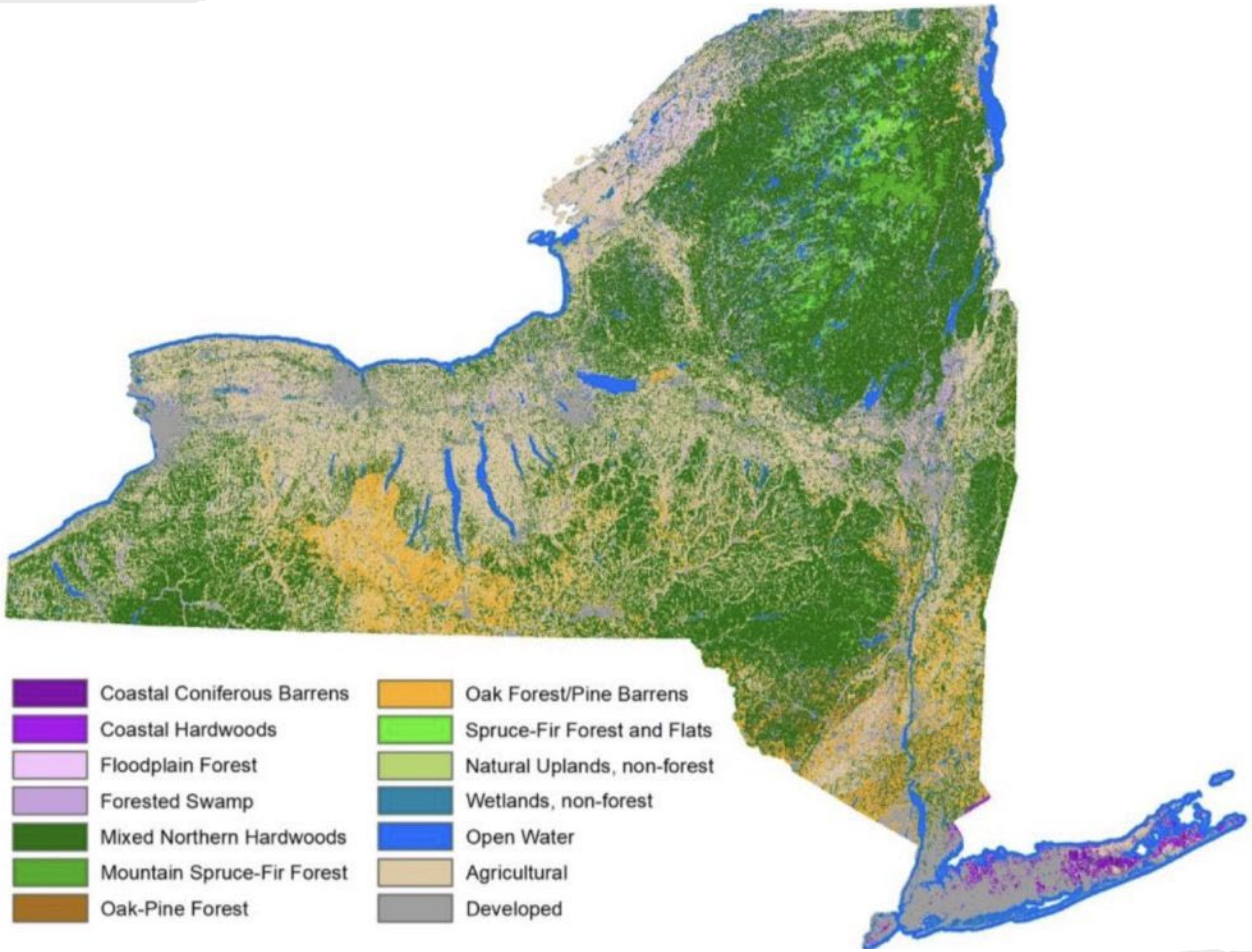
Soils

- Inceptisols
  - Dystrudepts, Aquepts, Eutrudepts, Fragiudepts, Umbrepts
- Spodisols
  - Orthods, Cryods
- Alfisols
  - Udalfs/Hapludalfs
- Mollisols
  - Aquolls
- Histosols
  - Saprists

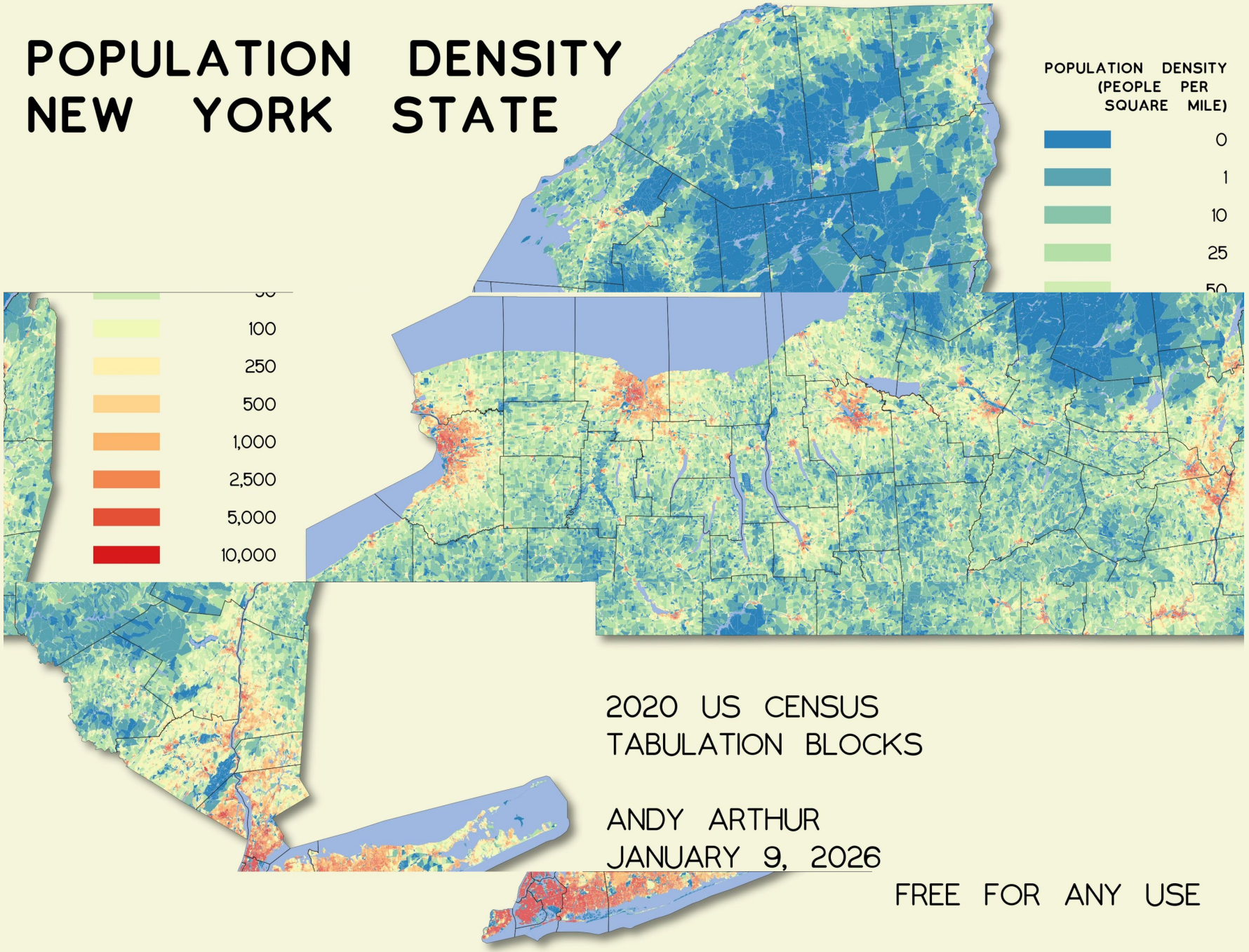


Cover Types

- Mixed Northern Hardwoods dominate
  Maple/beech/birch
- Mountain Spruce-Fir Forest and Spruce-Fir Forest and Flats
  found in Adirondacks
- Oak Forest/Pine Barrens and Oak-Pine Forest third
  Oak Hickory and Pitch Pine
- Coastal Coniferous Barrens and Coastal Hardwoods
  Long island



POPULATION DENSITY
NEW YORK STATE



2020 US CENSUS
TABULATION BLOCKS

ANDY ARTHUR
JANUARY 9, 2026

FREE FOR ANY USE

Disturbances

- Wind and ice- the 1950 Big Blowdown (420,000 acres), the 1995 derecho (10 million trees down), the January 1998 ice storm
- Fire in Barrens
- Most of New York was farmland in the 1880s with forest cover fell to 25% of state land
- Pests and Acid deposition problem now.



Insects and disease

- Beech leaf disease – kills mature beech trees in 6-10 yrs
- Emerald ash borer – 150k ac of ash mortality mapped in 2021
- Hemlock woolly adelgid – Bad in Catskills park and finger lakes
- Beech bark disease- Kills large beech's
- Spongy moth - 726,000 ac defoliated in 2021
- Spotted lanternfly – found in Staten island in 2020

Mixed Northern Hardwoods

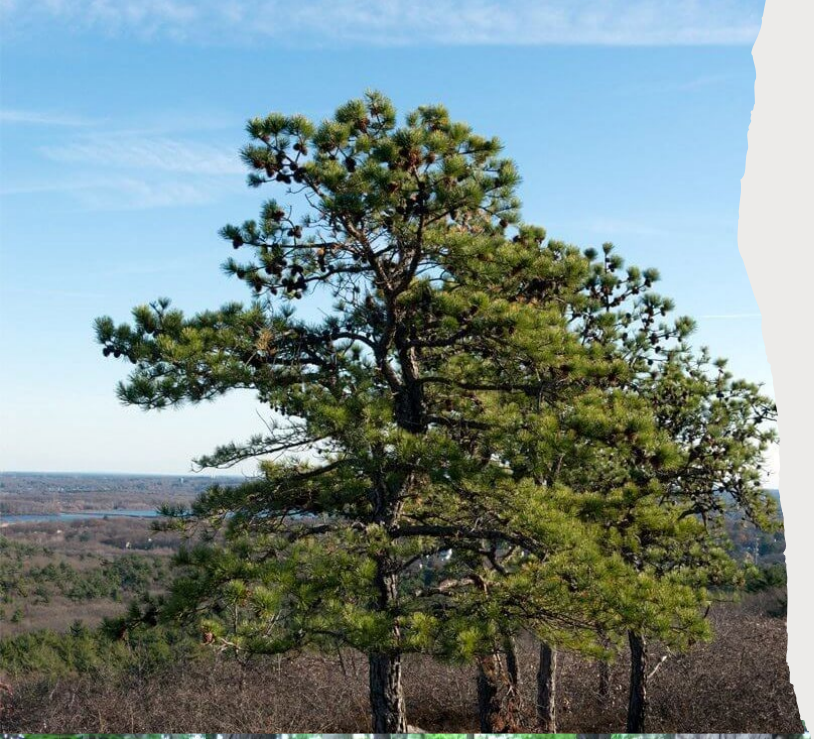
- Found in Adirondacks, Catskills, and South
- Composed of Sugar Maple, American beech, and yellow birch
- Found in moist deep well drained loams up to 2,500 ft



Spruce-Fir Forests

- Mountain Spruce- Fir composed of red spruce and balsam fir found on steep sloped on acidic solid
- Red spruce and balsam fir can also be found on poorly drained flats







Oak-Pine Forests

- Composed of white oak, black oak, chestnut oak, red oak, hickories; white pine in younger stands.
- Pitch pine and scrub oak can be found on sandy sites or barrens

Coastal Forests

- Pine barrens consisting of pitch pine and scrub oak
  Very small trees 4-8ft tall
- Coastal hardwoods are very similar to the oak pine forests
- Very gravely and sandy



Floodplain Forests and Swamps

- Floodplains: Silver maple, cotton wood, boxelder, and elms
  Frequently flooded
- Red maple swamps: Red maple and green ash
- Softwood Swamps: black spruce, tamarack, and northern white cedar
- Currently in danger due to dutch elm disease, and emerald ash borer



Finger Lakes National Forests

Only National forest in New York roughly about 16,000 ac

Used to be farms that were bought out by the federal resettlement administration in the 1930s

Now mostly grasslands and woodlands

Also used for Recreation



Adirondacks & Catskill Forest Preserves

- Adirondack Park is about 6.1 million ac but 2.6 million ac are ‘forever wild’
- Catskill park is about 700,000ac and about 288,000 ac are also ‘forever wild’
- No timber sold or removed



Major Tree species

Sugar maple
Acer saccharum

Red maple
Acer rubrum

American beech
Fagus grandifolia

Yellow birch
Betula alleghaniensis

Black cherry
Prunus serotina

White ash
Fraxinus americana

Northern red oak
Quercus rubra

Eastern hemlock
Tsuga canadensis

Eastern white pine
Pinus strobus

Red spruce
Picea rubens

Balsam fir
Abies balsamea

Pitch pine
Pinus rigida

- Ordered by Claude Opus 5.5

Sugar Maple – Acer Saccharum

- Very Shade Tolerant
- Late/ Climax Species
- Regenerates under canopy
- Too many deer kill tree
- Used for Maple Syrup!!



Red Maple- Acer Rubrum

- Shade tolerant
- Considered intermediate successional species
- Vigorous Sprouts; Annual Seed
- Used to make pallets, crates, and veneer



American beech – Fagus grandiflora

- Very shade tolerant
- Late or Climax successional species
- Regenerates using root suckers and Nuts
- Threatened by beech bark disease; beech leaf disease



Yellow birch – Betula alleghaniensis

- Moderately shade tolerant
- Mid successional species
- Seeds
- But suffers Poor seedbeds



Black cherry - Prunus serotina

- Shade Intolerant!
- Early successional species
- Regenerates using seeds
- Used for furniture and wood work



White ash – Fraxinus americana

- Moderately shade tolerant
- Mid-successional
- Lots of seeds
- Used for baseball bats
- Emeral ash borer



Norther red oak – Quercus rubra

- Moderately shade tolerant
- Mid successional species
- Regenerates using acorns and sprouts
- Advanced regen!
- Oak wilt, spongy moth, and deer



Eastern hemlock =- tsuga canadensis

- Very shade tolerant
- Late successional species
- Very slow regen and must be moist
- Threatened by hemlock wooly adelgid



Eastern white pine – Pinus strobus

- Intermediate shade tolerance
- Early to mid successional species
- Has periodic seed years
- Used for lumber
- Threatened by white pine weevil



Red spruce – Picea rubens

- Shade tolerant
- Late successional species
- Advanced regen
- Used for pulpwood and framing lumber. Sometimes piano soundboards due to ‘superior strength to weight ratio’



Balsam fit- Abies balsamea

- Very shade tolerant
- Late successional Species
- Advanced regen
- Used for pulpwood
- Threatened by spruce budworm



Pitch pine – Pinus rigida

- Not shade tolerant
- Pioneer or fire maintained climax species
- Has serotinous cones and thick bark perfect for fire
- Fuel
- Southern Pine beetle



Regen methods

- Natural regen
- Even aged methods
  Shelter wood: three cuts
  Seed tree: two cuts
- Uneven Age
  Group and Patch selection
- **Must protect saplings from deer**



Logging

- Chain saw, and cable skidder – old way
- Frozen ground prevents compaction
- Cut to length harvester and Forwarder
    - Harvester cuts the trees into logs and the forwarder moves the logs to prevent damage






Thank you