

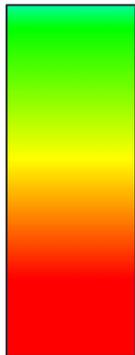
Minimizing Development Impacts to Prime Farmland



It's All About the Dirt!

Soil classes determine the ability to grow stuff

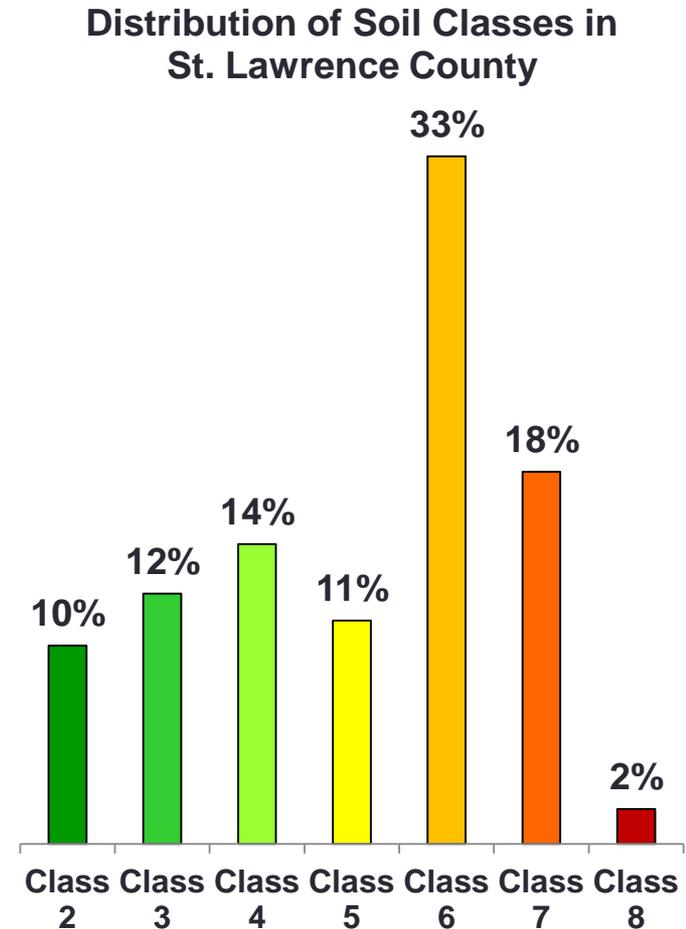
- Class 1: Few limitations
- Class 2: Some limitations
- Class 3: Severe limitations
- Class 4: Very severe limitations



Soils in SLC

- Zero Class 1 Soils Present
- 36% of soils suitable for production

Classes	SLC	USA
1 & 2	10%	23%
3 & 4	26%	35%
5 – 8	64%	42%



Legend

Soil Class Distribution in St. Lawrence County



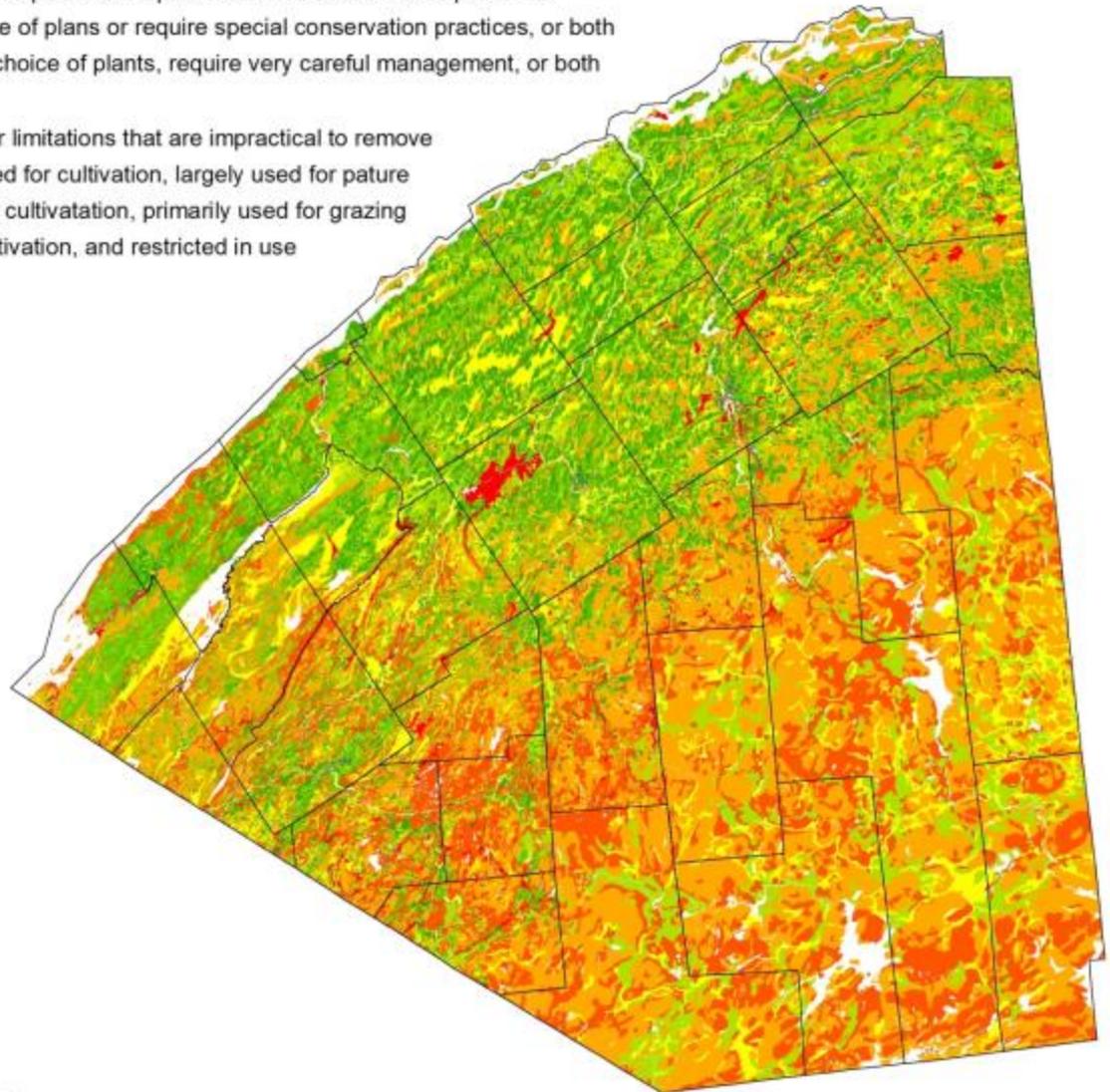
Soils Suitable for Cultivation

- Class 2: Some limitations that reduce choice of plants or require moderate conservation practices
- Class 3: Severe limitations that reduce choice of plans or require special conservation practices, or both
- Class 4: Very severe limitations that restrict choice of plants, require very careful management, or both

Unsuitable Soils

- Class 5: Little or no erosion hazard, but other limitations that are impractical to remove
- Class 6: Severe limitations; generally unsuited for cultivation, largely used for pature
- Class 7: Very severe limitations; unsuited for cultivation, primarily used for grazing
- Class 8: Limitations that preclude use for cultivation, and restricted in use

Town boundary



0 4 8 Miles
1:650,000

Prime Soils

Best combination of physical and chemical characteristics

Adequate and dependable supply of moisture

Acceptable acidity and alkalinity

Acceptable sodium content

Permeable

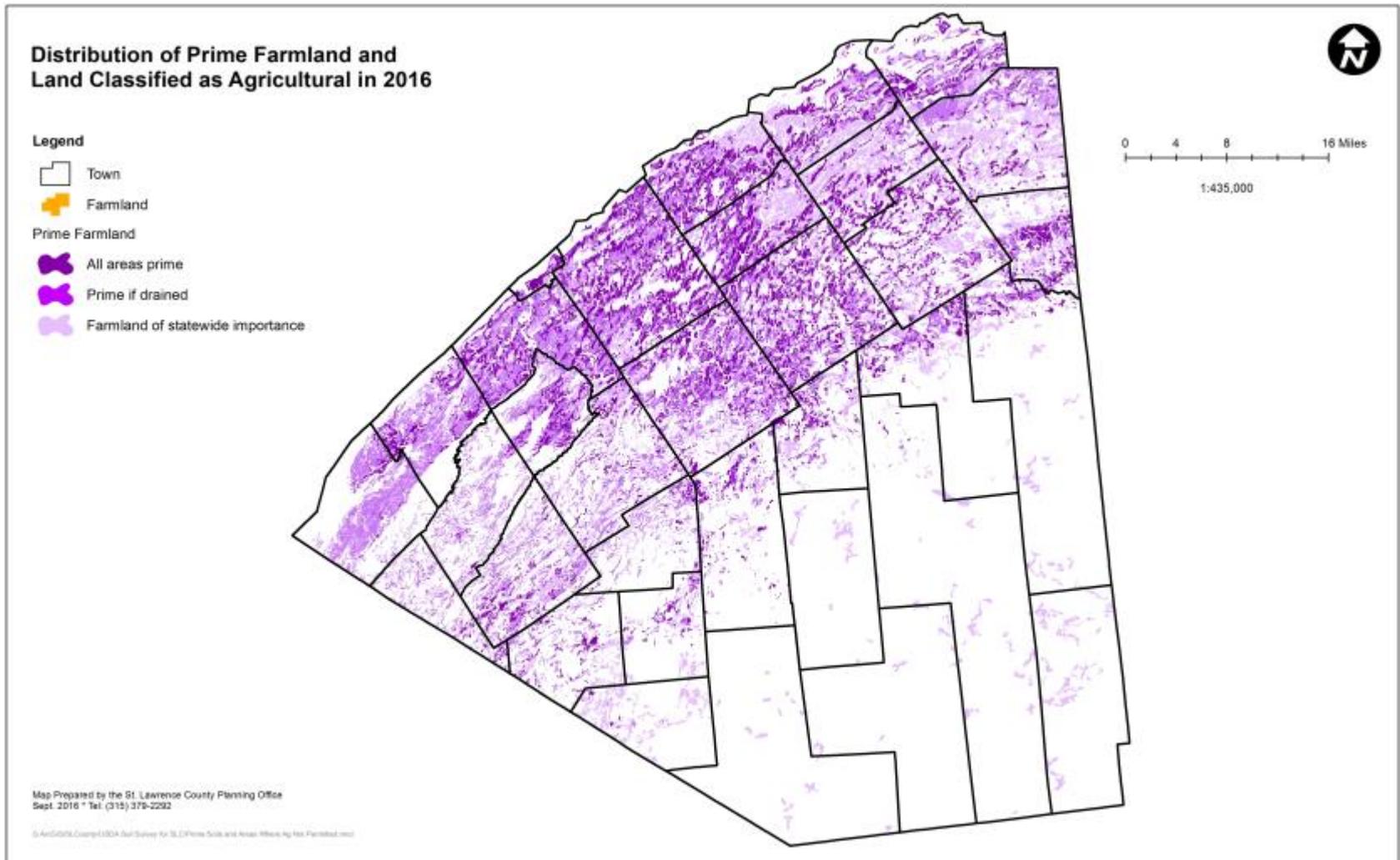
Few rocks

Not excessively erodible or saturated

Not frequently flooded

Slopes 0 to 6%





Prime & Prime if Drained = 19% of land in SLC
 → Less than 1 in 5 acres available

Distribution of Prime Soils, Farmland and Wind Classifications in St. Lawrence County



Legend



Town



Farmland

Prime Farmland



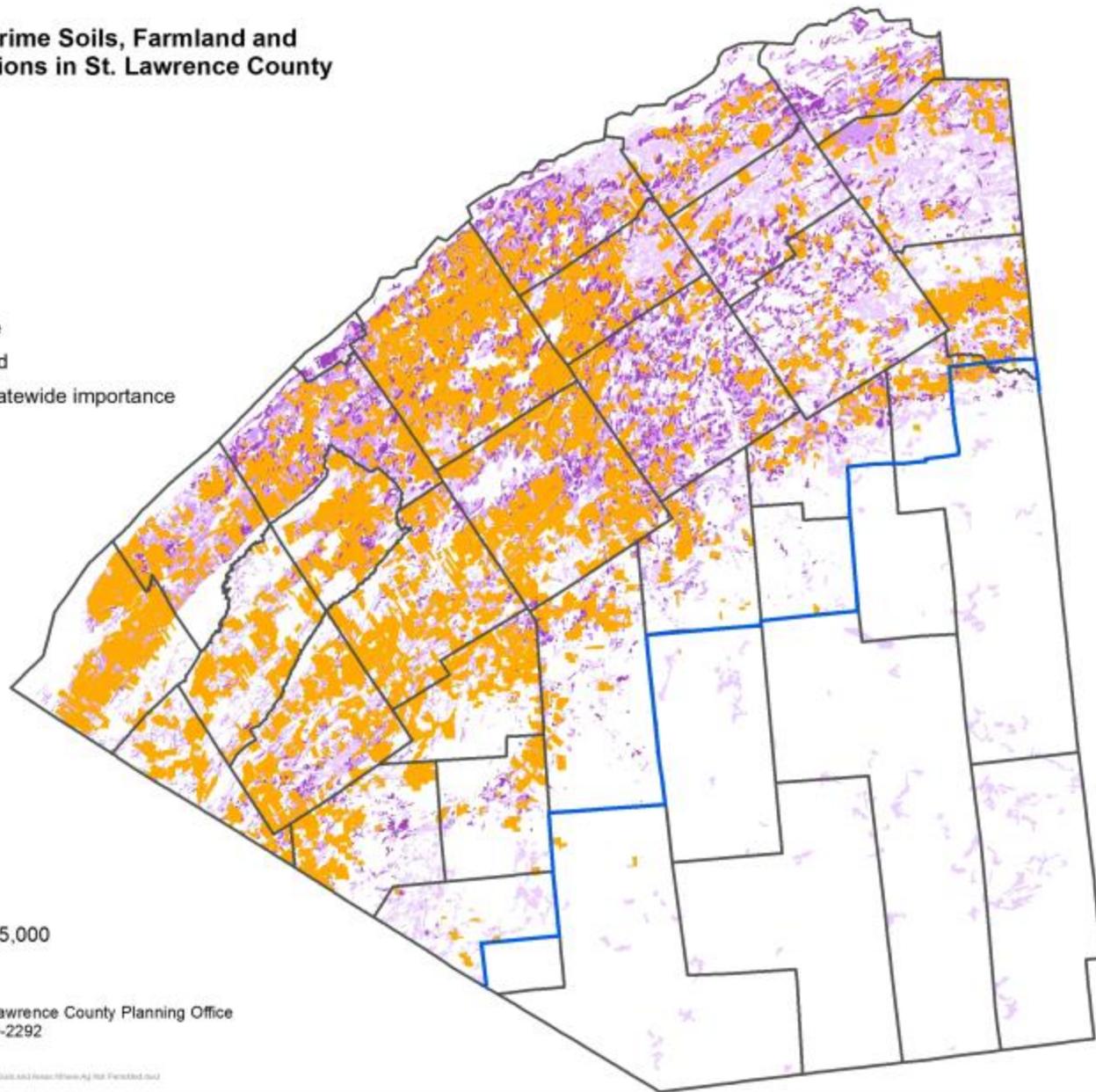
All areas prime



Prime if drained



Farmland of statewide importance



1:575,000

Map Prepared by the St. Lawrence County Planning Office
Sept. 2016 * Tel: (315) 379-2292

2016 Ag Survey

- Drainage & limited growing season are top two issues affecting business.
- 61% of tillable land is not drained.
- 48% anticipate putting additional land into production.
- 36% plan to expand operations in less than 5 yrs.



Reforming the Energy Vision

-40% greenhouse gases by 2030

-80% by 2050

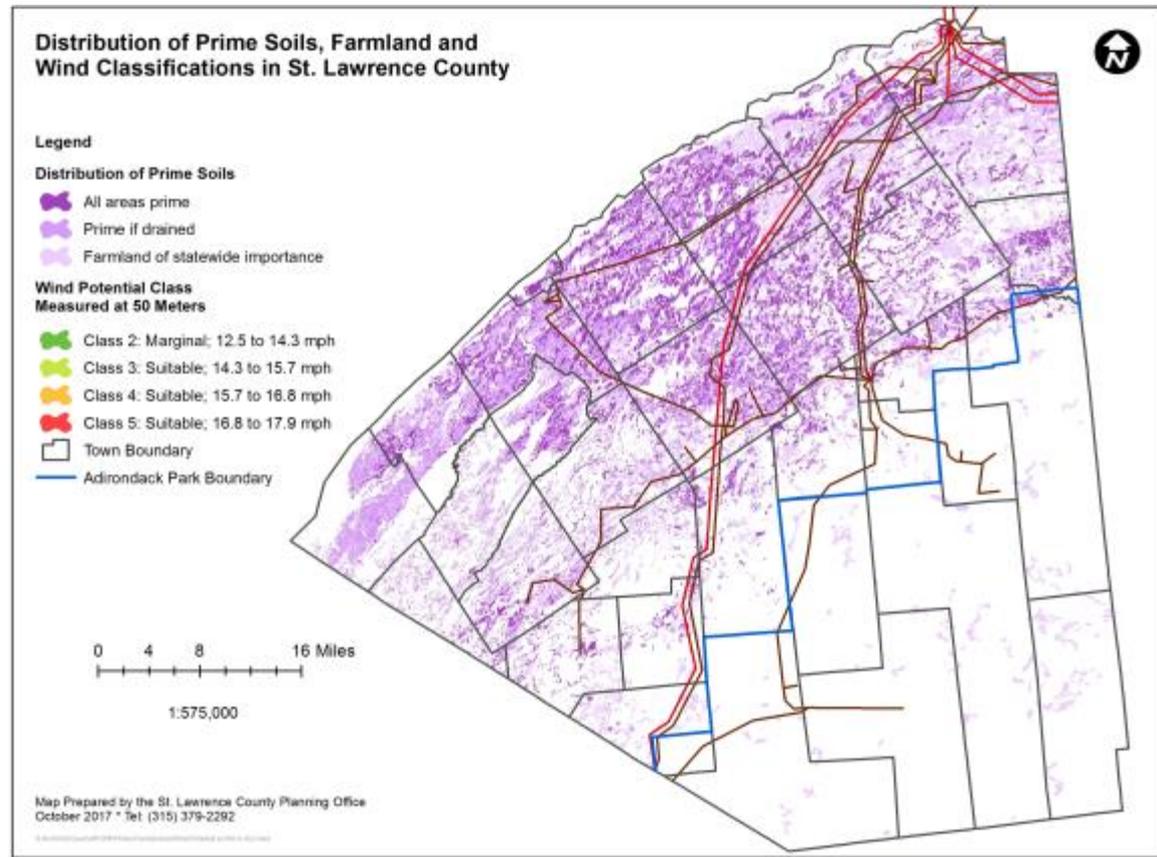
-23% energy consumption by buildings

Generate 50% from renewable sources

Install 3 GW (3,000 MW) of solar by 2023

Moses-Adirondack Smart Path

- \$440 million
- Rebuild 78 miles of transmission line
- 230 to 345 kilovolts
- Begin in 2019
- 4 Years



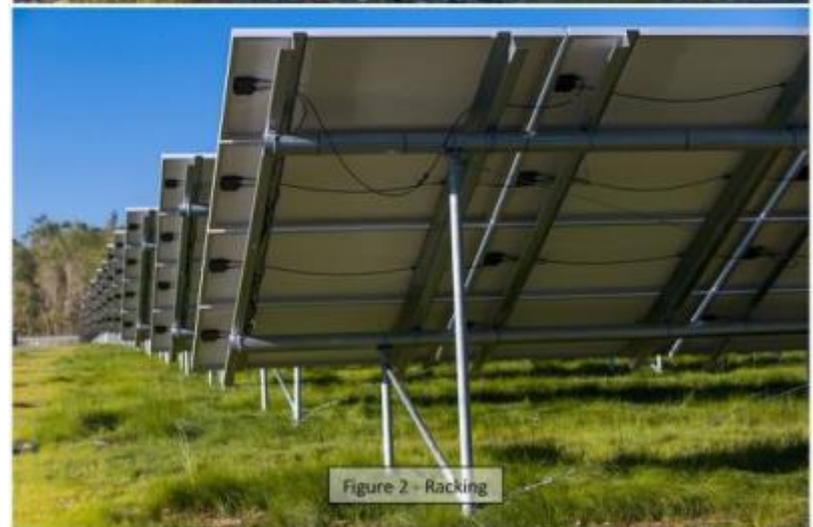
Solar Arrays

1-megawatt of solar energy = 164 homes

6 acres of land

3,000 – 4,000 panels

20 – 40 year lifecycle



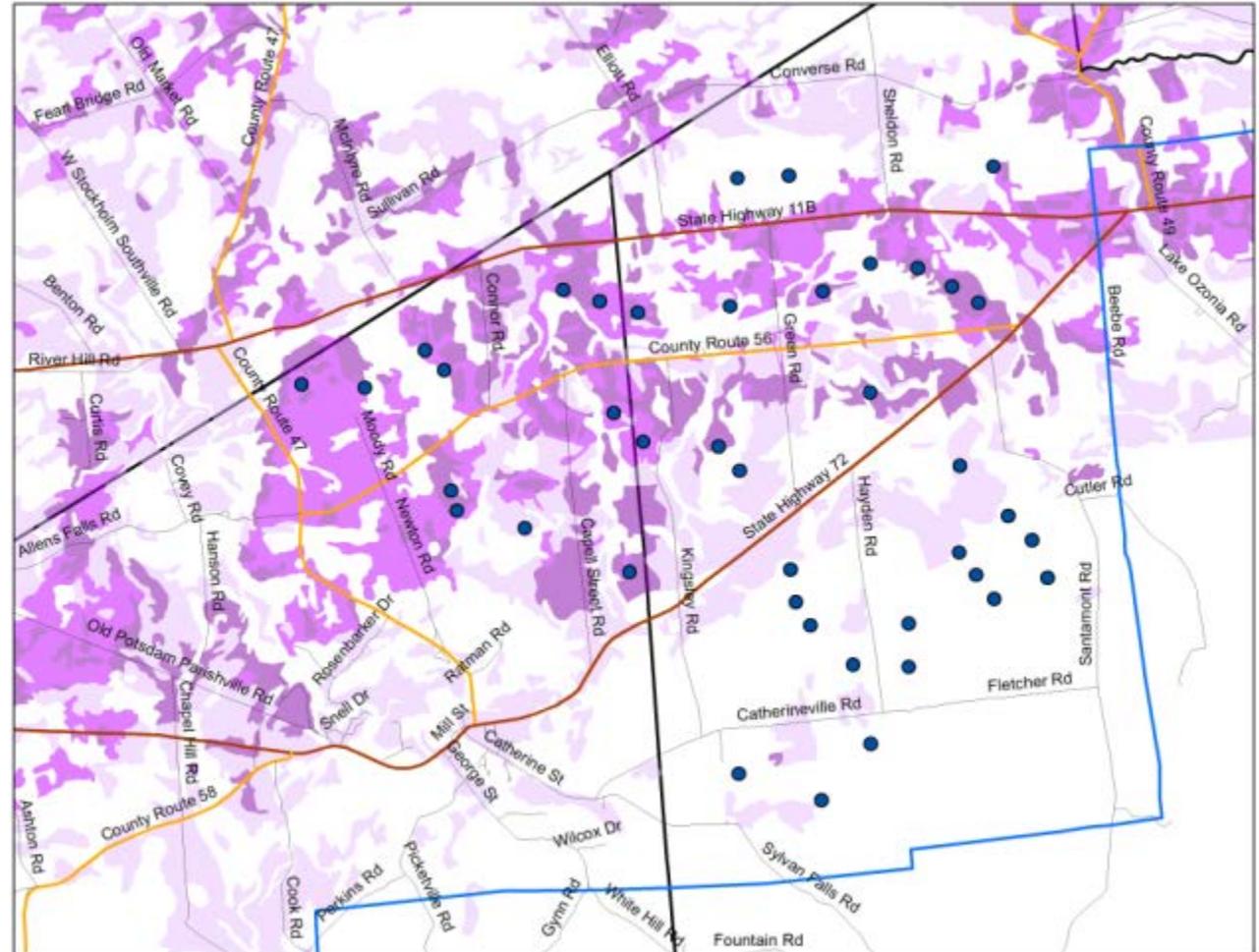
Suitable Characteristics

- Flat
- Cleared
- Not in flood plain
- Access to power
- 20-40 acres



North Ridge Wind Farm

- 41 turbines
- 100 m or 350' above grade
- 100 MW of wind energy=
25,000 homes



Distribution of Prime Soils, Farmland and Wind Classifications in St. Lawrence County



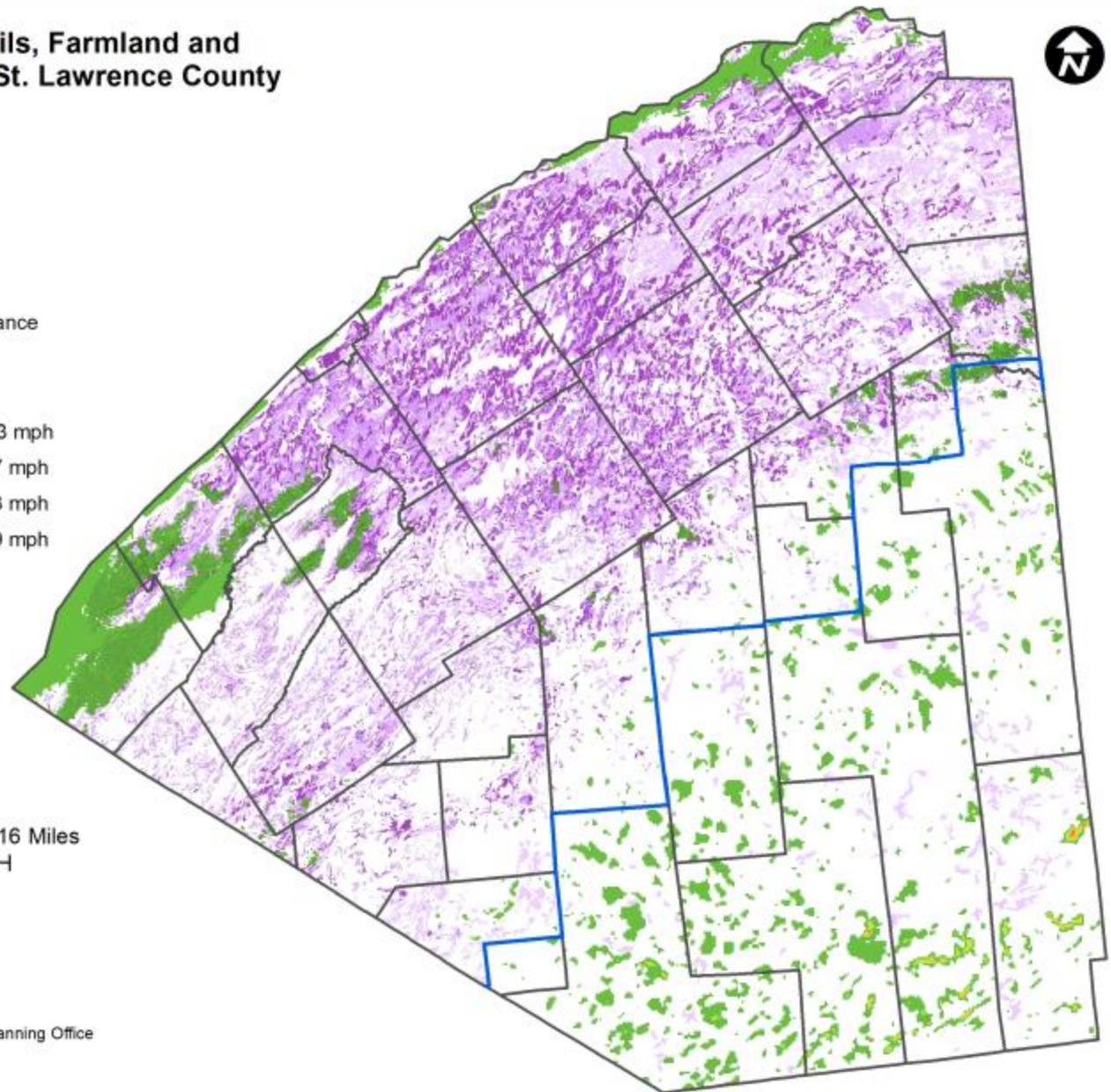
Legend

Distribution of Prime Soils

- All areas prime
- Prime if drained
- Farmland of statewide importance

Wind Potential Class Measured at 50 Meters

- Class 2: Marginal; 12.5 to 14.3 mph
- Class 3: Suitable; 14.3 to 15.7 mph
- Class 4: Suitable; 15.7 to 16.8 mph
- Class 5: Suitable; 16.8 to 17.9 mph
- Town Boundary
- Adirondack Park Boundary



0 4 8 16 Miles

1:575,000

Map Prepared by the St. Lawrence County Planning Office
October 2017 * Tel: (315) 379-2292

© ArcGIS, St. Lawrence County GIS, Prime Farmland and Wind Potential in St. Lawrence County

Prime Farmland Lost to Non-Ag Uses

→ Farm on less suitable soils

Increased production pressure on marginal land

→ Not easily cultivated

→ Less productive

→ More erodible and droughty



Increases production costs (time, energy, money)

Less competitive

new.dancgis.org/ima

The screenshot displays the DANC Internet Mapping Application interface. The browser address bar shows the URL new.dancgis.org/ima/. The application title is "DANC Internet Mapping Application" and the user is logged in as "St. Lawrence County (Public User)".

The interface includes a navigation menu on the left with the following sections:

- Home
- Metadata
- Basemaps
- Map Legend
- Map Layers
 - St. Lawrence County
 - St. Lawrence Census Block
 - St. Lawrence Census Tract
 - St. Lawrence County Boundary
 - St. Lawrence Property Owners
 - St. Lawrence Property Addresses
 - St. Lawrence Parcels
 - St. Lawrence Parcel IDs
 - St. Lawrence Town Boundaries
 - St. Lawrence Village/City Boundaries
 - St. Lawrence Streets
 - Water
 - Sewer
 - Storm
 - OATH
 - Other
 - Bridges
 - Contours
 - Agricultural Districts
 - Federal Wetland
 - School Districts
 - Soil Classes
 - State Wetland
 - Voting Districts
 - ZIP Codes
 - Toning
 - Toning

The main map area shows a satellite view of a rural area with a river and surrounding fields. A purple shaded area indicates the Federal Wetland. A popup window titled "(2 of 2) Federal Wetland" is displayed over the map, showing the following data:

Wetland Type	Freshwater Wetland	Emergent
Acres	37.91	

The popup window also includes a "Zoom to" button. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the time as 11:08 AM on 10/8/2015.

Prioritization of Farmland

- Active rotational farmland
- Permanent hayland
- Improved pasture
- Unimproved pasture
- Other support lands
- Fallow/inactive farmland



Avoid Dividing Large Tracts



Along Field Edges & Contours



Features to Avoid

- Tile lines
- Diversions
- Ditches



Access



- Timbermats
- 16' wide
- Geotextile fabric
- At grade

Fencing



Livestock Access



Stockpile Topsoil



Transmission Lines



- Underground
- 2' – 4' deep
- Taller utility poles
- Larger spans
- No guy wires

Decommissioning Plan



- Steps to remove system
- Outline how disposed/recycled
- Access roads
- Transmission Lines
- Decommissioning funds

Decommissioning Fund

- Discontinued / abandoned / reduced generation
- Specify time period to dismantle
- Letter of credit, bond, account or trust fund with series of payments to equal estimate
- Abandoned: option or dismantle for scrap value

<i>Task</i>	<i>Cost</i>
Remove wire racks	\$2,459
Remove panels	\$2,450
Dismantle racks	\$12,350
Remove electrical equipment	\$1,850
Breakup and remove concrete pads or ballasts	\$1,500
Remove racks	\$7,800
Remove cable	\$6,500
Remove ground screws and power poles	\$13,850
Remove fence	\$4,950
Grading	\$4,000
Seeding	\$250
Transport	\$2,250
Total	\$60,000
At 20 Years Inflation (2.5%)	\$98,900

Restoration



- Decompaction
- Rocks
- Debris
- 4' depth
- Regraded
- Seeded
- Revegetated
- Monitoring

Tax Implications

- Agricultural Valuations
- 15 Year Exemption
- Payment in Lieu of Taxes (PILOT)

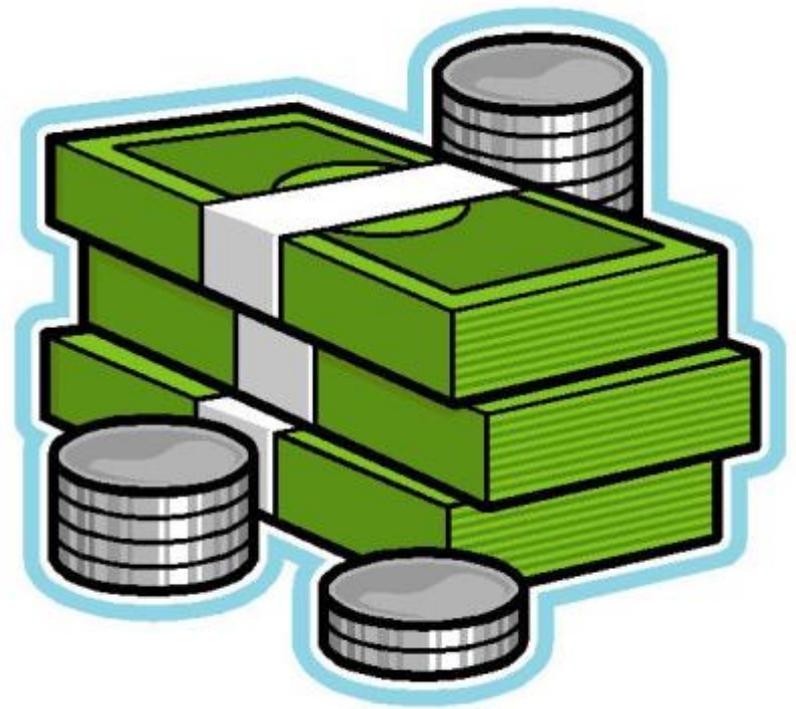
Ag Valuations/Assessments

- Lost when land taken out of production
- Conversion penalty 5 to 7 years
- Penalty = 5 x taxes saved + interest



Renewable Energy Exemption

- Exempt from property taxes
- Taxes in year 16
- Municipality may opt out
- Landowner applies



Payment in Lieu of Taxes

- Contract vs Property Tax
- Notify landowner within 60 days
- Annual amount up to taxable value
- 15 year period



Other Issues

- Liability insurance
- Succession
- Hunting access



Resources:

- Soils worksheet:
SLC Soil and Water Conservation District
1942 Old Canton-DeKalb Rd, Canton
Tel: (315) 386-3582
- NYSERDA Solar Guidebook:
<https://www.nyserda.ny.gov/solarguidebook>
- Nature Conservancy:
 - Biodiversity & wind mapping tool
 - <http://www.ebd.mapny.info/>

Questions, Comments or Suggestions?

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Public Safety Complex

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