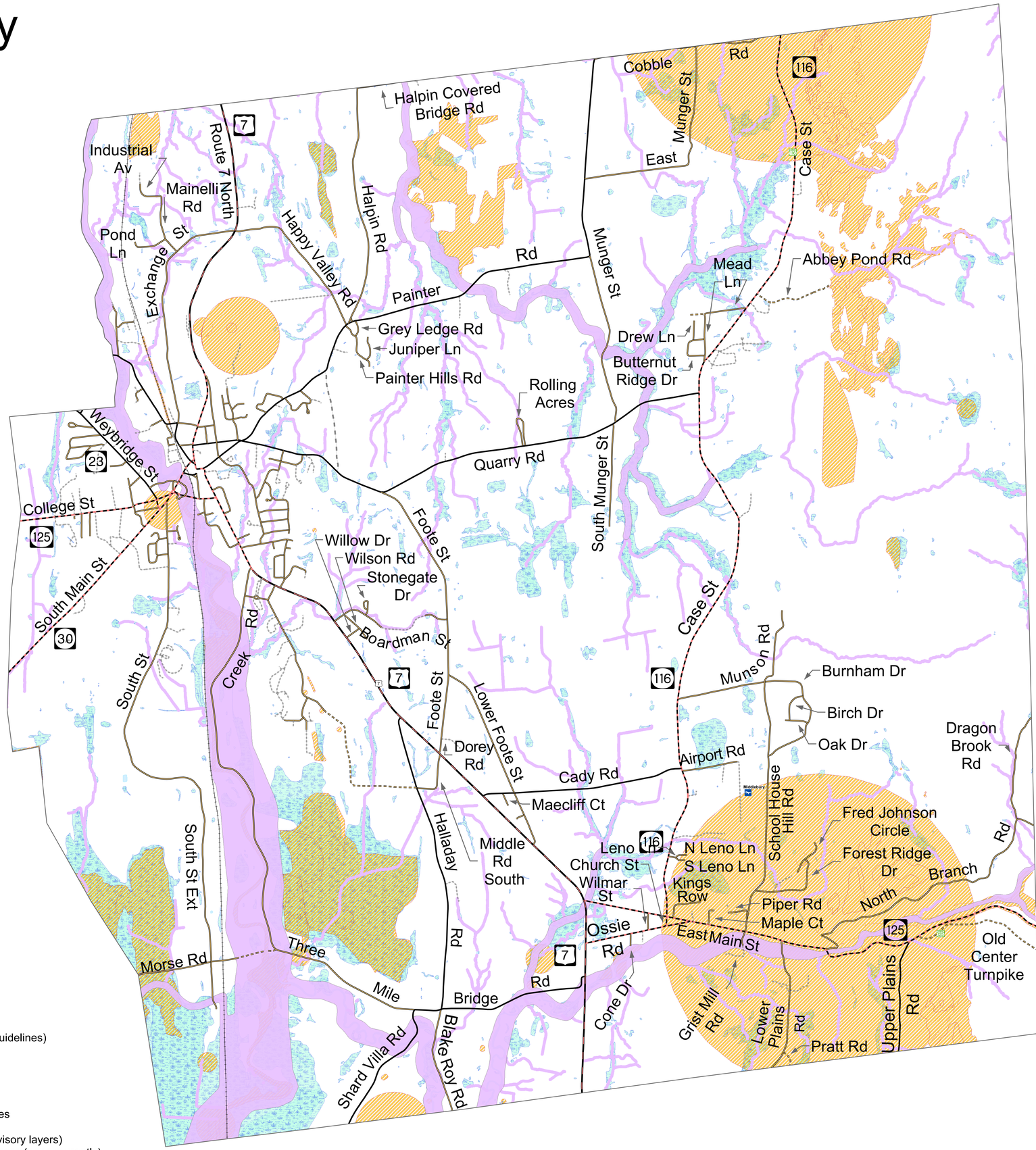
Renewable Energy Planning: Known Constraints - Middlebury



Legend

- Vernal Pools (confirmed and unconfirmed layers)
- State River Corridors (inc 50ft buffers on sm streams)
- FEMA Floodways
- Natural Communities and Rare, Threatened and Endangered
- Vermont Significant Wetlands (Class 1 & 2 and advisory layers)
- National Wilderness Areas

Known Constraints (State Energy Planning Guidelines)

Vernal Pools (confirmed and unconfirmed)
DEC River Corridors (inc stream 5oft buffer)
FEMA Floodways
State Significant natural Communities and
Rare, Threatened and Endangered Species
National Wilderness Areas
Class 1 and Class 2 Wetlands (VSWI and advisory layers)
Regionally or Locally Identified Critical Resources (none currently)

ACRPC 4/2017

0 0.5 1 2 Miles

N

Addison County
REGIONAL PLANNING COMMISSION

This map was created as part of a Regional Energy Planning Initiative with funding from the Vermont Public Service Department.

Renewable Energy Planning: Possible Constraints - Middlebury

Legend

- Agricultural Soils
- FEMA Special Flood Hazard Areas
- Protected Lands
- Agricultural Soil Mitigation (Act 250)
- Deer Wintering Areas
- Highest Priority Forest Blocks
- Hydric Soils

Possible Constraints (State Energy Planning Guidelines)

Agricultural Soils (Prime, Statewide and Local USDA)
FEMA Special Flood Hazard Areas
Protected Lands (State fee lands and prvt cons lands)
Act 250 Agricultural Soil Mitigation areas
Deer Wintering Arreas
ANR's Vermont Conservation Design Highest Priority Forest Blocks
Hydric Soils
Regionally or Locally Identified Critical Resources (none currently)

ACRPC 4/2017

0 0.5 1 2 Miles

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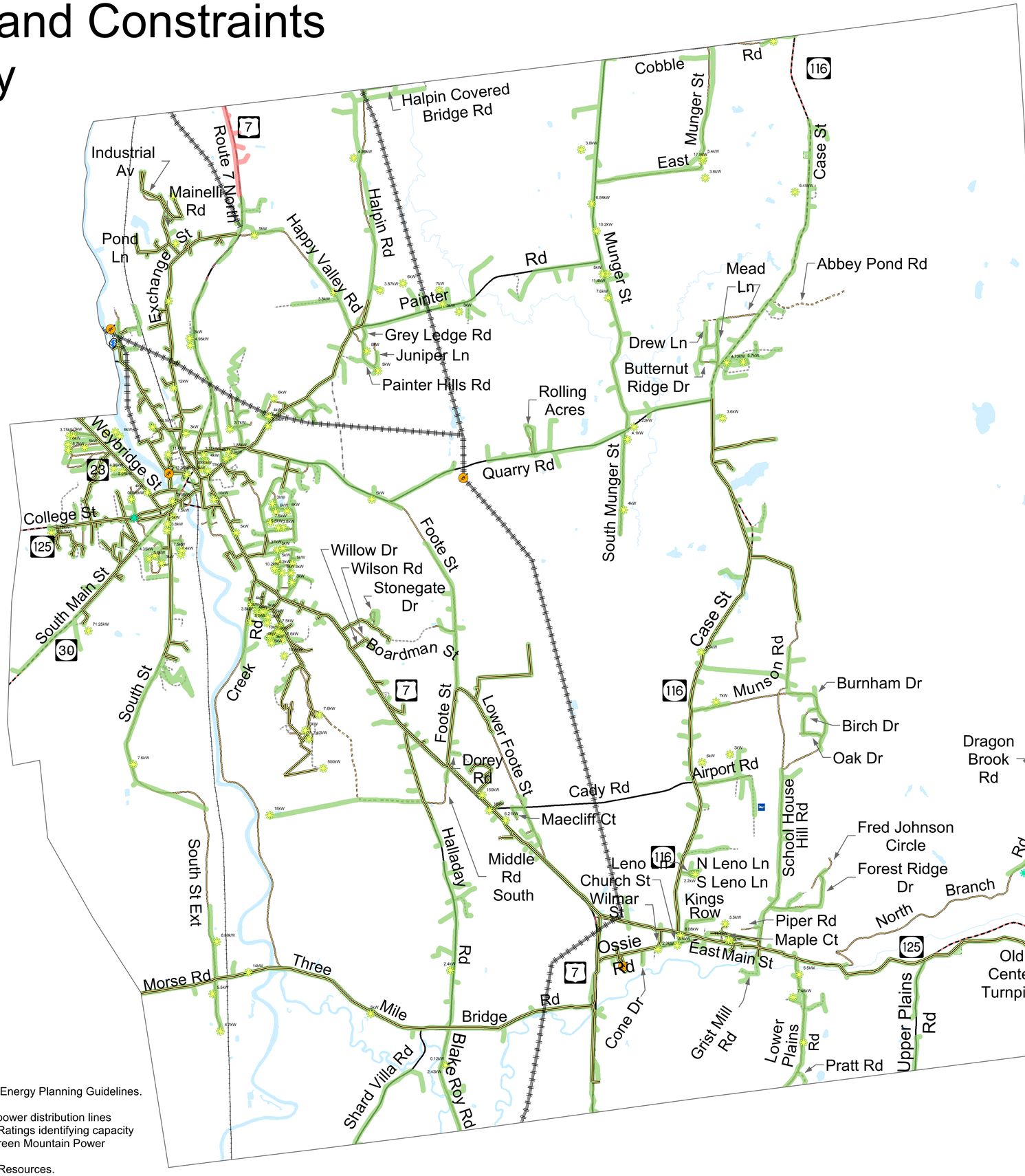
Renewable Energy Potential: Transmission and Distribution Resources and Constraints - Middlebury



Legend

- Substations
- Transmission Lines
- 3 Phase Power Lines

Circuit Ratings

- Good
- Fair
- Poor

Distributed Generation

- Solar
- Wind
- Bio
- Other
- Hydroelectric Dams

0 0.5 1 2 Miles

N

Transmission and Distribution under the State Energy Planning Guidelines.

Substations, Transmission lines and 3-Phase power distribution lines from Green Mountain Power/ACRPC, Circuit Ratings identifying capacity loads and Distributed Generation also from Green Mountain Power , 4/28/2017.
Hydroelectric facilities from agency of Natural Resources.

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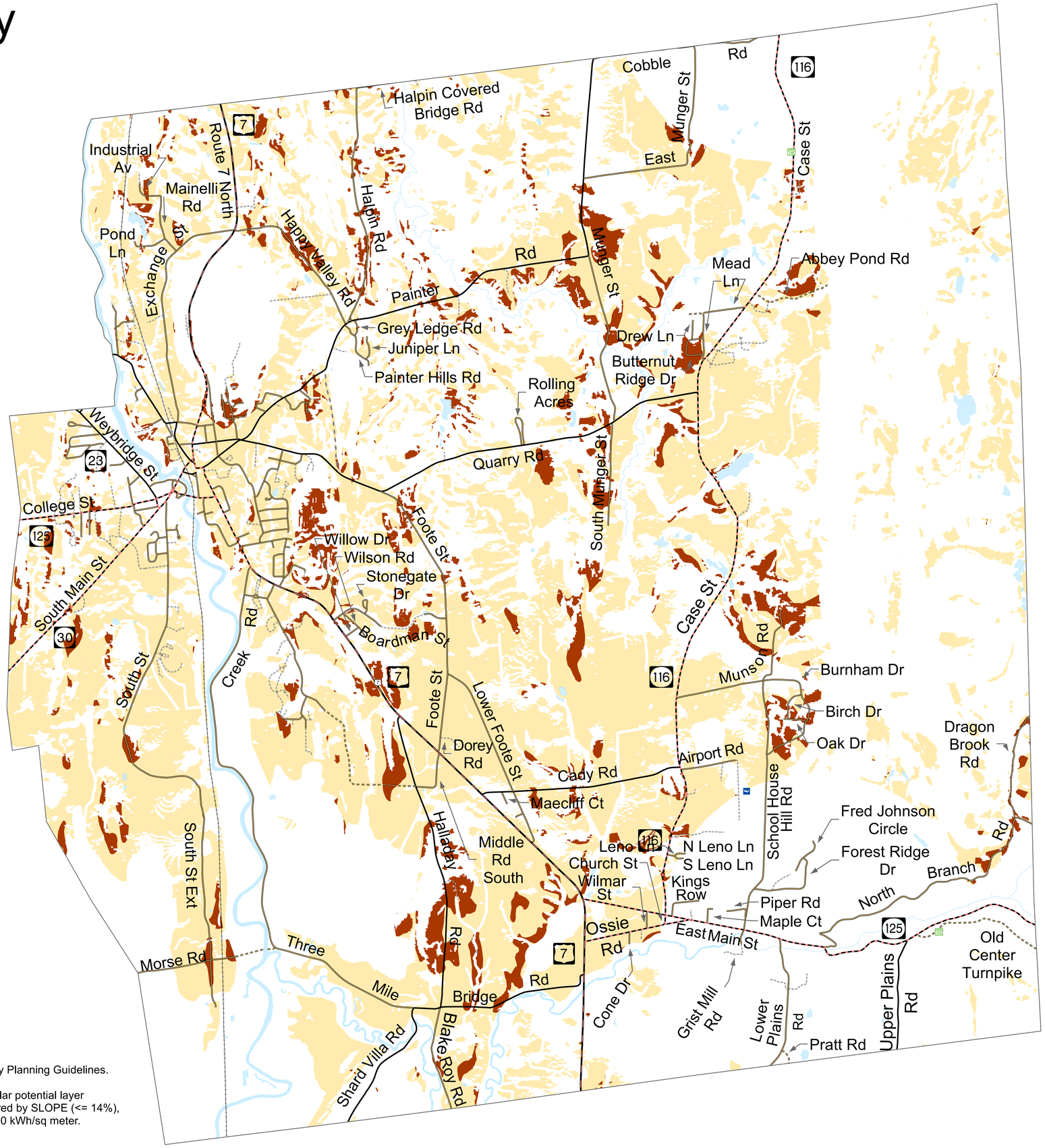
This map was created as part of a Regional Energy Planning Initiative with funding from the Vermont Public Service Department.

Renewable Energy: Potential Solar Resource Siting Areas - Middlebury



Solar Potential Analysis under the State Energy Planning Guidelines.

Statewide ground based (30m USGS DEM) solar potential layer created with ESRI solar analyst by VCGI. Filtered by SLOPE (<= 14%), ASPECT (90-270 degrees) and values >= 1,000 kWh/sq meter.

ACRPC 4/2017

Dept of Public Service Methodology

This map shows areas of resource potential for renewable energy generation from solar, i.e. locations where renewable energy generation would likely be most feasible according to the natural conditions of an area. This map also considers various other conditions, such as natural resource areas, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints. Areas of prime solar potential exist where the natural conditions make development feasible and no constraints exist.

Known Constraints

Known Constraints signal likely, though not absolute, unsuitability for development based on statewide or local regulations or designated critical resources.

Known Constraints include: Vernal pools, FEMA floodways, river corridors,Federal wilderness areas,Natural Communities and Rare, Threatened and Endangered Species, and wetlands (class 1 and 2) and wetland advisory layers.

These areas have been removed and are not shown on this map.

Possible Constraints

Possible Constraints signal conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect.

Possible Constraints include: Agricultural soils, FEMA flood areas, Protected Lands, ACT 250 soil mitigation areas, Deer wintering areas, Highest Priority Forest Blocks, and Hydric soils.

These areas are shown on the map where they coincide with areas of renewable solar potential identified in the solar analysis.

Legend

- Primary Solar Resource Siting Areas
- Secondary Solar Resource Siting Areas

0 0.5 1 2 Miles

Addison County REGIONAL PLANNING COMMISSION

This map was created as part of a Regional Energy Planning Initiative with funding from the Vermont Public Service Department.

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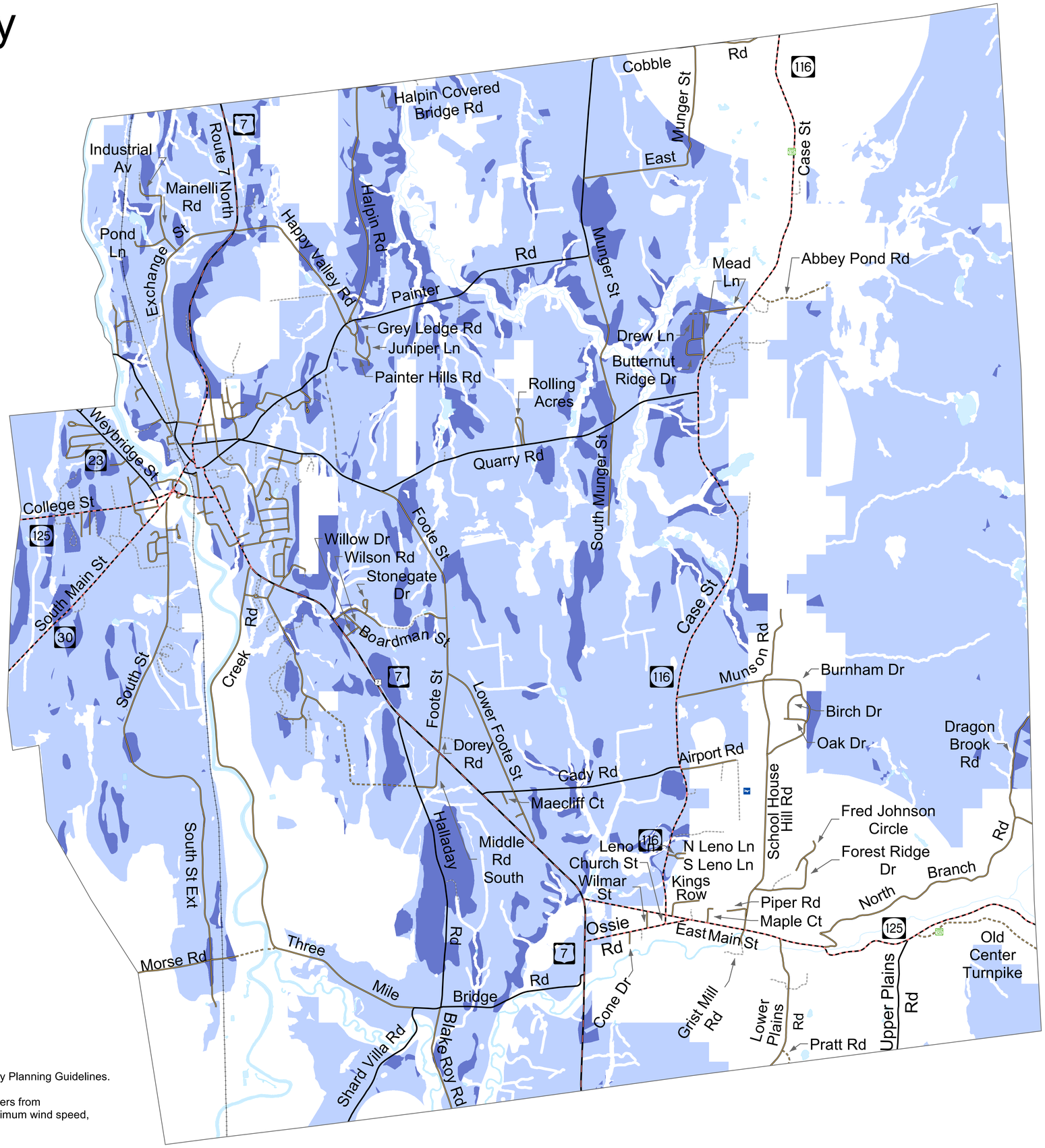
Renewable Energy: Potential Wind Resource Siting Areas - Middlebury



Dept of Public Service Methodology

This map shows areas of resource potential for renewable energy generation from wind, i.e. locations where renewable energy generation would likely be most feasible according to the natural conditions of an area. This map also considers various other conditions, such as natural resource areas, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints. Areas of prime wind potential exist where the natural conditions make development feasible and no constraints exist.

Known Constraints

Known Constraints signal likely, though not absolute, unsuitability for development based on statewide or local regulations or designated critical resources.

Known Constraints include: Vernal pools, FEMA floodways, river corridors,Federal wilderness areas,Natural Communities and Rare, Threatened and Endangered Species, and wetlands (class 1 and 2) and wetland advisory layers.

These areas have been removed and are not shown on this map.

Possible Constraints

Possible Constraints signal conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect.

Possible Constraints include: Agricultural soils, FEMA flood areas, Protected Lands, ACT 250 soil mitigation areas, Deer wintering areas, Highest Priority Forest Blocks, and Hydric soils.

These areas are shown on the map where they coincide with areas of renewable wind potential identified in the wind analysis.

Legend

- Primary Wind Resource Siting Areas
- Secondary Wind Resource Siting Areas

0 0.5 1 2 Miles

N

Wind Potential Analysis under the State Energy Planning Guidelines.

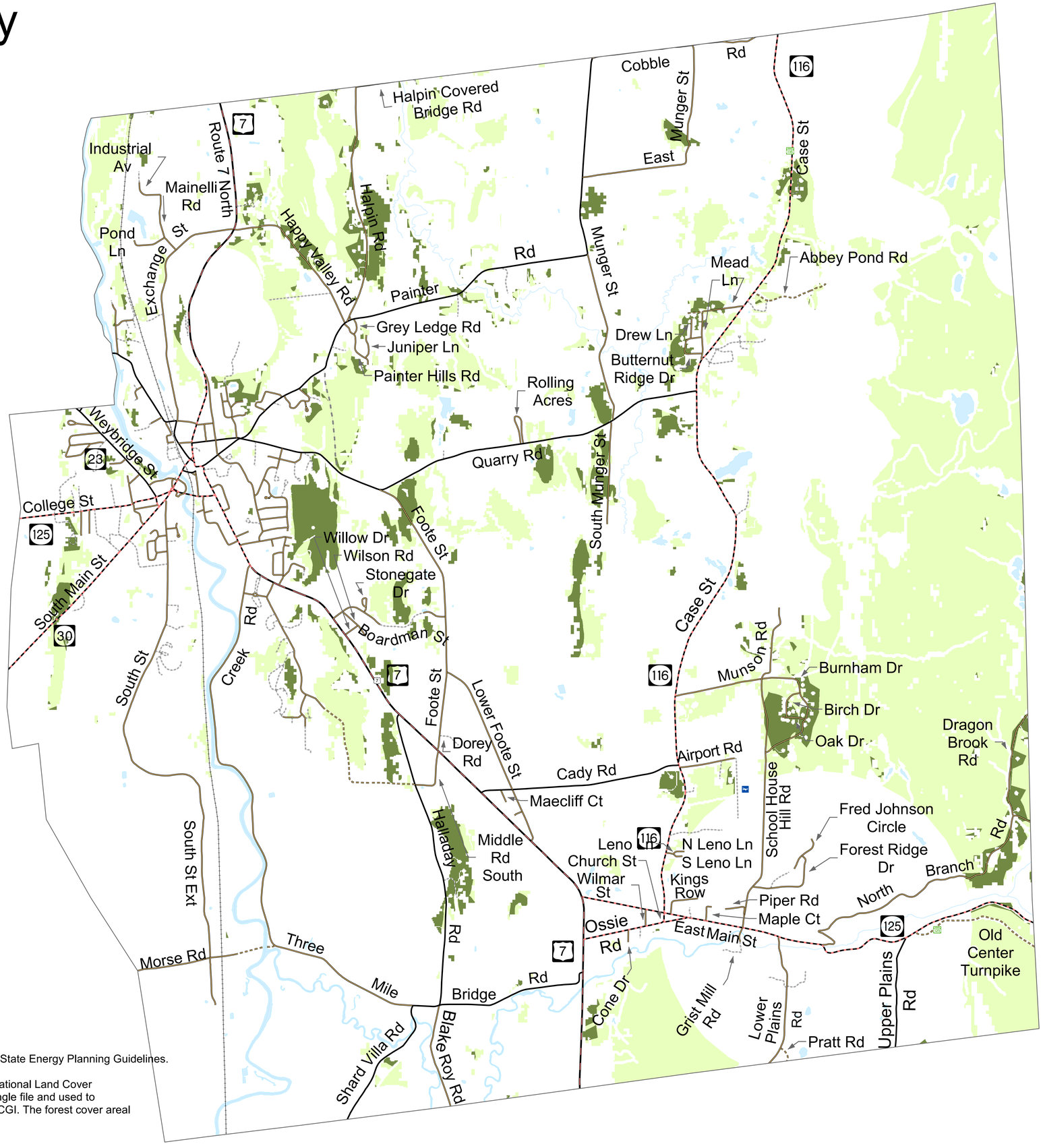
Statewide 30m, 50m, and 70m wind speed layers from Mass.Tech Collaborative wiere filtered for minimum wind speed, then merged into a single file by VCGI.

ACRPC 2/2017

Addison County REGIONAL PLANNING COMMISSION

This map was created as part of a Regional Energy Planning Initiative with funding from the Vermont Public Service Department.

Renewable Energy: Potential Woody Biomass Resource Siting Areas - Middlebury



Dept of Public Service Methodology

This map shows areas of resource potential for renewable energy generation from woody biomass, i.e. locations where renewable energy generation would likely be most feasible according to the natural conditions of an area. This map also considers various other conditions, such as natural resource areas, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints. Areas of prime woody biomass potential exist where the natural conditions make development feasible and no constraints exist.

Known Constraints

Known Constraints signal likely, though not absolute, unsuitability for development based on statewide or local regulations or designated critical resources.

Known Constraints include: Vernal pools, FEMA floodways, river corridors,Federal wilderness areas,Natural Communities and Rare, Threatened and Endangered Species, and wetlands (class 1 and 2) and wetland advisory layers.

These areas have been removed and are not shown on this map.

Possible Constraints

Possible Constraints signal conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect.

Possible Constraints include: Agricultural soils, FEMA flood areas, Protected Lands, ACT 250 soil mitigation areas, Deer wintering areas, Highest Priority Forest Blocks, and Hydric soils.

These areas are shown on the map where they coincide with areas of renewable woody biomass potential.

Legend

- Primary Biomass Siting Areas
- Secondary Biomass Siting Areas

0 0.5 1 2 Miles

Addison County REGIONAL PLANNING COMMISSION

N

Woody Biomass Potential Analysis under the State Energy Planning Guidelines.

Statewide forest cover types from the 2006 National Land Cover Dataset (NLCD, 2006) were merged into a single file and used to calculate low-grade green tons per acre by VCGI. The forest cover areal extent was used in this analysis.

This map was created as part of a Regional Energy Planning Initiative with funding from the Vermont Public Service Department.

ACRPC 4/2017