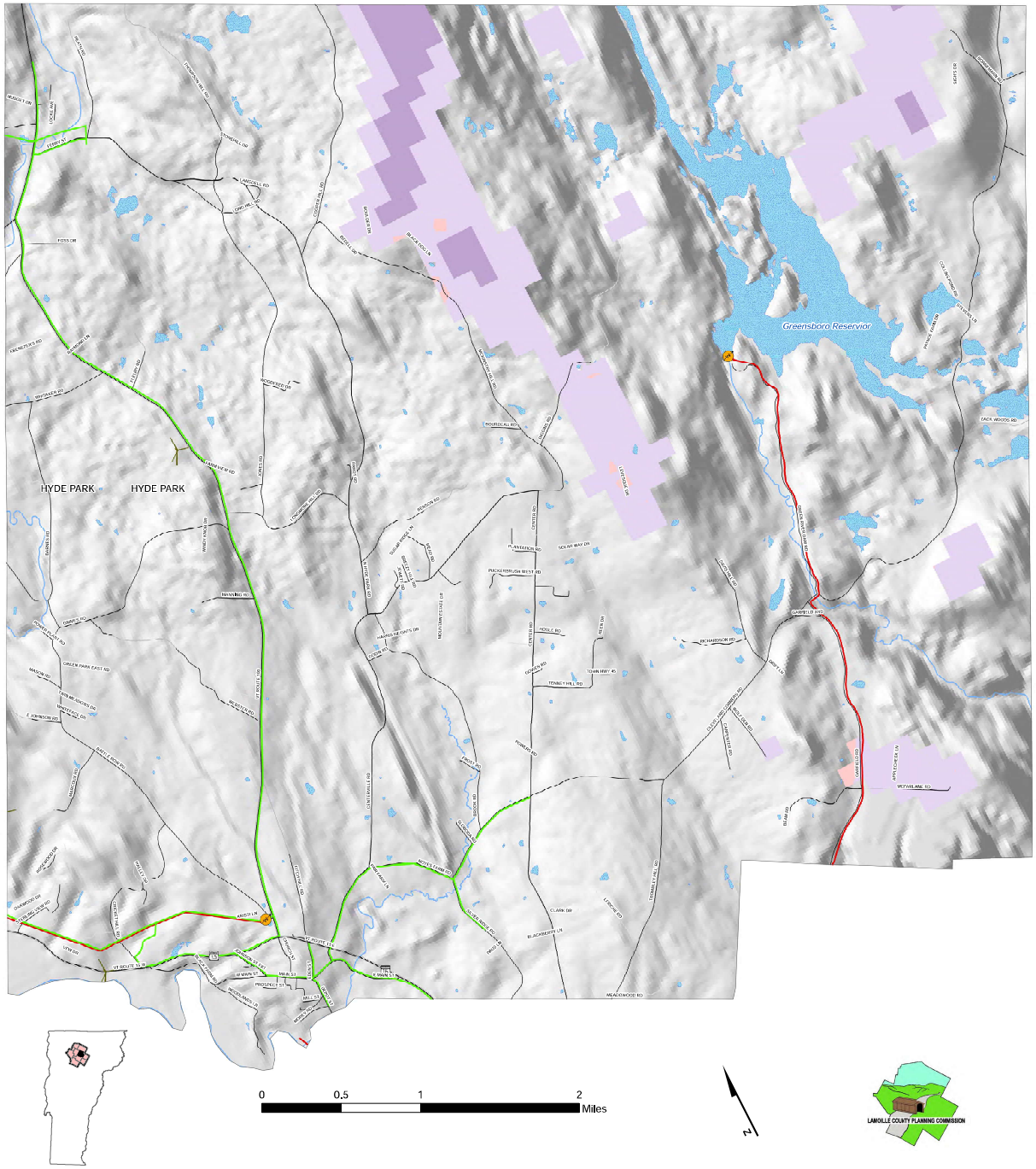
Hyde Park
Renewable Energy Potential: WIND



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 ecological zones, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints.

Prime Wind

Areas with high wind potential and no environmental constraints.

Secondary Wind

Areas with high wind potential and environmental constraints that may pose an obstacle to development. These areas are shown on the map and include the following constraints:

- Agricultural soils (local, prime and statewide classifications)
- FEMA special flood hazard areas
- Protected lands
- Act 250 agricultural soil mitigation areas
- Deer wintering yards
- Highest priority forest blocks
- Hydric soils

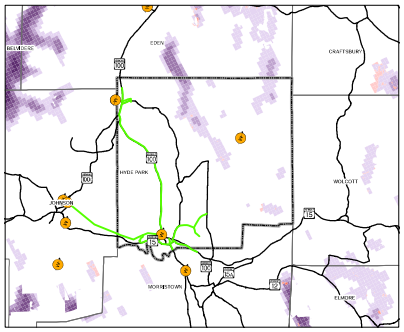
No Wind

Areas with low wind potential or envrionmental constraints likely to prohibit development. These areas have been removed and are not shown in any way on this map.These environmental constraints are:

- FEMA floodways
- River corridors
- Federal wilderness areas
- Natural Communities and Rare, Threatened and Endangered Species
- Vernal pools
- Wetlands class 1 and 2

This map was created as part of a Regional Energy Planning Initiative being conducted by Vermont Regional Planning Commissions and the Vermont Public Service Department.

Created: Lamoille County Planning Commission, February 2017.



Key

- Existing Wind Sites
- Substations
- 3 Phase Power Lines
- Transmission Lines
- Lakes/Ponds
- Rivers/Streams
- Prime Wind
- Secondary Wind

Darker areas have higher wind speeds.

Background Area: No Wind

Hyde Park
Renewable Energy Potential: BIOMASS

Methodology

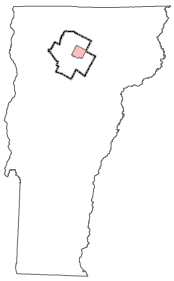
This map shows areas of resource potential for woody biomass, i.e., locations where forested areas are. This map also considers various other conditions, such as ecological zones, that may impact the feasibility of renewable energy/alternative heating source. These conditions are referred to as constraints. This map does not include areas where other types of biomass, such as biomass from agricultural residue, could be grown/harvested.

Level 1 Constraints

Areas with conditions that are likely to be hazardous or encounter significant obstacles to development, and therefore are very likely to make renewable energy generation development unfeasible, are considered Level 1 constraints. Level 1 constraints include: FEMA floodways, river corridors, Federal wilderness areas, rare and irreplaceable natural areas (RINAs), vernal pools, and wetlands class 1 and 2. These areas have been removed and are not shown in any way on this map.

Level 2 Constraints

Areas that may pose some obstacle to harvesting, but could still be used, are considered Level 2 Constraints. These areas ARE shown on the Map, wherever they overlap an area that has potential for biomass development. The map only shows where these conditions overlap an area that otherwise has the potential to be harvested for woody biomass. The Key below lists each Level 2 constraint.



N

Level 2 Constraint Description
* Public water sources have a 200 foot buffer added around the well head.

** Agricultural Soils include local, prime and statewide classifications.

*** Habitat Blocks only includes areas of 2,000 acres or greater of contiguous forest and other natural habitats that are unfragmented by roads, development, or agriculture.

This map was created as part of a Regional Energy Planning Initiative being conducted by the Lamoille County Planning Commission, and the Vermont Public Service Department.

Created: June 2017.

Key

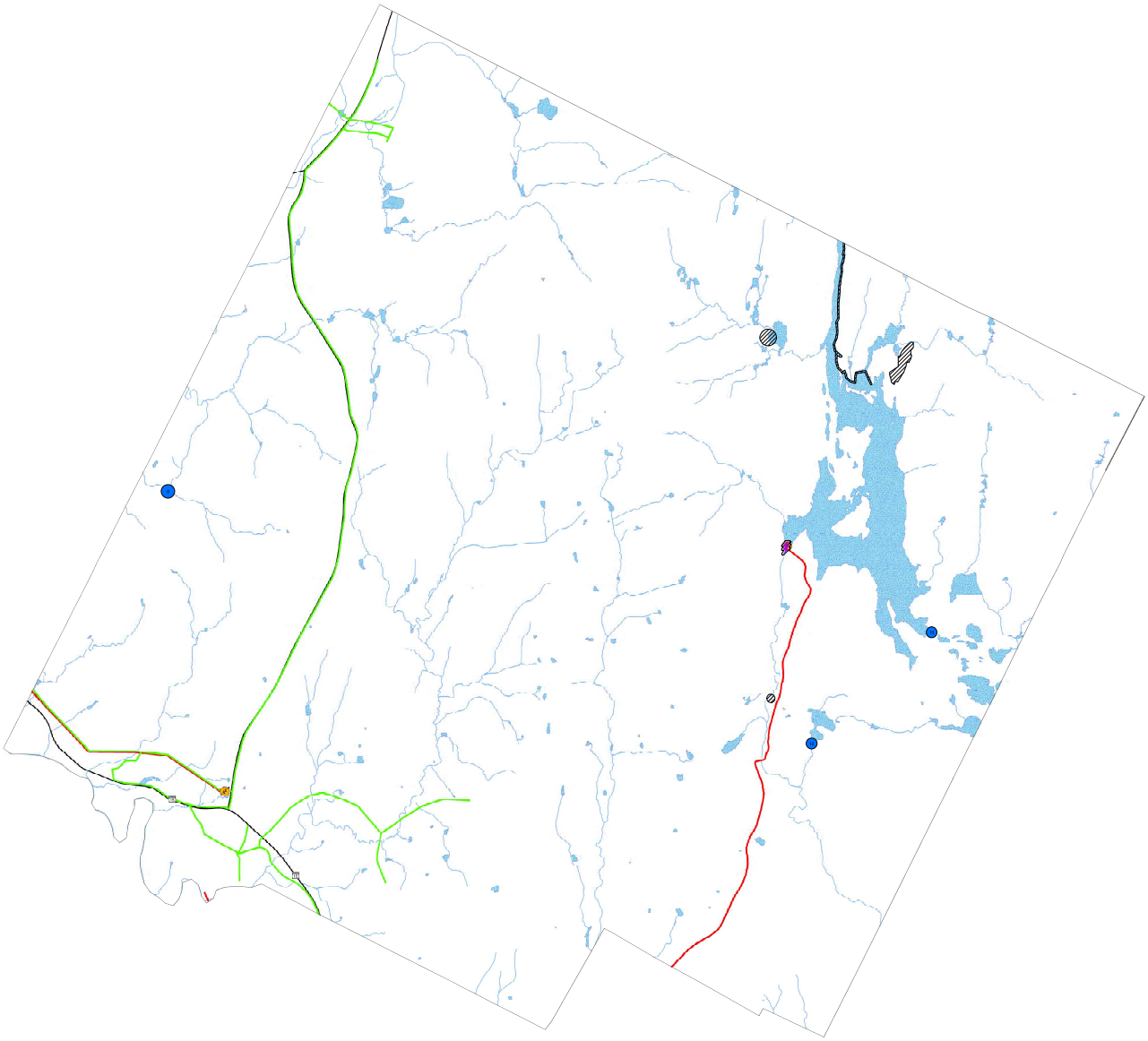
- Substations
- 3 Phase Power Lines
- Transmission Lines
- Major Roads
- Lakes/Ponds
- Rivers/Streams
- Prime Woody Biomass

Level 2 Constraints

- Class 3 Wetlands
- Public Water Sources *
- Special Flood Hazard Areas
- Ground Water Protection Areas
- Deer Wintering Areas
- Surface Water Protection Areas
- Conserved Lands
- Hydric Soils
- Agricultural Soils **
- Habitat Blocks ***

0 0.5 1 2 Miles

Hyde Park
Renewable Energy Potential: HYDROELECTRIC



Key

- Operational Hydroelectric Facilities
- Potential Hydroelectric Facilities
  - < 50 kW Capacity
  - > 50 kW Capacity
  - High Hazard with < 50 kW Capacity
  - High Hazard with > 50 kW Capacity
- Impaired Waters
- Stressed Waters
- Rare and Irreplaceable Natural Areas (RINAs)
- Substations
- 3 Phase Power Lines
- Transmission Lines
- Major Roads
- Lakes/Ponds
- Rivers/Streams

0 0.5 1 2 Miles

N

Methodology

This map shows areas of resource potential for renewable energy generation from hydroelectric, i.e. dams that could be converted into hydroelectric facilities as well as active hydroelectric sites. Existing hydroelectric dam information was extracted from the Vermont Dam Inventory, while potential hydroelectric sites were derived from a study conducted by Community Hydro 2007.1 Based on estimates conducted within the report, this map categorizes dams based on their potential hydroelectric generation capacity, and the downstream hazard risk that would be involved in hydroelectric production at each site.

*Rare and Irreplaceable Natural Areas (RINAs) are significant natural commmunities. They do not include the following rank descriptions: uncommon to common breeder in VT, common to very common in VT, historic in VT, not applicable, unrankable, unrankable breeding population, and extirpated.

This map was created as part of a Regional Energy Planning Initiative being conducted by Vermont Regional Planning Commissions and the Vermont Public Service Department.

Created: June 2017.

1http://www.vtenergya tla s-info .c o m /wp-c o ntent/uplo a d s/2010/02/DPS-U nd evelo ped -Hyd ro -Po tentia l-FINAL -V ERSION.pd