

# **Notice of Public Hearing**

The Belvidere Planning Commission hereby provides notice of a public hearing being held pursuant to 24 VSA §4384 (Preparation of Plans) and §4447 (Public Hearing Notice) for the purpose of hearing public comments concerning the proposed Municipal Plan for the Town of Belvidere 2015-2020.

The public hearing has been scheduled for:

**DATE:** May 4, 2015 at 7:00 p.m.

**PLACE:** Belvidere Central School, Route 109, Belvidere, VT.

**Statement of Purpose:** The public hearing is being held to solicit public comments regarding the draft Belvidere Town Plan.

The goals of the Belvidere Town Plan are:

- To control the growth of the town in such a way as to enable residents to continue to live in Belvidere without undue tax burden.
- To encourage growth of the town in such areas and under such conditions that the demand for increased services will not significantly raise the tax burden for existing residents.
- To regulate growth so that:
- Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
- Timberland management is economically feasible in the wooded area.
- Agricultural use of land is encouraged and protected.
- Residential and commercial growth is permitted in suitable areas.
- Land use decisions are directed by residents and not outside interests.

**Geographic Area Affected:** This Plan shall apply to all areas in the Town of Belvidere, VT.

## **Table of Contents:** (abbreviated)

The Planning Process  
Population and Growth  
Historic, Archeological, and Scenic Resources  
Natural Resources  
Education  
Facilities and Services  
Utilities & Energy Plan  
Housing  
Economic Development  
Transportation Plan  
Land Use Plan  
Recommended Plan of Implementation

## **Location where full text may be examined:**

Copies of the full text of the proposed Town Plan for Belvidere can be located in the office of the Belvidere Town Clerk in Belvidere, Vermont. A copy is also available for inspection during regular business hours at the offices of the Lamoille County Planning Commission, 52 Portland St., Morrisville, VT.

Memo to: Adjacent communities and VT DHCD  
 From: Belvidere Planning Commission  
 Date: April 3, 2015  
 Re: Planning Commission Report

The Belvidere Planning Commission has drafted a revised municipal plan for consideration by the Selectboard to guide the town for the next five years. A report is required by state law when considering an amendment of a municipal plan. This report is intended to meet the statutory requirements of 24 V.S.A. §4384(c).

The current *Town of Belvidere, Vermont Municipal Development Plan 2015* is consistent with the goals established in the Act and the proposed changes will not create any inconsistencies. The proposed plan is intended to be consistent with the goals established in 24 V.S.A. §4302 and as such:

- maintains the historic settlement patterns,
- provides for a strong and diverse economy,
- retains access to educational and vocational training opportunities,
- provides for a safe, convenient, economic, and energy efficient transportation system,
- identifies, protects, and preserves important natural and historic features,
- maintains and improves the quality of air water, wildlife and land resources,
- encourages efficient use of energy and the development of renewable energy,
- maintains and enhances recreational opportunities,
- encourages and strengthens agricultural and forest industries,
- provides for the wise use of natural resources,
- ensures safe and affordable housing,
- plans for efficient system of public facilities and services, and
- ensures the availability of safe and affordable child care,

The major changes are listed in the table below.

Housing Development	Addresses cluster development of housing
Local Food	Addresses use of local food sources
Location of Telecommunication Towers	Addresses development of telecommunications towers
Location of Commercial Energy Systems	Addresses development of commercial energy systems.

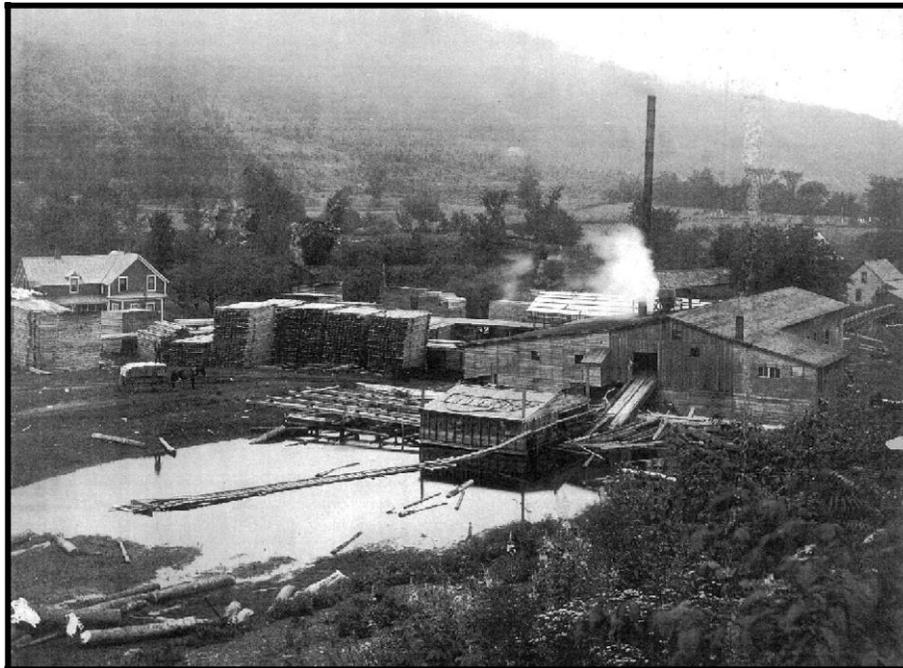
If there are any questions or comments with respect to the plan or this report, please contact Taylar Foster (802-888-4548) at the Lamoille County Planning Commission.

Taylar Foster, Regional Planner  
 Lamoille County Planning Commission

# Town of Belvidere, Vermont

## Town Plan 2015-2020

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**Photo of the Parker/Billings Lumber Mill  
located on the present day Loucks property in Belvidere Center.**

Adopted by the Belvidere Selectboard on DATE  
Regionally Approved by Lamoille County Planning Commission on DATE  
Plan Expires – DATE plus five years

Prepared by the  
**Belvidere Planning Commission**  
as authorized in Section 4381 of Chapter 117 of Title 24, Vermont Statutes Annotated and  
includes sections specified in Section 4382 of that law.

with assistance from  
Lamoille County Planning Commission

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## The Planning Process

The Town of Belvidere is engaged in a planning process to encourage the appropriate development of land, facilities, and services located within the Town in a manner that will promote the health, safety, and general welfare of its residents. The Belvidere Town Plan provides a framework for the achievement of recognized community goals and policies, while the planning process serves to coordinate public and private actions with these goals and policies. A Town plan can serve as an important function in the evaluation of major development under Vermont's Land Use and Development Law, Act 250. A plan can also serve as a foundation for implementation devices such as zoning bylaws, subdivision regulations, and capital programming.

Planning is a means of preparing for the future in order to overcome problems, meet opportunities, and achieve community goals. In response to changes in the community, problems must be addressed by comprehensive forethought to ensure that future decisions will provide long-term solutions. Since communities exist primarily for the health and enjoyment of those who live in them, it follows that the nature, location, and timing of any future development should be determined by the people of Belvidere rather than left solely to chance. The intent is not to eliminate any existing land uses or stop future development, but to encourage planned growth within the Town.

### Citizen Participation

Citizen participation is important in all levels of the planning process. Opportunities for citizen involvement have been assured throughout the Plan update process through public meetings and hearings. These efforts are intended to foster the broadest level of public participation possible, and to utilize the planning process as a vehicle for exercising an inclusive, community-wide vision for the future of Belvidere.

### What's In the Plan?

The plan for the Town of Belvidere must consider many inter-related factors. It is helpful to understand Belvidere's history and traditions to give a perspective for considering our present and our future. Present trends and their likely future impact must be analyzed. These components plus knowledge of the natural resource limitations and suitability for various uses provides the basis for determining what is possible and what may be desirable in our future. To begin, broad public goals should be stated. Consideration of these in light of Belvidere's past and present enables specific policies and land use, transportation, and recreation plans to be developed.

According to Section 4382 of Title 24, Chapter 117, Vermont Statutes Annotated, Town Plans must include the following components:

# BELVIDERE TOWN PLAN 2015-2020

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- a statement of growth related goals, policies, and programs;
- a land use plan;
- a transportation plan;
- a utility and facility plan;
- a statement of policies on the preservation of rare and irreplaceable natural areas, scenic, and historic features and resources;
- an educational facilities plan;
- a recommended plan implementation program;
- a statement indicating plan compatibility with plans and trends in adjacent municipalities, the region, and state;
- an energy plan; and
- a housing element.

## Overall Community Goals

Although specific goals, policies, and implementation strategies are included within each appropriate section, several broad statements may be made regarding the future of Belvidere. These are included below as overall community goals.

The goals of the Belvidere Town Plan are:

- To control the growth of the town in such a way as to enable residents to continue to live in Belvidere without undue tax burden.
- To encourage growth of the town in such areas and under such conditions that the demand for increased services will not significantly raise the tax burden for existing residents.
- To regulate growth so that:
  - Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
  - Timberland management is economically feasible in the wooded area.
  - Agricultural use of land is encouraged and protected.
  - Residential and commercial growth is permitted in suitable areas.
  - Land use decisions are directed by residents and not outside interests.

## Population and Growth

Population information is needed in order to plan for a community. Historical growth trends, the age structure, and future predictions are just a few pieces of information that can help decision makers in guiding the future of Belvidere. Knowing the number of residents in Belvidere, for example, is necessary in order to evaluate the amount of services required.

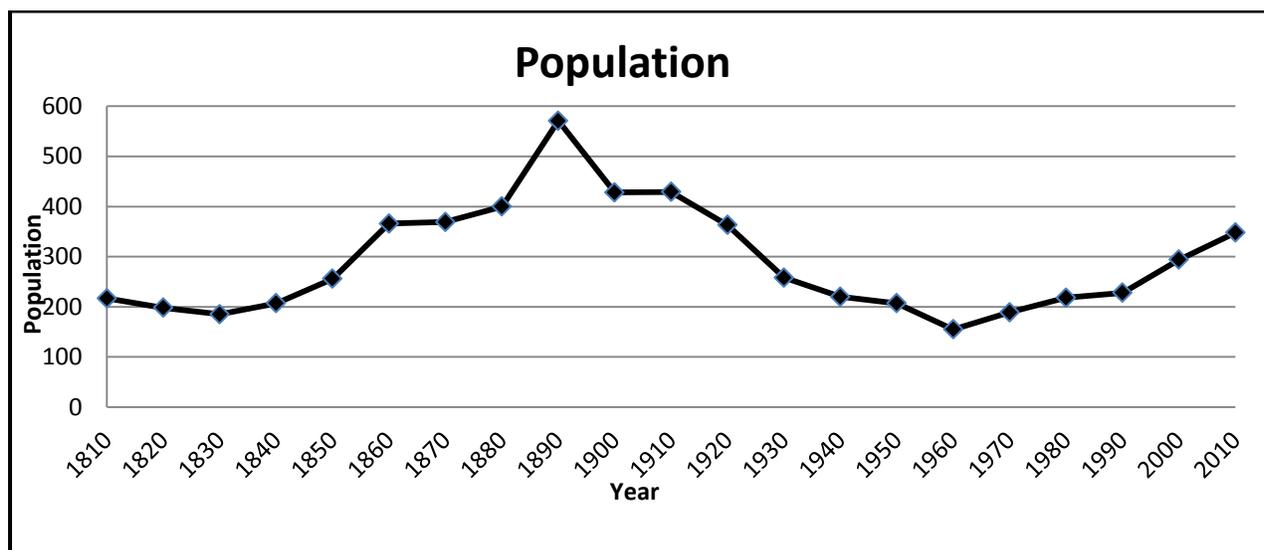
# BELVIDERE TOWN PLAN 2015-2020

Forecasting future changes in the population, meanwhile, allows the town to look ahead and prepare for the next five or ten years. This is especially important when preparing for the number of students expected in the school system in the next few years.

## Historical Census Counts.

Although chartered in 1791, the Town of Belvidere was not settled until after the turn of the century. At this point, the population grew rapidly as families moved to the area and established homesteads. By 1810, the town had 217 residents. Then, after two decades of decline, the population grew again until 1890 when Belvidere's population peaked at 571 residents (Figure 2.1).

**Figure 2.1 Population of Belvidere 1810-2010**



1 The Bureau of the Census, an agency within the Department of Commerce, carries out the Census of Population and Housing every ten years. The Belvidere Town Plan contains the 2010 Census because, in most cases, this is the most current data available. The 2010 Census data that has been used in this Town Plan was at the time of the count, accurate and did reflect what was happening to the Town at that time.

From 1890 through 1960, the population dropped by nearly 75% to 155 persons. This dramatic decrease in population was most likely tied to the final clearing of the forestland and collapse of the timber industry in the region. Aside from these factors, other aspects discouraged recovery from this century long population decline. The 1927 flood, for one, washed out a number of mills, which were never replaced. In addition, electricity was late in arriving to many corners of town, as were other amenities. While Belvidere Center had electricity since the end of World War II, many homesteads were not put onto the grid until the 1950's. Roads, including Route 109, were unpaved making travel difficult during certain times of year. Route 109 was the last unpaved state highway in the State of Vermont and was finally completed in the 1980's.

The introduction of these amenities to Belvidere and very low land prices during the 1960's and 70's spurred modest population growth once again with an increase of 63 people. Growth

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during the 1980's was then tempered by people moving out of town for job opportunities elsewhere in the region. Fueled by rising land prices in surrounding communities, the population grew faster through the 1990's until, in 2010, the population was recorded at 348, more than double what it was in 1960, but still only a little more than half of the population peak in 1890.

## **Components of Population Change**

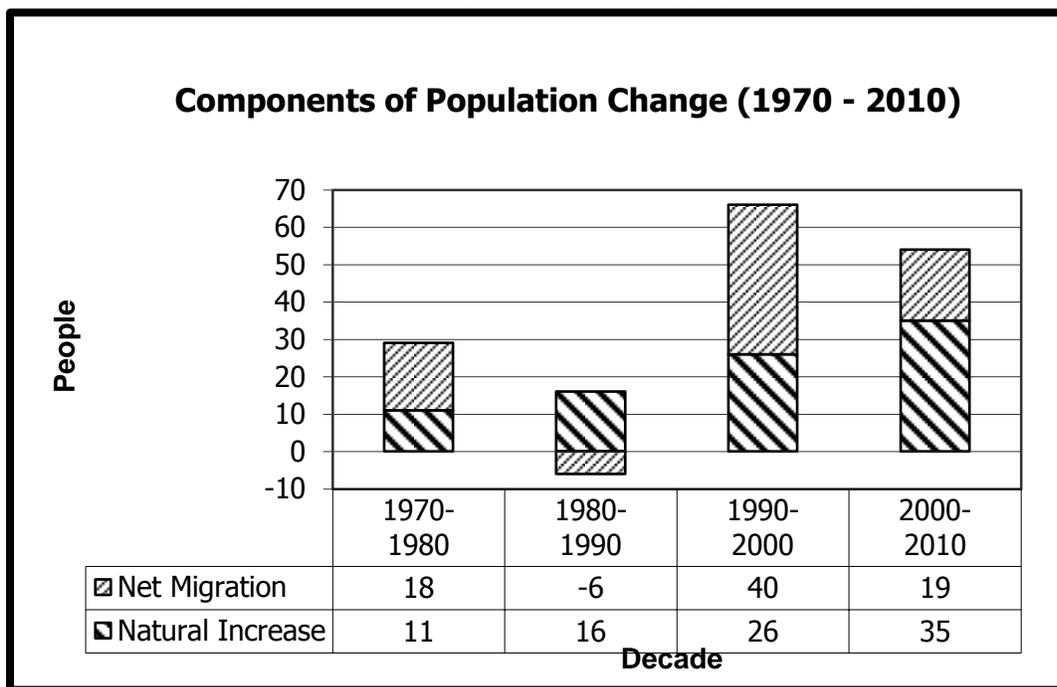
Population change is the result of two sets of factors, natural increase and net migration. Populations increase naturally when more people are born over a certain time period than die, which is referred to as natural increase. The Vermont Department of Health has kept birth and death statistics for each town since 1857. The net number of people that move in or out of the community, or net migration, is the second factor affecting population change. Net migration is determined by subtracting natural increase from the total change in population. Figure 2.2 below depicts the components of population change between 1970 and 2010.

Since 1970, the population has increased by 159 persons, of which there was a natural increase of 88 persons and a net migration of 71 persons. Natural increase grew steadily during this period, while net migration varied.

## **Housing Unit Growth.**

Growth in the number of housing units has generally followed the same trend as population growth (Figure 2.3). Considering a housing unit vacancy rate of 7% in 2010, housing unit growth is not needed or expected at this time. On the other hand, one in five housing units in Belvidere is seasonal in nature. Conversion from seasonal dwellings to year-round dwellings is difficult to track. If many homes convert during a short time period, provision of adequate municipal facilities and services may be threatened and the tax rate may be impacted (See the Housing Chapter for further discussion on this topic).

**Figure 2.2 Components of Population Change (1970 - 2010)**



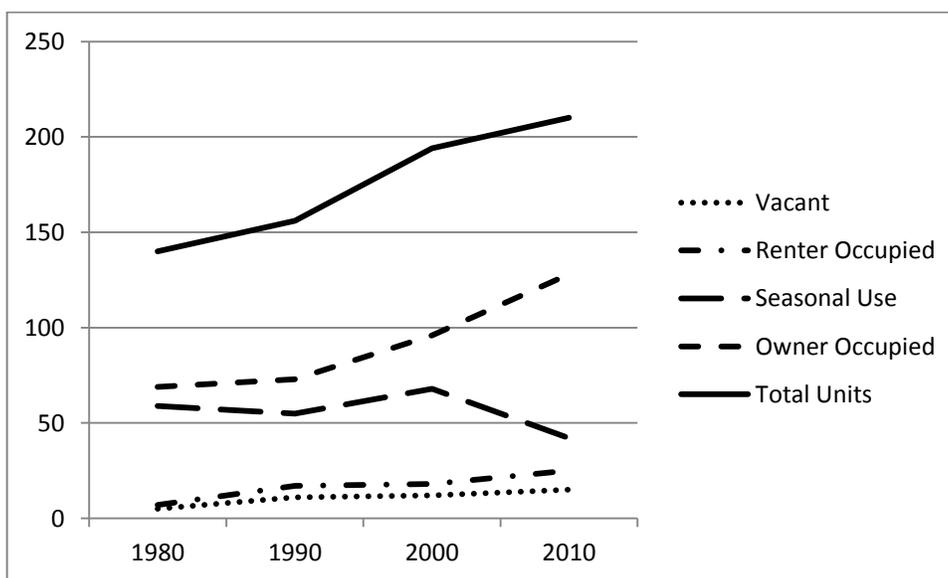
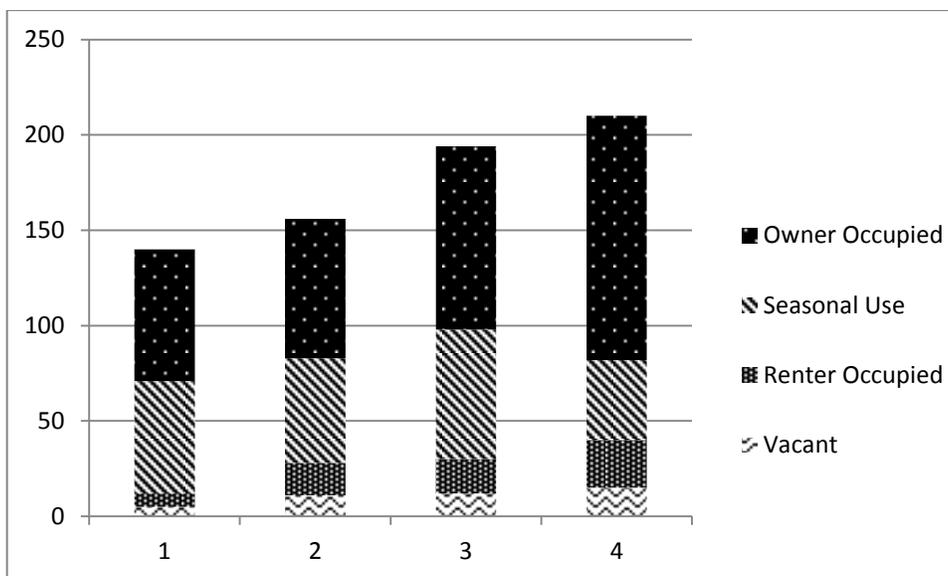
### Current Population and Age Distribution.

The most recent population count for Belvidere is 348 persons (U.S. Census 2010).

Age distribution is important in order to predict future service needs, especially schools. A breakdown by age category is shown in Figure 2.4. Belvidere’s population is middle aged, with the greatest age cohort being the forties. About 45% of the population is under 40, while 36% is in their 40s and 50s and 17% is 60 and older.

The childbearing age population (20 to 40 year olds) can be used to anticipate future school age population. The current childbearing age population is 22% and is expected to grow to 23%. Recent school enrollment has been relatively constant. It can also be presumed

**Figure 2.3 Housing Units in Belvidere (1980-2010)**



Year	1980	1990	2000	2010
Owner Occupied	69	73	96	128
Seasonal Use	59	55	68	42
Renter Occupied	7	17	18	25
Vacant	5	11	12	15
Total Units	140	156	194	210

from this data that there will be an increase in the early retirement groups in the next few decades, a population that may eventually require additional services, such as senior housing options and rural transit.

**Figure 2.4 Belvidere Population Distribution by Age and Gender**

	Men	Women	Both	Percent
under 10	9	20	29	8.3
10 - 19 years	27	27	54	15.5
20 - 29 years	10	15	25	7.2
30 - 39 years	26	26	52	14.9
40 - 49 years	37	32	69	19.8
50 - 59 years	27	31	58	16.6
60 - 69 years	14	11	25	7.2
70 - 79 years	16	14	30	8.6
80 + years	2	4	6	1.7
Total	168	180	348	100

## Regional and Neighborhood Populations.

Belvidere is surrounded by rural communities all of which experienced extraordinary growth rates since 1990. While the state grew by 11.1% and Lamoille County at 24%, The County’s northern towns grew at a mean rate of 47 percent, four times that of the state and almost twice that of the county.

**Table 2.1 Population and Percent Change for Belvidere and Neighboring Towns (1990, 2010, 2008). Table 2.1 Population and Percent Change for Belvidere and Neighboring Towns (1990, 2000, 2010).**

Town	1990 Population	2000 Population	2010 Population	% Change 1990-2000	% Change 2000-2010
Bakersfield	977	1,215	1,322	24.4	8.8
Belvidere	228	294	348	28.9	18.4
Eden	840	1,152	1,323	37.1	14.8
Johnson	3,156	3,274	3,446	3.7	5.3
Montgomery	823	992	1,201	20.5	21
Waterville	532	697	673	31	-3.4
Lamoille County	19,735	23,233	24,475	17.7	5.3
State of Vermont	562,758	608,827	625,741	8.2	2.8

Source: U.S. Census 1990, 2000, 2010

Table 2.1 clearly indicates that Belvidere’s growth rate during the 1990’s was part of a local trend. The high growth rate was likely due more to regional issues than programs or policies particular to Belvidere. Belvidere should watch local trends in order to be prepared for future population changes

# BELVIDERE TOWN PLAN 2015-2020

## Goals, Policies, and Recommendations.

In order to accomplish the primary goal of this town plan - to control growth so that residents may continue to live in Belvidere without undue tax burdens – the town needs to monitor growth rates to anticipate situations that may impact tax rates. It is not the intention of

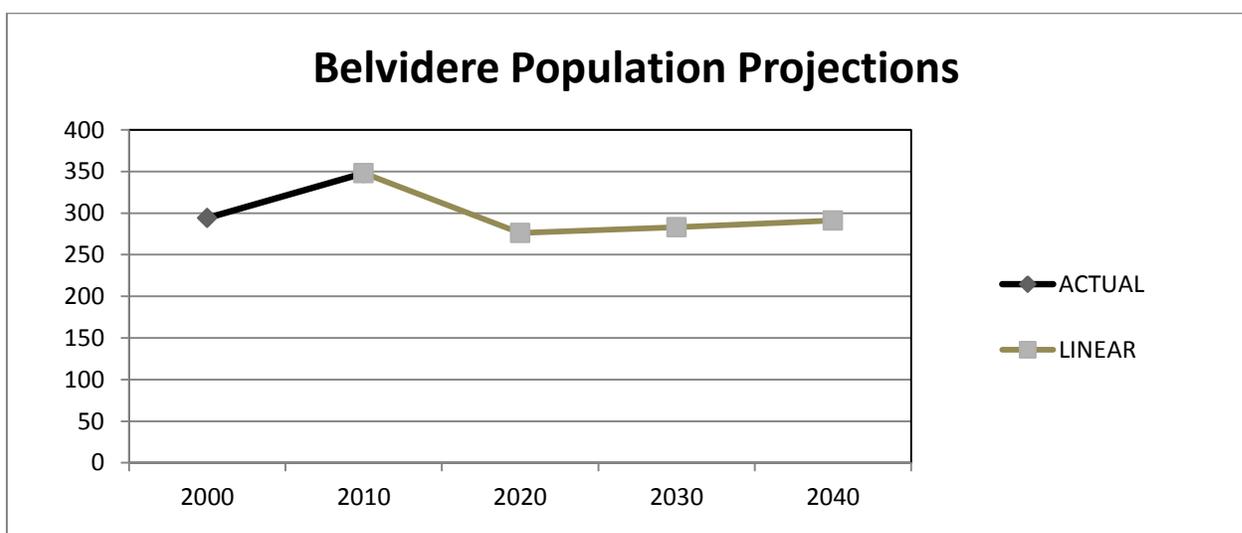
**Table 2.1 Population and Percent Change for Belvidere and Neighboring Towns (1990 - 2010)**

Town	Population			% Change		
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Montgomery	823	992	1,201	20.5	21.1	45.9
Waterville	532	697	673	31.0	-3.4	26.5
Lamoille County	19,735	23,233	24,475	17.7	5.3	24.0
State of Vermont	562,758	608,827	625,741	8.2	2.8	11.2

Source: U.S. Census 1990, 2000, 2010

Belvidere to stop growth. The Planning Commission and Selectboard intend only to moderate growth to prevent the need to increase taxes as a result of new or expanded services. New growth and development should not place an undue burden on services and facilities.

**Figure 2.5 Belvidere Population Projections**



Base population data: U.S. Census  
 Population Projections: An average of several population projections

# BELVIDERE TOWN PLAN 2015-2020

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## Population and Growth Goal:

For Belvidere's population to have a slow to moderate growth rate so as not to place a burden on existing facilities and services. Growth should not exceed the Town's ability to provide services to support the population.

## Policies:

Discussion: The Town has developed the following policies in order to guard against rapid growth over a short period of time. Until land use regulations are adopted, the town will be limited to commenting on Act 250 proceedings and any application should be reviewed in light of these policies. Examples of land uses that may affect rapid population growth over a short period of time include the subdivision of lots for development and conversion of seasonal to year-round dwellings. Seasonal camps are a concern because one of five dwellings in Belvidere is a camp. If a large number of these were converted to year-round occupancy over a short period of time, it could cause serious growth related issues. The conversion of large single-family homes to multifamily homes is discouraged for similar reasons.

- Major subdivisions (creating 6 or more lots for sale or development from one lot within five years) are not permitted because they will have the effect of increasing residents too quickly for Belvidere to accommodate. Major subdivisions should be phased over several years to not overburden the town's services and facilities.
- Belvidere does not encourage the conversion of seasonal dwellings to year-round dwellings, although property owners are not prohibited from doing so provided they meet state septic standards.
- Belvidere does not encourage the conversion of single-family homes to multifamily structures. Again, property owners are not prohibited from doing so provided they meet state septic standards.

## Recommendations:

Discussion: To monitor future growth trends and be prepared to draft land use regulations if needed, the following recommendations are proposed. The drafting of land use regulations is not seen as being needed at this time but would be considered as a future alternative.

- If the number of persons moving into Belvidere becomes a major issue over the next five years, the town should consider adopting growth management tools, such as subdivision regulations.
- The Planning Commission should review and amend the 'Future Population Predictions' information as new population data becomes available.
- The Town should review the annual population estimates released by the U.S. Census Bureau and VT Department of Health to ensure growth rates are not outside of the town's expectations.

## BELVIDERE TOWN PLAN 2015-2020

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- Belvidere should monitor the rate of conversion of seasonal dwellings to year-round dwellings. A high conversion rate can increase the resident population quickly due to the high proportion of camps when compared to permanent homes.
- The Planning Commission should review all 'Act 250' applications for their impact on the growth of the town. Where an application is determined to conflict with this chapter or any goal or policy in the Belvidere Town Plan, the Planning Commission should participate in the 'Act 250' process to ensure the concerns of the town are addressed.

## Historic, Archeological, and Scenic Resources

There are numerous historic and scenic structures, places and resources in Belvidere, in addition to a rich history and a local desire to explore, celebrate and protect these many resources. After a brief chronology of significant historic events, this section of the Municipal Plan will list and describe many of the historic sites and structures in Belvidere and what makes them special. Special focus is given to the historic mill sites in town and the scenic areas of Belvidere. In addition, this section discusses different options for protecting Belvidere’s historic and scenic resources and provides suggestions and considerations for developing and maintaining a local historical society to carry on much of the inventorying and preservation efforts for generations to come.

### Historic Resources

**Table 3.1 Notable Moments in Belvidere’s History**

1791-1796	The town of Belvidere is granted to John Kelly. The grant contains the condition that there must be one actual settlement for every 640 acres of the town’s original 30,100 acres by Jan 1, 1792. Gold mines and pine trees of a certain height are reserved to the People of the State of Vermont. Belvidere is surveyed into 177 lots of land with 200 or so acres in each lot.
1808	The date of the earliest book of deed records for Belvidere. Some of the deeds reference Franklin County records for descriptions of the properties being sold, so it is possible that the earliest records of land sales in Belvidere is located in Franklin County.
1824	Lumbermen discover Asbestos on Belvidere Mountain. A portion of Belvidere is annexed to form the new town of Waterville.
Sept. 4, 1827	Belvidere residents in a town meeting vote to join a partition for a new county on condition that all 12 towns, Belvidere, Cambridge, Eden, Elmore, Hyde Park, Johnson, Mansfield, Morristown, Stowe, Sterling, Waterville and Wolcott, also approve the measure and that the courthouse and jail be built “free from a county tax.” The process of creating this new county takes some time.
Sept. 27, 1828	Belvidere votes to approve a grant of five ranges from the east side of town, including Belvidere Mountain, to the township of Eden.
Oct. 7, 1834	Belvidere’s inclusion in the new “Lamoille County” is finalized.
1865	George Washington Henderson, an African American Civil War soldier and former slave, is believed to have been brought by officer and Belvidere resident Henry Carpenter to his hometown. Here Henderson is said to “learn his letters.” Henderson later goes on to be the first African American inducted into the Phi Beta Kappa academic honorary society and has a career as a minister and university teacher. A Vermont historical roadside marker in Belvidere commemorates this story.

# BELVIDERE TOWN PLAN 2015-2020

1890	Belvidere’s population peaks with 571 people measured by the Census Bureau.
1893	151 school age children in Belvidere, ages 5-21. Boys: 82, girls: 69.
1894	183 school age children in Belvidere, ages 5-21. Boys: 98, girls: 85.
1896	Part of Avery’s Gore in Franklin County is annexed to Belvidere.
1899	Belvidere resident Lewis J. Ingalls is awarded the Congressional Medal of Honor for his heroic actions under fire at Boutte Station, Louisiana, on September 4, 1862.
1927	THE GREAT FLOOD. Many mill sites in Belvidere, which had encompassed much of the economic activity in town, are destroyed. Belvidere never regains its preponderance of mills.
1935	Public Electric Light Company brings the first electric power to Belvidere Center households.
1936	The asbestos mine on Belvidere Mountain, now in Eden, is the only chrysotile asbestos mine in the country and employs many Belvidere residents.
1982	Vermont Route 109 becomes the last dirt state route to be paved, ending the reign of the “gravel gap.”
1989	State of Vermont orders Belvidere to build a new school because of capacity and structural issues at the Old Belvidere Central School.
1993	The Belvidere Mountain asbestos mine ceases operations.

## Historic Structures in the State Survey and National Register

Both the State of Vermont and National Park Service develop and keep lists of historic structures for the purposes of identifying them and expressing the importance of their continued existence and preservation. The two covered bridges in Belvidere, like all covered bridges in Lamoille County, are on the national register. There are also many local buildings listed in the state survey. What follows is a list of these structures, including some of the information from the listings that convey their historical importance.

### *On National Register:*

Mill Bridge (covered)

On town road across North Branch of Lamoille River, 2.8 miles west of Belvidere Center.

In National Register of Historic Places

Date of Record: 1974

Condition: Good

Period of Significance: 19th Century

Areas of Significance: Architecture, Engineering, Transportation

# BELVIDERE TOWN PLAN 2015-2020

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## **Morgan Bridge (covered)**

On town road across North Branch of Lamoille River, 1.8 miles west of Belvidere Center.

In National Register of Historic Places

Date of Record: 1974

Condition: Good

Period of Significance: 19th Century

Areas of Significance: Architecture, Engineering, Transportation

## *In State Survey:*

## **Potter-Bennett House**

At Belvidere Jct., south side of Rte. 109, just west of Belvidere-Waterville town line.

In VT Historic Sites & Structures Survey Date of Record: 1980

Year Built: 1875 Style: Greek Revival Condition: Good

Present Use: Residence

Summary of Significance: It is one of three significant buildings which remain from the once-prosperous hamlet of Belvidere Junction.

Surrounding Environment: Open land, Scattered buildings, Residential.

## **McCuin House / John B. McCuin Store**

At Belvidere Jct., south side of Rte. 109, just west of Belvidere-Waterville town line.

In VT Historic Sites & Structures Survey Date of Record: 1980

Year Built: 1845 Style: Greek Revival Condition: Good

Present Use: Residence

Summary of Significance: It was built c. 1845 as a store, perhaps for John B. McCuinn, who lived and did business there for the rest of the century. Surrounding Environment: Open land, Scattered buildings, Residential.

## **Belvidere Junction Church / Belvidere Christian Church**

At Belvidere Jct., south side of Rte. 109, just west of Belvidere-Waterville town line.

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1851 Style: Greek Revival Condition: Good

Summary of Significance: This New England church type is the most significant building in Belvidere.

Present Use: Church.

Surrounding Environment: Open land, Woodland, Scattered buildings, Residential.

# BELVIDERE TOWN PLAN 2015-2020

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## **Old District #2 School**

On north side of Rte. 109, 0.6 miles northeast of Belvidere Junction.

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1870

Style: Late Greek Revival Condition: Good

Present Use: Vacant

Summary of Significance: This simple yet functional schoolhouse is the last remaining district school in Belvidere.

Surrounding Environment: Open land, Woodland, Scattered buildings.

## **Amey House / D.G. Wittemore House**

On west side of Rte. 109, 0.3 miles east of Belvidere Junction.

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1860

Style: Late Greek Revival Condition: Good

Present Use: Residence

Summary of Significance: This Greek Revival period farmhouse dates from the mid-19th century, Belvidere Junctions era of prosperity.

Surrounding Environment: Open land, Agricultural.

## **Adams House / Norman Cheney House**

On south side of Rte. 109, 1.2 miles east of Belvidere Junction.

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1870 Style: Vernacular Condition: Good

Present Use: Residence

Summary of Significance: This plain house illustrates the lingering effect of Greek Revival on vernacular rural Vermont architecture.

Surrounding Environment: Open land, Woodland, Scattered buildings.

## **Tallman's Store / ABC Store**

On north side of Rte. 109, Belvidere Center.

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1900

Style: Vernacular Queen Anne Condition: Good

Present Use: Store, Residence Summary of Significance: [It] is the focal point of the village of Belvidere Center.

Surrounding Environment: Moderately built up.

## **Parker House**

On north side of Rte. 109, 1.5 miles east of Belvidere Center.

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In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1850

Style: Vernacular Greek Revival Condition: Good

Present Use: Residence

Summary of Significance: It is surrounded by some of the last agriculturally active land in Belvidere.

Surrounding Environment: Open land, Woodland, Agricultural.

Also:

## **Locke House**

On west side of Rte. 109, across from the former Belvidere Central School .

In VT Historic Sites & Structures Survey

Date of Record: 1980 Year Built: 1860

Style: Vernacular Greek Revival Condition: Good

Present Use: Residence

Summary of Significance: The traditional classic cottage plan is enriched by corner pilasters supporting a box cornice and gable returns.

Surrounding Environment: Open land, Woodland, Scattered buildings, Residential, Agricultural.

## **Old Belvidere Central School (Old District #1 School)**

Just east of Belvidere Center at the junction of Route 109 and Bog Road. Year Built: 1900

Condition: Good Present Use: Residence

Summary of Significance: It is a contributing structure in a potential Belvidere Center Historic District, which is eligible for inclusion on the State Register of Historic Places.

Surrounding Environment: Open land, Woodland, Agricultural.

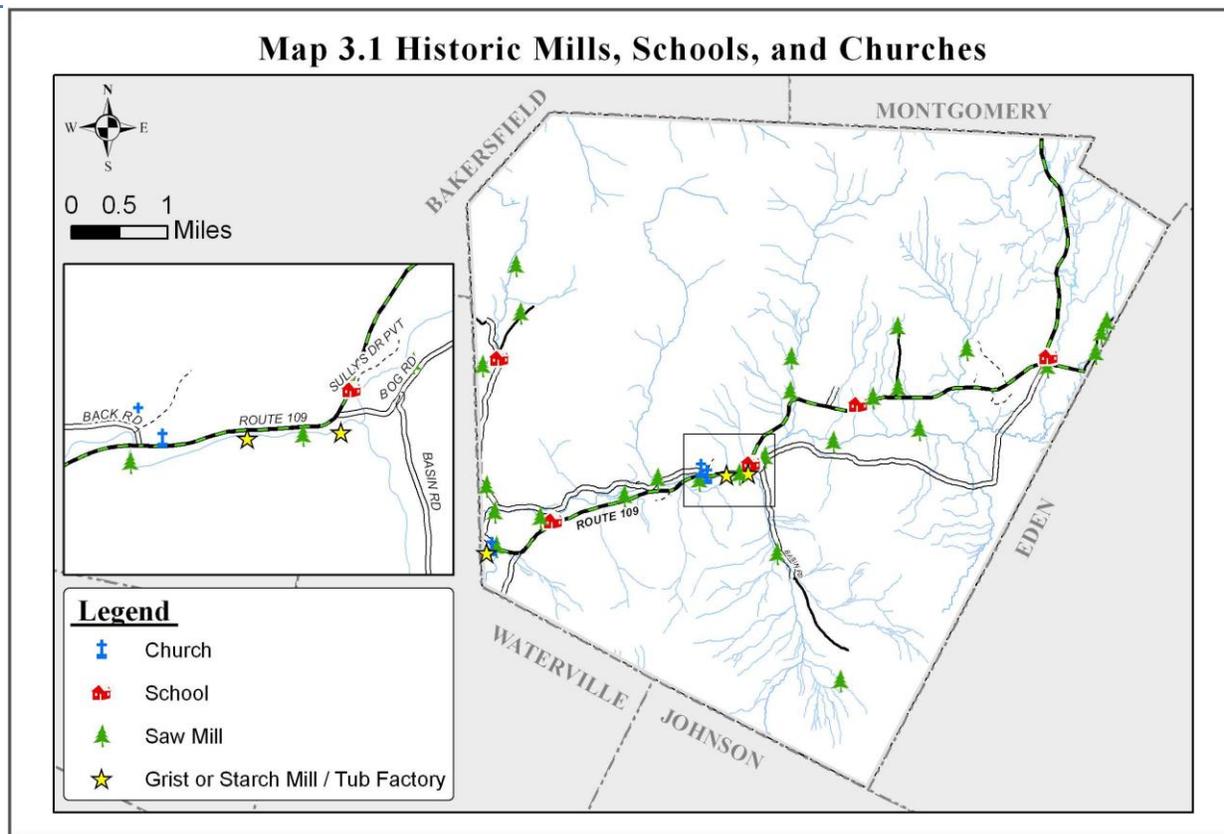
## **Other Structures of Note**

Other Structures of Note that merit gathering background information and being added in this list include the Belvidere Community Church and Old District #1 School. At one time there were 5 schools and 3 churches in town, so there are plenty of other sites or structures that merit research and exploration.

## ***The Mills of Belvidere***

As far back at Belvidere's land records go, one will find mention of mills in the town. Historically mills were commonplace in any Vermont town, especially those with as much forested land as Belvidere. However, Belvidere residents feel a special connection to their mill history. The important economic and social roles that the mills played in town, combined with the starkly different look of the town after the loss of business post-World War One and the ravages of the 1927 flood, have made the mills a captivating subject in Belvidere.

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In town records from between 1808 and 1980, there can be found entries for at least 26 wood-based mills (lumber, shingles, tubs, etc.) and 3 grist or starch mills (Map 3.1). The mills were the economic drivers of the town, supplying the jobs that brought the majority of residents during Belvidere’s peak population days and giving it a one-time status of an “exporting town.” As mentioned above, the mills of Belvidere met their demise in floods, fires, the end of World War One, and technological advancement.

## [Non-Regulatory Tools for Protecting Historic Resources](#)

There are many regulatory options for protecting historic and scenic resources in Belvidere, but of most interest to town residents may be the non-regulatory tools that have led to the successful preservation and rehabilitation of historic sites and structures throughout the state.

### *[Listing on State Survey and National Register](#)*

Both the federal and state governments maintain registers of historic places. These registers list structures and districts that meet objective and subjective historic criteria and whose listing was petitioned by their property owners and local residents. Typically, structures on the registers are more than 50 years old, are associated with significant local events and people, and embody the distinctive characteristics of a type, period, or method of construction.

Most structures and districts on the Vermont Historic Register are there as a result of the Historic Sites and Structures Survey, based upon a survey process begun in 1971 and strengthened by the 1975 Vermont Historic Preservation Act. Most Lamoille County Survey entries are from the early 1980s.

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Listing on the National Register involves the town or owner of a single property preparing the documentation required by the National Park Service, which administers the Register. Towns can apply for Municipal Planning Grants for funding.

Being listed in a register does not place restrictions on a structure’s property owner, per se; rather the registers provide benefits for the preservation of historic buildings. The table below elaborates on some of the details and benefits of the two registers.

**Table 3.2 The National and Vermont State Historic Registers**

	National Historic Register	Vermont State Survey
Administered by:	National Park Service	Vermont Division for Historic Preservation
Benefits:	Special consideration in permitting and in association with any federally funded project.	Special consideration in permitting and in association with any state funded project.
	Tax credits for rehabilitation projects.	
	Access to federal grants (when funded)	

### *The Certified Local Government Program*

Belvidere could apply to become a Certified Local Government (CLG). CLG status would benefit the town in many ways:

- The ability to work more closely with state and federal agencies on identifying and registering historic structures in town.
- Access to matching grants to
  - produce studies and cultural resource inventories,
  - determine property eligibility for local and National Register of Historic Places designation,
  - perform building reuse and feasibility studies,
  - develop design guidelines and conservation ordinances, and create publications to educate the public about the benefits of Belvidere’s historic resources.
- Access to technical assistance for all of the above.

In order to achieve CLG status, Belvidere would have to

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- enact a historic preservation ordinance for the designation and protection of historic properties,
- create a historic preservation commission,
- maintain an inventory of historic resources in town,
- ensure the involvement of the public within the process, and
- successfully apply to the Vermont Division of Historic Preservation.

## *Village Center Designation*

Another resource to pursue is Village Center Designation through the Vermont Downtown Program. Through this program, Belvidere would identify an area in town, such as Belvidere Junction, that contains a relatively dense collection of buildings and that has a significant role in portraying Belvidere's history and character. The Town could then apply to have this area designated as a Village Center and deserving of the associated historic preservation and rehabilitation incentives. Village Center Designation benefits include:

- state and federal tax credits toward the rehabilitation of historic buildings,
- tax credits for façade improvements,
- tax credits for code improvements, and
- priority consideration for Municipal Planning Grant and Community Development Block Grant (CDBG) funds.

Applying for Village Center Designation consists of the following:

- a resolution of the Belvidere Selectboard in support of the application,
- proof that the Lamoille County Planning Commission and Lamoille Economic Development Corporation have been notified of the intent to apply,
- a letter from the Lamoille County Planning Commission confirming Belvidere's Municipal Plan and planning process, and
- a map showing the boundaries of the proposed village center.

The idea behind this program is that the best way to preserve historic buildings in a manner that depicts their roots is to keep them in use and maintain their relevancy in today's time. While the Town of Belvidere itself, as a government body, would not be able to apply for the tax credits listed above to rehabilitate historic buildings and bring them up to code, Village Center Designation would give the town priority in consideration for CDBG funding for the building work.

## *Creating a Belvidere Historical Society*

Many of the non-regulatory options listed in the previous section would benefit greatly, if not depend upon, the guidance and administration of a local group of volunteers dedicated to

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identifying, preserving and celebrating Belvidere's historic sites, structures and heritage. There is current interest in developing a historical society in Belvidere.

The presence and activities of a historical society would greatly increase the chances that Belvidere's history will be remembered for generations to come. Not only could such a group petition for inclusion of structures in the State Survey and National Register of historic places and apply for Certified Local Government status and/or Village Center Designation, but the simple act of inventorying and publishing historical information would do much to maintain public awareness of the importance of preserving these resources.

A historical society is a very real possibility for Belvidere. The neighboring towns of Eden and Waterville have such societies with experiences and knowledge to share. In fact the Middlesex, Vermont, historical society can link its current existence to a town plan chapter just like this one. However the creation and maintenance of such a volunteer effort will take time and energy.

The organizational aspects include:

- forming and sustaining a group of volunteers,
- holding regular meetings
- adopting bylaws and/or a "constitution,"
- adopting and filling roles in the organization, and
- incorporating as a 501(c)3 charitable organization with the Vermont Secretary of State and the U.S. Internal Revenue Service.

Once the organization of a historical society is complete, there are many activities to consider:

- Inventory information on town history and structures
- Inventory, store, and/or preserve historic items and artifacts
- Publish reports and books of collections and stories
- Advocate for preservation of historic resources in town
- Petition for listing structures/districts on state and national registers
- Pursue Certified Local Government status and/or Village Center Designation
- Pursue grant funding for activities and rehabilitation
- Hold fundraising activities
- Secure/rehabilitate a structure as base of operations and possible museum

## Resources

There are various organizations and programs available to assist in the creation and operation of a historical society, as well as with some of the related activities. The below list represents

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sources for example society documents and bylaws, grant program information, organizational advice and consulting, and more:

- Other local historical groups – there are some right next door in Eden and Waterville. The Middlesex group is at [www.middlesex-vt.org/html/historical\\_society.html](http://www.middlesex-vt.org/html/historical_society.html)
- The Vermont Historical Society - [www.vermonthistory.org](http://www.vermonthistory.org)
- The Vermont Division of Historical Preservation – [www.historicvermont.org](http://www.historicvermont.org)
- The Preservation Trust of Vermont - [www.ptvermont.org](http://www.ptvermont.org)
- The American Association for State and Local History – [www.aaslh.org](http://www.aaslh.org) [membership required]

## **Archeological Sensitive Resources.**

Archaeological resources provide evidence of human habitation dating from prehistoric times. This includes evidence of prehistoric habitation and use, including villages, trails, and trade networks, and burial grounds, as well as remnants of historic settlement and use, including old foundations and cellar holes, quarry, mill, kiln and foundry sites, and unmarked cemeteries and roads.

When found intact, archaeological sites can provide a wealth of information about past ways of life, but because they are hidden, they may be easily disturbed or destroyed. Often, it is not the artifacts themselves that are important, but rather the context in which they are found.

The Vermont Division for Historic Preservation maintains listings of known sites, made available on a “need to know” basis in order to protect their integrity. For planning purposes, the Division has identified more broadly defined “sensitive areas,” using modeling based on known site conditions in which archaeological sites are known or expected to occur. These include a 200 foot buffer along all major rivers and tributaries in the region, particularly in the vicinity of major confluences, which is considered highly sensitive. Historic sites may be identified and located from historic records, including historic atlases and gazetteers and local records.

Development in known or anticipated sensitive areas should be reviewed with particular attention given to the possibility of buried sites. Assistance with the identification, protection and/or excavation of sites is available from the Division for Historic Preservation.

## **Scenic Resources.**

Belvidere is a beautiful place. In fact the town’s name roughly translates to “beautiful to see” in Latin (bel, beautiful, and vedere, to see ). It is only logical that the town’s residents take stock of the areas of scenic beauty in town. Some areas are:

- Laraway / Round Mountain
- The Mixing Bowl in Smithville

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- Newton Valley Brook
- The Morgan and Mill covered bridges
- The Natural Area District containing the bog at Belvidere Corners
- The view overlooking the bog from Lawrence Hill
- The Long Trail State Forest in the Basin

## Protecting Scenic Resources

Scenic areas may be threatened when development and other activities alter the immediate area and/or the viewshed. Some of the tools specifically applicable to the preservation of scenic resources include:

- creating a Conservation Commission in town to advocate for scenic and natural areas in town and advise other town boards and residents on potential threats;
- purchasing land or development rights in key scenic areas, a practice which preserves the areas while adequately compensating property owners; and
- strengthening Town Plan language for the protection of historic and scenic resources in Belvidere. This will provide the basis for possible local bylaws, if desired, as well as benefit the town during any Act 250 permitting process in Belvidere.
- explore adopting land use regulations to guide and/or prevent development in important scenic areas.

The town has decided not to create a local Conservation Commission but reserves the right to reconsider this in the future.

## **Goals, Policies and Recommendations.**

### Historic, Archeological, and Scenic Resources Goal:

- To preserve Belvidere's heritage and beauty for current and future generations.
- To record and preserve the history of Belvidere.
- To preserve individual buildings, structures and areas of historic value, including archeological sensitive areas.
- To conserve scenic resources and areas without undue burden on property owners.

### Policies:

- The Town of Belvidere supports applications for grants to compile a history of Belvidere.
- Efforts to protect and preserve items and artifacts of historic significance to Belvidere are supported.
- Belvidere encourages the rehabilitation, reuse and preservation of historic buildings.
- Identify and protect sites of potential archeological sensitivity.
- Telecommunications towers and other large obvious structures should be carefully sited to avoid impacts on scenic resources.

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- Development around scenic resources should be sited and constructed in such a manner as to retain the beauty of the area. Removal of natural vegetation on the site should be minimized, and structures should be screened or hidden from view as best as possible.
- Development should avoid ridgelines, especially those visible from roadways. Any ridgeline development should be set back from the edge of the hill with a forested buffer remaining to protect the view from the valley.

## **Recommendations:**

- The Town of Belvidere should support the creation of a local Historical Society.
- Maintain a comprehensive listing of historical structures and sites in Belvidere.
- The Planning Commission and/or future Historical Society should explore both Certified Local Government status and Village Center Designation as possibilities for Belvidere.
- The Planning Commission should review all Act 250 applications for their impact on the historic and scenic resources in town. Where an application is determined to not conform to this Municipal Plan chapter or any goal or policy, the Planning Commission, with input from the Historical Society, should participate in the Act 250 process in order to ensure that the concerns of the Town are addressed.

## Natural Resources

It is impossible to plan for the future of Belvidere without first discussing the natural resources that helped build the town and sustain it today. The land resources, including gravel deposits and agricultural soils, are the foundation of Belvidere's working landscape. Rivers, streams, and ponds, as well as our groundwater, are very clean and used by residents for day-to-day living as well as recreation. Finally, the abundant forests and clean water have provided the town a healthy ecosystem with habitat for wildlife and timber resources for management.

Land resources are the foundation of the local economy - providing ample gravel deposits for use by local officials and residents as well as prime soil conditions for forest management. Characteristics of the landscape, such as the topography and soil types, help determine such important factors as septic suitability and also identify limitations to development such as steep slopes and shallow soils. An understanding of the earth and soil resources as well as topography is therefore critical to any land use planning efforts.

The North Branch and other water resources are very clean and provide recreational opportunities to residents and visitors including fishing, swimming and kayaking. It is far easier to maintain Belvidere's water than to clean it up if polluted. The residents of town have inherited clean water and they need to ensure future generations receive the same valuable resource.

Overwhelmingly forested, the town is home to bears, moose, deer, fisher cats, and many other species of wildlife. These provide recreational opportunities to residents and visitors through hunting or by simply viewing from the windows of our homes. Belvidere Bog is a natural treasure containing many rare and endangered plant species.

Because the inhabitants of Belvidere have left a legacy of good land stewardship, today Belvidere has a clean and healthy environment in which to work, live, and play. These same traditions continue today as Belvidere enters the twenty first century with sustainable forest management, hunting, and fishing. Continuing to be good stewards of our environment will allow us to pass along these resources to future generations.

### **Land Resources.**

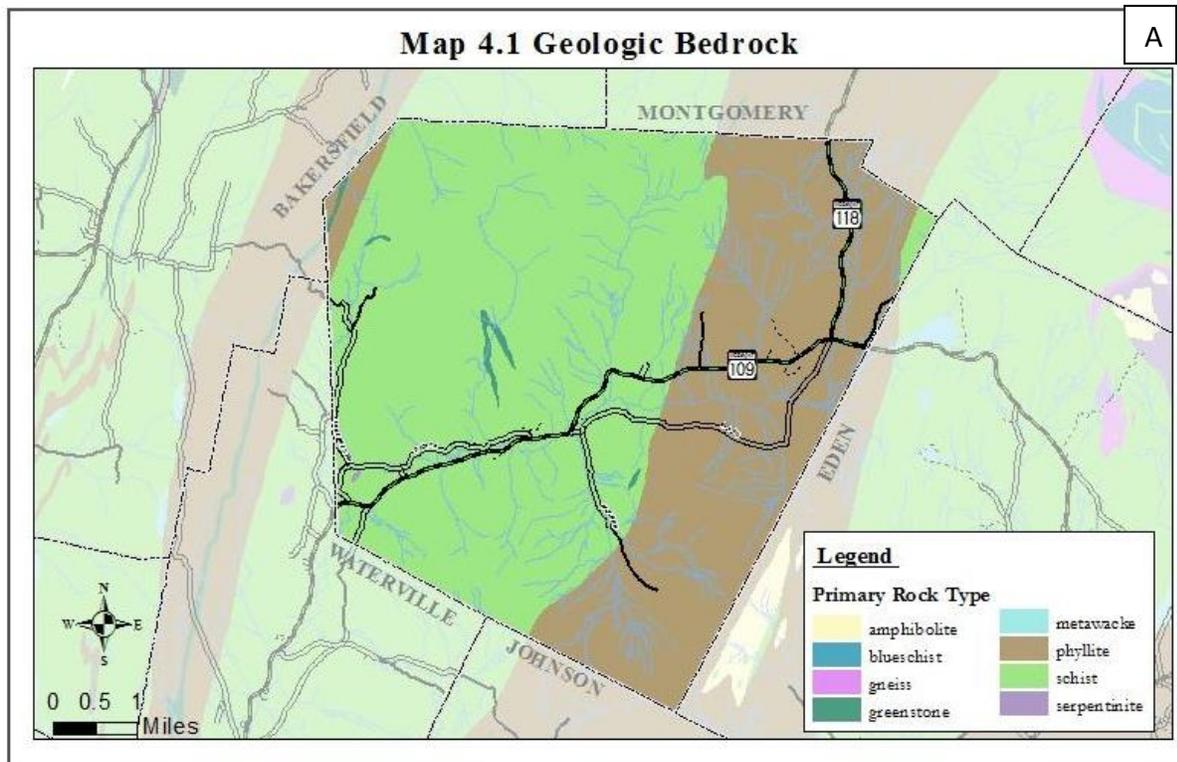
Land or earth resources are generally discussed in three topics- the geology, the topography, and the soils. Each of these features provides opportunities and constraints to current and future use of the land.

### **Geology.**

Following the last glaciation some 14,000 years ago all that remained in the area between the Cold Hollow Mountains and Laraway Mountain was bedrock and the glacial deposits of sand,

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gravel, and till. This base material was critical in determining the types of soil that developed later over these areas. Although soil has developed over the geologic materials, the combined

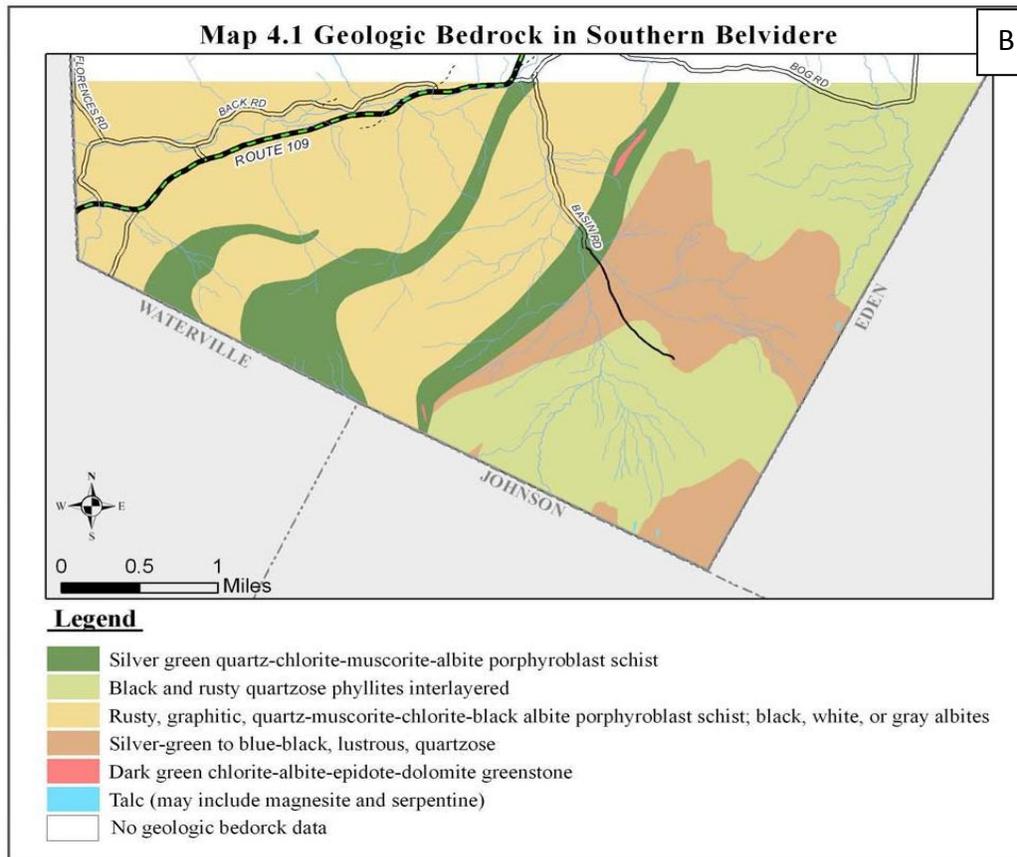


effects of the bedrock geology and the surficial geology have an important effect in determining the plant communities, water availability, and mineral resources that exist in Belvidere.

## **Bedrock**

Belvidere’s bedrock is defined as “interbedded, pale silver-gray to green, carbonaceous and non-carbonaceous schists” except for a small portion of town east of Route 118 as it enters Montgomery, which is defined as “interbedded phyllites, schists, and quartzites” (Geology for Environmental Planning in the Johnson-Hardwick Region, Vermont 1974). This type of bedrock is not associated with quarry stone and minerals. Bedrock geology data for Belvidere can be seen in Map 4.1A. Detailed bedrock geology data was released in 1998 for the southern part of Belvidere, which can be seen in Map 4.1B.

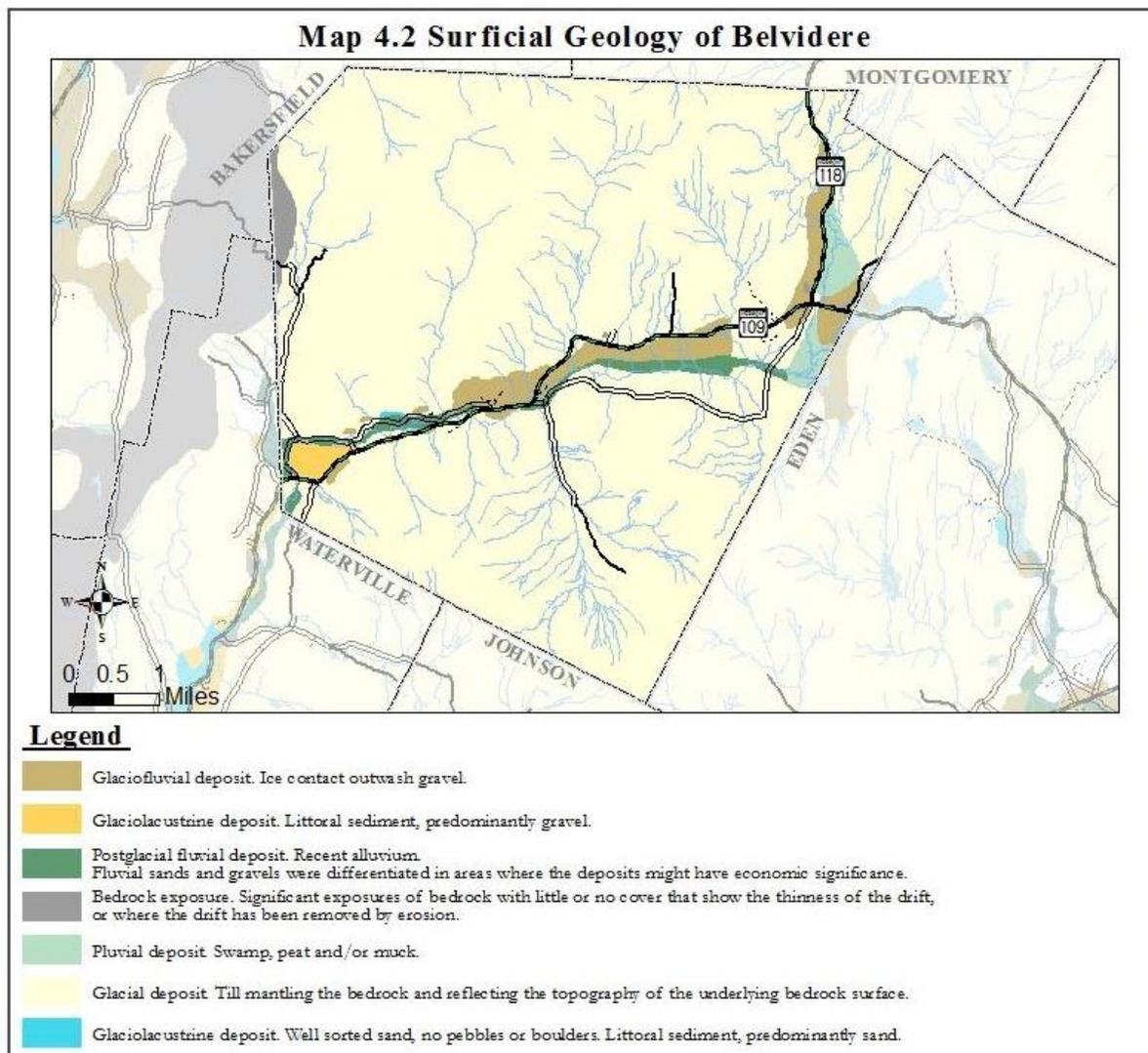
One of Vermont’s many trademark products known around the world is our marble and granite. Belvidere’s bedrock is such that quarry stones like these are not found. Talc is a soft pale green mineral found in parts of Lamoille County associated with ancient ocean crusts (known as serpentinitized ultramafic rocks). These formations tend to be on the east facing slopes of the Green Mountains such as the Johnson Talc sites in Johnson and the GAF asbestos mine in Eden/Lowell. This bedrock type is present only in very limited locations including, small deposits near the Eden town line. Minerals, therefore, may be present at the higher elevations in this area. While mineral rights have been purchased in places in town, based on the geologic evidence it is unlikely large outcrops of talc or other minerals will be present.



## Surface materials

While Belvidere is unlikely to possess bedrock resources, it does contain resources associated with glacial deposits. Belvidere has seven types of surface materials present (see Map 4.2). A thin layer of glacial till covers the bedrock in the upland regions. Much of the bedrock is exposed and the materials unsorted, poorly drained and bouldery. Moving closer to the valleys is ice contact gravel, mostly kame terraces. The materials are well sorted, may have high sand content and are a good gravel source. Lacustrine sands and gravels are found along the North Branch on the steep slopes north and east of Belvidere Junction. Predominantly sand and

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pebbly sand, these areas are good sources for sand. Not coincidentally, the Tatro pit and the Town of Belvidere gravel pit are found in these deposits. Peat and Muck are associated with swampy, poorly drained areas such as Belvidere Bog and the surroundings. Recent stream alluvium deposits are located in association with the North Branch of the Lamoille River. They are generally poorly drained. The final surficial material found in Belvidere is some lacustrine clays and silts located in a very small area beneath Belvidere Junction and west to the Waterville town line.

As resources, the ice contact gravel and lacustrine sands and gravels are both surface materials containing sand and gravel suitable for extraction. As sand and gravel are created from glacial outwash, they are essentially, non-renewable resources. Sand and gravel are important resources due to their use in the construction of roads and other projects. Areas likely to be gravel rich should be identified and noted.

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## *Use of earth resources*

Earth resources, including stone, minerals, and sand and gravel deposits, are valuable natural resources, particularly for their use in construction related activities and road maintenance. However, it is important to recognize that these resources are finite and that the geologic processes that create them can take tens of thousands of years to occur. While any construction over an earth resource should account for the potential loss of that resource, their use must be carefully balanced with the consequences of their extraction, and even then should be used only when high public benefit is in evidence.

Extraction of earth resources has potential for negative consequences in any of the following areas, which need to be accounted for:

- Noise, dust and air pollution or radiation;
- Surface and groundwater pollution, siltation or radiation;
- Storage and disposal of waste materials, both solid and liquid;
- Increased stormwater runoff, erosion and sedimentation;
- Spoiling of the landscape and limited utility for subsequent uses of the site;
- Decreased highway safety and increased municipal costs due to increased traffic and accelerated deterioration of highways and bridges attributed to the transportation activities generated by the earth resource operations;
- Reduced property values because of primary or secondary impacts of the proposed earth resource operations. The Lamoille County Planning Commission completed a study in 1989 that identified existing gravel pits and areas of likely gravel deposits (identified on Map 4.3 Sand and Gravel Resources). The following is from that report:

“Belvidere is relatively undeveloped consequently it could be beneficial for the town to purchase land along Route 109 for a future municipal resource before conflicts begin to occur. Bog Road is a natural area and gravel rich. Due to this non-compatible situation gravel users should seek resources elsewhere.”

In 2002 and 2009, the Belvidere Planning Commission revisited these findings to plan for future use of the gravel resources. The gravel pits located on Map 4.3 Sand and Gravel Resources are based on the findings of this review. As indicated on the map, there are 22 active or inactive gravel pits identified in Belvidere. A majority of these are inactive and some have been reclaimed. Table 4.1 identifies the owner of the site, its current status, and any other general comments on quantity or quality of materials. Active pits may be Commercial, Municipal, or for Personal use. Inactive sites are either Reclaimed or Not Reclaimed. Site tests would be required to determine the quantity and quality of any sand or gravel but generalizations can be made based on Map 4.3 (Sand and Gravel Resources) and table 4.1 above.

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**Table 4.1 Belvidere Gravel Sites – 2009.**

Site #	Name of site	Status	General comments
1	Town of Waterville	Inactive- Municipal	
2	G.W. Tatro	Active- Commercial	Act 250 permit
3	Town of Belvidere	Active- Municipal	Twenty year supply
4	Winnie Lanpher	Inactive- Reclaimed	
5	Edsel Rich	Inactive- Reclaimed	Some personal use
6	Brian Loucks	Inactive- Reclaimed	
7	Warren	Inactive- Not reclaimed	Some personal use
8	Schroeder, Lague, J+H Bowdy	Active- Personal	
9	Mark Schroder	Inactive	
10	James + Debbie Baker	Inactive- Reclaimed	
11	State of Vermont	Inactive- Reclaimed	
12	Steve Locke	Inactive	
13	Bob Tanner	Active- Commercial	Grand fathered
14	Brown farm	Inactive- Reclaimed	
15	Brown farm	Inactive- Reclaimed	
16	Brown farm	Inactive- Reclaimed	
17	Laraway Mountain Ltd.	Inactive- Not reclaimed	Some personal use
18	Kneen	Active- Personal	
19	Meyers	Active- Personal	
20	Airstrip pit (State)	Inactive- Reclaimed	
21	Art St. Onge	Active- Personal	
22	Laraway Mountain Ltd.	Inactive- Not reclaimed	Some personal use

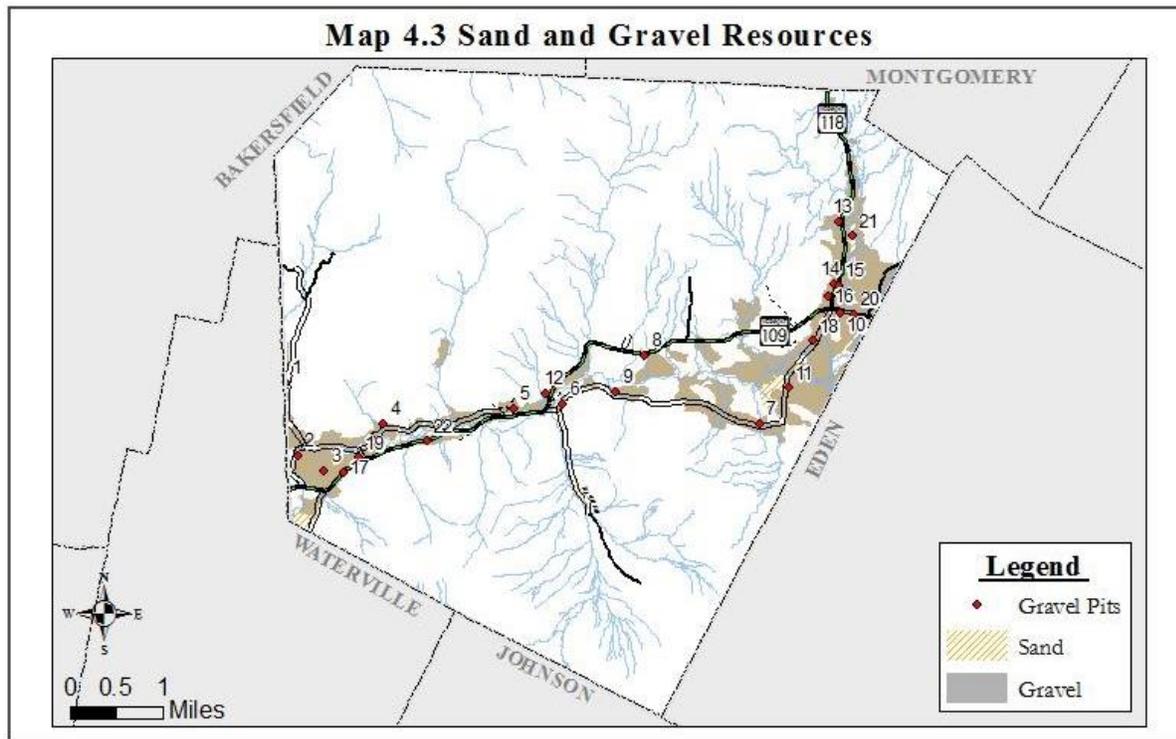
Source: Personal communication with residents and owners, 2009

The town’s gravel pit (at the old dump) is estimated to have twenty years of material remaining at current extraction rates. The town is therefore looking to secure a long-term supply in town through purchase of another site. Based on the expected areas of gravel deposits and locations of existing or inactive sites, it is recommended that the Selectboard investigate some other sites along Route 109 north of Belvidere Center or adjacent to the current pit.

## *Permitting*

For all the reasons mentioned above, gravel extraction operations are highly regulated by the state in the Act 250 process. Unless in continuous operation since June 1970, any commercial

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earth extraction operation on a lot greater than 1 acre must receive a state Act 250 permit [check with the District 5 Environmental Commission for exceptions and details]. The Environmental Commission is responsible for ensuring all operations will not have an undue harmful impact on the environment or surrounding lands and that a plan for site rehabilitation exists that ensures the land will be returned to a useable state. Currently the only permitted gravel extraction operation is the G. W. Tatro pit off of the Back Road near Belvidere Junction.

Municipal gravel pits only need permits if the area of disturbance is greater than 10 acres. If the municipality wishes to sell gravel then they will need a permit the same as other commercial operations. Currently the Town of Waterville has an inactive pit and the Town of Belvidere has a pit less than 10 acres in size (see #1 and #3 on Map 4.3 Sand and Gravel Resources for locations). The Belvidere Pit is on a 19-acre lot but the area of disturbance is less than 10 acres and therefore qualifies for the Act 250 municipal exemption. Although exempt from Act 250 oversight, both Belvidere and Waterville should have a plan for their sites that address environmental impacts as well as future restoration.

Belvidere has the option to regulate gravel operations locally if zoning bylaws are adopted although most operations currently appear to be conducted in a responsible manner and, therefore, such steps are not necessary. While choosing not to regulate gravel operations locally, the town should review any Act 250 proposals in light of the discussion above. During an Act 250 project, the town may choose to comment at the Environmental Board hearing if either a non-extraction proposal (residential subdivision for instance) will prevent the future use of an

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important earth resource or the project is an extraction proposal so as to ensure the responsible extraction and reclamation of the site. Contact the District 5 Environmental Commission with any Act 250 application questions.

## *Geologic hazards and limitations*

There are two geological hazards that exist in the state of Vermont – earthquakes and landslides. Lamoille County has experienced both of these in recent years, although Belvidere does not appear to have areas at risk of these hazards. Failure of the land along the hillside behind Jeffersonville in 1999 resulted in the loss of a home as well as significant cleanup. An earthquake centered in northern New York shook homes all across Vermont in 2002 but no damage occurred in Belvidere.

General construction conditions were determined for Belvidere based on surface geology according to their general suitability for foundations and structural loads. Not surprisingly, areas in wetlands and the floodplain were found to be unsuitable for foundations due to drainage issues. The Surficial Geology Map (Map 4.2) for Belvidere identifies bedrock outcrops, which will also present development limitations especially with respect to foundations and septic suitability.

## **Topography.**

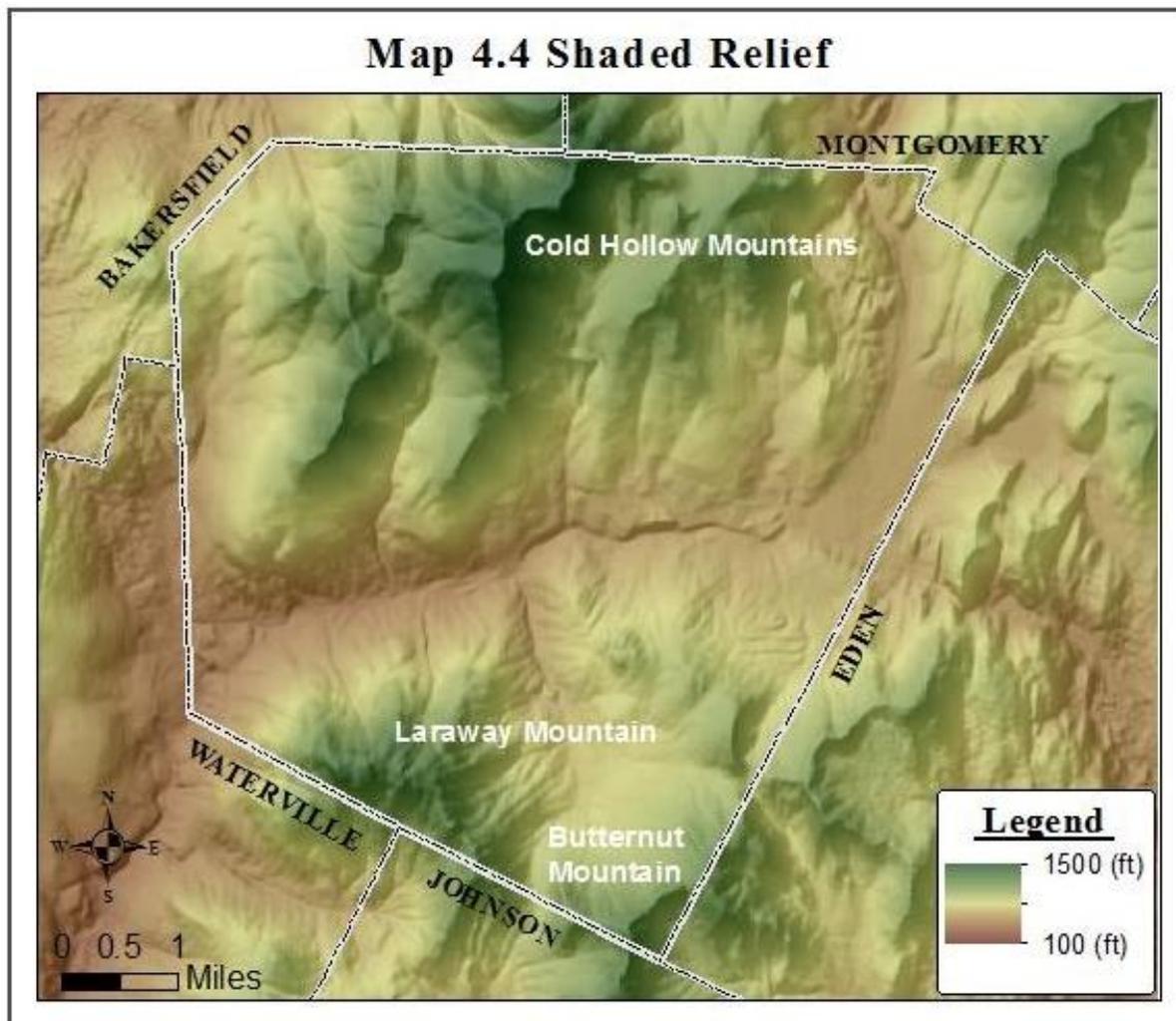
The Town of Belvidere lies in the biophysical region known as the northern Green Mountains, with elevations ranging between 680 and 3,260 feet. Topographic information is important in planning for different types of land use, transportation routes, and the location of public facilities and infrastructure because topography provides natural barriers to movement and often influences the accessibility and use of land.

## **Lands over 2,500 feet**

The hills and mountains of Belvidere provide a beautiful backdrop to the town. The factors that combine to make this effect also present limitations to development. For decades, Vermont has set a boundary statewide regarding development at 2,500-foot elevation. These areas typically are slower to recover from disturbance and are at greater risk to erosion. All development, including forestry operations, requires an Act 250 permit for projects over 2,500 feet. Two summits in the Cold Hollow Mountains as well as the summit of Laraway Mountain and Butternut Mountain are over 2,500 feet (see Map 4.4 Shaded Relief and Map 4.6 Topographic Limitations).

## **Steep slopes**

A second factor presenting considerable limitations to development is steep slopes. “Steep slopes” are defined as land having a slope greater than 30% grade over a distance of at least 50 feet. Some soil types, particularly clay, are unstable even at slopes as shallow as 5-8%. Based on Belvidere’s soil types this is not expected to be an issue. The sand, gravel, and bouldery soils

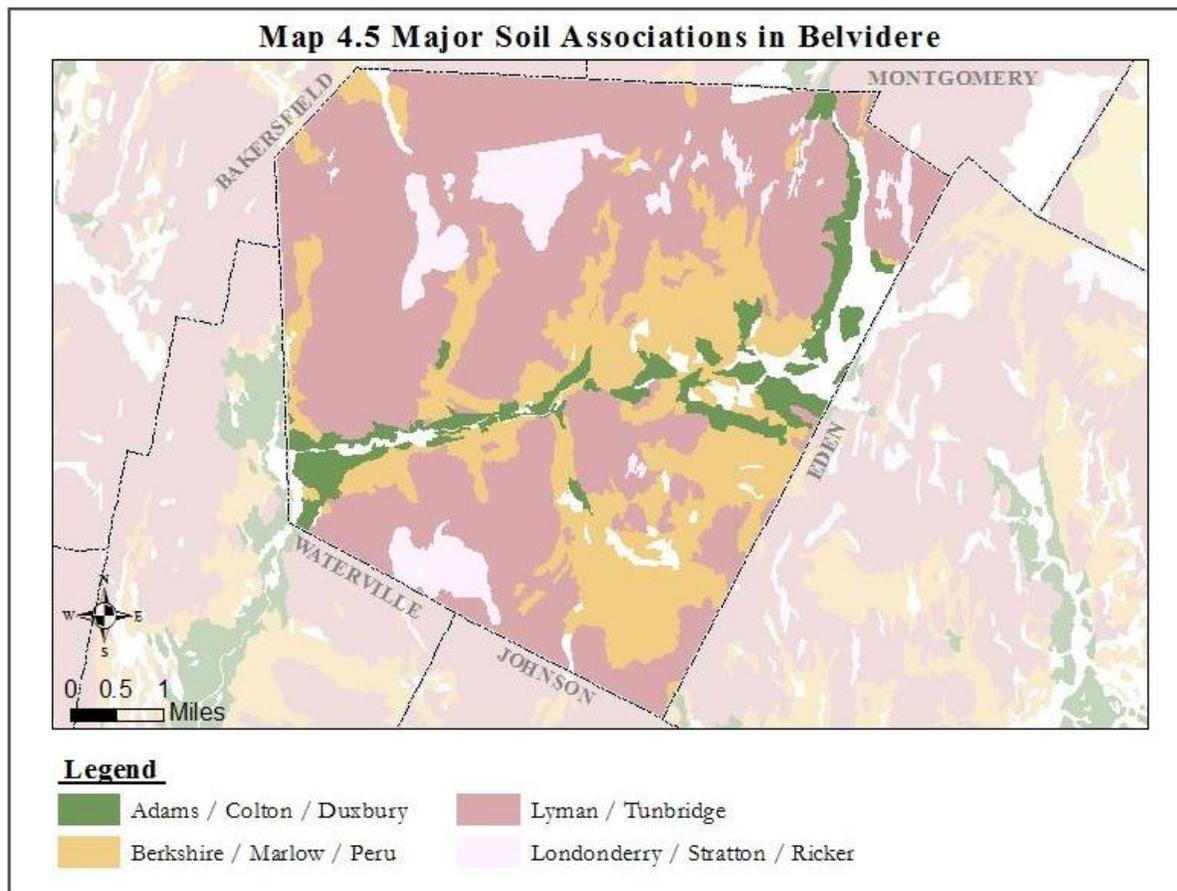


found in town are typically stable to 30% provided they have some vegetation cover (i.e. grass or trees). Sandy slopes can remain stable up to 50% if left undisturbed.

Steep slopes present problems when they are cleared for development or timber extraction as soil erosion is increased when vegetation is removed. Belvidere has many areas that are considered to have steep slopes. These areas are identified on Map 4.6 Topographic Limitations. Belvidere also has many 'extremely steep slopes', which are identified on the map as being over 45% slopes. These areas are generally associated with mountainsides, higher elevations and shallow soils, which compounds the risk. These areas should be set aside, whether through purchase of the property or purchase of development rights, to protect the soil resources and water quality.

Unlike land over 2,500 feet, development on steep slopes is not regulated automatically by the state. Regulation of steep slopes is generally a local responsibility (regulated through zoning bylaws). The town will need to monitor development to decide if regulations will be required to prevent irresponsible practices.

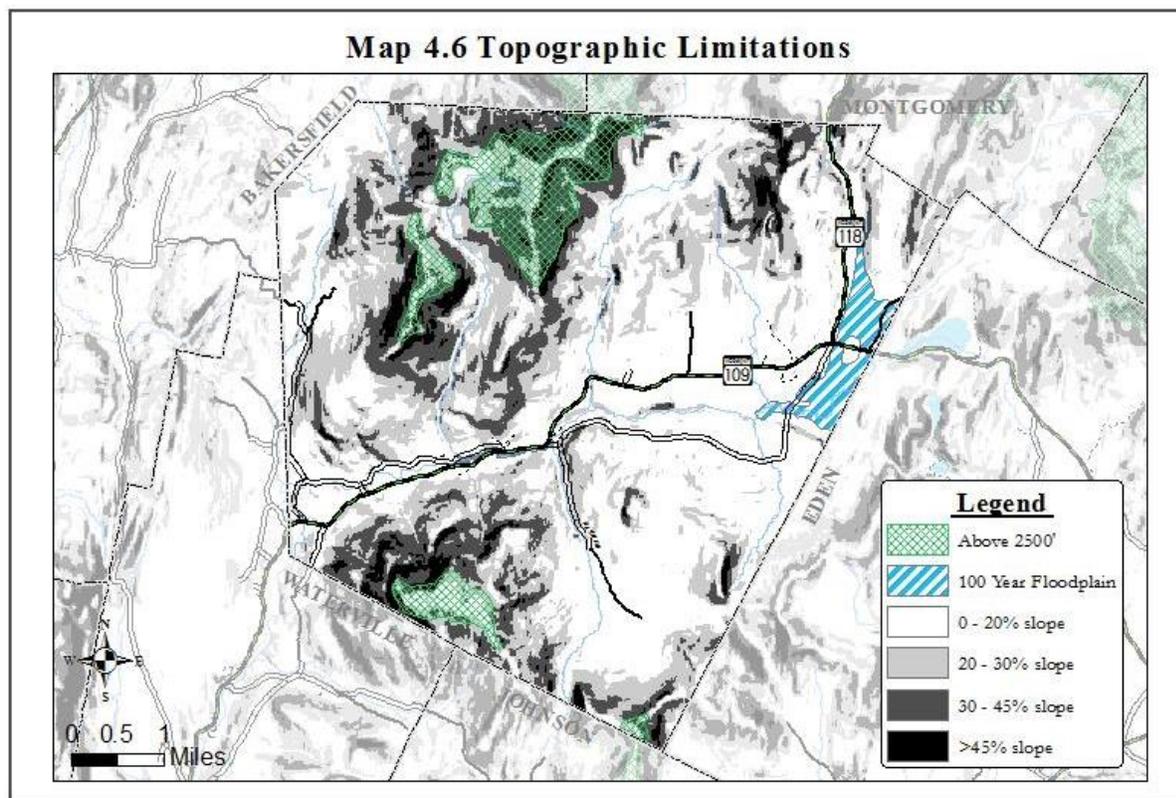
## Soil Resources.



### Soil types

The soil structure attributes in Belvidere provide both opportunities and limitations to construction and agriculture. Depending on the physical and natural processes that formed the soils, they may have differing depth, composition, texture and layering. Soils also vary in how easily they absorb water and in their load-bearing capacity. Soils that pose limits to development are often characterized by excessive slope, shallow depth to bedrock, high seasonal water, instability or high erosion potential. Soils also have qualities that make them productive for timber and agricultural products. The four main soil associations found in Belvidere are shown in Map 4.5 and outlined below.

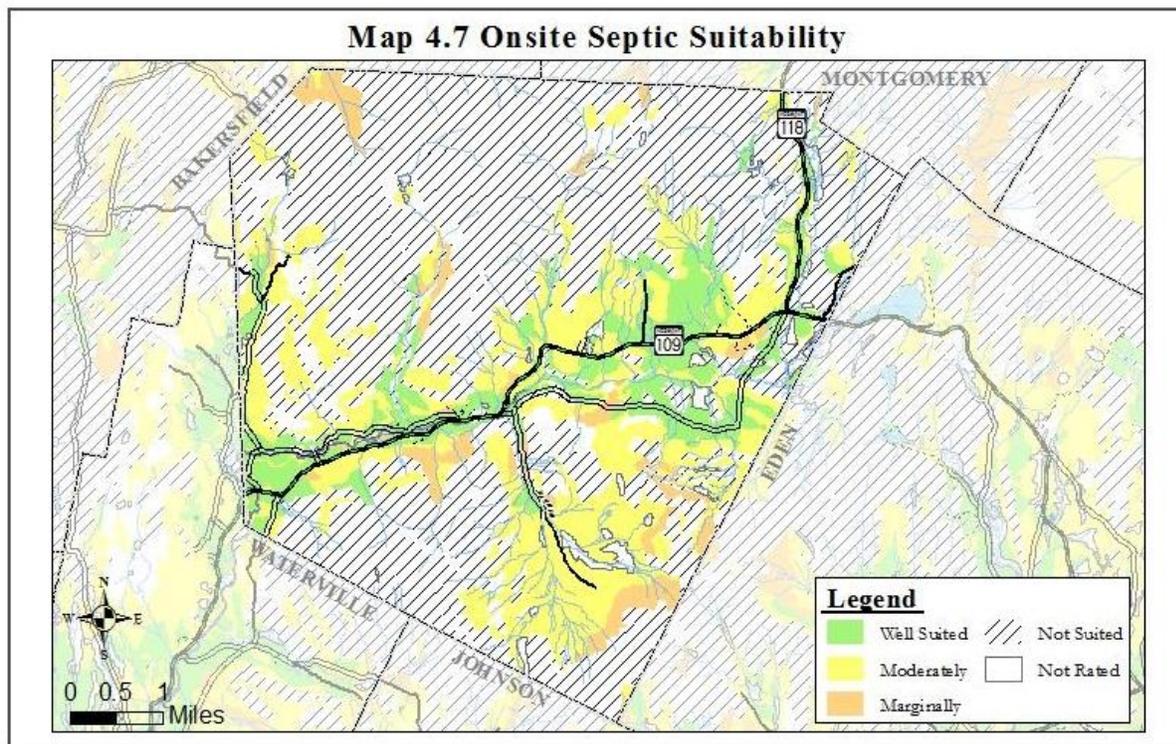
***Adams/Colton/Duxbury.*** This soil type can be level to steep and is characterized by excessively to well-drained sandy soils. They formed on the old deltas, terraces, and beaches and are therefore associated with the main sources of sand and gravel in town. Steeper areas are usually woodland while less steep areas are used for crops and home sites. These soils are found along the North Branch except in the Belvidere Center area.



***Lyman/Tunbridge.*** This soil association can be moderately deep in the level areas to shallow on steeper regions. The soil is described as being well drained to somewhat excessively drained loamy soil. It can be used for farming on the lower slopes but development is limited by depth to bedrock on slopes. It is found on the steeper hills and mountains around Belvidere.

***Berkshire/Marlow/Peru.*** This soil association is, again, deep in level areas and shallow on steeper slopes. This soil is also described as being well drained to somewhat poorly drained loamy soil. It can be used for cropping and trees but the pan and slope limit the developability. It is also suitable for wildlife habitat, recreation and woodland. These soils can be found at the base of the mountain ranges to the south of Route 109 and throughout the center of town, extending into Belvidere Basin and along Route 109 from Belvidere Center to Belvidere Junction.

***Londonderry/ Stratton/ Ricker.*** These soils are shallow to very shallow, sloping to steep, well-drained, loamy and organic soils. In Belvidere these soils are found only on the highest areas of Cold Hollow Mountain. As these soils are very shallow (around 9 inches to bedrock), very erodable, and generally found on steep slopes, they can only be used for wildlife habitat. Logging operations will generally result in severe erosion.



## Soil opportunities and limitations

Development limitations are shown on Map 4.6 (Topographic Limitations). This map highlights areas with steep slopes (20%-30% slopes, 30%-45% slopes, and >45% slopes), floodplains, and areas over 2,500-foot elevation. This map is not intended to infer that development is not possible on a site in these highlighted areas. It should be interpreted that development in these areas may need special construction, careful siting, or be of a limited extent or scale. Each property should be examined individually for limitations based on the characteristics above.

Soils may also present opportunities due to their characteristics. Soils that have characteristics particularly suitable for accommodating on-site septic systems are shown in Map 4.7.

Development is generally suited to these areas, however, these soils may also have value as agricultural and forestry soils. Primary agricultural and forestry soils are shown on Map 4.8 Soil Resources. These are the valuable and non-renewable soil resources that need to be protected for use in agriculture and forestry.

## Use and Conservation of Soil Resources

Soil provides the medium and nutrients for growth, and crops grow best where these conditions are ideal. Prime and statewide significant soils have been classified based on these and other criteria. Whether the crop is hay, corn, or trees, the best use for that soil resource is agriculture or forestry. As a limited resource, management and conservation are the keys to long-term sustainability. Agriculture and forestry as a land use will be discussed again in the land use chapter of this plan.

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An examination of the location of the managed forestlands with respect to the location of prime forest soil resources is important to keeping the best soils in forestry and not development. Similarly, parcel and soils data can be studied to determine if agricultural soils are located on large blocks of land that are being (or could be) farmed.

Accepted Agricultural Practices (AAPs) are designed to ensure soil conservation and all farms are required to meet these standards. The Planning Commission would recommend that farmers use Best Management Practices (BMPs) where technically and economically feasible. BMPs are not required but they offer better protection of the soil resource and will protect water quality as well. Where a farmer would like assistance to achieve some or all of the BMPs, the Planning Commission will be available to assist them by contacting other appropriate regional and state organizations.

Foresters have a similar set of practices to follow in order to conserve soil resources. Accepted Management Practices (AMPs) are the required methods and practices established to protect soil and water. Similarly, forestry has a voluntary set of BMPs for construction on forestry sites. Again, any foresters interested in obtaining more information or assistance in establishing BMPs at their sites should contact the planning commission for assistance.

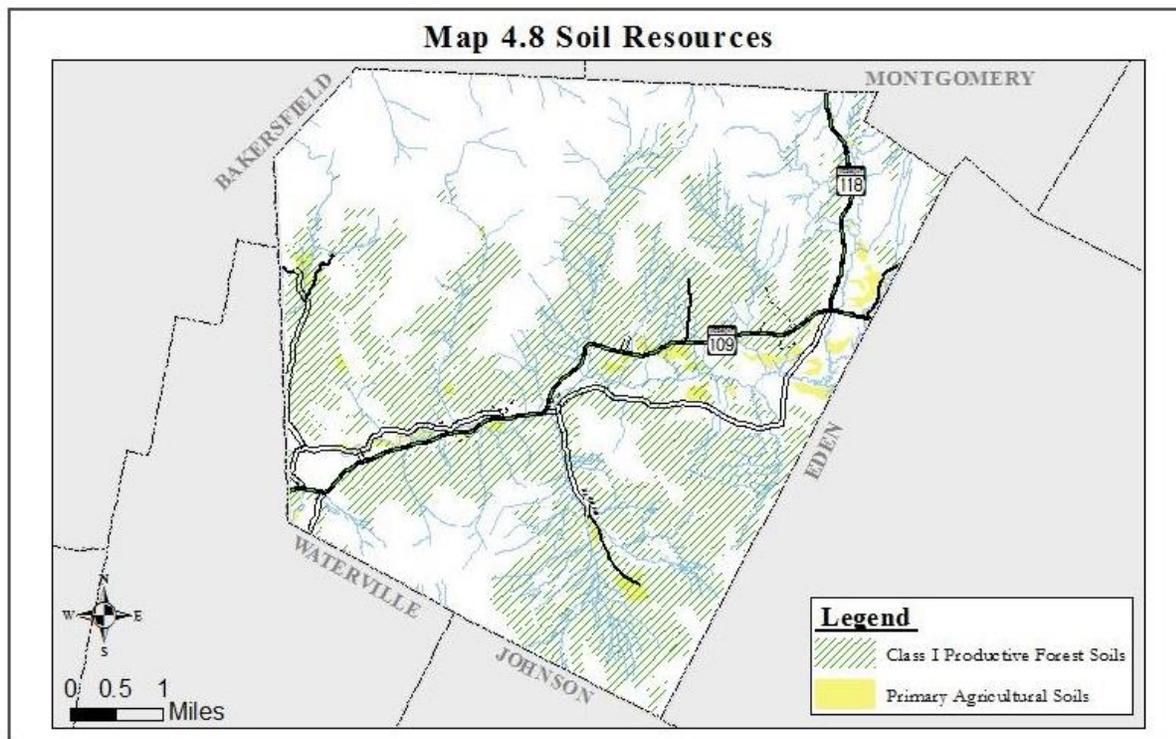
## Soil resource protection

Prime agricultural and forest soils need to be protected from development. Subdivision of land and development of residential properties prevents efficient management of the working landscape. The best way to protect land resources from development is to ensure the working landscape is economically feasible and provides the landowner with a stable income. There are three tools that help make agriculture and forestry more economically feasible - Current Use Assessment, Purchase of Development Rights, and land use regulations.

Use Value Assessment (UVA) Program. The current use or UVA Program has grown to be quite popular among Belvidere property owners. UVA may be used for either agricultural or forest land but, in the case of Belvidere, a majority of the properties are forested.

Purchase of Development Rights. The most well-known group involved in the purchase of development rights is the Vermont Land Trust. In a purchase of development rights, the right to develop or subdivide a parcel is bought by another party. The amount paid depends on the value of the potential development. The farmer or forester receives compensation for their loss of development value, while retaining the farm or forest. In addition, the property is appraised at a lower value, resulting in lower property taxes. The challenge with purchase of development rights is the raising the funds to cover the cost of development rights. Also, the landowner must want to sell the rights - all purchases are willing buyer/willing seller.

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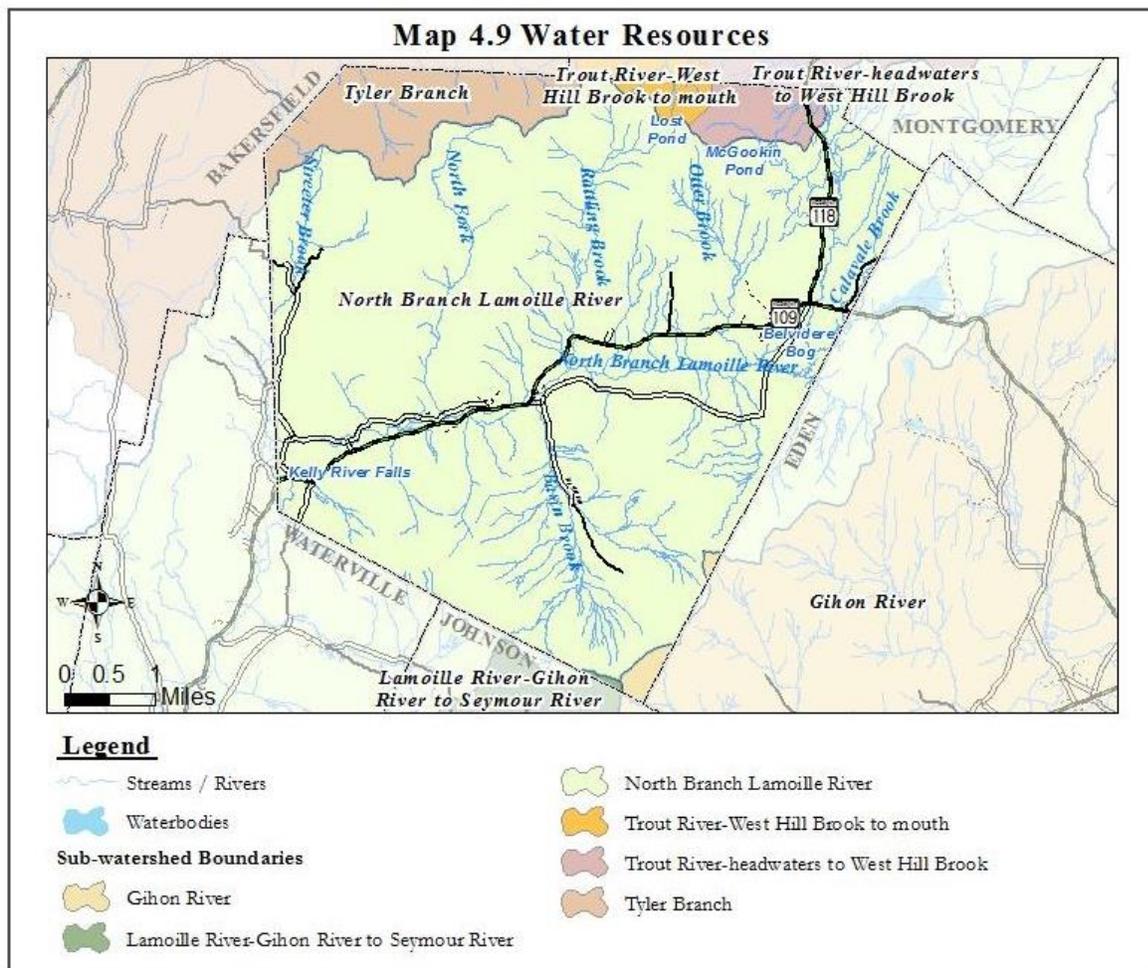


Belvidere may want to consider forming a conservation commission to purchase development rights on their own. The town would own the development rights instead of a non-profit organization. The money to purchase properties or development rights can come from grants and funding institutions around the state.

Land Use Regulations. Zoning and subdivision regulations are less effective in regulating development of important land resource parcels, but are also far less expensive. These types of regulations can guide development to ensure certain goals are accomplished. One valuable tool is Planned Residential Developments where developable lots are clustered to protect open space or other objectives. This type of flexible zoning tool allows the same number of developable lots as traditional subdivisions except that it also keeps the fields open and forests unfragmented.

## **Water Resources.**

From rivers and streams upon which to boat, fish and swim; groundwater to drink; and wetlands to store floodwaters, Belvidere has abundant, pristine water resources. The town's waters offer sustenance, scenic beauty, ecological values, and recreational opportunities and are important to the social, economic and cultural character of the community.



## Rivers and Streams.

Belvidere’s numerous brooks, streams and rivers have helped shape the local landscape and the historic mill economy on the North Branch. The North Branch Lamoille River flows from east to west across the center of Belvidere. The North Branch is part of the Lamoille River Basin, originating in Eden and flowing into the Lamoille River at Cambridge. Except for a few high elevation locations, most of the streams in Belvidere drain into the North Branch as part of the Lamoille River Basin (see watershed lines on Map 4.9 Water Resources). Some northern slopes of the Cold Hollow Mountains drain north into West Hill Brook, Cold Hollow Brook, Cooks Brook, and Ross Brook- eventually making their way to the Missisquoi River. The South Branch of the Trout River begins in Belvidere before exiting into Montgomery along Route 118 and entering the Missisquoi in Berkshire. The South Branch (Missisquoi Basin) drains some of the wetlands in the Belvidere Corners area especially during periods of high water. The largest brooks in Belvidere are the Streeter Brook, North Fork, Rattling Brook, Otter Brook, and Calavale Brook from the north; and the Basin Brook from the south.

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## Stream Banks

Vegetation along stream banks, or riparian habitat, not only shades the water, keeping it cooler and thus more tolerable for certain species of fish, but also provides cover for other wildlife, is aesthetically desirable, and prevents stream bank erosion.

According to the Vermont Agency of Natural Resources, River Management Section, several of Vermont's wildlife groups are highly dependent on riparian areas for their habitat needs. In addition, removal of riparian vegetation for development or conversion to agricultural uses is detrimental to water quality because of increased erosion risk and the elimination of filtration functions provided by the buffer. Erosion results in decreased water quality from additional suspended sediments, increased nutrient loading from overland runoff and increased risk of flooding due to losses in flood storage capacity and increased velocity, and its effects are often more severe downstream than at the point of erosion itself.

Belvidere supports the maintenance or construction of vegetative buffers in riparian areas. The short term drawbacks of lost tillable land acreage are more than offset by the bank stabilization power of buffers, which results in long term conservation of important agricultural resources. Road construction projects should avoid riparian areas, and filling, dredging or gravel extraction in or near rivers and streams should be avoided.

## River Attractions in Belvidere

### *Kelly River Falls*

Kelly River Falls is a small set of cascades adjacent to Belvidere Junction just north of Route 109. The Waterfalls, Cascades and Gorges of Vermont survey conducted in 1987 and later the Waterfalls, Cascades and Gorges of Lamoille County in 1991 identifies this area as having local importance. While there have been no updated surveys, the status of the Falls has not changed. The falls are a popular place for fishing and swimming. The shores are privately owned and the owners do not have them posted. The landowners maintain the area-keeping it clean and discouraging noisy and messy users.

### *Whitewater Boating*

The North Branch of the Lamoille River is a challenging and noteworthy stretch of whitewater enjoyed by many kayakers and canoers. Boaters put in below Long Pond in Belvidere Corners at the Route 118 bridge and go through a Class III or IV gorge, travel a 6-mile stretch of Class II whitewater and then are challenged by another stretch of Class III/IV water upstream from Waterville. It is described as having "excellent to outstanding" scenery and as "pristine" (Draft Lamoille River Basin Water Quality Management Plan, 2008).

### *Fishing.*

Fly fishing for trout is a popular activity in rural Vermont for locals and tourists. The numbers of rivers with good habitat for wild trout are decreasing, and many either are stocked or no longer

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have trout. According to the Draft Lamoille River Basin Water Quality Management Plan (2008), “much of the North Branch is a moderate to high gradient stream with populations of wild brook, brown, and rainbow trout...with the upper North Branch and its many high-gradient forested tributaries in Belvidere dominated by wild brook trout”.

## Lakes and Ponds.

Belvidere has no lakes and only a few small ponds in town. The only named pond is Lost Pond, which can be found at the headwaters of Rattling Brook. Off in the woods and near the top of a hill, the appropriately named pond is far from any roads. Although not officially named, McGookin Pond off Route 118 is of similar size and is also in a very isolated spot.

## Wetlands.

The term wetland is used to refer to areas that are inundated with water either seasonally or year-round. They are commonly referred to as swamps, marshes, bogs, fens or other such names. Wetlands share three basic characteristics:

- The presence of water at or near the ground surface,
- The presence of water dependent plants occurring on site, and
- Common types of soil that have formed as a result of the presence of water.

Wetlands serve a number of important functions, including stormwater retention, erosion control, ground water recharge, and wildlife habitat. The U.S. Department of the Interior has mapped wetlands and each town has a set of National Wetlands Inventory Maps. These maps were made using aerial photos. They are useful for assessing the general character of a particular area, but are not accurate enough to determine the nature of a particular property without a site visit.

Vermont's wetland regulations are based on the Vermont Significant Wetlands Inventory (VSWI) (Map 4.10). The VSWI designates all of the wetlands identified by the national inventory in Belvidere as Class II, which require a 50-foot vegetated buffer between the wetland and any adjacent land development. If any area is determined to be of importance, the town may request Class I designation and will receive a 100 foot buffer protection.

Belvidere Bog is one of two bogs singled out as significant by the Draft Lamoille River Basin Water Quality Management Plan (2008) for the Northern Green Mountain Region. The Belvidere Bog wetland complex is located at the headwaters of the North Branch and is approximately 375 acres. A number of wetland types are present in this complex including shrub swamp, cedar swamp, shallow marsh, mixed shrub swamps, deep marsh, a rare dwarf-shrub bog community and numerous beaver ponds. The wetland complex is highly significant for its size, diversity and function in the watershed. The Belvidere Bog wetland complex has been rated highly significant for cold-water fishery habitat, water quality protection, erosion

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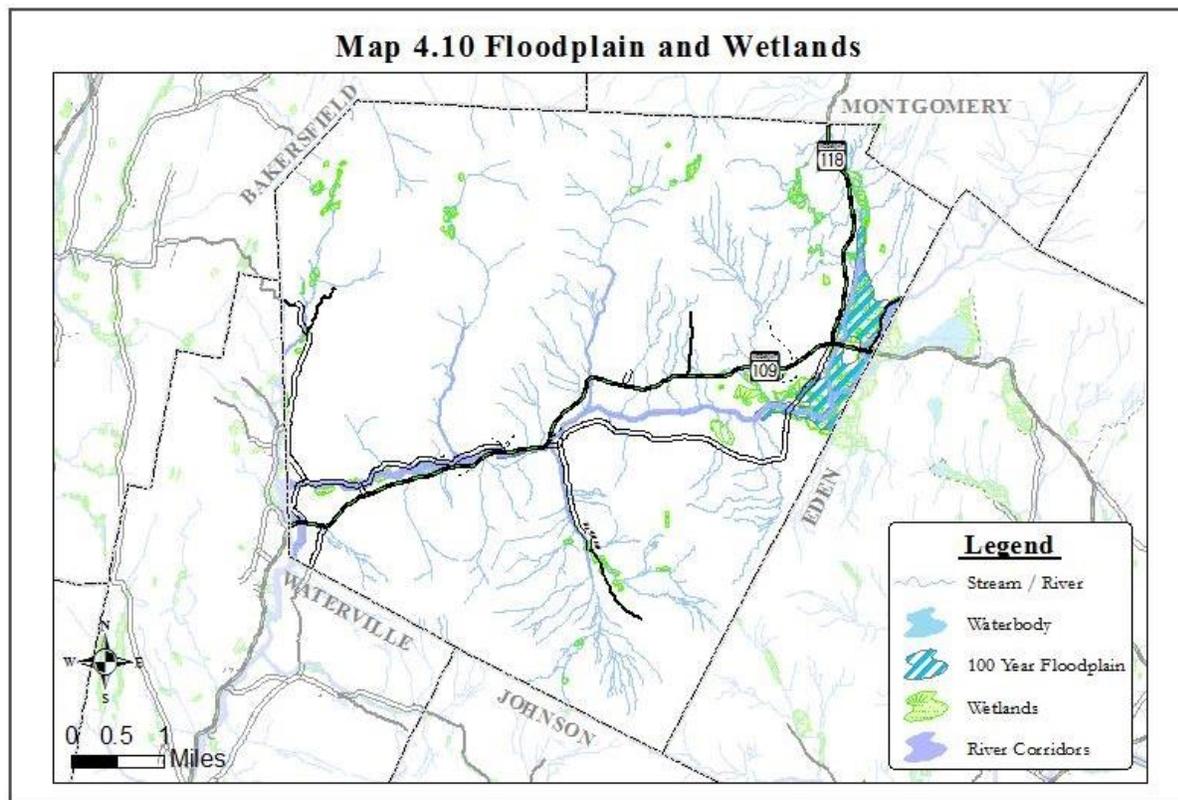
control, education, recreation, and wildlife habitat. The wetland complex is considered habitat for the state's endangered common loon (*Gavia immer*), the endangered Southern Twayblade orchid (*Listeria australis*), and also was rated as a high quality northern level bog. The size of the wetland complex and the undisturbed area surrounding the complex makes this area suitable for wildlife species that need large ranges such as black bear, bobcat and moose.

According to the Draft Lamoille River Basin Water Quality Management Plan (2008), Belvidere Bog could be at risk of being impacted by runoff from agricultural, silvicultural, and residential development runoff. To protect Belvidere Bog from these impacts, the Town can encourage purchase by the Agency of Natural Resources of the bog and surrounding buffer area. Currently only a portion of the wetland complex is owned publicly. The second set of protection methods is to petition the state to have Belvidere Bog declared a Class I wetland and request its inclusion on the Fragile Areas Registry. This will provide greater protection from encroachment and identify the area as being significant.

## **Flood Hazard Areas.**

Floodplains are land areas adjacent to water bodies, primarily rivers, which are subject to seasonal or periodic flooding. These areas store runoff during heavy rains and spring thaws, thus slowing the velocity of water flowing downstream. Floodplains are considered unsuitable for development for several reasons: potential danger to life and property, loss of flood water storage, effects on channel capacity and downstream communities, and improper functioning of subsurface sewage disposal systems when there are high water tables. Construction of impervious surfaces, such as driveways and homes, hamper the ability of floodplains to absorb water, and to assimilate nutrients from residential and agricultural runoff. More suitable uses, such as recreation and agriculture, will ensure a higher level of riverine health, and will prevent property and environmental damages associated with flooding.

Other flood hazards result from flash flood situations in particular along steeper stream sections. Clearing of vegetation cover and constructing impervious surfaces, like roofs and parking lots, increases storm runoff particularly in higher elevations. To prevent flash flood situations, developments cannot increase the volume or velocity of streams. Channelizing and straightening streams increases stream velocity and increases the risk of flash floods. Many times, roads and driveways up steep hills create perfect conditions for flash floods because they are designed to rapidly drain water from the surface and send it downhill in a straight steep ditch.



## ***Flood Protection Programs***

Belvidere participates in the National Flood Insurance Program (NFIP). Communities are required by the Federal Emergency Management Agency (FEMA) to adopt flood hazard regulations under the NFIP, which is structured to minimize risk to life and property. Regulations are required for property owners to become eligible for home mortgage loans and flood insurance. Belvidere adopted a stand-alone Flood Hazard Area Regulation Ordinance in 2000, which places regulations on areas of Special Flood Hazard as identified on the Federal Emergency Management Association's (FEMA) National Flood Insurance Maps. The areas designated as Zone A in the Special Flood Hazard Areas are those that have a 1 percent chance of flooding in any given year (the 100-year floodplain, Map 4.10). FEMA's Flood Insurance Rate Maps can be found in the Town Clerk's office. Unfortunately, these maps have not been updated since 1980 and may no longer provide the most accurate information. The 100 year floodplain (for planning purposes only), is shown in Map 4.10.

The Better Backroads Program from the state has road standards to avoid erosion and flash floods resulting from road design and construction. In 2002, the Selectboard improved Boarding House Hill Road with rock lined ditches and new culverts using funds supplied by the Better Backroads Program. This road had been experiencing routine washouts during heavy storm events. It is hoped that with these improvements, costs will be saved on repairs and water quality of the North Branch will be maintained.

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Belvidere has also adopted driveway standards to protect against washouts. The Selectboard should consider adopting state road standards so that any new roads, public or private, will be constructed to avoid flooding.

## Groundwater Resources.

Groundwater is the source for over 90% of the drinking water for rural communities in Vermont. It is replenished through rain and surface waters, which percolate through the soil. Any activity that introduces contaminants directly into the ground (such as underground storage tanks, septic disposal fields, and agricultural activities) can affect groundwater quality. Since surface waters may also travel underground, surface water quality may affect groundwater quality as well.

Since all water in Belvidere is provided through private wells and springs, it is important to protect the quality of well water through appropriate separation between wellheads and septic disposal fields and other hazards. All wells and springs are required to meet Vermont's Water Supply Rules. According to the Vermont Geological Survey, the lands along Route 109 between Rattling Brook and Belvidere Corners have soil and geological characteristics that provide the best potential for groundwater.

The Agency of Natural Resources is responsible for the Vermont Source Protection Program to protect Vermont's public water sources. A public water supply is defined as any water supply system with fifteen or more connections or that serves at least 25 individuals daily at least 60 days per year. Source Protection Areas are defined around public water sources where contaminants are likely to move. While there are many private wells and springs, there are currently no public water source protection areas within Belvidere.

Without detailed information about the direction of groundwater flow in Belvidere and surrounding communities, it is vital that all groundwater recharge areas town-wide be protected from activities that could contaminate the drinking water supply of residences.

## Surface Water Class.

Vermont's waters are classified according to a system that establishes goals to be attained or minimum standards to maintain, depending upon the present quality of a particular section of water. Assessments done during the Lamoille County Stream Stability Assessment (LCPC 2000) found that the North Branch is in excellent condition from its headwaters to Belvidere and in good condition through Belvidere. The section of the North Branch has very stable and in near-reference condition. The North Branch exhibits excellent riparian corridor quality, access to its floodplain, and little channel and bank erosion. Fish and macro invertebrate sampling was done on the North Branch in Belvidere during September 1992. A memo on the fish sample results stated: "the water appears to be a tannic color with low to moderate alkalinity. The physical habitat of the section was characterized by minimal sedimentation and a boulder-cobble-course

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gravel substrate. The population integrity was rated excellent due to the dominance of benthic insectivores combined with a strong presence of three trout species. Four of seven species collected were considered intolerant to general pollution effects... The Vermont Index of Biological Integrity rated excellent (43 out of a possible 45).” The macro-invertebrate community also was rated to be in excellent condition (Lamoille River Watershed Assessment Report, 2001).

Until recently, the Vermont Surface Water Management designation included two classes: A and B. Now, water is classified into five groups: class A(1), A(2), B(1), B(2), and B(3) depending on their management plan. Class A waters were divided into two subclasses: A(1) and A(2). Presently in the state, Vermont Statute classifies waters above 2,500 feet in elevation as A (1). The management objective for A(1) waters is to maintain their natural condition. Waters used as public water supplies are classified A(2). All remaining waters are class B(1), B(2), and B(3). The typing system (as it is termed) for class B waters is, for the most part, maintenance of acceptable conditions of water quality criteria such as aquatic biota, aquatic habitat, and recreational opportunities. A simplification of the B(1), B(2), and B(3) designations would be to say that the spectrum from B(3) to B(1) is described as “good,” “better,” and “best” aquatic conditions. All class B waters must still support the designated uses described in the Vermont Water Quality Standards for Class B waters, which includes suitability for boating, swimming, and drinking with treatment. Classification of Belvidere’s Class B waters has been postponed.

There was an effort to classify the North Branch of the Lamoille River as a Class A1 water in the early to mid-90s. Despite a number of letters from residents, private consultants, and state officials supporting reclassification, the process was never completed and the petition never filed with the Board.

## Basin Planning and Geomorphic Assessments.

In 2008, the Vermont Agency of Natural Resources completed a draft watershed plan for the Lamoille River for the purpose of improving water quality and aquatic habitat in the watershed. The draft Lamoille River Basin Water Quality Management Plan identifies many issues that need to be addressed to improve water quality in the Lamoille River Basin. The Plan does not identify any specific water quality projects in Belvidere because the North Branch and its tributaries generally have very good water quality. It is important for the Town to manage riparian habitats and runoff to maintain the water quality for future generations.

An assessment of the fluvial geomorphology, or how flowing waters shape the land, while eroding, transporting, and depositing sediment, was done during the Lamoille County Stream Stability Assessment (LCPC 2000). That study found that the North Branch is in excellent condition from its headwaters to Belvidere and in good condition through Belvidere. The section of the North Branch is very stable and in near-reference condition. The North Branch exhibits excellent riparian corridor quality, access to its floodplain, and little channel and bank erosion.

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While the shoreline of the North Branch is in excellent condition there are no regulations in effect to prevent encroachment or other threats to the health of the river. Enforcement of the on-site septic and floodplain regulations is important to protecting water quality but additional shoreline regulations would better protect this resource. The VT Agency of Natural Resources is using the results of geomorphic assessment studies to map fluvial erosion hazard (FEH) corridors. Limiting development within these areas will minimize risk and provide streams the opportunity to reestablish a stable, equilibrium condition. Maintaining vegetated buffers around waterways also helps to minimize risk to property and provides water quality benefits. These buffers can be incorporated into local ordinances to ensure that future development does not further encroach on the Town's waterways. FEH maps and other resources provide a way to identify the appropriate buffer width needed to protect a river corridor.

Stormwater runoff from impervious surfaces, such as roads, roofs, and parking lots, and agricultural runoff are the two largest contributors to water pollution in the Lamoille Basin. The Department of Agriculture has produced 'accepted' and 'best' management practices for farms and silvicultural operations (AAPs and BMPs are also discussed above in soil resources). The primary concern with agricultural runoff is nutrient loading into the streams causing algae and biological pollution down stream. Where farms are believed to be having an impact on water quality, BMPs and other measures can be used to help prevent the runoff from entering the streams. Belvidere has no dairy operations and the existing farms are generally small. Complying with AMPs and BMPs should, therefore, not be difficult. The Planning Commission will assist landowners who are looking to adopt management practices that prevent agricultural runoff with information and direction to USDA in Morrisville. There are many other organizations in Lamoille County also willing to contribute supplies and expertise to resolve water quality issues if the interest exists.

Runoff from logging operations will have impacts on water quality if erosion increases sediment runoff into streams and wetlands. Use of AMPs and BMPs mitigate these effects. Most loggers are aware of these requirements and comply with them. Anyone looking for information or assistance in complying with these standards should contact the County Forester for information.

New changes in state regulation are requiring tighter regulation of this issue. Using some basic development standards should prevent this from becoming an issue. Developers who 1) setback projects at least 50 feet from streams and 2) avoid channelizing runoff will be helping to ensure stormwater runoff does not enter waterways. These rules can be required through zoning bylaws but educating landowners can work effectively as well. Addressing the stormwater issue now is far easier than trying to go back and retrofit old developments as is being proposed in other communities.

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## **Fragile and Natural Areas and Wildlife Resources.**

### **Fragile & Natural Areas.**

In 1976, the State of Vermont created an inventory of significant natural areas throughout the state. While natural area designation does not provide a site with any additional protection from development, it does act as a tool for increasing local knowledge of Vermont's important natural heritage. Only three sites in Belvidere were placed on the Natural Areas Inventory and none of these were placed on the Fragile Areas Registry. The sites placed on the Natural Areas Registry include:

#### ***Belvidere Bog***

As discussed above in water resources, Belvidere Bog is approximately 375 acres of wetlands including seven different communities. It contains endangered species and habitats and, while not on the Fragile Areas Registry, is likely a candidate for inclusion. The registry would require any state action or state owned lands to meet a water and land use plan. Private lands would not be required to meet standards although recommendations are made.

#### ***Deer Yards***

The deer yards in Belvidere were placed on the Natural Area Inventory due to their crucial importance to the survival of deer in town in the winter. They are discussed further below.

#### ***Kelly River Falls***

Kelly River Falls is a small set of cascades adjacent to Belvidere Junction just north of Route 109. As discussed in the water resources section, the falls have local importance. It is unlikely the area would qualify for the Fragile Area Registry.

### **Critical Wildlife Habitat in Belvidere.**

Vermont has identified several unique natural habitats in Belvidere, including deer habitat, bear habitat, locations of rare, threatened, and endangered species, and fisheries (Map 4.11).

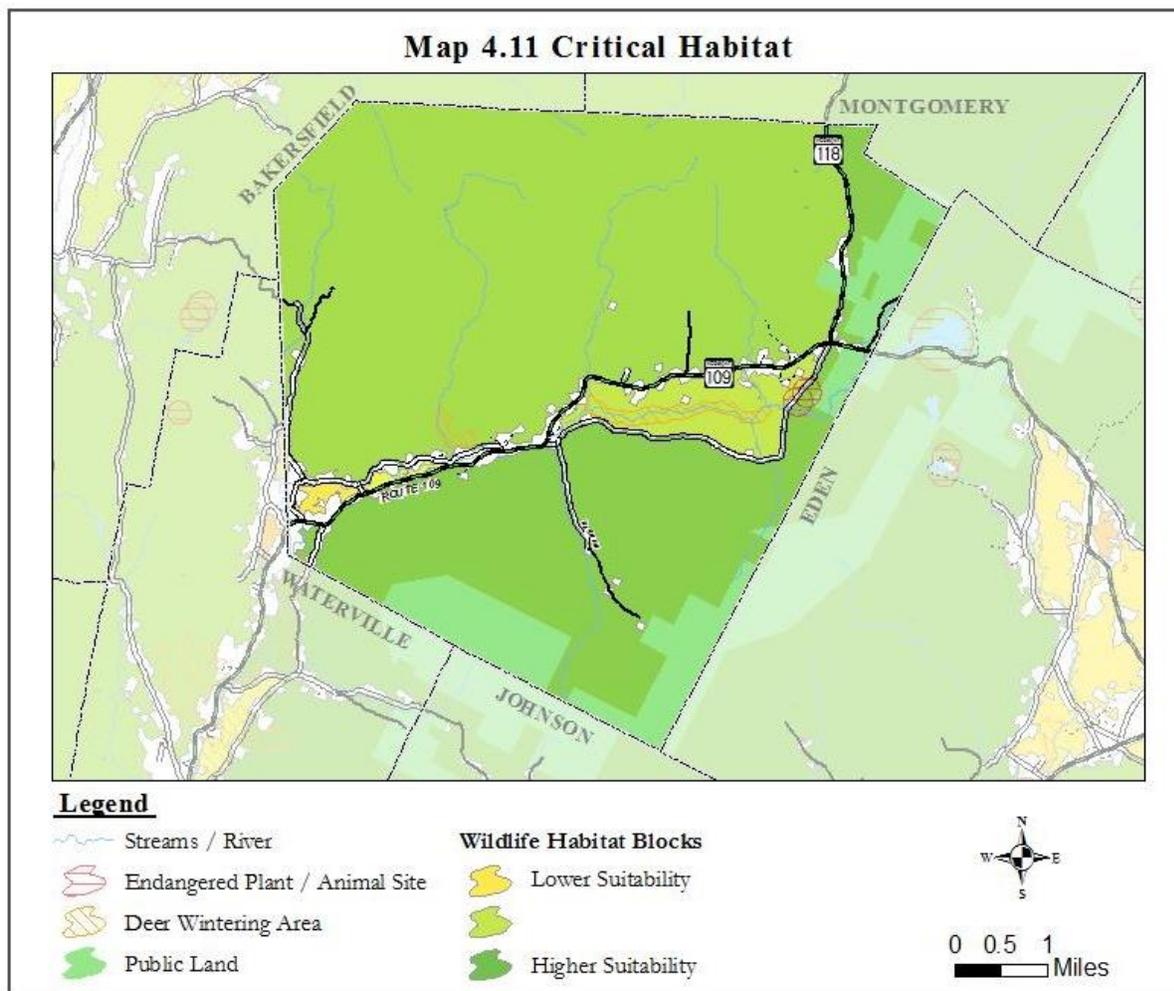
#### ***Deer Wintering Areas***

Vermont's deer require specific winter habitat in order to survive the seasonally severe weather and heavy snowfall. Winter deer yards provide two features important to whitetail deer survival: shelter and food. Statewide, between 6% and 8% of Vermont's forestland is suitable for winter deer range under average winter conditions. Wintering areas do not change significantly between years and can be used by generations of deer over several decades if appropriate habitat conditions are maintained.

#### ***Bear Habitat***

Bears require large areas of uninterrupted forestland for breeding. They also require travel corridors to move from one part of their habitat to another, especially as forested areas may be subdivided and developed. The Vermont Department of Fish and Wildlife prepared a map of

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black bear habitat in 1989 to indicate general areas of bear habitat. According to this map, all of Belvidere has been identified as bear habitat.

## ***Rare & Endangered Species Habitat***

Rare plants and animals are important for a variety of reasons. Some are indicators of unusual habitats or of colder (or warmer) climates in Vermont’s distant past. Some serve as indicators of environmental quality. Some species may provide compounds for medicines or agricultural or industrial products. Finally, some are attractive and add beauty to the natural landscape. Many uncommon species will disappear if not recognized and given some form of local protection.

All of Belvidere’s known rare and endangered species are associated with Belvidere Bog. Protection of this area is vital to these species and the Planning Commission should coordinate with the state to ensure the long-term preservation of the site.

## ***Fisheries***

According to the Draft Lamoille Basin Water Quality Management Plan (2008) Vermont Rivers Study, the North Branch has a naturally sustaining population of brown and brook trout along

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its entire length. State water quality records show that Belvidere Bog wetland complex has been rated highly significant for cold-water fishery habitat. Quality fisheries are important for recreation and for their role as a part of a healthy riparian environment.

## **Conclusions.**

Based on the findings of this chapter, the land use plan should consider two districts to protect the natural resources of Belvidere - a Natural Areas District and a Forest District. First, a Natural Areas District should be established that encompasses areas that are environmentally sensitive. Two areas stand out for consideration. Belvidere Bog is clearly a local treasure of statewide importance. Establishing a district to protect this area would be important to the long-term management of the area. Second are the high elevation areas of Cold Hollow and Laraway Mountains. Both of these mountaintops are over 2,500 feet, have shallow soils, are generally greater than 30 percent slope, and have erodible soils. While forested, these areas may not be appropriate for timber management due to the high risk of soil erosion. The land use plan should address mechanisms that would protect these areas without causing an undue burden on property owners.

The Forest District is needed to protect the prime forestlands that exist in town today from fragmentation and development. These areas are the best land for timber management which have forest soils, shallow slopes, and presently in large lots. While areas under 1,500-foot elevation may be appropriate for development, those above 1,500 feet should be conserved as working forestland (unless limited by the environmental concerns mentioned above). Again, any potential loss of development rights by property owners will need to be addressed in the implementation of the plan.

Within the Development District, regulation of uses adjacent to streams and rivers would go a long way to protecting water quality, wildlife habitat, and the health and safety of the public.

## **Goals, Policies, and Recommendations.**

This Town Plan has three goals concerning natural resources - to regulate growth so that:

- Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
- Timberland management is economically feasible in the wooded area.
- Agricultural use of land is encouraged and protected.

### **Natural Resource Goals:**

Discussion: In order to achieve these goals, Belvidere needs to identify and protect the natural resources that make the foundation of the working landscape. Belvidere today has an abundance of resources from clean water to healthy forestland to natural areas. Belvidere has

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adopted three goals in hopes that future generations not only have the same opportunities we have but are given a stronger healthy environment in which to work, live, and play.

- To use Belvidere's earth resources conservatively for the benefit of existing and future generations and to conserve and enhance the agricultural and forestry soils in town today.
- For Belvidere's water resources, including its ponds, streams, rivers, wetlands, groundwater, and associated habitats to be preserved and, where degraded, improved in order to ensure water quality for drinking, recreation, and the environment.
- To protect and maintain in a healthy condition natural areas and areas with significant ecological value including wetlands, uplands, and critical plant and animal habitats.

## Policies:

Discussion: The Town has developed the following policies in order to guide development in such a way as to protect the natural resources and achieve the goals mentioned above. Until other land use regulations are adopted, the town will be limited to commenting on Act 250 proceedings therefore any application should be reviewed in light of these policies. Many of the policies are not burdensome and residents are asked to consider them in planning projects. If issues such as water quality, gravel operations that become a nuisance, or development that threatens our natural areas come to light, the planning commission should consider proposing regulations that would oversee projects in these areas.

## Land Resources.

- Earth resources (primarily gravel) should be reasonably developed if deemed to be in the public interest.
- Development that is proposed near or over important earth resources should account for the potential loss of that resource.
- Extraction and related processing operations will be permitted only when it has been demonstrated that there will be no undue adverse impacts on the town or its residents. Potential conflicts between current land use and proposed extraction operations will be minimized. Strict standards for the operation, maintenance, and restoration of extraction sites may be established as appropriate based on the unique conditions of the area affected. The full restoration of extraction sites will be ensured through the submission of site restoration plans.
- All development within the Town must be pursued with strict regard to the capability of the soils to support it.
- Development on slopes greater than 30 percent are prohibited.
- Further fragmentation of productive agricultural and forestland is to be avoided; continued access to productive forest and farmland will be ensured.
- Development within forest areas will be sited to avoid taking forest soils out of

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- production.

## *Water Resources.*

- Development near rivers and streams should be located in such a way as to minimize the number of stream crossings.
- A natural vegetative buffer 25 feet wide is required for all streams and 50 feet for the North Branch.
- All wetlands are required to have a 50-foot buffer. No filling or draining of wetlands is permitted. Belvidere Bog should have a 100-foot vegetative buffer.
- No structures should be constructed within a flood hazard area. Filling of the flood hazard area or obstructing the flow of floodwaters is also prohibited.
- Agriculture, recreation fields, parks, and open space are all appropriate uses of flood hazard area.
- No form of land waste disposal or storage of possible contaminants should be permitted in high water table and ground water recharge areas.
- All construction where soil is to be disturbed should provide adequate erosion control so that no soil moves off site or into surface waters or wetlands.
- Agriculture and forestry must abide by AAPs and AMPs. Where an activity may have a negative impact on water quality, BMPs are recommended.

## *Natural & Fragile Areas.*

- Development proximate to Kelly River Falls and Belvidere Bog will take place in such a way as to preserve their value for education, science, research, aesthetics, and recreation.
- Deer wintering areas must be protected from development and other uses that threaten the ability of the habitat to support the species. Commercial, residential, and industrial development shall not occur in these areas. Development will be permitted adjacent to deer wintering areas only if it is demonstrated, in consultation with the Department of Fish and Wildlife, that the integrity of the area for deer habitat will be preserved. Rare, threatened and endangered plants and animals and their habitats will be protected and preserved through appropriate conservation techniques. Where appropriate, a buffer strip should be designed and maintained to ensure protection.

## Recommendations:

### *Land Resources.*

- The Town should consider purchasing the rights to a gravel pit or to purchase a property with sufficient gravel resources to provide for the town's needs in the future.
- Municipal gravel pits in Belvidere should develop plans to address environmental impacts as well as future restoration of the sites.

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- Farm and forestland owners are encouraged to participate in the UVA program.
- The Planning Commission should assist landowners interested in Accepted and Best Management Practices with information and resources.
- The Town should support the efforts of organizations in the purchase of development rights and other conservation methods provided the land protected meets the objectives of this plan. Where possible, the planning commission should review proposed purchases and comment based on the goals of this plan.

## *Water Resources.*

- The Planning Commission should consider acquiring funds to have a wetland inventory of the town conducted.
- The Town should consider purchasing properties or development rights of properties within the floodplain to permanently prevent development in those areas.
- The Planning Commission should consider creating a plan for the flood hazard areas to address recreational opportunities, flood hazard protection, and the potential for implementation of water quality measures.

## *Natural & Fragile Areas.*

- Belvidere supports the acquisition of lands within and around the Belvidere Bog by local or state conservation agencies.
- The Town should petition the state to include Belvidere Bog on the Fragile Areas Registry as well as a Class I wetland so that the area is given the greatest amount of protection from any potential encroachment.
- As a result of living in Belvidere, many landowners have an ethic to be good stewards of the land. The Planning Commission recognizes that more can be accomplished by educating, advising, and assisting landowners with their natural and wildlife resource concerns than could be accomplished through regulations. The Planning Commission will support and provide guidance to any property owner with questions or concerns about their natural resources.

## Education

### Current Facilities.

Belvidere Central School is situated on a wooded lot just west of Belvidere Center on VT Route 109. Constructed and dedicated in 1995 the modern design of the building is energy efficient and meets all state safety and accessibility codes for educational facilities. In 1998 10.2 additional acres were purchased as a buffer zone to protect the water supply developed on the original 82.8 acre site.

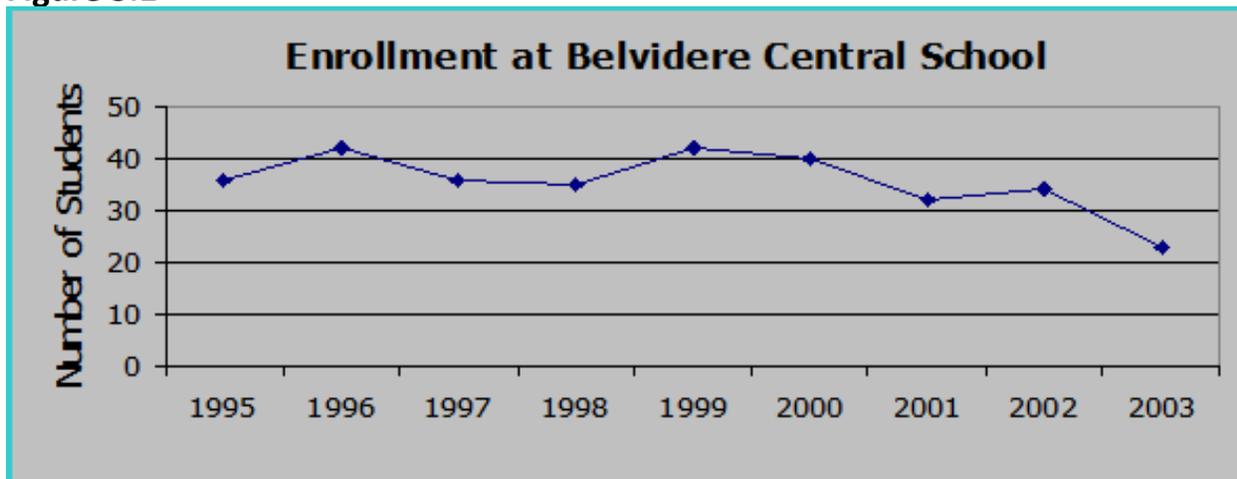
The building is fitted as a Community Resource Center. In 2003 a generator meeting FEMA standards for production of electricity in the event of a power failure was installed to better equip this site for continued use as a FEMA emergency shelter for the town. The central location, outside the floodplain, with frontage along Route 109, provides for easy access for emergency services.

As a member of Lamoille Union High School District #18, Belvidere students in grades seven through twelve attend Lamoille Union Middle School (LUMS) and Lamoille Union High School (LUHS) as well as the Green Mountain Technology and Career Center (GMTCC) located at a common site on Route 15 in Hyde Park, Vermont.

### Enrollment History and Projections.

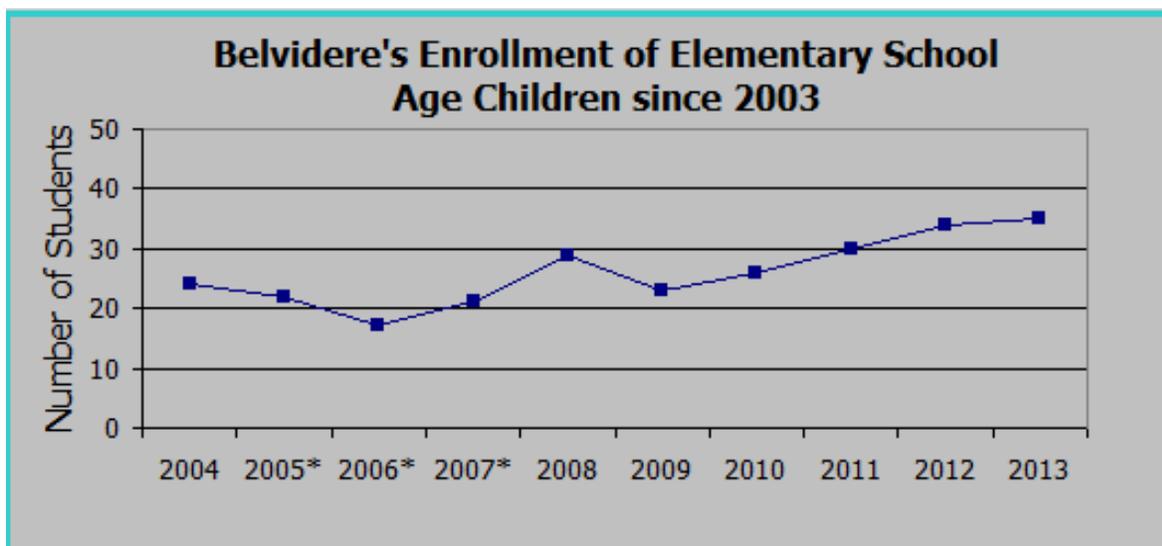
Figure 5.1 shows the enrollment at Belvidere Central School since it's opening in the 1995-1996 school year until temporary closure in the fall of 2004. Between 1999 and 2006, the number of school age children in Belvidere declined 42 to 18. Since 2006, the number of school age children in Belvidere has increased from 18 to 35. The decision to provide for the elementary education for the pupils residing in the district by paying tuition to one or more school districts was approved in 2004. After some study the school board chose to pay tuition to the town of Waterville and temporarily close the school. This issue may be revisited to determine what is in the best interests of the students in town. This is discussed in more detail under Issues Surrounding Educational Facilities and Services.

**Figure 5.1**



Source: Belvidere Annual Reports

**Figure 5.2**



Source: Belvidere Annual Reports

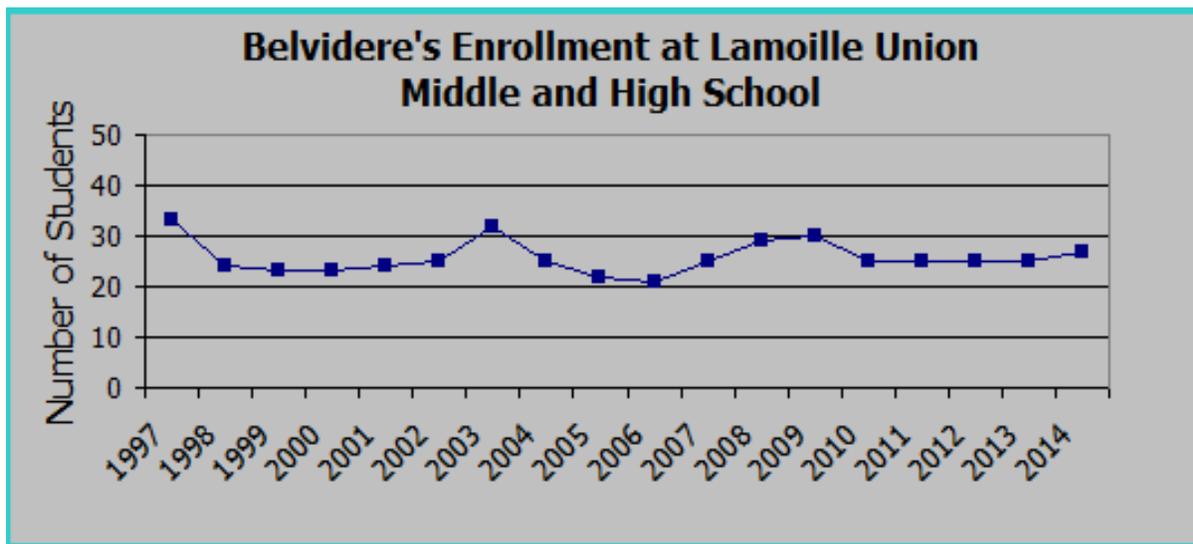
The Belvidere Central School was designed to accommodate approximately 60 students in pre-school through sixth grade. If the number of school age children increases over 60 the design plans, core mechanical, and core facilities are all in place should expansion be needed in the future, which could easily accommodate an additional 50 students.

LUMS and LUHS accommodate approximately 900 students and are not considered to have a space problem at this time. LUMS opened a new wing on the school in 2002 for seventh and

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eighth grades to alleviate the overcrowding that had been a problem for years. Belvidere's enrollment at LUMS and LUHS is shown in Figure 5.3.

**Figure 5.3**



Source: Source: Belvidere Annual Reports, Lamoille North Supervisory Union

## Current Educational Services.

Since 2004, pre-kindergarten through sixth grade students are tuitioned to Waterville Elementary School (Figure 5.2).

LUMS provides education to seventh and eighth grades and LUHS provides for grades 9 through 12. Parents may also pay to send their children to private school or other public high school if accepted. GMTCC offers career and technical education to all incoming juniors and seniors as well as adult learners in the surrounding school district areas. There are programs in automotive technology, business administration, computers, forestry and land management, manufacturing technology, and health and human services among others.

Home schooling in Belvidere has been an option used by some families in recent years. The exact number of students being home schooled is not known. Parents interested in home schooling their children must have a plan approved by the state. Although the town school district does not receive funding to help educate home-schooled students, Lamoille North Supervisory Union works to assist their efforts through access to services and resources such as music, the library, and extracurricular activities.

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## **School Governance.**

The Belvidere School Board is responsible for developing the budget and overseeing the administration of the school. The Board of Directors has three seats, each for a three-year term. Every Town Meeting one position is filled on this board.

Similarly the Lamoille Union Board of Directors is responsible for overseeing the budgets and administration of the Lamoille Union School District #18. There are twelve seats on the board of which Belvidere has one seat, which is elected at town meeting for a three-year term.

## **Education Costs.**

### **Cost of the Facilities**

The bond on the Belvidere Central School is \$30,000 per year plus interest. The school bond has been paid annually since 1995-1996 school year and should be completely paid off by 2015.

The bond for Lamoille Union is more substantial. Belvidere's share of debt service is paid through a tax rate to District #18.

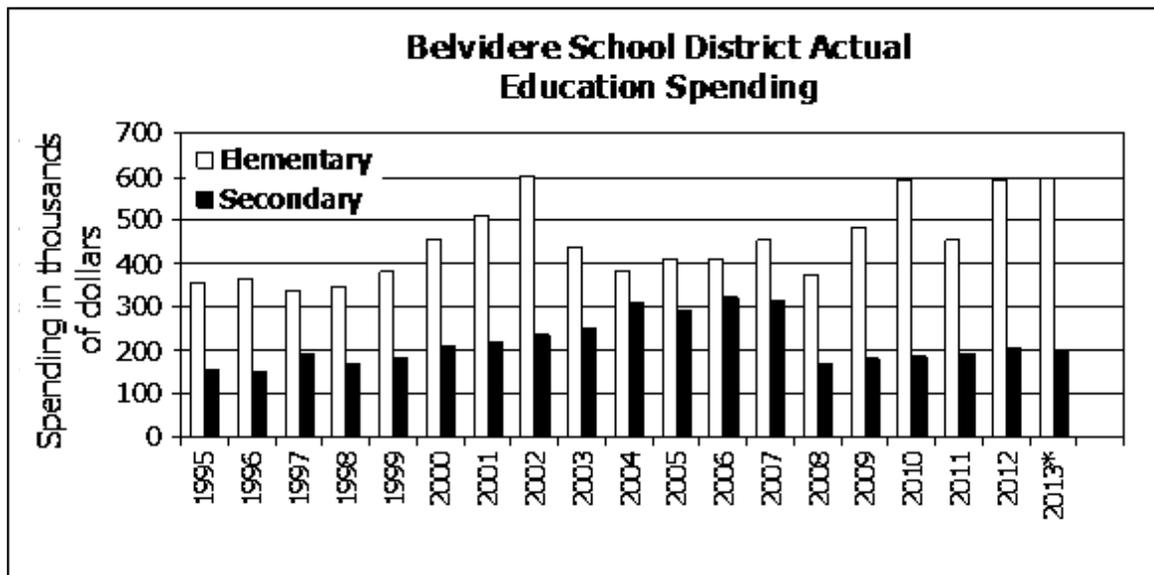
### **Cost of providing education**

The cost of providing education has been increasing across the state and is routinely an area of debate at Town Meeting. Belvidere School District spending on education (including debt service discussed above) is shown in Figure 5.4. As can be seen, elementary education spending increased dramatically between 1998 and 2001 - a 45.7% increase in 3 years. The following year, elementary spending increased by another 18%, a result of construction costs associated with building the school. From 2004 to 2013, elementary spending reflects costs from tuitioning students to Waterville Elementary; education costs since this transition have remained relatively constant.

In 1997, a new formula for funding education at the state level was adopted. Act 60, as it is most commonly known, established a statewide tax rate of \$1.10 for education. While originally benefiting Belvidere greatly, Act 60's benefits have become less apparent with increased local spending and decreased state contributions. In 2003, with the passing of Act 68, some major changes were made to the funding formula. First, there are separate rates for residential and non-residential properties. The residential rate varies depending on per pupil spending with the lowest rate at \$1.10. The non-residential rate is a fixed rate at \$1.39. The second major change is that there is no longer a statewide sharing pool.

## **Figure 5.4: Belvidere School District Education Spending**

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\*2013 elementary figure is budgeted for FY 14

Source: Belvidere Annual Reports, Lamoille North Supervisory Union

## Issues Surrounding Educational Facilities and Services.

### Decreased enrollment

Very small schools, like Belvidere Central School, are at financial risk due to changes in enrollment. Every school in Vermont is provided a block grant based on the equalized number of students enrolled. As enrollment drops, there is less money coming from the state to pay for services. This requires the town to raise property taxes to make up for the lost revenue even if the budget remains the same or drops.

This scenario played out in Belvidere during the 2003-2004 school year. Enrollment from the previous year decreased 11 students (34% decrease) and meant a comparable loss in state funding dollars. Although Act 68 has helped small schools adjust to fluctuations in enrollment, the Belvidere School Board decided to tuition the remaining students to Waterville in the 2004-2005 school year. Whether this becomes a short term or long-term solution is yet to be determined.

### Other Educational Services and Facilities.

#### Bussing

Due to a lack of public transportation and the rural nature of Belvidere, the school district provides bus service to students tuitioned to Waterville and living on all roads except class 4 town highways and private roads. The school district provides these services through a private contractor.

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Bussing for high school students is provided through the article of agreement between the Town and the Lamoille Union School District.

## Libraries

Belvidere no longer has a public library and the library association is no longer active. Some books are still stored at the old South School from the library association that existed many years ago. The town should consider whether to recreate the association or perhaps join efforts with a neighboring community to provide residents with access to library facilities. The library at the Central School was expected to be publicly accessible when constructed although that has not yet occurred.

## Colleges and adult education

There are several places in Lamoille County where college level classes are available. In Morrisville, the Community College of Vermont (CCV) has a satellite office where classes are taught. CCV offers associates degrees in many programs including business, criminal justice, nursing, and liberal arts as well as a new program in massage therapy.

Johnson State College is a four-year liberal arts college that is part of the state college system and is located in the neighboring Town of Johnson. Johnson is also home to the Vermont Studio Center, an international artists' and writers' residency program.

As mentioned earlier, GMTCC offers adult education for anyone who is no longer enrolled in a traditional high school. Another resource for adult education is Central Vermont Adult Basic Education (CVABE) that has a learning center located in Morrisville.

CVABE is a non-profit organization that provides free instruction to individuals no longer enrolled in public school.

## **Goals, Policies, and Recommendations.**

The Town currently does not have any growth issues that will impact the education system. Unless enrollments increase dramatically in the next few years, the town will not oppose any development based on school capacity. With the school enrollment in decline the planning commission should monitor future growth to see if this trend continues or reverses. The drafting of regulations is not seen as being needed at this time but could be considered as a future alternative.

## Education Goal:

- To plan for growth and development in a way that allows Belvidere to provide quality education services and adequate facilities for all local residents without placing an undue burden on tax payers.

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## Policies:

- Future development should not exceed the capacity of the town to provide educational services.
- Belvidere recognizes the importance to our community of high quality early education and daycare. Belvidere supports organizations that provide these services.
- Belvidere supports the GMTCC and their efforts to broaden access to education for adult learners and to provide vocational opportunities for students.

## Recommendations:

- Belvidere continues to have an active role at the local level, as well as the Board of Directors of Lamoille Union High School District #18 and Lamoille North Supervisory Union.
- The town should urge our senator and representative to ensure the concerns of small schools, like ours, are not overlooked in State Education Funding formulas.

## Facilities and Services

### Facilities.

#### Water and Sewer.

Water and sewer systems are privately owned with the exception of a municipally owned water system that serves the school. Individuals wanting to install a septic system, to work on their leach field, or to drill a well need to receive a Wastewater and Potable Water Supply Permit from the Vermont Department of Environmental Conservation (DEC). After July 1, 2007 new rules took effect which delegated the authority of permitting private on-site water supply and wastewater systems entirely to the State of Vermont rather than municipalities, unless a municipality applies for and is granted delegation. Belvidere has not sought delegation and therefore does not have authority to review or permit wastewater systems as was done prior to 2007. Any complaint or discovery of a failing septic system may be referred to the Agency of Natural Resources (ANR) by the local Health Officer. Owners of failed systems will be instructed by ANR on how to bring their systems back to operating condition.

#### Storm Drainage.

Other than culverts associated with roadways, Belvidere does not maintain a storm drainage system. The State of Vermont regulates stormwater runoff on construction sites disturbing more than 1 acre of land and on substantial development and redevelopment projects (typically those creating more than 1 acre of impervious surface).

#### Telecommunication Facilities.

Fairpoint owns and maintains the phone lines in Belvidere. There are no cable or T-1 lines located in town.

There are no wireless telecommunication facilities located in Belvidere. The town has limited wireless coverage due to the terrain and lack of operating towers. Belvidere does not have any telecommunication tower regulations to guide future development of these facilities but the town can participate in any Act 250 application for such facility. The town's policy is for towers to be allowed within the Development and Forest Districts but not in the Natural Areas District or Mountain District.

A privately owned telecommunication tower exists in town although there are no antennas located on it. According to the Lamoille County Public Safety Communications Study (2001), this site would provide good coverage for emergency services providers when responding to calls in Belvidere. The town currently has poor to non-existent coverage. Unfortunately it may be a long time before public safety communications are upgraded, due to the cost, but the town should make arrangements now to assure use of the tower in the future. Although this study was

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commissioned for public safety, a private telecommunications provider could be encouraged to locate on the tower in order to provide cellular service to residents as well.

## **Telecommunication Facilities**

Purpose is to regulate the erection, construction, installation or substantial modification of telecommunication systems in Belvidere.

Belvidere supports residents having access to affordable telecommunication services.

The rights of residents to erect personal communication towers must be weighed against the objections on aesthetics grounds.

Telecommunication towers must not significantly increase town services that raise the tax burden for existing residents.

## **Locating a Tower**

Telecommunication towers should be collocated with other antennas to avoid tower proliferation.

When locating a tower, consideration must be given to;

- wildlife habitats,
- soil erosion,
- forestry,
- agricultural lands,
- scenic views, and
- recreational opportunity.

Clearing around telecommunication facilities must be limited to what is necessary to provide for safe operation of the facility.

## **Scenic Protection**

Towers must not create undue adverse impacts on the scenic and natural beauty of Belvidere.

To minimize conflicts with scenic values, tower design and construction must:

- be positioned as far away from important scenic viewpoints as possible.
- be sited in areas not highly visible to the traveling public, or from residential neighborhoods, historic districts, public spaces and outdoor recreation areas such as hiking trails;
- be sited in areas where the view of towers while travelling the highways of Belvidere is not seen over an extended period.
- be located in forested areas or be sufficiently landscaped to screen the lower sections of towers and related ground fixtures from public vantage points such as trails, roads, and water bodies;

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- use materials, architectural styles, colors, textures, screening and landscaping to promote aesthetic compatibility with surrounding uses and to avoid adverse visual impacts;
- not appear as a focal point in an important scenic view in Belvidere, with a preference for towers to be at the edge of scenic views.
- Where prominent views of a site exist, be located downgrade of the ridge and should not exceed the elevation of the immediate ridge;
- construct access roads to follow the contour of the land and to avoid open fields or meadows to minimize visibility;
- avoid peaks and ridges identified as scenic resources in the Historic, Scenic and Archeological Resources chapter of this plan; and
- Avoid the use of external lights.

## Tower Lights

Towers must not place lights on the tower unless required by the FAA rules.

## Tower Security

Towers must be protected from unwanted access by the public.

To limit access to the tower,

- a fence six feet high with a locking portal must be placed around the facility's tower base,
- the tower climbing apparatus must be limited to no lower than 12 feet from the ground, or
- the facility's tower may be mounted on a roof top.

## Tower Setbacks

The minimum setback distance between each tower and all surrounding property lines, overhead or utility transmission lines, other towers, electrical substations, public roads and dwellings must be equal to no less than 1.5 times the total height of the tower unless

- appropriate easements are secured from adjacent property owners and
- a waiver demonstrating there is no possibility of damage to structures or infrastructure in the event of a collapse is approved by Belvidere.

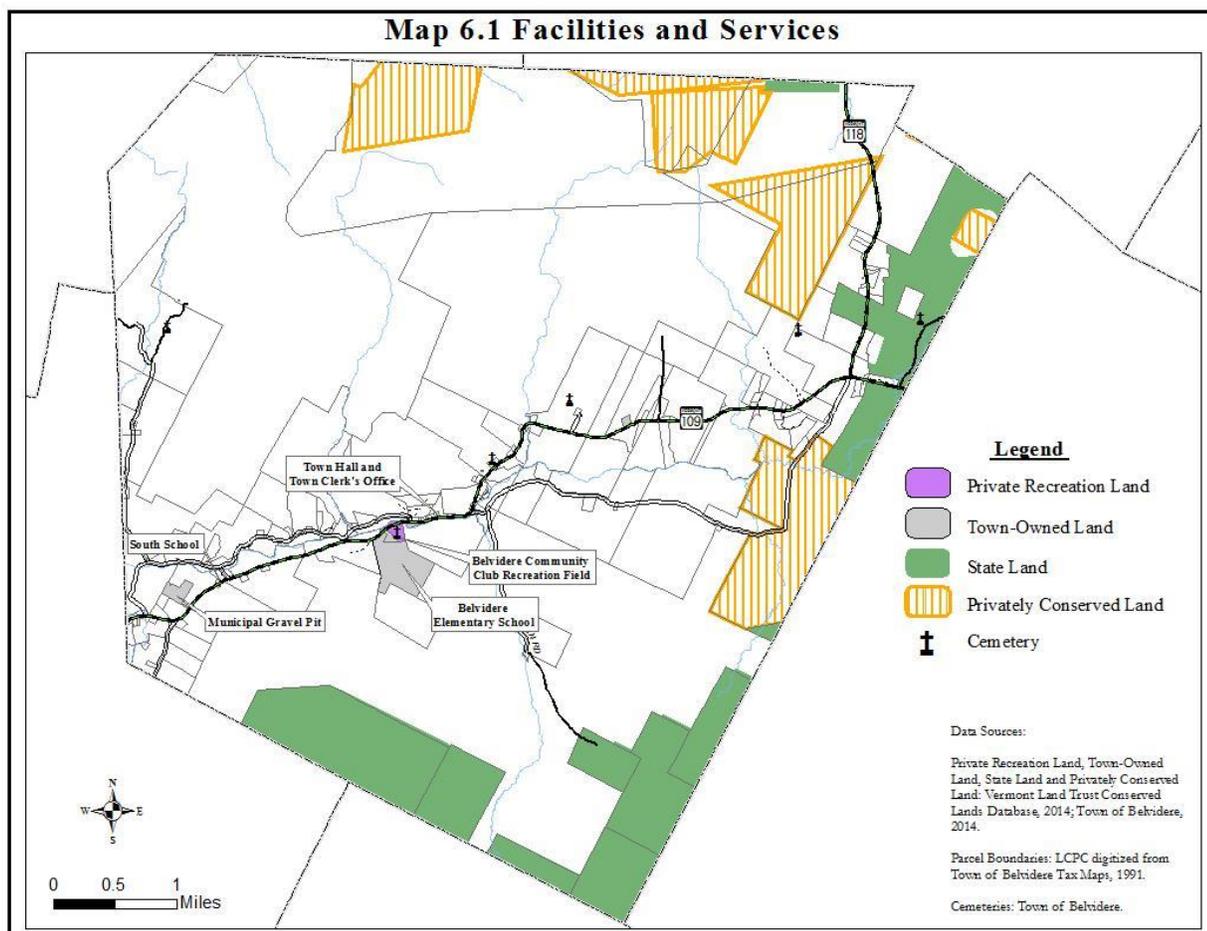
No part of the tower guy wire anchors, may extend closer than ten (10) feet to the property boundaries of the installation site.

In no case, must towers be located within 1.5 the height of the tower from public highways.

## Access Roads

Access to towers must use existing roads and trails for service and access roads.

When new roads are needed, access roads must be designed to minimize



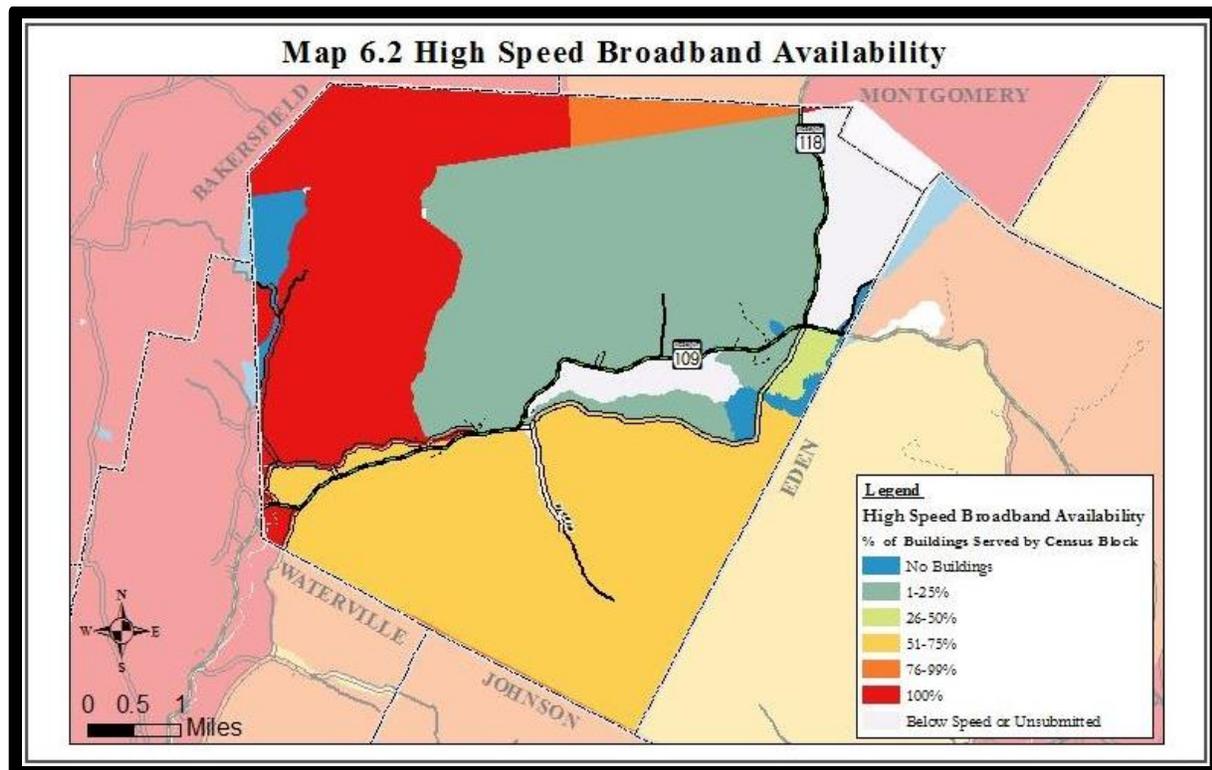
- amount of land used,
- adverse environmental impacts
- adverse visual impacts, and
- forest fragmentation.

Roads built for access to towers will not be eligible for Town ownership.

### Municipal Facilities and Properties.

The Town of Belvidere and Belvidere School District currently own and maintain three buildings: the Town Clerks Office, the South School, and the Belvidere Central School (Map 6.1). There are also several bridges owned by the town that are of special interest including the Morgan (covered) Bridge and the Mill (covered) Bridge discussed in more detail in Chapter 3 under Historic Structures in the State Survey and National Register.

The Town Hall was renovated in 1995 to be the Town Clerks Office at a cost of \$25,000. Improvements to the vault and conference room were completed in 2001 to protect against flood damage. The office is located on a 0.5-acre parcel of land.



The Old District #2 School is of special interest because it is a historically significant structure. Years ago it was one of the District School Houses and at present the Library Association's Books are stored in the building. It is located on a 0.6-acre parcel of land.

The Belvidere Central School remains available to the town for education and other purposes. The building also acts as Belvidere's emergency shelter. The building was outfitted with a Caterpillar Diesel Emergency Generator in 2002 to provide electricity if power is lost. The School is located on a parcel of land approximately 93 acres in size.

The town also owns several parcels of land totaling approximately 25 acres. The first parcel is around 19 acres and is the site of the former town landfill. It is presently used as a municipal gravel pit. The Belvidere Cemetery is four acres and there are two vacant lots of 0.5 acres each where former schools were located.

## Recreational Facilities

The Belvidere Community Club (a civic organization) owns and maintains a recreation field for the use of the community.

## Cemeteries

There is one public cemetery, which is cared for by the Belvidere Cemetery Association. The cemetery is approximately 4 acres in size. In addition, there are several private family cemeteries. All known cemeteries are indicated on Map 6.1 Facilities and Services.

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## Other Public Lands.

Over the past 15 years, a considerable effort was made by the State of Vermont to purchase and preserve land for conservation of the Long Trail. According to the 1990 Belvidere Utilities and Facilities Report, the state owned a total of 14.5 acres in town. In 2004, the Long Trail State Forest now includes 2,400 acres of land in the Town of Belvidere according to the Grand List. The locations of these properties are shown on Map 6.1 Facilities and Services.

There are also 1,289 acres of conserved lands that resulted from the sale of the former Atlas Timber Properties. The Vermont Land Trust and Nature Conservancy own these privately conserved properties jointly but the development rights have been purchased by the State of Vermont. The locations of these properties are shown on Map 6.1 Facilities and Services

## **High Speed Broadband Service**

Map 6.2 High Speed Broadband demonstrates the degree that high speed broadband service has penetrated Belvidere.

## **Emergency Services Planning.**

Dialing 911 accesses all emergency services available to residents of the Town of Belvidere. A study of emergency services communications in Lamoille County was completed in 2001 and concluded that a tower in Belvidere would improve public safety communications. The findings of this report should be implemented where feasible.

Annually, the Selectboard appoints an individual to serve as the Town's Emergency Management Director who represents the town on the Local Emergency Planning

Committee District #11 (LEPC 11) which serves Lamoille County. The mission of the LEPC is to provide resources and guidance to the community through education, coordination and assistance in hazardous materials safety, hazard mitigation, preparedness, response and recovery planning to assure public health and safety. LEPC 11 monitors the regional hazardous chemical inventory, reported annually by local facilities, and plans for response in the event of an emergency. Other responsibilities include:

- Performing hazardous analysis and risk assessments of the community,
- Maintained procedures for emergency notification,
- Maintaining evacuation plans and routes, and
- Providing training and training plans.

## **Pre-Disaster Mitigation (PDM)**

Belvidere has a Pre-Disaster Mitigation plan that was formally adopted as part of the Lamoille Multi-Hazard Regional Plan on September 28, 2005. Federal Emergency Management Agency (FEMA) officially approved the regional plan and town annex on September 8, 2006. The goal of

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this plan is to provide an all-hazards local mitigation strategy that expands the disaster resistance in the communities of Lamoille County.

The regional pre-disaster mitigation plan for the Lamoille County Region identifies potential disasters, potential impacts from these disasters, vulnerable sites, and mitigation projects and initiatives that would prevent, reduce, and recover from the impacts of disasters in Lamoille County. The Belvidere plan identifies potential hazards, vulnerable sites, and mitigation projects that are specific to the town. Since most Vermont communities are threatened mainly by flooding, storms, and landslides, many of the mitigation projects deal with things such as road design, culvert improvements, building improvements, and planning activities. The regional and local plans are set to be updated and adopted by 2015 to meet FEMA requirements.

In Belvidere the “Worst Threats” were identified as being:

- Flood and Flash Flooding
- Winter Storm/Ice Storm
- Power Shortage/Failure

## All Hazards Planning Initiative

Belvidere currently has local Emergency Operation Plan in the form of a Rapid Response Plan (RRP) and a Basic Emergency Operation Plan (BEOP). The Rapid Response Plan (also known as the pocket plan) is a portable, efficient guide for use in the early stages of disaster response. LCPC will work with the town of Belvidere in coordinating regional activities such as the development of an emergency operations plans (EOPs) and to address other strategic issues that will enable communities to better avoid, mitigate, respond to and recover from all hazard events, including terrorist acts involving weapons of mass destruction.

## Citizen’s Corps/CERT Initiative

Citizen Corps, a vital component of USA Freedom Corps, was created to help coordinate volunteer activities that will make our communities safer, stronger, and better prepared to respond to any emergency situation. Citizen Corps is coordinated nationally by the FEMA. The mission of Citizen Corps is to harness the power of every individual through education, training, and volunteer service to make communities safer, stronger, and better prepared to respond to the threats of terrorism, crime, public health issues, and disasters of all kinds. LEPC #11 agreed at its February 19, 2003 meeting to serve as the local Citizen’s Corps Council and to coordinate the establishment of the Lamoille County Community Emergency Response Team (CERT).

Belvidere currently has one active member of the Lamoille County Community Emergency Response Team (CERT) and community outreach for new members is ongoing. Lamoille County CERT members have had training in Disaster Preparedness, Disaster Fire Suppression, Disaster Medical Operations, Light Search and Rescue, Incident Command System, Disaster Psychology, and Traffic Control. The Lamoille County CERT works with local response agencies to increase

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collaboration among first responders, emergency management and volunteer groups and works with citizens to assist in mitigation, preparedness, and disaster response and recovery and public health activities.

## **Emergency Response Providers**

### **Police**

The Vermont State Police (VSP) and a locally elected Constable(s), who are responsible for enforcing local regulations, supply Belvidere's police services. The Lamoille County Sheriff's Department handles all emergency calls and calls for service from Belvidere and dispatches the appropriate agency. The associated fees for this service are paid for by the town.

Crime rates in Vermont are classified as Group A (more serious crimes like homicide, rape, robbery, forgery, and larceny) and Group B (less serious crimes like disorderly conduct, trespass of real property, and DUI).

Residents should report any crimes so that the town can take appropriate action. This could include increased police coverage or coordinated neighborhood watch associations.

### **Ambulance**

The town contracts for ambulance services by Newport Ambulance Service Inc. (NAS) (a not for profit corporation) a provider for the towns of Belvidere, Eden, Hyde Park, Johnson, and Waterville. NAS operates within these towns using the Northern Emergency Medical Services (NEMS) division. NEMS provides a 24-hour, seven day per week, 365 days per year emergency ambulance transport as well as a non-emergency medical transport to the citizens and visitors of the towns. Services rendered under this agreement are at the Paramedic or Intermediate level, as defined by the State of Vt. Department of Health. NEMS has operated out of their new facility on Route 100C in East Johnson, across from the Lamoille County Field Days site since 2007. The towns form a five-member oversight board, with an additional oversight board member from Copley Hospital.

### **Fire and Rescue**

The Town of Belvidere has an agreement with the Village of Johnson Fire Department and Rescue Squad to provide fire and rescue services; fees for this service are paid for by the town. Due to the time necessary for Johnson to respond to calls in Belvidere, improvements such as dry hydrants have been installed to speed access to water supplies. As of 2009, three dry hydrants are located in Belvidere: east of the intersection of Route 118 South and Route 109, on Route 109 at Belvidere Center, and adjacent to the Morgan Bridge.

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## Health Providers.

The area is served by a variety of physicians in private practice, the Cambridge Regional Health Center, and the Copley Hospital in Morrisville. Major medical centers are available in the Burlington area that is approximately one hour (45 miles) away.

## Child Care Providers.

The availability of quality child care has become an increasing issue across Vermont. The Planning Commission believes that there is a need for more child care services and encourages residents interested in opening a child care to contact the state Child Care Division for information.

## Solid Waste.

Belvidere is a member of the Lamoille Regional Solid Waste District (LRSW), a municipal district formed to serve the towns of Lamoille County as well as Craftsbury and Worcester. Funding is covered entirely by user fees. There are drop off and recycling facilities in Johnson, Hyde Park, and Cambridge and occasional special drop off days in town at the recreation fields.

## Other Community Wellness Services.

The Town of Belvidere does not provide social services to residents but does contribute financial support annually at Town Meeting to private and non-profit organizations that do. Many of these services are critical to families in order to meet day-to-day needs.

The Town also appoints a service officer every year to guide residents in need of services.

The organizations supported in 2015 are listed below:

- American Red Cross
- Central Vermont Adult Basic Education
- Central Vermont Community Action
- Central Vermont Council on Aging
- Clarina Howard Nichols Center
- Habitat for Humanity of Lamoille County
- Johnson Food Shelf
- Lamoille County Court Diversion
- Lamoille County Home Health
- Lamoille County Mental Health
- Lamoille County Special Investigation Unit
- Lamoille Economic Development Corporation
- Meals on Wheels of Lamoille County
- North Country Animal League
- Northern Vermont Resource Conservation and Development

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- Retired and Senior Volunteer Program
- Rural Community Transportation
- Vermont Center for Independent Living
- Vermont Dry Hydrant Program (VACD)
- Waterville Connection After School

## **Goals, Policies, and Recommendations.**

Belvidere has few facilities and services compared to other towns. This has enabled the town to maintain a low municipal tax rate. Belvidere has consistently supported the efforts of private and non-profit organizations that provide essential services for residents. Over the past few years, Belvidere has undertaken projects to provide improved services in a manner that will provide long term cost savings. The community should continue these efforts and policies in the future.

### **Facilities and Services Goal:**

- To ensure adequate public facilities and services are available to protect and enhance the lives of residents and visitors without placing an undue burden on taxpayers.

### **Policies:**

Discussion: The Town has developed policies to promote moderate growth under the Population and Growth Chapter of this Municipal Plan. With moderate population growth, the town should be able to maintain adequate services needed for the community.

- Belvidere supports regional efforts to provide improved emergency services communications.
- Belvidere should take a long-term view of costs to the town's tax payers in any purchase or new program.
- Belvidere should continue to support private and non-profit organizations that provide essential services to residents.
- Belvidere supports the efforts of the Belvidere Community Club in providing recreational facilities and services to the residents and visitors.

### **Recommendations:**

Discussion: The recommendations are for the Selectboard to continue its policies of fiscal responsibility while providing services for Belvidere's residents and visitors.

- Belvidere should consider adopting a telecommunication tower ordinance to ensure any tower located in town meets basic siting and aesthetic standards.
- Belvidere should continue to provide fire, rescue and ambulance services through contracts with surrounding towns and private companies as an economical means of providing necessary services.



## Utilities & Energy Plan

### Energy Sources.

#### Electricity

Electricity can be generated from a variety of sources including hydro, nuclear, and fossil fuels (coal, oil, and natural gas). Other potential sources of electricity include solar, wind, biomass (wood burning), and methane recovery (from landfills or farms).

There is no commercial electricity generating facility in Belvidere therefore all power is purchased from other places. Belvidere's electricity providers (Vermont Electric Cooperative and GMP) purchase power primarily from hydro (Hydro-Quebec). The electricity providers also purchase power from biomass (McNeil wood burning), other hydro power, and the New England Power Market (Vermont Department of Public Service Utility Facts, 2008). The only electricity used in Belvidere that originates from fossil fuels is from the New England Power Market.

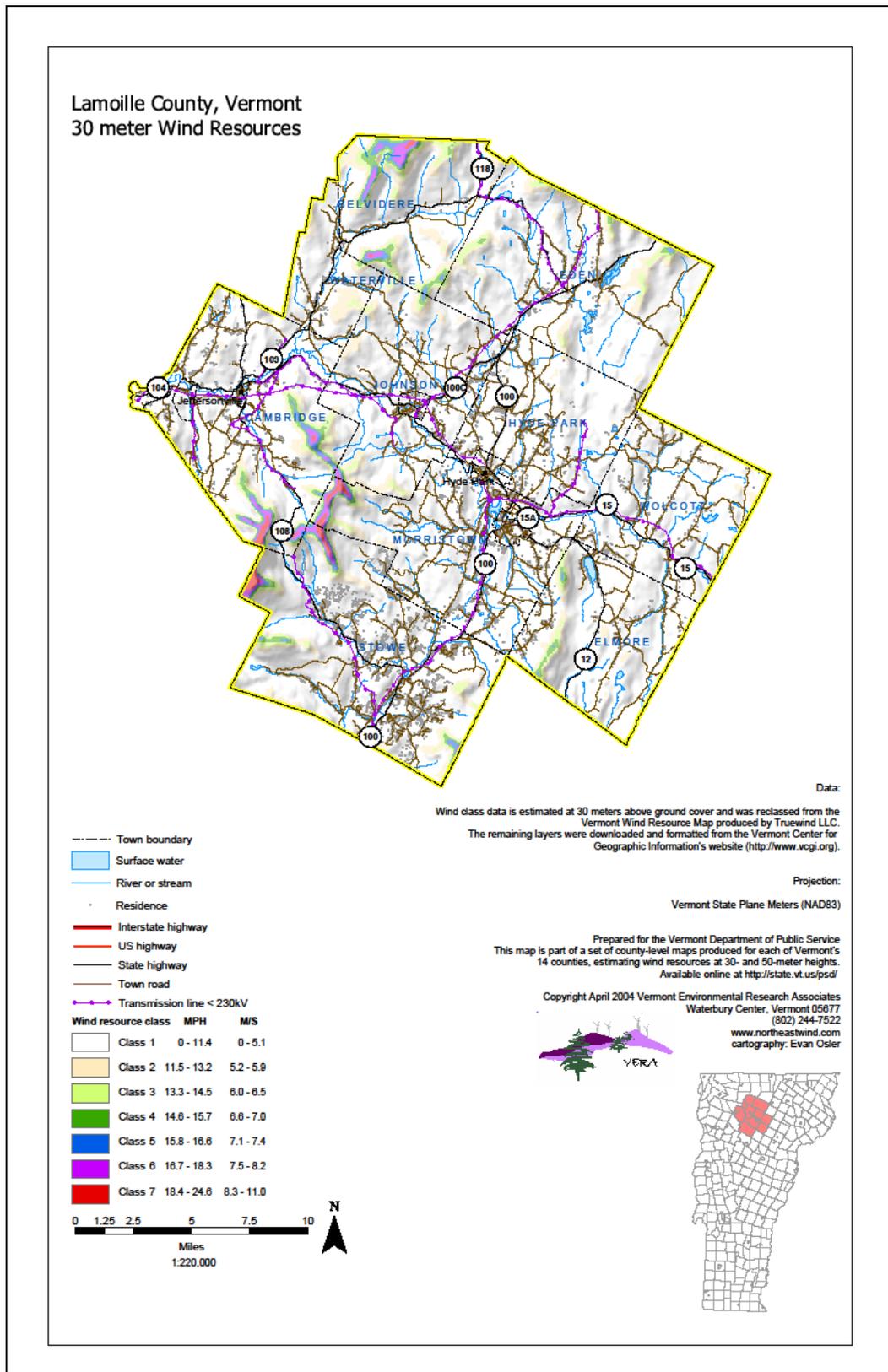
Wind towers and solar farms may have promise as a local source of electricity. According to some studies of wind currents in the state, the Cold Hollow range, Belvidere Mountain and Laraway Mountain have sufficient wind potential for commercial generation. These areas, however, are far from the power grid, and portions have been identified for protection from development due to wildlife and aesthetic concerns (particularly Laraway Mountain). There are other areas in town where private wind generation would be possible and this should be encouraged provided safety and aesthetic considerations are met. It is important for Belvidere to have input on where and to what extent wind and solar power is to be permitted in town.

Although the North Branch of the Lamoille River runs through town, it is unlikely that any hydroelectric facility could be located in town. The high quality of the water and river habitat as well as the lack of steady flow makes it a poor candidate for such a proposal.

#### Heating

The heating of homes and businesses is an important sector in energy plans especially in northern Vermont. One locally renewable source for heat in Belvidere is wood. Air pollution from wood is not a major concern for the Town at this time. Presently no restrictions are placed on the use of wood as a fuel for home heating. Solar power has also been used effectively in Lamoille County to heat water (which is another component of home heating). Other sources of home heating fuel include oil, gas, kerosene, and electricity.

## Map 7.1 Favorable Wind Energy Locations



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Electric heat is highly discouraged due to it being inefficient and putting a high demand on the local utilities to provide power. This discouragement is part of the reason that only one house in Belvidere heats primarily with electricity.

## Transportation

The rural character of the town makes it necessary to have an automobile or other vehicle for transportation. With more than nine out of ten of the Belvidere workforce commuting out of town for work and one third travelling outside the count, personal transportation is essential. (U.S. Census 2010 U.S. Census). There is a CCTA public daily commuter service between Jeffersonville, a distance of over ten miles, and Burlington. As the majority of residents use personal vehicles for commuting to work more residents could take advantage of Park & Ride facilities for carpool or rideshare purposes and reduce the amount of fossil fuel used. Lamoille County currently has two formal Park & Ride lots near Belvidere, one just west of Cambridge Village on Route 15 and one near the Hyde Park town offices off of Route 15. An informal Park & Ride is also available on Route 15 east of Jeffersonville.

## Energy Providers.

### *Electricity*

Belvidere is served by two electrical utilities. As Map 7.2 Electric Service demonstrates, Vermont Electric Cooperative Inc. provides power for the entire town except for Belvidere Center, which is serviced by GMP.

There is one major transmission line in Belvidere which follows Route 118 from Eden through Belvidere Corners and north to Montgomery. Major transmission lines are those that carry at least 34.5 kV. Vermont Electric Coop has one substation in town located west of Route 118 just north of the intersection with Route 109. Home heating

Heating fuels are provided through private individuals and companies.

### *Transportation*

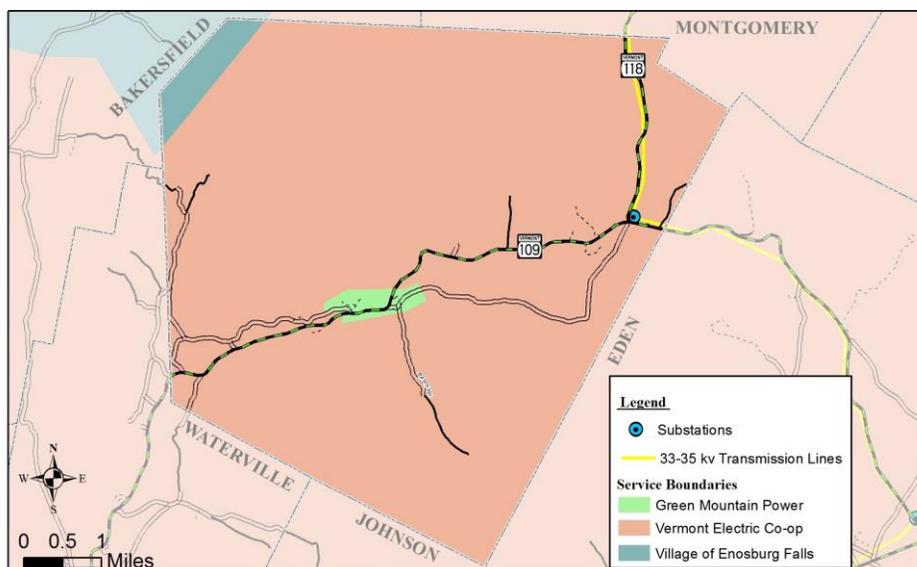
Currently Belvidere has only one local retail outlet that offers gasoline, stored in underground tanks, and kerosene for sale. The nearest alternative retailers are 9-15 miles away. The loss of this retail outlet would have an adverse affect on the residents of Belvidere.

## Energy Consumers.

### Residential, Commercial, and Industrial

Residential, commercial and industrial customers can save energy by installing more efficient heating, improving insulation, replacing inefficient appliances and windows, and being sited to take advantage of passive solar heating. The State of Vermont recently mandated that all

## Map 7.2 Electric Services



energy efficiency programs be handled by an energy efficiency utility call Efficiency Vermont. This program promotes efficiency by offering rebates and credit for more efficient energy use.

There is three-phase power at Belvidere Corners and within a few miles of Belvidere Jct. through Vermont Electric Cooperative for industrial customers willing to pay for the service.

### Energy Systems

Purpose is to regulate the erection, construction, installation or substantial modification of energy systems in the Town

Belvidere supports residents having access to affordable self-generated energy.

Belvidere encourages growth of commercial energy systems providing they do not have a demand for increased services that results in significantly raising the tax burden for existing residents.

The rights of residents to generate their own energy must be weighed against the objections on aesthetics grounds.

Small scale energy systems are encouraged providing;

- they do not pose a potential threat to public health, and
- do not significantly impair a scenic vista or scenic corridor as identified in the Town Plan.

### Locating a Commercial Energy System

Commercial energy system facilities should be collocated with other commercial energy system facilities to avoid facility proliferation.

# BELVIDERE TOWN PLAN 2015-2020

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When locating a commercial energy system facility, consideration must be given to;

- wildlife habitats,
- soil erosion,
- forestry,
- agricultural lands,
- scenic views, and
- recreational opportunity.

Clearing around the commercial energy system facility must be limited to what is necessary to provide for safe operation of the facility.

## **Scenic Protection**

Commercial energy facilities must not create undue adverse impacts on the scenic and natural beauty of Belvidere.

To minimize conflicts with scenic values, commercial energy system facility design and construction must:

- be positioned as far away from important scenic viewpoints as possible.
- be sited in areas not highly visible to the traveling public, or from residential neighborhoods, historic districts, public spaces and outdoor recreation areas such as hiking trails;
- be sited in areas where the view of commercial energy system facilities while travelling the highways of Belvidere is not seen over an extended period.
- be located in forested areas or be sufficiently landscaped to screen the lower sections of commercial energy system facilities and related ground fixtures from public vantage points such as trails, roads, and water bodies;
- use materials, architectural styles, colors, textures, screening and landscaping to promote aesthetic compatibility with surrounding uses and to avoid adverse visual impacts;
- not appear as a focal point in an important scenic view in Belvidere, with a preference for commercial energy system facilities to be at the edge of scenic views.
- Where prominent views of a site exist, be located downgrade of the ridge and should not exceed the elevation of the immediate ridge;
- construct access roads to follow the contour of the land and to avoid open fields or meadows to minimize visibility;
- avoid peaks and ridges identified as scenic resources in the Historic, Scenic and Archeological Resources chapter of this plan; and
- Avoid the use of external lights.

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## Noise

Under normal operating conditions, noise created by commercial energy system facilities must not exceed 60dBA, as measured at the property boundary.

Under normal operating conditions, noise must not exceed 60 dB(A) when measured at the base of a large scale or commercial wind turbine.

Noise created by small-scale wind energy systems must not exceed 60dBA, as measured at the nearest adjacent property line. This level may be exceeded during short-term events such as severe wind storms.

## Radio Signal Interference

Belvidere is nested within two mountain ranges that pose a challenge for the effective transmission of radio waves. Commercial energy system facilities must not be positioned in a manner that interferes with radio transmissions, especially emergency radio transmissions and telecommunications.

## Lights

Towers must not place lights on the tower unless required by the FAA rules.

## Minimum Distance

The minimum distance between the ground and any part of a commercial energy system wind turbine rotor blade must be thirty (30) feet.

## Tower Security

Wind turbine towers must be protected from unwanted access by the public.

To limit access to the tower,

- a fence six feet high with a locking portal must be placed around the facility's wind turbine tower base,
- the wind turbine tower climbing apparatus must be limited to no lower than 12 feet from the ground, or
- other equivalent means.

## Turbine Safety

All wind turbines must have an automatic braking, governing or feathering system to prevent uncontrolled rotation, over speeding and excessive pressure on the wind turbine tower structure, rotor blades and turbine components.

## Setbacks

The minimum setback distance between each wind turbine tower and all surrounding property lines, overhead or utility transmission lines, other wind turbine tower, electrical substations,

# BELVIDERE TOWN PLAN 2015-2020

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public roads and dwellings must be equal to no less than 1.5 times the vertical distance from ground level to the tip of the wind turbine when it is at its highest point, unless

- appropriate easements are secured from adjacent property owners and
- a waiver demonstrating there is no possibility of damage to structures or infrastructure in the event of a collapse is approved by Belvidere.

In no case, will a wind turbine tower be located within 1.5 times the height of the wind turbine tower from public highways.

## Access Roads

Access to CES facilities must use existing roads and trails for service and access roads.

When new roads are needed, they must be designed to minimize

- amount of land used,
- adverse environmental impacts
- adverse visual impacts, and
- forest fragmentation.

Roads build for access to CES facilities will not be eligible for Town ownership.

## Power Lines

Electrical controls and control wiring and power lines must be wireless or underground except where wiring is brought together for connection to the transmission or distribution network. Such above-ground wiring must be located adjacent to that network.

## Utility Connection Requirements

The commercial energy system, if interconnected to a utility system for the purpose of net-metering, must meet the requirements for interconnection and operation as set forth in the electric utility's then current service regulations applicable to commercial energy system facilities.

## Ridgelines

Where wind characteristics permit, wind turbine towers must be located so as to minimize breaking the silhouette of ridgelines as seen from public roads.

## **Goals, Policies, and Recommendations.**

The use of clean, renewable energy is a topic discussed prominently in global conferences. For many years, Belvidere has relied on renewable energy for electricity, renewable and non-renewable energy for home heating, and almost exclusively non-renewable energy for transportation. While residents do not have options to change some of these sources of energy,

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everyone can save money and energy by using more efficient appliances and vehicles or conserving power by turning off unused equipment.

The predicted continual slow growth of the town as well as technological and communication advances will create an ever-increasing demand for dependable electrical energy. Affordable electric rates coupled with available multi-phased power and adequate capacity will be critical to planning for future housing and economic development in Belvidere.

These three goals address Belvidere's future energy sources, providers, and consumers. The policies and recommendations below offer some avenues to achieve these goals.

## Energy Goals:

- For citizens to generate energy locally from renewable sources, whether for heating, electricity, or transportation.
- Energy should be provided in a safe, reliable and efficient manner.
- To promote energy efficiency and conservation in the design, construction, and use of municipal, industrial, commercial, and residential structures.

## Policies:

- Belvidere supports the use of wind and solar to generate electricity locally provided scenic and aesthetic concerns are addressed.
- Belvidere supports efforts to create a wood-burning or co-generation facility in Lamoille County.
- All planning for power transmission lines should be strongly weighed in favor of underground placement in order to serve the other objectives of this Town Plan.
- The town should use energy efficient appliances in municipal facilities.
- Outdoor lighting, especially in public areas, should use lighting systems that reduce light pollution and conserves energy

## Recommendations:

- The Planning Commission should consider requiring utilities be buried if subdivision regulations are drafted.
- The Planning Commission should exempt, or provide accommodations for, alternative energy adaptations (e.g. solar collectors) when developing bylaws.

## Housing

### **Housing Needs.**

Housing needs vary depending on age, income and family structure among other things. Single persons, especially when they are young, tend to rent apartments rather than homes because they lack the income and generally do not need large homes for themselves. Young families tend to rent rather than own homes due to limited incomes. As they age, their incomes allow them to move up to starter homes and later larger single family homes. Those nearing or in retirement tend to downsize their homes as they no longer need the extra room and added maintenance. Later into retirement, many seniors desire apartments because they no longer can afford nor have the ability to maintain their homes. While these generalizations are not true for every person in a group on average families are more likely to own homes than non-families; the wealthy are more likely to own their home; and those in their middle ages are more likely to own homes than when they are older or younger. Towns, therefore, should allow a variety of housing in their community so that all ages and types of families and individuals can find suitable housing.

### **Current Housing Supply.**

Housing demographics are used to show the amount and types of housing in town, the age of units, and their availability.

### **Housing Units**

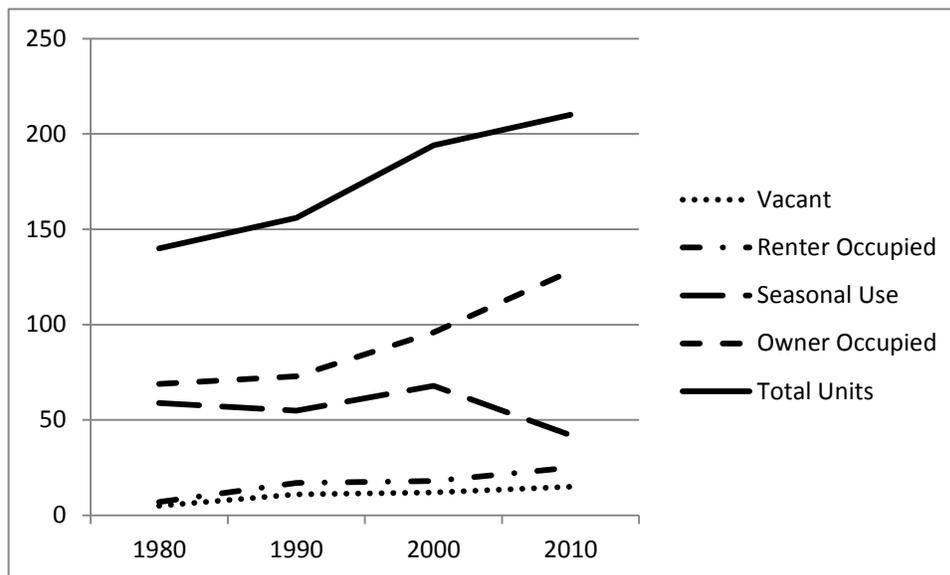
The total number of housing units increased from 194 to 210 units between 2000 and 2010. Of the 210 units in 2010, 42 were seasonal or vacation homes while the remaining 168 were owner or renter occupied units. The housing stock in town is primarily of two types, mobile homes and single-family dwellings. There are few two-unit structures in town as well.

At present no multi-family dwellings or buildings with more than three units are present in Belvidere. Given the increasing cost of construction, land, repair and renovation, multi-family homes have the potential of meeting the special housing needs for some population groups. Such construction would need to have adequate water, sewer, solid waste removal, heat and electrical facilities for its residents. Multi-family dwellings should also have sufficient land or acreage to provide families living in them with yard, green and recreational space. Any multi-family dwellings should also be arranged or designed to be in keeping with the rural character of the town.

### **Age of Units**

- The age of houses in town is a mix with about 40% of the housing constructed before 1960, another 40% constructed between 1960 and 1980, and the final 20% constructed more recently. The age of housing in town is important for a variety of reasons including the fact that older

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Year	1980	1990	2000	2010
Vacant	5	11	12	15
Renter Occupied	7	17	18	25
Seasonal Use	59	55	68	42
Owner Occupied	69	73	96	128
Total Units	140	156	194	210

homes add character to the area and are links to the past. Unfortunately older homes may also need greater maintenance, be more inefficient to heat, and have utilities that may not have been updated to modern standards.

## Availability

The vacancy rates in town were higher than the rest of the county in 2000 and presumably in 2010. The increased availability of housing is one factor that helps keep housing affordable in town. In areas where vacancy rates are very low, prices of units typically increase.

## Need for Affordable Housing.

Statewide housing policy states that housing is affordable when households with incomes below county median pay no more than 30% of their income on housing costs. Housing costs for renters are rent and utilities. Housing costs for homeowners are principal, interest, property taxes and insurance.

Regionally housing affordability has improved since 1990.

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The fact that Belvidere does not have apartments and other inexpensive rental options may be a factor in why the town was so unaffordable for renters.

## Cost of Purchasing a Home

Using the rough estimate that households can afford a house that is three times their yearly income, a household with an income of \$44,583 (median value in 1999) could afford a home with a sale price of \$133,749. Affordability is determined by sale prices not by property values (which is what the Census records). Table 8.1 shows the average sale price of non-vacation homes in Belvidere since 1999 according to property transfer records. The numbers in parentheses are the number of sales in that category for the year.

It appears by this review that a median household could afford to buy the average house on the market in Belvidere. It is difficult to gauge any market trends in Belvidere, though, because of the low number of sales in each category.

## Possible Avenues to Increase Affordable Housing

Towns have limited opportunities to impact affordable housing. Towns with local regulations must be careful that they do not drive up housing costs by requiring large lots or having other requirements that add costs to the final unit. As Belvidere does not have zoning or subdivision regulations, there are few areas that local policies may impact affordable housing today. Any bylaws if adopted should not prohibit or burden affordable housing efforts.

**Table 8.1. Average Sale Price of Houses in Belvidere 1999-2014**

	House	<6 acres	House	≥6 acres	Open Land	
	\$	n	\$	n	\$	Acres
2000	79,996	2	-	0	1,029	6
2001	95,800	3	97,500	1	2,020	6
2002	106,000	3	-	0	9,167	2
2003	65,000	3	136,000	2	8,100	2
2004	104,360	5	-	0	8,750	1
2005	174,250	2	176,517	2	5,543	8
2006	-	0	20,000	1	8,452	8
2007	144,800	3	171,000	1	10,259	4
2008	97,625	2	160,000	1	-	0
2009	91,250	4	-	0	5,000	1
2010	205,500	1	25,000	1	38,000	1
2011	81,000	1	124,250	2	185,000	1
2012	95,250	2	187,333	3	48,900	1
2013	132,000	1	85,000	1	-	0
2014	125,000	3	-	0	31,725	1

Source: State of Vermont Department of Taxes.

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One avenue to help increase affordable housing is for the town to support projects proposed in town which will provide affordable housing to residents provided care is taken in their design and scale.

## **Special Needs Housing.**

Within every community are individuals or families with special housing needs. The elderly and families with children living in poverty are examples of groups with special needs that are found in most communities. The disabled or infirmed may also require special arrangements. A final category of special needs housing is group quarters or institutional care. Living arrangements such as nursing homes, correctional facilities, dormitories, and homeless shelters fall into this category.

The amount of special care housing depends upon the community's situation. Some individuals need only a special construction (handicapped accessibility for instance), while others need assisted living arrangements (visiting nurses), while still others may require full institutional care. Belvidere has a low demand for special housing.

At this time Belvidere has limited resources available to meet many of the needs that may be required for special needs housing. A small mobile home park would provide less expensive housing and the opportunity for home ownership for single parent families and families living in poverty.

## **Goals, Policies, and Recommendations.**

Belvidere's housing is a mix of new and old single family dwellings. 35% of all units in town are seasonal or vacation homes. While housing remains affordable in general, the lack of multi-family housing keeps rental prices high when compared to the rest of the county.

Other than maintaining some minimum housing standards (e.g. septic and flood hazard), Belvidere has placed few barriers to the construction of housing in town. The policies and recommendations below reflect the town's desire to maintain these minimum safety requirements and to encourage housing types that are currently lacking in town.

### **Housing Goal:**

- To ensure that Belvidere has safe, affordable housing available in a variety of types for all incomes, ages, and for those with special needs.

### **Policies:**

- Belvidere encourages a pattern of residential development that is compatible with the traditional settlement pattern of the town and is consistent with the ability to provide community services.

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- Residential development is not permitted in the flood hazard area and existing housing in the floodplain should be flood proofed for the safety of the residents and the town as a whole.
- All housing must have an approved septic to ensure the health of the residents and public at large.
- Sites for manufactured and mobile homes are generally allowed in locations similar to those generally used for single-family conventional housing.
- Accessory apartments are encouraged as they provide needed income for the homeowner and needed small apartments for residents living alone.
- Belvidere encourages land use patterns that are inherently more affordable by nature of cost efficiencies associated with construction (e.g. shorter access roads, smaller, lots, proximity to utilities).
- Belvidere supports efforts to assist elderly and disabled residents who wish to remain in their homes, and to community based health care systems that enable elderly and disabled people to remain in the community.

## Recommendations:

- In the Land Use portion of this plan adequate land should be set-aside as a Development District to provide building space for the projected population growth.

## Economic Development

The foundation of Belvidere's early economy was its resource base. Initially, agriculture, forestry and mining dominated the Town's economic activity. More recently, townspeople have increasingly relied on driving to work in other communities. Although the resources still exist for agriculture and forestry to be an important component of the community's economy, trends in national and regional economics have forced these types of operations to change or be forced out of business.

To be prepared for future downturns in the market, Belvidere must have both a diverse and networked economic base. In addition to providing support to its existing merchants, the development of manufacturing, light industry, retail, and tourism in addition to farming, forestry and resource-based value added businesses would help to cushion the town in the event of further economic challenges. Because many residents commute to other towns for work, Belvidere is more susceptible to regional economic trends. Creating jobs in Belvidere would help to strengthen the tax base, build economic and social networks and make the town more self-reliant.

Sustainable economic development is vital to Belvidere's future because residents must have opportunities to earn a livable wage and have opportunities to learn the skills necessary to achieve gainful employment. Town policies should encourage and support local business ventures which foster healthy economic, environmental and social inter-relationships.

### Components and Characteristics.

The Department of Employment and Training (DET) tracks businesses and their employees who pay into the Unemployment Insurance fund (UI). Their figures do not count self-employed or other businesses exempt from UI. The DET figures for Belvidere indicate that in 1990 there were too few private sector jobs in town to be publishable. The local businesses were in trucking and social assistance. Within the public sector, though, there were 6 positions in town, all employed at the school. The average wage in the public sector in 1990 was \$10,767 per year. These six positions were present in 1995 with an average wage of \$16,018, a 48.8% increase. In 1995, only the private trucking business remained.

By 2000 private sector employment had increased to include businesses in specialty trade contracting, professional and technical services, and truck transportation. A total of 14 jobs, both public and private, were offered in town at an average annual wage of \$21,235. By 2008, however, employment had dropped with only 4 businesses and 12 employees reported (both public and private) with the average wage rising to \$34,649/yr.

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In contrast, in Lamoille County from 2000 to 2008, the number of businesses increased 11.5%, employment increased 3.8%, and the average wage increased 45%. Belvidere’s economy will continue to rely on small businesses and home occupations for growth.

### Labor Force and Employment.

According to the US Census in 2010, there were 167 persons in the labor force of which 5.9% were unemployed.

**Table 9.1. Belvidere’s Resident Labor Force by Occupation Category in 2010**

Occupation	Number
Management, professional, and related occupations	45
Service occupations	40
Sales and office occupations	32
Farming, forestry, and fishing	2
Construction, extraction, and maintenance occupations	21
Production, transportation and materials moving	20
Source: 2010 U.S. Census	

Tables 9.1 and 9.2 show the occupation and industry of residents of Belvidere in the 2010 Census. A manager of a construction company, for example has as his/her occupation ‘management, professional and related occupations’ while the industry is construction. As most residents don’t work in Belvidere, many of the industries and jobs are not found in town. As can be seen, most residents worked in the ‘education, health, and social services and construction, extraction, and maintenance industries. Their occupations are fairly evenly split between ‘management, professional and related occupations’, ‘service occupations’ and, ‘sales and office occupations’, followed by ‘production, transportation and materials moving’, and construction, extraction, and maintenance occupations. .

### Place of Work

Journey to Work information from the 2010 Census shows that the most common destination for work is to remain in Lamoille County (Table 9.3). Business within Belvidere employ 16 (10%) of the workers from Belvidere, within Lamoille County 143 (90%), and outside Lamoille county 53 (33%).

In 2000, Franklin, Orleans and other towns in Lamoille County reported Belvidere as their place of work. Historically, Burlington, Lowell (the GAF Asbestos Mine- no longer in operation), and Cambridge were the primary destinations for work in 1980. By 2000 there were no residents

# BELVIDERE TOWN PLAN 2015-2020

reported as being employed in either Burlington or Lowell but many did report working in Chittenden County. A majority of job growth between 1980 and 1990 was in Johnson and Morristown (Table 9.4). This trend has since leveled off for the period 1990-2000.

**Table 9.2. Belvidere’s Resident Labor Force by Industry Sector in 2010**

<b>Industry</b>	<b>Number</b>
Agriculture, forestry, fisheries, hunting, mining	8
Construction	26
Manufacturing	14
Wholesale trade	2
Retail trade	21
Transportation, warehousing, utilities	3
Information	0
Finance, insurance, and real estate	6
Professional, scientific, management, admin.	8
Education, health, and social services	47
Arts, entertainment and recreation services	4
Other services (except public administration)	2
Public administration	4
Source: 2010 U.S. Census	

## Type of Community

Journey to Work information is commonly used to classify communities as job centers, average communities, or bedroom communities. Job centers have more jobs than their resident workforce. Bedroom communities are defined as those that have more than 2/3 of the resident work force leaving town for employment. As Belvidere has greater than 80% of the workforce leaving town, Belvidere is classified as a bedroom community. The good news is that this figure is much improved over previous Census counts. In both 1980 and 1990, Belvidere had greater than 90% of the workforce leaving town.

**Table 9.3. Place of Work in 2010 and 2000 for Belvidere Labor Force 16+ Years Old**

2010 Census Data	Belvidere		Lamoille		Vermont	
	Total	%	Total	%	Total	%
Total workers 16 years of age and over	159	100	13051	100	325350	100
...who worked in their town	16	10.3	4594	35.2	112571	34.6
...who worked outside town of residence	143	89.7	8457	64.8	212779	65.4
...who worked outside county of residence	53	33	3785	29	71577	22

Source: 2010 U.S. Census

**Table 9.4. Place of Work Information for Residents of Belvidere, 1980-2010**

Place of Work	1980	1990	2000	2010
Belvidere	7	7	25	2
Cambridge	16	14	18	4
Hyde Park	2	2	6	5
Johnson		15	17	7
Morristown		24	24	9
Stowe			3	4
Waterville	4	11	2	0
Wolcott			1	0
Outside Lamoille County	28	33	52	107
Other State			1	1
Total employment	57	106	149	139

Source: U.S. Census, Journey to Work 1990, 2000, 2010

## Unemployment.

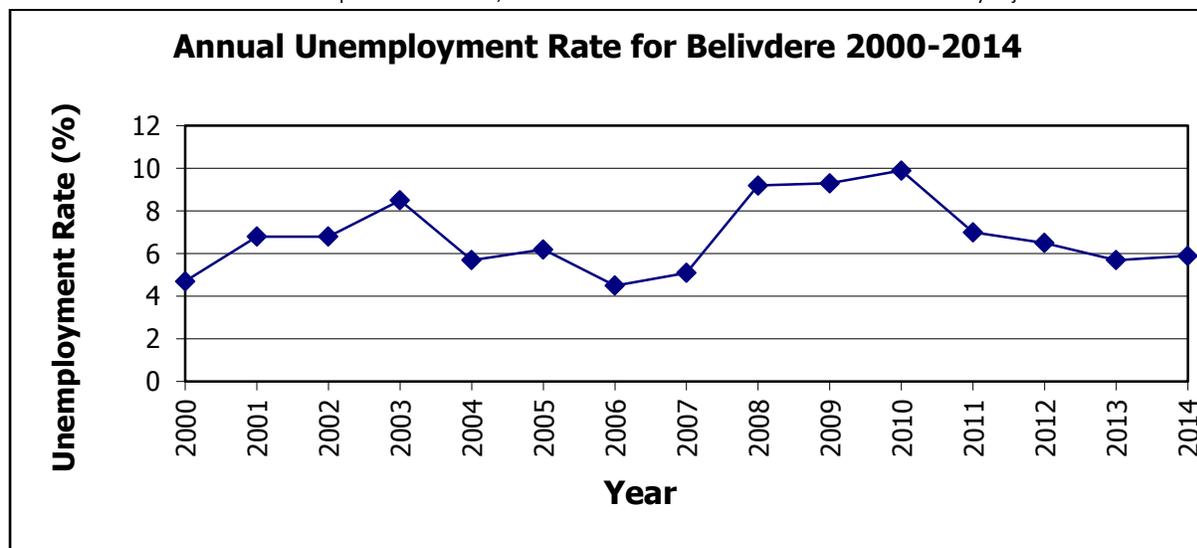
Unemployment figures at the town level are released quarterly by the Department of Employment and Training. Table 9.5 shows the unemployment rates between 2000 and 2014.

Compared to towns in the Morristown-Stowe labor market, Belvidere generally has one of the highest unemployment rates. Looking at the most recent figures (annual, 2014) Belvidere was second to last out of the 10 towns in the county.

**Table 9.5. Unemployment Rates for Belvidere Since 2000**

Year	Workforce (n)	Unemployed (n)	Rate (%)
2000	170	10	4.7
2001	180	10	6.8
2002	180	10	6.8
2003	180	20	8.5
2004	180	10	5.7
2005	180	10	6.2
2006	180	10	4.5
2007	180	10	5.1
2008	180	20	9.2
2009	180	20	9.3
2010	230	20	9.9
2011	230	20	7
2012	230	20	6.5
2013	230	10	5.7
2014	240	10	5.9

Source: Vermont Department of Labor, Economic & Labor Market Information. \*Not seasonally adjusted.



Annual unemployment rates for Belvidere from 1990 to 2014 (not seasonally adjusted) have varied between 4.5% in 2006 to 9.9% in 2010 with an average annual rate of 7.1% (Figure 9.1). This value reflects an estimate of the percentage of those who want to work, are able to work, and are actively seeking work but are unable to find employment. Historically, unemployment rates have varied; rising sharply between 1991 and 1992 before falling to around 5% for three years, jumping again in 1996 before falling in 1998-2000. This pattern continues with another rise in 2001 that remains elevated until falling around 5% in 2006-07 before reaching the highest rate since 1990 of 9.9% in 2010. In the 2011 there was a rapid decline in unemployment

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to 7% followed with the next three years averaging at 6% unemployment. (Department of Employment and Training).

The Vermont Livable Wage Guideline, as published in the Joint Fiscal Office’s, 2009 Vermont Basic Needs Budgets and Livable Wage Report is defined in statute as the hourly wage required for a full-time worker to pay for one-half of the basic needs budget for a two-person household

**Table 9.6. 2014 Vermont Livable Wages : Basic Needs + Taxes**  
(all figures per wage with employer-assisted health insurance)

Family Unit	Rural		Urban	
	Wage		Wage	
	Hourly	Annual	Hourly	Annual
Single Person	\$15.42	\$32,074	\$17.26	\$35,901
Single person, Shared Housing	\$13.11	\$27,269	\$14.52	\$30,202
Single parent, one child	\$24.57	\$51,106	\$28.84	\$59,987
Single parent, two children	\$30.97	\$64,418	\$35.94	\$74,755
Two adults wage earners, no children	\$25.02	\$26,021 HH \$52,042	\$30.11	\$28,038 HH \$56,077
Two parents, one wage earner, two children	\$30.90	\$64,272	\$32.41	\$67,413
Two parents, two children, two wage earners	\$19.66	\$40,893 HH \$81,785	\$20.96	\$43,597 HH \$87,194

Source: Basic Needs and Livable Wage Report, Vermont Joint Fiscal Office, January 2015

HH = Household NOTE: The JFO assumes the employer pays 84% of health insurance premium for single persons and 73% for without health insurance, workers must pay these costs out of pocket and the livable wage increases by \$2 to 6/hour.

with no children and employer-assisted health insurance averaged for both urban and rural areas. The 2008 Vermont Livable Wage is \$13.07 per hour (Table 9.6). The Livable Wage is different from the wage for a single person because it accounts for the economies achieved by multiple-person households. This figure does not, however, include all potential household expenses because it is for adults without children. A Basic Needs Budget is a market-based analysis that accounts for estimated monthly living expenses in Vermont. These basic needs budgets include the costs for essential items such as food, housing, transportation, child care, clothing and household expenses, telecommunications charges, health and dental care, renter’s insurance, life insurance, and savings. The budgets differ based on family size and whether the family live in an urban or rural part of Vermont.

Average wages offered by employers in Belvidere in 2008 was \$34,649 which is just above the livable wage rate for a single individual without children. Belvidere should make every effort to support businesses interested in locating in Belvidere, especially those that will offer jobs at a

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livable wage. For wage and salary workers, this is typically in manufacturing. Sales and service jobs generally pay minimum wage or slightly above and rarely provide benefits.

## **Goals, Policies, and Recommendations.**

Economic development is vital to the future of Belvidere. As we are dependent on our neighboring communities for employment, residents drive more and the Grand List remains reliant on residential properties to pay taxes. In the future, Belvidere will need some industrial or commercial properties to diversify the tax base. Any commercial and industrial development should be at a scale and be of a character consistent with Belvidere's rural setting.

### **Economic Development Goal:**

For Belvidere to have a balanced and diverse local economy that provides rewarding job opportunities at a livable wage.

### **Policies:**

The Town has developed the following policies in order to encourage and support local economic development.

- Belvidere supports initiatives which will make farming and forestry more economically viable into the future.
- Belvidere supports industries which take advantage of our local resources to produce value added products.
- The town supports existing and proposed businesses that provide jobs at a livable wage.
- Economic development at the expense of the environment is not encouraged. Businesses and industries shall not degrade or endanger air and water resources.
- Industries that extract renewable resources, such as timber, must do so in a sustainable manner.
- Any bylaws adopted locally should have an efficient process with clear standards to ensure local projects are not unnecessarily burdened.

### **Recommendations:**

The Planning Commission should review all 'Act 250' applications for its impact on the economic development of town. Where an application is determined to not conform to this chapter or any goal or policy in this plan, the Planning Commission should participate in the Act 250 process in order to ensure the concerns of the town are addressed. Where an application conforms to this plan, the Planning Commission should participate in the Act 250 process to attempt to ensure the process is as smooth as possible for the applicant.

## Transportation Plan

### Highways.

The Belvidere transportation plan proposes to classify roads in Belvidere in such a way that the needs of property owners are met without unreasonable demands on town tax revenues. Highway expenditures are usually the second largest municipal expense after education.

### Highway classification

Vermont's local roads are classified according to their importance and general use. This classification system applies to all town highways, and is used to determine the amount of state highway assistance provided to each community. Class 1 roads are those highways that while they are the responsibility of the town to maintain, are extensions of the state highway system

**Table 10.1. Town of Belvidere Highway Mileage by Classification**

	Class I	Class II	Class III	Class IV	Total Local Miles (excl Class IV)	Total State
Total Mileage	0	0	11.75	2.76	11.75	9.73

Source: Vermont Agency of Transportation, 2014 Belvidere Town Highway Map

and carry a state highway route number. Class 2 roads are the most important highways serving as corridors between towns, and consequently carry a large volume of local and regional traffic. Belvidere lacks any Class 1 and 2 roads. Class 3 roads - such as Back Rd - are comprised of secondary town highways that are passable year round by standard vehicles. Class 4 roads are typically dirt roads that are functional for only part of the year. Table 10.1 illustrates town highway mileages in Belvidere.

Table 10.2 shows all local roads and their classification and length. These are also shown on the Transportation Map 10.1.

### Highway Maintenance

Belvidere has done a good job over the years at maintaining roads while holding down costs. The cost of road maintenance has significantly increased and taken a larger part of the budget.

### Highway policies

As residential development continues in Belvidere, it is important that the town maintain written policy toward the maintenance and construction of roads. This will provide clear information to existing and future land owners as to the level of road maintenance service they can expect from the town. Based on the road maintenance costs for each mile of road constructed or class 4 road upgraded another \$3,915 in taxes, on average, will need to be collected annually to maintain it.

**Table 10.2. Highways, Classification and Length for Belvidere**

Highway #	Highway Description	Classification	Length (miles)
1	Vermont Route 109	State Highways	6.81
	Vermont Route 118		2.92
2	Back Road and Morgan Bridge Road	III	1.95
3	Back Road	III	1.20
4	Sackett’s Harbor Road	IV	0.28
5	Smithville Road	III	0.04
6	Smithville Road and Florence’s Road	III, IV	2.13, .15
7	Laraway Mountain Road	III, IV	0.04, .10
8	Bog Road	III	4.35
9	Newton Valley Road	IV	0.57
10	Basin Road	III, IV	1.27, 1.03
11	Jim Road	III	0.20
12	Boarding House Hill Road	III	0.21
13	John Lot Road	IV	0.63

Source: Vermont Agency of Transportation, 2014 Belvidere Town Highway Map

### Bridges and Culverts.

The Town has worked with Lamoille County Planning Commission to inventory all the culverts and bridges in town including the condition. This should help the town establish a schedule to repair and maintain structures over time. Belvidere has also taken advantage of state bridge and culvert grants to repair some failing or undersized culverts.

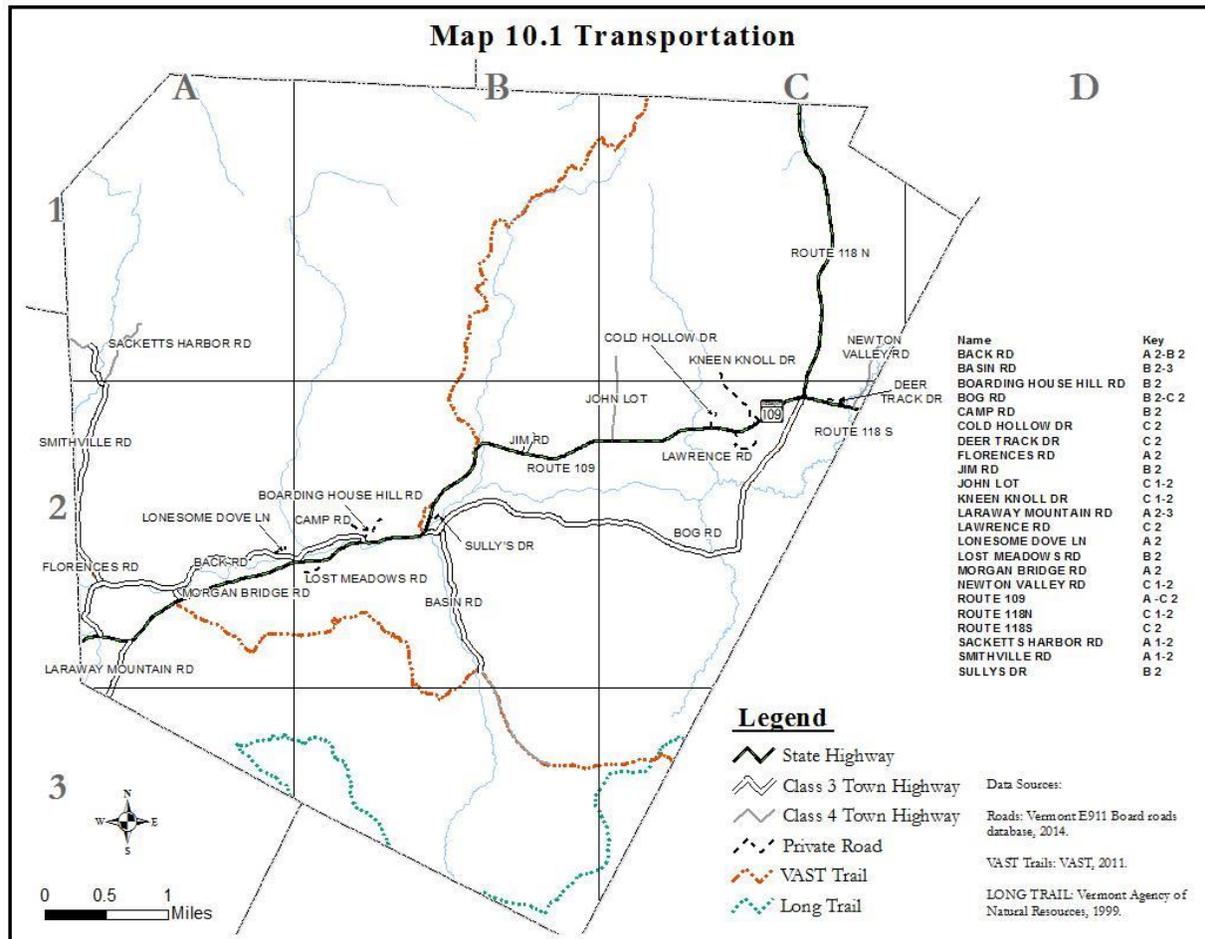
Bridges are expensive to maintain over time. Wherever possible, any new highway construction should minimize the number of bridges and/or culverts needed. In this way, long term maintenance costs will be minimized.

### Airports and Rail.

The closest airport service, the Morrisville/ Stowe State Airport, is located in Morrystown. Regular commercial airport service is available at the Burlington International Airport, in South Burlington.

The Lamoille Valley Railroad, long being out of operation, has had most of the road bed converted into recreational rail trails.. The nearest passenger service available is AMTRAK, with a station in Waterbury.

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## Recreation and Non-vehicular Transportation.

### Snowmobile trails

The Vermont Association of Snow Travelers (VAST) maintains a network of snowmobile trails on private and public lands across the state including areas in Belvidere (See Transportation Map 10.1). VAST trails in Belvidere connect the town to Waterville, Montgomery and Eden. VAST trails are maintained and groomed by volunteers, and provide an important link in a statewide recreation network.

### The Long Trail

The Long Trail is a statewide hiking trail network that extends the entire length of Vermont from Massachusetts to Canada. A portion of the trail is found in Belvidere along the southern border with Johnson and eastern border with Eden providing hiking and recreational opportunities at Laraway Mountain and other Long Trail State Forest land.

### Bicyclists

Most of Belvidere’s local roads were designed with the automobile traveler in mind. As cyclists - both individual and groups – use these roads, conflicts can arise from lack of space and poor

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shoulders. Future road projects, particularly State Routes 109 and 118 should be designed to give greater consideration to non-motorized users.

Additional information on recreational activities in Belvidere can be found in the Natural Resources chapter.

## **Transit Services.**

Taxi service is provided by a few taxi services that operate out of Morristown and Hyde Park.

## **Human Services Transportation**

Numerous human-service organizations in Lamoille County currently provide services that include Belvidere residents. Most of these services are operated by utilizing full-size vans and some volunteer drivers in automobiles.

The Central Vermont Council on Aging (CVCOA) operates transportation service for elders to healthcare, shopping and community programs. They also transport meals to residents that are confined to their homes through their funding for the Meals on Wheels program for Lamoille County.

Lamoille County Mental Health (LCMH) provides rides for developmentally-disabled clients between their homes and the region's treatment and activity center.

Vocational Rehabilitation (VR) provides services to clients with disabilities that create barriers to employment. The VR program works to relocate individuals and provide transportation so they can work in the community. VR also serves as an advocate of local and regional transportation planning.

Out & About is an adult day care program in Morrisville providing transportation to clients to gain access to and from their homes to the day center.

All four of the above organizations currently contract with Rural Community Transportation (RCT) to provide the majority of transportation services they offer. RCT is based out of St. Johnsbury with a satellite office in Morrisville and is the coordinator for the statewide Rideshare and Vanpool Programs in Lamoille and the surrounding counties. LCMH offers additional services beyond those that they contracted out to RCT.

## **Goals, Policies, and Recommendations.**

As highways are used by everyone in the community and are typically the second most expensive service, they are critical to any town plan. Belvidere should continue to manage and maintain town roads. The roads are overall in good condition and the budgets have been kept low. The town should continue to work with the regional planning commission and other

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organizations to ensure transportation services continue to provide assistance to residents in need of help.

## Transportation Goals:

- For town roads to be safe and efficient for vehicles and to be maintained in a cost effective manner.
- For pedestrian and non-vehicular transportation networks to be safe and conveniently located to encourage their use.
- To support regional transportation services that provide special transportation services for those who require assistance.

## Policies:

- The state highways should have limited road accesses to allow for smooth travel into and out of town.
- New driveway accesses should have a suitable sight distance so as to not create a hidden or blind driveway and be in accordance with state and local permitting
- (see Commercial and residential driveways ordinance).
- Any new or upgraded road should be built to town road standards.
- Belvidere supports efforts to regional organizations that provide transportation services to residents in need of assistance.

## Recommendations:

- The Selectboard should maintain the Road Surface Management Schedule (RSMS) for budgeting needed road repairs and major improvements.
- The Selectboard should update road and bridge conditions every three years to establish maintenance and repair priorities.
- The Town should continue to appoint a municipal representative to the Lamoille County Transportation Advisory Committee to coordinate transportation planning, road maintenance and improvements with adjoining towns, and to ensure that the interests of the town are adequately addressed by the region and state.

## Land Use Plan

Through this land use plan, Belvidere intends to achieve three objectives:

Protect its soil, forests, water, and wildlife habitat while realizing that these resources are valuable assets for both economic and recreational uses.

Prevent development of land that is unsuitable because of excessive slope, potential for the contamination of water supplies, or destruction of wildlife habitat.

Prevent development where provision of school services, road maintenance, police protection and other town services would be relatively expensive and therefore put an undue tax burden on existing residents.

In order to achieve the goals of this plan, the Town of Belvidere proposes to set forth four districts: the Development District, the Natural Area District, the Forest District, and the Cold Hollow/ Laraway Mountain District. Within each of these districts, specific goals are to be achieved. These districts are delineated by elevation and slope and pre-existing character. Map 11.1 Current Land Use shows the approximate boundaries entitled "Land Use Districts".

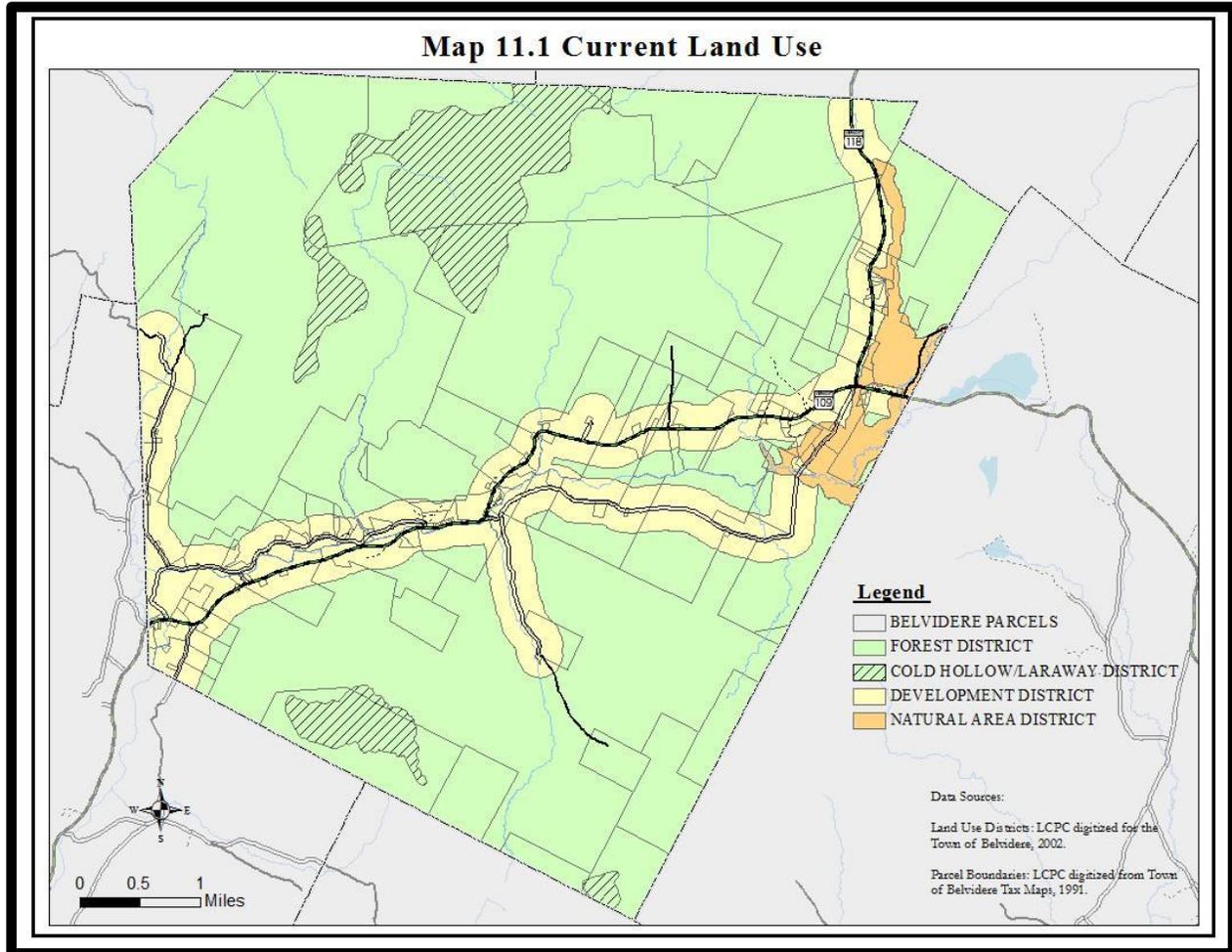
### **The Development District.**

Belvidere wishes to encourage reasonable, incremental, and affordable growth that will provide a variety of benefits to the residents of town. Development should be encouraged in areas that are close to road infrastructure in order to prevent growth from placing a burden on local services.

### **Purpose for district:**

The development district was established to identify areas in town where industrial, commercial and residential growth is encouraged. Through implementing the goals of the district, Belvidere hopes to achieve some objectives including:

- Allowing our sons and daughters to settle in town.
- Providing employment to residents.
- Encouraging agriculture on land that is suitable to it.
- Encouraging new enterprises and businesses to settle in Belvidere.
- Preventing existing residents from being forced to leave their homes because of excessive property tax.



## **Description:**

The Development District shall be defined as all land within 1000 feet of a class 1, 2, or 3 road and is also not in the Natural Area District. This includes approximately 3,914 acres or 17% of town.

## **Present Land Use:**

This District is presently used for many purposes, including forestry, commercial agriculture, part-time agriculture, gravel extraction, recreation, wildlife habitat, residences and commercial purposes.

## **Proposed Land Use:**

This District should continue to be usable for all the purposes stated above. While much of the land in this district is developable, future land uses should be constructed based on specific site considerations. Some considerations include development of land that is not greater than 30% slope, has soils that can support the proposed activity, and activities that will not threaten or impair water quality.

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## Recommendations for implementation:

Because Belvidere wishes to allow the maximum freedom for individuals to live and prosper in Belvidere, it does not propose that land be firmly regulated within the development district. Therefore, the Town of Belvidere has chosen to specify these general guidelines rather than detailed regulations so that we as residents and landowners can cooperate in developing the character of our town toward a common goal.

## **Development District**

Belvidere recognizes that economically strong downtowns are critical to the health and well-being of Vermont's communities and that downtowns are the natural location for both small businesses and other uses that together constitute the diverse fabric of communities that define Vermont's quality of life.

## **Housing Density**

Belvidere intends to prevent development that would place a burden on the Town's infrastructure or increased tax burden while protecting the constitutional rights of the residents to acquire, possess and protect property.

Belvidere desires to meet State goals of maintaining Belvidere's historic settlements in accordance with 24 VSA 4302.

Belvidere's historic settlement pattern is of one central village center located in the center of Belvidere Town flanked by two smaller village centers located at the Town's boundaries. These three village centers are separated by rural countryside.

Belvidere Center services are limited to Tallman's General Store, a community recreational field, the Town Hall, the Belvidere Elementary School, public lights, a dry hydrant and two churches. Notably lacking in Belvidere Center is three phase power, an essential power source for many commercial activities. Three phase power is located only at Belvidere Corners, within a few miles from Belvidere Center.

In developing the character of our town toward a common goal while maintaining historic settlement pattern of three village centers separated by rural countryside; Belvidere

- encourages economic development growth within the close proximity to the three existing town centers of development,
- discourages strip commercial development along transportation corridors,
- does not support densities of four or more units per acre because of the lack of water and sewer infrastructure,

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- supports cluster housing around the three village centers providing the following are taken into consideration;
  - the capability of the land as it relates to topography and soil limits,
  - areas of steep slopes,
  - poorly drained soils, unstable soils,
  - the ability of the land to accommodate site sewage disposal,
  - the likelihood of a significance flooding (fluvial, flash, or pluvial) incident in floodplains, tributaries of the North Branch of the Lamoille River and beaver ponds,
  - areas with identified fragile characteristics, such as;
    - high elevations,
    - steep slopes,
    - wetlands,
    - floodplains,
    - threatened and endangered species habitat,
    - deeryards,
- supports development that has frontage to public highways while recognizing that there are limited miles of highways in Belvidere thus limiting the amount and type of development that has frontage to public highways.

The State planning goal of developing compact residential and commercial development in the historic village center is limited due to

- Belvidere’s geophysical limitations of being nested in a mountain gap between the Green Mountains to the South and the Cold Hollow Mountains to the North inhibits the ability of Belvidere to develop other than along the main highways that serve Belvidere.
- Three phase power, an essential power source for commercial activities is located only at Belvidere Corners, making this village center the logical location for commercial development.
- In order to support the natural resource in Belvidere, a major Town asset, the Town Plan limits residents to develop in the valley.

In order to mitigate any adverse effects of not making substantial progress toward developing compact residential and commercial development in the historic village center, development in Belvidere should be undertaken such that it;

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- maintains the historic development pattern of compact village and urban centers separated by rural countryside,
- develops compact mixed-use village centers at a scale appropriate for the community,
- balances growth with the availability of economic and efficient public utilities and services,
- supports a diversity of viable businesses in the three village centers,
- provides for housing that meets the needs of a diversity of social and income groups in Belvidere,
- supports efforts to continue farming and forestry activities within the development district.
- reflects a settlement pattern that is not characterized by:
  - scattered development located outside compact urban and village centers that is excessively land consumptive;
  - development that limits transportation options, especially for pedestrians;
  - the fragmentation of farmland and forestland..

Belvidere intends to participate in any Act 250 action related to any development that causes taxes to increase beyond budgeted expenditures or places an intolerable financial burden on the Town.

The use of Belvidere's capital budget to plan the orderly development of the Town is essential in the growth of the Town

Where landowners are interested, clustering of housing and other efforts to protect open space are encouraged. The Town also supports Use Value Appraisal for those working landscapes within the Development District.

Housing development within the Development District must be permitted with the provision that it does not conflict with;

- limitations of
- slope,
- shallow bedrock and
- potential water contamination,
- is in compliance with the Vermont Department of Environmental Conservation – Wastewater System and Potable Water Supply rule, and
- is in compliance with the flood hazard bylaws of the Town of Belvidere.

In certain cases a specific development might receive modification of these limitations if, in a particular instance, it is deemed that the project has merit and follows the intent of the plan.

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Belvidere encourages the continued use of land used for agricultural purposes to remain productive agricultural operations. Presently open land is used primarily as pasture or source of feed.

Farming in Belvidere is not at a scale possible in the wider Lamoille River and Champlain Valley. The location of Belvidere along a mountain pass of the North Branch Lamoille River valley has shaped the Town's settlement pattern. This rough topography of forested lands and narrow river valleys provided opportunities for logging and milling; with limited agricultural operations.

Use of locally grown food products is encouraged by Belvidere but is limited to a cottage industry and private gardens.

Belvidere is located twenty minutes away from the closest Farmers Market in Jeffersonville and Johnson or Community Supported Agriculture (CSA) farms in Cambridge and Jeffersonville, Belvidere supports the use of Tallman's General Store to market locally grown food and food products. Presently Tallman's General Store carries locally produced eggs and produce.

## **The Natural Area District.**

Belvidere plans to preserve natural areas that provide significant habitat for wildlife, both game and non-game species, and rare or protected vegetation.

### **Purpose for the district:**

The Belvidere Bog and associated wetlands and floodplain are a fragile and important natural resource. This district is designed to preserve these habitats for future scenic, scientific, educational, and recreational value.

### **Description:**

The Natural Area District shall be defined as the area commonly known as the bog (plus 100 foot buffer), associated wetlands (plus 50 foot buffer), endangered species sites (plus the state 200-meter buffer - approximately 650 feet), and flood area lying generally east of Route 118 and extending south and west down the North Branch of the Lamoille River to the confluence of the North Branch of the Lamoille River with Otter Brook (see Land Use District Map 11.1). This district includes approximately 572 acres or 2.5% of town.

### **Present Land Use:**

This District is primarily undeveloped and is used as a nesting place for migratory fowl and habitat for wildlife and protected flora.

### **Proposed Land Use:**

This District is specifically designated to exist in its natural state. This district may not have:

- Permanent buildings, with the exception of those structures present as of this district's designation in August 2000.

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- Any commercial or industrial facilities, especially those that may have an adverse affect on the natural district or the Town of Belvidere.
- New roads or other construction that could disrupt natural habitats.

## **Recommendations for implementation:**

In order to preserve these habitats without unfairly taking property right away from landowners, the Town recommends the purchase of lands that fall within the district. These purchases could be made locally and be owned by the Town or by the state and be managed through the Agency of Natural Resources. Due to the regional and statewide significance of the area, the town feels that the state would be an appropriate agent to ensure the long-term preservation of the resource.

## **The Forest District.**

Belvidere plans to conserve the forest resources in town and encourage responsible management practices, such as those defined by the State of Vermont Accepted Management Practices (AMPs). To achieve this, the Planning Commission has proposed a Forest District which includes those areas best suited for timber management and which are at the same time not well suited for development due to the remote location. This area could be conserved through purchase of development rights or other agreements from landholders.

## **Purpose of district:**

Historically Belvidere's forestlands have provided significant employment and income for area residents. In addition, the forestlands provide excellent opportunities for all-season recreation. The numerous camps and seasonal visitors attest to this fact. Belvidere is renowned for its "wilderness" nature. The Forest District includes numerous hiking trails, state forest areas, and V.A.S.T. trails.

Specifically, within the Forest District, Belvidere plans to encourage the commercial and pre-commercial use of its forestlands for sustainable forestry. Other land uses that conflict with commercial forestry is not encouraged including residential development. Keep in mind that once the land has become residential its ability to be used for forestry is seriously diminished. Looking to the future Belvidere realizes that the increase in America's population will make land for forestry, agriculture and wildlife habitat a valuable resource necessary for our survival. The Town should therefore protect its large unfragmented forests as far as is practical.

## **Description:**

The Forest District shall be defined as all land within the Town of Belvidere that is below 2,500 feet, not within 1000 feet of a class 1, 2, or 3 roads, and not in the Natural Area District (see the Land Use Districts Map 11.1). This district includes approximately 16,640 acres or 73% of town.

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## **Present Land Use:**

This District is presently in forest, and has been since before the establishment of the Town of Belvidere. The forests in this district are a source of employment and income for commercial and private forestry. It is also a valuable habitat for wildlife and watershed area for the rivers and streams. Within this district there are several pre-existing camps.

## **Proposed Land Use:**

This District is specifically designated for commercial and private forestry, watershed protection, wildlife habitat and recreation. This District may have roads built for commercial forestry purposes but not for residential or other commercial purposes.

This District may not have permanent residential buildings or any facilities for commercial recreation or other commercial development that will have an undue adverse impact on the Town of Belvidere.

## **Recommendations for Implementation:**

Within this District the Town should be permitted to enter into agreements with landowners for lower appraisals if certain use restrictions are adopted. Currently the Vermont State Use Value Appraisal of Agricultural and Forest Land may be the most effective means of maintaining forestland for productive use. Belvidere encourages landowners to participate in forest improvement incentive programs such as those provided by the Natural Resources Conservation Service, the Vermont Department of Forestry Current Use program and others to mitigate the burden of taxes of forestlands and improve the quality of our forests.

A long-term solution to conserve our working landscape would be the purchase of development rights from landowners in the Forest District. By purchasing development rights the landowner continues to own and manage the land but is no longer permitted to develop the land for commercial or residential purposes. These development rights may be owned locally, by the state, or by private non-profit organizations. The landowner benefits by receiving money for selling the rights as well as reduced property taxes due to the property having less value.

## **The Cold Hollow/Laraway Mountain District.**

Belvidere's highest elevations are fragile environments that are characterized by shallow, erodible soils and slopes greater than 30%. Although this area is forested, this district is not appropriate for timber management due to the high risk of soil erosion and slow regeneration of vegetation after clearing. Belvidere's plans are to preserve these natural areas and allow them to provide important habitat for wildlife, both game and non-game species, and to maintain water quality downstream.

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## **Purpose for the district:**

This District is being created to encourage the preservation of these fragile, high elevation habitats.

## **Description:**

The Cold Hollow/ Laraway Mountain District is defined as those areas in town that are over 2,500 feet in elevation (see the Land Use District Map 11.1). This includes approximately 1,691 acres or 7% of town.

## **Present Land Use:**

This District is nearly pristine and is almost entirely forested. There are no Act 250 permits allowing activities in this area at this time.

## **Proposed Land Use:**

This District is specifically designated to exist in its natural state. This district may not have any structures, roads, logging, or agriculture.

## **Recommendations for implementation:**

In order to preserve these habitats without unfairly taking property right away from landowners, the Town recommends the purchase of lands that fall within the district. These purchases could be made locally and be owned by the Town or by the State and be managed through the Agency of Natural Resources. Due to the regional and statewide significance of the area, the town feels that the state would be an appropriate agent to ensure the long-term preservation of the resource.

## **Goals, Policies, and Recommendations.**

In order to accomplish the Primary Goals of this Town Plan the Town will need to achieve the objectives of each of the land use districts proposed in this Land Use Plan. The Primary Goals of the Belvidere Town Plan (as discussed in Chapter I of this Town Plan) are:

- To control the growth of the town in such a way as to enable residents to continue to live in Belvidere without undue tax burden.
- To encourage growth of the town in such areas and under such conditions that the demand for increased services will not significantly raise the tax burden for existing residents.
- To regulate growth so that:
  - Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
  - Timberland management is economically feasible in the wooded area.
  - Agricultural use of land is encouraged and protected.
  - Residential and commercial growth is permitted in suitable areas.

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- Land use decisions are directed by residents and not outside interests.

It is not the intention of Belvidere to stop growth. By identifying areas where growth is appropriate, the Planning Commission and Selectboard intend only to guide growth to protect the natural resources for economic and environmental reasons and to prevent the need to increase taxes to provide new or expanded services. For instance, the Development District is large enough that even if one house is built on every ten acres (an extremely low density for housing), there is still enough land to double the number of houses currently in town.

The town hopes that residents interested in maintaining the town's resource base will work with local officials to achieve the desired goals.

## Land Use Plan Goals:

For Belvidere to protect its soil, forests, water, and wildlife habitat while realizing that these resources are valuable assets for both economic and recreational uses.

- To prevent development of land that is unsuitable because of excessive slope, threats to water quality, or destruction of wildlife habitat.
- To prevent development where provision of school services, road maintenance, police protection and other town services would be relatively expensive and therefore put an undue tax burden on existing residents.
- The land use plan has been developed based on the findings of the other chapters found in this town plan. Policies and recommendations throughout this plan are relevant to implementing this land use plan. Only some of the broader policies and recommendations are included here.

## Policies:

- Development on slopes greater than 30% is prohibited.
- Fragmentation of productive forestland and wildlife habitat is to be avoided.
- Appropriate measures should be taken to ensure water quality with all development including the use of buffers for streams, rivers, and wetlands, and avoiding construction in flood hazard areas.

## Recommendations

- Farm and forestland owners are encouraged to participate in the Use Value Appraisal program.
- The Town should support the efforts of organizations in the purchase of development rights and other conservation methods provided those efforts meet the objectives of this plan. Where possible the Planning Commission should review proposed purchases and comment based on the goals of this plan.

- The Planning Commission should review all 'Act 250' applications for impacts on the town. Where the application is determined to not conform to this chapter or any goal or policy, the Planning Commission should participate in the 'Act 250' process.

## Recommended Plan of Implementation

This plan was developed with three overall goals in mind. They were discussed in Chapter I- Objectives and are as follows:

- I. To control the growth of the town in such a way as to enable residents to continue to live in Belvidere without undue tax burden.
- II. To encourage growth of the town in such areas and under such conditions that the demand for increased services will not significantly raise the tax burden for existing residents.
- III. To regulate growth so that:
  - Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
  - Timberland management is economically feasible in the wooded area.
  - Agricultural use of land is encouraged and protected.
  - Residential and commercial growth is permitted in suitable areas.
  - Land use decisions are directed by residents and not outside interests.

### Implementing the Program

In order to be successful in achieving the objectives of the plan, Belvidere has adopted a few programs. Planners many times refer these programs as tools. No single planning tool can be used to achieve all of the goals and policies of this plan. The tools Belvidere has adopted at this time include:

- Flood Hazard Area Zoning- These bylaws were adopted in 2001 to protect the health, safety, welfare, and property of the public in areas prone to flooding.
- Health Ordinance- Adopted in 1988 to ensure all wastewater systems meet certain minimum standards of performance.
- Participation in Act 250- both the Selectboard and Planning Commission are allowed to participate in the approval process of any project requiring Act 250 approval.

Belvidere has not adopted but could adopt:

- Zoning- to manage the impact of specific uses of land, the size and dimensions of structures, setback and yard requirements, and the density or intensity of uses.
- Shoreland bylaws- to protect water quality with 500 feet of lakes and ponds.
- Subdivision regulations- to regulate the creation of lots and to ensure efficient development of public or semi-public facilities such as utilities, roads, water, and wastewater systems.

# BELVIDERE TOWN PLAN 2015-2020

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- Conservation efforts- the town could create a conservation commission or partner with a statewide organization to coordinate the purchase of properties or development rights of certain properties.

The Planning Commission will need to review the various options in town to decide which tool, or tools, is appropriate for the situation. Various recommendations have been made throughout this plan and are listed below. Each of these recommendations will need to be discussed further to weigh the costs and benefits of each option.

## **How This Plan Relates to Neighboring Plans and Regional Plan:**

Copies of the proposed Belvidere Town Plan have been submitted to all neighboring towns and the Regional Planning Commission. Belvidere is a rural town with a small population. This plan proposes no radical changes in present land use, nor are there significant changes in land use districts. In light of this fact and from our review of adjoining town plans we feel no substantial conflicts exist.

The Lamoille County Regional Plan is based on the principle of local control. Nothing in the 2015 Town Plan for Belvidere is expected to be in conflict with the regional plan or will have a negative effect on any future implementation of the regional land use plan. The Belvidere Planning Commission and Lamoille County Planning Commission agree to work together to address any concerns they may have.

1. This plan was developed with three overall goals in mind. They were discussed in Chapter I- Objectives and are as follows:
2. To control the growth of the town in such a way as to enable residents to continue to live in Belvidere without undue tax burden.
3. To encourage growth of the town in such areas and under such conditions that the demand for increased services will not significantly raise the tax burden for existing residents.
4. To regulate growth so that:
  - Areas of natural beauty and wildlife habitat are not adversely affected but rather enhanced, encouraged, and maintained.
  - Timberland management is economically feasible in the wooded area.
  - Agricultural use of land is encouraged and protected.
  - Residential and commercial growth is permitted in suitable areas.
  - Land use decisions are directed by residents and not outside interests.

## **Implementation Plan:**

The following charts are the proposed plan of implementation for the Goals and Objectives for the Town of Belvidere as listed on page 6 of this plan. These recommendations are a compilation of the recommendations presented throughout this plan.

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## Implementation Plan

### Section: Population and Growth

GOAL: For Belvidere’s population to have a slow to moderate growth rate so not to place a burden on the existing facilities and services. Growth should not exceed the Town’s ability to provide services to support the population.

<b>Recommendations</b>	<b>Type of Action</b>	<b>Who’s Involved?</b>	<b>Timeframe</b>
If the number of persons moving into Belvidere becomes a major issue over the next five years, the town should consider adopting growth management tools, such as subdivision regulations.	Monitor	PC	Ongoing
The Planning Commission should review and amend the ‘Future Population Predictions’ information when figures are released by the State of Vermont, or other reliable source.	Monitor	PC	At minimum, once every five years in association with the municipal plan update.
The Town should review the annual population estimates released by the Department of Health or U.S. Census to ensure growth rates are not outside of the towns expectations.	Monitor	PC	Annually. See ‘Populations & Housing Estimates’ Brochures released in the fall of the following year.
Belvidere should monitor the rate of conversions of seasonal dwellings to year- round dwellings.	Monitor	PC	Annually
The Planning Commission should review all ‘Act 250’ applications for its impact on the growth of the town and participate in the process when the application is determined to conflict with this Municipal Plan Chapter or any Plan Goal or Policy.	Regulation	PC	Ongoing

## Implementation Plan

### Section: Historic, Archeological, And Scenic Resources

GOALS:

To preserve Belvidere’s heritage and beauty for current and future generations.

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To record and preserve the history of Belvidere.

To preserve individual buildings, structures and areas of historic value, including archeological sensitive areas.

To conserve scenic resources and areas without undue burden on property owners.

<b>Recommendations</b>	<b>Type of Action</b>	<b>Who's Involved?</b>	<b>Timeframe</b>
The Town of Belvidere should support the creation of a local Historical Society.	Non-regulatory	SB, PC	n/a
Maintain a comprehensive listing of historical structures and sites in Belvidere.	Monitor	PC, HS	Ongoing
The Planning Commission and/or future Historical Society should explore both Certified Local Government status and Village Center Designation as possibilities for Belvidere.	Non-regulatory	SB, PC	n/a
The Planning Commission should review all 'Act 250' applications for their impact on the historic and scenic resources in town and participate in the 'Act 250' process when the application is determined to not conform to this Municipal Plan chapter or any goal or policy.	Regulation	PC	Ongoing

NOTE: HS – Historical Society

## Implementation Plan

### Section: Natural Resources

#### GOALS:

To use Belvidere's earth resources conservatively for the benefit of existing and future generations and to conserve and enhance the agricultural and forestry soils in town today.

For Belvidere's water resources, including its ponds, streams, rivers, wetlands, groundwater, and associated habitats to be preserved and, where degraded, improved in order to ensure water quality for drinking, recreation, and the environment.

To protect and maintain in a healthy condition natural areas and areas with significant ecological value including wetlands, uplands, and critical plant and animal habitats.

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<b>Recommendations</b>	<b>Type of Action</b>	<b>Who's Involved?</b>	<b>Timeframe</b>
The Town should consider purchasing the rights to a gravel pit or to purchase a property with sufficient gravel resources to provide for the town's needs into the future.	Project	SB, PC	n/a
Municipal gravel pits in Belvidere should develop plans to address environmental impacts as well as future restoration of the sites.	Planning	SB, PC	n/a
Farm and forestland owners are encouraged to participate in the UVA program.	Non-regulatory	Public	n/a
The Planning Commission should assist landowners interested in Accepted and Best Management Practices with information and resources.	Non-regulatory	PC, Public	n/a
The Town should support the efforts of organizations in the purchase of development rights and other conservation methods provided the land protected meets the objectives of this plan. Where possible the Planning	Non-regulatory	PC	n/a
Commission should review proposed purchases and comment based on the goals of this plan.	Non-regulatory	SB, PC	n/a
The Planning Commission should consider acquiring funds to have a wetland inventory of town conducted.	Research	PC	n/a
The Town should consider purchasing development rights of properties within the floodplain to permanently prevent development in those areas.	Non-regulatory	SB, PC	n/a
The Planning Commission should consider creating a plan for the flood hazard areas to address recreational opportunities, flood hazard protection, and the potential for implementation of water quality measures.	Planning	PC	n/a
Belvidere supports the acquisition of lands within and around the Belvidere Bog by local or state conservation agencies.	Non-regulatory	SB, PC	n/a

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The Town should petition the state to include Belvidere Bog on the Fragile Areas Registry as well as a Class I wetland so that the area is given the greatest amount of protection from any potential encroachment	Non-regulatory	SB, PC	n/a
As a result of living in Belvidere, many landowners have an ethic to be good stewards of the land. The Planning Commission recognizes that more can	Non-regulatory	PC, Public	n/a

be accomplished by educating, advising, and assisting landowners with their natural and wildlife resource concerns than could be accomplished through regulations. The Planning Commission will support and provide guidance to any property owner with questions or concerns about their natural resources.

## Implementation Plan

### Section: Education

GOAL: To plan for growth and development in a way that allows Belvidere to provide quality education services and adequate facilities for all local residents without placing and undue burden on tax payers.

Recommendations	Type of Action	Who's Involved?	Timeframe
Belvidere should continue to have an active role at the local level, as well as the Board of Directors of LUHSD #18 and Lamoille North Supervisory Union.	Communication	Representatives to the boards	Ongoing
The town should urge our Senator and Representative to ensure the concerns of small schools, like ours, are not overlooked in State Education Funding formulas.	Communication	Public	n/a

## Implementation Plan

### Section: Facilities And Services

GOAL: To ensure adequate public facilities and services are available to protect and enhance the lives of residents and visitors without placing an undue burden on taxpayers.

Recommendations	Type of Action	Who's Involved?	Timeframe
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# BELVIDERE TOWN PLAN 2015-2020

Belvidere should consider adopting a telecommunication tower ordinance to ensure any tower located in town meets basic siting and aesthetic standards.	Regulatory	SB	n/a
Belvidere should continue to provide fire, rescue, and ambulance services through contracts with surrounding towns and private companies as an economical means of providing necessary services.	Non-regulatory	SB	Ongoing

## Implementation Plan

### Section: Utilities And Energy

#### GOALS:

or citizens to generate energy locally from renewable sources, whether for heating, electricity, or transportation.

Energy should be provided in a safe, reliable and efficient manner.

To promote energy efficiency and conservation in the design, construction, and use of municipal, industrial, commercial, and residential structures.

Recommendations	Type of Action	Who's Involved?	Timeframe
The Planning Commission should consider requiring utilities to be buried if subdivision regulations are drafted.	Regulatory	PC	n/a
The Planning Commission should exempt, or provide accommodations for, alternative energy adaptations (e.g. solar collectors) when developing bylaws.	Regulatory	PC	n/a

## Implementation Plan

### Section: Housing

GOAL: To ensure Belvidere has safe, affordable housing available in a variety of types for all incomes, ages, and for those with special needs.

Recommendations	Type of Action	Who's Involved?	Timeframe
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# BELVIDERE TOWN PLAN 2015-2020

Any bylaws, if adopted, should not prohibit or burden affordable housing efforts.	Regulation	PC	n/a
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## Implementation Plan

### Section: Economic Development

GOAL: For Belvidere to have a balanced and diverse local economy that provides rewarding job opportunities at a livable wage.

Recommendations	Type of Action	Who's Involved?	Timeframe
The Planning Commission should review all 'Act 250' applications for its impact on the growth of the town and participate in the process when the application is determined to conflict with this Municipal Plan Chapter or any Plan Goal or Policy. Where an application conforms to this plan, the Planning Commission should participate in the Act 250 process to attempt to ensure the process is as smooth as possible for the applicant.	Regulatory	PC	Ongoing

## Implementation Plan

### Section: Transportation

GOALS:

For town roads to be safe and efficient for vehicles and to be maintained in a cost effective manner.

For pedestrian and non-vehicular transportation networks to be safe and conveniently located to encourage their use.

To support regional transportation services that provide special transportation services for those who require assistance.

Recommendations	Type of Action	Who's Involved?	Timeframe
The Selectboard should maintain the Road Surface Management Schedule (RSMS) for budgeting needed road repairs and major improvements.	Non-regulatory	SB	Ongoing

# BELVIDERE TOWN PLAN 2015-2020

The Selectboard should update road and bridge conditions every three years to establish maintenance and repair priorities.	Research	SB	3-year cycle
The town should continue to appoint a municipal representative to the Lamoille County Transportation Advisory Committee to coordinate transportation planning, road maintenance and improvements with adjoining towns, and to ensure that the interests of the town are adequately addressed by the region.	Non-regulatory	SB	Annually

## Implementation Plan

### Section: Land Use

#### GOALS:

For Belvidere to protect its soil, forests, water, and wildlife habitat while realizing that these resources are valuable assets for both economic and recreational uses.

To prevent development of land that is unsuitable because of excessive slope, threats to water quality, or destruction of wildlife habitat.

To prevent development where provision of school services, road maintenance, police protection and other town services would be relatively expensive and therefore put an undue tax burden on existing residents.

<b>Recommendations</b>	<b>Type of Action</b>	<b>Who's Involved?</b>	<b>Timeframe</b>
Farm and forestland owners are encouraged to participate in the Use Value Appraisal program.	Non-regulatory	Public	Ongoing
The Town should support the efforts of organizations in the purchase of development rights and other conservation methods provided the land protected meets the objectives of this plan. Where possible the Planning Commission should review proposed purchases and comment based on the goals of this plan.	Non-regulatory	PC	n/a
The Planning Commission should review all 'Act 250' applications for its impact on the	Regulatory	PC	Ongoing

# BELVIDERE TOWN PLAN 2015-2020

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town and participate in the process when the application is determined not conform to this Municipal Plan Chapter or any Plan Goal or Policy in order to ensure the concerns of the town are addressed.			
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